

**FRAMEWORK ADJUSTMENT 2
to the
MONKFISH FISHERY MANAGEMENT PLAN**

**To modify the overfishing definition and
implement annual adjustments to management measures**

Prepared by
New England Fishery Management Council
and Mid-Atlantic Fishery Management Council

in consultation with
National Marine Fisheries Service

Final Framework Meeting: November 5-7, 2002 (NEFMC)
and December 10-12, 2002 (MAFMC)
Submitted: January 7, 2003

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1.0 Introduction

1.1 Executive Summary

This is the second framework adjustment to the Monkfish Fishery Management Plan (FMP). The New England and Mid-Atlantic Fishery Management Councils jointly manage the monkfish fishery, with the New England Council (Council) having the lead authority. The FMP implementing regulations specified at 50 CFR 648.96 require annual review of the progress of the plan toward the rebuilding goals, and adjustment of management measures, as needed to achieve those goals. This framework document contains the Councils' proposed action and alternatives, developed by the Monkfish Monitoring Committee (MMC) and Oversight Committee, for setting optimum yield (OY) and management area catch targets (TACs) consistent with the FMP's 10-year rebuilding plan, as well as the associated management measures designed to achieve those catch targets, and revisions to the overfishing and minimum biomass threshold reference points.

The original FMP contained a four-year phase-in of management measures to reduce fishing effort and rebuild the stocks within ten years or less. For Year 4, starting May 1, 2002, the FMP contained default measures that called for elimination of the directed fishery (zero DAS) and reduced bycatch trip limits, unless modified by a comprehensive plan review during Year 3 (FY2001). The Year 3 review resulted in Framework 1 (implemented by NMFS through an emergency action) which delayed the default measures for one year so the Councils could complete a plan amendment (Amendment 2) to address a number of issues with the FMP. The scope of issues being addressed, however, precluded completion and implementation of Amendment 2 prior to the start of the 2003 fishing year, so the Councils initiated this framework adjustment (Framework 2). The proposed action, and alternatives (other than the no action alternative) will eliminate the default measures because they are no longer supported by the best and most recently available science.

The purpose and need for this action is detailed in Section 2.0. Section 3.0 contains a description of the proposed action and alternatives. Baseline information for evaluating the impacts of the various alternatives, the "affected environment" is described in Section 4.0. Section 5.0, "Environmental Consequences" provides the methods and results of the analysis of impacts of the range of alternatives under consideration. Section 9.0 discusses and summarizes this framework's consistency with the Magnuson-Stevens Act. Other sections pertain to the requirements of other applicable law such as the National Environmental Policy Act (NEPA), the Endangered Species Act, the Marine Mammal Protection Act, Regulatory Flexibility Act, Executive Order 12866 (Regulatory Impact Review), Coastal Zone Management Act, and Paperwork Reduction Act.

Based on fall, 2002 survey indices, both northern and southern stocks are not overfished under current definitions of minimum biomass threshold, although pending implementations of the Councils' proposed revision, the southern stock will be slightly below the new minimum. This will not materially affect the fishery, however, since both stocks are already in the midst of a 10-year rebuilding program. Since current fishing mortality cannot be reliably estimated, the status of the stocks with respect to the

overfishing definition threshold is unknown. The Councils' propose implementing the overfishing reference point adopted by NMFS in the 2002 emergency interim rule of F_{max} , $F=0.2$.

This framework will establish an index- and landings-based method for setting annual harvest targets (TACs). The method compares current 3-year average biomass index values to annual targets that are based on ten equal increments between the 1999 levels (the start of the rebuilding program) to the 2009 biomass target (proxy for maximum sustainable yield biomass level). The annual TACs will be set based on the ratio of observed annual index values (3-yr. ave.) to the annual targets applied to the previous year's landings. If the observed value is below the target, the TAC will be set proportionally below the previous year's landings, and trip limits will be adjusted accordingly using a formula establish in the framework. Under the Councils' proposed action, if the observed valued is above the target, the TAC would be increased from previous year's landings by 1/2 the ratio up to a maximum of 20 percent. Other options would not allow for an increase when F is unknown (and overfishing status cannot be determined).

The proposed mechanistic method described above could be used to set future TACs and associated management measures by notice action, provided the measures are within the range of those that have been previously analyzed and reviewed by the public. Thus, in the event Amendment 2 is not implemented by May 1, 2004, NMFS could set 2004 trip limits and TACs by publication of a notice in the *Federal Register* as long as those measures are within the scope of the analysis contained in this document.

For FY2003, the TACs under the proposed action would be 10,211 mt in the SFMA and 17,708 mt in the NFMA, compared to FY2002 and FY2001 TACs of 7,921 mt and 6,024 mt (SFMA), and 11,764 mt and 5,673 mt (NFMA). Trip limits in the SFMA would be increased from FY2002 levels, 550 lbs. tail weight/DAS on Category A and C, and 450 lbs./DAS on Category B and D, to 1,250 lbs./DAS and 1,000 lbs./DAS respectively. In the NFMA, there is currently no trip limit on monkfish limited access vessels, and no change is proposed, but open-access Category E vessels would have their incidental catch limits increased to the lesser of 400 lbs./DAS or 50 percent of total weight of fish on board, from current levels of 300 lbs./DAS or 25 percent of total weight of fish on board.

The Councils recommend that the proposed action be published as a proposed rule to afford the public an additional opportunity to comment. This document contains an Environmental Assessment supporting a finding of no significant impact on the environment under the standards and guidelines of the National Environmental Policy Act (NEPA). This document also contains a regulatory impact review and draft initial regulatory flexibility analysis, with a finding that none of the proposed alternatives would meet criteria for a significant regulatory action under Executive Order 12866, and that the proposed regulations would likely have a significant positive impact on a substantial number of vessels that participate in the SFMA on monkfish-only DAS under the evaluation criteria of the Regulatory Flexibility Act. The incidental catch trip limit change in the NFMA would impact a substantial number of participating small entities but the overall impact is not expected to be significant.

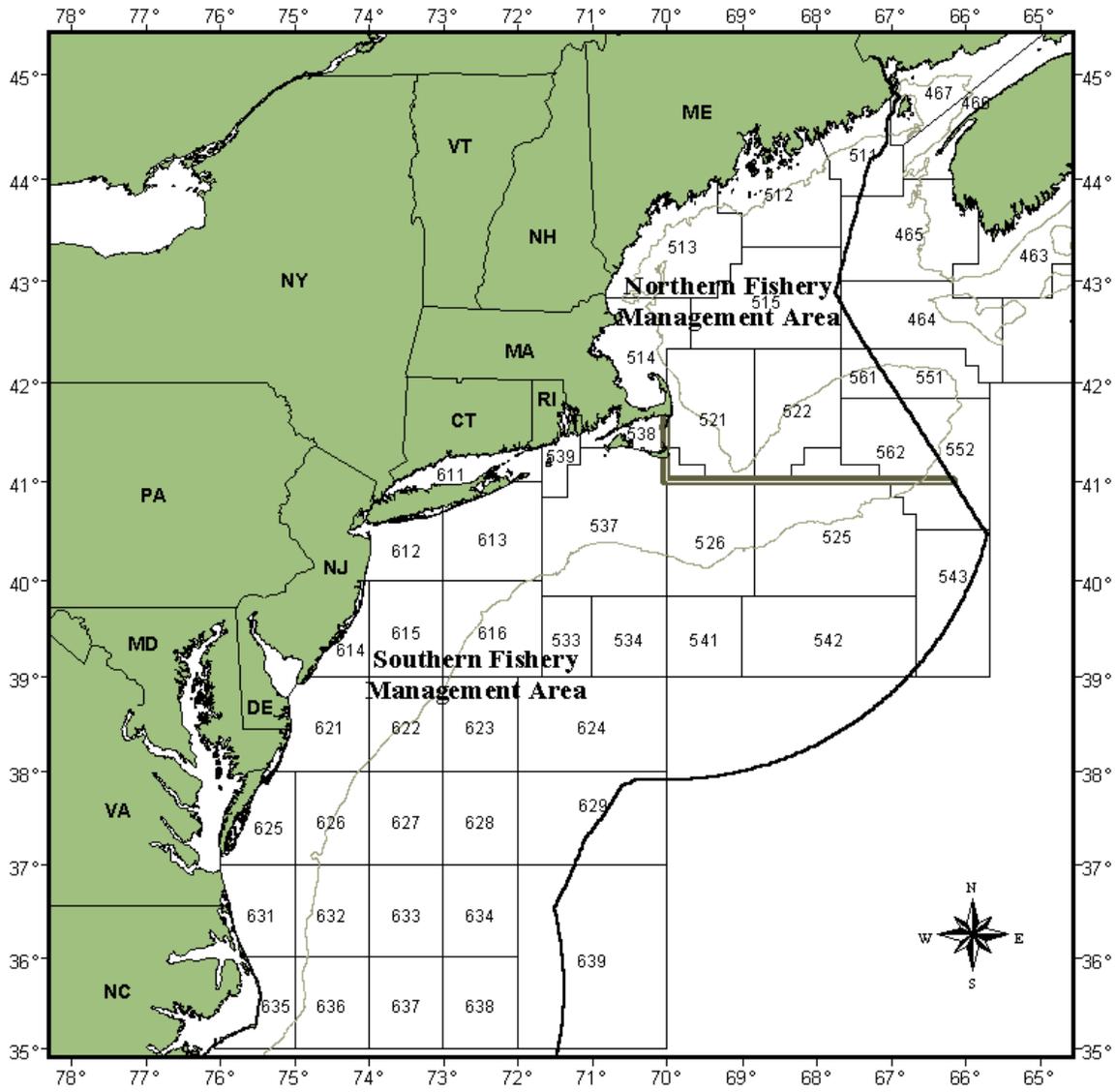


Figure 1 Monkfish management areas

1.2 Background

1.2.1 FMP implementation

The Council submitted the Monkfish FMP to NMFS on September 17, 1998. NMFS published the proposed rule on February 16, 1999 and the final rule on October 7, with an effectiveness date for implementation of November 8, 1999. The FMP contains the following measures:

- multi-level limited access program
- two management areas (see Figure 1)
- target TACs
- effort limitations (DAS)
- trip limits
- bycatch allowances
- minimum fish size and minimum mesh size
- gear restrictions
- spawning season closures
- a framework adjustment process
- permitting and reporting requirements
- other measures for administration and enforcement.

The FMP contains a four-year phase in of management measures to reduce fishing effort and rebuild the stocks within ten years or less.

Year 1 of the plan began May 1, 1999 the scheduled start of the fishing year, even though the FMP was not implemented until six months into the fishing year. An analysis by NMFS in 2000, however, concluded that even if the Year 1 measures had been implemented on May 1, 1999, the quota for the Southern Area would have been exceeded. Consequently, the Council made no adjustment to the default regulations for Year 2 or Year 3. For Year 4, starting May 1, 2002, the FMP regulations called for elimination of the directed fishery (zero DAS) and reduced bycatch trip limits, unless modified by a comprehensive plan review during Year 3 (FY2001).

1.2.2 Federal Court Order

In 2001, a Rhode Island Federal Magistrate Judge issued recommendations to the Federal District Court Judge on motions for summary judgment in a suit brought by several southern New England and New Jersey gillnetters challenging the differential trip limits in the FMP for vessels fishing under a monkfish DAS. The Federal District Court Judge agreed with most of the conclusions and opinions of the Magistrate Judge and ruled that based on the justification provided in the FMP, the differential trip limit violated National Standards Two, Four and Five. The judge vacated the 300 pound-per-day gillnet trip limit and set a 1,500 pound trip limit “for all monk fishermen...until such time as the Secretary [of Commerce] establishes a fair and equitable gear differential or otherwise revises the catch limit”. The judge later clarified the order that the trip limits apply by permit category. The effect of this order was that the trip limit on non-trawl (i.e. gillnet) vessels

was raised from 300 lbs./DAS to 1,000 or 1,500 lbs./DAS, depending on permit category, for the remainder of FY2001.

1.2.3 Year 3 review/Framework 1/emergency action

The regulations implementing the FMP require the Council to conduct a review of the status of the fishery during Year 3 of the rebuilding plan, FY2001, and make adjustments, as needed, to insure that rebuilding to stock biomass targets by 2009 remains on schedule. The MMC considered the results of the most recent stock assessment workshop (SAW 31, June, 2000) and reviewed landings and stock survey data in recommending that the management measures in place for FY2000 and FY2001 not be changed except to account for the court order.

Based on the Year 3 review and the results of a new stock assessment (SAW 34, January 2002), the Councils determined that additional work was necessary to thoroughly evaluate stock status, biological reference points and the rebuilding program. To that end, the Councils initiated work on Amendment 2 to the FMP and submitted Framework 1, incorporating the MMC recommendation and delaying for one year the default measures. In Framework 1, the Councils concluded that, based on the best available scientific information, fishing mortality rates had been reduced sufficiently to end overfishing under on the fishing mortality threshold reference point recommended by the Stock Assessment Review Committee (SARC 34), and observed that stock biomass was stable (in the SFMA) or increasing (in the NFMA).

NMFS disapproved Framework 1 because it did not comply with the fishing mortality rate threshold specified in the original plan (which had been invalidated by SAW 31 and SAW 34), but implemented a revision to the overfishing definition based on the recommendations of the SARC through an emergency interim rule (*67 Federal Register* 35928, May 22, 2002). NMFS also implemented in the emergency rule the measures recommended by the Council in Framework 1. In so doing, NMFS concurred with the Councils' determination that the measures in Framework 1 would end overfishing in 2002, based on the revised fishing mortality threshold recommended by SARC 34.

NMFS has extended the emergency interim rule through April 30, 2003 (*67 FR* 67568, Nov. 6, 2002). If the Council does not implement alternative measures, the default measures will take effect upon expiration of the emergency interim rule. The measures in Framework 1/emergency rule also include a revision to the trip limit to account for a federal court decision in vacating the gear-based trip limit differential in the original plan.

1.2.4 Amendment 2

As noted, in 2002, the Councils initiated an amendment to the FMP to incorporate the SAW 34 assessment results in a revision of the stock-rebuilding plan and address other issues. The original timetable for the amendment would have resulted in implementation of any appropriate changes to the overfishing definitions and revisions to the management program by the start of Year 5 (May, 2003). However, NMFS informed the Councils that even if they met the November 2001 submission target, the agency could not guarantee that the measures would be implemented by the start of FY2003. Without any other adjustment, the default measures delayed by Framework 1 would take effect at that time. As a result, the Councils agreed to initiate this framework, to put in place

management measures appropriate to the rebuilding plan and updated scientific information on stock status.

2.0 Purpose and Need

The purpose of the proposed action is to continue the ten-year stock rebuilding program started in 1999 under the original monkfish FMP consistent with updated scientific information. The fishery is currently (FY2002) being managed under NMFS' emergency rule (see Section 1.2.3). The FMP contains default measures that, unless eliminated or delayed beyond FY2003, will end the directed fishery (no allocation of monkfish DAS) and reduce some incidental catch limits.

The default measures were developed in the original FMP based on scientific analysis and projections done in 1997. More recent analyses and stock assessments have indicated that the scientific basis for the default measures is not valid, and the measures are no longer appropriate. Furthermore, reduced incidental catch limits in some fisheries may not *de facto* reduce fishing mortality if monkfish in excess of the limit are caught anyway and discarded. Secondly, those more recent scientific analyses have invalidated the fishing mortality reference points in the original FMP and provided alternative reference points that need to be incorporated into the FMPs overfishing definition and control rules. The MMC has developed options for consideration by the Councils to replace existing overfishing definition/control rules with more appropriate and practicable provisions.

3.0 Proposed action and alternatives

This section contains a description of the no action alternative (default measures) and alternatives, including alternative overfishing definition reference points and control rules, as well as a range of adjustments to the management measures (trip limits and DAS allocations) for each overfishing definition alternative. When the final meeting framework document was prepared, 2002 trawl survey indices were not available, so the MMC provided a range of target TACs and associated management measures as a contingency for updated NEFSC trawl survey indices for 2002. Those indices are now available and incorporated into the proposed action discussion, see Section 3.1.5.2.

The following description of the alternatives is the same as that reviewed by the Councils in the final meeting framework document, showing a range of possible survey indices and associated TACs. New sections are added to this document to show the effect of final 2002 survey indices available since November 22 and the contingency analysis for FY2004. In the event Amendment 2 is not implemented by May 1, 2004, NMFS can set TACs by notice action using the method recommended in this framework.

The contingency analysis for 2004 uses the same method as the analysis in the final meeting framework document (for FY2003), covering a range of possible survey indices (this time for fall 2003), but also includes a range of possible FY2002 landings (since the proposed action bases TACs on survey indices and previous year's landings). This contingency analysis facilitates multi-year impact analyses, so that NMFS can adjust 2004 TACs and management measures by notice action, if necessary (that is, if implementation of Amendment 2 is delayed beyond May 1, 2004), in accordance with agency and Council efforts to streamline the management process.

3.1 Overfishing definition/control rule alternatives

3.1.1 F_{threshold}

The MMC reviewed the options developed by the PDT and reviewed by the SSC for the proposed monkfish overfishing definition/status determination criteria, and methods for setting the annual specification of optimum yield (target TACs). For all options except the no-action alternative (Option 5), the threshold fishing mortality rate (**F_{threshold}**) is set at $F_{max}=0.2$. This is the criterion by which the overfishing status is determined, and will be evaluated each year using all available sources of information (including commercial surveys in those years when they are conducted). F_{max} is the proxy for the fishing mortality rate that will achieve maximum sustainable yield from a rebuilt stock. The 34th SARC recommended using F_{max} as **F_{threshold}**, and NMFS incorporated that change in the 2002 emergency rule implementing the measures in Framework 1. SARC 34 also calculated F_{max} to be $F=0.2$.

3.1.1.1 F_{threshold} preferred alternative

The Councils recommend that **F_{threshold}** be set equal to F_{max} . While the current value is $F=0.2$, if the SARC determines in the future that F_{max} is a different value, the value of **F_{threshold}** will change accordingly.

3.1.1.2 F_{threshold} Monkfish Committee recommendation

The Monkfish Committee recommended that **F_{threshold}** be set at $F=0.2$, the current value of F_{max} . The Councils did not adopt this alternative because members felt that if a SAW/SARC recalculated the value associated with F_{max} , then the new value should be adopted without further action by the Councils.

3.1.1.3 F_{threshold} no-action alternative (rejected)

The original FMP set **F_{threshold}** rates at the level estimated to result in long-term replacement of the stock, F_{rep} . These threshold rates were estimated as the average mortality rate for a period when monkfish in the two management areas were relatively abundant and stable. Based on biological data from the research survey and recommendations of the NEFMC's Overfishing Definition Working Group, the period on which F_{rep} calculations were based was 1970-1979. During this period the average fishing mortality rate in the NFMA was 0.051 and in the SFMA was 0.217.

As noted, the TACs for monkfish were set in the FMP using fishing mortality reference points and estimates of contemporaneous fishing mortality from SARC 23 (1997). The reference points and mortality rates were estimated using an equilibrium method (Beverton-Holt length-frequency method) which depends on assumptions of constant recruitment and mortality, representative sampling of the length composition of the exploitable population, and an accurate estimate of maximum fish length. The length-based method was used for goosefish because there were no age data available at the time. However, the assumptions of the method probably are violated, especially with respect to constant recruitment and representative sampling of the length composition.

Fishing mortality reference points and contemporaneous fishing mortality estimates were recalculated during SARC 31 (2000) using additional data and under a different hypothesis, considered more reasonable, about mean length of full selection. This

resulted in an unfeasible (negative) estimate of the fishing mortality threshold for the northern area. This further indicates that fishing mortality rates estimated using length composition from NEFSC surveys are not reliable point estimates of the exploitation status of monkfish and should be used to set TACs.

A new assessment (SAW 34) was presented in January, 2002, incorporating data from an industry-based goosefish survey conducted by NMFS using commercial vessels. This survey provided a wealth of new information and allowed a more complete assessment of the monkfish resource than had been previously possible. SAW 34 investigated several methods for assessing stock status and provided suggestions for improved biological reference points based on yield per recruit analyses. The SARC recommended that $F_{threshold}$ be set at $F_{max}=0.2$, and F_{target} be set at $F_{0.1}=0.14$. The MMC and, subsequently, the Councils recommend adopting the SAW's recommended $F_{threshold}$ and rejecting the $F_{threshold}$ adopted in the original FMP.

3.1.2 B_{target}

The biomass target (**B_{target}**), and proxy for B_{msy} , remains the same as adopted in the FMP (the median of the 3-year running average of the 1965-1981 autumn trawl survey biomass index).

3.1.3 $B_{threshold}$

The MMC includes two options for minimum biomass threshold (**$B_{threshold}$**), below which a stock is considered overfished. The **status quo (no action)** option from the FMP is based on the 33rd percentile of the autumn trawl survey from 1963 to 1994. This approach is not consistent with NMFS Guidelines which prescribe $B_{threshold}$ be set at $1/2 B_{target}$, or the minimum stock size at which rebuilding to B_{target} would be expected to occur within 10 years if the stock were exploited at $F_{threshold}$. Due to data limitations and the inability to do reliable projections of monkfish rebuilding, the second approach is not practicable. Therefore, the MMC includes a revised **$B_{threshold}$ Option 2** based on $1/2 B_{target}$. Since both stocks were overfished in 1999 and are now under a 10-year rebuilding plan, the effect of this change in the value of $B_{threshold}$ will not be significant, at least until after 2009 if the stocks fall below the new level.

	B_{target}	$B_{threshold}$ Alternatives	
		Option 1 (no action)	Option 2
NFMA	2.50	1.46	1.25
SFMA	1.85	0.75	0.93

Table 1 Biomass target and current and proposed threshold reference points

3.1.3.1 $B_{threshold}$ Option 1 (no-action alternative)

The Councils rejected this option for the reasons outlined in the discussion above.

3.1.3.2 $B_{threshold}$ Option 2 (preferred alternative)

The Councils recommend adopting $B_{threshold}$ Option 2, or $1/2 B_{target}$, as recommended by the Monkfish Committee and MMC.

3.1.3.3 Overfished status in FY2002

When the NEFMC held its final meeting on this framework action, final 2002 fall survey indices were not available, but have since become so. Based on the fall 2002 survey indices, both northern and southern stocks are not overfished. The 3-year running averages are 2.23 kg/tow and 0.813 kg/tow, north and south, respectively, see Table 1. Under Option 2, the preferred alternative, the southern stock would become overfished again.

3.1.4 Options for F targets/optimum yield and management area TACs

The FMP contains projected landings for the rebuilding program under default measures for Year 4 (starting May, 2002) that serve as a basis for the annual specifications of optimum yield (OY) and management area TACs. As noted above, the Year 4 default measures were delayed one year by Framework 1/emergency rule. As such, the no-action alternative would set 2003 TACs at the level prescribed in the FMP under the default rules. These TACs were calculated in 1997, and, based on more recent analysis and scientific information, may no longer be appropriate or consistent with the management objectives and fishing mortality reference points of the FMP. Accordingly, the MMC developed three alternatives (in addition to the no-action and status quo alternatives) for setting threshold and optimum yield target reference points, and provided, where possible, the associated TACs. The Monkfish Committee, at its October 23-24 meeting, developed a sixth option (Option 2b) to address some of the issues and comments raised about Option 2. The Councils adopted this option as the preferred alternative in this submission.

Options 1, 2 and 2b do not rely on estimating current fishing mortality rates to set annual catch targets, while still achieving the biomass rebuilding goals of the FMP. Options 3 and 4 require that fishing mortality be estimated and applied to a current estimate of biomass to calculate the TACs. Option 5 is the no-action alternative, and as noted, sets TACs based on calculations and projections done five years ago. Since fishing mortality and current biomass cannot be reliably estimated, Options 3-5, may not be appropriate for implementation at this time. Alternatively, under Option 4, the Councils could choose to extend the 2002 TACs and associated management measures for an additional year, or until a reliable estimate of fishing mortality can be calculated. Options 1, 2 and 2b rely on a survey index based method developed by the Monkfish Plan Development Team and reviewed by the NEFMC's Scientific and Statistical Committee (SSC). The method and the SSC's comments are summarized in Appendix III of the 2001 SAFE Report (Appendix I to this document).

Provisional target catch levels associated with optimum yield for 2003 are provided in the following Table 2 and shown, for Options 1, 2 and 2b, in Figure 2. Note that the TACs are unknown for those options (3 and 4) that are based on fishing mortality rates, since there is no reliable estimate of fishing mortality or absolute stock size on which to base those calculations. Also note that Options 1, 2 and 2b are provisional, as presented below under the assumption of no change in the survey indices in 2002, since final specifications are based on 2002 survey indices that were not available when the initial document was completed for Council review. (As noted, this discussion was prepared before 2002 survey indices were available. See Section 3.1.5.2 for updated discussion,

including 2002 trawl survey indices.) In the future, upcoming year's TACs would be set based on the relationship between the current year index to the current year biomass target and the previous year's landings. Note that TACs for Options 1 and 2 are the same under the condition that current fishing mortality rates (F) are unknown. If F were known, Option 2 NFMA TAC would be 19,581 mt.

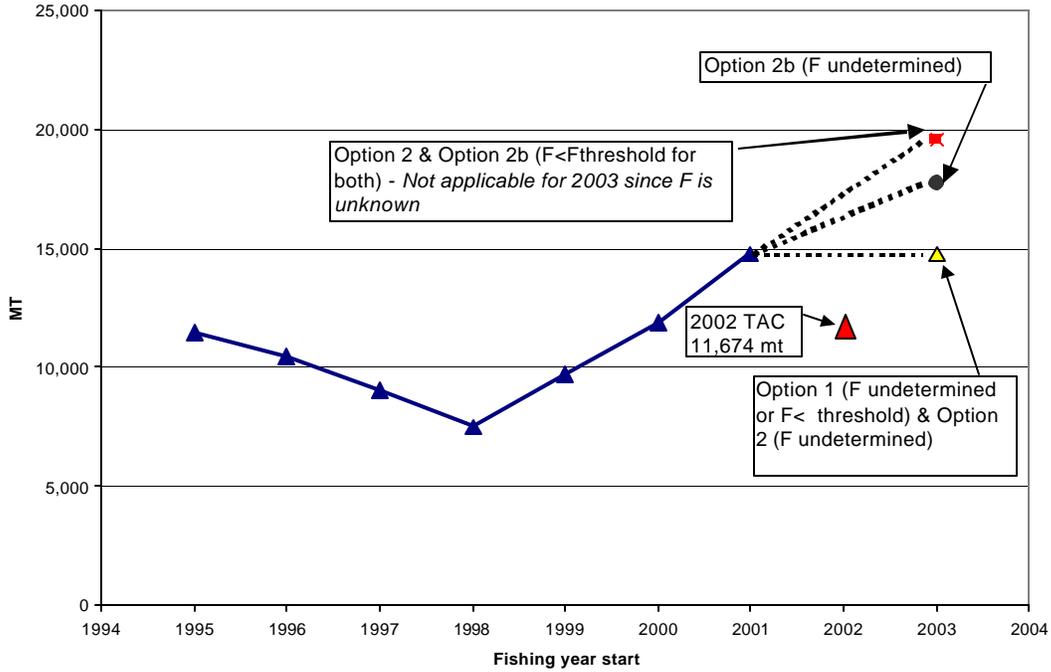
To enable the Councils to consider the various options, the MMC calculated a range of TACs for each option that accounts for possible values of the 2002 survey indices, Table 3. These results show the TACs under various scenarios ranging from -100% to +500% in the year-over-year biomass index values. The extreme bounds (maximum percentage change) are derived from observed variability in the index over the entire time series. Note that Section 3.1.5.2 contains discussion of 2002 survey indices available since the initial framework document was prepared, as well as the actual TAC and associated management measures.

Metric Tons	NFMA	SFMA	TOTAL (OY)
OY Option 1*	14,756	7,938	22,694
OY Option 2*	14,756	7,938	22,694
OY Option 2b*	17,708	7,938	25,646
OY Option 3	<i>unknown</i>	<i>unknown</i>	<i>unknown</i>
OY Option 4 (status quo)	<i>unknown</i> or 11,674	<i>unknown</i> or 7,921	<i>unknown</i> or 19,595
OY Option 5 (no action)	4,047	3,252	7,299

Table 2 Provisional TAC/Optimum Yield specification under Framework 2 options for FY2003

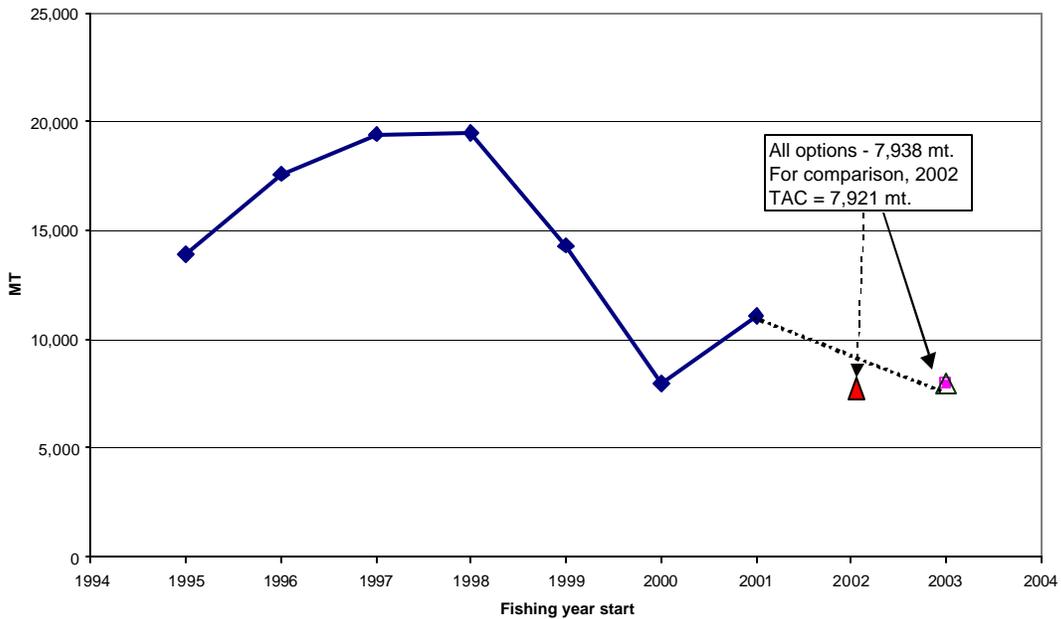
*Options 1, 2 and 2b are provisional pending completion of the 2002 fall survey, and are presented here in the case that there is not change in survey index from 2001. Options 3 and 4 are unknown, since they rely on estimates of fishing mortality and/or absolute biomass that are not available. Alternatively, under Option 4, Councils could extend FY2002 TACs/OY specification.

Landings '95-'01 and projected TACs for Options 1, 2 & 2B in the North. Note: values calculated based on no change in the raw index from the previous year.



(A)

Landings '95-'01 and projected TACs for Options 1, 2 & 2B in the South. Note: values calculated based on no change in the raw index from the previous year.



(B)

Figure 2 1995-2001 monkfish landings and 2003 TACs assuming no change in fall survey indices in 2002; (A) NFMA and (B) SFMA

Change in 2002 raw index	3-year index		TAC Option 1 & Option 2 (<i>F</i> not known) (mt)		TAC Option 2 & Option 2b (<i>F</i> known in both) (mt)		TAC Option 2b (<i>F</i> not known) (mt)	
	North	South	North	South	North	South	North	South
+500%	5.62	1.81	14,756	11,071	38,553	16,927	17,708	13,285
+200%	3.57	1.10	14,756	11,071	27,170	12,473	17,708	13,285
+100%	2.88	0.87	14,756	10,907	23,375	10,907	17,708	10,907
+50%	2.54	0.75	14,756	9,423	21,478	9,423	17,708	9,423
0%	2.20	0.63	14,756	7,938	19,581	7,938	17,708	7,938
-50%	1.86	0.51	14,756	6,454	17,684	6,454	17,684	6,454
-60%	1.79	0.49	14,756	6,157	17,304	6,157	17,304	6,157
-80%	1.65	0.44	14,756	5,563	16,545	5,563	16,545	5,563
-100%	1.52	0.40	14,756	4,969	15,786	4,969	15,786	4,969

Table 3 Range of 2003 TACs under Options 1, 2 and 2b under possible 2002 fall survey indices.

If *F* is not known, Option 2 is the same as Option 1, and if *F* is known, Option 2b is the same as Option 2.

The options proposed by the MMC and Monkfish Committee for consideration in Framework 2, including the no-action alternative and status quo options are described in the following subsections.

3.1.4.1 Option 1 – Index based catch target (TAC at or below previous year’s landings)

The control rule is shown schematically in Figure 3 and in matrix form in Table 4. This option is recommended by the MMC. If the 3-year running average of the autumn trawl survey biomass index is below the annual index target (Figure 5, NFMA, and Figure 6, SFMA), the TAC in the subsequent year will be reduced proportionally from the previous year landings. If the observed index average is above the annual index target, the TAC will remain the same as the previous year landings. The rationale for this approach is both that *F* will remain below *F*_{threshold} and that the biomass rebuilding program requirements will be met.

If fishing mortality, *F*, in the previous year exceeds *F*_{threshold}, the TAC will be reduced proportionally to stop overfishing, even if a reduction is not called for based on biomass index status. For example, if *F*=0.24, and *F*_{threshold} is *F*=0.2, then the TAC will be reduced to 20 percent below the previous year’s landings. If the 3-year average index is below the target (and a reduction in TAC is called for under the index based method), and *F* is above *F*_{threshold}, the greater reduction (between that called for under the index based method or to stop overfishing) will determine the TAC (as a percentage reduction from the previous year’s landings).

If the observed index is above *B*_{target} (that is, the stock is rebuilt), then the TAC would be adjusted based on the ratio of current *F* to *F*=0.2, allowing for an increase in the TAC if *F* is below *F*_{threshold}. This would set optimum yield target reference point at *F*_{threshold}.

If landings decline, and the running average index is above the annual biomass target, whether or not F can be determined, the MMC will recommend a TAC, after taking into account circumstances surrounding the landings decline and the Councils may set the TAC at the previous year's landings or previous year's TAC whichever is greater.

The MMC comments that this is a more conservative approach to the index-based rebuilding program than Option 2 (which allows for TAC increases before a stock is rebuilt), and accounts for uncertainty about growth and recruitment.

3.1.4.2 Option 2 - Index-based catch target (proportional increase in TAC when biomass is above annual target and $F < F_{\text{threshold}}$)

The control rule is shown schematically in Figure 3 and in matrix form in Table 5. This option is the same as Option 1, except that if the 3-yr. running average of the autumn survey biomass index (Figure 5, NFMA, and Figure 6, SFMA) is above the annual target, and F is below $F_{\text{threshold}}$, the TAC can be increased from the previous year's landings by $\frac{1}{2}$ of the percentage difference, provided that catch does not generate an F in excess of $F_{\text{threshold}}$. If the 3-yr running average in the autumn trawl survey is below the annual index target, the TAC in the subsequent year will be reduced proportionally from the previous landings.

If F in the previous year exceeds $F_{\text{threshold}}$, the TAC will be reduced proportionally to stop overfishing, even if a reduction is not called for based on biomass index status. For example, if $F=0.24$, and $F_{\text{threshold}}$ is $F=0.2$, then the TAC will be reduced to 20 percent below the previous year's landings. If the 3-year average index is below the target (and a reduction in TAC is called for under the index based method), and F is above $F_{\text{threshold}}$, the greater reduction (between that called for under the index based method or to stop overfishing) will determine the TAC (as a percentage reduction from the previous year's landings).

If the observed index is above B_{target} (that is, the stock is rebuilt), then the TAC would be adjusted based on the ratio of current F to $F=0.2$, allowing for an increase in the TAC if F is below $F_{\text{threshold}}$. This would set optimum yield target reference point at $F_{\text{threshold}}$.

If current F cannot be determined and the 3-yr average is above the annual biomass index target, the TAC would be set at the previous year's landings (no increase). If the stock is above B_{target} (stock is rebuilt) and current F cannot be determined, the TAC will be set at the previous year's landings.

If landings decline, and the running average index is above the annual biomass target, whether or not F can be determined, the MMC will recommend a TAC, after taking into account circumstances surrounding the landings decline and the Councils may set the TAC at the previous year's landings or previous year's TAC whichever is greater.

The MMC notes that current estimates of F are too imprecise to make a status determination regarding "overfishing". Therefore, the MMC does not recommend, under this option, any increase in the TAC for 2003 even if the 3-year average in the survey

index is above the annual biomass target. However, since the index-based method is based on a 3-year average, even if the 2002 fall survey index is zero in the northern area, the TAC would remain the same as the 2001 landings because the index would still be above the annual index target. Also, given that the management measures in the Framework 1/2002 emergency rule were designed to achieve an SFMA TAC that is 30 percent below the 2001 landings, the reduction indicated under the index-based method is only seven percent from 2002 to 2003. If the index in the SFMA rises, regardless of the magnitude of that increase, the MMC recommends no change in the 2003 TAC under this option because of the inability to determine status with respect to overfishing.

The MMC comments that under the index based method the TAC can already be increased from one year to the next if landings increase in the previous year. The idea behind basing the next year's TAC on the previous years landings (rather than TAC) is a reflection on the use of input controls on this fishery. If landings go up with the same effort and if the index is above the annual target, this method allows for the continuation of that landing level. Increasing the TAC further would compound the removals. For example a nominal increase in the raw survey index (+50%) for 2002 in the North yields a TAC for 2003 of 21,478 MT, almost double the TAC of 11,674 MT set in Framework 1 (Table 3).

Additionally, the connection between the two stock groups remains unclear. A complete rebuilding and sustainable management of the NFMA may increase the likelihood that the SFMA will achieve its biomass target by 2009 due to either larval transport or migration. And, from an ecosystem perspective, rebuilding any stock as quickly as possible is the best approach to avoid other unwanted side effects of low biomass, such as niche loss.

Furthermore, the MMC notes that only six years will remain in the rebuilding plan when this program would take effect (in 2003). Since monkfish reach sexual maturity at age 4, and considering that fecundity increases as a function of age (so most of the successful spawners are older than age 4), and that biomass status determination is based on a three-year running average, then the longer it takes to reach to Btarget, the more likely it is that landings targets will have to be reduced if there is a bad recruitment year and the biomass index does not rise as scheduled. "Saving" some of the biomass (not catching fish if we are above the line) provides insurance that the targets can be met even if recruitment/fish declines.

3.1.4.3 Option 2b Index-based catch target (precautionary increase in TAC when biomass is above annual target and F is unknown) (preferred alternative)

This option is the Councils' preferred alternative and was recommended by the Monkfish Committee. The control rule is shown schematically in Figure 3 and in matrix form in Table 6. This option is the same as Option 2, except that if the 3-yr. running average of the autumn survey biomass index (Figure 5, NFMA, and Figure 6, SFMA) is above the annual target, and F is unknown, the TAC for the following year can be increased from the previous year's landings by not more than 20% (compared to no increase under Option 2). If the 3-yr running average in the autumn trawl survey is below the annual index target, the TAC in the subsequent year will be reduced proportionally from the previous landings. If the 3-yr running average is above the annual target, and F is below

$F_{\text{threshold}}$, the TAC can be increased from the previous year's landings by $\frac{1}{2}$ of the percentage difference provided that catch does not generate an F in excess of $F_{\text{threshold}}$.

If F in the previous year exceeds $F_{\text{threshold}}$, the TAC will be reduced proportionally to stop overfishing, even if a reduction is not called for based on biomass index status. For example, if $F=0.24$, and $F_{\text{threshold}}$ is $F=0.2$, then the TAC will be reduced to 20 percent below the previous year's landings. If the 3-year average index is below the target (and a reduction in TAC is called for under the index based method), and F is above $F_{\text{threshold}}$, the greater reduction (between that called for under the index based method or to stop overfishing) will determine the TAC (as a percentage reduction from the previous year's landings).

If the observed index is above B_{target} (that is, the stock is rebuilt), then the TAC would be adjusted based on the ratio of current F to $F=0.2$, allowing for an increase in the TAC if F is below $F_{\text{threshold}}$. This would set optimum yield target reference point at $F_{\text{threshold}}$.

If current F cannot be determined and the 3-yr average is above the annual biomass index target, the TAC would be set at not more than 20% above previous year's landings. If the stock is above B_{target} (stock is rebuilt) and current F cannot be determined, the TAC will be set at not more than 20% above previous year's landings.

If landings decline, and the running average index is above the annual biomass target, whether or not F can be determined, the MMC will recommend a TAC, after taking into account circumstances surrounding the landings decline and the Councils may set the TAC at the previous year's landings or previous year's TAC whichever is greater.

Control Rule Matrix for Options 1, 2 and 2b

Legend:

(PYL)=Previous Year's Landings; (inc.)=increase from PYL; (dec.)=decrease from PYL

A: TAC= (previous year's landings) (1 – (3-yr. index average/annual index target))

B: TAC= (previous year's landings) (1-(F/Fthreshold))

C: TAC= (previous year's landings)(0.5(3-yr. index average/annual index target))

D: TAC= (previous year's landings)(1.20)

***Note:** if 3-yr. ave. index is above annual target and landings declined in the previous year, Councils will review MMC recommendation and use either PYL or previous year's TAC to set next year's TAC. Secondly, all options are the same except for shaded cells that refer to potential increases.

3-yr. ave. index/annual index target	Current F/Fthreshold			
	BELOW	AT	ABOVE	UNKOWN
ABOVE	PYL*	PYL	B (dec.)	PYL
AT	PYL	PYL	B (dec.)	PYL
BELOW	A (dec.)	A (dec.)	lesser of A or B (dec.)	A (dec.)

Table 4 Option 1

3-yr. ave. index/annual index target	Current F/Fthreshold			
	BELOW	AT	ABOVE	UNKOWN
ABOVE	C (inc.)*	PYL	B (dec.)	PYL
AT	PYL	PYL	B (dec.)	PYL
BELOW	A (dec.)	A (dec.)	lesser of A or B (dec.)	A (dec.)

Table 5 Option 2

3-yr. ave. index/annual index target	Current F/Fthreshold			
	BELOW	AT	ABOVE	UNKOWN
ABOVE	C (inc.)*	PYL	B (dec.)	Lesser of C or D (inc.)
AT	PYL	PYL	B (dec.)	PYL
BELOW	A (dec.)	A (dec.)	lesser of A or B (dec.)	A (dec.)

Table 6 Option 2b

3.1.4.4 Option 3 – Adjust TAC based on achieving an F_{target} of $F_{0.1}$ or 50 percent of $F_{threshold}$ if a stock is overfished (rejected)

The control rule is shown schematically in Figure 4. If the 3-yr. average index is above $B_{threshold}$ (that is, the stock is not overfished), or the stock is above B_{target} (that is, rebuilt), and F in the prior year exceeds $F_{0.1}$, then the TAC will be reduced proportionally from the prior year landings to achieve $F_{0.1}$. If the 3-yr. index is below $B_{threshold}$ (that is, the stock is overfished), and F in the previous year is above 50 percent of $F_{threshold}$, then the TAC will be reduced proportionally from the prior year landing to achieve an F_{target} of 50 percent of $F_{threshold}$. Under this options optimum yield for a stock that is either rebuilt or not overfished would be based on an $F_{0.1}$ target.

The Councils rejected this option because current estimates of F are too imprecise to set TACs and make a status determination regarding overfishing, making this option not practicable. The MMC recommends not adopting this option in Framework 2 but reconsidering it in the future, for example under Amendment 2.

3.1.4.5 Option 4 – Status quo (rejected)

This option would retain the current fishing mortality threshold and biomass target reference points in the FMP with modifications implemented in the 2002 emergency interim rule. The biomass threshold reference point options are as described above (two options). The emergency interim rule set optimum yield catch targets at levels consistent with ending overfishing, at or below $F_{threshold}$, and equal to the landings in FY2000. Under this option the 2003 TACs will remain the same as the FY2001 landings unless fishing mortality for the previous year exceeds $F_{threshold}$ (F_{max} , $F=0.2$), in which case the TAC will be reduced proportionally from the prior year landings to end overfishing. For example, if $F=0.24$, and $F_{threshold}$ is $F=0.2$, then the TAC will be set at 20 percent below the prior year's landings. The calculation will be done with either the prior year's catch or landings figures depending on the availability of discard data. When the 3-yr. average biomass index is above B_{target} , TACs will be recalculated to achieve F_{max} . Under this option, therefore, optimum yield will be based on $F_{threshold}=F_{max}$ applied to current biomass estimates.

The Councils rejected this option based on MMC comments that because current estimates of F are too imprecise to set TACs and make a status determination regarding overfishing, this option is not practicable. Without adjusting for $F/F_{threshold}$, the TACs and associated SFMA trip limits under this option could remain at current levels, although the relationship of this target to $F_{threshold}$ would be unknown. TACs for 2002 were set in Framework 1/emergency rule at 11,674 mt (NFMA) and 7,921 mt (SFMA), and trip limits at 550 lbs./DAS (tail weight) for Category A and C vessels, and 450 lbs./DAS for B and D vessels.

3.1.4.6 Option 5 – No action, default measures take effect (rejected)

This option would apply the F values associated with fishing mortality target and threshold reference points as adopted in the original FMP. The FMP set $F_{threshold}$ as the fishing mortality rate that prevailed during 1970-1979 (0.05 in the NFMA and 0.217 in the SFMA). F_{target} is set at $F_{0.1}$ ($F=0.10$) in the SFMA and undefined in the NFMA

(given the low value of $F_{threshold}$). The Councils rejected this option for reasons outlined below.

The F values associated with the original FMP have been re-estimated by SARC 34 and the original values are no longer appropriate. Furthermore, since current estimates of F are too imprecise to make a status determination regarding overfishing, this option is not practicable. Based on the above considerations, the MMC recommends rejection of this option and its elimination from the FMP as a default option. The MMC recommendation to eliminate this overfishing definition from the FMP includes removal of the associated default measures (eliminating the directed fishery). The Councils rejection of this option eliminates the default measures in the FMP.

The following table shows the Year 4 (FY2002) TACs calculated in 1997 for the original FMP default measures.

NFMA	SFMA	TOTAL (OY)
4,047 mt	3,252 mt	7,299 mt

Table 7 Specification of OY and Management Area TACs for Year 4 in the original FMP.

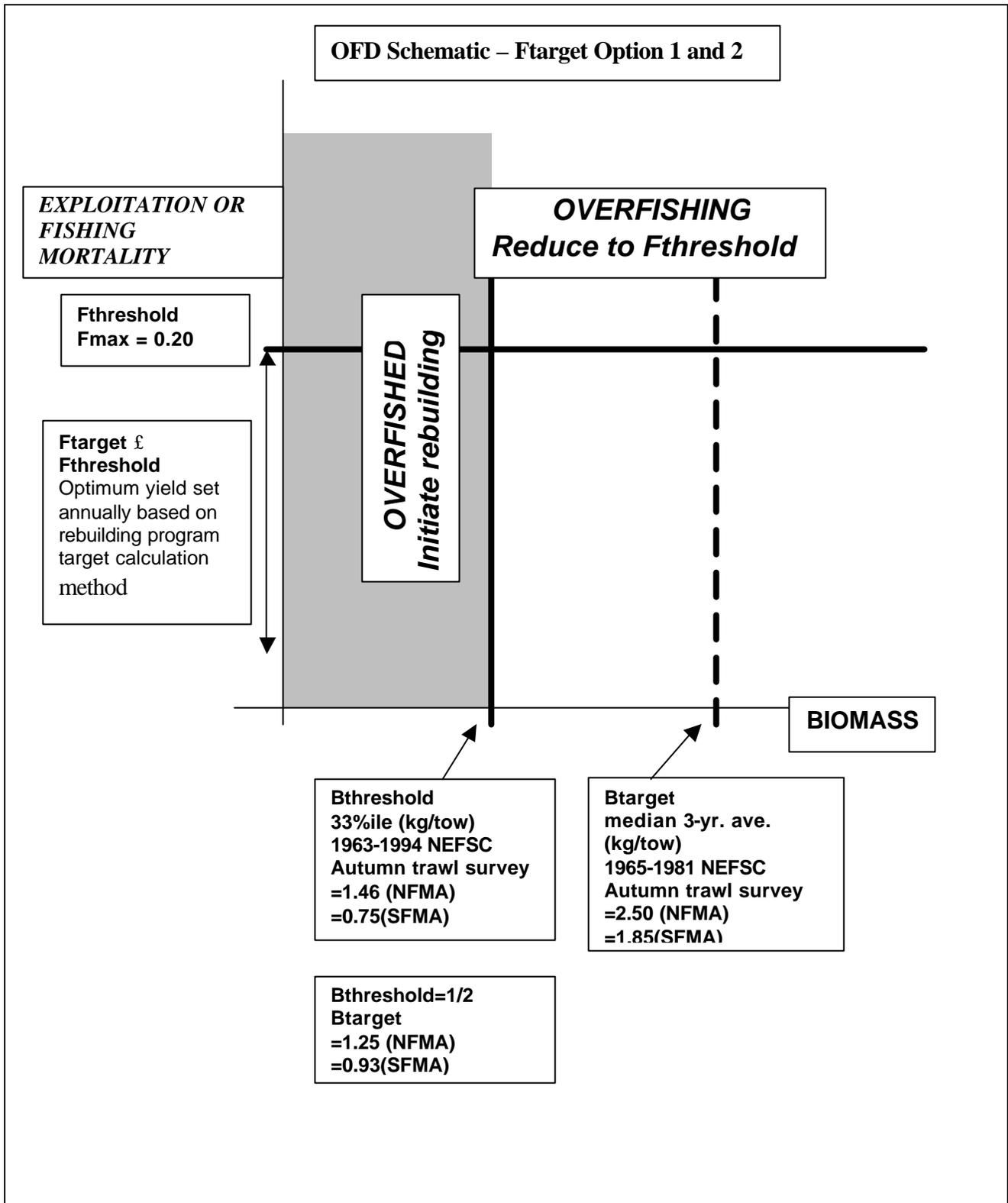


Figure 3– Overfishing Definition Control Rule Schematic – Options 1 and 2.

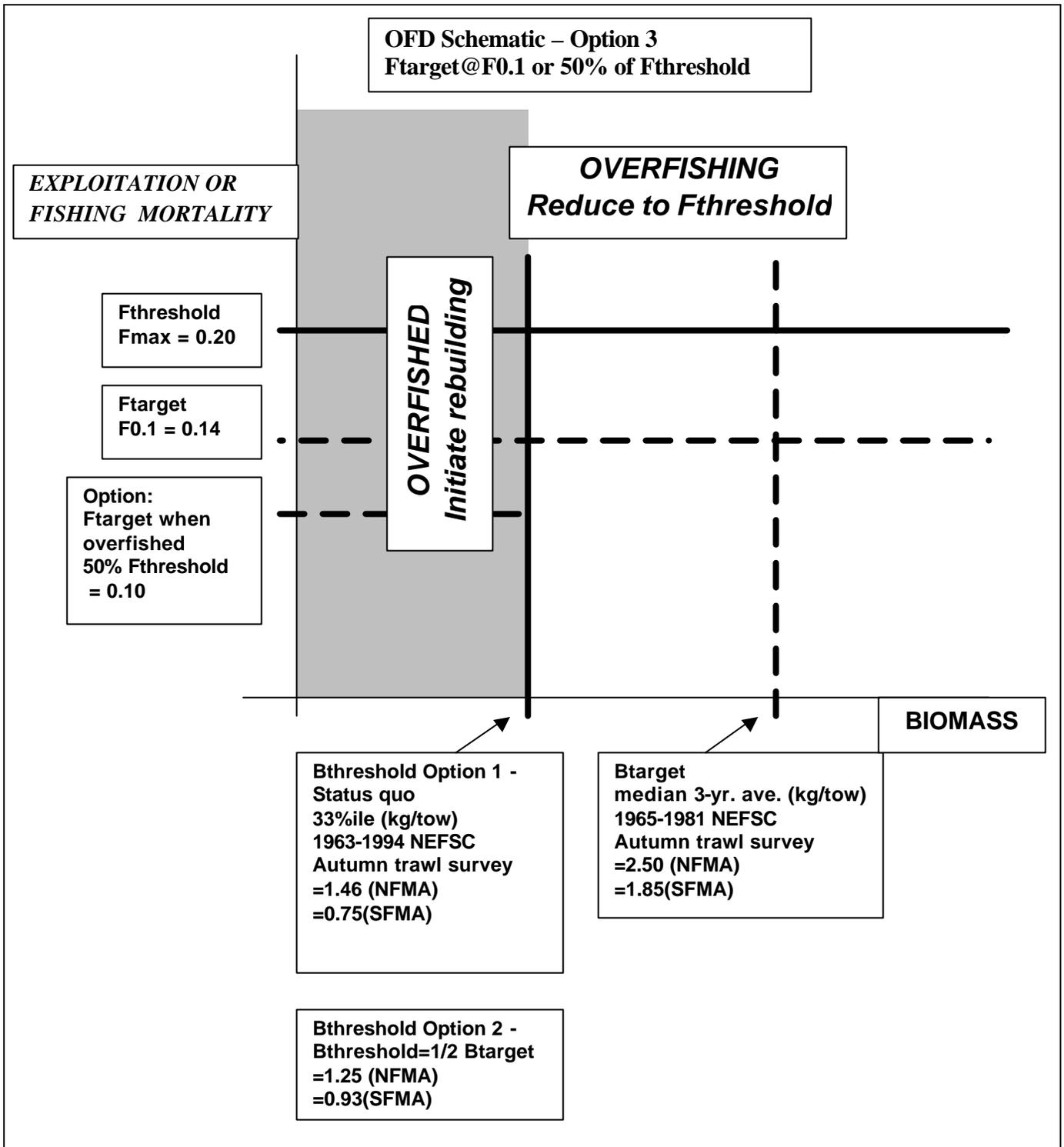


Figure 4– Overfishing Definition Control Rule Schematic – Option 3

NFMA Biomass Rebuilding

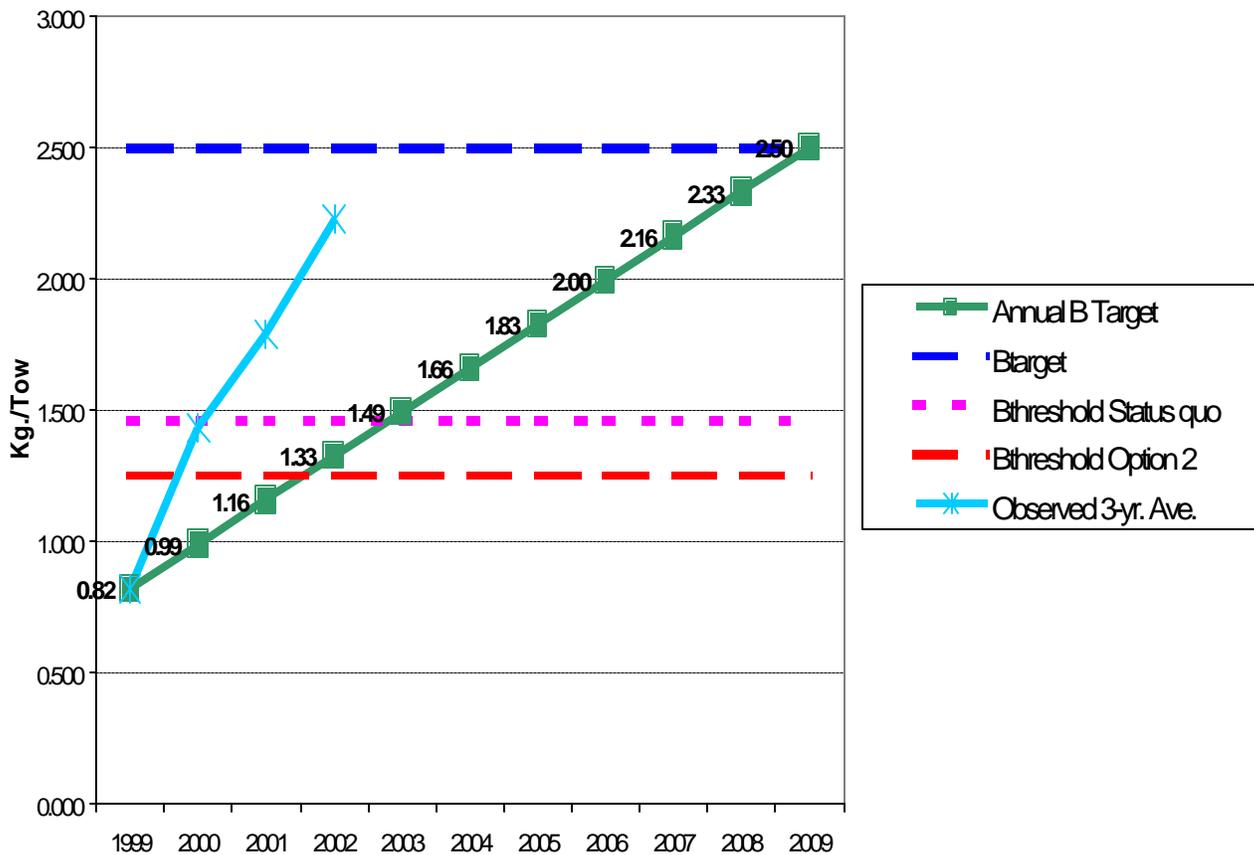


Figure 5 Index-based method for Northern Area biomass rebuilding program.

SFMA Biomass Rebuilding

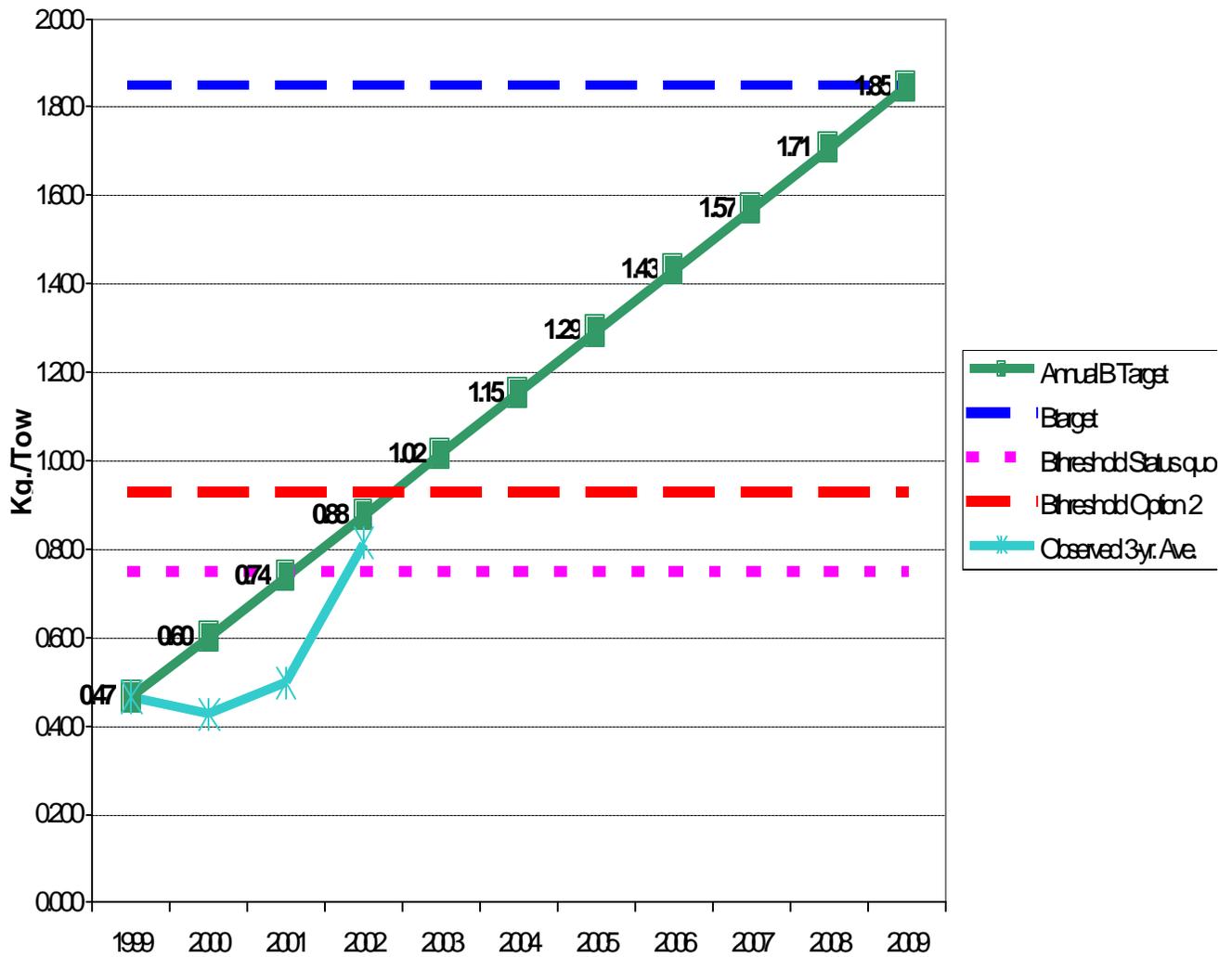


Figure 6– Index-based method for Southern Area biomass rebuilding program.

3.1.5 Setting targets and management measures by NMFS Notice Action

3.1.5.1 General procedures

Options 1, 2 and 2b, outlined above provide a mechanistic method for setting annual catch targets. The discussion also included a range of expected target TACs for FY2003 based on the FY2001 landings and the likely range of 2002 fall survey indices that were not available when the final meeting document was prepared. Of the two variables necessary to set catch targets (current year survey index and previous year's landings), one was known (FY2001 landings) and one was unknown (2002 fall survey index) so the MMC ran a projection based on a range of possible results for the unknown variable.

The same formulaic method will be applied annually to set catch targets designed to achieve the goals of the rebuilding program by 2009, however, until the fishing year is complete and landings data are compiled, the landings variable is also unknown. This circumstance adds another dimension to the analysis of impacts beyond one year because of the wide range of possible outcomes with two unknown variables (next year's survey index and current fishing year landings). To address this problem, and to facilitate the analysis of impacts for FY2004, for example, a range of possible 2003 survey indices is projected (as was done for 2002 indices in the final meeting document for this framework) along with a range of possible FY2002 landings.

By analyzing the multi-year impact of the management program, this framework document provides NMFS with the ability to set target TACs in upcoming years through notice action. This ability will greatly streamline the annual review and adjustment process by obviating the need to conduct an annual framework adjustment. Under this approach, the MMC will complete the annual SAFE Report and report to the Councils under the procedure established in the current regulations. Unless the Councils decide that a framework action is necessary, they will submit a letter to the Regional Administrator recommending that the TACs and associated management measures (trip limits or DAS reductions) be set by applying the control rule formula and by announcing them in the *Federal Register* as a notice action. For example in November/December 2003 the Councils would submit a letter to NMFS recommending that FY2004 specifications and measures be set by applying the formula outlined in Options 1, 2 or 2b, provided the impacts of the associated management measures have been fully analyzed in compliance with applicable law. This procedure does not change the Councils' authority under the regulations to initiate a framework adjustment at any time to address issues under the management program.

3.1.5.2 FY2003 and Preliminary FY2004 TACs

Since final 2002 survey indices are available at this time (but were not when the final framework meeting document was prepared), the following analysis shows the FY2003 TACs under Options 1, 2 and 2b. In addition to showing FY2003 TACs, the analysis shows the TACs associated with a range of possible 2003 indices and FY2002 landings for establishing the range of possible FY2004 TACs. The analysis results provide the basis for determining the impacts of alternatives that may be implemented for FY2004 under the notice action procedure outlined in the previous section. Table 8 shows 2002

biomass indices along with the index targets for 2002 and 2003 under the proposed control rule formula.

AREA	2002 FALL SURVEY BIOMASS INDEX (kg./tow)	2002 3-YR. AVERAGE (kg./tow)	2002 INDEX TARGET (kg./tow)	2003 INDEX TARGET (kg./tow)
NFMA	2.134	2.23	1.33	1.49
SFMA	1.25	0.813	0.88	1.02

Table 8 2002 fall survey biomass indices and 2002 and 2003 index targets.

Table 9 shows FY2003 TACs based on Table 8, 2002 biomass indices, and Table 3, the range of TACs associated with a range of possible 2002 survey indices.

Options	North 2003 TAC (mt)	% change	South 2003 TAC (mt)	% change
1	14,757	0.0	10,211	-7.8
2 *	14,757	0.0	10,211	-7.8
2B	17,708	20.0	10,211	-7.8

***Note:** Option 2 NFMA TAC is the same as Option 1 since F is unknown. If current F were known and below F=0.2, the NFMA TAC would be 19,732 mt.

Table 9 FY2003 TACs based on 2002 survey biomass indices and FY2001 landings.

Based on Table 8, 2002 biomass indices and 2003 index targets, and using the same method described in Section 3.1.4 and shown in Table 3 for FY2003, a range of possible reductions or increases (under Options 2 and 2b) can be calculated for a range of possible FY2002 landings, (in this case from 80 percent below to 100 percent above the FY2002 TAC) to show the likely range of FY2004 TACs. These results are shown below for Option 1 and Option 2 in the SFMA in Table 10 (a), and for Option 2b in Table 10 (b). The difference between the two options in metric tons is shown in Table 10 (c). The results for the NFMA are shown for Options 1 and 2 in Table 11 (a), and for Option 2b in (b), and the difference between the two options in metric tons is shown in Table 11 (c).

Since F is likely to be unknown in 2003, Option 2 would result in the same outcome as Option 1. There is no difference between the options (1 or 2 and 2b) in the SFMA if the 2003 raw biomass index declines from 2002's value, but Option 2b would set the TAC 2.5 percent higher if the index is the same, 8 percent higher if the index rises 25 percent, and 20 percent higher if the index rises 50 percent or more. In the NFMA, because the index is so much higher relative to the annual target than in the SFMA, the difference between the options becomes apparent even if the index declines by as much as 75 percent from the 2002 level. Under that scenario, Option 2b TAC would be 3 percent higher. The 20 percent cap on increase would become effective in the NFMA even if the index declines by 25 percent in 2003, because the 3-yr. average would be more than 40 percent over the 2003 annual index target. The effect of the variable 2003 survey and FY2002 landings on 2004 management measures in the SFMA is shown in schematic form in Figure 7.

The MMC reviewed and compared Option 2b with Option 1 and provides the following comment. The MMC did not reach consensus to either recommend or reject one or the other option. In general, Option 1 is more precautionary in biological terms than Option 2b. Option 1 will invest the increases in excess of the scheduled ones to try to reach the target earlier, while Option 2b will withdraw a portion (up to a maximum of 20 percent) of the excess as yield. Option 2b will increase the probability that overfishing will occur because allowable landings would be higher than in Option 1 (up to 20 percent higher), but the difference in probability of overfishing between options is not quantifiable since fishing mortality is unknown. Furthermore, Option 2b could increase the year-to-year variability in TACs because of the potentially higher TAC in a given year for a given index value. Since Option 2b allows for potentially higher TACs than Option 1, declines in TACs could be correspondingly greater under Option 2b than under Option 1 if the index declines below the annual target in a year following a TAC increase. The difference between Options 1 and 2b is only realized, however, if the survey increases sufficiently for a TAC increase to be implemented under Option 2b. The increase is proportional (1/2) to the increase in the 3-year moving average of survey index beyond the annual biomass target up to a maximum of 20 percent. The following tables show the difference between Option 1 and Option 2b in 2004 for a range of FY2002 landings and 2003 survey biomass indices.

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-36%	-25%	-15%	-5%	+5%	+16%	+26%	+36%	+46%	+87%
100%	15,842	+43%	10192	11817	13442	15067	15842	15842	15842	15842	15842	15842
50%	11,882	+7%	7644	8863	10082	11300	11882	11882	11882	11882	11882	11882
25%	9,901	-11%	6370	7386	8401	9417	9901	9901	9901	9901	9901	9901
0%	7,921	-29%	5096	5909	6721	7534	7921	7921	7921	7921	7921	7921
-25%	5,941	-47%	3822	4431	5041	5650	5941	5941	5941	5941	5941	5941
-50%	3,961	-65%	2548	2954	3361	3767	3961	3961	3961	3961	3961	3961
-80%	1,584	-86%	1019	1182	1344	1507	1584	1584	1584	1584	1584	1584

(a) Option 1 and 2, 2004 TACs in metric tons

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-36%	-25%	-15%	-5%	+5%	+16%	+26%	+36%	+46%	+87%
100%	15,842	+43%	10192	11817	13442	15067	16267	17080	19010	19010	19010	19010
50%	11,882	+7%	7644	8863	10082	11300	12200	12810	14258	14258	14258	14258
25%	9,901	-11%	6370	7386	8401	9417	10167	10675	11882	11882	11882	11882
0%	7,921	-29%	5096	5909	6721	7534	8134	8540	9505	9505	9505	9505
-25%	5,941	-47%	3822	4431	5041	5650	6100	6405	7129	7129	7129	7129
-50%	3,961	-65%	2548	2954	3361	3767	4067	4270	4753	4753	4753	4753
-80%	1,584	-86%	1019	1182	1344	1507	1627	1708	1901	1901	1901	1901

(b) Option 2b, 2004 TACs in metric tons

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-36%	-25%	-15%	-5%	+5%	+16%	+26%	+36%	+46%	+87%
100%	15,842	+43%	0	0	0	0	425	1238	3168	3168	3168	3168
50%	11,882	+7%	0	0	0	0	319	928	2376	2376	2376	2376
25%	9,901	-11%	0	0	0	0	266	774	1980	1980	1980	1980
0%	7,921	-29%	0	0	0	0	213	619	1584	1584	1584	1584
-25%	5,941	-47%	0	0	0	0	159	464	1188	1188	1188	1188
-50%	3,961	-65%	0	0	0	0	106	309	792	792	792	792
-80%	1,584	-86%	0	0	0	0	43	124	317	317	317	317

(c) FY2004 Target TACs (mt) Difference between Option 2b and Option 1 (2b-1).

Table 10 FY2004 SFMA TACs under a range of 2003 trawl survey indices and FY2002 landings for Options 1 and 2 (a), and 2b (b), and the difference between the two (c).

Shading corresponds to shaded text boxes in the schematic below showing management measures associated with different TACs.

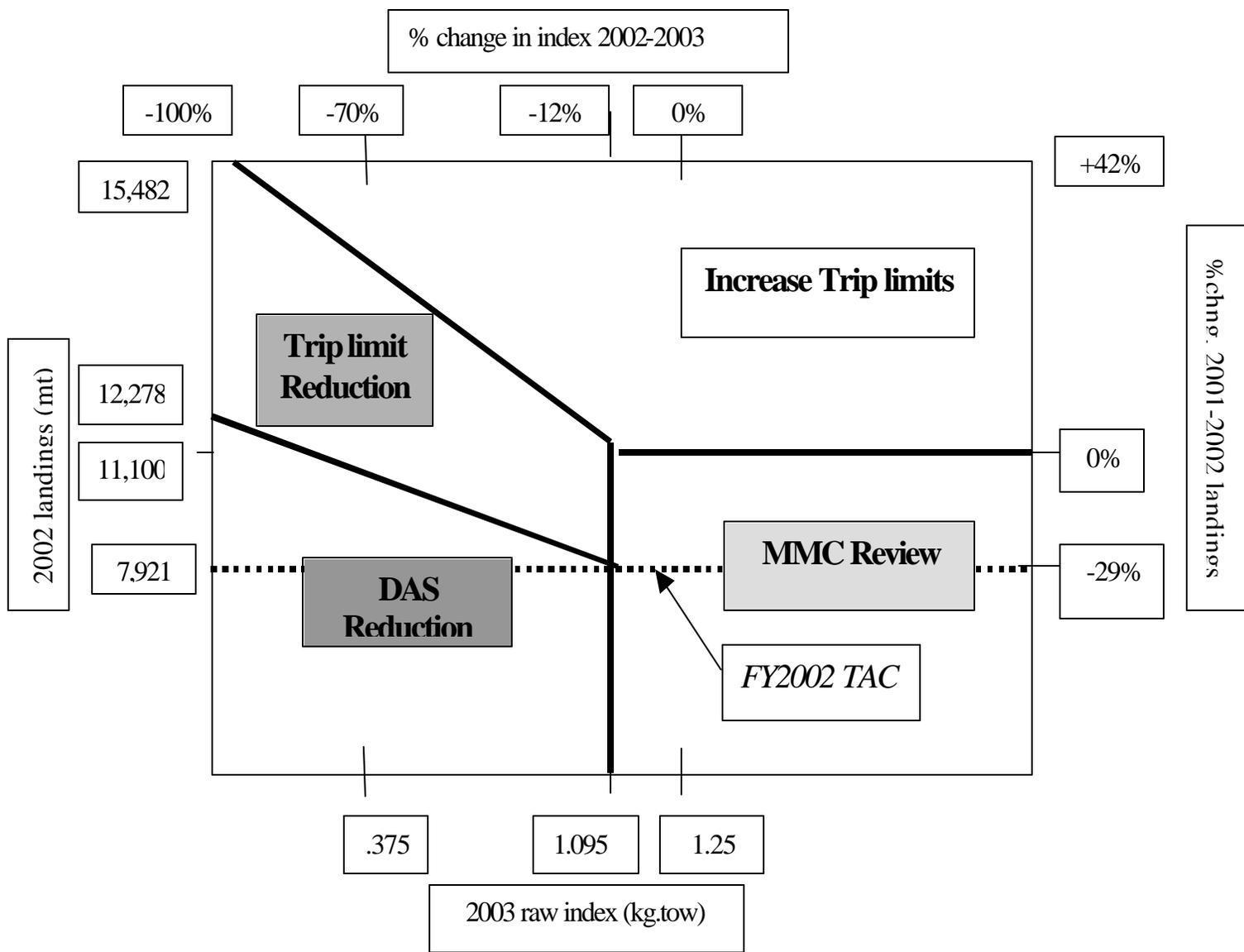


Figure 7 Schematic showing effect of a range of 2003 fall survey indices and FY2002 landings on FY2004 management actions under Option 1, 2 and 2b (when F is unknown).

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-6%	6%	18%	29%	41%	53%	65%	77%	89%	137%
100%	23348	+58%	21865	23348	23348	23348	23348	23348	23348	23348	23348	23348
50%	17511	+19%	16398	17511	17511	17511	17511	17511	17511	17511	17511	17511
25%	14593	-1%	13665	14593	14593	14593	14593	14593	14593	14593	14593	14593
0%	11674	-21%	10932	11674	11674	11674	11674	11674	11674	11674	11674	11674
-25%	8756	-41%	8199	8756	8756	8756	8756	8756	8756	8756	8756	8756
-50%	5837	-60%	5466	5837	5837	5837	5837	5837	5837	5837	5837	5837
-80%	2335	-84%	2186	2335	2335	2335	2335	2335	2335	2335	2335	2335

(a) FY2004 NFMA Target TACs (mt) based on a range of FY2002 landings, Option 1

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-6%	6%	18%	29%	41%	53%	65%	77%	89%	137%
100%	23348	+58%	21865	24000	25393	28018	28018	28018	28018	28018	28018	28018
50%	17511	+19%	16398	18000	19045	21013	21013	21013	21013	21013	21013	21013
25%	14593	-1%	13665	15000	15871	17511	17511	17511	17511	17511	17511	17511
0%	11674	-21%	10932	12000	12696	14009	14009	14009	14009	14009	14009	14009
-25%	8756	-41%	8199	9000	9522	10507	10507	10507	10507	10507	10507	10507
-50%	5837	-60%	5466	6000	6348	7004	7004	7004	7004	7004	7004	7004
-80%	2335	-84%	2186	2400	2539	2802	2802	2802	2802	2802	2802	2802

(b) FY2004 NFMA Target TACs (mt) based on a range of FY2002 landings, Option 2b

% change from FY2002 TAC	FY2002 landings (mt)	% change 2002 /2001 landings	%change in raw index, 2002-2003									
			3-yr. average index/annual biomass target (%)									
			-100	-75	-50	-25	0	+25	+50	+75	+100	+200
			-6%	6%	18%	29%	41%	53%	65%	77%	89%	137%
100%	23348	+58%	0	652	2045	4670	4670	4670	4670	4670	4670	4670
50%	17511	+19%	0	489	1534	3502	3502	3502	3502	3502	3502	3502
25%	14593	-1%	0	407	1278	2919	2919	2919	2919	2919	2919	2919
0%	11674	-21%	0	326	1022	2335	2335	2335	2335	2335	2335	2335
-25%	8756	-41%	0	244	767	1751	1751	1751	1751	1751	1751	1751
-50%	5837	-60%	0	163	511	1167	1167	1167	1167	1167	1167	1167
-80%	2335	-84%	0	65	204	467	467	467	467	467	467	467

(c) FY2004 NFMA Target TACs (mt) Difference between Option 2b and Option 1 (2b-1).

Table 11 FY2004 NFMA TACs under a range of 2003 trawl survey indices and FY2002 landings for Options 1 and 2 (a), and 2b (b), and the difference between the two (c).

3.2 Alternative management measures

This section provides the management measures associated with each of the TAC options described above. The method described below would apply across a range of TACs in any fishing year. The Councils propose that any increases in TACs be applied to trip limit adjustments unless the TACs are below levels in FY2002, under which DAS reductions would be implemented, keeping trip limits at current levels. The TACs for FY2004 will not be ascertainable until this time next year, but the following analysis provides a range of likely outcomes and can be used to assess the impacts of a range of measures that would apply in FY2004.

3.2.1 Options 1, 2 and 2b management measures

3.2.1.1 Trip limits/DAS

The following range of trip limits under Options 1 and 2 was initially calculated to provide results for the expected range of 2002 fall trawl survey results in the initial framework document, when 2002 indices were unknown. A section has been added that specifies the FY2003 trip limits based on the now-known survey results. The following analysis method would still apply, however, to a range of possible FY2004 TACs and be used to set management measures by notice action for FY2004. Based on extensive comments in the development of Framework 1, the MMC concluded that there is minimal support for reductions in DAS as an alternative to reductions in trip limits. Consequently, the MMC is providing management alternatives that offer a range of trip limits at 40 DAS under Options 1, 2 and 2b except for the worst-case scenario (greatest expected drop in 2002 fall survey indices), where it will provide a variable DAS alternative as well. The complete report on the trip limit analysis is provided in Appendix II.

Three SFMA TAC scenarios were analyzed, corresponding to the minimum, no change and maximum expected results of the 2002 fall bottom survey, but the results would also apply in FY2004 for the same range of TACs. Note that limited access vessels do not have a trip limit when fishing in the NFMA under either a monkfish or multispecies DAS, so the following analysis only applies to the SFMA. If the survey results in a 100 percent decline in biomass from 2001, the SFMA TAC under Options 1, 2 and 2b would be approximately 5,000 mt (11 million pounds). If the survey index is the same as 2001, the TAC would be set at 8,000 mt, and if the TAC increased up to 150 percent, the TAC would be approximately 11,000 mt, corresponding to the previous year's landings. Since F is unknown, and therefore the status relative to $F_{\text{threshold}}$ is unknown, Options 1 and 2 would not allow for a TAC increase above the previous year's landings, while Option 2b would allow an increase equal to the lesser of 20 percent or 1/2 the ratio of the 3-yr. average biomass index to the 2001 annual index target, if the survey increased more than 150 percent. Under this option the TAC could increase to a maximum of 17,700 mt in 2003 but this amount is above the baseline data used in the trip limit analysis (11,000 mt) and is not analyzed. Since this analysis was completed, 2002 survey indices have become available, and the resulting FY2003 trip limits are discussed in Section 3.2.1.3.

The analysis also assumes that the landings from Category E (open access) would remain the same as in the baseline period (FY2000). These landings are about 3,000 mt, or 6.5 million pounds. This amount is deducted from the TAC in each scenario prior to apportioning the TAC to the limited access permit categories on which the trip limits apply. Table 12 shows the expected landings under range of trip limits from 100 lbs. to 1,500 lbs. (tail weight) per DAS for Category AC and BD vessels.

Pre-determined Limit	Permit Category	
	AC	BD
(tail wt.)	Expected landing (Lbs. live wt.)	
100	829,336	1,038,906
200	2,853,513	3,106,188
300	4,037,580	4,315,470
400	4,877,690	5,173,470
500	5,529,329	5,838,986
600	6,061,758	6,382,752
700	6,511,919	6,842,500
800	6,901,867	7,240,751
900	7,245,825	7,592,034
1000	7,553,506	7,906,268
1500	8,737,574	9,115,550

Table 12 Expected monkfish landings under a range of trip limits from 100 to 1,500 lbs. (tail weight) per DAS in the SFMA.

Table 13 shows the trip limits associated with a range of FY2003 TACs: 5,000 mt (Scenario 1), 8,000 mt (Scenario 2) and 11,000 mt (Scenario 3). These results are presented graphically in Figure 8 for the entire range of TACs. Thus, if the TAC is set at 8,000 mt, for example, the trip limits would be 526 lbs. and 441 lbs. (tail weight) per DAS for Category AC and BD vessels, respectively. This TAC would be in effect if the 2002 survey biomass index remained the same as the 2001 index, and corresponds to the FY2002 TAC of 7,921 mt. For comparison, the FY2002 trip limits are 550 lbs. and 450 lbs. (In setting the trip limits in Framework 1, the Council rounded off the analysis results to these levels.)

In the event the 2002 survey biomass index declines, and a reduction in trip limits below current levels would be required, the MMC is providing a range of DAS reductions that would achieve various TACs from 8,000 mt to 5,000 mt with a continuation of the current 550 lbs. and 450 lbs. trip limits. These are analyzed in Part B of Appendix II, and the results are shown in Table 14 and Figure 9.

Scenario 1. A 5,000 Metric Ton Quota

Permit Category	Quota (Lbs. live wt.)	Landing per DAS (Lbs. Tail wt.)
AC	2,308,207	166
BD	2,222,421	149
E+ Dredge	6,492,299	
Total	11,022,928	

Scenario 2. An 8,000 Metric Ton Quota

Permit Category	Quota (Lbs. live wt.)	Landing per DAS (Lbs. Tail wt.)
AC	5,677,700	526
BD	5,466,685	441
E+ Dredge	6,492,299	
Total	17,636,684	

Scenario 3. An 11,000 Metric Ton Quota

Permit Category	Quota (Lbs. live wt.)	Landing per DAS (Lbs. Tail wt.)
AC	9,047,193	1,668
BD	8,710,948	1,310
E+ Dredge	6,492,299	
Total	24,250,441	

Table 13 Trip limits associated with a range of FY2003 TACs, 5,000 mt (Scenario 1), 8,000 mt (Scenario 2), and 11,000 mt (Scenario 3).

DAS	AC	BD	SUBTOTAL	E+dredge	TOTAL (lbs.)	TOTAL (mt)
10	2,457,394	2,846,824	5,304,218	6,492,299	11,796,517	5,351
20	3,994,610	4,174,382	8,168,992	6,492,299	14,661,291	6,650
30	4,948,401	4,872,602	9,821,003	6,492,299	16,313,302	7,400
40	5,435,634	5,237,904	10,673,538	6,492,299	17,165,837	7,786

Table 14 DAS allocations associated with a range of FY2003 TACs (~5,000 mt to ~8,000 mt) with FY2002 trip limits remaining in effect (550 lbs. and 450 lbs. for Category AC and BD vessels, respectively)

Graph 1. Expected Monkfish Landings under Predetermined Limits

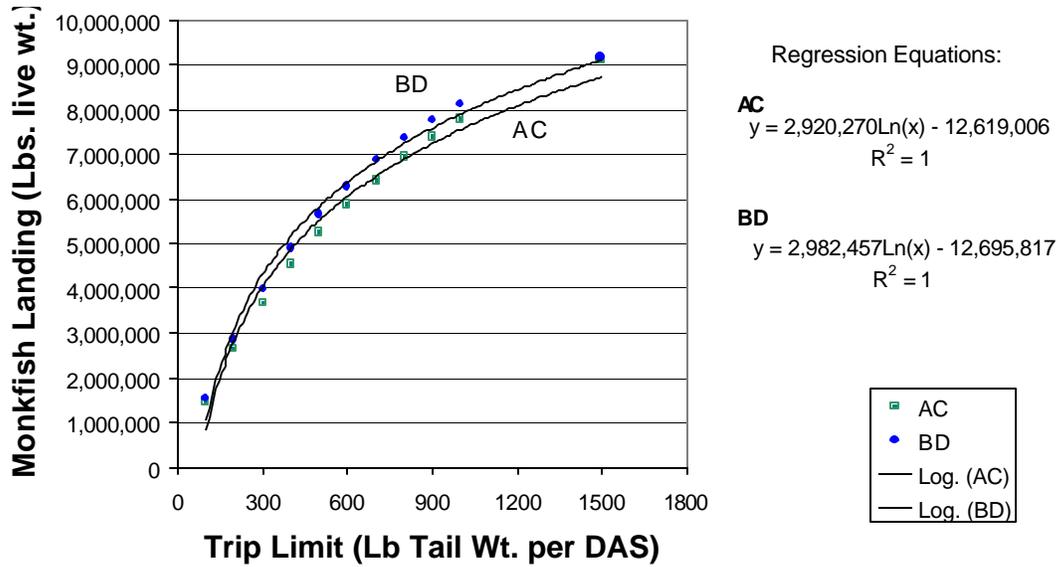


Figure 8 Monkfish trip limits across a range of FY2003 TACs from 5,000 mt to 11,000 mt for Category AC and BD vessels.

Graph 2. Expected Monkfish Landings at Various DAS Allocations

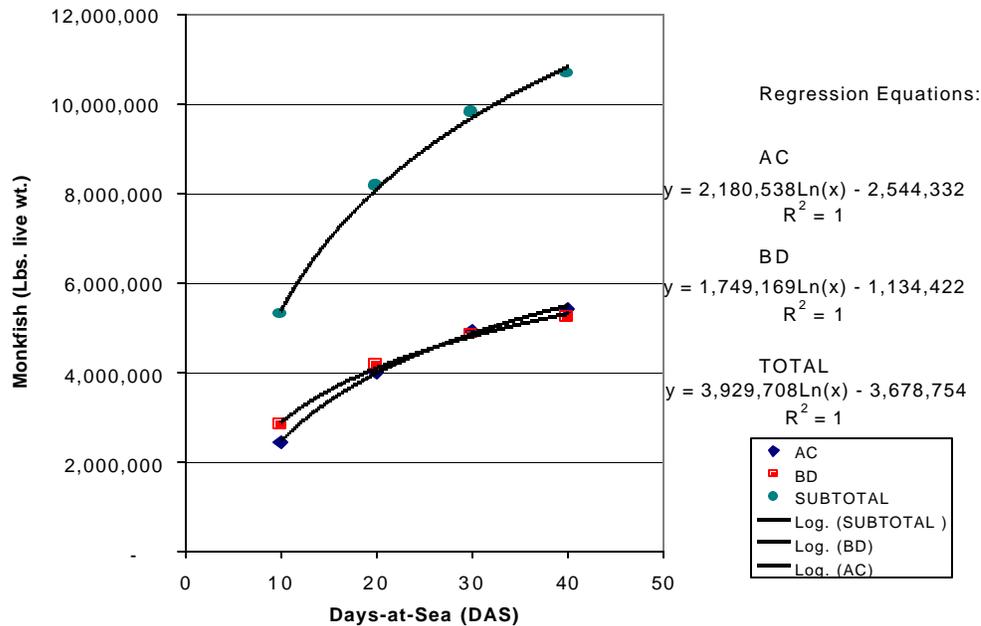


Figure 9 DAS allocations associated with a range of FY2003 TACs (~5,000 mt to ~8,000 mt) with FY2002 trip limits remaining in effect (550 lbs. and 450 lbs. for Category AC and BD vessels, respectively)

3.2.1.2 Bycatch limits under Option 2b

The Councils propose under Option 2b, its preferred alternative, a trip limit for Category E vessels fishing in the NFMA of 400 lbs. (tail weight)/DAS or 50 percent of the total weight of fish on board whichever is less, for the 2003-2004 fishing year. This compares to the current limit of the lesser of 300 lbs. or 25 percent of the total weight of fish on board. Since limited access vessels already have no trip limit when fishing under a monkfish or multispecies DAS in the NFMA, this proposal would essentially distribute the 2003 TAC increase to the incidental catch component on Category E vessels. The Councils' rationale for this adjustment is that as the stock increases, catch rates on incidental catch vessels would also increase. The incidental catch limit was set when the stock was less than 1/2 its current level, and without accommodating the expected increased incidental catch rate, the regulations increase the likelihood that regulatory discards would also rise. The increasingly restrictive management program on multispecies vessels reduces the likelihood that monkfish landings by these vessels, on a fleet wide basis, will increase significantly even if the incidental catch limit is raised by 33 percent as proposed.

3.2.1.3 FY2003 trip limits/DAS

Under the formula described in Section 3.2.1.1, the trip limits on vessels fishing in the SFMA under a TAC of 10,211 mt (as determined by the method described in Section 3.1.5.2) would be 1,230 lbs. (tail weight)/DAS on Category A and C vessels and 983 lbs./DAS on Category B and D vessels. For ease of compliance/enforcement, these values would be rounded to the nearest 50, resulting in the following:

Permit Category	SFMA Monkfish trip limits
Category A and C	1,250 (tail) or 4,150 (whole) lbs./DAS
Category B and D	1,000 (tail) or 3,320 (whole) lbs./DAS

3.2.2 Option 3 management measures

Since fishing mortality-based targets cannot be calculated at this time, there are no management measures associated with this option.

3.2.3 Option 4 management measures

Since fishing mortality-based targets cannot be calculated at this time, there are no management measures associated with this option, unless the Councils choose to extend FY2002 TACs and associated trip limits. In that case, the following Table 15 describes the trip limits that would be in effect.

Monkfish Trip Limits Effective May 17, 2002

Permit Category	DAS Program	Area	Gear ¹	Trip Limit per DAS ²
A&B and C&D with LA ³ scallop permit	Monkfish	NFMA	All Gear	No trip limit
A or C	Monkfish	SFMA	All Gear	550 lb of tail-weight
B or D	Monkfish	SFMA	All Gear	450 lb of tail-weight
C or D	Multispecies	NFMA	All Gear	No trip limit
C or D	Multispecies	SFMA	Trawl	300 lb of tail-weight
C or D	Multispecies	SFMA	Non-trawl	50 lb of tail-weight
C or D	Scallop	NFMA & SFMA	Dredge or net exemption	300 lb of tail weight
E (incidental)	Multispecies	NFMA	All Gear	300 lb of tail weight, or 25% of total weight of fish on board, whichever is less
E (incidental)	Multispecies	SFMA	All Gear	50 lb of tail-weight
E (incidental)	Scallop	NFMA & SFMA	Dredge	300 lb of tail-weight
A, B, C, D, or E (except C, D, or E <30ft. with MS ltd. access permit)	No DAS	NFMA & SFMA	Large Mesh	Up to 5% (whole or tail weight) of total weight of fish on board per trip
A, B, C, D, or E	No DAS	NFMA & SFMA	Small Mesh or Handgear	50 lb of tail weight per trip
C, D, or E vessels that are <30 feet with multi-species LA permit	No DAS	NFMA & SFMA	All Gear	50 lb of tail weight per trip

¹Dredge gear is prohibited unless fishing under a Scallop DAS

²Or the whole-weight equivalent (tail weight x 3.32)

³LA = Limited access

⁴Minimum regulated multispecies mesh size

⁵Less than regulated multispecies mesh size

Table 15 Monkfish trip limits in effect in FY2002 under the emergency rule.

3.2.4 No action (default) measures

The no action (default) alternative would eliminate monkfish DAS and implement reduced incidental catch limits on some vessels. These measures were calculated, in the original FMP to achieve the target TACs described in Section 3.1.4.6. The following tables, Table 16 & Table 17, show the monkfish trip limits by permit category for vessels fishing on a DAS or not on a DAS, respectively. Figure 10 is a flowchart showing the process by which a vessel can determine which of the five trip limits apply to that vessel under the default measures.

All of the management measures in the current program (gear, minimum fish size, etc.) would remain unchanged, except for the DAS, which are eliminated, and the incidental catch trip limits. Since there are no directed (DAS) trip limits, all vessels will be operating under one of the incidental catch limits, depending on permit category, gear and other factors.

Permit Category	DAS Program	Area	Gear*	Trip Limit per DAS**
C, D & E	Multispecies	NFMA	All Gear	300 lb tail-weight, or 25% of total weight of fish on board, whichever is less
C, D & E	Multispecies	SFMA	Trawl	300 lb tail-weight, or 25% of total weight of fish on board, whichever is less
C, D & E	Multispecies	SFMA	Non-Trawl	50 lb tail-weight, or 25% of total weight of fish on board, whichever is less
C, D & E	Scallop	SFMA and NFMA	Dredge or net exemption	200 lb tail-weight

*Dredge gear is prohibited when fishing under a monkfish or multispecies DAS

**Or the whole-weight equivalent (tail weight x 3.32)

Table 16 Monkfish trip limits for limited access vessels when fishing under a DAS under the default measures (no-action alternative).

Open Access (Category E) vessels fishing under a Multispecies or Scallop DAS have the same trip limits as the corresponding Limited Access vessels under the defaults.

Permit Category	Gear	Trip Limit*
All	Large Mesh (minimum regulated multispecies mesh size)	Up to 5% (whole or tail) of total weight of fish on board/trip size)
All	Small Mesh (Less than regulated multispecies mesh size)	50 lb/trip
All vessels that are <30 feet	All Gear	50 lb/trip

Table 17 Monkfish trip limits for vessels (all permit categories, including Categories A, B and E) when not fishing under a scallop or multispecies DAS under the default measures.

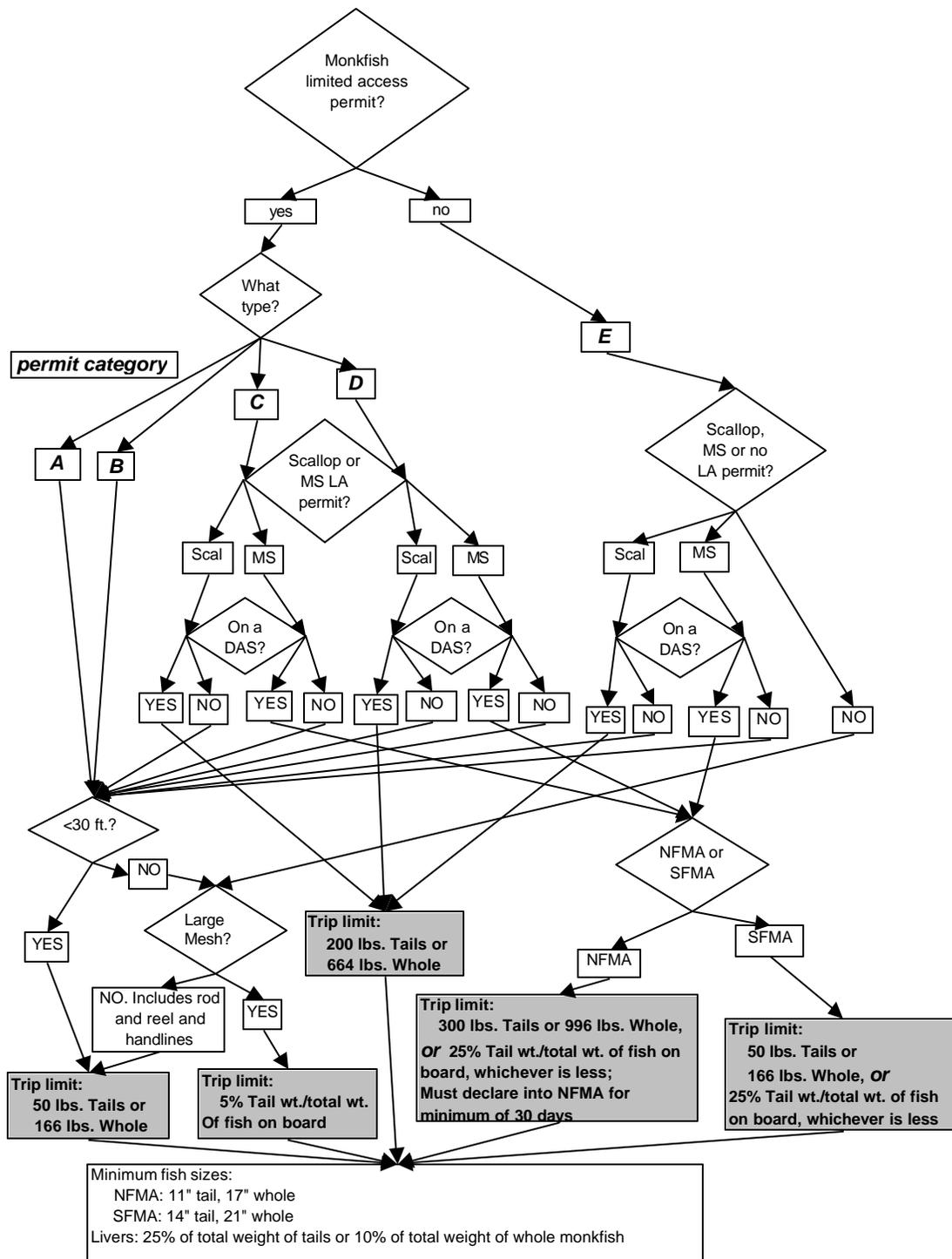


Figure 10 Flowchart showing Year 4 monkfish trip limits.

3.2.5 Revision to Area Declaration Regulations

The FMP states that prior to making a trip, vessels with multispecies, scallop, and monkfish DAS permits must declare into the NFMA for a minimum of 30 days in order to fish under the less restrictive size and trip limits. The collection-of-information requirements for the FMP approved under the Paperwork Reduction Act (PRA) also contained references to the multispecies, scallop and monkfish DAS permit vessels. However, NMFS inadvertently referenced only those vessels with monkfish DAS permits when the regulations implementing the FMP were published (64 FR 54732; October 7, 1999). As a result, existing monkfish regulations require only limited access monkfish vessels to declare their intent to fish in the NFMA in order to fish under the less restrictive measures of that area. Therefore, this action proposes to revise the monkfish minimum size and possession limit regulations to reflect the intent of the FMP. This revision would require vessels fishing under a scallop, multispecies or monkfish DAS that intend to fish in the NFMA under the less restrictive measures to declare their intent to fish in the NFMA for a minimum of 30 days.

4.0 Affected Environment

The affected environment is described in the EIS for the FMP and in the SAFE Report for 2001 (Appendix I).

5.0 Environmental Consequences

5.1 Biological impacts

5.1.1 Impacts of alternatives on monkfish

Of the six options under consideration, all but the no action alternative would establish a fishing mortality threshold at $F=0.2$, corresponding to current estimates of F_{max} . All of the options retain the original biomass targets established in the FMP (the median of the 3-year running average of the 1965-1981 autumn trawl survey biomass index). This target is the basis for the 10-year stock rebuilding program established by the FMP and continued by this framework adjustment.

This framework contains options for setting optimum yield target reference points, which set annual harvest targets (TACs) designed to achieve the rebuilding goals of the plan. Three of the options, Options 3, 4 and 5, are based on a target fishing mortality rate, and as such require current estimates of F to set annual TACs and associated adjustment to the management measures. Since reliable estimates of current F are not available, these options are not practicable at this time. Furthermore, since reliable projections of stock rebuilding under different fishing mortality rates are not possible at this time, the efficacy of Options 3, 4 and 5 cannot be demonstrated.

Options 1, 2, and 2b do not rely on current estimates of fishing mortality, but set annual TACs based on the current estimate of biomass (3-yr. moving average of the NMFS fall bottom trawl survey) relative to an annual biomass target. The annual biomass target is an equal interval level based on the 1999 biomass level for each stock and the 2009 biomass

target. As such, each option, while differing in the method for setting annual TACs, is designed to achieve the same incremental stock rebuilding goals with an automatic adjustment to the TACs, and corresponding management measures in the event the goals are not met or, in the case of Option 2 and 2b, exceeded. While these options are reactive, rather than projection-based, the annual review process insures against stock declines continuing without commensurate restrictions on the fishery.

The MMC commented that Option 1 is more precautionary in biological terms than Option 2b. Option 1 will invest the increases in excess of the scheduled ones to try to reach the target earlier, while Option 2b will withdraw a portion (up to a maximum of 20 percent) of the excess as yield. Option 2b will increase the probability that overfishing will occur because allowable landings would be higher than in Option 1 (up to 20 percent higher), but the difference in probability of overfishing between options is not quantifiable since fishing mortality is unknown. The difference between Options 1 and 2b is only realized, however, if the survey increases sufficiently for a TAC increase to be implemented under Option 2b.

The Councils' preferred alternative, Option 2b, also contains a provision to increase the incidental catch rate on Category E vessels fishing in the NFMA if the current biomass index exceeds the annual target. The rationale for this alternative is that at a fixed incidental catch rate, bycatch of monkfish will likely increase as the stock rebuilds. Allowing these vessels to land incidentally caught monkfish will not only increase economic yield and reduce waste, but it will improve catch data (thus, the precision of fishing mortality estimates) by including those animals in both VTR and dealer databases.

5.1.2 Impacts of alternatives on other managed species

All of the adjustments to management measures proposed in this framework will have no measurable impact on other managed species because they are solely based on changes to the monkfish trip limits, with one exception. If the fall survey index in the SFMA declines to a level that would result in a TAC below 8,000 mt, the Council may consider reducing monkfish DAS as an alternative to reducing the trip limits. In that case, the reduction in effort on Category A and B vessels may have a positive impact on other managed species that are in need of effort reductions. Category C and D, vessels, however, have limited access permits in either Multispecies or Sea Scallop fisheries, and would, therefore, not see a reduction in overall opportunity even if monkfish DAS were reduced. In fact, by reducing the opportunity to direct on monkfish, those vessels may redirect their effort on the groundfish or scallops.

5.1.3 Bycatch

Reliable quantitative estimates of the magnitude and scope of bycatch in monkfish fisheries, either of monkfish or other species, are not available. Information presented in the SAFE Report (Appendix I), however, provides some insight into the species discarded and the reasons for those discards. The incidence of bycatch appears to vary widely depending on gear, area and target species. Generally, on directed and non-directed trips catching monkfish, the predominant species discarded include monkfish, skates and dogfish. Reasons for monkfish discards include fish size (regulatory or market), trip limits (on non-directed trips), and quality (damage due to sharks and sand

fleas on large mesh gillnet trips). Other species are discarded for various reasons, including no market and trip limits.

While the Council intends to address bycatch issues more comprehensively in Amendment 2 to the Monkfish FMP and in actions being taken in other managed fisheries, this action does have positive impacts on some of the causes for monkfish bycatch, namely trip limits. The dynamic nature of the proposed control rule allows for increases in trip limits as the stock biomass increases. So, as the biomass and, therefore, catch rates increase, vessels will be allowed to retain more of the monkfish caught, thereby reducing the potential for discards while keeping the fishery on a rebuilding trajectory.

The proposed action also includes an increase in incidental catch limits on Category E (open access) vessels in the NFMA. This change will minimize discards in two ways. As the NFMA stock continues to rebuild, monkfish catch rates will increase on vessels targeting groundfish creating a potential bycatch situation. Increasing the limit from 300 lbs. (tail weight)/DAS to 400 lbs./DAS will reduce the amount of monkfish discarded in the groundfish fishery in the NFMA. To prevent the incidental catch limit from enabling an open access directed fishery, the regulations also place a limit on the monkfish proportion of total fish on board. The current limit is 25 percent of total weight of fish on board, but the Councils propose to increase that to 50 percent. As the possession of groundfish, dogfish or other species is restricted, the same weight of incidentally caught monkfish will represent a greater proportion of the total weight of fish on board. The proposed increase will minimize the regulatory discarding of monkfish that would result simply as a consequence of restrictions imposed under other fishery management plans.

5.2 Economic impacts

As noted in the previous section, this framework contains options for setting optimum yield target reference points, which set annual harvest targets (TACs) designed to achieve the rebuilding goals of the plan. Three of the options, Options 3, 4 and 5, are based on a target fishing mortality rate, and are not practicable at this time. Options 1, 2, and 2b do not rely on current estimates of fishing mortality, but set annual TACs based on the current estimate of biomass (3-yr. moving average of the NMFS fall bottom trawl survey) relative to an annual biomass target.

The analysis of economic impact of management alternatives depends on the measures being considered, specifically trip limits and DAS allocations. The specification of those measures depends on the results of the 2002 fall survey, which precluded the ability to complete a quantitative analysis of the specific measures for 2003 and beyond prior to the final Council meeting. The analysis done for Framework 1, however, provides some insight to the impact of measures being considered in this framework since it covered the no-action alternative and the range of trip limits expected during the rebuilding program.

This analysis is limited to vessels fishing in the SFMA because there are no trip limits currently or anticipated on limited access monkfish vessels fishing in the NFMA. Qualitatively, however, Option 2b differs from Options 1 and 2 in the NFMA in that it would allow for increased yield from the fishery if the index is above the annual target (by 1/2 the ratio) up to a maximum of 20 percent. If vessels in the NFMA actually harvest

the difference, the short-term benefit (of increased yield) would come at the expense of extending the time of rebuilding, since those additional fish would not be “invested” in rebuilding the biomass. It is not possible to quantify this relationship since stock rebuilding projections are not technically feasible.

5.2.1 Impact of the no-action alternative

The no-action alternative (Option 5) would eliminate the directed fishery (zero DAS) and reduce the incidental catch limit on Category C and D vessels fishing on a multispecies DAS in the NFMA to 300 lbs. (tail weight) per DAS from the current no-limit. Based on the Framework 1 trip limit analysis under the no-action alternative, when viewed by gear type, gillnet vessels would be most negatively impacted by the no action alternative. Ten percent of the gillnet vessels would experience a reduction in net income of 75.3 percent or more. However, 25 percent of gillnet vessels would have a reduction of 8.5 percent or more, and half of the vessels would not be impacted. Fewer than ten percent of dredge and hook vessels would be affected by the default measures, while 10 percent of trawl vessels (that hold a monkfish limited access permit and landed monkfish) would have a reduction in income of 9.5 percent or more.

Under the breakdown by vessel length, if implemented, the no action alternative would result in an estimated 54.6 percent reduction or greater for 10 percent of vessels less than 50 feet in length. Note that this estimated loss may be biased upward (show a greater loss than would actually be realized) since the trip limit model accounts for some changes in observed trips but does not account for substitution of different trips to mitigate losses in monkfish income. The model also does not account for potential resource changes that may result in improvements in productivity. As noted, the model also does not take into account the changes in monkfish DAS. The impact on larger vessels would be significantly less, with only ten percent of the vessels over 90 feet seeing a reduction of 1.6 percent or greater.

When homeport states are examined, the no action alternative would have the greatest impact on vessels in New Jersey and Delaware (combined), with 10 percent of the vessels having a reduction of 72 percent or more in net income. Least affected homeport states would be Virginia and Maryland (combined) and North Carolina where fewer than ten percent or less of the vessels would see any reduction at all (zero percent or greater).

5.2.2 Impact of Options 1, 2 and 2b

In comparison to the no action alternative, Options 1, 2 and 2b retain the current measures, with adjustments to the trip limits and, if the survey index in the SFMA declines significantly in any year (to a level which would prescribe a TAC lower than 8,000 mt), possibly DAS allocations. The model used to analyze Framework 1 options did not account for changes in monkfish DAS. With this limitation the model underestimates the impacts of DAS reductions; a factor that may be more severe for category A and B permit holders since they will not have multispecies or scallop DAS to fall back on. In general, options containing higher DAS allocations with similar trip limits may be assumed to be less burdensome than options with lower DAS allocations even though the estimated impacts (model results) will be similar.

If the 2002 survey index were zero, the corresponding SFMA TAC would approximate that of the default measures under the formula and method described in Section 3.2.1.3. Effectively, trip limits and/or DAS allocations would approach those associated with the default measures. Any value above zero would result in increases in TACs and associated management measures, with corresponding and proportional economic benefits.

If the 2002 survey index had remained unchanged from 2001, the SFMA TAC would be approximately 8,000 mt. This is the same TAC as in place for FY2002 under the Framework 1/emergency interim rule, and therefore, Options 1, 2 and 2b would likely have no economic impact relative to the status quo, and be positive relative to the no action alternative.

The Framework 1 analysis, which characterized incomes relative to a baseline period of 1998-2000, indicated that under the current set of trip limits (in FY2002, the status quo), 90 percent of vessels less than 50 feet would have their incomes restored, and the remaining 10 percent would experience a 3.4 percent or greater reduction from FY2000 levels. Permit Category A and B vessels will have all income restored, while 10 percent of Category C vessels will have a 0.8 percent or greater reduction and 10 percent of Category D vessels will have a reduction of 2.9 percent or more. Ten percent of vessels homeported in NJ and DE (combined) will have a 2.1 percent reduction in income, and 10 percent of RI vessels will have a 1.5 percent or greater loss.

Since the 2002 survey index rose to a level such that the 3-year running average is only about seven percent below the 2002 annual biomass target (under the method used by Options 1, 2 and 2b), the 2003 TAC in the SFMA increases to 10,211 mt (from 7,921 in FY2002). At that level, trip limits will increase to 1,250 and 950 lbs. (tail weight) per DAS for Category A and C, and B and D vessels, respectively. While these levels are more than double the FY2002 levels (550 and 450 lbs.), they are slightly below the levels in FY2001 (1,500 and 1,000 lbs, subsequent to the court decision). The Framework 1 analysis, which, as noted, did not account for changes in DAS, also included an analysis of the impact of these limits relative to the 1998-2000 baseline period. According to the analysis, all vessels would have their income restored to baseline levels.

5.2.3 Sensitivity Analysis of Economic Effects of Alternative Trip Limits

The proposed action would adjust trip limits for limited access monkfish vessels fishing in the SFMA while on a monkfish DAS (vessels in the NFMA have no trip limit and none is anticipated). Any such adjustment would be made to achieve a target quota that would be contingent on landings from the previous year and the Fall survey index. The method by which any such adjustment would be made could be extended out beyond one year, for example to cover FY2004. This means that while the actual trip limit for FY2003 is known, the trip limit for FY2004 will not be until a year from now and a range of possible results would be projected. For this reason, a range of possible trip limits and their economic impact has been analyzed for each year.

Trip limits will result in a truncation in the observed landings distribution. This truncation may not present a problem when lowered trip limits are being contemplated but does make assessment of raising trip limits problematic. For this reason, more recent data could not be used. Instead, data from a time period with no trip limits must be used.

Monkfish trips taken in the SFMA from 1998 to 2000 (calendar years) where monkfish nets were used (10-inches or greater) were assumed to best approximate the type of fishing activity that would be affected by the proposed action. Note that the analyses and discussion found in this section focuses solely on the economic impact on this segment of the monkfish fleet.

The economic effects of trip limits were evaluated based on a comparison of the expected return for alternative trip-taking strategies. Specifically, a vessel may abandon a trip if the trip limit causes earnings to fall below zero; a vessel may continue fishing while discarding any monkfish above the trip limit; or a vessel may fish up to the trip limit then return to port. In effect, assuming a trip is taken vessels may choose to continue fishing while discarding monkfish above the trip limit as long as revenue earned from species other than monkfish is greater than the cost of fishing. By contrast, trips where relatively small amounts of revenue are earned from other species are likely to be either uneconomical or would be discontinued once the trip limit has been reached since the cost of continued fishing would exceed the additional income.

The sensitivity analysis was conducted using six possible quota levels from 5,000 to 13,000 MT that are likely to be in effect for FY2003 and FY2004 (Table 18). This range includes the 2003 quota as well as those specified as Scenarios 1 to 3 in Table 9. The additional quota possibilities of 6,500 and 13,000 MT were included to provide a greater number of possible economic effects.

Quota	Category AC		Category BD	
	Whole Wt	Tail wt	Whole Wt	Tail wt
5,000 MT	551	166	495	149
6,500 MT	996	300	830	250
8,000 MT	1746	526	1464	441
FY2002	1826	550	1494	450
10,211 MT	4084	1230	3264	983
11,000 MT	5538	1668	4349	1310
13,000 MT	11952	3600	8964	2700

Table 18. Summary of Possible Quotas and Associated Trip Limits

Since the study data included a time period where trip limits had not been implemented the economic effect of changes in trip limits had to be inferred based on relative changes from a baseline condition. To construct this baseline the FY2002 trip limits were applied to the study period data. The economic impacts of alternative quota and associated trip limits were then compared to this baseline.

Median landings per day for 1998-2000 were 1,100 and 1,200 pounds (whole weight) for Category A&C and Category B&D vessels respectively (Table 19). The FY2002 trip limits would have affected about 30% of the trips that were taken by vessels in the SFMA from 1998 to 2000. Note that the FY2003 trip limits would have affected only 10% of Category A&C trips and 15-20% OF Category B&D. Thus, from these data alone, it may be inferred that the FY2003 trip limits would have positive economic benefit relative to FY2002.

Percentile	Category AC	Category BD	Combined
1 st	148	165	159
5 th	300	348	320
10 th	420	513	480
25 th	770	880	827
50 th	1100	1200	1161
75 th	2118	2360	2275
90 th	4003	4300	4200
95 th	5488	6000	5806
99 th	9000	10200	9808

Table 19. Distribution of Landings per Day (Whole wt) for Calendar Years 1998-2000

Relative to performance during calendar years 1998-2000, net return on monkfish-only trips would improve by 23% for the median vessel (Table 20) at the FY2003 quota level. At this quota the change in economic performance ranged from no change (compared to FY2002) to an improvement of 78%. Any given vessel would realize no improvement over FY2002 net return if the FY2002 trip limits were themselves non-constraining. Median vessel performance would be reduced by 63% at a 5,000 MT quota but would increase by 29% at a 13,000 MT quota.

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
10th Percentile	-70.0%	-45.5%	-3.4%	0.0%	0.0%	0.0%
25th Percentile	-67.3%	-41.5%	-1.9%	3.1%	3.1%	3.1%
50th Percentile	-63.4%	-34.1%	-0.9%	22.9%	25.9%	29.0%
75th Percentile	-59.6%	-25.8%	-0.1%	53.0%	62.7%	70.2%
90th Percentile	-53.3%	-14.7%	0.0%	78.4%	106.3%	130.4%

Table 20. Distribution of Percent Change in Net Returns on Monkfish-Only Trips

Since vessels have varying degrees of dependence on monkfish, relative changes in gross fishing income tend to be lower than economic impacts on monkfish trips alone. For example, median vessel gross revenues were estimated to increase by 12% (as compared to 23% for monkfish-only trip net return) at the FY2003 quota level (Table 21).

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
10th Percentile	-61.0%	-34.5%	-2.4%	0.0%	0.0%	0.0%
25th Percentile	-56.3%	-31.9%	-1.5%	1.6%	1.6%	1.6%
50th Percentile	-48.7%	-20.0%	-0.6%	12.3%	13.5%	17.4%
75th Percentile	-38.2%	-11.7%	-0.1%	35.1%	41.3%	48.9%
90th Percentile	-30.2%	-5.7%	0.0%	56.7%	72.8%	89.2%

Table 21. Distribution of Percent Change in Gross Fishing Revenue

Across vessel size classes the distribution of impact on net return on monkfish-only trips (Table 22) and gross fishing revenue (Table 23) was quite similar for small and medium

vessels for most quota scenarios. Large vessels were estimated to be comparatively less impacted by the lower quota scenarios limits and be relatively more favorably impacted at higher quotas. This finding may be due to the relatively small number of large vessels in the study baseline and may not be a reliable predictor of how larger vessels may fare under any given quota.

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
Small (less than 50 feet)						
10th Percentile	-70.1%	-46.0%	-2.9%	0.0%	0.0%	0.0%
25th Percentile	-67.4%	-41.4%	-1.8%	3.8%	3.8%	3.8%
50th Percentile	-63.1%	-33.8%	-0.8%	22.1%	25.2%	26.3%
75th Percentile	-58.6%	-25.8%	-0.1%	49.4%	58.3%	64.0%
90th Percentile	-53.4%	-18.9%	0.0%	66.8%	83.8%	96.0%
Medium (50 to 70)						
10th Percentile	-69.5%	-44.2%	-3.0%	0.0%	0.0%	0.0%
25th Percentile	-67.8%	-41.6%	-2.5%	5.0%	5.0%	5.0%
50th Percentile	-65.5%	-35.3%	-1.9%	49.6%	65.3%	80.7%
75th Percentile	-63.1%	-26.7%	-0.2%	87.9%	114.8%	126.7%
90th Percentile	-61.0%	-12.2%	0.0%	109.4%	139.8%	159.9%
Large (more than 70)						
10th Percentile	-69.8%	-45.5%	-4.4%	0.0%	0.0%	0.0%
25th Percentile	-66.1%	-43.1%	-3.9%	0.0%	0.0%	0.0%
50th Percentile	-64.1%	-40.7%	-1.2%	65.4%	84.0%	104.4%
75th Percentile	-39.3%	0.0%	0.0%	79.5%	128.0%	170.8%
90th Percentile	0.0%	9.7%	0.0%	110.8%	163.4%	223.7%

Table 22. Distribution of Percent Change in Net Returns on Monkfish-Only Trips by Vessel Size

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
Small (less than 50 feet)						
10th Percentile	-59.4%	-34.3%	-2.1%	0.0%	0.0%	0.0%
25th Percentile	-55.4%	-30.2%	-1.3%	1.8%	1.8%	1.8%
50th Percentile	-48.7%	-19.9%	-0.6%	11.3%	12.5%	12.6%
75th Percentile	-38.8%	-11.8%	-0.1%	32.0%	38.4%	43.6%
90th Percentile	-30.7%	-7.2%	0.0%	42.8%	51.9%	62.8%
Medium (50 to 70)						
10th Percentile	-61.7%	-39.8%	-2.6%	0.0%	0.0%	0.0%
25th Percentile	-60.1%	-34.0%	-1.8%	2.8%	2.8%	2.8%
50th Percentile	-53.2%	-27.2%	-1.3%	34.8%	44.8%	54.8%
75th Percentile	-39.6%	-8.2%	-0.2%	63.8%	74.6%	83.0%
90th Percentile	-31.5%	-3.2%	0.0%	79.0%	109.6%	121.3%
Large (more than 70)						
10th Percentile	-61.5%	-40.0%	-3.8%	0.0%	0.0%	0.0%
25th Percentile	-61.4%	-37.8%	-2.7%	0.0%	0.0%	0.0%
50th Percentile	-42.6%	-27.7%	-1.0%	48.2%	60.3%	74.3%
75th Percentile	-16.0%	-7.0%	0.0%	71.1%	106.1%	138.2%
90th Percentile	0.0%	0.0%	0.0%	75.5%	122.5%	150.3%

Table 23. Distribution of Percent Change in Gross Fishing Revenue by Vessel Size

In terms of relative net revenue (Table 24) and gross fishing revenue impacts (Table 25), compared to Southern New England and Mid-Atlantic states, vessels from home port states in Maine, New Hampshire, or Massachusetts would be more negatively impacted by quota scenarios below FY2003 and more positively impacted at all other quota scenarios. This finding is due to the tendency for vessels in these states (predominantly Massachusetts) to have relatively higher landings per day on monkfish-only trips as compared to vessels operating in Southern New England or the Mid-Atlantic as well as a relatively higher dependence on monkfish for total fishing revenue.

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
New England						
10th Percentile	-72.6%	-47.8%	-3.6%	0.0%	0.0%	0.0%
25th Percentile	-69.3%	-44.9%	-2.2%	3.4%	3.4%	3.4%
50th Percentile	-66.9%	-40.3%	-1.4%	27.0%	30.5%	31.4%
75th Percentile	-63.4%	-30.5%	-0.1%	61.7%	81.5%	94.0%
90th Percentile	-62.2%	-24.6%	0.0%	100.7%	139.8%	170.8%
Southern New England/Mid-Atlantic						
10th Percentile	-68.5%	-42.7%	-2.9%	0.0%	0.0%	0.0%
25th Percentile	-65.3%	-38.9%	-1.6%	2.5%	2.5%	2.5%
50th Percentile	-61.3%	-32.0%	-0.7%	18.8%	21.9%	25.8%
75th Percentile	-57.1%	-23.1%	-0.2%	49.7%	61.2%	67.6%
90th Percentile	-48.2%	-13.4%	0.0%	65.7%	84.4%	104.4%

Table 24. Distribution of Percent Change in Net Returns on Monkfish-Only Trips by Region

	5000 MT	6,500 MT	8,000 MT	10,211 MT	11,000 MT	13,000 MT
New England						
10th Percentile	-61.4%	-37.7%	-2.3%	0.0%	0.0%	0.0%
25th Percentile	-57.7%	-33.0%	-1.6%	1.8%	1.8%	1.8%
50th Percentile	-49.0%	-22.4%	-0.9%	14.9%	16.3%	17.9%
75th Percentile	-35.2%	-11.9%	-0.1%	41.2%	50.8%	59.7%
90th Percentile	-17.9%	-5.7%	0.0%	69.0%	98.8%	121.3%
Southern New England/Mid-Atlantic						
10th Percentile	-59.5%	-33.4%	-2.4%	0.0%	0.0%	0.0%
25th Percentile	-55.1%	-30.7%	-1.2%	1.4%	1.4%	1.4%
50th Percentile	-48.4%	-19.6%	-0.5%	11.9%	13.2%	15.5%
75th Percentile	-39.1%	-11.0%	-0.2%	33.2%	40.6%	46.1%
90th Percentile	-32.6%	-6.7%	0.0%	48.2%	60.3%	66.9%

Table 25. Distribution of Percent Change in Gross Fishing Revenue by Vessel Size by Region

5.3 Social impacts

5.3.1 Introduction

This Social Impact Assessment characterizes the magnitude and extent of the social impacts likely to result from the proposed management action as well as from the other alternatives considered by the Councils during the development of Framework 2. The purpose of this SIA is to consider and describe all groups of participants and the communities involved in the monkfish fishery and to analyze the impacts of the proposed alternatives on those participants and communities.

The mandate to consider the social impacts from proposed federal actions comes from two major laws: the National Environmental Policy Act (NEPA) and the Sustainable Fisheries Act (SFA). NEPA regulations require federal agencies to assess the proposed action's effects on the quality of the human environment, which includes the direct, indirect, and cumulative impacts on the economic and social aspects of the community (40 CFR 1508.14). In addition, SFA contains a National Standard that requires the Council to consider the importance of fishery resources to affected communities and provide those communities with continued access to the fishery, within the constraints of the conservation objectives and condition of the resource.

National Standard 8 of the Magnuson Stevens Fishery Conservation and Management Act states that:

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.

National Standard 8 requires Councils to consider the importance of fishery resources to affected communities and provide those communities with continuing access to fishery resources, but it does not allow Councils to compromise the conservation objectives of the management measures. "Sustained participation" is interpreted as continued access to the fishery within the constraints of the condition of the resource. The long-term conservation and rebuilding of stocks often require that limits be placed on particular gears and/or the harvest of specific stocks. Thus, National Standard 8 is interpreted to apply only to a consideration of continued overall access to fishery resources and is not a guarantee that fishermen will be able to use a particular gear type, harvest a particular species of fish, fish in a particular area, or fish during a certain time of the year.

A fundamental problem exists in attributing social change to specific factors such as management regulations when communities or other societal groups are constantly evolving in response to numerous external factors, such as market conditions or technology. Certainly, management regulations influence the direction and magnitude of social change, but attribution is difficult with the tools and data available. Attribution is particularly difficult considering the dynamic nature of fishing communities and other

social groupings of individuals in the industry, and in comparison to the no-action alternative in the context of a declining or collapsing resource.

In general, management measures implemented through Framework 2, as with all framework adjustments, are intended to fall within the scope of the rebuilding program initiated by the Monkfish FMP. Therefore, while there may be short-term social impacts resulting from the Framework 2 actions, the long-term social impacts of this framework adjustment are consistent with the FMP assessment. The long-term social impacts discussed in the FMP will be re-evaluated in Amendment 2. Nevertheless, this social impact discussion attempts to characterize the type and magnitude of short-term social impacts that can be expected from the Framework 2 alternatives. It also characterizes the differences between the expected social impacts under each management alternative in order to provide the Councils with information useful in selecting the final management measures to be included in Framework 2.

5.3.2 Background

A description of the affected human environment (monkfish fishermen and fishing communities), as well as an assessment of the social impacts of the monkfish rebuilding program, is presented in the Monkfish FMP. In addition, the Monkfish SAFE Report (Appendix I) contains useful information on affected fishing vessels and communities. The information in these documents can supplement this social impact assessment and provide background information to help assess the impacts of management alternatives. This information was used to qualitatively assess the social impacts of the alternatives under consideration for this framework adjustment. Amendment 2, now under development, will provide updated social and economic information to comprehensively characterize the socioeconomic baseline from which management actions will be evaluated.

5.3.3 Description of the fishery

For a complete description of the commercial fishery for monkfish, refer to the Monkfish FMP and the Monkfish FY2001 SAFE Report (Appendix I).

5.3.3.1 Dealer gross revenues

For the purposes of this Framework, data were compiled to illustrate the makeup of the monkfish fishery fleet and the distribution of the fishery across gear types, permit categories and port of landing. These data are presented in the SAFE Report (Appendix I). Additional background information can be found in the Affected Human Environment section of the Monkfish FMP document.

5.3.3.2 Homeport dependency on monkfish

For the purposes of assessing the impact to the communities of interest, defined later in this document, data have been compiled that shows total and monkfish revenue by homeport for the communities of interest. Essentially, impact analysis evaluates the impact to the overall community, not just that portion of the community that participates in the fishery in question. Therefore, monkfish fishing activity is expressed as a percentage of the overall community's direct fishing activity. Additionally, information is provided as to the number of federally permitted vessels in the community as compared

with the number of vessels with active monkfish permits. These data can be found in the SAFE Report (Appendix I).

5.3.3.3 Current management system

For a description of the current management system, see the SAFE Report (Appendix I).

5.3.4 Social impact of Framework 2 Alternatives

The purpose of Framework 2 is two-fold: (1) eliminate the “Year 4” default measures; and, (2) implement management measures for the 2003 fishing year. Refer to the MARFIN Report by Hall-Arber et. al (2001) for an in-depth look at many of the monkfish communities in New England. Since the specific measures associated with each of the alternatives under consideration depends on the results of the 2002 survey, the following analysis is based on a range of possible outcomes bounded by the expected survey results.

5.3.4.1 Communities of interest

For the purposes of this social impact assessment, the community groups identified as primary and secondary fishing communities related to monkfish activity from Framework 1 will be analyzed. These communities are most likely to be directly affected by the alternatives under consideration in this framework adjustment. Primary communities were defined as those averaging more than \$1 million in monkfish revenue from 1994-1997. Secondary communities were defined as those that averaged more than \$50,000 in monkfish revenues from 1994-1997.

Based on the information presented in the Monkfish SAFE report and the likely distribution of the impacts of the alternatives under consideration, the following primary and secondary community groups have been identified as Framework 2 “communities of interest,” about which more detail is provided and on which this assessment will primarily focus. A plethora of background information on many of the New England communities of interest can be found in New England’s Fishing Communities (MARFIN Report) by Hall-Arber et. al (2001).

Primary Community Groups

- Portland, ME
- Boston, MA
- Gloucester, MA
- New Bedford, MA
- Long Beach/Barnegat Light, NJ
- Point Judith, RI

Secondary Community Groups

- Rockland, ME
- Port Clyde, ME
- South Bristol, ME
- Ocean City, MD
- Chatham, MA
- Provincetown, MA

- Scituate, MA
- Plymouth, MA
- Westport, MA
- Portsmouth, NH
- Point Pleasant, NJ
- Cape May, NJ
- Greenport, NY
- Montauk, NY
- Hampton Bays, NY
- Newport, RI
- Hampton, VA
- Newport News, VA

While the community groups above have been identified as communities of particular interest in this framework adjustment, it is still important to consider the impacts of the measures in this framework adjustment across all communities. Social impacts can be defined as the changes that a fisheries management action may create in people's way of life (how they live, work, play, and interact), people's cultural traditions (shared beliefs, customs, and values), and people's community (population structure, cohesion, stability, and character). As such, social impacts may result from changes in flexibility, opportunity, stability, certainty, safety, and other factors that are not specific to any community, but oftentimes to any individual or entity experiencing changes resulting from a fishing regulation.

It is possible that the social impacts of some measures under consideration will not be experienced solely by one community group or another; rather, it is likely that some impacts will be experienced across communities and gear sectors. An example of this may be a reduction in allocated DAS, if it is applied to all monkfish permit holders.

5.3.4.2 Methodology

According to the Council on Environmental Quality regulations, social impact analysis fulfills the mandate that the "human environment" in NEPA be "interpreted comprehensively" to include "the natural and physical environment and the relationship of people with the environment" (40 CFR 1508.14). To meet this goal, the Committee on Guidelines and Principles (1994) identified five basic categories of social impact variables:

1. Population characteristics: size and expected size, ethnic and racial diversity and the influx and outflux of temporary residents.
2. Community and institutional structures: size, structure, linkages of local government, historical and present patterns of employment and industrial diversification, and the size, activity and interaction of voluntary associations, religious organizations and interest groups.
3. Political and social resources: distribution of power and authority, identification of interested and affected parties, and the leadership capacity within the community or region.

4. Individual and family changes: factors that influence the daily life of individuals and families in the community such as attitudes toward the proposed policy, alterations in family and community networks and perceptions of risk, health, and safety.
5. Community resources: patterns of natural resource use, the availability of housing, and community services including health, police, fire protection and sanitation facilities.

These five categories have already been analyzed in Framework 1. Refer to section 5.3.3.4 of that document for a discussion of some of the social impacts that can occur from a change in trip limits or DAS reductions (For example: changes in occupational opportunities, regulatory discarding, and formation of attitudes).

5.3.4.3 Alternatives

The alternatives under consideration which are analyzed in this section, including the no-action alternative are described in Section 3.0.

5.3.4.4 Impacts of general alternatives under consideration

This section provides a discussion of the social impacts that are most likely to result from trip limits and DAS reductions. These two management measures are the only effort controls that are part of the range of alternatives under consideration in this framework adjustment. The details of the alternatives are discussed in subsequent sections of this assessment.

Trip Limits

In general, trip limits can affect the structure of a fishery. If the trip limit is set very low, the inshore sector of the fleet can sometimes manage to fish economically, while the offshore sector of the fleet cannot cover trip expenses. This can change the structure of financial rewards generated in the fishery and can ultimately change the short-term and long-term structure of the fishery itself. Fishermen's views on trip limits are usually based on what the limit will do to their income, not that a trip limit itself holds some socially or culturally undesirable characteristic. Trip limits are the primary component of the Framework Adjustment 2. Most of the negative social impacts result from attitudes that form when fishermen are forced to discard their catch as a result of the trip limit. Furthermore, there are negative social costs if the trip limits are set too low, or too high.

Days-At-Sea Reductions

The impacts of reductions in DAS available to vessels for monkfish fishing vary, depending on the amount of allocated DAS that vessels use and the availability of other opportunities. Category A and B vessels are more likely to be affected, since they do not have limited access multispecies or scallop permits. DAS reductions are only being considered for this framework if the results from the Fall 2002 survey index suggest that a reduction in days-at-sea is necessary to protect the stock. The higher the percentage of allocated DAS usage, the more significant the impact of reducing DAS.

Social impacts of DAS reductions tend to be more far-reaching and long-term in nature than other management measures like trip limits. Most impacts result from direct reductions in monkfish fishing opportunities and revenues for vessels that are most active

in the fishery. Reductions in opportunities also relate to reductions in vessels' flexibility and can have direct impacts on fishing activity within a port, thereby impacting the shoreside facilities that are dependent on the affected vessels.

Other indirect impacts of DAS reductions manifest themselves in the form of reduced certainty and stability in the fishery and/or community, increased concerns about safety, problems finding and keeping crew, and overall increases in stress and reductions in feelings of job satisfaction. Indirect negative social impacts resulting from DAS reductions relate to adaptations that vessels make to compensate for reduced opportunity and reduce income, which can oftentimes increase their risk-taking and compromise their safety at sea. As income is reduced, some fishermen will try to minimize their operating costs in order to stay viable, sometimes reducing or eliminating crew, especially on smaller vessels. More owners of smaller vessels could be forced to fish alone for some or all of the year. Vessels may also try to maximize their remaining DAS by fishing during the winter when prices are usually better. Winter weather is more extreme and less predictable, increasing dangers that fishermen may encounter.

In addition, the disproportionate impacts of DAS reductions can create perceptions of inequity, which often exacerbate social impacts occurring in fishing communities. The groundfish fishery is an example of perceptions of inequity relative to the disproportionate impacts of DAS reductions. Some people think that DAS allocations from the Multispecies FMP Amendments 5 and 7 were unfair and created inequities and tensions between sectors involved in the fishery. Those who switched from groundfish to other fisheries with the decline of the groundfish stocks feel that they were punished by not receiving their true historical allocation of DAS. Some fishermen view DAS allocations as unfair because those who depend most on the fishery were impacted the greatest, while others who never depended on the fishery were allowed to potentially increase their effort eighty-eight fold (88 Fleet DAS were allocated to any vessel that could prove one pound of groundfish landings). Many fishermen feel that they have sacrificed more than their share to rebuild the resource and are concerned about their future ability to realize the benefits of their sacrifices. Five years later, the fishery is facing proposals to reduce DAS allocations by another 30% and 37%. Similar to Amendments 5 and 7, this measure will again significantly affect those who are most active in and dependent on the multispecies fishery.

One concern about the long-term impacts of DAS reductions is that once allocated DAS are reduced, the DAS that are eliminated from the fishery will never be returned to the vessels. Whether or not this is the case cannot be predicted at this time, but it should be noted as a serious concern relative to long-term social and community impacts of DAS reductions. Also, as noted in the report from the social impact informational meetings, many communities are losing much of their shoreside support infrastructure. Some communities throughout the region have experienced losses of cutting houses, ice facilities, processing facilities, and other important services. While these losses may be due in part to external factors (healthy economy, shift towards recreation and tourism, etc.), additional losses may be experienced in some communities that depend on the monkfish fishery or on vessels that depend on the monkfish fishery.

On the other hand, in recent years some communities have experienced growth in infrastructure elements as a result of positive changes in fisheries such as scallops, herring, groundfish and summer flounder. Communities with diversified fisheries dependence, including monkfish, are more able to weather stock declines or management restrictions in individual fisheries. The long-term concerns about the effect of monkfish management relate to the ability of the community to remain actively involved in the monkfish fishery, and the ability of the community to support increased participation in the fishery as the stocks continue to recover. Maintaining infrastructure elements even at minimal levels during periods of low activity significantly reduces the capital (financial and social) required to participate in a recovered fishery. Retaining DAS is viewed as essential to enabling monkfish dependent communities to maintain those elements, even at minimal levels.

Conflicts between user groups can exacerbate intra- and inter-community conflicts, create additional perceptions of inequity, and weaken overall cohesion within fishing communities. For instance, in communities where both monkfish gillnetters and trawlers exist, due to the disproportionately higher trip limits for non-gillnetters prior to the court order), conflicts and perceptions of inequity among the user groups exists. Gillnetters feel that they are being unfairly treated and, as such, the fishing community is divided by the gear sectors, thus weakening overall cohesion.

5.3.4.5 Impact of the no-action alternative

If the Councils do not take action in this framework, the default measures as described in Section 3.2.4 would take effect. This includes an elimination of the directed fishery (zero DAS) and reduced incidental catch limits. It is important to note that this alternative is the baseline for comparison to other options.

A supplement to the original FMP RFA estimated that 139 vessels would incur a loss of gross revenues of 35% or greater if the Year 4 default measures were implemented. Analysis of the economic impact of the no-action alternative done for Framework 1 is summarized in Section 5.2. That analysis showed that permit categories A and B would be most adversely affected by the elimination of directed fishing on monkfish. Almost all vessels in these categories would lose the majority of their fishing income because vessels in these two permit categories are the most dependent on monkfish landings as a proportion of their total income and do not hold limited access permits in multispecies or scallop fisheries. The no-action alternative would affect vessels fishing from the Mid-Atlantic states because the majority of the category A and B permit holders are homeported in this region (see Monkfish SAFE Report). The majority of vessels with category B permit in FY2000 were homeported in Barnegat Light, NJ.

5.3.4.5.1 Impact of no-action by permit category

Category A and B Vessels

Analysis of the Status Quo/No Action (Year 4 Default Measure) in Framework 1 shows that permit categories A and B would be most adversely affected by the elimination of directed fishing on monkfish and almost all vessels in these categories would lose the majority of their fishing income if the status quo alternative was implemented. This is true because vessels in these two permit categories are the most dependent on monkfish landings as a proportion of their total income and do not hold limited access permits in

multispecies or scallop fisheries. The no-action alternative would affect vessels fishing from the Mid-Atlantic states because the majority of the category A and B permit holders are homeported in this region (see Monkfish SAFE Report). Thirteen (13) of the 16 vessels with category B permit in FY2000 were homeported in Barnegat Light, NJ.

Under the alternatives considered in this framework, compared to the no-action alternative, fishing safety will not be compromised, community infrastructure has a better chance of surviving, attitudes about the fishery management process will be more positive, and there will likely be little or no disruption in family life. Fishermen and communities would experience a decline in fishing flexibility and opportunity under alternatives that reduce DAS in favor of a higher trip limit. However, under lower trip limit alternatives, regulatory discards may increase, particularly on trawl vessels, depending on the degree to which effort can be redirected away from high-monkfish tows, and on gillnet vessels that do not reduce the amount of gear set.

Category C and D Vessels

While not as severe as the permit category A and B vessels, category C and D vessels will experience a decline in fishing-related income of between 25% and 50% for the top 10th percentile of observations under the no-action alternative. Most vessels fishing for monkfish from New England states have a multispecies permit with which they are allowed to land monkfish while fishing on a multispecies day-at-sea. As a result, the New England vessels will still be able to land some monkfish, albeit at a lower trip limit. Generally, vessels in these permit categories will experience a much lower impact under any of the trip limit options under consideration as compared to the no-action alternative. While these vessels may not achieve the same fishing-generated revenues as they did in fishing year 2000, they will experience a neutral or positive impact under the trip limit and DAS options considered in this framework.

Most of the category C permit holders were homeported in the primary ports (195 of 341): Portland(10), Boston(46), Gloucester(18), New Bedford (93), and Point Judith (19). Other impacted ports include, Cape May, NJ (19) and Barnegat Light (9). Although vessels in these permit categories will be highly impacted by the selection of the no-action alternative, they will not be impacted as much as the category A and B boats.

In fishing year 2000, of vessels homeported in one of the six primary ports (Portland, ME; Boston, MA; Gloucester, MA; New Bedford, MA; Barnegat Light, NJ, and Point Judith, RI), 97-100% of the category D boats held limited access multispecies permits. Category C permits are held by between 33-100% of the vessels in the five primary ports. Ports at the lower end of the range, such as New Bedford, MA (47%) and Barnegat Light, NJ (33%), typically held the highest percentage of limited access scallop permits, 69% and 67%, respectively.

Therefore, the selection of any alternative other than the no-action alternative would bring more positive effects on homeports of monkfish vessels, regardless of permit category, but most notably on ports that are home to category A and B vessels. The table below is a summary of the percent of monkfish revenues and landings by Monkfish permit category for FY2001. Category A does seem to be more dependent on monkfish than category B, and category D seems to be more dependent on monkfish than category

C. (NOTE: Discrepancies may exist in data presented in this section compared to port data presented in other sections for several reasons but the relative amounts, percentages, are consistent and within the level of precision of the analysis.)

% of monkfish revenues out of total revenues	% of monkfish landings out of total landings	Monkfish Permit Category
71.6	65.8	A
65.1	47.6	B
9.3	6.4	C
20.0	11.7	D
2.1	0.9	E

Table 26 - Summary of Monkfish Dependence based on Permit Category for FY2001

5.3.4.5.2 Impact of no action by gear type

Gillnet vessels will experience the largest decline in income if the no-action alternative is chosen. Trawl vessels would experience a decline in fishing-related income but only a fraction of what the gillnet sector would experience. Additionally, under the other trip limit scenarios that are greater than status quo, both the gillnet and trawl sectors would most likely experience an increase in income if the market can support more supply. The dredge and hook sectors would experience little to no impact from the No Action alternative. This may be because the majority of the vessels in these sectors are affected by the current trip limit. Based on analysis from Framework 1, vessels homeported in Portland (93%), Boston (99%), New Bedford (70%) and Point Judith (73%) predominately prosecute the fishery with trawl gear. Gloucester homeported vessels are split between trawl (48%) and gillnet (50%). While the figures for Barnegat Light are not available at the time of this writing, it is important to note that 75% of the vessels with monkfish permits and that are homeported in New Jersey use gillnets. Other areas of high gillnet use in the monkfish fishery include New Hampshire (91%) and New York (69%).

Therefore, Gloucester, New Jersey, New Hampshire and New York Gillnet ports will be most impacted by the no-action alternative and any increase in trip limits above the incidental catch limits associated with the no action alternative would have beneficial social impacts.

% of monkfish revenues out of total revenues	% of monkfish landings out of total landings	Gear Type
9.9	5.8	Trawl
56.7	39.6	Gillnet
1.7	3.9	Dredge and Other

Table 27 - Summary of Monkfish Dependence by Gear Type for FY2001

5.3.4.5.3 Impact of no action by homeport

While primary ports are so classified by meeting the total landings threshold, they do not represent the communities with the highest dependence on monkfish as a percent of the total revenues. According to the 2000 SAFE Report, the following communities ranked as the top five communities in terms of dependence on monkfish by monkfish permit holders of the twenty four defined communities of interest: Westport, MA, Port Clyde, ME, Plymouth, MA, South Bristol, ME and Portsmouth, NH. According to the economic analysis from Framework 1, the states with the highest impact from the selection of the No Action alternative are the NJ/DE combined vessels. It is estimated that the 10th percentile of vessels homeported in these states will experience a 72% decline in fishing-related revenue as compared to that of FY 2000 under the No Action alternative. It is apparent that vessels homeported in NJ/DE would experience the highest social impacts compared to the other states with monkfish permit holders under the No Action alternative.

The table below describes homeport dependency on monkfish for FY2001. Monkfish dependency has been defined as the percent of monkfish revenues compared to total revenues for each port. In general, the homeports with high dependency on monkfish, are similar to the homeports with the highest overall monkfish revenues, with some important differences. For example, New Bedford ranked the highest for overall monkfish revenues for FY2001, but it ranked 17th for percent of monkfish revenues out of total revenues due to the revenues generated by scallop and groundfish landings there. It is also important to note that some ports with a high rank for monkfish dependency may not be as dependent on monkfish as the federal vessel data suggest. For example, homeports such as Port Clyde and South Bristol, Maine which rank among the highest in Table 28, these ports generate the majority of their revenues from state permitted vessels engaged in the lobster fishery and those revenues are not reflected in the federal vessel database.

hport rank by monk value	hport rank by % monk	HOMEPORT	% MONK	MONK VALUE	TOTAL VALUE
11	1	Plymouth, MA	55.1	\$827,885	\$1,502,707
8	2	Westport, MA	39.2	\$1,193,679	\$3,041,879
13	3	Scituate, MA	38.0	\$753,392	\$1,983,879
12	4	Port Clyde, ME	35.5	\$826,766	\$2,326,651
2	5	Long Beach and Brgt. Light, NJ	32.9	\$5,026,722	\$15,265,710
15	6	South Bristol, ME	32.7	\$473,841	\$1,449,171
6	7	Portsmouth, NH	29.0	\$1,694,248	\$5,833,790
7	8	Boston, MA	22.4	\$1,513,532	\$6,768,680
4	9	Portland, ME	20.6	\$3,126,299	\$15,200,219
3	10	Gloucester, MA	16.1	\$3,134,498	\$19,496,667
5	11	Point Judith, RI	13.5	\$2,994,514	\$22,172,169
9	12	Newport, RI	12.8	\$880,687	\$6,872,084
10	13	Chatham, MA	11.6	\$851,432	\$7,310,574
14	14	Pt. Pleasant, NJ	8.7	\$578,021	\$6,616,658
18	15	Ocean City, MD	7.3	\$149,030	\$2,029,699
19	16	Hampton Bays NY	5.9	\$146,823	\$2,481,701
1	17	New Bedford, MA	4.8	\$5,378,596	\$111,567,692
22	18	Rockland, ME	2.8	\$28,198	\$1,016,945
17	19	Montauk, NY	2.0	\$239,758	\$12,054,361
20	20	Provincetown, MA	1.4	\$59,421	\$4,267,880
24	21	Greenport, NY	0.9	\$11,797	\$1,335,957
16	22	Cape May, NJ	0.9	\$271,504	\$31,259,855
23	23	Hampton, VA	0.5	\$23,813	\$4,486,109
21	24	Newport News VA	0.3	\$43,609	\$15,460,387

Table 28 - Summary of Monkfish Dependence by homeport for FY2001. Data is for federal permit holders only and does not reflect all revenues from fishing in each port.

When describing the social impacts of management measures it is also important to analyze the potential impacts on primary ports of landing. The communities where fish is landed is another important aspect of social impact analysis in addition to where vessels are from. Many of the same communities from the homeport analysis came up for primary port as well. Based on the FY2001 data, Table 29, Portsmouth NH seems to be a community that is more dependent on monkfish as a port of landing, than a homeport for monkfish vessels.

Primary port rank by % of monkfish revenues	Primary port rank by % of monkfish landings	% of monkfish revenues out of total revenues	% of monkfish landings out of total landings	Port
1	1	62.96	61.51	Westport, MA
2	3	49.73	35.54	Portsmouth, NH
3	4	35.51	26.83	Port Clyde, ME
4	5	34.54	25.16	Scituate, MA
5	2	34.22	39.32	Long Beach and B. Light, NJ
6	6	32.97	23.39	South Bristol, ME
7	7	29.75	17.12	Plymouth, MA
8	11	22.16	7.11	Portland, ME
9	8	20.19	14.37	Boston, MA
10	10	16.16	7.79	Pt. Pleasant, NJ
11	16	15.89	4.30	Gloucester, MA
12	9	13.33	8.11	Newport, RI
13	15	11.26	4.52	Point Judith, RI
14	13	9.77	5.88	Hampton Bays, NY
15	14	9.31	5.57	Chatham, MA
16	23	9.22	0.41	Rockland, ME
17	17	6.85	3.95	Ocean City, MD
18	12	5.98	7.08	New Bedford, MA
19	18	2.28	1.20	Montauk, NY
20	21	1.13	0.54	Greenport, NY
21	20	0.93	0.74	Provincetown, MA
22	24	0.71	0.28	Cape May, NJ
23	19	0.60	1.10	Hampton, VA
24	22	0.16	0.50	Newport News, VA

Table 29 - Summary of Monkfish Dependence by Primary Port for FY2001. Data is for federal permit holders only and does not reflect all revenues from fishing in each port.

5.3.4.6 Impact of alternatives under consideration

This framework contains options for setting optimum yield target reference points, which set annual harvest targets (TACs) designed to achieve the rebuilding goals of the plan. Three of the options, Options 3, 4 and 5, are based on a target fishing mortality rate, and as noted earlier, their efficacy of Options 3, 4 and 5 cannot be demonstrated. Options 1, 2, and 2b set annual TACs based on the current estimate of biomass relative to an annual biomass target. A range of SFMA TACs from 5,000 mt to 13,000 mt is analyzed in Section 5.2.3 to account for possible results of the future trawl surveys and prior year landings, under the formula described in Section 3.1.5.2. If the formula results in a TAC of approximately 8,000 mt, roughly equivalent to the FY2002 TAC, the trip limits and DAS allocations would remain as they are in current year. Any increase in the index

could result in increases in the TAC (and associated trip limits) if landings increase in the prior year. Under Option 2b, the TAC increase could be as much as 20 percent higher than under Options 1 and 2, depending on the value of the 3-year running index average compared to the annual biomass index target. For FY2003 under the proposed action, Option 2b (as well as under Options 1 and 2), the TAC would increase to 10,211 mt from 7,921 mt in FY2002. This value is about 7 percent lower than FY2001 landings. Nevertheless, compared to current levels and to the no action alternative, any scenario where the TAC is above 8,000 mt, the trip limits would increase and the action would have generally positive social impacts.

Option 2b, also contains a provision to increase the incidental catch rate on Category E vessels fishing in the NFMA if the current biomass index exceeds the annual target. The rationale for this alternative is that at a fixed incidental catch rate, bycatch of monkfish will likely increase as the stock rebuilds. Allowing these vessels to land incidentally caught monkfish will not only increase economic yield and reduce waste, but it will improve catch data (thus, the precision of fishing mortality estimates) by including those animals in both VTR and dealer databases.

5.3.5 Conclusions

One difficulty in assessing the social impacts of the alternatives under consideration as compared to the no-action alternative is that in the short-term, social impacts will result from attitudes and perceptions about the new regulations, adaptations that fishermen make to the new regulations, and short-term losses in revenues.

Compared to the no action alternative, all of the alternatives under consideration are likely to produce positive short-term social impacts. Depending on the gear sector, whatever alternative is implemented, attitudes and perceptions about monkfish management may improve. Under the alternatives considered in this framework, compared to the no-action alternative, fishing safety will not be compromised, community infrastructure has a better chance of surviving, attitudes about the fishery management process will be more positive, and there will likely be little or no disruption in family life. Fishermen and communities would experience a decline in fishing flexibility and opportunity under alternatives that reduce DAS in favor of a higher trip limit. However, under lower trip limit alternatives, regulatory discards may increase, particularly on trawl vessels, depending on the degree to which effort can be redirected away from high-monkfish tows, and on gillnet vessels that do not reduce the amount of gear set.

The management measures under consideration in this framework that have the greatest chance of producing positive short-term social impacts are the increased trip limits. Most vessels in the Southern Management Area will most likely make more money from increased landings and some of the negative social impacts from regulatory bycatch will most likely reduce.

The management measures that were under consideration in this framework that have the greatest chance of producing negative short-term (and most likely long-term) social impacts are DAS reductions (which would only be implemented considered if the SFMA TAC is reduced significantly as the result of a sharp drop in survey indices over two or

more years). In the short-term, any decrease in allocated DAS would be offset by a higher trip limit for a given TAC. While most other measures considered in this framework would result in short-term impacts to some sectors, DAS reductions are likely to produce the broadest long-term impacts on affected vessels, families, and communities. It will be more difficult to adjust to reductions in monkfish opportunities (DAS) on which some vessels depend 100%. However, for those vessels with a limited access multispecies permit, the impact would be relatively less because they can still fish under a multispecies DAS. The proposed action does not reduce monkfish DAS unless the SFMA TAC needs to be reduced below the FY2002 level. It is very important to keep in mind that this Framework merely sets up the management measures and TAC for fishing year 2003, and provides for stock rebuilding by 2009. Long-term management and social/community impacts will be addressed in Amendment 2.

5.3.6 References

Hall-Arber, M., Dyer, C., Poggie, J., McNally, J., Gagne, R. 2001. New England's Fishing Communities (MARFIN Report), MIT Sea Grant College Program, 426 pp.

Interorganizational Committee on Guidelines and Principles. 1994. Guidelines and principles for social impact assessment. *Impact Assessment* 12(2):107-152.

5.4 Habitat impacts

5.4.1 Introduction

A comprehensive description of the physical environment in which monkfish occur and an assessment of the impacts to habitat resulting from a variety of fishing practices is presented in Amendment 1 to the Monkfish FMP (also known as the Omnibus EFH Amendment). The document includes a description of the designs, functions, and actions of all types of fishing gear used in New England fisheries, including the principal monkfish gears: otter trawls, gillnets, and scallop dredges. The following section describes the potential habitat impacts of proposed measures on monkfish EFH, as well as EFH for other species in the Northwest Atlantic. Furthermore, the impacts of other management plans in the region that influence monkfish EFH are described. Overall, the alternatives and actions proposed in this framework adjustment are not expected to increase any adverse impacts on essential fish habitat (EFH) resulting from fishing activity.

Of the three principal fishing gears used to harvest monkfish (otter trawls, gillnets, and scallop dredges), otter trawls are associated with the majority of landings (approximately 58% on average). Gillnets are the second most used gear and scallop dredges are the third most used gear type (with 32% and < 10% of landings on average, respectively).

5.4.1.1 Gillnets

The majority of studies that have investigated the impacts of fixed gillnets have concluded that they have a minimal effect on benthic habitats (Barnette 2001). West et al. (1994) stated that there was no evidence from their study that sink gillnets contributed importantly to bottom habitat disturbance. There is some evidence (Gomez et al. 1987; Ohman et al. 1993) that gillnets may be associated with adverse impacts to coral reef habitats, but aside from these potential impacts to coral reef communities, Barnette

(2001) concludes that “the available studies indicate that habitat degradation from gillnets is minor.” Thus, any management measures that increase or encourage the use of gillnets would be considered to have no adverse effects on any identified EFH relative to similar levels of fishing with bottom-tending mobile gear types.

5.4.1.2 Mobile Gear (otter trawl and scallop dredge)

The most significant impact associated with bottom-tending mobile fishing gear, including the various designs of otter trawls and scallop dredges, is the smoothing, or flattening, of substrate bedforms (Auster and Langton 1999). In sandy sediments, this gear type is associated with the flattening of sand ridges and the disturbance of some epifauna and infauna (Auster and Langton 1999). The extent of these impacts is dependent on the frequency and intensity of gear use (Auster and Langton 1999). In habitats of higher complexity, such as rock and gravel substrates, otter trawl gear is sometimes associated with the scraping and smoothing of gravel mounds and turning over of rocks and boulders (Auster and Langton 1999). Epifauna present in these habitats are often removed or crushed (Auster and Langton 1999; Collie et al. 1997).

The rate of habitat recovery from the disturbances associated with monkfish fishing is another important consideration to understanding habitat impacts. In general, high energy habitats (e.g., shallow areas with relatively strong currents and wave action) are thought to recover more quickly than low energy habitats (e.g., deep areas with relatively mild currents and little wave action) in part because the biologic communities present in these areas are adapted to those environments (Auster and Langton 1999; DeAlteris et al. 1999; Witman 1998). The biologic communities in relatively low energy environments tend to be long-lived and slow-growing (e.g., corals and sponges). The communities that form the biogenic structure in these areas take a long time to recover and may only recover in the absence of disturbance (Sainsbury et al. 1997).

The NMFS Final Rule for EFH defines an adverse effect as “any impact which reduces quality and/or quantity of EFH” (67 FR 2343). The significance of a fishing gear-related impact to habitat, and whether it is considered adverse, can depend on several factors, including: (1) the type of habitat; (2) the effect of the gear on the habitat; (3) the recovery rate of the habitat; (4) the location of the habitat and impact; (5) the natural disturbance regime; and (6) the functional elements of the habitat to managed species. Although the Magnuson Act requires each FMP to minimize gear effects from the fishery, this larger issue is most appropriately dealt with in the development of the upcoming Amendment 2 to the Monkfish FMP since the amendment will deal with the entire fishery. Amendment 2 to the Monkfish FMP will consider and determine adverse effects from the Monkfish fishery, if any. Therefore, it is not necessary to address adverse effects of the entire monkfish fishery on EFH in this framework document. However, the final EFH Assessment will determine if the framework action itself minimizes the adverse effects of fishing on EFH to the extent practicable.

5.4.2 Habitat impacts from management measures in other fisheries

A significant factor in understanding the potential impacts of the monkfish fishery is that almost all fishing effort for monkfish is a subset of the fishing effort managed and allowed under two other fishery management plans, the Northeast Multispecies FMP and the Sea Scallop FMP. Only 10 percent of total monkfish landings come from vessels that

do not have either a scallop or multispecies permit. DAS allocated under the Monkfish FMP are not additive with DAS allocated under the Groundfish or Scallop FMPs. For example, a vessel allocated 88 groundfish DAS and 40 monkfish DAS does not have a total of 128 DAS to fish, but rather can use up to 40 of their groundfish DAS to fish for monkfish. Since the plans are linked this way, restrictions in the Scallop or Groundfish plan directly, indirectly and cumulatively impact the monkfish fishery as well.

Reductions in monkfish DAS may simply result in a shift back to scallop, groundfish or other fisheries, depending on the profitability of increased effort in those fisheries. The overall amount of effective fishing effort in the region would not change. Thus, the specific changes to monkfish fishing that may be proposed in any change to the Monkfish FMP must be considered in the context of the overall fishery management programs for groundfish and scallops. This section will briefly discuss the major management elements of the Scallop and Groundfish management plans, and how they may influence the overall impact on habitat in the region. Both these fisheries are in the process of implementing major Amendments that will ultimately reduce overall effort (Amendment 13 to the Multispecies FMP and Amendment 10 to the Scallop FMP).

The types of measures that could be expected to provide some benefit to the habitat of the region from other FMP's would be reduction in fishing effort, gear restrictions, and year-round fishing closures. The multispecies FMP has closed large areas of Georges Bank and the Gulf of Maine since the implementation of Amendment 5 in 1994. These year-round closures are closed to all gears that are capable of catching groundfish, which is similar to gears capable of catching monkfish. Therefore, roughly 5,800 nm² have been closed in the region, and when Cashes's Ledge became a year-round closure rather than a seasonal closure in 2002, an additional 400nm² became closed to fishing. The groundfish fishery has also experienced significant reductions in effort over the last few years, and Amendment 13 will reduce direct fishing effort even more. Numerous gear restrictions have been implemented as well, which have had a direct and cumulative impact on the habitats of the region.

The Scallop FMP has also reduced effort over time, which has most likely benefited monkfish EFH and the EFH of other species as well. Amendment 7 to the FMP closed two large areas in the Mid-Atlantic region to scallop fishing (Hudson Canyon and Virginia Beach closures). These areas equate to roughly 1,900 nm² of ocean bottom closed to scallop fishing, therefore the habitats with EFH designations within these areas have benefited from these areas being closed. However, it is unknown whether the displaced effort has moved onto habitats that are more or less sensitive to disturbance. Several gear restrictions have also been implemented over time to improve the escapement of particular species and reduce the impact of scallop gear on the sea floor. Amendment 4 to the Scallop FMP (1994) prohibited the use of chafing gear, cookies, and triple links between rings, which benefited habitat by limiting scallop fishing in complex habitat areas and reducing the weight of dredges. Lastly, there are several effort controls that have been implemented through the Scallop FMP that may have positive benefits for habitat. These include crew size limits, which reduce the daily shucking capacity of a vessel. By limiting the number of men on a vessel, the at sea shucking time increases, so the overall time the gear is on the bottom declines, when scallop biomass is high. Furthermore, the days-at-sea allocations are a direct way the Scallop FMP limits the

amount of effort within the fishery. Since Amendment 4 (1994), the allocation of annual days-at-sea for full-time vessels has reduced from 204 to 120 in 2002. This reduction in overall days-at-sea allocation may benefit habitat as a direct control on effort; it also provides incentive for vessels to make each trip as efficient as possible because they do not have an unlimited amount of time to harvest scallops.

5.4.3 Habitat impacts of management alternatives under consideration

This framework is designed to achieve the monkfish stock-rebuilding goals established by the FMP, adopted in 1999, in the context of updated scientific information regarding biological reference points. The purpose and need for this framework is summarized in Section 3.0. Proposed action and alternatives are outlined in Section 3.0 and the impacts are analyzed and discussed in other subsections of this section (Section 5.0). In summary, the modification of the overfishing definition control rule provides a formula for setting primary management measures (trip limits and/or DAS) annually so that the goal of rebuilding the stocks to target biomass levels by 2009 will be achieved.

5.4.3.1 Preferred alternative

Compared to the baseline, no-action alternative, the proposed action and alternatives are designed to achieve the same biomass rebuilding goals while minimizing the economic impact to the industry and associated communities, and minimizing bycatch potential by setting trip limits at the highest level possible consistent with achieving annual rebuilding targets. Furthermore, as noted in the Purpose and Need section of this document, the scientific basis for the no-action alternative (including the default measures) has been invalidated by more recent scientific analysis.

For FY2003, the proposed control rule formula prescribes an increase in the SFMA TAC and associated trip limits under the preferred and non-preferred alternatives, compared to FY2002 levels. In the NFMA, the preferred alternative would also increase the target TAC and retain the current measures (40 monkfish DAS and no trip limit on a monkfish or multispecies DAS) for limited access vessels while increasing the incidental catch limits for vessels that do not have a limited access monkfish permit to forestall potential discard problems. The control rule formula would be applied annually to set catch targets (optimum yield) and associated management measures by notice action. The formula would not result in any increases in monkfish DAS allocated, but could result in DAS reductions if the TAC indicated by the control rule falls below a level that would set trip limits below the FY2002 levels. The TACs and associated management measures for FY2003, and the range of measures possible for FY2004 are shown in Section 3.1.5.2.

Since gillnet gear has been characterized as a very low impact gear on habitat, trawl and dredge gear are the only gear types of concern in the monkfish fishery in terms of habitat impacts, regardless of the trip limits. The majority of landings from these two gear types are from the NFMA, where limited access vessels have no trip limit, on either a monkfish or multispecies DAS, and no change is proposed. The proposed increase in incidental catch limits in the NFMA will minimize bycatch but will not likely change overall effort by mobile gear (which is predominantly regulated by Multispecies and Scallop FMPS). Trip limits under the proposed action will increase in the SFMA in FY2003 from current levels, but would still be below levels in FY2001. Even at FY2001 levels, directed monkfish trawl effort declined from pre-FMP levels and is not expected to increase at the

levels under consideration in this framework. Since trip limits were first implemented in late 1999, directed effort by trawl gear has declined dramatically. Thus, the proposed action will not likely significantly change the impact of the fishery on EFH for monkfish or other species.

5.4.3.2 No-action alternative

The no-action alternative would eliminate monkfish DAS and reduce some incidental catch limits. But since the majority of vessels in the fishery are also permitted under Multispecies or Scallop FMPs, the elimination of the directed monkfish fishery would not likely have a significant effect on the activity of those vessels, as they would most likely redirect their effort to the other fisheries. While this shift could potentially minimize the impact of the fishery on monkfish EFH, it would have a proportionally adverse effect on scallop and multispecies EFH.

5.4.3.3 Other alternatives – Options 1 and 2

From a habitat perspective, adjustments to the trip limits in the range considered in this framework do not have a measurable effect on EFH. It is not clear whether higher trip limits equate to more effort, unless the trip limits are very high and promote more vessels to participate in the fishery.

5.4.4 EFH Assessment

This essential fish habitat (EFH) assessment is provided pursuant to 50 CFR 600.920 of the EFH Final Rule to initiate EFH consultation with the National Marine Fisheries Service.

5.4.4.1 Description of the proposed action

Proposed action and alternatives are outlined in Section 3.0 and discussed above. In summary, the modification of the overfishing definition control rule provides a formula for setting primary management measures (trip limits and/or DAS) annually so that the goal of rebuilding the stocks to target biomass levels by 2009 will be achieved. The activity described by this proposed action, fishing for monkfish, occurs throughout most of the area under the jurisdiction of the New England and Mid-Atlantic Councils, including the Gulf of Maine, Georges Bank, the Southern New England shelf, and the Mid-Atlantic. The range of this activity occurs across the designated EFH of all New England Council-managed species. The range of this activity also occurs across the designated EFH of most species managed by the Mid-Atlantic Fishery Management Council and species managed under the NMFS Highly Pelagic Species FMP.

5.4.4.2 Analysis of the effects of the proposed action

The primary method of controlling effort will be through adjustments to the monkfish trip limits on directed fisheries, and in the NFMA in the incidental catch fisheries. It is important to point out that only the Southern area is managed under a trip limit; the monkfish fishery in the North is primarily a component fishery so there are no trip limits. The potential impact of increased trip limits on habitat is minimal. Allowing vessels to land more fish does not necessarily translate into more bottom contact time, although gillnet vessels may deploy more nets (within the allowable number). Since gillnet gear has been characterized as a very low impact gear on habitat, trawl and dredge gear are the only gear types of concern in the monkfish fishery in terms of habitat impacts. The

majority of landings from these two gear types are from the northern area, thus an increase in the TAC is not expected to impact habitat since those vessels already have no trip limit. Furthermore, since trip limits were first implemented in late 1999, directed effort by trawl gear has declined dramatically in the SFMA and that trend is not likely to change under the trip limits being considered in this framework (which are higher than in FY2002 but lower than in FY2001 and FY2000).

The proposed action contains measures for setting optimum yield (OY) and management area catch targets (TACs) for the 2003 fishing year. Trip limits are the primary tool proposed to achieve OY, and increased trip limits do not necessarily translate into increased levels of fishing activity in the US EEZ. Furthermore, the other measures proposed in this action would have no additional impact on habitat. This action may have adverse effects on EFH that are less than substantial, but it does not increase any of the adverse effects established in the baseline condition under Amendment #1 to the Monkfish FMP (the Omnibus EFH Amendment).

5.4.4.3 Conclusions

The actions proposed under this framework have no potential adverse effects on the EFH of any species managed by the New England, Mid-Atlantic or South Atlantic Fishery Management Councils or the National Marine Fisheries Service. Because there are no potential adverse impacts associated with this action, an EFH consultation is not required.

5.4.4.4 Proposed mitigation

None required.

5.4.5 References

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5.5 Threatened, Endangered and Other Protected species

5.5.1 Background

Section 8.1.9 in Volume 1 of the Monkfish Fishery Management Plan described the threatened and endangered species and other marine mammals that inhabit the monkfish management unit and discussed their potential interaction with the fishery, as well as the impacts of the monkfish management measures. The impacts of recent changes in monkfish management measures were discussed in Framework Adjustment 1 to the FMP and the Environmental Assessment prepared for the emergency action taken by NMFS in May 2002. Additional information is provided in Endangered Species Act (ESA) Biological Opinion (Opinion) for the Monkfish FMP completed by NMFS in June 2001. Consultation was reinitiated in 2002 in response to the modifications implemented through the emergency action and to account for a federal court order vacating differential trip limits for trawl and non-trawl gear in the Southern Fishery Management Area (Appendix III). Section 2.3.2 of the 2001 SAFE Report (Appendix I) provides an updated description of the monkfish fishery interactions with marine mammals and other protected species.

The status of the relevant marine mammal stocks was updated in the sixth of the series, *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2001* (Waring *et.al.* 2001). The report contains updated assessments for Atlantic strategic stocks and also includes those Atlantic stocks for which significant new information was available. A strategic stock is one listed as threatened or endangered under the ESA, designated as depleted under the Marine Mammal Protection Act, or for which human-caused mortality and serious injury exceed the potential biological removal (PBR) level calculated for the stock. The report lists PBR levels and also constitutes the most recent information on

marine mammal fishery-related serious injury and mortality for fisheries managed by the NEFMC, including the monkfish fishery.

Information on sea turtle status can be found in a number of published documents, including several sea turtle status reviews (NMFS and USFWS 1995; Turtle Expert Working Group (TEWG), 1998, 2000) and biological reports (USFWS 1997), as well as recovery plans for the Kemp's ridley (USFWS and NMFS 1992a), leatherback (NMFS and USFWS 1992b), Atlantic green (NMFS and USFWS 1998), and loggerhead sea turtles (NMFS and USFWS 1998). More current information on interactions involving sea turtles found within the management unit is available in the May 2002 Biological Opinion for the Monkfish FMP and also the *Environmental Assessment and Regulatory Impact Review for the Promulgation of a Final Rule to Enact a Seasonally-Adjusted Closure of the Mid-Atlantic Waters to Fishing with Gillnets with a Mesh Size Larger than Eight-Inch Stretched Mesh to Protect Migrating Turtles* (NMFS 2001).

5.5.2 Species Of Concern

As discussed in the May 2002 Opinion, actions in the monkfish fishery affect the North Atlantic right, humpback, fin, sei, and sperm whales, and the loggerhead, leatherback Kemps ridley and green sea turtles. The Opinion determined that shortnose sturgeon, Gulf of Maine Distinct Population Segments of the Atlantic salmon, hawksbill sea turtles and blue whales are not expected to be affected by the Monkfish FMP as it is currently written. Similarly, right whale critical habitat in Cape Cod Bay, the Great South Channel and the waters off Georgia and Florida will not be affected by this action. The supporting analyses from the May 2002 Opinion for these conclusions is incorporated into this document by reference, given that the proposed action will not significantly change conditions in the fishery as they existed at the time that Opinion was developed.

5.5.3 Actions to Reduce Threats to ESA-listed Species

The Atlantic Large Whale Take Reduction Plan (ALWTRP) and the Harbor Porpoise Take Reduction Plan (HPTRP) were developed pursuant to the Marine Mammal Protection Act to reduce the level of serious injury and mortality of whales and harbor porpoise in east coast gillnet fisheries. The gillnet sector of the monkfish fishery is subject to the ALWTRP and HPTRP measures which address the use of gillnets in Northeast and Mid-Atlantic waters. Current requirements include gear marking, the use of weak links in buoy lines and net panels, area closures, and other seasonal restrictions.

In addition, NMFS issued new rules for Seasonal Area Management (SAM), seasonal restrictions of specific fishing areas when right whales are present), and Dynamic Area Management ((DAM); restriction of defined fishing areas when specified concentrations of right whales occur unexpectedly). The measures for SAM apply to two defined areas called SAM West and SAM East, in which additional gear restrictions for anchored gillnet gear are required. SAM West and SAM East will occur on an annual basis for the period March 1 through April 30 and May 1 through July 31, respectively. The dividing line between SAM West and SAM East is at the 69° 24' W longitude line (67 FR 1142). The measures for DAM apply to areas north of 40° N latitude, and would allow for establishment of a zone within which NMFS might impose restrictions on fishing or fishing gear within the zone for a period of 15 days. If no restrictions are imposed, NMFS will issue an alert to fishermen, and request that they voluntarily remove gillnet

gear from the zone, and not set additional gear within the zone for a minimum of 15 days (67 FR 1130).

Like the ALWTRP, the HPTRP includes measures for gear modifications and area closures. Applicable measures are based on area fished, time of year fished, and mesh size of the gillnet fished. In general, the Gulf of Maine component of the HPTRP includes time and area closures, some of which are complete closures; others are closures to gillnet fishing unless pingers are used in the prescribed manner. The Mid-Atlantic component includes time and area closures in which gillnet fishing is prohibited regardless of the gear specifications. Under the HPTRP, monkfish gillnets are required to comply with the requirements for large-mesh gillnets (defined as 7-18 inch mesh under the HPTRP). These include mandatory use of tie-downs and a net cap of 80 nets. The net cap is particularly relevant since the current FMP for monkfish has a net cap of 160 nets. Fishermen are required to comply with the most restrictive of all measures that apply to them. Therefore, monkfish gillnetters fishing in the Mid-Atlantic (as defined under the HPTRP) can only fish up to 80 nets (nets may be up to 300' long).

While monkfish gillnet information is not broken out, in August, 2002 NMFS estimated the 2001 takes of harbor porpoise in the sink gillnet fishery to be 80, well below the Potential Biological Removal level of 747 animals specified by the agency. Fifty-one of the takes were attributed to the Northeast sink gillnet fishery, while 26 were attributed to the Mid-Atlantic coastal gillnet fishery. By contrast, estimated annual takes in 2000 were 529. From 1994 through 1998 the mean annual mortality of harbor porpoise in sink gillnet gear was 1,521. According to Waring *et.al.* (2001) the best current estimate of the Gulf of Maine/Bay of Fundy porpoise stock is 89,700 animals.

On November 2002, NMFS issued a final rule under the authority of the ESA to protect sea turtles from takes in large-mesh gillnet gear as the turtles move into North Carolina and Virginia waters this spring [67 FR 13098]. Specifically, the rule enacted a seasonally-adjusted closure of EEZ waters off of North Carolina and Virginia to fishing with large-mesh gillnets (mesh-size greater than 8 inches stretched). Four areas are identified: (1) waters north of 33° 51.0'N (North Carolina/South Carolina border at the coast) and south of 35° 46.0'N (Oregon Inlet) are closed at all times, (2) waters north of 35°46' N (Oregon Inlet) and south of 36° 22.5' N (Currituck Beach Light, NC) are closed from March 16 through January 14, (3) waters north of 36° 22.5' N (Currituck Beach Light, NC) and south of 37° 34.6' N (Wachapreague Inlet, VA) are closed from April 1 through January 14, and (4) waters north of 37° 34.6' N (Wachapreague Inlet, VA) and south of 37° 56' N (Chincoteague, VA) are closed from April 16 through January 14.

The impacts of these actions, both separately and collectively, were discussed relative to the monkfish fishery in the May 2002 Opinion. This and other information from that document are incorporated herein by reference and are discussed further below.

5.5.4 Impacts of the Proposed Action and Alternatives

Section 3.0 of this document describes the proposed action and alternatives in Framework Adjustment 2. The action includes revisions to the overfishing definition/control rules (outlined in section 3.1) that do not have an impact on protected species and are not, therefore, discussed further in this section. The action also includes adjustments to the

effort controlling management measures commensurate with the adjustments to the control rule targets. Accordingly, the discussion below focuses on the specific management measures associated with the different alternatives --- TACs, and trip limits and DAS reductions for the SFMA.

Of the six alternatives under consideration, the Councils rejected Options 3, 4 (status quo) and 5 (no action) because those options rely on current estimates of fishing mortality to set TACs, and such estimates are not technically feasible. The Councils considered Options 1, 2 and 2b, and recommend Option 2b. All three options use the same mechanistic approach to setting annual catch targets based on the relationship between observed survey indices and annual survey index targets. The annual targets represent equal increments in the ten-year rebuilding program that started with FMP implementation in 1999. The options differ only in how the TACs are set when the observed index is above the annual target. Option 1 would not allow an increase from previous year's landings under any circumstances; Option 2 would allow an increase if F is known, but otherwise is the same as Option 1; and Option 2b is the same as Option 2 when F is known, but would allow for an increase up to 20 percent even if F is not known. All options use previous year's landings as the basis for subsequent year's TACs, and, consequently, the TACs could increase or decrease solely based on the performance of the fishery in the previous year.

Based on the 2002 survey indices and FY2001 landings, all three options would result in the same TAC in the SFMA, 10,211 mt. This is an 8 percent reduction from FY2001 landings but a 29 percent increase over FY2002 TAC. As a result, the FY2003 trip limits would be set as follows:

Permit Category	SFMA Monkfish trip limits
Category A and C	1,250 (tail) or 4,150 (whole) lbs./DAS
Category B and D	1,000 (tail) or 3,320 (whole) lbs./DAS

Table 30 FY2003 SFMA TACs

For subsequent years, the trip limits would be set based on the method established and analyzed in the framework. The analysis examines a range of possible TACs from 5,000 to 11,000 mt and associated management measures (trip limits and DAS). If the SFMA TAC is above 8,000 mt, DAS would remain at the current level of 40, and the trip limit would be adjusted accordingly. If the TAC is below 8,000 mt, the trip limit would remain at FY2002 levels (550 and 450 lbs./DAS), and reductions would be applied to DAS allocations.

In the NFMA, Framework 2 would not modify any of the monkfish management measures for the directed fishery in FY2003 but would increase the incidental catch limits for permit Category E (open access) vessels under Option 2b. There would be no change under Options 1 and 2. Vessels with limited access monkfish permits in the NFMA already do not have a trip limit when fishing on either a monkfish or multispecies DAS. This situation is not expected to change in the next few years under any of the options even if the survey index declines significantly since the current index is so far above the annual index target. Under the proposed action, limited access monkfish effort

in the NFMA is effectively controlled by scallop and groundfish regulations. Furthermore, current and expected effort controls on multispecies vessels in the Gulf of Maine will indirectly limit the total potential incidental catch by multispecies vessels.

Options 1, 2 and 2b As discussed above, these options only differ in how the TAC is set, but apply the same method for calculating trip limits and DAS allocations. Under the range of SFMA TACs, trip limits would be adjusted if the TAC is above 8,000 mt, and DAS would be reduced if below that level. Reductions in DAS, if substantial, could have positive benefits to protected species because of the reduced time the gear is in the water. Reductions in the trip limits, however, would also have a positive benefit due to the expected reduction in numbers of nets deployed. As discussed in the May 2002 Opinion and based on the analysis of fishing behavior following the court order vacating the 300 lb trip limit, monkfish vessels that fish gillnet gear in the SFMA set more nets in response to increased trip limits.

If the TAC would result in increased trip limits over those discussed in the May 2002 Opinion, as it will for FY2003 under Options 1, 2, or 2b, the potential increased in risk to protected species may be ameliorated by the actions described in that Opinion. These are the new conservation measures implemented under the ALWTRP, the existing measures in HPTRP that restrict the use of gillnet gear in existing Mid-Atlantic waters and the Final Rule for Large Mesh Gillnets. As with Option 4 discussed below, however, the impacts to sea turtles may increase under certain scenarios.

Option 4 was rejected by the Councils because it requires an estimate of current fishing mortality to set TACs and associated management measures. Under this option, the Councils considered extending the FY2002 TACs and trip limits now in place through emergency action. The May 2002 Biological Opinion discussed the impacts of these measures and concluded they were not expected to result in the addition of adverse impacts to right, humpback, fin or sperm whales, but could result in adverse effects to ESA-listed sea turtles given the deferral of the default measures. The Final Rule for Large Mesh Gillnets discussed above should minimize these impacts, but as the May 2002 Opinion notes, takes in the monkfish gillnet fishery have also been observed off Maryland and New Jersey, and may still occur in parts of North Carolina and Virginia if turtles are present in water temperatures $> 11^{\circ}\text{C}$, or if water temperatures exceed 11°C before the closure takes effect. Additionally, it is noted that takes of turtles may occur in monkfish trawl gear given the overlap of sea turtle distribution and the operation of the trawl sector based on turtle takes in this gear as used in other fisheries.

Option 5, the no action or default alternative, would eliminate monkfish DAS and implement reduced incidental catch limits on some vessels. It would have a slight positive impact on protected species inhabiting the management unit in that it would eliminate directed monkfish effort, and accordingly, most risks associated with this fishery. Since about 95 percent of the limited access vessels also have multispecies or scallop permits, however, the impact of the elimination the directed monkfish fishery is not likely to significantly effect overall effort levels in the area because those vessels will likely shift from monkfish fishing to the other fisheries. Eliminating monkfish DAS could, however, mitigate some of the sea turtle interactions since most of the monkfish

only permitted vessels concentrate effort in the southern area. The Councils have rejected the no action alternative.

Impacts of allowing the default to become effective were discussed in the June 2001 Biological Opinion and in the May 2002 Opinion with both documents anticipating greatly reduced takes of any protected species under this scenario. That information is also incorporated by reference. The Councils recognize that the May 2002 Biological Opinion and the supporting analyses referenced in this section considered a one-year delay in the default measures but not their elimination.

Multi-Year Program

The proposed mechanistic method described above for Options 1, 2 and 2b could be used to set future TACs and associated management measures by notice action, provided the measures are within the range of those that have been previously analyzed and reviewed by the public. Thus, in the event Amendment 2 is not implemented by May 1, 2004, NMFS could set 2004 trip limits and TACs by publication of a notice in the *Federal Register* as long as those measures are within the scope of the analysis contained in this document.

While it is not possible to anticipate all the changes that may occur in the fishery beyond one year, the range of expected modifications to the management measures over the two year period are not likely to be significantly different than those analyzed and discussed in this document. The potential adjustments to trip limits and DAS allocations for FY2004 are within the scope and range of those considered and analyzed in the final meeting document for FY2003 and are within the scope of those discussed here and detailed in the May 2002 Opinion.

5.5.5 Conclusion

If approved, the Council's preferred alternative, and the other available alternatives could increase effort in the monkfish fishery in FY2003 as the result of increased trip limits in the SFMA, but that increase would still keep effort below FY2001 levels. Beyond FY2003, Amendment 2 notwithstanding, effort levels will either increase or decrease depending on the success of the rebuilding program in meeting its annual index targets. As such, these measures may affect, but will not likely jeopardize the species referred to earlier in this discussion (right, humpback, fin, sei and sperm whales, and the loggerhead, leatherback Kemps ridley and green sea turtles) given the measures in place to reduce threats to threatened and endangered species. This conclusion is based on the fact that increased gillnet effort would be offset by new conservation measures implemented under the ALWTRP, the Final Rule for Large Mesh Gillnets and the existing measures restricting the use of gillnet gear in the Mid-Atlantic under the HPTRP. The action should not affect right whale critical habitat or utilization of the area. The Council seeks the concurrence of NMFS on these issues.

5.5.6 References

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5.6 Cumulative Impacts of proposed action

The purpose of this section is to summarize the incremental impact of the proposed action on the environment resulting when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes them.

5.6.1 Background

The National Environmental Policy Act (NEPA) requires that cumulative effects of “past, present, and reasonably foreseeable future actions” (40 CFR § 1508.7) be evaluated along with the direct effects and indirect effects of each proposed alternative. Cumulative impacts result from the combined effect of the proposed action’s impacts and the impacts of other past, present, and reasonably foreseeable future actions. These impacts can result from individually minor but collectively significant actions taking place over a period of time. The Council on Environmental Quality (CEQ) directs federal agencies to determine the significance of cumulative effects by comparing likely changes to the environmental baseline. On a more practical note, the CEQ (1997) states that the range of alternatives considered must include the “no-action alternative as a baseline against which to evaluate cumulative effects.” Therefore, the analyses in this document, referenced in the following cumulative impacts discussion, compare the likely effects of the proposed actions to the effects of the no-action alternative.

5.6.2 Principles of Cumulative Effects Analysis

In 1997, the Council on Environmental Quality (CEQ) identified eight principles of cumulative effects analysis. These principles suggest that the cumulative effects of proposed alternatives cannot be examined in a vacuum but rather, must be considered in relation to previous measures and their impacts. In summary, the principles state that in a cumulative effects analysis it is important to consider the direct and indirect effects of management actions on the resource, ecosystem and human community over the short and long term. These eight principles are:

1. Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions.
2. Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, non-federal, or private) has taken the actions.
3. Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected.
4. It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.
5. Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.
6. Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.

7. Cumulative effects may last for many years beyond the life of the action that caused the effects.
8. Each affected resource, ecosystem, and human community must be analyzed in terms of its capacity to accumulate additional effects, based on its own time and space parameters.

5.6.3 Overview

This framework is designed to achieve the monkfish stock-rebuilding goals established by the FMP, adopted in 1999, in the context of updated scientific information regarding biological reference points. The purpose and need for this framework is summarized in Section 2.0. Proposed action and alternatives are outlined in Section 3.0 and the impacts are analyzed and discussed in Sections 5.0, - 8.0. In summary, the modification of the overfishing definition control rule provides a formula for setting primary management measures (trip limits and/or DAS) annually so that the goal of rebuilding the stocks to target biomass levels by 2009 will be achieved.

Compared to the baseline, no-action alternative, the proposed action and alternatives are designed to achieve the same biomass rebuilding goals while minimizing the economic impact to the industry and associated communities, and minimizing bycatch potential by setting trip limits at the highest level possible consistent with achieving annual rebuilding targets. Furthermore, as noted in the Purpose and Need section of this document, the scientific basis for the no-action alternative (including the default measures) has been invalidated by more recent scientific analysis.

For FY2003, the proposed control rule formula prescribes an increase in the SFMA TAC and associated trip limits under the preferred and non-preferred alternatives, compared to FY2002 levels. In the NFMA, the preferred alternative would also increase the target TAC and retain the current measures (40 monkfish DAS and no trip limit on a monkfish or multispecies DAS) for limited access vessels while increasing the incidental catch limits for vessels that do not have a limited access monkfish permit to forestall potential discard problems. The potential discard problems arise for two reasons: increased incidental catch rates resulting from increased monkfish biomass, and increased probability that vessels will reach the 25 percent incidental catch limit as a consequence of reduced trip limits in the multispecies fishery (that is, the same poundage of monkfish could exceed 25 percent of total weight of fish on board if vessels are not allowed to retain as much of the other species). The control rule formula would be applied annually to set catch targets (optimum yield) and associated management measures by notice action.

5.6.4 Discussion of Cumulative Effects

Cumulative effects are caused by the aggregate of past, present, and reasonably foreseeable future actions.

Past Actions

The current condition of the monkfish fishery (resource, vessel and community components) is the result of the cumulative impact of the Monkfish FMP, implemented in

1999, and regulations under other FMPs in the region that impact vessels catching monkfish as well as measures adopted under other laws, particularly the Endangered Species Act and the Marine Mammal Protection Act. This condition is summarized in the 2001 SAFE Report (Appendix I) and the Affected Environment Section of this document, Section 4.0.

Present Actions

This framework adjustment will continue the FMP rebuilding program in a manner that is consistent with the best available and most recent scientific information about monkfish populations. If the stock is rebuilding along a trajectory that will achieve the biomass targets by 2009, the fishery will be able to grow proportionally (via increased TACs and associated trip limits). On the other hand, if the stocks do not meet the incremental annual biomass targets, the fishery will be proportionally constrained. The long-term impact of the overall rebuilding program was analyzed in the EIS accompanying the original FMP implementing the rebuilding program, and the short-term impact is analyzed in Section 5.0 of this document.

Future Actions

Future actions considered in this section include actions taken under this FMP, actions taken under other FMPs that affect vessels catching monkfish, and actions taken to protect marine mammals or threatened and endangered species. Given that monkfish fishing occurs in relative isolation from other spatially co-occurring activities (shipping and recreational boating, for example), it is unlikely that any regulatory action or other changes in those activities will have an impact on the fishery, or vice versa. Other activities that could potentially have an impact on monkfish fishing, such as development of offshore oil and gas or offshore aquaculture projects, are not likely to occur in the reasonably foreseeable future.

Included in the reasonably foreseeable future actions that may have an impact on the monkfish fishery are FMP amendments in various stages of development, including Monkfish Amendment 2, Multispecies Amendment 13 and Sea Scallop Amendment 10, the latter two of which are in late pre-submission stages. Both Amendments 13 and 10 will have direct and indirect impacts on monkfish vessels since most monkfish vessels are also permitted in one of those other fisheries. Those vessels (monkfish permit Category C and D) must use both a monkfish and multispecies or scallop DAS when fishing for monkfish, (or in the NFMA must at least use a multispecies DAS). Both of those amendments may have short-term adverse impacts on monkfish vessels that may be mitigated if a program is developed in Monkfish Amendment 2 that would separate the DAS usage requirement. Any short-term adverse social or economic impact resulting from the cumulative effect of those other FMPs would be counter balanced by the positive impacts to the monkfish resource, other fishery resources, and the ecosystem. Since ultimate goal of all FMPs is to achieve optimum yield from the fishery (that is, long-term maximum sustainable yield reduced by relevant social, economic or ecological factors), short-term adverse socio-economic impacts should be offset by long-term positive impacts.

Other potential future actions whose effects would be cumulative to the proposed action include actions taken to protect marine mammals, endangered and threatened species. Current measures in effect are discussed in Section 5.5 and these could be modified in the

future under either a fishery management plan, marine mammal take reduction plan, or regulation promulgated under authority of the Endangered Species Act. Specifically, known or anticipated future actions include: short-term closures to sink gillnets under the Atlantic Large Whale Take Reduction Plan Dynamic Area Management (DAM) system; changes to the Harbor Porpoise Take Reduction Plan; and, NMFS regulatory action, or measures adopted under Monkfish Amendment 2 that could supplant the recently published (December 3, 2002) final rule implementing large-mesh gillnet closures off the North Carolina/Virginia coast to protect sea turtles.

Cumulative effects are the total effect, including both direct and indirect effects, on a given resource, ecosystem, and human community of all actions taken, no matter who (federal, non-federal, or private) has taken the actions.

This fishery occurs primarily Federal waters within the exclusive economic zone (EEZ) but a minor part extends into areas under state jurisdiction (inside three miles from shore). As noted in the preceding paragraphs, activities other than regulatory action directly affecting fishing (FMPs, state fishery regulations, and programs to protect marine mammals, threatened and endangered species) have minimal direct or indirect interaction with fishing. The combined direct and indirect effects of past and current State and Federal regulations (both for monkfish and other fisheries, including habitat protection and bycatch reduction measures), as well as regulations to protect marine mammals, threatened and endangered species are reflected in the current condition of the monkfish resource, ecosystem and community. Future regulatory actions will cumulatively enhance protection of the monkfish resource and the ecosystem overall from the effects of overfishing or fishing in a manner that has adverse effects on the environment.

Cumulative effects need to be analyzed in terms of the specific resource, ecosystem, and human community being affected.

The direct and indirect impacts of this action on the monkfish resource, habitat and fishing community are discussed in Section 5.0. Enhanced long-term sustainability of the fishery, through stock rebuilding and ecosystems protection, will have positive long-term benefits on the communities that depend on the monkfish resource. Given that the monkfish stock-rebuilding program appears to be on schedule, and that if this trend continues the monkfish fishery will grow proportionally until it reaches the level of long-term maximum sustainable yield, the cumulative impact of this action on the monkfish resource, the ecosystem and the affected communities should be positive in both the short term and long term.

It is not practical to analyze the cumulative effects of an action on the universe; the list of environmental effects must focus on those that are truly meaningful.

The effects most meaningful and relevant include:

- effects on the rebuilding of the monkfish resource;
- effects on the ecosystem, especially impacts on habitat, non-target species, and marine mammals and other protected species; and

- effects on the participants in the directed and incidental-catch monkfish fisheries.

The most likely effects of the proposed action are expected to be immediately positive for the monkfish resource, ecosystem and community.

Cumulative effects on a given resource, ecosystem, and human community are rarely aligned with political or administrative boundaries.

The monkfish fishery is managed throughout the specie's range, which extends from the Gulf of Maine to North Carolina, from state waters out to the continental slope. The measures proposed in this framework will have an impact on fisheries, communities and the ecosystem in New England and the Mid-Atlantic, across state and federal boundaries in proportion to the spatial distribution of the fishery.

Cumulative effects may result from the accumulation of similar effects or the synergistic interaction of different effects.

The monkfish fishery is, to varying degrees, closely integrated with multispecies, scallop and other fisheries. Even on trips nominally targeting monkfish, vessels interact with other fisheries and are subject to rules and regulations promulgated under other FMPs. In the NFMA, three quarters of the monkfish landings are caught on trips where monkfish is not the predominant species and vessels must comply with rules established under both the Monkfish FMP and other FMPs, mainly Multispecies. While the majority of monkfish landings in the SFMA is on directed monkfish trips, vessels there are still subject to all of the rules governing other fisheries in the area. For example, vessels not fishing under a Multispecies or Scallop DAS are limited to fishing under one of the Exempted Fishery Programs established under the Multispecies FMP, and since monkfish gear is capable of catching groundfish species, the gear is prohibited from fishing in Multispecies Closed Areas. Furthermore, it is reasonable to expect that action will be taken under the Multispecies FMP that could reduce multispecies DAS allocations below the number of monkfish DAS allocated. Such action would have a detrimental interactive effect on monkfish vessels unless the Councils adopt (as is being discussed in Amendment 2) a program to de-link the DAS or some other compensatory measure so vessels can continue to harvest optimum yield.

Cumulative effects may last for many years beyond the life of the action that caused the effects.

The proposed action implements a harvest control rule that will allow for stocks to rebuild to long-term maximum sustainable yield levels and to maintain fishing at that level over the long term. The harvest control rule establishes a formula that directly links annual optimum yield catch targets and associated management measures to the status of the stock, as measured by the NMFS bottom trawl survey. While the proposed action would allow fishing mortality rates be set higher than under the no-action alternative, the differential impact on the resource would be short-lived because both alternatives are designed to rebuild stocks to the same level by 2009. Over the long term, the ultimate FMP goal, under the no-action or proposed alternatives, is to achieve optimum yield,

based on maximum sustainable yield reduced by relevant social, economic and ecological factors. Thus, the long-term differences between any of the alternatives under consideration, and the no-action alternative are minimal, particularly in terms of the biological and ecological impact.

Under the proposed action, however, the opportunity to fish in the short term at a higher rate than under the no-action alternative (over the next few years, until stocks are rebuilt) will likely result in different and more beneficial cumulative economic and community impacts. Since the stocks appear to be rebuilding according to schedule, reductions called for under the default measures (no-action alternative) are unnecessary, even if the biological reference points were not invalidated. The proposed FY2003 TACs increase over the FY2002 levels is an opportunity for vessels to offset severe restrictions in other fisheries, especially multispecies fisheries, and represents a positive cumulative long-term benefit, since it will enable these vessels and their communities to utilize invested capital to a greater degree than if the opportunity did not exist. The potential loss of this opportunity (for example, under the no-action alternative) could have cumulative adverse effects for many years beyond the life of the action to due the high cost of re-capitalizing the fishery infrastructure when the stocks are rebuilt.

Each affected resource, ecosystem, and human community must be analyzed in terms of its capacity to accumulate additional effects, based on its own time and space parameters.

The proposed action is designed to rebuild monkfish biomass by 2009 so it can support the fishery at long-term maximum sustainable levels given past, present and anticipated future conditions of the resource and the affected environment (habitat, marine mammals and other protected species, as well as other fishery stocks). The regulatory environment within which this program operates is extremely dynamic, as laws, fishery management plans, new scientific information, and political and economic interests change. Likewise, the natural environment is continually changing as ecosystem elements such as climate, predator and prey abundance, and other physical and biological cycles evolve. Since these changes occur at different temporal and spatial scales, the fishery management plan (both the rebuilding program and the management at maximum sustainable levels) includes annual monitoring, not only of monkfish abundance, but of all other relevant factors that may have cumulative impacts on the fishery requiring and adaptive or mitigative response.

5.7 Unavoidable adverse effects

Unavoidable adverse effects of this action include:

- restrictions on the monkfish industry (trip limits, DAS, gear and area restrictions) that are necessary to achieve the rebuilding goals of the FMP
- adverse impacts on fishing communities and the general public arising from restrictions on the industry adopted to achieve long-term productivity objectives, and
- adverse impacts of fishing on habitat, fish, marine mammals and protected resources that may occur in spite of mitigating measures and management programs adopted, within the FMP and through other regulatory

mechanisms, to minimize the effects of the fishery on those environmental components.

5.8 Short-term use vs. long-term productivity

The proposed action is an adjustment to the monkfish stock-rebuilding program implemented under the FMP. The purpose of the action is to implement measures and management control rules that are based on achieving the biomass targets by 2009. Those targets are adopted as the proxies for the biomass that will support long-term maximum sustainable yield. The program and measures adopted in this framework provide a balance between allowing short-term use by the fishery while achieving the long-term productivity goals mandated by the Sustainable Fisheries Act.

5.9 Irreversible and irretrievable commitments of resources

Irreversible commitments of resources are those that cannot be recovered, except, perhaps over the extreme long term, while irretrievable commitments are those that are lost for a period of time. In the case of fishery management, irreversible commitments would result, for example, from the extinction of a species as a result of fishing or the destruction of physical habitat features that would not recover under natural processes. Examples of irretrievable commitments would be, overexploitation of a target or incidental catch species or destruction of biogenic habitat features that would require an extended period of time, and perhaps additional management action to restore.

Applicable law, not only the Magnuson-Stevens Act, but others such as the Endangered Species Act and Marine Mammal Protection Act, mandate measures to minimize or mitigate the effects of fishing, many of which would be irreversible or irretrievable without such controls. To the extent that the FMP, generally, and this framework adjustment, specifically, are shown to be consistent with all applicable law, the risks of irreversibly or irretrievably committing resources are minimized.

6.0 Environmental Assessment (NEPA)

This section addresses the requirements of the National Environmental Policy Act (NEPA) that Federal agencies consider all reasonably foreseeable environmental effects of their proposed actions and involve and inform the public in the decision making process. The Council submitted an Environmental Impact Statement (EIS) with the Monkfish FMP on September 15, 1998. This EA incorporates by reference the information in the original FMP document, particularly Section 6.0, Affected Environment, Section 7.0, Description of Fishery Impacts, and Section 8.1, Environmental Impact Statement. Updates to information in the FMP document are contained in the SAFE for the 2001 fishing year (Appendix I). The purpose and need for the action is discussed in Section 2.0, and a description of the proposed action and alternatives is provided in Section 3.0 of this document. The affected environment is described in Section 4.0 and the environmental consequences in Section 5.0. The list of preparers is in Section 12.0. The purpose of this EA is to determine whether significant environmental impacts will occur as a result of the proposed changes to the regulations.

6.1 Determination of significance

Based on guidance in Section 6.01(b) of NOAA Administrative Order NAO 216-6, May 20, 1999, and the analysis of impacts in Section 5.0 of this document, the proposed action

is deemed not significant. Based on the public comments the Council received when considering this proposal, the action is also not controversial. The NAO216-6 guidelines provide nine elements to be used in evaluating the significance of a fishery management action under NEPA. These elements are discussed below:

1. *The proposed action may be reasonably expected to jeopardize the sustainability of any target species that may be affected by the action.*

This framework adjustment will continue the FMP rebuilding program in a manner that is more consistent with the best available scientific information about monkfish populations. The proposed action implements a harvest control rule that will allow for monkfish stocks to rebuild to long-term maximum sustainable yield levels and to maintain fishing at that level over the long term. If the stock is rebuilding along a trajectory that will achieve the biomass targets by 2009, the fishery will be able to grow proportionally (via increased TACs and associated trip limits). On the other hand, if the stocks do not meet the incremental annual biomass targets, the fishery will be proportionally constrained.

2. *The proposed action may be reasonably expected to jeopardize the sustainability of any non-target species.*

The proposed action does not increase overall monkfish effort, in terms of DAS allocations, and does not otherwise modify management measures such that incidental catch of non-target species would increase. While fishery-wide information on the magnitude of bycatch of non-target species is extremely limited (see Section 5.1.3), vessels fishing for monkfish are still subject to the rules promulgated under other FMPs that regulate the catch (including incidental catch) of other species, for example the Multispecies Exempted Fishery Program and minimum mesh size rules, and, therefore, the proposed action will not likely jeopardize the sustainability of those other species.

3. *The proposed action may be reasonably expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs.*

As discussed in Section 5.4, the alternatives and actions proposed in this framework adjustment are not expected to increase any adverse impacts on essential fish habitat (EFH) resulting from fishing activity. The Councils have determined that the proposed action is consistent with affected states' Coastal Zone Management Programs.

4. *The proposed action may be reasonably expected to have a substantial adverse impact on public health or safety.*

The proposed action addresses biological reference points and associated management measures designed to achieve monkfish stock rebuilding. The measures proposed include increased trip limits for FY2003 and adjustments to the trip limits and DAS program in future years consistent with achieving annual rebuilding targets. As such, the action does not have an adverse impact on public health or safety.

5. *The proposed action may be reasonably expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species.*

In conjunction with the approval of Framework 1 to the Monkfish FMP, NMFS reinitiated a Section 7 consultation in accordance with the Endangered Species Act. The ensuing Biological Opinion concluded that the action could result in adverse effects to ESA-listed cetaceans and sea turtles that were not considered in the June 2001 consultation on the Monkfish FMP. The May 2002 consultation for Framework 1 found the action would not jeopardize any listed species under NMFS jurisdiction. Framework 2 would extend the Framework 1 management program with some modifications, but with the possibility of increased risks to ESA-listed species, particularly sea turtles due to potentially higher trip limits. Since the implementation of Framework 1, however, new conservation measures for turtles have been added to the actions in place to reduce risks to listed species. The Council maintains that these new measures will substantially reduce increased risks to these species, based on the analyses in the May 2002 Opinion. The proposed action also will be further considered through either formal or informal Section 7 consultation by NMFS.

6. *The proposed action may be reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species.*

The proposed action, designed to achieve biomass rebuilding goals by 2009, will have a positive, not adverse effect on monkfish stocks. As discussed in Section 5.6, the action, which will result in incremental annual changes to the monkfish trip limits and/or decreases in DAS allocations (if stocks decline significantly) will not likely have a cumulative adverse impact on non-target species.

7. *The proposed action may be reasonably expected to have a substantial impact on biodiversity and ecosystem function within the affected area (e.g. benthic productivity, predator-prey relationships, etc.)*

The proposed action does not increase overall monkfish fishing effort, measured by allocated DAS, and limits catches to levels consistent with rebuilding the monkfish biomass. Changes to trip limits and/or reductions in DAS allocations (if needed) that would result from adoption of the proposed control rule, will not substantially alter the impact of fishery on the ecosystem. While the impact of rebuilding the monkfish biomass on the ecosystem, in terms of the specie's function as a predator-prey element, is unknown, the biomass targets are within the range of historically observed levels and, consequently, not expected to substantially impact biodiversity or other ecosystem relationships.

8. *If significant social or economic impacts are interrelated with significant natural or physical environmental effects, then the EIS should discuss all of the effects on the human environment.*

As discussed in Section 5.0, there are no significant social or economic impacts, nor are there any significant natural or physical environmental effects expected to result from the measures proposed in this framework adjustment.

9. *A final factor to be considered in any determination of significance is the degree to which the effects on the quality of the human environment are controversial.* Since the proposed action is based on updated scientific information regarding the

biological reference points and will allow for harvesting monkfish at optimum yield levels consistent with the stock-rebuilding program, the proposed action is not controversial. The no-action alternative that would implement default measures (and which was rejected by the Councils) is controversial, however, since the scientific basis for the reference points and associated management measures has been invalidated by two stock assessment workshops. Based on public comment received at meetings of the Monkfish Committee and New England and Mid-Atlantic Fishery Management Councils when the proposed action was considered, the Councils have determined that the proposed action is not controversial.

6.2 Finding of no significant impact (FONSI)

In view of the analysis presented in this document and in the EIS for the Monkfish Fishery Management Plan, the proposed action will not have a significant effect on the human environment, with specific reference to the criteria contained in Section 6.02 of NOAA Administrative Order NAO 216-6, Environmental Review Procedures for Implementing the National Environmental Policy Act, May 20, 1999. Accordingly, the preparation of a Supplemental Environmental Impact Statement for the proposed action is not necessary.

Assistant Administrator for
Fisheries, NOAA

Date

7.0 Endangered Species Act and Marine Mammal Protection Act

7.1 Endangered Species Act (ESA)

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 NEFMC concludes, at this writing, that measures proposed in Framework Adjustment 2 to the Monkfish FMP and the prosecution of the monkfish fishery may affect, but are not likely to jeopardize any ESA-listed species or alter or modify any critical habitat, based on the discussion of impacts in this and other documents referred to in section 5.5. The NEFMC is seeking a determination by the National Marine Fisheries Service on this matter.

For further information on the potential impacts of the fishery and the proposed management action on listed species, see Section 5.5 of this document.

7.2 Marine Mammal Protection Act (MMPA)

The NEFMC has reviewed the impacts of the Framework Adjustment 2 on marine mammals and has concluded that the management actions proposed are consistent with the provisions of the MMPA, and will not alter existing measures to protect the species likely to inhabit the monkfish management unit.

For further information on the potential impacts of the fishery and the proposed management action on marine mammals, see Section 5.5 of this document.

8.0 Regulatory Impact Review and Initial Regulatory Flexibility Analysis

This section provides the analysis and conclusions to address the requirements of Executive Order 12866 and the Regulatory Flexibility Act (RFA). Since many of the requirements of these mandates duplicate those required under the Magnuson-Stevens Act and NEPA, this section contains references to other appropriate sections of this document. The following sections provide the basis for determining whether the proposed action is significant under E.O. 12866 or will have a significant economic impact on a substantial number of small entities under the RFA.

8.1 Regulatory Impact Review (E.O. 12866)

This section contains the required elements for determination of whether the proposed action is significant under E.O. 12866.

8.1.1 Description of management objectives

The goals and objectives of the management plan as stated in Section 3.4 of the Monkfish FMP are:

1. to end and prevent overfishing; to rebuild and maintain a healthy spawning stock
2. to optimize yield and maximize economic benefits to the various fishing sectors
3. to prevent increased fishing on immature fish
4. to allow the traditional incidental catch of monkfish to occur.

The proposed action is consistent with, and does not modify those goals and objectives.

8.1.2 Description of the fishery

Section 6.4 of the FMP contains a detailed description of the fishery. Section 4.0 of this document (“Affected Environment”), referencing the 2001 SAFE Report (Appendix I), contains an updated description of the fishery using the best and most current data available.

8.1.3 Statement of the problem

The problems being addressed, as described in Section 1.2 of this document (“Background”), include the following:

- the lack of current fishing mortality estimates and inappropriateness of some biological reference points
- the inability to set annual optimum yield harvest targets that are consistent with the stock-rebuilding program, and
- the existence of restrictive default measures that would eliminate the directed fishery.

The purpose and need for this action is described in Section 2.0.

8.1.4 Description of the alternatives

Section 3.0 of this document contains a description of the alternatives considered, including a “no-action” alternative.

8.1.5 Economic analysis

Section 5.2 of this document contains the economic analysis of the proposed action and alternatives.

8.1.6 Determination of significance under E.O. 12866

NMFS Guidelines provide criteria to be used to evaluate whether a proposed action is significant. A “significant regulatory action” means any regulatory action that is likely to result in a rule that may:

1. *Have an annual effect on the economy of \$100 million or more, or adversely effect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities.*

This action will not have an annual effect on the economy of \$100 million, nor adversely effect in a material way the economy, a sector of the economy, productivity, competition, the environment, public health or safety, or State, local, tribal governments or communities. Total gross revenues from the fishery in recent years (1999 to 2001) averaged approximately \$45 million. Under restrictions in place in the SFMA in the current fishing year (2002), landings (and revenues) are expected to decline from that level, but would be nearly restored to the 1999-2001 level under the proposed action. For example, compared to current limits, median vessel gross revenues were estimated to increase by 12% (as compared to 23% for monkfish-only trip net return) at the FY2003 quota level for the SFMA. Note, however, that the trip limit changes in the SFMA will only affect a segment of the monkfish fishery. This segment represents approximately 28% of total monkfish landings so the net effect on net benefit of the monkfish fishery as a whole will be modest (about 6.4%). The economic impact of the change in the incidental catch (Category E) trip limit is also expected to be modest as the current limit for these vessels in the NFMA is not constraining on the majority of trips where monkfish are landed. Thus, neither trip limit change would have an adverse impact nor would there either change reach the \$100 million threshold.

2. *Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency.*

The proposed action does not create an inconsistency or otherwise interfere with an action taken or planned by another agency. The activity proposed to be allowed under this action involves commercial fishing for monkfish in the Federal waters of the EEZ. NOAA Fisheries is the sole agency responsible for regulating this activity; therefore, there is no and can be no interference with actions taken by another agency. This proposed action would create no inconsistencies in the management and regulation of commercial fisheries in the northeast.

3. *Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof.*

The proposed action is to change the management reference points and associated

regulations governing the monkfish fishery. This action is unrelated to any entitlements, grants, user fees, or loan programs, and therefore cannot be considered to be significant under the third criterion specified in E.O. 12866.

4. *Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.*

The proposed action is taken pursuant to the mandates of the Sustainable Fisheries Act to stop overfishing and achieve optimum yield from the fishery using the best available scientific information. There is precedence for this action, in the fact that the fishery has been managed under the FMP since 1999, and that the agency has been making similar adjustments to other FMPs through the framework process since at least 1994. The proposed action, therefore, would not be considered to be significant under the fourth and final criterion specified in E.O. 12866.

Based on this review and assessment, for the purposes of E.O. 12866, none of the proposed alternatives would meet the Order's criteria for a significant regulatory action.

8.2 Initial Regulatory Flexibility Analysis (RFA)

The following sections contain analyses of the effect of the proposed action on small entities. Even though the Council is recommending that the proposed action be published as a final rule, and, therefore, not required to complete an initial regulatory flexibility analysis (IRFA), it is conducting the analysis so that it, and members of the public, have a better understanding of the action's regulatory impacts. To that end, it will follow the standard IRFA format. Under §603(b) of the RFA, each IRFA is required to address:

1. reasons why the agency is considering the action
2. the objectives and legal basis for the proposed rule
3. the kind and number of small entities to which the proposed rule will apply
4. the projected reporting, recordkeeping and other compliance requirements of the proposed rule, and
5. all Federal rules that may duplicate, overlap or conflict with the proposed rule.

8.2.1 Reasons for considering the action

The purpose and need for this action to implement changes to the fishery management plan for Monkfish is described in Section 2.0 of this document. Essentially, the purpose of the proposed action is to continue the ten-year stock rebuilding program started in 1999 under the original monkfish FMP consistent with updated scientific information and to eliminate the default measures that would unnecessarily shut down the directed monkfish fishery by eliminating DAS.

8.2.2 Objectives and legal basis for the action

The regulations implementing the Monkfish FMP at 50 CFR 648 authorize the Council to adjust the management measures as needed to achieve the goals and objectives of the management plan. The goals outlined in Section 3.4 of the FMP are:

1. To end and prevent overfishing; rebuilding and maintaining a healthy spawning stock

2. To optimize yield and maximize economic benefits to the various fishing sectors
3. To prevent increased fishing on immature fish, and
4. To allow the traditional incidental catch of monkfish to occur.

The proposed action is consistent with the FMP goals and implementing regulations.

8.2.3 Description and number of small entities to which the rule applies

A complete description of the small entities is contained in Section 2.2 of the 2001 SAFE Report (Appendix I). There are approximately 714 limited access permit holders, of which about 85 percent record some monkfish activity. Of the approximately 1,900 open-access Category E permits, only about 25 percent have recorded landing monkfish. Vessels range in size from less than 30 feet to over 90 feet, with the median being less than 50 feet in overall length. Most of the inactive vessels (not landing monkfish or not landing any species) are in the smaller size classes, while 70 percent of the limited access vessels over 50 feet have recorded monkfish landings.

8.2.4 Reporting, recordkeeping and other compliance requirements

The action does not introduce any new reporting, recordkeeping or other compliance requirements.

8.2.5 Duplication, overlap or conflict with other Federal rules

The proposed rule does not duplicate, overlap or conflict with any other Federal rules.

8.2.6 Economic impacts on small entities resulting from the proposed action

The vessel-level economic impact analysis of the proposed action is contained in Section 5.2. In achieving optimum yield from the fishery on an annual basis while rebuilding the resource to levels that will sustain long-term maximum sustainable yield, the proposed action strikes a reasonable balance between biological requirements and uncertainties and the financial requirements of small entities. Relative to performance during calendar years 1998-2000, net return on monkfish-only trips would improve by 23% for the median vessel under the proposed trip limits for FY2003. Median vessel performance would be reduced by 63% at a 5,000 MT quota but would increase by 29% at a 13,000 MT quota. Since vessels have varying degrees of dependence on monkfish, relative changes in gross fishing income tend to be lower than economic impacts on monkfish trips alone. For example, median vessel gross revenues were estimated to increase by 12% (as compared to 23% for monkfish-only trip net return) at the FY2003 quota level. In the NFMA, the proposed change in management measures affecting vessels is the increase in incidental catch limits on open-access Category E permits. While the current limit is non-constraining on the majority of the 255 Category E vessels catching monkfish in the NFMA, the proposed increase could allow those vessels that are constrained to increase their monkfish landings by as much as 33 percent without jeopardizing the stock-rebuilding program.

8.2.7 “Significance” evaluation criteria

NMFS’ guidelines specify two criteria to be used for evaluating whether a proposed action is significant: disproportionality and profitability. Disproportionality relates to the effect on small entities compared to large entities. Since all entities engaged in the fishery

fall under the \$3.5 million total sales criterion, this evaluation standard is not relevant to the fishery. According to the analysis of the impact on vessels in the SFMA (Section 5.2), relative to performance during calendar years 1998-2000, net return on monkfish-only trips would improve by 23% for the median and ranged from no change to an improvement of 78% at the FY2003 quota level. Given these levels of expected change in profitability the proposed trip limits may have a significant positive impact on limited access vessels that choose to fish in the SFMA.

At other quota levels median vessel performance would be reduced by 63% at a 5,000 MT quota but would increase by 29% at a 13,000 MT quota. In either of these two scenarios the change in profitability would be significant; negative and positive for the former and latter respectively.

In the NFMA, the only change in management measures would be the increased incidental catch limit on Category E vessels, of which 255 landed monkfish in FY2001. The impact on these vessels is not expected to be significant, however, because the monkfish average catch (62 lbs.) is well below the current and proposed incidental catch limits. Even though the current trip limit is not constraining for the majority of trips, the proposed increase would still be a positive economic impact for the infrequent number of trips where the current trip limit is constraining. However, in terms of improvements to participating vessels' annual profit, the proposed change is not likely to have a significant impact.

8.2.8 “Substantial number” evaluation criteria

NMFS' guidelines state that “a rule may be determined to affect a substantial number of small entities if the rule is controversial, impacts more than just a few entities, or affects the structure of the regulated industry even though only a small number of entities may be impacted”. The proposed action may affect a substantial number of small entities because it will impact the approximately 700 limited access permit holders, although not in an adverse way, through the adjustments (increase) to the SFMA trip limits. While not all of these vessels will realize an impact, the median vessel will realize a 23 percent positive impact in net returns on monkfish trips under the 2003 SFMA TAC (and associated trip limits). Under future TACs that could range from 5,000 mt to 13,000 mt, the median vessel would realize gross revenue impacts ranging from -49 percent to +17 percent. In the NFMA, approximately 255 vessels out of approximately 1,500 multispecies permit holders landed monkfish under the open-access Category E (incidental catch) permit. These vessels, while perhaps a substantial number, will mostly be unaffected by the proposed incidental catch limit increase since they land on average only about 20 percent of the current limit.

Combining the two evaluation criteria, the proposed regulations would likely have a significant positive impact on a substantial number of vessels that participate in the SFMA on monkfish-only DAS. The incidental catch trip limit change in the NFMA would impact a substantial number of participating small entities but the overall impact on vessel profitability is not expected to be significant.

9.0 Magnuson-Stevens Act (MSFCMA)

9.1 Consistency with the National Standards

Section 301 of the Magnuson-Stevens Fishery Conservation and Management 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 purpose of the proposed action, to modify the overfishing definition reference points and control rule, as well as the method for setting appropriate management measures, is to achieve optimum yield on an annual basis in a manner consistent with rebuilding monkfish stocks by 2009 to levels that will support harvesting long-term maximum yield. The control rule for setting annual optimum yield catch targets is designed to achieve annual incremental growth targets in the biomass indices for each stock based on the 10-year rebuilding program started in 1999 with implementation of the FMP.

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

The proposed revisions to the overfishing definition reference points and control rules incorporates new scientific information from the past two stock assessments (SAW 31 and SAW 34). These two SAWs also invalidated the original reference points adopted in the FMP based on new information and data, including the results of the 2001 cooperative monkfish survey conducted with the fishing industry. This framework action establishes a method for setting annual catch targets based on the most recent NMFS fall trawl survey each year and previous year's commercial landings.

(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 goosefish 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.

(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, nor does it allocate fishing privileges among various sectors of the fishery. 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 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. The Councils note that subsequent to the findings in the 2001 Rhode Island District Court case, trawl and gillnet vessels are given the same trip limits.

(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 and alternatives are designed to achieve the FMP's biomass rebuilding goals while minimizing the economic impact to the industry and associated communities, and minimizing bycatch potential by setting trip limits at the highest possible level consistent with achieving annual rebuilding targets. While the FMP, and the proposed action, may have differential impacts among different fishery groups, that is not the purpose of the plan.

(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 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 incidental catch limits are also based on the vast differences among different fisheries that catch monkfish as a target or incidental catch species. The proposed action does not change the Councils' consideration of variation among the different fisheries, and the proposed increase in NFMA incidental catch limits is consistent with that view. Vessels that do not have a monkfish limited access permit and fishing on a multispecies DAS in the NFMA will be faced with increasing monkfish catch rates, as the stock approaches a rebuilt state, and at the same time, see multispecies catch limits reduced under the increasingly restrictive groundfish rebuilding program. Unless their monkfish catch limits (absolute and percentage-based) are adjusted, these vessels will be forced to discard increasing amounts of monkfish.

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

The regulations promulgated under the Monkfish FMP, and modified in the framework adjustment are necessary to rebuild the monkfish resource. By establishing a program that will set optimum yield catch targets in a manner that will maximize fishing opportunity consistent with reaching annual rebuilding targets, the proposed action will minimize costs associated with the rebuilding program requirements.

(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 framework adjustment are not likely to result in significant adverse impacts on affected fishing communities and, in fact, will have a positive impact when compared to the no-action alternative (default measures closing the directed fishery). The proposed action is intended to allow for continued access to monkfish for vessels and communities that depend, to varying degrees, on a directed fishery by eliminating the default measures, and setting annual catch targets consistent with achieving stock rebuilding by 2009.

(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 proposed action establishes a method for setting monkfish trip limits at levels that will enable the fishery to maximize landings consistent with growth trends in the stocks, based on changes to the NMFS bottom trawl survey indices. As stocks grow, catch rates increase proportionally, and allowing vessels to land increasing amounts of monkfish on a per-day basis, as the proposed action does, directly reduces the amount of regulatory discarding that would otherwise occur. Furthermore, in the NFMA, where stock rebuilding is well ahead of schedule, vessels that do not have a limited access permit (and are limited to 400 lbs. tail weight or 25 percent of total weight of fish on board) would have their incidental catch limits increased under the proposed action to account for increasing catch rates (as the monkfish stock grows) and reduced groundfish trip limits.

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

This framework does not substantially change the impact of the FMP on safety at sea. Adjustments to the TAC and associated trip limits in the range considered for this adjustment are not sufficiently large that would cause a vessel to modify its fishing patterns and, perhaps, increase the risks to safety.

9.2 Other Required Provisions of the MSFCMA

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 framework adjusts the overfishing definition reference points and control rules, and associated management measures, to achieve stock rebuilding in a manner consistent with the best available scientific information. Consistency with the National Standards is discussed in the previous section.

(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, were described in the Affected Environment section of the EIS accompanying the original FMP. That information has been supplemented by SAFE Reports covering FY2000 and FY2001 (Appendix I to this document).

(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;

The proposed action is primarily an adjustment to the overfishing definition control rule for setting annual optimum yield catch targets under the rebuilding program designed to achieve the biomass capable of producing long-term maximum sustainable yield (as measured by survey index proxies for absolute biomass levels). The specific levels for 2003, and the method used for 2003 and future years, are summarized in Section 3.1.5.2.

(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;

As noted in the previous paragraphs, the proposed action is primarily an adjustment to the overfishing definition control rule for setting annual optimum yield catch targets under the rebuilding program designed to achieve the biomass capable of producing long-term maximum sustainable yield (as measured by survey index proxies for absolute biomass levels). The specific levels for 2003, and the method used for 2003 and future years, are summarized in Section 3.1.5.2. Since current levels of optimum yield are well below historical catch levels, and vessels are still operating under restrictive management measures, domestic capacity is clearly capable of taking and processing optimum yield. Consequently, no portion of optimum yield is available to foreign vessels or processors.

(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;

The 2001 SAFE Report (Appendix I of this document) contains a full description of the fishery and processing sector as required by this provision. As required by the FMP implementing regulations, the Monkfish Monitoring Committee compiles and publishes this information annually.

(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, under which this proposed action is taken, 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 5.4 contains the description of essential fish habitat and 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. The 2001 SAFE Report is attached as Appendix I.

(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 5.0 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;

The proposed action includes 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. Based on most recent survey data and the current threshold reference points, both stocks are no longer overfished, but, pending NMFS' likely approval of the proposed revision, the southern stock will be marginally overfished under the new threshold.

(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;

Vessels issued a monkfish permit are required to submit Vessel Trip Reports (VTRs, logbooks) which includes reporting of discards. Additionally, the NFMS Regional Administrator may request vessels issued a monkfish permit carry an observer for the purpose of collecting catch data, including bycatch of fish and marine mammals or other protected species. In addition, the Council and the National Marine Fisheries Service are both participating in the ACCSP, which is a long-term effort to improve the collection and utility of fisheries data, including bycatch information. In addition to the general effect of increased trip limits in reducing discards of monkfish that results from catches in excess of the limit, the incidental catch limit increase on Category E vessels in the NFMA, is specifically intended to minimize bycatch.

(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 2001 SAFE Report (Appendix I).

(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, 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. The Councils note that subsequent to the findings in the 2001 Rhode Island District Court case, trawl and gillnet vessels are given the same trip limits.

10.0 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.

11.0 Paperwork Reduction Act

This action does not contain a collection-of-information requirement for purposes of the Paperwork Reduction Act.

12.0 List of Preparers

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