

AMENDMENT 4 TO THE

FISHERY MANAGEMENT PLAN

FOR THE

ATLANTIC MACKEREL, SQUID, AND BUTTERFISH FISHERIES

May 1991

Mid-Atlantic Fishery Management Council

in cooperation with the

National Marine Fisheries Service

New England Fishery Management Council

and the

South Atlantic Fishery Management Council

Draft adopted by MAFMC: 30 May 1991
Final adopted by MAFMC: 17 July 1991
Final approved by NOAA: 8 November 1991

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2. SUMMARY

The Fishery Management Plan for the Atlantic Mackerel, Squid, and Butterfish Fisheries (FMP) modified by this Amendment was implemented on 1 April 1983 for a period ending 31 March 1986. This Amendment would extend the FMP for an indefinite period of time, or until amended.

The management unit is all Atlantic mackerel, *Loligo pealei*, *Illex illecebrosus*, and butterfish under US jurisdiction, excluding the Gulf of Mexico and the Caribbean Sea.

The objectives of the FMP are:

1. Enhance the probability of successful (i.e., the historical average) recruitment to the fisheries.
2. Promote the growth of the US commercial fishery, including the fishery for export.
3. Provide the greatest degree of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this FMP.
4. Provide marine recreational fishing opportunities, recognizing the contribution of recreational fishing to the national economy.
5. Increase understanding of the conditions of the stocks and fisheries.
6. Minimize harvesting conflicts among US commercial, US recreational, and foreign fishermen.

The fishing year for Atlantic mackerel, *Illex* and *Loligo* squid, and butterfish is the twelve (12) month period beginning 1 January.

Foreign Fishing Areas and Seasons

The time and area restrictions (section 9.1.2.2) are changed to read:

Foreign vessels fishing for Atlantic mackerel, squid or butterfish shall be subject to the applicable time and area restrictions and fixed gear avoidance regulations at 50 CFR 611.

The Director, Northeast Region, NMFS (Regional Director) may limit the areas where directed foreign fishing and joint venture transfers from US to foreign vessels may take place. Directed foreign fishing must be conducted seaward of at least 20 miles from the shore. The Regional Director, in consultation with the Mid-Atlantic Fishery Management Council (Council), may move the boundary a greater distance from shore and may also establish northern, eastern, and southern boundaries for the area of directed foreign fishing (see 9.2.2 for an explanation). Operations of foreign vessels in support of US vessels (that is, joint ventures) may operate anywhere in the Exclusive Economic Zone (EEZ) throughout the management unit unless specific areas are closed to them.

The catch limitations (section 9.1.2.3) are changed by requiring that, if the preliminary initial or final amounts differ from those recommended by the Council, the *Federal Register* notice must clearly state the reason(s) for the difference(s) and specify how the revised specifications satisfy the 9 criteria set forth for the species affected and by adding:

As an alternative to the process set forth above, for Atlantic mackerel the specification of OYs and other values may be specified for three years at one time. These annual values may be adjusted within any year and prior to the second and third years as set forth above. However, projecting specifications over several years should allow more orderly development of the fishery since the revisions to the specifications for the second and third years would be done by notice, rather than by regulatory measures.

The joint ventures section (9.1.2.3.2) is changed by adding:

In order to facilitate development of the US fishery, the Regional Director may impose special conditions on joint ventures and directed foreign fishing activities.

Such special conditions may include a ratio between the tonnage that may be caught in a directed foreign fishery relative to the tonnage that may be purchased over-the-side from US vessels and relative to the tonnage of US processed fish that must be purchased by the venture. These conditions will be developed through the annual specification setting process. They may be set as minimums against which applicants may submit proposals. It is the Council's intent that proposals offering the most advantageous arrangements for the US fishery get priority consideration (rather than the available quantities of JVP or TALFF, if any, being distributed among all applicants).

The alternative to the proposed FMP is discussed in Appendix 1 of the Amendment.

3. TABLE OF CONTENTS

1. COVER SHEET	1
2. SUMMARY	3
3. TABLE OF CONTENTS	4
4. INTRODUCTION	
4.1. History of Development of the FMP	6
4.2. Problems for Resolution	7
4.3. Management Objectives	8
4.4. Management Unit	8
5. DESCRIPTION OF STOCKS	8
6. DESCRIPTION OF HABITAT	8
7. DESCRIPTION OF FISHING ACTIVITIES	9
8. DESCRIPTION OF ECONOMIC CHARACTERISTICS OF THE FISHERY	9
9. FISHERY MANAGEMENT PROGRAM	
9.1. Management Measures	9
9.2. Analysis of Impacts of Adopted Management Measures	16
9.3. Relation of Recommended Measures to Existing Applicable Laws and Policies	20
9.4. Council Review and Monitoring of the FMP	22
10. REFERENCES	22
11. TABLES AND FIGURES	24

APPENDICES

1. ALTERNATIVE TO THE AMENDMENT	App 1-1
2. ENVIRONMENTAL ASSESSMENT (yellow paper)	EA 1
3. PUBLIC HEARING SUMMARIES	App3-1
4. REGULATORY IMPACT REVIEW (green paper)	RIR 1
5. PROPOSED REGULATIONS (blue paper)	PR 1
6. MID-ATLANTIC COUNCIL FISHERY DEVELOPMENT POLICY	App 6-1
7. GLOSSARY OF TECHNICAL TERMS AND ACRONYMS	App 7-1

4. INTRODUCTION

4.1. HISTORY OF DEVELOPMENT OF THE FMP

In March, 1977, the Council initiated development of the Mackerel and Squid FMPs. The Council adopted the Mackerel FMP for hearings in September 1977 and the Squid FMP for hearings in October 1977. Hearings on Mackerel and Squid FMPs were held in December, 1977. The Mackerel and Squid FMPs were adopted by the Council in March 1978. The Mackerel FMP was submitted for NMFS approval in May 1978. The Squid FMP was submitted for NMFS approval in June 1978. However, based on NMFS comments, the Council requested that the Mackerel and Squid FMPs be returned.

The FMPs were revised, the revisions being identified as Mackerel FMP Supplement 1 and Squid FMP Supplement 1. These two Supplements, along with the original Butterfish FMP, were adopted for public hearings by the Council in July of 1978. Hearings on all three documents were held during September and October 1978 and all three FMPs were adopted in final form by the Council in November 1978. The Butterfish FMP was submitted for NMFS approval in December 1978. Mackerel FMP Supplement 1 and Squid FMP Supplement 1 were submitted for NMFS approval in January 1979. NMFS approved Squid FMP Supplement 1 in June 1979 and Mackerel FMP Supplement 1 in July 1979. Both FMPs were for fishing year (1 April - 31 March) 1979-80.

The Butterfish FMP was disapproved by NMFS in April 1979 because of a need for additional justification of the reasons for reducing OY below MSY. The Butterfish FMP was revised, adopted by the Council, and resubmitted for NMFS approval in June 1979. It was approved by NMFS in November 1979 for fishing year 1979-80.

The Council adopted Amendments 1 to both the Mackerel and Squid FMPs for hearings in August 1979. Hearings were held during October 1979. The Amendments were adopted by the Council and submitted for NMFS approval in November 1979. Both Amendments were approved by NMFS in March 1980. This extended the Squid FMP for an indefinite time beyond the end of fishing year 1979-80 and extended the Mackerel FMP through fishing year 1980-81. Butterfish FMP Amendment 1, extending the FMP through fishing year 1980-81, was adopted by the Council for hearings in December 1979 with hearings held during January 1980. During January 1980 the Amendment was adopted in final form by the Council and submitted for NMFS approval. It was approved in March 1980.

The Council began work on an amendment to merge the Mackerel, Squid, and Butterfish FMPs in March 1980 the document being identified as Amendment 2 to the Mackerel, Squid, and Butterfish FMP. The Amendment was adopted by the Council for public hearings in August 1980. However, NMFS commented that there were significant problems with the Amendment that could not be resolved prior to the end of the fishing year (31 March 1981). The Council then prepared separate Amendments 2 to both the Mackerel and Butterfish FMPs to extend those FMPs through fishing year 1981-82. Since Amendment 1 to the Squid FMP extended that FMP indefinitely, there was no need to take this action for the Squid FMP. Those drafts were adopted for public hearing by the Council in October 1980 with hearings held in November. The Amendments were adopted in final form by the Council and submitted for NMFS approval in November 1980. Amendment 2 to the Mackerel FMP was approved by NMFS in January 1981 and Amendment 2 to the Butterfish FMP was approved by NMFS in February 1981.

In October 1980 the merger amendment, previously designated as Amendment 2, was redesignated Amendment 3. The Council adopted draft Amendment 3 to the Squid, Mackerel, and Butterfish FMP in July 1981 and hearings were held during September. The Council adopted Amendment 3 in October 1981 and submitted it for NMFS approval. NMFS review identified the need for additional explanation of certain provisions of the Amendment. The revisions were made and the revised Amendment 3 was submitted for NMFS approval in February 1982.

The Amendment was approved by NMFS in October 1982. However, problems developed with the implementation regulations, particularly with the Office of Management and Budget through that agency's review under Executive Order 12291. In an effort to have the FMP in place by the beginning of the fishing year (1 April 1983) the FMP, without the squid OY adjustment mechanism, or a revised Atlantic mackerel mortality rate, and retitled as the Atlantic Mackerel, Squid, and Butterfish FMP, was implemented by emergency interim regulations on 1 April 1983. By agreement of the

Secretary of Commerce (Secretary) and the Council, the effective date of those emergency regulations was extended through 27 September 1983.

The differences between the FMP and the implementing regulations resulted in a hearing before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment on 10 May 1983.

Amendment 1 to the Atlantic Mackerel, Squid, and Butterfish FMP was prepared to implement the squid OY adjustment mechanism and the revised mackerel mortality rate. That Amendment was adopted by the Council on 15 September 1983, approved by NMFS on 19 December 1983, and implemented by regulations published in the *Federal Register* on 1 April 1984.

Amendment 2 was adopted by the Council on 19 September 1985 and approved by NOAA 6 March 1986. Amendment 2 changed the fishing year to the calendar year, revised the squid bycatch TALFF allowances, put all four species on a framework basis, and changed the fishing vessel permits from permanent to annual.

Amendment 3 was adopted by the Council in two actions. The Atlantic mackerel overfishing definition was adopted by the Council at its October 1990 meeting. The *Loligo, Illex*, and butterfish overfishing definitions were adopted at the December 1990 meeting. This was done because the Northeast Fisheries Center proposed changes to the overfishing definitions proposed in the hearing draft for the squids and butterfish. The Center's concerns were incorporated in the version adopted at the December 1990 meeting.

4.2. PROBLEMS FOR RESOLUTION

Through a series of amendments, including the merger of the three FMPs into one, the Council has continued to work toward the objectives of sound management of the resource and development of the US fishery. The current Amendment is designed to make additional refinements to the Atlantic mackerel management regime.

After merging the management of the three fisheries and the adoption of terms that allowed more flexibility in setting of annual specifications in Amendment 1, the Council was able to undertake more controlled management of the three fisheries to maximize the opportunities for US growth and development in these fisheries. Foreign fisheries for the squids and butterfish have been eliminated through development of the US fishery. Substantial investments have been made in US vessels for operation in these fisheries and in shoreside facilities. The FMP continues to allow for allocations to TALFF, but Council recommendations for TALFF are tailored to actual needs in terms of bycatch amounts and to consistency with FMP goals where directed fisheries are involved.

The current mackerel regime sets a biologically based Allowable Biological Catch (ABC) for each year from which specifications of Optimum Yield (OY), Domestic Annual Harvest (DAH), Domestic Annual Processing (DAP), Joint Venture Processing (JVP), and Total Allowable Level of Foreign Fishing (TALFF) are made. The routine procedure is for the stock assessments to be reviewed at the Spring Northeast Fisheries Center (NEFC) Stock Assessment Workshop (SAW). The Council annually surveys the industry to develop estimates of DAP. The staff reviews available information on markets and on the supply of competing products and stocks. Based on the stock assessment, industry survey, an industry fact finding meeting, and fishery statistics, the Council prepares a report containing recommended specifications and submits it to the Regional Director. The proposed specifications are published in the *Federal Register* for comments. Final specifications are then published.

In recent years, the Council has recommended special conditions to be imposed on joint ventures, most particularly those with associated directed foreign fishing. These conditions range from attempts to reduce fishing mortality on shad and river herring by foreign fishing vessels to ratios specifying the relationship between the directed foreign fishing level relative to over-the-side purchases by foreign vessels versus foreign purchases of US processed mackerel.

NMFS has pointed out (Roe pers comm) that ratios and other special conditions were not provided for in the FMP and would not be used in the future if the FMP were not amended to provide for them.

Therefore, the problem is to provide for imposition of special conditions on joint ventures and directed foreign fishing, if any, to aid in achieving the FMP's objectives.

Another problem relates to the annual timetable for setting annual specifications. The FMP and implementing regulations provide that on or about 15 October of each year, the Council will prepare and submit recommendations to the Regional Director on the initial annual amounts for the fishing year beginning 1 January. On or about 1 November of each year, the Secretary will publish a notice in the *Federal Register* that specifies preliminary initial amounts of OY, DAH, DAP, JVP, TALFF, and reserve (if any) for each species; and on or about 15 December of each year, the Secretary will make a final determination on the initial amounts for each species, considering all relevant data and any public comments, and will publish a notice of the final determination and response to public comments in the *Federal Register*.

While the Council has routinely submitted its recommendations prior to 1 October (in 1990 they were submitted in July), the final specifications are not determined until 31 December, and sometimes after the year begins. The significance of this is that amounts available for JVP and TALFF are not known, so applications and business arrangements cannot be developed with any assurance of fish being available until the final specifications are published. Foreign nations should have two to three months prior to the start of the mackerel season to make their plans with US producers, obtain permits, and have vessels in the area ready to fish or purchase fish from US producers. Although applications for joint ventures may be prepared and submitted in the early fall, they cannot be reviewed in a critical way until the specifications are known.

It is important to realize that in the recent past NMFS has usually published the Council's recommended specifications as the proposed specifications. These are generally used as a guide by the industry in developing joint venture projects. However, it is not unusual for the final specifications to differ from the proposed specifications. US fishermen do not know what foreign nations will be participating in joint ventures or directed foreign fishing. Since the final specifications are rarely approved prior to 1 January, projects cannot be approved prior to 1 January. Many joint venture projects that are not completed in the January through March period bring their foreign boats back to US waters in November and December to complete the venture. The effect is that even though these foreign boats are in US waters to begin working on a new venture for the new year (1 January - 31 December), they cannot operate until the specifications are published, their applications are approved, and observers obtained, thereby incurring costs which ultimately impact the amount available to pay US fishermen. The end result is an impediment to orderly development of the fishery.

4.3. MANAGEMENT OBJECTIVES

The objectives of the FMP are:

1. Enhance the probability of successful (i.e., the historical average) recruitment to the fisheries.
2. Promote the growth of the US commercial fishery, including the fishery for export.
3. Provide the greatest degree of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this FMP.
4. Provide marine recreational fishing opportunities, recognizing the contribution of recreational fishing to the national economy.
5. Increase understanding of the conditions of the stocks and fisheries.
6. Minimize harvesting conflicts among US commercial, US recreational, and foreign fishermen.

4.4. MANAGEMENT UNIT

The management unit is all Atlantic mackerel, *Loligo pealei*, *Illex illecebrosus*, and butterfish under US jurisdiction, excluding the Gulf of Mexico and the Caribbean Sea.

5. DESCRIPTION OF STOCKS

There is no need to change this section of the FMP at this time.

6. HABITAT

There is no need to change this section of the FMP at this time.

7. DESCRIPTION OF FISHING ACTIVITIES

There is no need to change this section of the FMP at this time.

8. DESCRIPTION OF ECONOMIC CHARACTERISTICS OF THE FISHERY

There is no need to change this section of the FMP at this time.

9. FISHERY MANAGEMENT PROGRAM

9.1. MEASURES TO ATTAIN MANAGEMENT OBJECTIVES

9.1.1. Specification of ABC, OY, DAH, DAP, JVP, and TALFF

9.1.1.1. General

The fishing year is 1 January - 31 December. ABC, OY, DAH, DAP, and JVP and TALFF, if any, will be specified annually through an administrative process which requires that the Regional Director (Regional Director), in consultation with the Council, prepare the required estimates as described below for *Loligo*, *Illex*, Atlantic mackerel, and butterfish, and also provide for public comment on those estimates. The estimates will be prepared annually, however, as discussed below, and for certain species may be changed during the year.

9.1.1.2. Overfishing definitions

9.1.1.2.1. Atlantic mackerel

Overfishing is defined as the catch of Atlantic mackerel exceeding the annual ABC for the species. ABC in US waters for the upcoming fishing year is that quantity of mackerel that could be caught in US and Canadian waters, minus the estimated catch in Canadian waters, and maintain a spawning stock size in the year following the year for which catch estimates and quotas are being prepared equal to or greater than 600,000 mt.

The overfishing definition, therefore, is based on maintaining a minimum spawning stock biomass of 600,000 mt while allowing for a predicted catch in Canadian waters and a fishing mortality rate that fluctuates according to the size of the stock, but is generally $F_{0.1}$ (see 9.1.1.5).

The provision of the FMP concerning setting annual quotas prevents overfishing.

9.1.1.2.2. *Loligo*, *Illex*, and butterfish

For every short lived and highly volatile fishery population such as squids and butterfish, the analytical basis for defining spawning biomass thresholds or harvesting rates that buffer against recruitment overfishing has generally not been evaluated. In the absence of reliable analytical methods for computing such reference points, we define overfishing to occur based on a heuristic model relating recruitment time series data to subsequent fishery production and spawning biomasses.

For purposes of meeting the 602 Guidelines, overfishing for *Loligo pealei* is defined as occurring when the three year moving average of pre-recruits from the Northeast Fisheries Center's autumn bottom trawl survey (mid-Atlantic to Georges Bank) falls within the lowest quartile of the time series (1967 to present). This means, for example, that when the 1990 index is available (and thus a 24-year time series exists) that the sixth lowest annual index will be compared to the average of the 1988, 1989 and 1990 indices. If the three year average is below the sixth lowest index, overfishing will be defined as occurring. Quotas for this species are set annually by the Regional Director according to the FMP. Annual quotas can be set within the range of 0 to 44,000 metric tons (MSY estimate) based upon information prepared by the Council and included in the SAFE document. This overfishing definition meets the provisions of 602.11(c)(5) in that it:

- (1) has sufficient scientific merit;
- (2) is likely to result in effective action to prevent overfishing;
- (3) provides a basis for objective measurement; and
- (4) is operationally feasible.

For purposes of meeting the 602 Guidelines, overfishing for *Illex illecebrosus* is defined as occurring when the three year moving average of pre-recruits from the Northeast Fisheries Center's autumn bottom trawl survey (mid-Atlantic to Georges Bank) falls within the lowest quartile of the time se-

ries (1968 to present). Quotas for this species are set annually by the Regional Director according to the FMP. Annual quotas can be set within the range of 0 to 30,000 metric tons (MSY estimate minus a 10,000 metric ton ecological set aside) based upon information prepared by the Council and included in the SAFE document.

For purposes of meeting the 602 Guidelines, overfishing for butterfish is defined as occurring when the three year moving average of pre-recruits from the Northeast Fisheries Center's autumn bottom trawl survey (mid-Atlantic to Georges Bank) falls within the lowest quartile of the time series (1968 to present). Quotas for this species are set annually by the Regional Director according to the FMP. Annual quotas can be set within the range of 0 to 16,000 metric tons (MSY estimate) based upon information prepared by the Council and included in the SAFE document.

Such definitions have as their main assumption that in periods of sustained poor recruitment (a 3-year moving average of years) spawning stock and thus fishable biomass will decline. In order to reduce the harvest rate of spawners during periods of low spawning biomass, allowable landings (relative to the historical average as the basis for MSY and ABC calculations) will thus be reduced.

9.1.1.3. *Loligo* (this section is unchanged from the current FMP)

The maximum OY for *Loligo* is 44,000 mt. The Regional Director in consultation with the Council, determines annual specifications relating to Optimum Yield (OY), Domestic Annual Harvest (DAH), Domestic Annual Processing (DAP), Joint Venture Processing (JVP), and Total Allowable Level of Foreign Fishing (TALFF). The Regional Director reviews yearly the most recent biological data pertaining to the stock. If the Regional Director determines that the stock cannot support a level of harvest equal to the maximum OY, he establishes a lower Allowable Biological Catch (ABC) for the fishing year. This level represents essentially the modification of the maximum sustainable yield (MSY) to reflect changed biological circumstances. If the stock is able to support a harvest level equivalent to the maximum OY, the ABC is set at that level.

From the ABC, the Regional Director, in consultation with the Council, determines the OY for the fishing year. The OY represents a modification of ABC, based on economic factors. It is intended to provide the greatest overall benefit to the nation by incorporating all relevant factors. The OY is composed of an initial DAH and initial TALFF. The Regional Director projects the DAH by reviewing the data concerning past domestic landings, projected amounts of *Loligo* necessary for domestic processing and for joint ventures during the fishing year, and other data pertinent for such a projection. The Joint Venture Processing (JVP) component of DAH is the portion of DAH which domestic processors either cannot or will not use. In assessing the level of OY, the Regional Director provides for a TALFF of at least a minimum bycatch of *Loligo* squid that would be harvested incidentally in other directed fisheries. This bycatch level is 1.0% of the allocated portion of the *Illex*, 0.04% of the allocated portion of the mackerel (if a directed fishery is allowed), and 0.5% of the allocated portions of the silver and red hake TALFFs. In addition, this specification of OY is based on the application of the following factors:

1. total world export potential by squid producing countries;
2. total world import demand by squid consuming countries;
3. US export potential based on expected US harvests, expected US consumption, relative prices, exchange rates, and foreign trade barriers;
4. increased/decreased revenues to the US from foreign fees;
5. increased/decreased revenues to US harvesters (with/without joint ventures);
6. increased/decreased revenues to US processors and exporters;
7. increases/decreases in US harvesting productivity due to decreases/increases in foreign harvest;
8. increases/decreases in US processing productivity; and
9. potential impact of increased/decreased TALFF on foreign purchases of US products and services and US caught fish, changes in trade barriers, technology transfer, and other considerations.

Proposed annual specifications of the ABC and OY and its component amounts are published in the *Federal Register* and provide for a public comment period. At the close of the public comment period, a notice of final annual specifications with the reasons therefore are published in the *Federal Register*.

The OY may be adjusted by the Regional Director, in consultation with the Council, upward to the ABC at any time during the fishing year. An adjustment may be made to OY to accommodate DAH needs, including when the application of the above factors warrants an adjustment in TALFF. However, TALFF may not be adjusted to a quantity less than that already allocated to and accepted by foreign nations or less than that needed for bycatch. Any adjustments to the OY are published in the *Federal Register* and may provide for a public comment period.

9.1.1.4. *Illex* (this section is unchanged from the current FMP)

The maximum OY for *Illex* is 30,000 mt. The Regional Director, in consultation with the Council, determines annual specifications relating to OY, DAH, DAP, JVP, and TALFF. The Regional Director reviews yearly the most recent biological data pertaining to the stock. If the Regional Director determines that the stock cannot support a level of harvest equal to the maximum OY, he establishes a lower ABC for the fishing year. If the stock is able to support a harvest level equivalent to the maximum OY, the ABC is set at that level.

From the ABC, the Regional Director, in consultation with the Council, determines the OY for the fishing year. The OY represents a modification of ABC, based on economic factors. It is intended to provide the greatest overall benefit to the nation by incorporating all relevant factors. The OY is composed of an initial DAH and initial TALFF. The Regional Director determines the OY and any adjustments by the same procedures and factors set out above for *Loligo*, except that it provides for a minimum bycatch of *Illex* squid that would be harvested incidentally in other directed fisheries. This bycatch level is 10.0% of the allocated portion of the *Loligo* TALFF and 0.2% of the allocated portions of the silver and red hake TALFFs. In addition, this specification of OY is based on the application of the factors listed above under *Loligo*.

9.1.1.5. Atlantic mackerel

The Regional Director, in consultation with the Council, determines annual specifications relating to OY, DAH, DAP, JVP, and TALFF. The Council and Regional Director review yearly the best available biological data pertaining to the stock. ABC in US waters for the upcoming fishing year is that quantity of mackerel that could be caught in US and Canadian waters (T) minus the estimated catch in Canadian waters (C) and maintain a spawning stock size (S) in the year following the year for which catch estimates and quotas are being prepared equal to or greater than 600,000 mt.

From the ABC, the Regional Director, in consultation with the Council, determines the OY for the fishing year. The OY represents a modification of ABC, based on biological and economic factors. It is intended to provide the greatest overall benefit to the nation by incorporating all relevant factors. Examples of biological adjustments include, but are not limited to, reductions from ABC to account for availability of mackerel to the US fishery and to minimize fluctuations from year to year that could result from the biomass of a pelagic schooling species such as mackerel. Examples of economic factors include, but are not limited to, the nine factors set forth below. Ordinarily, OY will be specified so that the fishing mortality rate associated with T is less than or equal to $F_{0.1}$. However, if development of the US fishery requires a fishing mortality rate greater than $F_{0.1}$, but still less than or equal to ABC, OY may be set at the higher level. This modification will be for that fishing year only and will revert to $F_{0.1}$ unless modified again in subsequent years. Such development requirements are intended to be limited to catch by US fishermen for US processing. The deviation from $F_{0.1}$ is intended to allow the US fishing industry the opportunity to market additional mackerel into the world market during high demand periods such as may occur if a stock problem with the northeastern European Atlantic mackerel stocks developed. Determining these allocations involves estimating both the US and foreign harvesting potential and market demand.

The OY is composed of an initial DAH and initial TALFF. The Regional Director projects the DAH by reviewing data concerning past domestic landings, projected amounts of mackerel necessary for domestic processing and for joint ventures during the fishing year, and other data pertinent for such a projection. The recreational fishery component of DAH is determined by the equation $Y = (0.01)(X) - (166)$ where Y is the predicted recreational catch and X is the mackerel spawning stock

size in the upcoming fishing year, in metric tons. The JVP component of DAH is the portion of DAH which domestic processors either cannot or will not use. In assessing the level of OY, the Regional Director must provide for a TALFF of at least a minimum bycatch of mackerel that would be harvested incidentally in other directed fisheries. This bycatch level is 0.4% of the allocated portion of the silver and red hake, 1.0% of the allocated portion of the *Loligo*, and 0.1% of the allocated portion of the *Illex* TALFFs. In addition, this specification of OY is based on such criteria as contained in the Magnuson Act, specifically section 201(e), and the application of the following factors:

1. total world export potential by mackerel producing countries;
2. total world import demand by mackerel consuming countries;
3. US export potential based on expected US harvests, expected US consumption, relative prices, exchange rates, and foreign trade barriers;
4. increased/decreased revenues to the US from foreign fees;
5. increased/decreased revenues to US harvesters (with/without joint ventures);
6. increased/decreased revenues to US processors and exporters;
7. increases/decreases in US harvesting productivity due to decreases/increases in foreign harvest;
8. increases/decreases in US processing productivity; and
9. potential impact of increased/decreased TALFF on foreign purchases of US products and services and US caught fish, changes in trade barriers, technology transfer, and other considerations.

Proposed annual specifications of the ABC and OY and its component amounts are published in the *Federal Register* and provide for a public comment period. The notice will include a discussion of the 9 factors listed above as they apply to the proposed OY. At the close of the public comment period, a notice of final annual specifications with the reasons therefore are published in the *Federal Register*.

The OY may be adjusted by the Regional Director, in consultation with the Council, upward to the ABC at any time during the fishing year. An adjustment may be made to OY to accommodate DAH needs, including when the application of the above factors warrants an adjustment in TALFF. However, TALFF may not be adjusted to a quantity less than that already allocated to and accepted by foreign nations or less than that needed for bycatch. Any adjustments to the OY are published in the *Federal Register* and may provide for a public comment period.

The specification of mackerel OY, DAH, DAP, and TALFF is:

ABC = allowable biological catch in US waters for the upcoming fishing year.

T = total catch in all waters (US and Canadian) for the upcoming fishing year.

C = estimated mackerel catch in Canadian waters for the upcoming fishing year.

S = mackerel spawning stock biomass in the year after the upcoming fishing year.

Bycatch = 0.4% of the allocated portion of the silver and red hake, 1.0% of the allocated portion of the *Loligo*, and 0.1% of the allocated portion of the *Illex* TALFFs.

$ABC = T - C$ such that S greater than or = 600,000 mt.

OY less than or = ABC and additionally, ordinarily, the fishing mortality associated with OY less than or = $F_{0.1}$.

DAH less than or = OY - Bycatch.

DAP less than or = OY - Bycatch.

TALFF greater than or = Bycatch.

9.1.1.6. Butterfish (this section is unchanged from the current FMP)

Butterfish maximum OY is 16,000 mt. The Regional Director in consultation with the Council, determines annual specifications relating to OY, DAH, DAP, JVP, and TALFF. The Regional Director reviews yearly the most recent biological data, including data on discards, pertaining to the stock. If the Regional Director determines that the stock cannot support a level of harvest equal to the maximum OY, he establishes a lower ABC for the fishing year. This level represents essentially the modification of the MSY to reflect changed biological circumstances. If the stock is able to support a harvest level equivalent to the maximum OY, the ABC is set at that level.

From the ABC, the Regional Director, in consultation with the Council, determines the OY for the fishing year. The OY represents a modification of ABC. The OY is composed of an initial DAH and initial TALFF. The Regional Director projects the DAH by reviewing the data concerning past domestic landings, projected amounts of butterfish necessary for domestic processing and for joint ventures during the fishing year, and other data pertinent for such a projection. The JVP component of DAH is the portion of DAH which domestic processors either cannot or will not use. In assessing the level of OY, the Regional Director provides for a bycatch TALFF equal to 3.0% of the allocated portion of the *Loligo* TALFF and 0.5% of the allocated portion of the *Illex*, 0.08% of the allocated portion of the Atlantic mackerel, and 0.1% of the allocated portion of the silver and red hake TALFFs. Note that the nine factors considered in establishing OY for the squids and mackerel do not apply for butterfish because the butterfish TALFF is established for bycatch only in accordance with the preceding percentages.

Proposed annual specifications of the ABC and OY and its component amounts are published in the *Federal Register* and provide for a public comment period. At the close of the public comment period, a notice of final annual specifications with the reasons therefore are published in the *Federal Register*.

The OY may be adjusted by the Regional Director, in consultation with the Council, upward to the ABC at any time during the fishing year. An adjustment may be made to OY to accommodate DAH needs. However, TALFF may not be adjusted to a quantity less than that needed for bycatch. Any adjustments to the OY are published in the *Federal Register* and may provide for a public comment period.

The precise specification of OY is:

ABC less than or = 16,000 mt.

OY less than or = ABC.

DAH less than or = OY - bycatch.

DAP less than or = OY - bycatch.

TALFF = bycatch = 3.0% of the allocated portion of the *Loligo* TALFF and 0.5% of the allocated portion of the *Illex*, 0.08% of the allocated portion of the Atlantic mackerel, and 0.1% of the allocated portion of the silver and red hake TALFFs.

9.1.2. Specification of Management Measures

9.1.2.1. Permits and fees (this section is unchanged from the current FMP)

Any owner or operator of a vessel desiring to take any Atlantic mackerel, squid, or butterfish within the EEZ, or transport or deliver for sale, any Atlantic mackerel, squid, or butterfish taken within the EEZ must obtain an annual permit for that purpose. Each foreign vessel engaged in or wishing to engage in harvesting the TALFF must obtain a permit from the Secretary as specified in the Magnuson Fishery Conservation and Management Act (Magnuson Act). This section does not apply to recreational fishermen taking Atlantic mackerel, squid, or butterfish for their personal use, but it does apply to the owners of party and charter boats (vessels for hire).

The owner or operator of a US vessel may obtain the appropriate permit by furnishing on the form provided by NMFS information specifying, at least, the names and addresses of the vessel owner and master, the name of the vessel, official number, directed fishery or fisheries, gear type or types utilized to take Atlantic mackerel, squid, or butterfish, gross tonnage of vessel, radio call sign, length of the vessel, engine horsepower, year the vessel was built, type of construction, type of pro-

pulsion, navigational aids (e.g., Loran C), type of echo sounder, crew size including captain, fish hold capacity (to the nearest 100 lbs), quantity of *Loligo*, *Illex*, mackerel, and butterfish landed during the year prior to the one for which the permit is being applied, principal port of landing, and the home port of the vessel. The permit shall be subject to inspection by an authorized official upon landing.

Permits expire on 31 December of each year. Permits may be revoked for violations of this FMP.

9.1.2.2. Time and area restrictions

Foreign vessels fishing for Atlantic mackerel, squid or butterfish shall be subject to the applicable time and area restrictions and fixed gear avoidance regulations at 50 *CFR* 611.

The Regional Director may limit the areas where directed foreign fishing and joint venture transfers from US to foreign vessels may take place. Directed foreign fishing must be conducted seaward of at least 20 miles from the shore. The Regional Director, in consultation with the Council, may move the boundary a greater distance from shore and may also establish northern, eastern, and southern boundaries for the area of directed foreign fishing (see 9.2.2 for an explanation). Operations of foreign vessels in support of US vessels (that is, joint ventures) may operate anywhere in the EEZ throughout the management unit unless specific areas are closed to them.

9.1.2.3. Catch limitations

9.1.2.3.1. General

The fishing year for Atlantic mackerel, *Illex*, *Loligo*, and butterfish is the twelve (12) month period beginning 1 January.

The specification of OYs and other values for the squids, Atlantic mackerel, and butterfish are described in Section 9.1.1 and need not be repeated here. On an annual basis, the Regional Director, in consultation with the Council, and after giving opportunity for public notice and comment, sets initial annual values for the terms specified in Section 9.1.1.

On or before 15 October of each year, the Council will prepare and submit recommendations to the Regional Director of the initial annual amounts for the fishing year beginning 1 January, based on information gathered from sources including: (1) results of a survey of domestic processors and joint venture operators of estimated processing capacity and intent to use that capacity; (2) results of a survey of fishermen's trade associations of estimated fish harvesting capacity and intent to use that capacity; (3) landings and catch statistics; (4) stock assessments; and (5) any other relevant scientific information.

By 1 November each year, the Secretary will publish a notice in the *Federal Register* that specifies preliminary initial amounts of OY, DAH, DAP, JVP, and TALFF for each species. The amounts will be based on information submitted by the Council and from relevant sources including those sources specified above. In the absence of a Council report, the amounts will be based on information from the sources specified and other information considered appropriate by the Regional Director. The *Federal Register* notice will provide for a comment period. The Council's recommendation and all relevant data will be available in aggregate form for inspection at the office of the Regional Director during the public comment period. If the preliminary initial amounts differ from those recommended by the Council, the notice must clearly state the reason(s) for the difference(s) and specify how the revised specifications satisfy the 9 factors set forth above for the species affected.

On or before 15 December of each year, the Secretary will make a final determination of the initial amounts for each species, considering all relevant data and any public comments and will publish a notice of the final determination and response to public comments in the *Federal Register*. If the final amounts differ from those recommended by the Council, the notice must clearly state the reason(s) for the difference(s) and specify how the revised specifications satisfy the 9 factors set forth above for the species affected.

Additional adjustments may be made to annual values for OY, DAH, and TALFF for the *Loligo*, *Illex*, mackerel, and butterfish fisheries during the year. The Regional Director, in consultation with the Council, may modify these values up to ABC, applying the factors described in Section 9.1.1, for the benefit of the nation. The Secretary will publish a notice in the *Federal Register* and provide for comment before such revisions may take effect.

nuson Act the Secretary may, or if any civil penalty imposed under section 309 of the Magnuson Act has not been paid and is overdue the Secretary shall: (a) revoke such permit, with or without prejudice to the right of the foreign nation involved to obtain a permit for such vessel in any subsequent year; (b) suspend such permit for the period of time deemed appropriate; or (c) impose additional conditions and restrictions on the approved application of the foreign nation involved and on any permit issued under such application, provided, however, that any permit which is suspended pursuant to this paragraph for nonpayment of a civil penalty shall be reinstated by the Secretary upon payment of such civil penalty together with interest thereon at the prevailing US rate. Foreign nations fishing for Atlantic mackerel, squid, or butterfish are subject to the incidental catch regulations set forth at 50 *CFR* 611.13, 611.14, and 611.50.

9.1.3. Specification and Sources of Pertinent Fishery Data (this section is unchanged from the current FMP)

The butterfish fishery is approaching or possibly exceeding a safe harvest rate due to fishing practices and annual variations in stock distribution. The squids are being taken to a greater extent by US fishermen each year and TALFFs are rapidly diminishing such that it is expected that there may be no directed foreign fishing within the next two years. The markets are certainly available in the US and abroad for US utilization of total quotas. The Council now needs more timely data than in the past to allow a more accurate accounting of changing fishing practices and to allow the setting of annual allocations that will prevent recruitment overfishing as well as allowing for in season adjustments.

In section 303(a)(5) the Magnuson Act requires that FMPs "specify the pertinent data which shall be submitted to the Secretary with respect to 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 ... ". NMFS data systems (e.g., the NEFC Three Tier System) collect much information on the squid, mackerel, and butterfish fisheries and the reporting procedures in this FMP are based on those systems continuing in operation and being revised so that vessel identification information is retained in the data files in a manner that facilitates necessary analyses.

Foreign fishermen are subject to the reporting and recordkeeping requirements set forth at 50 *CFR* 611.9.

9.2. ANALYSIS OF BENEFICIAL AND ADVERSE IMPACTS OF ADOPTED MANAGEMENT MEASURES

9.2.1. The FMP Relative to the National Standards

9.2.1.1. Conservation and management measures shall prevent overfishing while achieving, on a continuous basis, the optimum yield from each fishery

The best scientific information available indicates that squid, mackerel, and butterfish are not currently overfished. Harvests at the OY levels described in the FMP should not endanger future harvests at comparable levels. Overfishing has been defined (section 9.1.1.2). The provisions of the FMP concerning setting annual quotas prevents overfishing.

9.2.1.2. Conservation and management measures shall be based upon the best scientific information available

The FMP is based on the best and most recent scientific information.

9.2.1.3. 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 meets the requirements of this standard by simultaneously managing Atlantic mackerel, *Loligo, Illlex*, and butterfish in a complementary manner. The FMP also takes into account the catch of mackerel outside US waters. The Council continues to review data on the squid and butterfish fisheries in the Gulf of Mexico to determine whether the management unit should be amended in the future to include this area.

9.2.1.4. Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reason-

As an alternative to the process set forth above, for Atlantic mackerel the specification of OYs and other values may be specified for three years at one time. These annual values may be adjusted within any year and prior to the second and third years as set forth above. However, projecting specifications over several years should allow more orderly development of the fishery since the revisions to the specifications for the second and third years would be done by notice, rather than by regulatory measures.

NMFS shall close the US fishery for *Loligo*, *Illex*, mackerel, or butterfish when US fishermen have harvested 80% of the allowable domestic harvest if such closure is necessary to prevent the allowable domestic harvest from being exceeded. The closure will be in effect for the remainder of the fishing year. If such a closure is necessary, NMFS will provide adequate notice to US fishermen and to the Executive Directors of the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils. During a period of closure, the trip limit for the species for which the fishery is closed is 10% of the weight of the total amount of fish on board.

9.1.2.3.2. Joint ventures and foreign fishing

The Amendment continues the procedure of permitting joint ventures on a case by case basis, so long as joint ventures do not result in a negative impact on US processors. The Council believes that this is a reasonable approach. In other words, joint ventures are considered on a case by case basis for Atlantic mackerel, *Illex*, *Loligo*, and butterfish and are permitted if such joint ventures would not have a negative impact on the development of the US harvesting and processing sectors.

In order to facilitate development of the US fishery, the Regional Director may impose special conditions on joint ventures and directed foreign fishing activities. Such special conditions may include a ratio between the tonnage that may be caught in a directed foreign fishery relative to the tonnage that may be purchased over-the-side from US vessels and relative to the tonnage of US processed fish that must be purchased by the venture. These conditions will be developed through the annual specification setting process. They may be set as minimums against which applicants may submit proposals. It is the Council's intent that proposals offering the most advantageous arrangements for the US fishery get priority consideration (rather than the available quantities of JVP or TALFF, if any, being distributed among all applicants).

In order to set appropriate levels of required purchases of domestic harvested and processed product, that is, ratios, information on prices and costs must be obtained or estimated. The most important factor is the price of mackerel in the world market. Costs to be considered include the cost of operating the fishing and processing vessels (US and foreign), the foreign fishing fee and observer fee established by NMFS, transportation costs to the foreign market, prices asked by US fishermen for US harvested mackerel, and prices asked by US processors for US processed product. The guiding principle behind the establishment of ratios is to maximize benefits to the US fishing industry. It is expected that the ratios may change from year to year as the prices and costs vary. Input from US harvesters and processors is obtained annually before the ratios are chosen.

9.1.2.4. Types of vessels, gear, and enforcement devices (this section is unchanged from the current FMP)

Foreign nations fishing for Atlantic mackerel, squid, or butterfish are subject to the gear restrictions set forth in 50 CFR 611.1.50(c).

9.1.2.5. Other measures

Each US fishing vessel shall display its official number on the deckhouse or hull and on an appropriate weather deck. Foreign fishing vessels shall display their International Radio Call Signs (IRCS) on the deckhouse or hull and on an appropriate weather deck. The identifying markings shall be affixed and shall be of the size and style established by NMFS. Fishing vessel means any boat, ship or other craft which is used for, equipped to be used for, or of a type which is normally used for, fishing, except a scientific research vessel. Fishing vessel includes vessels carrying fishing parties on a per capita basis or by charter which catch Atlantic mackerel, squid, or butterfish for any use.

Vessels conducting fishing operations pursuant to this FMP are subject to the sanctions provided for in the Magnuson Act.

Pursuant to Section 204(b)(12) of the Magnuson Act, if any foreign fishing vessel for which a permit has been issued has been used in the commission of any act prohibited by section 307 of the Mag-

ably calculated to promote conservation; and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges

The OY and DAH estimates described in the FMP will accommodate all US demand for squid, Atlantic mackerel, and butterfish in the commercial and recreational fisheries without prejudice to residents of any State. The seasonal movements and distributions of these species make it extremely unlikely that fishermen of any State could harvest the DAH before the species become available to other US fishermen.

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

The FMP permits growth of the US fishery up to maximum biological levels. The only restrictions placed on US fishermen are the overall quotas, and the permitting requirement. No measures would change the economic structure of the industry or the economic conditions under which the industry operates.

9.2.1.6. Conservation and management measures shall take into account and allow for variations and contingencies in, fisheries, fishery resources, and catches

The FMP anticipates fluctuations in species abundance and expected trends in demand for mackerel, the squids, and butterfish.

9.2.1.7. Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication

The FMP is consistent with and complements, but does not duplicate, management measures contained in other FMPs and PMPs.

9.2.2. Revision to Time and Area Restrictions

For several years during the annual specification process the Council has recommended the imposition of special condition to permits for foreign fishing or the receipt of United States harvested fish over the side at-sea. As noted above, the National Marine Fisheries Service recommended that the specification process would be better served if a mechanism authorizing their imposition appeared in the FMP. These conditions embraced several concerns. Restrictions were imposed to keep foreign vessels certain distances offshore near military installation. There was a national security concern that intelligence gathering might take place if these foreign vessels were able to fish up to the outer boundary of the territorial sea. Distance from shore restrictions were also imposed to prevent the large foreign trawler from fishing near shore areas and breaking up the schools of fish thus diminishing the ability of the domestic fleet to harvest them. Area restrictions are also useful to reduce the bycatch of certain species known to be concentrated in these areas. Foreign vessels have been restricted from fishing south of 37° North latitude to reduce the bycatch of shad and river herring. Other possible management problems that may be addressed through time and area restrictions are gear conflicts or other user group conflicts.

The revisions to the time and area restrictions are intended to allow foreign vessels fishing for Atlantic mackerel to routinely fish outside of the foreign fishing areas ("windows") designated at 50 CFR 611, while still allowing some geographical limits to be placed on them. This should improve the efficiency of the foreign fishing operations. The directed foreign mackerel fishery has been allowed outside the windows for a number of years on a case by case basis by exemption. This would institutionalize the exemption in the FMP.

The shoreward limit, and the ability to set north, south, and seaward limits, is intended to minimize conflicts with marine recreational fishing vessels and to minimize the capture of prohibited species by foreign vessels and US vessels transferring to foreign vessels. Any prohibited species caught by a foreign vessel must be discarded. Since many of these species are overfished, the wastage associated with possible capture and discarding is unacceptable.

As shown in Table 1 and Figure 1, there appears to be a relationship between the area fished and the catch of certain bycatch species. For example, in area 621 in 1990, 6.5% of the catch was herring. In area 625 the herring bycatch was 6.1% of the total and there was also a bycatch of one

metric ton of striped bass. In area 631 the herring bycatch was only 2%, but 1.6 mt of striped bass were caught.

Area restrictions have been used to minimize the river herring bycatch in the foreign Atlantic mackerel fishery by prohibiting that fishery south of 37° 30' N. latitude by permit condition.

9.2.3. Revision to Catch Limitations

This revision to the FMP will solve a problem associated with the current quota setting process using proposed and final regulations. While the FMP has mandatory dates by when the annual specifications must be submitted to the Regional Director by the Council and when the Regional Director must publish proposed and final specifications in the *Federal Register* (See section 4.2), the final specifications are rarely published in advance of the beginning of the new year. This does not present a problem with regard to the US fishery, which is why the revised provision does not apply to the squids and butterfish, but results in inadequate time being available for planning joint ventures. If the annual specifications are set for three years at one time, then subsequent adjustments may be made by a notice in the *Federal Register*, a process that does not consume much time. Therefore, while the specifications for the first year in any cycle may be delayed, the specifications for the second and third years will be known well in advance of the beginning of the season, even though some adjustments may be needed.

Another positive impact of this revision is that the foreign nations interested in joint ventures will know well in advance what the policy will be for a particular year, so planning by both US and foreign interests can proceed in an orderly manner.

Finally, timing is most critical because of the short duration of the mackerel season. The portion of the fishery that is associated with joint ventures and foreign fishing generally extends from November through March. Since the fishing year begins 1 January, if the specifications are not available on a timely basis, foreign vessels that are here finishing up one year's project are required to remain inactive until the new year's specifications are finalized, costing everyone money and decreasing opportunities for US fishermen.

For example, since the mackerel fishery generally runs from November through March, a joint venture project will begin in January and stop by the end of March. If there are mackerel allocated to the venture, but not caught, the foreign vessels will return in November under the same project and permits and attempt to acquire the balance of the allocated fish. The project and permits terminate 31 December. If the new specifications are not published, the foreign vessels must stop work, thereby incurring costs with no profit. Directed foreign fishing is an incentive to foreign over-the-side purchases from US fishing boats, as well as to the foreign purchase of US processed mackerel. If the subsidies are truly needed, then anything that increases the costs to the foreign operators cuts into that incentive. If delays in getting the specifications finalized temporarily stop the fishery, US fishermen will lose money.

9.2.4. Provision of Ratios

In order to effectuate the purpose of the Magnuson Act to promote the development of underutilized fisheries, the Council has recommended the use of purchase ratios in the annual specification setting process for several years. These purchase ratios were viewed as the manifestation of the Secretary's discretionary authority under section 201(e) to release TALFF. The specification setting process thus created a "fish and chips" program that enlisted the aid of foreign companies permitted to fish in the EEZ in developing the domestic fishing industry. This program initially resulted in the development of the *Loligo* squid fishery to the total exclusion of foreign interests. This program was later applied to the mackerel fishery in order to progress to an "Americanization" of this fishery as well. The initial purchase ratios rewarded foreign interests with several tons of TALFF if they purchased specified amounts of domestic harvested product or domestic processed product. This was later revised to require the purchase of both domestic harvested and processed product, but later reversed to retain flexibility in the system. The purchase ratios strike a balance between the costs of purchasing domestic harvested and processed product and the profits derived from joint ventures and/or TALFF.

Canada has been using a similar ratio system in the foreign fisheries in Canadian waters.

The opportunity for foreign market access for United States harvested mackerel has been minimal. However, over the past several years, there has been an increase in commercial landings to just over 28,000 mt in 1990. There have been several factors that have contributed to this situation. The total production from the North Sea fishery was 500,000 mt in 1988. The fleets from the United Kingdom have a virtual wrap on the east bloc countries with respect to selling mackerel. Since that time the political destabilization of the USSR has cast some doubt on the conduct of the North Sea fishery in 1991-92. The large state supported fleets from the east bloc countries have virtually disappeared as these countries have switched to a so called "free market" economy. The lack of capital in these countries will affect significantly the ability of these countries to participate in any mackerel fishery.

The African mackerel market can absorb roughly 250,000 mt of mackerel. However, due to tariffs, price ceilings and transportation charges, United States harvested mackerel cannot be sold into these markets except at a loss. Nigeria, for example, has a price ceiling of approximately \$580/mt. It is difficult for United States harvested mackerel to be sold profitably at that price.

The Japanese market has opened up recently to United States harvested mackerel due to the four-fold increase in allowable purchase levels of United States harvested mackerel. The Japanese market can use 70,000-80,000 mt of mackerel. This has been largely supplied by the Norwegians with levels approaching 60,000 mt. There is some feeling that the North Sea mackerel has a higher fat content and is more attractive to the Japanese market than Northwest Atlantic mackerel. The fat content of Northwest Atlantic mackerel is highest late in the fall. Unfortunately, at this time of year the mackerel are widely dispersed and difficult to catch in commercial quantities. It has been reported that negotiations between US processors and the Japanese were terminated once the Japanese learned that the Dutch were to be allocated TALFF in 1991.

United States harvested mackerel has also found its way into the Canadian bait market and the Jamaica market, but only in limited quantities. These markets are highly vulnerable to penetration from cheaper mackerel from other countries. Dutch caught mackerel from the EEZ has on occasion displaced United States harvested mackerel in these markets. This has negatively impacted many in our domestic mackerel industry.

With the many obstacles to selling United States harvested mackerel in foreign markets it is important to make the United States mackerel fishery attractive to foreign countries. Obviously, a mackerel "giveaway" would be quite attractive to foreign countries. These countries would harvest as much of our mackerel as they could and simply fill the existing markets occupied by United States produced mackerel by offering it at a cheaper price.

The objective then is to make the United States mackerel fishery attractive to foreign interests while conscripting them in aid of developing our domestic industry. The means of doing this selected by the Council is to require foreign interests to purchase domestic mackerel in return for joint ventures and/or TALFF. It seems reasonable to require the foreign interest to purchase both domestic harvested and processed product to achieve an overall development of the domestic mackerel industry. A caution remains, however, that the IOY not be set so high as to allow foreign harvested TALFF to displace United States harvested mackerel from existing markets.

These revisions to the FMP are an evolution of the Council's Fishery Development Policy (Appendix 6). It must be noted that application of this Policy and the FMP, as they have both been amended over time, have established an environment within which the US commercial Atlantic mackerel catch (landings and over-the-side joint venture transfers) have grown from 2,683 mt in 1980 to 6,632 mt in 1985, and to 28,265 mt in 1990 (MAFMC 1990). Atlantic mackerel prices have risen from a reported \$0.06/lb for over-the-side sales in 1985 to \$0.10/lb in 1989, with the price of US processed Atlantic mackerel a reported \$.30/lb in 1989.

This Amendment empowers the Regional Director to establish purchase ratios as part of the annual specification setting process based on recommendations submitted by the Council. In setting these ratios, the Regional Director should review the information generated with respect to the nine factors used to establish the OY. Based on this or any other relevant information, the Regional Director will establish ratios that allow foreign interests to derive a reasonable profit from TALFF while being able to offer domestic harvesters a price per pound competitive with shoreside processors.

The Regional Director may allow the purchase of additional amounts of one product in substitution for the other.

9.2.5. Fishery Impact Statement

Clearly, all impacts on US fishermen from the adopted measures should be positive. The adopted measures are intended to foster the additional development of the US Atlantic mackerel fishery, thereby providing employment and revenues for US fishermen processing plants, and dealers.

The only negative impact could come from the no action alternative, which was rejected. No action could delay or stop the development program, thereby decreasing revenues and employment opportunities.

9.3. RELATION OF RECOMMENDED MEASURES TO APPLICABLE LAWS AND POLICIES

9.3.1. FMPs

This Amendment is related to other plans to the extent that all fisheries of the northwest Atlantic are part of the same general geophysical, biological, social, and economic setting. US and foreign fishing fleets, fishermen, and gear often are active in more than a single fishery. Thus regulations implemented to govern harvesting of one species or a group of related species may impact upon other fisheries by causing transfers of fishing effort. Many fisheries of the northwest Atlantic result in significant nontarget species fishing mortality on other stocks and as a result of other fisheries. Atlantic mackerel, squid, and butterfish are food items for many commercially and recreationally important fish species, as well as themselves utilizing many finfish and invertebrate species as food items. Furthermore, research programs often provide data on stock size, levels of recruitment, distribution, age, and growth for many species regulated by preliminary fishery management plans, FMPs, and proposed FMPs.

9.3.2. Treaties or International Agreements

No treaties or international agreements, other than GIFAs entered into pursuant to the Magnuson Act, relate to these fisheries. It is possible that a fisheries agreement with Canada will be developed in the future.

9.3.3. Federal Law and Policies

The US Department of Commerce, acting through the Council, pursuant to the Magnuson Act, has authority to manage the stocks under US jurisdiction. Foreign fishing for mackerel, squid, and butterfish is regulated by the Magnuson Act pursuant to which Governing International Fishery Agreements (GIFA) are negotiated with foreign nations for fishing within the EEZ.

While Outer Continental Shelf (OCS) development plans may involve areas overlapping those contemplated for offshore fishery management, no major conflicts have been identified to date. The Council, through involvement in the Intergovernmental Planning Program of the MMS monitors OCS activities and has opportunity to comment and to advise MMS of the Council's activities. Certainly, the potential for conflict exists if communication between interests is not maintained or appreciation of each other's efforts is lacking. Potential conflicts include, from a fishery management position: (1) exclusion areas, (2) adverse impacts to sensitive biologically important areas, (3) oil contamination, (4) substrate hazards to conventional fishing gear, and (5) competition for crews and harbor space. We are not aware of pending deep water port plans which would directly impact offshore fishery management goals in the areas under consideration, nor are we aware of potential effects of offshore fishery management plans upon future development of deep water port facilities.

9.3.3.1. Marine Mammals and Endangered Species

Numerous species of marine mammals and sea turtles occur in the northwest Atlantic Ocean. The most recent comprehensive survey in this region was done from 1979-1982 by the Cetacean and Turtle Assessment Program (CETAP), at the University of Rhode Island (University of Rhode Island 1982), under contract to the Minerals Management Service (MMS), Department of the Interior. The following is a summary of the information gathered in that study, which covered the area from Cape Sable, Nova Scotia, to Cape Hatteras, North Carolina, from the coastline to 5 nautical miles seaward of the 1000 fathom isobath.

Four hundred and seventy one large whale sightings, 1547 small whale sightings and 1172 sea turtles were encountered in the surveys (Table 2). The "estimated minimum population number" for each mammal and turtle in the area, as well as those species currently included under the Endangered Species Act, were also tabulated.

CETAP concluded that both large and small cetaceans were widely distributed throughout the study area in all four seasons, and grouped the 13 most commonly seen species into three categories, based on geographical distribution. The first group contained only the harbor porpoise, which is distributed only over the shelf and throughout the Gulf of Maine, Cape Cod, and Georges Bank, but probably not southwest of Nantucket. The second group contained the most frequently encountered baleen whales (fin, humpback, minke, and right whales) and the white-sided dolphin. These were found in the same areas as the harbor porpoise, and also occasionally over the shelf at least to Cape Hatteras or out to the shelf edge. The third group indicated a "strong tendency for association with the shelf edge" and included the grampus, striped, spotted, saddleback, and bottlenose dolphins, and the sperm and pilot whales.

Loggerhead turtles were found throughout the study area, but appeared to migrate north to about Massachusetts in summer and south in winter. Leatherbacks appeared to have had a more northerly distribution. CETAP hypothesized a northward migration of both species in the Gulf Stream with a southward return in continental shelf waters nearer to shore. Both species usually were found over the shoreward half of the slope and in depths less than 200 feet. The northwest Atlantic may be important for sea turtle feeding or migrations, but the nesting areas for these species generally are in the South Atlantic and Gulf of Mexico.

This problem may become acute when climatic conditions result in concentration of turtles and fish in the same area at the same time. These conditions apparently are met when temperatures are cool in October but then remain moderate into mid-December and result in a concentration of turtles between Oregon Inlet and Cape Hatteras, North Carolina. In most years sea turtles leave Chesapeake Bay and filter through the area a few weeks before the summer flounder fishery becomes concentrated. Efforts are currently under way (by VIMS and the US Fish and Wildlife Service refuges at Back Bay, Virginia, and Pea Island, North Carolina) to more closely monitor these mortalities due to trawls. Fishermen are encouraged to carefully release turtles captured incidentally and to attempt resuscitation of unconscious turtles as recommended in the 1981 *Federal Register* (pages 43976 and 43977).

The only other endangered species occurring in the northwest Atlantic is the shortnose sturgeon (*Acipenser brevirostrum*). The Councils urge fishermen to report any incidental catches of this species to the Regional Director, NMFS, One Blackburn Drive, Gloucester, MA 01930, who will forward the information to persons responsible for the active sturgeon data base.

The range of Atlantic mackerel, *Loligo*, *Illex*, and butterfish and the above mentioned marine mammals and endangered species overlap and there always exists a potential for an incidental kill. Except in unique situations, such accidental catches should have a negligible impact on marine mammal or abundances of endangered species, and the Councils do not believe that implementation of this FMP will have any adverse impact upon these populations.

Commercial and recreational fisheries lose thousands of pounds of fishing gear annually. Incidences of entanglement in and ingestion of this gear is common among sea turtles and marine mammals, and may result directly or indirectly in some deaths.

9.3.3.2. Marine sanctuaries

The USS *Monitor* Marine Sanctuary was officially established on January 30, 1975, under the Marine Protection, Research, and Sanctuaries Act of 1972. Rules and regulations have been issued for the Sanctuary (15 *CFR* 924). They prohibit deploying any equipment in the Sanctuary, fishing activities which involve "anchoring in any manner, stopping, remaining, or drifting without power at any time" (924.3 (a)), and "trawling" (924.3(h)). Although the Sanctuary's position off the coast of North Carolina at 35°00'23"N, 75°24'32"W is located in the FMP's designated management area, it does not occur within, or in the vicinity of, any foreign fishing area. Therefore, there is no threat to the Sanctuary by allowing foreign fishing operations under this FMP. Also, the *Monitor* Marine Sanctuary is clearly designated on all National Ocean Survey charts by the caption "protected area". This minimizes the potential for damage to the Sanctuary by US fishing operations.

9.3.3.3. Indian treaty fishing rights

No Indian treaty rights are known to exist relative to mackerel, squid, or butterfish.

9.3.4. State, Local, and Other Applicable Law and Policies

9.3.4.1. Management activities of adjacent States and their effects on the FMP's objectives and management measures

Several States have minimum size limits for the commercial sale or possession of mackerel: Massachusetts, 6"; Connecticut, 7"; New York, 7"; and New Jersey, 7".

All of the east coast States mandate a permit or license for the commercial harvest and sale of finfish. The criteria for defining "commercial" harvest and sale, however, vary among the States. It is impossible to gauge the degree to which such requirement may affect domestic harvests, since fees for such permits and the enforcement of the applicable regulations also vary among the States.

All of the States have various regulations which prohibit or restrict the use of various kinds of commercial (and sometimes recreational) fishing gear within certain portions of state waters during all or parts of the year. For example, New Jersey prohibits all trawling within 2 miles of shore. Maryland prohibits the use of otter and beam trawls within 1 mile of shore. Delaware prohibits fishing with trawls, dragnets, and dredges operated by any power vessel within 3 miles of shore. Virginia prohibits fishing with trawl nets or 'similar devices' within the 3 mile limit of the Virginia Atlantic shoreline (with limited exceptions). In addition, several States restrict and/or regulate commercial harvesting within their jurisdiction by non-residents. Such regulations may or may not inhibit the magnitude of the commercial and recreational harvests of these species. It is probable, however, that these kinds of restrictions, particularly on trawling, serve to maintain or increase the proportion of the commercial catch which is harvested from the EEZ. This should support the effectiveness of the management measures in this FMP, since it would be difficult in many States for individuals to circumvent the regulations accompanying the FMP by transferring their harvests of these species to the territorial sea.

Several States also have mesh size specifications which may affect the magnitude of and/or the sizes of the fish in the catch.

No other State or local laws that control the fisheries that are the subject of this FMP are known to exist.

There are no implications regarding E.O. 12612 (Federalism) with regard to this Amendment.

9.3.4.2. Coastal Zone Management (CZM) Program consistency

The CZM Act of 1972, as amended, is primarily protective in nature, and provides measures for ensuring stability of productive fishery habitat within the coastal zone. It is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals. States with approved CZM programs are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. Copies of this Amendment will be mailed to States with CZM programs with a determination that the programs were either not affected by the Amendment or were consistent with it. As of the date at the bottom of this page, Connecticut, Virginia, Pennsylvania, and New Hampshire have concurred with the Council's determinations.

9.4. COUNCIL REVIEW AND MONITORING OF THE FMP

There is no need to amend this section at this time.

10. REFERENCES

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Table 1. Catch Composition by Species in the Foreign Directed and US Joint Venture Atlantic Mackerel Fishery, 1990 (metric tons)

	Three Digit Map Area											
	537	612	613	614	615	616	621	622	623	625	626	631
Mackerel, Atlantic	5034	603	551	40	1498	5345	4022	2695	66	7191	953	2307
Herring, Atlantic	181	9	40	-	35	162	275	67	-	453	70	31
Herring, river	-	-	-	-	1	2	2	*	-	2	*	-
Herring, Blueback	8	7	*	-	6	35	1	1	-	11	*	10
Alewife	1	-	-	-	1	7	-	-	-	-	-	*
Shad, American	7	-	-	-	-	1	-	*	-	-	-	-
Hake, Silver	2	-	-	-	*	4	-	1	-	-	-	-
Scup	19	-	*	-	-	66	-	26	1	-	*	-
Bass, Black Sea	-	-	-	-	-	*	-	1	-	-	-	-
Weakfish	-	-	-	-	-	-	-	-	-	-	-	-
Striped bass	-	-	-	-	-	-	-	-	-	1	-	2
Squid, Long-Finned	7	-	-	-	-	4	-	2	-	-	-	-
Squid, Short-Finned	1	-	-	-	-	-	-	352	-	-	-	-

Note: River herring are species codes 302, 334, & 360. The 352 mt of *Illex* were taken in a joint venture.
* = less than 0.5 mt; - = 0.

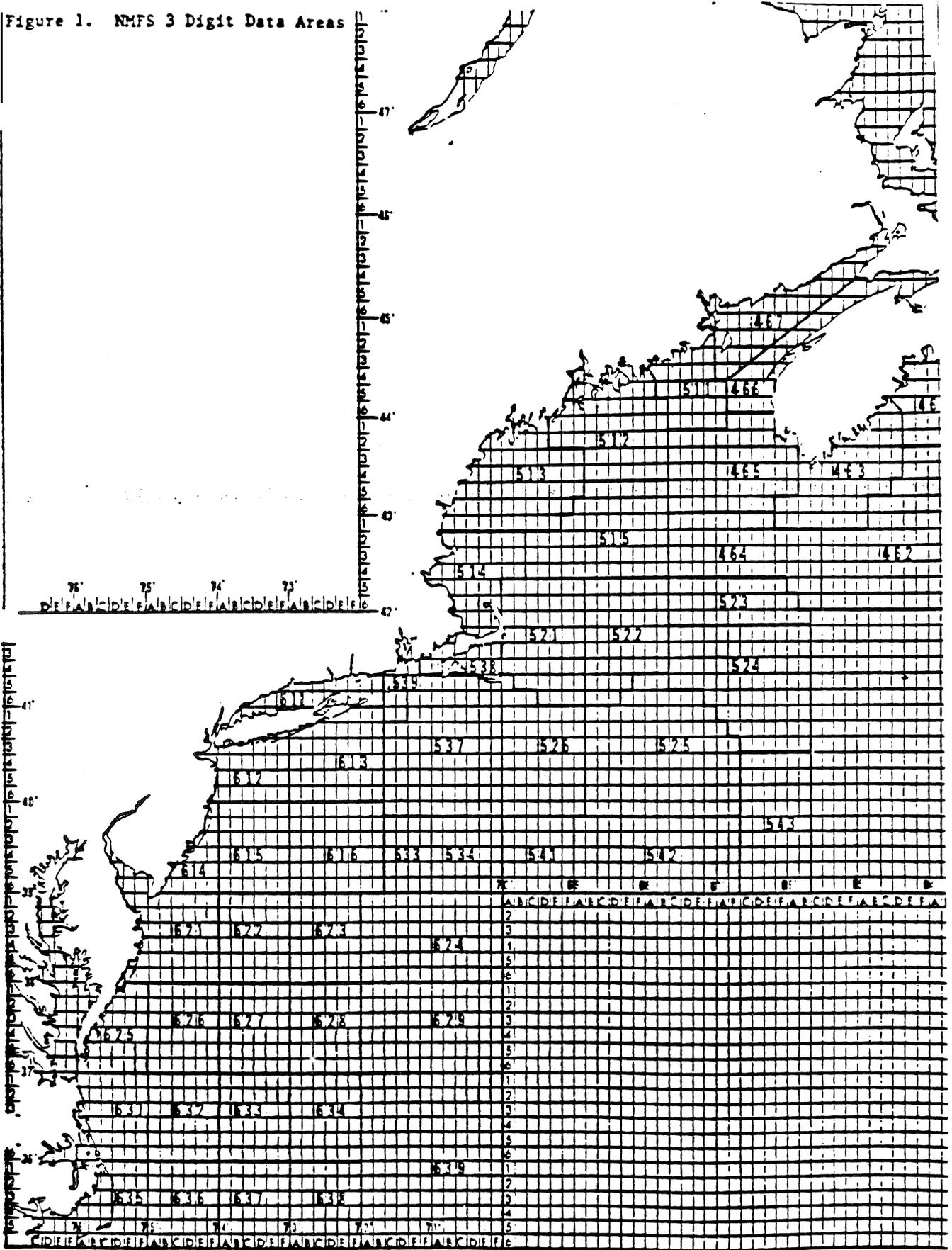
Source: NMFS Foreign Fishery Observer Files. All 1990 data are provisional.

Table 2. Cetaceans and Turtles Found in Survey Area

Scientific name	Common name	Est. Minimum Number in Study Area	Endangered	Threatened
LARGE WHALES				
<i>Balaenoptera physalus</i>	fin whale	1,102	X	
<i>Megaptera novaeangliae</i>	humpback whale	684	X	
<i>Balaenoptera acutorostrata</i>	minke whale	162		
<i>Physeter catodon</i>	sperm whale	300	X	
<i>Eubalaena glacialis</i>	right whale	29	X	
<i>Balaenoptera borealis</i>	sei whale	109	X	
<i>Orcinus orca</i>	killer whale	unk		
SMALL WHALES				
<i>Tursiops truncatus</i>	bottlenose dolphin	6,254		
<i>Globicephala</i> spp.	pilot whales	11,448		
<i>Lagenorhynchus acutus</i>	Atl. white-sided dolphin	24,287		
<i>Phocoena phocoena</i>	harbor porpoise	2,946		
<i>Grampus griseus</i>	grampus (Risso's) dolphin	10,220		
<i>Delphinus delphis</i>	saddleback dolphin	17,606		
<i>Stenella</i> spp.	spotted dolphin	22,376		
<i>Stenella coeruleoalba</i>	striped dolphin	unk		
<i>Lagenorhynchus albirostris</i>	white-beaked dolphin	unk		
<i>Ziphius cavirostris</i>	Cuvier's beaked dolphin	unk		
<i>Stenella longirostris</i>	spinner dolphin	unk		
<i>Steno bredanensis</i>	rough-toothed dolphin	unk		
<i>Delphinapteras leucas</i>	beluga	unk		
<i>Mesoplodon</i> spp.	beaked whales	unk		
TURTLES				
<i>Caretta caretta</i>	loggerhead turtle	4,017		X
<i>Dermochelys coriacea</i>	leatherback turtle	636	X	
<i>Lepidochelys kempi</i>	Kemp's ridley turtle	unk	X	
<i>Chelonia mydas</i>	green turtle	unk		X

Source: University of Rhode Island 1982.

Figure 1. NMFS 3 Digit Data Areas



APPENDIX 1. ALTERNATIVE TO THE AMENDMENT

ALTERNATIVE 1. TAKE NO ACTION AT THIS TIME

Description

This would mean that the FMP would continue in effect unchanged.

Beneficial and Adverse Impacts

Adoption of this alternative would mean that the Atlantic mackerel regime would not be improved in order to further facilitate development of the US fishery.

ENVIRONMENTAL ASSESSMENT ON AMENDMENT 4 TO THE ATLANTIC MACKEREL, SQUID, AND BUTTERFISH FISHERY MANAGEMENT PLAN (FMP)

1. INTRODUCTION

In March, 1977, the Council initiated development of the Mackerel and Squid FMPs. The Council adopted the Mackerel FMP for hearings in September 1977 and the Squid FMP for hearings in October 1977. Hearings on Mackerel and Squid FMPs were held in December, 1977. The Mackerel and Squid FMPs were adopted by the Council in March 1978. The Mackerel FMP was submitted for NMFS approval in May 1978. The Squid FMP was submitted for NMFS approval in June 1978. However, based on NMFS comments, the Council requested that the Mackerel and Squid FMPs be returned.

The FMPs were revised, the revisions being identified as Mackerel FMP Supplement 1 and Squid FMP Supplement 1. These two Supplements, along with the original Butterfish FMP, were adopted for public hearings by the Council in July of 1978. Hearings on all three documents were held during September and October 1978 and all three FMPs were adopted in final form by the Council in November 1978. The Butterfish FMP was submitted for NMFS approval in December 1978. Mackerel FMP Supplement 1 and Squid FMP Supplement 1 were submitted for NMFS approval in January 1979. NMFS approved Squid FMP Supplement 1 in June 1979 and Mackerel FMP Supplement 1 in July 1979. Both FMPs were for fishing year (1 April - 31 March) 1979-80.

The Butterfish FMP was disapproved by NMFS in April 1979 because of a need for additional justification of the reasons for reducing OY below MSY. The Butterfish FMP was revised, adopted by the Council, and resubmitted for NMFS approval in June 1979. It was approved by NMFS in November 1979 for fishing year 1979-80.

The Council adopted Amendments 1 to both the Mackerel and Squid FMPs for hearings in August 1979. Hearings were held during October 1979. The Amendments were adopted by the Council and submitted for NMFS approval in November 1979. Both Amendments were approved by NMFS in March 1980. This extended the Squid FMP for an indefinite time beyond the end of fishing year 1979-80 and extended the Mackerel FMP through fishing year 1980-81. Butterfish FMP Amendment 1, extending the FMP through fishing year 1980-81, was adopted by the Council for hearings in December 1979 with hearings held during January 1980. During January 1980 the Amendment was adopted in final form by the Council and submitted for NMFS approval. It was approved in March 1980.

The Council began work on an amendment to merge the Mackerel, Squid, and Butterfish FMPs in March 1980 the document being identified as Amendment 2 to the Mackerel, Squid, and Butterfish FMP. The Amendment was adopted by the Council for public hearings in August 1980. However, NMFS commented that there were significant problems with the Amendment that could not be resolved prior to the end of the fishing year (31 March 1981). The Council then prepared separate Amendments 2 to both the Mackerel and Butterfish FMPs to extend those FMPs through fishing year 1981-82. Since Amendment 1 to the Squid FMP extended that FMP indefinitely, there was no need to take this action for the Squid FMP. Those drafts were adopted for public hearing by the Council in October 1980 with hearings held in November. The Amendments were adopted in final form by the Council and submitted for NMFS approval in November 1980. Amendment 2 to the Mackerel FMP was approved by NMFS in January 1981 and Amendment 2 to the Butterfish FMP was approved by NMFS in February 1981.

In October 1980 the merger amendment, previously designated as Amendment 2, was redesignated Amendment 4. The Council adopted draft Amendment 4 to the Squid, Mackerel, and Butterfish FMP in July 1981 and hearings were held during September. The Council adopted Amendment 4 in October 1981 and submitted it for NMFS approval. NMFS review identified the need for additional explanation of certain provisions of the Amendment. The revisions were made and the revised Amendment 4 was submitted for NMFS approval in February 1982.

The Amendment was approved by NMFS in October 1982. However, problems developed with the implementation regulations, particularly with the Office of Management and Budget through that agency's review under Executive Order 12291. In an effort to have the FMP in place by the beginning of the fishing year (1 April 1983) the FMP, without the squid OY adjustment mechanism, or a revised Atlantic mackerel mortality rate, and redesignated as the Atlantic Mackerel, Squid, and Butterfish FMP, was implemented by emergency interim regulations on 1 April 1983. By agreement of the Secretary of Commerce and the Council, the effective date of those emergency regulations was extended through 27 September 1983.

The differences between the FMP and the implementing regulations resulted in a hearing before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment on 10 May 1983.

Amendment 1 to the Atlantic Mackerel, Squid, and Butterfish FMP was prepared to implement the squid OY adjustment mechanism and the revised mackerel mortality rate. That Amendment was adopted by the Council on 15 September 1983, approved by NMFS on 19 December 1983, and implemented by regulations published in the Federal Register on 1 April 1984.

Amendment 2 was adopted by the Council on 19 September 1985 and approved by NOAA 6 March 1986. Amendment 2 changed the fishing year to the calendar year, revised the squid bycatch TALFF allowances, put all four species on a framework basis, and changed the fishing vessel permits from permanent to annual.

This Amendment 4 was adopted by the Council in two actions. The Atlantic mackerel overfishing definition was adopted by the Council at its October 1990 meeting. The *Loligo, Illex*, and butterfish overfishing definitions were adopted at the December 1990 meeting. This was done because the Northeast Fisheries Center proposed changes to the overfishing definitions proposed in the hearing draft for the squids and butterfish. The Center's concerns were incorporated in the version adopted at the December 1990 meeting.

2. PURPOSE OF AND NEED FOR ACTION

Through a series of amendments, including the merger of the three FMPs into one, the Council has continued to work toward the objectives of sound management of the resource and development of the US fishery. The current Amendment is designed to make additional refinements to the Atlantic mackerel management regime.

After merging the management of the three fisheries and the adoption of terms that allowed more flexibility in setting of annual specifications in Amendment 1, the Council was able to undertake more controlled management of the three fisheries to maximize the opportunities for US growth and development in these fisheries. Foreign fisheries for the squids and butterfish have been eliminated through development of the US fishery. Substantial investments have been made in US vessels for operation in these fisheries and in shoreside facilities. The FMP continues to allow for allocations to TALFF, but Council recommendations for TALFF are tailored to actual needs in terms of bycatch amounts and to consistency with FMP goals where directed fisheries are involved.

The current mackerel regime sets a biologically based Allowable Biological Catch (ABC) for each year from which specifications of Optimum Yield (OY), Domestic Annual Harvest (DAH), Domestic Annual Processing (DAP), Joint Venture Processing (JVP), and Total Allowable Level of Foreign Fishing (TALFF) are made. The routine procedure is for the stock assessments to be reviewed at the Spring Northeast Fisheries Center (NEFC) Stock Assessment Workshop (SAW). The Council annually surveys the industry to develop estimates of DAP. The staff reviews available information on markets and on the supply of competing products and stocks. Based on the stock assessment, industry survey, an industry fact finding meeting, and fishery statistics, the Council prepares a report containing recommended specifications and submits it to the Regional Director. The proposed specifications are published in the *Federal Register* for comments. Final specifications are then published.

In recent years, the Council has recommended special conditions to be imposed on joint ventures, most particularly those with associated directed foreign fishing. These conditions range from attempts to reduce fishing mortality on shad and river herring by foreign fishing vessels to ratios specifying the relationship between the directed foreign fishing level relative to over the side purchases by foreign vessels versus foreign purchases of US processed mackerel.

NMFS has pointed out (Roe pers. comm.) that ratios and other special conditions were not provided for in the FMP and would not be used in the future if the FMP were not amended to provide for them.

Therefore, the problem is to provide for imposition of special conditions on joint ventures and directed foreign fishing, if any, to aid in achieving the FMP's objectives.

Another problem relates to the annual timetable for setting annual specifications. The FMP and implementing regulations provide that on or about 15 October of each year, the Council will prepare and submit recommendations to the Regional Director on the initial annual amounts for the fishing year beginning 1 January. On or about 1 November of each year, the Secretary will publish a notice in the *Federal Register* that specifies preliminary initial amounts of OY, DAH, DAP, JVP, TALFF, and reserve (if any) for each species; and on or about 15 December of each year, the Secretary will make a final determination on the initial amounts for each species, considering all relevant data and any public comments, and will publish a notice of the final determination and response to public comments in the *Federal Register*.

While the Council has routinely submitted its recommendations prior to 1 October (in 1990 they were submitted in July), the final specifications are not determined until 31 December, and sometimes after the year begins. The significance of this is that amounts available for JVP and TALFF are not known, so applications and business arrangements cannot be developed with any assurance of fish being available until the final specifications are published. Foreign nations should have two to three months prior to the start of the mackerel season to make their plans with US producers, obtain permits, and have vessels in the area ready to fish or purchase fish from US producers. Although applications for joint ventures may be prepared and submitted in the early fall, they cannot be reviewed in a critical way until the specifications are known.

It is important to realize that in the recent past NMFS has usually published the Council's recommended specifications as the proposed specifications. These are generally used as a guide by the industry in developing joint venture projects. However, it is not unusual for the final specifications to differ from the proposed specifications. US fishermen do not know what foreign nations will be participating in joint ventures or directed foreign fishing. Since the final specifications are rarely approved prior to 1 January, projects cannot be approved prior to 1 January. Many joint venture projects that are not completed in the January through March period bring their foreign boats back to US waters in November and December to complete the venture. The effect is that even though these foreign boats are in US waters to begin working on a new venture for the new year (1 January - 31 December), they cannot operate until the specifications are published, their applications are approved, and observers obtained, thereby incurring costs which ultimately impact the amount available to pay US fishermen. The end result is an impediment to orderly development of the fishery.

The management unit is all Atlantic mackerel, *Loligo pealei*, *Illex illecebrosus*, and butterfish under US jurisdiction, excluding the Gulf of Mexico and the Caribbean Sea.

The objectives of the FMP are:

1. Enhance the probability of successful (i.e., the historical average) recruitment to the fisheries.
2. Promote the growth of the US commercial fishery, including the fishery for export.
3. Provide the greatest degree of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this FMP.
4. Provide marine recreational fishing opportunities, recognizing the contribution of recreational fishing to the national economy.
5. Increase understanding of the conditions of the stocks and fisheries.
6. Minimize harvesting conflicts among US commercial, US recreational, and foreign fishermen.

The problem in the fishery is set forth in Section 4.2 of the FMP.

The Amendment does not change the MSYs, OYs, or quota setting process and, therefore, does not alter the FMP's consistency with any national standard.

The alternative to the adopted Amendment is discussed in Appendix 1 of the Amendment.

3. ALTERNATIVE

A description and evaluation of the alternative considered, but not adopted for Amendment 4 is contained in Appendix 1.

4. ENVIRONMENTAL IMPACTS

The environmental impacts of the management regime instituted in the original FMP were described in the Environmental Impact Statement accompanying the FMP, and in the Supplemental Environmental Impact Statements or Environmental Assessments accompanying the Amendments.

4.1. Revision to time and area restrictions

For several years during the annual specification process the Council has recommended the imposition of special condition to permits for foreign fishing or the receipt of United States harvested fish over the side at-sea. As noted above, the National Marine Fisheries Service recommended that the specification process would be better served if a mechanism authorizing their imposition appeared in the FMP. These conditions embraced several concerns. Restrictions were imposed to keep foreign vessels certain distances offshore near military installation. There was a national security concern that intelligence gathering might take place if these for-

eign vessels were able to fish up to the outer boundary of the territorial sea. Distance from shore restrictions were also imposed to prevent the large foreign trawler from fishing near shore areas and breaking up the schools of fish thus diminishing the ability of the domestic fleet to harvest them. Area restrictions are also useful to reduce the bycatch of certain species known to be concentrated in these areas. Foreign vessels have been restricted from fishing south of 37° North latitude to reduce the bycatch of shad and river herring. Other possible management problems that may be addressed through time and area restrictions are gear conflicts or other user group conflicts.

The revisions to the time and area restrictions are intended to allow foreign vessels fishing for Atlantic mackerel to routinely fish outside of the foreign fishing areas ("windows") designated at 50 CFR 611, while still allowing some geographical limits to be placed on them. This should improve the efficiency of the foreign fishing operations. The directed foreign mackerel fishery has been allowed outside the windows for a number of years on a case by case basis by exemption. This would institutionalize the exemption in the FMP.

The shoreward limit, and the ability to set north, south, and seaward limits, is intended to minimize conflicts with marine recreational fishing vessels and to minimize the capture of prohibited species by foreign vessels and US vessels transferring to foreign vessels. Any prohibited species caught by a foreign vessel must be discarded. Since many of these species are overfished, the wastage associated with possible capture and discarding is unacceptable.

As shown in Table 1 and Figure 1, there appears to be a relationship between the area fished and the catch of certain bycatch species. For example, in area 621 in 1990, 6.5% of the catch was herring. In area 625 the herring bycatch was 6.1% of the total and there was also a bycatch of one metric ton of striped bass. In area 631 the herring bycatch was only 2%, but 1.6 mt of striped bass were caught.

Area restrictions have been used to minimize the river herring bycatch in the foreign Atlantic mackerel fishery by prohibiting that fishery south of 37° 30' N. latitude by permit condition.

4.2. Revision to catch limitations

This revision to the FMP will solve a problem associated with the current quota setting process using proposed and final regulations. While the FMP has mandatory dates by when the annual specifications must be submitted to the Regional Director by the Council and when the Regional Director must publish proposed and final specifications in the *Federal Register* (See section 4.2), the final specifications are rarely published in advance of the beginning of the new year. This does not present a problem with regard to the US fishery, which is why the revised provision does not apply to the squids and butterfish, but results in inadequate time being available for planning joint ventures. If the annual specifications are set for three years at one time, then subsequent adjustments may be made by a notice in the *Federal Register*, a process that does not consume much time. Therefore, while the specifications for the first year in any cycle may be delayed, the specifications for the second and third years will be known well in advance of the beginning of the season, even though some adjustments may be needed.

Another positive impact of this revision is that the foreign nations interested in joint ventures will know well in advance what the policy will be for a particular year, so planning by both US and foreign interests can proceed in an orderly manner.

Finally, timing is most critical because of the short duration of the mackerel season. The portion of the fishery that is associated with joint ventures and foreign fishing generally extends from November through March. Since the fishing year begins 1 January, if the specifications are not available on a timely basis, foreign vessels that are here finishing up one year's project are required to remain inactive until the new year's specifications are finalized, costing everyone money and decreasing opportunities for US fishermen.

For example, since the mackerel fishery generally runs from November through March, a joint venture project will begin in January and stop by the end of March. If there are mackerel allocated to the venture, but not caught, the foreign vessels will return in November under the same project and permits and attempt to acquire the balance of the allocated fish. The project and permits terminate 31 December. If the new specifications are not published, the foreign vessels must stop work, thereby incurring costs with no profit. Directed foreign fishing is an incentive to foreign over-the-side purchases from US fishing boats, as well as to the foreign purchase of US processed mackerel. If the subsidies are truly needed, then anything that increases the costs to the foreign operators cuts into that incentive. If delays in getting the specifications finalized temporarily stop the fishery, US fishermen will lose money.

4.3. Provision of ratios

In order to effectuate the purpose of the Magnuson Act to promote the development of underutilized fisheries, the Council has recommended the use of purchase ratios in the annual specification setting process for several years. These purchase ratios were viewed as the manifestation of the Secretary's discretionary authority under section 201(e) to release TALFF. The specification setting process thus created a "fish and chips" program that enlisted the aid of foreign companies permitted to fish in the EEZ in developing the domestic fishing industry. This program initially resulted in the development of the *Loligo* squid fishery to the total exclusion of foreign interests. This program was later applied to the mackerel fishery in order to progress to an "Americanization" of this fishery as well. The initial purchase ratios rewarded foreign interests with several tons of TALFF if they purchased specified amounts of domestic harvested product or domestic processed product. This was later revised to require the purchase of both domestic harvested and processed product, but later reversed to retain flexibility in the system. The purchase ratios strike a balance between the costs of purchasing domestic harvested and processed product and the profits derived from joint ventures and/or TALFF.

Canada has been using a similar ratio system in the foreign fisheries in Canadian waters.

The opportunity for foreign market access for United States harvested mackerel has been minimal. However, over the past several years, there has been an increase in commercial landings to just over 28,000 mt in 1990. There have been several factors that have contributed to this situation. The total production from the North Sea fishery was 500,000 mt in 1988. The fleets from the United Kingdom have a virtual wrap on the east bloc countries with respect to selling mackerel. Since that time the political destabilization of the USSR has cast some doubt on the conduct of the North Sea fishery in 1991-92. The large state supported fleets from the east bloc countries have virtually disappeared as these countries have switched to a so called "free market" economy. The lack of capital in these countries will affect significantly the ability of these countries to participate in any mackerel fishery.

The African mackerel market can absorb roughly 250,000 mt of mackerel. However, due to tariffs, price ceilings and transportation charges, United States harvested mackerel cannot be sold into these markets except at a loss. Nigeria, for example, has a price ceiling of approximately \$580/mt. It is difficult for United States harvested mackerel to be sold profitably at that price.

The Japanese market has opened up recently to United States harvested mackerel due to the fourfold increase in allowable purchase levels of United States harvested mackerel. The Japanese market can use 70,000-80,000 mt of mackerel. This has been largely supplied by the Norwegians with levels approaching 60,000 mt. There is some feeling that the North Sea mackerel has a higher fat content and is more attractive to the Japanese market than Northwest Atlantic mackerel. The fat content of Northwest Atlantic mackerel is highest late in the fall. Unfortunately, at this time of year the mackerel are widely dispersed and difficult to catch in commercial quantities. It has been reported that negotiations between US processors and the Japanese were terminated once the Japanese learned that the Dutch were to be allocated TALFF in 1991.

United States harvested mackerel has also found its way into the Canadian bait market and the Jamaica market, but only in limited quantities. These markets are highly vulnerable to penetration from cheaper mackerel from other countries. Dutch caught mackerel from the EEZ has on occasion displaced United States harvested mackerel in these markets. This has negatively impacted many in our domestic mackerel industry.

With the many obstacles to selling United States harvested mackerel in foreign markets it is important to make the United States mackerel fishery attractive to foreign countries. Obviously, a mackerel "giveaway" would be quite attractive to foreign countries. These countries would harvest as much of our mackerel as they could and simply fill the existing markets occupied by United States produced mackerel by offering it at a cheaper price.

The objective then is to make the United States mackerel fishery attractive to foreign interests while conscripting them in aid of developing our domestic industry. The means of doing this selected by the Council is to require foreign interests to purchase domestic mackerel in return for joint ventures and/or TALFF. It seems reasonable to require the foreign interest to purchase both domestic harvested and processed product to achieve an overall development of the domestic mackerel industry. A caution remains, however, that the IOY not be set so high as to allow foreign harvested TALFF to displace United States harvested mackerel from existing markets.

These revisions to the FMP are an evolution of the Council's Fishery Development Policy (Appendix 6). It must be noted that application of this Policy and the FMP, as they have both been amended over time, have estab-

lished an environment within which the US commercial Atlantic mackerel catch (landings and over-the-side joint venture transfers) have grown from 2,683 mt in 1980 to 6,632 mt in 1985, and to 28,265 mt in 1990 (MAFMC 1990). Atlantic mackerel prices have risen from a reported \$0.06/lb for over-the-side sales in 1985 to \$0.10/lb in 1989, with the price of US processed Atlantic mackerel a reported \$.30/lb in 1989.

This Amendment empowers the Regional Director to establish purchase ratios as part of the annual specification setting process based on recommendations submitted by the Council. In setting these ratios, the Regional Director should review the information generated with respect to the nine factors used to establish the OY. Based on this or any other relevant information, the Regional Director will establish ratios that allow foreign interests to derive a reasonable profit from TALFF while being able to offer domestic harvesters a price per pound competitive with shoreside processors. The Regional Director may allow the purchase of additional amounts of one product in substitution for the other.

Effect on Endangered Species and on the Coastal Zone

Neither the Amendment or the alternatives would constitute an action that "may affect" endangered or threatened species or their habitat within the meaning of the regulations implementing Section 7 of the Endangered Species Act of 1973. Thus, consultation procedures under Section 7 will not be necessary on the Amendment.

The CZM Act of 1972, as amended, is primarily protective in nature, and provides measures for ensuring stability of productive fishery habitat within the coastal zone. It is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals. States with approved CZM programs are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. Copies of this Amendment will be mailed to States with CZM programs with a determination that the programs were either not affected by the Amendment or were consistent with it.

Effects on Flood Plains or Wetlands

The Amendment or its alternative will not adversely affect flood plains or wetlands, or trails and rivers listed or eligible for listing on the National Trails and Nationwide Inventory of Rivers.

List of Agencies and Persons Consulted in Formulating the Proposed Action

The CZM Act of 1972, as amended, is primarily protective in nature, and provides measures for ensuring stability of productive fishery habitat within the coastal zone. It is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals. States with approved CZM programs are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. Copies of this Amendment will be mailed to States with CZM programs with a determination that the programs were either not affected by the Amendment or were consistent with it. As of the date at the bottom of this page, Connecticut, Virginia, Pennsylvania, and New Hampshire have concurred with the Council's determinations.

List of Preparers of Environmental Assessment and Plan Amendment

Amendment 4 was prepared by John C. Bryson, David R. Keifer, and Clayton Heaton of the Council staff. The Squid, Mackerel, and Butterfish Committee of the Council is made up of Tom McVey, Bill Wells, Roger Locandro, Al Goetze, Stetson Tinkham, and Bob Smith (New England Council). Fred Bilik and Shirley Whitted (NMFS HQ), Richard Seamans and Myles Raizin (NMFS NERO), and Joel MacDonald (NOAA, GCNE) also assisted with the Amendment.

For the reasons discussed above, it is hereby determined that neither approval and implementation of the proposed action nor the alternative would affect significantly the quality of the human environment, and that the preparation of an environmental impact statement on the Amendment is not required by Section 102(2)(c) of the National Environmental Policy Act nor its implementing regulations.

Assistant Administrator for Fisheries, NOAA

Date

APPENDIX 3. PUBLIC HEARING SUMMARIES

19 June 1991, Cape May Courthouse, NJ

There was a public hearing held on 19 June 1991 at the Cape May County Extension Office in Cape May Courthouse, NJ on Amendment 4 to the Atlantic mackerel, Squid, and Butterfish Fishery Management Plan. Hearing moderator and Council member Tom McVey convened the hearing at 7:00 pm. There were 5 members of the public present. Dave Keifer represented the Mid-Atlantic Council staff.

Mr. Keifer reviewed the provisions of Amendment 4.

There were no questions or comments on the Amendment.

Mr. Harry Axelsson was concerned about 1992 specifications for *Loligo*, mackerel, and butterfish. He felt that the fact that US fishermen were unable to locate *Loligo* and butterfish would be taken as an indication that these species were not abundant, while the problem is more likely that US fishermen do not spend as much effort trying to locate the fish as did the foreign fleets when they were fishing in US waters.

Mr. Ray Vincent was concerned over the procedure for setting the mackerel specifications between the recreational and commercial fisheries. He did not want the mackerel regime to be reviewed to be similar to the bluefish regime so that the growth of the commercial mackerel fishery would be constrained by the recreational catch. He indicated he was a longliner who was being impacted by the pending shark and swordfish regulations, and did not want the possibility of a commercial mackerel fishery curtailed because in the past the recreational fishery had dominated the catch.

The hearing was adjourned at approximately 7:40 pm.

24 June 1991, Galilee, RI

There was a public hearing held on 24 June 1991 at the Dutch Inn, Galilee, RI, on Amendment 4 to the Atlantic mackerel, Squid, and Butterfish Fishery Management Plan. Hearing moderator and New England Council member Bob Smith convened the hearing at 7:00 pm. There were 3 members of the public present. Dave Keifer represented the Mid-Atlantic Council staff.

Mr. Keifer reviewed the provisions of Amendment 4.

Eric Reid, Town Dock, Inc., asked what the Cape May fishermen thought of Amendment 4. He said he supported the preferred alternative. He recommended that there continue to be no TALFF for butterfish and *Loligo*. He recommended that changing the fishing year to July 1 through June 30 might solve some of the mackerel timing problems.

The hearing was adjourned at approximately 7:30 pm.

APPENDIX 4. REGULATORY IMPACT REVIEW

1. INTRODUCTION

1.1. Purpose

The purpose of this document is to present an analysis of the proposed regulations for the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan (FMP). This document has been prepared in compliance with the procedures of the National Marine Fisheries Service (NMFS) to implement Executive Order (E.O.) 12291. The document also contains an analysis of the impacts of the Plan relative to the Regulatory Flexibility Act and the Paperwork Reduction Act of 1980.

1.2. Description of User Groups

The fishery is described in Sections 7 and 8 of the FMP.

1.3. Problems Addressed by the FMP

The problems to be addressed are discussed in Section 4.2 of the FMP.

1.4. Management Objectives

The objectives of the FMP are:

1. Enhance the probability of successful (i.e., the historical average) recruitment to the fisheries.
2. Promote the growth of the US commercial fishery, including the fishery for export.
3. Provide the greatest degree of freedom and flexibility to all harvesters of these resources consistent with the attainment of the other objectives of this FMP.
4. Provide marine recreational fishing opportunities, recognizing the contribution of recreational fishing to the national economy.
5. Increase understanding of the conditions of the stocks and fisheries.
6. Minimize harvesting conflicts among US commercial, US recreational, and foreign fishermen.

1.5. Provisions of the FMP

The management measures adopted for public hearing are presented in Sections 3 and 9.1 of the FMP. The other alternative is presented in Appendix 1 to the FMP.

2. REGULATORY IMPACT ANALYSIS

The impacts of the adopted management measures are presented in Section 9.2 of the FMP. The other alternative is evaluated in Appendix 1 to the FMP.

3. DISCUSSION OF THE BENEFITS AND COSTS OF THE AMENDMENT

E.O. 12291 requires that a benefit-cost analysis of all proposed regulations be performed.

3.1. Costs

Management costs are discussed in section 9.2.

3.2. Benefits

The benefits of the FMP are discussed in section 9.2.

3.3. Benefit - Cost Conclusion

The benefits and costs of the FMP are discussed in section 9.2.

4. Other E.O. 12291 Requirements

E.O. 12291 requires that the following three issues be considered:

1. Will the Plan have an annual effect on the economy of \$100 million or more.
2. Will the Plan lead to an increase in the costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions.

3. Will the Plan have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of US based enterprises to compete with foreign based enterprises in domestic or export markets.

The FMP should not have an annual effect of \$100 million or more. The total commercial mackerel fishery (the only one of the three species affected by this Amendment) was valued at \$4,261,000 in 1989, including US landings and sale by US vessels to foreign vessels through joint ventures. US landings in 1989 alone were estimated at \$3,182,000 (USDC 1990).

The Amendment is not expected to lead to an increase in costs or prices to consumers. Recreational anglers will not be impacted by the Amendment. The commercial fishery has been increasing steadily since the FMP was originally implemented in 1978 (Table RIR1). The US catch was 1,605 metric tons (mt) in 1978 and increased to an estimated 28,265 mt in 1990. In more recent years, these data include direct sales by US fishermen to foreign processing vessels (through joint ventures). Unpublished data from the NMFS Northeast Regional Office estimate landings (excluding joint venture sales) were 6,065 mt in 1988, increasing steadily to 9,412 mt in 1990 and 11,276 mt in 1991 (through mid-April).

US exports of mackerel (Pacific, Gulf, and Atlantic; the species cannot be separated in the data) have also been increasing. They were 659 mt (\$778,959) in 1987 and increased to 4,518 mt (\$4,174,777) in 1989 (Table RIR2). It must be recognized that the exported tonnage is included in the landings data to the extent they are Atlantic mackerel.

It seems clear that the US fishery is expanding. The adjustments to the management regime through Amendment 4 should improve the environment within which the fishery is operating and, therefore, facilitate further improvement in the fishery.

Impacts are analyzed in section 9.2 of the FMP.

The FMP should not have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of US based enterprises to compete with foreign based enterprises in domestic or export markets.

5. Impacts of the Plan relative to the Regulatory Flexibility Act, Paperwork Reduction Act of 1980, and the Federalism Executive Order.

The Regulatory Flexibility Act requires the examination of the impacts on small businesses, small organizations, and small jurisdictions. The impacts of the FMP do not favor large businesses over small businesses.

The Paperwork Reduction Act concerns the collection of information. The intent of the Act is to minimize the Federal paperwork burden for individuals, small business, State and local governments, and other persons as well as to maximize the usefulness of information collected by the Federal government. This Amendment does not change the reporting and permitting requirements of the existing FMP.

This Amendment has no impact on Federalism considerations.

Table RIR1. US and Foreign Atlantic Mackerel Catch (mt), 1966-1990

Year	In US Waters (NAFO/ICNAF Subarea 5 and Statistical Area 6)					Total	Outside US waters +
	US Commercial	US Recreational	US Total	Foreign#	Total		
1966	2,724	4,535	7,259	6,707	13,966	12,820	
1967	3,891	4,498	8,389	18,984	27,373	11,242	
1968	3,929	7,781	11,710	56,040	67,750	20,837	
1969	4,364	13,050	17,414	108,805	126,219	18,635	
1970	4,049	16,039	20,088	205,557	225,645	21,005	
1971	2,406	16,426	18,832	346,319	365,151	24,494	
1972	2,006	15,588	17,594	385,337	402,931	22,359	
1973	1,336	10,723	12,059	379,808	391,867	38,548	
1974	1,042	7,640	8,682	293,867	302,549	44,653	
1975	1,974	5,190	7,164	248,991	256,155	36,256	
1976	2,712	4,202	6,914	205,945	212,859	33,063	
1977	1,377	522	1,899	53,661	55,560	22,764	
1978	1,605	6,571	8,176	371	8,547	25,797	
1979	1,990	3,723	5,713	63	5,776	30,610	
1980	2,683	2,381	5,064	399	5,463	20,499	
1981	2,941	8,505	11,446	5,282	16,728	19,318	
1982	3,330	1,162	4,492	9,548	14,040	16,382	
1983	3,805	3,280	7,085	1,597	8,682	19,805	
1984	5,954	2,618	8,572	15,045	23,617	17,942	
1985	6,632	3,287	9,919	32,409	42,328	30,899	
1986	9,637	3,943	13,580	25,355	38,935	26,128	
1987	12,310	5,567	17,877	35,094	52,971	23,640	
1988	12,309	3,853	16,162	42,858	59,020	24,390	
1989*	14,634	947	15,581	36,823	52,404	22,000	
1990*	28,265	**	**	9,126	**	25,000	

+ = Foreign catch from NAFO/ICNAF Subareas 3 and 4 (includes Canada).

= includes catch taken by Poland in a research fishery from 1982 - 1987.

* = NEFC estimate for entire 1989 & 1990.

** = not available.

Sources: 1965-1983: Anderson, 1985; 1984 - 1989: Overholtz, 1990, pers. comm.

Table RIR2. US Exports of Fresh and Frozen Mackerel, 1987 - 1989

	<u>1987</u>		<u>1988</u>		<u>1989</u>	
	<u>Quantity</u> <u>Metric Tons</u>	<u>Value</u> <u>US\$</u>	<u>Quantity</u> <u>Metric Tons</u>	<u>Value</u> <u>US\$</u>	<u>Quantity</u> <u>Metric Tons</u>	<u>Value</u> <u>US\$</u>
Canada	4.30	\$6,417	98.89	\$99,895	623.16	\$888,104
Dominican Republic	-	-	-	-	6.44	\$7,500
Mexico	-	-	4.70	\$7,692	-	-
Bahamas	1.72	1,698	3.66	4,785	-	-
Jamaica	515.45	\$530,013	577.96	\$345,791	309.59	\$75,500
Br Virgin Isl	4.02	\$4,560	2.90	\$3,000	-	-
Netherlands Antls	17.57	\$52,200	-	-	-	-
Trinidad & Tobago	-	-	-	-	-	-
United Kingdom	-	-	-	-	-	-
Belgium	-	-	-	-	18.15	\$12,400
Netherlands	-	-	-	-	-	-
West Germany	1.03	\$6,840	-	-	-	-
East Germany	-	-	-	-	363.50	\$492,734
Italy	20.01	\$14,000	-	-	-	-
Rep. of Korea	-	-	-	-	55.34	\$89,340
Japan	67.00	\$150,170	249.37	\$340,851	1,500.44	\$1,594,266
Australia	21.09	\$7,440	380.34	\$181,466	732.36	\$568,659
Fiji	-	-	-	-	872.18	\$418,462
Kiribati	-	-	-	-	6.58	\$7,105
Micronesia	6.68	\$5,621	4.53	\$7,040	30.42	\$20,707
Other Pacific Isl	-	-	301.32	\$337,419	-	-
TOTAL EXPORTS	658.87	\$778,959	1,623.67	\$1,327,939	4,518.16	\$4,174,777

Note: Includes Pacific, Gulf and Atlantic Mackerel Exports

Source: Ross, 1990 and NMFS Import/Export Files

APPENDIX 5. ATLANTIC MACKEREL, SQUID, AND BUTTERFISH FMP REGULATIONS

Subpart A - General Provisions

- Sec. 655.1 Purpose and scope.
- Sec. 655.2 Definitions.
- Sec. 655.3 Relation to other laws.
- Sec. 655.4 Vessel permits.
- Sec. 655.5 Recordkeeping and reporting. (Reserved)
- Sec. 655.6 Vessel identification.
- Sec. 655.7 Prohibitions.
- Sec. 655.8 Enforcement.
- Sec. 655.9 Penalties.

Subpart B - Management Measures

- Sec. 655.20 Fishing year.
- Sec. 655.21 Allowable levels of harvest.
- Sec. 655.22 Procedures for determining initial annual amounts and adjustments.
- Sec. 655.23 Closure of the fishery.

AUTHORITY: 16 U.S.C. 1801 *et seq.*

Subpart A - General Provisions

§655.1 Purpose and scope.

(a) The regulations in this part govern fishing for Atlantic mackerel, *Illlex*, *Loligo*, and butterfish by fishing vessels of the United States in the EEZ off the coasts of the Atlantic States.

(b) The regulations governing fishing for Atlantic mackerel, *Illlex*, *Loligo*, and butterfish by vessels other than vessels of the United States are contained in 50 CFR Part 611.

(c) This part implements the Fishery Management Plan for the Atlantic Mackerel, Squid, and Butterfish Fisheries of the Northwest Atlantic Ocean.

§655.2 Definitions.

In addition to the definitions in the Magnuson Act and in §620.2 of this chapter, the terms used in this part have the following meanings:

Atlantic butterfish or butterfish means the species *Peprilus triacanthus*.

Atlantic mackerel or mackerel means the species *Scomber scombrus*.

Charter or party boat means any vessel which carries passengers for hire to engage in fishing.

Fishery management plan (FMP) means the Fishery Management Plans for the Atlantic Mackerel, Squid, and Butterfish Fisheries of the Northwest Atlantic Ocean, as consolidated by amendment 3 and revised by subsequent amendments.

Fishing trip or trip means a period of time during which fishing is conducted, beginning when the vessel leaves port and ending when the vessel returns to port.

Illex means the species *Illex illecebrosus* (short-finned or summer squid).

Joint venture harvest means U.S. harvested Atlantic mackerel, squid, or butterfish transferred to foreign

vessels in the EEZ or in the internal waters of a State. Transfers to foreign vessels in the internal waters of a State are governed under section 306(c) of the Magnuson Act.

Loligo means the species *Loligo pealei* (long-finned or bone squid).

Metric ton (mt) means 1,000 kilograms or 2,204.6 pounds.

Regional Director means the Regional Director, Northeast Region, National Marine Fisheries Service, 14 Elm Street, Federal Building, Gloucester, MA, or a designee.

Squid means *Loligo pealei* and *Illex illecebrosus*.

Vessel length means that length set forth in U.S. Coast Guard or State records.

§655.3 Relation to other laws.

(a) The relation of this part to other laws is set forth in §620.3 of this chapter and paragraph (b) of this section.

(b) Vessels fishing within the regulated mesh area defined at §651.20 of this chapter with cod end mesh size of less than 5.5 inches must apply to fish under the exempted fishery program as set forth in §651.22 of this chapter.

§655.4 Vessel permits.

(a) *General.* Any vessel of the United States which catches Atlantic mackerel, *Illex* and *Loligo* squid, or butterfish must have a permit issued under this section except vessels used by recreational fishermen taking Atlantic mackerel, *Illex* and *Loligo* squid, or butterfish for the personal use of such recreational fishermen.

(b) *Application.*

(1) Each applicant must submit a permit application signed by the owner or operator of the vessel on an appropriate form obtained from the Regional Director before November 1 of each year or at least 30 days before the date on which the applicant desires to have the permit made effective.

(2) Applicants shall provide all the following information (approved by the Office of Management and Budget under OMB control number 0648-0097):

(i) The name, mailing address including zip code and telephone number of the owner of the vessel;

(ii) The name of the vessel;

(iii) The vessel's U.S. Coast Guard documentation number, or the vessel's State registration number for vessels not required to be documented under provisions of Title 46 of the U.S. Code;

(iv) The home port or principal port of landing, gross tonnage, radio call sign, and length of the vessel;

(v) The engine horsepower of the vessel and the year the vessel was built;

(vi) The type of construction, type of propulsion, and the type of echo sounder of the vessel;

(vii) The permit number of any current or previous Federal fishing permit issued to the vessel;

- (viii) The approximate fish hold capacity of the vessel;
- (ix) The type and quantity of fishing gear used by the vessel;
- (x) The average size of the crew, which may be stated in terms of a range; and
- (xi) The quantity of *Loligo* and *Illex* squid, Atlantic mackerel, and butterfish landed during the year prior to the year for which the permit is being applied; and
- (xii) Any other information concerning vessel characteristics requested by the Regional Director.

(3) Any change in the information specified in paragraph (b)(2) of this section must be reported by the applicant in writing to the Regional Director within 15 days of the change.

(c) *Issuance.* The Regional Director will issue a permit to the applicant no later than 30 days from the receipt of a completed application.

(d) *Expiration.* A permit will expire upon any change in vessel ownership, registration, name, length, gross tonnage, fish hold capacity, home port, or the regulated fisheries in which the vessel is engaged or on December 31 of the year for which the permit was issued.

(e) *Duration.* A permit is valid until it expires or is revoked, suspended, or modified pursuant to Subpart D of 15 CFR Part 904.

(f) *Alteration.* Any permit which has been altered, erased, or mutilated is invalid.

(g) *Replacement.* Replacement permits may be issued by the Regional Director when requested in writing by the owner or operator stating the need for replacement, the name of the vessel, and the fishing permit number assigned. An application for a replacement permit will not be considered a new application.

(h) *Transfer.* Permits issued under this part are not transferable or assignable. A permit is valid only for the fishing vessel and owner for which it is issued.

(i) *Display.* Any permit issued under this part must be carried on board the fishing vessel at all times. The operator of a fishing vessel shall present the permit for inspection upon request by any Authorized Officer.

(j) *Sanctions.* Procedures governing permit sanctions and denials are found at Subpart D of 15 CFR Part 904.

(k) *Fees.* No fee is required for any permit issued under this part.

§655.5 Recordkeeping and reporting. (Reserved)

§655.6 Vessel identification.

(a) *Official number.* Each fishing vessel subject to this part over 25 feet in length must display its official number on the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck so as to be visible from above.

(b) *Numerals.* The official number must contrast with the background and be in block Arabic numerals at least 18 inches in height for vessels equal to or over 65 feet, and at least 10 inches in height for all other vessels over 25 feet in length.

(c) The official number must be permanently affixed to or painted on the vessel. However, charter or party boats may use non-permanent markings to display the official number whenever the vessel is fishing for Atlantic mackerel, squid, or butterfish.

(d) *Duties of operator.* The operator of each vessel subject to this part shall:

(1) Keep the vessel name and official number clearly legible and in good repair; and

(2) Ensure that no part of the vessel, its rigging, its fishing gear, or any other object obstructs the view of the official number from an enforcement vessel or aircraft.

§655.7 General prohibitions.

In addition to the general prohibitions specified in §620.7 of this chapter, it is unlawful for any person to do any of the following:

(a) To fish commercially for Atlantic mackerel, squid, and butterfish without a permit issued pursuant to §655.4.

(b) To use any vessel for taking, catching, harvesting, or landing of any Atlantic mackerel, squid, or butterfish (except as provided in §655.4(a)) unless the vessel has on board a valid permit issued under §655.4.

(c) To fail to report to the Regional Director within 15 days any change in the information contained in the permit application for a vessel, as specified in §655.4(b).

(d) To falsify or fail to affix and maintain vessel markings as required by §655.6.

(e) To take and retain, or land more Atlantic mackerel, squid, or butterfish than specified under a notice issued under §655.24.

(f) To falsify the records and reports prescribed by these regulations.

(g) Violate any other provision of this part, the Magnuson Act, any notice issued under Subpart B of this part, or any other regulation or permit promulgated under the Magnuson Act.

(h) To make any false statement, written or oral, to an authorized officer, concerning the taking, catching, landing, purchase, sale, or transfer of any mackerel, squid, or butterfish.

(i) To interfere with, obstruct, delay, or prevent by any means the lawful investigation or search conducted in the process of enforcing this part.

§655.8 Facilitation of Enforcement.

See §620.8 of this chapter.

§655.9 Penalties. Any person or fishing vessel committing or used in the commission of a violation of this part is subject to the civil and criminal penalty provisions and civil forfeiture provisions of the Act and to 15 CFR Part 904 (Civil Procedures), and any other applicable laws.

Subpart B - Management Measures

§655.20 Fishing year. The fishing year is the 12-month period beginning on January 1 and ending on December 31.

§655.21 Allowable levels of harvest.

(a) *Maximum optimum yields.*

(1) The optimum yields (OYs) during a fishing year may not exceed the following amounts:

Illex	30,000 mt
Loligo	44,000 mt
Butterfish	16,000 mt

(2) For Atlantic mackerel, the maximum OY is determined in accordance with paragraph (b)(2)(ii) of this section.

(b) *Annual specifications.* Total allowable biological catch (ABC), initial optimum yield (IOY), and amounts for domestic annual harvest (DAH), domestic annual processing (DAP), joint venture processing (JVP), and total allowable level of foreign fishing (TALFF) for each species will be determined annually by the Regional Director, in consultation with the Mid-Atlantic Fishery Management Council (Council), under the procedures specified in §655.22, consistent with the following:

(1) *Squid.*

(i) Total allowable biological catch (ABC) for any fishing year is either the maximum OY specified in paragraph (a)(1) of this section, or a lower amount determined by the Regional Director, in consultation with the Council, if stock assessments or other ecological data indicate that the potential yield is less than the maximum OY level.

(ii) The IOY consists of an initial DAH and initial TALFF and represents a modification of ABC, based on economic factors. These factors must include the following:

(A) Total world export potential by squid-producing countries;

(B) Total world import demand by squid-consuming countries;

(C) U.S. export potential based on expected U.S. harvests, expected U.S. consumption, relative prices, exchange rates, and foreign trade barriers;

(D) Increased or decreased revenues to the U.S. from foreign fishing fees;

(E) Increased or decreased revenues to U.S. harvesters (with or without joint ventures);

(F) Increased or decreased revenues to U.S. processors and exporters;

(G) Increases or decreases in U.S. harvesting productivity due to decrease or increase in foreign harvest;

(H) Increases or decreases in U.S. processing productivity; and

(I) Potential impact of increased or decreased TALFF on foreign purchases of U.S. products and services and U.S.-caught fish, changes in trade barriers, technology transfer, and other considerations.

(iii) The DAH, DAP, and JVP must be based on data from sources specified in §655.22(e) and other relevant data including past domestic landings, the capacity and intent of U.S. processors to process U.S.-harvested squid, and projected amounts of squid necessary for joint ventures during the fishing year.

(iv) IOY must be set at a level that will produce the greatest overall net benefit to the United States. In determining this amount, the Regional Director, in consultation with the Council, will provide for a TALFF of at least a minimum incidental catch in other directed fisheries. TALFF

may be greater than an incidental catch level, if the IOY determined to produce the greatest overall benefit to the United States is sufficiently greater than DAH.

(A) *Loligo*: The incidental catch level is 1.0 percent of the allocated portion of the Illex, 0.04 percent of the allocated portion of the mackerel (if a directed fishery is allowed), and 0.5 percent of the allocated portions of the silver and red hake TALFFs.

(B) *Illex*: The incidental catch level is 10.0 percent of the allocated portion of the Loligo TALFF and 0.2 percent of the allocated portions of the silver and red hake TALFFs.

(v) The IOY may be adjusted by the Regional Director, in consultation with the Council, at any time during the fishing year, under §655.22(f). The basis for any adjustment may be that new information or changed circumstances indicate that U.S. fishermen will exceed the initial DAH, or that the IOY should be increased to produce maximum net benefits to the United States based upon an application of the factors above. The IOY may be increased by the amount that DAH or TALFF, or both, are increased, but IOY may not exceed ABC. An adjustment to IOY may not result in TALFF being reduced to a quantity less than that allocated to and accepted by foreign nations or to a quantity less than the incidental catch levels specified in paragraph (b) of this section.

(2) *Atlantic mackerel*. For Atlantic mackerel the maximum OY may not exceed ABC. Mackerel amounts are derived using the following terms:

C = Estimated mackerel catch in Canadian waters for the upcoming fishing year.

US = Estimated U.S. mackerel catch for the upcoming year.

S = Mackerel spawning-stock size in the year after the upcoming fishing year.

Bycatch = 0.4 percent of the allocated portion of the silver hake and red hake TALFFs and 1 percent of the allocated portion of the Loligo and 0.1 percent of the allocated portion of the Illex TALFFs.

ABC = Acceptable biological catch in U.S. waters for the upcoming fishing year.

T = Total catch in all waters (U.S. and Canadian) for the upcoming fishing year.

(i) ABC in U.S. waters for the upcoming fishing year is that quantity of mackerel that could be caught in U.S. and Canadian waters (T) minus the estimated catch in Canadian waters (C) and still maintain a spawning stock size (S) in the year following the year for which catch estimates and quotas are being prepared equal to or greater than 600,000 mt.

(A) IOY represents a modification of ABC, based on biological and economic factors, intended to provide the greatest overall benefit to the nation by incorporating all relevant factors. Examples of biological adjustments include, but are not limited to, reductions from ABC to account for availability of mackerel to the US fishery and to minimize fluctuations from year to year that could result from the biomass of a pelagic schooling species such as mackerel. Examples of economic factors include, but are not limited to, the nine criteria set forth below in (ii)(A) through (I).

(B) IOY will be specified so that the fishing mortality rate associated with T is less than or equal to $F_{0.1}$. If the Council determines that development of the U.S. fishery requires a fishing mortality rate greater than $F_{0.1}$, but still less than or equal to ABC, IOY may be set at the higher level. Such modification will be for that fishing year only and revert to $F_{0.1}$ unless modified again in subsequent years.

(ii) The IOY is composed of an initial DAH and initial TALFF. The Regional Director projects the DAH by reviewing data concerning past domestic landings, projected amounts of mackerel necessary for domestic processing and for joint ventures during the fishing year, and other data pertinent for such a projection. The recreational fishery component of DAH is determined by the equation $Y = (0.01)(X) - (166)$ where Y is the predicted recreational catch and X is the mackerel spawning stock size in the upcoming fishing year, in metric tons. The JVP component of DAH is the portion of DAH which domestic processors either cannot or will not use. In addition, this specification of IOY is based on such criteria as contained in the Magnuson Act, specifically section 201(e), and the application of the following factors --

- (A) Total world export potential by mackerel producing countries;
- (B) Total world import demand by mackerel consuming countries;
- (C) U.S. export potential based on expected U.S. harvests, expected U.S. consumption, relative prices, exchange rates, and foreign trade barriers;
- (D) Increased/decreased revenues to the U.S. from foreign fees;
- (E) Increased/decreased revenues to U.S. harvesters (with/without joint ventures);
- (F) Increased/decreased revenues to U.S. processors and exporters;
- (G) Increases/decreases in U.S. harvesting productivity due to decreases/increases in foreign harvest;
- (H) Increases/decreases in U.S. processing productivity; and
- (I) Potential impact of increased/decreased TALFF on foreign purchases of U.S. products and services and U.S. caught fish, changes in trade barriers, technology transfer, and other considerations.

(iii) The DAH, DAP, and JVP must be based on data from sources specified in §655.22(e) and other relevant data including past domestic landings, the capacity and intent of U.S. processors to process U.S. harvested squid and projected amounts of squid necessary for joint ventures during the fishing year.

(iv) IOY must be set at a level that will produce the greatest overall net benefit to the United States. In determining this amount, the Regional Director, in consultation with the Council, will provide for a TALFF of at least a minimum incidental catch in other directed fisheries. TALFF may be greater than an incidental catch level, if the IOY determined to produce the greatest overall benefit to the U.S. is sufficiently greater than DAH. The incidental level is 0.4 percent of the allocated portion of the silver and red hake, 1.0 percent of the allocated portion of the Loligo, and 0.1 percent of the allocated portion of the Illex TALFFs.

(v) The IOY may be adjusted by the Regional Director, in consultation with the Council, at any time during the fishing year, under §655.22(f). The basis for any adjustment may be that new information or changed circumstances indicate that U.S. fishermen will exceed the initial DAH, or that the IOY should be increased to produce maximum net benefits to the United States based upon an application of the factors above. The IOY may be increased by the amount that DAH or TALFF, or both, are increased, but IOY may not exceed ABC. An adjustment to IOY may not result in TALFF being reduced to a quantity less than that allocated to and accepted by foreign nations or to a quantity less than the incidental catch levels specified in paragraph (iv) of this section.

(3) Butterfish.

(i) The Regional Director will review yearly the most recent biological data, including data on discards, pertaining to the stock. If the Regional Director determines that the stock cannot support a level of harvest equal to the maximum OY, he will establish a lower ABC for the fishing year. This level represents essentially the modification of MSY to reflect changed biological circumstances. If the stock is able to support a harvest level equivalent to the maximum OY, the ABC is set at that level.

(ii) From the ABC, the Regional Director, in consultation with the Council, will determine the IOY for the fishing year. The IOY represents a modification of ABC. The IOY is composed of an initial DAH and initial bycatch TALFF. The Regional Director will project the DAH by reviewing the data concerning past domestic landings, projected amounts of butterfish necessary for domestic processing and for joint ventures during the fishing year, and other data pertinent for such a projection. The JVP component of DAH is the portion of DAH which domestic processors either cannot or will not use.

(iii) In assessing the level of IOY, the Regional Director will provide for a bycatch TALFF equal to 3.0 percent of the allocated portion of the Loligo TALFF and 0.5 percent of the allocated portion of the Illex, 0.08 percent of the allocated portion of the Atlantic mackerel, and 0.1 percent of the allocated portion of the silver and red hake TALFFs.

(iv) The IOY may be adjusted by the Regional Director, in consultation with the Council, upward to the ABC at any time during the fishing year. An adjustment may be made to IOY to accommodate DAH needs. However, TALFF may not be adjusted to a quantity less than that needed for bycatch. Any adjustments to the IOY will be published in the FEDERAL REGISTER and may provide for a public comment period.

(c) *Allowable domestic harvest.* Fish taken within State jurisdiction will be counted against the domestic harvests specified under this section. The allowable domestic harvest for each species is the OY (including OY as increased under paragraph (b)(1)(v) of this section) minus TALFF.

§655.22 Procedures for determining initial annual amounts and adjustments.

(a) On or about October 15 of each year, the Council will prepare and submit recommendations to the Regional Director of the initial annual amounts for the fishing year beginning January 1, or the continuing validity of annual specifications for the upcoming fishing year established under paragraph (g) of this section, based on information gathered from sources specified in paragraph (e) of this section. The Council may also recommend that certain ratios of TALFF to purchases of domestic harvested fish and/or domestic processed fish be established in relation to the initial annual amounts.

(b) On or about November 1 of each year, unless annual specifications have been established under paragraph (g) of this section, the Secretary will publish a notice in the FEDERAL REGISTER that specifies preliminary initial amounts of OY, DAH, DAP, JVP, TALFF, and reserve (if any) for each species. The amounts will be based on information submitted by the Council and from the sources specified in paragraph (e) of this section; in the absence of a Council report, the amounts will be based on information gathered from sources specified in paragraph (e) of this section and other information considered appropriate by the Regional Director. If the preliminary initial amounts differ from those recommended by the Council, the notice must clearly state the reason(s) for the difference(s) and specify how the revised specifications satisfy the 9 criteria set forth above for the species affected. The FEDERAL REGISTER notice will provide for a 30-day comment period.

(c) The Council's recommendation and the information listed in paragraph (e) of this section will be available in aggregate form for inspection at the office of the Regional Director during the public comment period. The Council's report on specifications established under paragraph (g) of this section will also be available for inspection at the office of the Regional Director upon receipt from the Council.

(d) On or about December 15 of each year, unless annual specifications have been established under paragraph (g) of this section, the Secretary will make a final determination of the initial amounts for each species, considering all relevant data and any public comments, and will publish a notice of the final determination and response to public comments in the FEDERAL REGISTER. If the final amounts differ from those recommended by the Council, the notice must clearly state the reason(s) for the difference(s) and specify how the revised specifications satisfy the 9 criteria set forth above for the species affected.

(e) Sources used to establish initial annual specifications include:

(1) Results of a survey of domestic processors and joint venture operators of estimated processing capacity and intent to use that capacity (approved by the Office of Management and Budget under OMB control number 0648-0114);

(2) Results of a survey of fishermen's trade associations of estimated fish harvesting capacity and intent to use that capacity (approved by the Office of Management and Budget under OMB control number 0648-0114);

(3) Landings and catch statistics;

(4) Stock assessments; and

(5) Relevant scientific information.

(f) In accordance with the procedures set forth in this section, the Council may prepare recommendations for initial annual amounts for three consecutive fishing years. These annual amounts may be adjusted upward or downward to produce the greatest overall benefit to the United States at any time prior to or during the fishing year for which the annual specifications were set.

(g) Any adjustments to the OY must be published in the FEDERAL REGISTER with the reasons for such adjustment. Any notice of adjustment may provide for a public comment period.

§655.23 Closure of the fishery.

(a) *General.* The Secretary shall close any domestic fishery in the EEZ for any species when U.S. fishermen have harvested 80 percent of the allowable domestic harvest (see §655.21(c)), if such closure is necessary to prevent the allowable domestic harvest from being exceeded. The closure will be in effect for the remainder of the fishing year.

(b) *Notice.* If the Secretary determines that a closure is necessary, he will:

(1) Notify in advance the Executive Directors of the Mid- Atlantic, New England, and South Atlantic Councils;

(2) Mail notifications of the closure to all holders of permits issued under §655.5 at least 72 hours before the effective date of the closure;

(3) Provide for adequate notice of the closure to recreational fishermen in the fishery; and

(4) Publish a notice of closure in the FEDERAL REGISTER.

(c) *Incidental catches.* During a period of closure, the trip limit for the species for which the fishery is closed is 10 percent by weight of the total amount of fish on board.

§655.24 Time and area restrictions.

(a)(1) *Directed foreign fishing restriction.* Foreign fishing, other than joint venture support by foreign vessels, shall be conducted beyond twenty miles from the baseline from which the territorial sea is measured.

(2) The Secretary shall modify the twenty mile restriction or impose northern or southern boundaries or other time or area restrictions on foreign fishing if necessary to address national security concerns.

(3) The Secretary may modify the twenty mile restriction or impose northern or southern boundaries or other time or area restrictions on foreign fishing if he determines that:

(i) the restriction will enhance the availability of fish to domestic fishermen;

(ii) the restriction will reduce the amount of the bycatch of certain nontarget species;

(iii) the restriction will reduce gear conflicts between domestic and foreign fishermen; or

(iv) the restriction will enhance the conservation and management of the fishery.

(b) *Procedure.*

(1) The Secretary shall consult with the Council prior to giving notice of any area or time restriction. The Secretary shall also consult with the Coast Guard if the restriction is proposed to reduce gear conflicts. If the Secretary determines after such consultation that the restriction is appropriate, he shall publish a notice of the restriction in the Federal Register together with a summary of the information on which the restriction is based.

(2) The Secretary may rescind any restriction if he determines that the information on which the restriction is based is no longer relevant.

(c) *Effect.* Any notice of restriction shall operate as a condition imposed on the permit issued to the foreign vessels involved in the fishery.

APPENDIX 6. COUNCIL FISHERY DEVELOPMENT POLICY (adopted 9/82, amended 11/82, 11/83, 9/87, & 6/89)

I. INTRODUCTION:

In 1983 the Mid-Atlantic Fishery Management Council developed a formal policy providing guidance for its efforts to implement the mandate of the MFCMA. This mandate includes the need to adopt measures calculated to involve the United States fishing industry in full exploitation of underutilized and non-utilized species. By adhering to this policy the Council has, so far, been successful in reaching that objective in both the butterfish and *Loligo* squid fisheries.

The experience gained in the course of the development of these fisheries includes the understanding that the Council's policy required modification from time to time in order to adjust to changes in the fishery as the development process advances.

The Council's policy has been, and will continue to be, based on certain of the Findings and Purposes contained in Section 2 of the Magnuson Fishery Conservation and Management Act of 1976, as amended:

"(a)**FINDINGS.** The Congress finds and declares the following:

"(1)The fish off the coasts of the United States, the highly migratory species of the high seas, the species which dwell on or in the Continental Shelf appertaining to the United States, and the anadromous species which spawn in United States rivers or estuaries, constitute valuable and renewable natural resources. These fishery resources contribute to the food supply, economy, and health of the Nation and provide recreational opportunities.

"(3)Commercial and recreational fishing constitutes a major source of employment and contributes significantly to the economy of the Nation. Many coastal areas are dependent upon fishing and related activities, and their economies have been badly damaged by the overfishing of fishery resources at an ever increasing rate over the past decade. The activities of massive foreign fishing fleets in waters adjacent to such coastal areas have contributed to such damage, interfered with domestic fishing efforts, and caused destruction of the fishing gear of United States fishermen.

"(4)International fishery agreements have not been effective in preventing or terminating the overfishing of these valuable fishery resources. There is danger that irreversible effects from overfishing will take place before an effective international agreement on fishery management jurisdiction can be negotiated, signed, ratified and implemented.

"(7)A national program for the development of fisheries which are underutilized or not utilized by the United States fishing industry, including bottom fish off Alaska, is necessary to assure that our citizens benefit from the employment, food supply, and revenue which could be generated thereby.

"(b) **PURPOSES.** It is therefore declared to be the purposes of the Congress in this Act

"(3)to promote domestic commercial and recreational fishing under sound conservation and management principles;

"(6)to encourage the development by the United States fishing industry of fisheries which are currently underutilized or not utilized by United States fishermen, including bottom fish off Alaska, and to that end, to ensure that optimum yield determinations promote such development."

II. POLICY

1. Section 201(e)(1) of the MFCMA reserves the final decision for foreign fishing allocations to the Secretary of State in cooperation with the Secretary of Commerce. Recognizing this provision of the Act the Council perceives its role as that of the advisor and consultant of close experience in that decision making process.

Therefore it is the policy of the Council to:

- (a) invite continuing communications with the Secretaries concerning foreign fisheries matters of mutual interest, and

- (b) to provide the Secretaries with fair and equitable recommendations for the distribution of available resources in a manner which the Council believes will be best suited to the continued development of the U.S. fishing industry.
2. Based on its prior experience in the development of the underutilized species the Council recognizes the necessity for the timely decisions which will afford interested foreign nations the opportunity to plan and organize their participation in joint ventures.

Therefore it is the policy of the Council to:

- (a) address the matter of annual allocations for the next fishing year at the earliest possible date during the current fishing year;
 - (b) to publish its decisions within a reasonable time immediately after it has reached a decision; and
 - (c) to urge the Secretaries to act on the Council's recommendations before the 1st day of October of the current fishing year.
3. Past experience has proven to the Council that a directed fishing allocation affords very little if any benefit to the development of the U.S. fishing industry.

Therefore it is the policy of the Council to:

- (a) consider only those foreign nation applications which qualify as joint ventures under the guidelines as the Council may, from time to time, establish for the conduct of such fishing activity.

III. BASIC CONSIDERATIONS AND ASSUMPTIONS

To implement this basic policy, the Council shall consider that:

1. Directed fishery allocations to foreign flag vessels (FFV) will be granted only when such allocations clearly contribute to the further and continued development and/or benefit of the United States fishing industry.
2. The term "industry" includes the harvester, processor, and marketer.
3. The Council may give preferential consideration to FFV requests for directed fishing allocations when more than one sector of the U.S. industry is beneficially involved.
4. In appraising the benefits to the United States industry the Council's considerations may include, but are not limited to, joint venture (JV) agreements, processed product purchases, fisheries oriented cooperative scientific research, and fisheries technology transfer.
5. In its efforts to develop the United States fishing industry the role of the Council is limited to formulating the general conditions and requirements necessary to making equitable allocation decisions, and, in consultation with the Regional Director, to monitor the implementing agreements to assure that the conditions are continually and mutually observed.

IV. SPECIES AVAILABILITY

1. In its effort to comply with the mandate to the Council found in Section 2(b)(6) of the Act, the Council shall focus its considerations on the identified underutilized and not utilized species for which it is responsible by Secretarial directive.
2. Once a species has been converted from underutilized to fully utilized by the U.S. industry the Council shall normally consider that species no longer available for either a JV or a directed fishery allocation.
3. For a compelling reason which cannot be anticipated in the adopting of basic policy, the Council may consider recommending either a directed or a JV allocation in a previously utilized fishery that is currently not fully utilized. In such an event the decision must be based on an extraordinary benefit to the U.S. fishing industry.
4. Section 306(c) of the Act provides for the Governor of a State to decide that a FFV may enter State waters for purposes of receiving and processing fish harvested by U.S. flag vessels.

Based on the management unit of the FMP, it shall be the policy of the Council that any product transferred under this section of the Act shall be counted against the JVP, DAH, and OY for that species whether or not the U.S. flag vessel or the foreign partner have previously applied for such an EEZ JV allocation.

The Council shall request the Regional Director to make every effort to obtain the catch data from such joint ventures.

V. PROCEDURES

The following procedures would be applied by the Mid-Atlantic Council in establishing annual harvest recommendations and should be used by NOAA/NMFS and the State Department in allocating any JVP or TALFF to foreign nations.

1. Annually determine, in consultation with appropriate committees, which fisheries are harvested, processed, marketed, and/or consumed by Americans at levels substantially below their potential in the US.
2. For each applicable fishery, determine and annually update, with industry input, the following:
 - a. impediments to increasing domestic: harvest; processing capacity and intent to use such capacity; penetration of all (US and world) markets, including consideration of structured foreign markets that preclude or inhibit US sales but still appear to accommodate markets for foreign catches in US waters; consumption..
 - b. specify how TALFF and JVP allocation could assist in increasing benefit to the US.
3. Based on such determinations, recommend JVP and TALFF specifications that will promote increasing domestic participation in any or all components of each applicable fishery. Such specifications may include recommendations for amounts of US processed fish to be purchased as part of joint venture or foreign fishing projects, on the number and location of ventures or foreign fishing, or other conditions.
4. Once TALFF and JVP recommendations are made, NMFS should make decisions consistent with general and specific guidelines provided by the Council (see Appendix). In addition, if applications for joint venture/foreign fishing projects exceed the quantities specified, NMFS shall make priority decisions based on the criteria in the FMP, as follows:
 1. total world export potential by producing countries;
 2. total world import demand by consuming countries;
 3. US export potential based on expected US harvests, expected US consumption, relative prices, exchange rates, and foreign trade barriers;
 4. increased/decreased revenues to the US from foreign fees;
 5. increased/decreased revenues to US harvesters (with/without joint ventures);
 6. increased/decreased revenues to US processors and exporters;
 7. increases/decreases in US harvesting productivity due to decreases/increases in foreign harvest;
 8. increases/decreases in US processing productivity; and
 9. potential impact of increased/decreased TALFF on foreign purchases of US products and services and US caught fish, changes in trade barriers, technology transfer, and other considerations.

Merely dividing the allocations proportionately or equally among applicants shall be considered a conflict with this policy

DEVELOPMENT POLICY APPENDIX

a. General guidelines:

- (1) the amount of projected increase in US involvement in all phases of harvesting, processing, and marketing due to the JV;
 - (2) past performance and compliance with past JV commitments and permit conditions;
 - (3) the benefits that the foreign nation offers the US fishing industry (including the extent to which the flag nation of the foreign partner: uses the particular product rather than selling it to other nations; purchases US processed products; competes with the US fishing industry in the world market; presents trade barriers to US processed fishery products; or provides overall assistance, including technology transfer to the US fishing industry);
 - (4) compliance with the MFCMA.
 - (5) Information Needed to Evaluate JV Applications.
 - A. Information on the Foreign Partner.
 - i. Vessels to be involved, including name, company or owner, length, hold capacity in tons, processing capacity, type of gear and other equipment, and violation record of those vessels.
 - B. Information on the US Partner.
 - i. Name and description of the firm; including harvesting, processing, and freezing capacity, and whether the facilities are owned or leased.
 - ii. Name and historical business background, including previous fishery experience, of the principal officers of the firm.
 - iii. Number, type, size, and NMFS permit number of US vessels participating and type and extent of commitment to JV.
 - iv. Method of harvesting.
 - C. Information on the JV.
 - i. Area JV is proposed for, specified by NMFS Statistical Areas.
 - ii. Time (beginning and ending months and years) JV is proposed for.
 - iii. Amount applied for, by species.
 - iv. If there is to be any purchase of US processed products specify: amount, form, species, processor(s) involved, and timetable.
 - v. If there is to be any technology transfer to the US partner or US harvesters, specify schedule and type of transfer (gear, quality improvement, facility development, or processing).
 - D. Information on the Flag Nation of the Foreign Partner.
 - i. Purchases (imports) of US processed fishery products by species for the two most recent calendar years.
 - ii. Import tariff rates for US fishery products.
 - iii. Import quotas or other trade barriers relating to the species involved in the JV.
 - iv. quantity of the species involved in the JV that the nation harvested, imported, and exported for each of the two most recent calendar years.
 - v. Nations to which the flag nation sold the species involved in the JV and the quantities sold by nation for each of the two most recent calendar years.
 - (6) Appropriate financial security to assure compliance with JV or TALFF permit conditions shall be required.
- b. Specific guidelines: Specific guidelines will be adopted annually by the Council viz.: amounts, dates, locations, number of operations, operational capacity, specific conditions (e.g., river herring policy).

APPENDIX 7. ABBREVIATIONS AND DEFINITIONS OF TERMS

Act (MFCMA) - the Magnuson Fishery Conservation and Management Act of 1976, as amended, 16 USC 1801 et seq.

allocated portion - that portion of the TALFF actually distributed to foreign nations.

Allowable Biological Catch (ABC) - the maximum allowable catch for a particular fishing year developed by reducing the maximum OY as necessary based on stock assessments.

Amendment - Amendment 4 to the Atlantic Mackerel, Squid, and Butterfish FMP (FMP).

Atlantic mackerel (mackerel) - the species *Scomber scombrus*.

butterfish - the species *Peprilus triacanthus*.

CFR - Code of Federal Regulations.

Council (MAFMC) - the Mid-Atlantic Fishery Management Council.

CPUE - catch per unit of effort.

Domestic Annual Harvest (DAH) - the capacity of US fishermen, both commercial and recreational, to harvest and their intent to use that capacity.

Domestic Annual Processing (DAP) - the capacity of US processors to process, including freezing, and their intent to use that capacity.

F - instantaneous rate of fishing mortality (The proportion of the population caught in a small period of time.). This mortality occurs in the presence of mortality from other causes and is usually given as averages for a year.

F_{0.1} - the rate of fishing mortality for a given method of fishing at which the increase in yield per recruit for a small increase in fishing mortality results in only 10% increase in yield per recruit for the same increase in fishing mortality from a virgin fishery.

FMP - fishery management plan.

Exclusive Economic Zone (EEZ) - the zone contiguous to the territorial sea of the US, the inner boundary of which is a line coterminous with the seaward boundary of each of the coastal States and the outer boundary of which is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured.

GIFA - Governing International Fishery Agreement.

GRT - gross registered ton.

ICNAF - International Commission for the Northwest Atlantic Fisheries (replaced by NAFO).

internal waters - marine waters landward of the territorial sea.

joint venture - an arrangement through which US fishermen transfer their catch at sea to foreign vessels.

metric tons (mt) - 2204.6 pounds.

MSY - maximum sustainable yield. The largest average catch of yield that can continuously be taken from a stock under existing environmental conditions, while maintaining the stock size.

NAFO - Northwest Atlantic Fisheries Organization.

natural mortality - deaths from all causes except fishing, including predation, senility, epidemics, pollution, etc.

NEFC - the Northeast Fisheries Center of the NMFS.

NMFS - the National Marine Fisheries Service of NOAA.

NOAA - the National Oceanic and Atmospheric Administration of the US Dept. of Commerce.

Optimum Yield (OY) - the initial annual specification amounts as determined by the Northeast Regional Director, in consultation with the Council, modifying the ABC on the basis of biological or economic considerations.

Regional Director (RD) - the Regional Director, Northeast Region, NMFS.

SA - Subarea or Statistical Area.

SSC - the Scientific and Statistical Committee of the Council.

Secretary - the Secretary of Commerce, or his designee.

squid - the species *Loligo pealei* (*Loligo* or *L. pealei*) and *Illex illecebrosus* (*Illex* or *I. illecebrosus*).

state waters - internal waters and the Territorial Sea.

stock assessment - the NMFS yearly biological assessment of the status of the resources. This analysis provides the official estimates of stock size, spawning stock size, fishing mortalities, recruitment, and other parameters used in this Plan. The data from these assessments shall constitute the "best scientific information currently available" as required by the Act.

Territorial Sea - marine waters from the shoreline to 3 miles seaward.

Total Allowable Level of Foreign Fishing (TALFF) - that portion of the Optimum Yield made available for foreign fishing.

USDC - US Department of Commerce.

year-class - the fish spawned or hatched in a given year.

yield per recruit (YPR) - the expected yield in weight from a single recruit.