South Atlantic Coastal Migratory Pelagics Framework Action 2013

August 2013

Draft Environmental Assessment Regulatory Impact Review Regulatory Initial Regulatory Flexibility Analysis

A publication of the South Atlantic Fishery Management Council pursuant to National Oceanic and Atmospheric Administration Award Number FNA10NMF4410012

Abbreviations and Acronyms Used in the FMP

ABC	acceptable biological catch
ACL	annual catch limits
AM	accountability measures
ACT	annual catch target
B	a measure of stock biomass in either weight or other appropriate unit
B_{MSY}	the stock biomass expected to exist under equilibrium conditions when fishing at F_{MSY}
B_{OY}	the stock biomass expected to exist under equilibrium conditions when fishing at F_{OY}
B_{CURR}	The current stock biomass
CPUE	catch per unit effort
DEIS	draft environmental impact statement
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
F	a measure of the instantaneous rate of fishing mortality
$F_{30\%SPR}$	fishing mortality that will produce a static SPR = 30%
F_{CURR}	the current instantaneous rate of fishing mortality
F_{MSY}	the rate of fishing mortality expected to achieve MSY under equilibrium conditions and a corresponding biomass of B_{MSY}
F_{OY}	the rate of fishing mortality expected to achieve OY under equilibrium conditions and a corresponding biomass of B_{OY}
FEIS	final environmental impact statement
FMP	fishery management plan
FMU	fishery management unit
M	natural mortality rate
MARMAP	Marine Resources Monitoring Assessment and Prediction Program
MFMT	maximum fishing mortality threshold
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistics Survey
MRIP	Marine Recreational Information Program
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	overfishing limit
OY	optimum yield
RIR	regulatory impact review
SAMFC	South Atlantic Fishery Management Council
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SIA	social impact assessment
SPR	spawning potential ratio
SSC	Scientific and Statistical Committee

South Atlantic Coastal Migratory Pelagics Framework Action with Draft Environmental Assessment and Regulatory Impact Review

Proposed action:	Modify restrictions on transfer at sea and gillnet allowances for Atlantic migratory group Spanish mackerel, and modify king mackerel trip commercial limits for the Florida East Coast subzone.
Lead agency:	FMP Amendment – South Atlantic Fishery Management Council Environmental Assessment – National Marine Fisheries Service (NMFS) Southeast Regional Office
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Summary

The South Atlantic Fishery Management Council (South Atlantic Council) is considering changes to the restrictions on transfer at sea and gillnet allowances for the Atlantic migratory group Spanish mackerel commercial sector. Currently, transfer at sea is prohibited for any species under a commercial trip limit, and only two gillnets are allowed on a vessel. Provisions to allow a portion of a third net to be transferred from a vessel that has met the Spanish mackerel trip limit to another vessel that has not yet reached the trip limit are intended to reduce dead discards and minimize waste when catch in one set exceeds the trip limit for the vessel.

The South Atlantic Council is considering changes in commercial trip limits for Atlantic king mackerel for the Florida East Coast subzone. Modifications to the trip limits may help to minimize lost opportunities to fish for the species due to the current system of trip limits, which may increase the rate of harvest causing the commercial sector to close before Lent, the most lucrative part of the fishing season.

In accordance with the provisions set forth in the Magnuson-Stevens Fishery Conservation and Management Act and regulations found at 50 CFR 622.389 (Adjustment of Management Measures), the intent of the Framework Actions is to: minimize dead discards of target and other species; reduce the potential of lost fishing opportunities for mackerel fishermen in the Atlantic; and optimize utilization of the resource, while minimizing adverse biological impacts. This Framework Action with its integrated Environmental Assessment will be made available for public review before and during each South Atlantic Council meeting, where the action will be discussed, at www.SAFMC.net; during public hearings held in August 2013; and during the proposed rule phase of the rulemaking process.

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Chapter 1. Introduction

1.1 What Actions Are Being Proposed?

The actions contained in this framework amendment include modifications to restrictions on transfer of fish at sea and gillnet allowances for receiving vessels involved in transferring Atlantic migratory group Spanish mackerel at sea, and changes to the commercial trip limit for king mackerel in the Florida East Coast subzone.

1.2 Who is Proposing the Actions?

The South Atlantic Fishery Management Council (South Atlantic Council) is proposing the actions with approval by the Gulf of Mexico Fishery Management Council. The South Atlantic Council develops the fishery management plans and amendments, and submits them to the National Marine Fisheries Service (NMFS) who ultimately approves, disapproves, or partially approves the actions in the amendment on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks
- Consists of 13 voting members who are appointed by the Secretary of Commerce and 4 non-voting members
- Management area is from 3 to 200 mi off the coasts of North Carolina, South Carolina, Georgia, and Florida through the Atlantic side of Key West
- Develops management plans/amendments and recommends regulations to NMFS for implementation

1.3 Why is the South Atlantic Council Considering Action?

Atlantic Migratory Group Spanish Mackerel

The South Atlantic Council is considering changes to the restrictions on transfer at sea and gillnet allowances for vessels involved in transferring Atlantic migratory group Spanish mackerel at sea. Currently transfer at sea is prohibited for any species under a commercial trip limit, and only two gillnets are allowed on a vessel. Provisions to allow a portion of a third net to be transferred from a vessel holding a valid Spanish Mackerel Commercial Vessel Permit that has exceeded the Spanish mackerel trip limit to another vessel that also has a valid Spanish Mackerel Commercial Vessel Permit and has not yet reached the trip limit is intended to reduce dead discards and minimize waste when catch in one net exceeds the trip limit for the vessel.

Atlantic Migratory Group King Mackerel

The South Atlantic Council is considering changes of commercial trip limits for Atlantic migratory group king mackerel for the Florida East Coast subzone. Modifications to the trip limits may help to minimize lost opportunities to fish for the species caused by the current system of trip limits, which may increase the rate of harvest causing the commercial sector to close before Lent, the most lucrative part of the fishing season.

The current management objectives in the joint Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (CMP FMP) (GMFMC/SAFMC 1982) as amended are:

1) The primary objective of this FMP is to stabilize yield at the maximum sustainable yield, 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-1970s, which is prior to the development of the deep water run-around gillnet 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.

The actions proposed in the amendment specifically help to meet FMP Objectives 1, 6, 7 and 8.

Purpose for Actions

The purpose of this amendment is to modify the restrictions on transfer-at-sea and gillnet allowances for Atlantic migratory group Spanish mackerel and modify the king mackerel trip limit in the Florida East Coast Subzone.

Need for Actions

The need for the action is to modify current king and Spanish mackerel regulations to minimize dead discards of target and other species; reduce the potential of lost fishing opportunities for mackerel fishermen in the Atlantic; and optimize utilization of the resource, while minimizing adverse biological impacts.

1.4 Which species and areas would be affected by the actions?

Three species—king mackerel, Spanish mackerel, and cobia—are included in the CMP FMP. The proposed actions in this amendment would affect king mackerel and Spanish mackerel, and could affect fishermen harvesting king mackerel and Spanish mackerel in the federal waters off North Carolina, South Carolina, Georgia, the east coast of Florida, and the Florida Keys.

The CMP FMP, approved in 1982 and implemented by regulations effective February 1983, treated king and Spanish mackerel each as one U.S. stock. The present management regime for mackerel recognizes two migratory groups of king and Spanish mackerel, the Gulf migratory group and the Atlantic migratory group.

King mackerel: These two migratory groups seasonally mix off the east coast of Florida through Monroe County, Florida. For management and assessment purposes, a boundary between these migratory groups of king mackerel was specified at 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) (**Figures 1.4.1** and **1.4.2**).

Spanish mackerel: Although these two migratory groups mix in south Florida, abundance trends along each coast of Florida are different, indicating sufficient isolation between the two migratory groups to warrant separate management regimes. Consequently, the boundary for Spanish mackerel is fixed at the Miami-Dade/Monroe County border on Florida's southeast coast (**Figure 1.4.3**). Within the Atlantic migratory group there are different regulations in Florida (Atlantic migratory group South) and north of Florida (Atlantic migratory group North).

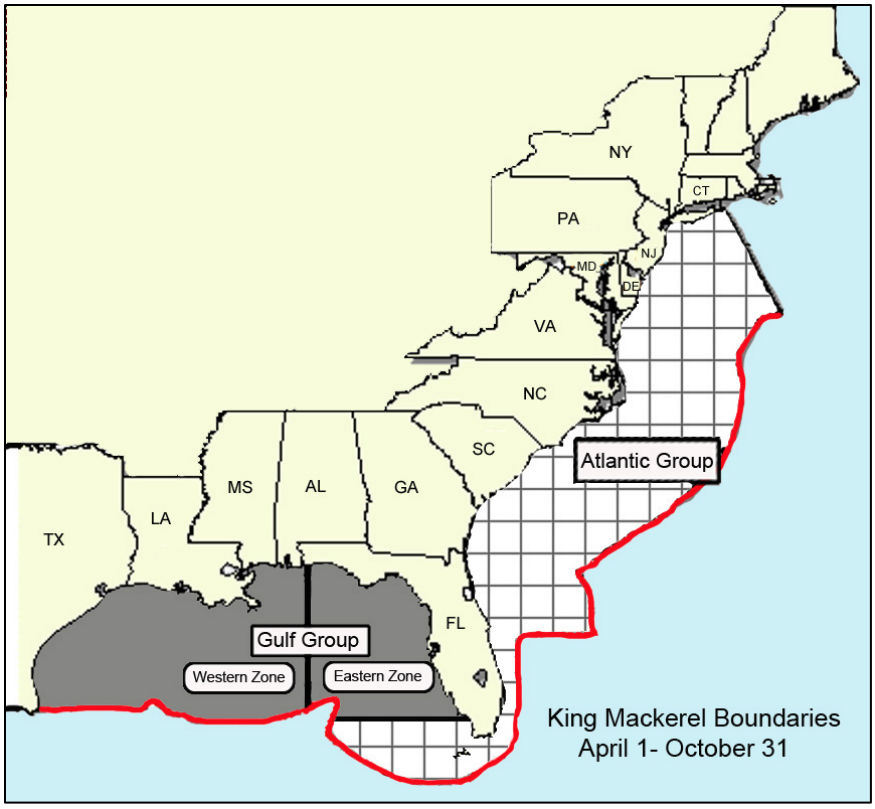

Figure 1.4.1. King mackerel seasonal boundaries April 1-October 31.

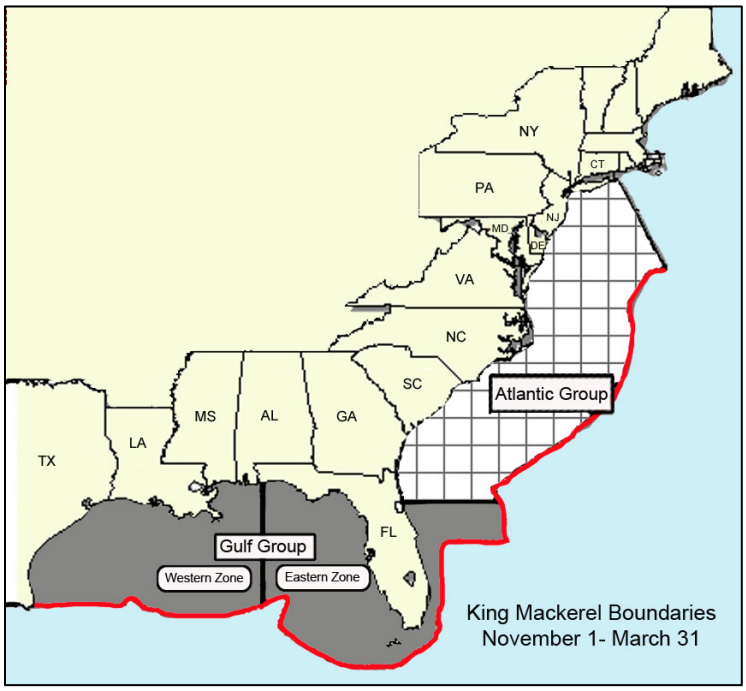

Figure 1.4.2. King mackerel seasonal boundaries November 1- March 31.

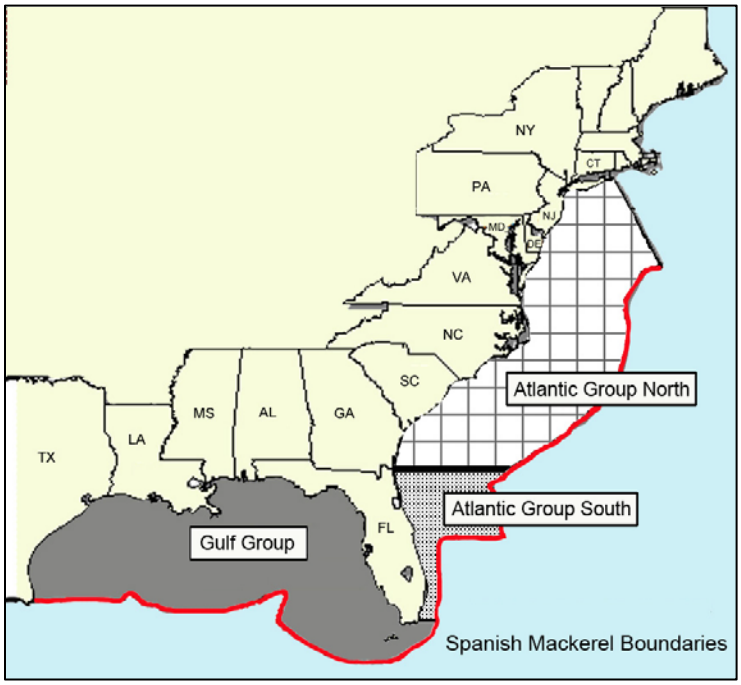

Figure 1.4.3. Spanish mackerel boundaries.

Chapter 2. Proposed Actions and Alternatives

Action 1. Modify restrictions on transfer-at-sea and gillnet allowances for Atlantic migratory group Spanish mackerel.

Alternative 1 (No Action). No more than two gillnets, including any net in use, may be possessed at any one time; provided, however, that if two gillnets, including any net in use, are possessed at any one time, they must have stretched mesh sizes (as allowed under the regulations) that differ by at least 0.25 inch (0.64 cm) 622.377(b)(2)(iii). A species subject to a trip limit specified in this section taken in the EEZ may not be transferred at sea, regardless of where such transfer takes place, and such species may not be transferred in the EEZ (§622.385).

Alternative 2. Alternative 2 applies only to commercial harvest of Atlantic migratory group Spanish mackerel with gillnet. This alternative recognizes that the current biomass levels of Spanish mackerel may result in catches of Spanish mackerel in excess of the commercial trip limit by vessels using gillnets. Specifically, even with very short sets, these gillnets may exceed the daily trip limit. As such, the regulations would be modified to allow for the transfer of Spanish mackerel at sea. Any amount of Spanish mackerel less than the commercial trip limit could be transferred between two vessels given 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 vessels with valid Spanish mackerel commercial permits.
c) The receiving vessel may possess no more than three gillnets on board after the transfer is complete.
d) All fish exceeding the applicable daily vessel limit shall remain entangled in the meshes of the net until transfer. The quantity of fish transferred to any single vessel shall not exceed the applicable daily trip limit.
e) Call-in is required for both vessels engaged in the transfer.

The following describes how transfer at sea may occur: After catching Spanish mackerel in the gillnet in excess of the trip limit, the donor vessel would cut the net into two sections. The captain would transfer the portion of the net to the receiving vessel. The receiving vessel would accept the portion of the net and retrieve that portion on the vessel. Call-in by both vessels must be made prior to the net being cut.

Discussion:

Currently vessels harvesting Spanish mackerel with gillnets are 1) not allowed to transfer Spanish mackerel at sea, and 2) allowed no more than two gillnets on board, and those gillnets must have a difference in the mesh size of at least 0.25 inches. The prohibition on transfer at sea is a general rule for all commercial harvest for any species or stock under a commercial trip limit (§622.385). The South Atlantic Fishery Management Council (South Atlantic Council) defined allowable gear for Atlantic migratory group Spanish mackerel in Amendment 8 to the CMP FMP (GMFMC/SAFMC 1996) and specified that vessels fishing for Atlantic migratory group Spanish mackerel on the Florida east coast are limited to two run-around gillnets of different mesh sizes that may not exceed 800 yards, and only one may be fished at a time. The purpose of specifying allowable gear was to assist enforcement in identifying legal and illegal gear, but the South Atlantic Council also specifically noted that it was their intent to define 'allowable gear' as gear that has been traditionally used to harvest king mackerel or Spanish mackerel while minimizing potential user conflict in the future due to new gear developments.

At times, a vessel may haul a gillnet with enough Spanish mackerel to exceed the trip limit. This may occur on the first, second, or even third set if the operator expects to capture less than the trip limit, even after multiple sets. For example, if the trip limit is 3,500 lbs, a vessel operator may have caught 1,000 lbs on the first and second sets, and then decides to make a third set, which may or may not result in a harvest that exceeds the trip limit. Overages are difficult to estimate when the gillnet is in the water and fish caught in this gear do not survive when released.

Modifying the prohibition on transfer at sea and gear specifications for Spanish mackerel commercial harvest would allow part of the gillnet and its contents to be transferred to another vessel that has not met its trip limit, and would prevent waste in the sector, because fish caught in gillnets have high discard mortality. It is the South Atlantic Council's intent to allow transfer at sea of a portion of Spanish mackerel gillnet and its contents to another federally permitted Spanish mackerel vessel that has not harvested its trip limit as a means of reduce dead discards. It is also the South Atlantic Council's intent that only one such transfer would be allowed per vessel per trip.

The South Atlantic Council previously considered in Amendment 8 (GMFMC/SAFMC 1996) allowing transfer at sea in the Spanish mackerel commercial gillnet sector when a trip limit had been exceeded, but did not approve the alternative. They concluded that transfer at sea precludes effective enforcement and may reduce the effectiveness of trip limits. The incidence of exceeding the trip limit on one set is thought to be quite rare, and if transfer at sea of fish harvested in excess of the trip limit is allowed, a significant increase in the rate of harvest is not expected. Based on this information, the South Atlantic Council is again considering allowing transfer at sea of Spanish mackerel caught in excess of the trip limit as a way to reduce dead discards in the fishery. Regulations at 50 CFR 622.389 allow changes to transfer at sea provisions and gear restrictions to be made via framework action.

In 2003, the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) created a provision for transfer-at-sea to address a similar problem in the commercial scup fishery (MAFMC 2003). At times, a daily vessel limit for scup would be exceeded in one set of otter trawl (this can happen on the first, second, or third set, similar to Spanish mackerel gillnets), and the Mid-Atlantic Council created an exception to allow transfer at sea in this situation to reduce discards and waste when the vessel trip limit was exceeded.

Vessels harvesting Spanish mackerel with gillnets commonly range 28-35 feet in length, and some fishermen have pointed out that the typical boat size in this component of the commercial sector has decreased in the past several years. A vessel will typically have both allowable nets on board and will use the maximum allowable length (800 yards). In general, two or three sets will allow a vessel to reach the commercial trip limit. According to anecdotal information from fishermen, it is not uncommon for some fish houses to notify vessels of a limit on the amount of Spanish mackerel they will purchase, although the exact number of fish houses that set 'fish house limits' is unknown. The amount the fish houses are willing purchase can often be lower than the vessel trip limit, causing Spanish mackerel vessel operators to intentionally harvest an amount lower than the trip limit to make sure all the fish they harvest will be purchased by the fish house. This practice of abiding by the 'fish house limits' can restrict landings in some areas during certain times of the year, most likely between October and May. **Figure 2.1** illustrates the frequency with which vessels land fish under the trip limit, not necessarily because they cannot harvest the trip limit, but because the fish houses have told them that they will only purchase up to a certain amount, which may be lower than the trip limit. However, a vessel can still land Spanish mackerel up to the commercial trip limit. Gillnets are typically not set very deep in the water. Additionally, harvest of Spanish mackerel with gillnet occurs only in the daytime hours.

Conditions for and the likelihood of a vessel exceeding the commercial trip limit with one set of the gillnet may vary and depend on where Spanish mackerel are located, if the fish are schooling or scattered, and if other species such as king mackerel, blue runner, sheepshead, crevalle jack, and some species of sharks are being caught in the gillnet (see **Table 2** in **Appendix D**). The highest landings per trip generally occur in October through March (**Figure 2.1**). Currently, for the southern zone (the Florida east coast), the trip limit is 3,500 lbs starting March 1, and then starting December 1, trips are not limited on week days and are 1,500 lbs on weekends. This unlimited trip time period continues until 75 % of the adjusted quota is landed, after which the trip limit is 1,500 lbs every day. When 100 % of the adjusted quota is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until the full quota is met or projected to be met. In the northern zone (north of the Georgia-Florida line), the trip limit is 3,500 lbs year-round.

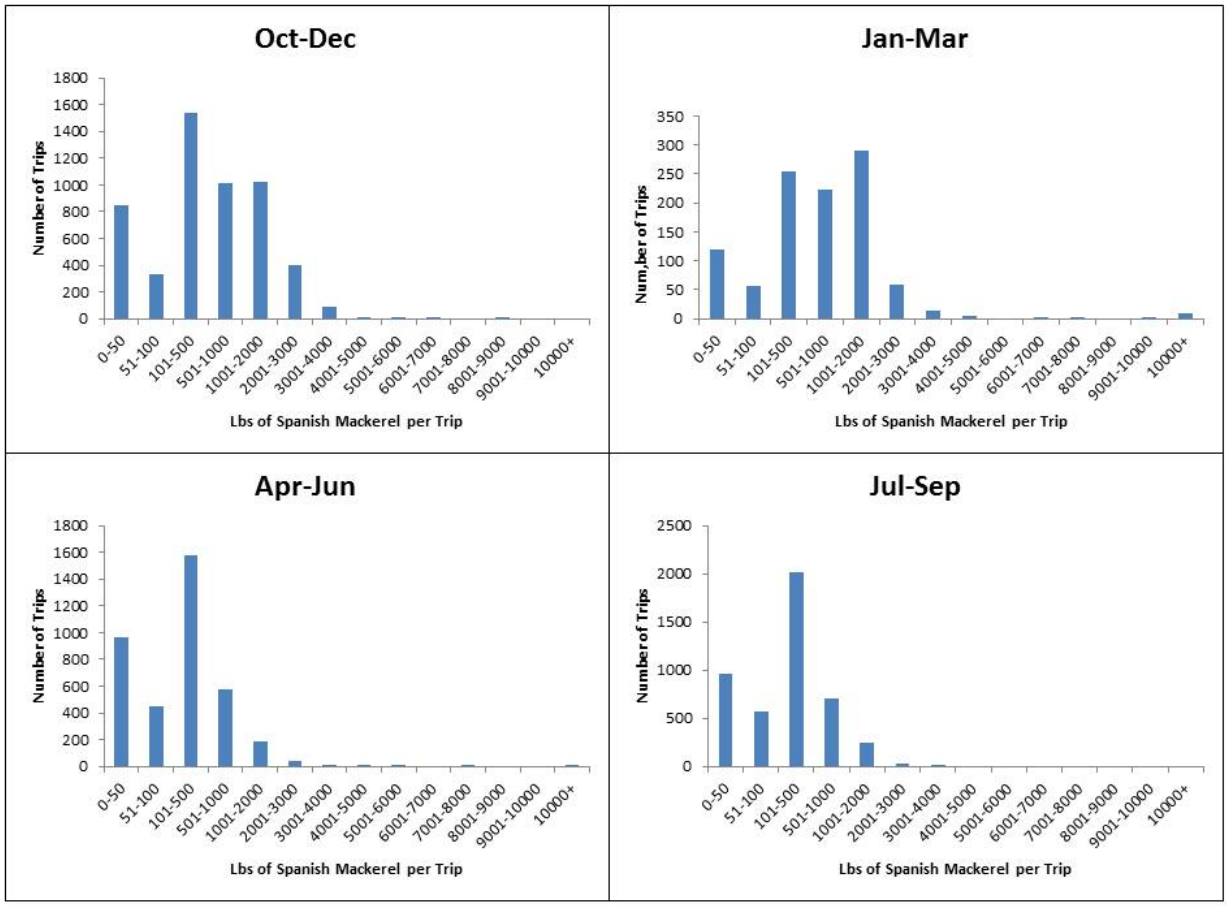

Figure 2.1. Comparison of seasonal variation of the number of trips with different lbs per trip for vessels landing Spanish mackerel caught with gillnet. All years are combined in those months during the fishing years of 2002-03 through 2011-2012. The data include gillnet trips from all South Atlantic states and include catch from state waters and the EEZ. Data source: SEFSC logbook data.

Figure 2.1 illustrates a few characteristics of the gillnet fleet that likely influence the frequency of overages occurring in one set. **Figure 2.1** shows the frequency of trips with landings within certain ranges, regardless of the trip limit during that period. The information suggests how vessels in general harvest under the different trip limits throughout the year.

October-December and January-March are the primary fishing periods for Spanish mackerel in the Atlantic because schooling of Spanish mackerel results in a higher frequency of trips with more than 500 lbs. Higher catches after December 1 is also a consequence of the change in the trip limit. Trips during April-June and July-September show a higher frequency with lower landings per trip because during these periods the Spanish mackerel are more likely to be scattered and harvested in sets that target multiple species (such as blue runner). Furthermore, there is a 3,500-lbs trip limit in place during this time period, which would help to constrain catch. As a result, Spanish mackerel make up a smaller portion of a larger set during April-September than during October-March. The data presented in **Figure 2.1** suggest that a case in which a vessel exceeds the commercial trip limit for Spanish mackerel on one set is more likely

to occur during the months of October-March, and less likely to occur during April-September. However, **Figure 2.1** also demonstrates that exceeding the 3,500 lbs trip limit during October-December is uncommon. Even under the unlimited limit, few trips land high landings, and mostly trips stay far below the 3,500 lbs. This may be due the previously mentioned fish house limits on the amount of fish they are willing to purchase from vessels, or other factors affecting the decision to harvest. However, the data in **Figure 2.1** demonstrate that there are factors restraining harvest because trips are not bumping up on the possible trip limits in place.

Alternative 1 (No Action) would not establish the provision to allow transfer at sea in the specific case that a vessel exceeds the Spanish mackerel commercial trip limit using gillnet gear. **Alternative 2** would establish the provision by 1) allowing the receiving vessel to have three gillnets on board only after the transfer; and 2) allowing transfer at sea for Spanish mackerel only in the specific case that a vessel exceeds the commercial trip limit with gillnet gear. **Alternative 2** describes in detail the conditions and requirements under which the transfer may occur.

Part of the need for this framework action is to minimize dead discards on the Spanish mackerel gillnet fishery. The South Atlantic Council did not consider other ways to reduce discards when the trip limit is exceeded based on how the gillnet sector for Spanish mackerel is prosecuted in the southeast. For example, the South Atlantic Council did not consider reducing the maximum length requirement for Spanish mackerel gillnets, which could help control the amount of fish that could be captured per set and minimize the incidences of exceeding the trip limit. However, Amendment 8 (GMFMC/SAFMC 1996), did address gillnet length. At the time Amendment 8 was developed, many gillnets were 1,000 yards in length or longer to facilitate capture of more fish per trip. In order to slow the rate of harvest of Spanish mackerel with gillnet gear, the South Atlantic Council limited the length of Spanish mackerel gillnets to 800 yards.

Another means to reduce waste due to trip limit overages with gillnet gear would be to increase or remove the current commercial trip limit. The Spanish mackerel trip limit was first implemented through Amendment 6 to the CMP FMP in 1992 (GMFMC/SAFMC 1992). The original intent of the Spanish mackerel trip limits in the northern and southern zones of the Atlantic region were to 1) increase control on harvesting power to reduce the probability the commercial quota would be exceeded, 2) to slow the rate of harvest and extend the fishing year, and 3) change the geographical distribution of landings such that smaller boats in Florida catch more of the available commercial quota than they has previously caught so that conflicts among fishermen are reduced (GMFMC/SAFMC 1992). Subsequent to Amendment 6 to the CMP FMP, the southern zone trip limit was revised through the 1996 Framework Amendment (SAFMC 1996) and again was revised to its current form in a 2000 Framework Amendment (SAFMC 2000).

Although an action to remove the trip limit would remove the possibility of exceeding the trip limit in one set, the objectives the trip limit was initially implemented to meet may not be achieved. One result might be market saturation with large amounts of Spanish mackerel, which could negatively impact the price and quality of the product. However, fish houses are known to

notify vessels of how much fish they are willing to purchase in an effort to maintain market stability. Such external influences may keep this sector the CMP fishery from reaching the commercial ACL in a very short amount of time even with no trip limit in place.

The intention of this action is to specifically define the conditions and requirements under which a transfer of a net and its contents at sea can occur. Doing so would provide an alternative to discarding the fish and contributing to waste in the CMP fishery. The conditions for when a transfer may take place and the anticipated infrequency of the occurrence are expected to minimize the likelihood that the provision will be misused.

Comparison of Alternatives:

If the anecdotal information shared by the fishery participants is accurate and events where the trip limit is exceeded with one set, which may or may not be the first set made on a trip, are indeed quite rare, under **Alternative 1 (No Action)** the biological impacts would likely be negligible. **Figure 2.1** shows that very few trips approach 3,500 lbs, and exceeding that trip limit is not likely to occur. If part of a net does need to be cut free to maintain harvest levels under the trip limit for the harvesting vessel, some fish would be released dead. However, if this activity does not occur on a frequent basis, the overall impact to the sustainability of the stock is assumed to be extremely small.

Alternative 2 would not eliminate the prohibition on transfer at sea of any CMP species; rather, it would allow transfer at sea of Spanish mackerel caught with gillnet gear only under very specific conditions. No other transfer at sea provisions would be affected by this action. Because Spanish mackerel is an open access fishery (meaning anyone with a vessel can apply to receive a commercial Spanish Mackerel Permit), **Alternative 2** could result in the use of "runner boats" that could take trips back and forth from the lead vessel to the dock with the excess fish if the South Atlantic Council were to allow transfer at sea of Spanish mackerel harvested in excess of the trip limits. If the use of runner boats or the practice of transferring Spanish mackerel at sea becomes commonplace, the rate of harvest could increase, negating the intended effect of the current trip limit. However, it is the South Atlantic Council's intent to allow only one transfer per vessel per day, which may remove the possibility that runner boats could be used repeatedly during one trip. Because commercial Spanish mackerel is managed under a 3.87 million lbs ACL, overall harvest would be capped at that level and no biological impacts would be expected, although the ACL could be reached faster if trip limits were exceeded on a regular basis. Additionally, the common occurrence of fish houses purchasing only a certain amount of Spanish mackerel at times due to limited demand ('fish houses limits') would reduce the likelihood of vessels taking advantage of the exemption.

Establishment of a provision to allow transfer at sea for the Spanish mackerel gillnet sector through **Alternative 2** would likely result in benefits to the commercial gillnet fleet by reducing waste and maximizing economic trip efficiency. Nevertheless, commercial fishermen have indicated that they avoid this situation when possible. By allowing the transfer of Spanish mackerel at sea, Spanish mackerel regulatory discards can be converted into landings. Under

Alternative 1 (No Action) the potential benefits to the commercial Spanish mackerel fleet would not occur. **Alternatives 1 (No Action)**, and **2** are expected to have no economic impact (short or long run) on recreational fishing because anglers on board private and for-hire vessels cannot use gillnets to take Spanish mackerel in the exclusive economic zone (EEZ).

Alternative 2 would have negative impacts on the administrative environment. Because a call in would be required for each transfer at sea, the National Marine Fisheries Service (NMFS) would be responsible for establishing a call in number and monitoring and storing the transfer call in data. Additionally, enforcement of the transfer at sea provisions may be difficult since enforcement of proper transfers would need to be witnessed at sea by law enforcement. Additionally, allowing transfer of large quantities of Spanish mackerel with portions of cut gillnets from one vessel to another at sea could be considered an unsafe practice especially in rough seas far from land. However, the practice would be voluntary and the level of safety during a potential transfer would be at the discretion of both vessels involved with no requirement to participate.

Action 2. Modify the king mackerel commercial trip limit in the East Coast Florida Subzone.

Alternative 1 (No Action). Retain the current commercial trip limit regulations in place for East Coast Florida Subzone king mackerel. In the Florida East Coast Subzone (Flagler/Volusia County line south to the Miami-Dade/Monroe County line, November 1 – March 31 each year), king mackerel in or from the EEZ may be possessed on board at any time or landed in a day from a vessel with a commercial permit for king mackerel as follows:

(A) From November 1 through January 31--not to exceed 50 fish.

(B) Beginning on February 1 and continuing through March 31--

(1) If 75 % or more of the [Gulf group] Florida east coast subzone quota has been taken-- not to exceed 50 fish.

(2) If less than 75 % of the [Gulf group] Florida east coast subzone quota has been taken --not to exceed 75 fish.

Alternative 2. Change the king mackerel commercial trip limit in the Florida East Coast Subzone to 50 fish for the entire fishing season (November 1- March 31).

Alternative 3. Change the king mackerel commercial trip limit in the Florida East Coast Subzone to 75 fish for the entire fishing season (November 1- March 31).

Preferred Alternative 4. In the Florida East Coast Subzone, king mackerel in or from the EEZ may be possessed on board at any time or landed in a day from a vessel with a commercial permit for king mackerel as follows:

(A) From November 1 through the end of February--not to exceed 50 fish.

(B) Beginning on March 1 and continuing through March 31--

(1) If 70 % or more of the [Gulf group] Florida east coast subzone quota has been taken-- not to exceed 50 fish.

(2) If less than 70 % of the [Gulf group] Florida east coast subzone quota has been taken --not to exceed 75 fish.

Discussion:

The trip limit increase if 75% of the quota is not reached by February 1 was originally implemented at the request of king mackerel fishermen because they were not harvesting the full quota before the end of the fishing season (SAFMC 2000). However, in the 2011/2012 fishing year, less than 75% of the quota was reached by February 1, triggering the trip limit increase to 75 fish when king mackerel are abundant. This in turn allowed the quota to be filled quickly, requiring NMFS to close the subzone in March (**Table 2.1**) which is around Lent, the most profitable time of the year for these fishermen. The South Atlantic Council may wish to reverse this trend and implement measures to slow the rate of harvest by enough to extend fishing opportunities through the Lent season each year. Regulations at 50 CFR 622.389 allow trip limits to be adjusted via framework action.

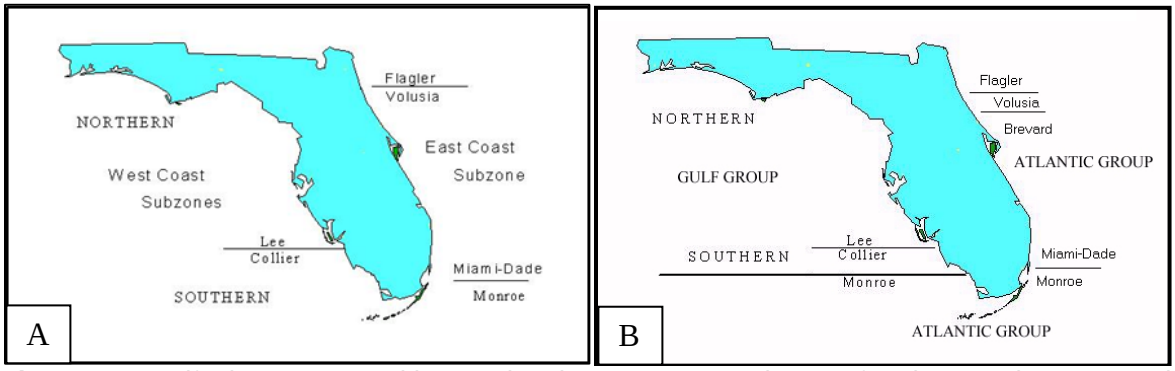

Figure 2.1. Gulf migratory group king mackerel Eastern zone subzones for A) November 1 – March 31 and B) April 1- October 31.

Table 2.1. Trip limit increases and closures dates for the Florida East Coast Subzone for the most recent 12 years. Note: This area is considered to contain Atlantic migratory group king mackerel beginning April 1, at which time harvesting can resume under the Atlantic quota.

Fishing Season	Trip limit increase to 75 fish?	Closure date
2001/2002	Yes	None
2002/2003	Yes	None
2003/2004	Yes	None
2004/2005	Yes	None
2005/2006	Yes	None
2006/2007	Yes	None
2007/2008	Yes	2/21/2008
2008/2009	No	3/6/2009
2009/2010	No	2/4/10 (reopened for an additional 6 days)
2010/2011	No	2/26/2011
2011/2012	Yes	3/14/2012
2012/2013	Yes	None

Comparison of Alternatives:

Under **Alternative 1 (No Action)** the current system of trip limits and the trip limit increase would not be modified and fishermen could reach the commercial ACL prior to the Lenten season. The biological impacts of **Alternatives 1-3** and **Preferred Alternative 4** are expected to be neutral or positive as there would be no increase in overall harvest, and in-season accountability measures are in place to close commercial harvest of king mackerel when the ACL is met. Regardless of which trip limit is implemented, total harvest of king mackerel is limited to the ACL, landings are monitored in-season, and the commercial sector is closed when the commercial ACL is projected to be met. Based on this information, changes in the trip limit would not result in negative biological impacts even though the ACL may be met at varying times during the fishing season depending on which alternative is implemented.

A modification to the trip limit system for king mackerel in the Florida East Coast Subzone could have positive and negative social and economic effects. This area of Florida has several of the most important commercial fishing communities in the king mackerel sector in the South Atlantic region, including Cocoa Beach, Fort Pierce, and Palm Beach (**Table 3.3.3.1**). In the current environmental and market conditions of this portion of the CMP fishery, the trip limit system under **Alternative 1 (No Action)** could trigger the higher trip limit of 75 fish and reach the ACL before the end of the fishing year, which may impact the supply of king mackerel in the spring. **Alternatives 2** and **3** would provide for more stability in the supply of king mackerel, which would be beneficial to fish houses and mackerel dealers. However, the 50-fish limit under **Alternative 2** could prevent the ACL for the Florida East Coast Subzone from being reached, while the 75-fish limit under **Alternative 3** would likely increase the rate of harvest and potentially cause the ACL to be met earlier than usual. **Preferred Alternative 4** would be expected to allow the step-up to be triggered, but only if necessary, which would be expected to be most beneficial to the fishermen and dealers. The stability in the supply of fish would be maintained for a longer period under **Preferred Alternative 4** while allowing some flexibility in reaching the ACL.

Chapter 3. Affected Environment

This section describes the affected environment in the proposed project area. The affected environment is divided into four major components:

- **Habitat environment** (Section 3.1)
- **Biological environment** (Section 3.2)
- **Human environment** (Sections 3.3)
- **Administrative environment** (Section 3.4)

3.1 Habitat Environment

The South Atlantic Fishery Management Council (South Atlantic Council) has management jurisdiction of the federal waters (3-200 nm) offshore of North Carolina, South Carolina, Georgia, and Florida. The continental shelf off the southeastern U.S., extending from the Dry Tortugas, Florida, to Cape Hatteras, North Carolina, encompasses an area in excess of 100,000 square km (Menzel 1993). Based on physical oceanography and geomorphology, this environment can be divided into two regions: Dry Tortugas, Florida, to Cape Canaveral, Florida, and Cape Canaveral, Florida, to Cape Hatteras, North Carolina. The continental shelf from the Dry Tortugas, Florida, to Miami, Florida, is approximately 25 km wide and narrows to approximately 5 km off Palm Beach, Florida. The shelf then broadens to approximately 120 km off of Georgia and South Carolina before narrowing to 30 km off Cape Hatteras, North Carolina. The Florida Current/Gulf Stream flows along the shelf edge throughout the region. In the southern region, this boundary current dominates the physics of the entire shelf (Lee et al. 1994).

In the northern region, additional physical processes are important and the shelf environment can be subdivided into three oceanographic zones (Atkinson et al. 1985; Menzel 1993), the outer shelf, mid-shelf, and inner shelf. The outer shelf (40-75 m) is influenced primarily by the Gulf Stream and secondarily by winds and tides. On the mid-shelf (20-40 m), the water column is almost equally affected by the Gulf Stream, winds, and tides. Inner shelf waters (0-20 m) are influenced by freshwater runoff, winds, tides, and bottom friction. Water masses present from the Dry Tortugas, Florida, to Cape Canaveral, Florida, include Florida Current water, waters originating in Florida Bay, and shelf water. From Cape Canaveral, Florida, to Cape Hatteras,

North Carolina four water masses found are: Gulf Stream water; Carolina Capes water; Georgia water; and Virginia coastal water.

Spatial and temporal variation in the position of the western boundary current has dramatic effects on water column habitats. Variation in the path of the Florida Current near the Dry Tortugas induces formation of the Tortugas Gyre (Lee et al. 1992, 1994). This cyclonic eddy has horizontal dimensions on the order of 100 km and may persist in the vicinity of the Florida Keys for several months. The Pourtales Gyre, which has been found to the east, is formed when the Tortugas Gyres moves eastward along the shelf. Upwelling occurs in the center of these gyres, thereby adding nutrients to the near surface (<100 m) water column. Wind and input of Florida Bay water also influence the water column structure on the shelf off the Florida Keys (Smith 1994; Wang et al. 1994). Further, downstream, the Gulf Stream encounters the "Charleston Bump", a topographic rise on the upper Blake Ridge where the current is often deflected offshore resulting in the formation of a cold, quasi-permanent cyclonic gyre and associated upwelling (Brooks and Bane 1978). On the continental shelf, offshore projecting shoals at Cape Fear, North Carolina, Cape Lookout, North Carolina, and Cape Hatteras, North Carolina affect longshore coastal currents and interact with Gulf Stream intrusions to produce local upwelling (Blanton et al. 1981; Janowitz and Pietrafesa 1982). Shoreward of the Gulf Stream, seasonal horizontal temperature and salinity gradients define the mid-shelf and inner-shelf fronts. In coastal waters, river discharge and estuarine tidal plumes contribute to the water column structure.

The water column from Dry Tortugas, Florida, to Cape Hatteras, North Carolina, serves as habitat for many marine fish and shellfish. Most marine fish and shellfish release pelagic eggs when spawning and thus, most species utilize the water column during some portion of their early life history (Leis 1991; Yeung and McGowan 1991). There are a large number of fishes that inhabit the water column as adults. Pelagic fishes include numerous clupeoids, flying fish, jacks, cobia, bluefish, dolphin, barracuda, and the mackerels (Schwartz 1989). Some pelagic species are associated with particular benthic habitats, while other species are truly pelagic.

3.2 Biological and Ecological Environment

3.2.1 Fish Populations Affected by this Amendment

A description of the biological environment for CMP species is provided in Amendment 18 (GMFMC/ SAFMC 2011), and is incorporated herein by reference.

Species in the fishery management plan are migratory and move into specific areas to spawn. King mackerel, for example, move from the southern portion of their range to more northern areas for the spawning season. However, environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980). King mackerel \mature at ages of 2-3 years and Spanish mackerel mature at age 1-2.

The mackerel family, Scombridae, includes tunas, mackerels and bonitos are among the most important commercial and sport fishes. The habitat of adults in the coastal pelagic management unit is the coastal waters out to the edge of the continental shelf in the Atlantic Ocean. Within the area, the occurrence of coastal migratory pelagic species is governed by temperature and salinity. All species are seldom found in water temperatures less than 20°C. Salinity preference varies, but these species generally prefer high salinity, less than 36 ppt. Salinity preference of little tunny and cobia is not well defined. The habitat for eggs and larvae of all species in the coastal pelagic management unit is the water column. Within the spawning area, eggs and larvae are concentrated in the surface waters.

King Mackerel

King mackerel is a marine pelagic species that is found throughout the Gulf of Mexico and Caribbean Sea and along the western Atlantic from the Gulf of Maine to Brazil and from the shore to 200 meter depths. Adults are known to spawn in areas of low turbidity, with salinity and temperatures of approximately 30 ppt and 27°C, respectively. There are major spawning areas off Louisiana and Texas in the Gulf (McEachran and Finucane 1979); and off the Carolinas, Cape Canaveral, and Miami in the western Atlantic (Mayo 1973; Schekter 1971; Wollam 1970).

Spanish Mackerel

Spanish mackerel is also a pelagic species, occurring in depths 75 meters throughout the coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Collette and Russo 1979). Adults usually are found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas, especially the higher salinity areas, during seasonal migrations, but are considered rare and infrequent in many Gulf estuaries. A detailed description of the Spanish mackerel gillnet fleet and how it operates is contained in **Section 2.1** of this document.

3.2.2 Protected Species

There are 40 species protected by federal law that may occur in the EEZ of the South Atlantic Region and are under the purview of NMFS. Thirty-one of these species are marine mammals protected under the Marine Mammal Protection Act (MMPA). Six of these marine mammal species are also listed as endangered under the Endangered Species Act (ESA) (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the smalltooth sawfish; five distinct population segments (DPSs) of Atlantic sturgeon; and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]) are also protected under the ESA. Portions of designated critical habitat for North Atlantic right whales and *Acropora* corals also occur within the South Atlantic Council's jurisdiction. Section 3.5 in the Comprehensive ACL Amendment (SAFMC 2011), and Section 3.2.2 in Snapper Grouper

Regulatory Amendment 13 (SAFMC 2012), describe the life history characteristics in detail for these species. Section 3.5 of the Comprehensive ACL Amendment and Section 3.2.2 of Regulatory Amendment 13 are hereby incorporated by reference and may be found at: http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx and http://sero.nmfs.noaa.gov/sf/pdfs/Reg13_FINAL_Dec2012.pdf, respectively. The potential impacts from the continued authorization of the mackerel fishery on all ESA-listed species were considered in the August 13, 2007 biological opinion titled: *The Continued Authorization of Fishing under the Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Atlantic and Gulf of Mexico (CMPR FMP).*

The biological opinion concluded the continued authorization of the fishery may adversely affect green, leatherback, hawksbill, Kemp's ridley, and loggerhead sea turtles and smalltooth sawfish. However, it determined the continued operation of the CMP fishery is not likely to jeopardize the continued existence of sea turtles or smalltooth sawfish. The 2007 biological opinion also concluded that ESA-listed whales, elkhorn and staghorn coral, and Gulf sturgeon were all not likely to be adversely affected by the fishery for CMP. Lastly, the biological opinion determined that the designated critical habitat for the North Atlantic right whale would not be adversely affected. In a separate consultation memorandum dated May 18, 2010, NMFS concluded the continued authorization of the CMP fishery, is not likely to adversely affect elkhorn and staghorn critical habitat.

Subsequent to the 2007 biological opinion and the May 2010 memorandum, NMFS made several modifications to the list of protected species for which they are responsible. These changes included 1) the determination that the loggerhead sea turtle population consists of nine distinct population segments (DPSs; 76 FR 58868), 2) the listing of five DPSs of Atlantic sturgeon, and 3) the proposed listing of 66 coral species and reclassification of *Acropora* from threatened to endangered (77FR 73220). What affects the CMP fishery is likely to have on these protected species has never been analyzed in a Section 7 consultation and therefore, NMFS has reinitiated consultation on this fishery. In a January 11, 2013, memo, the NMFS determined the continued authorization of the CMPR FMP during the reinitiation period is not likely to jeopardize the continued existence of or impede the recovery of any Atlantic sturgeon DPS with respect to threats identified in the final rule. Therefore, the fishery remains open while NMFS's Protected Resources Division continues to work towards a new biological opinion for the CMPR FMP.

3.3 Social and Economic Environment

3.3.1 Economic Environment

3.3.1.1 Economic Description of the Commercial Fishery

An economic description of the commercial fisheries for the CMP species is contained in Vondruska (2010) and is incorporated herein by reference. Select summary statistics are provided in **Table 3.3.1.1**.

Table 3.3.1.1. Five-year average performance statistics, including number of vessels landing each species, value of the species for those vessels, value of all species for those vessels, and the average value for those vessels.

Species	Vessels	Ex-vessel Value[2] Species from Column 1 (millions)	Ex-vessel Value All Species (millions)	Average Ex-vessel Value per Vessel
Atlantic Migratory group King Mackerel	776	$4.90	$27.24	$35,100
Atlantic Migratory group Spanish Mackerel	387	$1.87	$11.99	$31,000

Notes: Each row should be interpreted individually, as there will be substantial double counting across rows in columns 2 and 4, e.g., the same vessel might fish for different migratory groups of the same or different species.
Five-year averages in column 3 are based on fishing years for king and Spanish mackerels (2007/2008, 2008/2009,…, 2011/2012).
Five-year averages in column 4 are based on calendar years (2007-2011).
All value analyses account for inflation by adjusting dollar amounts reported from 2007-2012 (i.e., current dollars) to 2011 dollars (i.e., constant dollars) using price indices from the Bureau of Labor Statistics, specifically SERIES CUUR0000SA0, CPI-U, ALL ITEMS, NOT SEASONALLY ADJUSTED, BASE=1982-84.
Source: NMFS SEFSC Coastal Fisheries Logbook for landings and NMFS Accumulated Landings System for prices. Note that small amounts (0.03% of king mackerel, 1.95% of Spanish mackerel) are landed in the Northeast and are not counted here. Similar, landings and revenue from State waters by vessels without federal permits are not included.

Economic Activity

An alternate, regional perspective on the economics of the CMP fishery is economic impact assessment or analysis. The desire to eat fish generates economic activity as consumers spend their income on fish products or services associated with fish, such as a restaurant visit. This spurs economic activity in the region(s) where fish is purchased and fishing occurs. It should be clearly noted that, in the absence of CMP fish for purchase, consumers would presumably spend their income on other goods and services (i.e., substitute fish, substitute food, or different type of consumption altogether). As such, the economic impact analysis below represents a distributional analysis only.

Estimates of the average annual economic activity (impacts) associated with the commercial fisheries for CMP species addressed in the amendment were derived using the model developed for and applied in NOAA SEFSC SSRG (NMFS 2011) and are provided in **Table 3.3.1.2**. Business activity for the commercial sector is characterized in the form of full-time equivalent (FTE) jobs, income impacts (wages, salaries, and self-employed income), and output (sales) impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

As noted in **Table 3.3.1.1**, the annual period refers to either the fishing year or calendar year, as appropriate to the management of the species. The estimates of economic activity include the direct effects (effects in the sector where an expenditure is actually made), indirect effects (effects in sectors providing goods and services to directly affected sectors), and induced effects

(effects induced by the personal consumption expenditures of employees in the direct and indirectly affected sectors). Estimates are provided for the economic activity associated with the ex-vessel revenues from the individual CMP species as well as the revenues from all species harvested by these same vessels. The estimates of ex-vessel value are replicated from **Table 3.3.1.1**.

Table 3.3.1.2. Average annual economic activity associated with the king mackerel and Spanish mackerel fisheries in the South Atlantic.

Species	Average Ex-vessel Value[1] (millions)	Total Jobs	Harvester Jobs	Output (Sales) Impacts (millions)	Income Impacts (millions)
Atlantic Migratory group King Mackerel	$4.57	862	112	$60.21	$25.66
- All Species[2]	$23.41	4,412	576	$308.26	$131.38
Atlantic Migratory group Spanish Mackerel	$1.85	348	45	$24.31	$10.36
- All Species	$9.76	1,840	240	$128.52	$54.77

[1]2008 dollars.
[2]Includes ex-vessel revenues and economic activity associated with the average annual harvests of all species harvested by vessels that harvested the subject CMP species.

Permits

The numbers of commercial permits associated with the king mackerel and Spanish mackerel fishery as of March 1, 2013, are provided in **Table 3.3.1.3**.

Table 3.3.1.3. Number of commercial permits associated with the king mackerel and Spanish mackerel fishery.

	Valid Permits[1]
King Mackerel	1,366
King Mackerel Gillnet	22
Spanish Mackerel	1,747

[1]Non-expired. Expired permits may be renewed within one year of expiration.

3.3.1.2 Economic Description of the Recreational Fishery

The recreational fishery is comprised of the private sector and for-hire sector. The private sector includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire sector is composed of the charter vessel and headboat (also called party boat) sectors. Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person.

Effort

Extrapolated recreational effort derived from the MRFSS/MRIP database can be characterized in terms of the number of trips as follows:

Target effort - The number of individual angler trips, regardless of trip duration, where the angler indicated that the species was targeted as either the first or the second primary target for the trip. The species did not have to be caught.

Catch effort - The number of individual angler trips, regardless of trip duration and target intent, where the individual species was caught. The fish caught did not have to be kept.

All recreational trips - The total estimated number of recreational trips taken by individual anglers, regardless of target intent or catch success.

Estimates of average annual recreational effort, 2007-2011, for the CMP species addressed in this amendment are provided in **Tables 3.3.1.4-5**. In each table, where appropriate, the "total" refers to the total number of target or catch trips, as appropriate, while "all trips" refers to the total number of trips across all species regardless of target intent of catch success. The estimates were evaluated by calendar year and not fishing year. As a result, while the results may not be fully reflective of effort associated with specific stocks (e.g., Gulf migratory group versus Atlantic migratory group for king or Spanish mackerel), the results are consistent with fishing activity based on area fished.

The effort situation is somewhat different for the South Atlantic states (**Table 3.3.1.4**). While Spanish mackerel still records the highest average number of catch trips per year, the difference over king mackerel is not as pronounced as in the Gulf. Further, more trips target king mackerel than Spanish mackerel (and cobia). Further, both species, as well as cobia, are subject to more target effort than catch effort. East Florida dominates for all three species and effort type.

In the South Atlantic, the private mode leads for all three species and effort type (**Table 3.3.1.5**).

Table 3.3.1.4. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic, by species and by state, across all modes, 2007-2011.

	Target Trips					
	East Florida	**Georgia**	**North Carolina**	**South Carolina**	**Total**	**All Trips**
King Mackerel	365	11	166	86	629	19,842
Spanish Mackerel	186	4	258	64	512	
	Catch Trips					
King Mackerel	263	7	63	22	355	19,842
Spanish Mackerel	242	9	200	54	505	

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.5. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic, by species and by mode, across all states, 2007-2011.

	Target Trips				
	Shore	**Charter**	**Private**	**Total**	**All Trips**
King Mackerel	102	27	500	629	19,842
Spanish Mackerel	231	8	273	512	
	Catch Trips				
King Mackerel	7	49	298	355	19,842
Spanish Mackerel	189	22	294	505	

Source: NMFS MRFSS/MRIP and SERO.

Tables 3.3.1.6-9 contain estimates of the average annual (2007-2011) target trips and catch trips, by species, for each state and mode.

Table 3.3.1.6. Average annual (calendar year) recreational effort (thousand trips), East Florida, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	18	5	19	35	328	223	365	263
Spanish Mackerel	119	116	1	3	67	123	186	242

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.7. Average annual (calendar year) recreational effort (thousand trips), Georgia, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	0	0	0	0	11	7	11	7
Spanish Mackerel	2	2	0	1	2	7	4	9

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.8. Average annual (calendar year) recreational effort (thousand trips), North Carolina, by species and by mode, 2007-2011.

	Shore		**Charter**		**Private**		**Total**	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	37	1	2	9	128	53	166	63
Spanish Mackerel	67	41	4	12	187	148	258	200

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.9. Average annual (calendar year) recreational effort (thousand trips), South Carolina, by species and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
King Mackerel	47	1	5	5	33	16	86	22
Spanish Mackerel	43	31	3	7	17	16	64	54

Source: NMFS MRFSS/MRIP and SERO.

Similar analysis of recreational effort is not possible for the headboat sector because the headboat data are not collected at the angler level. Estimates of effort in the headboat sector are provided in terms of angler days, or the number of standardized 12-hour fishing days that account for the different half-, three-quarter-, and full-day fishing trips by headboats.

Headboat effort and harvest data, however, is collected through the NMFS Southeast Fisheries Science Center Headboat Survey (Headboat Survey) program. The average annual (2007-2011) number of headboat angler days is presented in **Table 3.3.1.10**. Due to confidentiality issues, Georgia estimates are combined with those of East Florida on the Atlantic.

Table 3.3.1.10. Southeast headboat angler days, 2007-2011.

	South Atlantic			
	East Florida/ Georgia	**North Carolina**	**South Carolina**	**Total**
2007	157,150	29,002	60,729	246,881
2008	124,119	16,982	47,287	188,388
2009	136,420	19,468	40,919	196,807
2010	123,662	21,071	44,951	189,684
2011	124,041	18,457	44,645	187,143
5-year Average	133,078	20,996	47,706	201,781

Source: Headboat Survey, NMFS, SEFSC, Beaufort Lab.

Permits

There are 1,441 pelagic for-hire (charter or headboat) permits (non-expired) as of March 1, 2013. The for-hire permits do not distinguish between charter vessels and headboats, though information on the primary method of operation is collected on the permit application form. Some vessels may operate as both a charter vessel and a headboat, depending on the season or purpose of the trip. An estimated 70 headboats in the Gulf and an estimated 75 headboats in the South Atlantic participate in the Headboat Survey.

There are no specific federal permitting requirements for recreational anglers to harvest coastal migratory pelagic species. Instead, anglers are required to either possess a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions.

Economic Value, Expenditures, and Economic Activity

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus. The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips.

The estimated consumer surplus per fish kept for king mackerel to anglers in the South Atlantic, based on the estimated willingness-to-pay to avoid a reduction in the bag limit, is $7 (assumed 2006 dollars; Whitehead 2006). Comparable estimates have not been identified for Spanish mackerel.

While anglers receive economic value as measured by the consumer surplus per fish kept, for-hire businesses receive value from the services they provide. Producer surplus is the measure of the economic value these operations receive. Producer surplus is the difference between the revenue a business receives for a good or service, such as a charter or headboat trip, and the cost the business incurs to provide that good or service. Estimates of the producer surplus associated with for-hire trips are not available. However, proxy values in the form of net operating revenues are available (D. Carter, NMFS SEFSC, personal communication, August 2010). These estimates were culled from several studies – Liese et al. (2011), Dumas et al. (2009), Holland et al. (1999), and Sutton et al. (1999). Estimates of net operating revenue per angler trip (2009 dollars) on representative charter trips (average charter trip regardless of area fished) are $146 for Louisiana through east Florida, $135 for east Florida, $156 for northeast Florida, and $128 for North Carolina. For charter trips into the EEZ only, net operating revenues are $141 in east Florida and $148 in northeast Florida. For full-day and overnight trips only, net operating revenues are estimated to be $155-$160 in North Carolina. Comparable estimates are not available for Georgia, South Carolina, or Texas.

Net operating revenues per angler trip are lower for headboats than for charter boats. Net operating revenue estimates for a representative headboat trip are $48 in the Gulf (all states and all of Florida), and $63-$68 in North Carolina. For full-day and overnight headboat trips, net operating revenues are estimated to be $74-$77 in North Carolina. Comparable estimates are not available for Georgia and South Carolina.

These value estimates should not be confused with angler expenditures or the economic activity (impacts) associated with these expenditures. While expenditures for a specific good or service may represent a proxy or lower bound of total value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

The desire for recreational fishing generates economic activity as consumers spend their income on the various goods and services needed for recreational fishing. This spurs economic activity

in the region where the recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services. As such, the analysis below represents a distributional analysis only.

Estimates of the regional economic activity (impacts) associated with the recreational fishery for king mackerel and Spanish mackerel were derived using average coefficients for recreational angling across all fisheries (species), as derived by an economic add-on to the MRFSS, and described and utilized in NMFS (2011) and are provided in **Tables 3.3.1.11** and **3.3.1.12**. Business activity is characterized in the form of FTE jobs, income impacts (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income and value-added impacts are not equivalent, though similarity in the magnitude of multipliers may result in roughly equivalent values. Neither income nor value-added impacts should be added to output impacts because this would result in double counting. Job and output (sales) impacts; however, may be added across sectors.

Estimates of the average expenditures by recreational anglers are provided in NMFS (2009) and are incorporated herein by reference. Estimates of the average recreational effort (2007-2011) and associated economic impacts (2008 dollars) are provided in **Table 3.3.1.11**. Target trips were used as the measure of recreational effort. As previously discussed, more trips may catch some species than target the species. Where such occurs, estimates of the economic activity associated with the average number of catch trips can be calculated based on the ratio of catch trips to target trips because the average output impact and jobs per trip cannot be differentiated by trip intent. For example, if the number of catch trips is three times the number of target trips for a particular state and mode, the estimate of the associated activity would equal three times the estimate associated with target trips. **Table 3.3.1.11.** contains estimates of the average annual (2007-2011) target trips and catch trips, by species, for each state and mode.

It should be noted that output impacts and value added impacts are not additive and the impacts for each species should not be added because of possible duplication (some trips may target multiple species). Also, the estimates of economic activity should not be added across states to generate a regional total because state-level impacts reflect the economic activity expected to occur within the state before the revenues or expenditures "leak" outside the state, possibly to another state within the region. Under a regional model, economic activity that "leaks" from, for example, Alabama into Louisiana, would still occur within the region and continue to be tabulated. As a result, regional totals would be expected to be greater than the sum of the individual state totals. Regional estimates of the economic activity associated with the fisheries for these species are unavailable at this time.

The distribution of the estimates of economic activity by state and mode are consistent with the effort distribution with the exception that charter anglers, on average, spend considerably more money per trip than anglers in other modes. As a result, the number of charter trips can be a fraction of the number of private trips, yet generate similar estimates of the amount of economic

activity.

Table 3.3.1.11. Summary of king mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), South Atlantic states. Output and value added impacts are not additive.

	North Carolina	South Carolina	Georgia	East Florida
	Shore Mode			
Target Trips	37,113	47,408	0	17,947
Output Impact	$9,912,562	$5,147,891	$0	$546,734
Value Added Impact	$5,519,852	$2,866,467	$0	$317,409
Jobs	112	59	0	5
	Private/Rental Mode			
Target Trips	127,556	33,068	11,070	328,019
Output Impact	$7,424,590	$1,551,501	$184,435	$13,227,424
Value Added Impact	$4,186,496	$905,280	$111,875	$7,904,088
Jobs	75	17	2	130
	Charter Mode			
Target Trips	1,540	5,476	318	19,418
Output Impact	$639,289	$1,969,232	$21,318	$8,115,065
Value Added Impact	$358,770	$1,112,535	$12,442	$4,777,567
Jobs	8	24	0	78
	All Modes			
Target Trips	166,209	85,952	11,388	365,384
Output Impact	$17,976,441	$8,668,624	$205,752	$21,889,223
Value Added Impact	$10,065,119	$4,884,283	$124,317	$12,999,064
Jobs	195	99	2	214

Source: Effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2011).

Table 3.3.1.12. Summary of Spanish mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), South Atlantic states. Output and value added impacts are not additive.

	North Carolina	South Carolina	Georgia	East Florida
	Shore Mode			
Target Trips	66,917	43,394	1,623	118,706
Output Impact	$17,872,953	$4,712,022	$27,878	$3,616,236
Value Added Impact	$9,952,630	$2,623,766	$16,717	$2,099,424
Jobs	202	54	0	36
	Private/Rental Mode			
Target Trips	187,165	17,139	2,113	66,616
Output Impact	$10,894,222	$804,136	$35,204	$2,686,302
Value Added Impact	$6,142,915	$469,203	$21,354	$1,605,208
Jobs	110	9	0	26
	Charter Mode			
Target Trips	4,404	3,000	89	595

Output Impact	$1,828,200	$1,078,834	$5,966	$248,659
Value Added Impact	$1,025,990	$609,497	$3,482	$146,393
Jobs	22	13	0	2
	All Modes			
Target Trips	258,486	63,533	3,825	185,917
Output Impact	$30,595,375	$6,594,993	$69,049	$6,551,197
Value Added Impact	$17,121,534	$3,702,465	$41,553	$3,851,024
Jobs	334	76	1	65

Source: Effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2011).

As previously noted, the values provided in the tables above only reflect effort derived from the MRFSS/MRIP. Because the headboat sector in the Southeast Region is not covered by the MRFSS/MRIP, the results do not include estimates of the economic activity associated with headboat anglers. While estimates of headboat effort are available, species target information is not collected in the Headboat Survey, which prevents the generation of estimates of the number of headboat target trips for individual species. Further, because the model developed for NMFS (2009) was based on expenditure data collected through the MRFSS/MRIP, expenditure data from headboat anglers was not available and appropriate economic expenditure coefficients have not been estimated. As a result, estimates of the economic activity associated with the headboat sector comparable to those of the other recreational sector modes cannot be provided.

3.3.2 Social Environment

Demographic profiles of coastal communities can be found in Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011). The referenced description focuses on available geographic and demographic data to identify communities having a strong relationship with king mackerel, and Spanish mackerel fishing using 2008 accumulated landings system (ALS) data. A strong relationship is defined as having significant landings and revenue for these species. Thus, positive or negative impacts from regulatory change are expected to occur in places with greater landings. This section has been updated using 2011 ALS data, the most recent year available.

The descriptions of South Atlantic communities include information about the top communities based upon a regional quotient of commercial landings and value for CMP species. These top communities are referred to in this document as "CMP Communities" because these are the areas that would be most likely to experience the effects of proposed actions that could change the CMP fishery and impact the participants and associated businesses and communities within the region. The identified CMP communities in this section are referenced in Section 4.1.3, 4.2.3, and 4.3.3 in order to provide information on how the actions and alternatives could impact specific communities.

The regional quotient is the proportion of landings and value out of the total landings and value of that species for that region. It is a relative measure. Profiles are included for the top three communities (by commercial lbs landed) for each CMP species. This profile includes a figure

that presents the local quotient and a description of the CMP permits held by community members.

The local quotient is the proportion of landings and value for the top species out of the total landings and value of all species combined for that community. This measure provides additional information to assess potential effects on a particular community because the local quotient highlights the social and economic importance of a species in a community. If a community is identified as a CMP community based on the regional quotient, this does not necessarily mean that the community would experience significant impacts due to changes in the CMP fishery if a different species or number of species were also important to the local community and economy.

In addition to the regional and local quotients in understanding how South Atlantic communities are engaged and reliant on fishing, indices were created using secondary data from permit and landings information for the commercial sector and permit information for the recreational sector (Colburn and Jepson 2013; Jacob et al. 2012). Fishing engagement is primarily the absolute numbers of permits, landings and value. For commercial fishing, the analysis used the number of vessels designated commercial by homeport and owner address, value of landings and total number of commercial permits for each community. For recreational engagement we used the number of recreational permits, vessels designated as recreational by homeport and owners address. Fishing reliance has the same variables as engagement divided by population to give an indication of the per capita influence of this activity.

Using a principal component and single solution factor analysis each community receives a factor score for each index to compare to other communities. Taking the communities with the highest regional quotients, factor scores of both engagement and reliance for both commercial and recreational fishing were plotted. Two thresholds of one and ½ standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. The factor scores are standardized therefore a score above 1 is also above one standard deviation. A score above ½ standard deviation is considered engaged or reliant with anything above 1 standard deviation to be very engaged or reliant.

The reliance index uses factor scores that are normalized. The factor score is similar to a z-score in that the mean is always zero and positive scores are above the mean and negative scores are below the mean. Comparisons between scores are relative but one should bear in mind that like a z-sore the factor score puts the community on a spot in the distribution. Objectively they have a score related to the percent of communities with those similar attributes. For example, a score of 2.0 means the community is two standard deviations above the mean and is among the 2.27% most vulnerable places in the study (normal distribution curve). Reliance score comparisons between communities are relative. However, if the community scores greater than two standard deviations above the mean, this indicated that the community is dependent on the species. By examining the component variables on the reliance index and how they are weighted by factor score, this provides a measurement of commercial reliance. The reliance index provides a way

to gauge change over time with these communities but also provides a comparison of one community with another.

3.3.2.1 South Atlantic Coastal Pelagic Fishing Communities

King Mackerel

Commercial Communities

In **Figure 3.3.2.1**, Cocoa, Florida, lands over 25% of all king mackerel for South Atlantic fishing communities and those landings represent over 30% of the value. Only four North Carolina communities make up the top fifteen, and no South Carolina or Georgia communities are included in this graph.

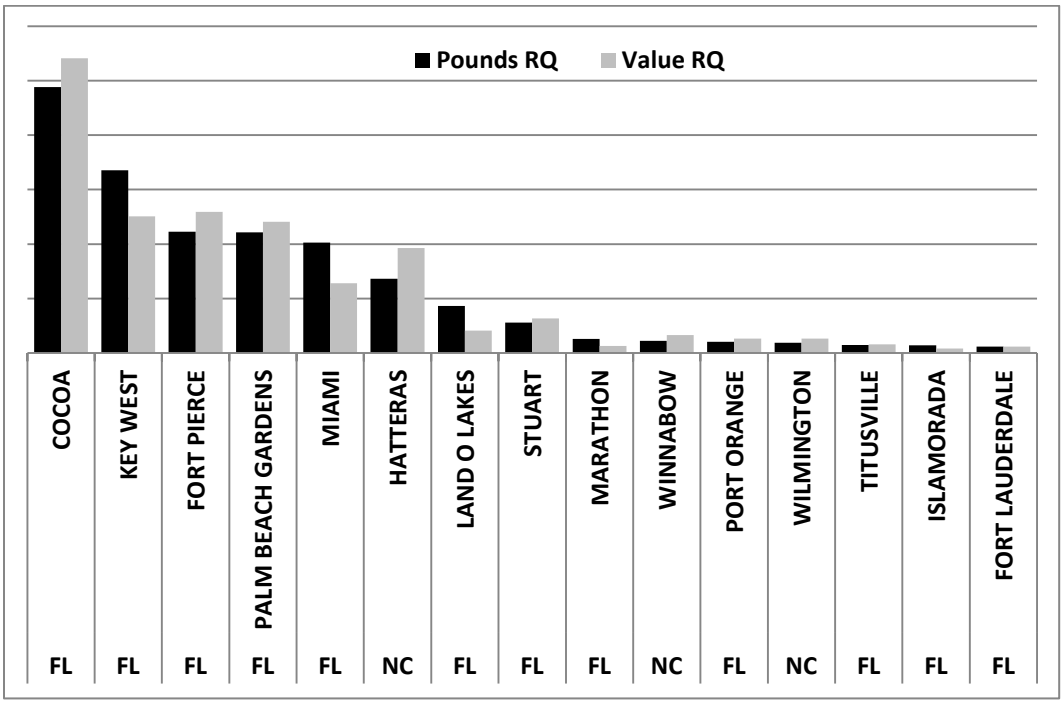

Figure 3.3.2.1. Top fifteen South Atlantic communities ranked by lbs and value regional quotient (RQ) of king mackerel. Source: ALS 2011

Reliance on and Engagement with Commercial and Recreational Fishing

For king mackerel (**Figure 3.3.2.2**), the primary communities that demonstrate high levels of commercial fishing engagement and reliance are include Fort Pierce, Florida; Key West, Florida; Marathon, Florida; Miami Florida; and Wilmington, North Carolina. Communities with substantial recreational engagement and reliance include the Florida communities of Fort Lauderdale, Islamorada, Key West, Marathon, and Miami.

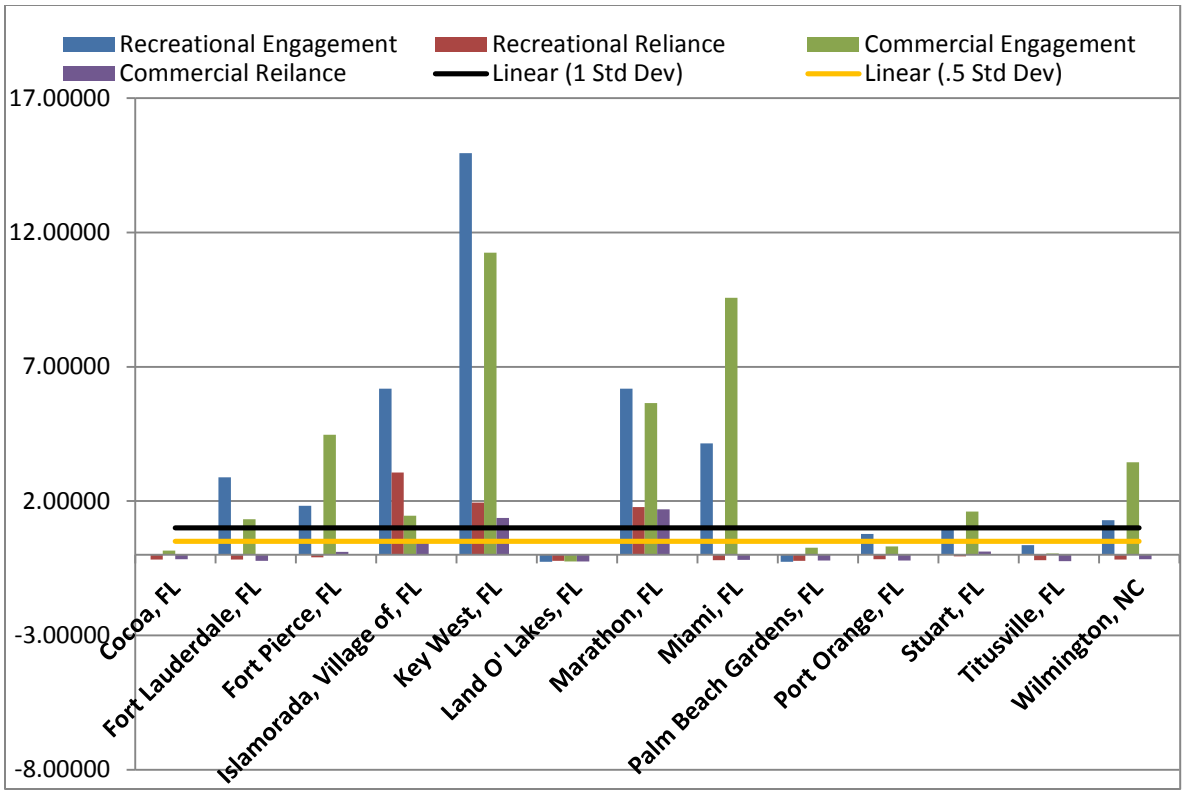

Figure 3.3.2.2. Commercial and recreational reliance and engagement for thirteen South Atlantic communities with the top regional quotients for king mackerel.
Source: SERO Social Indicator Database 2013

Spanish Mackerel

Commercial Communities

For Spanish mackerel in the South Atlantic (**Figure 3.3.2.3**), Fort Pierce, Florida, has almost 32% of the landings and 50% of the value. Cocoa, Florida, is second with about 16.5% of landings and about 31% of value. Although Hatteras, North Carolina ranked third for value, the community had lower landings than Palm Beach Gardens, Florida. No South Carolina or Georgia communities are included in the top fifteen for Spanish mackerel.

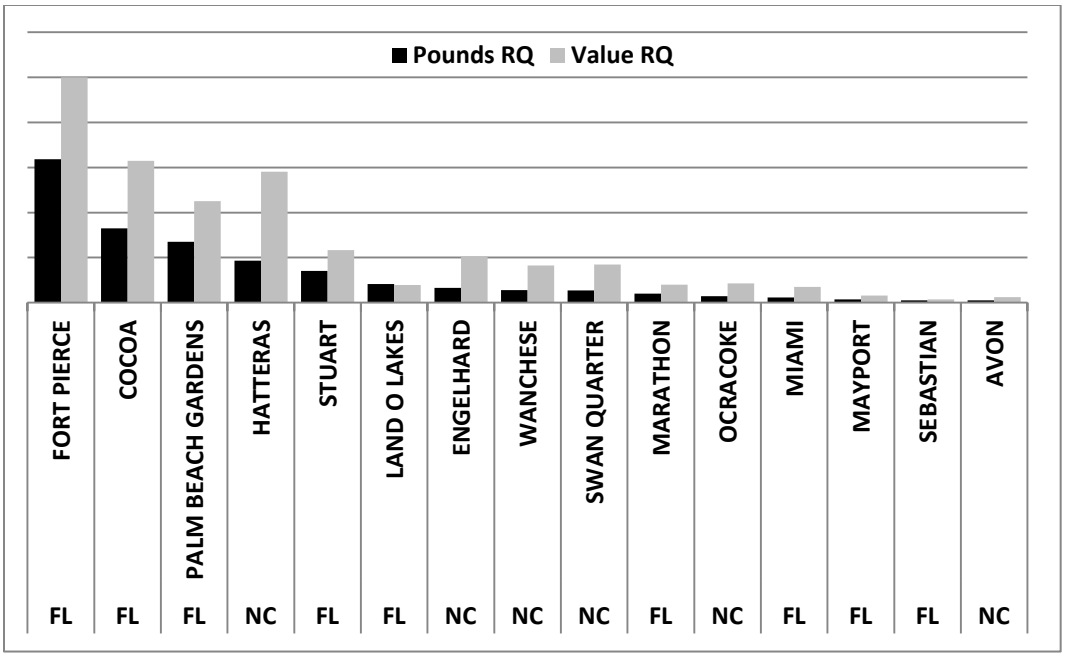

Figure 3.3.3.3. Top fifteen South Atlantic communities ranked by lbs and value of regional quotient (RQ) of Spanish mackerel.
Source: ALS 2011

Reliance on and Engagement with Commercial and Recreational Fishing

For significant communities in the Spanish mackerel fishery, **Figure 3.3.2.4** shows commercial and recreational engagement and reliance on fishing. The primary commercial communities in the Spanish mackerel fishery include Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; Stuart, Florida; and Wanchese, North Carolina. The primary recreational communities in the Spanish mackerel fishery are Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; and Wanchese, North Carolina.

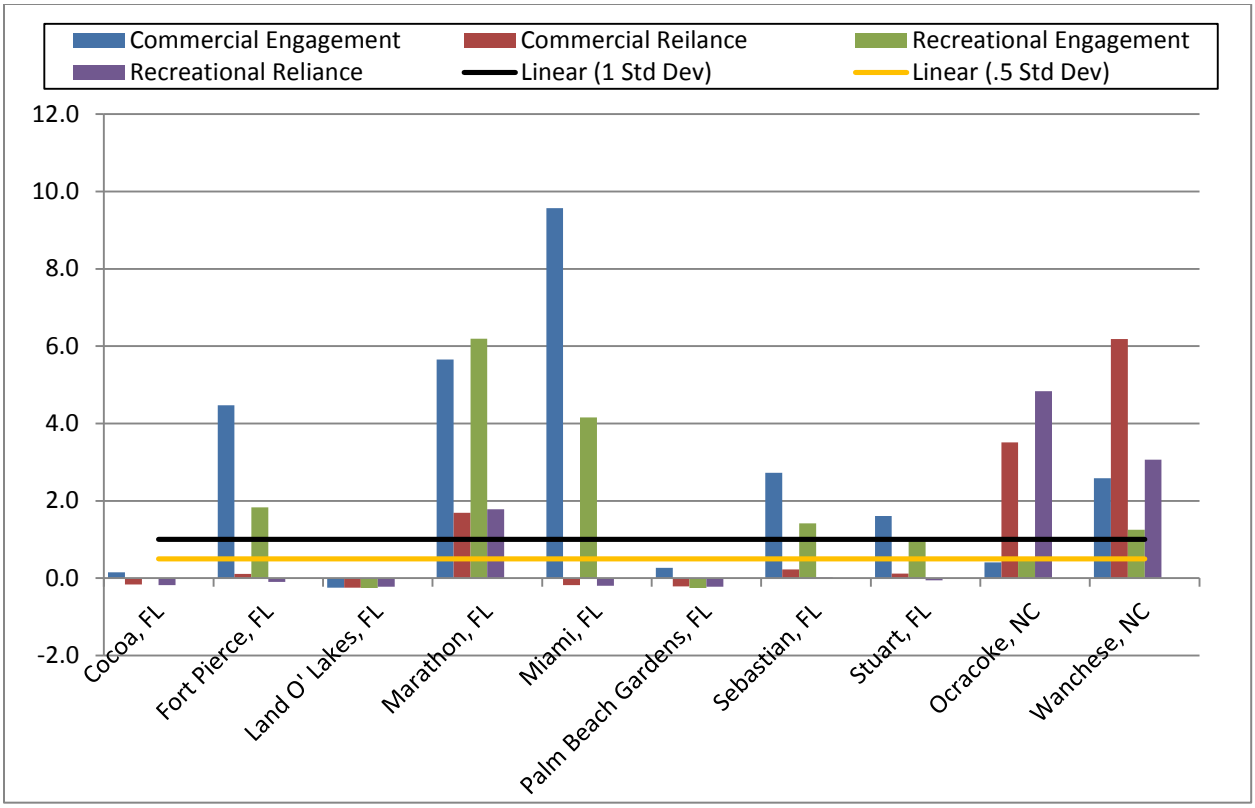

Figure 3.3.3.4. Commercial and recreational reliance and engagement for ten South Atlantic communities with the top regional quotients for Spanish mackerel.
Source: SERO Social Indicator Database 2013

3.3.2.2 Mid-Atlantic Coastal Pelagic Fishing Communities

The South Atlantic Council manages Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia through the Mid-Atlantic region as well as in the South Atlantic region. Overall, landings of these species in the Mid-Atlantic region are very low, and management actions by the South Atlantic Council likely have minimal impacts on Mid-Atlantic communities.

King Mackerel

Commercial Communities

For king mackerel in the Mid-Atlantic (**Figure 3.3.2.5**), the relatively highest level of landings at the regional level occur in Accomac, Virginia. Other Mid-Atlantic communities with commercial king mackerel landings include Hampton, Virginia; Barnegat Light, New Jersey; Amagansett, New York; Moriches, New York; and Montauk, New York. No communities in Pennsylvania, Delaware, or Maryland are included in the top Mid-Atlantic communities for king mackerel.

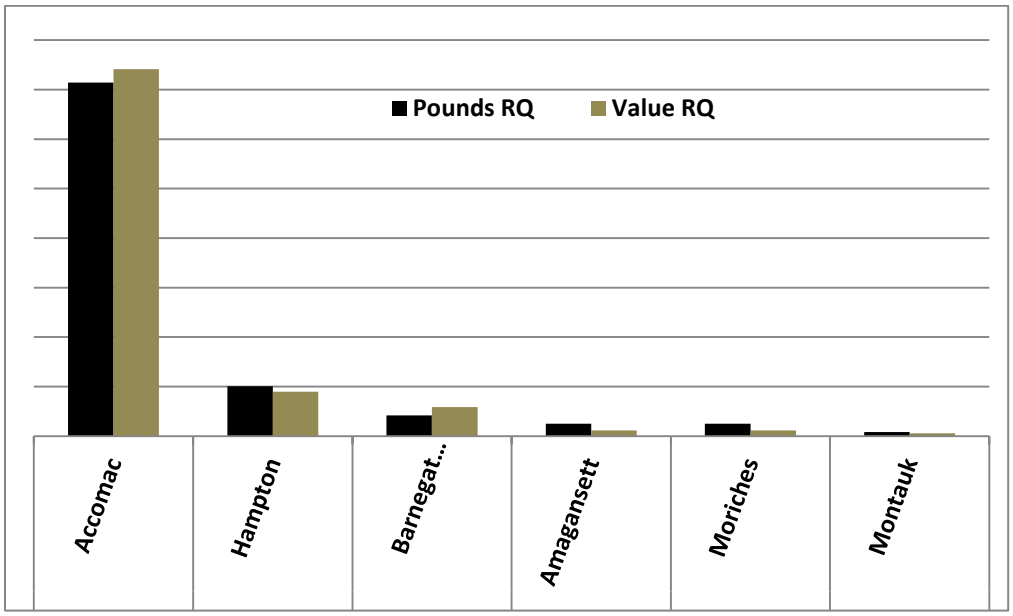

Figure 3.3.2.5. Top Mid-Atlantic communities ranked by lbs and value regional quotient (RQ) of king mackerel.
Source: NEFSC 2011

Reliance on and Engagement with Commercial and Recreational Fishing

For king mackerel (**Figure 3.3.2.6**), the primary Mid-Atlantic communities that demonstrate relatively high levels of commercial fishing engagement and reliance are include Montauk, New York; and Barnegat Light, New Jersey. Communities with substantial recreational engagement and reliance include Montauk, New York; Hampton, Virginia; and Barnegat Light, New Jersey.

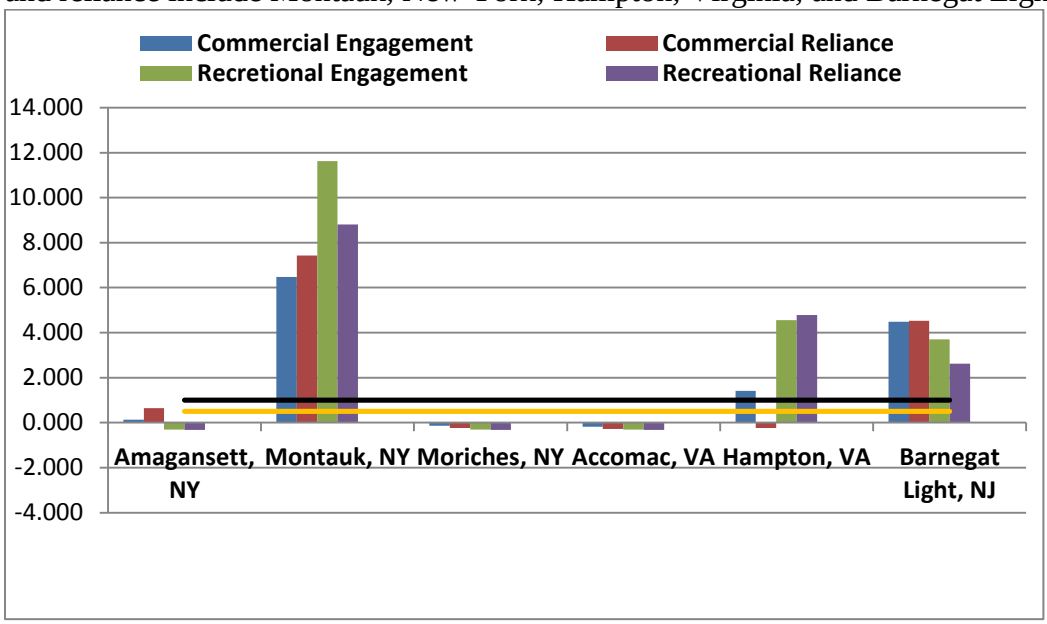

Figure 3.3.2.6. Commercial and recreational reliance and engagement for Mid-Atlantic communities with the top regional quotients for king mackerel. Source: SERO/NEFSC Social Indicator Database 2013

Spanish Mackerel

Commercial Communities

For Spanish mackerel in the Atlantic (**Figure 3.3.2.7**), the primary community with the relatively highest level of landings of at the regional level is Virginia Beach, Virginia. The Virginia counties of Gloucester, Northampton, and Northcumberland also include communities with higher levels of landings in the Mid-Atlantic region. Some communities in Maryland reported landings of Spanish mackerel (minimal), but no communities in New York, New Jersey, Pennsylvania, or Delaware are included in the top communities for Spanish mackerel.

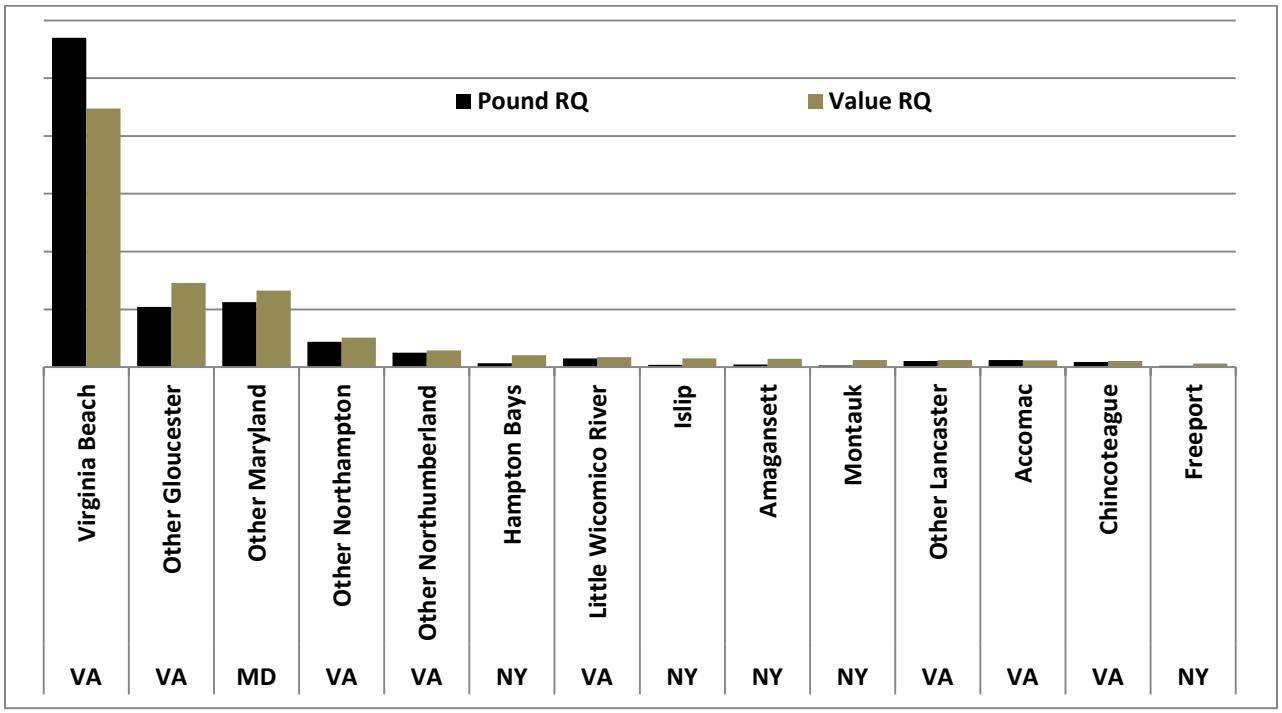

Figure 3.3.2.7. Top Mid-Atlantic communities ranked by lbs and value regional quotient (RQ) of Spanish mackerel.
Source: NEFSC 2011

Reliance on and Engagement with Commercial and Recreational Fishing

For king mackerel (**Figure 3.3.2.8**), the primary communities that demonstrate relatively high levels of commercial fishing engagement and reliance are Montauk, New York, and Hampton Bays, New York. Communities with relatively substantial recreational engagement and reliance include Montauk, New York; Virginia Beach, Virginia; Chincoteague, Virginia; and Freeport, New York.

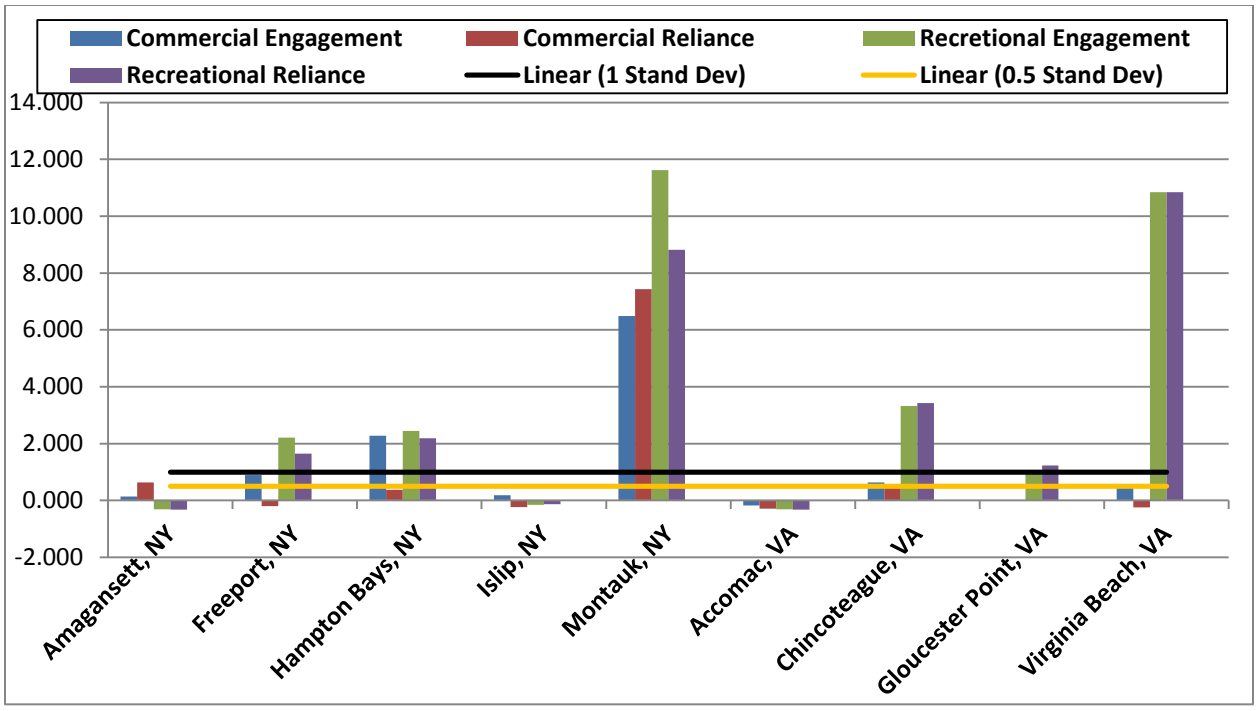

Figure 3.3.2.8. Commercial and recreational reliance and engagement for Mid-Atlantic communities with the top regional quotients for Spanish mackerel.
Source: SERO/NEFSC Social Indicator Database 2013

3.3.3 Environmental Justice Considerations

Executive Order 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. This executive order is generally referred to as environmental justice (EJ).

To evaluate EJ considerations for the proposed actions, information on poverty and minority rates is examined at the county level. Information on the race and income status for groups at the different participation levels (vessel owners, crew, dealers, processors, employees, employees of associated support industries, etc.) is not available. Because the proposed actions would be expected to affect fishermen and associated industries in several communities along the Gulf and South Atlantic coasts and not just those profiled, it is possible that other counties or communities have poverty or minority rates that exceed the EJ thresholds.

In order to identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If the value for the community or county was greater than or equal to 1.2 times the state average, then the community or county was considered an area of potential EJ concern. Census data for the year

2010 were used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in **Table 3.3.3.1**; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table**.**

Table 3.3.3.1. Environmental justice thresholds (2010 U.S. Census data) for counties in the South Atlantic region. Only coastal counties (east coast for Florida) with minority and/or poverty rates that exceed the state threshold are listed.

State	County	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold*
Florida		**47.4**	**56.88**	**13.18**	**15.81**
	Broward	52.0	-4.6	11.7	4.11
	Miami-Dade	81.9	-34.5	16.9	-1.09
	Orange County	50.3	-2.9	12.7	3.11
	Osceola	54.1	-6.7	13.3	2.51
Georgia		**50.0**	**60.0**	**15.0**	**18.0**
	Liberty	53.2	-3.2	17.5	0.5
South Carolina		**41.9**	**50.28**	**15.82**	**18.98**
	Colleton	44.4	-2.5	21.4	-2.42
	Georgetown	37.6	4.3	19.3	-0.32
	Hampton	59.0	-17.1	20.2	-1.22
	Jasper	61.8	-19.9	9.9	-0.92
North Carolina		**39.1**	**46.92**	**15.07**	**18.08**
	Bertie	64.6	-25.50	22.5	-4.42
	Chowan	39.2	-0.1	18.6	-0.52
	Gates	38.8	0.3	18.3	-0.22
	Hertford	65.3	-26.2	23.5	-5.42
	Hyde	44.5	-5.4	16.2	1.88
	Martin	48.4	-9.3	23.9	-5.82
	Pasquotank	43.4	-4.3	16.3	1.78
	Perquimans	27.7	11.4	18.6	-0.52
	Tyrrell	43.3	-4.2	19.9	-1.82
	Washington	54.7	-15.6	25.8	-7.72

*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded.

Another type of analysis uses a suite of indices created to examine the social vulnerability of coastal communities and is depicted in **Figures 3.3.3.1** and **3.3.3.2**. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups; more single female-headed households; more households with children under the age of 5; and disruptions like higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. The data used to create these indices are

from the 2005-2009 American Community Survey estimates at the U.S. Census Bureau. The thresholds of 1 and ½ standard deviation are the same for these standardized indices. Again, for those communities that exceed the threshold for all indices it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Similar to the reliance index discussed in Section 3.3.2, the vulnerability indices also use normalized factor scores. Comparison of vulnerability scores is relative, but the score is related to the percent of communities with similar attributes. The social vulnerability indices provide a way to gauge change over time with these communities but also provides a comparison of one community with another.

With regard to social vulnerabilities, the following South Atlantic communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figures 3.3.4.1** and **3.3.4.2**): Miami, Florida; Fort Pierce, Florida; Cocoa, Florida; Wilmington, North Carolina; and Ocracoke, North Carolina. These communities are expressing substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

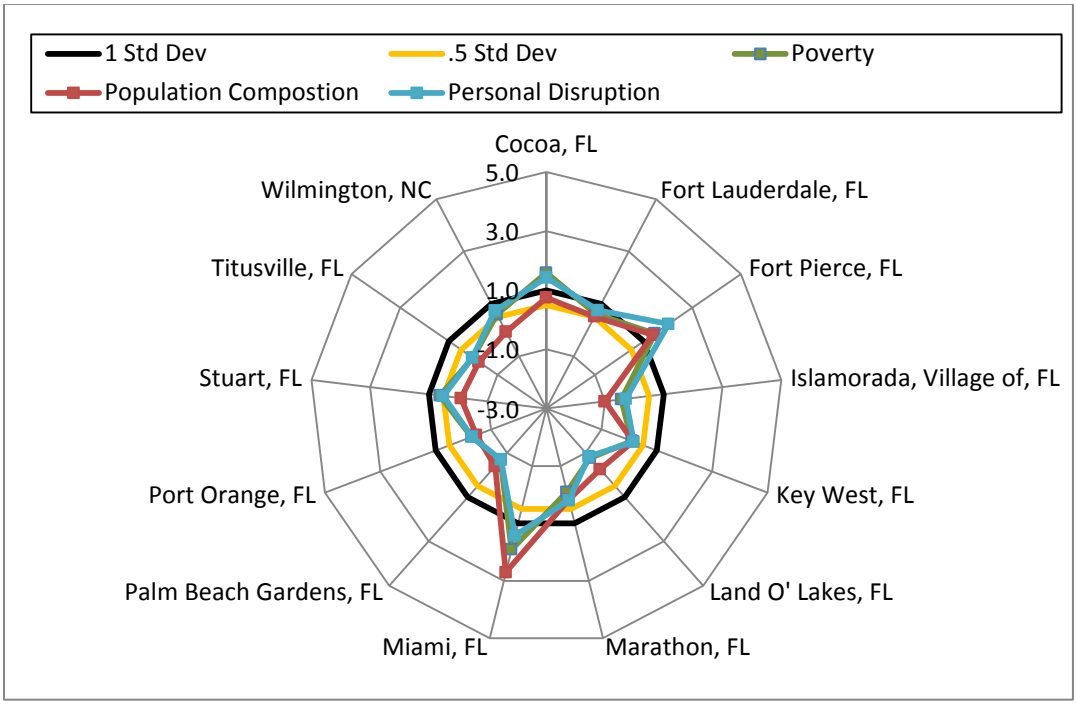

Figure 3.3.3.1. Social vulnerability indices for South Atlantic communities with the top regional quotients for king mackerel.
Source: SERO Social Indicator Database 2013

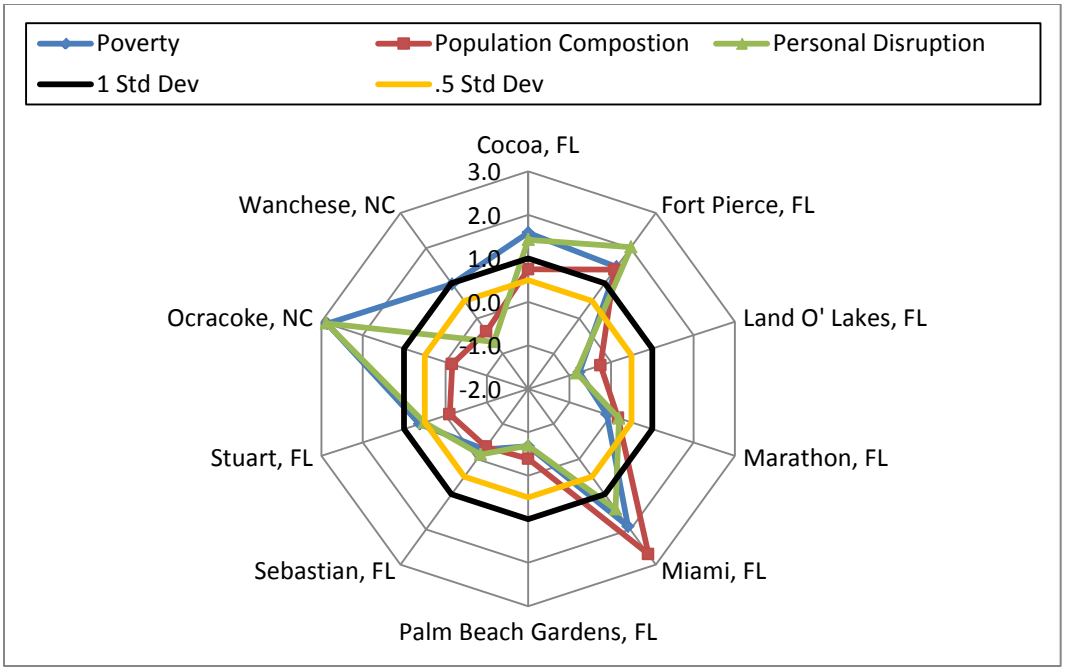

Figure 3.3.3.2. Social vulnerability indices for South Atlantic communities with the top regional quotients for Spanish mackerel.
Source: SERO Social Indicator Database 2013

With regard to social vulnerabilities for the Mid-Atlantic Region, the following communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figure 3.3.3.3**): Norfolk, Virginia; Hampton, Virginia; Chincoteague, Virginia; and Freeport, New York. The Virginia communities of Norfolk and Hampton exceed at least two thresholds on all three social vulnerability indices, but no communities exceed thresholds of all three indices. These communities are expressing substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

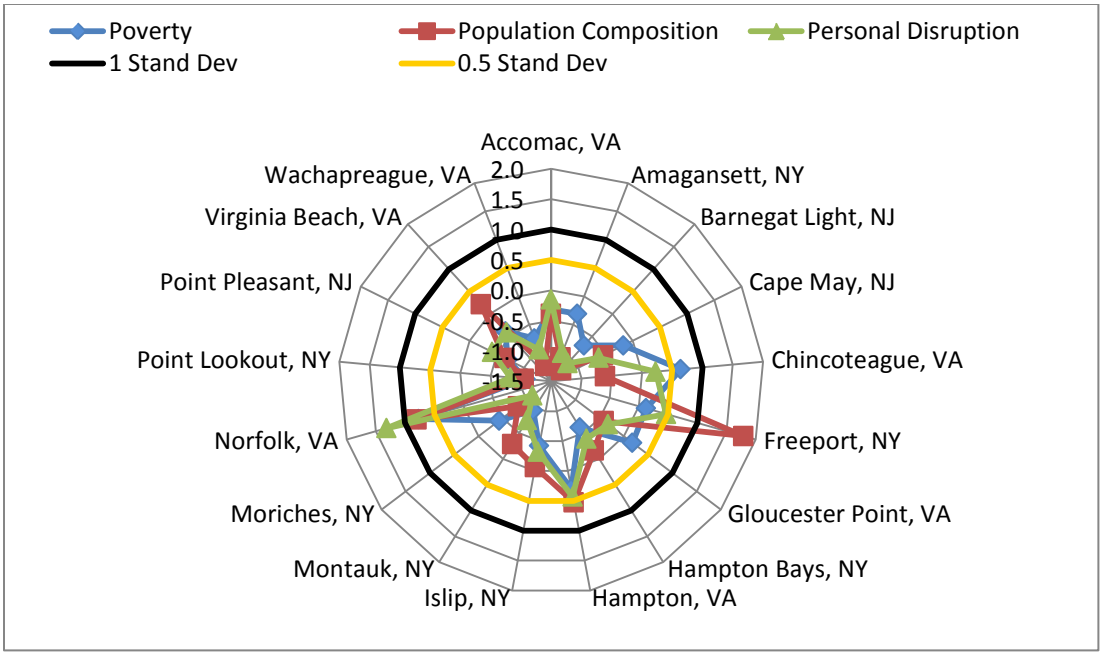

Figure 3.3.3.3. Social vulnerability indices for fifteen communities with the top regional quotients for coastal pelagics.
Source: SERO Social Indicator Database 2013

While some communities expected to be affected by this proposed amendment may have minority or economic profiles that exceed the EJ thresholds and, therefore, may constitute areas of concern, significant EJ issues are not expected to arise as a result of this proposed amendment. No adverse human health or environmental effects are expected to accrue to this proposed amendment, nor are these measures expected to result in increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons.

King mackerel and Spanish mackerel are part of an important commercial fishery throughout the South Atlantic and Gulf regions, and specifically in Florida, and the fish are also targeted by recreational fishermen. The actions in this proposed amendment are expected to incur social and economic benefits to users and communities by implementing management measures that would contribute to conservation of the coastal pelagic stocks and to maintaining the commercial and recreational sectors of the fishery. Although there will be some short-term impacts due to some of the proposed management measures, the overall long-term benefits are expected to contribute to the social and economic health of South Atlantic and Gulf coastal communities. Impacts (positive and negative) are expected to be minimal for fishermen and communities in the Mid-Atlantic region.

Finally, the general participatory process used in the development of fishery management measures (e.g., scoping meetings, public hearings, and open South Atlantic and Gulf Council

meetings) is expected to provide sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this amendment and have their concerns factored into the decision process. Public input from individuals who participate in the fishery has been considered and incorporated into management decisions throughout development of the amendment. A public hearing will also be held in the Mid-Atlantic region prior to final approval by the Councils.

3.4 Administrative Environment

3.4.1 The Fishery Management Process and Applicable Laws

3.4.1.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending 200 nm from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the U.S. EEZ.

Responsibility for federal fishery management decision-making is divided between the U.S. Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for collecting and providing the data necessary for the councils to prepare fishery management plans and for promulgating regulations to implement proposed plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act and with other applicable laws. In most cases, the Secretary has delegated this authority to NMFS.

The South Atlantic Council is responsible for conservation and management of fishery resources in federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 mi offshore from the seaward boundary of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the South Atlantic Council, there are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard, State Department, and Atlantic States Marine Fisheries Commission (ASMFC). The South Atlantic Council has adopted procedures whereby the non-voting members serving on the South Atlantic Council Committees have full voting rights at the Committee level but not at the full South Atlantic Council level. South Atlantic Council members serve three-year terms and are recommended by

state governors and appointed by the Secretary from lists of nominees submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through council meetings, which, with few exceptions for discussing personnel matters, are open to the public. The South Atlantic Council uses its SSC to review the data and science being used in assessments and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedure Act, in the form of "notice and comment" rulemaking.

3.4.1.2 State Fishery Management

The state governments of North Carolina, South Carolina, Georgia, and Florida have the authority to manage fisheries that occur in waters extending three nautical miles from their respective shorelines. North Carolina's marine fisheries are managed by the Marine Fisheries Division of the North Carolina Department of Environment and Natural Resources. The Marine Resources Division of the South Carolina Department of Natural Resources regulates South Carolina's marine fisheries. Georgia's marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Marine Fisheries Division of the Florida Fish and Wildlife Conservation Commission is responsible for managing Florida's marine fisheries. Each state fishery management agency has a designated seat on the South Atlantic Council. The purpose of state representation at the South Atlantic Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters.

The South Atlantic States are also involved through the ASMFC in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries Cooperative Management Act, to compel adoption of consistent state regulations to conserve coastal species. The ASFMC is also represented at the South Atlantic Council level, but does not have voting authority at the South Atlantic Council level.

NMFS's State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

3.4.1.3 Enforcement

Both the NMFS Office for Law Enforcement (NOAA/OLE) and the United States Coast Guard (USCG) have the authority and the responsibility to enforce South Atlantic Council regulations. NOAA/OLE agents, who specialize in living marine resource violations, provide fisheries expertise and investigative support for the overall fisheries mission. The USCG is a multi mission agency, which provides at sea patrol services for the fisheries mission.

Neither NOAA/OLE nor the USCG can provide a continuous law enforcement presence in all areas due to the limited resources of NOAA/OLE and the priority tasking of the USCG. To supplement at sea and dockside inspections of fishing vessels, NOAA entered into Cooperative Enforcement Agreements with all but one of the states in the Southeast Region (North Carolina), which granted authority to state officers to enforce the laws for which NOAA/OLE has jurisdiction. In recent years, the level of involvement by the states has increased through Joint Enforcement Agreements, whereby states conduct patrols that focus on federal priorities and, in some circumstances, prosecute resultant violators through the state when a state violation has occurred.

NOAA General Counsel issued a revised Southeast Region Magnuson-Stevens Act Penalty Schedule in June 2003, which addresses all Magnuson-Stevens Act violations in the Southeast Region. In general, this penalty schedule increases the amount of civil administrative penalties that a violator may be subject to up to the current statutory maximum of $120,000 per violation. The Final Penalty Policy was issued and announced on April 14, 2011 (76 FR 20959).

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Modify restrictions on transfer-at-sea and gillnet allowances for Atlantic migratory group Spanish mackerel.

Alternative 1 (No Action). No more than two gillnets, including any net in use, may be possessed at any one time; provided, however, that if two gillnets, including any net in use, are possessed at any one time, they must have stretched mesh sizes (as allowed under the regulations) that differ by at least 0.25 inch (0.64 cm) (622.377(b)(2)(iii). A species subject to a trip limit specified in this section taken in the EEZ may not be transferred at sea, regardless of where such transfer takes place, and such species may not be transferred in the EEZ (§622.385).

Alternative 2. Alternative 2 applies only to commercial harvest of Atlantic migratory group Spanish mackerel with gillnet. This alternative recognizes that the current biomass levels of Spanish mackerel may result in catches of Spanish mackerel in excess of the commercial trip limit by vessels using gillnets. Specifically, even with very short sets, these gillnets may exceed the daily trip limit. As such, the regulations would be modified to allow for the transfer of Spanish mackerel at sea. Any amount of Spanish mackerel less than the commercial trip limit could be transferred between two vessels given 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 vessels with valid Spanish mackerel commercial permits.
c) The receiving vessel may possess no more than three gillnets on board after the transfer is complete.
d) All fish exceeding the applicable daily vessel limit shall remain entangled in the meshes of the net until transfer. The quantity of fish transferred to any single vessel shall not exceed the applicable daily trip limit.
e) Call-in required for both vessels engaged in the transfer.

The following describes how transfer at sea may occur: After catching the Spanish mackerel in the gillnet, the donor vessel would cut the net into two sections. The captain would transfer the portion of the net to the receiving vessel. The receiving vessel would accept the portion of the net and retrieve that portion on the vessel. Call-in by both vessels should be made prior to the net being cut.

4.1.1 Biological Effects

Currently, Spanish mackerel gillnet fishermen are limited to the use of two gillnets, which must have different mesh sizes. If, in the course of setting the nets a vessel harvests more than the trip limit, the excess fish must be discarded. Because the discard mortality rate of fish caught in gillnets is very high, most of the excess fish that are discarded would die. Under **Alternative 1 (No Action)** no change would be made to the current regulations that limit the number of nets fishermen may use when gillnetting for Spanish mackerel; nor would fishermen who catch excess poundage (fish in excess of the trip limit) be able to transfer those excess fish to another vessel that has not yet reached the trip limit to prevent the excess catch from having to be discarded. The King and Spanish Mackerel Advisory Panel (AP) met in April 2013 and discussed this issue at length. During the meeting Spanish gillnet fishermen stated that the need to transfer fish harvested in excess of the trip limits is extremely rare and thus did not warrant action taken by the South Atlantic Fishery Management Council (South Atlantic Council) to modify the current regulations. **Figure 2.1** shows that very few trips approach 3,500 pounds, and exceeding that trip limit is not likely to occur. However, another AP member stated that when it does happen the numbers of fish that need to be discarded are significant, and at times double the trip limit could be caught in one set.

Based on this information the AP recommended the South Atlantic Council choose **Alternative 1 (No Action)** as their preferred alternative. If the anecdotal information shared by the fishery participants is accurate, under **Alternative 1 (No Action)** the biological impacts would likely be negligible based on the rarity of occurrence. If part of a net does need to be cut free to maintain harvest levels under the trip limit, the fish in the cut away portion of the net would most likely be released dead. However, if this activity does not occur on a frequent basis, the overall impact to the sustainability of the stock is assumed to be extremely small. Because the practice of cutting away a portion of a net and transferring to another vessel is currently prohibited it is not possible to obtain a true measure how prevalent this activity is. **Table 4.2.1.1** and **Table 4.2.1.2** illustrate the amount of Spanish mackerel harvested each year with gillnet gear. However, the proportion of harvest that is landed as a result to transferring a portion of gillnet to another vessel at sea is unknown.

Table 4.2.1.1. South Atlantic commercial Spanish mackerel landings (lbs ww) by gear.

Year	Gill Net	Hook and Line	Other	Total
2006	1,386,896	653,472	1,568,193	3,608,561
2007	1,705,634	714,690	1,329,200	3,749,524
2008	1,065,412	821,158	789,002	2,675,572
2009	1,420,139	941,620	1,228,516	3,590,275
2010	1,361,139	1,123,460	1,976,477	4,461,076
2011	1,183,603	1,226,150	1,882,132	4,291,885

Source: SEFSC ACL Data (Mar 2013). Note 2012 landings are incomplete, thus excluded.

Table 4.2.1.2. Percentage of commercial Spanish mackerel landings (lbs ww) in South Atlantic jurisdiction landed by gillnet.

Year	Gill Net
2006	41%
2007	33%
2008	25%
2009	26%
2010	39%
2011	40%

Source: SEFSC ACL Data (Mar 2013). Note 2012 landings are incomplete, thus excluded.

Regulations at 50 CFR 622.389 allow transfer at sea provisions and gear restrictions, to be modified via framework action. **Alternative 2** would modify the current regulations by allowing transfer of a portion of a Spanish mackerel gillnet and its contents to another federally permitted Spanish mackerel vessel, which has not caught the trip limit. **Alternative 2** would not eliminate the prohibition on transfer at sea of any CMP species; rather, it would allow transfer at sea of Spanish mackerel caught with gillnet gear only under very specific conditions. No other transfer at sea provisions would be affected by this action. Additionally, **Alternative 2** would allow three gillnets to be onboard the receiving vessel involved in such a transfer in essence exempting the receiving vessel from the two gillnet maximum during transfer operations as codified in (622.377(b)(2)(iii).

If the South Atlantic Council were to allow transfer at sea of Spanish mackerel harvested in excess of the trip limits under **Alternative 2** this option could result in the use of "runner boats" that could take trips back fourth from the lead vessel to the dock with the excess fish. However, it is the South Atlantic Council's intent to limit the number of transfers to one per vessel per trip, which may limit the potential use of runner boats for multiple transfers during a single trip. Spanish mackerel is managed under a 3.87 million pound annual catch limit (ACL), overall harvest would be capped at that level and no biological impacts would be expected. If many vessels engage in transferring excess fish at sea, the ACL may be reached faster than in previous years since more vessels may participate in this activity due the open access nature of the Spanish mackerel permit. Additionally, allowing Spanish mackerel to be transferred at sea may potentially undermine the original intent of the current trip limit for the species. The effects of such practices on market conditions and how dealers may set their own limits on the amount of fish they are willing to purchase are discussed in **Section 4.2.2** of this document.

Overall, the direct biological impacts of **Alternative 2** are likely to be neutral because overall harvest is limited to the commercial ACL, and few trips approach the 3,500 pound trip limit (**Figure 2.1**). However, for the reasons discussed previously, the ACL may be met faster when compared to previous fishing years due to increased efficiency of fishing operations. For this reason, the potential impacts of **Alternative 2** may be more predominant in the social and economic environments.

Alternative 1 (No Action) would not modify the way in which the CMP fishery in the southeast could impact protected species or the ecosystem as a whole. This alternative will not increase fishing or change fishing methods for species targeted within the CMP FMP. Therefore, no adverse effects to the protected species most likely to interact with mackerel fishing gear (e.g., sea turtles and smalltooth sawfish) are likely to result under this alternative. **Alternative 2** would allow the transfer of a net and its contents at sea, but would not result in an increase in the number of gillnets a vessel is permitted to have in the water at any one time. The transfer of Spanish mackerel at sea could result in a slight reduction in the number of fishing days as the commercial ACL may be met faster with fewer discards. A decrease in fishing effort could provide a biological benefit for protected species. However since these transfers are not expected to occur very often, it is more likely that this alternative would not result in any changes to the CMP fishery and therefore no adverse effects to protected species are expected. Additionally, neither of the two alternatives under consideration are expected to alter or cause damage to designated essential fish habitat (EFH), habitat areas of particular concern (HAPCs), or coral HAPCs. Neither alternative is expected to adversely affect any CMP species' roles within the ecosystem or alter existing predator-prey relationships. Additionally, any impacts that may be realized under either alternative are not expected to be significant as they relate to the human environment.

4.1.2 Economic Effects

Alternatives 1 (No Action) and **2** would be expected to result in direct effects on commercial fishing for Spanish mackerel by gillnet and could produce some economic effects on vessels harvesting Spanish mackerel with other gear types, which are discussed below. These alternatives would have no direct or indirect impact on recreational fishing of any kind. **Alternative 2** may have an indirect impact on commercial fishing for other species if the provision to allow transfer at sea contributed to an increased harvest rate and early in-season closure by resulting in effort shift.

Presently, under **Alternative 1 (No Action)** a vessel has to discard Spanish mackerel that are caught in gillnets that are in excess of the trip limit, even when these excess fish cannot be returned to the water alive. Under **Alternative 2**, a second vessel could take the excess catch of Spanish mackerel by a transfer of the netted fish as long as the receiving vessel did not have landings in excess of the trip limit. The excess fish would be landed and sold by the second vessel, rather then returned to the water dead by the first vessel. Therefore, **Alternative 2** could allow for an increase in landings and dockside revenues of Spanish mackerel beyond the status quo by allowing transfer of excess catch. Both vessels however would have to incur the time and costs to report the upcoming transfer and safely implement the transfer under **Alternative 2**. The formerly discarded fish would be landed and counted against the Spanish mackerel ACL, which could shorten the length of the open season and affect all vessels harvesting Spanish mackerel. However, due to factors such as seasonal availability of Spanish mackerel and potential landings limits imposed by the fish houses, it is likely that vessels likely stay under the trip limit in any case and the number of transfers is anticipated to be relatively small.

If transfers are allowed under **Alternative 2**, there is a possibility a higher number of vessels than expected would participate in the transfer, or that some vessels could exploit the provisions through runner boats or other means to circumvent the daily trip limit, which could flood the market for Spanish mackerel. However, as discussed in **Section 2.1** it is common for a fish house to specify limits that the dealer will purchase from a vessel that is lower than the daily trip limit. Limitations imposed by dealers and market demand could help reduce the risk of transfers occurring in excess or unnecessarily.

Alternative 2 would likely be of greatest benefit to commercial fishing operations of North Carolina because gillnet is the primary gear used by North Carolina commercial fishing operations for Spanish mackerel. In 2011, all categories of gillnets accounted for over 90% of North Carolina's landings of Spanish mackerel, while gillnets accounted for approximately 11% of Spanish mackerel landings on Florida's east coast. Overall, gillnet landings represent a decreasing proportion of Florida east coast Spanish mackerel landings from 2000 through 2011 (**Figure 4.2.2.1**).

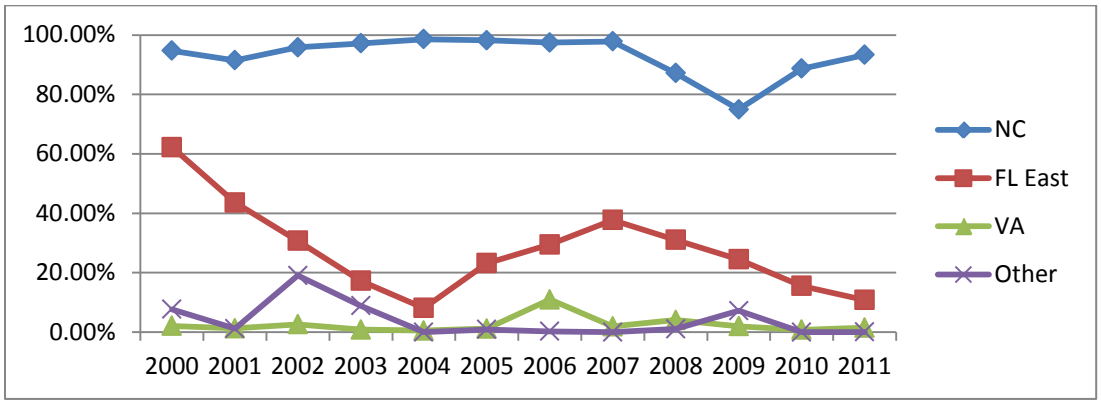

Figure 4.2.2.1. % of Spanish mackerel landings by all gillnets, 2000 through 2011. Source: NMFS OST, Online ALS (excludes confidential information).

4.1.3 Social Effects

Establishment of a provision to allow transfer at sea for the Spanish mackerel gillnet sector through **Alternative 2** would likely primarily result in benefits to the commercial gillnet fleet by reducing waste and maximizing economic trip efficiency. The Spanish mackerel gillnet sector can be selective to a certain point; however, when large schools of fish are encountered, it is possible that the vessel trip limit will be exceeded. Nevertheless, commercial fishermen have indicated that they avoid this situation when possible. By allowing the transfer of Spanish mackerel at sea, Spanish mackerel regulatory discards can be converted into landings. Under **Alternative 1 (No Action)** the potential benefits to the commercial Spanish mackerel fleet would not occur.

Figure 2.1 shows that on most trips, vessels land under the trip limit. However there are no data available to accurately determine how many vessels have exceeded the trip limit on one set but discarded the fish instead of landing the fish, and would likely participate in the transfer of Spanish mackerel at sea. Additionally, there is no information about how much Spanish mackerel would be transferred at sea if allowed under **Alternative 2**. While all vessels participating in the Spanish mackerel gillnet sector could take advantage of a provision to allow transfer at sea, data provided in **Figure 2.1** shows that the number of vessels that would actually transfer Spanish mackerel at sea and the number of times that such transfers would occur would be expected to be low. Spanish mackerel transfers between donor and receiving vessels would have to be completed within a short time period to prevent spoilage and the transfer of Spanish mackerel at sea would likely be weather-dependent. That is, as the severity of the weather increases the transfer of Spanish mackerel at sea is less likely.

By allowing the transfer of Spanish mackerel at sea, both the donor and receiver vessels may economically benefit. The donor vessel may benefit by selling fish that would otherwise be discarded and the receiver vessel may benefit from obtaining fish employing less resources than under a typical fishing operation. However, while a provision for transfer under **Alternative 2** would reduce Spanish mackerel discards, there may be no positive benefits for fishery-associated businesses.

It is possible that allowing transfer of Spanish mackerel at sea could close the commercial sector earlier because of increased landings of Spanish mackerel, especially if the commercial ACL is reduced, which would trigger an in-season closure. However, since there are no data available to accurately determine how many vessels would participate in the transfer of Spanish mackerel at sea and how much Spanish mackerel would be transferred at sea under **Alternative 2**, the full impact of this alternative on early closures cannot be fully assessed.

4.1.4 Administrative Effects

Alternative 1 (No Action) would not modify the current administrative environment and would not result in an increased or decreased administrative burden. **Alternative 2** would require the National Marine Fisheries Service (NMFS) notify fishery participants of any changes to the regulations. If the South Atlantic Council chooses to allow a portion of a Spanish mackerel gillnet and its contents to be transferred to another vessel at sea, the call in requirement under **Alternative 2** would help law enforcement track the transfer activity. However, the call in system would need to be established because such a system does not currently exist. This may represent a moderate administrative burden. It may be possible that the call in requirement may be folded into an existing call in system, but currently the details of what office fishermen would be calling to comply with this requirement are unknown.

Alternative 2 would also make enforcement of transfer activity more burdensome. Because the transfers would take place at sea, enforcement personnel would need to also need to be at sea to witness the transfer for compliance with the conditions listed under **Alternative 2**. At sea

enforcement of this proposed provision may require additional time and funding in an already lean budgetary environment. In addition to law enforcement issues, allowing large quantities of fish along with large portions of gillnets to be transferred from one vessel to another while at sea could pose safety concerns especially in foul weather or less than ideal conditions. Because transfers of Spanish mackerel would be limited to taking place in the exclusive economic zone (EEZ) the activity would occur fairly far from shore, which could compound safety issues in the event of an accident. Furthermore, an additional utilization of resources to launch a rescue effort would be required if an accident were to happen in the EEZ and one or more vessels are unable to safely return to port.

4.2 Action 2. Modify the king mackerel commercial trip limit in the East Coast Florida Subzone.

Alternative 1 (No Action). Retain the current commercial trip limit regulations in place for East Coast Florida Subzone king mackerel. In the Florida East Coast Subzone (Flagler/Volusia County line south to the Miami-Dade/Monroe County line, November 1 – March 31 each year), king mackerel in or from the EEZ may be possessed on board at any time or landed in a day from a vessel with a commercial permit for king mackerel as follows:

(A) From November 1 through January 31--not to exceed 50 fish.

(B) Beginning on February 1 and continuing through March 31--

(1) If 75 % or more of the [Gulf group] Florida east coast subzone quota has been taken-- not to exceed 50 fish.

(2) If less than 75 % of the [Gulf group] Florida east coast subzone quota has been taken --not to exceed 75 fish.

Alternative 2. Change the king mackerel commercial trip limit in the Florida East Coast Subzone to 50 fish for the entire fishing season (November 1- March 31).

Alternative 3. Change the king mackerel commercial trip limit in the Florida East Coast Subzone to 75 fish for the entire fishing season (November 1- March 31).

Preferred Alternative 4. In the Florida East Coast Subzone, king mackerel in or from the EEZ may be possessed on board at any time or landed in a day from a vessel with a commercial permit for king mackerel as follows:

(A) From November 1 through the end of February--not to exceed 50 fish.

(B) Beginning on March 1 and continuing through March 31--

(1) If 70 % or more of the [Gulf group] Florida east coast subzone quota has been taken-- not to exceed 50 fish.

(2) If less than 70 % of the [Gulf group] Florida east coast subzone quota has been taken -- not to exceed 75 fish.

4.2.1 Biological Effects

In the 2011 fishing year, less than 75% of the quota was reached by February 1, triggering the trip limit increase to 75 fish when the king mackerel are abundant. This in turn allowed the quota to be filled quickly, requiring NMFS to close the subzone in March (**Table 2.1**), which is around Lent, the most profitable time of the year for fishery participants. Under **Alternative 1 (No Action)** the current system of trip limits and the trip limit increase would not be modified and fishermen could reach the commercial ACL prior to the Lenten season. Because commercial harvest of king mackerel is limited to the commercial ACL, regardless of the trip limit or trip limit increase proposed under each of the alternatives, overall harvest is expected to stay the same. What would change, based on each alternative, is the rate at which the fish are harvested and when the ACL is met. Because king mackerel in the Florida East Coast Subzone are not

open during the spawning season, which occurs between May and October, and typically peaks in September each year (McEachran and Finucane 1979), none of the alternatives under this action are likely to affect spawning king mackerel or disrupt spawning activities. It is important to note that the migratory group of king mackerel being addressed under this action is the Gulf migratory group, which migrates into Florida east coast waters during the winter and mixes with the Atlantic migratory group king mackerel. Therefore, for the purposes of this discussion, the collective term "king mackerel" is used to describe the mixed harvest of Gulf migratory group and Atlantic migratory group king mackerel in the Florida East Coast Subzone during the winter.

Alternative 2 would change the commercial trip limit for king mackerel in the Florida East Coast Subzone to 50 fish per vessel for the entire fishing season, November 1 – March 31. This alternative would not include a trip limit increase of any kind and would hold the trip limit constant throughout the fishing season. Without the trip limit increase in February, it is likely the fishing season would be extended to include Lent, which is the most profitable time of year for king mackerel fishermen in the East Coast Subzone. The biological impacts of this alternative are expected to be neutral because if there were an increase in overall harvest, in-season accountability measures (AMs) are in place to close commercial harvest of king mackerel when the ACL is met.

Alternative 3 would increase the commercial trip limit for king mackerel in the East Coast Subzone to 75 fish for the entire fishing season (November 1-March 31). Under this alternative, it is likely the ACL would be reached earlier in the year than in past years since the new trip limit would be permanently set at the higher level than what is currently in place under **Alternative 1 (No Action)**. Anecdotal information indicates the main reason why the ACL was met in 2011 fishing year is because the trip limit increase was too large given the level of fishing effort and the rate of harvest. Therefore, setting the trip limit at 75 fish for the entire fishing season is not expected to prolong king mackerel harvest through the Lenten season. However, regardless of which trip limit is implemented, total harvest of king mackerel is limited to the ACL, is monitored in-season, and the commercial sector is closed when the commercial ACL is projected to be met. Based on this information, **Alternative 3** would not result in negative biological impacts to the stock even though the ACL may be met early in the fishing season.

Preferred Alternative 4 would modify the trip limits for king mackerel in the Florida East Coast Subzone by retaining the 50 fish trip limit through the end of February as opposed to the end of January. The trip limit for March would be based on what percentage of the quota has been caught. If 70% or more of the quota is harvested by March 1, then the March trip limit would not change and would remain 50 fish per trip. If less than 70% of the quota is harvested by March 1, the March trip limit would increase from 50 fish to 75 fish to allow for all of the ACL to be harvested. In addition to extending the initial 50 fish trip limit through the month of February, this alternative would reduce the percentage of the quota that needs to be caught to trigger a trip limit increase. The combination of these modifications may limit the rate of harvest by a sufficient amount to prolong fishing opportunities for king mackerel through Lent, which is the objective of this action. As stated previously, regardless of which system of trip limits is established under this action, overall harvest of king mackerel in the Florida East Coast Subzone

is limited by the ACL and the commercial AM; therefore, biological impacts under **Preferred Alternative 4** are expected to be neutral.

There is likely to be no additional biological benefit to protected species from any of the proposed alternatives. **Alternative 1 (No Action)** would perpetuate the existing level of risk for interactions between ESA-listed species and the CMP fishery. **Alternative 2** and **Preferred Alternative 4** could result in an increased number of fishing days, as trip limits would limit the number of mackerel harvested per outing. An increase in the number of fishing days would not be biologically beneficial for the protected species because it would increase the likelihood of interactions. The impacts from **Alternative 3** would be the most biologically beneficial for protected species as an increase in the trip limit could result in a decrease in fishing days, thereby reducing likelihood of an interaction. None of the alternatives under consideration for this action would damage or modify EFH, HAPCs, or coral HAPCs. None of the alternatives considered are expected to adversely affect any CMP species' roles within the ecosystem or alter existing predator-prey relationships. Additionally, any impacts that may be realized under each of the alternatives are not expected to be significant as they relate to the human environment.

4.2.2 Economic Effects

Alternatives 1 (No Action) through **4** would have no direct or indirect effect on recreational landings or recreational fishing practices. **Alternatives 1 (No Action)** through **4** would directly affect commercial fishing for king mackerel in federal waters of the Florida East Coast Subzone from November 1 through March 31. Although these alternatives would also have no direct effect on commercial fishing for species other than king mackerel and commercial fishing outside the Florida East Coast Subzone, there may be indirect effects if commercial fishermen shift any effort to or from king mackerel to other species.

Florida's commercial vessel limit in the Eastern Region is 50 king mackerel per vessel per day, and the season begins November 1 and continues through March 31, unless the season closes sooner. According to Florida Administrative Code, while the season is open, no person shall *possess* while or on the waters of the region or *land* from a single vessel in any one day within this region more than 50 king mackerel. If that possession limit also applies to king mackerel caught in federal waters, then the discrepancy between the federal and state trip limits is irrelevant because the state's 50-fish limit is the upper bound. In that case, **Alternatives 1 (No Action)**, **2** and **3** and **Preferred Alternative 4** would have no impact on commercial landings of king mackerel that were harvested in the Florida East Coast Subzone because a vessel could land no more than 50 fish per day whenever the season is open.

If Florida's 50-fish possession limit does not apply to king mackerel harvested in federal waters, a change in the federal trip limit could result in a change in landings and associated dockside revenues. Currently (**Alternative 1)** and since 2000, the federal trip limit is and has been 50 fish per vessel per day from November 1 through January 31 and either 50 or 75 fish thereafter depending on if 75 % or more of the quota is harvested by February 1. On February 1 of 2012

and 2013, the limit was increased to 75 fish because less than 75 % of the quota had been harvested by those dates; however, in 2011, the limit was not increased beyond 50 fish because more than 75 % had been landed. Although the season did not close early in 2013, it closed before March 31 in 2011 and 2012. The quota was approximately 1.04 mp in 2010/11 and 2011/2012 and approximately 1.22 mp in 2012/13. In 2013/14, the quota will be approximately 1.1mp. It is possible that under **Alternative 1 (No Action)** the 2013/14 season could close before March 31 because of the lower quota.

Alternative 2 and **Preferred Alternative 4** would keep the current trip limit of 50 fish per trip per day from November 1 through January 31, while **Alternative 3** would increase it. Therefore, **Alternatives 1 (No Action), 2** and **Preferred Alternative 4** would maintain status-quo landings and dockside revenues from king mackerel during these three months and **Alternative 3** would likely increase landings and dockside revenues beyond the status quo during those months. However, that increase in landings would likely lead to smaller dockside revenues per pound received by fishermen during the first three months of the season.

The higher trip limit under **Alternative 3** would likely result in a shorter open season, which would reduce landings from their baseline levels in February and March. **Alternative 3** would likely result in the smallest market supply of (Gulf group) king mackerel from February through March, which is when the Christian season of Lent drives demand to be historically at its highest. Consumers of king mackerel would likely have to pay significantly more per pound and/or then purchase substitute species from the time the season closes until April 1st when the Atlantic season begins. **Alternative 3** may indirectly affect commercial fishing for those substitute species by vessels shifting effort to those species during the time the season is closed.

Alternative 2 and **Preferred Alternative 4**, on the other hand, would likely increase the length of the open season beyond the status quo by likely reducing landings from their baseline levels in February. Although both **Alternative 2** and **Preferred Alternative 4** would have the same impacts from November 1 through February, **Alternative 2** would be more likely than **Preferred Alternative 4** to keep the season open through March 31. However, **Alternative 2** would not allow for an increase in the limit before the season ends, even when landings were substantially less than the quota. Consequently, end-of-season landings are more likely to be the least and less than the quota under **Alternative 2. Preferred Alternative 4** would more likely result in higher landings in March than **Alternative 2** and is more compatible with seasonal demand.

4.2.3 Social Effects

A modification to the trip limit system for king mackerel in the Florida East Coast Subzone could have positive and negative social effects. This area of Florida has several of the most important commercial fishing communities in the king mackerel sector in the South Atlantic region, including Cocoa Beach, Fort Pierce, and Palm Beach (Table 3.3.3.1). In the current environmental and market conditions of this portion of the CMP fishery, the trip limit system under **Alternative 1 (No Action)** could trigger the higher trip limit of 75 fish and reach the ACL

before the end of the fishing year, which may impact the supply of king mackerel in the spring. **Alternatives 2** and **3** would provide for more stability in the supply of king mackerel, which would be beneficial to fish houses and mackerel dealers. However, the 50-fish limit under **Alternative 2** could prevent the ACL for the Florida East Coast Subzone from being met, while the 75-fish limit under **Alternative 3** would likely increase the rate of harvest and potentially cause the ACL to be met earlier than usual. **Preferred Alternative 4** would be expected to allow the step-up to be triggered but only if necessary, which would be expected to be most beneficial to the fishermen and dealers. The stability in the supply of fish would be maintained for a longer period under **Preferred Alternative 4** while allowing some flexibility in reaching the ACL.

4.2.4 Administrative Effects

Alternative 1 (No Action) and **Preferred Alternative 4**, would have no effect on the administrative environment because there is currently a system of trip limits and trip limit increases that is triggered when a certain amount of harvest has been verified. **Preferred Alternative 4**; therefore, would also not add or detract to the administrative burden of implementing the trip limits and/or trip limit changes throughout the fishing season because like **Alternative 1 (No Action)** they contain a series of trip limit reductions when certain harvest thresholds are met. **Alternatives 2** and **3** would hold the trip limit constant through the entire fishing season, and thus, would result in positive administrative impacts in the form of a reduced public notification burden and ease enforcement burden. Because there would be no change in the trip limit during each fishing season, there would be no need to develop outreach materials designed to inform fishery participants of the change.

Chapter 5. Council's Choice for the Preferred Alternatives

5.1 Action 1. Modify restrictions on transfer-at-sea and gillnet allowances for Atlantic migratory group Spanish mackerel.

5.1.1 Mackerel Advisory Panel Comments and Recommendation

At the April 2013 meeting, the AP discussed alternatives such as raising the trip limit or allowing an overage to be removed from a vessel's subsequent trip limit, but the majority decided felt there was a risk of vessels taking advantage of the provision. The AP supported Alternative 1 as the preferred alternative. (6 in favor, 2 opposed, 3 abstentions)

5.1.2 Public Comments and Recommendations

- One commenter supported no action.
- One commenter felt that there was no need for a call-in requirement because the Mid-Atlantic did not have this requirement, and this would be unnecessary.
- Three commenters (including the AP Chair) supported Alternative 2 as the Preferred. The AP Chair felt like it was necessary and would not be abused.

5.1.3 South Atlantic Council Choice for Preferred Alternative

5.2 Action 2. Modify the king mackerel commercial trip limit in the East Coast Florida Subzone.

5.2.1 Mackerel Advisory Panel Comments and Recommendations

At the April 2013 meeting, the AP supported Alternative 4 because it was developed by and supported by fishermen in the Florida East Coast subzone.

5.2.2 Public Comments and Recommendations

- Four commenters supported Preferred Alternative 4.
- One commenter supported an increase in the trip limit.

5.2.3 South Atlantic Council Choice for Preferred Alternative

Chapter 6. Cumulative Effects

This Cumulative Effects Analysis (CEA) for the biophysical environment will follow a modified version of the 11 steps. Cumulative effects for the socio-economic environment will be analyzed separately.

6.1 Biological

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.

CEQ cumulative effects guidance states that this step is done through three activities. The three activities and the location in the document are as follows:

I. The direct and indirect effects of the proposed actions **(Chapter 4.0)**;
II. Which resources, ecosystems, and human communities are affected **(Chapter 3.0)**; and
III. Which effects are important from a cumulative effects perspective **(information revealed in this CEA)**.

2. Establish the geographic scope of the analysis.

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West, which is also the South Atlantic Fishery Management Council's (South Atlantic Council) area of jurisdiction. In light of the available information, the extent of the boundaries would depend upon the degree of fish immigration/emigration and larval transport, whichever has the greatest geographical range. Therefore, the proper geographical boundary to consider effects on the biophysical environment is larger than the entire South Atlantic exclusive economic zone (EEZ) and includes the Gulf of Mexico since some mackerel species move to and from Gulf of Mexico waters throughout the year. The ranges of affected species are described in **Section 3.2**. The most measurable and substantial effects would be limited to the South Atlantic region.

3. Establish the timeframe for the analysis.

Establishing a timeframe for the CEA is important when the past, present, and reasonably foreseeable future actions are discussed. It would be advantageous to go back to a time when there was a natural, or some modified (but ecologically sustainable) condition. However, data collection for many fisheries began when species were already fully exploited. The biological, economic, and social impacts analyses for the actions in this amendment use CMP fishery data from 2007 through 2012, the most recent complete year of data available for the affected species. Long-term evaluation of the cumulative impacts of Actions 1 and 2 is needed to determine if management measures have the intended effect of improving stock status.

4. Identify the other actions affecting the resources, ecosystems, and human communities of concern (the cumulative effects to the human communities are discussed in Section 4).

Listed are other past, present, and reasonably foreseeable actions occurring in the South Atlantic and Gulf of Mexico region. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical environment.

I. Fishery-related actions affecting the snapper grouper species addressed in this amendment

A. Past

The reader is referred to **Appendix C** for past regulatory activity for all species in the Snapper Grouper FMP. Past regulatory activity for the relevant snapper grouper species in this amendment is listed below. In the recent past several amendments to the CMP FMP have implemented or modified various management measures affecting king and Spanish mackerel stocks.

Amendment 15 to the CMP FMP (GMFMC/SAFMC 2004) established an indefinite limited access program for king mackerel in the EEZ under the jurisdiction of the Gulf of Mexico, South Atlantic, and Mid-Atlantic Fishery Management Councils and changed the fishing year to March 1 through February 28/29 for Atlantic group king and Spanish mackerels.

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established annual catch limits (ACL), annual catch targets (ACT) and accountability measures (AM) for king mackerel, Spanish mackerel, and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the Fishery Management Unit: cero, little tunny, dolphin and bluefish.

B. Present

In addition to king and Spanish mackerel management issues being addressed in this amendment, other CMP FMP amendments have been developed concurrently and are in the process of approval and implementation.

The Joint Dealer Reporting Amendment has been approved for Secretarial Review by the Gulf of Mexico Fishery Management Council (Gulf of Mexico Council) and the South Atlantic Council. This amendment is intended to improve the timeliness and accuracy of fisheries data reported by permitted dealers. The amendment would also create one dealer permit for all federally-permitted dealers in the southeast region. Requiring dealers to report landings data weekly will help to improve in-season quota monitoring efforts, which will increase the likelihood that AMs could be implemented prior to ACLs being exceeded.

The Generic For-Hire Reporting Amendment, which has been approved for Secretarial Review by the Gulf of Mexico Council and the South Atlantic Council, would increase the frequency

with which headboats must report landings information, and would also require that all headboats report landings data electronically. This amendment would improve the timeliness and accuracy of landings data that are used to monitor recreational harvest sector in-season for the purpose of maintain catches below the recreational ACLs.

Amendment 19 to the CMP FMP considers stopping or limiting the sale of cobia, king mackerel, and Spanish mackerel that are caught under a bag limit, eliminating inactive king mackerel permits through a two-for-one program similar to the Unlimited South Atlantic Snapper Grouper permit program, and eliminating income requirements for Gulf of Mexico and South Atlantic commercial coastal migratory pelagics permits.

The Gulf of Mexico and South Atlantic Fishery Management Councils created zones and subzones for king mackerel to allow for fair distribution of allowable harvest as fish migrate. In Amendment 20 to the CMP FMP the Councils are considering actions to modify the commercial hook-and-line trip limits for Gulf migratory group king mackerel, changing the fishing season for Gulf group king mackerel for the eastern and western zones, establishing transit provisions for travel through areas that are closed to king mackerel fishing, establishing regional ACLs for Atlantic migratory group king and Spanish mackerel, modifying the CMP FMP framework procedures, and modifying the Gulf and Atlantic migratory group cobia ACLs and annual catch targets.

C. Reasonably Foreseeable Future

The Joint Commercial Logbook Reporting Amendment would be similar to the Generic For-Hire Reporting Amendments for the Gulf of Mexico and South Atlantic regions. This amendment would require electronic reporting of landings information by federally-permitted commercial vessels, which would increase the timeliness and accuracy of landings data.

The Joint Charter Boat Reporting Amendment would be similar to the Generic For-Hire Reporting Amendment by requiring charter vessels to regularly report their landings information electronically. Including charter boats in the recreational harvest reporting system would further improve the agency's ability to monitor recreational catch rates in-season.

The above listed past, present and future actions are expected to result in cumulative impacts on the human environment. However, those impacts, in combination with the intended effects of the actions in this amendment are not expected to result in significant adverse biological, social, or economic impacts on the human environment.

II. Non-Council and other non-fishery related actions, including natural events affecting snapper grouper species in this amendment.

A. Past
B. Present
C. Reasonably foreseeable future

In terms of natural disturbances, it is difficult to determine the effect of non-Council and non-fishery related actions on stocks of mackerel species. Annual variability in natural conditions such as water temperature, currents, food availability, predator abundance, etc. can affect the abundance of young fish that survive the egg and larval stages each year to become juveniles (i.e., recruitment). Furthermore, natural factors such as storms, red tide, cold water upwelling, etc. can affect the survival of juvenile and adult fishes; however, it is very difficult to quantify the magnitude of mortality these factors may have on a stock. Alteration of preferred habitats for snapper grouper species could affect survival of fish at any stage in their life cycles. However, estimates of the abundance of fish, which utilize any number of preferred habitats, as well as, determining the impact habitat alteration may have on mackerel species, is problematic.

On April 20, 2010, an explosion occurred on the Deepwater Horizon MC252 oil rig, resulting in the release of an estimated 4.9 million barrels of oil into the Gulf. In addition, 1.84 million gallons of Corexit 9500A dispersant were applied as part of the effort to constrain the spill. The cumulative effects from the oil spill and response may not be known for several years.

The oil spill affected more than one-third of the Gulf area from western Louisiana east to the panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. Oil is dispersed on the surface, and because of the heavy use of dispersants, oil is also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf as well as non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are more persistent in the environment and can be transported hundreds of miles. Oil on the surface of the water could restrict the normal process of atmospheric oxygen mixing into and replenishing oxygen concentrations in the water column. In addition, microbes in the water that break down oil and dispersant also consume oxygen; this could lead to further oxygen depletion. Zooplankton that feed on algae could also be negatively impacted, thus allowing more of the hypoxia-fueling algae to grow.

The highest concern is that the oil spill may have impacted spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. The oil spill occurred during spawning months for every species in the CMP FMP; however, most species have a protracted spawning period that extends beyond the months of the oil spill. Effects on the physical environment, such as low oxygen, could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encounter oil. In addition, effects of oil exposure may create sub-lethal effects on the eggs, larva, and early life stages. The stressors could potentially be additive, and each stressor may increase the susceptibility to the\ harmful effects of the other. If eggs and larvae were affected, impacts on harvestable-size coastal migratory pelagic fish would begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. King mackerel and cobia mature at 2-3 years and Spanish mackerel mature at 1-2 years; therefore a year class failure in 2010 may be felt by the fishery as early as 2011. The impacts would be felt as reduced fishing success and reduced spawning potential, and would need to be taken into consideration in the next SEDAR assessment.

Species in the CMP FMP are migratory and move into specific areas to spawn. King mackerel, for example, move from the southern portion of their range to more northern areas for the spawning season. In the Gulf of Mexico, that movement is from Mexico and south Florida to the northern Gulf (Godcharles and Murphy 1986). However, environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980). The possibility exists that CMP species would be able to detect environmental cues when moving toward the area of the oil spill that would prevent them from entering the area. These fish might then remain outside the area where oil was in high concentrations, but still spawn.

Indirect and inter-related effects on the biological and ecological environment of the CMP fishery in concert with the Deepwater Horizon MC252 oil spill are not well understood. Changes in the population size structure could result from shifting fishing effort to specific geographic segments of populations, combined with any anthropogenically induced natural mortality that may occur from the impacts of the oil spill. The impacts on the food web from phytoplankton, to zooplankton, to mollusks, to top predators may be significant in the future. Impacts to mackerels and cobia from the oil spill may similarly impact other species that may be preyed upon by CMP species, or that might benefit from a reduced stock.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

Information on species most affected by this amendment are provided in **Section 3.2** of this document. The CMP managed species are part of a vast marine ecological environment, the health of which is dependent upon strong predator-prey relationships, habitat availability and health, fishing pressure, and natural variables such as current and temperature. Actions implemented under the FMP are intended to fortify the role of CMP species within the larger ecosystem and maintain the ecological balance that would enable those species to thrive. Such CMP FMP amendment actions may help to increase the mackerel and cobia species' ability to withstand stress from natural and anthropogenic sources.

The cumulative effects of the actions in this amendment and those past, present and future action affecting the king and Spanish mackerel segments of the CMP fishery, are not expected to be significant. Unlike many other fisheries, one single universe of fishermen should not be assumed. For example, in the snapper grouper fishery, all species are landed under one permit and in the same area, and each fisherman might be expected to be affected to some extent by all ACLs imposed on snapper grouper species. However, under the CMP FMP, separate commercial permits are issued to king mackerel and Spanish mackerel fishermen, and no permits are required for cobia fishermen. Some overlap of these migratory groups most certainly occurs; however, different gear types are primarily used to fish for king mackerel and Spanish mackerel, and many fishermen do not switch between gear types. Further, each species would be managed under different sets of regulations. A large portion of commercial king mackerel fishermen fish in both the Gulf of Mexico and South Atlantic. Recreational fishermen are also unlikely to move between the Gulf and South Atlantic, except perhaps in the Florida Keys.

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

Fish populations

Section 3.1 in Amendment 18 (GMFMC/SAFMC 2011) discusses the unique characteristics of the Gulf of Mexico and South Atlantic Regions that are important to migration, spawning, and overall wellbeing of king and Spanish mackerel populations throughout the southeast region. Therefore, **Section 3.1** of Amendment 18 is incorporated by reference. Additionally, Amendment 18 to the CMP FMP describes in detail biological characteristics of king mackerel and Spanish mackerel in the Gulf of Mexico and South Atlantic. This discussion is contained in **Section 3.2** of that document and is hereby incorporated by reference.

Section 3.3 of this document contains a full description of the human communities that directly and indirectly depend on the CMP resource and would be affected by any management measures implemented by past, current, and future amendments to the CMP FMP.

Climate change

Global climate changes may or may not have significant effects on South Atlantic and Gulf of Mexico fisheries. However, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (IPCC 2007; Kennedy et al. 2002).

It is unclear how climate change would affect mackerel species in the South Atlantic and Gulf of Mexico. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Climate change may significantly impact snapper grouper species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur. In the near term, it is unlikely that the management measures contained in this amendment would compound or exacerbate the ongoing effects of climate change on king mackerel and Spanish mackerel species.

7. Define a baseline condition for the resources, ecosystems, and human communities.

Southeast Data, Assessment, and Review (SEDAR) assessments show trends in biomass, fishing mortality, fish weight, and fish length going back to the earliest periods of data collection. A

stock assessment (SEDAR 28) for Spanish mackerel was recently completed and stock is not overfished nor undergoing overfishing. The most recent stock assessment for Atlantic migratory group king mackerel was completed 2008 (SEDAR 16), and that assessment indicates king mackerel are also not overfished nor are they undergoing overfishing. For a detailed discussion of the baseline conditions of king mackerel and Spanish mackerel, the reader is referred to **Section 3.2** of the document. The reader is also referred to the information on ecosystems (**Section 3.1**) and human communities (**Section 3.3**).

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.

The CMP fishery has been managed through the FMP and subsequent amendments since 1982. The South Atlantic Council and the Gulf of Mexico Fishery Management Council have jointly developed numerous amendments intended to improve management of the CMP resource and/or address scientific and management issues as they present themselves. Additionally, each fishery management council has implemented various amendments to the FMP independent from one another, mostly in the form of regulatory amendments, for routine changes to management measures such as trip limits, bag limits, or season lengths. Each of these amendments, both joint and independent, may be found on the fishery management council's web sites at www.SAFMC.net, and http://www.gulfcouncil.org. Each amendment to the FMP explains the cause-and-effect relationship between the actions undertaken therein, as well as how those actions impacted or were expected to impact the resources, ecosystems, and human communities. Additionally, a list of CMP FMP amendments and a summary of each of their actions may be found in **Appendix C** of this document.

9. Determine the magnitude and significance of cumulative effects.

The proposed management actions are summarized in **Section 2** of this document. Detailed discussions of the magnitude and significance of the impacts of the preferred alternatives on the human environment appear in **Section 4** of this document. None of the impacts of the actions in this amendment, in combination with past, present, and future actions have been determined to be significant. Though CMP FMP amendments 19 and 20, both supported by EA's, contain actions that affect the species addressed in this framework action, the additive effects on the species and the fishery are not expected to result in a significant level of cumulative impacts.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The cumulative effects of past, present, and future actions, combined with potential impacts of the actions in this amendment on the biophysical environment are expected to be negligible. Avoidance, minimization, and mitigation are not necessary for the successful implementation of the proposed actions in this amendment.

11. Monitor the cumulative effects of the selected alternatives and adopt management.

The effects of the proposed actions are, and will continue to be, monitored through collection of data by the National Marine Fisheries Service, states, stock assessments and stock assessment updates, life history studies, and other scientific observations.

6.2 Social and Economic

Participation in and the economic performance of the coastal migratory pelagic fisheries addressed in this document have been affected by a combination of regulatory, biological, social, and external economic factors. Regulatory measures have obviously affected the quantity and composition of harvests of species addressed in this document, through the various size limits, seasonal restrictions, trip or bag limits, and quotas. In addition to a complex boundary and quota system the coastal migratory pelagic fishery also exists under regulations on bag limits, size limits, trip limits, and gear restrictions.

The commercial king mackerel permit and king mackerel gill net endorsement are under limited entry permit systems. New participation in the king mackerel commercial sector or gillnet component require access to additional capital and an available permit to purchase, which may limit opportunities for new entrants. Additionally, almost all fishermen or businesses with one of the limited entry permits also hold at least one (and usually multiple) additional commercial or for-hire permit to maintain the opportunity to participate in other fisheries. Commercial fishermen, for-hire vessel owners and crew, and private recreational anglers commonly participate in multiple fisheries throughout the year. Even within the coastal migratory pelagics fishery, effort can shift from one species to another due to environmental, economic, or regulatory changes. Overall, changes in management of one species in the coastal migratory pelagics fishery can impact effort and harvest of another species (in the coastal migratory pelagics fishery or in another fishery) because of multi-fishery participation that is characteristic in the South Atlantic region.

Biological forces that either motivate certain regulations or simply influence the natural variability in fish stocks have likely played a role in determining the changing composition of the fisheries addressed by this document. Additional factors, such as changing career or lifestyle preferences, stagnant to declining prices due to imports, increased operating costs (gas, ice, insurance, dockage fees, etc.), and increased waterfront/coastal value leading to development pressure for other than fishery uses have impacted both the commercial and recreational fishing sectors. In general, the regulatory environment for all fisheries has become progressively more complex and burdensome, increasing the pressure on economic losses, business failure, occupational changes, and associated adverse pressures on associated families, communities, and businesses. Some reverse of this trend is possible and expected through management. However, certain pressures would remain, such as total effort and total harvest considerations, increasing input costs, import induced price pressure, and competition for coastal access.

Descriptions of the economic environment and the social environment, including a description of the coastal migratory pelagics fishery, as well as associated key fishing communities are contained in **Section 3.3**. A description of the history of management of the fisheries addressed in this document is contained in **Appendix C**. A detailed description of the expected social and economic impacts of the actions in this document is contained elsewhere in **Section 4**.

Additional actions have been implemented or are in the process of being implemented for coastal migratory pelagic species. ACLs, AMs and management measures have been developed in Amendment 18 to the Coastal Migratory Pelagics FMP (GMFMC/SAFMC 2011). The Generic Dealer Amendment is pending approval, and will require for the first time a federal dealer permit (and associated reporting requirements) for individuals buying CMP species. The Joint South Atlantic/Gulf of Mexico Generic Charter/Headboat Reporting in the South Atlantic Amendment is also pending approval and will implement additional reporting requirements for vessels with the Gulf CMP For-hire Federal Permit and the South Atlantic CMP For-hire Federal Permit. Additionally, Joint Amendments 20A and 20B are currently being developed on the same schedule as this amendment. Amendment 20A could prohibit bag limit sales of king mackerel and Spanish mackerel; eliminate or restrict inactive king mackerel permits, or establish a two-for-one requirement for new entrants; and eliminate income requirements. Amendment 20B could change trip limits and fishing seasons for some zones and sub-zones for Gulf migratory group king mackerel, and could establish a separate allocation of the commercial ACL for Atlantic migratory group king mackerel and Spanish mackerel for North Carolina.

A stock assessment for Spanish mackerel was completed in 2012. Changes in the ACLs to reflect new information for the Atlantic migratory group Spanish mackerel fishery could impact the coastal migratory pelagics fishery in the near future. Additionally, the stock assessment for king mackerel takes place in 2013, and the results could increase or decrease the available fish for harvest.

Currently a formal consultation is underway for the Coastal Migratory Pelagics (CMP) fishery, triggered by the listing in 2012 of the Carolina and South Atlantic distinct population segments (DPSs) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as endangered under the ESA. Specifically the consulation will examine the effects of harvest with gillnets that could impact the protected sturgeon populations. Additionally, in December 2012, NMFS issued a proposal to list 82 coral species as threatened or endangered, including seven species found in the South Atlantic region, including a proposal to relist two Acropora species (elkhorn and staghorn coral) as endangered. The final determination will be published in November 2013. The ongoing formal consultation for the CMP fishery could include assessment of impacts on these species if they are listed as endangered.

The cumulative social and economic effects of past, present, and future amendments may be described as limiting fishing opportunities in the short-term, with some exceptions of actions that alleviate some negative social and economic impacts. The intent of these amendments is to improve prospects for sustained participation in the respective fisheries over time and the proposed actions in this amendment are expected to result in some important long-term benefits to the commercial fleets, fishing communities and associated businesses. The proposed changes in management for king mackerel and Spanish mackerel will contribute to changes in the fishery within the context of the current economic and regulatory environment at the local and regional level but are expected to reduce waste in the fishery and provide economic benefits to fishermen and fish houses.

Chapter 7. List of Interdisciplinary Plan Team (IPT) Members

Name	Agency/Division	Title
Kari MacLauchlin	SAFMC	Interdisciplinary plan team (IPT) Lead/Fishery Social Scientist
Kate Michie	SERO /SF	IPT Lead/Fishery Biologist
Adam Brame	SERO/PR	Fishery Biologist
Shannon Calay	SEFSC	Research Fish Biologist
Brian Cheuvront	SAFMC	Fishery Economist
Nancie Cummings	SEFSC	Research Fish Biologist
David Dale	SERO /HC	EFH Specialist
Anne Marie Eich	SERO	Technical Writer and Editor
Nick Farmer	SERO	Biologist
Stephen Holiman	SERO /SF	Economist
Denise Johnson	SERO/SF	Economist
David Keys	NMFS/SER	Regional NEPA Coordinator
Mara Levy	NOAA GC	General Counsel
Christopher Liese	SEFSC	Economist
Jack McGovern	SERO/SF	Fishery Scientist
Andy Strelcheck	SERO/SF	Fishery Biologist
Gregg Waugh	SAFMC	Deputy Director

NMFS = National Marine Fisheries Service, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel

Chapter 8. Agencies and Persons Consulted

Responsible Agency

South Atlantic
Coastal Migratory Pelagics
Framework Action 2013
South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
Charleston, South Carolina 29405
(843) 571-4366 (TEL)
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Environmental Assessment:
NMFS, Southeast Region
263 13th Avenue South
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(727) 824-5301 (TEL)
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List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Kind and Spanish Mackerel Advisory Panel
SAFMC Scientific and Statistical Committee
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Georgia Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
South Carolina Department of Natural Resources
North Carolina Division of Marine Fisheries
North Carolina Sea Grant
South Carolina Sea Grant
Georgia Sea Grant
Florida Sea Grant
Atlantic States Marine Fisheries Commission
Gulf and South Atlantic Fisheries Development Foundation
Gulf of Mexico Fishery Management Council
National Marine Fisheries Service
- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

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Appendix A. Glossary

Allowable Biological Catch (ABC): Maximum amount of fish stock than can be harvested without adversely affecting recruitment of other components of the stock. The ABC level is typically higher than the total allowable catch, leaving a buffer between the two.

ALS: Accumulative Landings System. NMFS database which contains commercial landings reported by dealers.

Biomass: Amount or mass of some organism, such as fish.

B_{MSY}: Biomass of population achieved in long-term by fishing at F_{MSY}.

Bycatch: Fish harvested in a fishery, but not sold or kept for personal use. Bycatch includes economic discards and regulatory discards, but not fish released alive under a recreational catch and release fishery management program.

Caribbean Fishery Management Council (CFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The CFMC develops fishery management plans for fisheries off the coast of the U.S. Virgin Islands and the Commonwealth of Puerto Rico.

Catch Per Unit Effort (CPUE): The amount of fish captured with an amount of effort. CPUE can be expressed as weight of fish captured per fishing trip, per hour spent at sea, or through other standardized measures.

Charter Boat: A fishing boat available for hire by recreational anglers, normally by a group of anglers for a short time period.

Cohort: Fish born in a given year. (See year class.)

Control Date: Date established for defining the pool of potential participants in a given management program. Control dates can establish a range of years during which a potential participant must have been active in a fishery to qualify for a quota share.

Constant Catch Rebuilding Strategy: A rebuilding strategy where the allowable biological catch of an overfished species is held constant until stock biomass reaches B_{MSY} at the end of the rebuilding period.

Constant F Rebuilding Strategy: A rebuilding strategy where the fishing mortality of an overfished species is held constant until stock biomass reached BMSY at the end of the rebuilding period.

Directed Fishery: Fishing directed at a certain species or species group.

Discards: Fish captured, but released at sea.

Discard Mortality Rate: The % of total fish discarded that do not survive being captured and released at sea.

Derby: Fishery in which the TAC is fixed and participants in the fishery do not have individual quotas. The fishery is closed once the TAC is reached, and participants attempt to maximize their harvests as quickly as possible. Derby fisheries can result in capital stuffing and a race for fish.

Effort: The amount of time and fishing power (i.e., gear size, boat size, horsepower) used to harvest fish.

Exclusive Economic Zone (EEZ): Zone extending from the shoreline out to 200 nautical miles in which the country owning the shoreline has the exclusive right to conduct certain activities such as fishing. In the United States, the EEZ is split into state waters (typically from the shoreline out to 3 nautical miles) and federal waters (typically from 3 to 200 nautical miles).

Exploitation Rate: Amount of fish harvested from a stock relative to the size of the stock, often expressed as a percentage.

F: Fishing mortality.

Fecundity: A measurement of the egg-producing ability of fish at certain sizes and ages.

Fishery Dependent Data: Fishery data collected and reported by fishermen and dealers.

Fishery Independent Data: Fishery data collected and reported by scientists who catch the fish themselves.

Fishery Management Plan: Management plan for fisheries operating in the federal produced by regional fishery management councils and submitted to the Secretary of Commerce for approval.

Fishing Effort: Usually refers to the amount of fishing. May refer to the number of fishing vessels, amount of fishing gear (nets, traps, hooks), or total amount of time vessels and gear are actively engaged in fishing.

Fishing Mortality: A measurement of the rate at which fish are removed from a population by fishing. Fishing mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

Fishing Power: Measure of the relative ability of a fishing vessel, its gear, and its crew to catch fishes, in reference to some standard vessel, given both vessels are under identical conditions.

$F_{30\%SPR}$: Fishing mortality that will produce a static SPR = 30%.

$F_{45\%SPR}$: Fishing mortality that will produce a static SPR = 45%.

F_{OY}: Fishing mortality that will produce OY under equilibrium conditions and a corresponding biomass of B_{OY}. Usually expressed as the yield at 85% of F_{MSY}, yield at 75% of F_{MSY}, or yield at 65% of F_{MSY}.

F_{MSY}: Fishing mortality that if applied constantly, would achieve MSY under equilibrium conditions and a corresponding biomass of B_{MSY}

Fork Length (FL): The length of a fish as measured from the tip of its snout to the fork in its tail.

Framework: An established procedure within a fishery management plan that has been approved and implemented by NMFS, which allows specific management measures to be modified via regulatory amendment.

Gear restrictions: Limits placed on the type, amount, number, or techniques allowed for a given type of fishing gear.

Growth Overfishing: When fishing pressure on small fish prevents the fishery from producing the maximum poundage. Condition in which the total weight of the harvest from a fishery is improved when fishing effort is reduced, due to an increase in the average weight of fishes.

Gulf of Mexico Fishery Management Council (GFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The GFMC develops fishery management plans for fisheries off the coast of Texas, Louisiana, Mississippi, Alabama, and the west coast of Florida.

Head Boat: A fishing boat that charges individual fees per recreational angler onboard.

Highgrading: Form of selective sorting of fishes in which higher value, more marketable fishes are retained, and less marketable fishes, which could legally be retained are discarded.

Individual Fishing Quota (IFQ): Fishery management tool that allocates a certain portion of the TAC to individual vessels, fishermen, or other eligible recipients.

Longline: Fishing method using a horizontal mainline to which weights and baited hooks are attached at regular intervals. Gear is either fished on the bottom or in the water column.
Magnuson-Stevens Fishery Conservation and Management Act: Federal legislation responsible for establishing the fishery management councils and the mandatory and discretionary guidelines for federal fishery management plans.

Marine Recreational Fisheries Statistics Survey (MRFSS): Survey operated by NMFS in cooperation with states that collects marine recreational data.

Maximum Fishing Mortality Threshold (MFMT): The rate of fishing mortality above which a stock's capacity to produce MSY would be jeopardized.

Maximum Sustainable Yield (MSY): The largest long-term average catch that can be taken continuously (sustained) from a stock or stock complex under average environmental conditions.

Minimum Stock Size Threshold (MSST): The biomass level below which a stock would be considered overfished.

Modified F Rebuilding Strategy: A rebuilding strategy where fishing mortality is changed as stock biomass increases during the rebuilding period.

Multispecies fishery: Fishery in which more than one species is caught at the same time and location with a particular gear type.

National Marine Fisheries Service (NMFS): Federal agency within NOAA responsible for overseeing fisheries science and regulation.

National Oceanic and Atmospheric Administration: Agency within the Department of Commerce responsible for ocean and coastal management.

Natural Mortality (M): A measurement of the rate at which fish are removed from a population by natural causes. Natural mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

Optimum Yield (OY): The amount of catch that will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

Overfished: A stock or stock complex is considered overfished when stock biomass falls below the minimum stock size threshold (MSST) (e.g., current biomass < MSST = overfished).

Overfishing: Overfishing occurs when a stock or stock complex is subjected to a rate of fishing mortality that exceeds the maximum fishing mortality threshold (e.g., current fishing mortality rate > MFMT = overfishing).

Quota: % or annual amount of fish that can be harvested.

Recruitment (R): Number or percentage of fish that survives from hatching to a specific size or age.

Recruitment Overfishing: The rate of fishing above which the recruitment to the exploitable stock becomes significantly reduced. This is characterized by a greatly reduced spawning stock,

a decreasing proportion of older fish in the catch, and generally very low recruitment year after year.

Scientific and Statistical Committee (SSC): Fishery management advisory body composed of federal, state, and academic scientists, which provides scientific advise to a fishery management council.

Selectivity: The ability of a type of gear to catch a certain size or species of fish.

South Atlantic Fisheries Management Council (SAFMC): One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The SAFMC develops fishery management plans for fisheries off North Carolina, South Carolina, Georgia, and the east coast of Florida.

Spawning Potential Ratio (Transitional SPR): Formerly used in overfished definition. The number of eggs that could be produced by an average recruit in a fished stock divided by the number of eggs that could be produced by an average recruit in an unfished stock. SPR can also be expressed as the spawning stock biomass per recruit (SSBR) of a fished stock divided by the SSBR of the stock before it was fished.

% Spawning Per Recruit (Static SPR): Formerly used in overfishing determination. The maximum spawning per recruit produced in a fished stock divided by the maximum spawning per recruit, which occurs under the conditions of no fishing. Commonly abbreviated as %SPR.

Spawning Stock Biomass (SSB): The total weight of those fish in a stock which are old enough to spawn.

Spawning Stock Biomass Per Recruit (SSBR): The spawning stock biomass divided by the number of recruits to the stock or how much spawning biomass an average recruit would be expected to produce.

Total Allowable Catch (TAC): The total amount of fish to be taken annually from a stock or stock complex. This may be a portion of the Allowable Biological Catch (ABC) that takes into consideration factors such as bycatch.

Total Length (TL): The length of a fish as measured from the tip of the snout to the tip of the tail.

Appendix B. Actions and Alternatives Considered but Rejected

Action 1. Alternative 2.

Alternative 2: Modify commercial gear specifications for Atlantic migratory group Spanish mackerel.

Option a. Remove the maximum number of gillnets.
Option b. Remove the requirement for different mesh sizes.
Option c. Allow federally-permitted Spanish mackerel vessels to possess three gillnets.
Option d. Allow three gillnets for the vessel receiving transfer.

Alternative 2 was eliminated from the detailed analysis because the structure of the action's alternatives was modified in such a way that the elements of Alternative 2 were incorporated into what is now the new Alternative 2, which improved the readability of the document and streamlined the action.

Action: Modify regulations for the Atlantic migratory group Spanish mackerel minimum commercial size limit.

Alternative 1 (No Action). Continue to prohibit harvest of undersized Atlantic migratory group Spanish mackerel except for vessels fishing under a quota for Spanish mackerel specified in Section 622.42(c)(2), which may possess undersized Spanish mackerel in quantities not exceeding five %, by weight, of the Spanish mackerel on board. The current commercial and recreational minimum size limit is 12 inches fork length (FL).

Alternative 2. Allow commercial harvest of undersized Atlantic migratory group Spanish mackerel in waters off North Carolina with pound nets between August 1 and September 30 each year.

Sub-Alternative 2a. Decrease the minimum size limit to 11 inches FL.
Sub-Alternative 2b. Eliminate the minimum size limit.

Alternative 3. Allow commercial harvest of undersized Spanish mackerel with pound nets in waters within the Atlantic northern zone (GA-NY) between August 1 and September 30 each year.

Sub-Alternative 3a. Decrease the minimum size limit to 11 inches FL.
Sub-Alternative 3b. Eliminate the minimum size limit.

This action was removed from the amendment in March 2013 because the South Atlantic Council felt it would be more suitable to be address through the Atlantic State Marine Fisheries Commission. The majority of Spanish mackerel landings with pound nets are from state waters. Though the alternatives are appropriate for consideration under this action, the South Atlantic

Council decided not to pursue modification of Spanish mackerel minimum size limits. Therefore, Alternatives 2 and 3 were removed from the document, along with the action, and were not considered for detailed analysis.

Action: Modify the Atlantic migratory group king mackerel minimum size limit.

Alternative 1 (No Action). Do not change the Atlantic migratory group king mackerel minimum size limit of 24 inches fork length (FL) for the commercial and recreational sectors.

Alternative 2. Reduce the Atlantic migratory group king mackerel recreational and commercial minimum size limit to 23 inches FL.

Alternative 3. Reduce the Atlantic migratory group king mackerel recreational and commercial minimum size limit to 22 inches FL.

Alternative 4. Reduce the Atlantic migratory group king mackerel commercial minimum size limit to 23 inches FL for the commercial sector only, from the Georgia/Florida line south to the Miami-Dade/Monroe County line. The commercial minimum size limit in areas north of the Georgia/Florida state line and South of the Miami-Dade/Monroe County line would remain 24 inches FL. The recreational minimum size limit would remain 24 inches FL.

The South Atlantic Council removed this action in June 2013 because there is concern about stock status, and the South Atlantic Council wanted to wait until the stock assessment update is finished before making any changes to size limit requirements. Because the action was removed from the document, the alternatives were also removed. This does not imply the alternatives did not represent a reasonable range of alternatives, but simply the alternatives do not require further analysis due to the South Atlantic Council's decision to table this action until they have more information.

Action: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel.

Alternative 1 (No Action). The quota for the northern and southern zones of Atlantic migratory group Spanish mackerel is 3.87 million lbs(mp), and is adjusted to 3.62 mp and the fishing year begins March 1. Currently for the southern zone, the trip limit is 3,500 lbs starting March 1, and then starting December 1 trips are not limited on week days and are 1,500 lbs on weekends. This unlimited time period continues until 75 % of the adjusted quota is landed, after which the trip limit is 1,500 lbs every day. When 100 % of the adjusted quota is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until the full quota is met or projected to be met. In the northern zone, the trip limit is 3,500 lbs year-round or until the quota is met or projected to be met.

Alternative 2. Remove the use of an adjusted quota for Atlantic migratory group Spanish mackerel in the southern zone and:

Sub-Alternative 2a. Remove all trip limit changes for the southern zone. The trip limit would remain 3,500 lbs year-round. Close commercial harvest of Atlantic migratory group Spanish mackerel when the commercial ACL is met or projected to be met.

Sub-Alternative 2b. Remove the period of unlimited trips for the southern zone that starts December 1 each year. The southern zone trip limit would start at 3,500 lbs on March 1 of each year. When 75% of the commercial ACL has been landed or projected to be landed the trip limit would be reduced to 1,500 lbs. Close commercial harvest of Atlantic migratory group Spanish mackerel when the commercial ACL is met or projected to be met.

Sub-Alternative 2c. Remove the period of unlimited trips for the southern zone that starts December 1 each year. The southern zone trip limit would start at 3,500 lbs on March 1 of each year. When 75% of the commercial ACL has been landed or projected to be landed the trip limit would be reduced to 500 lbs. Close commercial harvest of Atlantic migratory group Spanish mackerel when the commercial ACL is met or projected to be met.

Alternative 3. Retain the adjusted commercial quota but remove the period of unlimited trips for the southern zone that starts December 1 each year. The southern zone trip limit would start at 3,500 lbs on March 1 of each year. When 75% of the adjusted commercial ACL has been landed or projected to be landed the trip limit would be reduced to 1,500 lbs. When 100% of the adjusted commercial quota is reached, the trip limit is reduced to 500 lbs until the end of the fishing year or until the commercial ACL is met or projected to be met.

This action, and its associated alternatives, was removed from the amendment in June 2013 to allow time for the SSC to review the results of the stock assessment (SEDAR 28) and the associated projections, and to allow time for the South Atlantic Council to establish the new ACL for Atlantic migratory group Spanish mackerel before proceeding with changes in the trip limits or other management measures.

Appendix C. History of Management

The CMP FMP, with Environmental Impact Statement (EIS), was approved in 1982 and implemented by regulations effective in February of 1983. Managed species included king mackerel, Spanish mackerel, and cobia. The FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf of Mexico. The FMP established allocations for the recreational and commercial sectors harvesting these stocks, and the commercial allocations were divided between net and hook-and-line fishermen.

FMP Amendments

Amendment 1, with EIS, implemented in September of 1985, provided a framework procedure for pre-season adjustment of total allowable catch (TAC), revised the estimate of 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, except purse seines, which were allowed 6% of the commercial allocation of TAC, were eliminated. The Gulf commercial allocation for king mackerel was divided into Eastern and Western Zones for the purpose of regional allocation, with 69% of the remaining allocation provided to the Eastern Zone and 31% to the Western Zone. Amendment 1 also established minimum size limits for Spanish mackerel at 12 in fork length (FL) or 14 in total length (TL), and for cobia at 33 in FL or 37 in TL.

Amendment 2, with environmental assessment (EA), implemented in July of 1987, revised MSY for Spanish mackerel downward, recognized two migratory groups, established allocations of TAC for the commercial and recreational sectors, and set commercial quotas and bag limits. Charterboat permits were established, and it was clarified that TAC must be set below the upper range of ABC. The use of purse seines on overfished stocks was prohibited, and their allocation of TAC was redistributed under the 69%/31% split.

Amendment 3, with EA, was partially approved in August 1989, revised, resubmitted, and approved in April 1990. It prohibited drift gillnets for coastal pelagic species and purse seines for the overfished migratory groups of mackerels.

Amendment 4, with EA, implemented in October 1989, reallocated Atlantic migratory group Spanish mackerel equally between recreational and commercial fishermen.

Amendment 5, with EA, implemented in August 1990, made the following changes in the management regime:

- Extended the management area for Atlantic migratory groups of mackerels through the Mid-Atlantic Council's area of jurisdiction;
- Revised problems in the fishery and plan objectives;
- Revised the fishing year for Gulf Spanish mackerel from July-June to April-March;
- Revised the definition of "overfishing";
- Added cobia to the annual stock assessment procedure;
- Provided that the South Atlantic Council 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;
- Continued to manage the two recognized Gulf migratory groups of king mackerel as one until management measures appropriate to the eastern and western migratory groups can be determined;
- Re-defined recreational bag limits as daily limits;
- Deleted a provision specifying that bag limit catch of mackerel may be sold;
- Provided guidelines for corporate commercial vessel permits;
- Specified that Gulf migratory group king mackerel may be taken only by hook-and-line and run-around gillnets;
- Imposed a bag and possession limit of two cobia per person per day;
- Established a minimum size of 12 in FL or 14 in TL for king mackerel and included a definition of "conflict" to provide guidance to the Secretary.

Amendment 6, with EA, implemented in November of 1992, made the following changes:
- Identified additional problems and an objective in the fishery;
- Provided for rebuilding overfished stocks of mackerels within specific periods;
- Provided for biennial assessments and adjustments;
- Provided for more seasonal adjustment actions;
- Allowed for Gulf migratory group king mackerel stock identification and allocation when appropriate;
- Provided for commercial Atlantic migratory group Spanish mackerel possession limits;
- Changed commercial permit requirements to allow qualification in one of three preceding years;
- Discontinued the reversion of the bag limit to zero when the recreational quota is filled;
- Modified the recreational fishing year to the calendar year; and
- Changed the minimum size limit for king mackerel to 20 in FL, and changed all size limit measures to fork length only.

Amendment 7, with EA, implemented in November 1994, equally divided the Gulf commercial allocation in the Eastern Zone at the Dade-Monroe County line in Florida. The sub-allocation for the area from Monroe County through Western Florida is equally divided between commercial hook-and-line and net gear users.

Amendment 8, with EA, implemented March 1998, made the following changes to the management regime:
- Clarified ambiguity about allowable gear specifications for the Gulf migratory group king mackerel fishery by allowing only hook-and-line and run-around gillnets. However, catch by permitted, multi-species vessels and bycatch allowances for purse seines were maintained;
- Established allowable gear in the South Atlantic and Mid-Atlantic areas as well as providing for the RA (RA) to authorize the use of experimental gear;
- Established the Councils' intent to evaluate the impacts of permanent jurisdictional boundaries between the Gulf and South Atlantic Councils and development of separate FMPs for coastal pelagic species in these areas;
- Established a moratorium on commercial king mackerel permits until no later than

October 15, 2000, with a qualification date for initial participation of October 16, 1995;
- Increased the income requirement for a king or Spanish mackerel permit to 25% of earned income or $10,000 from commercial sale of catch or charter or head boat fishing in one of the three previous calendar years, but allowed for a one-year grace period to qualify under permits that are transferred;
- Legalized retention of up to five cut-off (damaged) king mackerel on vessels with commercial trip limits;
- Set an optimum yield (OY) target at 30% static spawning potential ratio (SPR) for the Gulf and 40% static SPR for the Atlantic;
- Provided the South Atlantic Council with authority to set vessel trip limits, closed seasons or areas, and gear restrictions for Gulf migratory group king mackerel in the North Area of the Eastern Zone (Dade/Monroe to Volusia/Flagler County lines);
- Established various data consideration and reporting requirements under the framework procedure;
- Modified the seasonal framework adjustment measures and specifications (see Appendix A);
- Expanded the management area for cobia through the Mid-Atlantic Council's area of jurisdiction (to New York).

Amendment 9, with EA, implemented in April 2000, made the following changes to the management regime:

- Reallocated the percentage of the commercial allocation of TAC for the North Area (Florida east coast) and South/West Area (Florida west coast) of the Eastern Zone to 46.15% North and 53.85% South/West and retained the recreational and commercial allocations of TAC at 68% recreational and 32% commercial;
- Subdivided the commercial hook-and-line king mackerel allocation for the Gulf migratory group, Eastern Zone, South/West Area (Florida west coast) by establishing two subzones with a dividing line between the two subzones at the Collier/Lee County line;
- Established regional allocations for the west coast of Florida based on the two subzones with 7.5% of the Eastern Zone allocation of TAC being allowed from Subzone 2 and the remaining 92.5% being allocated as follows:
- 50% - Florida east coast
- 50% - Florida west coast that is further subdivided:
    - 50% - Net Fishery
    - 50% - Hook-and-Line Fishery
- Established a trip limit of 3,000 lb per vessel per trip for the Western Zone;
- Established a moratorium on the issuance of commercial king mackerel gillnet endorsements and allow re-issuance of gillnet endorsements to only those vessels that: 1) had a commercial mackerel permit with a gillnet endorsement on or before the moratorium control date of October 16, 1995 (Amendment 8), and 2) had landings of king mackerel using a gillnet in one of the two fishing years, 1995-1996 or 1996-1997, as verified by the National Marine Fisheries Service (NMFS) or trip tickets from Florida; allowed transfer of gillnet endorsements to immediate family members (son, daughter, father, mother, or spouse) only; and prohibited the use of gillnets or any other net gear for the harvest of Gulf migratory group king mackerel north of an east/west line at the Collier/Lee County line;

- Increased the minimum size limit for Gulf migratory group king mackerel from 20 in to 24 in FL
- Allowed the retention and sale of cut-off (damaged), legal-sized king and Spanish mackerel within established trip limits.

Amendment 10, with Supplemental Environmental Impact Statement (SEIS), approved June 1999, incorporated essential fish habitat provisions for the South Atlantic.

Amendment 11, with SEIS, partially approved in December 1999, included proposals for mackerel in the South Atlantic Council's Comprehensive Amendment Addressing Sustainable Fishery Act Definitions and other Provisions in FMPs of the South Atlantic Region.

Amendment 12, with EA, implemented October 2000, extended the commercial king mackerel permit moratorium from its current expiration date of October 15, 2000, to October 15, 2005, or until replaced with a license limitation, limited access, and/or individual fishing quota or individual transferable quota system, whichever occurs earlier.

Amendment 13, with SEIS, implemented August 19, 2002, established two marine reserves in the exclusive economic zone (EEZ) of the Gulf in the vicinity of the Dry Tortugas, Florida known as Tortugas North and Tortugas South in which fishing for coastal migratory pelagic species is prohibited. This action complements previous actions taken under the National Marine Sanctuaries Act.

Amendment 14, with EA, implemented July 29, 2002, established a three-year moratorium on the issuance of charter vessel and head boat Gulf migratory group king mackerel permits in the Gulf unless sooner replaced by a comprehensive effort limitation system. The control date for eligibility was established as March 29, 2001. Also includes provisions for eligibility, application, appeals, and transferability.

Amendment 15, with EA, implemented August 8, 2005, established an indefinite limited access program for the commercial king mackerel fishery in the EEZ under the jurisdiction of the Gulf, South Atlantic, and Mid-Atlantic Councils. It also changed the fishing season to March 1 through February 28/29 for the Atlantic migratory groups of king and Spanish mackerel.

Amendment 16, was not developed.

Amendment 17, with SEIS, implemented June 15, 2006, established a limited access system on for-hire reef fish and CMP permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. There will be a periodic review at least every 10 years on the effectiveness of the limited access system.

Amendment 18, with EA, established annual catch limits (ACL), annual catch targets (ACT) and accountability measures (AM) for king mackerel, Spanish mackerel and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the Fishery Management Unit: cero, little tunny, dolphin and bluefish. The South Atlantic and the Gulf councils approved the

amendment for formal review in August, 2011. The amendment was approved by the Secretary of Commerce in December, 2011

Appendix D. Bycatch Practicability Analysis

1.1 Population Effects for the Bycatch Species

Background

The Coastal Migratory Pelagics (CMP) Framework Action includes actions that would allow transfer of Atlantic migratory group Spanish mackerel caught in excess of the trip limit in gillnet gear from one federally permitted Spanish mackerel vessel to another federally permitted Spanish mackerel vessel that has not yet harvested the trip limit. This amendment also considers a provision to allow the receiving vessel involved in a Spanish mackerel transfer at sea to have three gillnets onboard. The intent of allowing Spanish mackerel to be transferred at sea is to reduce the amount of dead discards that result from the trip limit being exceeded while fishing with gillnet gear. Additionally, the CMP Framework Action includes an action to modify the system of commercial trip limits for king mackerel in the Florida East Coast subzone as outlined under Action 2 of the document.

In the Fishery Management Plan (FMP) for CMP in the Gulf of Mexico and Atlantic Region Fishery Management Plan, most king mackerel and cobia are taken with hook and line gear; however, gillnets and castnets are the predominant gear type used to harvest Spanish mackerel.

Commercial Sector

Currently, discard data are collected using a supplemental form that is sent to a 20% stratified random sample of the active permit holders in CMP fishery. However, in the absence of any observer data, there are concerns about the accuracy of logbook data in collecting bycatch information. Biases associated with logbooks primarily result from inaccuracy in reporting of species that are caught in large numbers or are of little economic interest (particularly of bycatch species), and from low compliance rates.

Recreational Sector

For the recreational sector, during 2008-2012, estimates of the number of recreational discards were available from Marine Recreational Fisheries Statistical Survey (MRFSS) and the the National Marine Fisheries Service (NMFS) headboat survey. The MRFSS system classifies recreational catch into three categories:

- Type A - Fishes that were caught, landed whole, and available for identification and enumeration by the interviewers.

- Type B - Fishes that were caught but were either not kept or not available for identification:

    - Type B1 - Fishes that were caught and filleted, released dead, given away, or disposed of in some way other than Types A or B2.

    - Type B2 - Fishes that were caught and released alive.

For the CMP FMP during 2008-2012, the private recreational landings and discards for CMP species in the South Atlantic were also higher than those in the headboat/charterboat category (**Table 1**). Landings and subsequent discards for the private recreational category were higher for Spanish mackerel (883,818 and 527,057), followed by king mackerel (242,716 and 76,948), and cobia (31,380 and 32,947) (**Table 1**). A similar trend was seen for the South Atlantic charterboat category, with landings and discards for Spanish mackerel (156,011 and 38,766) higher than king mackerel (45,212 and 3,212), and cobia (4,362 and 3,003) (**Table 1**). However, in the headboat category, landings and discards were higher for king mackerel (14,824 and 2,038), followed by Spanish mackerel (9,686 and 1,436), and cobia (1,453 and 0) (**Table 1**).

During 2008-2012, "for-hire" charter vessels for the CMP fishery were selected to report by the Southeast Regional Director (SRD) to maintain a fishing record for each trip, or a portion of such trips as specified by the SRD, and on forms provided by the SRD. Harvest and bycatch information was monitored by MRFSS. Since 2000, a 10% sample of charter vessel captains were called weekly to obtain trip level information. In addition, the standard dockside intercept data were collected from charter vessels and charter vessel clients were sampled through the standard random digital dialing of coastal households. Precision of charter vessel effort estimates has improved by more than 50% due to these changes (Van Voorhees *et al.* 2000).

Harvest from headboats was monitored by NMFS at the Southeast Fisheries Science Center's (SEFSC) Beaufort Laboratory. Collection of discard data began in 2004. Daily catch records (trip records) were filled out by the headboat operators, or in some cases by NMFS approved headboat samplers based on personal communication with the captain or crew. Headboat trips were subsampled for data on species lengths and weights. Biological samples (scales, otoliths, spines, reproductive tissues, and stomachs) were obtained as time allowed. Lengths of discarded fish were occasionally obtained but these data were not part of the headboat database.

Recent improvements have been made to the MRFSS program, and the program is now called Marine Recreational Information Program (MRIP). After 2012, samples will be drawn from a known universe of fishermen rather than randomly dialing coastal households. Other improvements have been and will be made that should result in better estimating recreational catches and the variances around those catch estimates.

Table 1. Mean headboat, MRFSS charter and private, and commercial estimates of landings and discards in the U.S. southern Atlantic Ocean (2008-2012). Headboat, MRFSS charter and private landings are in numbers of fish (N); commercial landings are in pounds whole weight (lbs ww). Discards represent numbers of fish that were caught and released alive (B2).

	HEADBOAT				MRFSS CHARTER				MRFSS PRIVATE				COMMERCIAL	
	Catch (N)	Landings (N)	Discards (N)	Discards (%)	Catch (N)	Landings (N)	Discards (N)	Discards (%)	Catch (N)	Landings (N)	Discards (N)	Discards (%)	Landings (lbs ww)	Discards (N)
Cobia	1,453	1,453	0	0%	7,365	4,362	3,003	69%	64,328	31,380	32,947	105%	137,075	0
King mackerel*	16,862	14,824	2,038	14%	51,424	45,212	6,212	14%	319,663	242,716	76,948	32%	2,709,249	5,604
Spanish mackerel	11,122	9,686	1,436	15%	194,776	156,011	38,766	25%	1,410,875	883,818	527,057	60%	3,702,992	443
Total	**29,437**	**25,963**	**3,474**		**253,565**	**205,585**	**47,981**		**1,794,866**	**1,432,010**	**636,952**		**5,549,316**	**6,047**

Sources: MRIP data from SEFSC Recreational ACL Dataset (May 2013), Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2013), Commercial landings data from SEFSC Commercial ACL Dataset (July 10, 2013) with discard estimates from expanded SEFSC Commercial Discard Logbook (Jun 2013). Note commercial discard estimates are for vertical line gear only. Note: Commercial king mackerel includes "king and cero mackerel" category; commercial gray triggerfish includes "triggerfishes, unclassified" category; commercial white grunt includes "grunts, unclassified" category. Note: Estimates of commercial discards are highly uncertain.

Finfish Bycatch Mortality

Release mortality rates are unknown for most managed species. Recent Southeast Data Assessment and Review (SEDAR) assessments include estimates of release mortality rates based on published studies. Stock assessment reports can be found at http://www.sefsc.noaa.gov/sedar/.

SEDAR 16 (2009) provided a 20% estimate of release mortality of king mackerel for the private and charter sectors and 33% release mortality for the headboat sector. For Spanish mackerel, SEDAR 17 (2008) used the following discard mortality rates: gillnets 100%, shrimp trawls 100%, trolling 98%, hook and line 80%, and trolling/hook and line combined 88%. SEDAR 28 has been completed to assess Spanish mackerel and cobia stocks in the South Atlantic and the Gulf of Mexico. The stocks have been determined to be neither overfished nor undergoing overfishing.

Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality

Bycatch information is currently being collected in the CMP fishery. The anticipated effects on bycatch mortality of target and non-target species as a result of the actions contained in the CMP Framework Action are likely to be negligible. Allowing vessels that have harvested Spanish mackerel in excess of the trip limit to transfer the excess fish at sea would not modify the number or type of non-target fish caught in Spanish mackerel gillnet gear. This action is intended to reduce the amount of dead discards in the Spanish mackerel gillnet sector. Spanish mackerel caught in excess of the trip limit with gillnet gear must be released and most fish caught in gillnet gear die as a result of capture trauma. Therefore, this action may allow fishermen to transfer excess Spanish mackerel to another vessel that has not harvested the trip limit; and those fish can then brought to market rather than being discarded dead. This action is not expected to modify the way in which the Spanish mackerel gillnet sector is prosecuted, nor would the action lead to increased fishing effort (total harvest is capped by a commercial annual catch limit [ACL]).

The second action in the CMP Framework Amendment would modify the Florida East Coast Subzone king mackerel system of trip limits. The trip limit modifications may limit the rate of harvest by a sufficient amount to prolong fishing opportunities for king mackerel through Lent, which is the objective of the action. However, regardless of the trip limit, overall harvest of king mackerel in the Florida East Coast Subzone is limited by the commercial ACL and the commercial accountability measures (AMs). Therefore, this action is unlikely to change the current level of bycatch mortality associated with the king mackerel fishery in the Florida East Coast Subzone.

According to the bycatch information for mackerel gill nets, menhaden, smooth dogfish sharks, and spiny dogfish sharks were the three most frequently discarded species (SAFMC 2004). There were no interactions of sea turtles or marine mammals reported (Poffenberger 2004). The Southeast Region Current Bycatch Priorities and Implementation Plan FY04 and FY05 reported that 26 species of fish are caught as bycatch in the Gulf king mackerel gillnet sector. Of these, 34% are reported to be released dead, 59% released alive, and 6% undetermined. Bycatch was

not reported for the Gulf Spanish mackerel sector. The South Atlantic Spanish mackerel portion of the CMP fishery has 51 species reported as bycatch with approximately 81% reported as released alive. For the South Atlantic king mackerel portion of the CMP fishery 92.7% are reported as released alive with 6% undetermined. Bycatch was not reported separately for gill nets and hook-and-line gear. Additionally, the supplementary discard program to the logbook reporting requirement shows no interactions of gill-net gear with marine mammals or birds. **Tables 2-4** list the species most often caught with king mackerel in the Gulf and South Atlantic , and Spanish mackerel in the South Atlantic region. There is very little bycatch Spanish mackerel fishery with gillnet gear, and the king mackerel fishery is also associated with a low level of bycatch. The CMP Framework Action would not modify the gear types or fishing techniques in the mackerel segments of the CMP fishery. Therefore, bycatch and subsequent bycatch mortality in the CMP fishery is likely to remain very low if the framework action is implemented.

Table 2. Top 6 species caught on trips where at least one pound of Spanish mackerel was caught with gillnet gear in the South Atlantic for 2008 and 2012.

Species	Percent Caught with Spanish Mackerel Gillnets
Spanish mackerel	91.16%
blue runner	4.14%
king & cero mackerel	3.91%
unclassified jacks	0.58%
crevalle jack	0.14%
black sea bass	0.03%
sheepshead	0.02%

Source: Southeast Fisheries Science Center Commercial Logbook (June 2013)

Table 3. Top 3 species caught on trips where at least one pound of Spanish mackerel was caught with all gear types in the South Atlantic from 2008-2012.

Species	Percent Caught with Spanish Mackerel All Gear Types
Spanish mackerel	88%
king & cero mackerel	8%
blue runner	2%
crevalle jack	1%

Source: Southeast Fisheries Science Center Commercial Logbook (June 2013)

Table 4. Top 10 species caught on trips where at least one pound of king-cero mackerel with all gear types in the Gulf of Mexico and in the South Atlantic from 2008-2012.

Species	Percent Caught with King & Cero Mackerel
king & cero mackerel	73.83%
vermilion snapper	5.93%
red grouper	3.10%

red snapper	2.76%
Spanish mackerel	2.47%
yellowtail snapper	2.14%
greater amberjack	2.07%
Gag	1.31%
red porgy	0.89%
gray triggerfish	0.83%
Scamp	0.80%

Source: Southeast Fisheries Science Center Commercial Logbook (June 2013)

Additional information on fishery related actions from the past, present, and future considerations can be found in **Chapter 6** (Cumulative effects) of the CMP Framework Action.

1.2 Ecological Effects Due to Changes in the Bycatch

The ecological effects of bycatch mortality are the same as fishing mortality from directed fishing efforts. If not properly managed and accounted for, either form of mortality could potentially reduce stock biomass to an unsustainable level. The South Atlantic Fishery Management Council (South Atlantic Council) and NMFS are in the process of developing actions that would improve bycatch monitoring in all fisheries including the CMP fishery. Better bycatch and discard data would provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, provide better estimates of interactions with protected species, and lead to better decisions regarding additional measures to reduce bycatch. Management measures that affect gear and effort for a target species can influence fishing mortality in other species. Therefore, enhanced catch and bycatch monitoring would provide better data that could be used in multi-species assessments.

Ecosystem interactions among CMP species in the marine environment is poorly known. Most species are migratory, interacting in various combinations of species groups at different levels on a seasonal basis. With the current state of knowledge, it is not possible to evaluate the potential ecosystem-wide impacts of these species interactions, or the ecosystem impacts from the limited mortality estimated to occur from mackerel fishing effort.

1.3 Changes in the Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects

The CMP Framework Action is not expected to affect bycatch of other, non-mackerel, fish species. Measures proposed in the CMP Framework Action are intended to reduce waste in the Spanish mackerel gillnet sector in the form of dead discards, and extend fishing opportunities for king mackerel in the South Atlantic further into the fishing season. Allowing Spanish mackerel to be transferred at sea may lead to the commercial ACL being met earlier in the fishing season despite the fact that overall effort is expected to remain the same. Fish that were previously thrown back as regulatory discards would be allowed to be transferred to another vessel that can convert those one discarded fish into profit yielding landings. This may result in less bycatch of

non-target species because commercial Spanish mackerel harvest would close when the ACL is met or projected to be met. In the king mackerel portion of the CMP fishery, the trip limit would be modified in an effort to ensure that harvest can occur during the Lenten season, which is the most profitable time of year for king mackerel fishermen. Because this action would not allow overall effort to increase but rather spread the effort out over a longer period of time, not increase in bycatch of non-target fish species is anticipated.

1.4 Effects on Marine Mammals and Birds

Under Section 118 of the Marine Mammal Protection Act (MMPA), NMFS must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The 2013 proposed List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (78 FR 23008, April 22, 2013). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet portion of the CMP fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The gillnet portion of the CMP fishery has no documented interaction with marine mammals; NMFS classifies gillnet portion of the CMP fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occurring in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with fisheries has not been reported as a concern for either of these species.

Fishing effort reductions have the potential to reduce the amount of interactions between the fishery and marine mammals and birds. Although, the Bermuda petrel and roseate tern occur within the action area, these species are not commonly found and neither has been described as associating with vessels or having had interactions with the snapper grouper fishery. Thus, it is believed that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

Spanish mackerel are among the species targeted with gillnet in North Carolina state waters. Observer coverage for gillnet is up to 10% and provided by the North Carolina Division of Marine Fisheries, primarily during the fall flounder fishery in Pamlico Sound. Gillnets are also used from the North Carolina/South Carolina border and south and east of the fishery management council demarcation line between the Atlantic Ocean and the Gulf of Mexico to target finfish including, but not limited to king mackerel, Spanish mackerel, whiting, bluefish, pompano, spot, croaker, little tunny, bonita, jack crevalle, cobia, and striped mullet. The majority of fishing effort occurs in federal waters because South Carolina, Georgia, and Florida prohibit the use of gillnets, with limited exceptions, in state waters.

The Shark Gillnet Observer Program Observer Program is mandated under the Atlantic Highly Migratory Species FMP, the Atlantic Large Whale Take Reduction Plan (ALWTRP) (50 CFR Part 229.32), and the Biological Opinion under Section 7 of the Endangered Species Act. Observers are deployed on any active fishing vessel reporting shark drift gillnet effort. In 2005, this program also began to observe sink gillnet fishing for sharks along the southeastern U.S. coast.

The shark gillnet observer program now covers all anchored (sink, stab, set), strike, or drift gillnet fishing by vessels that fish from Florida to North Carolina year-round. The observed fleet includes vessels with an active directed shark permit and fish with sink gillnet gear. There is some observer coverage of CMP targeted trips by vessels with an active directed shark permit.

1.5 Changes in Fishing, Processing, Disposal, and Marketing Costs

The CMP Framework Action would allow Atlantic migratory group Spanish mackerel caught in excess of the trip limit to be transferred to another vessel that has not yet met the trip limit so they may be sold instead of discarded. This constitutes a modification to how some Spanish mackerel would be handled after they have been harvested. Though allowing transfer at sea would seemingly result in more fish entering the market and possibly disrupting market stability, a common practice among fish houses is to tell Spanish mackerel fishing vessels how many fish they are willing to purchase to maintain price stability. The fish house limit is often lower than the actual trip limit and is likely to prevent gluts in the market that would otherwise result from an increased number of fish being landed due to the transfer at sea provision. Modifying the Florida east coast sub-zone king mackerel trip limit to ensure that harvest of king mackerel may occur during Lent would not change fishing behavior, processing, disposal, or marketing costs. This action would spread fishing effort out over a longer period of time in an effort to extend fishing opportunities during the fishing season. See **Chapter 4** of the amendment for a complete description of how the CMP fishery and the species would be impacted by the proposed actions.

1.6 Changes in Fishing Practices and Behavior of Fishermen

Actions proposed in the CMP Framework Action could result in a modification of fishing practices by commercial fishermen. If transfer of excess Atlantic migratory group Spanish mackerel at sea is allowed, the level of discarded Spanish mackerel may decrease. However, it is rare that a vessel exceeds the trip limit due the amount harvested in one gillent set. Therefore, the actual amount that regulatory discards would be reduced by is expected to be negligible. Modifying the system of trip limits for king mackerel is expected to impact the number of fish that can be retained on any one trip, and this action is not expected to change fishing practices or how fishermen harvest Florida east coast sub-zone king mackerel.

1.7 Changes in Research, Administration, and Enforcement Costs and Management Effectiveness

The actions in the CMP Framework Amendment are not expected to modify research needs, administration, or management effectiveness. However, the action to allow transfer of Atlantic migratory group Spanish mackerel at sea does include a provision that requires fishermen to call in a transfer before one takes place. This call-in requirement would add to the administrative and law enforcement burden since no call-in requirement is currently required for the Spanish mackerel segment of the CMP fishery. Additionally, law enforcement costs in the form of time and effort may increase as a result of necessary enforcement of the new transfer at sea provision. To enforce proper transfers at sea procedures, a law enforcement officer may need to intercept both vessels at sea and witness the transfer taking place. Some aspects of enforcement of this action could take place dockside, such as checking the number of gillnets onboard the receiving vessel, matching up call-in notifications with the vessels involved in a transfer, and determining trip limit compliance. Any additional time and effort required for law enforcement purposes is not anticipated to be significant.

Research and monitoring is ongoing to understand the effectiveness of proposed management measure and their effect on bycatch. In 1990, the SEFSC initiated a logbook program for vessels with federal permits in the snapper grouper fishery from the Gulf of Mexico and South Atlantic. In 1999, logbook reporting was initiated for vessels catching king and Spanish mackerel (Gulf of Mexico and South Atlantic Fishery Management Councils). The Dolphin and Wahoo FMP required logbook reporting by fishermen with Commercial Atlantic Dolphin/Wahoo Permits. Approximately 20% of commercial fishermen from snapper grouper, dolphin wahoo, and CMP fisheries are asked to fill out discard information in logbooks; however, a greater percentage of fishermen could be selected with emphasis on individuals that dominate landings. Recreational discards are obtained from the MRIP and logbooks from the NMFS headboat program.

The preferred alternative in Charter/Headboat Amendment would require electronic reporting for headboats and increase the frequency of reporting to 7 days for the snapper grouper, dolphin wahoo, and CMP fisheries. The South Atlantic Council is also developing an amendment to improve commercial logbook reporting for these fisheries. Some observer information for the snapper grouper fishery has been provided by the SEFSC, Marine Fisheries Initiative, and Cooperative Research Programs (CRP), but more is desired for the snapper grouper, dolphin wahoo, and CMP fisheries. An observer program reporting is in place for headboats sector in the southeast for the snapper grouper, reef fish, dolphin wahoo, and CPM fisheries. Observers in the NMFS Headboat survey collect information about numbers and total weight of individual species caught, total number of passengers, total number of anglers, location fished (identified to a 10 mile by 10 mile grid), trip duration (half, ¾, full or multiday trip), species caught, and numbers of released fish with their disposition (dead or alive). The headboat survey does not collect information on encounters with protected species. Recreational snapper grouper fishermen do not participate in Category I or II fisheries; therefore, reporting interactions with marine mammals is not required, and these interactions are not expected to occur. At the September 2012 South Atlantic Council meeting, the SEFSC indicates that observers are place on about 2% of the headboat trips out of South Carolina to Florida, and about 9% of the headboat trips out of

North Carolina
(http://www.safmc.net/LinkClick.aspx?fileticket=XGaVZzxLePY%3d&tabid=745).

Cooperative research projects between science and industry are being used to a limited extent to collect bycatch information on the snapper grouper fishery in the South Atlantic. For example, Harris and Stephen (2005) characterized the entire (retained and discarded) catch of reef fishes from a selected commercial fisherman in the South Atlantic including total catch composition and disposition of fishes that were released. The Gulf and South Atlantic Fisheries Foundation, Inc. conducted a fishery observer program within the snapper grouper vertical hook-and-line (bandit rig) fishery of the South Atlantic United States. Through contractors they randomly placed observers on cooperating vessels to collect a variety of data quantifying the participation, gear, effort, catch, and discards within the fishery.

In the spring 2010, Archipelago Marine Research Ltd. worked with North Carolina Sea Grant and several South Atlantic Unlimited Snapper Grouper Permit holders to test the effectiveness of electronic video monitoring to measure catch and bycatch. A total of 93 trips were monitored with video monitoring, 34 by self-reported fishing logbooks, and 5 by observers. Comparisons between electronic video monitoring data and observer data showed that video monitoring was a reliable source of catch and bycatch data.

Research funds for observer programs, as well as gear testing and testing of electronic devices are also available each year in the form of grants from the Foundation, Marine Fisheries Initiative, Saltonstall-Kennedy program, and the CRP. Efforts are made to emphasize the need for observer and logbook data in requests for proposals issued by granting agencies. A condition of funding for these projects is that data are made available to the Councils and NMFS upon completion of a study.

Stranding networks have been established in the Southeast Region. The NMFS SEFSC is the base for the Southeast United States Marine Mammal Stranding Program (http://sero.nmfs.noaa.gov/pr/strandings.htm). NMFS authorizes organizations and volunteers under the MMPA to respond to marine mammal strandings throughout the United States. These organizations form the stranding network whose participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass strandings and mass mortalities (http://www.sefsc.noaa.gov/species/mammals/strandings.htm).

The Southeast Regional Office and the SEFSC participate in a wide range of training and outreach activities to communicate bycatch related issues. The NMFS Southeast Regional Office issues public announcements, Southeast Fishery Bulletins, or News Releases on different topics, including use of turtle exclusion devices, bycatch reduction devices, use of methods and devices to minimize harm to turtles and sawfish, information intended to reduce harm and interactions with marine mammals, and other methods to reduce bycatch for the convenience of constituents in the southern United States. These are mailed out to various organizations,

government entities, commercial interests and recreational groups. This information is also included in newsletters and publications that are produced by NMFS and the various regional fishery management councils. Announcements and news released are also available on the internet and broadcasted over NOAA weather radio.

Additional administrative and enforcement efforts would help to implement and enforce fishery regulations. NMFS established the South East Fishery-Independent Survey in 2010 to strengthen fishery-independent sampling efforts in southeast U.S. waters, addressing both immediate and long-term fishery-independent data needs, with an overarching goal of improving fishery-independent data utility for stock assessments. Meeting these data needs is critical to improving scientific advice to the management process, ensuring overfishing does not occur, and successfully rebuilding overfished stocks on schedule.

1.8 Changes in the Economic, Social, or Cultural Value of Fishing Activities and Non-Consumptive Uses of Fishery Resources

Proposed management measures, and any changes in economic, social, or cultural values are discussed in **Chapter 4**. In summary, the social and economic impacts of both actions in the CMP Framework Action are expected to be positive.

1.9 Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from actions in the CMP Framework Action are discussed in **Chapter 4**. The benefits of being able to convert, what previously would have been discarded fish, into profitable landings; and extending harvest opportunities for king mackerel over Lent, would be redistributed in ways that are expected to positively affect the social and economic environment. These actions are not associated with negative impacts or costs since they would not reduce the ability to fish for the subject species.

1.10 Social Effects

The social effects of all the measures are described in **Chapter 4** of this document. In summary, the social environment would benefit from both actions in the CMP Framework Action. Fishing opportunities would be maximized for Atlantic migratory group Spanish mackerel, and Florida east coast sub-zone king mackle without negatively affecting the sustainability of either stock.

1.11 Conclusion

This section evaluates the practicability of taking additional action to minimize bycatch and bycatch mortality using the ten factors provided at 50 CFR 600.350(d)(3)(i). In summary, measures proposed in the CMP Framework Action would allow Atlantic migratory group Spanish mackerel harvested in excess of the trip limit to be transferred to another vessel that has

not yet met the trip limit. This action would reduce waste in the fishery by allowing what would be discarded dead Spanish mackerel to be converted to landings. Modifying the trip limits for Florida east coast sub-zone king mackerel would allow harvest to continue through the Lenten season, which would optimize profits for king mackerel fishermen and extend the fishing season to increase fishing opportunities. Neither of these actions are expected to significantly increase or decrease the magnitude of bycatch or bycatch mortality in the CMP fishery. Both segments of the CMP fishery have relatively low baseline levels of bycatch, which are not expected to change as a result of implementation of this amendment. No additional action is needed to further minimize bycatch in the CMP fishery.

Appendix E. Regulatory Impact Review

Appendix F. Regulatory Flexibility Analysis

Appendix G. Other Applicable Law

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (16 U.S.C. 1801 et seq.) provides the authority for fishery management in federal waters of the Exclusive Economic Zone. However, fishery management decision-making is also affected by a number of other federal statutes designed to protect the biological and human components of U.S. fisheries, as well as the ecosystems that support those fisheries. Major laws affecting federal fishery management decision-making are summarized below.

Administrative Procedures Act
All federal rulemaking is governed under the provisions of the Administrative Procedure Act (APA) (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the APA, National Marine Fisheries Service is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day waiting period from the time a final rule is published until it takes effect.

Coastal Zone Management Act
Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state's coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NOAA regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state's coastal zone, National Marine Fisheries Service is required to provide a consistency determination to the relevant state agency at least 90 days before taking final action.

Upon submission to the Secretary, National Marine Fisheries Service (NMFS) will determine if this plan amendment is consistent with the Coastal Zone Management programs of the states of Florida, Georgia, South Carolina, North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act
The Data Quality Act (DQA) (Public Law 106-443) effective October 1, 2002, requires the government to set standards for the quality of scientific information and statistics used and disseminated by federal agencies. Information includes any communication or representation of knowledge such as facts or data, in any medium or form, including textual, numerical, cartographic, narrative, or audiovisual forms (includes web dissemination, but not hyperlinks to information that others disseminate; does not include clearly stated opinions).

Specifically, the DQA directs the Office of Management and Budget (OMB) to issue government wide guidelines that "provide policy and procedural guidance to federal agencies for ensuring

and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: 1) ensure information quality and develop a pre-dissemination review process; 2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and 3) report periodically to OMB on the number and nature of complaints received.

Scientific information and data are key components of fishery management plans (FMPs) and amendments and the use of best available information is the second national standard under the Magnuson-Stevens Act. To be consistent with the DQA, FMPs and amendments must be based on the best information available. They should also properly reference all supporting materials and data, and be reviewed by technically competent individuals. With respect to original data generated for FMPs and amendments, it is important to ensure that the data are collected according to documented procedures or in a manner that reflects standard practices accepted by the relevant scientific and technical communities. Data will also undergo quality control prior to being used by the agency and a pre-dissemination review.

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, (16 U.S.C. Section 1531 et seq.) requires federal agencies use their authorities to conserve endangered and threatened species. The ESA requires NMFS, when proposing a fishery action that "may affect" critical habitat or endangered or threatened species, to consult with the appropriate administrative agency (itself for most marine species, the U.S. Fish and Wildlife Service for all remaining species) to determine the potential impacts of the proposed action. Consultations are concluded informally when proposed actions may affect but are "not likely to adversely affect" endangered or threatened species or designated critical habitat. Formal consultations, including a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" endangered or threatened species or adversely modify designated critical habitat. If jeopardy or adverse modification is found, the consulting agency is required to suggest reasonable and prudent alternatives. National Marine Fisheries Service, as part of the Secretarial review process, will make a determination regarding the potential impacts of the proposed actions.

Marine Mammal Protection Act (MMPA)

The MMPA established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas. It also prohibits the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NOAA Fisheries Service) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea otters, polar bears, manatees, and dugongs.

Part of the responsibility that NMFS has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted." A conservation plan is then developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries; and studies of pinniped-fishery interactions. The MMPA requires a commercial fishery to be placed in one of three categories, based on the relative frequency of incidental serious injuries and mortalities of marine mammals. Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing; Category II designates fisheries with occasional serious injuries and mortalities; Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities.

Under the MMPA, to legally fish in a Category I and/or II fishery, a fisherman must take certain steps. For example, owners of vessels or gear engaging in a Category I or II fishery, are required to obtain a marine mammal authorization by registering with the Marine Mammal Authorization Program (50 CFR 229.4). They are also required to accommodate an observer if requested (50 CFR 229.7(c)) and they must comply with any applicable take reduction plans.

The 2013 proposed List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (78 FR 23008, April 22, 2013). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

Executive Orders

E.O. 12630: Takings

The Executive Order on Government Actions and Interference with Constitutionally Protected Property Rights that became effective March 18, 1988, requires each federal agency prepare a Takings Implication Assessment for any of its administrative, regulatory, and legislative policies and actions that affect, or may affect, the use of any real or personal property. Clearance of a regulatory action must include a takings statement and, if appropriate, a Takings Implication Assessment. The NOAA Office of General Counsel will determine whether a Taking Implication Assessment is necessary for this amendment.

E.O. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory

actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations would have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act.

On June 20, 2013, the Small Business Administration (SBA) issued a final rule revising the small business size standards for several industries effective July 22, 2013 (78 FR 37398). The rule increased the size standard for Finfish Fishing from $4.0 to $19.0 million, Shellfish Fishing from $4.0 to $5.0 million, and Other Marine Fishing from $4.0 to $7.0 million. In light of these new standards, NMFS has preliminarily determined that the proposed action would not have a significant economic impact on a substantial number of small entities.

E.O. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations

This Executive Order mandates that each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. Federal agency responsibilities under this Executive Order include conducting their programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons from participation in, denying persons the benefit of, or subjecting persons to discrimination under, such, programs policies, and activities, because of their race, color, or national origin. Furthermore, each federal agency responsibility set forth under this Executive Order shall apply equally to Native American programs. Environmental justice considerations are discussed in detail in Section 3.3.4.

E.O. 12962: Recreational Fisheries

This Executive Order requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (Council) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS

and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13132: Federalism

The Executive Order on Federalism requires agencies in formulating and implementing policies, to be guided by the fundamental federalism principles. The Order serves to guarantee the division of governmental responsibilities between the national government and the states that was intended by the framers of the Constitution. Federalism is rooted in the belief that issues not national in scope or significance are most appropriately addressed by the level of government closest to the people. This Order is relevant to FMPs and amendments given the overlapping authorities of NMFS, the states, and local authorities in managing coastal resources, including fisheries, and the need for a clear definition of responsibilities. It is important to recognize those components of the ecosystem over which fishery managers have no direct control and to develop strategies to address them in conjunction with appropriate state, tribes and local entities (international too).

No federalism issues have been identified relative to the actions proposed in this amendment. Therefore, consultation with state officials under Executive Order 12612 is not necessary.

Essential Fish Habitat

The amended Magnuson-Stevens Act included a new habitat conservation provision known as Essential Fish Habitat (EFH) that requires each existing and any new FMPs to describe and identify EFH for each federally managed species, minimize to the extent practicable impacts from fishing activities on EFH that are more than minimal and not temporary in nature, and identify other actions to encourage the conservation and enhancement of that EFH. To address these requirements the South Atlantic Fishery Management Council has, under separate action, approved an environmental impact statement (SAFMC 1998) to address the new EFH requirements contained within the Magnuson-Stevens Act. Section 305(b)(2) requires federal agencies to obtain a consultation for any action that may adversely affect EFH. An EFH consultation will be conducted for this action.