REVISED FINAL

REGULATORY AMENDMENT

(INCLUDING REGULATORY IMPACT REVIEW AND ENVIRONMENTAL ASSESSMENT)

FOR THE

FISHERY MANAGEMENT PLAN FOR THE COASTAL MIGRATORY PELAGIC RESOURCES (MACKERELS) IN THE GULF OF MEXICO AND SOUTH ATLANTIC REGION

FEBRUARY 1995

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Prepared by the:

South Atlantic, Gulf of Mexico and Mid-Atlantic Fishery Management Councils

FEBRUARY 1995

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(Atlantic Migratory Group King Mackerel Trip limits)

This integrated document contains all elements of the Regulatory Amendment, Environmental Assessment (EA), Regulatory Impact Review (RIR) and Social Impact Assessment (SIA). Separate "Tables of Contents" are provided to assist the NMFS/NOAA/DOC reviewers in referencing corresponding sections of the Regulatory Amendment. Introductory information and/or background for the EA, RIR and SIA are included with the separate table of contents for each of these sections. The general public information begins on page 1; information for agency reviewers continues below.

National Environmental Policy Act (NEPA) regulations require certain information be presented to define the issues and provide a clear basis for choice among options by the decision maker and the public. The Council's documents must also conform to Magnuson Act and "Other Applicable Law" requirements. National Environmental Policy Act regulations are one of the "other applicable laws" referenced. The South Atlantic Council's policy is to consolidate Magnuson Act and "other applicable law" (including NEPA) requirements into one non-duplicative and non-repetitive document. This results in a document that is more easily read by the general public and saves large quantities of paper, reduces copying requirements and saves money on postage costs. The Council concluded this is the most cost effective and efficient manner to meet the many requirements faced in preparing a fishery management plan or amendment.

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NAME OF ACTION

(X) Administrative ( ) Legislative

SUMMARY

The proposed management program is to implement the following trip limits for Atlantic Migratory Group king mackerel:

April 1 - March 31	Volusia/Flagler to NY/CT	3,500 pounds
April 1 - October 31	Brevard/Volusia to Volusia/Flagler	3,500 pounds
April 1 - October 31	Collier/Monroe to Brevard/Volusia	50 fish

Public comments have been received at several committee and council meetings, at two scoping meetings and in letters. Appendix D contains recent letters and a summary of scoping comments.

ENVIRONMENTAL ASSESSMENT

This integrated document contains all elements of the Regulatory Amendment, Environmental Assessment (EA), Regulatory Impact Review (RIR) and Social Impact Assessment (SIA). A Table of Contents for the Environmental Assessment is provided separately to aid reviewers in referencing corresponding sections of the Regulatory Amendment.

SUMMARY

Issues and concerns to be addressed in the Environmental Assessment (EA) are: What is the best approach to stabilize yield at MSY and maintain population levels sufficient to ensure adequate recruitment? What approaches will minimize gear and user group conflicts? What is the best approach to optimize social and economic benefits?

The proposed management program is to implement the following trip limits for Atlantic Migratory Group king mackerel:

April 1 - March 31	Volusia/Flagler to NY/CT	3,500 pounds
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REGULATORY IMPACT REVIEW

This integrated document contains all elements of the Regulatory Amendment, Environmental Assessment (EA), Regulatory Impact Review (RIR) and Social Impact Assessment (SIA). Table of Contents for the EA, RIR and SIA are provided separately to aid the reviewers in referencing corresponding sections of the Regulatory Amendment.

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Introduction

The Regulatory Impact Review (RIR) is part of the process of developing and reviewing fishery management plans and amendments and is prepared by the Regional Fishery Management Councils with assistance from the National Marine Fisheries Service, as necessary. The regulatory impact review provides a comprehensive review of the level and incidence of economic impact associated with the proposed regulatory actions. The purpose of the analysis is to ensure that the regulatory agency or Council systematically considers all available alternatives so that public welfare can be enhanced in the most efficient and cost effective way.

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action, 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem, and 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in Executive Order 12866 and whether the proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act of 1980 (RFA).

Problems and Objectives

The general problems and objectives are found in the FMP (Section 1.0 and Appendix A). This regulatory amendment proposes to spread out the harvest of Atlantic Migratory Group king mackerel among the largest number of fishermen using a commercial trip limit and to protect recruitment by reducing catch during the spawning season. Further exposition of these issues are found in the discussions under the action.

Methodology and Framework for Analysis

This RIR analyzes the probable impacts on fishery participants of the proposed regulatory amendment to the Fishery Management Plan for Coastal Pelagics in the Gulf of Mexico and South Atlantic Region (FMP). The discussions for the proposed action is incorporated in the text under socioeconomic impacts. The basic approach adopted in this RIR is an assessment of management measures from the standpoint of determining the resulting changes in costs and benefits to society. The net effects should be stated in terms of producer surplus to the harvest sector, net profits to the intermediate sector, and consumer surplus to the final users of the resource.

The harvest sector refers to harvesters of Atlantic Migratory Group king mackerel and the intermediate sector to processors and dealers of Atlantic Migratory Group king mackerel. Final users of the resource are taken to refer to the individuals that derive benefits from consuming Atlantic Migratory Group king mackerel. Ideally, all these changes in costs and benefits need to be accounted for in assessing the net economic benefit to society from management of the Atlantic Migratory Group king mackerel fishery. However, lack of data does not allow for this type of analysis. The RIR attempts to determine these changes to the extent possible, albeit in a very qualitative manner.

SOCIAL IMPACT ASSESSMENT

This integrated document contains all elements of the Regulatory Amendment, Environmental Assessment (EA), Regulatory Impact Review (RIR) and Social Impact Assessment (SIA). A Table of Contents for the Social Impact Assessment is provided separately to aid reviewers in referencing corresponding sections of the Regulatory Amendment.

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Introduction

Mandates to conduct Social Impact Assessments (SIA) come from both the National Environmental Policy Act (NEPA) and the Magnuson Fishery Conservation and Management Act (MFCMA). NEPA requires Federal agencies to consider the interactions of natural and human environments by using a "systematic, interdisciplinary approach which will ensure the integrated use of the natural and social sciences...in planning and decision-making" [NEPA section 102 (2) (a)]. Under the Council on Environmental Quality's (CEQ, 1986) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act* a clarification of the terms "human environment" expanded the interpretation to include the relationship of people with their natural and physical environment (40 CFR 1508.14). Moreover, agencies need to address the aesthetic, historic, cultural, economic, social, or health effects which may be direct, indirect or cumulative (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1994).

Under the MFCMA fishery management plans (FMPs) must "...achieve and maintain, on a continuing basis, the optimum yield from each fishery" [MFCMA section 2 (b) (4)]. When considering "a system for limiting access to the fishery in order to achieve optimum yield" the Secretary of Commerce and Regional Fishery Management Councils are to consider both the social and economic impacts of the system [MFCMA section 303 (b) (6)]. More recent amendments to the MFCMA require that FMPs address the impacts of any management measures on the participants in the affected fishery and those participants in other fisheries that may be affected directly or indirectly [MFCMA section 303 (1) (9)]. Consideration of social impacts is a growing concern as fisheries experience increased participation and/or declines in stocks. With an increasing need for management action, the consequences of such changes need to be examined in order to mitigate the negative impacts experienced by the populations concerned.

Problems and Methods

Social impacts are generally the consequences to human populations that follow from some type of public or private action. Those consequences may include alterations to "the ways in which people live, work or play, relate to one another, organize to meet their needs and generally cope as members of a society...." (Interorganizational Committee on Guidelines and Principles for Social Impact Assessment, 1994:1). In addition, cultural impacts which may involve changes in values and beliefs which affect people's way of identifying themselves within their occupation, communities and society in general are included under this interpretation. Social impact analyses help determine the consequences of policy action in advance by comparing the status quo with the projected impacts. Therefore, it is extremely important that as much information as possible concerning a fishery and its participants be gathered for an assessment. Although public hearings and scoping meetings do provide input from those concerned with a particular action, they do not constitute a full overview of the fishery.

Without access to relevant information for conducting social impact analyses it is important to identify any foreseeable adverse effects on the human environment. With quantitative data often lacking, qualitative data can be used to provide a rough estimate of some impacts. In addition, when there is a body of empirical findings available from the social science literature, it needs to be summarized and referenced in the analysis.

1.0 PURPOSE AND NEED

This Regulatory Amendment to the Fishery Management Plan for the Coastal Migratory Pelagic Resources (Mackerels) was developed to spread out the harvest of Atlantic Migratory Group king mackerel among the largest number of fishermen and to provide additional biological protection. Trip limits specified in this regulatory amendment are necessary to limit the commercial user group to their allocation. The Council recognizes that the commercial allocation has not been taken since the 1988/89 fishing year. However, given the potential for a large shift in effort as a result of the recent net ban in Florida and the extensive closures in the northeast, the Council is concerned that a large increase in effort could result in the commercial user group exceeding their allocation. The South Atlantic Fishery Management Council is concerned about this resource and is proposing to implement the following commercial trip limits for Atlantic Migratory Group king mackerel:

April 1 - March 31	Volusia/Flagler to NY/CT	3,500 pounds
April 1 - October 31	Brevard/Volusia to Volusia/Flagler	3,500 pounds
April 1 - October 31	Collier/Monroe to Brevard/Volusia	50 fish

The Gulf Council does not need to approve this regulatory amendment as the framework procedure provides that "Recommendations with respect to the Atlantic groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf groups of king and Spanish mackerel will be the responsibility of the Gulf Council."

Adjustment of trip limits was added to the framework procedure in Amendment 6 (GMFMC and SAFMC, 1992):

> Section 1.2.6.1.1 D is revised as follows:
> D. If changes are needed in MSYs, TACs, quotas, bag limits, size limits, vessel trip limits, closed seasons or areas, gear restrictions, or initial permits for each stock of king or Spanish mackerel or cobia, the Councils will advise the Regional Director of the Southeast Region of the National Marine Fisheries Service (RD) in writing of their recommendations, accompanied by the assessment group's report, relevant background material, and public comment.
>
> Recommendations with respect to the Atlantic groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf groups of king and Spanish mackerel will be the responsibility of the Gulf Council. This report shall be submitted each year by such date as may be specified by the Councils.

The discussion section of Amendment 6 indicated that "Inclusion of these additional management options will provide the Councils and RD with more flexibility to respond to management needs to restore overfished stocks and achieve OY. The Gulf Council's Reef Fish FMP allows this flexibility as does Amendment 4 to the South Atlantic Council's Snapper-Grouper FMP."

Management Objectives

Objectives addressed in this amendment are presented below. (See Appendix A for a complete listing of objectives from the Fishery Management Plan for Coastal Pelagics as amended.)

- Stabilize yield at MSY, allow recovery of overfished populations, and maintain population levels sufficient to ensure adequate recruitment.
- To minimize gear and user group conflicts.
- To optimize the social and economic benefits of the coastal migratory pelagic fisheries.

Issues/Problems to be Considered

Issues/problems addressed in this amendment are as follows. (See Appendix A for a complete listing of issues/problems from the Fishery Management Plan for Coastal Pelagics as amended.)

Stabilize Yield

- What is the best approach to stabilize yield at MSY and maintain population levels sufficient to ensure adequate recruitment?

Minimize Gear and User Group Conflicts

- What approaches will minimize gear and user group conflicts? What approach will prevent the commercial user group from exceeding their allocation?

Optimize Social and Economic Benefits

- What is the best approach to optimize social and economic benefits?

History of Management

The original FMP was implemented in February 1983. Amendments 1 through 7 modified the management program. See Appendix B for details of the original FMP and Amendments 1 through 7. The present management regime for king mackerel recognizes two migratory groups, the Gulf Migratory Group and the Atlantic Migratory Group. The Gulf group is currently defined as being overfished (See Section 3.0 E.). These groups seasonally mix on the east coast of Florida. For management and assessment purposes, a boundary between groups (Figure 1) was specified which was the Volusia/Flagler County border on the Florida east coast in the Winter (November 1 - March 31) and the Monroe/Collier County border on the Florida southwest coast in the summer (April 1 - October 31).

For the purpose of allocating a limited resource among users, the management plan has set ratios based on historic unregulated catches. The Gulf Migratory Group is allocated with 68% for

recreational fishermen and 32% for commercial fishermen. The commercial allocation is further subdivided into 69% for the Eastern Zone and 31% for the Western Zone. The Atlantic Migratory Group of king mackerel is allocated with 62.9% to recreational fishermen and 37.1% to commercial fishermen.

There is a mechanism for seasonal framework adjustments (See Appendix I in Amendment 7) which provides that: "Recommendations with respect to the Atlantic groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf groups of king and Spanish mackerel will be the responsibility of the Gulf Council."

Additional information on the history of mackerel management in Florida is contained in Appendix C.

Issues/Problems Requiring Regulatory Amendment

There is some uncertainty concerning the status of Atlantic Migratory Group king mackerel. They are classified as "not overfished" based on the Council's overfishing definition and the latest stock assessment report (Stock Assessment Panel, 1994). However, input from fishermen and an examination of catch information indicate that the abundance of Atlantic Migratory Group king mackerel is not what it was in past years and fishermen have expressed concern about the biological status of this group of fish. (See Section 3.0 C. Status of the Stocks for more information.)

The problems addressed in this regulatory amendment are: (1) concern about the condition of Atlantic Migratory Group king mackerel; (2) competition/conflicts among gear and user groups; (3) potential impact on the biological status of the fishery, and potential increase in competition/conflict among gear and user groups from effort displaced by the recent ban on nets in the State of Florida and area closures in New England which could result in the commercial user group exceeding their allocation; and (4) optimizing social and economic benefits from the harvest of Atlantic Migratory Group king mackerel.

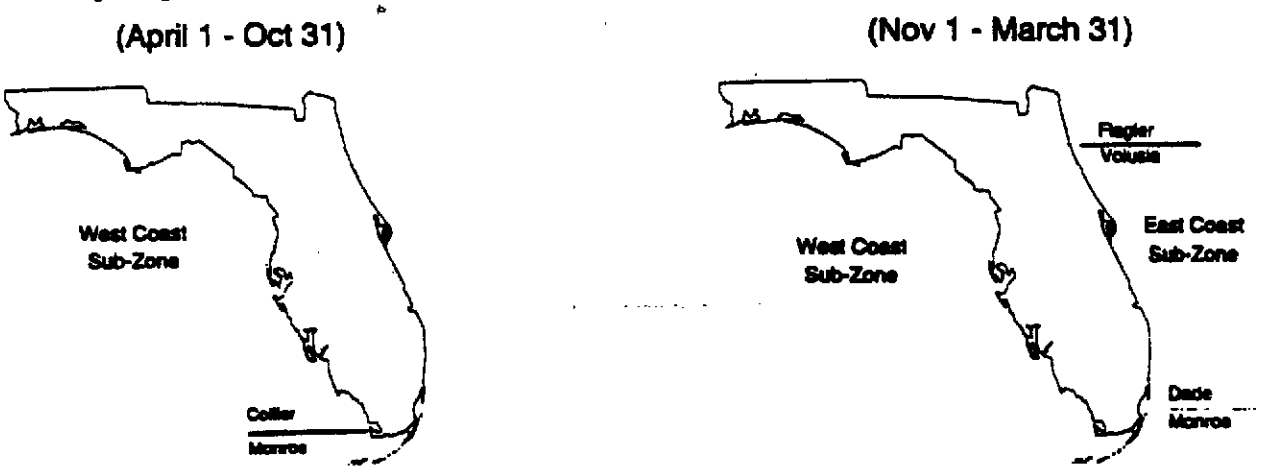

Figure 1. Seasonal boundary between Atlantic and Gulf Migratory Groups of king mackerel. Winter (November 1 - March 31) = Flagler/Volusia and Summer (April 1 - October 31) = Monroe/Collier.

2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

National Environmental Policy Act (NEPA) regulations indicate that Section 2.0 should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. The Council's documents must also conform to Magnuson Act and "Other Applicable Law" requirements. National Environmental Policy Act regulations are one of the "other applicable laws" referenced. The South Atlantic Council decided to consolidate Magnuson Act and "other applicable law" (including NEPA) requirements into one non-duplicative and non-repetitive document. The Council's approach, used successfully in Snapper Grouper Amendments 6 and 7, is to present the bulk of the evaluation of alternatives and discussion about the effects on the environment in Section 4.0 Environmental Consequences of Fisheries Activities. Section 2 Alternatives, is presented as a summary of Section 4.0. In Section 2.0, the Council makes extensive use of matrices to provide the reader with an overview of the alternatives considered and resulting environmental impacts for each management measure. The Council concluded that this meets the intent of NEPA regulatory requirements.

Management measures (proposed actions) are intended to address the management objectives and issues discussed above. Each management measure has a number of alternatives that have been considered by the Council. The following table summarizes the alternatives and how they address the problems/issues identified by the Council. Management alternatives are presented in the rows and issues/problems in the columns.

The proposed action addresses the issues/problems of (1) stabilize yield, (2) minimize gear and user group conflicts, and (3) optimize social and economic benefits. The proposed action provides the greatest access to the largest number of fishermen while protecting the continued biological productivity of the Atlantic Migratory Group king mackerel resource. The rejected options would not have provided a similar level of access and could have resulted in user group and gear conflicts. See the detailed analysis of impacts for each alternative in Section 4.0 Environmental Consequences.

Table 1. Summary of Effects of Alternatives on the Issues/Problems.

ACTION 1. TRIP LIMITS FOR ATLANTIC MIGRATORY GROUP KING MACKEREL:

ISSUES/PROBLEMS

Alternatives	Stabilize Yield	Minimize Gear & User Group Conflicts	Optimize Social & Economic Benefits
Proposed Action: Trip limits: 3,500 lb 4/1-3/31 Vol/Flagler to NY/CT; 3,500 lb Brev/Vol to Vol/Flagler 4/1-10/31; 50 fish 4/1-10/31 Collier/Mon to Brev/Vol	Provides the most biological protection by ensuring commercial allocation will not be exceeded	Prevents use of conflicting gear and minimizes introduction of non-traditional gear thereby minimizing user conflicts; ensures commercial allocation will not be exceeded	Best alternative to optimize benefits
Rejected Option 1. No Action.	Does not provide additional biological protection	Does not address problems	Does not optimize benefits
Rejected Option 2. 4/1-10/31 GA->NY 3,500 lb & Brev/Vol-> GA 1,500 lb; 4/1-6/30 Brev/Vol-> Mon/Col 50 fish; 7/1-10/31 Brev/Vol-> Mon/Col 150 fish	Provides some biological protection	Prevents some use of conflicting gear and reduces user conflicts	Does not optimize benefits
Rejected Option 3. 4/1-3/31 Brev/Vol-> NY 3,500 lb; 4/1-6/30 Brev/Vol-> Mon/Col 50 fish; 7/1-10/31 Brev/Vol-> Mon/Col 150 fish	Provides more biological protection	Prevents some use of conflicting gear and reduces user conflicts	Does not optimize benefits
Rejected Option 4. 4/1-3/31 GA->NY 3,500 lb	Provides biological protection in northern area (GA->NY)	Reduces potential user conflicts in the northern area (GA->NY)	Optimizes benefits in the northern area (GA-.NY) but not in the other areas

3.0 AFFECTED ENVIRONMENT

King mackerel is a major target species of an important commercial fishery in south Florida as well as a major target species for the private boat and charter boat recreational fishery along widespread areas within the Gulf and South Atlantic regions. Information on recreational and commercial catches are included in Section 3.0 C. Status of the Stocks. King mackerel are particularly important to the charter boat and offshore private boat fleets. In addition, smaller amounts of king mackerel are caught as a commercial supplement by the North Carolina charter boat fleet.

Recreational users have increased in numbers over time. Many come from outside the management unit as well as areas within it. Increased income, leisure time, and a wide variety of supplies have increased participation. This participation has, in turn, generated significant amounts of economic value and also employment.

Data on numbers of Atlantic king mackerel fishermen were requested from the NMFS Regional Office but this information is not available under the current permit system. The permit system can only provide the total number of vessels permitted for commercial king and Spanish mackerel which includes Atlantic and Gulf Migratory Groups of both king and Spanish mackerel (Table 2).

Table 2. Number of vessels (by state of registration) permitted for commercial king and Spanish mackerel as of 2/14/95. SOURCE: Pat Howell, NMFS SERO.

												%INCREASE
Fishing Year	NC	SC	GA	FLEC	FLWC	AL	MS	LA	TX	OTHER	TOTAL	FROM 87/88
1987/88	325	40	2	580	237	4	7	58	9	18	1,280	
1988/89	462	44	6	629	290	3	72	86	15	27	1,634	28%
1989/90	533	56	7	645	340	5	12	161	14	51	1,824	43%
1990/91	590	74	13	767	558	14	13	195	32	52	2,308	80%
1991/92	481	69	11	717	580	15	13	172	27	46	2,131	66%
1992/93	488	112	37	819	981	64	38	178	98	61	2,876	125%
1993/94	412	79	10	846	808	20	21	238	56	98	2,588	102%

The total number of permitted vessels increased from 1,280 in fishing year 1987/88 to 2,876 in fishing year 1992/93 (125% increase) and then decreased slightly to 2,588 in the 1993/94 fishing year. The average annual increase of vessels between 1987/88 and 1993/94 was 74%. Overall the number of vessels increased 104% between 1987/88 and 1993/94. The number of fishermen per vessel is unknown.

A number of assumptions can be made to refine the estimate of vessels fishing for Atlantic Migratory Group King Mackerel. If you assume that all vessels registered in North Carolina through the Florida east coast fish for Atlantic king mackerel, the number of permitted vessels was 1,347

during the 1993/94 fishing year (Table 3, Scenario No. 1). If you add one-half of the vessels registered in the Florida west coast, the number of permitted vessels was 1,751 during the 1993/94 fishing year (Table 3, Scenario No. 2). Adding all vessels in the "OTHER" category, the number of permitted vessels was 1,849 during the 1993/94 fishing year (Table 3, Scenario No. 3). For purposes of this regulatory amendment, the number of vessels fishing in the Atlantic Migratory Group king mackerel fishery is assumed to be between 1,347 (Scenario No. 1) and 1,849 (Scenario No. 3). The number of fishermen is unknown.

Table 3. Three scenarios for estimating the number of vessels permitted for commercial Atlantic Migratory Group king mackerel based on Table 2.

					Scenario	Scenario			Scenario
					No. 1	No. 2			No. 3
Fishing Year	NC	SC	GA	FLEC	TOTAL	TOTAL	FLWC	OTHER	TOTAL
1987/88	325	40	2	580	947	1,066	237	18	1,084
1988/89	462	44	6	629	1,141	1,286	290	27	1,313
1989/90	533	56	7	645	1,241	1,411	340	51	1,462
1990/91	590	74	13	767	1,444	1,723	558	52	1,775
1991/92	481	69	11	717	1,278	1,568	580	46	1,614
1992/93	488	112	37	819	1,456	1,947	981	61	2,008
1993/94	412	79	10	846	1,347	1,751	808	98	1,849
Scenario No. 1 - Atlantic king mackerel = NC through FLEC.									
Scenario No. 2 - Atlantic king mackerel = NC through FLEC + half FLWC.									
Scenario No. 3 - Atlantic king mackerel = NC through FLEC + half FLWC + Other									

Most of the commercial fishery for king mackerel is located off Florida, and most are taken there from November through March. In the area from Volusia through Dade Counties on Florida's east coast, of approximately 200 trollers, about 150 are dependent on the king mackerel fishery (GMFMC and SAFMC, 1992b). They also fish on Gulf group king mackerel from November through March or until the limited quota is filled and fishing is closed, usually in January.

Florida attempted to allocate king mackerel catches among fishermen in different geographic areas by areal subquotas and landing limits. The Florida trip limit regulations were vacated in December 1992, by a federal court ruling, and the Eastern Zone commercial quota was quickly taken in the Florida Keys with 900,000 pounds landed in a 10-day period in January, 1993. An emergency allocation of 259,000 pounds was given to Florida's east coast commercial fishermen. Boats were limited to 25-fish daily; and took the supplemental allocation between February 18 and March 27, 1993.

The habitat of king mackerel is described and was updated in Amendments 1 (GMFMC and SAFMC, 1985) and 3 (SAFMC and GMFMC, 1989). No new information is available. Additional information on the affected environment is contained in Appendix C.

In November 1994, Florida voters approved a constitutional amendment that prohibits use of gill nets or other entanglement nets for the purpose of catching or taking any saltwater finfish, shellfish, or other marine animals in any Florida waters effective July 1, 1995 (see Appendix F for actual wording). As fishermen search for alternatives, the Atlantic king mackerel fishery on the Florida east coast is one which may see a large increase in effort which could negatively impact the resource.

A. Optimum Yield

The long-term goal of optimum yield (OY) from mackerels is maximum sustainable yield (MSY). The amount of optimum yield which may be harvested annually for each species, defined as total allowable catch (TAC), may vary due to fluctuating recruitment, fluctuating abundance by area or unit of stock, intensity of fishing effort by area or unit of stock, social, economic, or ecological factors, and improved estimates of MSY (Revised Amendment 2; GMFMC and SAFMC, 1987).

The best available estimates are (in millions of pounds):

Table 4. Estimates of MSY, TAC and ABC.

	MSY	TAC	ABC RANGE
King Mackerel	26.2		
Gulf Group		7.8	1.9 - 8.1
Atlantic Group		10.0	7.6 - 10.3

Maximum sustainable yield is the level of maximum surplus production of the population. It may be a target or goal which is to be achieved. In order to reach that goal, fishing mortality rate, and, thus, the catch must be altered. The annual catch levels specified as a particular strategy for achieving the goal are the TACs. Therefore, MSY is a biologically determined level which may be the target of management, whereas, TAC is the catch level specified solely by management to realize a particular management strategy and goal.

The sum of the Atlantic and Gulf ABCs does not necessarily add up to MSY. If one group is overfished its ABC will be lower than the long-term average; the reverse is true if a group is underfished. Only if both groups are producing exactly at MSY will the sum of the ABCs from both areas equal MSY.

Acceptable biological catch (ABC) is a biological determination from which TAC is derived.

B. Definition of Overfishing

Overfishing was defined in Amendment 5 (GMFMC and SAFMC, 1990) and modified in Amendment 6 (GMFMC and SAFMC, 1992). The revised wording is as follows:

a. A mackerel or cobia stock shall be considered overfished if the spawning potential ratio (SPR) is less than the target level percentage recommended by the assessment group, approved by the Scientific and Statistical Committee (SSC), and adopted by the Councils. The target level percentage shall not be less than 20 percent. (The Councils have subsequently set a minimum index for SPR of 30 percent for king mackerel and Spanish mackerel with the 1990 seasonal adjustment based on more recent data provided by the assessment group and endorsed by the SSC.)

b. When a stock is overfished (as defined in a.), the act of overfishing is defined as harvesting at a rate that is not consistent with programs to rebuild the stock to the target level percentage, and the assessment group will develop ABC ranges based on a fishing mortality rate that will achieve and maintain at least the minimum specified spawning potential ratio (currently set at 30 percent). The recovery period is not to exceed 12 years for king mackerel beginning in 1985 and 7 years for Spanish mackerel beginning in 1987.

c. When a stock is not overfished (as defined in a.), the act of overfishing is defined as a harvest rate that if continued would lead to a state of the stock that would not at least allow a harvest of OY on a continuing basis, and the assessment group will develop ABC ranges based upon OY (currently MSY).

C. Status of the Stocks

The 1994 report of the mackerel stock assessment panel (Stock Assessment Panel, 1994) contains the latest information on stock status:

A. Atlantic Migratory Group King Mackerel - The Panel believes the Atlantic Migratory Group of king mackerel is not overfished because the fishing mortality rate is less than $F_{30\%SPR}$ and the spawning stock appears to be adequate.

Recreational and commercial catches of Atlantic Migratory Group king mackerel are shown in Table 5 (Source: Stock Assessment Panel, 1994).

The South Atlantic Fishery Management Council is concerned over the status of Atlantic Migratory Group king mackerel because:

1. Fishermen have expressed concern that, based on their observations, this group is not in as good condition as the stock assessment indicates. See letters and summary of scoping comments in Appendix D, data provided in Table 10 and the Council's conclusions beginning on page 20.

Table 5. Catches of Atlantic Migratory Group king mackerel. Source: Stock Assessment Panel (1994).

Fishing	Numbers of fish in thousands			Weight of fish in thousands of pounds			Average
Year	Com	Rec	Total	Com	Rec	Total	Weight
1979/80	249	287	536	2,169	2,685	4,854	9.06
1980/81	316	1,260	1,576	3,101	9,611	12,712	8.07
1981/82	298	720	1,017	2,570	6,385	8,954	8.80
1982/83	411	508	919	4,239	5,207	9,446	10.28
1983/84	252	669	922	2,598	5,930	8,528	9.25
1984/85	187	802	989	1,945	7,435	9,380	9.48
1985/86	232	562	794	2,485	4,911	7,396	9.31
1986/87	291	572	863	2,826	5,238	8,064	9.34
1987/88	338	513	852	3,446	3,797	7,244	8.50
1988/89	337	559	896	3,081	4,927	8,008	8.94
1989/90	280	360	640	2,635	3,224	5,859	9.15
1990/91	344	439	783	2,677	3,473	6,151	7.86
1991/92	298	534	832	2,506	4,557	7,063	8.49
1992/93	274	572	846	2,245	5,074	7,319	8.65

2. There are two estimates of maximum sustainable yield from the Atlantic Migratory Group: (a) 7.7 million pounds (1983 Stock Assessment Report) and (b) 9.7 million pounds (equilibrium production model done by Dr. Joseph Powers, NMFS SEFSC, for the 1993 Stock Assessment). Catches in Table 5 indicate that the 7.7 million pound level was exceeded from 1980/81 through 1984/85, and in fishing years 1986/87 and 1988/89. In addition, recent tagging information indicates that a larger percentage of fish in the mixing zone on the Florida east coast are from the Atlantic Migratory Group. If one assumes the tagging data are correct, which implies that approximately 80% of the king mackerel in the mixing zone are Atlantic Migratory Group, the estimated maximum sustainable yield of 7.7 million pounds would have been exceeded in every fishing year from 1985/86 through 1992/93 except the 1989/90 and 1990/91 fishing years when the catches were 6.6 and 7.3 million pounds respectively (Table 6). The 9.7 million pound level was exceeded only in 1980/81, a time when the recreational catch estimate is suspect (Table 6).

3. Effort increased significantly in 1986 with the introduction of drift gill nets. In an underutilized fishery catches would be expected to increase with such a large increase in effort. Actual catches (Table 6, Atlantic stock catch) increased from 7.4 million pounds in 1985/86 (prior to the introduction of drift gill nets) to 8.1 million pounds in 1986/87 (the first year drift gill nets were used) and then declined to 7.2 million pounds in 1987/88 (the second year of drift gill net use). These catches are within the range of catches from 1981/82 onwards, and the 8.1 million pounds in 1986/87 was slightly above the 7.9 million pound average from 1979/80 through 1992/93 fishing years. The 8.1 million pound catch in 1986/87 equaled the average from 1985/86 through 1992/93

assuming 80% of the fish in the mixing zone are Atlantic Migratory Group (Table 6). The lack of any significant increase in catch with a large introduction of fishing effort leads to the conclusion the fishery is fully utilized.

4. There is the potential for a large shift in effort as the result of the recent net ban in Florida and extensive closures in the northeast. Depending on the magnitude of new fishermen entering the Atlantic Migratory Group king mackerel fishery, the commercial allocation could be exceeded adversely impacting the resource.

5. Tagging studies indicate a north to south migration during the spawning season from the Carolinas to south Florida. King mackerel spawning in south Florida whose larvae are carried north with the Gulf Stream may provide a disproportionate number of new recruits to the population.

Table 6. Atlantic migratory group king mackerel catches.

Atlantic Stock catch (thousands of pounds)				Gulf Stock catch in mixing zone.				
	Recreational	Commercial	Total	Recreational	Commercial	Total	80% Total	Grand Total
1979/80	2,169	2,685	4,854		1,118			
1980/81	3,101	9,611	12,712		2,528			
1981/82	2,570	6,385	8,954		3,393			
1982/83	4,239	5,207	9,446		1,921			
1983/84	2,598	5,930	8,528		1,274			
1984/85	1,945	7,435	9,380		1,382			
1985/86	2,485	4,911	7,396	796	943	1,739	1,391	8,787
1986/87	2,826	5,238	8,064	384	508	892	714	8,778
1987/88	3,446	3,797	7,244	432	361	793	634	7,878
1988/89	3,081	4,927	8,008	767	425	1,192	954	8,962
1989/90	2,635	3,224	5,859	557	367	924	739	6,598
1990/91	2,677	3,473	6,151	711	694	1,405	1,124	7,275
1991/92	2,506	4,557	7,063	870	714	1,584	1,267	8,330
1992/93	2,245	5,074	7,319	1,382	277	1,659	1,327	8,646
Averages	2,752	5,175	7,927					
Averages (81/82-92/93)	2,771	5,013	7,784					
Averages (85/86-92/93)	2,738	4,400	7,138	737	536	1,274	1,019	8,157
King Mackerel MSY = 26.2 million pounds								
Atlantic Stock MSY = 7.7 million pounds								

4.0 ENVIRONMENTAL CONSEQUENCES

A. Introduction

This section is divided into two major parts. The first part addresses management measures and alternatives considered by the Council. The second depicts the consequences of management. The regulatory impact review (RIR) analysis and information for analyses required by the Regulatory Flexibility Act are incorporated into the discussion under the proposed action and each of the alternatives. The social impact assessment analyses are presented under the "Socioeconomic" heading and in Section J.

Each Action is followed by four subheadings: Biological Impacts, Enforcement Impacts, Socioeconomic Impacts, and Conclusion. These are self explanatory with the first three presenting the impacts of each measure considered. The Council's rationale is presented under the heading "Conclusion".

B. Management Measures

ACTION 1. TRIP LIMITS FOR ATLANTIC MIGRATORY GROUP KING MACKEREL

Establish the following commercial daily possession and landing limits for Atlantic Migratory Group king mackerel:

April 1 - March 31	Volusia/Flagler to NY/CT	3,500 pounds
April 1 - October 31	Brevard/Volusia to Volusia/Flagler	3,500 pounds
April 1 - October 31	Collier/Monroe to Brevard/Volusia	50 fish

The trip limits are specified as "daily possession and landing limits" to be consistent with the existing trip limits for Atlantic Migratory Group Spanish mackerel. It is the Council's intent the 3,500 pounds specified apply for king and Spanish mackerel combined to track existing regulations in North Carolina. This would allow possession and landings of 3,500 pounds of Atlantic king mackerel or 3,500 pounds of Atlantic Spanish mackerel or 3,500 pounds of Atlantic king and Spanish mackerel combined.

Biological Impacts

Information from fishermen suggest that the majority of spawning on the Florida east coast occurs during the month of May (see letters and summary of scoping comments in Appendix D). The following information on spawning season is directly from Amendment 1 which contains the references cited (GMFMC and SAFMC, 1985):

> The spawning season in this species is protracted (Beaumariage, 1973; Ivo, 1972; Wollam, 1970) with several spawning peaks (Beaumariage, 1973). Along the Florida west coast the season is from April through November with a peak in May (Beaumariage, 1973). However, NMFS 1978 king mackerel data from Panama City indicates spawning peak in the northwest Florida area occurs in the late summer and fall (J. Finucane, pers. comm.).

Larvae and juveniles are found from May to November in U.S. waters (Berrien and Finan, 1977). Ivo (1972) observed spawning stage gonads in Brazilian waters the year round; although Menezes (1969) said the species spawns in Brazil during the first and fourth quarters.

Gonadal development and spawning appear to be correlated with some seasonally varying environmental factor such as photoperiod or temperature (Beaumariage, 1973).

The following information is directly from Finucane et al. (1986) which contains the references and figures cited:

The seasonal progression of mean GSIs and EDs indicated that king mackerel have a prolonged spawning season that varied between areas (Figs. 2-5). Peak spawning months occurred from May through September as observed in 14 ripe females from areas I, II, and IV. (Note: Area I=Texas, Area II=Louisianna-Mississippi, Area III=Northwest Florida and Area IV=North and South Carolina.). A few fish were in spawning condition as early as April and as late as October. In area I, GSIs and EDs peaked in July and August for both sexes. Area II fish had the highest GSIs and EDs for both sexes during May. In area III, GSIs for both sexes were greatest during June while EDs peaked in August. Area IV fish had the highest female GSIs and EDs during July.

Our results on the seasonal maturation and protracted spawning season of king mackerel agree closely with other studies. In waters off Florida, Beaumariage (1973) found late-maturing (stages III and IV) eggs in king mackerel from may though October. In the northeastern Gulf of Mexico (area III), Dwinell and Futch (1973) caught king mackerel larvae during the same time interval and MacGregor et al. (1981) reported early-or late-maturing ovaries from August through October. In the northwestern Gulf of Mexico off Texas (area I), Finucane and Collins (1977) and McEachran et al. (1980) noted catches of larvae from May though August, and April through October, respectively. In the area off Cape Fear, NC, to Cape Canaveral, FL, Powles collected king mackerel larvae from May through September.

The following information is directly from Noble et al. (1992) which contains the references and figures cited:

King mackerel have a prolonged spawning season off North Carolina that peaks June through August. Maturity stages of male and female king mackerel were determined for 2,157 fish from June through October, 1988 (Figure 23) and 3,094 fish from June through October, 1990 (Figure 24). In both 1988 and 1990, ripe males were found from June through September and most frequently occurred in June and July 1988 and in June and August 1990. Spent males occurred from June through October, but were most prevalent in September and October. Ripe females occurred June through September and were most prevalent June through August. Spent females occurred July through October and predominated in September and October.

The peak spawning period for king mackerel off North Carolina occurs during June through August. Ripe males and females were found June through October, but the highest percentage were found June through August. Finucane et al. (1986) found the highest GSIs and EDs for female king mackerel off the Carolinas during July. Beaumariage (1973) found peak spawning in Florida occurred June through September. Marginal increment analyses from the present study suggested annulus formation for king mackerel in North Carolina occurring in late spring or early summer based on whole otoliths and summer to early fall based on sectioned otoliths. This time frame correlates well with peak spawning period.

The average weight of Atlantic Migratory Group king mackerel as reported in the 1994 stock assessment report was 8.87 pounds (Stock Assessment Panel Report, 1994: page 17, Section V.). Ben Hartig (SAFMC Member; pers. comm.) indicated the average size fish caught in the live bait fishery on the Florida east coast is closer to 12 pounds. The 50 fish trip limit would equate to 444 or 600 pounds based on the different figures for average size. The range of 444 to 600 pounds encompasses the likely range of poundage for a 50 fish trip limit.

The 50 fish trip limit (which equates to between 444 and 600 pounds) will not impact any trips based on average catch per trip from the 1992-93 fishing year (Table 7). However, some individual catches per trip would be higher (and some lower) and resulting impacts greater than indicated using average catch per trip. Data in Table 7 are from the Florida Marine Research Institute (McKenna, 1994; included as Appendix C); they were unable to provide the actual frequency distribution of catch per trip given time constraints.

Table 7. Atlantic Migratory Group king mackerel catch, number trips and average pounds per trip for the 1992-93 fishing year. Source: McKenna (1994; included as Appendix C).

1992	Pounds	Trips	Average Pounds/Trip
April	231,192	1,229	188
May	173,528	1,304	133
June	113,131	1,344	84
July	70,792	972	73
August	144,132	1,267	114
September	118,532	1,013	117
October	46,998	547	86
November	873	19	46
December	3,092	33	94
1993			
January	2,391	20	120
February	1,965	12	164
March	416	10	42

In the absence of actual frequency distribution of catch per trip from Florida, other sources of data were explored. Ben Hartig (SAFMC member; pers. comm.) worked with two live bait hook-and-line fishermen who were cooperative and offered to provide their individual catch per trip information. Data in Tables 8A are from one fisherman and data in Tables 8B and 8C are from the other fisherman, referred to as Fisherman A and Fisherman B respectively. Data from North Carolina (Table 9) were provided by Nancie Parrick (NMFS SEFSC Miami Lab, pers. comm.) based on information from Linda Mercer (formerly with NC Division of Marine Fisheries) and Paul Phalen (NC Division of Marine Fisheries).

Table 8A. Atlantic Migratory Group king mackerel catch per trip from an individual fisherman and impacts of trip limits. Source: Information provided by Ben Hartig, SAFMC Member.

Converting 50 Atlantic king mackerel to pounds:				Number (%) of trips impacted			Pounds impacted		
	NMFS 1994	Live bait fishermen		Fisherman A	444	600	Fisherman A	444	600
	Assessment	Average		1990	8 (50%)	7 (44%)	1990	3,364	2,209
Avg. Weight	8.87	12		1991	7 (37%)	5 (26%)	1991	2,035	1,090
Weight	444	600		1992	9 (64%)	6 (43%)	1992	4,077	2,903
				1993	14 (45%)	10 (32%)	1993	6,304	4,340
Catch per trip		Pounds impacted per trip		Catch per trip		Pounds impacted per trip			
Fisherman A		Trip limit	Trip limit	Fisherman A		Trip limit	Trip limit		
1990		444 pounds	600 pounds	1992		444 pounds	600 pounds		
5-May	120			23-Apr	760	316	160		
6-May	150			24-Apr	1,160	716	560		
8-May	130			25-Apr	728	284	128		
9-May	100			26-Apr	220				
10-May	30			27-Apr	500	56			
10-May	900	456	300	28-Apr	348				
13-May	681	237	81	30-Apr	80				
14-May	1,009	565	409	2-May	520	76			
15-May	631	187	31	3-May	1,470	1,026	870		
16-May	1,117	673	517	4-May	1,315	871	715		
17-May	110			5-May	1,070	626	470		
20-May	1,051	607	451	6-May	550	106			
21-May	365			11-May	220				
22-May	1,020	576	420	13-May	68				
23-May	507	63		TOTALS	14	4,077	2,903		
28-May	150			1993					
TOTALS	16	3,364	2,209	1-Apr	250				
1991				2-Apr	260				
22-Apr	1,066	622	466	3-Apr	250				
24-Apr	220			4-Apr	250				
25-Apr	378			5-Apr	223				
26-Apr	200			23-Apr	265				
27-Apr	300			26-Apr	250				
3-May	170			27-Apr	260				
5-May	728	284	128	29-Apr	330				
6-May	80			30-Apr	570	126			
11-May	632	188	32	1-May	110				
12-May	310			May-95	300				
13-May	200			5-May	460	16			
14-May	300			6-May	143				
15-May	80			10-May	306				
16-May	1,040	596	440	11-May	370				
17-May	310			12-May	906	462	306		
18-May	624	180	24	13-May	880	436	280		
23-May	455	11		14-May	306				
24-May	598	154		15-May	1,432	988	832		
25-May	223			16-May	1,145	701	545		
TOTALS	19	2,035	1,090	17-May	953	509	353		
				18-May	600	156	0		
				19-May	770	326	170		
				20-May	610	166	10		
				21-May	1,170	726	570		
				22-May	137				
				26-May	402				
				27-May	1,071	627	471		
				29-May	1,403	959	803		
				30-May	550	106			
				TOTALS	31	6,304	4,340		

Table 8B. Atlantic Migratory Group king mackerel catch per trip from an individual fisherman and impacts of trip limits. Source: Information provided by Ben Hartig, SAFMC Member.

Converting 50 Atlantic king mackerel to pounds:				Number (%) of trips impacted			Pounds impacted		
	NMFS 1994	Live bait fishermen		Fisherman B	444	600	Fisherman B	444	600
	Assessment	Average		1990	6 (27%)	4 (18%)	1990	1,188	475
Avg. Weight	8.87	12		1991	9 (36%)	4 (16%)	1991	1,861	720
Weight	444	600		1992	9 (64%)	8 (57%)	1992	3,848	2,485
				1993	11 (37%)	8 (27%)	1993	3,485	2,073
				1994	6 (33%)	3 (17%)	1994	1,538	886
Catch per trip		Pounds impacted per trip		Catch per trip		Pounds impacted per trip			
Fisherman B		Trip limit	Trip limit	Fisherman B		Trip limit	Trip limit		
1990		444 pounds	600 pounds	1992		444 pounds	600 pounds		
19-Apr	119			21-Apr	176				
23-Apr	324			23-Apr	800	356	200		
24-Apr	318			25-Apr	1,198	754	598		
25-Apr	398			26-Apr	691	247	91		
26-Apr	718			27-Apr	444	0			
28-Apr	717	273	117	1-May	691	247	91		
29-Apr	271			2-May	697	253	97		
2-May	640	196	40	3-May	559	115			
3-May	343			4-May	1,271	827	671		
8-May	156			5-May	874	430	274		
9-May	368			6-May	1,063	619	463		
15-May	505	61		8-May	184				
16-May	443			14-May	124				
17-May	781	337	181	2-Jun	310				
19-May	138			TOTALS	14	3,848	2,485		
21-May	737	293	137	1993					
23-May	120			20-Apr	111				
25-May	472	28		25-Apr	234				
26-May	395			27-Apr	880	436	280		
29-May	113			28-Apr	795	351	195		
8-Aug	35			2-May	328				
29-Aug	109			4-May	280				
TOTALS	22	1,188	475	5-May	156				
1991				7-May	143				
20-Apr	534	90		10-May	64				
23-Apr	785	341	185	11-May	84				
24-Apr	629	185	29	12-May	878	434	278		
27-Apr	345			May-95	1,028	584	428		
29-Apr	394			14-May	331				
4-May	253			15-May	339				
6-May	400			16-May	943	499	343		
7-May	267			17-May	848	404	248		
8-May	120			18-May	843	399	243		
11-May	284			19-May	557	113			
13-May	1,095	651	495	20-May	489	45			
14-May	583	139		21-May	658	214	58		
16-May	588	144		22-May	346				
17-May	611	167	11	25-May	198				
18-May	515	71		26-May	450	6			
20-May	517	73		27-May	278				
24-May	154			30-May	324				
25-May	137			1-Jun	389				
22-Jun	133			4-Jun	118				
9-Jul	105			6-Jun	93				
19-Jul	111			3-Aug	120				
22-Jul	164			22-Aug	75				
14-Aug	149			TOTALS	30	3,485	2,073		
15-Aug	35								
16-Aug	251								
TOTALS	25	1,861	720						

Table 8C. Atlantic Migratory Group king mackerel catch per trip from an individual fisherman and impacts of trip limits. (This table is a continuation of the information presented in Table 8B). Source: Information provided by Ben Hartig, SAFMC Member.

Catch per trip		Pounds impacted per trip	
Fisherman B		Trip limit	Trip limit
1994		444 pounds	600 pounds
26-Apr	818	374	218
4-May	136		
6-May	193		
7-May	77		
10-May	491	47	
11-May	552	108	
12-May	1,073	629	473
13-May	415		
14-May	342		
15-May	473	29	
16-May	163		
18-May	334		
20-May	186		
23-May	434		
26-May	382		
27-May	307		
28-May	167		
29-May	795	351	195
TOTALS	18	1,538	886

The 50 fish limit would have impacted between 37% (1991) and 64% (1992) of Fisherman A's trips between 1990 and 1993 if the poundage trip limit was 444 pounds (Table 8A). If the poundage equivalent was 600 pounds, Fisherman A's impacts (in terms of percent of trips impacted) would have been: 44% in 1990, 26% in 1991, 43% in 1992 and 32% in 1993. Pounds impacted if the poundage equivalent was 600 pounds ranged from a low of 1,090 pounds in 1991 to a high of 4,340 in 1993.

The impacts to Fisherman B's catches would have been between 27% (1990) and 64% (1992) if the poundage trip limit was 444 pounds (Table 8B). If the poundage equivalent was 600 pounds, Fisherman B's impacts (in terms of percent of trips impacted) would have been: 18% in 1990, 16% in 1991, 57% in 1992, 27% in 1993 and 17% in 1994. Pounds impacted if the poundage equivalent was 600 pounds ranged from a low of 475 pounds in 1990 to a high of 2,485 pounds in 1992.

To the extent these catches are representative of a decline in fishing mortality, the trip limit will provide biological benefits by reducing mortality during the spawning season resulting in increased spawning and subsequent recruitment. The trip limit will also prevent any increases in catches during the spawning season resulting from a substantial number of new entrants in the

fishery, thereby providing biological protection. The trip limit will also provide a cap during the fishing year that will provide biological protection and prevent localized depletion.

The 3,500 pound trip limit will have no impact on catches in northeast Florida based on catches from Fisherman A and Fisherman B (Tables 8A, 8B and 8C).

Trip limit information is limited for states north of Florida. Based on trip data through most of September 1994, less than 1% of the trips in North Carolina would have exceeded the 3,500 pound limit (Paul Phalen, NC Division Marine Fisheries; pers. comm.). Further, based on actual catch per trip information for king mackerel combined from the 1981/82 fishing year through the 1994/95 (preliminary) fishing year, less than 1% of trips would be impacted (Table 9). The actual impacts may be slightly higher as the 3,500 pounds would apply to king and Spanish mackerel combined. It should be noted that North Carolina has a state landing law of 3,500 pounds of king and/or Spanish mackerel. Information from other states is lacking but catches are expected to be below 3,500 pounds per trip.

Table 9. Atlantic Migratory Group king mackerel catch per trip from North Carolina. Source: Information provided by Nancie Parrack, NMFS SEFSC Miami Lab based on data provided by Linda Mercer and Paul Phalen, NC Division of Marine Fisheries.

		CUMULATIVE		CUMULATIVE
INTERVAL	FREQUENCY	FREQUENCY	PERCENT	PERCENT
0-500	6,523	6,523	78.91%	78.91%
501-1000	1,209	7,732	14.63%	93.54%
1001-1500	374	8,106	4.52%	98.06%
1501-2000	99	8,205	1.20%	99.26%
2001-2500	36	8,241	0.44%	99.70%
2501-3000	10	8,251	0.12%	99.82%
3001-3500	5	8,256	0.06%	99.88%
3501-4000	4	8,260	0.05%	99.93%
4001-4500	2	8,262	0.02%	99.95%
4501-5000	2	8,264	0.02%	99.98%
5001-5500	0	8,264	0.00%	99.98%
5501-6000	0	8,264	0.00%	99.98%
6001-6500	1	8,265	0.01%	99.99%
6501-7000	0	8,265	0.00%	99.99%
7001-7500	0	8,265	0.00%	99.99%
7501-8000	0	8,265	0.00%	99.99%
8001-8500	0	8,265	0.00%	99.99%
8501-9000	0	8,265	0.00%	99.99%
9001-9500	0	8,265	0.00%	99.99%
9501-10000	0	8,265	0.00%	99.99%
10001-10500	1	8,266	0.01%	100.00%
TOTAL	8,266			

Enforcement Impacts

The proposed action is compatible with regulations in the State of North Carolina thereby promoting voluntary compliance and dockside enforcement.

The State of Florida has a special bag limit of 50 king mackerel per boat per day in the Atlantic Migratory Group fishery for persons holding a Florida resident, nonresident, or alien saltwater products license with a restricted species endorsement and a federal commercial permit to harvest king mackerel from the Atlantic Migratory Group, upon the following conditions: (a) only hook and line gear may be used to harvest such king mackerel; and (b) the king mackerel so harvested may not be possessed in, on, or above state waters outside the Atlantic fishery; and (c) the season for harvest under the special bag limit has not been closed pursuant to Rule 46-30.004. The proposed action is compatible with the 50 king mackerel limit but the 3,500 pound federal limit in northeast Florida would be inconsistent with Florida state law. Overall, the proposed action will promote voluntary compliance and dockside enforcement.

The States of South Carolina and Georgia, and the states north of North Carolina would need to adopt compatible regulations for dockside enforcement.

The proposed action is also compatible with federal regulations for Gulf Migratory Group up until the time the Gulf trip limit declines to 25 king mackerel when 75% of the east coast sub-zone quota is taken.

Socioeconomic Impacts

Catches by trip and/or gear type are only available for two live bait fishermen for a limited time period. Thus, it is impossible to estimate the impact of this action on different sizes of vessels by trip or types of gear. If such information were available the impacts on "highliner" and "marginal" fishermen could be determined. Also, there is no information to evaluate the extent of participation of Atlantic king mackerel fishermen in other fisheries and the fleet composition for Atlantic king mackerel in terms of vessel size, gear type, number of crew, etc. If such information were available, the regulatory impact review would contain such analyses. Based on conversation with the economist in the NMFS Southeast Regional Office responsible for reviewing coastal migratory pelagic resources (mackerel) plan amendments, no such data exist (Dr. John Vondruska, Industry Economist, NMFS SERO, pers. comm.).

The figures in Table 7 provide average pounds per trip on a monthly basis for the 1992– 93 fishing year. The highest average pounds per trip was 188 pounds. This means that the 50 fish (444 pounds or 600 pounds) and 3,500 pounds trip limits will not affect king mackerel fishermen. It should be noted that the values for the average pounds per trip were obtained from landings for all vessels, gear types in the fishery. These averages do not reflect trip landings by different vessels or gear types. However, data obtained from two live bait, hook and line fishermen indicate that the

proposed trip limits will impact some fishermen in Florida. The figures in Tables 8A, 8B and 8C show that a trip limit of 50 fish will impact fishermen's catches in Florida. This data only covers April and May for 1990 through 1993 for Fisherman A and April to August for 1990 through 1994 for Fisherman B. It is not known whether they are representative of landings for the rest of the fishing season and how representative they are of other fishermen's catches.

The 50 fish trip limit would have impacted between 37% (1991) and 64% (1992) of Fisherman A's trips between 1990 and 1993 if the poundage trip limit was 444 pounds. (Table 8A). If the poundage equivalent was 600 pounds, the impact on Fisherman A (in terms of percent of trips impacted) would have been between 26% (1991) and 44% (1990) from 1990 to 1994. Pounds impacted if the poundage equivalent was 600 pounds would have ranged from a low of 1,090 pounds in 1991 to a high of 4,340 pounds in 1993. It should be noted that this analysis is based on the data provided for the time period shown in Table 8A. It does not cover the entire time period (April 1 – October 31) for the 50 fish trip limit.

The impacts on Fisherman B's catches would have been between 27% (1990) and 64% (1992) if the poundage trip limit was 444 pounds (Table 8B). If the poundage equivalent was 600 pounds, the impact on Fisherman B (in terms of percent of trips impacted) would have been between 16% (1991) and 57% (1992) from 1990 to 1994. Pounds impacted if the poundage equivalent was 600 pounds would have ranged from a low of 475 pounds in 1990 to a high of 2,485 pounds in 1992. It should be noted that this analysis is based on the data provided for the time period shown in Tables 8B and 8C. It does not cover the entire time period (April 1 – October 31) for the 50 fish trip limit.

However, the trip limit does not necessarily prevent fishermen from making multiple day trips. If it is technically possible and economically feasible for king mackerel fishermen to make multiple day trips, they could minimize the impact on their total landings and hence total revenue per month or season. If this should happen, it will circumvent the intent of the action and the spawning stock may not be adequately protected by this action.

The 50 fish trip limit from Brevard/Volusia Counties to Monroe/Collier Counties (April 1 – October 31) will impact fishermen, but it is not known whether the level of impact would be the same throughout the season. However, the trip limit will provide biological protection for spawning Atlantic Migratory Group king mackerel, extend the season, maintain steady supply and stable prices. This will likely increase the long term net benefits from the fishery through increased revenues to more fishermen and regular supply of king mackerel to consumers.

The 3,500 pounds trip limit will have virtually no impact on king mackerel fishermen. Based on actual catch per trip information from North Carolina for king mackerel combined for 1981/82 fishing year through 1994/95 (preliminary) fishing year, less than 1% of trips would have been

impacted (Table 9). The actual impacts may be slightly higher as the 3,500 pounds would apply to king and Spanish mackerel combined.

Conclusion

Excluding drift gill nets, catches of Atlantic Migratory Group king mackerel by nets are rare. Amendment 3 (SAFMC and GMFMC, 1990: pg. 26) states "There is very limited traditional use of any purse seine fishery targeting Atlantic migratory group king mackerel until April 1988. In fact, no recorded catches exist although fishermen have reported sporadic catches during April in past years. During April 1988, purse seines took king mackerel in the Ft. Pierce area and directed catches were also made with run-around gillnets (Table 1; Attachment 11). These unprecedented catches possibly occurred because prolonged cool weather retained migratory king mackerel in that area later than usual, thus making the available to purse seine and run-around gillnet fishing operations (total catch for both gears was approximately 340,000 pounds)." The referenced table is included as Attachment 11 in Appendix E. Input from fishermen indicated that run-around gill net sets occurred during April 1993 and 1994.

The State of North Carolina has requested the Council consider implementing a 3,500 pound daily trip limit for Atlantic group king mackerel. A federal trip limit would complement an existing state daily trip limit of 3,500 pounds for king and Spanish mackerel combined. A 3,500 pound daily trip limit has already been implemented for Atlantic Migratory Group Spanish mackerel.

The Concerned Fishermen of Florida (CFF) proposed the following Atlantic king mackerel trip limits for Florida:

Apr 1 - Mar 31	Brevard/Volusia→NY	3,500 pounds
Apr 1 -Oct 31	Brev/Vol→Mon/Col	50 fish

The proposed action, while worded differently, accurately tracks this request. The Concerned Fishermen of Florida's goal is to extend the season through the fishing year for king mackerel fishing, while controlling the number of fish caught during spawning beginning in early April when there may still be substantial proportions of Gulf Migratory Group king mackerel south of Cape Canaveral. During spring and summer (spawning season), king mackerel tend to move south. CFF originally proposed the 50 fish bag limit for April, May, and June (see Rejected Option 2.) when the spawning rate is at its peak and the fish are concentrated. More boats have entered the fishery in the last few years, landing larger fish filled with roe. However, overall landings have been reduced during the May and August spawning runs. Hook and line fishermen are requesting a limit during this period to optimize future yield by protecting the current spawning population. They report a decline in summer stocks of fish along the east coast of Florida, particularly off Jupiter, over the last

few years. CFF originally proposed an increase from 50 to 150 fish beginning July 1 (see Rejected Option 2.) because good weather prompts the fishermen to take multiple day trips.

Florida hook and line fishermen report that fish concentrations in Palm Beach, Ft. Pierce, and Sebastian, Florida are reduced after times when the gill net fishery has operated. Although catches of Atlantic Migratory Group king mackerel are rare, fishermen report that after large catches by net boats, the king mackerel are scattered and hard to catch by hook and line. The proposed 50 fish trip limit would limit the east coast of Florida run-around gill net fishery in the rare instances when fish are still in schools due to cold weather during early April.

Drift gill nets are illegal in the Coastal Pelagics fishery but the Council has received information indicating drift gill nets have been modified to circumvent the prohibition and were being used to harvest king mackerel. The 50 fish trip limit will provide additional restrictions on the use of illegal drift gill nets. The Council will specify allowable gear in Amendment 8 to the fishery management plan which will provide further effectiveness in prohibiting use of drift gill nets.

The Florida State net ban was approved and will become effective July 1, 1995 (Appendix F). The proposed 50 fish trip limit will limit additional fishing effort which could shift into the king mackerel fishery in federal waters and ensure the commercial allocation is not exceeded.

Catches from Palm Beach County from 1982 through 1993 were presented to the Council and document declines in the Atlantic Migratory Group king mackerel fishery. Further, the data show that the fishery is still depressed south of the area where the drift gill nets operated prior to them being prohibited (Table 10). The months of April-September are the spawning season when the fish migrate to south Florida from the north. Fishermen are concerned that the fishery has not rebounded since the drift gill nets were banned. There is a lot of pulse pressure on those fish when they come into south Florida and there are a lot of king mackerel permits that are only used when the fish come into this area to spawn. These fishermen are not full-time king mackerel fishermen and their seasonal entry into the fishery results in user group conflicts.

The catches shown in Table 10 are only from Palm Beach County and were used because the spawning season run which starts in late April in Palm Beach County is the center of abundance for this group of fish. The catches primarily occur off of the Jupiter area which is south of Ft. Pierce where the drift net fleet fished extensively while it was legal. Another point to note from these data is that the fishermen have no net caught fish in any of the data—it is all caught by hook and line. The catch data in Table 10 was grouped into two time periods April-June and July-September. Each of these time periods has incorporated within it a spawning peak which fishermen refer to as the May and August runs. Using 1982-1986 as the historical period, which was prior to any significant catches by drift gill nets, average catch for the April-June period was 179,507 pounds (Table 10). Drift gill nets started in 1986, increased in 1987 and continued until they were prohibited in 1991. The average catch for those four years was 121,071 pounds which was a 33% reduction in the hook

Table 10. Atlantic migratory group king mackerel catches from Palm Beach, Florida. Source: NMFS.

KING MACKEREL CATCHES FROM PALM BEACH COUNTY													
YEAR	APRIL	MAY	JUNE	SUBTOT	AVERAGE	PERIOD AVERAGES	JULY	AUGUST	SEPT	SUBTOT	AVERAGE	PERIOD AVERAGES	TOTAL
1982	249,527	783,602	59,112	1,092,241	364,080		137,470	248,606	10,391	396,467	389,540		1,488,708
1983	2,433	408,149	104,146	514,728	171,576		8,850	50,573	435	59,858	59,568		574,586
1984	7,734	135,876	26,618	170,228	56,743		17,439	167,853	90,738	276,030	215,538		446,258
1985	115,987	301,383	33,950	451,320	150,440		86,670	79,193	1,548	167,411	166,379		618,731
1986	130,189	310,899	22,998	464,086	154,695	179,507	58,110	172,276	7,328	237,712	232,828	212,771	701,798
1987	98,891	193,642	37,996	330,529	110,176		14,086	34,248	9,643	57,977	51,548		388,506
1988	116,508	280,432	16,795	413,735	137,912		2,166	23,322	1,561	27,069	26,028		440,804
1989	39,678	270,901	17,017	327,596	109,199		22,685	41,727	3,286	67,698	65,507		395,294
1990	53,491	286,829	40,669	380,989	126,996	121,071	9,285	9,379	3,347	22,011	19,780	40,716	403,000
1991	89,396	197,951	3,534	290,881	96,960		11,085	10,491	2,380	23,956	22,369		314,837
1992	72,360	95,499	25,519	193,378	64,459		2,200	5,663	10,135	17,998	11,241		211,376
1993	84,392	287,500	18,151	390,043	130,014	97,145	4,166	24,460	7,059	35,685	30,979	21,530	425,728
% REDUCTION 87-90 FROM 82-86 =				32.55%				% REDUCTION 87-90 FROM 82-86 =				80.86%	
% REDUCTION 91-93 FROM 82-86 =				45.88%				% REDUCTION 91-93 FROM 82-86 =				89.88%	

and line fishery that is suspected to have been caused by the introduction of drift gill nets. During 1991-1993 after the drift gill net prohibition, average catches were 97,145 pounds which is still a 46% reduction from the historical levels. This supports the fishermen's concern that the portion of the Atlantic Migratory Group that migrates to south Florida was not in as good a shape as the stock assessment concluded. The 50 fish trip limit will reduce mortality on that group of fish during this time period.

There is also a run of fish during July-September and these catches are also shown in Table 10. The historical average from 1982-1986 for the July-September time period was 212,771 pounds. After drift gill nets were fished for four years, the catches were reduced to 40,716 pounds on average which is an 81% reduction in catch for the August run. The catch has continued to decline even with the prohibition of drift gill net gear. Catch has declined for the recent several years to an average of 21,530 pounds or a 90% reduction in catch. Fishermen are still concerned about the August run of fish that have not returned in any number. In fact, catches have continued to decline. The trip limit will go a long way to help rebuild this group of fish.

The Council concluded that the 50 fish trip limit in Florida and the 3,500 pound trip limit from the Brevard/Volusia County line through New York will provide biological protection to help stabilize yield, will ensure new effort does not result in the commercial allocation being exceeded, will minimize gear and user group conflicts that are occurring and those that would occur with a shift in effort resulting from the net ban in the State of Florida and area closures in New England, and will optimize social and economic benefits from the Atlantic Migratory Group king mackerel fishery.

Rejected Options for Action 1

Rejected Option 1. No action.

Biological Impacts

The no action option would not provide a cap on fishing mortality and would not prevent the expected increase in fishing mortality resulting from effort shifting out of the State of Florida and possibly out of the New England area.

Enforcement Impacts

The no action option would not result in compatible regulations with the State of North Carolina but would be consistent with regulations in the other states except Florida where a 50 fish king mackerel per boat per day limit is in effect.

Socioeconomic Impacts

The no action option would result in negative long-term impacts as the stock was overfished and yield declined. This could lead to unstable prices, irregular supply and reduction in revenue to fishermen and fish dealers. Consumers will also be affected by price instability and irregular supply.

Conclusion

The Council rejected the no action option because it would not stabilize yield, would not minimize gear and user group conflicts and would not optimize social and economic benefits because the resource would be overfished and long-term yield would decline.

Rejected Option 2. Concerned Fishermen of Florida (CFF) original proposal:

Apr 1 - Oct 31	GA→NY	3,500 pounds
	Brevard/Volusia County→GA	1,500 pounds
Apr 1 - Jun 30	Brev/Vol→Monroe/Collier	50 fish
Jul 1 - Oct 31	Brev/Vol→Mon/Col	150 fish

Biological Impacts

The average weight of Atlantic Migratory Group king mackerel as reported in the 1994 stock assessment report was 8.87 pounds (Stock Assessment Panel Report, 1994: page 17, Section V.). Ben Hartig (SAFMC Member; pers. comm.) indicated that the average size fish caught in the live bait fishery on the Florida east coast is closer to 12 pounds. The 50 fish trip limit would equate to 444 or 600 pounds based on the different figures for average size; the 150 fish trip limit would equate to 1,331 or 1,800 pounds. See the discussion under the proposed action for the biological impacts of the 50 fish trip limit during April through June. The 150 fish trip limit would not reduce fishing mortality based on the average catch per trip data shown in Table 7 (or in Figure 3 in Appendix C). Fisherman A's catches would only have been impacted on two trips during 1992 and one trip during 1993 if the 150 fish equated to 1,331 pounds (Table 8A); no trips would have been impacted if the equivalent weight was 1,800 pounds per trip. None of Fisherman B's catches would have been impacted (Tables 8B and 8C). In addition, this level of catch is so much higher than the vast majority of observed catches that it would allow for increased mortality from the continued illegal use of prohibited drift gill nets and potential effort shifts from the State of Florida and New England.

Enforcement Impacts

See the discussion under the proposed action.

Socioeconomic Impacts

The 150 fish trip limit will be equivalent to 1,331 or 1,800 pounds. Two of Fisherman A's trips would have been impacted during 1992 if the trip poundage was 1,331 pounds. No trip would

have been impacted if the trip poundage was 1,800 pounds (Table 8A). None of Fisherman B's trips would have been impacted with the 150 fish trip limit (Tables 8B and 8C). The same discussion for the proposed action obtains for the 50 fish trip limit (April 1 – June 30). The 3,500 pounds and 1,500 pounds trip limits would have virtually no impact on king mackerel fishermen. However, this option will not address the potential shift of effort to this fishery as a result of the Florida net ban and will also not reduce the high level of mortality on the spawning stock.

Conclusion

The Council rejected this option because portions of it are included in the proposed action and because the higher trip limits of 150 fish and 1,500 pounds would not stabilize yield, would not minimize gear and user group conflicts and would not optimize social and economic benefits because the resource would be overfished and long-term yield would decline.

Rejected Option 3. Modified CFF proposal:

Apr 1 - Mar 31	Brevard/Volusia→NY	3,500 pounds
Apr 1 - Jun 30	Brev/Vol→Mon/Col	50 fish
Jul 1 - Oct 31	Brev/Vol→Mon/Col	150 fish

Biological Impacts

See the discussions under Rejected Option 2 and the proposed action.

Enforcement Impacts

See the discussion under the proposed action.

Socioeconomic Impacts

See the discussions under the proposed action and Rejected Option 2.

Conclusion

The Council rejected this option because portions of it are included in the proposed action and because the higher trip limit of 150 fish would not stabilize yield, would not minimize gear and user group conflicts and would not optimize social and economic benefits because the resource would be overfished and long-term yield would decline.

Rejected Option 4. North Carolina proposal.

Apr 1 - Mar 31 GA→NY 3,500 pounds

Biological Impacts

The 3,500 trip limit would not apply in Florida, therefore, there would be no reduction in fishing mortality. In addition, this option would allow for increased mortality from the continued illegal use of prohibited drift gill nets and potential effort shifts from the State of Florida and the New England area.

Enforcement Impacts

This option would be consistent with regulations in the State of North Carolina thereby promoting voluntary compliance and dockside enforcement. The States of South Carolina and Georgia would have to adopt similar regulations to be consistent and result in dockside enforcement.

Socioeconomic Impacts

There would be no negative impacts in the State of North Carolina because this is consistent with state regulations. Catches from federal waters do not exceed this level and the state 3,500 pound trip limit is enforced as a landing law regardless of where the fish were harvested. Landings statistics indicate that catches are well below this level off the States of South Carolina and Georgia. Taking no action in the State of Florida would result in negative long-term impacts as the stock became overfished and yield declined.

Conclusion

The Council rejected this option because portions of it are included in the proposed action and because the lack of trip limits in Florida would not stabilize yield, would not minimize gear and user group conflicts and would not optimize social and economic benefits because the resource would be overfished and long-term yield would decline.

C. Unavoidable Adverse Effects

Without trip limits, fishing effort would increase, the commercial allocation could be exceeded and catches of Atlantic Migratory Group king mackerel would ultimately decline. The stock assessment does not classify this group as overfished but there is concern over the status of the Atlantic Migratory Group (see Section 3.0 C Status of Stocks). The Council concluded that if fishing mortality were allowed to increase, the fishery for this migratory group could ultimately collapse.

Implementation of the trip limits for Atlantic Migratory Group king mackerel will have some impacts on fishermen. Available catch per trip information (Tables 8A, 8B and 9) indicate that between 37% and 64% of the trips taken by Fisherman A during the months of April and May will be affected by a 50 fish trip limit if the average weight of king mackerel is 8.87 pounds, and 27% to 64% of Fisherman B's trips will be affected over a longer time period within the fishing year. If the average weight of king mackerel is 12 pounds, 26% to 44% of Fisherman A's trips will be affected for those months, and 16% to 57% of Fisherman B's trips will be affected over a longer time period within the fishing year. Less than 1% of the trips in North Carolina would be affected by the 3,500 pound trip limit.

The trip limits will provide a cap for likely increases in fishing mortality, some of which would be during the spawning season which should prevent growth and recruitment overfishing and will ultimately lead to a stabilization of yield near maximum sustainable yield.

D. Relationship of Short-term Uses and Long-term Productivity

Short-term users will be impacted slightly. This level of impact is necessary to protect the Atlantic Migratory Group of king mackerel and to ensure the long-term productivity of this important migratory group. Without these trip limits, the long-term yield would be jeopardized.

The Council weighed the short-term losses to fishermen against the long-term productivity and stability of this fishery and concluded that the proposed action would result in net long-term benefits to society.

E. Irreversible and Irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments of resources associated with the proposed actions. If the Council had not taken action to cap fishing mortality on this migratory group of king mackerel, substantial reductions in catches and future net long-term benefits would be expected.

F. Effects of the Fishery on the Environment

Damage to Ocean and Coastal Habitats

The proposed actions, and their alternatives, are not expected to have any adverse effect on the ocean and coastal habitats. The habitat of king mackerel is described and was updated in Amendments 1 (GMFMC and SAFMC, 1985) and 3 (SAFMC and GMFMC, 1989). No new information is available.

The fishery, as presently prosecuted, does not substantially impact the live bottom habitat that is essential to the coastal migratory pelagic resources (mackerels) under Council management. The Council will continue to monitor the fishery and if it becomes apparent that a particular gear or

fishing practice results in habitat damage, action will be proposed through the framework procedures to mitigate or minimize damage.

Public Health and Safety

The proposed action, and their alternatives, are not expected to have any substantial adverse impact on public health or safety.

Endangered Species and Marine Mammals

The proposed action, and their alternatives, are not expected to affect adversely any endangered or threatened species or marine mammal population.

Cumulative Effects

The proposed action, and their alternatives, are not expected to result in cumulative adverse effects that could have a substantial effect on the coastal pelagics resource or any related stocks, including sea turtles.

G. Summary of Expected Changes in Net Benefits (Summary of Regulatory Impact Review-RIR)

ACTION	POSITIVE IMPACTS	NEGATIVE IMPACTS	NET IMPACTS
Action 1. Trip limits	Provides the most biological protection Ensures commercial allocation not exceeded	Will have some negative impact on fishermen	Ensure long-term benefits. Possible increase in future net benefits
Rejected Option 1. No Action.	None	Possible loss in benefits in the long-term	Possible reduction in long-term benefits
Rejected Option 2. CFF Original Proposal	Provides some biological protection & prevents gear and user group conflict	Possible loss in benefits in the long-term due to decline in stock levels	Possible reduction in long-term benefits
Rejected Option 3. Modified CFF Proposal	Provides more biological protection & prevents gear and user group conflict	Possible loss in benefits in the long-term due to decline in stock levels	Possible reduction in long-term benefits
Rejected Option 4. North Carolina Proposal	Provides biological protection & reduces potential conflicts in northern area (GA->NY)	Possible loss in benefits in the long-term within Florida	Possible reduction in long-term benefits

This Regulatory Amendment is not significant under Executive Order 12866.

H. Public and Private Costs

The preparation, implementation, enforcement and monitoring of this and any federal action involves expenditure of public and private resources which can be expressed as costs associated with the regulation. Costs associated with specific actions in this regulatory amendment are shown on the next page. NMFS law enforcement indicated that there would be no additional enforcement costs for this Regulatory Amendment.

Council costs of document preparation, meetings, public hearings and information dissemination	$5,000
NMFS administrative costs of document preparation, meetings and review	$2,500
NMFS law enforcement costs (costs should decline in Florida & North Carolina)	$0
Total	$7,500

Enforcement costs in the States of Florida and North Carolina will decline because regulations will be enforced dockside; the proposed action will bring federal trip limit regulations into conformance with regulations in the States of Florida and North Carolina.

I. Effects on Small Businesses

Introduction

The purpose of the Regulatory Flexibility Act is to relieve small businesses, small organizations, and small governmental entities from burdensome regulations and record keeping requirements. The category of small entities likely to be affected by the proposed plan is that of commercial Atlantic Migratory Group king mackerel fishermen. The impacts of the proposed action on these entities have been discussed in Section 4. The following discussion of impacts focuses specifically on the consequences of the proposed action on the mentioned business entities. A "threshold-type analysis" is done to determine whether the impacts would have a "significant or non-significant economic impact on a substantial number of small entities." If impacts are determined to be significant, then an Initial Regulatory Flexibility Analysis (IRFA) is conducted to analyze impacts of the proposed action and alternatives on individual business entities. In addition to analyses conducted for the Regulatory Impact Review (RIR), the IRFA provides an estimate of the number of small businesses affected, a description of the small businesses affected, and a discussion of the nature and size of the impacts.

Determination of Significant Economic Impact on a Substantial Number of Small Entities

In general, a "substantial number" of small entities is more than 20 percent of those small entities engaged in the fishery (NMFS, 1991). For all south Atlantic states, there were between 1,347 and 1,849 vessels permitted for the Atlantic Migratory Group king mackerel fishery. The Small Business Administration (SBA) defines a small business in the commercial fishing activity as a firm with receipts of up to $2.0 million annually. All holders of Atlantic Migratory Group king mackerel permits readily fall within the definition of small business. Since the proposed action will directly and indirectly affect many of these permittees, the "substantial number" criterion will be met.

Economic impacts on small business entities are considered to be "significant" if the proposed action would result in any of the following: a) reduction in annual gross revenues by more than 5%; b) increase in total costs of production by more than 5% as a result of an increase in compliance costs; c) compliance costs as a percent of sales for small entities are at least 10% higher than compliance costs as a percent of sales for large entities; d) capital costs of compliance represent a significant portion of capital available to small entities, considering internal cash flow and external financing capabilities; or e) as a rule of thumb, 2% of small business entities being forced to cease business operations (NMFS, 1991).

The Council examined the following action and alternatives: (1) Trip limits for Atlantic Migratory Group king mackerel.

Given that for this action (a) any impact would likely be equivalent to much less than a 5% reduction in annual gross revenues, (b) any increase in compliance costs would be much less than a 5% increase in total costs of production, (c) all entities involved are small entities, (d) capital costs of compliance represent a very small portion of capital, and (e) no entities are expected to be forced to cease business operations, the Council determined that the resulting impacts will not have a significant economic impact on a substantial number of small entities, therefore, this regulatory amendment is not significant under Executive Order 12866.

Explanation of Why the Action is Being Considered

Refer to Section 1.0, Purpose and Need. This regulatory amendment addresses: (1) concerns about the condition of the Atlantic Migratory Group of king mackerel, (2) competition and/or conflicts among gear and user groups, (3) potential impacts on the biological status of the fishery and potential increases in competition/conflict among gear and user groups from effort displaced by the recent ban on nets in the State of Florida and fishing area closures in New England which could result in the commercial user group exceeding their allocation, and (4) optimizing social and economic benefits from the harvest of Atlantic Migratory Group king mackerel.

Objectives and Legal Basis for the Rule

Refer to Section 1.0 and Appendix A for the Management Objectives. Objectives addressed in this amendment are: (1) Stabilize yield at MSY, allow recovery of overfished populations, and maintain population levels sufficient to ensure adequate recruitment, (2) To minimize gear and user group conflicts, and (3) To optimize the social and economic benefits of the coastal migratory pelagic fisheries. The Magnuson Fishery Conservation and Management Act of 1976 as amended provides the legal basis for the rule.

Demographic Analysis

Refer to Amendment 1 (GMFMC and SAFMC, 1985) and Section 3.0 of this regulatory amendment. Data on fishermen are very limited.

Cost Analysis

Refer to the summary of the impacts (Section 4.0, Subsections F, G and J and the summary of government costs (Section 4.0, Subsection H. The Council concluded that the benefits of the preferred alternative outweighs the costs.

Competitive Effects Analysis

The industry is composed entirely of small businesses (harvesters and fish houses). Since no large businesses are involved, there are no disproportional small versus large business effects.

Identification of Overlapping Regulations

The proposed action does not create overlapping regulations with any state regulations or other Federal laws.

Conclusion

The proposed measure will not have a significant effect on small businesses. Therefore, an initial regulatory flexibility analysis (IRFA) is not required.

J. Social Impact Assessment

Proposed Actions and Review of Social Impacts

In attempting to assess the social impacts of the proposed amendment it must be noted that there was very little information upon which to base such an assessment. A review of scoping meetings, public hearings and committee meetings, in addition to a review of the economic impacts, provided the bulk of the information used for this survey of possible social impacts. Personal communications by staff with industry personnel were used to help define the population of concern and determine some of the impacts. Data used for this analysis did not represent a comprehensive overview of the fishery therefore the analysis does not include all social impacts. What little information was available pertains primarily to the commercial harvesting sector, so, social impacts upon non-commercial harvesters, the processing sector, the consumer and society as a whole are not fully addressed due to data limitations.

McKenna (1994) identified the number of fishermen in Florida reporting landings of king mackerel (based on Saltwater Products Licenses) from 1987 to 1993 as varying from 1,500 to

2,222. From 1986 to 1990 the number of commercial permits for Atlantic migratory group king mackerel ranged from a high of 888 in 1989/90 fishing season to low of 785 in the 1987/88 fishing year (see Appendix E, attachment 4). The percentage of those permits which were hook and line fishermen for those years ranged from 89% in 86/87 to 78% in 1990 (see Appendix E, attachment 4). Present data indicate there were 1654 vessels permitted for commercial king mackerel and Spanish mackerel in Florida for the 1993-94 fishing year (Table 2). The number of permitted vessels was divided with 846 and 808 allocated to the East and West coasts respectively. How many of those vessels landed king mackerel is unknown at this time. Catch per unit of effort data seems fairly consistent for the southeastern region of the Atlantic group king mackerel with an average CPUE of between 200-300 lbs/trip (McKenna, 1994). Most of the commercial landings of Atlantic group king mackerel are made by hook and line fishermen (McKenna 1994) There was evidence of a net fishery in the past prior to the prohibition of drift gill nets. The extent of present participation comes from anecdotal information which suggests in some years with cold spring weather and the continued bunching of king mackerel large run around gill net boats may fish the Atlantic group.

There is a commercial fishery which exists outside Florida, primarily in North Carolina. From 1986 to 1990 the number of permits for Atlantic group king mackerel issued in North Carolina ranged from a low of 325 in 1987/88 to a high of 533 in 1989/90 (Table 2). Again, the majority of those permits were granted to hook and line fishermen (see Appendix E, attachment 4). Present data indicates there were 412 commercial vessels permitted for king and Spanish mackerel in North Carolina (Table 2). There were 10 permitted vessels in Georgia and 79 in South Carolina (Table 2).

McKenna (1994) identified over 200 dealers in Florida who had handled king mackerel since 1987. In 1992 there were 240 who reported landings of king mackerel. Most of those dealers purchased king mackerel ten or fewer times per season and handled less than 5000 pounds. There were over twenty dealers who handled 100,000 pounds or more during the 1992 season.

King mackerel are important to the recreational fishery and may become increasingly important for certain sectors within the recreational fishery. There is insufficient data to determine the extent of that shift in importance.

Action 1. Trip limits for Atlantic migratory group king mackerel

Hook and line fishermen have expressed a general concern over the past and future impact of nets within the Atlantic king mackerel fishery. The perceived negative impact of net fishing on the Atlantic king mackerel stock has prompted this segment of the harvesting sector to call for limits on fishing effort. By establishing a 50 fish per trip limit during April 1 to October 31 from the Brevard/Volusia county line to the Monroe/Collier county line the first component of this action will diminish conflict over use of gear by eliminating the potential for net fishing of Atlantic king

mackerel in this area. The trip limit may also extend the season for hook and line fishermen providing a steady supply and stable prices.

Given the ban placed on nets in Florida state waters and the earlier prohibition of drift nets by the South Atlantic Council, it is unlikely that gill net fishers will shift effort using that gear type to a fishery where they would be limited to 50 fish. With the limited data available it is impossible to know the extent of the impacts that may be experienced by those whose potential effort may have shifted to this fishery.

According to personal communications with staff, letters received and testimony at hearings some hook and line fishermen will be affected by the 50 fish limit. Tables 8A, 8B and 8C indicate that live bait fishermen would be impacted by the 50 fish trip limit. A substantial number of trips for fisherman A would be impacted according to Table 8A. Fisherman B would also experience some impacts according to Tables 8B and 8C, but would have fewer trips impacted. Under the proposed action both fishermen would have to make repeated trips daily to match their current pounds landed which would lower their catch per unit of effort (CPUE). The increased costs and time associated with making more than one trip per day may discourage fishermen from this strategy. If multiple trips are not an option then high grading by discarding smaller fish may be practiced to keep CPUE high. Fishermen may also transfer fish over the limit at sea which would make future individual CPUE data questionable.

The 50 fish trip limit does not prevent multiple trips/day nor does it prevent an overall increase in effort within the hook and line portion of the fishery. It is likely that displaced gill net fishermen will change gear and join the present group of hook and line fishermen. It is also likely that multiple trips per day will be made when feasible. Under these circumstances it is possible that overcapitalization within the fishery may evolve and conflict within the one gear configuration may appear as participation increases. Given the present data limitations, it is impossible to determine the extent of the possible increase in capitalization or the potential for increased conflict through expanded participation within the hook and line sector. However, trip limits should ensure the commercial allocation is not exceeded.

The 3,500 pound trip limit north of the Brevard/Volusia county line to the New York state should have little impact upon the known participants within the commercial fishery. As indicated above the majority of the commercial fishery outside of Florida is located in North Carolina. Table 9 shows that less than one percent of the trips made in the State of North Carolina would be impacted by the 3,500 pound trip limit. The limit would be inconsistent with Florida state law as fishermen in northeast Florida would be allowed to catch 3,500 pounds in federal waters while they are allowed only fifty fish in state waters.

Rejected Option 1. No action.

No action would allow for continued user group and gear conflict within the fishery. The possibility of a major shift in effort to the Atlantic king mackerel fishery is possible since entanglement nets have been banned in Florida state waters. The present conflict over gear use could intensify with the potential shift in effort by displaced gill net fishermen.

Rejected Option 2. Concerned Fishermen of Florida (CFF) original proposal:

April 1 - October 31	GA->NY	3,500 pounds
	Brev/Vol->GA	1,500 pounds
April 1 - June 30	Brev/Vol->Mon/Col	50 fish
Jul 1 - October 31	Brev/Vol->Mon/Col	150 fish

The 1,500 pound limit would be inconsistent with state regulations and add unnecessary complications to present regulations without adding beneficial protection to stocks. The 150 fish limit from July 1 to October 31 would lessen the impact upon those hook and line fishermen who have indicated the 50 fish limit would reduce their catch per unit of effort.

Rejected Option 3. Modified CFF proposal.

April 1 - March 31	Brev/Vol->NY	3,500 pounds
April 1 - June 30	Brev/Vol->Mon/Col	50 fish
Jul 1 - October 31	Brev/Vol->Mon/Col	150 fish

The 150 fish limit from July 1 to October 31 would lessen the impact upon those hook and line fishermen who have indicated the 50 fish limit would reduce their catch per unit of effort.

Rejected Option 4. North Carolina proposal.

April 1 - October 31	GA->NY	3,500 pounds

This proposal would not address the present conflict over gear that exists within the fishery at the present time. In addition, it does not address the potential for increased effort from displaced gill net fishers from state waters.

Social Impact Assessment Data Needs

Given the lack of sufficient data to conduct a complete social impact analysis, the following data needs are suggested to help improve assessments of future actions within the coastal migratory pelagic resources (mackerels) fisheries. The following categories include the types of data that need

to be collected on all sectors including commercial fishers; non-commercial fishers; buyers/processors/wholesalers; fishing support industries; and fishing communities:

1. Demographic information may include but not necessarily limited to: Population; Age; Gender; Ethnic/Race; Education; Language; Marital Status; Children, (age & gender); Residence; Household Size; Household Income, (fishing/non-fishing); Occupational Skills; Association with vessels & firms (role & status).

2. Social Structure information may include but not necessarily limited to: Historical participation; Description of work patterns; Kinship unit, size and structure; Organization & affiliation; Patterns of communication and cooperation; Competition and conflict; Spousal and household processes; and Communication and integration.

3. Emic culture information may include but not necessarily limited to: Occupational motivation and satisfaction; Attitudes and perceptions concerning management; Constituent views of their personal future of fishing; Psycho-social well-being; and Cultural traditions related to fishing (identity and meaning).

Summary

Action 1. Trip limits for Atlantic migratory group king mackerel.

Positive impacts - reduces conflict over gear. Negative impacts - possible overcapitalization and may reduce CPUE for some fishermen. Net impacts - likely positive.

Rejected Option 1. No action.

Positive impacts - unknown. Negative impacts - continued conflict among users over gear. Net impacts - negative.

Rejected Option 2. Concerned Fishermen of Florida (CFF) original proposal.

Positive impacts - reduces conflict among users over gear. Negative impacts - conflicts with present state regulation. Net impacts - likely positive.

Rejected Option 3. Modified CFF proposal.

Positive impacts - reduces conflict among users over gear. Negative impacts - conflicts with present state regulation. Net impacts - likely positive.

Rejected Option 4. North Carolina proposal.

Positive impacts - brings federal regulations more in line with state. Negative impacts - does not reduce gear and user conflicts. Net impacts - likely negative.

5.0 LIST OF PREPARERS

Gregg T. Waugh, Deputy Executive Director, South Atlantic Fishery Management Council
Dr. Theophilus R. Brainerd, Fishery Economist, South Atlantic Fishery Management Council
Michael E. Jepson, Cultural Anthropologist, South Atlantic Fishery Management Council

The following individuals assisted by providing valuable review comments:
Susan Shipman, South Atlantic Fishery Management Council Member from Georgia
Ben Hartig, South Atlantic Fishery Management Council Member from Florida
Dennis Spitsbergen, South Atlantic Fishery Management Council Member from North Carolina
Bob Mahood, Executive Director, South Atlantic Fishery Management Council
Roger Pugliese, Fishery Biologist, South Atlantic Fishery Management Council

The work of James E. McKenna, Jr., Florida Marine Research Institute was particularly useful. Special thanks are due two fishermen who provided their individual catch information to Ben Hartig (SAFMC Member). Without the cooperation and trust of these fishermen no analysis of impacts would have been possible. Nancie Parrick, NMFS SEFSC Miami Lab, provided the detailed catch information from North Carolina which was very useful. The North Carolina data was provided to NMFS by Linda Mercer and Paul Phalen, NC Division of Marine Fisheries.

Informal review comments were received from NMFS SERO, SEFSC and Washington and have been addressed. Council staff consulted with Dr. John Vondruska, NMFS SERO Economist, in determining that there was little to no economic information available for use in this regulatory amendment.

Table 2.

Stages of the Florida King Mackerel Fishery Historical Course of Events

Quota Region	Fishing Year	Time Span	STAGE *					
			1000 #/vessel	15,000 #/vessel	300 #/vessel	UNLIMITED	25 fish/vessel	Post ** Season
	85-86	4/1/85-3/31/86	-	-	-	4/1/85-3/31/86	-	-
	86-87	4/1/86-3/31/87	-	-	-	4/1/86-3/31/87	-	-
ATLANTIC	87-88	4/1/87-3/31/88	-	-	-	4/1/87-3/31/88	-	-
	88-89	4/1/88-3/31/89	-	-	-	4/1/88-3/31/89	-	-
STOCK	89-90	4/1/89-3/31/90	-	-	-	4/1/89-3/31/90	-	-
	90-91	4/1/90-3/31/91	-	-	-	4/1/90-3/31/91	-	-
	91-92	4/1/91-3/31/92	-	-	-	4/1/91-3/31/92	-	-
	92-93	4/1/92-3/31/93	-	-	-	4/1/92-3/31/93	-	-
	85-86	11/1/85-3/31/86	-	-	-	11/1/85-3/11/86	-	3/12/86-3/31/86
EASTERN	86-87	11/1/86-3/31/87	-	-	-	11/1/86-2/3/87	-	2/4/87-3/31/87
	87-88	11/1/87-3/31/88	-	-	-	11/1/87-12/28/87	-	12/29/87-3/31/88
GULF-	88-89	11/1/88-3/31/89	-	-	-	11/1/88-12/30/88	-	12/31/88-3/31/89
	89-90	11/1/89-3/31/90	-	-	-	11/1/89-1/8/90	-	1/9/90-3/31/90
ATLANTIC	90-91	11/1/90-3/31/91	11/1/90-12/31/90	-	-	-	-	1/1/91-3/31/91
	91-92	11/1/91-3/31/92	11/1/91-12/31/91a	1/1/92-1/9/92	1/10/92-1/30/92	-	-	1/31/92-3/31/92
	92-93	11/1/92-3/31/93	11/1/92-12/29/92	-	-	12/30/92-1/13/93b	1/18/93-3/26/93	1/14/93-1/17/93
								3/27/93-3/31/93
	85-86	7/1/85-6/30/86	-	-	-	7/1/85-3/11/86	-	3/12/86-6/30/86
WESTERN	86-87	7/1/86-6/30/87	-	-	-	7/1/86-2/3/87	-	2/4/87-6/30/87
	87-88	7/1/87-6/30/88	-	-	-	7/1/87-12/28/87	-	12/29/87-6/30/88
GULF-	88-89	7/1/88-6/30/89	-	-	-	7/1/88-12/30/88	-	12/31/88-6/30/89
	89-90	7/1/89-6/30/90	-	-	-	7/1/89-1/8/90	-	1/9/90-6/30/90
ATLANTIC	90-91	7/1/90-6/30/91	7/1/90-12/31/90	1/1/91-1/3/91	-	-	-	1/4/91-6/30/91
	91-92	7/1/91-6/30/92	7/1/91-12/31/91	1/1/92-1/8/92	1/9/92-1/30/92	-	-	1/31/92-6/30/92
	92-93	7/1/92-6/30/93	7/1/92-12/24/92	-	12/25/92-12/29/92	12/30/92-1/13/93b	-	1/14/93-6/30/93

* Dates courtesy of Mark Godcharles - National Marine Fisheries Service, St. Petersburg, FL

** Recreational Bag Limit

a - Fishing proceeded at 1000#/vessel per day after the region's suballocation was exhausted, due to wording in the rule tieing the cutoff to 1 January 1991.

b - Trip limits were eliminated due to inconsistencies between state and federal rules.

Table 1

KING MACKEREL SEASONS AND QUOTAS

FISHING YEAR	Migratory Group and Region					
	Eastern Gulf-Atlantic		Western Gulf-Atlantic		Atlantic	
	Season	Quota	Season	Quota	Season	Quota*
90-91	Jul-Jun	470,000	Jul-Jun	470,000	Apr-Mar	3 080 000
91-92	Jul-Jun	635,000	Jul-Jun	635,000	Apr-Mar	3 900 000
92-93	Jul-Jun	635,000	Jul-Jun	635,000	Apr-Mar	3,900,000

* Federal Quota

1992-93 Quotas of King Mackerel in Florida State Waters

REGION	TRIP LIMIT	TIME PERIOD
Eastern Gulf-Atlantic Group	1,000 #/vessel/day	until 1 January 1993 or total harvest reaches 476,000
	15,000 #/vessel/day	until total pounds harvested reaches 476,000
	300 #/vessel/day	until total pounds harvested reaches 635,000
	Recreational Bag Limit*	until 1 July 1993
Western Gulf-Atlantic Group	1,000 #/vessel/day	until 31 December 1992 or total harvest reaches 476,000
	15,000 #/vessel/day	until total pounds harvested reaches 476,000
	300 #/vessel/day	until total pounds harvested reaches 635,000
	Recreational Bag Limit*	until 1 July 1993
Atlantic Stock	Unlimited	1 April 1992 - 31 March 1993 or until total reaches 3,900,000

* 2 fish/person per day

6.0 LIST OF AGENCIES AND ORGANIZATIONS

Responsible Agencies:

South Atlantic Fishery Management Council
1 Southpark Circle
Southpark Building, Suite 306
Charleston, South Carolina 29407-4699
(803) 571-4366
(803) 769-4520 (FAX)

Gulf of Mexico Fishery Management Council
5401 West Kennedy Boulevard, Suite 331
Tampa, Florida 33609-2486
(813) 228-2815

Mid-Atlantic Fishery Management Council
Room 2115, Frear Federal Building
300 South New Street
Dover, Delaware 19904-6790
(302) 674-2331
(302) 674-5399 (FAX)

List of Agencies and Persons Consulted:

SAFMC Law Enforcement Advisory Panel
SAFMC Mackerel Advisory Panel
SAFMC Scientific and Statistical Committee
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Department of Natural Resources
Florida Marine Fisheries Commission
Georgia Department of Natural Resources
South Carolina Wildlife and Marine Resources Department
North Carolina Department of Environment, Health, and Natural Resources
National Marine Fisheries Service
- Southeast Region
- Southeast Center

Gulf of Mexico & Mid-Atlantic Fishery Management Councils

7.0 APPLICABLE LAW

A. VESSEL SAFETY CONSIDERATIONS

PL. 99-659 amended the Magnuson Act to require that a fishery management plan or amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safety of the vessels.

No vessel will be forced to participate in the fishery under adverse weather or ocean conditions as a result of the imposition of management regulations set forth in this amendment to the Coastal Pelagics Fishery Management Plan. Therefore, no management adjustments for fishery access will be provided.

There are no fishery conditions, management measures, or regulations contained in this amendment which would result in the loss of harvesting opportunity because of crew and vessel safety effects of adverse weather or ocean conditions. No concerns have been raised by people engaged in the fishery or the Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions. Therefore, there are no procedures for making management adjustments in this amendment due to vessel safety problems because no person will be precluded from a fair or equitable harvesting opportunity by the management measures set forth.

There are no procedures proposed to monitor, evaluate, and report on the effects of management measures on vessel or crew safety under adverse weather or ocean conditions.

B. COASTAL ZONE CONSISTENCY

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 requires that all federal activities which directly affect the coastal zone be consistent with approved State coastal zone management programs to the maximum extent practicable. While it is the goal of the Council to have complementary management measures with those of the states, federal and state administrative procedures vary and regulatory changes are unlikely to be fully instituted at the same time. Based upon the assessment of this amendment's impacts in previous sections, the Council has concluded that this amendment is an improvement to the federal management measures for the Atlantic king mackerel fishery.

The Council concluded that this amendment is consistent with the Coastal Zone Management Plan of the states with approved plans. This determination has been submitted to the responsible state agencies for their review.

C. ENDANGERED SPECIES AND MARINE MAMMAL ACTS

A formal Section 7 consultation under the Endangered Species Act (ESA) was completed for Amendment 6. In a biological opinion dated August 19, 1992, the National Marine Fisheries Service determined that fishing activities conducted under the amendment and its implementing regulations, as well as the fisheries for coastal migratory pelagic resources, are not likely to jeopardize the continued existence of any endangered or threatened species under its jurisdiction. However, it was also determined that gillnet fisheries may adversely affect the recovery of listed species of sea turtles. Accordingly, in compliance with the endangered species act, an Incidental Take Statement was issued and reasonable and prudent measures were specified to minimize such adverse impacts. The trip limits described and considered herein are expected to have no additional impact on endangered or threatened species.

D. PAPERWORK REDUCTION ACT

The purpose of the Paperwork Reduction Act is to control paperwork requirements imposed on the public by the federal government. The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget. This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications.

The Council does not propose additional permit and data collection programs within this amendment.

E. FEDERALISM

No federalism issues have been identified relative to the actions proposed in this amendment and associated regulations. The affected state have been closely involved in developing the proposed management measures and the principal state officials responsible for fisheries management in their respective states have not expressed federalism related opposition to adoption of this amendment.

F. NATIONAL ENVIRONMENTAL POLICY ACT — FINDINGS OF NO SIGNIFICANT IMPACT (FONSI)

The discussion of the need for this amendment, proposed actions and alternatives, and their environmental impacts are contained in Sections 1.0 and 2.0 of this amendment/environmental assessment. A description of the affected environment is contained in Section 3.0.

The proposed amendment is not a major action having significant impact on the quality of the marine or human environment of the South Atlantic. The proposed action is an adjustment of the original regulations of the fishery management plan to protect the mackerel resource. The proposed action should not result in impacts significantly different in context or intensity from those described in the Environmental Impact Statement (EIS) published with the initial regulations implementing the

approved fishery management plan. The preparation of a formal Supplemental Environmental Impact Statement (SEIS) is not required for this amendment by Section 102(2)(c)(c) of the National Environmental Policy Act or its implementation regulations.

Mitigating measures related to proposed actions are unnecessary. No unavoidable adverse impacts on protected species, wetlands, or the marine environment are expected to result from the proposed management measures in this amendment.

The proposed regulations will protect the resource from depletion, better achieve the objectives of the fishery management plan, and lessen the environmental impacts of the fishery. Overall, the benefits to the nation resulting from implementation of this amendment are greater than management costs.

Finding of No Significant Environmental Impact (FONSI)

The Council's preferred action is to implement a trip limit for Atlantic Migratory Group king mackerel. Section 4.0 describes the Council's management measures in detail.

Section 1508.27 of the CEQ Regulations list 10 points to be considered in determining whether or not impacts are significant. Impacts of these actions are relative to the individuals that will be required to forego catches in the short-term and to the individuals, and society, in the long-term, because higher and more stable catches will be maintained. The analyses presented below are based on the detailed information contained in Section 4.0 Environmental Consequences including the Regulatory Impact Review and Regulatory Flexibility Determination.

Beneficial and Adverse Impacts

There are beneficial and adverse impacts from the proposed actions. The impacts are described for each action in Section 4.0 (See Section 4.0, Items G. Summary of Impacts, I. Effects on Small Businesses and J. Social Impact Assessment) and summarized in Section 2.0. Overall, the adverse impacts of the trip limit are expected to be minor. Beneficial impacts are unquantifiable but preventing overfishing will ensure the long-term economic viability of the fishery.

The beneficial and adverse impacts as analyzed in Section 4.0 are not significant.

Public Health or Safety

The proposed actions are not expected to have any significant adverse impact on public health or safety.

Unique Characteristics

The proposed actions are not expected to have any significant adverse impact on unique characteristics of the area such as proximity to historic or cultural resources, park lands, wetlands, or ecologically critical areas. The Council evaluated the effects of the fishery on the environment

(Section 4.0, Item F) and concluded that the fishery, as presently prosecuted, does not significantly impact the habitat that is essential to Atlantic king mackerel under Council management.

Controversial Effects

The proposed actions are not expected to have any significant controversial issues. The Council has provided for input by the public through committee and Council meetings that are open to the public, through meetings with the mackerel advisory panel, by holding two scoping meetings and by providing the opportunity for interested persons to provide written comments. Appendix D contains recent letters and a summary of public scoping comments.

Uncertainty or Unique/Unknown Risks

The proposed actions are not expected to have any significant effects on the human environment that are highly uncertain or involve unique or unknown risks. Benefits from management cannot be quantified but the direction and relative magnitude are known and are positive. If the proposed action was not implemented there would be a high level of uncertainty as to the future status of the Atlantic Migratory Group of king mackerel being managed.

Precedent/Principle Setting

The proposed actions are not expected to have any significant effects by establishing precedent and do not include actions which would represent a decision in principle about a future consideration.

Relationship/Cumulative Impact

The proposed actions are not expected to have any significant cumulative impacts that could have a substantial effect on the coastal pelagics resource or any related stocks, including sea turtles. (See Section 4.0, Item G. Summary of Impacts, I. Effects on Small Businesses, and J. Social Impact Assessment).

Historical/Cultural Impacts

The proposed actions are not expected to have any significant effects on historical sites listed in the National Register of Historic Places and will not result in any significant impacts on significant scientific, cultural, or historical resources.

Endangered/Threatened Impacts

The proposed actions are not expected to adversely affect any endangered or threatened species or marine mammal population. (See Section 7, Item C. Endangered Species and Marine Mammal Acts.) A Section 7 consultation was conducted with the NMFS Southeast Regional Office.

A biological assessment was prepared which concluded that the proposed actions will not adversely affect any threatened or endangered species or marine mammals.

Interaction With Existing Laws for Habitat Protection

The proposed actions are not expected to have any significant interaction which might threaten a violation of Federal, State or local law or requirements imposed for the protection of the environment.

Additional points analyzed by the Council in determining that a SEIS was not necessary are presented below.

Effects of the Fishery on the Environment

The habitat of king mackerel is described and was updated in Amendment 1 (GMFMC and SAFMC, 1985) and Amendment 3 (SAFMC and GMFMC, 1989). The Council evaluated the effects of the fishery on the environment (Section 4.0, Item F) and concluded that the fishery, as presently prosecuted, does not significantly impact the habitat that is essential to the coastal migratory pelagic resources (mackerels) under Council management.

Bycatch

The measures in this regulatory amendment will not impact bycatch and do not have bycatch considerations.

Effort Directed at or From Other Fisheries

The measures in this regulatory amendment will not result in effort being shifted into other fisheries. Further, these measures will provide biological, economic and social benefits by establishing vessel trip limits in the face of likely additional fishing effort entering the Atlantic Migratory Group king mackerel fishery.

In view of the analysis presented in this document, I have determined that the proposed action in this amendment to the Fishery Management Plan for the Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic Region would not significantly affect the quality of the human environment with specific reference to the criteria contained in NAO 216-6 implementing the National Environmental Policy Act. Accordingly, the preparation of a Supplemental Environmental Impact Statement for this proposed action is not necessary.

Approved: _____

Assistant Administrator for Fisheries Date

8.0 REFERENCES

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9.0 APPENDIXES

Appendix A. Existing FMP Problems (Issues) & Objectives

The problems (issues) listed in the Mackerel Fishery Management Plan as modified are:

1. The stocks of Spanish mackerel and Gulf king mackerel are below the level of producing MSY, and spawning stocks have been reduced such that recruitment has been affected. The harvest levels of Atlantic king mackerel are close to their upper limit. Uncontrolled fishing would further reduce biomass.

2. A. Available recreational catch statistics were not designed to track catch for quota purposes.

B. Additional biological and statistical data on both the recreational and commercial fisheries are needed, and social and economic information that assesses the impact of regulations and allocations is not available.

3. Intense conflicts and competition exist between recreational and commercial users of the mackerel stocks and between commercial users employing different gears.

4. Inconsistencies in state and federal regulations make management and enforcement difficult and can result in fishing the resource beyond the allocation.

5. The condition of the cobia stock is not known, and increased landings over the last ten years have prompted concern about overfishing.

6. The extent of mixing and the appropriate boundaries between some migratory groups are uncertain. This complicates management and could result in allocation of landings to the wrong group, thus affecting ABC estimates for both groups.

7. Large catches of mackerel over a short period cause quotas and TAC to be exceeded before closures could be implemented. Therefore, some users obtained a share in excess of their allocation.

8. Excessive effort and low quotas have resulted in closures which deprive some traditional fisheries of access to the resource and which precludes access to some valuable markets.

9. Fish caught under the bag limit and sold contribute to the filling of both the recreational and commercial quotas.

10. Part-time commercial fishermen compete with full-time commercial fishermen for the available quota.

11. Bycatch needs to be quantified better.

12. Violations of state and federal regulations continue.

13. There may be a problem of localized depletion of dolphin due to heavy localized fishing pressure.

The management objectives of the Mackerel Fishery Management Plan as modified are:

1. The primary objective of this FMP is to stabilize yield at MSY, allow recovery of overfished populations, and maintain population levels sufficient to ensure adequate recruitment.
2. To provide a flexible management system for the resource which minimizes regulatory delay while retaining substantial Council and public input in management decisions and which can rapidly adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by areas.
3. To provide necessary information for effective management and establish a mandatory reporting system for monitoring catch.
4. To minimize gear and user group conflicts.
5. To distribute the total allowable catch of Atlantic Migratory Group Spanish mackerel between recreational and commercial user groups based on the catches that occurred during the early to mid 1970's, which is prior to the development of the deep water run-around gill-net fishery and when the resource was not overfished.
6. To minimize waste and bycatch in the fishery.
7. To provide appropriate management to address specific migratory groups of king mackerel.
8. To optimize the social and economic benefits of the coastal migratory pelagic fisheries.

Appendix B. History of Management

The Fishery Management Plan for Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic (FMP), approved in 1982 and implemented by regulations effective in February of 1983, treated king and Spanish mackerel each as one U.S. stock. Allocations were established for recreational and commercial fisheries, and the commercial allocation was divided between net and hook-and-line fishermen.

Amendment 1, implemented in September of 1985, provided a framework procedure for pre-season adjustment of total allowable catch (TAC), revised king mackerel maximum sustainable yield (MSY) downward, recognized separate Atlantic and Gulf Migratory Groups of king mackerel, and established fishing permits and bag limits for king mackerel. Commercial allocations among gear users were eliminated. The Gulf commercial allocation for king mackerel was divided into eastern and western zones for the purpose of regional allocation.

Amendment 2, implemented in July of 1987, revised Spanish mackerel MSY downward, recognized two migratory groups, and set commercial quotas and bag limits. Charter boat permits were required, and it was clarified that TAC for overfished stocks must be set below the upper range of acceptable biological catch (ABC). The use of purse seines on overfished stocks was prohibited.

Amendment 3 was partially approved in 1989, revised, resubmitted, and approved in 1990. It prohibited drift gill nets for coastal pelagics and purse seines for the overfished groups of mackerels.

Amendment 4, implemented in 1989, reallocated Spanish mackerel equally between recreational and commercial fishermen on the Atlantic group with an increase in TAC.

Amendment 5, implemented in August 1990, made a number of changes in the management regime which:

1. Extended management area for Atlantic groups of mackerels through the Mid-Atlantic Fishery Management Council's (MAFMC) area of jurisdiction;
2. Revised problems in the fishery and plan objectives;
3. Revised the fishing year for Gulf Spanish mackerel from July-June to April-March;
4. Revised the definition of "overfishing";
5. Added cobia to the annual stock assessment procedure;
6. Provided that the South Atlantic Fishery Management Council (SAFMC) will be responsible for pre-season adjustments of TACs and bag limits for the Atlantic Migratory Groups of mackerels while the Gulf Council will be responsible for Gulf Migratory Groups;
7. Continued to manage the two recognized Gulf Migratory Groups of king mackerel as one until management measures appropriate to the eastern and western groups can be determined;
8. Redefined recreational bag limits as daily limits;
9. Deleted provision specifying that bag limit catch of mackerel may be sold;

10. Provided guidelines for corporate commercial vessel permits;
11. Specified that Gulf group king mackerel may be taken only by hook-and-line and run-around gill nets;
12. Imposed a bag limit of two cobia per person per day for all fishermen;
13. Established a minimum size of 12-inch (30.5 cm) fork length or 14-inch (35.6 cm) total length for king mackerel and included a definition of "conflict" to provide guidance to the Secretary.

Amendment 6, implemented in November of 1992, made the following changes:

1. Identified additional problems and an objective in the fishery;
2. Provided for rebuilding overfished stocks of mackerels within specific periods;
3. Provided for biennial assessments and adjustments;
4. Provided for more seasonal adjustment actions, including size limits, vessel trip limits, closed seasons or areas, and gear restrictions;
5. Allowed Gulf king mackerel stock identification and allocation when appropriate;
6. Provided for commercial Atlantic Spanish mackerel possession limits;
7. Changed commercial permit requirements to allow qualification in one of three preceding years;
8. Discontinued the reversion of the bag limit to zero when the recreational quota is filled;
9. Modified the recreational fishing year to the calendar; and
10. Changed minimum size limit for king mackerel to 20 inches fork length, and changed all size limit measures to fork length only.

Amendment 7, implemented in August 1994, made the following changes:

1. Suballocated the eastern zone Gulf Migratory Group of king mackerel commercial quota at the Dade/Monroe County line with 50% in the northern area (Dade through Volusia County) and 50% in the southwestern area (Monroe to the Florida/Alabama border);
2. Further suballocate within the two areas between net and hook-and-line fishermen with no allocation by gear in the northern area and 50% hook-and-line/50% net in the southwestern area; and
3. Require permits to specify gear type fished: A gear permit endorsement for the use of nets is required for taking Gulf group king mackerel in the southern area. Permittees with the net endorsement may fish for king mackerel only with nets in that area.

The present management regime for king mackerel recognizes two migratory groups, the Gulf Migratory Group and the Atlantic Migratory Group. The Gulf group is currently defined as being overfished (See Section 3.0 E.). These groups seasonally mix on the east coast of Florida. For management and assessment purposes, a boundary between groups was specified which was the

Volusia/Flagler County border on the Florida east coast in the Winter (November 1 - March 31) and the Monroe/Collier County border on the Florida southwest coast in the summer (April 1 - October 31). The Gulf Migratory Group may be divided at the Florida/Alabama border when the stock assessment panel is able to provide separate acceptable biological catches for each group. The commercial allocation for the Gulf group is currently divided at this boundary into eastern (Florida) and western (Texas through Alabama) quotas.

For the purpose of allocating a limited resource among users, the FMP has set ratios based on historic unregulated catches. The Gulf Migratory Group is allocated with 68% for recreational fishermen and 32% for commercial fishermen. The commercial allocation is further subdivided 69% for the Eastern Zone and 31% for the Western Zone. The Atlantic Migratory Group of king mackerel is allocated with 62.9% to recreational fishermen and 37.1% to commercial fishermen.

There is a mechanism for seasonal framework adjustments (See Appendix I in Amendment 7) which provides that: "Recommendations with respect to the Atlantic groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf groups of king and Spanish mackerel will be the responsibility of the Gulf Council."

Appendix C. Annual Report for King Mackerel for 1992-93 Fishing Season

Commercial Landings and Quota Monitoring of Florida's 1992-93 King Mackerel Fishery

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Florida Marine Research Institute
April 21, 1994

Introduction

King mackerel (Scomberomorus cavalla) are migratory, pelagic fish, ranging (in the United States) as far north as New England and as far west as Texas (Collette and Russo 1984). They migrate north along the eastern seaboard of the United States and north and west into the Gulf of Mexico each Spring. Spawning occurs any time from May through September (Collette and Russo 1984), depending on the spawning grounds. In early fall they migrate southward and gather in dense schools off Florida's southern coasts in the winter, where they support an important commercial fishery (Finucane et al. 1985).

Records on the commercial harvest of King mackerel date back to 1880 (Manooch 1979). King mackerel are harvested from Florida waters by both gill nets and hook and line. Commercial production averaged over five million pounds annually throughout the 1960's and 1970's. Concern over the decline of king mackerel stocks prompted research on the basic biology and stock identification of this species. Based on this work the fishery management councils have divided king mackerel into two migratory groups, Atlantic and Gulf-Atlantic. There is some debate over the biological significance of such stock identification (Sutter et al. 1985), but it is convenient for regulatory purposes. In 1983, quotas were established to limit the fishing mortality experienced by the king mackerel groups. In 1990, Florida implemented a quota on the portion of the Gulf-Atlantic group harvested from its waters (Table 1). This document provides an overview of the King mackerel fishery in Florida since implementation of quota management, with a focus on the events of the 1992-93 fishing season (See also McKenna 1991 and McKenna 1992 for previous assessments).

For the purposes of monitoring and regulating the commercial king mackerel fishery, state waters are divided into three quota regions, whose ranges vary throughout the year.

Atlantic region:
Nassau - *Monroe* counties, 1 April - 30 October.
Nassau - *Flagler* counties, 1 November - 31 March.

Eastern Gulf-Atlantic region:
Dade - *Volusia* counties, 1 November - 31 March.

Western Gulf-Atlantic region:
Collier - *Escambia* counties, 1 April - 30 October.
Monroe - *Escambia* counties, 1 November - 31 March.

These regions are based on the results of a tag-and-recapture operation designed to identify the distribution of fish from each group (Sutter et al. 1991). Managing the fishery within these regions helps to distribute fishing mortality throughout state waters. King mackerel congregate during winter in the waters adjacent to Monroe County and fishermen from that county land a large portion of the total stock allocation (Fig. 1). I have used a composite of the regional divisions for describing commercial landings in the reports for Spanish and king mackerel as follows:

Northeast : *Nassau* - *Flagler* counties.
Southeast : *Volusia* - *Dade* counties.
Monroe : *Monroe* County only.
Southwest : *Collier* - *Dixie* counties.
Northwest : *Taylor* - *Escambia* counties.

At any point during the year all stocks and subquotas fit completely within one or two of these regions. This allows the reports for both species to be easily compared.

Spatial and Temporal Activity of the Fishery Since the Establishment of Quotas

Overall Pattern of Landings and Effort

The quota management regime used in Florida partitions the fishing year into segments of varying harvest intensity. Harvest within each geographic region usually opens with a limited pre-season period (e.g. 1,000 lbs/vessel per day), which is followed by an unlimited stage, and then one or more subsequent post-season periods of increasingly stringent landing limits. Each period is delimited by an opening date or a harvest threshold limit (poundage) (See The 1992-93 Fishing Season, below). The history of fishing limits within each region of the king mackerel fishery is summarized in Table 2.

Since the advent of quotas the annual pattern of mackerel landings in Florida has been fairly consistent from one year to the next. Commercial king mackerel landings are reported year-round from Florida. The major peak, on a statewide basis, usually occurs in winter, but may also occur in spring (Fig. 2). Although these fish migrate, Florida spans much of their typical latitudinal range, especially in the Gulf of Mexico. As a result, king mackerel landings are reported from some locations within the state at all times of year, although they are clearly depressed in early summer (June and July). However, seasonal shifting of the geographic extent of the quota regions causes much different patterns of landings at the stock level. When landings from each stock are viewed separately, the availability of the fish appears clearly defined (temporally). For example, November through March king mackerel landings are virtually absent from the Atlantic Stock, while landings from the Gulf-Atlantic group, at that time of year, dwarf all other landings from that stock. Only fish caught from waters adjacent to the four northeastern counties (Nassau-Flagler) are considered Atlantic Stock fish (at that time of year), while all landings from Monroe County and the Southeast, as well as the Gulf coast, are associated with the Gulf-Atlantic Stock. This dynamic separation of the two migratory groups is a result of the debate over stock identification and the fact that each is managed by a different federal regulatory body. Therefore, I will describe each group separately and comment on statewide trends as necessary. The majority of Florida landings from the Atlantic group occur in the spring (April and May) and taper off through the summer (Fig. 2a). There is usually a secondary peak of Atlantic group landings in August. Landings from the Gulf-Atlantic group are dominated by activity in the southeastern region and Monroe County (Fig. 1b). Fishermen in this region draw from the Gulf-Atlantic group November through March, only (Fig. 2b). The bulk of landings from this group occur in December or January.

The sudden increase in Atlantic Stock landings in April are an artifact of the management scheme. The geographic extent of the migratory groups changes on April 1st. The line separating Atlantic stock fish from Gulf-Atlantic stock fish moves from the border between Flagler and Volusia Counties to the border between Monroe and Collier Counties. Thus, the fish, which one day earlier were considered members of the Gulf-Atlantic and unavailable due to the usual season closure, are (on April 1st) once again made available as Atlantic stock fish. The transition would not be so abrupt if not for the fact that Gulf-Atlantic quotas are usually exhausted by the end of January, restricting February and March landings to very low levels.

Effort in this analysis was determined by the number of trips that reported landings of king mackerel to the Florida Department of Environmental Protection's Marine Fisheries Information System (MFIS) (Fig. 2c). This index provides a good measure of effort, but

does not account for differences in vessel size or capacity. Effort is highly variable and only roughly follows a pattern similar to that of the landings (Fig. 1e and 1f). King mackerel fishing trips do not mirror landings because there are many trips in the summer and fall when the fish are taken in small quantities by a large number of fishermen. This is especially true during periods when restrictive vessel landing limits are in effect. However, the bulk of Gulf-Atlantic group landings are taken by only a few fishermen, using large nets on a relatively small number of trips (McKenna 1993), most working out of the Keys. Gulf-Atlantic group landings are constrained by daily trip limits until January 1st. In that region, landings usually peak during January when a 15,000 pounds/vessel per day trip limit is in effect, and decline when a more strict trip limit is imposed. In recent years, much of the allocation has been landed before the 15,000 pound stage is opened. Most of the Atlantic group landings, in Florida, are taken by hook and line fishermen.

Catch per unit of effort (CPUE), as measured by mean pounds landed per trip, follows different annual patterns for the Gulf-Atlantic and Atlantic groups. In the Atlantic, it follows a cyclical pattern with a small range, generally between 50 and 300 pounds/trip (Fig. 3a). The greatest values occur in spring, decreasing to a minimum in October or November, and increasing again into the winter. CPUE in the Gulf-Atlantic group is much more variable. It is typically less than 50 pounds/trip at some point during the year, but may be as high as 1200 pounds/trip (Fig. 3b). One exceptional value of over 3000 pounds/trip occurred during the 1985/86 fishing year. The highest CPUE values frequently occur between December and February, but has occurred as late as May. Interannual variability in CPUE may be an indication of the size of the available stock, but also incorporates some of the influence of economics and regulations on behavior of the fishermen.

Regional Patterns

The southeastern region strongly dominates landings of Atlantic group fish in Florida (Table 3, Fig. 1a), often producing ten to twenty times more than that reported from either the northeastern region (which is composed of only four counties from November through March) or Monroe County. In regions occupied by the Gulf-Atlantic group, landings from the southeast and Monroe county dominate and are usually of similar magnitude, but vary widely from year to year (Fig. 3b). The 1987-88 season was a poor season for Monroe County ($<$100,000 pounds landed), while landings during the 1985-86 season ($>$1.5 million pounds) were over twice as large as those from the southeast. Landings in the southwest and northwest regions were small by comparison.

In the Atlantic group, regional landings are reflected in the effort applied (Fig. 1e). King mackerel were landed on roughly ten times as many trips in the southeastern region as in Monroe County or the northeast. The temporal pattern of effort in the southeastern region has been inverse to that of the landings in that region, large landings occurring in years where effort was relatively small. Regionally, efforts on the Gulf-Atlantic group follow patterns similar to their associated landings (Fig. 1f). However, over time there is more variability and only a general increase in effort is apparent.

CPUEs have been of similar magnitude from year to year, within the regions of the Atlantic group. All three regions displayed similar CPUE, but the southeast was two to four times more productive during the 1987-88 through 1989-90 seasons (active drift net fishery), than the northeast or Monroe County (Fig. 4a). CPUE within the Gulf-Atlantic group is more variable than that from the Atlantic group (Fig. 4b). Fishermen from the southeast achieve consistently high CPUE (200 - 300 lbs/trip). However, landings in Monroe County occasionally punctuate the pattern with very high CPUE ($>$900 lbs/trip). During the 1985-86 and 1988-89 seasons, landings in Monroe County were nearly twice

as large as those from the southeast region. The northwest and southwest generally experience small CPUE, but an exceptionally large peak (1,240 pounds/trip) occurred in the northwest during the 1985-86 season. This value was the result of large landings associated with a small number of trips (37) that season. The trip ticket reporting system was just beginning to operate in 1985 and data may be incomplete for that season.

Fishermen and Dealers

Saltwater Products License (SPL) information was excluded from the trip ticket data base by rule until late 1986. Since that time the MFIS has incorporated this information into the landings data base. The number of fishermen (based on Saltwater Products Licenses) reporting landings of king mackerel has varied between 1,500 and 2,222 since 1987 (Fig. 5). Saltwater Products License data are not complete before 1987. The fishery is dominated by fishermen who land 100 pounds or less (Fig. 5a) of king mackerel on fewer than ten trips over the course of a season (Fig. 5b). Since 1987, approximately 200 dealers have handled king mackerel annually. Most dealers handle less than 5,000 pounds of king mackerel per season (Fig. 6a). The number of dealers is more evenly distributed across poundage classes than is the number of fishermen. There are generally modes at 100 - 500; 5000; and 100,000 pounds. Most dealers have purchased king mackerel on ten or fewer occasions per season (Fig. 6b). However, between 50 and 70 dealers purchase king mackerel more than 50 times annually.

The 1992-93 Fishing Season

The 1992-93 fishing season generally followed the typical pattern (Table 4, Fig. 7). Most fishing mortality of Atlantic group fish occurred in the spring and late summer (Fig. 7a). The major spring peak in the southeast occurred in April (190,999 pounds) and a minor peak (138,721 pounds) occurred in August. Monroe County had a small April peak (45,445 pounds) and the northeast's largest monthly landings occurred in June (21,003 pounds). The pattern of landings roughly followed the associated effort in each region (Fig. 7e).

Fish from the Gulf-Atlantic group began arriving in south Florida during December 1992. Landings in the southeast increased sharply in December (313,739 pounds) and then dropped again before rising throughout the remainder of the season (Fig. 7b). Landings in Monroe County also jumped sharply in December, peaked at over 1,000,000 pounds in January, and declined again to very low levels after the season closure in mid-January. Landings in the other regions of the Gulf-Atlantic group were small by comparison. Effort in each region followed a seasonal pattern similar to that of landings.

Quota Monitoring

Calls vs. Tickets

Trip ticket data from the MFIS illustrate the level of landings maintained since regulation began (Table 3). Data from this system can accurately track daily landings. However, the quality control and editing process results in several months lag between the time a trip ticket is filled out and the point at which it is an official part of the master data base. Most of the unedited data are available for such tasks as quota monitoring, but there are potential errors in those data. At best there is a one week lag between the actual time of landing and when those unedited data are available from the trip ticket system.

Landings data must quickly reach the monitors for a quota system to achieve effective management, but there is always a time lag in acquiring landings information.

The solution to reduce this time lag has been to telephone the major dealers (those accounting for 90% or more of the previous year's landings, Table 5) as frequently as necessary to gauge the rate at which landings are approaching a quota limit. There is still a one day time lag in such a system and since the fishing fleet has the capacity of landing 100,000 pounds of king mackerel or more in a single day, then cumulative landings have the potential to overshoot a quota cutoff before fishing can be halted or slowed by the managing agencies.

King mackerel fishermen experienced an unsettled season of fishing and regulatory restrictions during the 1992-93 fishing year. The fish became available to fishermen working in both the eastern and western regions of the Gulf-Atlantic migratory group in December 1992. Landings continued at a steady pace under the 1,000 pounds/vessel per day landing limit until the third week of December. During that week over 300,000 pounds of king mackerel were landed from the western region. The 476,00 pound cutoff had been reached by 24 December 1992, resulting in a 300 pounds/vessel per day landing limit imposed by the Florida Department of Natural Resources on fishermen of the western region. Objections were raised by fishermen and upon judicial review it was determined that the rule was not enforceable as written. Thus, on 29 December 1992 the 300 pounds/vessel per day landing limit was rescinded. As a result both landing limits and regional subdivisions for Gulf-Atlantic group king mackerel were eliminated. From that time forth, any closure action was the sole responsibility of the National Marine Fisheries Service (NMFS) and was based on stock-wide cumulative landings estimates. The State of Florida was simply required to close state waters when federal waters closed. NMFS staff handled quota monitoring in Monroe County and the Southeast beginning on December 29th. King mackerel fishing in the Key West area, and elsewhere, proceeded without restriction until the closure date, when the federal quota (1.73 million pounds) for the Eastern Gulf-Atlantic group (federal designation, essentially all waters adjacent to Florida with the exception of waters adjacent to the four northeastern most counties) was reached. Commercial fishing from all segments of the Gulf-Atlantic stock associated with Florida waters was closed on 13 January 1993.

Weather and other factors had severely limited king mackerel landings in the state's eastern region, prior to the closure. The economic hardship imposed by the closure on Florida's east coast king mackerel fishermen prompted the South Atlantic Fishery Management Council to recommend that the Regional Director of the National Marine Fisheries Service (NMFS) promulgate an emergency rule to reopen fishing for king mackerel in that region. Fishermen in that region were subsequently (18 January 1993) allotted 259,000 pounds of Gulf-Atlantic king mackerel and allowed to land 25 fish/vessel per day. Monitoring of that portion of the quota was handled by NMFS staff. Harvest of Gulf-Atlantic king mackerel from Florida's eastern region continued until 27 March 1993 when the 259,000 pound supplement was estimated to have been taken. Harvest of Gulf-Atlantic group king mackerel was then limited to a recreational bag limit of two fish/person per day, and this limitation remained in effect until the end of the fishing year. However, on 1 April of each year the geographic extent of the two migratory groups switches, moving the Southeast and Monroe County into the Atlantic group. Thus, fishermen along Florida's east coast (except those of the Northeast, which are always governed by restrictions on the Atlantic migratory group) were prohibited from harvesting king mackerel for five days between the first closure and issue of the emergency rule, and again for five more days at the end of March before they were allowed to harvest from the Atlantic migratory group. Fishermen in Monroe County were prohibited from harvesting Gulf-Atlantic king mackerel from the January 13th closure, until the end of March, when they were once again part of the Atlantic group. However, the freedom to harvest king mackerel in Monroe County after March 31st is probably irrelevant, since most fishermen have rigged their vessels for other fisheries (e.g. stone crab or Spanish mackerel) and most

of the fish have dispersed and moved north by then. Fishermen along Florida's Gulf Coast were prohibited from commercial harvest of king mackerel from the January 13th closure, until the end of the fishing year (30 June 1993).

In general, estimates based on telephone calls accurately tracked the progress of the fishery during the Florida DNR monitored portion of the 1992-93 fishing season (Fig. 8). Atlantic group landings changed little over the quota monitoring period (October - March) and were easily tracked by telephone estimates (Fig. 8a). Western Gulf-Atlantic group king mackerel landings were closely tracked until 29 December 1992, when trip limits were eliminated (Fig. 8b and 8c). Estimates of landings from the Eastern Gulf-Atlantic group tracked the pattern, but underestimated total landings during December. This was the result of using an overly optimistic factor (95%) to account for uncontacted dealers' landings. These adjustment factors are established before each year's most active fishing season, based on the monthly distributions of landings across dealers during the past two or three years.

Trip tickets show that 393,954 pounds of king mackerel had been landed from the Eastern Gulf-Atlantic region at the time of the federal closure (13 January 1993). Less than 700 pounds of king mackerel were landed during the five intervening days before the emergency rule went into effect. Cumulative landings reached 395,652 pounds by the end of January 1993. Eastern Gulf-Atlantic dealers reported 308,028 pounds of king mackerel while the emergency rule (25 fish/vessel per day) was in effect and a total of 706,345 pounds for the entire fishing year. This value places landings for the Eastern Gulf-Atlantic region over quota by 11%.

Estimated landings (based on trip tickets) of king mackerel in the western portion the Gulf-Atlantic Group totalled to 458,136 pounds when the notice to slow fishing to the 300 pounds/vessel per day limit was issued. An additional 25,532 pounds were landed before that limit was rescinded. Fishing was intense during the Unlimited Stage (December 29 - January 13). More than 200,000 pounds of king mackerel were landed on 7 January 1993 and over 100,000 pounds were landed on each of four other days. Over 1,086,000 pounds were landed during the fifteen day Unlimited stage. The cumulative total at the time the federal closure notice was issued was 1,569,754 pounds. That value climbed to 1,638,976 pounds by the end of March 1993. Few king mackerel were landed in Monroe County after that time and the cumulative total for the fishing year was 1,641,104 pounds for the Western Gulf-Atlantic Group. This value is 258% of the allotted quota for the western region. Stockwide total landings amounted to 2,347,449 pounds, which exceeded the federal quota for the Eastern Gulf-Atlantic Stock (federal designation) by 1,077,449 pounds (85%).

Conclusions

King mackerel landings from the Florida portion of the Atlantic stock were effectively monitored throughout the season. However, king mackerel fishing on the Gulf-Atlantic Stock was not effectively regulated in Florida through quota monitoring during the 1992-93 fishing year. Natural variability in the pattern of fishing (e.g. weather conditions and availability of fish), market condition, and the great capacity of the fleet were evident during this season (Table 6, Fig. 9, 10), but each played a minor role in determining the course of events that comprised the 1992-93 fishing year. Social and political events were much more important in determining the course of events. Loss of regulatory enforcement due to legal complications arising from incompatibility of State and Federal management regulations lead to elimination of sub-allocations within the migratory group and contributed to overages on the quotas for the Gulf-Atlantic migratory group. As a result, fishing could not be slowed as the federal quota was approached and the lion's share of

landings were taken by fishermen in the Key West area. That, in turn, lead to an emergency rule allocating more fish for fishermen along Florida's east coast and exacerbated the overages on the State and Federal quotas established for the Gulf-Atlantic migratory group.

Rules governing the management of fishery resources are developed through a merger of information on the condition of fish stocks and the sociological concerns of both fishermen and the general public. This merger process can be difficult, as the varied interests of many groups must be considered. The resulting rules represent a compromise, which satisfies some of those interests, without threatening to degrade the health of the fishery resource. The users of the resource are not members of a cooperating organization or set of organizations, and cannot be expected to abide by the spirit of the rules, which are by their very nature a compromise of the regulations desired by each group. It is clear from the events of the 1992-93 king mackerel season that adequate enforcement of those rules is a necessary and integral component of effective fishery management. Quota management of Spanish mackerel (McKenna 1991, 1992) and spotted seatrout in Florida has shown that it can be an effective management tool, but the conditions that allow it to work must be maintained. Other regulatory options exist (Muller et al. 1990), but each has its shortcomings as well as its advantages. Quota monitoring can be difficult and may not be the best regulatory method for all fisheries, but it can be effective if all the necessary components function properly.

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List of Tables

8. Catch rates of king mackerel have declined in the area since 1985 and are now estimated to be about half the pre-1985 level.

9. The handliners want to participate in the Spanish mackerel fishery but do not want to share the king mackerel fishery with the gill netters.

10. A 50 fish trip limit in the designated area will put the gill netters completely out of business. We have been eliminated from the Gulf stock fishery and the drift net fishery already. This is our last fishery and we know that the king mackerel stock is healthy. The TAC has never been reached, so it should not be regulated this way. It should stay wide open because there is a quota in place. We have a lot of investment in this fishery and studies have shown that we can participate in the fishery. They are going to ban nets in state waters so we need to have something to fall back on. Thousands of dollars are already invested in our activities.

11. There is no need for nets in this fishery. There are rumors that people are trying to sew old drift net together to make fish tend the bottom so they could not be called drift nets. I do not want to see this happen.

12. It is a hook and line fishery and lots of money could be made if things were still right but the nets messed it up. We need to take as little as possible while it is in this messed up state so that we can get the most out of it.

13. We used to have an August run in Jupiter and that's gone. The May run is almost gone. A lot of fishermen will move into the hand line fishery with the net ban in Florida. Room should be made for them.

14. Using the head count instead of pounds for smaller volume leaves opportunity for more fish to be caught. Fishermen are paid by poundage not by head. Someone can claim that the 50 head weighs an exorbitant amount of pounds.

15. Two live bait fishermen thought that 75 heads will be more acceptable. They will be biting the bullet a little bit but are willing to accept that restriction.

16. One speaker supported the 50 fish trip limit but would like to see a quota set aside for net fishermen within the context of the trip limit.

17. Two speakers suggested raising the income requirements to qualify for permits. This would eliminate the need for trip limits.

18. One handliner did not favor trip limits. He thought the quota should be sufficient to maintain the fishery in a healthy state.

Appendix D. Recent letters and Summary of Scoping Comments

SUMMARY OF PUBLIC HEARING COMMENTS ON TRIP LIMITS FOR ATLANTIC MIGRATORY GROUP KING MACKEREL

The following is a summary of the comments received at the scoping meetings held at Marathon, Florida (June 21, 1994) and FT. Pierce, Florida (September 28, 1994).

1. The majority of those who spoke at the FT. Pierce meeting supported the CFF revised trip limits proposal to the council (see draft regulatory amendment for CFF revised proposal) for the following reasons:

to protect spawning stock
to allow summer stock to rebuild
to prevent intense harvesting (king mackerel move in large concentrations during certain times in the year and a liable to be harvested intensely)
to spread out the harvest and allow equal access to all fishermen in the fishery
to ensure fresh market availability over time and geographic location.

2. Hook and line fishermen have the capacity to catch larger volumes of king mackerel, but prefer not to in order to spread the harvest over a broader range and time to ensure a more stable fishery and market.

3. The incidence of net boats in federal waters will increase if the state of Florida net ban is approved in November 1994. Thus, trip limits should be put in place as soon as possible by emergency action.

4. Whenever there is a large concentration of king mackerel in an area and the large net vessels harvest intensely in that area, it takes several years for the stock to recover in that area.

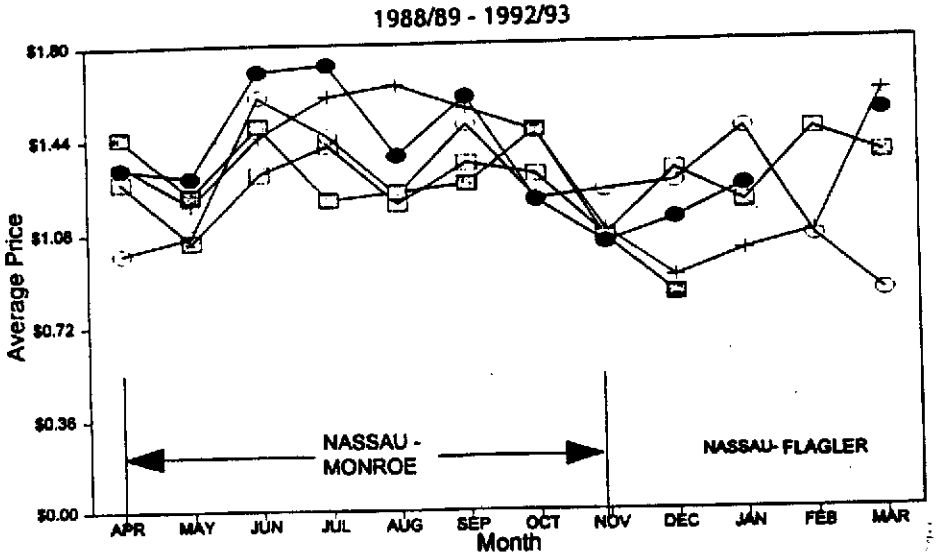
5. The king mackerel stock in the Brevard/Volusia County line to the Monroe/Collier County line are severely stressed because of the activity of the nets. The 50 fish head count would go a long way to accomplish the goal of allowing the stock rebound.

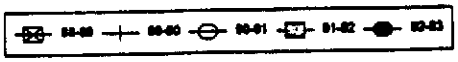
6. The state of Florida has implemented a 50 fish trip limit since 1986 and from Juno, Florida south, most of the fish were caught in state waters. The state has had problems enforcing its trip limit because fishermen can claim that the fish were caught in federal waters. The federal trip limit will make for consistent state and federal regulation and will aid enforcement.

7. King mackerel stock is not as heavily fished north of Florida as it is in Florida.

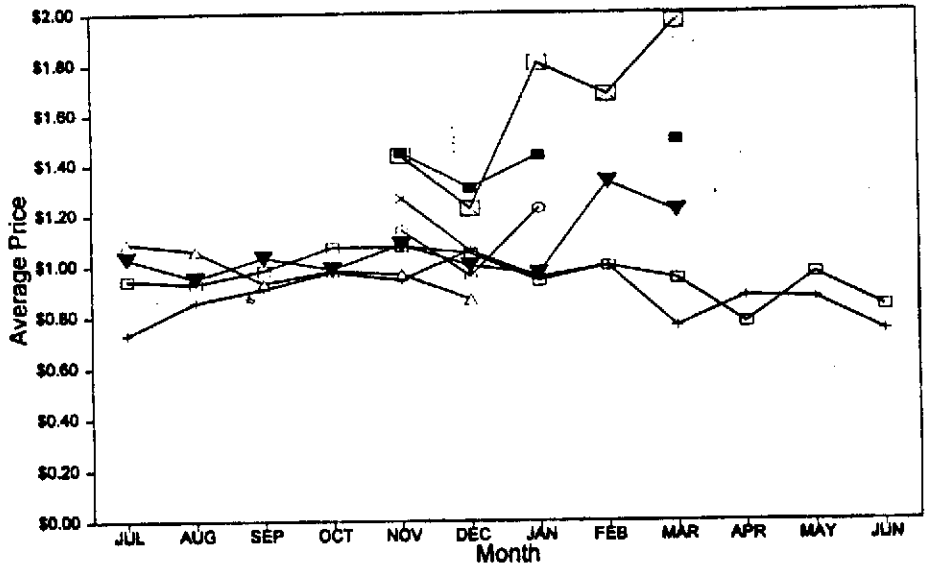
Fig. 10

Mean Monthly Price of King Mackerel
within the Atlantic Region
1988/89 - 1992/93





Mean Monthly Price of King Mackerel
within the Gulf-Atlantic Region
1989/90 - 1992/93



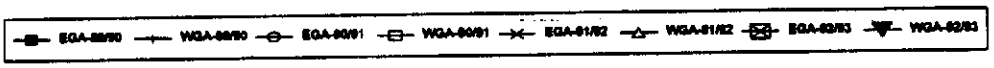
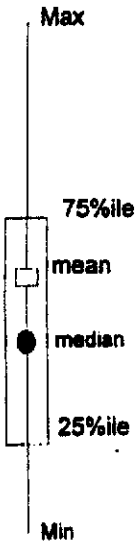
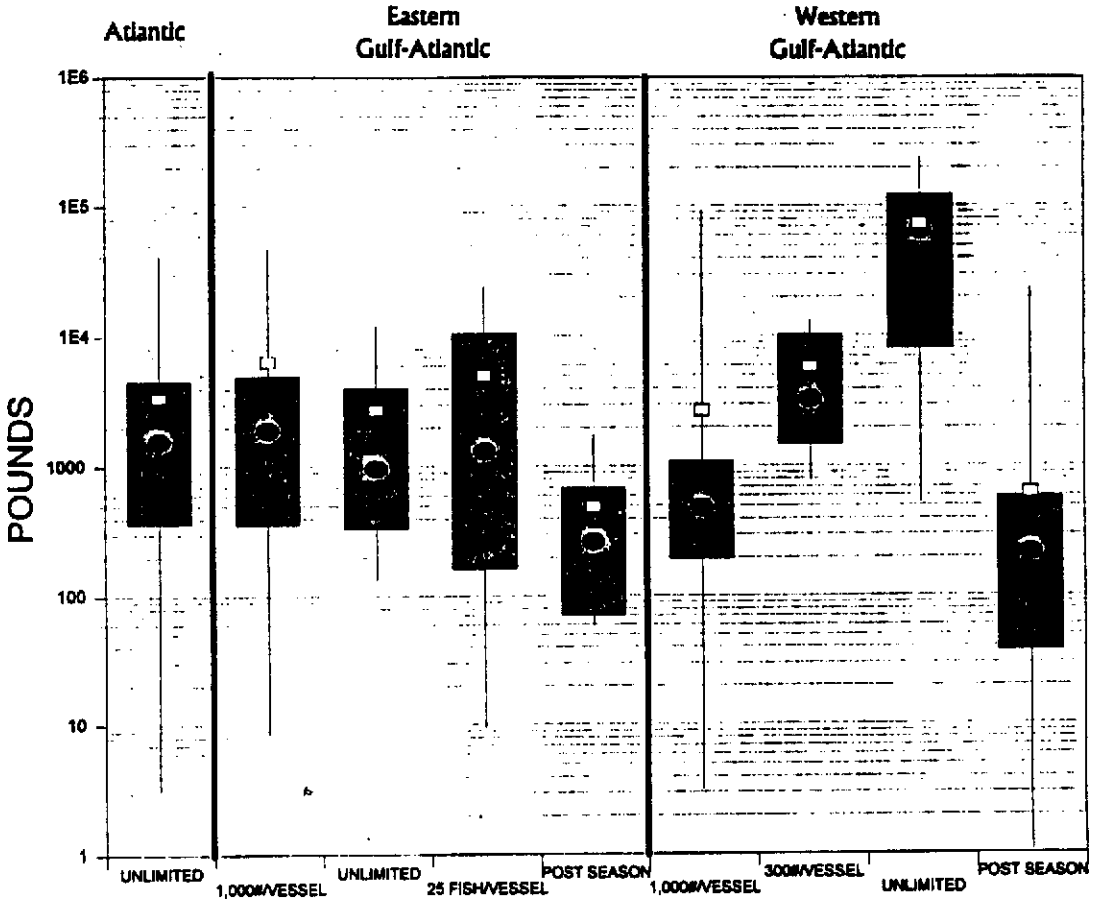


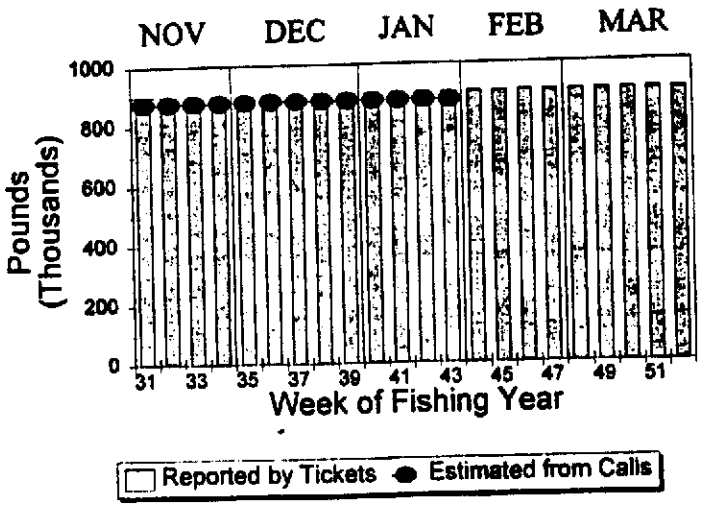
Fig. 9



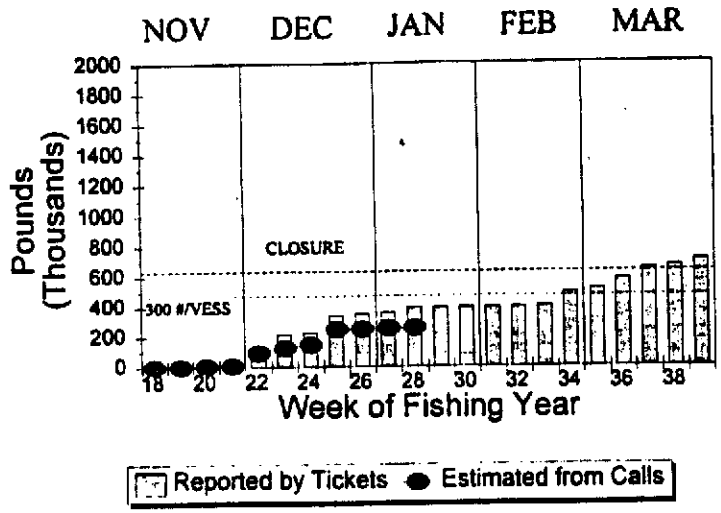
Average and Spread of King Mackerel Landings/Day - 1992-93 Fishing Year



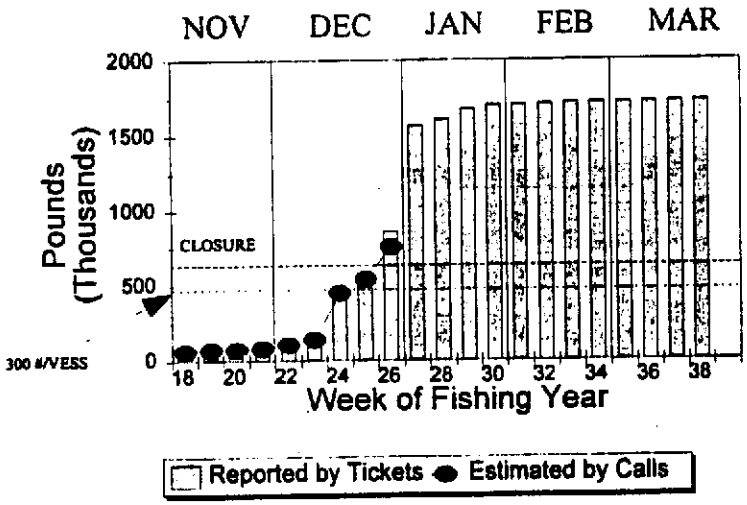
CUMULATIVE CATCH OF KING MACKEREL
Atlantic Stock



CUMULATIVE CATCH OF KING MACKEREL
Eastern Gulf-Atlantic Group



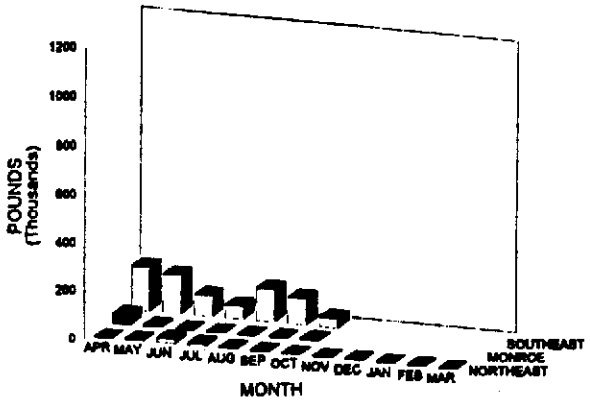
CUMULATIVE CATCH OF KING MACKEREL
Western Gulf-Atlantic Group



MONTHLY LANDINGS OF KING MACKEREL

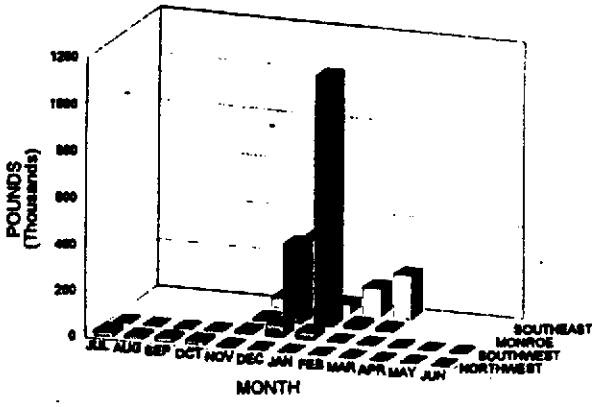
by Coastal Region - 92/93 Fishing Year

Atlantic Stock



by Coastal Region - 92/93 Fishing Year

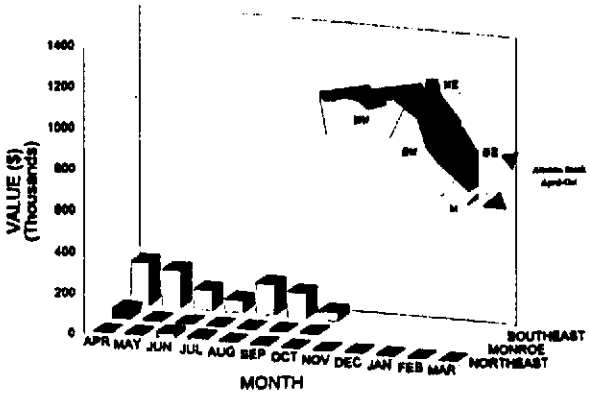
Gulf-Atlantic Stock



MONTHLY VALUE OF KING MACKEREL

by Coastal Region - 92/93 Fishing Year

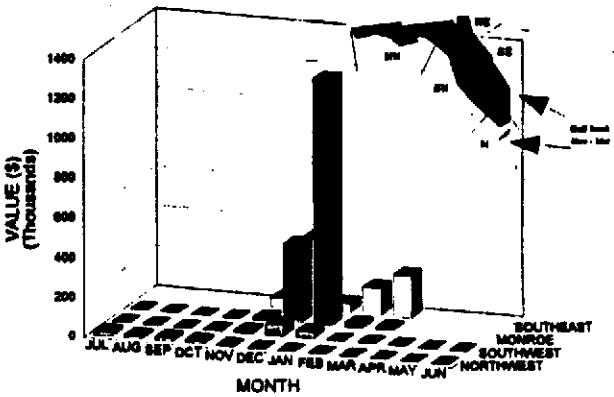
Atlantic Stock



MONTHLY VALUE OF KING MACKEREL

by Coastal Region - 92/93 Fishing Year

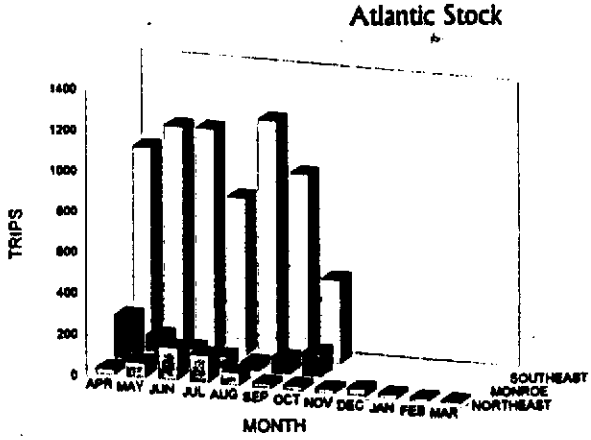
Gulf-Atlantic Stock



EFFORT EXPENDED ON KING MACKEREL

by Coastal Region - 92/93 Fishing Year

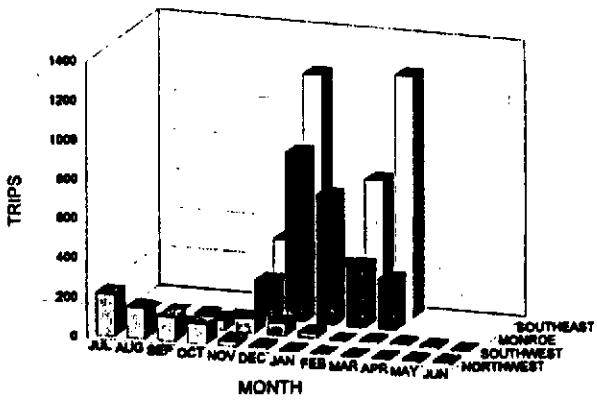
Atlantic Stock



EFFORT EXPENDED ON KING MACKEREL

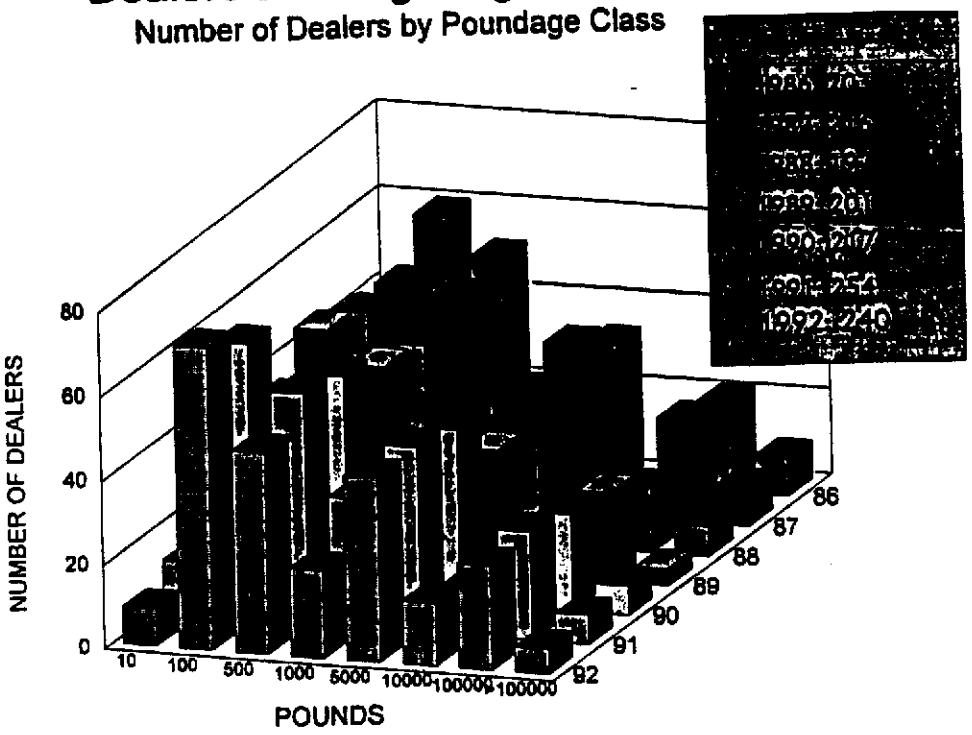
by Coastal Region - 92/93 Fishing Year

Gulf-Atlantic Stock



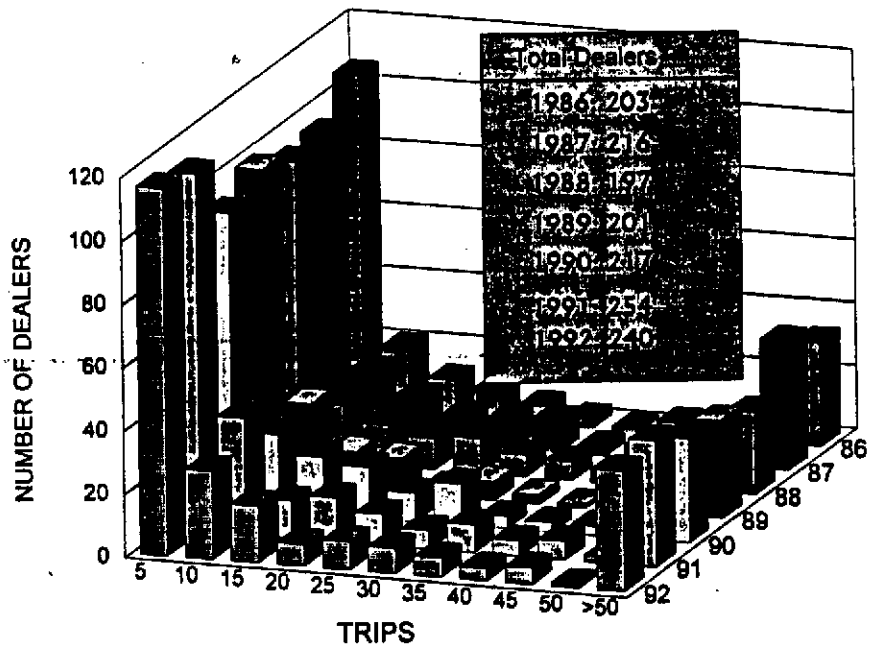
Dealers Landing King Mackerel

Number of Dealers by Poundage Class



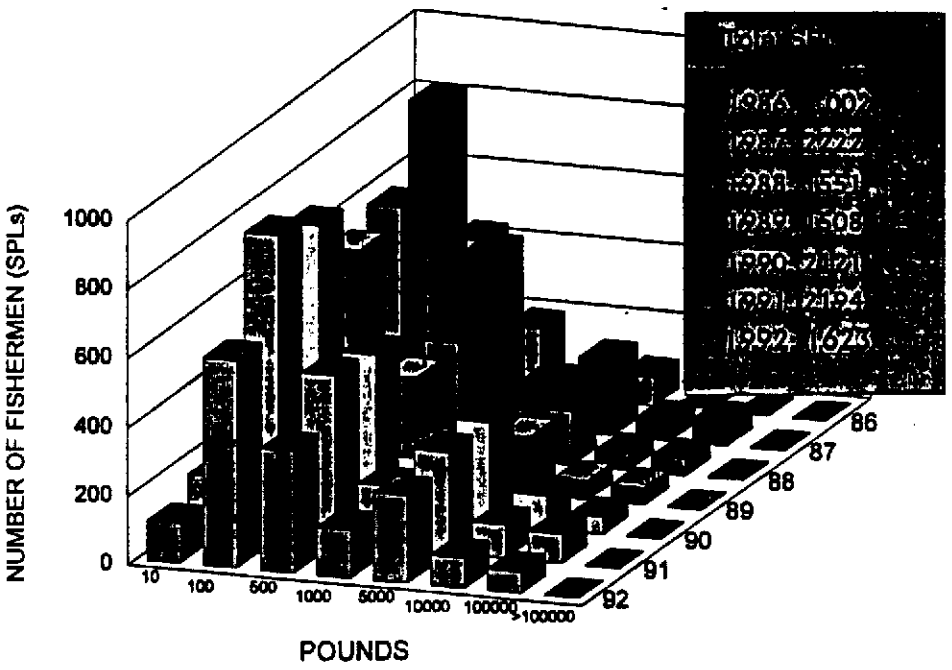
Dealers Landing King Mackerel

Number of Dealers by Trips Class



Fishermen Landing King Mackerel

Number of Fishermen by Poundage Class



Fishermen Landing King Mackerel

Number of Fishermen by Trips Class

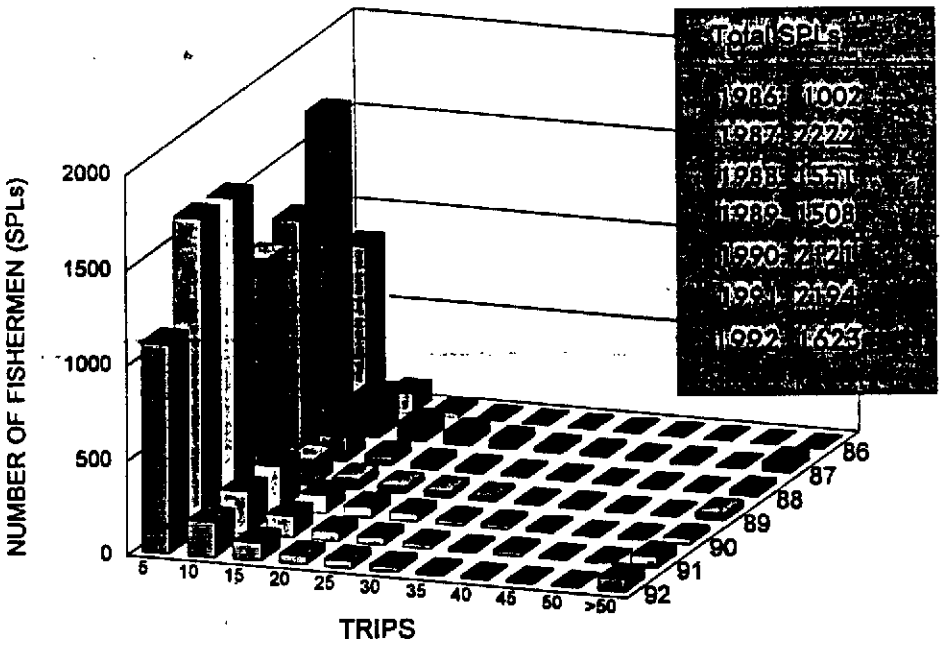
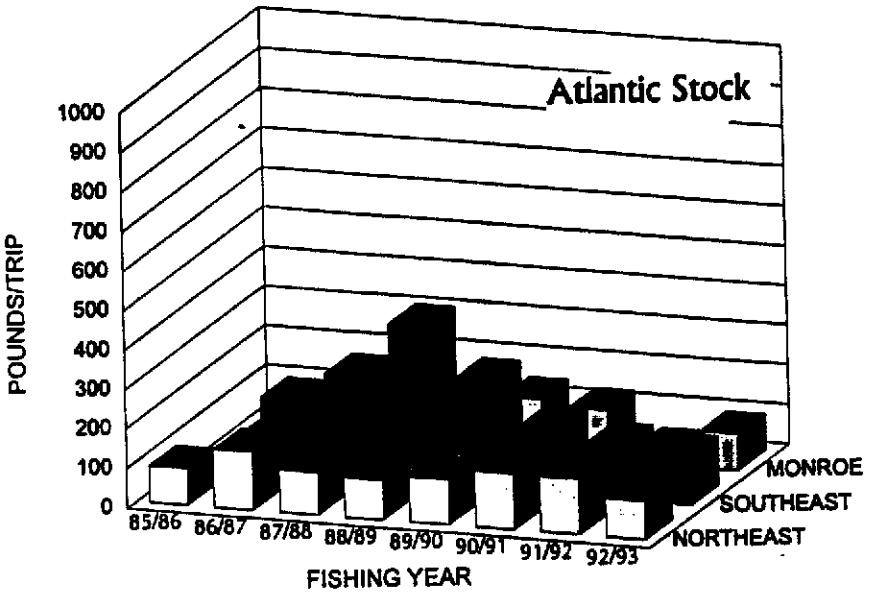


Fig. 4

C.P.U.E. OF KING MACKEREL
by Coastal Region and Fishing Year



C.P.U.E. OF KING MACKEREL
by Coastal Region and Fishing Year

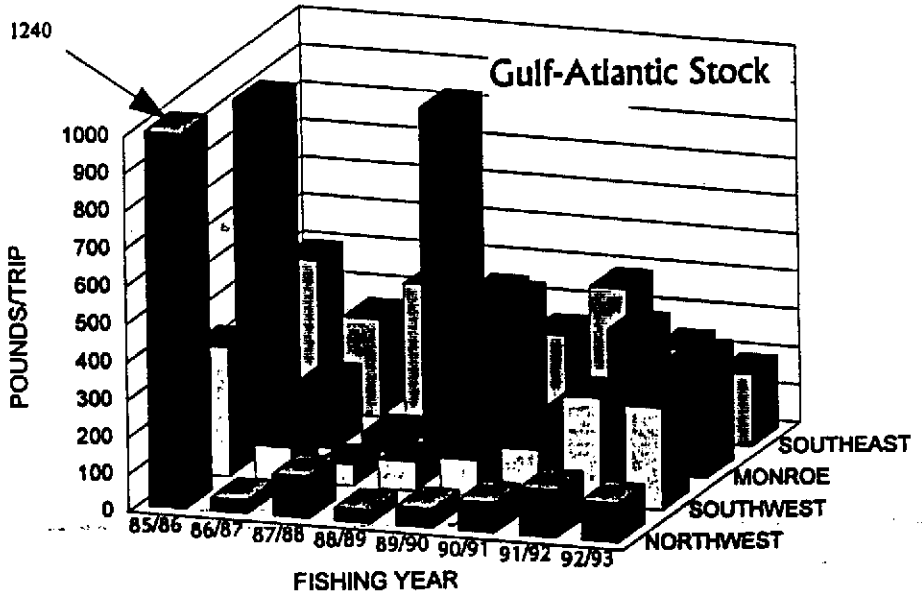
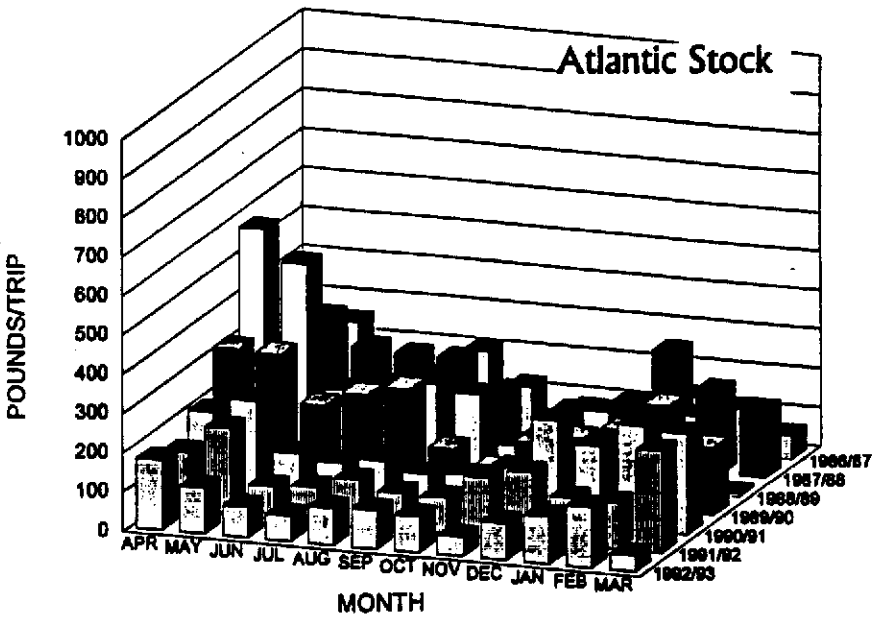
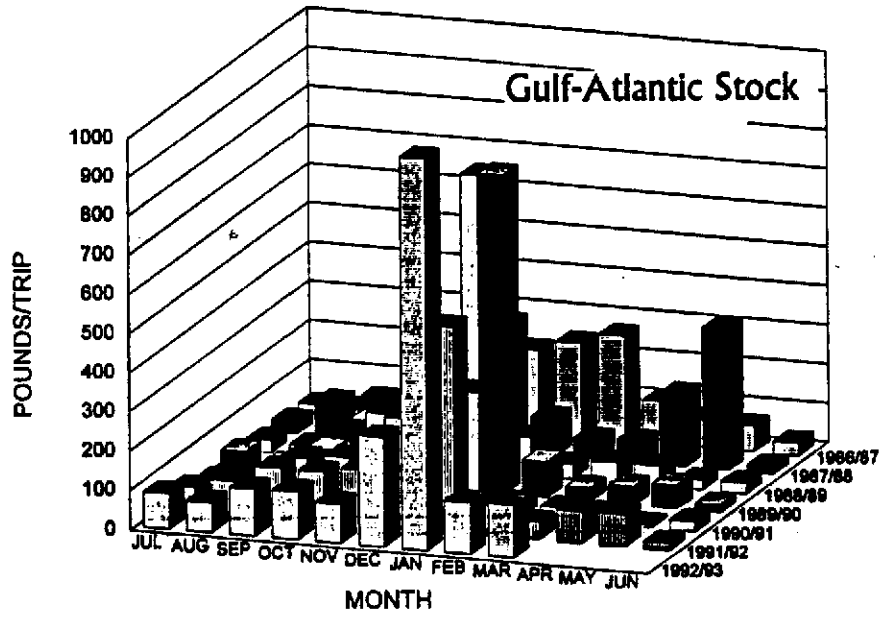


Fig. 3

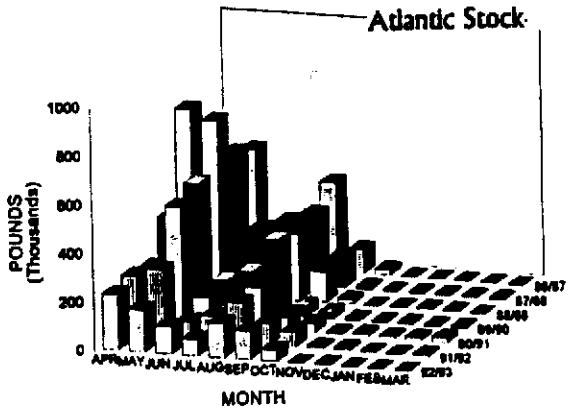
C.P.U.E. OF KING MACKEREL
by Month - 1986/87 - 1992/93



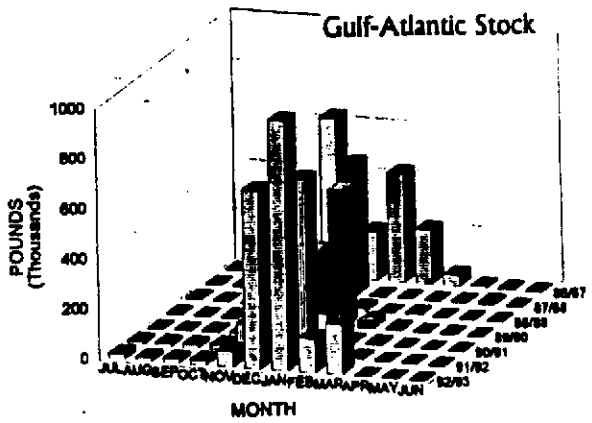
C.P.U.E. OF KING MACKEREL
by Month - 1986/87 - 1992/93



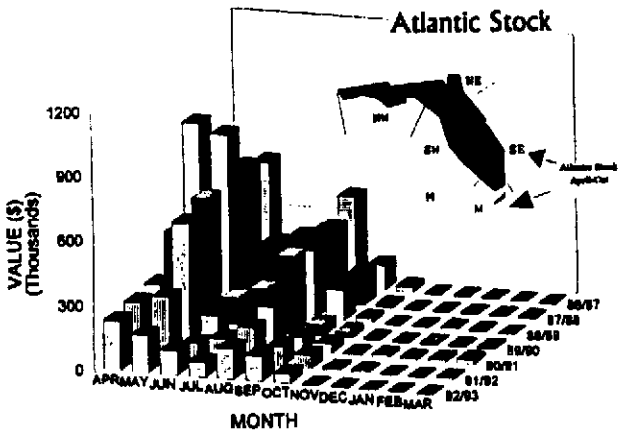
MONTHLY LANDINGS OF KING MACKEREL
1986/87 - 1992/93 Fishing Years



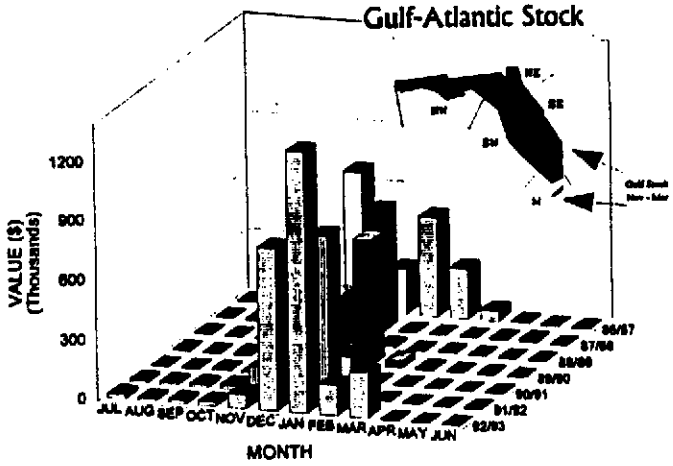
MONTHLY LANDINGS OF KING MACKEREL
1986/87 - 1992/93 Fishing Years



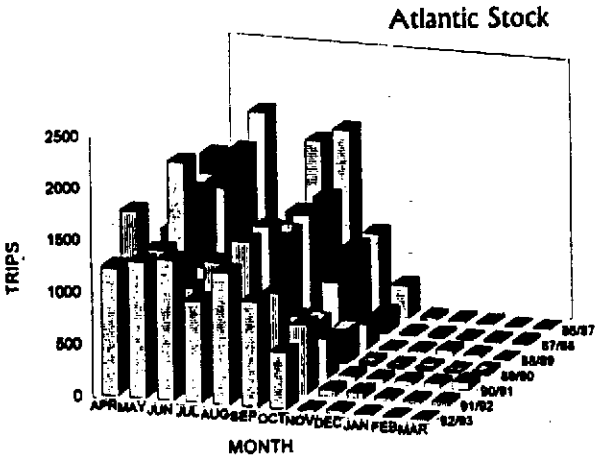
MONTHLY VALUE OF KING MACKEREL
1986/87 - 1992/93 Fishing Years



MONTHLY VALUE OF KING MACKEREL
1986/87 - 1992/93 Fishing Years



EFFORT EXPENDED ON KING MACKEREL
1986/87 - 1992/93 Fishing Years



EFFORT EXPENDED ON KING MACKEREL
1986/87 - 1992/93 Fishing Years

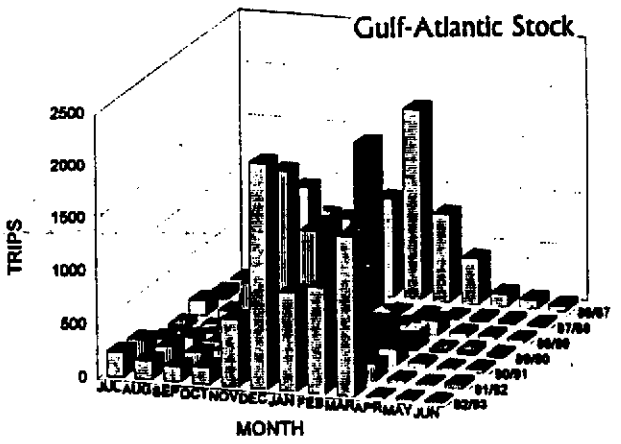
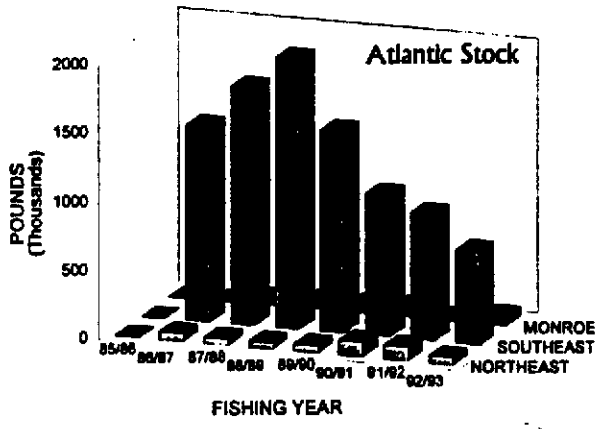
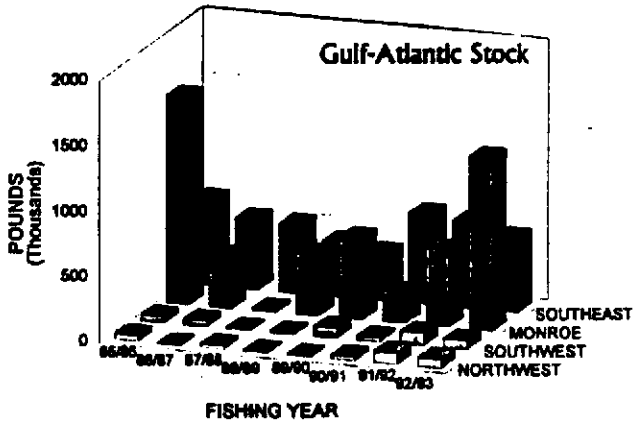


Fig. 1

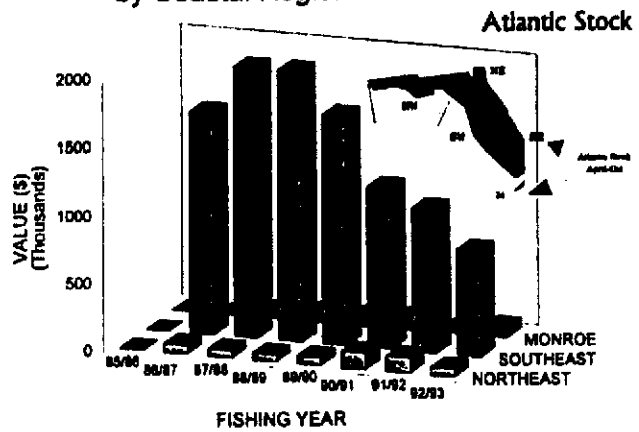
REGIONAL LANDINGS OF KING MACKEREL
by Coastal Region - 1986-1992



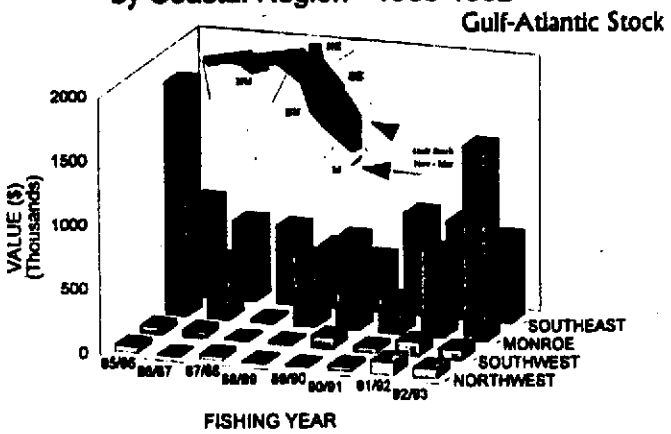
REGIONAL LANDINGS OF KING MACKEREL
by Coastal Region - 1986-1992



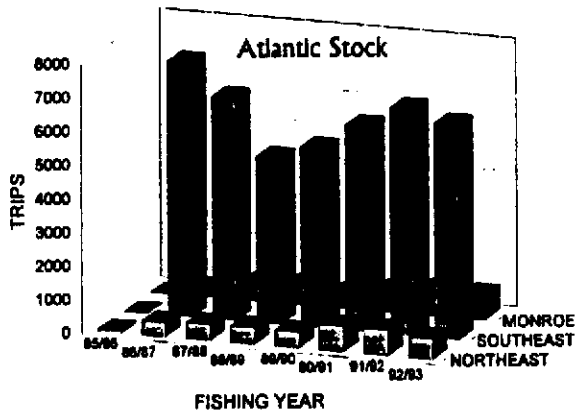
REGIONAL VALUE OF KING MACKEREL
by Coastal Region - 1986-1992



REGIONAL VALUE OF KING MACKEREL
by Coastal Region - 1986-1992



EFFORT EXPENDED ON KING MACKEREL
by Coastal Region - 1986-1992



EFFORT EXPENDED ON KING MACKEREL
by Coastal Region - 1986-1992

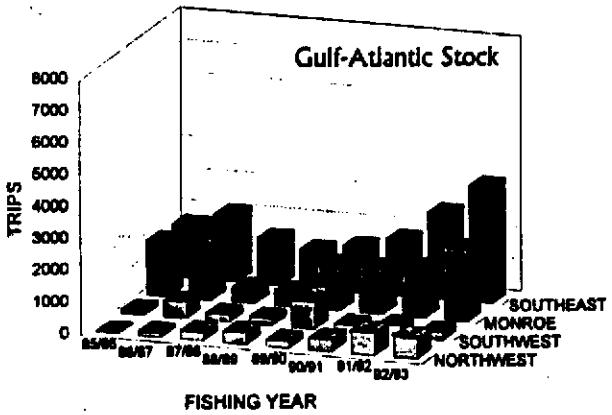


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Table 6.

Location and Spread of Daily King Mackerel Landings During Each Stage of the 1992-93 Fishing Year

STOCK	QUOTA REGION	STAGE	DATES	POUNDS/DAY					
				LOWER QUARTILE	MEDIAN	MEAN	UPPER QUARTILE	MAXIMUM	N (days)
ATLANTIC	ATLANTIC	UNLIMITED	1Apr92-31Mar93	364	1,548	3,372	4,513	40,728	269
GULF-ATLANTIC	EASTERN	1,000#/VESSEL	1Nov92-29Dec92	357	1,889	6,303	4,888	47,614	56
		UNLIMITED	30Dec92-13Jan93	331	965	2,731	4,040	12,096	15
		25 FISH/VESSEL	18Jan93-26Mar93	162	1,302	4,968	10,447	24,295	62
		POST SEASON	14Jan93-17Jan93	71	260	485	671	1,737	9
			27Mar93-31Mar93						
	WESTERN	1,000#/VESSEL	1Jul92-24Dec92	194	476	2,645	1,087	89,787	172
		300#/VESSEL	25Dec92-29De92	1,462	3,257	5,758	10,233	13,073	5
		UNLIMITED	30Dec92-13Jan93	8,051	63,188	72,406	122,314	234,626	15
		POST SEASON	14Jan93-30Jun93	36	215	615	575	23,276	116

Table 5.

King Mackerel Quota Monitoring - 1992-93 Fishing Year
Comparison of Landings by Contacted vs. Non-contacted Dealers

Region *	Year	Month	Non-contact		Contact**				Total	
			Pounds	Trips	Pounds	Trips	% of Total #	Factor***	Pounds	Trips
ATLANTIC	92	APRIL	86951	570	144241	659	-	-	231,192	1,229
		MAY	86942	621	86586	683	-	-	173,528	1,304
		JUNE	34181	488	78950	856	-	-	113,131	1,344
		JULY	19748	363	51044	609	-	-	70,792	972
		AUGUST	27204	375	116928	892	-	-	144,132	1,267
		SEPTEMBER	29943	371	88589	642	-	-	118,532	1,013
		OCTOBER	29214	368	17784	179	-	-	46,998	547
		NOVEMBER	152	6	721	13	82.6%	88.1%	873	19
		DECEMBER	114	3	2978	30	96.3%	95.0%	3,092	33
	93	JANUARY	123	6	2268	14	94.9%	-	2,391	20
		FEBRUARY	175	2	1790	10	91.1%	-	1,965	12
		MARCH	110	3	306	7	73.6%	-	416	10
	Total		314,857	3,176	592,185	4,594			907,042	7,770
EASTERN GULF-ATLANTIC GROUP	92	NOVEMBER	17569	162	23861	178	57.6%	69.0%	41,430	340
		DECEMBER	98147	465	215592	729	68.7%	95.7%	313,739	1,194
	93	JANUARY	18196	116	22288	117	55.1%	-	40,484	233
		FEBRUARY	46470	286	75078	398	61.8%	-	121,548	684
		MARCH	110416	641	78729	587	41.6%	-	189,145	1,228
	Total		290,798	1,670	415,548	2,009			706,346	3,679
WESTERN GULF-ATLANTIC GROUP	92	JULY	21654	236	99	2	-	-	21,753	238
		AUGUST	13701	174	83	2	-	-	13,784	176
		SEPTEMBER	17232	143	35	1	-	-	17,267	144
		OCTOBER	18612	155	979	7	-	-	19,591	162
		NOVEMBER	13605	245	10717	55	44.1%	16.5%	24,322	300
		DECEMBER	77384	459	321624	483	80.6%	76.1%	399,008	942
	93	JANUARY	285845	303	825844	389	74.3%	-	1,111,689	692
		FEBRUARY	9837	177	7885	138	44.5%	-	17,722	315
		MARCH	7638	168	6203	102	44.8%	-	13,841	270
		APRIL	841	17	-	-	-	-	841	17
		MAY	522	21	-	-	-	-	522	21
		JUNE	692	16	73	1	-	-	765	17
	Total		467,563	2,114	1,173,542	1,180			1,641,105	3,294

* Total of king mackerel landings reported from inland counties during the 1992-93 Fishing year was: 3331 pounds (49 trips)

** NMFS monitored Gulf-Atlantic Group king mackerel landings in the Keys and southeastern Florida from 12/29/92 until 1/13/93.

*** Factor applied to account for non-contacted dealers during telephone monitoring

Table 4.

Monthly King Mackerel Landings in Florida by Region during the 1992-93 Fishing Year

YEAR	MONTH	Western Gulf-Atlantic				Eastern Gulf-Atlantic	Atlantic Stock				Statewide
		NORTHWEST	SOUTHWEST	MONROE	Total	SOUTHEAST	MONROE	SOUTHEAST	NORTHEAST	Total	Total
92	4	-	-	-	-	-	43,812	184,654	2,726	231,192	231,192
	5	-	-	-	-	-	6,650	162,213	4,666	173,529	173,529
	6	-	-	-	-	-	2,998	89,129	21,003	113,130	113,130
	7	20,523	1,229	-	21,752	-	2,279	55,921	12,592	70,792	92,544
	8	12,204	1,580	-	13,784	-	1,910	137,793	4,429	144,132	157,916
	9	16,774	493	-	17,267	-	3,801	111,697	3,035	118,533	135,800
	10	15,933	3,658	-	19,591	-	6,666	39,364	968	46,998	66,589
	11	3,247	11,850	9,225	24,322	41,429	-	-	873	873	66,624
	12	316	51,646	347,046	399,008	313,739	-	-	3,092	3,092	715,839
93	1	62	30,408	1,081,219	1,111,689	40,484	-	-	2,391	2,391	1,154,564
	2	0	6	17,716	17,722	121,548	-	-	1,965	1,965	141,235
	3	158	902	12,781	13,841	189,145	-	-	416	416	203,402
	4	170	672	-	842	-	-	-	-	-	842
	5	338	184	-	522	-	-	-	-	-	522
	6	582	182	-	764	-	-	-	-	-	764
Total:		70,307	102,810	1,467,987	1,641,104	706,345	68,116	780,771	58,156	907,043	3,254,492

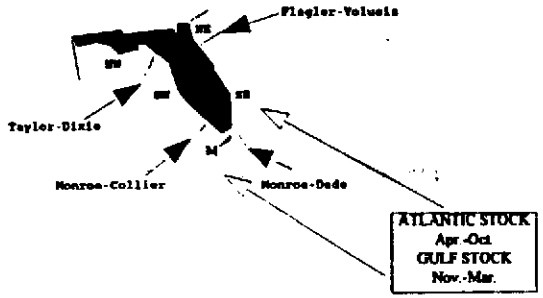
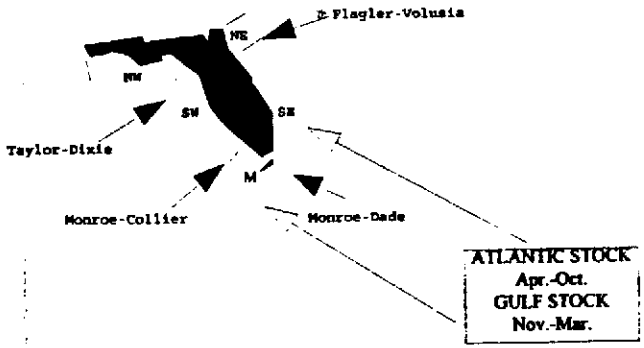


Table 3.

Regional King Mackerel Landings in Florida over the Past Eight Fishing Years



	Atlantic Migratory Group			
FISHING YEAR	MONROE	SOUTHEAST	NORTHEAST	Total
85/86	0	0	5,405	5,405
86/87	7,496	1,424,896	61,075	1,485,971
87/88	51,983	1,736,681	50,860	1,787,541
88/89	64,999	1,976,614	48,946	2,025,560
89/90	62,142	1,474,128	53,463	1,527,591
90/91	79,484	1,044,224	107,519	1,151,743
91/92	28,154	933,225	103,377	1,036,602
92/93	68,116	780,771	58,156	907,043

Gulf-Atlantic Migratory Group						
FISHING YEAR	Western Gulf-Atlantic				Eastern Gulf-Atlantic	Total
	NORTHWEST	SOUTHWEST	MONROE	Total	SOUTHEAST	
85/86	45,865	49,335	1,580,440	1,629,775	662,045	2,291,820
86/87	5,063	48,006	409,812	457,818	542,806	1,000,624
87/88	30,516	13,775	24,406	38,181	528,196	566,377
88/89	12,508	18,859	471,191	490,050	421,648	911,698
89/90	12,139	82,335	628,802	711,137	368,759	1,079,896
90/91	31,001	33,912	235,400	269,312	694,191	963,503
91/92	90,950	98,940	593,689	692,629	663,903	1,356,532
92/93	70,307	102,810	1,467,987	1,641,104	706,345	2,347,449

Statewide
Total
2,297,225
2,486,595
2,353,918
2,937,258
2,607,487
2,115,246
2,393,134
3,254,492

Concerned Fishermen of Florida

P.O. Box 5551 •Fort Pierce, Florida 34954

October 6, 1994

South Atlantic Fishery Management Council
One Southpark Circle, Suite 306
Charleston, S. C. 29407-4699

Dear Council Members: Re: Trip Limits - Atlantic King Mackerel
Net Length Limits

The Concerned Fishermen of Florida would like to see trip limits implemented by April 1st, 1995 for the Atlantic group king mackerel. We would also like to change somewhat the modified CFF proposal as follows:

Apr. 1 - Mar. 31	Brevard/Volusia to NY	3,500 pounds
Apr. 1 - Oct. 31	Bre/Vol to Mon/Col	50 fish

The fishermen feel that a 50 fish limit from Brevard/Volusia to Monroe/Collier from April 1st thru October 31st would serve to protect the spawning fish and allow the summer stock to rebuild.

The CFF would also like to have implemented by April 1st a one net limit with a maximum length of 600 yards along Florida's east coast. (a one hour soak time would track current Florida state law)

The above proposals were presented by Lee Tompkins at the scoping meeting held in Ft. Pierce.

Sincerely,

Carole Anderson Pruitt

Concerned Fishermen of Florida
Carole Anderson Pruitt
Secretary

Dedicated to Sound Fisheries Management

October 6, 1994

TO: South Atlantic Fishery Management Council

RE: Options for Amendment 8 - Mackerel Fisheries

Please consider the Concerned Fishermen of Florida's proposal placing trip limits as a working solution as the most intelligent method of regulating catch rates to prevent over harvesting of the migratory pelagic resource - mackerel-King and Spanish. This is the best way to spread out the harvest to allow most state's fishermen equal access; also to ensure fresh market availability over the broadest range of time and regions. This method has the most benefit to markets, fishermen, fish and truly optimal yield for the resource; instead of large catches in very short periods which has proven in the past to devastate fish stocks to the point of near collapse.

Large net vessel's capabilities of catching enormous amounts of fish in a very short period of time and from a small section of a region of concentrated fish schools can erase years of management to rebuild stocks. (certain times of the year because of the nature of mackerels to congregate in small areas, they can be overfished.

Why allow what caused initial problems for the fishery to be repeated? If we had trip limits in place in the '70's & '80's there would not be the problems we face in the '90's.

This is 1995. Hopefully we have learned from the past what can happen from allowing too many fish taken from one sector at a time to allow a repeat. The 14 or so large Florida roller net boats feel that because they have the capability to catch large amounts they should be allowed to do so. This is an old fashioned way of thinking - and is not any form of management- just GREED. Hook & line fishermen can catch larger amounts also, but feel it is in the best interest of a future for the fishery and stocks to spread out the harvest over a broader range and time, and to insure a more stable fishery and market.

Re: Allowing transferring mackerels at sea from one vessel to another encourages fishermen to get maximum amount of gear at a time when limits should be slowing down catch rates. This is not sound management but another loop hole to allow overages.

With the likelihood of new Florida state water regulations it is highly probable we'll see greatly increased netting preassure in federal waters by large and small net vessels. Trip limits and net lengths limits should be in place as soon as possible by emergency action.

These councils should be able to slow down production any time

where 10% of a yearly quota is taken in a one week period during an unlimited fishery. Some form of emergency action should be taken in order to stop a massive decline in too short a time period for pelagics where wasteful practices are likely to occur; such as MORE FISH THAN THE MARKET CAN ABSORB, POOR QUALITY PRODUCT. Whenever there is a large concentration of fish in one area and the LARGE NET VESSELS OVER HARVEST AN AREA IT TAKES SEVERAL YEARS FOR AN AREA TO RECOVER AND SHOW GOOD STOCKS AGAIN.

If some form of limited entry is put into place, equal shares should be divided among all fishermen who can prove they are and have been already engaged in the fishery for 3-4 years or more and are dependent on the fishery as their main form of income.

Thank you.

Captain Douglas E. King
Sebastian, Florida

Douglas E. King

October 7, 1994

TO: South Atlantic Fishery Management Council

RE: Spanish Mackerel (controlled access) King Mackerel Trip Limits - Net Length Limits

The only way to manage the Spanish Mackerel fishery is with trip limits and quotas. Any ITQ system will not work. An ITQ system leads to a few owning the catch and leaving many without.

We need trip limits in place by April 1, 1995 for the King Mackerel to protect the future of the fishery. I concur with the Concerned Fishermen of Florida's proposal. For the area south of the Brevard/Volusia line..50 fish per day..April 1st thru October 31st...North of Brevard/Volusia..3500#.

I also agree with limiting net length to 600 yds.--one net--no soak and support the CFF position.

Thank you.

Jerry Harrison, Jr.
Sebastian, Florida

Jerry Harrison Jr

October 7, 1994

TO: South Atlantic Fishery Management Council

Re: Mackerel (Spanish and King)

In regards to the controlled access in the Spanish mackerel fishery, I believe the best way is with quotas and trip limits. I do not think that any method using an ITQ system is necessary and would only allow a few to participate. Possible changes in the Florida net rule could change the way Spanish mackerel are caught near shore and open it to a large hook and line fishery.

I also want to support the position of the Concerned Fishermen of Florida. I would like to see trip limits in place by April 1, 1995, King Mackerel - 50 fish a day - April 1st thru October 31st from Brevard/Volusia south..then - north of Brevard//Volusia - 3500#. If changed, new Florida state water regulations would in all probability increase netting pressure in Federal waters and net length limits (one net, 600 yds.) should also be in place by April 1st, 1995.

Thank you,

John DeVane, Sr.
Sebastian, Florida

John DeVane Sr.

October 7, 1994

South Atlantic Fishery Management Council
One Southpark Circle, Suite 306
Charleston, S. C. 29407-4699

Dear Council Members: Re: Controlled Access (Spanish Mackerel)
Trip Limits (King Mackerel)

I feel ITQ's are unfair. They are a disadvantage to the small time conservation minded hook and liner because he doesn't have the catch records of the big operations; therefore they will own the most shares. This situation has come about because of overindulgence and greed. The big operations who have stressed the fishery shouldn't be rewarded with large ITQ's. Quotas and trip limits is the only fair way to go, the only way to distribute the fishery equitably. I am against any ITQ in both the spanish and king mackerel fishery.

I agree with the proposal of the Concerned Fishermen of Florida establishing trip limits for Atlantic King Mackerel..April 1 thru October 31 from Brevard/Volusia to Mon/Col..50 fish a day and Brevard/Volusia to NY..3500#. Hook and line fishermen are not asking for 50 fish because that is all they can catch..they are capable of larger catches..they are doing it for conservation purposes. They want to fish for king mackerel 20 years from..not catch all you can and to heck with the future.

I also feel it is imperative that these trip limits be in place for the April 1, 1995 thru October 31, 1995 season,

Sincerely,

John R. Pruitt, Jr.
Sebastian, Florida

October 7, 1994

TO: South Atlantic Fishery Management Council

Re: Controlled Access (Spanish) Trip Limits (King Mackerel)

I am not in favor of any ITQ method in the Spanish mackerel fishery. I think we'll see many changes in this industry if the Florida state water regulations are changed. I would like to see trip limits and quotas as the preferred management tool.

I am in favor of trip limits in the King Mackerel Fishery and support the Concerned Fishermen of Florida's proposal. (50 fish per day from April 1st thru October 31st, South of the Brevard/Volusia line..and north of Brevard/Volusia - 3500#) These limits need to be in place by April 1, 1995.

I also want to support the position of the Concerned Fishermen of Florida as regards the net length limits on Florida's East Coast. (one net - 600 yds. no soak) and this should be in place by April 1, 1995. Again, possible changes to the Florida state regulations would increase netting pressure in Federal waters.

Thank you,

Floyd Roseman

Floyd Roseman
Sebastian

TRANSCRIBED FROM HANDWRITTEN FAXED COPY TO IMPROVE LEGIBILITY

TO : South Atlantic Council, Attn: Gregg Waugh

FROM: Harold Schenavar (FL 4425EJ)

Dear South Atlantic Council:

Hope this letter finds you all in good spirits and health. I am a hook and line fisherman currently fishing out of the port of Sebastian, FL. I have fished kingfish from Cape Canaveral to Key West (1979-1994), I have watched the stocks of kingfish decline drastically over the years. The main reason NETS!! This gear type must be removed from the King fishery if it is to hold its own. The fifty fish limit from April 1st to Oct 31st would go a long way to accomplish this goal of letting the fish make a rebound.

The big net boat operators and certain fish houses are at present using altered drift nets. If something is not done to stop this from happening you can kiss all your management efforts good bye. The voters in Florida will shut down shore netting Nov. 8th I am sure. Most of those will enter other fisheries. This will split up the pie even more yet.

In summary, due to over harvest in the past because of nets, kingfish stocks are reduced at present. More individuals entering into the fishery. The 50 fish head count is a must from April 1st to Oct. 31st.

Thank you,

Harold Schenavar

Any receiving problems, call 407-589-2552

Concerned Fishermen of Florida

P.O.Box 5551
Ft. Pierce FL 34954-5551

October 10, 1994

South Atlantic Fishery Management Council
One Southpark Circle, Cuite 306
Charleston SC 29407-4699

Dear Council:

The C.F.F. has modified its proposal for Atlantic group king mackerel to the following:

> April 1st to October 31st from the Brevard/Volusia county line to Monroe/Collier county line - 50 fish per vessel per day.

We feel that these limits must be implemented by April 1st, 1995.

The following fishermen feel that these limits are necessary during this period to optimize future yield by rebuilding and protecting the current spawning population:

NAME Johnny Jones ADDRESS
2497 N. IND. RV. DR.
FT. PIERCE, FLA

COMMERCIAL BOAT
CAROLYN-D
DOC. 579449

Concerned Fishermen of Florida

P.O.Box 5551
Ft. Pierce FL 34954-5551

October 10, 1994

South Atlantic Fishery Management Council
One Southpark Circle, Cuite 306
Charleston SC 29407-4699

Dear Council:

The C.F.F. has modified its proposal for Atlantic group king mackerel to the following:

> April 1st to October 31st from the Brevard/Volusia county line to Monroe/Collier county line - 50 fish per vessel per day.

We feel that these limits must be implemented by April 1st, 1995.

The following fishermen feel that these limits are necessary during this period to optimize future yield by rebuilding and protecting the current spawning population:

NAME Thomas W. Jones ADDRESS
2499 N. Indian River Dr.
Fort Pierce, Fl. 34946
Commercial Boat
"Hard Jerk"

Thomas Marvel Jr.
2734 12th St. No.
Naples, Fl. 33940

Dr. Andrew J. Kemmerer
Director, SE Region, NMFS
9721 Executive Center Drive
St. Petersburg, Fl. 33702

Dear Dr. Kemmerer,

It has been brought to my attention that the South Atlantic Council has requested a 50 fish per day trip limit for Atlantic group king mackerel from April 1 through October 31. This will have an adverse impact on a hook and line fishery that occurs in Monroe County waters during April and again in September and October.

Given that the Atlantic group king mackerel quota is not filled it is apparent that such a move is designed as a gear restriction. If the Atlantic Council does not feel justified in an outright gear restriction it does not seem right to enact one via a backdoor method that hampers or precludes other hook and line fishermen from participating. What exactly is to be gained from such a trip limit? Is there not already a 3500 lbs. trip limit on Atlantic stock fish? If so, that easily precludes non hook and line harvest.

A 50 fish per day limit is unnecessary and it will either preclude participation or increase inefficiency in Monroe County waters.

Your attention to this matter is appreciated.

Thank-you,

Thomas Marvel Jr.

Thomas Marvel Jr.

cc: Gulf Council
South Atlantic Council

IS THIS LEGAL?

(Pages 1 and 4 through 7 cover the October 24-28 meeting in Wrightsville Beach, NC)

Council approves trip limits to extend season for Atlantic king mackerel

At its October meeting, the South Atlantic Council approved a recommendation from the commercial industry to implement trip limits for the Atlantic king mackerel fishery for the next fishing season beginning in April.

The Concerned Fishermen of Florida, an organization of hook-and-line king mackerel fishermen, asked the council to consider restricting commercial fishermen to 3,500 pounds per vessel per trip when fishing between the Brevard/Volusia, FL, county line and New York from April 1 through March 31. Between the Brevard/Volusia county line and the Monroe/Collier county line the fishermen asked for a 50-fish trip limit between April 1 and October 31.

The majority of the public favored this proposal to protect the spawning stock and to allow the summer stock to rebuild, to prevent intense harvesting while the fish are in large concentrations, to spread out harvest and to allow equal access to all fishermen. The 3,500-pound trip limit is consistent with regulations already effective for North Carolina state waters.

TO WHOM IT MAY CONCERN:

THE ATLANTIC KING MACKEREL QUOTA HAS BEEN FILLED ONCE IN THE LAST 5 TO 7 YEAR'S.

THIS ARTICLE IS BASED ON LIE'S AND FALSE INFORMATION

HOW DO YOU EXTEND A ~~SEASON~~ THAT DOES NOT CLOSE? (A FOOL'S ERRAND)

THE INTENSE HARVESTING OF ATLANTIC KING MACKEREL DURING MAY SHOULD BE CLOSED COMPLETELY, (95% OF ~~SPAWN~~ YEARLY SPAWN OCCURS DURING MAY IN SOUTH FL.)

NO ONE KNOW'S WHERE ALL THESE FISH SPAWN DURING JUNE; JULY OR AUGUST; HISTORY OF LANDINGS PROVE THIS.

"THE TRUTH"

IN JUNE THE SPAWNING STOCK BREAK'S UP IN SMALL POD'S AND WILL NOT FORM UP IN LARGE SCHOOLS ~~TITLE~~ TILL THE FALL MIGRATION!

THEREFORE THE COUNCIL HAS BEEN FEED LIE'S AND FALSE INFORMATION CONCERNING KINGFISH FROM JUNE TILL NOV.

THE INABILITY TO PROTECT THESE FISH DURING SPAWN IS A ~~~~~ "CRIME AGAINST NATURE"!

WHY PUNISH EVEYONE WITH A 50 HEAD A DAY ~~YEAR~~ LIMIT YEAR ROUND WHEN COMPLETE ~~CLOUS~~ CLOSURE DURING MAY IS THE ANSWER.

YOUR PROPAGANDA IS FALSE

LAW'S ARE BEING CREATED ~~and~~ BASED LIE'S AND MISCONCEPTION.

I HAVE ONE QUESTION; WHO DOES THE GULF/ATLANTIC COUNCIL ANSWER TO?

FOR LAW'S OF NATURE ARE CONTINOUSLY BROKEN BY THESE COUNCIL MEMBERS.

DANIEL C. KANE
CAPT HURI-KANE III
P.O. BOX 125
ROSELAND FL 32957

(407) 729-8125

Ray & Anna Cartwright
2781 Park Lane. N.E.
Palm Bay, Fl. 32905-2717
Dec. 3rd 1994

29

South Atlantic Fishery Management Council: mid

Please, we need your help desperately — the commercial fishing co's in Fort Pierce & Stuart Fl. are using ~~net~~ drifting gill nets in 60' to 90' of water adjacent to the gulf stream with just enough weight for them to slowley bounce along the bottom; Early November all parties responsible for fishery management in federal waters - (N.F.M.S) of St Petersburg (NMFS) in Washington D.C. agreed this is an illegal net - but Andrew J. Kemmerer, Regional Director, South-east Region (NMFS) is dragging his feet on this as he usually does - Would yak - all please build a fire under him - before he kills the Kingfish stock just as it's starting to come back. - Please help us before it's too late

Anxiously Ray & Anna Cartwright

Concerned Fishermen of Florida

P.O.Box 5551
Ft. Pierce FL 34954-5551

October 10, 1994

South Atlantic Fishery Management Council
One Southpark Circle, Cuite 306
Charleston SC 29407-4699

Dear Council:

The C.F.F. has modified its proposal for Atlantic group king mackerel to the following:

> April 1st to October 31st from the Brevard/Volusia county line to Monroe/Collier county line - 50 fish per vessel per day.

We feel that these limits must be implemented by April 1st, 1995.

The following fishermen feel that these limits are necessary during this period to optimize future yield by rebuilding and protecting the current spawning population:

NAME	ADDRESS
George Kaul	10600 Okeechobee Rd Ft Pierce Fl 349[illegible]
Frank X Breig	308 Fun Town Fort Pierce Fla. 34946
Adolph A Grimes	2703 Apt. F A 1A
[illegible]	
Chris Lennard	2517 S. 17th St. Ft Pierce Fl 34950
Gino Deskins	2240 Keen Rd Ft. Pierce Fl 34940
[illegible]	8286 Bayard Rd. Ft. Pierce Fla. 34951
A L Tyrrell	102 Gardenia Ave, Ft Pierce
Lee Tompkins	8200 Ft Walton Ave Ft Pierce Fl.
[illegible]	1010 Pulitzer Rd Ft Pierce 34945 Fl
[illegible]	2809 Carol [illegible] Ft. P.
[illegible]	2407 St Lucie Blvd Ft Pierce Fl
[illegible]	[illegible] La. PSL
[illegible]	721 Hernando Ft Pierce Fla
[illegible]	1144 Fernandina Ft Pierce Fla 34949
James A. Davis Jr.	14390 Orange Ave Fla.
[illegible]	14390 Orange Ave. Fla.
C. W. White	211 [illegible] 34946 Ft Pierce Fla

February 14, 1995

South Atlantic Fishery Management Council
One Southpark Circle, Suite 306
Charleston, SC 29407-4699

Dear Council:

It is imperative that trip limits for the Atlantic king mackerel fishery approved by the council at the October meeting be implemented by April 1, 1995. The CONCERNED FISHERMEN OF FLORIDA are requesting that the council direct staff to immediately do whatever is required to keep the time clock running and through emergency action see that trip limits are in place by April 1st.

We are asking this with the future in mind. We feel the council understands the importance of this proposal. Any delay beyond April 1, 1995 in implementing trip limits will only serve to help the very ones who are exploiting the resource.

Sincerely,

Carole A. Pruitt, Secretary
Concerned Fishermen of Florida (FAX 407-589-0262)

cc: Dr. Andrew J. Kemmerer, Dir. SE Region NMFS
Dick Schaefer, Div. 2- Fisheries Conservation & Mgt.
Ron Brown, Sec.of Commerce
Parker, Johnson, Owen & McGuire ESQ.

Appendix E. Information from Amendment 3

RESUBMISSION OF DISAPPROVED MEASURES

AMENDMENT 3

TO

THE FISHERY MANAGEMENT PLAN

FOR THE

COASTAL MIGRATORY PELAGIC RESOURCES

(MACKERELS)

OF THE GULF OF MEXICO AND THE SOUTH ATLANTIC

INCLUDES ENVIRONMENTAL ASSESSMENT
AND REGULATORY IMPACT REVIEW

JANUARY 1990

South Atlantic Fishery Management Council
1 Southpark Circle
Southpark Building, Suite 306
Charleston, South Carolina 29407-4699
(803) 571-4366

Gulf of Mexico Fishery Management Council
Lincoln Center, Suite 881
5401 W. Kennedy Blvd.
Tampa, Florida 33609-2486
(813) 228-2815

Number of commercial Atlantic migratory group king mackerel permits by year and State.

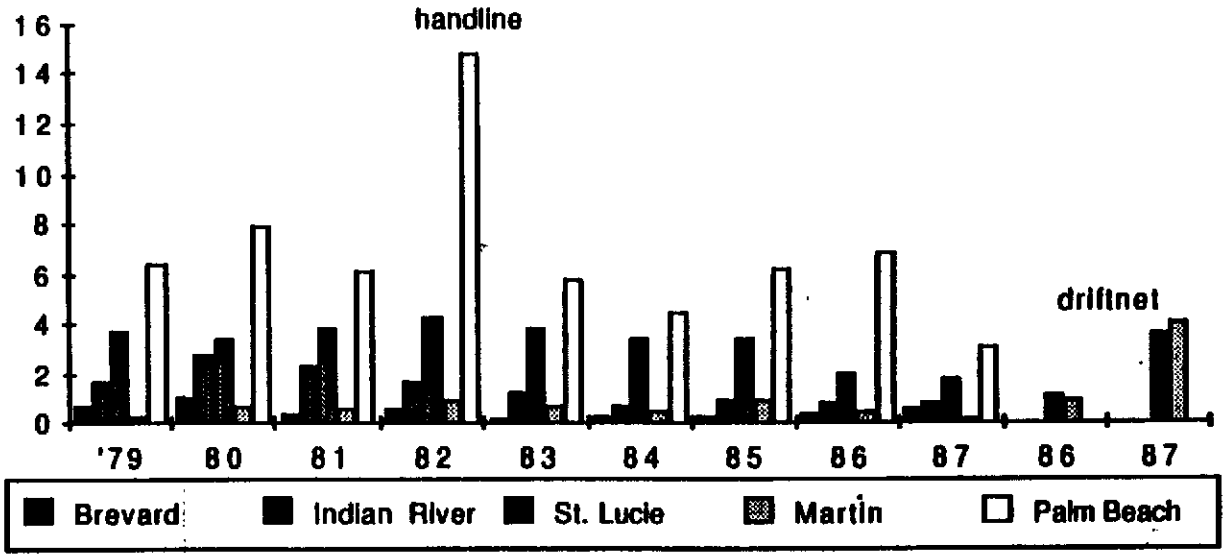
		FISHING YEAR (FY)			
		FY=1986/87	FY=1987/88	FY=1988/89	FY=1989/90*
FLORIDA	Hook & Line	747	657	723	696
	Total	838	785	878	888
	% Hook & Line	89%	84%	82%	78%
GEORGIA	Hook & Line	10	2	6	6
	Total	11	2	6	6
	% Hook & Line	91%	100%	100%	100%
SOUTH CAROLINA	Hook & Line	33	39	40	54
	Total	45	40	43	56
	% Hook & Line	73%	98%	93%	96%
NORTH CAROLINA	Hook & Line	224	249	361	388
	Total	379	326	463	522
	% Hook & Line	59%	76%	78%	74%
TOTAL	Hook & Line	1,014	947	1,130	1,144
	Total	1,273	1,153	1,390	1,472
	% Hook & Line	80%	82%	81%	78%

*Fishing year 1989/90 number of permits as of December 4, 1989.

ATTACHMENT 4

(SOURCE: Fisheries Operations Branch, NFMS, SERO)

Figure 2. Pounds of King Mackerel from the Florida East Coast commercial fishery (in hundreds of thousands)



	Year	Brevard	Indian River	St. Lucie	Martin	Palm Beach	Handline Total	Total with Driftnet
	79	67,511	169,395	372,962	33,483	639,594	1,282,945	
	80	101,332	279,551	344,658	66,498	796,715	1,588,754	
	81	42,818	232,480	383,059	57,431	616,397	1,332,185	
	82	60,343	170,368	428,619	89,436	1,488,629	2,237,395	
	83	20,889	128,613	381,861	70,929	574,486	1,176,778	
	84	23,728	70,394	340,283	48,392	446,258	929,055	
	85	29,819	91,530	341,056	98,330	618,731	1,179,466	
	86	37,074	83,499	205,020	45,254	687,727	1,058,574	1,267,128
	87	64,449	81,886	178,980	19,757	305,972	651,044	1,416,270
driftnet	86			113,499	95,055			
driftnet	87			362,056	403,170			

(Source:Ernie Snell, NMFS Miami, FL; personal communication)

ATTACHMENT 9

TABLE 1. SOUTH ATLANTIC GROUP KING MACKEREL COMMERCIAL LANDINGS. (Source: NMFS SERO)

	HOOK AND LINE			DRIFT GILLNET			RUNAROUND GILLNET & PURSE SEINE		
YEAR/MONTH	TRIPS	POUNDS	LB/TRIP	TRIPS	POUNDS	LB/TRIP	TRIPS	POUNDS	LB/TRIP
Year=1986									
April	884	195,480	221	13	18,667	1,436	0	0	
May	1,641	392,444	239	36	32,051	890	0	0	
June	448	45,982	103	15	5,259	351	0	0	
July	1,206	103,457	86	98	61,879	631	0	0	
August	1,437	245,107	171	86	86,341	1,004	0	0	
September	573	65,010	113	33	12,612	382	0	0	
TOTAL	6,189	1,047,480	169	281	216,809	772			
Year=1987									
April	1,130	239,206	212	92	73,475	799	0	0	
May	1,166	247,582	212	115	165,983	1,443	0	0	
June	497	70,512	142	146	137,327	941	0	0	
July	551	59,590	108	155	191,540	1,236	0	0	
August	897	112,689	126	125	166,745	1,334	0	0	
September	510	50,750	100	90	60,198	669	0	0	
TOTAL	4,751	780,329	164	723	795,268	1,100			
Year=1988									
April	603	203,408	337	58	83,646	1,442	24	338,703	14,113
May	814	273,500	336	172	388,944	2,261	0	0	
June	152	17,721	117	107	64,734	605	0	0	
July	114	7,182	63	119	65,178	548	0	0	
August	588	70,574	120	181	158,224	874	0	0	
September	N/A	N/A		58	47,320	816	0	0	
TOTAL	2,271	572,385	252	695	808,046	1,163	24	338,703	14,113

Data for 1988 represents landings of 10 major dealers
Data for 1986 & 1987 are from all commercial dealers
N/A Not Available

Appendix F. Florida's Constitutional Amendment

CONSTITUTION
OF THE
STATE OF FLORIDA

ARTICLE X

Section 16. Limiting Marine Net Fishing.

(a) The marine resources of the State of Florida belong to all of the people of the state and should be conserved and managed for the benefit of the state, its people, and future generations. To this end the people hereby enact limitations on marine net fishing in Florida waters to protect saltwater finfish, shellfish, and other marine animals from unnecessary killing, overfishing, and waste.

(b) For the purpose of catching or taking any saltwater finfish, shellfish, or other marine animals in Florida waters:

1. No gill nets or other entangling nets shall be used in any Florida waters; and

2. In addition to the prohibition set forth in 1., no other type of net containing more than 500 square feet of mesh area shall be used in nearshore and inshore Florida waters. Additionally, no more than two such nets, which shall not be connected, shall be used from any vessel, and no person not on a vessel shall use more than one such net in nearshore and inshore Florida waters.

(c) For purposes of this section:

1. "Gill net" means one or more walls of netting which captures saltwater finfish by ensnaring or entangling them in the meshes of the net by the gills, and "entangling net" means a drift net, trammel net, stab net, or any other net which captures saltwater finfish, shellfish, or other marine animals by causing all or part of heads, fins, legs, or other body parts to become entangled or ensnared in the meshes of the net, but a hand thrown cast net is not a gill net or entangling net;

2. "Mesh area" of a net means the total area of netting with the meshes open to comprise the maximum square footage. The square footage shall be calculated using standard mathematical formulas for geometric shapes. Seines and other rectangular nets shall be calculated using the maximum length and maximum width of the netting. Trawls and other bag type nets shall be calculated as a cone using the maximum circumference of the net mouth to derive the radius, and the maximum length from the net mouth to the tail end of the net to derive the slant height. Calculations for any other nets or combination type nets shall be based on the shapes of the individual components;

3. "Coastline" means the territorial sea base line for the State of Florida established pursuant to the laws of the United States of America;

4. "Florida waters" means the waters of the Atlantic Ocean, the Gulf of Mexico, the Straits of Florida, and any other bodies of water under the jurisdiction of the State of Florida, whether coastal, intracoastal or inland, and any part thereof; and

5. "Nearshore and inshore Florida waters" means all Florida

waters inside a line three miles seaward of the coastline along the Gulf of Mexico and inside a line one mile seaward of the coastline along the Atlantic Ocean.

(d) This section shall not apply to the use of nets for scientific research or governmental purposes.

(e) Persons violating this section shall be prosecuted and punished pursuant to the penalties provided in section 370.021(2)(a),(b),(c)6. and 7., and (e), Florida Statutes (1991), unless and until the legislature enacts more stringent penalties for violations hereof. On and after the effective date of this section, law enforcement officers in the state are authorized to enforce the provisions of this section in the same manner and authority as if a violation of this section constituted a violation of Chapter 370, Florida Statutes (1991).

(f) It is the intent of this section that implementing legislation is not required for enforcing any violations hereof, but nothing in this section prohibits the establishment by law or pursuant to law of more restrictions on the use of nets for the purpose of catching or taking any saltwater finfish, shellfish, or other marine animals.

(g) If any portion of this section is held invalid for any reason, the remaining portion of this section, to the fullest extent possible, shall be severed from the void portion and given the fullest possible force and application.

(h) This section shall take effect on the July 1 next occurring after approval hereof by the vote of the electors.