

## 7.0 MAGNUSON-STEVENSONS ACT CONSISTENCY

The Magnuson-Stevens Fishery Conservation and Management Act specifies ten National Standards, fourteen required provisions and several discretionary provisions to be contained in each FMP or amendment. The following discussion summarizes how this amendment complies with the Magnuson-Stevens Act.

### 7.1 National Standards

Section 301 of the Magnuson-Stevens Act requires that FMPs contain conservation and management measures that are consistent with the ten National Standards. The following section summarizes, in the context of the National Standards, the analyses and discussion of the proposed action that appear in various sections of this framework adjustment document.

*(1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.*

The proposed action does not significantly modify the stock-rebuilding program established by the original FMP and modified by Framework Adjustment 2. As noted in Section 2.7, Framework 2 implemented a streamlined procedure for setting optimum yield on an annual basis and for preventing overfishing. While the Councils initially identified a proposal to separate DAS usage requirements on permit Category C and D vessels as their preferred alternative in the DSEIS, in the final recommendation they decided to adopt the no action alternative because of concerns that the proposal would result in increased effort and potentially jeopardize the rebuilding program. The other measures proposed in this amendment do not significantly affect the stock rebuilding program.

*(2) Conservation and management measures shall be based upon the best scientific information available.*

Several sources of data were used in the development of Amendment 2, including the analysis of impacts. These data sources include, but are not limited to, landings data from vessel trip reports and dealer weighout reports, catch data collected in the NOAA Fisheries Observer Program, effort data collected in the DAS call-in and, where applicable, the electronic vessel monitoring system programs, fisheries independent data collected in the NOAA Fisheries bottom trawl surveys, cooperative research projects, and deep-sea corals and habitat data collected by NOAA-funded National Undersea Research Center. The Councils have determined that these are the best available scientific data, and that the analyses in this document are compliant with the Data Quality Act (see Section 8.7).

*(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.*

The FMP established a two-area management program for monkfish, covering the exploitable range of the species. SARC 34 discussed the basis for assessing goosfish as a single stock, versus two stocks, and concluded that information was insufficient to make a determination on a biological basis. The SARC noted that the choice of number of management units is independent of the number of assessment units, and that the use of two management units may be required because of the characteristically different fisheries that occur in the two areas, in terms of gear,

catch composition, seasonality and other parameters. The Councils considered a single-stock approach, but rejected it for further analysis and consideration prior to the development of the DSEIS (see Section 4.2.1.1).

*(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.*

The proposed action does not discriminate between residents of different states. While the FMP measures developed to achieve the conservation goals of the FMP may have a differential impact on sectors of the industry, that differential impact is not the purpose. The two-area management program is based on differences in the fisheries between the two areas, and not based on allocation of fishing privileges differently among sectors of the industry. In fact, all limited access permit holders may fish in either management area, subject to the rules that apply in each. In this amendment, the Councils propose to admit qualifying vessels for a limited access permit based on the relatively late development of the monkfish fishery at the southernmost end of the range of the fishery, and to restrict those vessels to the area where those vessels fished during the qualification period.

*(5) Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.*

The proposed action includes a number of measures that reduce the potential for regulatory discards in fisheries where monkfish is taken incidentally, thereby promoting economic efficiency. The proposal to establish an offshore fishery program also promotes economic efficiency by allowing for higher trip landings, while maintaining an equitable per-vessel opportunity compared to non-participating vessels through an adjustment to the DAS allocations in exchange for the higher trip limits. Overall, while the FMP generally, and the proposed action in particular, may have differential impacts among different fishery groups, economic allocation is not one of the goals and objectives.

*(6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.*

As noted in discussion of National Standards 3 and 4, the two-area management approach, is intended to take into account the differences in fisheries between the two areas. Other measures in the FMP, such as the permit categories and gear- and area-based incidental catch limits are also based on the wide differences among different fisheries that catch monkfish as a target or incidental catch species. The proposed action furthers the Councils' recognition of these differences, particularly the adjustments to the incidental catch limits, the establishment of an offshore fishery program, the modification of permit qualification criteria for vessels at the southernmost extent of the fishery, and the southern area roller gear restriction.

*(7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.*

This amendment contains several measures that minimize costs to vessels, either directly or indirectly, such as measures that reduce discards (adjustments to the incidental catch limit and minimum fish size, and the offshore fishery program). The Councils also propose measures in this amendment that reduce administrative and enforcement costs, such as the uniform minimum fish size and the VMS requirement in the offshore fishery. This FMP does not duplicate measures or regulations implemented under other FMPs, but coordinates with them. For example, this FMP uses DAS controls in the multispecies FMP to regulate effort levels in the northern area fishery, in recognition of the overlap between the two fisheries. This FMP also applies the multispecies minimum mesh size regulations on vessels that have multispecies limited access permits who are fishing on a monkfish DAS.

*(8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.*

The measures proposed in this amendment are not likely to result in significant adverse impacts on affected fishing communities and, in fact, many will have a positive, but not significant impact compared to taking no action. The impact of the proposed action on fishing communities is analyzed and discussed in Section 6.5, and specifically with regards to this national standard in Section 6.5.3. This discussion concludes that “of importance to this particular management plan is the general trend toward neutral or positive outcomes”.

*(9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.*

The Councils propose several measures specifically intended to minimize bycatch, including regulatory discards, and a number of measures that will directly or indirectly minimize bycatch although that is not their primary purpose. The measures are listed below:

1. Adjust incidental catch limits for monkfish in other fisheries to minimize the regulatory discarding due to trip limits. (Section 4.1.1)
2. Reduce the minimum fish size for monkfish in the SFMA (Section 4.1.2)
3. Provide incentives (DAS set-aside or exemptions) to vessels to engage in cooperative research, including research on gear, fishing methods or other measures that will reduce bycatch of monkfish or other species. (Section 4.1.9)
4. Close areas of deep-water coral concentrations, Oceanographer and Lydonia Canyons (Section 4.1.8.2)

In addition to the proposed action items listed above, the Councils also considered but did not adopt several other measures that may have also had the effect of minimizing bycatch. Those measures, and the rationale for not being adopted are discussed in Section 4.2.2. They are listed here:

1. Separate monkfish DAS from multispecies and sea scallop DAS, and require large mesh on monkfish-only DAS. This action would reduce bycatch of small monkfish and other species on monkfish DAS due to the larger mesh requirements. (Section 4.2.2.1.1)
2. Reduce or eliminate the minimum fish size for monkfish (Section 4.2.2.4)
3. Implement a trawl experimental fishery in the NFMA for the purpose of establishing an exempted fishery with minimal bycatch of regulated multispecies. (Section 4.2.2.12)
4. Require monkfish trawl vessels to use a net designed to minimize the ability of the vessel to fish in areas where groundfish species are more abundant (that is, rough or complex bottom habitat), to minimize the ability of the net to catch most groundfish species (by reducing the nets ability to “herd” fish, by reducing headrope overhang, and by allowing more escapement through the larger meshes). (Section 4.2.2.9.3), and
5. Increase trawl minimum mesh size on a monkfish DAS (Section 4.2.2.3).
6. Close areas of deep-water coral concentrations, up to 12 canyons along the northeast continental shelf (Section 4.2.2.9.4.1)

(10) *Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.*

This amendment does not substantially change the impact of the FMP on safety at sea. The requirement that vessels enrolling in the offshore fishery use electronic vessel monitoring systems, while adopted for enforcement and monitoring purposes, promotes safety by facilitating precise vessel location and two-way communications with vessels.

## **7.2 Required Provisions**

Section 303 of the MSFCMA contains fourteen additional required provisions for FMPs, which are discussed below. Any FMP prepared by any Council, or by the Secretary, with respect to any fishery, shall:

(1) *contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are-- (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery; (B) described in this subsection or subsection (b), or both; and (C) consistent with the National Standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;*

This amendment modifies provisions of the FMP but does not significantly change the existing stock rebuilding program. As discussed in the previous section, this amendment is consistent with the National Standards.

(2) *contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any;*

The fishery and its components, including biological, social and economic aspects, are described in the Affected Environment section of the EIS. There is no foreign fishing, and there are no known Indian treaty fishing rights.

*(3) assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;*

Both monkfish stocks are in the middle of a rebuilding program implemented by the original FMP and modified by Framework 2. The status of the stocks, relative to the biomass targets is shown in Figure 11 and Figure 12. Both stocks are no longer overfished, nor rebuilt, but are progressing near (SFMA) or ahead (NFMA) of schedule to be rebuilt by 2009. Stock assessments have been unable to specify maximum sustainable yield, primarily due to a lack of historical catch data. Optimum yield, however, is specified in Framework 2 as the annual catch targets calculated to achieve the annual rebuilding biomass targets (which are based on trawl survey biomass indices). The method for that calculation is described in Section 2.7.

*(4) assess and specify-- (A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3); (B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing; and (C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;*

The monkfish fishery is in a rebuilding program that places annual limits on the amount of fish that can be harvested, that is, optimum yield. Even though the fishery is managed under a limited access program, there is sufficient harvesting capacity to take optimum yield, and, in fact, there is sufficient capacity to take additional fish, as evident from the amount of unused DAS allocated. As such, there is no amount of optimum yield available for foreign fishing. Sufficient domestic processing capacity also exists to utilize the monkfish harvested by United States vessels.

*(5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, and charter fishing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;*

Section 5.3 of this document, Human Environment, contains a description of the fishery and processing sector. The Councils' Monkfish Monitoring Committee compiles and publishes this information annual as part of the Stock Assessment and Fishery Evaluation Report. There is no significant recreational or charter fishery for monkfish.

*(6) consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe*

*conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery;*

The framework adjustment mechanism established in the FMP provides the Council with the ability to change regulations to address issues such as vessel safety within the context of the fishery management program on an annual, or as needed basis.

*(7) describe and identify essential fish habitat for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;*

Section 5.0, and particularly Section 5.4, contains the description of monkfish essential fish habitat, and Section 6.3 contains the habitat assessment of the proposed action and alternatives.

*(8) in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan;*

The Council prepares annually a Stock Assessment and Fishery Evaluation (SAFE) Report. Section 5.0 of this document contains the information and data for the 2002 fishing year that is usually provided in the SAFE Report. The 2003 SAFE Report will be incorporated into the documents supporting the annual adjustment for the 2005 fishing year to be submitted by January, 2005.

*(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and describe the likely effects, if any, of the conservation and management measures on-- (A) participants in the fisheries and fishing communities affected by the plan or amendment; and (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;*

The impacts of the proposed action and alternatives, including cumulative impacts, impacts on the physical and human environments are discussed in Section 6.0 of this document.

*(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;*

Framework 2 implemented revisions to the threshold biomass reference point that better align the FMP with NMFS' national standards guidelines. Since both monkfish stocks were overfished at the time the FMP was implemented in 1999, the current management program is designed to rebuild the stocks to target biomass levels by 2009. The program that includes objective and measurable criteria for determining annually the status of the stocks is described in Section 2.7.

- (11) *establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority-- (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided;*

NMFS currently has in place extensive reporting requirements for all vessels participating in the Federal monkfish fishery, including requirements to report all bycatch. In addition, NMFS increased observer coverage to the 10 percent level for the Northeast (NE) multispecies fishery, which substantially overlaps the monkfish fishery particularly in NFMA, for the 2004 fishing year as mandated by Congress in the budget appropriation for Fiscal Year 2004. NMFS has recently determined that 5 percent observer coverage on all trips fished under a NE multispecies DAS would provide sufficiently robust statistical data to assess and estimate the amount and type of bycatch of regulated species in the NE multispecies fishery. As a result, NMFS intends to maintain observer coverage in the NE multispecies fishery at a minimum level of 5 percent in future years, absent a similar budget appropriation requiring a greater level of observer coverage.

To the extent that vessels have on board a NMFS observer while fishing for monkfish on a multispecies DAS, the increase in observer coverage in the NE multispecies fishery will provide an increase in data on bycatch in the monkfish fishery. Additionally, VMS would be mandatory in the Offshore Fishery Program. Since VMS allows the tracking of predominant fishery locations, coordination of this information with observer coverage may allow for more accurate bycatch assessment and projection. Also, the Study Fleet Pilot Program can provide another source of bycatch information for the different gear types and areas. The Study Fleet Pilot Program is designed to enhance fishery-dependent data necessary for management decisions through the development of electronic reporting technology. The pilot project initially placed NMFS personnel and contracted individuals on board 15 vessels to work with the captain and crew in determining how electronic reporting devices can be integrated in to their fishing operations. Phase Two of the pilot project has been expanded to involve a total of 30 vessels.

On March 6, 2003, NMFS unveiled a national bycatch strategy aimed at further reducing bycatch through fishing gear improvements, standardized reporting, and education and outreach. One objective of the national bycatch strategy is to develop a national approach that standardizes bycatch reporting. This program will also assess regional progress toward meeting national bycatch objectives and strategies. As part of this national bycatch strategy, each Regional Office of NMFS was tasked with producing regional implementation plans and timelines to implement the national bycatch goal. The Northeast Regional Office (NERO) of NMFS unveiled its regional bycatch plan entitled "Current Bycatch Priorities and Implementation Plan" on November 28, 2003. As part of this plan, NERO in conjunction with the New England and Mid-Atlantic Fishery Management Councils, the Atlantic States Marine Fisheries Commission, and the Northeast and Mid-Atlantic Sea Grant programs, sponsored the Northeast Regional Bycatch Workshop on June 29 – July 1, 2004. The proceedings from this workshop are available from NERO, and online at <http://www.nero.noaa.gov/nero/hotnews/index.html>.

For the reasons noted above, and given the fact that NMFS is approaching the bycatch issue on a national level versus on a fishery-by-fishery basis, the Councils determined that is not appropriate or practicable to implement a significantly new or expanded reporting methodology focused just on the monkfish fishery through this amendment. Therefore, no additional specific

bycatch monitoring alternatives are being recommended in Amendment 2. However, the Councils recommend that further observer coverage aimed specifically at the monkfish fishery be established at a level sufficient to characterize the amount and type of bycatch in this fishery consistent with NMFS' development of bycatch monitoring strategies.

Measures proposed in this amendment to minimize bycatch and/or bycatch mortality are discussed in the previous section under National Standard 9.

*(12) assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish;*

Monkfish catch in recreational fisheries is not significant enough to be recorded in the recreational catch data.

*(13) include a description of the commercial, recreational, and charter fishing sectors which participate in the fishery and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter fishing sectors;*

Monkfish catch in recreational fisheries is not significant enough to be recorded in the recreational catch and vessel data. Commercial fishery sectors are described in the Affected Environment section of the EIS accompanying the original FMP and updated in the Affected Environment Section of this SEIS (Section 5.0).

*(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery.*

As noted under the discussion of National Standard 4 in the previous section, while regulations may have a differential impact on different sectors of the industry, that differential impact is not the purpose, and is done in a manner that is intended achieve the conservation and rebuilding goals of the FMP. The two-area management program is based on differences in the fisheries between the two areas, and not to allocate fishing privileges differently among sectors of the industry.

## **8.0 CONSISTENCY WITH OTHER APPLICABLE LAW**

### **8.1 National Environmental Policy Act (NEPA)**

#### **8.1.1 Introduction**

This SEIS addresses the requirements of NEPA to fully consider the impact of proposed actions on the quality of the human environment, consistent with NOAA's policies and guidelines as described in Administrative Order 216-6, as well as subsequent guidance provided at the regional level by NMFS' staff. In addition to the analyses and discussion throughout the rest of this document, this section contains the specific EIS elements not addressed in other sections, such as identification of areas of controversy and issues to be resolved, if any. This document contains some changes from the DSEIS, reflecting the Councils' selection of proposed action and

rationale for rejection/selection of particular alternatives. This document also incorporates additional analyses to address public comment on the DSEIS, as well as a complete set of public comments received and the Councils' response (Appendix III).

Based in part on the issues identified during scoping, this EIS includes an evaluation of the effects of fishing on EFH and an analysis of alternatives to minimize to the extent practicable the adverse effects on EFH from fishing. The EIS considers and evaluates alternatives to minimize adverse effects to the extent practicable and include consideration of measures such as closed areas, effort reductions and gear modifications.

The analysis considers the no-action, along with a range of other reasonable alternatives. Information from the original FMP and the EA for Amendment 1 is reflected in this analysis. However, additional information and the selection of alternatives come from a review of the best scientific information available, including new information made available since the fishery management plan amendments were originally completed.

Section 5.0 of the EIS describes the affected biological, physical and human environment. This includes a discussion of the areas and habitat types in the area that EFH is designated. The section's description of the affected environment details the physical and biological resources affected by the alternatives, including a description of the Atlantic Coast shelf ecosystem, benthic habitat, fishery activity and relevant biological resources with an emphasis on benthic organisms.

Section 5.4 includes an evaluation of gear effects on EFH. Specifically, the section describes the gears used, distribution and use of the different gears, the types of gear effects, the vulnerability of the EFH to the gear type and a determination of the adverse effects of gears on EFH.

Section 4.1.8 describes the alternatives for minimizing the adverse effects of fishing on EFH. The section discusses significant issues associated with each alternative including those identified during scoping. The discussion of each alternative for minimizing the effects of fishing on EFH describes the associated fishery management measures. This section concludes with a discussion and explanation of alternatives that were considered but not carried forward for further analysis. The description of alternatives provides a broad summary and comparison of each alternative.

Section 6.0 contains the analysis and discussion of the environmental consequences of the proposed action and alternatives. Specifically, Section 6.3 describes the environmental consequences of each alternative for minimizing the effects of fishing on EFH. For each alternative to minimizing adverse effects of fishing on EFH, the chapter describes the practicability of the associated fishery management measures and evaluates the environmental consequences in relation to effects on EFH, the fishery, other fisheries, and protected resources. The discussion of potential impacts resulting from each alternative is presented in comparative form that clearly distinguishes the environmental consequences of each alternative. The discussion includes a description of the conservation benefits and the adverse impacts of the alternatives.

Appendix II and other parts of this document also include material to satisfy the requirements of the NMFS guidelines at 50 CFR part 600, Subpart J for mandatory requirements of an FMP to:

1. Identify any fishing activities that are not managed under the MSA that may adversely effect EFH.
2. Identify activities other than fishing that may adversely effect EFH. For each activity, the FMP should describe known and potential adverse effects to EFH.
3. Identify actions to encourage the conservation and enhancement of EFH, including recommended options to avoid, minimize, or compensate for the adverse effects, especially in HAPCs.
4. List the major prey species for the species in the fishery management unit and discuss the location of prey species' habitat. Consider adverse effects on prey species and their habitats that may result from actions that reduce their availability, either through direct harm or capture, or through adverse effects to prey species' habitats.
5. Recommendations, in priority order, for research effects necessary to improve upon the description and identification of EFH, the identification of threats to EFH from fishing and other activities and the development of conservation and enhancement measures for EFH.
6. Conduct a cumulative impact analysis that describes impacts on an ecosystem or watershed scale (Cumulative effects of multiple gear types is included in the Gear Effects Evaluation Section)

### **8.1.2 Scoping**

The Councils distributed a scoping document on November 15, 2001 to approximately 400 interested parties and members of the press, and published a Notice of Intent to prepare an SEIS and formally initiate scoping on December 10, 2001 (66 *FR* 63666). In addition to written scoping comments, the Councils received oral comment at a Monkfish Oversight Committee meeting on January 14, 2002, the NEFMC meeting on January 15, and the MAFMC meeting on January 30.

In April 2002, a member of the NEFMC staff visited several ports in the southern range of the fishery to gather information on the fishing communities in the area and take comments from members of the industry there. While not formal scoping hearings, the information collected contributed to the formulation of alternatives and identification of issues considered in this amendment, particularly those pertaining to the revision of the limited entry provisions. Those meetings took place as follows: Point Pleasant, NJ (4/19); Barnegat Light, NJ (4/19); Cape May, NJ (4/21); Wanchese, NC (4/25); Chincoteague, VA (4/26); and Ocean City, MD (4/26).

The Councils held supplemental scoping hearings (67 *FR* 54609, August 23, 2002), specifically to take additional public comment on the proposals to modify the limited entry qualification criteria on September 11 (in Providence, RI and Manteo, NC) and September 12 (in Chincoteague, VA), 2002.

NMFS published a Notice of Intent (NOI) to prepare a supplemental EIS for the EFH components of the Northeast Multispecies and Atlantic Sea Scallop Fishery Management Plans on February 1, 2001 (66 FR 8568). While not specifically addressing the Monkfish FMP, the process is relevant to this amendment given the close connection between multispecies and scallop fishing and monkfish fishing, and the significant overlap of vessels permitted in the three fisheries. The public comment period was open until April 4, 2001. NMFS (and/or the Council) solicited public comment to identify a range of alternatives for identifying and describing EFH and HAPCs and requested information on adverse effects of fishing activities on EFH and HAPCs. NMFS (and/or the Council) solicited public comment on appropriate management measures and alternatives to minimize, to the extent practicable, any adverse effects of fishing on EFH. NMFS (and/or the Council) held 1 public scoping meeting. The meeting occurred in Gloucester, MA on February 22, 2001. No scoping comments were submitted on essential fish habitat issues.

Following the formal scoping period, during the development of Amendment 2, the Councils received a number of comments at Council and Monkfish Committee meetings that were addressed in the DSEIS, even though they had not been raised during the scoping period. Among these was the matter of protecting deep-sea coral habitats which resulting in the inclusion of alternatives proposed and adopted for closing such areas. During the period between scoping and completion of the DSEIS, the Councils implemented Framework 2, to address the rebuilding issues identified during the scoping period that required immediate attention because of the impending default measures in the original FMP that would have unnecessarily shut down the directed monkfish fishery. Also during the period between scoping and completion of the DSEIS, the NEFMC developed and implemented important amendments to the Multispecies (Amendment 13) and Sea Scallop (Amendment 10) FMPs, as well as several framework adjustments to those plans. These actions directly affected vessels fishing for monkfish, and were considered in the selection of final measures proposed in this amendment.

### **8.1.3 Areas of Controversy**

Based on the public comment received on the DSEIS, as presented and summarized in Appendix III, the Councils have concluded that there are no areas of controversy in the proposed action. As reflected in those comments, the alternative that would have separated monkfish DAS usage from multispecies and scallop DAS usage requirements (Decision 1, Appendix I) was the only controversial proposal in the DSEIS, and the Councils did not adopt it, even though it was originally their preferred alternative.

### **8.1.4 Issues to be Resolved**

This section will be completed for the final EIS based on comments received on the DSEIS. Several issues have been identified, however, during the development of this amendment that will be addressed in the future under separate action, and are described below.

#### **8.1.4.1 Measures to minimize fishery interactions with sea turtles**

The Councils considered including in this amendment alternative approaches to the sea turtle protection measures implemented by NMFS under the authority of the Endangered Species Act for the large mesh gillnet fishery in the southern end of the range. But, as indicated in Section 4.1.6.2, the development of specific measures, depended on the completion of analysis sea-surface temperature data and other analyses that were not done in time to be included in this

amendment. Therefore, no specific measures are proposed for Amendment 2 at this time, but the Councils may take action in the future under the framework adjustment process.

#### **8.1.4.2 Essential Fish Habitat requirements**

In addition to the actions being considered in this amendment to minimize the impact of the monkfish fishery on EFH, a number of other Magnuson-Stevens Act requirements (as outlined in NMFS' guidelines) remain to be addressed. In the March 2003, the NEFMC 1 initiated a Habitat Omnibus Amendment that will be considered as Amendment 3 to the Monkfish FMP, as well as Amendment 14 to the Multispecies FMP, Amendment 11 to the Sea Scallop, Amendment 2 to the Herring FMP, and Amendment 1 to the Skate, Red Crab, and the Atlantic Salmon FMPs. This Omnibus Amendment will be driven by the following Council-approved goals and objectives:

#### **GOALS:**

1. Redefine, refine or update the identification and description of all EFH for those species of finfish and mollusks managed by the Council, including the consideration of HAPCs;
2. Identify, review and update the major fishing activities (MSA and non-MSA) that may adversely affect the EFH of those species managed by the Council;
3. Identify, review and update the major non-fishing activities that may adversely affect the EFH of those species managed by the Council;
4. Identify and implement mechanisms to protect, conserve, and enhance the EFH of those species managed by the Council to the extent practicable;
5. Define metrics for achieving the requirements to minimize adverse impacts to the extent practicable;
6. Integrate and optimize measures to minimize the adverse impacts to EFH across all Council managed FMPs;
7. Update research and information needs;
8. Review and update prey species information.

#### **OBJECTIVES:**

- A. Identify new data sources and assimilate into the process to meet goals (state, federal and other data sources);
- B. Implement review of existing HAPCs and consider modified or additional HAPCs ;
- C. Review EFH designations and refine or redefine where appropriate as improved data and analysis become available;

- D. Develop analytical tools for designation of EFH, minimization of adverse impacts, and monitoring the effectiveness of measures designed to protect habitat;
- E. Modify fishing methods and create incentives to reduce the impacts on habitat associated with fishing;
- F. Support restoration and rehabilitation of fish habitat which have already been degraded (by fishing and non-fishing activities);
- G. Support creation and development of fish habitat where appropriate and when increased fishery resources would benefit society;
- H. Develop a strategy for prioritizing habitat protection;
- I. Develop criteria for establishing and implementing dedicated habitat research areas;
- J. Design a system for monitoring and evaluating the benefits of EFH management actions including dedicated habitat research areas.

### 8.1.5 LIST OF PREPARERS

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Allison	Ferreira	NERO	PDT
Pat	Fiorelli	NEFMC	
Steven	Fromm	NEFSC	
Philip	Haring	NEFMC	PDT
Lynn	Lankshear	NERO	
Jason	Link		HPDT
Leslie-Ann	McGee	NEFMC	HPDT
Renee	Olsen	NERO	
Robert	Reid	NEFSC	HPDT
Anne	Richards	NEFSC	PDT
Rich	Seagraves	MAFMC	PDT
David	Stevenson	NERO	HPDT
Eric	Thunberg	NEFSC	PDT
Alison	Verry	NERO	PDT
Joseph	Vitliano	NEFSC	
Stanley	Wang	NERO	PDT
Kurt	Wilhelm	NERO	
John	Witzig	NERO	
Valerie	Whalen	MAFMC	(formerly)

PDT- Monkfish Plan Development Team

HPDT- Habitat Plan Development Team

NEFMC – New England Fishery Management Council

MAFMC – Mid-Atlantic Fishery Management Council

NERO – NMFS Northeast Regional Office

NEFSC – Northeast Fishery Science Center

### 8.1.6 SEIS CIRCULATION LIST

The Councils and NOAA Fisheries distributed the DSEIS and “Dear Reviewer” letter to the following agencies for review:

<b>Agency</b>	<b>Address</b>
EPA – Boston Regional Office	Mr. Ira Leighton, Regional Administrator Environmental Protection Agency One Congress Street Boston, MA 02114-2023
EPA – New York Regional Office	Ms. Jeanne M. Fox, Regional Administrator Environmental Protection Agency 290 Broadway, 26 <sup>th</sup> floor New York, NY 10007
EPA – Philadelphia Regional Office	Mr. Stanley Laskowski Director of Environmental Services Division Environmental Protection Agency 1650 Arch Street Philadelphia, PA 19103-2029
EPA – Atlanta Regional Office	Mr. John H. Hankinson, Jr., Regional Administrator Environmental Protection Agency 61 Forsyth Street, SW Atlanta, GA 30303
Marine Mammal Commission	Mr. David Cottingham Executive Director Marine Mammal Commission 4340 East-West Highway, Room 905 Bethesda, Maryland 20814
Atlantic States Marine Fisheries Commission	Mr. John V. O’Shea Executive Director Atlantic States Marine Fisheries Commission 1444 Eye Street, N.W. 6th Floor Washington, D.C. 20005
U.S. Coast Guard – First District Commander	Commander First Coast Guard District (OLE) Coast Guard Building 408 Atlantic Avenue Boston, Massachusetts 02110-3350
U.S. Coast Guard – Fifth District Commander	Commander Fifth Coast Guard District (OLE) Federal Building 431 Crawford Street Portsmouth, Virginia 23704-5004
U.S. Dept. of State	Mr. William Gibbons-Fly Director, Office of Marine Conservation Department of State Washington, D.C. 20520

In addition, copies were distributed on request to interested members of the public, and were available on the NEFMC website.

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### 8.1.8 Glossary

**Adult stage:** One of several marked phases or periods in the development and growth of many animals. In vertebrates, the life history stage where the animal is capable of reproducing, as opposed to the juvenile stage.

**Adverse effect:** Any impact that reduces quality and/or quantity of EFH. May include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include sites-specific or habitat wide impacts, including individual, cumulative, or synergistic consequences of actions.

**Aggregation:** A group of animals or plants occurring together in a particular location or region.

**Anadromous species:** fish that spawn in fresh or estuarine waters and migrate to ocean waters

**Amphipods:** A small crustacean of the order Amphipoda, such as the beach flea, having a laterally compressed body with no carapace.

**Anaerobic sediment:** Sediment characterized by the absence of free oxygen.

**Anemones:** Any of numerous flowerlike marine coelenterates of the class Anthozoa, having a flexible cylindrical body and tentacles surrounding a central mouth.

**Benthic community:** *Benthic* means the bottom habitat of the ocean, and can mean anything as shallow as a salt marsh or the intertidal zone, to areas of the bottom that are several miles deep in the ocean. *Benthic community* refers to those organisms that live in and on the bottom. (*In@* meaning they live within the substrate; e.g, within the sand or mud found on the bottom. See *Benthic infauna*, below)

**Benthic infauna:** See *Benthic community*, above. Those organisms that live *in* the bottom sediments (sand, mud, gravel, etc.) of the ocean. As opposed to *benthic epifauna*, that live *on* the surface of the bottom sediments.

**Benthivore:** Usually refers to fish that feed on benthic or bottom dwelling organisms.

**Berm:** A narrow ledge typically at the top or bottom of a slope; e.g. a berm paralleling the shoreline caused by wave action on a sloping beach; also an elongated mound or wall of earth.

**Biogenic habitats:** Ocean habitats whose physical structure is created or produced by the animals themselves; e.g, coral reefs.

**Biomass:** The total mass of living matter in a given unit area or the weight of a fish stock or portion thereof. Biomass can be listed for beginning of year (Jan-1), Mid-Year, or mean (average during the entire year). In addition, biomass can be listed by age group (numbers at age

\* average weight at age) or summarized by groupings (e.g., age 1<sup>+</sup>, ages 4+ 5, etc). See also spawning stock biomass, exploitable biomass, and mean biomass.

**B<sub>MSY</sub>:** The stock biomass that would produce MSY when fished at a fishing mortality rate equal to F<sub>MSY</sub>. For most stocks, B<sub>MSY</sub> is about ½ of the carrying capacity. The proposed overfishing definition control rules call for action when biomass is below ¼ or ½ B<sub>MSY</sub>, depending on the species.

**B<sub>threshold</sub>:** 1) A limit reference point for biomass that defines an unacceptably low biomass i.e., puts a stock at high risk (recruitment failure, depensation, collapse, reduced long term yields, etc). 2) A biomass threshold that the SFA requires for defining when a stock is overfished. A stock is overfished if its biomass is below B<sub>threshold</sub>. A determination of overfished triggers the SFA requirement for a rebuilding plan to achieve B<sub>target</sub> as soon as possible, usually not to exceed 10 years except certain requirements are met. For monkfish, B<sub>threshold</sub> was specified in Framework 2 as 1/2B<sub>Target</sub> (see below).

**B<sub>target</sub>:** A desirable biomass to maintain fishery stocks. This is usually synonymous with B<sub>MSY</sub> or its proxy, and was set in the original Monkfish FMP as the median of the 3-yr. running average of the 1965-1981 autumn trawl survey biomass index.

**Biota:** All the plant and animal life of a particular region.

**Bivalve:** A class of mollusks having a soft body with platelike gills enclosed within two shells hinged together; e.g., clams, mussels.

**Bottom roughness:** The inequalities, ridges, or projections on the surface of the seabed that are caused by the presence of bedforms, sedimentary structures, sedimentary particles, excavations, attached and unattached organisms, or other objects; generally small scale features.

**Bottom tending mobile gear:** All fishing gear that operates on or near the ocean bottom that is actively worked in order to capture fish or other marine species. Some examples of bottom tending mobile gear are otter trawls and dredges.

**Bottom tending static gear:** All fishing gear that operates on or near the ocean bottom that is not actively worked; instead, the effectiveness of this gear depends on species moving to the gear which is set in a particular manner by a vessel, and later retrieved. Some examples of bottom tending static gear are gillnets, traps, and pots.

**Boulder reef:** An elongated feature (a chain) of rocks (generally piled boulders) on the seabed.

**Bryozoans:** Phylum aquatic organisms, living for the most part in colonies of interconnected individuals. A few to many millions of these individuals may form one colony. Some bryozoans encrust rocky surfaces, shells, or algae others form lacy or fan-like colonies that in some regions may form an abundant component of limestones. Bryozoan colonies range from millimeters to meters in size, but the individuals that make up the colonies are rarely larger than a millimeter. Colonies may be mistaken for hydroids, corals or seaweed.

**Burrow:** A hole or excavation in the sea floor made by an animal (as a crab, lobster, fish, burrowing anemone) for shelter and habitation.

**Bycatch:** (v.) the capture of nontarget species in directed fisheries which occurs because fishing gear and methods are not selective enough to catch only target species; (n.) fish which are harvested in a fishery but are not sold or kept for personal use, including economic discards and regulatory discards but not fish released alive under a recreational catch and release fishery management program.

**Capacity:** the level of output a fishing fleet is able to produce given specified conditions and constraints. Maximum fishing capacity results when all fishing capital is applied over the maximum amount of available (or permitted) fishing time, assuming that all variable inputs are utilized efficiently.

**Catch:** The sum total of fish killed in a fishery in a given period. Catch is given in either weight or number of fish and may include landings, unreported landings, discards, and incidental deaths.

**Coarse sediment:** Sediment generally of the sand and gravel classes; not sediment composed primarily of mud; but the meaning depends on the context, e.g. within the mud class, silt is coarser than clay.

**Commensalism:** See *Mutualism*. An interactive association of two species where one benefits in some way, while the other species is in no way affected by the association.

**Continental shelf waters:** The waters overlying the continental shelf, which extends seaward from the shoreline and deepens gradually to the point where the sea floor begins a slightly steeper descent to the deep ocean floor; the depth of the shelf edge varies, but is approximately 200 meters in many regions.

**Crustaceans:** Invertebrates characterized by a hard outer shell and jointed appendages and bodies. They usually live in water and breathe through gills. Higher forms of this class include lobsters, shrimp and crawfish; lower forms include barnacles.

**Diatoms:** Small mobile plants (algæ) with silicified (silica, sand, quartz) skeletons. They are among the most abundant phytoplankton in cold waters, and an important part of the food chain.

**Days absent:** an estimate by port agents of trip length. This data was collected as part of the NMFS weighout system prior to May 1, 1994.

**Days-at-sea (DAS):** the time allocated by an FMP to vessels on which the vessel can exceed any incidental catch limit for the species managed by that FMP .

**Demersal species:** Most often refers to fish that live on or near the ocean bottom. They are often called benthic fish, groundfish, or bottom fish.

**Discards:** animals returned to sea after being caught; see Bycatch (n.)

**Dissolved nutrients:** Non-solid nutrients found in a liquid.

**Echinoderms:** A member of the Phylum Echinodermata. Marine animals usually characterised by a five-fold symmetry, and possessing an internal skeleton of calcite plates, and a complex water vascular system. Includes echinoids (sea urchins), crinoids (sea lillies) and asteroids (starfish).

**Ecosystem-based management:** a management approach that takes major ecosystem components and services—both structural and functional—into account, often with a multispecies or habitat perspective

**Egg stage:** One of several marked phases or periods in the development and growth of many animals. The life history stage of an animal that occurs after reproduction and refers to the developing embryo, its food store, and sometimes jelly or albumen, all surrounded by an outer shell or membrane. Occurs before the *larval* or *juvenile stage*.

**Elasmobranch:** Any of numerous fishes of the class Chondrichthyes characterized by a cartilaginous skeleton and placoid scales: sharks; rays; skates.

**Embayment:** A bay or an indentation in a coastline resembling a bay.

**Emergent epifauna:** See *Epifauna*. Animals living upon the bottom that extend a certain distance above the surface.

**Epifauna:** See *Benthic infauna*. *Epifauna* are animals that live on the surface of the substrate, and are often associated with surface structures such as rocks, shells, vegetation, or colonies of other animals.

**Essential Fish Habitat (EFH):** Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The EFH designation for most managed species in this region is based on a legal text definition and geographical area that are described in the Habitat Omnibus Amendment (1998).

**Estuarine area:** The area of an estuary and its margins; an area characterized by environments resulting from the mixing of river and sea water.

**Estuary:** A water passage where the tide meets a river current; especially an arm of the sea at the lower end of a river; characterized by an environment where the mixing of river and seawater causes marked variations in salinity and temperature in a relatively small area.

**Eutrophication:** A set of physical, chemical, and biological changes brought about when excessive nutrients are released into the water.

**Euphotic zone:** The zone in the water column where at least 1% of the incident light at the surface penetrates.

**Exclusive Economic Zone (EEZ):** a zone, the outer limit of which is 200 nautical miles from the Territorial Sea baseline (usually the shoreline) over which the U.S. government exercises jurisdiction over resources and other maritime activities.

**Exempted fisheries:** Any fishery determined by the Regional Director to have less than 5 percent regulated species as a bycatch (by weight) of total catch according to 50 CFR 648.80(a)(7).

**Fathom:** A measure of length, containing six feet; the space to which a man can extend his arms; used chiefly in measuring cables, cordage, and the depth of navigable water by soundings.

**Fishing mortality (F):** A measurement of the rate of removal of fish from a population caused by fishing. This is usually expressed as an instantaneous rate (F) and is the rate at which fish are harvested at any given point in a year. Instantaneous fishing mortality rates can be either fully recruited or biomass weighted. Fishing mortality can also be expressed as an exploitation rate (see exploitation rate) or less commonly, as a conditional rate of fishing mortality (m, fraction of fish removed during the year if no other competing sources of mortality occurred. Lower case m should not be confused with upper case M, the instantaneous rate of natural mortality).

**F<sub>0.1</sub>:** a conservative fishing mortality rate calculated as the F associated with 10 percent of the slope at origin of the yield-per-recruit curve.

**F<sub>MAX</sub>:** a fishing mortality rate that maximizes yield per recruit. F<sub>MAX</sub> is less conservative than F<sub>0.1</sub>.

**F<sub>MSY</sub>:** a fishing mortality rate that would produce MSY when the stock biomass is sufficient for producing MSY on a continuing basis.

**F<sub>threshold</sub>:** 1) The maximum fishing mortality rate allowed on a stock and used to define overfishing for status determination. Framework 2 established F<sub>MSY</sub> as the proxy for F<sub>threshold</sub>. 2) The maximum fishing mortality rate allowed for a given biomass as defined by a control rule.

**Fishing effort:** the amount of time and fishing power used to harvest fish. Fishing power is a function of gear size, boat size and horsepower.

**Framework adjustments:** adjustments within a range of measures previously specified in a fishery management plan (FMP). A change usually can be made more quickly and easily by a framework adjustment than through an amendment. For plans developed by the New England Council, the procedure requires at least two Council meetings including at least one public hearing and an evaluation of environmental impacts not already analyzed as part of the FMP.

**Furrow:** A trench in the earth made by a plow; something that resembles the track of a plow, as a marked narrow depression; a groove with raised edges.

**Glacial moraine:** A sedimentary feature deposited from glacial ice; characteristically composed of unsorted clay, sand, and gravel. Moraines typically are hummocky or ridge-shaped and are located along the sides and at the fronts of glaciers.

**Glacial till:** Unsorted sediment (clay, sand, and gravel mixtures) deposited from glacial ice.

**Grain size:** the size of individual sediment particles that form a sediment deposit; particles are separated into size classes (e.g. very fine sand, fine sand, medium sand, among others); the classes are combined into broader categories of mud, sand, and gravel; a sediment deposit can be composed of few to many different grain sizes.

**Halocline:** The zone of the ocean in which salinity increases rapidly with depth.

**Habitat complexity:** Describes or measures a habitat in terms of the variability of its characteristics and its functions, which can be biological, geological, or physical in nature. Refers to how complex the physical structure of the habitat is. A bottom habitat with *structure-forming organisms*, along with other three dimensional objects such as boulders, is more complex than a flat, featureless, bottom.

**Hydroids:** Generally, animals of the Phylum Cnidaria, Class Hydrozoa; most hydroids are bush-like polyps growing on the bottom and feed on plankton, they reproduce asexually and sexually.

**Immobile epifaunal species:** See *epifauna*. Animals living on the surface of the bottom substrate that, for the most part, remain in one place.

**Individual Fishing Quota (IFQ):** federal permit under a limited access system to harvest a quantity of fish, expressed by a unit or units representing a percentage of the total allowable catch of a fishery that may be received or held for exclusive use by an individual person or entity

**Juvenile stage:** One of several marked phases or periods in the development and growth of many animals. The life history stage of an animal that comes between the *egg* or *larval stage* and the *adult stage*; juveniles are considered immature in the sense that they are not yet capable of reproducing, yet they differ from the larval stage because they look like smaller versions of the adults.

**Landings:** The portion of the catch that is harvested for personal use or sold.

**Land runoff:** The part of precipitation, snowmelt, or irrigation water that reaches streams (and thence the sea) by flowing over the ground, or the portion of rain or snow that does not percolate into the ground and is discharged into streams instead.

**Larvae (or Larval) stage:** One of several marked phases or periods in the development and growth of many animals. The first stage of development after hatching from the *egg* for many fish and invertebrates. This life stage looks fundamentally different than the juvenile and adult stages, and is incapable of reproduction; it must undergo metamorphosis into the juvenile or adult shape or form.

**Limited-access permits:** permits issued to vessels that met certain qualification criteria by a specified date (the "control date").

**Macrobenthos:** See *Benthic community* and *Benthic infauna*. Benthic organisms whose shortest dimension is greater than or equal to 0.5 mm.

**Megafaunal species:** The component of the fauna of a region that comprises the larger animals, sometimes defined as those weighing more than 100 pounds.

**Mesh selectivity ogive:** A mathematical model used to describe the selectivity of a mesh size (proportion of fish at a specific length retained by mesh) for the entire population.  $L_{25}$  is the length where 25% of the fish encountered are retained by the mesh.  $L_{50}$  is the length where 50% of the fish encountered are retained by the mesh.

**Meter:** A measure of length, equal to 39.37 English inches, the standard of linear measure in the metric system of weights and measures. It was intended to be, and is very nearly, the ten millionth part of the distance from the equator to the north pole, as ascertained by actual measurement of an arc of a meridian.

**Metric ton:** A unit of weight equal to a thousand kilograms (1kgs = 2.2 lbs.). A metric ton is equivalent to 2,205 lbs. A thousand metric tons is equivalent to 2.2 million lbs.

**Microalgal:** Small microscopic types of algae such as the green algae.

**Microbial:** Microbial means of or relating to microorganisms.

**Mobile organisms:** organisms that are not confined or attached to one area or place, that can move on their own, are capable of movement, or are moved (often passively) by the action of the physical environment (waves, currents, etc.).

**Molluscs:** Common term for animals of the phylum Mollusca. Includes groups such as the bivalves (mussels, oysters etc.), cephalopods (squid, octopus etc.) and gastropods (abalone, snails). Over 80,000 species in total with fossils back to the Cambrian period.

**Mortality:** see Annual total mortality (A), Exploitation rate (u), Fishing mortality (F), Natural mortality (M), and instantaneous total mortality (Z).

**Motile:** Capable of self-propelled movement. A term that is sometimes used to distinguish between certain types of organisms found in water.

**Multispecies:** the group of species managed under the Northeast Multispecies Fishery Management Plan. This group includes whiting, red hake and ocean pout plus the regulated species (cod, haddock, pollock, yellowtail flounder, winter flounder, witch flounder, American plaice, windowpane flounder, white hake and redfish).

**Mutualism:** See *Commensalism*. A symbiotic interaction between two species in which both derive some benefit.

**Natural disturbance:** A change caused by natural processes; e.g. in the case of the seabed, changes can be caused by the removal or deposition of sediment by currents; such natural processes can be common or rare at a particular site.

**Natural mortality:** A measurement of the rate of death from all causes other than fishing such as predation, disease, starvation, and pollution. Commonly expressed as an instantaneous rate (M). The rate of natural mortality varies from species to species, but is assumed to be  $M=0.2$  for the five critical stocks. The natural mortality rate can also be expressed as a conditional rate (termed  $n$  and not additive with competing sources of mortality such as fishing) or as annual expectation of natural death (termed  $v$  and additive with other annual expectations of death).

**Nearshore area:** The area extending outward an indefinite but usually short distance from shore; an area commonly affected by tides and tidal and storm currents, and shoreline processes.

**Nematodes:** a group of elongated, cylindrical worms belonging to the phylum Nematoda, also called thread-worms or eel-worms. Some non-marine species attack roots or leaves of plants, others are parasites on animals or insects.

**Nemertean:** Proboscis worms belonging to the phylum Nemertea, and are soft unsegmented marine worms that have a threadlike proboscis and the ability to stretch and contract.

**Nemipterids:** Fishes of the Family Nemipteridae, the threadfin breams or whiptail breams. Distribution: Tropical and sub-tropical Indo-West Pacific.

**Northeast Shelf Ecosystem:** The Northeast U.S. Shelf Ecosystem has been described as including the area from the Gulf of Maine south to Cape Hatteras, extending from the coast seaward to the edge of the continental shelf, including the slope sea offshore to the Gulf Stream.

**Northwest Atlantic Analysis Area (NAAA):** A spatial area developed for analysis purposes only. The boundaries of this the area are within the 500 fathom line to the east, the coastline to the west, the Hague line to the north, and the North Carolina/ South Carolina border to the south. The area is approximately 83,550 square nautical miles, and is used as the denominator in the EFH analysis to determine the percent of sediment, EFH, and biomass contained in an area, as compared to the total NAAA.

**Nutrient budgets:** An accounting of nutrient inputs to and production by a defined ecosystem (e.g., salt marsh, estuary) versus utilization within and export from the ecosystem.

**Observer:** any person required or authorized to be carried on a vessel for conservation and management purposes by regulations or permits under this Act

**Oligochaetes:** See *Polychaetes*. Oligochaetes are worms in the phylum Annelida having bristles borne singly along the length of the body.

**Open access:** describes a fishery or permit for which there is no qualification criteria to participate. Open-access permits may be issued with restrictions on fishing (for example, the type of gear that may be used or the amount of fish that may be caught).

**Opportunistic species:** Species that colonize disturbed or polluted sediments. These species are often small, grow rapidly, have short life spans, and produce many offspring.

**Optimum Yield (OY):** the amount of fish which A) will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems; B) is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor; and C) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the maximum sustainable yield in such fishery

**Organic matter:** Material of, relating to, or derived from living organisms.

**Overfished:** A condition defined when stock biomass is below minimum biomass threshold and the probability of successful spawning production is low.

**Overfishing:** A level or rate of fishing mortality that jeopardizes the long-term capacity of a stock or stock complex to produce MSY on a continuing basis.

**Peat bank:** A bank feature composed of partially carbonized, decomposed vegetable tissue formed by partial decomposition of various plants in water; may occur along shorelines.

**Pelagic gear:** Mobile or static fishing gear that is not fixed, and is used within the water column, not on the ocean bottom. Some examples are mid-water trawls and pelagic longlines.

**Phytoplankton:** Microscopic marine plants (mostly algae and diatoms) which are responsible for most of the photosynthetic activity in the oceans.

**Piscivore:** A species feeding preferably on fish.

**Planktivore:** An animal that feeds on plankton.

**Polychaetes:** Polychaetes are segmented worms in the phylum Annelida. Polychaetes (poly-chaetae = many-setae) differ from other annelids in having many setae (small bristles held in tight bundles) on each segment.

**Porosity:** The amount of free space in a volume of a material; e.g. the space that is filled by water between sediment particles in a cubic centimeter of seabed sediment.

**Pre-recruits:** Fish in size or age groups that are not vulnerable to the fishery (including discards).

**Prey availability:** The availability or accessibility of prey (food) to a predator. Important for growth and survival.

**Primary production:** The synthesis of organic materials from inorganic substances by photosynthesis.

**Recovery time:** The period of time required for something (e.g. a habitat) to achieve its former state after being disturbed.

**Recruitment:** the amount of fish added to the fishery each year due to growth and/or migration into the fishing area. For example, the number of fish that grow to become vulnerable to fishing gear in one year would be the recruitment to the fishery. “Recruitment” also refers to new year classes entering the population (prior to recruiting to the fishery).

**Recruitment overfishing:** fishing at an exploitation rate that reduces the population biomass to a point where recruitment is substantially reduced.

**Regulated groundfish species:** cod, haddock, pollock, yellowtail flounder, winter flounder, witch flounder, American plaice, windowpane flounder, white hake and redfish. These species are usually targeted with large-mesh net gear.

**Relative exploitation:** an index of exploitation derived by dividing landings by trawl survey biomass. This measure does not provide an absolute magnitude of exploitation but allows for general statements about trends in exploitation.

**Riverine area:** The area of a river and its banks.

**Saurids:** Fish of the family Scomberesocidae, the sauries or needlefishes. Distribution: tropical and temperate waters.

**Scavenging species:** An animal that consumes dead organic material.

**Sea whips:** A coral that forms long flexible structures with few or no branches and is common on Atlantic reefs.

**Sea pens:** An animal related to corals and sea anemones with a featherlike form.

**Sediment:** Material deposited by water, wind, or glaciers.

**Sediment suspension:** The process by which sediments are suspended in water as a result of disturbance.

**Sedentary:** See *Motile* and *Mobile organisms*. Not moving. Organisms that spend the majority of their lives in one place.

**Sedimentary bedforms:** Wave-like structures of sediment characterized by crests and troughs that are formed on the seabed or land surface by the erosion, transport, and deposition of particles by water and wind currents; e.g. ripples, dunes.

**Sedimentary structures:** Structures of sediment formed on the seabed or land surface by the erosion, transport, and deposition of particles by water and wind currents; e.g. ripples, dunes, buildups around boulders, among others.

**Sediment types:** Major combinations of sediment grain sizes that form a sediment deposit, e.g. mud, sand, gravel, sandy gravel, muddy sand, among others.

**Spawning adult stage:** See *adult stage*. Adults that are currently producing or depositing eggs.

**Spawning stock biomass (SSB):** the total weight of fish in a stock that sexually mature, i.e., are old enough to reproduce.

**Species assemblage:** Several species occurring together in a particular location or region

**Species composition:** A term relating the relative abundance of one species to another using a common measurement; the proportion (percentage) of various species in relation to the total on a given area.

**Species diversity:** The number of different species in an area and their relative abundance

**Species richness:** See *Species diversity*. A measurement or expression of the number of species present in an area; the more species present, the higher the degree of species richness.

**Species with vulnerable EFH:** If a species was determined to be “highly” or “moderately” vulnerable to bottom tending gears (otter trawls, scallop dredges, or clam dredges) then it was included in the list of species with vulnerable EFH. Currently there are 23 species and life stages that are considered to have vulnerable EFH for this analysis.

**Status Determination:** A determination of stock status relative to  $B_{\text{threshold}}$  (defines overfished) and  $F_{\text{threshold}}$  (defines overfishing). A determination of either overfished or overfishing triggers a SFA requirement for rebuilding plan (overfished), ending overfishing (overfishing) or both.

**Stock:** A grouping of fish usually based on genetic relationship, geographic distribution and movement patterns. A region may have more than one stock of a species (for example, Gulf of Maine cod and Georges Bank cod). A species, subspecies, geographical grouping, or other category of fish capable of management as a unit.

**Stock assessment:** determining the number (abundance/biomass) and status (life-history characteristics, including age distribution, natural mortality rate, age at maturity, fecundity as a function of age) of individuals in a stock

**Structure-forming organisms:** Organisms, such as corals, colonial bryozoans, hydroids, sponges, mussel beds, oyster beds, and seagrass that by their presence create a three-dimensional physical structure on the bottom. See *biogenic habitats*.

**Submerged aquatic vegetation:** Rooted aquatic vegetation, such as seagrasses, that cannot withstand excessive drying and therefore live with their leaves at or below the water surface in shallow areas of estuaries where light can penetrate to the bottom sediments. SAV provides an important habitat for young fish and other aquatic organisms.

**Surficial sediment:** Sediment forming the sea floor or land surface; thickness of the surficial layer may vary.

**Surplus production:** Production of new stock biomass defined by recruitment plus somatic growth minus biomass loss due to natural deaths. The rate of surplus production is directly

proportional to stock biomass and its relative distance from the maximum stock size at carrying capacity (K).  $B_{MSY}$  is often defined as the biomass that maximizes surplus production rate.

**Surplus production models:** A family of analytical models used to describe stock dynamics based on catch in weight and CPUE time series (fishery dependent or survey) to construct stock biomass history. These models do not require catch at age information. Model outputs may include stock biomass history, biomass weighted fishing mortality rates,  $MSY$ ,  $F_{MSY}$ ,  $B_{MSY}$ ,  $K$ , (maximum population biomass where stock growth and natural deaths are balanced) and  $r$  (intrinsic rate of increase).

**Survival rate (S):** Rate of survival expressed as the fraction of a cohort surviving the a period compared to number alive at the beginning of the period (# survivors at the end of the year / numbers alive at the beginning of the year). Pessimists convert survival rates into annual total mortality rate using the relationship  $A=1-S$ .

**Survival ratio (R/SSB):** an index of the survivability from egg to age-of-recruitment. Declining ratios suggest that the survival rate from egg to age-of-recruitment is declining.

**TAC:** Total allowable catch. This value is calculated by applying a target fishing mortality rate to exploitable biomass.

**Ten-minute- “squares” of latitude and longitude (TMS):** Are a measure of geographic space. The actual size of a ten-minute-square varies depending on where it is on the surface of the earth, but in general each square is approximately 70-80 square nautical miles in this region. This is the spatial area that EFH designations, biomass data, and some of the effort data have been binned into for analysis purposes in various sections of this document.

**Topography:** The depiction of the shape and elevation of land and sea floor surfaces.

**Total mortality:** The rate of mortality from all sources (fishing, natural, pollution) Total mortality can be expressed as an instantaneous rate (called  $Z$  and equal to  $F + M$ ) or Annual rate (called  $A$  and calculated as the ratio of total deaths in a year divided by number alive at the beginning of the year)

**Trophic guild:** Trophic is defined as the feeding level within a system that an organism occupies; e.g., predator, herbivore. A guild is defined as a group of species that exploit the same class of environmental resources in a similar way. The trophic guild is a utilitarian concept covering both structure and organization that exists between the structural categories of trophic groups and species.

**Turbidity:** Relative water clarity; a measurement of the extent to which light passing through water is reduced due to suspended materials.

**Vulnerability:** In order to evaluate the potential adverse effects of fishing on EFH, the vulnerability of each species EFH was determined. This analysis defines vulnerability as the likelihood that the functional value of EFH would be adversely affected as a result of fishing with different gear types. A number of criteria were considered in the evaluation of the

vulnerability of EFH for each life stage including factors like the function of habitat for shelter, food and/or reproduction.

**Yield-per-recruit (YPR):** the expected yield (weight) of individual fish calculated for a given fishing mortality rate and exploitation pattern and incorporating the growth characteristics and natural mortality.

**Yearclass:** also called cohort. Fish that were spawned in the same year. By convention, the “birth date” is set to January 1st and a fish must experience a summer before turning 1. For example, winter flounder that were spawned in February-April 1997 are all part of the 1997 cohort (or year-class). They would be considered age 0 in 1997, age 1 in 1998, etc. A summer flounder spawned in October 1997 would have its birth date set to the following January 1 and would be considered age 0 in 1998, age 1 in 1999, etc.

**Zooplankton:** See *Phytoplankton*. Small, often microscopic animals that drift in currents. They feed on detritus, phytoplankton, and other zooplankton. They are preyed upon by fish, shellfish, whales, and other zooplankton.

## **8.2 Regulatory Impact Review**

This section addresses the requirements of Executive Order 12866 and the Regulatory Flexibility Act.

### **8.2.1 Executive Order 12866**

E.O. 12866 requires a review of proposed regulations to determine whether the expected effects would be significant, where a significant action is any regulatory action that may

- 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, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a 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 the Executive Order.

Of these four criteria, the following discussion focuses only on the expected magnitude of the economic impacts of the proposed action. While a summary of these impacts is provided here, a more detailed discussion appears in Section 6.4.1.

The proposed action would implement a number of changes to the monkfish fishery, some technical in nature and some more administrative. Changes in the incidental catch limit for vessels fishing with small mesh, scallop and clam dredge vessels, and summer flounder vessels fishing west of 72°30' W are proposed, which would reduce the amount of monkfish being discarded while enhancing economic opportunities. A proposed change in the minimum fish size in the southern management area would also work towards this goal. Economic analysis provided in Section 6.4.1 finds that using FY2001 data the maximum revenue gain from the proposed changes to incidental trip limits would be just over \$500,000. It is not possible to assess accurately the economic benefit of the change in minimum fish size without detailed information on the size distribution of the commercial catch in both areas.

Elimination of the requirement for limited access vessels to take a 20-day block out of the fishery is proposed, which will provide vessels with greater flexibility in deciding when to fish for monkfish. Another change that may assist vessels in using their available time more wisely is the proposed establishment of an offshore SFMA fishery. Economic opportunities would be restored for some vessels fishing south of 38° 20'N under the proposed modification of permit qualifications for these vessels. It is possible that the addition of these vessels will have an impact on the trip limits for other vessels fishing in the SFMA since the TAC would be distributed over an increased number of vessels, but the economic impact from this change cannot be accurately estimated.

Additions to the list of actions that may be considered under the framework adjustment procedure are also proposed, but these changes are administrative in nature and do not entail economic impacts. Vessels issued a High Seas Fishing Compliance permit and fishing in the NAFO regulatory area would be freed from the regulatory burden of compliance with EEZ regulations under the proposed exemption program. While the economic impact of this change is likely to be positive due to the regulatory relief afforded, the magnitude of the impact cannot be estimated.

Measures to minimize the impact of the monkfish fishery on EFH are also proposed. Trawl roller gear would be limited to a diameter of six inches for vessels fishing on a monkfish DAS in the SFMA, and Oceanographer and Lydonia Canyons would be closed to monkfish vessels. The economic effect of the canyon closures is estimated to be zero since no trips took place in the closure area during 1999 and 2001, while the impact of the change in roller gear diameter is mitigated since most vessels fishing in the SFMA already use this size.

Two alternatives for facilitating cooperative research programs are proposed, a research DAS set-aside and a DAS exemption program. While it is possible that vessels using their full allocation of DAS and not participating in these programs will lose fishing opportunities, the change is distributional in nature since vessels participating in such programs may see an increase in their fishing opportunities, and vessels not using their full allocation will not be affected. Finally, elimination of the dual vessel-upgrading baseline applying to a vessel modified or replaced between the time it received its multispecies or scallop limited entry permit and its monkfish limited entry permit is proposed. The vessel's baseline would be that which applied when the vessel received its original federal permit. This change would not have an immediate economic impact on a vessel's ability to earn fishing income since no proposed measures are tied to the physical dimensions of the vessel.

Overall, the economic effect of the proposed measures will be to increase flexibility in monkfish trip planning and scheduling while providing participants with greater opportunities to retain monkfish. While there may be some short-run costs associated with some of the measures, the protection afforded to EFH and the potential benefits to stock rebuilding can be reasonably expected to contribute to the recovery of the stock. As stock size increases and it becomes possible to ease restrictions on fishing for and the retention of monkfish, both consumers and producers will see economic benefits. Profits for fishing vessels should increase as they are permitted to retain more monkfish while using fewer inputs. This should be at least somewhat offset by reductions in the price received for monkfish as the market supply increases, but the efficiency gains can be expected to lead to greater profitability. As supply increases, the price of monkfish for consumers will also decrease, so they will also benefit. The magnitude of these changes and their distribution between consumers and producers will depend on the slope of the demand and supply curves, but it is reasonable to assume that these changes will be positive from a net national benefit standpoint.

The aggregate economic impact of the proposed measures would not rise to the \$100 million threshold for a significant action. As discussed above, using FY2001 data the maximum revenue gain from the proposed changes to incidental trip limits would be just over \$500,000. While accurate assessment of economic benefits for changes to the other proposed measures is not possible due to data limitations or the nature of the changes, these changes would be reasonably

expected to have only a small economic impact. Therefore, the proposed action is not significant for purposes of E.O. 12866.

## **8.2.2 Regulatory Flexibility Act**

The proposed actions would provide regulatory relief to small fishing vessels participating in the monkfish fishery. In 2001, there were 723 monkfish limited access vessels, 687 of which were participants during FY2001. In addition, there were 1977 incidental catch permits, 1023 of which participated in the fishery. Under the SBA size standards for small fishing entities (\$3.5 million), all of the participating vessels are considered small, as gross sales by any entity do not exceed this threshold.

The proposed actions will affect differing numbers of current and potential participating vessels within the fishery. For this reason, the discussion below addresses each proposed action separately, identifying where possible the conditions under which vessels may participate, the potential number of affected entities, and an assessment of the possible economic impacts. Since the economic impacts of the proposed action and non-preferred alternatives are discussed in detail in Section 6.4, this section provides only a summary of these impacts.

### **8.2.2.1 Incidental catch trip limit**

Using FY2001 VTR records, the change to the trip limit for incidental catch would affect 835 trips by 112 vessels, providing these small entities an opportunity to retain more monkfish than under current conditions. Since the proposed change represents an increase over current trip limits, it is impossible to provide a precise estimate of the economic benefit provided by the change, however, an upper bound estimate of the economic benefit can be calculated by assuming that all trips would retain the maximum allowable limit. Using the average 2001 monkfish price of \$2.53 per lb., the maximum revenue gain would be \$192,000, an average benefit of \$1,700 in gross fishing revenue for the 112 vessels that would benefit.

Under the non-preferred alternative that would have increased the maximum amount of monkfish that could be retained by extending the maximum trip duration to 10 days over which the benefits could accrue, the maximum revenue gain for the 112 affected vessels would increase to \$322,000, an average benefit of \$2,900 per vessel.

### **8.2.2.2 Incidental catch trip limit – general category scallop dredge and clam dredge vessels**

Based on FY2001 VTR data, 1,620 trips by 52 vessels would potentially be affected by the proposed change to the incidental catch limit for general category scallop and clam dredge vessels. Most of these trips were 24 hours or less and nearly all were less than 48 hours. Thus, the maximum benefit from a 50 lb. trip limit would be \$204,000, again using the average 2001 monkfish price of \$2.53 per pound. This maximum benefit assumes that catch rates on every trip would be at least 50 lbs., which is unlikely since the median landings on incidental landings were only 25 lbs. At this median level, the revenue gain would be approximately \$102,000, an average of just under \$2,000 per vessel. The proposed incidental trip limit would provide only a modest increase above this level since few general category scallop or clam dredge trips are more than 24 hours, and nearly all are less than 48 hours. Assuming median landings, the maximum benefit would be only \$10,250 more than that of the 50 lb. incidental trip limit.

### **8.2.2.3 Incidental catch trip limit – summer flounder vessels west of 72°30'W**

Based on FY2001 VTR records, the proposed change to the incidental catch limit for summer flounder vessels would affect 114 vessels. Using these VTR records, an estimate of the potential revenues that would be restored to these vessels can be calculated. Adjusting the observed monkfish landings by the current incidental catch limit of 50 lbs. per trip, the average annual restored landings per vessel would be 326 lbs., translating to \$825 per vessel at the average 2001 monkfish price per pound of \$2.53. However, the impact varies greatly across vessels, ranging from no impact for vessels without an observed trip exceeding 50 lbs. to almost \$10,000.

### **8.2.2.4 Minimum fish size**

The proposed change to the minimum fish size affects only vessels that fish in the SFMA, since the minimum size will now be uniform between the 2 management areas, at the current size restriction in the NFMA. Thus, for FY2001 the 170 vessels that fished in the SFMA only would face reduced regulatory burden as well as increased economic opportunities. The 73 additional vessels that chose to fish in both management areas would also benefit, though only on the trips they take to the SFMA. However, as was noted above, without detailed information on the size distribution of the commercial catch in both areas an accurate assessment of the economic benefit that will accrue to each vessel is not possible.

Other non-preferred alternatives for minimum fish size included a uniform 10-inch minimum tail size, eliminating the minimum size requirement, and an alternative that was contingent on the adoption of a monkfish-only DAS program and would have applied a different minimum size when the vessel was on a monkfish-only DAS. As with the proposed change, it is impossible to estimate with any accuracy the economic benefit of these alternatives without information on the size distribution of the catch. However, the 10-inch minimum tail size option would have increased economic opportunities for all vessels fishing for monkfish, and eliminating the minimum size would have provided for the greatest economic opportunity for vessels participating in the monkfish fishery. The alternative that was contingent on the non-preferred monkfish-only DAS program could possibly have resulted in losses in economic opportunity for vessels fishing in the NFMA on a monkfish-only DAS.

### **8.2.2.5 Closed season or time out of the fishery**

The proposal to remove the 20-day block out of the fishery requirement would result in a reduction in regulatory burden compared to current conditions for the 45 Category A and B monkfish limited access vessels. Currently, category C & D vessels also holding a scallop permit do not face this requirement, and those holding a multispecies permit, are required to take a 20-day block under the Multispecies FMP. However, the extent of the regulatory relief provided by the removal of this requirement is unknown. The 20-day block out of the fishery only means that vessels cannot call in a monkfish DAS. The vessels are still able to fish in other fisheries and retain monkfish up to the bycatch limits for those fisheries. Since the 20-day block may be taken at any time during the prescribed period, vessels can choose the block they expect to be the most advantageous. Nonetheless, as was earlier noted, removal of this requirement does afford the vessels greater flexibility in choosing when to fish for monkfish and when to fish for other species.

The non-preferred alternative would have doubled the current 20-day block to 40 days where vessels could choose to take the entire 40 days consecutively or as two 20-day blocks. This

change would have placed a greater burden on trip scheduling and planning since weather can be quite variable during the season. While the economic impacts are unclear, this alternative would have been more burdensome than the no action alternative in a relative sense.

If monkfish DAS had been separated, scallop vessels would also have been required to take time out of the monkfish fishery. This would have represented a change from the flexibility currently available to scallop vessels, but the impact may not have been substantial since scallop vessels would more likely be engaged in a directed scallop fishery than a monkfish fishery due to improvements in the scallop resource. Further, if scallop vessels took advantage of separated monkfish DAS to take a monkfish-only trip, they would be more likely to take such a trip during the fall and early winter months when monkfish prices are peaking. Therefore, there would not likely have been an adverse impact on scallop vessels from the time-out requirement.

#### **8.2.2.6 Offshore SFMA fishery**

The proposed offshore SFMA monkfish fishery program would be voluntary and would allow vessels to use their available fishing time more efficiently by effectively increasing the amount of monkfish that could be retained per DAS. Over a fishing season, a vessel participating in the program could potentially achieve higher profitability because more monkfish could be retained using fewer overall inputs. While VMS would be required for participating vessels and vessels currently not having VMS would have to bear the cost of installation, each individual would be able to weigh the benefits and costs of participating in the program.

#### **8.2.2.7 Modification of permit qualifications for south of 38°00'N**

Economic opportunities would be restored for some vessels fishing south of 38° 00'N under the proposed modification of permit qualifications for these vessels. It is possible that the addition of these vessels will have an impact on the trip limits for other vessels fishing in the SFMA since the TAC would be distributed over an increased number of vessels, but this economic impact from this change cannot be accurately estimated. Preliminary estimates indicate that 5 additional vessels would qualify for a limited access monkfish permit under the proposed action, while the non-preferred alternatives for qualification criteria would have granted permits to either 3 or 7 vessels. From January 1, 1995 to the implementation date of the FMP in November, 1999, these 5 vessels averaged approximately \$78,000 in revenues from monkfish, out of total revenues of \$480,000 for the period.

#### **8.2.2.8 Modifications to the framework adjustment procedure**

The proposed action would modify the framework adjustment process, expanding the list of frameworkable measures to include transferable monkfish DAS, measures to minimize impact on protected species, and requirements to use bycatch reduction devices. While the individual frameworkable measures have associated economic impacts and regulatory burdens, adding these measures to the list of actions that can be taken under the framework adjustment process is administrative in nature and does not affect the current situation faced by any participant in the fishery. The economic impact of each measure will be analyzed in the associated framework action, should the measures be given further consideration by the Councils.

#### **8.2.2.9 NAFO regulated area exemption program**

The proposed action would exempt anyone fishing in the NAFO regulatory area from EEZ regulations. Vessels would be assumed compliant with NAFO regulations and would be issued a

High Seas Fishing Compliance permit, relieving participating vessels from dual compliance with both NAFO and EEZ regulations. While this will provide vessels with greater flexibility compared to current regulations, the economic impact of this change cannot be estimated since the extent that current regulations inhibit domestic vessels from participating in the NAFO Regulatory Area is unknown. However, this reduction in regulatory burden would be likely to have a positive economic impact since the EEZ measures are more restrictive than their NAFO counterparts.

#### **8.2.2.10 Measures to minimize fishery impact on EFH**

It is impossible to calculate the economic impacts of the proposed actions to minimize the impact of the monkfish fishery on EFH using available data. Restricting the trawl roller gear diameter to a six-inch maximum for vessels fishing on a monkfish DAS in the SFMA may have some short-term negative economic on some vessels, since vessels using non-conforming gear will be required to bear the cost of making the necessary change. However, this roller gear diameter is already used by most vessels in the SFMA, thus reducing the potential impact, although the effect is not quantifiable since the number of non-conforming vessels cannot be determined.

The economic effect of the proposed closure of Oceanographer and Lydonia Canyons to monkfish vessels was estimated by identifying the fishing activity taking place within the areas using the position coordinates provided in VTRs for calendar years 1999 and 2001. No trips were identified as having taken place within the proposed closure area, so based upon this analysis the economic effect of the closure would be zero.

Among the non-preferred alternatives were measures to change the trawl configuration and a proposal to close up to 12 large, steep-walled canyons. The proposed changes to the trawl configuration could have had some short-term negative economic effects depending on the trawl configuration chosen and the management area in which the configuration would have applied. Vessels would have borne the cost of changes to any non-conforming gear, and vessels may not have been able to fish in certain areas. Using 2001 VTR data, closing the 12 canyons would have affected between 3 and 24 trips depending on the option chosen, so this alternative would have been more burdensome than the chosen alternative.

#### **8.2.2.11 Cooperative research programs funding**

The economic impacts of the changes to the cooperative research programs funding would be at most redistributive in nature. The 500 DAS set-aside that will be established will be drawn equally from the DAS allocations of all monkfish vessels. Thus, monkfish vessels that use their full allocation of DAS and do not participate in research projects will experience a loss in fishing opportunities, while other vessels could expand their fishing opportunities through participation in such projects. Vessels not using their full allocation of DAS will not be affected.

#### **8.2.2.12 Clarification of vessel baseline history**

Clarification of vessel baseline would not have an immediate economic impact on a vessel's ability to earn fishing income in the monkfish fishery, since no proposed measures are tied to the physical dimensions of the vessels. However, the value of the vessel could be affected depending on whether the baseline is higher or lower than the current monkfish baseline, and there may be implications for the pool of trading partners should a DAS leasing program be developed.

#### **8.2.2.13 Other non-preferred alternatives.**

Several alternatives that were considered by the Councils but not adopted do not appear in the preceding discussion. There was a proposal to modify the requirement that monkfish vessels also holding a scallop or multispecies limited access permit must use a scallop or multispecies DAS while fishing on a monkfish DAS. Another proposed change was to the minimum trawl mesh size on directed monkfish DAS. A NFMA monkfish trawl experimental fishery was proposed. Finally, there was a proposal to change the fishing year for monkfish. The economic impacts of these non-preferred alternatives are discussed below.

##### **8.2.2.13.1 Monkfish DAS usage by scallop and multispecies limited access permit holders**

The economic impact of separating DAS on the 328 Category C and 334 Category D permit holders would have depended on whether they held a multispecies or scallop permit and where they fish or plan to fish. Overall, separation of DAS would not make any vessel worse off than under the no action alternative, since all vessels would have the option to fish under current regulations rather than under separated DAS. The economic impact, therefore, was likely to have been positive or at worst neutral relative to the no action alternative. However, this assumes that the overall effort level within the monkfish fishery would not have changed because of the DAS separation. If vessels that were previously not active in the fishery became so due to separated DAS, the trip limits and DAS allocated to currently active vessels would have to be reduced proportionally to maintain the same overall level of effort. In this case, the economic opportunities of current participants in the fishery could have been reduced.

##### **8.2.2.13.2 Minimum trawl mesh size on directed monkfish DAS**

Had any of the mesh alternatives been adopted, vessels would have been required to replace any nonconforming gear to the appropriate configuration. Since the alternatives would have applied only to trawl gear, the economic effects would have been felt only by vessels using large mesh otter trawls.

##### **8.2.2.13.3 NFMA monkfish trawl experimental fishery**

If the experimental fishery had been approved, vessels would have been able to retain both their groundfish and monkfish catch while engaged in the experiment. Had the experiment proven successful, an exempted trawl fishery could have been established allowing a larger number of vessels increased fishing opportunities under DAS separation. Since DAS separation was rejected, there would be little economic benefit for trawl vessels to use larger mesh since they would be better off using groundfish gear and fishing with no trip limit in the NFMA.

##### **8.2.2.13.4 Change fishing year**

While one of the proposed options would have increased the cost of applying for and administering renewals of permits by putting monkfish at odds with the renewal schedule of every other FMP in the Northeast, this non-preferred alternative would have had limited economic impact.

### **8.3 Endangered Species Act**

Section 7 of the Endangered Species Act requires federal agencies conducting, authorizing or funding activities that affect threatened or endangered species to ensure that those effects do not

jeopardize the continued existence of listed species. The Councils have concluded that while most of the measures proposed in this amendment will have no impact on fishery interactions with protected species, some potential negative impacts may result from eliminating the closed season and modifying the permit qualification criteria for vessels fishing in the southernmost range of the fishery. Conversely, the Councils have concluded that the offshore fishery program may have a positive effect on fishery-protected species interactions as a result of the reduced DAS allocations to participating vessels. The Councils expect these impacts, positive or negative, will not be significant and the overall effect of the proposed amendment and the prosecution of the monkfish fishery is not likely to jeopardize any ESA-listed species, or alter or modify any critical habitat, based on the discussion of impacts in this document. The Councils are seeking the concurrence of NMFS in this matter. For further information on the potential impacts of this fishery and the proposed management action on listed species see Sections 5.1.7 and 6.2.3 of this document.

#### **8.4 Marine Mammal Protection Act**

The Councils have reviewed the impacts of the Monkfish FMP and this amendment on marine mammals, and have concluded that the management actions proposed are consistent with the provisions of the MMPA are not likely to produce negative impacts beyond the status quo, and will not alter any existing measures to protect the species likely to inhabit the monkfish fishery management unit. For further information on the potential impacts of the fishery, and the proposed management action on marine mammals, see Sections 5.1.7 and 6.2.3 of this document.

#### **8.5 Coastal Zone Management Act**

The Council has made an initial determination that the proposed action is consistent to the maximum extent practicable with the approved coastal management programs of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina. This determination is being submitted for review by the responsible state agencies under §307 of the Coastal Zone Management Act concurrent with the submission of the proposed action to NMFS for review and implementation.

#### **8.6 Paperwork Reduction Act**

Materials and analysis required under the PRA will be submitted separately and presented in the Amendment 2 proposed rule.

#### **8.7 Data Quality Act**

The following sections address the requirements of the Data Quality Act pursuant to the Office of Management and Budget Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by Federal Agencies (*67 Federal Register* 8451, February 22, 2002).

#### **1. Utility of Information Product:**

The intended users of the information contained in Amendment 2 are individuals involved in the monkfish fishery, including fishing vessels, fish dealers, fish processors, and other persons interested in the management of the monkfish fishery. The information contained in this FSEIS is beneficial to the intended users (the affected public) by presenting a clear description of the purpose and need of the proposed action, the measures being proposed, and the impacts of those measures. Specifically, the FSEIS provides the intended users with a comprehensive analysis

(biological, social, economic, and cumulative) of the impacts of the proposed management measures contained in Amendment 2, and rationale behind the selection of these measures. The FSEIS will also contain a discussion of the impacts of the alternative management measures that were considered in the DSEIS, but were not selected as preferred alternatives by the Councils, including a discussion concerning why these alternatives were not selected. Finally, the proposed rule for Amendment 2 will provide the public with the opportunity to comment on the proposed management measures contained in this FSEIS.

The information contained in the FSEIS includes detailed, and relatively recent information on the monkfish resource, and fishing gear impacts, and therefore represents an improvement over previously available information. For example, Appendix II contains an extensive gear effects evaluation. The document has been revised based on comments received on the DSEIS. Specifically, the document outlines the management measures being proposed by the New England and Mid-Atlantic Fishery Management Councils after taking into account public comments on the proposed alternatives contained in the DSEIS.

The information product will be subject to public comment through proposed rulemaking, as required under the Administrative Procedure Act, and therefore, may be improved based on any comments received. Furthermore, the NOA for Amendment 2 will provide a 60-day public comment period on the amendment as required by the Magnuson-Stevens Fishery Conservation and Management Act.

The media being used in the dissemination of the information contained in Amendment 2 will be the Federal Register notices for the proposed rule, the (Notice of Availability) NOA for the amendment, and the NOA for the FSEIS. These documents will be made available in printed publication and on the Northeast Regional Office Internet website ([www.nero.noaa.gov](http://www.nero.noaa.gov)). In addition, the FSEIS will be made available on CD-rom from the New England Fishery Management Council, and on their website at [www.nefmc.org](http://www.nefmc.org).

## **2. Integrity of Information Product:**

Prior to dissemination, information associated with this action, independent of the specific intended distribution mechanism, is safeguarded from improper access, modification, or destruction, to a degree commensurate with the risk and magnitude of harm that could result from the loss, misuse, or unauthorized access to or modification of such information. All electronic information disseminated by NOAA Fisheries adheres to the standards set out in Appendix III, "Security of Automated Information Resources," of OMB Circular A-130; the Computer Security Act; and the Government Information Security Act. All confidential (e.g., dealer purchase reports) is safeguarded pursuant to the Privacy Act; Titles 13, 15, and 22 of the U.S. Code (confidentiality of census, business and financial information); the Confidentiality of Statistics provisions of the Magnuson-Stevens Fishery Conservation and Management Act; and NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics.

## **3. Objectivity of Information Product**

For the purpose of the Pre-Dissemination Review, this document is considered to be a "Natural Resource Plan." Accordingly, the document adheres to the published standards of the Magnuson-Stevens Act; the Operational Guidelines, Fishery Management Plan Process; the Essential Fish Habitat Guidelines; the National Standard Guidelines; and NOAA Administrative

Order 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act.

National Standard 2 of the Magnuson-Stevens Act states that a FMP's conservation and management measures shall be based upon the best scientific information available. Several sources of data were used in the development of Amendment 2, including the analysis of impacts. These data sources include, but are not limited to, landings data from vessel trip reports and dealer weighout reports, catch data collected in the NOAA Fisheries Observer Program, effort data collected in the DAS call-in and, where applicable, the electronic vessel monitoring system programs, fisheries independent data collected in the NOAA Fisheries bottom trawl surveys, cooperative research projects, and deep-sea corals and habitat data collected by NOAA-funded National Undersea Research Center. The Councils and NOAA Fisheries have determined that these are the best available scientific data.

The proposed management measures contained in Amendment 2 represent the policy choices made, and are supported by the available science. The management measures contained in Amendment 2 are designed to meet the conservation goals and objectives of the FMP, and prevent overfishing and rebuild the monkfish resource while maintaining a sustainable level of monkfish harvest, and to be consistent with the National Standards established in the Magnuson-Stevens Act. The proposed management measures are fully described in Section 4.1 of the document in order to distinguish them from associated analyses and underlying science, which is subsequently described in different sections, and consistent with the EIS format prescribed by NEPA.

The data and analyses used to develop and analyze the measures contained in Amendment 2 are included in this FSEIS, and will be summarized in the proposed and final rules for the amendment. Further, the FSEIS includes appropriate references to sections of the document that contain detailed descriptions of source material (i.e. literature cited, appendices), as well as references to tables, figures and analyses.

The information contained in this FSEIS concerning monkfish stock status was peer reviewed according to standard methodology (Stock Assessment Review Committee; SARC). Furthermore, scientists of diverse affiliation (Federal, State, Private, International) were involved in the development of Amendment 2 through the input of various committees and entities (e.g., Plan Development Team, Scientific and Statistical Committee, Northeast Fisheries Science Center, New England Fishery Management Council, Habitat Technical Committee).

With respect to the review of Amendment 2, the review process will involve the New England Fishery Management Council, the Northeast Fisheries Science Center (Center), the Northeast Regional Office, and NOAA Fisheries headquarters. The Center's technical review is conducted by senior level scientists with specialties in population dynamics, stock assessment methods, population biology, economics, and sociology. The Council review process involves public meetings at which affected stakeholders have opportunities to provide comments on the Amendment. Reviews by staff at the Regional Office are conducted by those with expertise in fisheries management and policy, habitat conservation, protected species, and compliance with the applicable law. Final approval of Amendment 2 and clearance of the proposed rule is conducted by staff at NOAA Fisheries Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget.

## **8.8 Executive Order 12898 – Environmental Justice**

Executive Order (E.O.) 12898 requires that, “to the greatest extent practicable and permitted by law... each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions...” The neutral or positive outcomes that have been predicted in this amendment may differentially affect some populations. However, due to data constraints and other concerns the means for conducting this analysis are not yet available. Due to the mobile lifestyle of many vessel crew members and processing plant workers, the U.S. Census does not adequately capture these populations. Nonetheless, many of the participants in the monkfish industry (crew and shoreside support industries) may come from lower income and/or ethnic minority populations who may be vulnerable to more restrictive management measures. This amendment is not expected to disproportionately or adversely effect the health or human environment of minority or low-income populations, given the overall conclusions of no significant environmental effects.