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**AMENDMENT 8
TO
THE FISHERY MANAGEMENT PLAN
FOR
COASTAL MIGRATORY PELAGIC RESOURCES
IN
THE GULF OF MEXICO
AND
SOUTH ATLANTIC
INCLUDES ENVIRONMENTAL ASSESSMENT
REGULATORY IMPACT REVIEW
AND
INITIAL REGULATORY FLEXIBILITY ANALYSIS**



AUGUST 1996

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COVER SHEET

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TITLE OF PROPOSED ACTION:

Amendment 8 to the Fishery
Management Plan for Coastal
Migratory Pelagic Resources
in the Gulf of Mexico and South
Atlantic

TYPE OF DOCUMENT:

Environmental Assessment (EA)

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ABSTRACT:

The Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) propose an amendment to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic (FMP) to adjust management procedures for king and Spanish mackerels, cobia, and dolphin. Proposed changes include requirements for gear, consideration of stock boundary adjustments in the next amendment, changes to the definition of overfishing, permitting requirements, and extension of the range of management for cobia. Also proposed are possible changes in trip limits for cobia and dolphin, and additional flexibility for changes as seasonal adjustments by regulatory amendment.

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- g. Allow setting zero bag limits.
- h. Allow gear regulation including prohibition.
- i. Provide that the South Atlantic Fishery Management Council is to set vessel trip limits, closed seasons or areas, or gear restrictions within the commercial suballocation for Gulf group king mackerel for the northern area of the Eastern Zone (Dade-Volusia Counties, Florida).
- j. Clarify that the Regional Director of the National Marine Fisheries Service (NMFS) may implement quota closures when the quota is filled.

12. Revise the definition of optimum yield. (Section 2.8)

Summary:

The Environmental Assessment for Amendment 8 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic was prepared by the Gulf of Mexico and South Atlantic Fishery Management Councils to manage king and Spanish mackerels, cobia, and dolphin (fish). Amendment 8 addresses the following issues:

1. Identify additional problems in the fishery (Section 2.1).
2. Specify allowable gear (Section 2.2).
3. Allow transfer of Atlantic commercial Spanish mackerel at sea (Section 2.3).
4. Obtain public comment on stock boundaries for king mackerel but maintain current boundaries for the time being (Section 2.4).
5. Require dealer permits for coastal pelagics (Section 2.5.1).
6. Establish a moratorium on new king mackerel endorsements, commercial coastal pelagic permits, a moratorium on new for hire (charter and head boat) permits in the Gulf of Mexico, and provide for transferability of permits during the moratorium (Section 2.5.2 and 2.5.3).
7. Revise qualifications for a commercial permit (Section 2.5.4), require compliance with state or federal regulations (Section 2.5.5), and require additional information on the permit application (Section 2.5.6).
8. Extend the management area of cobia through New York (Section 2.6.1) and consider a change in trip limits (Section 2.6.2).
9. Consider bag, trip, and size limits for dolphin (Section 2.6.3).
10. Allow retention of up to 5 cut-off (barracuda damaged) king mackerel on vessels with commercial trip limits. Provide for commercial vessel trip limits for Atlantic king mackerel (Section 2.6.4).
11. Revise the seasonal framework procedures (Section 2.7) to:
 - a. Delete a procedure for subdividing the Gulf group migratory group of king mackerel.
 - b. Request that the stock assessment panel provide additional information on spawning potential ratios and mixing of king mackerel migratory groups.
 - c. Provide for consideration of public comment.
 - d. Clarify frequency and type of stock assessment reports.
 - e. Redefine overfishing and allow for adjustment by framework procedure.
 - f. Allow changes in allocation ratio of Atlantic Spanish mackerel.

- o 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;
- o 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;
- o Redefined recreational bag limits as daily limits;
- o Deleted provision specifying that bag limit catch of mackerel may be sold;
- o Provided guidelines for corporate commercial vessel permits;
- o Specified that Gulf group king mackerel may be taken only by hook-and-line and run-around gill nets;
- o Imposed a bag limit of two cobia per person per day for all fishermen;
- o 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:

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

The present management regime for king mackerel recognizes two migratory groups, the Gulf migratory group and the Atlantic Migratory Group. These groups seasonally mix on the east coast of Florida. For management and assessment purposes, a boundary between groups was specified as 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.

1.0 PURPOSE AND NEED FOR ACTION

1.1 History of Management

Species in the Fishery for Coastal Migratory Pelagics:

King mackerel	<u>Scomberomorus cavalla</u>
Spanish mackerel	<u>S. maculatus</u>
Cobia	<u>Rachycentron canadum</u>
Cero	<u>S. regalis</u>
Little tunny	<u>Euthynnus alleteratus</u>
Dolphin	<u>Coryphaena hippurus</u>
Bluefish (Gulf of Mexico only)	<u>Pomatomus saltatrix</u>

The Fishery Management Plan for Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic (FMP) and Environmental Assessment (EA), 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 and its EIS, 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 with Environmental Assessment (EA), implemented in July of 1987, revised Spanish mackerel MSY downward, recognized two migratory groups, and set commercial quotas and bag limits. Charterboat 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 with EA, 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 with EA, implemented in 1989, reallocated Spanish mackerel equally between recreational and commercial fishermen on the Atlantic group with an increase in TAC.

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

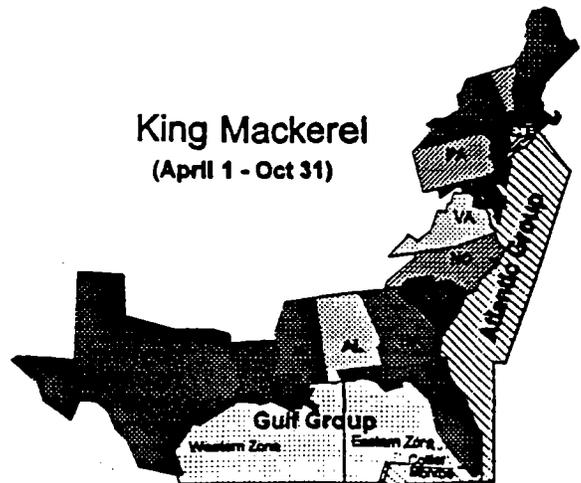
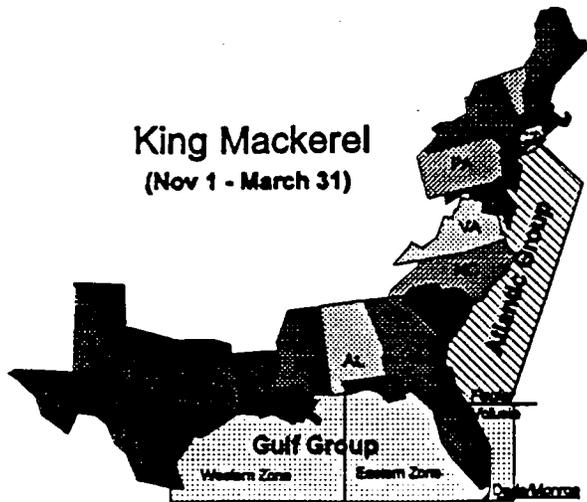
- o Extended management area for Atlantic groups of mackerels through the Mid-Atlantic Fishery Management Council's (MAFMC) area of jurisdiction;
- o Revised problems in the fishery and plan objectives;
- o Revised the fishing year for Gulf group Spanish mackerel from July-June to April-March;
- o Revised the definition of "overfishing";
- o Added cobia to the annual stock assessment procedure;

4. The existence of separate state and federal jurisdiction and lack of coordination between these two make biological management difficult; since, in some instances, the resource may be fished beyond the allocation in state waters.
5. The condition of the cobia stock is not known and increased landings over the last ten years have prompted concern about overfishing.
6. Lack of information on multiple stocks or migratory groups of king mackerel that may mix seasonally confounds and complicates management.
7. Large catches of mackerel over a short period cause quotas and TAC to be exceeded before closures can be implemented; therefore, some users have obtained a share in excess of their allocation.
8. Closures of a fishery and reversion of bag limits to zero due to the filling of a quota have deprived geographic areas of access to a fishery.
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.

1.3 Management Objectives

The current FMP as amended lists eight plan objectives:

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.



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 percent for recreational fishermen and 32 percent for commercial fishermen. The commercial allocation is further subdivided 69 percent for the Eastern Zone and 31 percent for the Western Zone.

The Atlantic migratory group of king mackerel is allocated with 62.9 percent to recreational fishermen and 37.1 percent to commercial fishermen.

Amendment 7 with EA equally divided the Gulf commercial allocation in the Eastern Zone at the Dade-Monroe County line in Florida. The suballocation for the area from Monroe County through Western Florida is equally divided between commercial hook-and-line and net gear users.

The mechanism for seasonal framework adjustments is described in Appendix I.

1.2 Problems in the Fishery as addressed previously in the Amended FMP

1. The stocks of Spanish mackerel and Gulf group 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 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.

mitigate conflict between user groups that focus on the effects of increased fishing effort and its impact on stocks.

Consideration must also be given to the possibility that conflicts that develop over the issue of localized depletion may sometimes be based on the perception that overfishing is occurring. In some instances, increased effort may be a short-term event and have little effect on the stock or markets. Although perceptions may or may not be based on fact, they affect behavior; and behavior can affect management. Whether valid or not, perceptions of overfishing in a particular area may affect fishing effort and markets. In the south Atlantic, longline fishermen have testified that they are being urged to redirect fishing effort toward dolphin. Continued redirection of commercial effort to dolphin could increase concern for this stock and create a perception and possible potential for overfishing.

2.1.2 Rejected Alternative: Status Quo - No change to problems in the fishery.

Discussion: The no change alternative would not allow the councils to clarify their concern for this issue that may become a recurring problem within the fishery. Although public testimony has indicated a redirection in effort toward dolphin, it is currently unknown whether this shift will result in local depletion or market fluctuations. There may, however, be continued or heightened user-group conflicts; and in either case, these problems should be recognized.

2.2 Gear Regulation

2.2.1 Specification of Allowable Gear in South Atlantic and Mid-Atlantic

2.2.1.1 Proposed Alternative: Only the following gear is allowable:

- a. Directed Atlantic migratory group Spanish mackerel fishery: hook-and-line, (handline, rod and reels, and bandit gear); and run around nets, stab nets, and cast nets.
- b. Directed Atlantic migratory group king mackerel fishery south of Cape Lookout within the South Atlantic Council's area of jurisdiction is limited to hook-and-line gear. Multigear trips, consisting of mixed species including king mackerel not to exceed 3,500 pounds, are allowed north of Cape Lookout.
- c. Vessels with a coastal migratory permit fishing for or possessing Atlantic Spanish mackerel on Florida's east coast are limited to two run-around gill nets of different mesh sizes. Neither may exceed 800 yards, and only one may be fished at a given time. The maximum soak time is 1 hour, and nets must be marked with a maximum of 9 dissimilar floats (different from normal net buoys and marked with the permit number) spaced every 100 yards or less.
- d. Directed coastal migratory pelagic fisheries in the SAFMC's and MAFMC's area of jurisdiction, excluding little tunny north of Cape Lookout, cero, king, and Spanish mackerel; surface longline; and hook-and-line gear including manual, electric, or hydraulic rod and reels, and bandit gear.

1.4 Current Status of the Fishery

Gulf migratory groups of king and Spanish mackerels were determined to be overfished in the mid 1980s, and a rebuilding program of reduced allowable catches was implemented. Both stocks have improved to a level that the 1995 stock assessment panel recommended, and they are no longer considered overfished. Atlantic migratory groups of king and Spanish mackerels are not defined as being overfished; however, there is concern because fishermen are unable to take their share of the TAC.

The fishery for cobia, restrained by a universal bag limit of 2-fish per person per daily trip, remains stable producing at its MSY.

Dolphin occur throughout the world's temperate oceans, and there is no evidence of overfishing. There has, however, been some concern expressed of localized reduction in availability due to high fishing pressure. There are no federal regulations on this species.

1.5 Need for Action

Actions proposed in this amendment are the result of adjusting management measures to recovering stocks, new gear, and attempting to provide a more flexible and responsive regulatory system. Increasing entry of participants in the fishery has resulted in shorter seasons to fill quotas. Uncertainty of stock identification of migratory groups of king mackerel continues to complicate management of this species.

2.0 MANAGEMENT ALTERNATIVES

2.1 Additional Problems in the Fishery

2.1.1 Proposed Alternative: Add problems 11. Localized reduction of fish in abundance due to high fishing pressure; and 12. Disruption of markets.

Discussion: This option addresses concerns that increased effort could result in reduced availability in local areas, thereby creating user-group conflicts. A case in point has been an expansion of a longline fishery for dolphin off South Carolina. Charterboat operators are concerned that the increased catches will have a negative impact on their access to the fish. Also, the South Atlantic Council is concerned about the localized impacts of high catches on the availability and market price. Although prices did not fluctuate over time from the dolphin fishery off South Carolina, there have often been cases of mackerel prices dropping when large net catches have been landed. Many of the regulations adopted under the Coastal Migratory Pelagics FMP were implemented to disperse catches due to regional differences in fishing capacity and to prevent quota-induced closure of fisheries before certain regions were able to have access to migrating stocks. Consequently, these problems are currently being addressed through opening and closing seasons and shifting boundaries.

Increased fishing effort on a commercially and recreationally important species can often create conflict between user groups because of the perception of overfishing and possible market effects. The rapid increase in fishing effort may affect the availability of a particular species to certain other sectors within the fishery. In addition, the sudden appearance of large quantities of product may affect prices received by fishermen and prices paid by consumers. It may be in the fishermen's best interest to prevent wide fluctuations in catch and/or landings and strive for a more stable product flow that may provide steady prices for both consumers and fishermen. In addressing problems with localized depletion and market disruption, the Councils may also

Discussion: It is often difficult to determine the impacts of new gear types. By allowing for the use of experimental gear, the Council can assess the various impacts and still allow for the introduction of new gear types if desired. This alternative will allow for the development of gear types that may have beneficial impacts upon the fishery as a whole. It will also allow the Council to monitor the impacts of new gear types in order to assess any negative impacts that they may have on the fishery, habitat, or other fisheries.

2.2.1.3 Proposed Alternative: Specification of nonconforming gear in the South and Mid-Atlantic. Possession of coastal pelagics aboard a vessel using nonconforming gear, including the shark drift gill net fishery, is limited to the bag limit for species with a bag limit in the SAFMC, GMFMC, and MAFMC's area of jurisdiction. Species with no bag limit, unlimited.

Discussion: By specifying the bag limit for nonconforming gear, the Council is providing further clarification to enhance law enforcement within the region.

2.2.1.4 Rejected Alternative: No Change - do not specify allowable gear but continue gear prohibitions in the South Atlantic area.

Discussion: Mackerel Amendment 2, implemented in July 1987, prohibited use of purse seines on overfished stocks, while Amendment 3 (partially approved in 1989, revised, resubmitted, and approved in 1990) prohibited drift gill nets for coastal pelagics and purse seines for overfished groups of mackerels. In Amendment 5, implemented in August 1990, the Councils specified that Gulf group king mackerel may be taken only by hook-and-line and run-around gill nets. The South Atlantic Council, in Amendment 7 to the Snapper-Grouper Fishery Management Plan, specified allowable gear in the directed snapper-grouper fishery and included a procedure for experimental gear. Enforcement problems continue with existing gear prohibitions, such as the drift gill net prohibition, and specifying allowable gear would increase the effectiveness of enforcement.

2.2.2 Specification of allowable gear for Gulf group king mackerel

2.2.2.1 Proposed Alternative: Gulf group king Mackerel may be taken only by hook-and-line (including longline) and run-around gill nets. Possession is prohibited aboard a vessel with a drift gill net. This proposal is not intended to prohibit possession aboard appropriately permitted multispecies vessels with other fishing gear aboard (i.e. spiny lobster traps, shrimp trawls, fish traps, and stone crab traps). The incidental catch allowance for purse seine vessels of up to 1 percent of king mackerel and 10 percent for Spanish mackerel of all fish aboard remains in effect.

Discussion: This action is intended to correct the regulations to be consistent with the intent of Amendment 5: Section 12.6.8.1.1 Gulf group king mackerel may be taken only with the following gear: hook-and-line (including longlines) and run-around gill nets.

The action was intended to limit the use of gear for taking Gulf group king mackerel to current gear used in the fishery and prevent introduction of new gear, i.e., drift gill nets and purse seines. Possession of coastal pelagics aboard a vessel with a drift gill net would continue to be prohibited, and possession of Gulf group king mackerel aboard a vessel with a purse seine would be limited to the aforementioned incidental catch allowance.

e. **Drift net rules in place now only apply south of Cape Lookout.**

Discussion: In order to assist law enforcement in recognizing legal and illegal gear, the Councils have been urged to define allowable gear in each fishery. The South Atlantic Council has prohibited the use of purse seines and drift gill nets for coastal pelagic fisheries; however, there is evidence that modified drift net gear is still being used, especially in the king mackerel fishery. Fishermen along Florida's east coast have complained about modified drift gill nets being used to harvest king mackerel, and law enforcement agencies have conducted operations to apprehend illegal netters. In addition, a recently completed study of the shark drift gill net fishery shows some rather large incidental catches of king mackerel (Trent and Parshley, 1995). By specifying allowable gear, the Council would provide clear guidelines for law enforcement to regulate the use of gear.

It has been the Council's intent to allow gear historically used within the fishery and prevent gear conflicts from developing. The king mackerel fishery along Florida's east coast has historically been a hook and line fishery; however, net catches have often occurred on early season fish that may be Atlantic group or late returning Gulf group fish. From New York to North Carolina, net fishermen target king mackerel from time to time. In North Carolina, net fishermen are more opportunistic than Florida east coast fishermen; however, they will target king mackerel when feasible. Further north, net fishermen fishing for bluefish use a type of net that drifts, and they may also take little tunny. The Councils' intent in specifying allowable gear within each directed fishery is to provide for continuation of these historical fisheries, while excluding newer gear types that may create conflict.

The trend in Florida east coast fisheries has been towards increasingly longer nets for several reasons. First, as some fish became less abundant, and/or more effort was needed to catch the same quantity; fishermen had to deploy more effort, i.e., more net in order to maintain shares. Second, under the quota system, each fisherman has added incentive to catch the maximum amount that can be carried on the boat, and a longer net is one way to maximize catch. Spanish mackerel fishermen have used more and more net to get a larger share for themselves and the spotter pilots with which they work. Trent and Anthony (1978) reported that in the early, deep-water fishery, gill nets about 600 yards in length were used to catch as much as 9 million pounds per year. Currently, with much lower quotas, nets may be 1,000 yards or longer. The South Atlantic Council has managed the Atlantic Spanish mackerel fishery in order to slow down catch rates and increase benefits to the industry. Shorter nets would further reduce catch rates, increase vessel safety, and probably increase product quality. Stipulating that nets must be marked with a permit number and dissimilar floats will enhance enforcement by providing law enforcement officers with a means for readily identifying net length and ownership. Restricting soak time (the time from which the net is placed overboard until retrieval begins) will prohibit indiscriminate use of nets, help reduce bycatch, and increase the quality of fish.

2.2.1.2 Proposed Alternative: Specification of experimental gear in the South and Mid-Atlantic. In consultation with the Council, the Regional Director may issue permits for experimental gear (for coastal pelagics in the SAFMC and MAFMC area) on a limited basis provided that a process is implemented to collect data on the use of the particular gear concurrently with issuance of the permit. The data collected would be reviewed by the assessment group as soon as possible after the gear has been in use for 12 months or some specified period of time. The Council would review the data and the group's report and determine whether the gear should be allowed. Any changes would be made by plan amendment. It would be the Council's intent to allow the sale of catch from experimental gear.

1992 to conform with the federal regulations prohibiting transfer at sea. In the amended FMFC Rule, transfer is prohibited only on the east coast of Florida, whereas in the federal rule transfer is prohibited wherever there is a possession limit regardless of region. In June 1993, the Circuit Court of Florida declared the thousand pound trip limit unconstitutional. The judge determined that "the rule not only establishes criminal sanctions for conduct lacking criminal intent, it also establishes criminal sanctions for conduct which clearly establishes intent not to violate the law ..." and that "...expert testimony established that Spanish mackerel by their very nature cannot be returned to the water alive and unharmed after being caught in a gill net. Therefore, once the Spanish mackerel are netted in excess of the weight limit under any circumstance the Defendant can no more escape the criminal sanctions of the Marine Fisheries rule than can the Spanish mackerel escape the net..."

2.3.2 Proposed Alternative: No Change - do not allow transfer at sea

Discussion: Currently the FMP prohibits transfer of Atlantic Spanish mackerel at sea. On occasion, net sets will make a catch in excess of vessel trip limits. Vessels currently share the catch by cutting the loaded net in the water to be retrieved by another vessel. Overages occur because catches are difficult to estimate in the water; however, allowing transfer at sea precludes effective enforcement and may reduce the effectiveness of trip limits. On the other hand, fishermen have expressed concern over being cited for possessing a net (or piece of net) with another permittees number and exceeding the number of allowable nets onboard. The South Atlantic Council has requested that a meeting of NMFS personnel, law enforcement officials, and fishermen be held to address these concerns.

2.4 King Mackerel Stock Identification

2.4.1 Proposed Alternative: After the next stock assessment and after staff has prepared a detailed analysis of the impact of establishing boundaries for management, the Councils will evaluate impacts of establishing permanent jurisdictional boundaries and separate council fishery management plans for coastal pelagics in order to obtain public comment for development of Amendment 9.

Discussion: The Councils chose to develop separate plans in Amendment 2 to the Fishery Management Plan for Coral and Coral Reefs in part because of differing issues related to the harvest of wild live rock. Different options were chosen by each council to take to public hearing. In the end, each council chose a different management strategy with respect to the harvest of wild live rock that addressed the specific issues within each jurisdictional area, and a separation of plans was approved.

With coastal pelagics the councils have again chosen differing management strategies to address issues specific in their respective areas of jurisdiction. Although most of the biology of Spanish and king mackerel is the same for each region, the social and economic characteristics of these fisheries are not. These factors often lead to differing management strategies by each council. By promulgating a separate set of management measures and regulations for each area of jurisdiction, each council is able to pursue the management strategy it deems necessary to address the particular social and economic characteristics of a fishery in a more timely manner. Presently, management measures must be approved by both committees and both councils. Staff for both councils must coordinate the writing, editing, and assembly of management plans, and fishermen must travel to two sets of meetings.

Presently, the FMP for coastal pelagics incorporates a complex set of regulations comprising changing boundaries, quotas and trip limits across jurisdictional areas for king mackerel. By fixing the boundary for king

This proposal would not prohibit possession of Gulf group king mackerel on vessels with other fishing gear on board such as shrimp trawls, crab and lobster traps, cast nets, etc. Fishermen have traditionally engaged in multi-species trips, and about 155 shrimp vessels hold coastal pelagic permits for this purpose.

2.2.2.2 Rejected Alternative: No Change - Section 12.6.8.1.1 remains Gulf group king mackerel may be taken only with the following gear: hook-and-line and run-around gill nets.

Discussion: Current regulations state that it is unlawful to possess Gulf group king mackerel aboard a vessel with gear aboard other than hook-and-line and run-around gill nets. In Amendment 5, the Councils did not intend to prohibit possession by shrimp, lobster, and crab vessels with coastal pelagic permits from fishing for king mackerel with allowable gear (hook-and-line and run-around gill nets). No change would continue the possession prohibition.

2.3 Transfer of Spanish Mackerel at Sea

2.3.1 Rejected Alternative: Transfer of Atlantic Spanish mackerel between permitted vessels engaged in harvest for commercial purposes within this region is allowed only under the following conditions:

- a. **Transfer is allowed if directed harvesting gear used to harvest the Spanish mackerel being transferred is allowable net gear. Spanish mackerel harvested with other than directed allowable net harvesting gear shall not be transferred.**
- b. **Transfer shall only take place in the EEZ between permitted vessels.**
- c. **The Spanish mackerel removed from the directed harvesting gear aboard the harvesting vessel shall be isolated aboard the vessel and shall not exceed the applicable daily vessel limit specified in this subsection. All fish exceeding the applicable daily vessel limit shall remain entangled in the meshes of the net until another vessel operated by a person possessing a valid permit (applicable to himself or the vessel) is within 50 yards of the vessel from which the transfer shall take place. The fish shall then be removed from the net in a continuous process and transferred singly or in a container to the second vessel. The quantity of fish transferred to any single vessel shall not exceed the applicable daily harvest limit.**

Discussion: The transfer at sea of Atlantic Spanish mackerel was prohibited with implementation of trip limits in Mackerel Amendment 6. (§ 642.27[e]: A person for whom a trip limit specified in this section applies may not transfer at sea from one vessel to another a Spanish mackerel: [1] Taken in the EEZ, regardless of where such transfer takes place; or [2] In the EEZ, regardless of where such Spanish mackerel were taken.) The prohibition was approved by the Council to prevent commercial boats, especially the larger boats, from avoiding trip limits by dividing large catches into small ones and using run boats to land them. This practice was reported to have continued during 1993/94 under current trip limits.

Fishermen have argued that allowing transfer at sea prevents waste through discards if their catch exceeds the trip limit; and prior to the 1992/93 fishing year, the Florida Marine Fisheries Commission (FMFC) allowed Spanish mackerel to be transferred at sea. That action was partially modified by the Commission in November

6. A copy of the dealer permit and records of catching vessel must be kept on fish delivery vehicles.

Discussion: The Gulf Council and South Atlantic Council are considering limited access programs for king mackerel. The South Atlantic Council is also considering a program for Spanish mackerel. A detailed catch reporting system will be required for any type of controlled access system. By being able to identify dealers, NMFS can track quotas with current landings and track individual landings in a limited access program. The intent of the requirement for a fish delivery vehicle to carry records is to ensure that when coastal pelagic fish are offloaded to a vehicle for delivery to a dealer such vehicle will carry a record of how much of each species of coastal pelagic fish was received from each vessel. The South Atlantic Council recently discovered delays in the reporting system for rock shrimp that severely curtailed the Council's ability to determine the total harvest of rock shrimp from the south Atlantic in order to understand the impacts of preferred actions. A key to accounting for all the landings was the identification of the first receivers of rock shrimp. The reported landings by these dealers was the most accurate information the Council had until the more specific information from the states became available. The primary objections by rock shrimp dealers to additional permitting was that it not be repetitive. They requested that the Council reduce the chance for dual reporting by utilizing existing state reporting systems when possible.

2.5.1.2 Proposed Alternative: Status Quo - No dealer permit required.

Discussion: Implementation and enforcement of a limited access program without a method of tracking the sale of fish would be very difficult. In Florida, the number of wholesale and retail dealer license holders with purchases of king mackerel from 1991 through 1994 ranged from 228 to 247 annually. Trip-ticket systems in Florida and North Carolina have improved quota monitoring; however, some landings remain unreported. Because most dealers participate in state monitoring programs, requiring federal dealer permits probably would not improve quota monitoring at this time. If the Councils pursue implementation of a limited access system, dealer permits may be necessary to adequately identify and monitor landings.

2.5.2 Permit Moratorium

2.5.2.1 Proposed Alternative: For a king mackerel to be possessed aboard a vessel in numbers exceeding the bag limit, a commercial king mackerel permit must be issued to the vessel and must be on board. A commercial king mackerel permit may be issued for a vessel if its owner was an owner of a vessel that had a commercial king and Spanish mackerel permit prior to the published control date of October 16, 1995. In the event of the sale of a vessel so qualifying, the right to the commercial king mackerel permit will be retained by the owner of the vessel when it qualified unless there is a written agreement that such right transfers to the new owner with the sale of the vessel. Applications for commercial king mackerel permits must be submitted not later than 90 days after the final rule to implement Amendment 8 is published. No new commercial king mackerel permits are to be issued under this moratorium, that is, a commercial king mackerel permit that is not renewed or that is revoked will not be reissued. This moratorium will terminate not later than October 15, 2000.

Discussion: The purpose of the moratorium is to provide stability and prevent speculative entry into the fishery while the Councils develop a limited access program. Any vessel that was issued a commercial king and Spanish mackerel permit prior to the control date of October 16, 1995 would be eligible to apply for a king

mackerel at the council boundary, certain management parameters would change affecting Allowable Biological Catch (ABC) for each council's area of jurisdiction. At present, winter catches on the east coast of Florida are considered to be 100 percent Gulf group king mackerel. This stock mixing is facilitated by a shifting boundary on November 1 from the Collier/Monroe county line to the Flagler/Volusia county line below which all king mackerel are considered Gulf group and come under the purview of the GMFMC. With a fixed boundary, a portion of those fish would be considered Atlantic group thereby changing the stock assessment procedure and ultimately the parameters used to set ABC. Table 1 shows the changes in ABC with the reanalysis of the entire time series 79/80-92/93. An examination of the 91/92 and 92/93 catches indicates that about 190,000 east Florida fish (winter) were assigned to the Gulf. Some portion of those fish are Atlantic fish. The stock assessment panel cautioned that some management measure may be needed to compensate for the reassigning of those Gulf fish if managed as if they were all Atlantic fish.

With such a change, each Council would certainly need to reassess management strategies given the change in ABC ranges that would ultimately affect Total Allowable Catch (TAC) and quotas for each group. If all winter, east coast Florida fish were considered to be Atlantic group, the Gulf group would see a reduction in ABC ranging from 2.4 - 5.5 million pounds. The total commercial and recreational catch for 93/94 in the U.S. Gulf was 7.86 million pounds. If TAC was set at the highest level of ABC using the reanalysis, Gulf group TAC would be reduced by 5.46 million pounds. This scenario is purely hypothetical, and any future analysis will offer alternative assessments. However, it should be noted that there is the possibility of such changes in assessed numbers of fish for either group. If there were to be such changes in assessments, even the potential increase in TAC projected here for Atlantic group king mackerel could have a dramatic impact on effort shifts from one Florida coast to another. These are serious social and economic impacts that need to be considered.

2.4.2 Rejected Alternative: Status Quo - No Change.

Discussion: The preferred alternative temporarily maintains the status quo until better data are available.

2.5 Fishing Permit Regulation

2.5.1 Dealer Permits

2.5.1.1 Rejected Alternative: Require permitting and record keeping by coastal pelagic fish dealers who are first receivers of fish.

- 1. Permitted dealers can only buy coastal pelagics from permitted vessels and permitted vessels can only sell to permitted dealers;**
- 2. Permitted dealers must make their records available to law enforcement agents;**
- 3. Permitted dealer records must include how much of each species of coastal pelagic fish was purchased from each vessel;**
- 4. Permitted dealers must keep their records at the principal place of business for at least one year;**
- 5. Permitted dealers must have a permanent facility at a fixed location (not endorsed by the GMFMC);**

of competition and low profit margins, and this climate causes many businesses to fail (Ditton and Loomis, 1985).

Charter permits were first required in 1987 to identify the for-hire vessels eligible for a higher king mackerel bag limit. Disregarding the first two years when the permit requirement was not well known, the number of charter permits has remained relatively stable (Table 3).

2.5.2.4 Proposed Alternative: Status Quo - No moratorium on coastal pelagic charter permits.

Discussion: The charter permit for coastal pelagics was created to identify for-hire vessels that were provided with a different recreational bag limit. The number of charter permits has remained relatively stable for the last five years; therefore, there appears to be no need to limit entry. Economics appears to be a limiting factor in this competitive business.

2.5.3 Transferability of Permits During the Moratorium

2.5.3.1 Rejected Alternative: Status Quo - A vessel permit is valid only for the vessel for which it is issued. It is transferable on the sale of the vessel to a new qualifying owner.

Discussion: Currently, a permit may be transferred through sale of the vessel. The new owner must meet the qualifying criteria to be eligible. As worded, this alternative would not allow for replacement of vessels, because the permit would have to be transferred with the vessel. This option would probably reduce the number of permits over time; however, it could inflict unnecessary hardships on some fishermen.

2.5.3.2 Proposed Alternative: During the permit moratorium a king mackerel permit may be transferred to another vessel with a qualifying owner or operator or with the vessel to another qualifying owner or operator with a one-year grace period to qualify.

Discussion: Allowing a transfer of permits provides for entrance and exit to the fishery without increasing the number of permits during the moratorium. This alternative is similar to 2.5.3.1, but it also allows transfer to other vessels. The one-year grace period to qualify allows new permittees time to meet the income requirement necessary for renewal of the permit. The king mackerel gill-net endorsement applicable to Florida's West Coast (Dade-Monroe County line to the Florida-Alabama boundary) remains transferable only in June. (This limited period of transfer was adopted to restrict gear users to one or the other gear quota for a season.)

2.5.3.3 Rejected Alternative: During the permit moratorium a permit may not be transferred except that the Regional Director shall have the authority to transfer a permit:

- a. between members of the immediate family (spouses, children, siblings or parents),
or
- b. in the event of death or disability of a permit holder to a person specified by the permit holder, his legal guardian, or the estate.

mackerel permit following implementation of this amendment. Vessels that were issued new permits after the control date will only be allowed to catch Spanish mackerel. Although the number of new entrants since the control date is unknown, on the control date of October 16, 1995, there were 2,723 commercial king mackerel permits in effect. In August 1996 there were 2,864 active permits; consequently, there are potentially 141 new permittees that could be precluded from the commercial fishery by the moratorium.

From the 1987-1988 to the 1993-1994 fishing year, the number of commercial vessel permits for mackerel increased by 102 percent from 1,280 to 2,588 (Table 2). The number continued to increase in 1994-1995 to 3,072 and 3,353 in 1995-1996. Some permit holders may only fish king mackerel on a seasonal basis. Others may not fish for king mackerel, or they may hold permits as insurance policies for use when more lucrative fisheries are less lucrative or not available. Consequently, the number of permits may not definitively indicate the number of vessels participating in the king mackerel fishery; however, it appears that effort currently exceeds that which is needed to optimally harvest the available TAC.

The intent of the moratorium is to prevent further increases in effort and possibly reduce the number of permittees in the king mackerel fishery which is currently in a state of rebuilding. The moratorium would extend through the period needed to implement a long-range program to provide a more equitable distribution of the catch.

2.5.2.2. Rejected Alternative: No Change - No king mackerel endorsement required. Any qualifying vessel owner may obtain a permit. To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during one of the three calendar years preceding the application at least ten percent of his earned income was derived from commercial fishing, that is, sale of the catch.

Discussion: While the Councils are developing a limited access program, there likely will be incentive for additional persons to obtain permits in the hope of obtaining a windfall under the new program. Under the current regulations, recreational fishermen with income only from dividends, annuities, pensions, etc., may qualify to fish under the commercial quota with the sale of few fish. Current regulations are sufficiently loose to allow recreational fishermen to fish under the commercial quota. In March 1995, there were 2,220 commercial vessel permits, 853 coastal pelagic charter vessel permits, and 439 vessels with both permits. New restrictions on commercial fishing in state waters are displacing fishermen, and many may seek alternative fisheries in federal waters. The no change alternative could further increase the number of participants in the mackerel fishery which has minimal entry requirements.

2.5.2.3 Rejected Alternative: A moratorium of up to 5 years from the control date of October 16, 1995 is established on the issuance of Gulf of Mexico coastal pelagic charter vessel permits. During the moratorium no new charter vessel permits are to be issued. The charter vessel permit applies to both charter vessels and headboats in the for-hire fishing business.

Discussion: In 1995, there were 853 charter vessels permitted for coastal migratory pelagic fishery and 439 permits for both charter and commercial fishing. A comparison of the numbers of permits over time does not give a clear picture of what is happening in the for-hire fishery. In an examination of the Texas charterboat industry, Ditton and Loomis (1985) found a 52 percent turnover of participants over a 5-year period; however, the number of participants increased by 38 percent. Charterboat operations are characterized by high levels

estimated that an initial reduction in the number of permitted vessels, would only be about 145 as a result of the increase in the income requirement.

2.5.4.4 Rejected Alternative: Threshold level of income - gross sales of seafood of \$20,000 during one of last three calendar years preceding the application with a minimum age of 18 years or older.

Discussion: This option was originally chosen by the SAFMC on the recommendation of its Advisory Panel. This option was an attempt to reduce the number of permits within the fishery and allow for the participation by professional full-time fishermen. With a threshold level of \$20,000, however, a number of longtime commercial fishermen would be excluded from the fishery. For a variety of reasons including increased competition, reduced availability of stocks, increased regulation, etc., it has become increasingly difficult for commercial fishermen to make a living solely by commercial fishing in some areas. Also, the number of part-time commercial fishermen has increased, and it is difficult to determine fishing effort and dependence on a species or fishery. Choosing a lower threshold level of income, however, may reduce the effectiveness of such a management measure by not sufficiently reducing the number of permits.

2.5.4.5 Rejected Alternative: A minimum threshold income from the sale of fish of \$5,000. After possession of a mackerel permit for 10 consecutive years, fishermen would be grandfathered in at age 62 or older, retroactive to the first issuing of the permit. All mackerel permit holders would be grandfathered in after holding the permit for 10 consecutive years, retroactive to its first issuing. Minimum age of 18 or older. Permit moratorium. Decal for each fishery.

Discussion: This alternative was suggested by the Concerned Fishermen of Florida (CFF). The CFF proposed a lower threshold income and a grandfathering clause to ensure that longtime commercial king mackerel fishermen would be able to participate in the fishery. Many CFF members are older fishermen who are semi-retired and no longer fish full-time or as actively as they once did. The small amount of revenue that they receive from king mackerel fishing supplements their household income, i.e., social security. The minimum age requirement was included to prevent permitting of young children who might meet a percentage income requirement by selling their fish. The CFF also supported a moratorium that would put a cap on the number of commercial permits, and decals were proposed to aid in identification of permits within a fishery. The CFF proposal has a low income threshold level, and fishermen who fish part-time or for recreation may still be able to meet the minimum criteria. Additionally, this alternative would not reduce the number of permits substantially.

2.5.4.6 Rejected Alternative: To qualify for a commercial permit for king or Spanish mackerel the owner or operator must be able to show that during one of three years preceding the application at least 50 percent of his earned income came from commercial sale or charter/headboat operation.

Discussion: This alternative is similar to 2.5.4.2; however, it does not include an earned income level (only a percentage), and it includes qualification of income from charter and headboats (as with the proposed alternative, 2.5.4.3). As discussed in 2.5.4.2, the 50 percent earned income requirement could disqualify a substantial number of long-time commercial fishermen.

2.5.5 Consistency of Regulations

Discussion: This alternative essentially limits transfers to hardship cases or retirement. Such limited transfers could adversely affect some multi-species fishermen who fish king mackerel when more lucrative fisheries are less lucrative or not available. It could also preclude certain business practices in the fishery.

2.5.4 Qualifying Income For Permit

2.5.4.1 Rejected Alternative: Status Quo - To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during one of the three calendar years preceding the application at least ten percent of his earned income was derived from commercial fishing, that is, sale of the catch.

Discussion: Earned income is defined as income attributable to work, employment, and entrepreneurship, and not income from pensions, retirement benefits, or social security benefits. Under the current regulations, recreational fishermen with income only from dividends, annuities, pensions, etc., may qualify to fish under the commercial quota with the sale of few fish. Current regulations do not preclude recreational fishermen from fishing under the commercial quota. On July 1, 1996, there were 2,891 commercial king and Spanish mackerel vessel permits, 1,403 coastal pelagic charter vessel permits, and 460 vessels with both permits.

2.5.4.2 Rejected Alternative: To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during 1 of the 3 calendar years preceding the application at least 50 percent of his earned income or at least \$20,000 was derived from commercial fishing, that is, sale of the catch.

Discussion: This alternative has been recommended by NMFS and is used in the Snapper-Grouper FMP of the South Atlantic Council and by NMFS in the Shark FMP (Table 4). It subsequently increases the required qualifying threshold for earned income, and some long-time commercial fishermen faced with increasingly restrictive state and federal fishing regulations may become ineligible for permits. A NMFS review of recent permit applications (from 1/1/93 to 3/31/95) indicates that an increase in the qualifying threshold from 10 percent to 50 percent would disqualify 295 of the 3,096 permit applicants or approximately 10 percent. Of these applicants 2,170 or 70 percent reported that 100 percent of their earned income is from commercial fishing.

2.5.4.3 Proposed Alternative: To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during 1 of the 3 calendar years preceding the application at least 25 percent of his earned income or at least \$10,000 was derived from commercial sale of catch or charter or headboat fishing.

Discussion: This alternative has a more restrictive qualifying requirement than the status quo option (Rejected Alternative 2.5.4.1); however, it is less restrictive than Rejected Alternative 2.5.4.2. It may disqualify some fishermen that now qualify because they may not be able to meet the increased earned income requirement. This level of increase in the earned income requirement will preclude some recreational sales and more clearly allocate the commercial quota to commercial fishermen; however, it will not be so restrictive as to preclude sales by charterboats.

Of recent applicants that reported income information, 145, or 5 percent, had between 10 and 25 percent of their income from commercial fishing, and 896 permittees had incomes of less than \$10,000 according to NMFS records. Because applicants will only have to meet one of the aforementioned requirements, it is

and the Gulf Council have employed economists, and the South Atlantic Council has a cultural anthropologist on staff. These individuals are capable of writing social and economic assessments for the king mackerel fishery and others; however with little or no economic and social data being collected on a regular basis (e.g. through the permit application), it is difficult to assess the impacts of the various alternatives presented in this amendment. The following types of information gathered on a regular and systematic basis would greatly improve social and economic assessments: species and migratory group sought; length and type of vessel used and status (captain, crew member, etc.); types of gear used for each species sought; percent importance of each species to yearly fishing; percent of yearly time spent fishing; percent of yearly time spent fishing in the EEZ; years as a commercial fisherman; years fishing for a particular species; age; gender; ethnicity/race; education; religious affiliation; marital status; household size; household income and percent from commercial fishing; other sources of income; cultural traditions related to fishing; motivation and satisfaction with fishing; views regarding management; and perceptions of future in fishing.

2.5.6.2 Proposed Alternative: No Action.

Discussion: With the no action alternative the Councils would continue to have difficulty in determining the social and economic impacts of their management measures. This type of information could become crucial when considering some forms of limited access.

2.6 Species Specific Regulation

2.6.1 Cobia Management Area

2.6.1.1 Proposed Alternative: Extend the management area for cobia through New York, i.e., through the jurisdiction of the Mid-Atlantic Fishery Management Council.

Discussion: National Standard 3 of the Magnuson Act requires that an individual stock of fish be managed as a unit throughout its range. Cobia range as far north as Massachusetts, but most of the catch is south of New Jersey. Virginia recreational catches have averaged about 5,500 fish per year over the last eight years. This action proposed by the South Atlantic Council would be taken in coordination with the Mid-Atlantic Council which is represented on the South Atlantic Council's advisory panel and mackerel management committee. The management range for king and Spanish mackerel was extended through the Mid-Atlantic's area of jurisdiction in Amendment 5 (1990). This alternative would automatically extend the current bag limit of two fish per person and the minimum size limit of 33 inches FL to the Mid-Atlantic.

2.6.1.2 Rejected Alternative: Status Quo - Cobia management is limited to the Gulf and South Atlantic areas.

Discussion: Cobia migrate seasonally along the Atlantic coast; however, management measures do not apply north of North Carolina. Public testimony and National Standard 3 support extending the management of cobia through the jurisdiction of the Mid-Atlantic Council.

2.6.2 Cobia Bag and Trip Limit

2.6.2.1 Proposed Alternative: Status Quo - A daily bag and possession limit of 2 cobia per person per day applies to recreational and commercial fishermen.

2.5.5.1 Rejected Alternative: As a condition of a federal permit issued under the coastal pelagic FMP, the applicant must agree to comply with the more restrictive of state or federal regulations when fishing in state waters. Included are regulations such as bag limits, size limits, trip limits, sale of fish and closures.

Discussion: This alternative would help to provide for effective quotas, seasonal closures, and trip and size limits in both state and federal waters. It allows a state to enact and enforce more restrictive regulations in its waters. It would reduce the lag time for states to respond to federal closures and reduce the likelihood of quota overruns. A similar procedure is used in the FMP for Atlantic bluefish and in the Atlantic Shark FMP.

This action applies only to federal permit holders and does not affect state management of fishermen without federal permits. State regulations that are more stringent than federal regulations (closures, lower bag limit, gear restrictions, etc.) will continue to apply in state waters to all fishermen.

2.5.5.2 Proposed Alternative: Status Quo - Federal regulations apply only to federal waters.

Discussion: Currently, the states are requested to adopt regulations consistent with those in federal waters in order to achieve the intended objectives and to provide effective enforcement. In instances where the state cannot or does not adopt the same regulations, the more restrictive of the two regulations becomes difficult to enforce.

In February 1995, the Council's request for a supplemental allocation of 300,000 pounds of king mackerel for Florida's west coast hook-and-line fishery was implemented with daily trip limits to distribute the catch over time and area. Because trip limits in state waters required approval of the Governor and Florida's Cabinet, there was insufficient time for state implementation. Because trip limits in federal waters were unenforceable, a derby fishery quickly erupted; and the quota was filled.

Quota overruns remain a problem when state waters remain open to federally permitted fishermen after a federal closure. The rejected alternative could help prevent conflicting regulations; however, concern was expressed during public testimony regarding the federal government's ability to supersede state laws. Because of the potential for other conflicts, the Councils considered status quo as the preferred alternative at this time.

2.5.6 Modify Permit Application

2.5.6.1 Rejected Alternative: Modify the permit application to obtain additional social and economic information such as species and migratory groups sought, number of persons on the vessel, etc.

Discussion: The Councils must assess the social and economic consequences of their actions. Many times the necessary information is not available to assist in determining the impacts of management actions because it is often difficult to determine who and how many fishermen might be affected by an action. By modifying the permit application to obtain additional social and economic information, both the Councils and those who may be affected will benefit because the Councils will be better able to judge the impact of their regulations.

The NMFS has indicated that it is not feasible at this time to collect social and economic information by adding questions to the permit application; however, the Councils have expressed the need for this information and the types of information needed to develop social and economic impact assessments. Both the South Atlantic

South Atlantic Region and an increase in landings among all sectors: commercial, charter, and private. It should also be noted that with increased landings in South Carolina during the months of April and May (Table 6), the price has remained stable overall.

Management of dolphin has been considered previously (Amendment 5 Public Hearing Draft); however, because they are a fast growing and short lived fish and tend to be highly migratory and widely distributed, the Councils have previously chosen, to forego any management for this species.

2.6.3.2 Proposed Alternative: Status Quo - no management for dolphin.

Discussion: Dolphins are oceanic fishes found worldwide in tropical and subtropical waters. The common dolphin occurs in coastal waters; while the pompano dolphin is more pelagic (Palko, et al., 1982). They grow rapidly and live only about four years. A one-year-old fish may range in length from 19 inches FL to 46 inches FL. A four year old fish may be 60 inches FL and weigh 77 pounds. Females begin to mature at 14 inches FL, and all are mature by 22 inches FL, (Beardsley, 1967). Young dolphin school along weed lines, and large numbers can be quickly harvested by a single boat. Almost all of the commercial and recreational catch is landed in Florida and to a lesser amount in North Carolina. Recent landings are shown in Table 7.

Florida has a recreational daily bag limit of 10 dolphin and a minimum commercial size limit of 20 inches FL. A bag limit of 10 fish per person would reduce charterboat catch by 12 percent and effect only 6 percent of the trips. The minimum size limit of 20 inches for commercial catch would allow most fish to attain spawning size. Although there is no indication of overfishing of this species at this time, the Gulf Council SSC has recommended that dolphin biology be studied further and the status of the stock monitored in the future. Problems with the fishery for dolphin have mainly resulted from local distribution of catch and perceptions of overharvesting. The prosecution of the fishery should also be monitored because perceptions and localized fishing effort could affect future assessments of the stock.

2.6.4 King Mackerel Management

2.6.4.1 Cut off or Damaged Fish

2.6.4.1.1 Proposed Alternative: Allow retention of up to 5 cut-off (damaged) king mackerel on vessels with commercial trip limits. These fish would not be counted toward the trip limit and may not be sold.

Discussion: It is common for barracudas or sharks to cut off hooked or netted king mackerel before they can be landed. These fish have a reduced market value; however, they can be utilized as food instead of being wasted through discard. On the other hand, fishermen could utilize some method or tool to damage fish that could not be distinguished by enforcement personnel, thus increasing their trip limit. The five-fish allowance, however, coincides with the average number of encounters per trip by hook and line fishermen and should not significantly increase catches.

2.6.4.1.2 Rejected Alternative: Status Quo - king mackerel must have their heads and fins intact when landed. There is a minimum size limit of 20 inches fork length.

Discussion: This alternative would require all cut-off king mackerel to be discarded at sea and thus wasted.

Discussion: In its 1995 and 1996 report, the Council's Stock Assessment Panel recommended no management changes for cobia at this time because of uncertainties regarding cobia biology and Virtual Population Analyses (VPA) as well as stabilization of yield for the Gulf and South Atlantic area around MSY of 2.2 million pounds. The cobia fishery is seasonal and opportunistic, and recreational landings are 5 to 10 times greater than commercial landings (Tables 5A and 5B).

2.6.2.2 Rejected Alternative: Revise bag or trip limits for commercial cobia fishermen.

- Option 1:** Specify pounds per trip per day (select from a range of 10 - 500 pounds per day).
- Option 2:** Specify a number of fish per day (select from a range of 1 - 20 fish per day).
- Option 3:** Multiple day trips with 2 fish per trip per day (how many days?).
- Option 4:** Specify a boat limit of 4 - 6 fish per day.
- Option 5:** Specify a boat limit of 6 fish per trip.
- Option 6:** Limit all fishermen to 1 per person per day.
- Option 7:** Prohibit all sale of cobia.

Discussion: Commercial fishermen have requested that the Council reconsider the current bag limit of two fish per day which applies to both recreational and commercial fishermen. Since there is no current directed commercial fishery on cobia, some fishermen have requested a 500-pound trip limit which would allow for a small, directed fishery but limit its expansion. Using an average of 25 pounds/fish in the South Atlantic, a 500 pound limit would equate to roughly 20 fish. The trip limit was requested in favor of an increased bag limit to prevent highgrading.

Prior to the 2-fish trip limit implemented under Amendment 5 in late 1990, multi-day trips produced approximately 1,000 pounds per trip. Some commercial operators feel that they are being penalized for taking multi-day trips. A crew of four on a 3 to 7-day trip would be limited to approximately 200 pounds based on a 2-fish per trip rule. Total commercial landings have remained about the same probably due to increased effort, and the Mackerel Stock Assessment Panel in MSAP (1996) has recommended against increasing mortality on cobia at this time.

2.6.3 Dolphin Management

- 2.6.3.1 Rejected Alternative:** Consider management of dolphin such as size, bag limits, and commercial trip limits. Management measures presently being considered:
- a. 20 inch commercial size limit.
 - b. 10 fish recreational bag limit.
 - c. 5 fish per person per day limit (recreational & commercial).
 - d. 10 fish per person per day limit (recreational & commercial).
 - e. Require coastal pelagics permit for over the bag limit of fish.
 - f. Establish a commercial trip limit of between 1,000 and 12,000 pounds.

Discussion: Longliners in South Carolina have recently expressed written concern to the South Atlantic Council over increased landings of dolphin. Questions have been raised over the status of the stock and the ramifications of this increased localized effort. Conflict among user groups seems to have developed because of the perceived effects of such a rapid increase in harvesting effort by one sector of the fishery. It is, however, unknown whether this shift in effort is temporary or not. Although public testimony supported many of the aforementioned options, anecdotal information suggests an increase in abundance of dolphin throughout the

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 through August, and April through October, respectively. In the area off Cape Fear, NC, to Cape Canaveral, FL, Powles and Stender (1976) collected king mackerel larvae from May through September.

The following quotation is 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 1995 stock assessment report was 10.11 pounds (MSAP Report, 1995: page 26, Section V.). Ben Hartig (personal communication) 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 506 or 600 pounds based on the different figures for average size. The range of 500 to 600 pounds encompasses the likely range of poundage for a 50 fish trip limit.

The 50 fish trip limit (which equates to between 500 and 600 pounds) will impact 1.73 percent of the trips and 15.9 percent of the fish (total of 170,757 pounds) based on catch per trip information for Florida landings during the 1993-94 fishing year (Table 8); however, some of these trips are probably net landings. Catches were not separated by gear type. Data in Table 8 are from the Florida Marine Research Institute (O'Hop, 1995).

Commercial landings of Atlantic migratory group king mackerel for the 1991-92 through 1994-95 fishing years were transformed into numbers of fish per trip using average weights of sized catches of king mackerel. These data are imperfect because there are a large amount of unedited data for 1993 in the database; and there will be additional edits and additional data added to this database. In addition, concern regarding accurate gear assignments precludes separate gear evaluations at this time. The data were provided by Mr. Joe O'Hop of the Florida Department of Environmental Protection and Ms. Nancie Cummings-Parrack of the NMFS Miami Laboratory.

Tables 9, 10, and 11 were constructed from this database by Council staff. Table 9 presents data for Nassau through Volusia Counties that indicate the 50 fish limit would have impacted 6.3 percent of the trips and 38.5 percent of the fish in 1991/92; 4.6 percent of the trips and 32.3 percent of the fish in 1992/93; 4.7 percent of

2.6.4.2 Commercial Trip Limits for Atlantic King Mackerel

2.6.4.2.1 Rejected Alternative of the SAFMC: 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.

Discussion: The SAFMC concluded that the proposed trip limits are necessary to prevent the commercial sector from exceeding their allocation.

Information from fishermen suggests that the majority of spawning on the Florida east coast occurs during the month of May. The following quotation concerning the spawning season is 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 indicate that a 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 quotation is from Finucane et al. (1986) which contains the references and figures cited:

The seasonal progression of mean GSIs (Gonosomatic Index) and Eds (egg diameter) 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=Louisiana-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 through October. In the northeastern Gulf of Mexico (area III), Dwinell and Futch (1973)

gill nets in the fishery targeting Atlantic migratory group king mackerel until April 1988. In fact, no recorded catches previously existed for purse seines, although fishermen have reported sporadic catches during April in recent years. During April 1988, purse seines took king mackerel in the Fort Pierce, Florida area and directed catches were also made with run-around gill nets. These unprecedented catches possibly occurred because prolonged cool weather retained migratory king mackerel in that area later than usual, thus making them available to purse seine and run-around gill net fishing operations. Input from fishermen indicated that run-around gill net sets occurred during April 1993 and 1994.

The state of North Carolina has requested that 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 north of the Florida/Georgia border.

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	Brevard/Volusia→Monroe/Collier	50 fish

The CFF proposed action, while worded differently, accurately tracks this alternative. The CFF 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. The CFF originally proposed the 50 fish trip limit for April, May, and June when spawning 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 have requested a limit during this period to optimize future yield by protecting the current spawning population. They reported a decline in summer stocks of fish along the east coast of Florida, particularly off Jupiter, Florida over the last few years. The CFF originally proposed an increase from 50 to 150 fish beginning July 1 because good weather prompts fishermen to take multiple day trips.

Florida hook and line fishermen report that fish concentrations in Palm Beach, Fort Pierce, and Sebastian, FL are reduced after times when the gill net fishery has operated. Although gill-net catches of Atlantic migratory group king mackerel are rare, fishermen report that after large catches by net boats, king mackerel are scattered and hard to catch by hook and line. A 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 Councils have 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 would provide additional restrictions on the use of illegal, drift gill nets. The Councils have specified allowable gear in this document to increase the ability to prohibit the use of drift gill nets.

The Florida net ban was approved and became effective July 1, 1995. The 50-fish trip limit would limit additional fishing effort that could shift into the king mackerel fishery in federal waters and help prevent the commercial allocation from being exceeded.

the trips and 36.1 percent of the fish in 1993/4; and 2.9 percent of the trips and 27.7 percent of the fish in 1994/95.

Table 10 presents data for Brevard through Dade Counties that indicate the 50 fish limit would have impacted 4.3 percent of the trips and 21.4 percent of the fish in 1991/92; 4.3 percent of the trips and 23.2 percent of the fish in 1992/93; 5.4 percent of the trips and 27.7 percent of the fish in 1993/94; and 3.8 percent of the trips and 22.4 percent of the fish in 1994/95.

Table 11 presents data for Monroe County that indicate the 50 fish limit would have impacted 0.1 percent of the trips and 7.3 percent of the fish in 1991/92; 4.6 percent of the trips and 58.1 percent of the fish in 1992/93; 0.3 percent of the trips and 3.4 percent of the fish in 1993/94; and 4.9 percent of the trips and 71.0 percent of the fish in 1994/95.

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 (which equates to 346 fish based on the average weight of 10.11 pounds) will have no impact on catches in northeast Florida (Table 9).

Trip limit information is limited for states north of Florida. Based on trip data through most of September 1994, less than 1 percent of the trips in North Carolina would have exceeded the 3,500 pound limit (Paul Phalen, personal communication). 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 percent of trips would be impacted (Table 12).

This action is effectively 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. This 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.

Excluding drift gill nets, catches of Atlantic migratory group king mackerel by nets are rare. Amendment 3 (SAFMC and GMFMC, 1990) noted that there was very limited traditional use of purse seines or run-around

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 Brevard/Volusia to Dade/Monroe	500 pounds
April 1 - October 31 Monroe	1,250 pounds

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.

Discussion: This alternative includes by reference all of the discussions in the rejected alternative 2.6.4.2.1 with the addition of an increased trip limit for the Monroe County area. The need for an increased limit in this area was proposed by the Monroe County Commercial Fishermen's Association who pointed out that the majority of hook-and-line fishermen there must travel 30 to 60 miles and often make multi-day trips to reach the fishing grounds. A trip limit of 500 pounds would be unprofitable.

Using a trip limit in pounds rather than numbers of fish may help prevent highgrading and aid enforcement because most trip-limit enforcement occurs at the dock, and weighing is less time consuming than counting.

2.7 Seasonal Framework Adjustment

2.7.1 Alternative: Separate ABC for Gulf Group Zones

2.7.1.1 Proposed Alternative: Delete from Section 12.6.1.1(A)(3) of the framework procedure the provision to provide separate ABC ranges for eastern and western groups of Gulf group king mackerel when the stock assessment panel obtains sufficient data to do so.

Discussion: Amendments 5 and 6 recognized the existence of two subgroups of Gulf group king mackerel based on allele frequencies from electrophoretic studies. A separation of the subgroups was determined to be at the Alabama/Florida border, and ABC ranges were to be developed for each subgroup when sufficient catch data could be obtained from Mexico. Subsequently, the Councils convened a special stock identification panel to review king mackerel stocks. The panel found that the stock separation studies using alleles may be compromised by variation of the alleles due to sex and age of fish. Currently, there are insufficient data to establish accurate ABCs for separate subgroup boundaries. Without the Mexican data, establishment of a boundary and ABC for the western Gulf zone could result in an ABC range that is insufficient to accommodate both the current levels of Mexican and U.S. catches.

2.7.1.2 Rejected Alternative: Status Quo - Section 12.6.1.1(A)(3) continues to provide, in part, that when the stock assessment panel is able to provide separate ABC ranges for the eastern and western groups of Gulf group king mackerel, separated at the Alabama/Florida border, the ratio of the mix is to be calculated based on allele frequencies. Allocations between the recreational and commercial users are to remain unchanged or 68 and 32 percent, respectively.

Discussion: The proposed separation of migratory groups at this boundary seemed appropriate based on data available in 1992. More recent analysis of the allele frequencies suggests that they may vary with age and sex of fish, and the boundary may be inappropriate. Separate management regimes for these subgroups could be flawed without additional data and definition of the stock.

Catches from Palm Beach County, Florida from 1982 through 1993 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 being prohibited (Table 13). During the spawning season, king mackerel 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 from Palm Beach County (Table 13) were used because here the spawning run starts in late April, and Palm Beach County is the center of abundance for this group of fish. The catches primarily occur off Jupiter, FL, south of Fort Pierce, where the drift net fleet fished extensively when it was legal. All reported catches in the Jupiter, Florida area were by hook and line gear. The catch data in Table 13 was grouped into two time periods, April-June and July-September. Each of these time periods has a spawning peak that fishermen refer to as the May and August runs. Prior to any significant catches by drift gill nets, (1982-1986) the average catch for the April-June period was 179,507 pounds (Table 13).

The drift gill-net fishery that started in 1986, increased in 1987, and continued until it was prohibited in 1991, has potentially affected the traditional hook-and-line fishery. The average annual hook-and-line catch for 1986-1990 was 121,071 pounds and represents a 33 percent reduction in the hook-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 percent reduction from the historical levels. These data support the fishermen's contention that the portion of the Atlantic migratory group that migrates to south Florida was not as abundant as the stock assessment concluded. The 50 fish trip limit would 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 13. 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 percent 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 in recent years to an average of 21,530 pounds or a 90 percent reduction in catch. A trip limit could help rebuild this group of fish.

The South Atlantic Council has 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 prevent the commercial fishery from exceeding its allocation. The South Atlantic Council recognizes that the quota will constrain commercial catches, but it is concerned that without trip limits, catches in Florida will be large enough to fill the quota, thereby resulting in a closure of the fishery in the northern states, particularly North Carolina. Such a premature closure would disrupt markets and result in negative social and economic impacts in the affected states. Trip limits would also provide biological protection to help stabilize yield, minimize gear and user group conflicts (including those that are occurring and those that would occur with a shift in effort resulting from the net ban in Florida and area closures in New England), and optimize social and economic benefits from the Atlantic migratory group king mackerel fishery.

2.6.4.2.2 Proposed Alternative: Establish the following commercial daily possession and landing limits for Atlantic migratory group king mackerel:

must be implemented and continued until the stock is restored beyond the overfished condition. The rebuilding program must be designed to achieve recovery within an acceptable time frame as specified by the Councils. The Councils will continue to rebuild the stock until the stock is restored to the management target (OY) within an unspecified time frame.

- d. When a stock or migratory group is not overfished (transitional SPR equal to or greater than 20 percent), the act of overfishing is defined as a static SPR that exceeds the threshold of 20 percent (i.e., F20 percent). If fishing mortality rates that exceed the level associated with the static SPR threshold are maintained, the stock may become overfished. Therefore, if overfishing is occurring, a program to reduce fishing mortality rates toward management target levels (OY) will be implemented, even if the stock or migratory group is not in an overfished condition.
- e. The Councils have requested the Mackerel Stock Assessment Panel provide a range of possibilities and options for specifying an absolute biomass level which could be used to represent a depleted condition or state. In a future amendment, the Councils will describe a process whereby if the biomass is below such a level, the Councils would take appropriate action, including but not limited to, eliminating directed fishing mortality and evaluating measures to eliminate any bycatch mortality in a timely manner through the framework procedure.
- f. For species like cobia, when there is insufficient information to determine whether the stock or migratory group is overfished (transitional SPR), overfishing is defined as a fishing mortality rate in excess of the fishing mortality rate corresponding to a default threshold static SPR of 30 percent. If overfishing is occurring, a program to reduce fishing mortality rates to at least the level corresponding to management target levels will be implemented.

Discussion: This alternative reduces the criteria of overfishing for king and Spanish mackerel from 30 percent SPR to 20 percent transitional SPR. The SPR Management Strategy Committee (SPRMSC) and MSAP extensively reviewed overfishing definitions for king and Spanish mackerel and determined that a static percent SPR should be used to measure the extent of *overfishing* and a transitional percent SPR should be used to measure the *overfished* condition of a stock. These groups concluded that the overfished definition for king and Spanish mackerel should be consistent with reef fish because there is no reason to believe that these mackerel species are any more or less resilient than reef fish or the "average" fish to which the 20 percent transitional SPR has been applied.

If a fishery was determined to be overfished, the SPRMSC recommended that a rebuilding program be implemented and continued until the overfished stock was restored to the target (OY) level. Although a time frame was not specified, the SPRMSC recommended that the Councils establish an appropriate time for rebuilding.

When the Councils adopted a definition of overfishing in terms of the minimum level of spawning biomass, the management emphasis shifted to the prevention of recruitment failure by increasing the potential egg production. This was accomplished by adopting a fishing mortality rate that would allow 20 percent of the spawning stock biomass to survive in the fishery. This limit should not be considered a management goal but

2.7.2 Request Additional Information from the Stock Assessment Panel

2.7.2.1 Proposed Alternative: Modify FMP Section 12.6.1.1(A)(3) to provide that the stock assessment panel address (additions italicized):

Condition of the stock(s) or groups of fish within each stock which could be managed separately. For each stock, this should include but not be limited to:

- a. Fishing mortality rate relative to F_{msy} and $F_{0.1}$ as well as $F_{20\%SPR}$, $F_{30\%SPR}$ and $F_{40\%SPR}$.
- b. Spawning potential ratio (SPR).
- c. Abundance relative to an adequate spawning biomass.
- d. Trends in recruitment.
- e. Acceptable Biological Catch (ABC) which will result in long-term yield as near MSY as possible.
- f. Calculation of catch ratios based on catch statistics using procedures defined in the FMP as modified.
- g. Estimate of current mix of Atlantic and Gulf migratory group king mackerel in the mixing zone for use in tracking quotas.

Discussion: The additions to a, and new parts b and g will provide the Councils with more information on which to base management. With mortality rates relative to different SPR levels, the Councils can examine the various benefits to managing at different SPR levels. Estimation of the current mix of Atlantic and Gulf migratory group king mackerel in the mixing zones will allow the Councils to determine the impacts of changing boundary lines if desired.

2.7.2.2. Rejected Alternative: Status Quo - The above additions are not requested in the stock assessment panel report.

Discussion: Some of the additional information requested can be provided by the panel; however, the estimate of migratory group mixing has not been determined. By stipulating that the additional information be provided, the Councils will be able to more appropriately set TAC levels and allocations to distribute available harvests and prevent overfishing.

2.7.3 Definition of Overfishing

2.7.3.1 Proposed Alternative: Section 12.6.1.1(a)(4) is revised as follows:

- a. A mackerel stock or migratory group is considered to be overfished when the transitional spawning potential ratio (SPR) is below 20 percent.
- b. The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or optimum yield is 30 percent static SPR. ABC is calculated based on the target level or optimum yield (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).
- c. When a stock or migratory group is overfished (transitional SPR less than 20 percent), a rebuilding program that makes consistent progress towards restoring stock condition

mortality rate that achieves the overfished level during the prescribed recovery period. The recovery period is not to exceed 12 years for king mackerel and 7 years for Spanish mackerel from the time the stocks are defined as being overfished.

- 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 becoming overfished. In this case, the stock assessment panel should develop ABC ranges associated with the objective of achieving the target of OY.
- d. For cobia, the act of overfishing is defined as a harvest rate that exceeds OY (currently defined as MSY) on a continuing basis.

Discussion: Both fishing targets and overfishing levels are generally associated with biological reference points estimated from standard fisheries models. The overfishing level incorporates biological considerations only, namely, the risk of recruitment overfishing. The management target, usually optimum yield (OY) may include biological, economic, social and other considerations (SPRMSC, 1996).

Section (a) of the rejected alternative includes a similar change in the overfishing level for king and Spanish mackerels as discussed in Section (a) of the proposed alternative, i.e., SPR is reduced from 30 percent SPR to 20 percent as recommended by the Councils' SPRMSC, and approved by the MSAP, SSC and Gulf Council. This definition, however, does not clearly distinguish SPR as static or transitional; thus it is not as definitive as the proposed alternative.

Section (b) remains essentially unchanged except that the overfishing level is specified as the goal to be achieved in overfished stocks. The current recovery periods of 12 years for king and 7 years for Spanish mackerel are slightly more than a generation time, 10 years for king mackerel and 5 years for Spanish mackerel (MSAP Report 1992), and they have been deemed an appropriate period for remedial management measures to be effective. Because no mackerel stocks are currently classified as being overfished, the initial dates of the recovery period are no longer applicable and are deleted.

Section (c) continues to specify that the ABC target is OY for stocks that are not overfished.

Cobia have been evaluated by the MSAP using virtual population assessments (VPA) since 1984. Size sampling has been very sparse, and indices of abundance used to calibrate the VPAs are limited in scope. Section (d) is added in accordance with the recommendation of the SPRMSC which stated that cobia be evaluated based on a measure of overfishing only. The definition that overfishing is a harvest rate that exceeds the target OY on a continuing basis allows the catch to fluctuate around the target; however, OY is not a quota or ceiling. Continual harvests at levels above OY would be considered as overfishing.

2.7.3.3 Rejected Alternative: Status Quo - Section 12.6.1.1(a)(4) remains 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

rather as a base level below which the stock should not be pushed. The SPR strategy should drive the spawning stock away from a critical value that may result in recruitment overfishing. For spawning stocks above the critical value, the fishery may remain below long-term optimum yield; therefore, fishing mortality rates designed to recuperate the stocks to 30 percent SPR may be above or below the fishing mortality rate that would generate MSY.

There is uncertainty associated with the current and projected $F_{30\% SPR}$ values. This uncertainty, if coupled with TACs consistently chosen from the higher range of ABCs, could greatly increase the risk of not achieving the target biomass at 30 percent SPR during the specified recovery period. At lower ABC levels, the stock will recover more quickly; and, if the true ABC is higher than the current estimates, the long-term recovery and maintenance of the stock would be more assured. The risk of remaining in an overfished state increases if TAC is consistently chosen from the upper range of ABC.

The SPRMSC has recommended setting a target or OY, based on the biological target of MSY, above the overfishing threshold; and if MSY cannot be reliably calculated, then a static SPR in the range of 30 to 40 percent should be used. The MSAP has recommended that the Councils review appropriate target levels for stocks that are not overfished. Target or OY levels are based on biological, social, and economic factors. Because these factors may differ among fisheries and in different geographical areas of the same fishery, OY targets may likewise vary. In the past, Atlantic migratory group mackerels have had higher SPRs than Gulf migratory group mackerels, and allocations for some groups have not been met. On the other hand, most Gulf group king mackerel allocations have consistently been exceeded in recent years. Stock assessments for both groups conclude that stocks are not overfished; however, estimates of MSY are imperfect. The South Atlantic Council's target of 40 percent static SPR and the Gulf Council's target of 30 percent static SPR are both consistent with the recommendations of the SPRMSC and reflect the social and/or economic differences between the regions.

The SPRMSC also recommended that measures of stock biomass should be used to represent stock *depletion*, and these estimates should be calculated as part of individual stock assessments. Such estimates may be better indicators of stock status than SPR estimates. In requesting that the MSAP develop options for specifying an absolute biomass level that would represent a depleted condition, the Councils intend to establish an overfishing definition based on biomass. This alternative also includes the establishment of a default threshold static SPR of 30 percent for species for which there is insufficient data to accurately calculate a percent transitional SPR. For species included in the management unit of the FMP, this level of protection should be adequate to prevent overfishing until additional data can be acquired.

2.7.3.2 Rejected Alternative of the GMFMC: Section 12.6.1.1(a)(4) of the FMP is revised as follows:

- a. A king or Spanish mackerel stock shall be considered overfished if the spawning potential ratio (SPR) is less than the overfished level percentage recommended by the stock assessment panel, approved by the Scientific and Statistical committee (SSC) and adopted by the Council. The overfished criterion shall not be less than 20 percent SPR and is to be set initially at 20 percent SPR in this action.**
- 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 above the overfished level. The stock assessment panel will develop ABC ranges based on a fishing**

1. **Assessment panel report:** The Councils will consider the report and recommendations of the Panel and such public comments as are relevant to the Panel's report. A public hearing will be held at the time and place where the Councils consider the Panel's report. The Councils will consult their Advisory Panels and Scientific and Statistical Committees to review the report and provide advice prior to taking final action. After receiving public input, the Councils will make findings on the need for changes.
2. **Information separate from assessment panel report:** The Councils will consider information that surfaces separate from the assessment group. Council staff will compile the information and analyze the impacts of likely alternatives to address the particular situation. The Council staff report will be presented to the Council. A public hearing will be held at the time and place where Councils consider the Council staff report. The Councils will consult their Advisory Panels and Scientific and Statistical Committees to review the report and provide advice prior to taking final action. After receiving public input, the Councils will make findings on the need for changes.

Discussion: The Councils have always convened the SSC and AP to review MSAP reports regarding framework adjustments; however there may be occasions where information outside the Stock Assessment Report surfaces and should be considered. For example, in the 1995/1996 MSAP report, Atlantic group king mackerel were determined to have a SPR of over 50 percent; however, both the South Atlantic Council and its Mackerel AP had received information that would support a lower estimate. These changes to the framework seasonal adjustment would allow the Councils' staffs to develop separate reports based on other information, e.g., from the industry, and to review and receive comments on these reports from their APs and SSCs prior to taking action.

2.7.4.4 Rejected Alternative: Status Quo - No Change to Section 12.6.1.1(c).

Discussion: With no change, the MSAP report will continue to be the primary, if not the only, document upon which the Councils and their APs and SSCs would base their decisions regarding seasonal adjustments. This limitation could preclude the Councils from considering some relevant information, particularly social and economic data that are especially needed to address allocations.

2.7.5 Seasonal Framework Items

2.7.5.1 Proposed Alternative: Section 12.6.1.1(d) of the FMP is revised in part as follows:

- d. If changes are needed in the following, 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 panel's report, relevant background material, and public comment:
 - a. MSYs,
 - b. overfishing levels
 - c. TACs,
 - d. quotas (including zero quotas),
 - e. trip limits,
 - f. bag limits (including zero bag limits),

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. (Note: The revised mechanism for seasonal framework adjustments appears in Appendix I.)
- 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).

Discussion: The SPRMSC has recommended a revision of the minimum overfishing level for mackerels from 30 percent SPR to 20 percent SPR which is more consistent with similar stocks of fish. Biomass levels should not fall below the overfishing biomass level. Because of a paucity of data, however, cobia should be evaluated based on a measure of overfishing only. These recommendations should be included in order to provide appropriate management based on the best available information.

2.7.4 Provide for the Development and Review of Stock Assessment Panel Report

2.7.4.1 Proposed Alternative: Section 12.6.1.1(b) of the FMP is revised as follows:

The panel will prepare a written report with its recommendations for submission to the Councils each year (even years - full assessment, odd years - mini assessment) by such date as may be specified by the Councils. The report will contain the scientific basis for their recommendations and indicate the degree of reliability which the Councils should place on the recommended stock divisions, levels of catch, and options for nonquota controls of catch.

Discussion: The proposed alternative is a clarification of the current procedure for conducting the stock assessments and developing reports. The Councils wished to incorporate this modification to specify the type of report needed and the timeframe for receiving it.

2.7.4.2 Rejected Alternative: Status Quo - No change to the existing reporting procedure.

Discussion: Reports would continue to be developed without specification of the type of annual report to be developed.

2.7.4.3 Proposed Alternative: Section 12.6.1.1(c) of the FMP is revised as follows:

The Councils may take action based on the panel report or may take action based on issues/information that surface separate from the assessment group. The steps are as follows:

of that increase going to the recreational sector (Table 14). If TAC was reduced, the allocations would have remained the same. This action was implemented, in part, because of re-estimates of historic recreational catches, but also to address social and economic impacts sustained by the recreational sector due to growth in the number of both commercial and recreational fishermen and a growing interest in fishing for Spanish mackerel. The Councils decided that a more equitable allocation would be 50/50; but to implement such a drastic change immediately would create too many negative impacts upon the commercial fishery. With a gradual change of allocation percentage with each increase in TAC over time, the impacts would be less while still achieving the desired goal of a 50/50 division. Therefore, the Councils chose to implement the changes in allocation incrementally to each sector's allocation accordingly.

Such social and economic impacts may occur for either sector of this fishery without changes in TAC and at any given time during the fishing year, i.e., Florida net ban. For these reasons, the Councils would like to make changes in reallocation of the resource in a timely manner through the framework to mitigate the negative social and economic impacts that either sector might endure given such structural changes that occur rapidly, like shifts in effort.

- i. Gear restriction (ranging from modifying current regulations to a complete prohibition). This change is a clarification that restricting gear can include complete prohibition of some gear types. The South Atlantic Council has been concerned that modified drift nets are being used in the king mackerel fishery. The Council has been frustrated in its attempts to prevent the use of this gear because of definitions within the FMP. Making changes through the framework would allow the Councils to make the necessary adjustments to clarify their intent when confusion exists over the prohibition of gear.
- k. Season/area closures and reopenings (including spawning closures): This change is further clarification that spawning closures are included in framework adjustments.

2.7.5.2 Rejected Alternative: Status Quo - No Change to Section 12.6.1.1(d).

- d. If changes are needed in MSYs, TACs, quotas, bag limits, size limits, vessel trip limits, closed seasons or areas, gear restrictions, or initial requirement of 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 panels' report, relevant background material and public comment.

Discussion: The Councils' flexibility to implement needed changes in seasonal harvest is limited to those actions specified above. Joint plan amendments may not be implemented in time for the following fishing season. (This amendment is an example.)

2.7.6 Council Responsibility for Regulating Migratory Groups

- 2.7.6.1 **Proposed Alternative:** Section 12.6.1.1 (d) is further modified to provide that the SAFMC is to set regulations within the commercial sub allocation for the northern area of the Eastern Zone (Dade through Volusia Counties, Florida) for the commercial fishery for Gulf group king mackerel as follows:

- g. minimum sizes,
- h. reallocation of Atlantic group Spanish mackerel,
- i. gear restriction (ranging from modifying current regulations to a complete prohibition),
- j. permit requirements, or
- k. season/area closure and reopening (including spawning closure).

Discussion: The following changes are proposed:

- b. Overfishing levels: The provision for adjusting the overfishing level by regulatory amendment (notice action) was introduced in Amendment 5 and utilized in seasonal adjustments in 1990 and 1991 as the stock assessment panel obtained a better data base. Recent interpretation of the framework procedure opined that since it was not included in this Section D, it was unclear whether the level could be adjusted other than by plan amendment, a costly and slow process. Like the determination of MSY, the overfishing level is a scientific finding. This action would allow adjustment of the overfishing level in the same manner that MSY is set.
- d. Quotas (including zero quotas): This change is a clarification that zero quotas are an option within the framework. Some coastal pelagics may be susceptible to overfishing with rapid increases in fishing effort. The mackerel stocks declined dramatically in the late 1970's and 1980's. Setting a zero quota would allow the Councils to address rapid stock depletion, if necessary.
- f. Bag limits (including zero bag limits): This change is also a clarification that zero bag limits are an option within the framework. Some coastal pelagics may be susceptible to overfishing with rapid increases in fishing effort. The mackerel stocks declined dramatically in the late 1970's and 1980's. Setting a zero bag limits would allow the Councils to address rapid stock depletion, if necessary.
- h. Reallocation of Atlantic Spanish mackerel: Because more than half of the recreational allocation has not been met since 1992, the commercial industry has requested revisiting the recreational/commercial split of Atlantic Spanish mackerel. The original allocation set in Amendment 2, based on landings from 1979 through 1985, resulted in a 76 percent commercial, 24 percent recreational split of Spanish mackerel. In 1989 with Amendment 4, the Councils determined that the allocation was inappropriate for five main reasons. The Spanish mackerel resource was considered overfished during the time period used to set allocations. The commercial catches increased disproportionately during the mid-1970s, during the period when the resource began to decline and became more compressed geographically. Catches declined in North Carolina, South Carolina, and Georgia. The Councils knew that the quantitative information on recreational catches were underestimated. At the time the Atlantic group Spanish mackerel resource was reduced and harvest capacity and demand of both user groups expanded to where either group could harvest all or most of the available resource, it became more equitable to share the resource between user groups. The Councils concluded that an equitable allocation maximized the net socioeconomic benefits available from the resource. As Spanish mackerel have recovered and extended into their traditional range, commercial fishermen have requested reconsideration of the allocation; since the recreational sector has not taken its allocation in recent years.

In Amendment 4, the Councils chose to reallocate Spanish mackerel between the recreational and commercial sectors by implementing a mechanism whereby any increase in TAC would be divided between the two sectors with 10 percent of that increase going to the commercial sector and 90 percent

Discussion: Administrative requirements have become increasingly burdensome for both the Councils and NMFS. The NMFS has also experienced a reduction in personnel and an increasing workload. Requiring a time limit for action on seasonal regulatory amendments for coastal migratory pelagics could impede implementation of other regulatory actions and amendments that might not be consistent with the priorities of the Councils or NMFS.

2.7.8 Framework Actions Authorized by the Regional Director

2.7.8.1 Proposed Alternative: The remainder (other than the first paragraph) of Section 12.6.1.1(f) is revised as follows:

Appropriate regulatory changes that may be implemented by the Regional Director by proposed and final rules in the Federal Register are:

- 1. Adjustment of the point estimates of MSY for cobia, for Spanish mackerel within a range of 15.7 million pounds to 19.7 million pounds, and for king mackerel within a range of 21.9 million pounds to 35.2 million pounds. Adjustment of the overfishing level for king and Spanish mackerels.**
- 2. Setting total allowable catches (TACs) for each stock or migratory group of fish which should be managed separately, as identified in the FMP provided:
 - a. No TAC may exceed the best point estimate of MSY by more than 10 percent.**
 - b. No TAC may exceed the upper range of ABC if it results in overfishing as defined in Section 12.6.1.1(A)(4).**
 - c. Downward adjustments of TAC of any amount are allowed in order to protect the stock and prevent overfishing.**
 - d. Reductions or increases in allocations as a result of changes in the TAC are to be as equitable as may be practical utilizing similar percentage changes to allocations for participants in a fishery.****
- 3. Adjusting user group allocations in response to changes in TACs according to the formula specified in the FMP.**
- 4. The reallocation of Spanish mackerel between recreational and commercial fishermen may be made through the framework after consideration of changes in the social and/or economic characteristics of the fishery. Such allocation adjustments shall not be greater than a ten percent change in one year to either sector's allocation. Changes may be implemented over several years to reach a desired goal, but must be assessed each year relative to changes in TAC and social and/or economic impacts to either sector of the fishery. (See Proposed Alternative 2.7.5.1.)**

Paragraph 2:

Recommendations with respect to the Atlantic migratory groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf migratory groups of king and Spanish mackerel will be the responsibility of the Gulf Council. Except that the SAFMC will have responsibility to set vessel trip limits, closed seasons or areas, or gear restrictions for the northern area of the Eastern Zone (Dade through Volusia Counties, Florida) for the commercial fishery for Gulf group king mackerel. This report shall be submitted by such data as may be specified by the Councils.

Discussion: This area is in the jurisdiction of the SAFMC; however, at times, fishermen must travel to meetings and hearings of both Councils in order to address management of both migratory groups in the same geographic area. This alternative would provide for management by only one Council (South Atlantic Council) in this area; consequently, fishermen desiring to have input to management decisions in this area should save time and money by only being required to address one Council.

2.7.6.2 Rejected Alternative: Status Quo - The GMFMC continues to manage Gulf group king mackerel seasonally on Florida's east coast.

Discussion: While allocations among the user groups are fixed in ratios, the GMFMC would continue to resolve management issues within the commercial fishery in the SAFMC's area of jurisdiction. The no change option would require fishermen to continue to fish under the jurisdictions of both the South Atlantic and Gulf Councils; thereby continuing the added burdens of addressing two Councils.

2.7.7 Seasonal Adjustment Review Period

2.7.7.1 Rejected Alternative: Section 12.6.1.1(f) in the first paragraph is revised as follows:

- f. If the RD concurs that the Councils' recommendations are consistent with the goals and objectives of the plan, the National Standards, and other applicable law, he shall implement the regulations by proposed and final rules in the Federal Register prior to the appropriate fishing year or such dates as may be agreed upon with the Councils, but in no case longer than (60) (90) days after receipt of the Councils' request.

Discussion: This alternative would set a time limit for response by NMFS to approve or disapprove the seasonal regulatory action. The 1995 regulatory amendment submitted by the Councils in June of 1995 was not implemented by October. A 60-day time limit, however, may be difficult for NMFS to meet.

2.7.7.2 Proposed Alternative: Status Quo - Section 12.6.1.1(f) continues to read as follows:

- f. If the RD concurs that the Councils' recommendations are consistent with the goals and objectives of the plan, the National Standards, and other applicable law, he shall implement the regulations by proposed and final rules in the Federal Register prior to the appropriate fishing year or such dates as may be agreed upon with the Councils.

- d. Reductions or increases in allocations as a result of changes in the TAC are to be as equitable as may be practical utilizing similar percentage changes to allocations for participants in a fishery. (Changes in bag limits cannot always accommodate the exact desired level of change).
3. Adjusting user group allocations in response to changes in TACs according to the formula specified in the FMP.
4. Implementing or modifying quotas, adjusted quotas, bag limits, size limits, vessel trip limits, closed seasons or areas, gear restrictions, or initial requirement of permits as necessary to limit the catch of each user group to its allocation.

Discussion: The status quo option would continue confusion regarding the authority of the RD to implement recommendations of the Councils through the framework process and aggravate the Councils' attempts to make seasonal changes.

2.8 Revise Optimum Yield to Conform to the Overfishing Definition

2.8.1 Optimum Yield

2.8.1.1 Rejected Alternative: Revise Section 12.5.1.1 as follows:

Optimum yield (OY) is any harvest level which maintains, or is expected to maintain, over time, a survival rate of biomass into the stock of spawning age mackerel or cobia to achieve at least a 40 percent spawning potential ratio (SPR) population level, relative to the SPR that would occur with no fishing. The Council's intent is to ensure the weight of spawning stock does not decrease below 40 percent of the spawning stock that would occur in an unfished fishery.

Discussion: The South Atlantic Council has chosen an optimum yield of 40 percent SPR to ensure the maximum long-term benefit from the coastal pelagic stocks. This action coincides with the changes to the overfishing definition. By setting a target level of 40 percent SPR, the Council is choosing a risk averse strategy that may drive spawning stock levels away from the overfished level. This strategy should, in the long-term, provide for a more stable fishery and allow for more latitude when considering social and/or economic impacts.

2.8.1.2 Proposed Alternative: Section 12.5.1.1 is modified to read as follows:

The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or OY is 30 percent static SPR. ABC is calculated based on the target level or OY (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).

Discussion: Current specifications of MSY for king and Spanish mackerel may be excessive. Continuing to specify optimum yield for mackerels at these MSY levels could drive the spawning stock toward the overfished level. This phenomenon may occur because mackerels in some areas are currently near the overfished level.

5. **Modifying (or implementing for a particular species):**
 - a. quotas (including zero quotas)
 - b. trip limits
 - c. bag limits (including zero bag limits)
 - d. minimum sizes
 - e. re-allocation of Atlantic group Spanish mackerel by no more than 10 percent per year to either the commercial or recreational sector.
 - f. gear restriction (ranging from modifying current regulations to a complete prohibition)
 - g. permit requirements, or
 - h. season/area closures and reopenings (including spawning closure)

Authority is also granted to the Regional Director to close any fishery, i.e., revert any bag limit to zero and close and reopen any commercial fishery, once a quota has been established through the procedure described above and such quota has been filled. When such action is necessary, the Regional Director will recommend that the Secretary publish a notice in the Federal Register as soon as possible.

Discussion: The allowable recommendations by the Councils provided in framework Section D are specified as being allowable regulatory changes that may be made by the RD. These changes also clarify the authority of the RD to close a fishery when a quota is reached or reopen it when needed. Recent efforts by the Councils to initiate changes by seasonal framework adjustment were judged to be beyond the authority specified in the framework because of inconsistencies in the wording in various sections. The above changes have been made to clarify what the RD may implement regarding regulatory changes as recommended by the Councils. These changes will eliminate inconsistencies found in earlier attempts to implement framework changes.

2.7.8.2 Rejected Alternative: Status Quo - Section 12.6.1.1(f), after the first paragraph, remains:

Appropriate regulatory changes which may be implemented by the Regional Director by notice action in the Federal Register include:

1. Adjustment of the point estimates of MSY for cobia, for Spanish mackerel within a range of 15 million pounds to 19.7 million pounds, and for king mackerel within a range of 21.9 million pounds to 35.2 million pounds.
2. Setting total allowable catches (TACs) for each stock or group of fish which should be managed separately, as identified in the FMP provided:
 - a. No TAC may exceed the best point estimate of MSY by more than ten percent.
 - b. No TAC may exceed the upper range of ABC if it results in overfishing as defined in Section 12.6.1.1 (A)(4).
 - c. Downward adjustments of TAC of any amount are allowed in order to protect the stock and prevent overfishing.

- d. Reductions or increases in allocations as a result of changes in the TAC are to be as equitable as may be practical utilizing similar percentage changes to allocations for participants in a fishery. (Changes in bag limits cannot always accommodate the exact desired level of change).
3. Adjusting user group allocations in response to changes in TACs according to the formula specified in the FMP.
4. Implementing or modifying quotas, adjusted quotas, bag limits, size limits, vessel trip limits, closed seasons or areas, gear restrictions, or initial requirement of permits as necessary to limit the catch of each user group to its allocation.

Discussion: The status quo option would continue confusion regarding the authority of the RD to implement recommendations of the Councils through the framework process and aggravate the Councils' attempts to make seasonal changes.

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Discussion: The South Atlantic Council has chosen an optimum yield of 40 percent SPR to ensure the maximum long-term benefit from the coastal pelagic stocks. This action coincides with the changes to the overfishing definition. By setting a target level of 40 percent SPR, the Council is choosing a risk averse strategy that may drive spawning stock levels away from the overfished level. This strategy should, in the long-term, provide for a more stable fishery and allow for more latitude when considering social and/or economic impacts.

2.8.1.2 Proposed Alternative: Section 12.5.1.1 is modified to read as follows:

The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or OY is 30 percent static SPR. ABC is calculated based on the target level or OY (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).

Discussion: Current specifications of MSY for king and Spanish mackerel may be excessive. Continuing to specify optimum yield for mackerels at these MSY levels could drive the spawning stock toward the overfished level. This phenomenon may occur because mackerels in some areas are currently near the overfished level.

(Section 2.7.3.1) (MSAP 1996). By establishing a target level OYs in the form of static SPRs that are based on conservative biological analyses, the Councils have adopted a more risk adverse strategy that will allow for them to better track the status and/or recovery of stocks. Furthermore, the framework procedure will allow adjustments in TAC to meet the OY target.

2.8.1.3 Rejected Alternative: Revise Section 12.5.1.1 as follows:

Optimum yield (OY) for king and Spanish mackerels is any harvest level which maintains, or is expected to maintain, over time, a survival rate of biomass of spawning age mackerel at a spawning potential ratio (SPR) population level between (20 and 40 percent).

The level of yield within this biological range is to be determined through modification by any relevant economic, social, or ecological factors.

OY for cobia is a harvest level equal to MSY or 2.2 million pounds.

Discussion: The SPR level is equivalent to an ABC that relates only to the biological condition of the stock. Setting the SPR level at a safe biological range above the defined level of overfishing provides the Councils with the flexibility to adjust catch levels to user needs and ecological conditions.

OY for cobia is set at MSY, currently 2.2 million pounds, in accord with the recommendation of the SPRMSC that, because of limited data, SPR not be used for cobia.

3.0 REGULATORY IMPACT REVIEW

3.1 Introduction

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).

This RIR analyzes the impacts of the proposed changes in regulations affecting the commercial and recreational sectors of the coastal migratory pelagic fisheries in the Gulf and South Atlantic.

3.2 Problems and Objectives

The general problems and objectives are enumerated in the FMP, as amended, and in Sections 1.2, 1.3, and 1.4 of this document. Section 1.5 delineates the purpose and need for the present plan amendment. This plan amendment addresses eight sets of issues, namely: (1) identification of two new problems in the fishery, (2) gear regulation, (3) transfer at sea of commercial Atlantic Spanish mackerel, (4) king mackerel stock identification, (5) fishing permit regulation, (6) species specific regulation, (7) revision of seasonal framework adjustment, and (8) optimum yield definition.

3.3 Methodology and Framework for Analysis

Ideally, the expected present values of net yield streams over time associated with the different alternatives would be compared in evaluating impacts. Net yield streams in the present context mean producer and consumer surpluses in the commercial sectors, producer surplus in the for-hire sector, and consumer surplus of private anglers. Unfortunately, estimates of the yield streams and their associated probabilities are not available. The approach then taken in analyzing the potential impacts of the various alternatives is to describe and/or quantify the changes in short-term net benefits. A qualitative discussion of long-term impacts is also attempted.

3.4 Impacts of Management Alternatives¹

2.1 Additional Problems in the Fishery

2.1.1 Proposed Alternative: Add problems 11. Localized reduction in abundance of fish due to high fishing pressure; and 12. Disruption of markets.

2.1.2 Rejected Alternative: Status Quo - No change to problems in the fishery.

Localized depletion or reduction in abundance and market disruption are particularly pertinent to the coastal migratory fishery due to the presence of quota/allocation for some species like king and Spanish mackerel and the migratory nature of species in this fishery. A problem of this sort arose in the Gulf group king mackerel fishery when an allocation was fished out before a group of fishermen in another geographical area could fish at their historical level. The Gulf Council has already requested three emergency actions (two were implemented and one was disapproved by the Secretary of Commerce) to address this type of problem. While the commercial sector is susceptible to this type of problem, the recreational sector is not totally immune to it. The expansion of the longline fishery for dolphin off South Carolina has raised concern among charterboat operators regarding their access to the fish. Table 6 depicts the commercial landings of dolphin in South Carolina, and shows that in the first six months alone of 1995 landings were more than twice those of total annual landings for 1993 and 1994. This surge in commercial landings has been perceived as potentially detrimental to the charterboat operation in this area.

In a sense, this problem is a subset of a more encompassing problem regarding open access management of the fishery. That is, an increase in fishing effort in one or more areas of fishing that translates into an increase in total fishing effort would eventually create economic inefficiency. Open access solutions to this type of

¹Management measures are numbered as in Section 2 for easy reference.

problem, such as area and gear-type quotas, may address short-term socioeconomic issues; however, similar types of problems will arise if overall effort is not controlled through some form of limited access management.

2.2 Gear Regulation

2.2.1 Specification of Allowable Gear in South Atlantic and Mid-Atlantic

2.2.1.1 Proposed Alternative: Only the following gear is allowable:

- a. **Directed Atlantic migratory group Spanish mackerel fishery: hook-and-line, (handline, rod and reels, and bandit gear); and run around nets, stab nets, and cast nets.**
- b. **Directed Atlantic migratory group king mackerel fishery south of Cape Lookout within the South Atlantic Council's area of jurisdiction is limited to hook-and-line gear. Multigear trips, consisting of mixed species including king mackerel not to exceed 3,500 pounds, are allowed north of Cape Lookout.**
- c. **Vessels with a coastal migratory permit fishing for or possessing Atlantic Spanish mackerel on Florida's east coast are limited to two run-around gill nets of different mesh sizes. Neither may exceed 800 yards, and only one may be fished at a given time. The maximum soak time is 1 hour, and nets must be marked with a maximum of 9 dissimilar floats (different from normal net buoys and marked with the permit number) spaced every 100 yards or less.**
- d. **Directed coastal migratory pelagic fisheries in the SAFMC's and MAFMC's area of jurisdiction, excluding little tunny north of Cape Lookout, cero, king, and Spanish mackerel; surface longline; and hook-and-line gear including manual, electric, or hydraulic rod and reels, and bandit gear.**
- e. **Drift net rules in place now only apply south of Cape Lookout.**

2.2.1.2 Proposed Alternative: Specification of experimental gear in the South and Mid-Atlantic. In consultation with the Council, the Regional Director may issue permits for experimental gear (for coastal pelagics in the SAFMC and MAFMC area) on a limited basis provided that a process is implemented to collect data on the use of the particular gear concurrently with issuance of the permit. The data collected would be reviewed by the assessment group as soon as possible after the gear has been in use for 12 months or some specified period of time. The Council would review the data and the group's report and determine whether the gear should be allowed. Any changes would be made by plan amendment. It would be the Council's intent to allow the sale of catch from experimental gear.

2.2.1.3 Proposed Alternative: Specification of nonconforming gear in the South and Mid-Atlantic. Possession of coastal pelagics aboard a vessel using nonconforming gear, including the shark drift gill net fishery, is limited to the bag limit for species with a bag

limit in the SAFMC, GMFMC, and MAFMC's area of jurisdiction. Species with no bag limit, unlimited.

2.2.1.4 Rejected Alternative: No Change - do not specify allowable gear but continue gear prohibitions in the South Atlantic area.

There are currently many gear types prohibited for directed harvest of coastal pelagics, particularly king and Spanish mackerel. The prohibited gear types, however, vary from species to species. This condition alone presents certain enforcement problems. The appearance of gear types that are modifications of those prohibited would undoubtedly present additional and more complex enforcement problems. In this regard the enumeration of those gear allowed for each of the managed species, as done in Proposed Alternative 2.2.1.1, simplifies enforcement and reduces potential confusion in complying with regulations. Proposed Alternative 2.2.1.3 places a clarifying condition in the event that nonconforming gear types, presumably used for harvesting other species, are on-board the regulated vessels. Since the enumerated allowable gear types are the ones currently used in the fishery, the proposed alternatives would have minimal adverse effects on the profitability of the industry over the short run.

While enforcement is simplified, the proposed limitation on allowable gear would definitely have some impact on innovation. Gear types that may be more economically efficient while not biologically destructive may not be developed. In this regard, the benefits of the proposed measures in terms of simplifying enforcement may not outweigh the economic costs of preventing innovation in the harvest of regulated species. To some extent, this negative impact on innovation may be reduced by Proposed Alternative 2.2.1.2, which addresses experimental gear. The classification as experimental gear becomes of utmost importance in this regard.

Item (c) of Proposed Alternative 2.2.1.1 has ramifications not shared by the other items. This particular rule would limit the use of certain sizes of nets for harvesting Spanish mackerel off the East Coast of Florida. This further restriction on the fishery and some of its ramifications are discussed below.

The MSAP has estimated the median SPR of the South Atlantic group of Spanish mackerel at the beginning of 1995/96 to be 55 percent (MSAP Report, 1995). This panel has therefore considered this stock to be not overfished. The panel also concluded that even very large catches in 1995/96 will only marginally increase the risk of SPR falling below 20 percent.

From 1987/88 through 1991/92, the commercial fishery closed about 9 to 10 months after it opened and exceeded its allocation by as high as 52 percent. For the last 3 years, the commercial harvest approximated the commercial allocation, and the fishery did not experience any closure during these years. The commercial trip limits adopted for these 3 years enabled the fishery to remain open throughout the fishing season. It is noted that the recreational sector has never fished its allocation since 1987/88. This underrun has become more significant with the adoption of a 50/50 commercial/recreational allocation of the Atlantic group of Spanish mackerel.

The number of vessels with home ports in Florida (east coast) through North Carolina permitted to fish commercially for coastal migratory pelagics are the ones most likely to fish for the Atlantic group of Spanish mackerel. Additional vessels in the Florida Keys listed as having home ports in the west coast of Florida may also fish for this species. The number of vessels from the east coast of Florida through North Carolina has increased from 947 in 1987/88 to 1,347 in 1993/94 (Table 2). While Table 2 shows a relatively large increase in the number of vessels (and most target Atlantic migratory group Spanish mackerel during the season), the

number actually hovered around 1,300, if the 1987/88 period is excluded. In addition to increases in the number of vessels fishing Atlantic migratory group Spanish mackerel, the length of nets used in the fishery has also increased over the same period. It is likely that a good portion of recent increases in catches over a shorter period is accounted for by the reported increases in the size of nets used.

The proposed reduction in net size together with a limit on soak time would put a restraint on harvests in addition to that already imposed by the trip limits. This condition would help spread harvest of the quota throughout the fishing season and may result in better prices for fishermen and relatively better quality of fish for consumers. Such benefits, nonetheless, have to be weighed against the potential inefficiency that may befall the industry. This measure then is likely to adversely affect larger vessels and to positively impact smaller vessels, thereby redistributing catches from larger to smaller vessels. Whether such redistribution results in positive, negative, or zero changes in industry profitability depends on the cost and return configuration of these vessel classes.

In pure economic terms, large capacity gear may produce significant net benefits to fishermen using that gear and to consumers, despite the fact that prices are lower than if smaller scale boats and gear were used. In this way, giving more Spanish mackerel catch to smaller boats probably involves some efficiency losses and hence some net losses of consumer and producer benefits. Although current cost and earnings information is not available to describe the magnitude of these losses, few would argue that large net gear is not more efficient than smaller net gear and hook and line gear used by smaller boats. It is sometimes argued that large boats receive a lower price per pound for Spanish mackerel than smaller boats, thus creating less benefit per pound than from small boats. That argument, however, ignores the fact that costs associated with catching a pound of Spanish mackerel on average are probably considerably lower for large boats than for small boats. If operational cost savings more than compensate for per unit revenue differences, then net profits to producers with large vessels should be larger; and aggregate producer benefits are larger with large scale gear than with smaller scale gear, if all other factors are equal.

Empirical analysis to confirm that prices to large vessels are really lower is not available. Available evidence on seasonal prices to large and small boats (NMFS, 1991) does not isolate the potential effects of fluctuations in quantity landed during the period when exvessel prices are monitored. Hence, prices to large vessels may not be lower on average than those to smaller boats, suggesting further that producer surplus created by large vessels in the fishery may be larger than the producer surplus created by smaller boats for the same quantity of Spanish mackerel.

Management that directly affects the economics of the fishery, i.e., management under individual transferable quotas (ITQs), would probably create greater economic benefits than input control schemes such as trip limits, or competitive fishing under no action. An ITQ program would allow fishermen to respond directly to market signals to avoid low exvessel prices from flooded markets. ITQs would also address over-capacity problems in the fishery directly by allowing those with the highest-valued use of the fishery to buy out others.

2.2.2 Specification of Allowable Gear for Gulf Group King Mackerel

2.2.2.1 Proposed Alternative: Gulf group king Mackerel may be taken only by hook-and-line (including longline) and run-around gill nets. Possession is prohibited aboard a vessel with a drift gill net. This proposal is not intended to prohibit possession aboard appropriately permitted multispecies vessels with other fishing gear aboard (i.e. spiny lobster traps, shrimp trawls, fish traps, and stone crab traps). The

(i.e. spiny lobster traps, shrimp trawls, fish traps, and stone crab traps). The incidental catch allowance for purse seine vessels of up to 1 percent of king mackerel and 10 percent for Spanish mackerel of all fish aboard remains in effect.

2.2.2.2 Rejected Alternative: No Change - Section 12.6.8.1.1 remains Gulf group king mackerel may be taken only with the following gear: hook-and-line and run-around gill nets.

The Proposed Alternative is similar to the proposed provision for the harvest of Atlantic migratory group Spanish mackerel. It would simplify enforcement of the existing prohibition on certain gear types. In addition, this measure would limit the harvest of king mackerel to those employing traditional gear used in the fishery.

While enforcement is simplified, the proposed limitation on allowable gear would have an adverse impact on innovation. Gear types which may be more economically efficient while not biologically destructive may not be developed. In this regard, the benefits of the proposed measures in terms of simplifying enforcement may not outweigh the economic costs of preventing innovation in the harvest of regulated species. Unlike the case for the Atlantic migratory group Spanish mackerel, this measure has no mitigating condition that would allow innovative gear types to be introduced to the fishery. It does, however, contain a provision that would allow multispecies-permitted vessels to fish for mackerel while they have onboard other gear types used for catching other species, i.e., spiny lobster, stone crabs, and shrimp. These gears are not generally used for targeting mackerel. In addition, the condition for retaining incidental catch of Gulf group king mackerel in purse seine vessels is retained.

2.3 Transfer of Spanish Mackerel at Sea

2.3.1 Rejected Alternative: Transfer of Atlantic Spanish mackerel between permitted vessels engaged in harvest for commercial purposes within this region is allowed only under the following conditions:

- a. Transfer is allowed if directed harvesting gear used to harvest the Spanish mackerel being transferred is allowable net gear. Spanish mackerel harvested with other than directed allowable net harvesting gear shall not be transferred.
- b. Transfer shall only take place in the EEZ between permitted vessels.
- c. The Spanish mackerel removed from the directed harvesting gear aboard the harvesting vessel shall be isolated aboard the vessel and shall not exceed the applicable daily vessel limit specified in this subsection. All fish exceeding the applicable daily vessel limit shall remain entangled in the meshes of the net until another vessel operated by a person possessing a valid permit (applicable to himself or the vessel) is within 50 yards of the vessel from which the transfer shall take place. The fish shall then be removed from the net in a continuous process and transferred singly or in a container to the second vessel. The quantity of fish transferred to any single vessel shall not exceed the applicable daily harvest limit.

2.3.2 Proposed Alternative: No Change - do not allow transfer at sea

It is reasonable to expect that the Rejected Alternative could reduce mortality of Spanish mackerel by eliminating discards of fish already caught in the net. To the extent that vessels involved in this practice abide by the daily trip/possession limit, some positive short- and long-run benefits can accrue to the fishery. The short-run benefits come in the form of lower fishing cost. Vessels that would have incurred cost by spending time fishing would be simply transporting fish from the sea to the dock. In addition, larger vessels that catch more fish than the trip limit allows would not be forced to sort out fish for discarding if the crew feels that retaining fish caught would make them exceed the trip limits. The long-run benefits come in the form of a possible increase in abundance from avoiding unintended fishing mortality. This condition may bring about an increase in future quota or simply a reduction in fishing cost due to less fishing time expended.

The downside of this measure is that enforcement of trip limits would be complicated. Smaller vessels that haul fish from larger vessels to the dock can go back and forth as many times as possible, despite the fact that these vessels are subject to the daily trip and possession limits. The complicating factor here is that these vessels are not restricted to any number of trips. It is only required that they do not exceed the daily trip limits. As the number of these types of vessels increases, so does the complication in enforcement. The cost of operating these vessels could limit the proliferation of such practice; however, the strength of prevailing market demand may outweigh the cost.

There is also the possibility that larger vessels could be rigged to catch significantly larger numbers of fish than the trip limit. While the transfer can only be done among permitted vessels, the current permitting system is not restrictive enough to prevent some operators of large vessels from securing permits for their smaller vessels. While the advantage of reducing mortality, as discussed above, is not precluded by this possible fishing scenario, the possibility of flooding the market over a short period time is real.

In summary, the benefits from the Rejected Alternative would heavily depend on the enforcement of trip limits.

2.4 King Mackerel Stock Identification

2.4.1 Proposed Alternative: After the next stock assessment and after staff has prepared a detailed analysis of the impact of establishing boundaries for management, the Councils will evaluate impacts of establishing permanent jurisdictional boundaries and separate council fishery management plans for coastal pelagics in order to obtain public comment for development of Amendment 9.

2.4.2 Rejected Alternative: Status Quo - No Change.

A more detailed analysis of the impacts of this set of measures will be included in the next plan amendment. In the meantime, some general discussion is initiated here.

The Proposed Alternative would in effect fix boundaries for migratory groups at one location in contrast to the present boundaries that vary with fishing seasons. There would be several options for locating such fixed boundaries as Amendment 9 is developed. Table 1 depicts one potential option with its concomitant implications regarding ABC and SPR ranges for fixing boundaries for Gulf and Atlantic migratory group king mackerel. One major implication from this scenario is that any boundary that would result in less than a 100 percent assignment of winter East Florida king mackerel to the Gulf migratory group would mean lower ABC and SPR estimates for the Gulf group king mackerel. Under such scenario, those fishing for the Gulf group of king mackerel would experience reduction in catch and likely reduction in producer surplus. Considering

that both the commercial and recreational sectors currently targeting Atlantic group king mackerel have not met their respective allocations, while the commercial sector targeting Gulf group king mackerel has always met its quota, any boundary location that would reduce TAC for Gulf group king mackerel would reduce overall net benefits to the entire fishery. Such reduction in net benefits would be even larger if we factor in the likely situation that the recreational sector in the Gulf group king mackerel fishery would be faced with a lower bag limit even if there would be no closure of this segment of the fishery. This reduction in net benefits from such reallocation of fish is not likely to be outweighed by simplification of management in both the Gulf and South Atlantic Councils' areas of jurisdiction.

2.5 Fishing Permit Regulation

2.5.1 Dealer Permits

2.5.1.1 Rejected Alternative: Require permitting and record keeping by coastal pelagic fish dealers who are first receivers of fish.

- 1. Permitted dealers can only buy coastal pelagics from permitted vessels and permitted vessels can only sell to permitted dealers;**
- 2. Permitted dealers must make their records available to law enforcement agents;**
- 3. Permitted dealer records must include how much of each species of coastal pelagic fish was purchased from each vessel;**
- 4. Permitted dealers must keep their records at the principal place of business for at least one year;**
- 5. Permitted dealers must have a permanent facility at a fixed location (not endorsed by the GMFMC);**
- 6. A copy of the dealer permit and records of catching vessel must be kept on fish delivery vehicles.**

2.5.1.2 Proposed Alternative: Status Quo - No dealer permit required

Table 15 shows the distribution of dealers with purchases of king mackerel in Florida for period 1991-95. The number of dealers handling any of the managed coastal pelagics is undoubtedly significantly higher. In addition, the number of such dealers easily multiplies when potential buyers throughout the range of the managed species are included. For example, in the 1990-1991 fiscal year, Florida sold 772 resident county wholesale seafood dealer and 2,859 resident retail seafood dealer (primary) licenses for the Atlantic and Gulf coasts. Louisiana sold 1,243 resident wholesale/retail dealer-for business licenses; Mississippi sold 86 seafood dealer licenses; and Texas sold 387 wholesale fish dealer and 2,902 retail fish dealer licenses (GSMFC, 1992). One should note, however, that many classes of licenses are sold in each state; and there is a possibility that one company may own several classes of licenses or the same class of licenses for each establishment. The requirements to whom commercial fishermen may sell their catch also varies (GSMFC, 1992). For example, Florida requires that commercial fishermen sell their fish to wholesale dealers. There are also a number of seafood buyers in other parts of the U.S. that may potentially buy fish from Gulf fishermen [see NMFS lists

of seafood brokers (1993), seafood processors (1993), and primary receivers of imported fishery products (1991)]. Some of these potential buyers, may now be buying coastal pelagics (although in small amounts), or they might have bought fish before but have ceased temporarily or permanently. All these establishments, which must also possess a license from the states, would be directly or indirectly affected in varying degrees by the Rejected Alternative.

While enactment of coastal pelagics (and other fishery) regulations presupposes a direct control on either fishing effort or fishing mortality, in actuality fisheries agencies have direct control only on the governing instruments (e.g., quotas, area closures, ITQ, etc.); the monitoring procedure (e.g., dockside, sea surface, or aerial observation, reviewing of financial records, etc.); and in some cases, the type of penalty (Anderson, 1987). Fishermen's behavior regarding net-benefits maximization remains the same regardless of the presence of any regulations. Regulations merely pose as constraints to such maximizing behavior. In this context, the full benefits from enactment of "governing instruments" would not be realized if not complemented by adequate monitoring procedures (and penalty structure). In terms of costs and benefits determination, accounting for monitoring procedures does not only mean inclusion of initial and on-going enforcement costs but also determination of the benefit reduction when certain rules become highly susceptible to being evaded or avoided. To date, monitoring procedures for coastal pelagic regulations are generally directed at recording fishermen's actual fishing activities, including the nature and level of their catches, at sea or at the dockside. One possible exception is the determination of total catches for estimating quotas for king and Spanish mackerel, a determination made by also collecting information from dealers. The proposed dealer permits would extend the monitoring process beyond the fishermen and onto the dealers (first buyers). While fishermen's activities are still the prime target for observation purposes, dealer permitting also extends the penalty for deviant behavior to the dealers themselves.

In general, permitting of dealers provides certain benefits; the most important of which is the improved enforceability of many fishery regulations, but it also imposes certain costs directly on dealers and indirectly on persons that transact business with them. At the state level, (marine) seafood dealer permits or licenses are also one source of revenues; at the federal level, especially under the Magnuson Act, dealer permits provide revenues that merely offset administrative issuance costs. While relative to the entire federal government, costs of administering dealer permits are offset by permit fees. To the administering agency, NMFS, such administration costs may mean a reallocation of existing funds from one budget item to another. The relatively small amount involved in such reallocation does not warrant further discussion here.

The major benefits from the Rejected Alternative come in the form of enhancing enforcement of several fishery regulations and improving the accuracy of estimating commercial harvests. Dealer permitting also provides a better enumeration of businesses potentially affected by fishery regulations as well as a more complete and accurate list of persons that the Councils and NMFS can utilize for more widespread information dissemination regarding proposed and approved regulatory changes of federal coastal pelagic fishing rules. This latter set of benefits are actually mainly byproducts of dealer permitting and may be obtained through other less costly or less intrusive means.

Items (a), (e), and to some extent (f) of the Rejected Alternative would provide a clear identification of dealers buying coastal migratory pelagics directly from the fishermen. Item (a) would also allow identification of fishermen selling coastal pelagics to a particular dealer, and it would also ensure that coastal pelagics caught in the EEZ pass through known markets, at least up through the first buyers. Items (b), (c), and (d) would ensure that a record of every transaction (which includes, among others, the actual amount of each species of fish sold) between fishermen and dealers is kept in some known sites and available to federal law enforcement

agents when a need arises. Such clear identification of participants in the commercial fishery and availability of records provide a means of checking and cross-checking landings for adherence to fishing regulations.

Species, particularly king and Spanish mackerel, under the FMP's management unit are subject to one or more types of regulations. While at-sea and dockside checking are still the core of enforcing these regulations, under the Rejected Alternative dealers would be expected to add pressure on fishermen to abide by the rules, since they (dealers) would stand to lose eventually their permit when buying "illegally caught" fish. Currently dealers are already subject to some penalties at the federal and state level for buying "illegally caught" fish; the presence of federal permits would stiffen the penalty structure on dealers. More important than the pressures that dealers may impose on fishermen is the fact that another record is available to enforcement officials for use in strengthening cases against violators without, in some instances, the need of actually observing a violation in progress at sea. The availability of such records from dealers may also prompt certain fishermen to file more accurate catch records when submitting trip tickets (or logbooks if later required for the fishery). It may be noted, however, that not all types of violations can be ferreted out by an examination of dealer records, but it is hoped that some flagrant ones may be adequately addressed, like violations of trip limits and sales of recreationally caught fish where prohibited. In addition to the above, permitting of dealers becomes very vital in realizing the benefits of effort limitation program, particularly ITQ, that may be instituted for the coastal pelagic fishery or a segment thereof.

Closely related to enhanced enforcement of regulations expected from dealer permitting is the improvement in the accuracy of estimating commercial harvests of species currently subject to overall quota management. There are several points to consider here. First, the commercial fisheries in the EEZ for king and Spanish (excluding Atlantic group) mackerels close when the respective quotas are filled. EEZ closures have been complemented by state water closures enacted by some states in the Gulf and Atlantic. Monitoring of quotas for closure purposes has relied heavily on reports from dealers. With practically all dealers of coastal pelagics identified under the dealer permitting process, reports from all such establishments may not only be collected but in certain instances some dealer records may be examined by authorized state and federal personnel. This situation would enable a better accounting of landings in determining when the fishery should be closed without the threat of significant quota overrun or underrun. When the fishery is closed, the dealer permitting program provides a mechanism to determine the major sources of continued landings of coastal pelagics. Some of these landings may be from states that still allow sales of coastal pelagics when the EEZ commercial fishery for that species is closed, and in such situation at-sea or dockside enforcement may be focused in known areas of landings to ensure that fish are not harvested illegally. Second, both commercial and recreational fishermen fish for various species of coastal pelagics. While commercial fishermen are subject to a numerical quota with closures (except Atlantic Spanish mackerel), their recreational counterparts are subject mainly to bag limits without closures. This situation demands then an appropriate accounting of catches by both the commercial and recreational sectors. The dealer permitting program would require that sales of reef fish, at least those caught in the EEZ, transpire only among permitted vessels and dealers, and that a record of each such transaction be kept and made available for examination by authorized personnel when a need arises. In this sense, a more accurate assignment of sales of reef fish to a commercial quota may be achieved. Sales of reef fish outside of the system may not be counted towards the commercial quota or harvest.

From an economic efficiency standpoint, dealer permitting may be seen as a means to deter fishermen and dealers from undertaking "avoidance activities." The cost of such activities is implicit in the sense that resources producing goods and services elsewhere in the economy are directed to the fishery, and this cost has no net offsetting benefits (Anderson, 1987). Such avoidance activities also lead to less than full realization of the benefits from the management program. To some extent, minimization of such implicit cost and of such

reduction in benefits from the management program depends on the level at which dealer permitting is enforced and on the level of avoidance activities exercised in relation to the dealer permitting requirement. Moreover, there are costs attendant to the imposition and enforcement of dealer permitting as will be discussed shortly.

The major cost items of the Rejected Alternative are compliance costs to dealers, threat to dealers of losing coastal pelagics and other seafood businesses, decrease in dealer competition, and possible conflict with state licensing or other regulations. These costs may vary from dealer to dealer within a state or among the various states in the Gulf and Atlantic.

Compliance costs to dealers consist of permit fees; burden time of obtaining and renewing permits; cost of record keeping, including the hiring of new personnel to maintain the records; and perhaps, the cost of establishing a permanent facility at a fixed location. The annual permit fee is currently estimated to be \$40 per applicant. The annual burden time for obtaining and renewing permits has been estimated to be about 5 minutes per application. Record keeping cost could be a potential major cost item, but mainly to very small businesses. It may be expected that most of the major fish dealers throughout the Gulf and Atlantic are now maintaining records of sale of coastal pelagics and other species. The Florida trip ticket system, for example, already requires numerous information that dealers have to submit to the state agency. A somewhat similar trip ticket system in North Carolina also requires numerous information from the dealers. Louisiana has also established, though not yet operational, a trip ticket system for fishermen landing fish in the state. It is not known what the level of record keeping cost could be to smaller business establishments relative to their size of operation, although the major requirements under the Rejected Alternative are for them to record the amount of each species of coastal pelagics purchased from each vessel and to keep such record in their principal place of business for at least one year. Again, it may be expected that most dealers of coastal pelagics already have some kind of permanent facilities at fixed locations. For smaller dealers or those that only occasionally buy coastal pelagics, like restaurants, any permanent structure like houses or restaurant buildings could most likely qualify as permanent facilities at fixed locations for permit purposes. Although delivery vehicles may not qualify as permanent facilities at fixed locations, these businesses can still secure permits by specifying another place that could qualify as a permanent facility. To a large extent, this last cost item may be viewed as minimal.

In addition to the direct costs to dealers identified above, the dealer permitting system also imposes on them implicit costs that arise from complying with the regulations. These are implicit costs since no actual cost outlay is incurred but instead an additional activity demanding extra labor is performed. These costs are related more to tasks performed by dealers to ensure that they do not become parties to any fishing violations which may result in heavy fines or outright loss of coastal pelagic and other seafood business. These tasks could involve more careful identification, counting, and measurement of the size of fish or refusal to buy fish from otherwise legally qualified suppliers. Some of these activities could result in missing good market windows for fresh-fish or volume transactions.

Another potential cost of the dealer permitting program is the possible reduction in the competitive stature of the coastal pelagic dealer market. Less competition in this market could result in lower price offered to fishermen not as a result of demand and supply interactions but as a direct result of market inefficiencies. This situation only offers fishermen a fertile ground for selling fish to nonpermitted dealers/buyers, and fishermen would go by this route to the extent that additional revenues offset additional costs, including expected penalty costs. While this particular cost item is a possibility, the proposed requirements to obtain dealer permits do not appear to be too restrictive so that, on balance, this cost item is likely to be relatively small.

Another potential cost from the Rejected Alternative is the presence of federal dealer permits in addition to state dealer permits. Presumably, entities with federal dealer permits would still need to secure state dealer permits to operate as fish buyers in state jurisdictions. On the other hand, state permitted fish dealers do not need to secure federal dealer permits to continue operating in state jurisdictions. While these dealers may not buy coastal pelagics caught in the EEZ without first securing federal dealer permits, they may legally continue to buy these species if they can justify that the fish they buy come from state waters. On the other hand, if dealers without federal permits stop buying coastal pelagics even when caught in state waters, they would stand to lose this portion of their seafood business. Moreover, fishermen without federal vessel permits who catch coastal pelagics in state waters mainly as bycatch in their fishing operation would also lose a portion of their business. Naturally, the extent of this identified problem depends to a large degree on the amount of coastal pelagics caught in state waters. The amount of mackerel caught in state waters of Florida appears to be relatively large.

Considering both benefits and costs, maintaining the status quo may result in forgoing net benefits to the fishery as a whole. Such forgone net benefits especially tend to increase as an effort limitation program for the coastal pelagic fishery or any segment thereof is adopted.

2.5.2 Permit Moratorium

2.5.2.1 Proposed Alternative: For a king mackerel to be possessed aboard a vessel in numbers exceeding the bag limit, a commercial king mackerel permit must be issued to the vessel and must be on board. A commercial king mackerel permit may be issued for a vessel if its owner was an owner of a vessel that had a commercial king and Spanish mackerel permit prior to the published control date of October 16, 1995. In the event of the sale of a vessel so qualifying, the right to the commercial king mackerel permit will be retained by the owner of the vessel when it qualified unless there is a written agreement that such right transfers to the new owner with the sale of the vessel. Applications for commercial king mackerel permits must be submitted not later than 90 days after the final rule to implement Amendment 8 is published. No new commercial king mackerel permits are to be issued under this moratorium, that is, a commercial king mackerel permit that is not renewed or that is revoked will not be reissued. This moratorium will terminate not later than October 15, 2000.

2.5.2.2. Rejected Alternative: No Change - No king mackerel endorsement required. Any qualifying vessel owner may obtain a permit. To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during one of the three calendar years preceding the application at least ten percent of his earned income was derived from commercial fishing, that is, sale of the catch.

The proposed endorsement system applies only to the harvest of Gulf and Atlantic groups of king mackerel. Harvest of all other coastal pelagic species are merely subject to the permitting requirement. Based on 1993/94 data, a total of 2,588 vessels may be eligible to secure the endorsement (Table 2). Between 1994 and October 16, 1995, it is possible that additional vessels entered the fishery, some of which may have been induced by the Councils' deliberation on imposing an endorsement system for the king mackerel fishery and a subsequent moratorium on the issuance of new endorsements.

It appears from Table 2 that while there has been a substantial increase in the number of vessels permitted to commercially fish for king and Spanish mackerel, a good portion of the increases occurred in vessels with home

ports in the Gulf area. These are the ones that are most likely to target Gulf group king mackerel. It may be noted here that the commercial quota for Gulf group king mackerel has been met in the last several years, while that for Atlantic group king mackerel has not been fully taken. It is highly probable that the impact of the endorsement system and the moratorium would be felt more in the Gulf group king mackerel fishery.

A proposed moratorium on permits may be expected to induce an increase in permits just prior to the start of the moratorium. If the Proposed Alternative is approved, only a relatively small time would have been available for an increase in permitted vessels; thus the proposed moratorium may be expected to induce only a slight increase in the number of permitted vessels that qualify for the endorsement. Considering that permits to commercially fish for other coastal pelagics are still open, it is likely that the total number of vessels with coastal pelagic permits will increase.

Since the moratorium would not initially result in an immediate reduction in permits, no potential change in harvest that is controlled by quotas may be attributed to the moratorium. Hence, any increase in the ex-vessel price for king mackerel could not be directly associated with the moratorium. Over the span of the proposed moratorium, i.e., a maximum of 5 years, permits and vessels could decrease, but such decreases would materially depend on other features of the moratorium such as permit transfers and re-issuances and future catch restrictions.

If the moratorium induces an increase in the number of permits issued, the administrative cost could increase but only in the initial year of the moratorium. Over the span of the moratorium, the relative cost of administering the permits could slightly decrease if some permits are retired and not re-issued; however, since NMFS would be charging for the administrative costs of issuing or renewing permits most costs will be transferred to the fishermen.

A moratorium provides a planning period for both the industry and the management agencies within which the nature and characteristics of the fishery are not expected to materially change. Fishing operators are given some time to decide whether to remain in the fishery, although this decision could partly be affected by restrictions on permit transfer or permit retirement. With entry restricted, the number of participants is stabilized, and management can collect the necessary information to determine the feasibility of implementing a more comprehensive limited-access system for the fishery. However, in contemplation of a permanent, limited-access system for the fishery, those included in the moratorium program may increase their effort in order to increase vessel harvest levels that could be a deciding factor in their allocation under a limited access system. This may have some adverse impacts on both the stock and on other participants from later decisions on the allocation of harvesting privileges. Any such adverse impacts would, however, be substantially less than those that could occur under an open-access fishery.

Under an open-access system (status quo), the amount of effort would be expected to expand. Even though this would occur over a period of years, the amount of actual new effort would be at least equal to the additional effort that may be created as a result of participants attempting to establish long-term fishing rights under the moratorium. Given the supposition that the current regulations are designed to rebuild and maintain stocks at high abundance, there will be additional economic incentives for increased effort by existing and new participants over time. This fact is the basis of the economic argument for a moratorium as an interim step toward an ITQ or other limited-access system.

During the moratorium, the participants would not be faced with increasing externality from new entrants. If some recovery of stocks occurs, this could raise the profitability of the industry; however, domestic producers

would still be vulnerable to competition from imports which have been increasing over the years. A moratorium (properly a limited-access system) could initiate the improvement of efficiency in the harvesting sector of the industry, but such improvement on efficiency would depend mainly on other restrictions imposed during the moratorium.

A moratorium has some adverse social consequences, although the extent of these consequences depends largely on the requirement for inclusion in the moratorium program and opportunities in other fisheries. For example, crew members who are intending to operate their own vessel, but are now financially unable to, could be ineligible to join the fishery as independent operators if permit transfers are not allowed (see Section 2.5.3).

Overall, a moratorium as contrasted with the status quo provides a better opportunity for the evaluation of a permanent and more comprehensive limited-access program, and in this respect may be construed to result in positive benefits.

2.5.2.3 Rejected Alternative: A moratorium of up to 5 years from the control date of October 16, 1995 is established on the issuance of Gulf of Mexico coastal pelagic charter vessel permits. During the moratorium no new charter vessel permits are to be issued. The charter vessel permit applies to both charter vessels and headboats in the for-hire fishing business.

2.5.2.4 Proposed Alternative: Status Quo - No moratorium on coastal pelagic charter permits.

The Rejected Alternative applies to the head and charterboats targeting coastal pelagic species and not just king mackerel. In addition, this alternative imposes a 5-year moratorium only on those vessels fishing in the area of jurisdiction of the Gulf Council. Currently, the charterboat permitting system does not distinguish between those fishing in the Gulf and those fishing in the Atlantic EEZ. In effect, this measure would establish a separate permitting system for the Gulf area, and consequently for the Atlantic area.

A moratorium for the for-hire sector presents a different situation from that of the commercial sector. For-hire boats are generally suppliers of fishing sites, and as such the motivation for their economic activities would be different from that of the commercial sector which may be viewed as suppliers of fish rather than fishing sites. That is, while the output of a for-hire boat is a fishing service, that of a commercial boat is fish. Despite the differences, one common denominator of the two sectors lies in the fact that they rely partly on fish abundance to remain in business. They also affect each other's activities through the harvest of the same stock.

Table 3 lists the number of charter vessels permitted in the coastal migratory pelagic fishery. Most of the permitted vessels operate out of Florida. Texas and Alabama also have a relatively large number of permitted charter vessels. While the total number of permitted vessels more than doubled from 1987/88 to 1993/94, the number appears to be relatively stable over the period 1988/89 to 1993/94. On a state by state basis in the Gulf area, the number of permitted vessels also did not fluctuate widely over this period, and the relative ranking of states by number of vessel remained the same throughout this period.

In 1987 and 1988 surveys, Ditton et al. (1992a, 1992b) determined that there were nine major activity centers for charterboats in Florida, with the three highest concentrations of vessels being in Destin, Panama City, and Islamorada, Florida. In other states, the major activity centers were Orange Beach, Alabama; Grand Isle, Chauvin, Cocodrie, and Houma, Louisiana; and Port Aransas, South Padre Island, and Port Isabel, Texas.

Florida charterboats target more species than charterboats in other states. Grouper, snapper, king mackerel, dolphin, amberjack, and spotted seatrout were the six major species to which effort was directed, although these species vary in importance by state. Grouper, snapper, and amberjack were important in the Panhandle and Peninsula sections of Florida, king mackerel in the Florida Panhandle and Keys, dolphin in the Florida Keys, spotted seatrout and red drum in Texas and Louisiana, snapper in Alabama, king and Spanish mackerel and snapper in Mississippi.

Ditton et al. (1992a, 1992b) also found that over two-thirds of party boats were located in Florida. Major activity centers in Florida included the Keys, Marco Island, Naples, Fort Myers, and Clearwater/St. Petersburg area. The Galveston-Freeport area was the major activity center in Texas. Similar to the charterboat case, Florida party boats target more species than their counterparts in other areas of the Gulf. Most party boats, however, targeted 5 or fewer species. Most boats in Texas targeted snapper while those in Florida targeted snapper and grouper. Most of the boats in the northern Gulf targeted red drum and spotted seatrout.

Ditton and Loomis (1985) studied the turnover rate in the Texas charterboat fishing industry using data for the period 1975-80. They found that the total number of vessels increased over time, but the turnover rate was relatively high. About 52 percent of businesses operating in 1975 left the industry in 1980. On the other hand, about 65 percent of businesses operating in 1980 were new entrants. Dropout rates were highest in the Freeport and Port Aransas areas, but entry rates were also high in these areas. South Padre Island registered a low dropout rate and high entry rate. Ditton and Loomis (1985) advanced two reasons for the high turnover rate in the industry. First, entrepreneurs entered the business for all the wrong reasons. The business is highly competitive, and to survive one should be oriented to business and motivated by concerns for profit. The second is that these businesses naturally turn over as the business environment changes or as the operator loses interest, has particular experiences, or chooses to devote his time, boat, and money elsewhere.

One other characteristic of the charter industry that has gained particular significance in the last few years is the upward trend in charter/headboat's share in catches of king mackerel. The SEP (1996) noted that king mackerel landings from shore mode have declined since 1990 and those from private mode have remained flat. In contrast, king mackerel landings by charter/headboat have more than doubled. Such increase in landings has been partly attributed to the increase in the number of charter/headboat vessels and the number of directed effort trips. Considering that king mackerel allocation of the recreational sector has consistently been exceeded, the SEP (1996) indicated that landings and effort in the for-hire industry be addressed.

Given the above information, a moratorium on coastal pelagic permits for charter and headboats appears to have an overall effect on benefits to the industry different from that on the commercial sector. The change in industry benefits can go either direction. On the one hand, such a moratorium would put a restraint on the relatively high entry rate and so would tend to open the potential for increased profitability for those remaining. This is especially important since a reduction in the number of charter/headboat vessels can partially place a control on the upward trend in king mackerel landings of this sector. Such control takes on major significance in preventing overages that could eventually result in reduced TAC for king mackerel and eventual reduced profitability of the charter/headboat industry. On the other hand, the high dropout rate could eventually result in the industry operating at a level well below that required to maintain a healthy competition in the market. If the moratorium is imposed to evaluate the industry for potential development of a form of limited-access system, the condition that the industry would be relatively stable would not materialize. This negative aspect of the moratorium may partially be neutralized if a percentage of the number of permits retired due to business stoppage are reissued.

2.5.3 Transferability of Permits During the Moratorium

2.5.3.1 Rejected Alternative: Status Quo - A vessel permit is valid only for the vessel for which it is issued. It is transferable on the sale of the vessel to a new qualifying owner.

2.5.3.2 Proposed Alternative: During the permit moratorium a king mackerel permit may be transferred to another vessel with a qualifying owner or operator or with the vessel to another qualifying owner or operator with a one-year grace period to qualify.

2.5.3.3 Rejected Alternative: During the permit moratorium a permit may not be transferred except that the Regional Director shall have the authority to transfer a permit:

- a. between members of the immediate family (spouses, children, siblings or parents),
or
- b. in the event of death or disability of a permit holder to a person specified by the permit holder, his legal guardian, or the estate.

The transferability of permits and endorsement under the Proposed Alternative is one major condition that would potentially diffuse the mentioned adverse effects of the moratorium. The commercial and for-hire industries would likely experience a more stable environment under the said transferability condition. Any economic rent that may exist in the fishery will be captured by the permits. This case is more likely under the transfer condition defined by the Proposed Alternative.

Without transferability of permits, those activity centers experiencing high dropout rates would experience reductions in economic activities, particularly if the absence of competition prompts the remaining operators to increase their prices. While such action may increase profitability of operators, it would be at the expense of less consumer surplus and potentially less indirect economic effects in the area. With transferability, the permits would command monetary values, and entry into the industry would be faced with a relatively higher fixed cost. This condition would prompt new entrants to enter the industry with a strong profit motive; thus, the dropout rate discussed by Ditton and Loomis (1985) would probably not be as high.

Limited transferability of permits as in Alternative 2.5.3.3 would address certain hardship conditions, but it would not address economic efficiency.

2.5.4 Qualifying Income For Permit

2.5.4.1 Rejected Alternative: Status Quo - To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during one of the three calendar years preceding the application at least ten percent of his earned income was derived from commercial fishing, that is, sale of the catch.

2.5.4.2 Rejected Alternative: To qualify for a commercial vessel permit for king or Spanish mackerel, the owner or operator must be able to show that during 1 of the 3 calendar

years preceding the application at least 50 percent of his earned income or at least \$20,000 was derived from commercial fishing, that is, sale of the catch.

2.5.4.3 Proposed Alternative: To qualify for a commercial vessel permit for king or Spanish mackerel the owner or operator must be able to show that during 1 of the 3 calendar years preceding the application at least 25 percent of his gross income or at least \$10,000 was derived from commercial sale of catch or charter or headboat fishing.

2.5.4.4 Rejected Alternative: Threshold level of income - gross sales of seafood of \$20,000 during one of last three calendar years preceding the application with a minimum age of 18 years or older.

2.5.4.5 Rejected Alternative: A minimum threshold income from the sale of fish of \$5,000. After possession of a mackerel permit for 10 consecutive years, fishermen would be grandfathered in at age 62 or older, retroactive to the first issuing of the permit. All mackerel permit holders would be grandfathered in after holding the permit for 10 consecutive years, retroactive to its first issuing. Minimum age of 18 or older. Permit moratorium. Decal for each fishery.

2.5.4.6 Rejected Alternative: To qualify for a commercial permit for king or Spanish mackerel the owner or operator must be able to show that during one of three years preceding the application at least 50 percent of his earned income came from commercial sale or charter/headboat operation.

The various alternatives presented would impose earned income requirements for owners or operators in order to obtain a commercial permit. No income requirement is imposed for securing a coastal migratory pelagic charter permit. As of July 1996, there were 2,891 vessels with commercial permits, 1,483 vessels with charter permits, and 460 vessels had both commercial and charterboat permits. Of these vessels, the ones that had commercial permits prior to the control date of October 16, 1995 would be affected by any of the alternatives to status quo.

Of the various alternatives to status quo, Rejected Alternatives 2.5.4.2 and 2.5.4.6 are probably the most restrictive. The 50 percent income requirement could disqualify as much as 10 percent of current commercial permit holders. Rejected Alternative 2.5.4.5, on the other hand, is probably the least restrictive. The Proposed Alternative lies in between these sets of alternatives.

An income requirement functions as a screening process not as much for limiting effort as for enabling one to harvest at a commercial level. The income requirement cannot effectively limit effort, because the industry, no matter how few (but not only one) the participants are, can increase its effort in ways other than an increase in the number of vessels. In this sense, any of the alternatives to status quo does not materially affect the economic efficiency of the industry.

As an allocation process, the alternatives to status quo would have distributional effects. In particular, Rejected Alternatives 2.5.4.2, 2.5.4.4, and 2.5.4.5 would likely enable the commercial industry to receive a bigger share of the TAC by reducing the amount of harvest by charter/headboat fishermen that would otherwise be counted against the commercial quota. How large such a share would be depends on the number of current charter/headboat participants in the commercial fishery that would be forced out of the industry and the

magnitude of their harvest. Considering, however, that even an increase in income requirement would potentially disqualify only about 10 percent of the current permit holders, it appears that such an increase in the commercial sector's share would be relatively small.

2.5.5 Consistency of Regulations

2.5.5.1 Rejected Alternative: As a condition of a federal permit issued under the coastal migratory pelagic FMP, the applicant must agree to comply with the more restrictive of state or federal regulations when fishing in state waters. Included are regulations such as bag limits, size limits, trip limits, sale of fish and closures.

2.5.5.2 Proposed Alternative: Status Quo - Federal regulations apply only to federal waters.

The Rejected Alternative would tend to strengthen enforcement of state rules in state waters. Vessels fishing solely in federal waters are unlikely to be affected by this measure, but vessel that fish in both waters would be forced to alter their fishing practices. This effect would occur when vessels that fished in federal waters fish for some of the same species in state waters on their way to shore. The number of vessels with this type of fishing practice is not known. In any event, there are about 1,400 charter and 2,500 commercial vessels that would be potentially affected by the Rejected Alternative.

2.5.6 Modify Permit Application

2.5.6.1 Rejected Alternative: Modify the permit application to obtain additional social and economic information such as species and migratory groups sought, number of persons on the vessel, etc.

2.5.6.2 Proposed Alternative: No Action.

Information regarding the economics and social characteristics of fishing participants is lacking. The permit system offers one avenue for collecting some of the basic information for purposes of describing the fishery. While collecting such information through this approach cannot substitute for a more detailed collection of information through e.g., a cost/return or attitudinal survey, some of the key information about the participants in the fishery can be generated from a modified permit-application system. Some of the major economic information that can be potentially collected from the permitting system are gross returns and fixed costs. Such information can be tied to information in state trip ticket reports or in logbooks should this latter be required in this fishery.

It must be stressed, nonetheless, that with the exception of some required information (e.g., total income, species targeted, and gear type used), permit applicants may refuse to supply economic and social information. Whether such refusal may be considered as grounds for disapproval or delay in the issuance of a permit is a controversial issue. To the extent that fishermen recognize the importance of added information for management decisions regarding the fishery, the incidence of such refusal may not be high. Still the issue of validating the accuracy of information supplied remains.

Like any data collection activity, a modification to the current permitting procedure would impose cost on both the applicants and the agency charged with processing the permits. Permit applicants would be forced to expend more effort and time in filing permit applications. In turn, the agency charged with processing the

permit would have to devote more resources to the process as more information would have to be stored in readily accessible form or as more validation checks would have to be performed.

Despite the cost, it may still be concluded that the benefits from more and better information for management decision purposes would outweigh any increase in cost. These benefits would be forgone by maintaining status quo.

2.6 Species Specific Regulation

2.6.1 Cobia Management Area

2.6.1.1 Proposed Alternative: Extend the management area for cobia through New York, i.e. through the jurisdiction of the Mid-Atlantic Fishery Management Council.

2.6.1.2 Rejected Alternative: Status Quo - Cobia management is limited to the Gulf and South Atlantic areas.

The Proposed Alternative would mainly extend the bag limit restriction on cobia to fishermen in the Mid-Atlantic area. Since the Mid-Atlantic accounts for a very minor portion of total harvest of cobia by both the commercial and recreational sectors, the adverse impact of the Proposed Alternative may be deemed minimal.

2.6.2 Cobia Bag and Trip Limit

2.6.2.1 Proposed Alternative: Status Quo - A daily bag and possession limit of 2 cobia per person per day applies to recreational and commercial fishermen.

2.6.2.2 Rejected Alternative: Revise bag or trip limits for commercial cobia fishermen

- Option 1:** Specify pounds per trip per day (select from a range of 10 - 500 pounds per day).
- Option 2:** Specify a number of fish per day (select from a range of 1 - 20 fish per day).
- Option 3:** Multiple day trips with 2 fish per trip per day (how many days?).
- Option 4:** Specify a boat limit of 4 - 6 fish per day.
- Option 5:** Specify a boat limit of 6 fish per trip.
- Option 6:** Limit all fishermen to 1 per person per day.
- Option 7:** Prohibit all sale of cobia.

The current management regulation imposed on cobia is a two-fish bag limit for both the commercial and recreational sectors. While any of the alternatives that would raise the bag or trip limit for cobia may bring about a short-run increase in benefits to both the commercial and recreational sectors, the long-run impacts are relatively unknown. Both the Stock Assessment Panel (MSAP Report, 1996) and the Socioeconomic Panel (SEP, 1996) recommended maintaining the current status for management of cobia. The MSAP raised some concern with the relatively high bycatch of cobia in shrimp trawls in the Gulf, and thought that Gulf cobia would benefit from bycatch reduction. The SEP did not find any social or economic reasons for additional management of cobia, although they thought that an increase in effort in the recreational fishery could occur considering that cobia was a suitable replacement for king mackerel.

2.6.3 Dolphin Management

2.6.3.1 Rejected Alternative: Consider management of dolphin such as size, bag limits, and commercial trip limits. Management measures presently being considered:

- a. 20 inch commercial size limit.
- b. 10 fish recreational bag limit.
- c. 5 fish per person per day limit (recreational & commercial).
- d. 10 fish per person per day limit (recreational & commercial).
- e. Require coastal pelagics permit for over the bag limit fish.
- f. Establish a commercial trip limit of between 1,000 and 12,000 lbs.

2.6.3.2 Proposed Alternative: Status Quo - no management for dolphin.

The outcome of any change in management for dolphin is not known. There has been some report of some intensive fishing for this species in waters off South Carolina by longliners. Table 7a and 7b, however, show that total landings of this species in the recent have been relatively stable.

2.6.4 King Mackerel Management

2.6.4.1 Cut off or Damaged Fish

2.6.4.1.1 Proposed Alternative: Allow retention of up to 5 cut-off (damaged) king mackerel on vessels with commercial trip limits. These fish would not be counted toward the trip limit and may not be sold.

2.6.4.1.2 Rejected Alternative: Status Quo - king mackerel must have their heads and fins intact when landed. There is a minimum size limit of 20 inches fork length.

The effect of discarding damaged king mackerel (from barracuda or sharks) on overall king mackerel mortality is not known. The Proposed Alternative would not increase economic benefits because such fish could not be sold. They could, however, be consumed by the crew, thus reducing food costs. The enforcement problem that the Proposed Alternative would bring about would probably outweigh the benefits.

2.6.4.2 Commercial Trip Limits for Atlantic King Mackerel

2.6.4.2.1 Rejected Alternative of the SAFMC: 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.

2.6.4.2.2 Proposed Alternative: 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 Dade/Monroe to Brevard/Volusia	500 pounds
April 1 - October 31 Monroe County	1,250 pounds

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.

The major differences between the two options are the level and denomination of trip limits from Collier/Monroe to Brevard/Volusia. Under the Rejected Alternative, trip limits are denominated in number of fish and are lower for Monroe County. Since poundage limits assume an average of 10 pounds per fish, both options have basically the same trip limits for Dade/Monroe to Brevard/Volusia. There are, nonetheless, some differences that will be discussed below.

These various trip limits are results of requests from various sectors to make trip limits compatible with state limits, as in the case in North Carolina, and to make fish available for some group at some point in time during the fishing year. The Proposed Alternative's 1,250-pound trip limit in Monroe County is an outcome of the same request by fishermen in this area for a 125 fish trip limit for the hook-and-line segment of the Gulf group king mackerel commercial fishery in the western portion of the Eastern Zone. The pound trip limit is simply the pound equivalent of the requested trip limit, using an average of 10 pounds per fish.

It is noted that the Atlantic migratory group of king mackerel is not overfished because the transitional SPR is above 30 percent. Additionally, the stock is not undergoing overfishing because the fishing mortality rate is less than the $F_{30\%}$ static SPR (MSAP, 1996). Both the commercial and recreational allocations for this species group have not been met in the past several years. It is likely that the proposed trip limits would bring about an insignificant increase in long-term viability of the stock. The short-term effects would be largely distributional in nature, although some level of efficiency would be sacrificed when larger boats are limited to the proposed daily trip limits.

One feature of the Rejected Alternative that deserves closer scrutiny is the trip limit for Collier/Monroe to Brevard/Volusia. During the 1991/1992 fishing season, only one out of 853 trips reported in Monroe County caught over 50 fish per trip. A 50 fish trip limit would have reduced the total catch by 306 fish (2,387 pounds) or by 7.3 percent (Table 11). For the 1992/1993 fishing season, 4.6 percent of the trips reported in Monroe County caught over 50 fish per trip; and with a 50 fish trip limit, total catch would have been reduced by 5,133 fish (40,551 pounds) or by 58.1 percent. During the 1993/1994 fishing season, two out of 621 trips reported in Monroe County landed over 50 fish per trip, and the 50 fish trip limit would have reduced total catch by 130 fish (1,014 pounds) or by 3.4 percent. For the 1994/1995 fishing season, 4.9 percent of the trips reported in Monroe County caught over 50 fish per trip, and with a 50 fish trip limit, total catch would have been reduced by 11,491 fish (91,928 pounds) or by 71 percent. If the annual average is taken for the 1991/1992 through 1994/1995 fishing seasons, 2.5 percent of the trips caught over 50 fish per trip. Thus, the total catch would have been reduced by 4,265 fish (33,970 pounds) or by 35 percent on an annual basis. It should be noted that the total commercial catch reported in Monroe County for this period represents between 2.8 percent and 11.9 percent of the total Atlantic migratory group king mackerel landed in Florida for the same period. Thus, the

impact of this action in terms of Florida landings is not significant because the fishery is mainly a hook-and-line fishery. Some net fishermen (who according to industry participants are not traditionally in the fishery) make a number of trips during the first two weeks of April when the fish aggregate to spawn, resulting in catches of over 50 fish per trip.

During the 1991/1992 fishing season, only 4.3 percent of the trips reported in Brevard through Dade Counties caught over 50 fish per trip, and a 50 fish trip limit would have reduced the total catch by 22,714 fish (204,426 pounds) or by 21.3 percent (Table 10). For the 1992/1993 fishing season, 4.3 percent of the trips reported in Brevard through Dade Counties caught over 50 fish per trip, and with the 50 fish trip limit, total catch would have been reduced by 20,208 fish (173,789 pounds) or by 23.1 percent. During the 1993/1994 fishing season, 5.3 percent of the trips reported in Brevard through Dade Counties landed over 50 fish per trip, and the 50 fish trip limit would have reduced total catch by 29,943 fish (272,481 pounds) or by 27.5 percent. For the 1994/1995 fishing season, 3.8 percent of the trips reported in Brevard through Dade Counties caught over 50 fish per trip, and with a 50 fish trip limit, total catch would have been reduced by 22,449 fish (204,286 pounds) or by 22.3 percent. If the annual average is taken for the 1991/1992 through 1994/1995 fishing seasons, 4.4 percent of the trips caught over 50 fish per trip. Thus, the total catch would have been reduced by 23,829 fish (213,746 pounds) or by 23.7 percent on an annual basis. It should be noted that the total commercial catch reported in Brevard through Dade Counties for this period represents between 81.4 percent and 92.2 percent of the total Atlantic migratory group king mackerel landed in Florida for the same period. Again, it is reported by industry participants that the trips that caught over 50 fish per trip were made by net fishermen over a two-week period in April of each season. These fishermen are traditionally not in the Atlantic migratory group king mackerel fishery.

The trip limit would likely have a greater impact in the Brevard through Dade County area than in the Monroe County area. Given an average exvessel price of \$1.10 per pound, the reduction in annual revenue could amount to \$37,367 (52 percent) and \$235,121 (23.7 percent) for Monroe, and Brevard through Dade Counties, respectively. These figures amount to 3.2 percent and 20.4 percent, respectively, in terms of the total exvessel value of Atlantic migratory group king mackerel commercial landings in Florida for the same period. When the total exvessel value of the commercial Atlantic migratory group king mackerel fishery in the region is considered, the likely annual reduction in revenue as a result of the proposed trip limit would be less than 11 percent. This is based on computing the ratio of the reduction in landings due to the trip limit and the commercial landings of Atlantic migratory group king mackerel in the region from 1991/92 to 1994/95. It also assumes that the trend over the last four fishing seasons will continue.

Although the TAC has been reduced in the last two years, commercial landings have still fallen below the reduced quota. In 1994/1995, the quota was reduced to 3.71 million pounds, but landings were only 2.2 million pounds. The quota was further reduced in 1995/1996 to 2.70 million pounds, while landings have been projected at only 2.02 million pounds. It is likely that the Florida net ban could result in a significant effort shift into the Atlantic migratory group king mackerel fishery. If this happens, the commercial catch could increase and probably exceed the allocation of 2.7 million pounds, or a much lower one as recently proposed for this migratory group. A trip limit of 50 fish (or 500 pounds) should prevent this from happening and also keep the season open for as long as possible to maintain price and market stability. Also, it could be seen from the results of the analysis that poundage of fish landed by vessels that caught over 50 fish per trip increased significantly over the last two fishing seasons. Some industry participants have indicated that this increase may be due to catches taken by new fishermen entering the fishery and using nets that are illegal in the fishery. Thus, this action should prevent or minimize the use of such nets, and thus reinforce the proposed allowable gear rule for this fishery (see Section 2.2).

For the 3,500 pounds trip limit from April 1 - October 31 between Brevard/Volusia and Volusia/Flagler Counties, no trip caught over 3,500 pounds during the 1991/1992 to 1994/1995 fishing seasons (Table 9). The highest number of fish caught per trip was 302 (2,748 pounds) during 1994/1995 fishing season. Thus, the trip limit of 3,500 pounds will not impact fishermen in this area. Similarly, the 3,500-pound trip limit from April 1 - March 31 between Volusia/Flagler Counties and New York/ Connecticut will not impact any commercial fishermen as no trip caught 3,500 pounds during the period for which data is available. Over 96 percent of the trips caught 200 fish (1,820 pounds) or less.

The Proposed Alternative would have similar effects as described above, with less adverse impacts on fishermen in Monroe County. The 1,250-pound trip limit in Monroe County would reduce catch by 7.3 percent based on 1991/1992 data, 39.5 percent based on 1992/1993 data, 0 percent based on 1993/1994 data, and 62.1 percent based on 1994/1995 data. Based on 1991/1992 - 1994/1995 average catch, the 1,250-pound trip limit would reduce catch by about 28 percent annually. The earlier estimated reduction under a 50 fish trip limit was 35 percent. Thus, there is only a 7 percent difference between the Proposed and Rejected Alternatives in this regard. However, such difference could have a relatively large impact on profitability for some vessels, especially those that may have to travel longer distances to fish. In addition, the 1,250-pound trip limit would also be consistent with the Gulf Council's enacted trip limit on the Gulf group king mackerel hook-and-line fishery from the Dade-Monroe County line to the Florida-Alabama line.

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. This fishery has traditionally been a hook-and-line fishery; however, there have been sporadic catches by large net boats.

By establishing a restrictive 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 during that time period. The trip limit may also extend the season for hook-and-line fishermen, as has occurred in the last several years, providing a steady supply at stable prices.

Trip limits have been used as a management tool in the king mackerel fishery for some time. This management strategy often has indirect consequences that need to be considered. In general, restrictive trip limits will at times introduce problems such as highgrading and transfer at sea, if not allowed. In addition, changing trip limits makes calculating CPUE over time difficult; and if crucial to determining stock abundance, it can raise serious doubts about that type of information (Richards, 1994).

The highgrading effect is partially addressed by the Proposed Alternative's use of pounds rather than number of fish in denominating trip limits. While pound trip limits would not eliminate highgrading entirely, the incentive to pursue such activity is higher when the trip limit is denominated in number of fish. Since poundage rather than number partly determines revenues, pounds can be increased by simply substituting smaller fish with a bigger one. Of course, there are certain limits to catching ever larger fish such as boat capacity, fishing time and cost, and high mercury content of king mackerel greater than 44 inches in length (at least in Florida).

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 small scale nets to a fishery where they would be limited to low trip limits. Net fishing has always been sporadic within the king mackerel fishery.

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.

The 1,250-pound trip limit does not 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 hook-and-line fishermen since gill-net fishing is not feasible under the present or proposed trip limits. Under these circumstances, it is possible that overcrowding within this sector of 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 effort or the potential for increased conflict through expanded participation within the hook-and-line sector.

The 3,500 pound trip limit north of the Brevard-Volusia county line to New York state should have few social impacts 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 12 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, however, be inconsistent with Florida state law because fishermen in northeast Florida would be allowed to catch 3,500 pounds in federal waters, while they are allowed only 50 fish in state waters.

2.7 Seasonal Framework Adjustment

2.7.1 Alternative: Separate ABC for Gulf Group Zones

2.7.1.1 Proposed Alternative: Delete from Section 12.6.1.1(A)(3) of the framework procedure the provision to provide separate ABC ranges for eastern and western groups of Gulf group king mackerel when the stock assessment panel obtains sufficient data to do so.

2.7.1.2 Rejected Alternative: Status Quo - Section 12.6.1.1(A)(3) continues to provide, in part, that when the stock assessment panel is able to provide separate ABC ranges for the eastern and western groups of Gulf group king mackerel, separated at the Alabama/Florida border, the ratio of the mix is to be calculated based on allele frequencies. Allocations between the recreational and commercial users are to remain unchanged or 68 to 32 percent, respectively.

With the level of current information regarding stock identification and feasibility of conducting a separate stock assessment for the eastern and western groups of Gulf king mackerel, the two alternatives would have about the same effects on rule making and on the fishing participants.

2.7.2 Request Additional Information from the Stock Assessment Panel

See Sections 2.7.2.1 and 2.7.2.2 for specific wording of the alternatives. Essentially the alternatives refer mainly to the specific information requested from the stock assessment panel. These alternatives are administrative in nature and have no direct effects on fishing participants.

2.7.3 Definition of Overfishing

2.7.3.1 Proposed Alternative: Section 12.6.1.1(a)(4) is revised as follows:

- a. A mackerel stock or migratory group is considered to be overfished when the transitional spawning potential ratio (SPR) is below 20 percent.
- b. The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or optimum yield (OY) is 30 percent static SPR. ABC is calculated based on the target level or optimum yield (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).
- c. When a stock or migratory group is overfished (transitional SPR less than 20 percent), a rebuilding program that makes consistent progress towards restoring stock condition must be implemented and continued until the stock is restored beyond the overfished condition. The rebuilding program must be designed to achieve recovery within an acceptable time frame as specified by the Councils. The Councils will continue to rebuild the stock until the stock is restored to the management target (OY) within an unspecified time frame.
- d. When a stock or migratory group is not overfished (transitional SPR equal to or greater than 20 percent), the act of overfishing is defined as a static SPR that exceeds the threshold of 20 percent (i.e., F20 percent). If fishing mortality rates that exceed the level associated with the static SPR threshold are maintained, the stock may become overfished. Therefore, if overfishing is occurring, a program to reduce fishing mortality rates toward management target levels (OY) will be implemented, even if the stock or migratory group is not in an overfished condition.
- e. The Councils have requested the Mackerel Stock Assessment Panel (MSAP) provide a range of possibilities and options for specifying an absolute biomass level which could be used to represent a depleted condition or state. In a future amendment, the Councils will describe a process whereby if the biomass is below such a level, the Councils would take appropriate action, including but not limited to, eliminating directed fishing mortality and evaluating measures to eliminate any bycatch mortality in a timely manner through the framework procedure.
- f. For species like cobia, when there is insufficient information to determine whether the stock or migratory group is overfished (transitional SPR), overfishing is defined as a fishing mortality rate in excess of the fishing mortality rate corresponding to a default threshold static SPR of 30 percent. If overfishing is occurring, a program to reduce fishing mortality rates to at least the level corresponding to management target levels will be implemented.

2.7.3.2 Rejected Alternative of the GMFMC: Section 12.6.1.1(a)(4) of the FMP is revised as follows:

- a. A king or Spanish mackerel stock shall be considered overfished if the spawning potential ratio (SPR) is less than the overfished level percentage recommended by the stock assessment panel, approved by the Scientific and Statistical Committee (SSC) and adopted by the Council. The overfished criterion shall not

- be less than 20 percent SPR and is to be set initially at 20 percent SPR in this action.
- 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 above the overfished level. The stock assessment panel will develop ABC ranges based on a fishing mortality rate that achieves the overfished level during the prescribed recovery period. The recovery period is not to exceed 12 years for king mackerel and 7 years for Spanish mackerel from the time the stocks are defined as being overfished.
 - 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 becoming overfished. In this case, the stock assessment panel should develop ABC ranges associated with the objective of achieving the target of OY.
 - d. For cobia, the act of overfishing is defined as a harvest rate that exceeds OY (currently defined as MSY) on a continuing basis.

2.7.3.3 Rejected Alternative: Status Quo - Section 12.6.1.1 (A) (4) remains 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. (Note: The revised mechanism for seasonal framework adjustments appears in Appendix I.)
- 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).

The Proposed Alternative contains several provisions that differ substantively from those of the other alternatives. First, it provides for a lower overfishing level than either of the rejected alternatives. Second, it provides for a management target SPR or OY, while the rejected alternatives do not. Third, it does not require

a fixed time frame for rebuilding an overfished stock whereas the rejected alternatives peg the rebuilding period to 12 years for king mackerel and 7 years for Spanish mackerel. Fourth, it contains a more refined definition of overfishing when the stock is not overfished, or when there is insufficient information to determine whether the stock or migratory group is overfished.

The choice between 20 and 30 percent SPR as a level for considering a stock to be overfished involves biological, management, and economic issues. The biological issue appears to have already been addressed by the SPR Management Strategy Committee assembled by the Council and NMFS. The report of this committee points to a 20 percent SPR level as an overfished level for king and Spanish mackerel. The management issue is the ability of fishery managers to adopt management measures that would prevent the stock from falling below a level that cannot be sustained over a long period of time. This ability involves the Councils' willingness to propose stringent regulations, and the NMFS' desire to adopt and implement those regulations. Where such ability on both sides is rather weak, adherence to a rule mandating a higher SPR level as an overfished level would be the logical approach. Where such ability is strong, a lower SPR level is appropriate. It is undeniably true that the exercise of such ability is partly determined by the degree of support or opposition to regulations by direct and indirect participants of the fishery. The major economic implication is that a higher-level definition for considering a species to be overfished would entail larger short-run costs to the industry; conversely, a lower SPR level would entail smaller short-run costs. The long-term gains would depend on whether the stock can recover soon enough such that the stream of net revenues over time would exceed the short-run losses. If the resulting stream of net revenues between a low and a high SPR as an overfished level were not significantly different, the choice of a lower level would bring about higher benefits.

The choice of a target SPR takes special significance here, since the calculation of an ABC range is tied to the chosen level. A higher SPR level would very likely result in a lower ABC, and as such would limit the choice of TAC. When the stock is overfished, a lower level would substantially decrease the benefits that fishing participants can derive from the fishery.

The absence of a fixed rebuilding period for an overfished stock provides the Council some flexibility in defining and modifying the specific period. In that way, the Council can take into account factors other than the biology of the fishery. In some instances, the social or economic conditions may warrant longer or shorter rebuilding periods without a significant difference in the long-term biological status of the stock. This condition may then act to cushion the impacts of a choice of overfishing definition and target SPR.

The proposed refinement in defining overfishing, where the stock is not overfished or if there is not enough information to determine whether the stock is overfished, provides a guide in designing management measures that would protect the long-run stability of the stock. This condition takes on some significance because all mackerel stocks are currently not considered to be overfished; however, for some migratory groups, the fishing level is high enough to place them at greater risk of being overfished. To the extent that this provision allows the fishery to remain stable at higher levels of fish abundance, any short-term losses from some restrictive management are more likely to be outweighed by long-term gains.

2.7.4 Provide for Review of Stock Assessment Panel Report

See Sections 2.7.4.1, 2.7.4.2, 2.7.4.3, and 2.7.4.4 for specific wording of the alternatives. Essentially, these alternatives deal with review of the MSAP report by the AP and SSC and the consideration of information not dealt with in the MSAP report. These options are mainly procedural in nature. While they have no direct impacts on fishing participants, these options may afford the Councils an opportunity to consider information

from sources other than that of the MSAP when deliberating management measures required to address stock and other fishery problems. The negative side of having such an opportunity is that anecdotal information may be used as a substitute for scientific information coming from a scientific panel.

2.7.5 Seasonal Framework Items

See Sections 2.7.5.1 and 2.7.5.2 for specific wording of the alternatives. These alternatives are mainly procedural in nature and pertain to measures that may be addressed under the framework procedure. If changes are made to the framework procedure and the Councils proceed to exercise those added management measures, a regulatory impact review will be conducted to assess the effects of those measures.

2.7.6 Council Responsibility for Regulating Migratory Groups

2.7.6.1 Proposed Alternative: Section 12.6.1.1 (D) is further modified to provide that the SAFMC is to set regulations within the commercial sub allocation for the northern area of the Eastern Zone (Dade through Volusia Counties, Florida) for the commercial fishery for Gulf group king mackerel as follows:

Paragraph 2:

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 migratory groups of king and Spanish mackerel will be the responsibility of the Gulf Council. Except that the SAFMC will have responsibility to set vessel trip limits, closed seasons or areas, or gear restrictions for the northern area of the Eastern Zone (Dade through Volusia Counties, Florida) for the commercial fishery for Gulf group king mackerel. This report shall be submitted by such date as may be specified by the Councils.

2.7.6.2 Rejected Alternative: Status Quo - The GMFMC continues to manage Gulf group king mackerel seasonally on Florida's east coast.

The apparent advantage of the Proposed Alternative over the status quo is that commercial fishermen will track only one Council's decision regarding fishing for mackerel in SAFMC's area of jurisdiction. Once specific measures are considered under this proposed regulatory change, an assessment of their potential impacts on fishing participants will be conducted at that time.

2.7.7 Seasonal Adjustment Review Period

Refer to Sections 2.7.7.1 and 2.7.7.2 for specific wording of the alternatives. The alternatives pertain to a specific period of time within which the Regional Director will implement regulations proposed by the Council under the framework procedure. These alternatives are procedural in nature and have no direct economic effects on fishing participants.

2.7.8 Framework Actions Authorized by the Regional Director

Refer to Sections 2.7.8.1 and 2.7.8.2 for specific wording of the alternatives. These alternatives pertain to additional measures that may be enacted under the framework procedure. A regulatory impact assessment will be conducted at the time those additional measures are considered for adoption.

2.8 Revise Optimum Yield to Conform to Overfishing Definition.

2.8.1 Optimum Yield

2.8.1.1 Rejected Alternative: Revise Section 12.5.1.1 as follows:

Optimum yield (OY) is any harvest level which maintains, or is expected to maintain, over time, a survival rate of biomass into the stock of spawning age mackerel or cobia to achieve at least a 40 percent spawning potential ratio (SPR) population level, relative to the SPR that would occur with no fishing. The Council's intent is to ensure the weight of spawning stock does not decrease below 40 percent of the spawning stock that would occur in an unfished fishery.

2.8.1.2 Proposed Alternative: Section 12.5.1.1 is revised as follows:

The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or OY is 30 percent static SPR. ABC is calculated based on the target level or OY (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).

2.8.1.3 Rejected Alternative: Revise Section 12.5.1.1 as follows:

Optimum yield (OY) for king and Spanish mackerels is any harvest level which maintains, or is expected to maintain, over time, a survival rate of biomass of spawning age mackerel at a spawning potential ratio (SPR) population level between (20 and 40 percent).

The level of yield within this biological range is to be determined through modification by any relevant economic, social, or ecological factors.

OY for cobia is a harvest level equal to MSY or 2.2 million pounds.

It may be stressed at this stage that these various alternatives have no direct effects on fishing participants, since they merely introduce changes into the framework procedure. Specific measures adopted later through the modified framework procedure would have direct effects on fishing participants. The effects of such measures will be analyzed when they are proposed. In the present case, it suffices to mainly discuss the various issues surrounding the determination of OY.

Among the alternatives, Rejected Alternative 2.8.1.3 appears to approximate the intent of the OY definition under the Magnuson Act. It is also the most difficult to quantify. The Proposed Alternative may or may not address economic and social issues in the determination of OY. In all likelihood, it does not address economic

efficiency, since given a management system, for example an ITQ system, that allows achievement of maximum economic yield (MEY), the likely level of harvest that corresponds to MEY is below MSY (approximately 35 percent SPR). It may, however, address certain social issues, such as employment of more labor in the industry. Rejected Alternative 2.8.1.1 leans more on the biological parameter determining OY and does not explicitly consider economic and social factors, although the Council may consider these factors in setting TAC.

While the alternatives themselves do not have direct impacts on fishing participants, they do set the tone for the type of management measures that may be adopted later. In this regard, several issues are worth raising at this juncture.

First, it is understood that both in the initial stage when only the biological component of OY is specified and later when other factors are considered by the Council, OY itself corresponds to a certain level of allowable harvest. In this manner, the harvest level corresponding to OY may change as other factors are considered or as more information on the fishery becomes available. Measures designed to achieve such levels of harvest are the ones that have direct effects on fishing participants.

Second, a biological factor is introduced as the starting point for rendering OY to be measurable. Considering the relative amount of resources devoted to biological research, there is a better chance for the biological component of OY to be defined more adequately than the economic and social factors. It thus appears reasonable to start defining OY along the line suggested by Rejected Alternative 2.8.1.3 or the Proposed Alternative when considering the respective Council's target SPR level. In addition, the presence of an overfishing definition (Section 2.7.3.1) invariably implies that the biological component of OY must be one that maintains the fish stocks above the overfishing level. In the meantime when economic and social factors are not considered, measures adopted to achieve OY would then be governed by the need to achieve the biological target. There is a very high possibility that the level of harvest allowed under such condition may not be coincident with the level demanded by economic or social factors. In this way, Rejected Alternative 2.8.1.1 could force the fishing participants to forgo economic or social benefits. That is, if the measures are very restrictive, short-run benefits may be forgone although the long-term status of the fish stock may be preserved. Measures less restrictive than those that may be required for social and economic reasons are very unlikely.

Third, the process of incorporating social and economic factors in the determination of OY may involve more than a determination of a fixed or variable harvest level. The process could involve adoption of a management regime that would enable achievement of OY at some harvest levels. In determining OY, the economic process involves, among others, the translation of sustainable harvests into consumer and producer surpluses. One way of doing this is to perform a constrained optimization exercise whereby consumer and producer surpluses are maximized over time subject to a minimum level of SPR or an attribute of the minimum SPR level. For example, if the stock is not overfished, the binding constraint could be a specific level of SPR, e.g., 20 percent. If the stock is overfished, the binding constraint could be an attribute of the chosen level of SPR, such as the direction, absolute magnitude, or rate of change of the SPR. A similar exercise of constrained optimization may be performed incorporating social factors. As the process continues, OY that incorporates economic and social factors would be measurable. Such a procedure is especially adaptable to Rejected Alternative 2.8.1.3. It may be noted, however, that while the process discussed may determine the level of harvest corresponding to OY, achieving that level of harvest with the highest possible economic and social benefits may require certain types of management regimes, such as ITQs or some other effort limitation programs. In the absence of this

management regime, constraining the harvest level to one that was determined to correspond to OY may not achieve OY itself.

The last issue that needs mentioning is the strong possibility that a satisfactory incorporation of economic and social factors in the determination of OY may take several years. In the meantime, the biological component may be the overriding concern; but as long as the Councils through their various advisory groups are able to infuse social and economic factors in designing measures to achieve OY, an option like Rejected Alternative 2.8.1.3 may not require very restrictive measures that result in significant adverse consequences to the fishing participants.

3.5 Private and Public Costs

The preparation, implementation, enforcement, and monitoring of this or any Federal action involves the expenditure of public and private resources which can be expressed as costs associated with the regulations. Costs associated with this specific action include:

Council costs of document preparation, meetings, public hearings, and information dissemination.....	\$ 71,000
NMFS administrative costs of document preparation, meetings and review.....	\$ 35,000
Law enforcement costs.....	\$ none
Public burden associated with permits.....	\$ 80,000
TOTAL.....	<u>\$186,000</u>

3.6 Determination of a Significant Regulatory Action

Pursuant to E.O. 12886, a regulation is considered a "significant regulatory action" if it is likely to result in: a) an annual effect on the economy of \$100 million or more; b) a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or c) significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The entire commercial Gulf and Atlantic king and Spanish mackerel fishery has an ex-vessel value significantly less than \$100 million annually. Of the sets of alternatives contained in this plan amendment, the length limit on net used for harvesting Atlantic Spanish mackerel, and endorsement on commercial permit for king mackerel, and the moratorium on issuance of new endorsements have the potential to increase the cost of operation on the affected industries and the price to consumers. There is not enough information to estimate these increases, although it is felt that such increases would not be substantial. The specification of allowable gear types could stymie innovation in harvesting techniques, but the extent of this effect is not known. The moratorium on the issuance of commercial permits for king mackerel could adversely affect investment and employment. This adverse effect, though, may be neutralized by provisions that would make such permits

transferable. All other items enumerated under criteria (b) and (c) for a significant regulatory action would only be minimally affected by the measures considered in this amendment.

The preceding analyses of impacts show that this regulation if enacted would not constitute a "significant regulatory action" under any of the mentioned criteria.

3.7 Initial Regulatory Flexibility Analysis

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 amendment is that of commercial and for-hire businesses currently engaged in the coastal pelagic fishery. The impacts of the proposed action on these entities have been discussed above. The following discussion of impacts focuses specifically on the consequences of the proposed action on the mentioned business entities. An Initial Regulatory Flexibility Analysis (IRFA) is conducted to primarily determine whether the proposed action would have a "significant economic impact on a substantial number of small 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, 1992). As of March 1995, a total of 3,512 coastal pelagic permits were issued. Of these, 2,220 were commercial, 853 charterboat, and 439 both commercial and charterboat permits. The Small Business Administration (SBA) defines a small business in the commercial fishing activity as a firm with receipts of up to \$3.0 million annually. The SBA defines a small business in the charterboat activity as a firm with receipts up to \$5 million per year. All the coastal pelagic permittees may readily fall within the definition of small business. Since the proposed action will affect practically all 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 percent; (b) increase in total costs of production by more than 5 percent as a result of an increase in compliance costs; (c) compliance costs as a percent of sales for small entities are at least 10 percent 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 percent of small business entities being forced to cease business operations (NMFS, 1992).

Among the management measures contained in this amendment, the king mackerel endorsement on commercial vessel permits and moratorium on issuance of new endorsements, qualifying income for commercial permit, and commercial trip limits for Atlantic king mackerel would have potential effects on the revenues of the subject small entities. Any one of these mentioned actions would probably result in minimal change to vessel revenues; however, taken together, they could change revenues in excess of 5 percent. The length limit on nets used for harvesting Atlantic Spanish mackerel, and endorsement on commercial permit for king mackerel and moratorium on issuance of new endorsements could increase compliance costs. The actual magnitude of this

increase is not known; although for some fishery participants, it could be more than 5 percent of their total costs of production. Considering that current participants, in the coastal pelagic fishery may be deemed small business entities, the issue of big versus small business operations, i.e., competitive standing of small business versus big business, is not relevant in determining the distributional/regional effects of regulations. However, small businesses in the SBA sense should not be confused with the distinction between large and small boats in the fishery. A change in the income requirement for obtaining a coastal pelagic commercial permit may eliminate as much as 5 percent of current permitted vessels. Whether these vessels would cease business operation entirely is not known, but remaining in the fishery would likely compel them to bear a relatively higher cost.

The foregoing discussion points to the conclusion that the proposed regulation, if enacted, will result in a significant impact on a substantial number of small business entities in the coastal migratory pelagic fishery in the Gulf and South Atlantic regions.

Explanation of Why the Action is Being Considered

Refer to the section on Problems and Objectives in the RIR and to Section 1.5 of the amendment document.

Objectives and Legal Basis for the Rule

Refer to the section on Problem and Objectives in the RIR and to Section 1.3 of the amendment document. The Magnuson Fishery Conservation and Management Act of 1976 provides the legal basis for the rule.

Demographic Analysis

Refer to the Coastal Pelagic Fishery Management Plan, as amended.

Cost Analysis

Refer to the section on Impacts of Management Alternatives and Public and Private Costs in the RIR.

Competitive Effects Analysis

The industry is composed entirely of small businesses (harvesters and charterboats operations). 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. There is, in fact, a set of measures considered to render compatible state and federal regulations.

Conclusion

Taken together, the measures considered in this plan amendment would have a significant economic impact on a substantial number of small business entities. In this regard, the foregoing information and pertinent portions of the RIR are deemed to satisfy the analysis required under the RFA.

4.0 ENVIRONMENTAL CONSEQUENCES

This section describes or directs the reviewer to the appropriate source on the biological, physical, and human environment of the coastal pelagic resources of Gulf of Mexico and South Atlantic.

4.1 Biological Environment:

The biology and habitat of the coastal migratory pelagic fishery resources have been described in Amendment/EIS 1 and Amendment/EA 3 and are incorporated here by reference. No new information is available. The allowable catches are consistent with the Councils' objective to rebuild and maintain the fishery stocks while fairly allocating catch among fishermen. The biological effects of this proposed action, if they may be expected to occur, are discussed with the appropriate alternatives in Section 2.

The following sections contain proposed changes that may affect the biological environment.

Section 2.2, Gear Regulation - specifies the type of fishing gear that may be used to take coastal pelagics in the South Atlantic and Mid-Atlantic Council's area of jurisdiction, provides for the issuance of permits for experimental gear in these areas, prohibits possession of coastal pelagics in excess of the bag limit aboard vessels using nonconforming gears, and clarifies that Gulf group king mackerel may be possessed aboard vessels with gear other than hook-and-line and run-around gill nets.

Section 2.5, Fishing Permit Regulation - establishes a moratorium on the issuance of new king mackerel permits from a control date of October 16, 1995 until October 15, 2000 but allows for transfer of permits during the period and increases the income qualifications for a commercial king or Spanish mackerel permit to 25 percent of the earned income or at least \$10,000 within 1 of the last 3 calendar years preceding the implementation of this amendment.

Section 2.6, Species Specific Regulation - extends the management area for cobia through the mid-Atlantic area (New York) to provide management throughout its range and prevent the possibility of overfishing.

Section 2.7, Seasonal Framework Adjustment - adds criteria to be addressed in stock assessments; clarifies timing and content of stock assessment reports while providing for their review as well as a review of any staff-developed reports by APs and SSCs; clarifies seasonal framework items that can be addressed; provides that the South Atlantic Council will have responsibility for setting trip limits, closed seasons or areas, or gear restrictions for the commercial fishery for Gulf group king mackerel in the Eastern Zone; and clarifies framework actions authorized by the RD.

4.2 Physical Environment:

To the extent that they can be evaluated, the actions proposed in this amendment will have no impact on the physical environment. Gears traditionally used in this fishery (hook-and-line and run around gill-nets) have no adverse impact on the bottom substrate or other habitat. As deployed in this fishery, these gear are selective for the target species and bycatch is minimal. The relationship between stocks and their habitats are contained in the FMP as amended, and subsequent studies have not provided new or different information that could be used to further define relationships.

- 4.2.1 **Effect on Wetlands:** The proposed action will have no effect on flood plains, wetlands, or rivers.
- 4.2.2 **Mitigating Measures:** No mitigating measures related to the proposed action are necessary because there are no harmful impacts to the environment.
- 4.2.3 **Unavoidable Adverse Affects:** The proposed action does not create unavoidable adverse affects.
- 4.2.4 **Irreversible and Irretrievable Commitments of Resources:** There are no irreversible commitments of resources other than costs of administering and enforcing the proposed rule resulting from implementation of this amendment.
- 4.2.5 **Relationship Between Short-Term Uses and Long-Term Productivity:** Since 1985, the FMP has restricted annual catches in order to restore overfished stocks. The result of these actions has been a gradual rebuilding of the stocks such that none are currently defined as being overfished. Rebuilding programs to increase standing stocks to their management goal of OY remain in effect.
- 4.2.6 **Impacts on Other Fisheries:** The actions proposed in this amendment do not directly affect other fisheries; however, the moratorium on new commercial king mackerel permits and the increased income qualification for these permits could redirect effort to other accessible fishery resources.

4.3 Human Environment

- 4.3.1 **Description of the Fishery:** The FMP and Amendments 1 through 3 with accompanying Environmental Impact Statements or Environmental Assessments describe the fishery. More recently, increasing fishing effort has contributed to some changes.

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 charterboat recreational fishery along widespread areas within the Gulf and South Atlantic regions. King mackerel are particularly important to the charterboat and offshore private boat fleets. In addition, smaller amounts of king mackerel are caught as a commercial supplement by the North Carolina charterboat fleet.

A hook-and-line fishery for king mackerel developed commercially off Louisiana in the winter of 1982-1983. This trolled-handline fishery uses gear and methods similar to the Florida hook-and-line fleet and is centered in the Grand Isle, Louisiana area. The number of participants has increased; and in 1995, the 770 thousand pound quota was filled in the first 66 days of the season.

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 employment.

Most of the commercial fishery for king mackerel is located off Florida, and most are taken there from November through March. Recent number of commercial mackerel permits in the Eastern Zone (Florida) Gulf

migratory group king mackerel lists 2,132 hook-and-line (trollers), 68 net, and 264 combination of net and hook-and-line permits.

In the North Area of the zone (Volusia through Dade Counties on Florida's east coast) of approximately 200 trollers about 150 are dependent on the king mackerel fishery. They fish on Gulf group king mackerel from November through March or until the limited quota is filled and fishing is closed, usually in January.

Twelve net boats are also capable of fishing for king and Spanish mackerel in the North Area with landing capacities of 20,000 to 40,000 pounds per trip. King mackerel begin forming tight schools and become available to run-around gill nets in this area in February and March. Since 1985, low quotas resulted in early closures of the fishery before the fish became available to net boats in the North Area.

In the South/West Area of the Eastern Zone, (Monroe County to the Florida/Alabama border) fishing begins on Gulf group king mackerel in July by a few small vessels trolling off the Florida Panhandle. Daily trip catches are generally less than 500 pounds, and landings amounted to approximately 22,000 pounds in 1991, 56,000 pounds in 1992, and 83,000 pounds in 1993. As a result of unusual environmental conditions in 1994, the fish remained off the Panhandle for a longer period, and virtually the entire hook-and-line quota for west Florida was taken there by mid-December.

In November, when the boundaries between stocks shift northward, some 75 to 100 trollers in South Florida begin fishing on Gulf group king mackerel. Some net vessels may also troll for these fish. Fishing becomes intense off Monroe County in December as the fish form large, over-wintering schools. In late December or early January the fish become accessible to nets and 16 to 20 net boats from the Florida Keys enter the fishery. The beginning of the king mackerel net fishery in this area is variable depending on availability of other alternative fishery resources (lobster and Spanish mackerel), weather, water conditions, presence of sharks, and landing prices. With good weather and marketing conditions the quota is usually filled quickly by late December or early January by the large-capacity net boats.

Vessel trip limits have been implemented off Florida to extend and distribute catches. However, the commercial quota for Atlantic king mackerel has been filled only once in 1988 with a low quota of 2.6 million pounds.

Bycatch of juvenile king and Spanish mackerels in trawls in the Gulf shrimp fishery exceeds the number taken in the directed commercial and recreational fishery (Powers et al 1994). The bycatch in the Atlantic shrimp fishery is not yet quantified. Bycatch reduction is being addressed through a fishery management plan amendment for Gulf shrimp.

4.3.2 History of Management: The management regime is described in Section 1.1.

4.3.3 Economic and Social Assessment: The economic and social effects of this Amendment are discussed in detail in Section 3.0.

5.0 OTHER APPLICABLE LAW

5.1 Vessel Safety:

The proposed actions do not impose requirements for use of unsafe (or other) gear nor do they direct fishing effort to periods of adverse weather conditions. The proposed actions, therefore, would have no effect on vessel safety.

5.2 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 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. Although the income qualification revision for a king or Spanish mackerel permit (Alternatives 2.5.4) may increase the paperwork requirement for fishermen, any increase should be offset by the moratorium on issuance of any new permits (Alternative 2.5.2.1) following implementation of this amendment.

5.3 Coastal Zone Management Consistency:

The Councils have determined that this proposed action will be implemented in a manner that is consistent to the maximum extent practicable with the approved coastal zone management programs of the affected states in the management area. This determination has been submitted for review by the affected states under Section 307 of the Coastal Zone Management Act.

5.4 Effect on Endangered Species and Marine Mammals:

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 gill-net fisheries may adversely affect the recovery of listed species of sea turtles. Accordingly, in compliance with the ESA, an Incidental Take Statement was issued and reasonable and prudent measures were specified to minimize such adverse impacts. Emergency actions described and considered herein are expected to have no additional impact on endangered or threatened species.

5.5 Scientific Data Needs: To monitor stocks to determine whether overfishing occurs, the SEFC of NMFS currently monitors catch by size (age) to estimate recruitment and acceptable biological catch. No additional collection of scientific data would be required by this amendment. The MSAP and the Socioeconomic Assessment Panel have identified the following data needs:

- Determine the bycatch of Atlantic migratory group king and Spanish mackerels in the directed shrimp fishery in Atlantic coastal waters. (MSAP)
- Evaluate potential bias of the lack of appropriate stratification of the data used to generate age-length keys for Atlantic and Gulf king and Spanish mackerel. (MSAP)

- Determine the effects of gear standardization corrections via GLM techniques on temporal and spatial trends in bycatch of Gulf migratory group Spanish and king mackerels, paying particular attention to the time before and after the implementation of TEDs in the directed shrimp fishery. (MSAP)
- Develop fishery-independent methods of monitoring stock size of Gulf and Atlantic king and Spanish mackerels, with a consideration of the feasibility of alternative assessment methods such as aerial surveys in south Florida during winter. (MSAP)
- Improve data collection of CPUE information on Gulf and Atlantic group king and Spanish mackerels, particularly in Florida waters, with emphasis on greater temporal and spatial resolution in estimates of CPUE and the distribution of fishing effort. Note: Log-books and/or trip intercept techniques focused on coastal pelagics should be among the techniques considered. (MSAP)
- Develop methods to obtain the proportions of Gulf and Atlantic migratory group king mackerel that comprise the overwintering population off southeast Florida. One such method presently under exploration, otolith shape analysis, should be evaluated. (MSAP)
- Consideration of the implications to management of alternative values of natural mortality in the VPA's for king mackerel (i.e., 0.20 rather than 0.15) and cobia (i.e., M 's < 0.40). (MSAP)
- Consideration of the implications to the fishery of changing the minimum size limits of Gulf king mackerel to increase the protection of immature fish. (MSAP)
- Consideration of alternative stock assessment methods for short-lived species such as Spanish mackerel, such as non-equilibrium production models, which are more aggregated with respect to population age structure; these would be particularly useful when assessment are being projected from incomplete catch at age data. (MSAP)
- Preparation of economic and social assessments for Gulf mackerels and cobia fisheries. (SEP) (This should be similar to 1995 data sets, updated to contain new data and analyses).
- Cost and returns data for commercial mackerel fishery. (SEP)
- Cost and returns data for for-hire mackerel fishery. (SEP)

5.6 Federalism:

This proposed action does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under E.O. 12612.

6.0 LIST OF PREPARERS

Richard Leard, Gulf of Mexico Fishery Management Council
 Michael Jepson, South Atlantic Fishery Management Council
 Antonio Lamberte, Gulf of Mexico Fishery Management Council
 Terrance Leary, Gulf of Mexico Fishery Management Council
 Gregg Waugh, South Atlantic Fishery Management Council

7.0 LIST OF AGENCIES, ORGANIZATIONS AND PERSONS TO WHOM COPIES OF THE AMENDMENT/ENVIRONMENTAL ASSESSMENT ARE SENT.

Gulf of Mexico Fishery Management Council

Law Enforcement Advisory Panel
Coastal Migratory Pelagic Advisory Panel
Socioeconomic Panel
Scientific and Statistical Committee

South Atlantic Fishery Management Council

King and Spanish Mackerel Advisory Panel
Scientific and Statistical Committee

Coastal Zone Management Offices

Alabama, Mississippi, Louisiana, Florida, Georgia, North Carolina, South Carolina, Virginia, New Jersey, Delaware, New York, Maryland and Pennsylvania
Monroe County Commercial Fishermen's Association
Offshore Fishermen of Florida
Southern Offshore Fisheries Association
Southeastern Fishermen's Association
Coastal Conservation Association
Louisiana Coastal Fishermen's Association

PUBLIC HEARING SITES

Public hearings for the Gulf of Mexico area were held from 7:00 p.m. to 10:00 p.m. at the following locations:

Monday, December 11, 1995

Larose Regional Park
2001 East 5th Street
Larose, Louisiana 70373

Visitor's Center Auditorium
University of Texas
750 Channel View Drive
Port Aransas, Texas 78373

Lions Club
2405 N. Roosevelt Boulevard
Key West, Florida 33040

Tuesday, December 12, 1995

J. L. Scott Marine Education
Center and Aquarium
115 East Beach Boulevard
Biloxi, Mississippi 39530

Best Western Beachfront Inn
5914 Seawall Boulevard
Galveston, Texas 77551

Wednesday, December 13, 1995

Quality Inn Beachside
931 W. Gulf Shores Boulevard
Gulf Shores, Alabama 36547

National Marine Fisheries Service
Panama City Laboratory
3500 Delwood Beach Road
Panama City, Florida 32408

Police Jury Annex
Courthouse Square
Cameron, Louisiana 70631

Thursday, December 14, 1995

City Hall Recreation Center
200 Rex Place
Madeira Beach, Florida 33708

Public hearings for the South Atlantic area will be held from 7:00 p.m. until business is completed at the following locations:

Tuesday, January 2, 1996

Ft. Pierce Holiday Inn
7151 Okeechobbe Road
Ft. Pierce, FL

Murrell's Inlett Community Center
4450 Murrell's Inlet Road
Murrell's Inlet, SC

Wednesday, January 3, 1996

Sea Turtle Days Inn
10 Ocean Boulevard
Atlantic Beach, FL

Holiday Inn
1706 N. Lumina Avenue
Wrightsville Beach, NC

Thursday, January 4, 1996

Comfort Inn - I95
5308 New Jesup Highway
Brunswick, GA

Carteret Community College
3505 Arendell Street
Morehead City, NC

Friday, January 5, 1996

Holiday Inn-Mid-Town
7100 Abercorn Street
Savanah, GA

Monday, January 8, 1996

Town & Country Inn
2008 Ssvannah Highway
Charleston, SC

Thursday, January 11, 1996

Quality Inn Lake Wright
6280 Northhampton Boulevard
Norfolk, VA

Friday, January 12, 1996

North Carolina Aquarium
Airport Road
Manteo, NC

Monday, March 18, 1996

Holiday Inn
3845 Veterans Memorial Highway
Ronkonkoma, NY

Tuesday, March 19, 1996

Holiday Inn
290 Route 37 East
Tom's River, NJ

Wednesday, March 20, 1996

Holiday Inn
2625 N. Salisbury Boulevard
Salisbury, MD

Written comments on the amendment were required to be mailed to the Gulf Council by January 6, 1996.

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- Finucane, J.H., L.A. Collins, H.A. Brusher, and C.H. Saloman. 1986. Reproductive biology of king mackerel, *Scomberomorus cavalla*, from the southeastern United States. *Fishery Bulletin* 84(4): 841-850.
- GMFMC and SAFMC. 1985. Final Amendment 1 to the Fishery Management Plan and Final Environmental Impact Statement, for the Coastal Migratory Pelagic Resources (Mackerels). Prepared by the Gulf of Mexico and South Atlantic Fishery Management Councils, April 1985. Available from: SAFMC, 1 Southpark Circle, Suite 306, Charleston, South Carolina 29414-6446. 191 pp. (plus attachments).
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GMFMC and SAFMC. 1992. Amendment 6 to the Fishery Management Plan for Coastal Migratory Pelagic in the Gulf of Mexico and South Atlantic Includes Environmental Assessment, Regulatory Impact Review, and Initial Regulatory Flexibility Analysis. Available from Gulf of Mexico Fishery Management Council, 5401 West Kennedy Boulevard, Suite 331, Tampa, Florida 33609. 33pp. (plus attachments).

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MSAP. 1994. Report of the mackerel stock assessment panel. Prepared April 4-6, 1994. Contribution No. MIA-93/94-42. National Marine Fisheries Service, Southeast Fisheries Science Center, 75 Virginia Beach Drive, Miami, Florida 33149. 20 pp. (plus figures).

MSAP. 1995. Report of the Mackerel Stock Assessment Panel. Prepared March 21-23, 1995. Contribution No. MIA-94/95-30. National Marine Fisheries Service, Southeast Fisheries Science Center, 75 Virginia Beach Drive, Miami, Florida 33149. 29 pp.

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SEP. 1996. Report of the fifth coastal migratory pelagics socioeconomic panel meeting. Gulf of Mexico Fishery Management Council, 5401 West Kennedy Boulevard, Suite 331, Tampa, Florida 33609.

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Table 1. ABC and SPR ranges computed by extracting winter east coast Florida indices from the Gulf analysis and adding them to the Atlantic analysis.

	100% Winter East FL Assigned to Gulf Group 93/94 ABC (lbs x 10 ⁶)	93/94 SPR	0% Winter East FL Assigned to Gulf Group 93/94 ABC (lbs x 10 ⁶)	93/94 SPR
Gulf Group				
16th Percentile	2.9	0.15	0.5	0.09
50th Percentile	4.9	0.20	1.3	0.14
84th Percentile	7.9	0.25	2.4	0.19
Atlantic Group				
16th Percentile	7.4	0.46	11.8	0.49
50th Percentile	10.0	0.53	15.2	0.55
84th Percentile	13.8	0.60	19.8	0.60

Source: MSAP Report 1994.

Table 2. Number of vessels (by state of registration) with commercial king and Spanish mackerel permits, 1987/88 through 1993/94.

Fishing Year	NC	SC	GA	FLEC	FLWC	AL	MS	LA	TX	OTHER	TOTAL	% INCREASE 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	891	64	38	178	98	61	2,786	118%
1993/94	412	79	10	846	808	20	21	238	56	98	2,588	102%

Source: Pat Howell (personal communication)

Table 3. Number of charter vessels (by state of registration) with coastal migratory pelagic fishery permits, 1987/88 through 1993/94.

Fishing Year	NC	SC	GA	FLEC	FLWC	AL	MS	LA	TX	OTHER	TOTAL
1987/88	136	54	6	99	223	26	34	15	48	28	669
1988/89	202	69	11	231	396	48	39	30	63	55	1144
1989/90	275	77	29	310	524	57	38	46	91	72	1519
1990/91	287	86	43	309	574	69	35	47	110	82	1642
1991/92	264	79	39	284	529	63	32	43	101	75	1509
1992/93	279	77	41	380	483	60	27	29	90	68	1534
1993/94	243	86	26	344	436	62	25	39	75	97	1433

Table 4. Comparison of vessel permit qualification criteria.

	Commercial King and Spanish Mackerel	Reef Fish (Gulf of Mexico)	Commercial Snapper-Grouper (South Atlantic)	Shark	Commercial Spiny Lobster	Florida Restricted Species
Percentage of gross income						25 percent
Percentage of earned income	At least 10 percent	More than 50 percent	More than 50 percent	More than 50 percent	At least 10 percent	
Gross sales alternative			More than \$20,000 in sales of fish	More than \$20,000 in sales of fish		More than \$5,000 in sales of fish
Source of earned income	Sale of catch	Commercial, charter or headboat	Commercial, charter or headboat	Commercial charter or headboat	Sale of Catch	
Timeframe for qualification	One of three years prior to application	Either of two years prior to application	One of three years prior to application	One of three years prior to application	Year prior to application	

Note: There is no earned income requirement for a Swordfish Permit, a Charter Vessel Permit for Coastal Migratory Pelagic Fish, a Charter Vessel/Headboat Permit for Snapper-Grouper (South Atlantic) or a Spiny Lobster Tailing Permit.

Table 5a. Atlantic coast landings of cobia (pounds x 1000), 1984 through 1994.

Year	Commercial	Recreational	TOTAL
84	33.4	951.4	984.9
85	30.0	1313.6	1343.6
86	70.0	735.4	805.4
87	122.8	695.9	808.6
88	105.6	704.9	810.5
89	131.1	1185.4	1316.5
90	123.3	818.0	941.3
91	125.0	837.6	962.6
92	137.3	1244.5	1381.8
93	129.0	644.2	773.2
94	39.9	512.5	552.4

Table 5b. Gulf coast landings of cobia (pounds x 1000), 1984 through 1994.

Year	Commercial	Recreational	TOTAL
84	174.4	1066.9	1240.3
85	161.4	1115.8	1277.3
86	7176.8	1492.2	1669.1
87	201.9	1145.6	1347.5
88	180.0	1358.8	1538.8
89	232.2	1477.6	1709.9
90	174.1	1541.3	1715.4
91	176.3	1508.3	2162.9
92	232.6	1061.7	1293.3
93	228.6	1028.3	1256.9
94	197.1	881.0	1078.1

Source: NMFS, SEFSC.

Table 6. Dolphin landings for South Carolina by month for 1993-1995*.

Month	1993		1994		1995*	
	Pounds	Value	Pounds	Value	Pounds	Value
JAN	233	374	294	570	1,946	3,226
FEB	1,086	1,173	458	654	564	953
MAR	149	208	142	241	532	855
APR	1,061	1,467	3,979	6,739	16,440	30,093
MAY	29,187	40,197	32,062	55,038	150,712	201,011
JUN	38,489	56,810	57,040	98,108	87,454	137,540
JUL	13,907	21,042	4,772	7,621		
AUG	3,513	5,621	1,267	2,316		
SEP	1,127	1,549	2,369	4,200		
OCT	1,439	2,152	1,898	3,455		
NOV	778	1,066	1,912	3,049		
DEC	386	589	817	1,233		
Totals	91,355	13,2248	107,010	183,224		
Avg value		\$1.45		\$1.71		\$1.45

* 1995 data are preliminary.

Source: Joe Moran (personal communication).

Table 7a. Atlantic coast catches of dolphin (pounds x 1000) for the commercial and recreational sectors, 1984 - 1994*.

Year	Commercial	Recreational	TOTAL
84	216.7	5490.1	5706.9
85	188.7	8295.1	8473.8
86	228.9	5225.2	5454.1
87	265.9	6333.0	6598.9
88	261.3	6347.5	6608.8
89	1416.7	14377.0	15793.0
90	679.4	10130.8	10810.2
91	638.2	12050.0	12688.2
92	334.5	5854.0	6188.5
93	493.5	4917.0	5410.5
94	141.5	7247.0	7388.5

Table 7b. Gulf coast catches of dolphin (pounds x 1000) for the commercial and recreational sectors, 1984 - 1994*.

Year	Commercial	Recreational	TOTAL
84	330.5	1307.7	1701.2
85	327.4	1557.9	1885.3
86	679.1	2292.0	2971.1
87	634.1	1318.0	1952.1
88	723.2	3315.0	4074.2
89	1685.8	3994.9	5680.7
90	1849.0	4314.0	6190.0
91	1701.9	6062.0	7763.9
92	771.8	2624.0	3395.8
93	589.9	3060.4	3650.3
94	48.4	1698.0	1746.4

* 1994 landings are preliminary.

Source: NMFS, SEFSC.

Table 8. Atlantic migratory group king mackerel landings in Florida by trip category during the 1993-1994 fishing year.

ATLANTIC MIGRATORY GROUP KING MACKEREL CATCHES IN FLORIDA						
Trip Category (pounds)	Number	Percent	Cumulative	Number	Percent	Cumulative
	Trips	Trips	Percent	Pounds	Pounds	Percent
			Trips			Pounds
1-9	585	7.23%	7.23%	3,609	0.34%	0.34%
10-99	4,448	54.95%	62.18%	202,658	18.87%	19.20%
100-249	1,935	23.91%	86.09%	304,133	28.32%	47.52%
250-499	773	9.55%	95.64%	263,483	24.53%	72.05%
500-749	213	2.63%	98.27%	129,425	12.05%	84.10%
750-999	71	0.88%	99.15%	62,161	5.79%	89.89%
1,000-1,249	30	0.37%	99.52%	33,365	3.11%	93.00%
1,250-1,499	19	0.23%	99.75%	26,156	2.44%	95.43%
1,500-1,749	9	0.11%	99.86%	14,184	1.32%	96.75%
1,750-1,999	2	0.02%	99.89%	3,703	0.34%	97.10%
2,000-2,249	0	0.00%	99.89%	9,181	0.85%	97.95%
2,250-2,499	4	0.05%	99.94%	7,971	0.74%	98.69%
2,500-2,999	3	0.04%	99.98%	0	0.00%	98.69%
3,000-3,499	0	0.00%	99.98%	0	0.00%	98.69%
3,500-3,999	0	0.00%	99.98%	0	0.00%	98.69%
4,000-4,499	0	0.00%	99.98%	0	0.00%	98.69%
4,500-4,999	0	0.00%	99.98%	0	0.00%	98.69%
5,000-5,999	0	0.00%	99.98%	0	0.00%	98.69%
6,000-6,999	1	0.01%	99.99%	6,532	0.61%	99.30%
7,000-7,999	1	0.01%	100.00%	7,504	0.70%	100.00%
TOTALS	8,094			1,074,065		

Source: O'Hop (1995).

Table 9. Atlantic migratory group king mackerel landings (not separated by gear) in Nassau through Volusia counties, 1991/92 through 1994/95 fishing years.

Atlantic Migratory Group King Mackerel Landings in Nassau through Volusia Counties (not separated by gear)																
Fish/Trip	Fishing Year = 1991/92				Fishing Year = 1992/93				Fishing Year = 1993/94				Fishing Year = 1994/95			
	Number		Cumulative		Number		Cumulative		Number		Cumulative		Number		Cumulative	
	Fish	Percent	Trips	Percent												
1-9	2957	18.2%	713	63.8%	2697	20.0%	642	63.0%	1436	21.5%	380	69.3%	1366	27.2%	354	74.5%
10-19	2509	33.6%	189	80.8%	2842	41.2%	209	83.5%	1338	41.6%	95	86.7%	805	43.3%	58	86.7%
20-29	1690	43.9%	71	87.1%	1817	54.7%	75	90.9%	545	49.8%	22	90.7%	648	56.2%	27	92.4%
30-39	1528	53.3%	44	91.0%	971	61.9%	28	93.6%	507	57.4%	15	93.4%	507	66.3%	15	95.6%
40-49	1328	61.5%	30	93.7%	776	67.7%	18	95.4%	435	63.9%	10	95.3%	300	72.3%	7	97.1%
50-59	792	66.3%	15	95.1%	380	70.5%	7	96.1%	386	69.7%	7	96.5%	111	74.5%	2	97.5%
60-69	1014	72.5%	16	96.5%	581	74.8%	9	97.0%	258	73.5%	4	97.3%	332	81.2%	5	98.5%
70-79	741	77.1%	10	97.4%	754	80.4%	10	97.9%	151	75.8%	2	97.6%	0	81.2%	0	98.5%
80-89	496	80.1%	6	97.9%	672	85.4%	8	98.7%	245	79.5%	3	98.2%	244	86.0%	3	99.2%
90-99	288	81.9%	3	98.2%	198	86.9%	2	98.9%	190	82.3%	2	98.5%	95	87.9%	1	99.4%
100-124	1025	88.2%	9	99.0%	425	90.0%	4	99.3%	0	82.3%	0	98.5%	0	87.9%	0	99.4%
125-149	269	89.8%	2	99.2%	138	91.1%	1	99.4%	830	94.8%	6	99.6%	126	90.4%	1	99.6%
150-174	323	91.8%	2	99.4%	159	92.3%	1	99.5%	156	97.1%	1	99.8%	0	90.4%	0	99.6%
175-199	1103	98.6%	6	99.9%	563	96.4%	3	99.8%	193	100.0%	1	100.0%	178	94.0%	1	99.8%
200-249	229	100.0%	1	100.0%	479	100.0%	2	100.0%	0	100.0%	0	100.0%	0	94.0%	0	99.8%
250-499	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	302	100.0%	1	100.0%
500-999	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%
Total Number	16292		1117		13452		1019		6670		548		5014		475	
Total Pounds	129986				101719				53720				37783			
Avg. Weight	8.0				7.6				8.1				7.5			
%Total Atl.																
Mig. Group																
Commercial																
Landed in FL	11.6%				11.0%				5.0%				3.5%			
%Total Atl.																
Mig. Group																
Commercial	5.2%				4.5%				2.7%				1.8%			
%Total Atl.																
Mig. Group	1.6%				1.2%				1.0%				0.8%			

Source: NMFS Data and Information provided to the SEP, 1995.

Table 10. Atlantic migratory group king mackerel landings (not separated by gear) in Brevard through Dade counties, 1991/92 through 1994/95 fishing years.

Atlantic Migratory Group King Mackerel Landings in Brevard through Dade Counties (not separated by gear)																
Fish/Trip	Fishing Year = 1991/92				Fishing Year = 1992/93				Fishing Year = 1993/94				Fishing Year = 1994/95			
	Number	Cumulative	Number	Cumulative												
	Fish	Percent	Trips	Percent	Fish	Fish	Trips	Trips	Fish	Fish	Trips	Trips	Fish	Fish	Trips	Trips
1-9	15361	14.5%	3240	47.5%	14421	16.6%	3207	53.1%	16431	15.2%	3562	51.5%	17871	17.8%	3838	53.9%
10-19	26287	39.3%	1880	75.0%	20472	40.1%	1487	77.7%	23530	36.9%	1699	76.0%	25197	43.0%	1843	79.8%
20-29	19364	57.6%	810	86.9%	15520	58.0%	652	88.5%	17308	52.9%	724	86.5%	15880	58.8%	668	89.2%
30-39	13398	70.2%	399	92.8%	9290	68.6%	274	93.1%	12567	64.5%	371	91.8%	10689	69.5%	315	93.6%
40-49	8828	78.6%	202	95.7%	7076	76.8%	161	95.7%	8505	72.3%	193	94.6%	8082	77.6%	184	96.2%
50-59	5748	84.0%	106	97.3%	4663	82.1%	85	97.2%	6940	78.8%	128	96.4%	5342	82.9%	99	97.6%
60-69	3659	87.4%	57	98.1%	2850	85.4%	45	97.9%	4985	83.4%	78	97.6%	3788	86.7%	59	98.4%
70-79	3364	90.6%	45	98.8%	2518	88.3%	34	98.5%	3796	86.9%	51	98.3%	2379	89.1%	32	98.8%
80-89	1849	92.4%	22	99.1%	1768	90.3%	21	98.8%	2775	89.4%	33	98.8%	1243	90.3%	15	99.0%
90-99	1498	93.8%	16	99.3%	2442	93.1%	26	99.2%	1806	91.1%	19	99.1%	1897	92.2%	20	99.3%
100-124	3073	96.7%	28	99.7%	3152	96.8%	28	99.7%	3933	94.7%	36	99.6%	3109	95.3%	28	99.7%
125-149	949	97.6%	7	99.8%	1664	98.7%	12	99.9%	1764	96.4%	13	99.8%	1058	96.4%	8	99.8%
150-174	333	97.9%	2	99.9%	477	99.2%	3	100.0%	976	97.3%	6	99.9%	829	97.2%	5	99.9%
175-199	182	98.1%	1	99.9%	374	99.7%	2	100.0%	375	97.6%	2	99.9%	185	97.4%	1	99.9%
200-249	890	98.9%	4	99.9%	0	99.7%	0	100.0%	1343	98.8%	6	100.0%	638	98.0%	3	100.0%
250-499	1169	100.0%	4	100.0%	300	100.0%	1	100.0%	0	98.8%	0	100.0%	331	98.4%	1	100.0%
500-999	0	100.0%	0	100.0%	0	100.0%	0	100.0%	1250	100.0%	2	100.0%	1650	100.0%	2	100.0%
Total Number	105952		6823		86987		6038		108284		6923		100168		7121	
Total Pounds	958097				751247				989532				916246			
Avg. Weight	9.0				8.6				9.1				9.1			
%Total Atl.																
Mig. Group																
Commercial																
Landed in FL	85.5%				81.4%				92.2%				84.5%			
%Total Atl.																
Mig. Group																
Commercial	38.2%				33.5%				48.9%				44.7%			
%Total Atl.																
Mig. Group	11.8%				9.1%				18.7%				18.7%			

Source: NMFS Data and Information provided to the SEP, 1995.

Table 11. Atlantic migratory group king mackerel landings (not separated by gear) in Monroe County, 1991/92 through 1994/95 fishing years.

Atlantic Migratory Group King Mackerel Landings in Monroe County (not separated by gear)																
Fish/Trip	Fishing Year = 1991/92				Fishing Year = 1992/93				Fishing Year = 1993/94				Fishing Year = 1994/95			
	Number		Cumulative		Number		Cumulative		Number		Cumulative		Number		Cumulative	
	Fish	Trips	Percent	Trips												
1-9	2603	62.2%	764	89.6%	2249	25.4%	637	83.9%	1878	48.5%	515	82.9%	2383	14.7%	676	80.4%
10-19	955	85.0%	76	98.5%	848	35.0%	65	92.5%	1007	74.5%	76	95.2%	1129	21.7%	85	90.5%
20-29	217	90.1%	9	99.5%	347	39.0%	15	94.5%	455	86.3%	18	98.1%	485	24.7%	20	92.9%
30-39	65	91.7%	2	99.8%	130	40.4%	4	95.0%	173	90.7%	5	98.9%	444	27.4%	13	94.4%
40-49	42	92.7%	1	99.9%	131	41.9%	3	95.4%	229	96.6%	5	99.7%	252	29.0%	6	95.1%
50-59	0	92.7%	0	99.9%	113	43.2%	2	95.7%	51	98.0%	1	99.8%	205	30.3%	4	95.6%
60-69	0	92.7%	0	99.9%	259	46.1%	4	96.2%	0	98.0%	0	99.8%	128	31.1%	2	95.8%
70-79	0	92.7%	0	99.9%	225	48.7%	3	96.6%	79	100.0%	1	100.0%	228	32.5%	3	96.2%
80-89	0	92.7%	0	99.9%	251	51.5%	3	97.0%	0	100.0%	0	100.0%	174	33.5%	2	96.4%
90-99	0	92.7%	0	99.9%	91	52.5%	1	97.1%	0	100.0%	0	100.0%	0	33.5%	0	96.4%
100-124	0	92.7%	0	99.9%	684	60.3%	6	97.9%	0	100.0%	0	100.0%	680	37.7%	6	97.1%
125-149	0	92.7%	0	99.9%	417	65.0%	3	98.3%	0	100.0%	0	100.0%	276	39.4%	2	97.4%
150-174	0	92.7%	0	99.9%	303	68.4%	2	98.6%	0	100.0%	0	100.0%	304	41.3%	2	97.6%
175-199	0	92.7%	0	99.9%	188	70.6%	1	98.7%	0	100.0%	0	100.0%	182	42.4%	1	97.7%
200-249	0	92.7%	0	99.9%	1156	83.6%	5	99.3%	0	100.0%	0	100.0%	679	46.6%	3	98.1%
250-499	306	100.0%	1	100.0%	1446	100.0%	5	100.0%	0	100.0%	0	100.0%	3134	66.0%	8	99.0%
500-999	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	0	100.0%	5501	100.0%	8	100.0%
Total Number	4188		853		8838		759		3872		621		16184		841	
Total Pounds	32695				69843				30068				128973			
Avg. Weight	7.8				7.9				7.8				8.0			
%Total Atl.																
Mig. Group																
Commercial																
Landed in FL	2.9%				7.6%				2.8%				11.9%			
%Total Atl.																
Mig. Group																
Commercial	1.3%				3.1%				1.5%				6.3%			
%Total Atl.																
Mig. Group	0.4%				0.9%				0.6%				2.6%			

Source: NMFS Data and Information provided to the SEP, 1995.

Table 12. Atlantic Migratory Group king mackerel catch per trip from North Carolina.

		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			

Source: Nancie Parrack, NMFS, SEFC

Table 13. Atlantic Migratory Group king mackerel catches from Palm Beach, Florida.

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	7,326	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		2,186	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%				

Source: NMFS.

Table 14. Recreational and commercial catch, TAC, allocation, and quota for Atlantic group Spanish mackerel, 1987/88 through 1994/95 fishing years.

SEASON	TAC M lb	RECREATIONAL				COMMERCIAL				TOTAL
		ALLO- CATION %	QUOTA M lb	CATCH %	CATCH M lb	ALLO- CATION %	QUOTA M lb	CATCH %	CATCH M lb	CATCH M lb
*1994/95	9.2	50	4.6	22	1.34	50	4.6	110	4.65	5.99
1993/94	9	50	4.5	28	1.27	50	4.5	110	4.97	6.21
1992/93	7	50	3.5	48	1.68	50	3.5	96	3.28	4.95
1991/92	7	50	3.5	49	1.73	50	3.5	115	4.02	5.75
1990/91	5	37	1.86	94	1.76	63	3.14	107	3.35	5.10
1989/90	6	46	2.76	63	1.75	54	3.24	102	3.32	5.07
1988/89	4	24	0.96	290	2.78	76	3.04	100	3.05	5.83
1987/88	3.1	24	0.74	215	1.59	76	2.36	107	2.52	4.11

*Projected
Source: MSAP (1994).

Table 15. Number and categorization of wholesale and retail dealers with purchases of king mackerel, 1991-1995

Annual Landings (pounds)	Number of Dealers Calendar Year				
	1991	1992	1993	1994	1995
1-9	6	16	11	5	4
10-99	60	70	53	58	44
100-499	54	52	56	65	35
500-999	28	22	28	24	18
1,000-4,999	39	45	36	37	18
5,000-9,999	10	12	13	10	4
10,000-99,999	27	24	22	29	19
100,000 or more	4	6	10	5	6
Total	228	247	229	233	148

APPENDIX I

Section 6.1.1: Mechanism for Determination of Framework Adjustments, as modified by this and previous amendments is as follows:

Section 12.6.1.1

- A. An assessment panel (Panel) appointed by the Councils will normally reassess the condition of each stock or migratory group of king and Spanish mackerel and cobia in alternate (even numbered) years for the purpose of providing for any needed preseason adjustment of TAC and other framework measures. However, in the event of changes in the stocks or fisheries, the Councils may request additional assessments as may be needed. The Councils, however, may make annual seasonal adjustments based on the most recent assessment. The Panel shall be composed of NMFS scientists, Council staff, Scientific and Statistical Committee members, and other state, university, and private scientists as deemed appropriate by the Councils.

The Panel will address the following items for each stock:

1. Stock identity and distribution. This should include situations where there are groups of fish within a stock which are sufficiently different that they should be managed as separate units. If several possible stock divisions exist, the Panel should describe the likely alternatives.
2. MSY for each identified stock. If more than one possible stock division exists, MSY for each possible combination should be estimated.
3. Condition of the stock(s) or groups of fish within each stock which could be managed separately. For each stock, this should include but not be limited to:
 - a. Fishing mortality rate relative to F_{msy} and $F_{0.1}$ as well as $F_{20\%SPR}$, $F_{30\%SPR}$, and $F_{40\%SPR}$.
 - b. Spawning potential ratio (SPR).
 - c. Abundance relative to an adequate spawning biomass.
 - d. Trends in recruitment.
 - e. Acceptable Biological Catch (ABC) which will result in long-term yield as near MSY as possible.
 - f. Calculation of catch ratios based on catch statistics using procedures defined in the FMP as modified.
 - g. Estimate of current mix of Atlantic and Gulf migratory group king mackerel in the mixing zone for use in tracking quotas.
4. Overfishing:
 - a. A mackerel stock or migratory group is considered to be overfished when the transitional spawning potential ratio (SPR) is below 20 percent.
 - b. The South Atlantic Council's target level or optimum yield (OY) is 40 percent static SPR. The Gulf Council's target level or optimum yield (OY) is 30 percent static SPR. ABC is calculated based on the target level or optimum yield (SAFMC = 40 percent static SPR and GMFMC = 30 percent static SPR).

- c. When a stock or migratory group is overfished (transitional SPR less than 20 percent), a rebuilding program that makes consistent progress towards restoring stock condition must be implemented and continued until the stock is restored beyond the overfished condition. The rebuilding program must be designed to achieve recovery within an acceptable time frame as specified by the Councils. The Councils will continue to rebuild the stock until the stock is restored to the management target (OY) within an unspecified time frame.
 - d. When a stock or migratory group is not overfished (transitional SPR equal to or greater than 20 percent), the act of overfishing is defined as a static SPR that exceeds the threshold of 20 percent (i.e., F20 percent). If fishing mortality rates that exceed the level associated with the static SPR threshold are maintained, the stock may become overfished. Therefore, if overfishing is occurring, a program to reduce fishing mortality rates toward management target levels (OY) will be implemented, even if the stock or migratory group is not in an overfished condition.
 - e. The Councils have requested the Mackerel Stock Assessment Panel (MSAP) provide a range of possibilities and options for specifying an absolute biomass level which could be used to represent a depleted condition or state. In a future amendment, the Councils will describe a process whereby if the biomass is below such a level, the Councils would take appropriate action, including but not limited to, eliminating directed fishing mortality and evaluating measures to eliminate any bycatch mortality in a timely manner through the framework procedure.
 - f. For species like cobia, when there is insufficient information to determine whether the stock or migratory group is overfished (transitional SPR), overfishing is defined as a fishing mortality rate in excess of the fishing mortality rate corresponding to a default threshold static SPR of 30 percent. If overfishing is occurring, a program to reduce fishing mortality rates to at least the level corresponding to management target levels will be implemented.
5. Management options. If recreational or commercial fishermen have achieved or are expected to achieve their allocations, the Panel may delineate possible options for nonquota restrictions on harvest, including effective levels for such actions as:
- a. Bag limits.
 - b. Size limits.
 - c. Gear restrictions.
 - d. Vessel trip limits.
 - e. Closed season or areas, and
 - f. Other options as requested by the Councils.
6. Other biological questions as appropriate.
- B. The Panel will prepare a written report with its recommendations for submission to the Councils each year (even years - full assessment, odd years - mini assessments) by such date as may be specified by the Councils. The report will contain the scientific basis for their recommendations and indicate the degree of reliability which the Council should place on the recommended stock divisions, levels of catch, and options for nonquota controls of the catch.
- C. The Councils may take action based on the panel report or may take action based on issues/information that surface separate from the assessment group. The steps are as follows:

1. **Assessment panel report:** The Councils will consider the report and recommendations of the Panel and such public comments as are relevant to the Panel's report. A public hearings will be held at the time and place where the Councils consider the Panel's report. The Councils will consult their Advisory Panels and scientific and Statistical Committees to review the report and provide advice prior to taking final action. After receiving public input, the Councils will make findings on the need for changes.
 2. **Information separate from assessment panel reports:** The Councils will consider information that surfaces separate from the assessment group. Council staff will compile the information and analyze the impacts of likely alternatives to address the particular situation. The Council staff report will be presented to the Council. A public hearing will be held at the time and place where Councils consider the Council staff report. The Councils consult their Advisory Panels and Scientific and Statistical Committees to review the report and provide advice prior to taking final action. After receiving public input, the Councils will make findings on the need for changes.
- D. If changes are needed in the following, 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 panel's report, relevant background material, and public comment:
- a. MSYs,
 - b. overfishing levels,
 - c. TACs,
 - d. quotas (including zero quotas),
 - e. trip limits,
 - f. bag limits (including zero bag limits),
 - g. minimum sizes,
 - h. reallocation of Atlantic group Spanish mackerel,
 - i. gear restriction (ranging from modifying current regulations to a complete prohibition),
 - j. permit requirements, or
 - k. season/area closure and reopening (including spawning closure).

Recommendations with respect to the Atlantic migratory groups of king and Spanish mackerel will be the responsibility of the South Atlantic Council, and those for the Gulf migratory groups of king and Spanish mackerel will be the responsibility of the Gulf Council. Except that the SAFMC will have responsibility to set vessel trip limits, closed seasons or areas, or gear restrictions for the northern area of the Eastern Zone (Dade through Volusia Counties, Florida) for the commercial fishery for Gulf group king mackerel. This report shall be submitted by such data as may be specified by the Councils.

- E. The RD will review the Councils' recommendation, supporting rationale, public comments and other relevant information, and if he concurs with the recommendation, he will draft regulations in accordance with the recommendation. He may also reject the recommendation, providing written reasons for rejection. In the event the RD rejects the recommendation, existing regulations shall remain in effect until resolved. However, if the RD finds that a proposed recreational bag limit for Gulf migratory group or groups of king mackerels is likely to exceed the allocation and rejects the Councils' recommendation, the bag limit reverts to one fish per person per day.

- F. If the RD concurs that the Councils' recommendations are consistent with the goals and objectives of the plan, the National Standards, and other applicable law, he shall implement the regulations by proposed and final rules in the Federal Register prior to the appropriate fishing year or such dates as may be agreed upon with the Councils. A reasonable period for public comment shall be afforded, consistent with the urgency, if any, of the need to implement the management measure.

Appropriate regulatory changes that may be implemented by the Regional Director by proposed and final rules in the Federal Register are:

1. Adjustment of the point estimates of MSY for cobia, for Spanish mackerel within a range of 15.7 million pounds to 19.7 million pounds, and for king mackerel within a range of 21.9 million pounds to 35.2 million pounds. Adjustment of the overfishing level for king and Spanish mackerels.
2. Setting total allowable catches (TACs) for each stock or migratory group of fish which should be managed separately, as identified in the FMP provided:
 - a. No TAC may exceed the best point estimate of MSY by more than 10 percent.
 - b. No TAC may exceed the upper range of ABC if it results in overfishing as defined in Section 12.6.1.1(A)(4).
 - c. Downward adjustments of TAC of any amount are allowed in order to protect the stock and prevent overfishing.
 - d. Reductions or increases in allocations as a result of changes in the TAC are to be as equitable as may be practical utilizing similar percentage changes to allocations for participants in a fishery.
3. Adjusting user group allocations in response to changes in TACs according to the formula specified in the FMP.
4. The reallocation of Spanish mackerel between recreational and commercial fishermen may be made through the framework after consideration of changes in the social and/or economic characteristics of the fishery. Such allocation adjustments shall not be greater than a ten percent change in one year to either sector's allocation. Changes may be implemented over several years to reach a desired goal, but must be assessed each year relative to changes in TAC and social and/or economic impacts to either sector of the fishery.
5. Modifying (or implementing for a particular species):
 - a. quotas (including zero quotas)
 - b. trip limits
 - c. bag limits (including zero bag limits)
 - d. minimum sizes
 - e. re-allocation of Atlantic group Spanish mackerel by no more than 10 percent per year to either the commercial or recreational sector.
 - f. gear restriction (ranging from modifying current regulations to a complete prohibition)
 - g. permit requirements, or
 - h. season/area closures and reopenings (including spawning closure)

Authority is also granted to the Regional Director to close any fishery, i.e., revert any bag limit to zero and close and reopen any commercial fishery, once a quota has been established through the procedure described above and such quota has been filled. When such action is necessary, the Regional Director will recommend that the Secretary publish a notice in the Federal Register as soon as possible.