

# Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region

Commercial trip limits for Atlantic Spanish mackerel  
in the Southern Zone



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Environmental Assessment    Regulatory Impact Review    Regulatory Flexibility Analysis

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## Abbreviations and Acronyms Used in the FMP

<b>ABC</b>	acceptable biological catch	<b>FMP</b>	fishery management plan
<b>ACL</b>	annual catch limits	<b>FMU</b>	fishery management unit
<b>AM</b>	accountability measures	<b>HAPC</b>	Habitat Area of Particular Concern
<b>ACT</b>	annual catch target	<b>M</b>	natural mortality rate
<b>B</b>	a measure of stock biomass in either weight or other appropriate unit	<b>MARMAP</b>	Marine Resources Monitoring Assessment and Prediction Program
<b>B<sub>MSY</sub></b>	the stock biomass expected to exist under equilibrium conditions when fishing at F <sub>MSY</sub>	<b>MFMT</b>	maximum fishing mortality threshold
<b>B<sub>OY</sub></b>	the stock biomass expected to exist under equilibrium conditions when fishing at F <sub>OY</sub>	<b>MMPA</b>	Marine Mammal Protection Act
<b>B<sub>CURR</sub></b>	The current stock biomass	<b>MRFSS</b>	Marine Recreational Fisheries Statistics Survey
<b>CLM</b>	Commercial Landings Monitoring System	<b>MRIP</b>	Marine Recreational Information Program
<b>CMP</b>	coastal migratory pelagics	<b>MSFCMA</b>	Magnuson-Stevens Fishery Conservation and Management Act
<b>CPUE</b>	catch per unit effort	<b>MSST</b>	minimum stock size threshold
<b>EA</b>	environmental assessment	<b>MSY</b>	maximum sustainable yield
<b>EEZ</b>	exclusive economic zone	<b>NEPA</b>	National Environmental Policy Act
<b>EFH</b>	essential fish habitat	<b>NMFS</b>	National Marine Fisheries Service
<b>ESA</b>	Endangered Species Act	<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>F</b>	a measure of the instantaneous rate of fishing mortality	<b>NS</b>	National Standard
<b>F<sub>30%SPR</sub></b>	fishing mortality that will produce a static SPR = 30%	<b>OFL</b>	overfishing limit
<b>F<sub>CURR</sub></b>	the current instantaneous rate of fishing mortality	<b>OY</b>	optimum yield
<b>F<sub>MSY</sub></b>	the rate of fishing mortality expected to achieve MSY under equilibrium conditions and a corresponding biomass of B <sub>MSY</sub>	<b>PSE</b>	percent standard error
<b>F<sub>OY</sub></b>	the rate of fishing mortality expected to achieve OY under equilibrium conditions and a corresponding biomass of B <sub>OY</sub>	<b>RIR</b>	regulatory impact review
<b>FEIS</b>	final environmental impact statement	<b>SEDAR</b>	Southeast Data Assessment and Review
		<b>SEFSC</b>	Southeast Fisheries Science Center
		<b>SERO</b>	Southeast Regional Office
		<b>SPR</b>	spawning potential ratio
		<b>SRD</b>	Science and Research Director
		<b>SSC</b>	Scientific and Statistical Committee

# Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region with Environmental Assessment and Regulatory Impact Review

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<b>Proposed action:</b>	Modify the quota and trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel in the Southern Zone
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# Summary

The South Atlantic Fishery Management Council (South Atlantic Council) is proposing an action in Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources (CMP FMP) in the Gulf of Mexico and South Atlantic Region (Framework Amendment 2) to modify the commercial trip limit system in the Southern Zone for Atlantic migratory group Spanish mackerel. The trip limit in place for the area north of the Georgia/Florida boundary is 3,500 pounds (lbs) all year. The trip limit and quota system for the exclusive economic zone (EEZ) off Florida begins with a trip limit of 3,500 lbs from March 1 through November 30. Starting December 1, there is no trip limit on weekdays and a 1,500-lb trip limit on weekends, until 75% of the adjusted quota (adjusted quota = 250,000 lbs below the specific commercial annual catch limit (ACL)) 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.

Since the trip limit system has been in place, fishery conditions and regulations have changed. When the current trip limit system for the EEZ off Florida was put in place, the total allowable catch (TAC) for commercial harvest of Atlantic migratory group Spanish mackerel was 3.87 million pounds (mp). The current commercial ACL for Atlantic Spanish mackerel, set in Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011), is 3.13 mp, and the South Atlantic Council has proposed a commercial ACL of 3.33 mp in Framework Amendment 1 (**Table S-1**). Both the current and proposed commercial ACLs are lower than the TAC that was in place when the trip limit system was implemented. Additionally, the lack of a Spanish mackerel trip limit in Florida waters on weekdays beginning December 1 may contribute to early closures under the 3.13 mp ACL.

**Table S-1** Harvest parameters in whole weight currently in place and proposed in Amendment 20B, Framework 1 and this amendment for Atlantic migratory group Spanish mackerel.

	Commercial ACL/Quota	Adjusted Quota	Southern Zone Quota	Southern Zone Adjusted Quota
Current	3.13mp	2,880,000 lbs	--	--
Proposed	3.33mp	--	2,667,330 lbs	2,417,000 lbs

The adjusted quota was calculated based on the number of vessels and the catch rates at that time, and was intended to allow small vessels to catch 500 lbs after the adjusted quota was caught. However, both the number of vessels and the catch rates have changed in the past 20 years and may have reduced the effectiveness and necessity of the adjusted quota.

Lastly, Amendment 20B to the CMP FMP proposes to establish a Northern Zone and a Southern Zone at the North Carolina/South Carolina boundary, with separate commercial quotas for Atlantic migratory group Spanish mackerel. To reduce complexity within the

proposed Southern Zone by having consistent trip limits across the entire zone, the South Atlantic Council proposes changes to the trip limit system that currently applies just to the EEZ off Florida to the entire Southern Zone (the EEZ off South Carolina, Georgia and Florida).

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 Framework Amendment 2 is to modify the current trip limit system for Atlantic migratory group Spanish mackerel to tailor the system to current fishery conditions and new catch limits, while increasing social and economic benefits of the CMP fishery. Framework Amendment 2, with the integrated Environmental Assessment, was available for public review before and during each South Atlantic Council meeting where the action will be discussed, during the proposed rule phase of the rulemaking process, and online at [www.safmc.net](http://www.safmc.net).

**Action: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Southern Zone**

**Alternative 1 (No Action).** Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel (see Discussion section of this chapter).

**Alternative 2.** Establish a trip limit of 3,500 lbs for the Southern Zone for March 1-November 30. After December 1, when 75% of the adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Alternative 3.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of the Southern Zone quota is met or projected to be met, the trip limit would be reduced to 500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Preferred Alternative 4.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs. When 100% of adjusted Southern Zone quota is met or projected to be met, the trip limit is reduced to 500 lbs until the end of the fishing year or until the Southern Zone commercial quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

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# Chapter 1. Introduction

## 1.1 What Action is Being Proposed?

Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources (CMP FMP) in the Gulf of Mexico and South Atlantic Region includes one action to modify the quota and trip limit system for commercial harvest of Atlantic migratory group Spanish mackerel in the exclusive economic zone (EEZ) of the proposed Southern Zone, which includes South Carolina, Georgia, and Florida.

## 1.2 Who is Proposing the Action?

The coastal migratory pelagic (CMP) fishery is managed jointly by the Gulf of Mexico Fishery Management Council (Gulf Council) and the South Atlantic Fishery Management Council (South Atlantic Council). The South Atlantic Council is proposing the framework action but the Gulf Council also approved the action before the framework amendment was submitted for formal review. The South Atlantic and Gulf Councils develop the framework amendments, and submit them to the National Marine Fisheries Service (NMFS) who implements the actions in the amendment on behalf of the Secretary of Commerce. NMFS is a line office in the National Oceanic and Atmospheric Administration.

### ***South Atlantic and Gulf of Mexico Fishery Management Councils***

- Responsible for conservation and management of fish stocks
- The South Atlantic Council consists of 13 voting members appointed by the Secretary of Commerce and 4 non-voting members. The management area is from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia, and Florida through the Atlantic side of Key West. The South Atlantic Council manages the CMP Fishery through the mid-Atlantic region and the Dolphin-Wahoo Fishery along the entire east coast.
- The Gulf Council consists of 17 voting members appointed by the Secretary of Commerce and 4 non-voting members. The management area is from 9 to 200 nautical miles off the coasts of West Florida and Texas, and from 3 to 200 nautical miles off the coasts of Alabama, Mississippi, and Louisiana.
- Develop management plans/amendments and recommends regulations to NMFS for implementation

### **1.3 Why is the South Atlantic Council Considering Action?**

The trip limit and quota system for commercial harvest of Atlantic migratory group Spanish mackerel was first established in Amendment 6 (GMFMC/SAFMC 1992) with modifications in subsequent framework actions (SAFMC/MAFMC 1996; 2000; 2007). However, fishery conditions and the regulations for Spanish mackerel have been through many changes since the system has been in place. When the most recent trip limits were implemented, the total allowable catch (TAC) for commercial harvest of Atlantic migratory group Spanish mackerel was 3.87 million pounds (mp). The current commercial annual catch limit (ACL), set in Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) is 3.13 mp, and the South Atlantic Council has proposed a commercial ACL of 3.33 mp in Framework Amendment 1 (GMFMC/SAFMC 2014a). Both the current and proposed commercial ACLs are lower than the TAC that was in place when the trip limit system was implemented. Additionally, the lack of a Spanish mackerel trip limit in Florida waters on weekdays beginning December 1 may contribute to early closures in the spring under the 3.13 mp ACL.

The adjusted quota (250,000 lbs below the specific commercial ACL) was originally calculated based on the number of vessels and the catch rates at that time, and was intended to allow small vessels to catch 500 lbs after the adjusted quota was caught. However, both the number of vessels and the catch rates have changed in the past 20 years and may have reduced the effectiveness and necessity of the adjusted quota.

Lastly, Amendment 20B to the CMP FMP (GMFMC/SAFMC 2014b) proposes to establish a Northern Zone and a Southern Zone separated at the North Carolina/South Carolina boundary, with separate commercial quotas for Atlantic migratory group Spanish mackerel in each zone. To reduce complexity within the proposed Southern Zone by having consistent trip limits across the entire zone, the South Atlantic Council is proposing changes to the trip limit system that will apply to South Carolina, Georgia, and Florida.

There is a reasonable expectation that Amendment 20B and Framework Amendment 1 are likely to be implemented in the near future. These two actions would influence the effects of the trip limit modifications being considered in this amendment. Therefore, the majority of the environmental impacts analysis for the proposed action reflects what the impacts would be when combined with the actions in Amendment 20B and Framework Amendment 1.

#### **Management Plan Objectives**

The current management objectives in the joint CMP FMP as amended are:

- 1) The primary objective of this FMP is to stabilize yield at the maximum sustainable yield (MSY), allow recovery of overfished populations, and maintain population levels sufficient to ensure adequate recruitment.
- 2) To provide a flexible management system for the resource which minimizes regulatory delay while retaining substantial Council and public input in management decisions and which can rapidly adapt to changes in resource abundance, new scientific information, and changes in fishing patterns among user groups or by areas.
- 3) To provide necessary information for effective management and establish a mandatory reporting system for monitoring catch.
- 4) To minimize gear and user group conflicts.
- 5) To distribute the total allowable catch of Atlantic migratory group Spanish mackerel between recreational and commercial user groups based on the catches that occurred

during the early to mid-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 CMP fisheries.

The action proposed in the amendment specifically helps to meet CMP FMP Objectives 2, 6, and 8.

### 1.3.1 Purpose and Need Statement

#### **Purpose for Action**

The purpose of this amendment is to ensure the system of trip limits for Atlantic migratory group Spanish mackerel in the proposed Southern Zone is aligned with the current conditions of the fishery through proposed modifications to the current system of trip limits in place for the species.

#### **Need for Action**

The need for this amendment is to respond to new regulations and changing fishery characteristics for Atlantic migratory group Spanish mackerel in the proposed Southern Zone, while increasing social and economic benefits of the CMP fishery through sustainable and profitable harvest of Atlantic migratory group Spanish mackerel in accordance with provisions set forth in Magnuson-Stevens Conservation and Management Act.

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

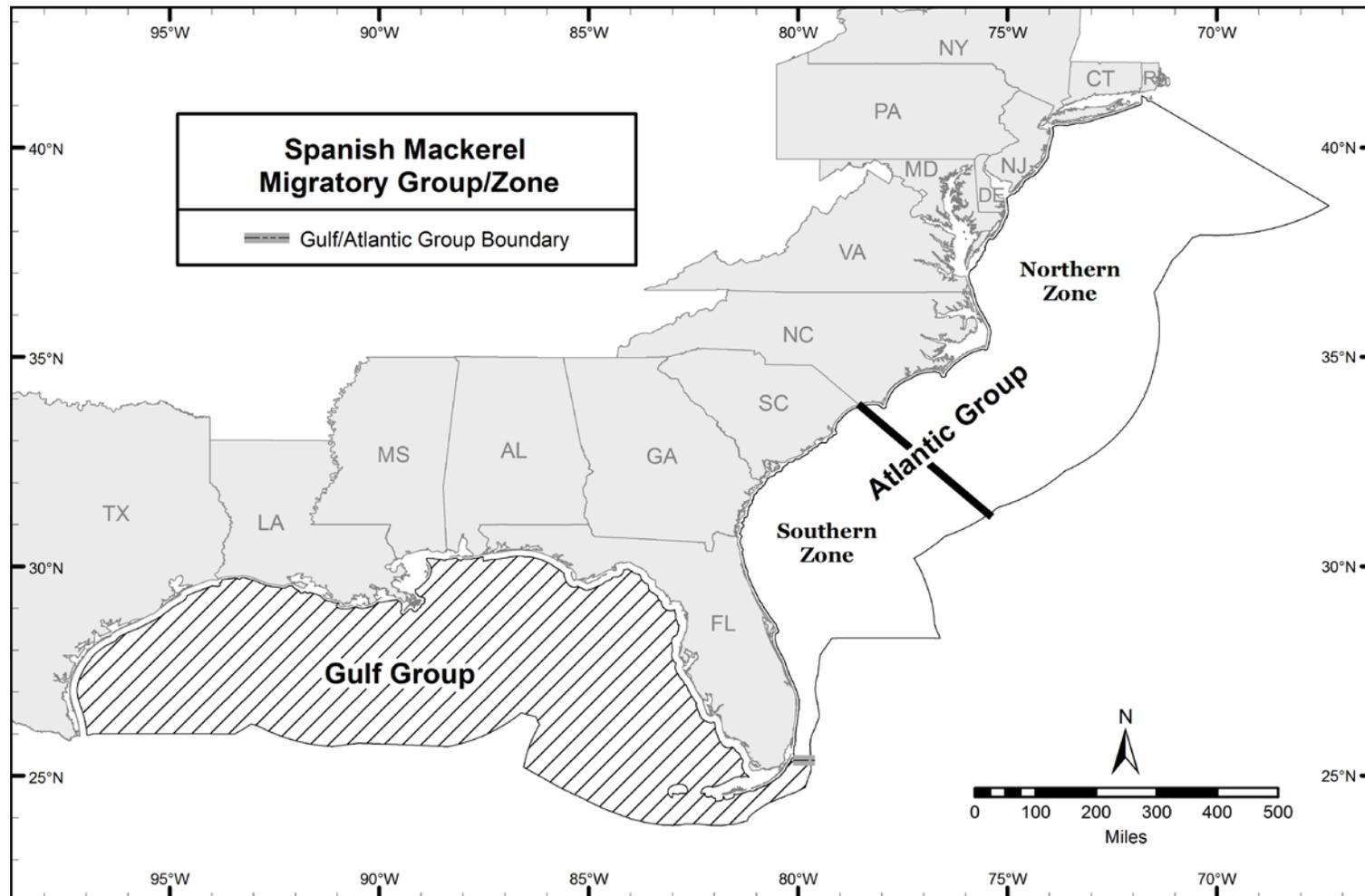
Three species—king mackerel, Spanish mackerel, and cobia—are included in the CMP FMP; however, Spanish mackerel is the only species addressed in this action. Spanish mackerel is separated into Atlantic and Gulf of Mexico (Gulf) migratory groups at the Miami-Dade/Monroe County line for management purposes (**Figure 1.4.1**). Atlantic migratory group Spanish mackerel is managed by the South Atlantic Council through the Mid-Atlantic region.

Amendment 20B to the CMP FMP (GMFMC/SAFMC 2014b) proposes a Northern Zone and a Southern Zone (as shown in **Figure 1.4.1**) that will have separate commercial quotas for Atlantic migratory group Spanish mackerel, which can be transferred from one zone to another annually. The proposed rule for Amendment 20B was published on October 31, 2014. Framework Amendment 1 to the CMP FMP (GMFMC/SAFMC 2014a), also under review, would increase the total Spanish mackerel ACL in the South Atlantic from 5.69 million pounds (mp) to 6.063 mp, if implemented. The proposed action in this amendment would affect Atlantic migratory group Spanish mackerel, and would primarily affect commercial fishermen harvesting Spanish mackerel in the proposed Southern Zone (South Carolina, Georgia, and the east coast of Florida).

Additionally, the analyses for the action contained in this framework amendment account for the regulatory changes that would result from proposed Amendment 20B (creation of quota zones)

and Framework Amendment 1 (increase of Spanish mackerel ACLs), because there is a reasonable expectation that those amendments will be implemented in the near future.

The terms “Southern Zone” and “Southern Zone quota” reference the proposed area and associated commercial quota that would be specified by Amendment 20B, which is not yet fully implemented through rule making. Henceforth, the terms “Southern Zone” and “Southern Zone quota” should be considered a proposed fishery management area within which this action would take place, and its associated commercial quota.



**Figure 1.4.1.** Fixed boundary between Atlantic and Gulf migratory groups of Spanish mackerel, with the proposed Northern and Southern Zones in the Atlantic Group (pending approval of CMP Amendment 20B).

## Chapter 2. Proposed Action and Alternatives

### **Action: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Southern Zone**

**Alternative 1 (No Action).** Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel (see Discussion section of this chapter).

**Alternative 2.** Establish a trip limit of 3,500 lbs for the Southern Zone for March 1- November 30. After December 1, when 75% of the adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Alternative 3.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of the Southern Zone quota is met or projected to be met, the trip limit would be reduced to 500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Preferred Alternative 4.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs. When 100% of adjusted Southern Zone quota is met or projected to be met, the trip limit is reduced to 500 lbs until the end of the fishing year or until the Southern Zone commercial quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

#### **Discussion:**

Amendment 6 to the CMP FMP (GMFMC/SAFMC 1992) established the first trip limit system for Atlantic migratory group Spanish mackerel and set up northern and southern management areas. The northern management area was designated as north of the Georgia/Florida boundary, and the southern management area was designated as the Florida east coast to the Miami-Dade/Monroe county boundary. The trip limit for the northern management area was set at 3,500 lbs year-round. For the southern management area, the amendment established a system that included an adjusted quota, which was a 250,000-lb reserve off the commercial quota. The southern management area also had a 1,500-lb trip limit until December 1, at which time the daily trip limits were unlimited on Monday, Wednesday, and Friday; 1,500 lbs on Tuesday and Thursday; and 500 lbs on Saturday and Sunday. When 80% of the adjusted quota was met, the

trip limit decreased to 1,000 lbs until 100% of the adjusted quota was met, at which time the trip limit was set at 500 lbs for the remainder of the fishing year.

The trip limit system set up in Amendment 6 for Florida has been modified through framework adjustments in September 1996, January 2000, and August 2007 (SAFMC/MAFMC 1996; 2000; 2007) to the current system that uses unlimited trips, step-downs, and adjusted quotas. The unlimited trips on weekdays between December 1 and February 28 allow larger vessels to maximize efficiency on trips until 75% of the adjusted quota is reached, when the 1,500-lb trip limit goes into place all days of the week. The adjusted quota, which is 250,000 lbs less than the full commercial quota (commercial annual catch limit (ACL)), allows harvest to continue, but at a slower rate. Originally, no closure provision was in place for Atlantic migratory group Spanish mackerel when the full commercial quota (commercial ACL) was met, but a closure provision when the full commercial ACL is met or projected to be met was implemented through Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011). Therefore, the 500-lb trip limit after the adjusted quota is met is only effective until the additional 250,000 lbs are landed. Since 2011, the 1,500-lb trip limit reduction has been triggered each year. The 500-lb trip limit reduction has not been triggered since the 2004/2005 fishing season.

Some fishery participants have expressed concern about the unlimited trips but wish to retain the adjusted quota so that the 500-lb trip limit can remain in place after the adjusted quota is met, including members of the South Atlantic King and Spanish Mackerel Advisory Panel (AP). However, the adjusted quota is 92% of the full quota. It is unlikely the National Marine Fisheries Service (NMFS) could implement the 500-lb trip limit reduction before the full quota is projected to be met if landings rates are very high. In the Gulf of Mexico, the Florida west coast subzones have a reduction to 500 lbs at 75% of the quota that in some years could not be implemented before the quota was projected to be met due to high catch rates, and the Gulf Council chose to remove this step-down in Amendment 20B (GMFMC/SAFMC 2014b). As noted previously, the 500-lb trip limit reduction has not been triggered since the 2004/2005 fishing season because the rate of harvest is too fast to implement the trip limit reduction before the quota is reached; therefore, a trip limit reduction at 92% of the quota would be even less likely to be implemented.

When the current trip limit system for Florida was put in place, the total allowable catch (TAC) for commercial harvest of Atlantic Spanish mackerel was 3.87 million pounds (mp). The current commercial ACL, set in Amendment 18 (GMFMC/SAFMC 2011), is 3.13 mp, and the South Atlantic Council has proposed a commercial ACL of 3.33 mp in Framework Amendment 1 (GMFMC/SAFMC 2014a). Both the current and proposed commercial ACLs are lower than the TAC that was in place when the trip limit system was implemented. Additionally, Amendment 18 included an in-season closure when the commercial ACL is met or projected to be met as the commercial accountability measure (AM) for Atlantic Spanish mackerel.

The lack of a Spanish mackerel trip limit in Florida waters on weekdays beginning December 1 may contribute to early closures in the spring under the 3.13 mp ACL. A trip limit reduction may help lengthen the commercial fishing season; however, because the allowable catch has

been reduced since 1992, it may be more appropriate to base the trip limit reduction on the commercial quota for that area rather than the adjusted quota.

For commercial harvest of Atlantic group Spanish mackerel, Amendment 20B (pending approval by NMFS and assuming implementation of the commercial ACL specified in Framework Amendment 1) would set the Northern Zone (north of the North Carolina/South Carolina boundary) quota at 662,670 lbs and the Southern Zone (South Carolina, Georgia, and the east coast of Florida) quota at 2,667,330 lbs. The current and proposed ACLs and quotas are summarized in **Table 2.1**.

**Table 2.1.** Summary of current and proposed ACLs and quotas for Atlantic migratory group Spanish mackerel. The Northern Zone would include North Carolina through New York, and the Southern Zone would include South Carolina through eastern Florida.

	2011/12 through 2013/14	2014/15 through 2016/17 (Proposed)
Total ACL	5.69 mp	6.063 mp
Commercial ACL	3.13 mp	3.33 mp
Northern Zone Quota	--	662,670 lbs
Southern Zone Quota	--	2,667,330 lbs
Adjusted Quota	2,257,130 lbs	2,417,330 lbs

**Alternative 1 (No Action)** would not make any modifications to the current trip limit system for Atlantic migratory group Spanish mackerel. For harvest of Atlantic migratory group Spanish mackerel in the exclusive economic zone (EEZ) off Florida, the trip limit is 3,500 lbs from March 1 through November 30. Starting December 1, trips are unlimited on weekdays and are 1,500 lbs on weekends. This trip limit remains unlimited 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. The adjusted quota provides a buffer to help prevent the commercial sector from exceeding the commercial ACL. The adjusted quota is used to trigger a second in-season trip limit reduction once the ACL is very close to being harvested to reduce the rate of harvest. North of the Georgia/Florida boundary, the trip limit is 3,500 lbs year-round.

**Alternative 2** would establish a 3,500-lb trip limit for the Southern Zone from March 1 through November 30. Starting December 1, the trip limit would be reduced to 1,500 lbs when 75% of the adjusted Southern Zone quota has been met or is projected to be met. Under the proposed increased commercial ACL and Southern Zone quota, the adjusted Southern Zone quota would be 2,417,330 lbs and the trigger (75% of the adjusted quota) would be 1,812,998 lbs. This alternative would remove the period of unlimited trips on weekdays and would not include a second step-down to 500 lbs triggered by an adjusted quota. Once the trip limit is reduced to

1,500 lbs, that trip limit would remain in place until the Southern Zone quota is met or projected to be met, at which time the commercial sector would close. Additionally, **Alternative 2** would modify the current trip limits for Georgia and South Carolina, because the trip limit system would apply to the entire Southern Zone, and would use the adjusted Southern Zone quota instead of an adjustment of the commercial ACL for the entire Atlantic migratory group Spanish mackerel.

**Alternative 3** would remove the use of the adjusted quota and establish a 3,500-lb trip limit for the Southern Zone beginning March 1. The trip limit would be reduced to 500 lbs when 75% of the Southern Zone quota has been met or is projected to be met, but there is no specified time period of when this could occur. Under the proposed increased commercial ACL in CMP Framework Amendment 1, and the Southern Zone quota, the trigger would be 2,000,498 lbs. This alternative also removes the period of unlimited trips and use of an adjusted quota to trigger step-downs. This alternative would also modify the current trip limits for Georgia and South Carolina because the trip limits would apply to the entire Southern Zone.

**Preferred Alternative 4** would also establish a 3,500-lb trip limit for the Southern Zone, but includes two step-down provisions using an adjusted quota and without specified time periods for step-downs to be allowed. When 75% of the adjusted Southern Zone quota (1,812,998 lbs) has been landed, the trip limit would be reduced to 1,500 lbs. When 100% of the adjusted Southern Zone quota (2,417,330 lbs) has been met, the trip limit would be reduced to 500 lbs. This alternative would remove the period of unlimited trips on weekdays and would use an adjustment on the Southern Zone quota instead of the commercial ACL. Additionally, this alternative would modify the current trip limits for Georgia and South Carolina, because the trip limits would apply to the entire Southern Zone. **Preferred Alternative 4** is based on input from the AP at their April 2012 meeting.

Under all alternatives, the commercial AMs (closure of commercial sector when the commercial ACL is met or projected to be met) for Atlantic group Spanish mackerel established in Amendment 18 (GMFMC/SAFMC 2011) and proposed for the quota zones in Amendment 20B (GMFMC/SAFMC 2014b) would apply. **Table 2.2** shows a comparison of the trip limits under each alternative. Pending approval of Amendment 20B by NMFS, the AMs for each zone would apply when the zone's commercial quota is met or is projected to be met.

**Table 2.2.** Comparison of trip limits for Atlantic migratory group Spanish mackerel in the Southern Zone (South Carolina, Georgia, and Florida) for each alternative. The alternatives would not change the year-round 3,500-lb trip limit for the area north of the South Carolina/North Carolina boundary.

**SZQ= Southern Zone Quota**

	Alt 1- FL	Alt 1- SC/GA	Alt 2- SC/GA/FL	Alt 3- SC/GA/FL	Pref Alt 4- SC/GA/FL
March 1- Nov 30	3,500 lbs		3,500 lbs		
Dec 1- Feb 28	<p><b>Unlimited</b> on weekdays and <b>1,500 lbs</b> on weekends.</p> <p>When 75% of the adjusted quota is met, set at <b>1,500 lbs</b> every day.</p> <p>When 100% of the adjusted quota is met, reduced to <b>500 lbs</b>.</p>	3,500 lbs	<p>When 75% of the adjusted SZQ is met, reduced to <b>1,500 lbs</b>.</p>	<p><b>3,500 lbs</b> with step-down to <b>500 lbs</b> when 75% of SZQ is met</p>	<p><b>3,500 lbs</b> with step-down to <b>1,500 lbs</b> when 75% of adjusted SZQ is met; step-down to <b>500 lbs</b> when 100% of adjusted SZQ is met.</p>

**Comparison of Alternatives:**

*Biological Effects*

**Alternative 1 (No Action)** would be expected to result in a 337-day fishing season in the Florida EEZ (**Table 2.3**), compared to a slightly shorter fishing seasons expected under **Alternative 2** and **Preferred Alternative 4**, and a slightly longer fishing season length expected under **Alternative 3**. However, the projected season lengths for each of the alternatives are all very similar and differ by only as much as several days and as few as one day. If the commercial ACL is projected to be met, commercial harvest of Spanish mackerel is closed for the duration of the fishing season, which prevents overfishing from occurring. Therefore, when compared to **Alternative 1 (No Action)**, the biological impacts of **Alternatives 2-4 (Preferred)** are expected to be neutral. **Alternative 2** could result in the shortest fishing season of all the alternatives under consideration. As mentioned previously, Amendment 20B, if implemented, would allow proposed Northern and Southern Zone quotas to be transferred from one zone to another. Quota transfers are expected to occur rarely and are not expected to result in significant biological effects since harvest in the Northern and Southern zones would be limited to the commercial ACL. Slowing the rate of harvest once the 75% threshold level is met may be biologically

beneficial if it allows fishery managers to more accurately predict when the proposed Southern Zone quota would be met.

**Table 2.3.** Projected fishing days and closure dates for Spanish mackerel in the Southern Zone for the 2014-2015 fishing season for each alternative, under conditions that would exist if CMP Framework 1 and CMP Amendment 20B are implemented. The fishing year is March – February.

Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative 4
Projected Closure Date	2/1/15	1/24/15	2/18/15	1/31/15
Projected Fishing Days	337	329	354	336

Source: NMFS 2013

**Alternative 3** would also remove the period of unlimited trips beginning on December 1 each year. This alternative would retain the current trip limit of 3,500 lbs for the proposed Southern Zone, but would reduce the trip limit to 500 lbs when 75% of the Southern Zone quota is harvested. A slower rate of harvest triggered by meeting the 75% threshold level may be biologically beneficial if it allows fishery managers to more accurately predict when the ACL or proposed southern zone quota would be met. **Preferred Alternative 4** is most similar to **Alternative 1 (No Action)** because it would retain the adjusted commercial quota for Atlantic migratory group Spanish mackerel fishery, and would specify two trip limit reductions for the Southern Zone.

The overall biological effects of **Alternatives 1 (No Action), 2, 3,** and **Preferred Alternative 4** are expected to be neutral because under all circumstances, and regardless of whether or not northern and southern zone quotas are implemented under Amendment 20B, harvest is limited to the commercial quota.

#### *Economic Effects*

In-season closures would be expected for the proposed Southern Zone under all of the alternatives considered, with the longest season expected to occur under **Alternative 3** (354-day season), followed by **Alternative 1 (No Action)** (337-day season), **Preferred Alternative 4** (336-day season), and **Alternative 2** (329-day season) (**Table 2.3**). Because longer seasons are generally expected to result in more economic benefits than short seasons (assuming the equivalent harvest occurs), **Alternative 3** would be expected to result in the best economic benefits; however, those benefits are not considered significant. **Alternative 1 (No Action)** would result in the second best economic benefits followed by **Preferred Alternative 4**, and **Alternative 2**, which is associated with the lowest magnitude of economic benefits.

#### *Social Effects*

Overall, the social effects would be associated with economic costs and benefits for the commercial vessels harvesting Spanish mackerel in the Southern Zone. This includes changes in fishing opportunities for vessels fishing in the Southern Zone due to trip limit adjustments, particularly for fishermen in South Carolina and Georgia who would work under a new system

with step-downs and adjusted quotas, and a reduced level of complexity from the current trip limit system for Florida fishermen. Social effects associated with positive or negative biological effects on the Spanish mackerel resource are expected to be minimal. The primary communities that would be affected by changes in the Atlantic migratory group Spanish mackerel quota and trip limit system are discussed in **Section 3.4**. These communities include the Florida communities of Fort Pierce, Cocoa Beach, Palm Beach Gardens, Stuart, Marathon, Miami, Mayport, and Sebastian, and the North Carolina communities of Engelhard, Wanchese, Swan Quarter, Ocracoke, Avon, and Cedar Island. However, Spanish mackerel is not the only economically important species in most of these communities, and while changes may affect fishermen and individual fish houses or dealers, few or no impacts are expected at the community level.

Changes in fishing opportunities and trip efficiency could be affected by different trip limit systems. However, some fish houses may set a ‘fish house limit’ for vessels that the fish house regularly buys from, which could be lower than the allowable trip limit. The period that allows unlimited trips in **Alternative 1 (No Action)** would be removed under **Alternatives 2, 3, and Preferred Alternative 4**, and this could affect some vessels taking advantage of maximized trip efficiency and profitability.

There is a trade-off between flexibility and a trip limit system tailored to current fishery conditions, and complexity of the system. Reducing complexity would be expected to be beneficial for compliance and enforcement. The step-downs in **Alternatives 2, 3, and Preferred Alternative 4** could provide flexibility by helping to slow the rate of harvest later in the season while still allowing Spanish mackerel fishing. The use of the adjusted Southern Zone quota as a trigger for the step-down in **Alternative 2 and Preferred Alternative 4** does maintain a similar level of complexity as under **Alternative 1 (No Action)**, but could help to allow fishing to continue but keep an additional buffer to minimize the risk of exceeding the commercial ACL for Atlantic Spanish mackerel. **Alternative 3** is the least complex trip limit system.

#### *Administrative Effects*

**Alternative 3** represents a decreased administrative burden compared to **Alternative 1 (No Action)** because it removes the adjusted quota. The burden on law enforcement would not change under **Alternatives 1 (No Action), 2, 3, or Preferred Alternative 4**, because commercial quota closures implemented when the commercial ACLs or adjusted quotas are projected to be met are currently enforced.

The administrative impacts under **Alternative 1 (No Action)** would be the most complex and the least beneficial, followed by **Preferred Alternative 4, Alternative 3, and Alternative 2**. **Alternatives 2 and 3** represent the least complex and the most beneficial alternatives due to reducing the complexity of the quota and trip limit regulations.

## Chapter 3. Affected Environment

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

- **Habitat environment** (Section 3.1)
- **Biological environment** (Section 3.2)
- **Economic environment** (Section 3.3)
- **Social environment** (Section 3.4)
- **Administrative environment** (Section 3.5)

### 3.1 Habitat Environment

The South Atlantic Fishery Management Council (South Atlantic Council) has management jurisdiction of the federal waters (3-200 nautical miles) 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 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 meters (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 are found: 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 of approximately 100 km and may persist near 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, Cape Lookout, 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). Many fish 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 coastal migratory species (CMP) species is provided in Amendment 18 (GMFMC/ SAFMC 2011), is incorporated herein by reference, and is summarized below.

The mackerel family, Scombridae, includes tunas, mackerels, and bonitos, and are among the most important commercial and sport fishes. The adults in the CMP management unit utilize the coastal waters of the Atlantic Ocean out to the edge of the continental shelf as their primary habitat. Within the area, the occurrence of CMP 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 parts per thousand (ppt). 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.

The proposed action in this amendment specifically affects Spanish mackerel (*Scomberomorus maculatus*). Spanish mackerel are migratory and move into specific areas to spawn. Environmental factors, such as temperature, can change the timing and extent of their migratory patterns (Williams and Taylor 1980).

Spanish mackerel is also a pelagic species primarily found in depths of 50m or less but also found in depths up to 85m. Collette and Russo (1979) indicate that Spanish mackerel occurs throughout the coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Gulf). Adults are usually 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.

Spawning occurs along the inner continental shelf from April to September (Powell 1975). Eggs and larvae occur most frequently offshore over the inner continental shelf, at temperatures between 20°C to 32°C, and salinities between 28 and 37 ppt.

Juveniles are most often found in coastal and estuarine habitats, and at temperatures greater than 25° C and salinities greater than 10 ppt. Although they occur in waters of varying salinity, juveniles appear to prefer marine salinity levels and generally are not considered estuarine-dependent. Like king mackerel, adult Spanish mackerel are migratory, generally moving from wintering areas of south Florida and Mexico to more northern latitudes in spring and summer. Spanish mackerel generally mature at age 1 to 2 and have a maximum age of approximately 11 years (Powell 1975).

A Southeast Data, Assessment, and Review (SEDAR) assessment was recently completed for South Atlantic Spanish mackerel (SEDAR 28, 2012 revised May 2013). The assessment indicates the stock is not overfished and is not undergoing overfishing. Additional details of the stock status, including the current exploitation rate and biomass levels, may be found in SEDAR 28 (2013), and is hereby incorporated by reference.

### **3.2.2 Description of the Fishery**

A commercial Spanish mackerel permit is required for vessels fishing in the Gulf or South Atlantic. This permit is open access. For-hire vessels must have a limited access charter/headboat CMP permit to harvest Spanish mackerel. As of August 21 2014, there are 1,758 valid or renewable federal commercial Spanish mackerel permits.

The area of the Atlantic migratory group of Spanish mackerel is divided into two areas: one area includes waters off New York through Georgia, and the other area includes waters off the east

coast of Florida. One quota is set for both areas, which is adjusted for management purposes. The fishing year for Atlantic migratory group Spanish mackerel is March-February. This fishing year was implemented in August 2005; before then, the fishing year was April 1 – March 31. Because of the change in fishing year, the 2005/2006 fishing year has only 11 months of landings and has been normalized for comparison with other years.

Landings compiled for the SEDAR 28 stock assessment (2013, 2013) divide the two migratory groups at the boundary between the Gulf of Mexico and South Atlantic Fishery Management Councils (Councils) (the line of demarcation between the Atlantic Ocean and the Gulf), although the management boundary is at the Dade/Monroe County line. Additionally, landings were compiled by calendar year rather than fishing year. For consistency with previous analyses, landings based on the correct boundary and calendar year are included here.

Commercial landings over the past five years have varied, averaging 1.4 mp annually in the Gulf and 3.9 mp annually in the Atlantic. Commercial landings of Spanish mackerel have generally been increasing in the Atlantic over the last decade (**Table 3.2.2.1**).

**Table 3.2.2.1.** Annual commercial landings of Spanish mackerel.

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000-2001	868,171	2,855,805
2001-2002	782,227	3,091,117
2002-2003	1,707,950	3,257,807
2003-2004	883,090	3,763,769
2004-2005	1,958,155	3,379,347
2005-2006	888,379	3,908,607
2006-2007	1,472,307	3,654,655
2007-2008	863,871	3,086,792
2008-2009	2,273,248	3,190,881
2009-2010	916,614	4,208,116
2010-2011	1,219,484	4,592,708
2011-2012	1,176,211	4,008,625
2012-2013	1,413,904	3,267,220

Source: SEFSC, ALS database; NEFSC, CFDBS database.

\*Note: For 1999/2000-2004/2005, the Atlantic fishing year is Apr 1 – Mar 31; for 2006/2007-2009/2010, the fishing year is Mar 1 – Feb 28.

Recreational catches of Spanish mackerel in the Gulf have remained rather stable since the early 1990’s at around 2.0 to 3.0 mp, despite increases in the bag limit from three fish in 1987 to ten fish in 1992 to 15 fish in 2000. Recreational landings in the Atlantic also have remained fairly steady over time (**Table 3.2.2.2**). The recreational allocation in the Atlantic is 45 percent.

**Table 3.2.2.2.** Annual recreational landings of Spanish mackerel

Fishing Year	Landings (lbs)	
	Gulf	Atlantic
2000-2001	2,787,773	2,306,607
2001-2002	3,452,981	2,046,039
2002-2003	3,171,235	1,640,822
2003-2004	2,742,270	1,853,294
2004-2005	2,665,269	1,359,360
2005-2006	1,595,375	1,648,291
2006-2007	2,845,347	1,653,413
2007-2008	2,724,757	1,710,276
2008-2009	2,525,443	2,046,806
2009-2010	1,890,143	2,107,213
2010-2011	2,964,339	1,763,640
2011-2012	2,677,725	1,231,166
2012-2013	3,096,836	1,377,762

Source: SEFSC, ACL data sets; MRFSS, HBS, TPWD.

### 3.2.3 Protected Species

There are 44 species, or distinct population segments (DPSs), protected under the purview of NMFS that occur in the exclusive economic zone (EEZ) of the South Atlantic and Gulf of Mexico Regions. Thirty-one of these species are marine mammals protected under the Marine Mammal Protection Act (MMPA). The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS’s List of Fisheries (LOF) classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals. More information about the LOF and the classification process can be found at: <http://www.nmfs.noaa.gov/pr/interactions/lof/>. Six of the marine mammal species (sperm, sei, fin, blue, humpback, and North Atlantic right whales) protected by the MMPA, are also listed as endangered under the Endangered Species Act (ESA). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp’s ridley, leatherback, and loggerhead); the smalltooth sawfish; five 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, the Northwest Atlantic (NWA) DPS of loggerhead sea turtles, and *Acropora* corals also occur within the South Atlantic or Gulf of Mexico. Additionally, in August 2014, NMFS published a final determination to list five coral species found in the Florida-Atlantic region as Threatened under the ESA, in addition to maintaining the Threatened listing for elkhorn and staghorn coral. NMFS has conducted specific analyses (“Section 7 consultations”) to evaluate the potential adverse effects from the CMP fishery on species protected under the ESA. Summaries of those consultations and their determination are in **Appendix G**. Those consultations indicate that of the species listed above, sea turtles and

smalltooth sawfish are the most likely to interact with the CMP fishery. These species potentially affected by the fishery are discussed below.

### **Turtles**

Green, hawksbill, Kemp's ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the South Atlantic. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the South Atlantic region. Several volumes exist that cover the biology and ecology of these species more thoroughly (i.e., Lutz and Musick 1997; Lutz et al. 2003).

**Green** sea turtle hatchlings are thought to occupy pelagic areas of the open ocean and are often associated with *Sargassum* rafts (Carr 1987; Walker 1994). Pelagic stage green sea turtles are thought to be carnivorous. Stomach samples of these animals found ctenophores and pelagic snails (Frick 1976; Hughes 1974). At approximately 20 to 25 cm carapace length, juveniles migrate from pelagic habitats to benthic foraging areas (Bjorndal 1997). As juveniles move into benthic foraging areas, a diet shift towards herbivory occurs. They consume primarily seagrasses and algae, but are also known to consume jellyfish, salps, and sponges (Bjorndal 1980, 1997; Mortimer 1981, 1982; Paredes 1969). The diving abilities of all sea turtles species vary by their life stages. The maximum diving range of green sea turtles is estimated at 110 m (360 ft) (Frick 1976), but they are most frequently making dives of less than 20 m (65 ft.) (Walker 1994). The time of these dives also varies by life stage. The maximum dive length is estimated at 66 minutes with most dives lasting from 9 to 23 minutes (Walker 1994).

The **hawksbill's** pelagic stage lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 cm in straight carapace length (Meylan 1988; Meylan and Donnelly 1999). The pelagic stage is followed by residency in developmental habitats (foraging areas where juveniles reside and grow) in coastal waters. Little is known about the diet of pelagic stage hawksbills. Adult foraging typically occurs over coral reefs, although other hard-bottom communities and mangrove-fringed areas are occupied occasionally. Hawksbills show fidelity to their foraging areas over several years (van Dam and Diéz 1998). The hawksbill's diet is highly specialized and consists primarily of sponges (Meylan 1988). Gravid females have been noted ingesting coralline substrate (Meylan 1984) and calcareous algae (Anderes Alvarez and Uchida 1994), which are believed to be possible sources of calcium to aid in eggshell production. The maximum diving depths of these animals are not known, but the maximum length of dives is estimated at 73.5 minutes. More routinely, dives last about 56 minutes (Hughes 1974).

**Kemp's ridley** hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987; Ogren 1989). Once the juveniles reach approximately 20 cm carapace length, they move to relatively shallow (less than 50m) benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp that Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or from

discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys most routinely make dives of 50 m or less (Byles 1988; Soma 1985). Their maximum diving range is unknown. Depending on the life stage, a Kemp's ridley may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Byles 1988; Mendonca and Pritchard 1986; Soma 1985). Kemp's ridleys may also spend as much as 96% of their time underwater (Byles 1988; Soma 1985).

**Leatherbacks** are the most pelagic of all ESA-listed sea turtles and spend most of their time in the open ocean. Although they will enter coastal waters and are seen over the continental shelf on a seasonal basis to feed in areas where jellyfish are concentrated. Leatherbacks feed primarily on cnidarians (medusae, siphonophores) and tunicates. Unlike other sea turtles, leatherbacks' diets do not shift during their life cycles. Because leatherbacks' ability to capture and eat jellyfish is not constrained by size or age, they continue to feed on these species regardless of life stage (Bjorndal 1997). Leatherbacks are the deepest diving of all sea turtles. It is estimated that these species can dive in excess of 1,000 m (Eckert et al. 1989) but more frequently dive to depths of 50 m to 84 m (Eckert et al. 1986). Dive times range from a maximum of 37 minutes to more routine dives of 4 to 14.5 minutes (Eckert et al. 1986, 1989; Keinath and Musick 1993; Standora et al. 1984). Leatherbacks may spend 74% to 91% of their time submerged (Standora et al. 1984).

**Loggerhead** hatchlings forage in the open ocean and are often associated with *Sargassum* rafts (Bolten and Balazs 1995; Carr 1987; Hughes 1974; Walker 1994). The pelagic stage of these sea turtles are known to eat a wide range of things including salps, jellyfish, amphipods, crabs, syngnathid fish, squid, and pelagic snails (Brongersma 1972). Stranding records indicate that when pelagic immature loggerheads reach 40-60 cm straight-line carapace length they begin to live in coastal inshore and nearshore waters of the continental shelf throughout the U.S. Atlantic (Witzell 2002). Here they forage over hard- and soft-bottom habitats (Carr 1986). Benthic foraging loggerheads eat a variety of invertebrates with crabs and mollusks being an important prey source (Burke et al. 1993). Estimates of the maximum diving depths of loggerheads range from 211 m to 233 m (692-764ft.) (Limpus and Nichols 1988; Thayer et al. 1984). The lengths of loggerhead dives are frequently between 17 and 30 minutes (Lanyon et al. 1989; Limpus and Nichols 1988, 1994; Thayer et al. 1984) and they may spend anywhere from 80 to 94% of their time submerged (Lanyon et al. 1989; Limpus and Nichols 1994).

### **Fish**

Historically the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but believed to have contracted from these historical areas. In the South Atlantic region, they are most commonly found in Florida, primarily off the Florida Keys (Simpfendorfer and Wiley 2004). Only two smalltooth sawfish have been recorded north of Florida since 1963 (the first was captured off North Carolina in 1963 and the other off Georgia in 2002 (National Smalltooth Sawfish Database, Florida Museum of Natural History)). Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Adams and Wilson 1995; Bigelow and Schroeder 1953), while mature animals occur in waters in excess of 100 meters (Simpfendorfer

pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Bigelow and Schroeder 1953; Norman and Fraser 1938).

In a 2007 biological opinion, NMFS determined the continued existence of endangered green, leatherback, hawksbill, and Kemp's ridley sea turtles, and threatened loggerhead sea turtles was not likely to be jeopardized by fishing for CMP species in the Southeastern United States. Other listed species are not likely to be adversely affected, including ESA-listed whales, Gulf sturgeon, and *Acropora* corals. Since the completion of the 2007 consultation, five DPSs of Atlantic sturgeon became federally protected by the ESA. The effect of the CMP fishery on Atlantic sturgeon has never been analyzed in a Section 7 consultation; however, Atlantic sturgeon have been captured by fishermen fishing for CMP species in the past. Because of these past captures and the new protection for Atlantic sturgeon, ESA consultation was reinitiated in November 2012. Following the request for consultation, the Sustainable Fisheries Division considered the effects of the fishery on Atlantic sturgeon and developed ESA 7(a)(2) and 7(d) determinations in a January 11, 2013, memorandum. The CMP fishery is currently operating under the 7(a)(2) and 7(d) determinations while consultation proceeds.

### **Marine Mammals**

The Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2014 MMPA List of Fisheries as a Category III fishery (79 FR 14418, March 14, 2014), meaning the annual mortality and serious injury of a marine mammal resulting from the fishery is less than or equal to 1% of the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population.

The Gulf and South Atlantic CMP gillnet fishery is classified as a 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 (i.e., similar risk to marine mammals) with other gillnet fisheries.

## **3.3. Economic Environment**

### **3.3.1. Economic Description of the Recreational Sector**

A description of the recreational sector of the Spanish mackerel component of the CMP fishery is contained in Amendment 20A (GMFMC/SAFMC 2013a) and is incorporated herein by reference. Because Framework Amendment 2 would only change management of the commercial sector, summary and update of the information on the recreational sector is not provided in this assessment.

### 3.3.2 Economic Description of the Commercial Sector

A description of the commercial sector of the Spanish mackerel component of the CMP fishery is contained in Amendment 20A (GMFMC/SAFMC 2013a) and is incorporated herein by reference. Because this proposed framework amendment would only change management of the Atlantic migratory group Spanish mackerel, only the available information on this stock is summarized in this assessment.

#### Number of Vessels and Ex-vessel Revenue

An economic description of the commercial sectors for Spanish mackerel is contained in Vondruska (2010) and is incorporated herein by reference. Updated select summary statistics are provided in **Table 3.3.2.1**. These estimates include the average number of vessels per fishing year that recorded harvesting at least one pound of Atlantic migratory group Spanish mackerel over the 2007/2008 through 2011/2012 fishing years, the average ex-vessel revenue from Spanish mackerel, the average ex-vessel revenue from all other species harvested on all trips by these vessels (regardless of whether Spanish mackerel was harvested on the trip), and the average ex-vessel revenue per vessel.

**Table 3.3.2.1.** Average number of vessels, ex-vessel revenue from Atlantic migratory group Spanish mackerel, ex-vessel revenue from all species harvested by same vessels, and average ex-vessel revenue per vessel. All revenue estimates are in 2013 dollars.

Species	Number of Vessels	Ex-vessel Revenue (millions)	Ex-vessel Revenue All Species (millions)	Average Ex-vessel Revenue per Vessel
Atlantic migratory group Spanish mackerel	387	\$1.94	\$12.42	\$32,100

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 species. Five-year averages in column 3 are based on fishing years for Spanish mackerels (2007/2008, 2008/2009, 2011/2012). Five-year averages in column 4 are based on calendar years (2007-2011). Source: NMFS SEFSC Coastal Fisheries Logbook for landings and NMFS Accumulated Landings System for prices. Note that small amounts (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.

#### Business Activity

The commercial harvest and subsequent sales and consumption of fish generates business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as Spanish mackerel purchased at a local fish market and served during restaurant visits. These expenditures spur additional business activity in the region(s) where the harvest and purchases are made, such as jobs in local fish markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would spend their money on substitute goods and services. As a result, the analysis presented below represents a distributional analysis

only; that is, it only shows how economic effects may be distributed through regional markets.

Estimates of the average annual business activity associated with the commercial harvest of Atlantic migratory group Spanish mackerel, and all species harvested by the vessels that harvested these Spanish mackerel, were derived using the model developed for and applied in NMFS (2011) and are provided in **Table 3.3.2.2**. This business activity is characterized as full-time equivalent 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.

**Table 3.3.2.2.** Average annual business activity associated with the commercial harvest of Atlantic migratory group Spanish mackerel. All monetary estimates are in 2013 dollars.

Species	Average Ex-vessel Value (millions)	Total Jobs	Harvester Jobs	Output (Sales) Impacts (millions)	Income Impacts (millions)
Atlantic migratory group Spanish mackerel	\$1.94	337	44	\$25.50	\$10.86
- all species harvested on all trips by same vessels	\$12.42	2,163	282	\$163.50	\$69.68

### 3.4 Social Environment

Because this framework amendment only proposes changes to the commercial regulations for Spanish mackerel, this section focuses on the communities that are the most likely to be affected by regulatory changes to the commercial fishery for Spanish mackerel. In addition, only South Atlantic communities are included in this description because the proposed action in this amendment would primarily affect commercial fishermen harvesting Spanish mackerel in the federal waters off South Carolina, Georgia, and the east coast of Florida. However, some Spanish mackerel commercial fishermen in the Gulf of Mexico and Mid-Atlantic could also be affected. Amendment 20A (GMFMC/SAFMC 2013aa) includes a detailed description of the top commercial Spanish mackerel communities in the Gulf and Mid-Atlantic regions, which are summarized below.

The descriptions in this section include information about the top communities based upon a regional quotient of commercial landings and ex-vessel value for Spanish mackerel. These communities are referred to as “Spanish mackerel communities” because these are the areas that would be most likely to experience the effects of the proposed actions that would change the Spanish mackerel commercial fishing regulations. Additionally, the descriptions in Amendment 20A (GMFMC/SAFMC 2013a) also apply fishing reliance and engagement indices to the top Spanish mackerel communities. These indices provide information about a community’s overall

involvement in commercial fishing, which provides information on how a community could experience effects from regulatory actions for any species. The indices were created using secondary data from permit and landings information for the commercial sector (Jacob et al. 2013; Jepson and Colburn 2013). Fishing engagement is primarily measured by the absolute number of permits, landings, and ex-vessel value. Fishing reliance uses the same variables as engagement, which are divided by population to provide an indication of the per capita influence of this activity (see Amendment 20A for more details about the reliance and engagement indices and methodology).

### **Commercial Spanish Mackerel Communities in the South Atlantic**

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013a), Fort Pierce, Florida, ranks highest, with almost 32% of the landings and over 25% of the ex-vessel value. Cocoa, Florida, is second with approximately 17% of landings and 17% of ex-vessel value. Other top Florida communities include Palm Beach Gardens, Stuart, Marathon, Miami, Mayport, and Sebastian. Although Hatteras, North Carolina, ranked third for ex-vessel value, the community had lower landings than Palm Beach Gardens, Florida. Additional top North Carolina communities include Engelhard, Wanchese, Swan Quarter, Ocracoke, Avon, and Cedar Island. No South Carolina or Georgia communities are included in the top fifteen communities for Spanish mackerel.

### **Reliance on and Engagement with Commercial Fishing in the South Atlantic**

The reliance and engagement indices provide information on how a community is involved overall with commercial fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013a). The primary communities in the Spanish mackerel fishery with substantial commercial fishing reliance and/or engagement (communities with engagement or reliance values above one standard deviation from the mean) include Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; Stuart, Florida; Ocracoke, North Carolina; and Wanchese, North Carolina.

### **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).

Only South Atlantic communities and counties are included in the following description because the proposed action in this amendment would primarily affect commercial fishermen harvesting Spanish mackerel in the federal waters off the east coast of Florida. However, some Spanish mackerel commercial fishermen in the Gulf and Mid-Atlantic could be affected by regulatory changes in the Atlantic EEZ off the coast of Florida. Therefore, the reader is directed to Amendment 20A (GMFMC/SAFMC 2013s) for a detailed description of coastal migratory pelagic EJ concerns for the Gulf and Mid-Atlantic regions.

To evaluate EJ considerations for the proposed action, 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 action would be expected to affect fishermen in several communities 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 (**Table 3.4.1**).

**Table 3.4.1.** 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*
<b>Florida</b>		<b>39.5</b>	<b>47.5</b>	<b>13.2</b>	<b>15.8</b>
	Broward	52.0	-4.6	11.7	4.1
	Miami-Dade	81.9	-34.5	16.9	-1.1
	Orange County	50.3	-2.9	12.7	3.1
	Osceola	54.1	-6.7	13.3	2.5
<b>Georgia</b>		<b>41.7</b>	<b>50.0</b>	<b>15.0</b>	<b>18.0</b>
	Liberty	53.2	-3.2	17.5	0.5
<b>South Carolina</b>		<b>34.9</b>	<b>41.9</b>	<b>15.8</b>	<b>19.0</b>
	Colleton	44.4	-2.5	21.4	-2.4
	Georgetown	37.6	4.3	19.3	-0.3
	Hampton	59.0	-17.1	20.2	-1.2
	Jasper	61.8	-19.9	19.9	-0.9
<b>North Carolina</b>		<b>32.6</b>	<b>39.1</b>	<b>15.1</b>	<b>18.1</b>
	Bertie	64.6	-25.5	22.5	-4.4
	Chowan	39.2	-0.1	18.6	-0.5
	Gates	38.8	0.3	18.3	-0.2
	Hertford	65.3	-26.2	23.5	-5.4
	Hyde	44.5	-5.4	16.2	1.9
	Martin	48.4	-9.3	23.9	-5.8
	Pasquotank	43.4	-4.3	16.3	1.8
	Perquimans	27.7	11.4	18.6	-0.5
	Tyrrell	43.3	-4.2	19.9	-1.8
	Washington	54.7	-15.6	25.8	-7.7

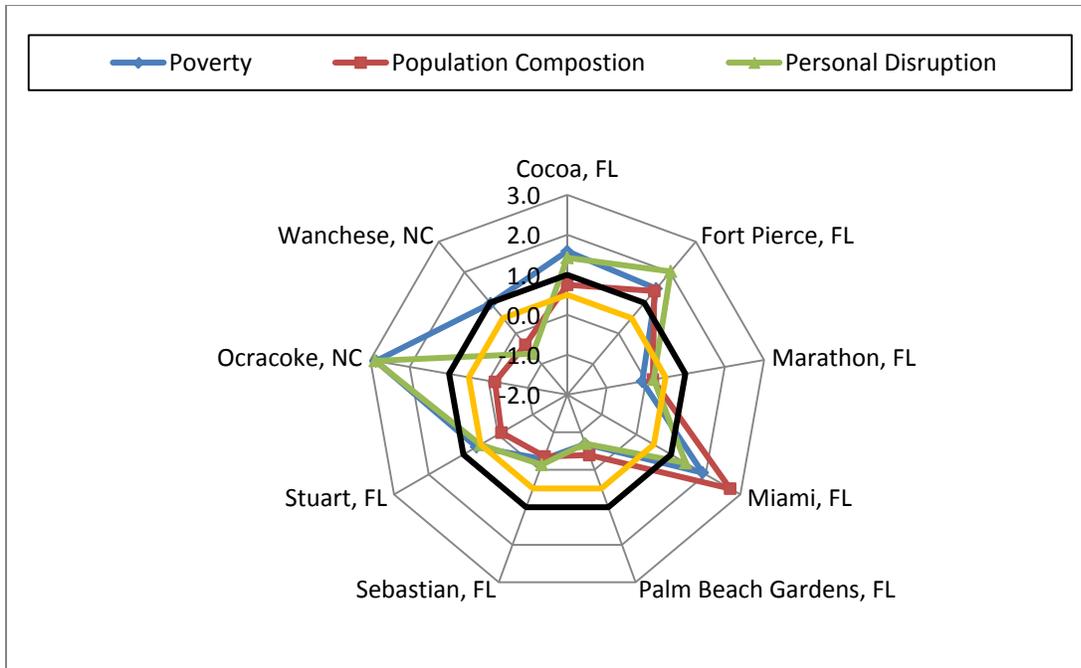
\*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded.

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 (EPA 1999). Census data for the year 2010 were used. Estimates of the state minority and poverty rates, associated thresholds, and county rates are provided in **Table 3.4.1**; note that only counties that exceed the minority threshold and/or the poverty threshold are included in the table.

Another type of analysis uses a suite of indices created to examine the social vulnerability of coastal communities and is depicted in **Figure 3.4.1**. The three indices in this analysis 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 five; 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 one and one-half standard deviation are the same for these standardized indices. 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 previously, 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 (**Figure 3.4.1**): Cocoa, Fort Pierce, Miami and Stuart in Florida and Wanchese and Ocracoke, North Carolina. The Florida communities of Cocoa, Fort Pierce and Miami all exceed the thresholds on all three social vulnerability 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 3.4.1.** Social vulnerability indices for communities with the top regional quotients for Spanish mackerel in the South Atlantic.  
Source: SERO Social Indicator Database 2013

Although some communities expected to be affected by this proposed action 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 from this proposed amendment, nor are these measures expected to result in an increased risk of exposure of affected individuals to adverse health hazards. The proposed management measure 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.

Finally, the general participatory process used in the development of fishery management measures (e.g., public hearings, advisory panel meetings, and open South Atlantic and Gulf Council meetings) provided sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this action 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 action.

## **3.5 Administrative Environment**

### **3.5.1 The Fishery Management Process and Applicable Laws**

#### **3.5.1.1 Federal Fishery Management**

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act; 16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The U.S. claims through the Magnuson-Stevens Act, sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending 200 nautical miles (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 nm offshore from the seaward boundary of the States of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has 13 voting members: one from NMFS; one each from the state fishery agencies; and eight public members appointed by the Secretary. Non-voting members include representatives of the U.S. Fish and Wildlife Service, US Coast Guard (USCG), and Atlantic States Marine Fisheries Commission (ASMFC).

The Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) has two voting seats on the South Atlantic Council's Mackerel Committee but does not vote during Council sessions. The Mid-Atlantic Council is responsible for fishery resources in federal waters off New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina. The coastal migratory pelagic fishery is jointly managed with the Gulf of Mexico Fishery Management Council (Gulf Council). Therefore, the Gulf Council reviewed CMP Framework 2 and voted to approve it for Secretarial review.

The Councils use their respective Scientific and Statistical Committees (SSC) to review data and science used in assessments and fishery management plans/amendments. Regulations contained within FMPs are enforced through actions of the NMFS' Office for Law Enforcement (NOAA/OLE), the USCG, and various state authorities.

The public is involved in the fishery management process through participation at public meetings, on advisory panels, and through council meetings that, with some exceptions, are open to the public. The regulatory process is in accordance with the Administrative Procedures Act, in the form of “notice and comment” rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

### **3.5.1.2 State Fishery Management**

The purpose of state representation at the 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 state governments have the authority to manage their respective state fisheries including enforcement of fishing regulations. Each of the eight states exercises legislative and regulatory authority over their states’ natural resources through discrete administrative units. Although each agency listed below is the primary administrative body with respect to the state’s natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources.

The states are also involved through the Gulf States Marine Fisheries Commission and the ASMFC in management of marine fisheries. These commissions were created to coordinate state regulations and develop management plans for interstate fisheries.

NMFS’ 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 commissions to develop and implement cooperative State-Federal fisheries regulations.

More information about these agencies can be found from the following web pages:

Texas Parks & Wildlife Department - <http://www.tpwd.state.tx.us>

Louisiana Department of Wildlife and Fisheries <http://www.wlf.state.la.us/>

Mississippi Department of Marine Resources <http://www.dmr.state.ms.us/>

Alabama Department of Conservation and Natural Resources <http://www.dcnr.state.al.us/>

Florida Fish and Wildlife Conservation Commission <http://www.myfwc.com>

Georgia Department of Natural Resources, Coastal Resources Division <http://crd.dnr.state.ga.us/>

South Carolina Department of Natural Resources <http://www.dnr.sc.gov/>

North Carolina Department of Environmental and Natural Resources

<http://portal.ncdenr.org/web/guest/>

### **3.5.1.3 Enforcement**

Both the NOAA/OLE and the USCG have the authority and the responsibility to enforce 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: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Southern Zone

**Alternative 1 (No Action).** Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel (see Discussion section of this chapter).

**Alternative 2.** Establish a trip limit of 3,500 lbs for the Southern Zone for March 1- November 30. After December 1, when 75% of the adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Alternative 3.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of the Southern Zone quota is met or projected to be met, the trip limit would be reduced to 500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Preferred Alternative 4.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs. When 100% of adjusted Southern Zone quota is met or projected to be met, the trip limit is reduced to 500 lbs until the end of the fishing year or until the Southern Zone commercial quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

### 4.1.1 Biological Effects

The trip limit analysis for this action included landings data from the 2003/2004 through 2012/2013 fishing years, of which the 2012/2013 fishing year landings were markedly reduced from previous fishing years (3.15 million pounds (mp) compared to 4 mp and 4.5 mp in the two previous fishing seasons). Including the 2012/2013 landings data caused the predictive model to forecast a declining landings trend and, thus indicated that under all the alternatives considered, there would be no in-season closure for the commercial sector in the Southern Zone (assuming Amendment 20B (GMFMC/SAFMC 2014b) is implemented, see explanation in the following paragraph). Because the reason for the reduced landings in the 2012/2013 fishing season is unknown, additional analysis without the 2012/2013 landings data was conducted. **Table 4.1.1.1** shows the projected fishing season lengths and approximate closure dates for the 2014/2015

fishing season under each of the alternatives considered using the alternate model, which eliminates the 2012/2013 landings information, in the absence of conditions that would exist if CMP Framework 1 (GMFMC/SAFMC 2014a) and Amendment 20B are implemented.

There is a reasonable expectation that Amendment 20B, which would establish Northern and Southern Zones with their own transferable quotas and Framework Amendment 1, which would increase the Atlantic migratory group Spanish mackerel annual catch limit (ACL) from 5.69 mp to 6.063 mp, are likely to be implemented in the near future. These two actions would influence the effects of the trip limit modifications being considered in this amendment. Therefore, a prediction model was used to forecast the closing dates and number of fishing days under the conditions that would exist if Amendment 20B and Framework Amendment 1 are implemented. Similar to the previous model prediction, with the landings data from the 2012/2013 fishing season included in the model analysis, all alternatives in combination with the anticipated conditions created under Amendment 20B and Framework Amendment 1 would result a 365-day fishing year. The results of the alternate model, removing the 2012/2013 landings data, are illustrated in **Table 4.1.1.2**. Further explanation of the data sources and calculations used to develop the projections presented in **Table 4.1.1.1** and **4.1.1.2** are included in **Appendix H** of this document. All projections assume compatible regulations would be implemented by South Carolina, Georgia, and Florida.

**Table 4.1.1.1.** Projected fishing days and closure dates for Spanish mackerel in the Atlantic for the 2014-2015 fishing season for each alternative in the absence of conditions that would exist if Framework 1 and Amendment 20B are implemented. The fishing year is March – February.

Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative 4
Projected Closure Date	1/03/15	12/25/14	1/19/15	1/03/15
Projected Fishing Days	308	299	324	308

Source: NMFS 2013

**Table 4.1.1.2.** Projected fishing days and closure dates for Spanish mackerel in the southern zone for the 2014-2015 fishing season for each alternative under conditions that would exist if Framework 1 and Amendment 20B are implemented. The fishing year is March – February.

Alternative	Alternative 1	Alternative 2	Alternative 3	Preferred Alternative 4
Projected Closure Date	2/1/15	1/24/15	2/18/15	1/31/15
Projected Fishing Days	337	329	354	336

Source: NMFS 2013

**Alternative 1 (No Action)** would perpetuate the current level of complexity for the management of Atlantic migratory group Spanish mackerel. Under this alternative the adjusted quota would continue to be used, although it may no longer be necessary for controlling harvest because of the system of ACLs and accountability measures (AMs) for this segment of the coastal migratory pelagics (CMP) fishery. Currently, the adjusted quota is 250,000 pounds (lbs) less than

the full quota (commercial ACL). The adjusted quota was originally intended to allow vessels to continue fishing for the remainder of the fishing season, after the adjusted quota was met. Originally, no closure provision was in place for Atlantic migratory group Spanish mackerel when the full quota (commercial ACL) was met, but a closure provision when the full quota is met or projected to be met was implemented through Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011). If Amendment 20B is implemented, each proposed zone would have a separate quota and closure. Therefore, the 500-lb trip limit, which is triggered when the adjusted quota is met, is only effective until the additional 250,000 lbs are landed. Since the establishment of the current adjusted quota/trip limit system for Atlantic migratory group Spanish mackerel, ACLs and AMs have been established for the species and are now used to control harvest and prevent overfishing. Therefore, maintaining the adjusted trip limit is not biologically necessary.

**Alternative 1 (No Action)** would result in a projected 337-day fishing season in the Florida exclusive economic zone (EEZ) (**Table 4.1.1.2**), compared to slightly shorter projected fishing seasons under **Alternative 2** and **Preferred Alternative 4**, and a slightly longer projected fishing season length under **Alternative 3**. However, the projected season lengths for each of the alternatives are all very similar and differ by only as much as several days and as few as one day. If the commercial ACL is projected to be met, commercial harvest of Spanish mackerel is closed for the duration of the fishing season, which prevents overfishing from occurring. Amendment 20B would create separate northern and southern zone quotas that could be transferred from one zone to another. It is not possible to predict the overall effect quota transfers would have on the biological environment when combined with the trip limit modifications proposed in this framework action. However, commercial harvest is limited to the commercial ACL; therefore, the biological impacts of **Alternative 1 (No Action)** are expected to be neutral. In the absence of conditions created by the implementation of Framework Amendment 1 and/or Amendment 20B, commercial harvest would still be constrained by the commercial quota and in-season trip limit reductions, and the biological impacts would be neutral.

**Alternative 2** would not remove the use of the adjusted quota, which is no longer biologically necessary for maintaining harvest at sustainable levels given the recently implemented system of ACLs and AMs. However, **Alternative 2** would eliminate the unlimited trip period starting December 1 until 75% of the adjusted quota met, as well as the weekend trip limit of 1,500 lbs during the same time, but there would be a trip limit reduction to 1,500 lbs after December 1, when 75% of the adjusted quota is met. The Southern Zone trip limit under **Alternative 2** would be 3,500 lbs for March – November 30.

According to projections provided in **Tables 4.1.1.1** and **4.1.1.2**, under **Alternative 2**, the quota for the Southern Zone would be met sometime between late December and late January for the 2014/2015 fishing season; therefore, the commercial Spanish mackerel harvest would be likely to be closed prior to Lent, the most profitable time of year for fishermen and dealers. This option could result in the shortest fishing season of all the alternatives under consideration. As mentioned previously, Amendment 20B would allow proposed northern and southern zone quota to be transferred from one zone to another. Quota transfers are not expected to take place on a regular basis and may occur rarely. Though the amounts of future quota transfers cannot be

forecasted, overall harvest of Spanish mackerel in the South Atlantic is limited to the ACL. Therefore, regardless of how many quota transfers take place or how much quota is transferred from one zone to another in the future, biological impacts of the Spanish mackerel trip limit modifications in this amendment combined with the quota transfer provision in Amendment 20B are not expected to be significant. However, slowing the rate of harvest triggered once the 75% threshold level is met may be biologically beneficial if it allows fishery managers to more accurately predict when the proposed Southern Zone quota would be met, and prevent the quota from being exceeded. The biological effects of **Alternatives 1 (No Action)-4 (Preferred)** on Spanish mackerel and non-target species which may co-occur with Spanish mackerel are expected to be neutral because under all circumstances, harvest is limited to the commercial ACL (zone quotas, if Amendment 20B is implemented), if necessary.

**Alternative 3** would also remove the period of unlimited trips beginning on December 1 each year and discontinue the use of an adjusted quota. This alternative would retain the current trip limit of 3,500 lbs for the proposed Southern Zone, but would reduce the trip limit to 500 lbs when 75% of the quota is harvested. An in-season closure under this alternative could be expected to occur between mid-January and mid-February of the 2014/2015 fishing season (**Tables 4.1.1.1 and 4.1.1.2**), which may slightly extend fishing opportunities further into the fishing season as desired. Slowing the rate of harvest when the ACL (southern zone quota if Amendment 20B is implemented) is close to being met, helps support in-season monitoring efforts, which often include a lag time between the time when fish are landed and when fishery managers are able to process the data to determine what percentage of the quota has been harvested. A slower rate of harvest triggered by meeting the 75% threshold level may be biologically beneficial if it allows fishery managers to more accurately predict when the ACL or proposed Southern Zone quota would be met. Biological benefits realized under this alternative are not expected to be significant compared to the status quo, as there are currently two trip limit reductions in place, which achieve the same objective of slowing the rate of harvest when the fishery is close to meeting the ACL.

**Preferred Alternative 4** is most similar to **Alternative 1 (No Action)** because it would retain the adjusted commercial quota for Atlantic migratory group Spanish mackerel fishery, and would specify two trip limit reductions for the Southern Zone. **Preferred Alternative 4** would eliminate the unlimited trip limit that begins December 1 each year. Instead, this alternative would specify a Southern Zone trip limit of 3,500 lbs that would be reduced to 1,500 lbs when 75% of the adjusted quota is met; then when 100% of the adjusted quota is harvested the southern zone trip limit would be reduced again from 1,500 lbs to 500 lbs until the proposed Southern Zone quota is met or projected to be met. This alternative does little to simplify the current management regime for Atlantic migratory group Spanish mackerel, other than removing the unlimited trip limit after December 1. Furthermore, it retains the use of an adjusted quota, which may no longer be biologically necessary to maintain harvest at or below the sector ACL. **Preferred Alternative 4** would be expected to result in an in-season closure in early January when analyzed in the absence of expected effects of Amendment 20B and Framework Amendment 1 (**Table 4.1.1.1**). When combined with the anticipated effects of Amendment 20B and Framework Amendment 1, if implemented, the season would close in late January.

However, regardless of whether or not Amendment 20B and Framework Amendment 1 are implemented, biological effects under this alternative are likely to be neutral because overall harvest is limited by the commercial ACL and AMs.

The biological impacts on protected species from alternatives under **Action 1** are not expected to be significantly beneficial or negative. **Alternative 1 (No Action)** would perpetuate the existing level of risk for interactions between Endangered Species Act-listed species and the CMP fishery. **Alternatives 2, 3, and Preferred Alternative 4** could perpetuate the existing amount of fishing effort, increase effort, or decrease effort. Any change in effort could change the likelihood of interactions between protected species (turtles and smalltooth sawfish). Increases in effort provide the least amount of biological benefits. However, if these alternatives cause reductions in the overall amount of effort in the fishery, the risk of interactions between protected species and the fishery may decrease. **Alternative 3** could lead to a slightly longer season and therefore an increase in the number of fishing days. Increased effort provides the least amount of biological benefit for protected species; however, any change in fishing effort is expected to be minor and thus would not result in significant adverse impacts on ESA-listed species. This action is not likely to significantly alter the way in which the fishery is prosecuted in terms of fishing areas, gear types, or fishing methods. Therefore, no significant adverse effects on essential fish habitat (EFH) or EFH areas of particular concern are anticipated.

#### **4.1.2 Economic Effects**

The proposed action would apply only to the commercial harvest of the Atlantic migratory group Spanish mackerel. As a result, this action would not be expected to have any impact on the recreational sector or associated economic benefits.

The analysis of the effects of the proposed action on the expected season length and economic effects was conducted with and without 2012/2013 harvest data, which are the most recent final data available. The commercial harvest of Atlantic migratory group Spanish mackerel in 2012/2013 was approximately 3.27 mp, compared to harvests in excess of 4 mp in the previous three fishing years (see **Table 3.2.2.1**). Perhaps more importantly, Atlantic migratory group Spanish mackerel commercial harvests have shown a cyclical harvest pattern of high, medium, and low harvests on approximately a three-year cycle. As a result, removal of the low harvest in 2012/2013 from the analysis may help capture the potential effects under higher and lower harvest rates.

Based on data from the 2003/2004 through 2012/2013 fishing years, none of the proposed alternatives would be expected to result in less than a 365-day fishing year; no closure would be expected to occur (**Appendix H**). However, although commercial harvest of Atlantic migratory group Spanish mackerel would not be projected to close under any of the alternatives considered, differences in economic performance may still occur. In addition to projecting that the commercial season for Atlantic migratory group Spanish mackerel would not be expected to close, the model projects that the quota would not be expected to be harvested under any of the alternatives, with the amount of unharvested quotas ranging from approximately 648,000 lbs (**Preferred Alternative 4**) to 714,000 lbs (**Alternative 1 (No Action)**). The amounts of

unharvested quota for the other alternatives are not provided because the difference in underage with respect to **Alternative 1 (No Action)** is the more important economic statistic. These differences are provided below. The total underage can be calculated by subtracting the increases in harvest expected to occur under the alternatives to **Alternative 1 (No Action)** from the underage for **Alternative 1 (No Action)** (714,000 lbs). Although these projections may exaggerate actual performance, they suggest that the alternatives may differ in their effect on the ability of the industry to harvest the quota, which would result in forgone revenue to vessels, and associated economic effects on shoreside businesses. From this perspective, compared to **Alternative 1 (No Action)**, **Preferred Alternative 4** would be expected to result in the highest harvest and revenue, a gain of approximately \$74,000 (associated with an increase in harvest of approximately 66,500 lbs), assuming an average price of \$1.11 (2013 dollars) per pound, followed by **Alternative 2** (gain of \$43,300; 39,100 lbs), and **Alternative 3** (gain of \$1,600; 14,000 lbs). Thus, **Alternatives 2-4 (Preferred)** would be expected to result in more harvest, and associated economic benefits, than **Alternative 1 (No Action)**.

If data from the 2012/2013 fishing year are excluded from the analysis, the assessment results change. Under this scenario, none of the alternatives considered, including **Alternative 1 (No Action)**, would be expected to allow the fishing year to remain open a full year, when analyzed in the absence of anticipated effects of Amendment 20B (GMFMC/SAFMC 2014b) and Framework Amendment 1 (GMFMC/SAFMC 2014a), if implemented (see **Table 4.1.1.1**). The open fishing season would be expected to range from 299 days (**Alternative 2**) to 324 days (**Alternative 3**). However, closure would only occur if the quota is harvested, or is projected to be harvested. As a result, unlike the results discussed above where the primary economic differences may be associated with the amount of the quota harvested, the economic differences under the current perspective would be associated with the potential effects of shorter seasons. **Alternative 2** would be expected to result in nine fewer days than **Alternative 1 (No Action)**, followed by **Preferred Alternative 4** (an equivalent season), and **Alternative 3** (16 more days). Longer seasons are generally expected to support more stable product supply to markets, higher or less variable prices, and greater operational flexibility (when to fish, cash flow management, etc.). Thus, from this perspective, **Alternative 3** would be expected to result in the highest economic benefits, followed by **Alternative 1 (No Action)** and **Preferred Alternative 4** (due to equivalent season lengths), and **Alternative 2**.

If it is assumed that these two analytical perspectives may reasonably bracket the actual economic effects, comparing the rankings does not provide clear identification of the alternative that would be expected to result in the highest economic benefits. Under the first perspective (including 2012/2013 data), the rankings are (best to worst): **Preferred Alternative 4-Alternative 3-Alternative 2-Alternative 1 (No Action)**. Under the second perspective (excluding 2012-2013 data), the rankings are (best to worst): **Alternative 3-Alternative 1 (No Action)** and **Preferred Alternative 4-Alternative 2**. Across the two perspectives, **Alternative 3** and **Preferred Alternative 4** hold their status as the “better” alternatives, holding either the first or second best position, though they reverse in order depending on whether revenue or season length is examined. Similarly, **Alternative 2** maintains a poor ranking across both perspectives, having either the worst (days open) or next to worst (revenue) projected outcomes. Only

**Alternative 1 (No Action)** demonstrates marked differences between the two perspectives, going from the worst alternative if revenue is examined to second best under season length. From the perspective of the average ranking across both perspectives, **Alternative 3** and **Preferred Alternative 4** share the best average ranking (1.5), followed by **Alternative 1 (No Action)** (3), and **Alternative 2** has the worst average ranking (3.5).

Although not part of this proposed action, as discussed in **Chapter 2**, other changes have been proposed through additional rulemaking that would apply to the Atlantic migratory group Spanish mackerel commercial sector. These actions are a proposed increase in the commercial quota to 3.33 mp, and the establishment of a Northern Zone (the EEZ off North Carolina through New York) and a Southern Zone (the EEZ off east Florida, Georgia, and South Carolina), a quota for each zone, and closure of each zone when the quota is harvested or is projected to be harvested. Because these actions would have an effect on the expected economic effects of the action proposed in this amendment, they have been combined to form an alternative baseline for the examination of the expected effects of this proposed action. This analysis, similar to the analysis already discussed, compares results with and without the 2012/2013 harvest data. Although the current action would only affect the proposed Southern Zone, discussion of the effects of these combined actions on the proposed Northern Zone are included in the following discussion in order to provide a comprehensive discussion of the effects of these actions. However, because the current action would only affect the proposed Southern Zone, discussion of the effects on each zone are separated to reduce possible confusion.

### **Southern Zone Effects**

Based on data from the 2003/2004 through 2012/2013 fishing years, none of the proposed alternatives would be expected to result in less than a 365-day fishing year; no closure would be expected to occur in the Southern Zone. Similar to the original results, however, none of the alternatives, including **Alternative 1 (No Action)**, would be expected to result in the harvest of the quota in either zone. **Alternative 1 (No Action)** is projected to result in approximately 545,000 lbs less than the quota. Compared to **Alternative 1 (No Action)**, **Preferred Alternative 4** would be expected to result in approximately \$69,900 in more revenue (2013 dollars; associated with an increase of harvest of approximately 63,000 lbs) in the proposed Southern Zone, followed by **Alternative 2** (gain of \$42,500 and 38,300 lbs), and **Alternative 3** (loss of \$25,400 and 22,900 lbs).

If data from the 2012/2013 fishing year are excluded from the analysis, closures would be expected for the proposed Southern Zone under all of the alternatives considered, with the longest season expected to occur under **Alternative 3** (354-day season), followed by **Alternative 1 (No Action)** (337-day season), **Alternative 4** (336-day season), and **Alternative 2** (329-day season). As previously discussed, because longer seasons are generally expected to result in more economic benefits than short seasons (assuming the equivalent harvest occurs), **Alternative 3** would be expected to result in the highest economic benefits, followed by **Alternative 1 (No Action)**, **Preferred Alternative 4**, and **Alternative 2**.

To summarize, under the first perspective (including 2012/2013 data), the rankings are (best to worst): **Alternative 2-Alternative 3-Preferred Alternative 4-Alternative 1 (No Action)**. Under the second perspective (excluding 2012-2013 data), the rankings are (best to worst): **Alternative 3-Alternative 1 (No Action)-Preferred Alternative 4-Alternative 2**. From the perspective of the average ranking across both perspectives, **Alternative 3** has the best average ranking (1.5), followed by **Alternative 2** (2.5), and **Alternative 1 (No Action)** and **Preferred Alternative 4** (tied; 3.5).

### **Northern Zone Effects**

Based on data from the 2003/2004 through 2012/2013 fishing years, the proposed Northern Zone would not be expected to close under the combined effects of all three actions. However, the harvest projection in the proposed Northern Zone is expected to be less than the quota, leaving approximately 372,300 lbs, with an ex-vessel value of approximately \$413,200 (2013 dollars), unharvested.

If 2012/2013 data are excluded from the analysis, the proposed Northern Zone would be expected to remain open only 135 days but, the entire proposed Northern Zone Atlantic migratory group Spanish mackerel quota would be expected to be harvested.

Attempting to identify the best alternative for the proposed Northern Zone under the current action is not relevant. Regardless of whether the actual outcome is closer to a 365-day season, but the quota is not harvested, or the quota is harvested and a closure occurs, neither outcome would be affected by the alternative chosen under the current action because the alternatives would only apply to the proposed Southern Zone.

### **4.1.3 Social Effects**

Overall, the social effects would be associated with economic costs and benefits for the commercial vessels who harvest Spanish mackerel in the Southern Zone. This includes changes in fishing opportunities for vessels fishing in the Southern Zone due to trip limit adjustments and a reduced level of complexity from the current trip limit system for Florida fishermen. Additionally for fishermen in South Carolina and Georgia, changes to the trip limit system under **Alternatives 2, 3, and Preferred Alternative 4** would change the year-round 3,500-lb trip limit in the EEZ off Georgia and Florida, and those fishermen would then have work under a system with step-downs and adjusted quotas. Social effects associated with positive or negative biological effects on the Spanish mackerel resource are expected to be minimal. The primary communities that would be affected by changes in the Atlantic migratory group Spanish mackerel quota and trip limit system are discussed in **Section 3.4**. These communities include the Florida communities of Fort Pierce, Cocoa Beach, Palm Beach Gardens, Stuart, Marathon, Miami, Mayport, and Sebastian, and the North Carolina communities of Engelhard, Wanchese, Swan Quarter, Ocracoke, Avon, and Cedar Island. However, Spanish mackerel is not the only economically important species in most of these communities, and while changes may affect fishermen and individual fish houses or dealers, few or no impacts are expected at the community level.

An earlier closure date for Spanish mackerel commercial harvest could have some impact on the commercial fleet and the supply of Spanish mackerel in the market. However, as shown in **Tables 4.1.1.1** and **4.1.1.2**, the projected closure dates under both the current ACL and proposed Southern Zone quota that would be established under Amendment 20B (GMFMC/SAFMC 2014b) have minimal variation. Even if effort increases, it is expected that the trip limit system under any of the alternatives would not contribute to a substantially longer season than any other alternative. As a result, the effects on fishermen and communities would be expected to be similar under all alternatives and not significant.

Changes in fishing opportunities and trip efficiency could be affected by the changes proposed in **Alternatives 2, 3, and Preferred Alternative 4**. If a trip limit does not allow a vessel to make a profitable trip, the captain or vessel owner may decide not to make the trip. This could affect job opportunities for the crew in addition to supply of Spanish mackerel to fish houses in the area. However, some fish houses may set a ‘fish house limit’ for vessels that the fish house regularly buys from, which could be lower than the allowable trip limit. The period that allows unlimited trips in **Alternative 1 (No Action)** would be removed under **Alternatives 2, 3, and Preferred Alternative 4**, and this could affect some vessels taking advantage of maximized trip efficiency and profitability.

There is a trade-off between flexibility and a trip limit system tailored to current fishery conditions, and complexity of the system. Reducing complexity would be expected to be beneficial for compliance and enforcement. The step-downs in **Alternatives 2, 3, and Preferred Alternative 4** could provide flexibility by helping to slow the rate of harvest later in the season while still allowing Spanish mackerel fishing. The use of the adjusted Southern Zone quota as a trigger for the step-down in **Alternative 2** and **Preferred Alternative 4** do maintain a similar level of complexity as under **Alternative 1 (No Action)**, but could help to allow fishing to continue but keep an additional buffer to minimize the risk of exceeding the commercial ACL for Atlantic Spanish mackerel. **Alternative 3** is the least complex trip limit system.

#### **4.1.4 Administrative Effects**

**Alternatives 2, 3, and Preferred Alternative 4** represent a decreased administrative burden compared to **Alternative 1 (No Action)** because they reduce the number of trip limit reductions and remove the unlimited trip limits compared to **Alternative 1 (No Action)**.

The administrative impacts under **Alternative 1 (No Action)** and **Preferred Alternative 4** would be very similar because they both retain the use of a series (2 or more) of trip limit changes when certain harvest thresholds are met, though **Preferred Alternative 4** removes one extra layer of regulatory complexity from the current system of trip limits. **Alternatives 2 and 3** include the least number of trip limit reductions compared to **Alternative 1 (No Action)** and **Preferred Alternative 4**, and therefore reduce the need to develop outreach materials to inform fishery participants of a trip limit change. **Alternative 3** also removes the adjusted quota. There are no additional administrative impacts expected for **Alternative 1 (No Action)** or **Preferred Alternative 4** because there is currently a system of trip limits and trip limit reductions that are

triggered when a certain amount of harvest has been verified. However, confusion due to the regulatory complexity of the existing system of trip limits would persist and public notification of each trip limit change throughout the year would continue to be required.

The burden on law enforcement would not change under **Alternatives 1 (No Action), 2, 3, and Preferred Alternative 4** because commercial quota closures implemented when the commercial ACLs or adjusted quota are projected to be met are currently enforced. However, the 500-lb trip limit reduction in **Alternatives 1, 3, and Preferred Alternative 4**, could be difficult for the National Marine Fisheries Service to implement before a commercial closure takes place.

The administrative impacts under **Alternative 1 (No Action)** would be the most complex and the least beneficial, followed by **Preferred Alternative 4, Alternative 3, and Alternative 2**. **Alternatives 2 and 3** represent the least complex and the most beneficial alternatives due to reducing the complexity of the quota and trip limit regulations; however, no significant impacts on the administrative environment are expected under any of the alternatives considered when compared to the status quo.

# Chapter 5. Council's Choice for the Preferred Alternatives

## 5.1 Action: Modify the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel in the Southern Zone

**Alternative 1 (No Action).** Do not modify the current system of trip limits for Atlantic migratory group Spanish mackerel (see Discussion section of this chapter).

**Alternative 2.** Establish a trip limit of 3,500 lbs for the Southern Zone for March 1- November 30. After December 1, when 75% of the adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Alternative 3.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of the Southern Zone quota is met or projected to be met, the trip limit would be reduced to 500 lbs until the end of the fishing year or until the Southern Zone quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

**Preferred Alternative 4.** Establish a trip limit of 3,500 lbs for the Southern Zone. When 75% of adjusted Southern Zone quota is met or projected to be met, the trip limit would be reduced to 1,500 lbs. When 100% of adjusted Southern Zone quota is met or projected to be met, the trip limit is reduced to 500 lbs until the end of the fishing year or until the Southern Zone commercial quota is met or projected to be met, at which time the commercial sector in the Southern Zone would be closed to harvest of Spanish mackerel.

### 5.1.1 Public Comments and Recommendations

The Mackerel Advisory Panel (AP) met in April 2014, and reviewed the alternatives in Framework Amendment 2. The AP recommended **Preferred Alternative 4**.

Public hearings were held in August 2014. One attendee supported **Preferred Alternative 4**, and also recommended the South Atlantic Fishery Management Council (South Atlantic Council) consider a 10% overage allowance when removing the unlimited trips. The individual did not wish to comment on the record. One written comment was received and expressed support for **Preferred Alternative 4**.

### **5.1.2 Council's Choice for Preferred Alternative**

The South Atlantic Council selected **Alternative 4** as the preferred because the alternative had support of the Mackerel AP and from public comment. Additionally, there is little difference in the projected season length for the alternatives. The South Atlantic Council wanted to keep the adjusted quota in the trip limit system because the 500-pound (1b) trip limit would still allow the season to be extended and profitable. The South Atlantic Council is confident that the new dealer reporting requirements, which were effective in August 2014, will contribute to improved monitoring of the commercial ACL and quotas, and allow the National Marine Fisheries Service (NMFS) to implement timely step-downs during the season.

The Gulf of Mexico Fishery Management Council approved the framework amendment at their October 2014 meeting.

The Councils concluded that **Preferred Alternative 4** best meets the purpose of ensuring the system of trip limits for Atlantic migratory group Spanish mackerel in the Southern Zone is aligned with the current conditions of the fishery. Additionally the Councils concluded that **Preferred Alternative 4** best meets the objectives of the Coastal Migratory Pelagics Fishery Management Plan (CMP FMP) while complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act and other applicable law.

## Chapter 6. Cumulative Effects

### 6.1 Affected Area

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of 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. The range of the affected species is described in **Section 3.2**. For this action, the cumulative effects analysis (CEA) includes an analysis of actions and events dating back to 2010 and through what is expected to take place approximately before or within 2015-2016.

### 6.2 Past, Present, and Reasonably Foreseeable Actions Impacting the Affected Area

#### *Past Actions*

The reader is referred to **Appendix C** for a list of all past regulatory activity for species in the CMP FMP. Recently implemented actions are listed below.

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 of Mexico (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.

Generic amendments have been implemented requiring headboats in the South Atlantic and Gulf to report each week through electronic means. Regulations in the South Atlantic went into place on January 27, 2014, and regulations in the Gulf went into place on March 5, 2014.

#### *Present Actions*

Currently, there exist five CMP FMP/regulatory amendments in progress affecting Atlantic Spanish mackerel, including this framework action. One has recently been implemented (CMP Amendment 20A (GMFMC/SAFMC 2013a), and the others are in various stages of development and rulemaking. These actions include Amendment 20B (GMFMC/SAFMC 2014b), South Atlantic CMP Framework Action 2013 (GMFMC/SAFMC 2013b), Framework Amendment 1 (GMFMC/SAFMC 2014a), and this action (Framework Amendment 2).

Amendment 20A (GMFMC/SAFMC 2013a) allows certain types of sale of recreationally caught fish in each region. For the Atlantic region, Amendment 20A allows the sale of recreationally caught king and Spanish mackerel only from state-permitted tournaments where the proceeds are donated to charity. In addition, the amendment removes the income requirement for king and

Spanish mackerel commercial permits. This action could increase the number of Spanish mackerel permits, which are open access.

Amendment 20B (GMFMC/SAFMC 2014b), which has been approved by the Gulf of Mexico and South Atlantic Fishery Management Councils, would establish transit provisions for travel through areas that are closed to king mackerel fishing, establish regional quotas for Atlantic migratory group king and Atlantic migratory group Spanish mackerel, modify the CMP FMP framework procedures, and modify the Gulf and Atlantic migratory group cobia ACLs and ACTs. NMFS published the proposed rule for Amendment 20B on October 31, 2014. The amendment is expected to be approved for implementation prior to implementation of Framework Amendment 2.

South Atlantic CMP Framework Action 2013 (GMFMC/SAFMC 2013b) would allow transfer of a portion of a Spanish mackerel gillnet and its contents from a vessel that has met their trip limit to another federally permitted Spanish mackerel vessel that has not yet met their trip limit. This action is in the final rule stage of implementation and is intended to reduce waste in the Spanish mackerel gillnet portion of the CMP fishery.

Framework Amendment 1 (GMFMC/SAFMC 2014a) would increase the ACLs for Spanish mackerel in the Gulf and South Atlantic based on the results from recent assessments that indicates the stocks are neither overfished nor undergoing overfishing. National Marine Fisheries Service (NMFS) published the proposed rule for this amendment on July 31, 2014. It is expected that Framework Amendment 1 will be effective prior to implementation of Framework Amendment 2.

The Joint Dealer Reporting Amendment, which was effective on August 7, 2014, is intended to improve the timeliness and accuracy of fisheries data reported by permitted dealers. The amendment created one dealer permit for all federally-permitted dealers in the southeast region. Previously, no dealer permit was previously required for CMP species. Requiring dealers to report landings data electronically each week is expected to improve in-season quota monitoring efforts, which would increase the likelihood that AMs can be implemented prior to commercial ACLs being exceeded.

Currently, a formal consultation is underway for the coastal migratory pelagics (CMP) fishery, triggered by the 2012 listing of five distinct population segments (Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) under the Endangered Species Act. Additionally, in August 2014, the NMFS issued a final determination to newly list five Caribbean coral species found in the South Atlantic region as threatened and to maintain the threatened listing for the *Acropora* species (elkhorn and staghorn coral).

Recent increases in fishing effort and resultant management actions, particularly in the South Atlantic, have restricted access to other species that provide income for mackerel fishermen. In 2013, fishing for nine species or species groups in the South Atlantic was prohibited before the

end of the year due to ACLs being met. Many commercial mackerel fishermen only fish for mackerel part time. With reduced income from other fishing, some fishermen that have not been very active in the CMP fishery may shift effort to fish for mackerel.

#### ***Reasonably Foreseeable Future Actions***

Amendment 24 to the CMP FMP would consider re-allocating allowable catch between the commercial and recreational sector for Atlantic group Spanish mackerel, or establishing a process for in-season or pre-season quota shifts between the recreational and commercial sectors. Additionally, the stock assessment for king mackerel is complete (SEDAR 38) and will likely result in the Councils re-designating the zones and subzones for king mackerel. Revised annual catch limits based on the stock assessment, changes in zones and subzones, and other management measures for Gulf and Atlantic king mackerel are expected to be developed in 2015 and included in Amendment 26. In Amendment 28, the Councils may also consider establishing separate regional commercial permits for king and Spanish mackerel; currently, commercial permits are valid in both the Gulf and South Atlantic regions.

#### ***Expected Impacts from Past, Present, and Future Actions***

Framework Amendment 2 alone would not result in significant cumulative impacts on the human environment. When combined with the impacts of past, present, and future actions affecting the CMP fishery, specifically the Atlantic migratory group Spanish mackerel portion of the CMP fishery, cumulative impacts are likely to accrue, such as a longer fishing season, increased management control for designated fishing zones, and social and economic benefits associated with improved management strategies. The generic and South Atlantic Council amendments intended to increase the frequency of reporting by dealers and fishermen are likely to benefit the human environment through more timely biological protections and unnecessary delay in data availability, leading to more stable market conditions. Actions that would help the Spanish mackerel segment of the CMP fishery avoid waste (South Atlantic CMP Framework Action 2013), increase the ACLs (Framework Amendment 1), allow flexibility in managing harvest limits among the fishing zones (Amendment 20B), and update the current method of sector allocations (Amendment 24), together or separately, are not expected to result in significant cumulative adverse biological or socioeconomic effects. All of the proposed or recently implemented management actions affecting South Atlantic Spanish mackerel and the CMP fishery are intended to improve management of the CMP resource, while minimizing, to the maximum extent practicable adverse social and economic impacts.

### **6.3 Consideration of Climate Change and Other Non-Fishery Related Issues**

#### ***Climate Change***

The Environmental Protection Agency's climate change webpage (<http://www.epa.gov/climatechange/>) provides basic background information on measured or anticipated effects from global climate change. A compilation of scientific information on climate change can be found in the United Nations Intergovernmental Panel on Climate Change's Fourth Assessment Report (IPCC 2007). Those findings are incorporated here by reference and are summarized. Global

climate change can affect marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, and through increases in wave height and frequency, loss of sea ice, and increased risk of diseases in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions may affect a wide range of organisms and ecosystems. These influences could negatively affect biological factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators.

In the Southeast, general impacts of climate change have been predicted through modeling, with few studies on specific effects to species. Warming sea temperature trends in the southeast have been documented, and animals must migrate to cooler waters, if possible, if water temperatures exceed survivable ranges (Needham et al. 2012). Mackerels and cobia are migratory species, and may shift their distribution over time to account for the changing temperature regime. However, no studies have shown such a change yet. Higher water temperatures may also allow invasive species to establish communities in areas they may not have been able to survive previously. An area of low oxygen, known as the dead zone, forms in the northern Gulf each summer, which has been increasing in recent years. Climate change may contribute to this increase by increasing rainfall that in turn increases nutrient input from rivers. This increased nutrient load causes algal blooms that, when decomposing, reduce oxygen in the water (Kennedy et al. 2002; Needham et al. 2012). Other potential impacts of climate change to the southeast include increases in hurricanes, decreases in salinity, altered circulation patterns, and sea level rise. The combination of warmer water and expansion of salt marshes inland with sea-level rise may increase productivity of estuarine-dependent species in the short term. However, in the long term, this increased productivity may be temporary because of loss of fishery habitats due to wetland loss (Kennedy et al. 2002). Actions from this amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

### ***Weather Variables***

Hurricane season is from June 1 to November 30, and accounts for 97% of all tropical activity affecting the Atlantic basin. These storms, although unpredictable in their annual occurrence, can devastate areas when they occur. Although these effects may be temporary, those fishing-related businesses whose profitability is marginal may go out of business if a hurricane strikes.

### ***Deepwater-Horizon Oil Spill***

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.

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 at this time. 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. Direct and indirect impacts on the food

web from phytoplankton, to zooplankton, to mollusks, to top predators in the South Atlantic have not been significant and are not likely to be significant in the future.

## **6.4 Overall Impacts Expected from Past, Present, and Future Actions**

The proposed management actions are summarized in **Chapter 2** of this document. Detailed discussions of the magnitude and significance of the impacts of the preferred alternatives on the human environment appear in **Chapter 4** of this document. None of the impacts of the action in this framework, in combination with past, present, and future actions have been determined to be significant. Though Amendment 20A, Amendment 20B, Framework Amendment 1, and South Atlantic Framework Action 2013, all supported by Environmental Assessments, contain actions that affect the species addressed in this framework action (Framework Amendment 2), the additive effects, beneficial and adverse, on the species and the fishery are not expected to result in a significant level of cumulative impacts.

The proposed action would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places as these are not in the South Atlantic Exclusive Economic Zone (EEZ). This action is not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific, cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas as the proposed action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The U.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic EEZ. The proposed actions are not likely to cause loss or destruction of these national marine sanctuaries because the actions are not expected to result in appreciable changes to current fishing practices.

## **6.5 Monitoring and Mitigation**

The effects of the proposed action are, and will continue to be, monitored through collection of landings data by states, NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. The proposed action relates to the harvest of an indigenous species in the Atlantic, and the activity being altered does not itself introduce non-indigenous species, and is not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, it does not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

None of the beneficial or adverse impacts from the proposed management action (as summarized in **Chapter 2** of this document) have been determined to be significant. See **Chapter 4** for the detailed discussions of the magnitude of the impacts of the preferred alternatives on the human environment. The action in CMP Framework Amendment 2 would not have significant biological, social, or economic effects because even though the action could extend fishing opportunities, accountability measures are also considered, and are in place to ensure overfishing

does not occur. Therefore, the cumulative effects of the action proposed in CMP Framework Amendment 2 are not expected to affect bycatch, diversity and ecosystem structure of fish communities, or safety at sea of fishermen targeting CMP species, and other species managed by South Atlantic Council. Based on the cumulative effects analysis presented herein, the proposed action will not have any significant adverse cumulative impacts compared to, or combined with, other past, present, and foreseeable future actions

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

Name	Agency/Division	Title
Kari MacLauchlin	SAFMC	IPT Lead/Fishery Social Scientist
Kate Michie	SERO /SF	IPT Lead/Fishery Biologist
Adam Brame	SERO/PR	Protected Resources
Brian Chevront	SAFMC	Fishery Economist
Anik Clemens	SERO	Technical Writer and Editor
Mike Errigo	SAFMC	Fishery Biologist
Susan Gerhart	SERO/SF	Fishery Biologist
Stephen Holiman	SERO/SF	Economist
David Keys	SERO	Regional NEPA Coordinator
Noah Silverman	SERO	NEPA Specialist
Nick Farmer	SERO	Biologist
Christina Package-Ward	SERO/SF	Fishery Social Scientist
Jeff Radonski	NOAA/OLE	Special Agent
Kate Siegfried	SEFSC	Statistician
Brent Stoffle	SEFSC	Anthropologist
Monica Smit-Brunello	NOAA GC	General Counsel
Jack McGovern	SERO/SF	Fishery Biologist
Gregg Waugh	SAFMC	Deputy Director
Mary Vara	SERO/SF	Fishery Biologist

NMFS = National Marine Fisheries Service, GMFMC = Gulf of Mexico Fishery Management Council, 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, OLE= Office of Law Enforcement

# Chapter 8. Agencies Consulted

## Responsible Agencies

### **Coastal Migratory Pelagics Framework Amendment 2**

South Atlantic Fishery Management Council (Administrative Lead)

4055 Faber Place Drive, Suite 201

Charleston, South Carolina 29405

843-571-4366/ 866-SAFMC-10 (TEL)

843-769-4520 (FAX)

[www.safmc.net](http://www.safmc.net)

Gulf of Mexico Fishery Management Council

2203 North Lois Avenue, Suite 1100

Tampa, Florida 33607

813-348-1630/ 888-833-1844 (TEL)

[www.gulfcouncil.org](http://www.gulfcouncil.org)

### **Environmental Assessment:**

NMFS, Southeast Region

263 13<sup>th</sup> Avenue South

St. Petersburg, Florida 33701

727- 824-5301 (TEL)

727-824-5320 (FAX)

## List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel

SAFMC King 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

Atlantic States Marine Fisheries Commission

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<sub>MSY</sub>:** Biomass of population achieved in long-term by fishing at F<sub>MSY</sub>.

**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.

**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<sub>MSY</sub> 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 B<sub>MSY</sub> 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<sub>30%SPR</sub>**: Fishing mortality that will produce a static SPR = 30%.

**F<sub>45%SPR</sub>**: Fishing mortality that will produce a static SPR = 45%.

**F<sub>OY</sub>**: Fishing mortality that will produce OY under equilibrium conditions and a corresponding biomass of B<sub>OY</sub>. Usually expressed as the yield at 85% of F<sub>MSY</sub>, yield at 75% of F<sub>MSY</sub>, or yield at 65% of F<sub>MSY</sub>.

**F<sub>MSY</sub>**: Fishing mortality that if applied constantly, would achieve MSY under equilibrium conditions and a corresponding biomass of B<sub>MSY</sub>

**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 advice 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. **Alternative Considered but Rejected**

**Alternative 2.** Establish a trip limit of 3,500 lbs for the Florida EEZ.

The South Atlantic Fishery Management Council removed this alternative from Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region because fishing industry representatives felt it did not offer a desired buffer, in the form of an in-season trip limit reduction, to prevent the commercial annual catch limit and regional quota proposed for the Southern Zone from being exceeded.

## Appendix C. History of Management

The Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (CMP FMP; GMFMC/SAFMC 1982), with an environmental impact statement (EIS), was approved in 1982 and implemented by regulations effective in February 1983. Managed species included king mackerel, Spanish mackerel, and cobia. The CMP FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf (Gulf) of Mexico. The CMP 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.

### CMP FMP Amendments

**Amendment 1**, with EIS, implemented in September 1985, provided a framework procedure for pre-season adjustment of total allowable catch (TAC), revised the estimate of king mackerel 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 inches fork length (FL) or 14 inches total length (TL), and for cobia at 33 inches FL or 37 inches TL.

**Amendment 2**, with an environmental assessment (EA), implemented in July 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 the acceptable biological catch. 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 inches FL or 14 inches 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 inches FL, and changed all size limit measures to FL 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 in 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 Regional Administrator to authorize the use of experimental gear;
- Established the Gulf and South Atlantic Councils' intent to evaluate the impacts of permanent jurisdictional boundaries between the Gulf and South Atlantic Councils and development of separate fishery management plans 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 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 pounds 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 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 inches 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 2002, established two marine reserves in the 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 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 2005, established an indefinite limited access program for the commercial king mackerel fishery in the EEZ under the jurisdiction of the Gulf, South Atlantic Council, and Mid-Atlantic Council. 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 2006, established a limited access system on for-

hire reef fish and coastal migratory pelagic 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, implemented in January 2012 established ACLs, ACTs, and AMs 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 FMU: cero, little tunny, dolphin and bluefish. The South Atlantic and Gulf Councils approved the amendment for formal review in August 2011. The amendment was approved by the Secretary of Commerce in December 2011.

**Amendment 20A**, with EA, implemented July 2014 prohibits the sale of king and Spanish mackerel caught under the bag limit in each region except under limited circumstances. For the Gulf of Mexico, the amendment prohibits the sale of king and Spanish mackerel caught under the bag limit unless those fish are either caught on a for-hire trip and the vessel has both a for-hire and commercial vessel permit, or the fish are caught as part of a state-permitted tournament and the proceeds from the sale are donated to charity. For the Atlantic region, the amendment prohibits the sale of king and Spanish mackerel caught under the bag limit unless the fish are caught as part of a state-permitted tournament and the proceeds from the sale are donated to charity. In addition, the amendment removes the income qualification requirement for king and Spanish mackerel commercial permits.

Framework Adjustments relevant to the proposed action:

**September 1996**, with EA, modified the trip limits for Florida set up in Amendment 6. From April 1-October 31, the trip limit would be 1,500 lbs. Starting November 1, trips would be unlimited on Monday, Wednesday, and Friday, and there would be a trip limit of 1,500 lbs all other days. When 75% of the adjusted quota was met, the trip limit would be 1,500 lbs every day. When 100% of the adjusted quota was met, the trip limit would be 500 lbs.

**January 2000**, with EA, modified the trip limits for Florida. From April 1- November 30, the trip limit would be 1,500 lbs. Starting December 1, trips would be unlimited on weekdays and there would be a trip limit of 1,500 lbs on weekends. When 75% of the adjusted quota was met, the trip limit would be 1,500 lbs every day. When 100% of the adjusted quota was met, the trip limit would be 500 lbs.

**August 2007**, with EA, changed the first time period in the trip limit system for Florida to be March 1-November 30. This framework adjustment was necessary because the fishing year had been changed in Amendment 15 to start on March 1, but the trip limit system for Florida was set up to start on April 1.

# Appendix D. Bycatch Practicability Analysis

## 1.1 Population Effects for the Bycatch Species

### Background

Framework Amendment 2 to the Fishery Management Plan for Coastal Migratory Pelagic (CMP) Resources in the Gulf of Mexico and South Atlantic Region (Framework Amendment 2) includes an action intended to streamline and simplify the current system of trip limits for Atlantic group Spanish mackerel. According to the Fishery Management Plan (FMP) for CMP in the Gulf of Mexico and South Atlantic Region (CMP FMP), as amended, hook and line, gillnets and castnets are the predominant gear types 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. This action does not affect recreational harvest of CMP species.

### 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 [www.sefsc.noaa.gov/sedar/](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 (2013) 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 because of the action contained in Framework Amendment 2 are likely to be negligible.

According to the bycatch information for mackerel gillnets, menhaden, smooth dogfish sharks, and spiny dogfish sharks were the three most frequently discarded species (GMFMC/SAFMC 2004). There were no interactions of sea turtles or marine mammals reported (Poffenberger 2004). 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 gillnets and hook-and-line gear. Additionally, the supplementary discard program to the logbook reporting requirement shows no interactions of gillnet gear with marine mammals or birds. **Tables D-1** and **D-2** list the species most often caught with Spanish mackerel in the South Atlantic region. There is very little bycatch in the Spanish mackerel fishery with gillnet gear. Framework Amendment 2 would not modify the gear types or fishing techniques in the Spanish mackerel segment of the CMP fishery. Therefore, bycatch and subsequent bycatch mortality in the CMP fishery is likely to remain very low if this framework amendment is implemented.

**Table D-1.** Top six 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 D-2.** Top four taxa 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)

Additional information on fishery related actions from the past, present, and future considerations can be found in **Chapter 6** (Cumulative effects) of Framework Amendment 2.

## **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 the National Marine Fisheries Service (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 are 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**

Framework Amendment 2 is not expected to affect bycatch of other, non-mackerel, fish species. The trip limit modifications proposed in the amendment are intended to simplify the current system of trip limits for Spanish mackerel. This action is not likely to alter the current level of bycatch or bycatch mortality of target and non-target species captured in the CMP fishery.

## **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 2014 final List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (79 FR 14418, March 14, 2014). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The 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.

Spanish mackerel are among the species targeted with gillnets in North Carolina state waters. Observer coverage for gillnets 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**

Framework Amendment 2 would simplify the system of trip limits in place for Atlantic migratory group Spanish mackerel in order to reduce regulatory complexity. This action is not expected to modify current fishing practices, processing methods, disposal techniques, or marketing costs. 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**

Framework Amendment 2 is not likely to significantly alter fishing practices or fishermen behavior. Streamlining the system of trip limits for Atlantic migratory group Spanish mackerel would reduce the regulatory burden placed on fishermen who must adapt and keep track of trip limit adjustments throughout the fishing season.

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

The action in Framework Amendment 2 is not expected to modify research needs, administration, or management effectiveness. A complex system of trip limits is currently in place for Atlantic Spanish mackerel. Under the proposed action, the trip limit would be simplified, which may benefit, to a small degree, the administrative environment and law enforcement efforts.

Research and monitoring is ongoing to document the effectiveness of proposed management measure and their effect on bycatch. In 1990, the Southeast Fisheries Science Center (SEFSC) initiated a logbook program for vessels with federal permits in the CMP 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 Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic 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 Marine Recreational Information Program and logbooks from the NMFS headboat program.

The Charter/Headboat Amendment requires electronic reporting for headboats and increases 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 the headboat sector in the southeast for the snapper grouper, reef fish, dolphin wahoo, and CMP 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,  $\frac{3}{4}$ , 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 indicated that observers are placed on about 2% of the headboat trips out of South Carolina to Florida, and about 9% of the headboat trips out of North Carolina. More information and the draft document is available online at [http://sero.nmfs.noaa.gov/sustainable\\_fisheries/s\\_atl/2013/for\\_hire\\_reporting/index.html](http://sero.nmfs.noaa.gov/sustainable_fisheries/s_atl/2013/for_hire_reporting/index.html).

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 (available online at: <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 broadcast 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**

The proposed modifications to the Atlantic migratory group Spanish mackerel trip limit, and any changes in economic, social, or cultural values are discussed in **Chapter 4**. In summary, the social and economic impacts of the action in Framework Amendment 2 are expected to be beneficial to the commercial fishing fleet and associated businesses and communities. The modifications to the trip limit system will remove the unlimited trips, which could help lengthen

the season. The step-downs in trip limits will slow the rate of harvest but still allow vessels to continue to catch Spanish mackerel until the Southern Zone quota is landed.

## **1.9 Changes in the Distribution of Benefits and Costs**

The distribution of benefits and costs expected from the action in the Framework Amendment are discussed in **Chapter 4**. The proposed action to simplify the Atlantic migratory group Spanish mackerel trip limit is not expected to change the distribution of benefits or costs because it 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 be expected to benefit from the action in Framework Amendment 2. The system of trip limits would be modified without negatively affecting the sustainability of target or non-species, and without adversely affecting fishing industry participants.

## **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). The Atlantic Spanish mackerel segment of the CMP fishery has relatively low baseline levels of bycatch, which are not expected to change as a result of implementation of this amendment.

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# Appendix E. Regulatory Impact Review

## 1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest. The RIR does three things: 1) it provides a comprehensive review of the level and incidence of impacts associated with a proposed or final regulatory action; 2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives that could be used to solve the problem; and, 3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost-effective way. The RIR also serves as the basis for determining whether the regulations are a “significant regulatory action” under the criteria provided in Executive Order (E.O.) 12866. This RIR analyzes the impacts that this action would be expected to have on the commercial sector of Atlantic migratory group Spanish mackerel component of the coastal migratory pelagic (CMP) fishery.

## 2 Problems and Objectives

The problems and objectives addressed by this action are discussed in **Section 1.3**.

## 3 Description of Fisheries

A description of the Atlantic migratory group Spanish mackerel component of the CMP fishery is provided in **Section 3.3**.

## 4 Impacts of Management Measures

A detailed discussion of the expected economic effects of each alternative for this action is provided in **Chapter 4** and analysis of the expected effects of the preferred alternative on individual entities is provided in **Appendix F**.

An analysis of the effects of the proposed alternatives on the expected season length and economic effects was conducted with and without 2012/2013 harvest data, which is the most recent final data available. The commercial harvest of Atlantic migratory group Spanish mackerel in 2012/2013 was approximately 3.27 mp, compared to harvests in excess of 4 mp in the previous three fishing years (see **Table 3.2.2.1**). Atlantic migratory group Spanish mackerel commercial harvests have shown a cyclical harvest pattern of high, medium, and low harvests on approximately a three-year cycle. As a result, removal of the low harvest in 2012/2013 from the analysis may help capture the potential effects of the proposed alternatives under high and low harvest rates.

Based on data from the 2003/2004 through 2012/2013 fishing years, i.e., inclusive of 2012/2013 data, **Preferred Alternative 4** would be expected to result in a gain in revenue to all vessels combined of approximately \$74,000 as a result of an increase in Atlantic migratory group Spanish mackerel commercial harvest of approximately 66,500 lbs and assuming an average price of \$1.11 (2013 dollars) per pound. No closure would be expected to be required. Thus, commercial harvest would be allowed the entire fishing year. However, the total quota would not be expected to be harvested; an estimated 648,000 lbs of the 3.13 million lb quota would not be expected to be harvested.

If data from the 2012/2013 fishing year are excluded from the analysis, **Preferred Alternative 4** would not be expected to have any economic effects compared to the status quo, **Alternative 1 (No Action)**. Both alternatives are projected to result in harvest of the full quota and only allow commercial harvest to occur for 308 days. As a result, no change in season length, product supply to markets, prices, operational flexibility, revenue, or other economic factors would be expected to occur.

Assuming these two analytical perspectives adequately bracket the expected outcomes, **Preferred Alternative 4** would be expected to have no to minor positive economic effects on fishermen that commercially harvest Atlantic migratory group Spanish mackerel or associated businesses.

## 5 Public and Private Costs of Regulations

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

Council costs of document preparation, meetings, public hearings, and information dissemination.....	\$30,000
NMFS administrative costs of document preparation, meetings and review .....	\$20,000
TOTAL .....	\$50,000

The Council and federal costs of document preparation are based on staff time, travel, printing, and any other relevant items where funds were expended directly for this specific action. There are no permit requirements proposed in this regulatory amendment. The estimates provided above do not include any law enforcement costs. Any enforcement duties associated with this action would be expected to be covered under routine enforcement costs rather than an expenditure of new funds.

## **6 Determination of Significant Regulatory Action**

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is likely to result in: 1) an annual effect of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in this executive order. Based on the information provided above, this action has been determined to not be economically significant for the purposes of E.O. 12866.

# Appendix F. Regulatory Flexibility Analysis

## 1 Introduction

The purpose of the Regulatory Act Analysis (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure such proposals are given serious consideration. The RFA does not contain any decision criteria; instead the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the fishery management plan (FMP) or amendment (including framework management measures and other regulatory actions) and to ensure the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

The RFA requires agencies to conduct a Regulatory Flexibility Act Analysis (RFAA) for each proposed rule. The RFAA is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. An RFAA is conducted to primarily determine whether the proposed action would have a “significant economic impact on a substantial number of small entities.” The RFAA provides: 1) A description of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for, the proposed rule; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; 4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule; 6) a description and estimate of the expected economic impacts on small entities; and 7) an explanation of the criteria used to evaluate whether the rule would impose “significant economic impacts”.

## 2 Statement of the need for, objective of, and legal basis for the proposed action

The need for and objectives of this proposed action are provided in **Chapter 1**. In summary, the objective of this proposed action is to respond to changing fishery characteristics for the Atlantic migratory group Spanish mackerel component of the coastal migratory pelagic (CMP) fishery, reduce the complexity of the commercial trip limit system for this component, and increase social and economic benefits while ensuring resource protection. The Magnuson-Stevens Fishery Conservation and Management Act provides the statutory basis for this proposed action.

### **3 Description and estimate of the number of small entities to which the proposed action would apply**

This proposed action, if implemented, would be expected to directly affect all commercial fishing vessels that harvest Atlantic migratory group Spanish mackerel. A federal commercial permit is required to harvest Spanish mackerel in the Atlantic Exclusive Economic Zone (EEZ) in excess of the bag limit and to sell these species. On May 6, 2014, 1,729 vessels possessed a valid federal commercial Spanish mackerel permit. A valid permit is a permit that has not expired and may be actively fished. Because the federal commercial Spanish mackerel permit is an open access permit, expired permits are not renewed; if a permit expires before renewal, a new permit would be issued (if applied for) instead of renewal of the expired permit. The federal commercial Spanish mackerel permit, however, allows fishermen to harvest commercial quantities of Spanish mackerel in the EEZ in either, or both, the Atlantic and the Gulf of Mexico (Gulf), and harvest either, or both, Atlantic or Gulf migratory group Spanish mackerel. Over the 2007/2008 through 2011/2012 fishing years (March through February), an average of 387 vessels per year recorded harvests of Atlantic migratory group Spanish mackerel. More recent estimates are not available. This proposed action would, therefore, be expected to affect an estimated 387 commercial fishing vessels per year. The estimated average annual gross revenue from all fishing activity by a commercial vessel that harvests Atlantic migratory group Spanish mackerel is approximately \$32,100 (2013 dollars).

NMFS has not identified any other small entities that would be expected to be directly affected by this proposed action.

The Small Business Administration (SBA) has established size criteria for all major industry sectors in the U.S., including commercial fish harvesters. A business involved in commercial fish harvesting is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of \$20.5 million (NAICS code 114111, finfish fishing) for all its affiliated operations worldwide. Because the average annual revenue estimate provided above is significantly less than the SBA revenue threshold for this sector, all commercial vessels expected to be directly affected by this proposed action are believed to be small business entities.

### **4 Description of the projected reporting, record-keeping and other compliance requirements of the proposed action, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for the preparation of the report or records**

This proposed action would not require any new reporting, record-keeping, or other compliance requirements associated with reporting or record-keeping that may require professional skills.

## **5 Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed action**

No duplicative, overlapping, or conflicting federal rules have been identified.

## **6 Significance of economic impacts on a substantial number of small entities**

### **Substantial number criterion**

This proposed action, if implemented, would be expected to directly impact all small business entities in the federally permitted commercial Spanish mackerel fleet that harvest Atlantic migratory group Spanish mackerel, or an estimated 387 vessels, or approximately 22% of the vessels permitted to harvest Spanish mackerel. As a result, this proposed action would be expected to directly affect a substantial number of the small entities.

### **Significant economic impacts**

The outcome of “significant economic impact” can be ascertained by examining two factors: disproportionality and profitability.

**Disproportionality:** Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities expected to be directly affected by this proposed action are believed to be small business entities, so the issue of disproportionality does not arise.

**Profitability:** Do the regulations significantly reduce profits for a substantial number of small entities?

The effects of this proposed action, if implemented, are expected to range from no economic effects to a small increase in revenue to directly affected fishing vessels. Analysis of the economic effects of the proposed action, and alternatives, was conducted with and without 2012/2013 harvest data, which is the most recent final data available. The commercial harvest of Atlantic migratory group Spanish mackerel in 2012/2013 was approximately 3.27 mp, compared to harvests in excess of 4 mp in the previous three fishing years (see **Table 3.2.2.1**). Atlantic migratory group Spanish mackerel commercial harvests have shown a cyclical harvest pattern of high, medium, and low harvests on approximately a three-year cycle. As a result, removal of data for the low harvest in 2012/2013 from the analysis may capture the potential effects of the proposed alternatives under high and low harvest rates.

Based on data from the 2003/2004 through 2012/2013 fishing years, i.e., inclusive of 2012/2013 data, the proposed action would be expected result in a gain in revenue to all directly affected vessels combined of approximately \$74,000 (2013 dollars), or approximately \$190 per vessel. An estimate of the individual or average annual profit of these entities is not available. If data from the 2012/2013 fishing year are excluded from the analysis, the proposed action would be expected to result in the same total harvest and revenue as the status quo. Although the actual

effects may be somewhere between these estimates, depending on whether future harvest rates are more similar to the fishing performance that resulted in the lower total harvest of 2012/2013 or the faster total harvest of the 2009/2010 through 2011/2012 fishing seasons, neither scenario would be expected to result in a reduction in revenue, or profit, to any directly affected small entities. Instead, this proposed action would be expected to have a small beneficial to no economic effect on the affected small entities.

Based on the discussion above, NMFS determines that this proposed action, if implemented, would not have a significant adverse economic effect on a substantial number of small entities. As a result, an initial regulatory flexibility analysis is not required and none has been prepared.

## **7 Description of the significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities**

This proposed action, if adopted, would not be expected to have a significant adverse economic effect on a substantial number of small entities. As a result, the issue of significant alternatives is not relevant.

## 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 (NMFS) 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.

The proposed rule associated with this amendment will include a request for public comment, and if approved, upon publication of the final rule, there will be a 30-day wait period before the regulations are effective in compliance with the APA.

### **Coastal Zone Management Act**

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that directly 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, NMFS 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 of Commerce, NMFS will determine if this framework amendment is consistent with the Coastal Zone Management programs of the states of Florida, Georgia, South Carolina, 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.

### **Information Quality Act**

The Information Quality Act (IQA) (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 IQA 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 IQA, 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.

CMP Framework Amendment 2 uses the best available information and makes a broad presentation thereof. The Southeast Fisheries Science Center has reviewed the document, and has determined the information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

### **Endangered Species Act (ESA)**

The ESA of 1973 (16 U.S.C. Section 1531 et seq.) requires that federal agencies must ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or the habitat designated as critical to their survival and recovery. The ESA requires NMFS to consult with the appropriate administrative agency (itself for most marine species, and the U.S. Fish and Wildlife Service for all remaining species) when proposing an action that may affect threatened or endangered species or adversely modify critical habitat. Consultations are necessary to determine the potential impacts of the proposed action. They conclude informally when proposed actions may affect but are “not likely to adversely affect” threatened or endangered species or designated critical habitat. Formal consultations, resulting in a biological opinion, are required when proposed actions may affect and are “likely to adversely affect” threatened or endangered species or adversely modify designated critical habitat.

NMFS completed a biological opinion, evaluating the impacts of the CMP fishery on ESA-listed species on August 13, 2007 (NMFS 2007). The opinion concluded the fishery would not affect

ESA-listed marine mammals, *Acropora* corals, Gulf sturgeon, or listed critical habitat for North Atlantic right whales, and is not likely to jeopardize the continued existence or recovery of any listed sea turtle species or smalltooth sawfish. However, the opinion did state that the CMP fishery would adversely affect sea turtles and smalltooth sawfish and thus NMFS issued an Incidental Take Statement for these species. Reasonable and Prudent Measures to minimize the impact of these incidental takes were specified, along with Terms and Conditions to implement them.

Subsequent to the biological opinion, NMFS made several modifications to the list of protected species for which they are responsible. These changes included: (1) the designation of *Acropora* critical habitat, (2) the determination that the loggerhead sea turtle population consists of nine distinct population segments (DPSs; 76 FR 58868), (3) the listing of five DPSs of Atlantic sturgeon, and (4) the designation of critical habitat for the Northwest Atlantic DPS of loggerhead sea turtles (79 FR 39855). Further, NMFS has proposed the listing of 66 additional coral species (7 of which are in the South Atlantic or Gulf of Mexico) and the reclassification of *Acropora* from threatened to endangered (77 FR 73220).

NMFS addressed how the designation of *Acropora* critical habitat could impact the determinations of the 2007 biological opinion in a consultation memorandum. NMFS concluded the continued authorization of the CMP fishery, is not likely to adversely affect *Acropora* critical habitat (May 18, 2010). NMFS is similarly addressing how the CMP fishery could affect the newly designated critical habitat for the NWA loggerhead DPS in an additional memorandum. This memorandum was completed on November 3, 2014.

The listing of five DPSs of Atlantic sturgeon triggered reinitiation of consultation under Section 7 of the ESA because the previous opinion did not consider what effects the CMP fishery is likely to have on this species. Atlantic sturgeon are known to be captured by fishermen fishing for CMP species, therefore NMFS Protected Resources must analyze the impacts of these potential interactions. The Sustainable Fisheries Division requested reinitiation of Section 7 consultation on November 26, 2012. Following the request for consultation the Sustainable Fisheries Division considered the effects of the fishery on Atlantic sturgeon and developed ESA 7(a)(2) and 7(d) determinations in a January 11, 2013, memorandum. The CMP fishery is currently operating under the 7(a)(2) and 7(d) determinations while consultation proceeds.

### **Marine Mammal Protection Act**

The Marine Mammal Protection Act (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 NMFS) 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; and 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 2015 proposed List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (79 FR 50589, August 25, 2014). 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.

The action in this framework amendment is not expected to negatively impact marine mammals.

### **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 was completed on October 16, 2014, for this action, and determined that no adverse impacts on EFH is expected.

## **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 12, 2014, the Small Business Administration issued a final rule revising the small business size standards for several industries effective July 14, 2014 (79 FR 33647). The rule increased the size standard for Finfish Fishing from \$19.0 to \$20.5 million, Shellfish Fishing from \$5.0 to \$5.5 million, and Other Marine Fishing from \$7.0 to \$7.5 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 3.4**.

The action in this framework amendment is not expected to negatively impact minority or low-income populations.

#### **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.

The action in this framework amendment does not affect the recreational sector of the coastal migratory pelagic fishery.

#### **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.

### References

National Marine Fisheries Service (NMFS). 2007. Biological Opinion, ESA Section 7 Consultation for 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). NMFS Southeast Regional Office Protected Resources Division: St. Petersburg, FL.

South Atlantic Fishery Management Council (SAFMC). 1998. Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans in the South Atlantic Region, including environmental assessment, regulatory impact review, and fishery impact statement. South Atlantic Fishery Management Council, Charleston, South Carolina. Available at: [http://ocean.floridamarine.org/efh\\_coral/pdfs/Comp\\_Amend/EFHAmendCovTOC.pdf](http://ocean.floridamarine.org/efh_coral/pdfs/Comp_Amend/EFHAmendCovTOC.pdf).

# Appendix H. Spanish Mackerel Quota and Trip Limit Analysis

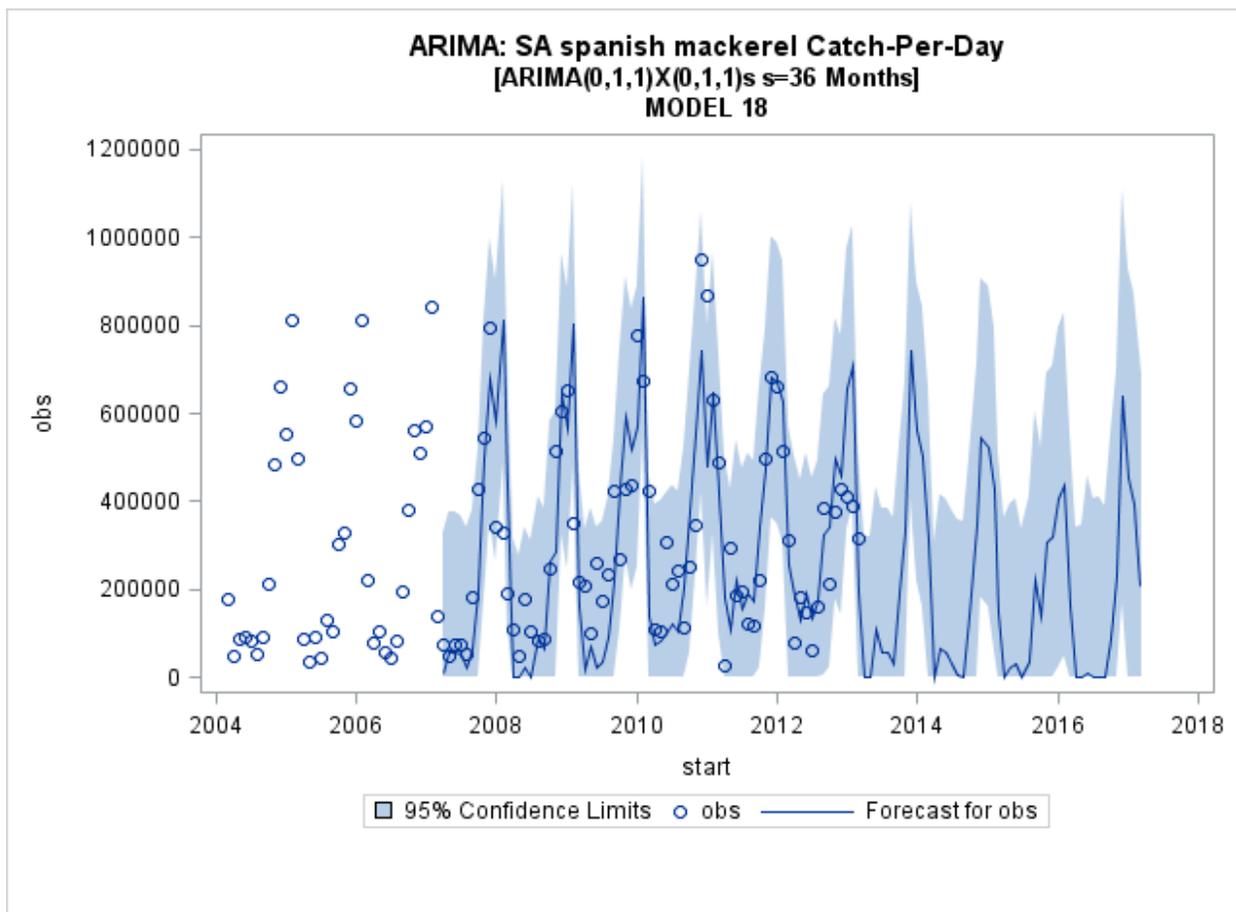
Prepared by: Nick Farmer, SERO

**Table 1.** Forecast for the 2014-2015 commercial season for Atlantic group Spanish mackerel.

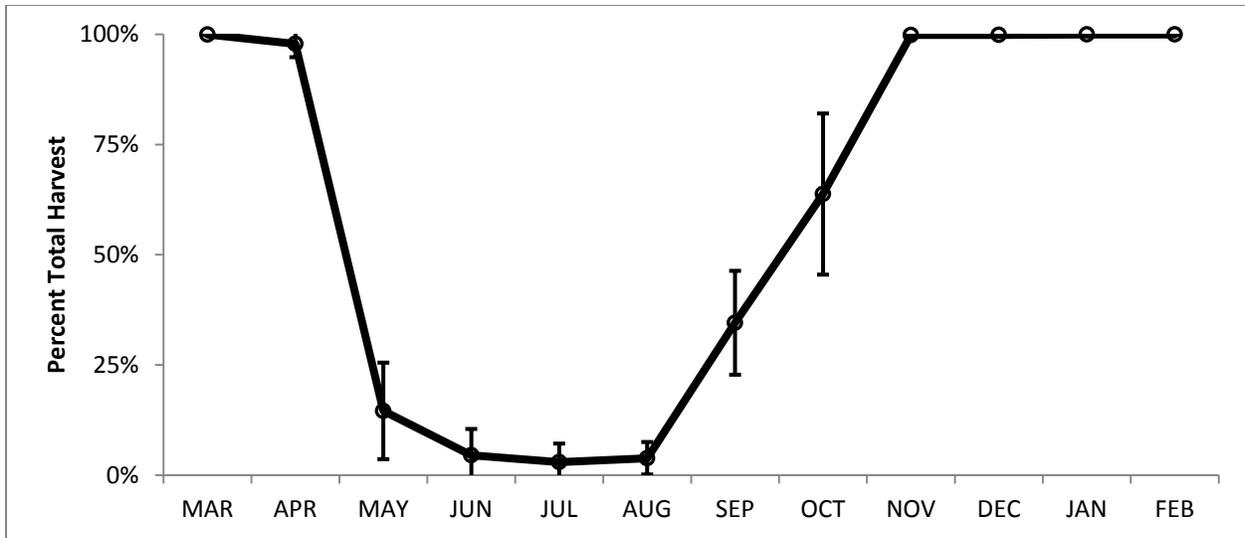
	SOUTHERN ZONE				Northern Zone
<b>MODEL 1: INCLUDE 2012/13</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 3</b>	<b>Alt 4</b>	<b>Status Quo</b>
PROJECTED CLOSURE DATE-->	n/a	n/a	n/a	n/a	n/a
PROJECTED DAYS OPEN-->	365	365	365	365	365
<b>MODEL 2: EXCLUDE 2012/13</b>	<b>Alt 1</b>	<b>Alt 2</b>	<b>Alt 3</b>	<b>Alt 4</b>	<b>Status Quo</b>
PROJECTED CLOSURE DATE-->	02/01/15	01/24/15	02/18/15	01/31/15	07/14/14
PROJECTED DAYS OPEN-->	337	329	354	336	135

**Table 1** shows projected South Atlantic Spanish mackerel season lengths and quota closure dates under the various trip limit alternatives in the action, incorporating the 82.8% S/17.2% N allocation of the ACL from Table 2.4.3 in CMP Amendment 20B, where the Northern Zone is NC->NY, Southern Zone is FL (25 degrees N)->SC. The analysis also incorporates the CMP\_FA1 ACL increase to 3.33 MP. **Table 1** forecasts the 2014-2015 season. These projections are based on a forecast of harvest from SEFSC ACL data, incorporating monthly catch rates (**Figure 1**). The best fitting projection model to the data including 2012/13 catches was a Seasonal Auto-Regressive Integrated Moving Average (SARIMA) model, with a 3-year time lag on the moving average term and a 1-month time lag on the autoregressive term. Twenty-four SARIMA model permutations were considered, and this was the best fitting model, per the AIC, with significant parameter estimates. It explained 84% of the variability in Spanish mackerel monthly commercial harvest. The best fitting projection model to the data excluding 2012/13 catches was a Seasonal Auto-Regressive Integrated Moving Average (SARIMA) model, with a 3-year time lag and a 1-month time lag on the autoregressive term. Twenty-four SARIMA model permutations were considered, and this was the best fitting model, per the AIC, with significant parameter estimates. It explained 83% of the variability in Spanish mackerel monthly commercial harvest. Spanish mackerel harvest in the South Atlantic appears to have a 3-year cycle with the pattern of high harvest, mid-level harvest, and low harvest. Projected catch rates were partitioned out to Northern and Southern Zones, with trip limit impacts applying only to Southern Zone. Seasonal dynamics in zone of fishing were accounted for using mean percent harvest by zone, 2000-2012 (**Figure 2**). The impacts of trip limits were simulated using catch per trip data reported to the SEFSC Coastal Fisheries Logbook Program (**Figure 3**). The season length projections in **Table 1** assume that trip limit impacts to vessels reporting to SEFSC Coastal Fisheries Logbook Program are a reasonable proxy for impacts to vessels harvesting Spanish mackerel that do not report to this program. This includes commercial vessels without federal permits that harvest predominantly in state waters. If the concentrations of Spanish mackerel encountered on a trip or the gears used to harvest them are substantially different between federally licensed and state-licensed vessels, this assumption may be violated. If state-licensed vessels are less likely to encounter

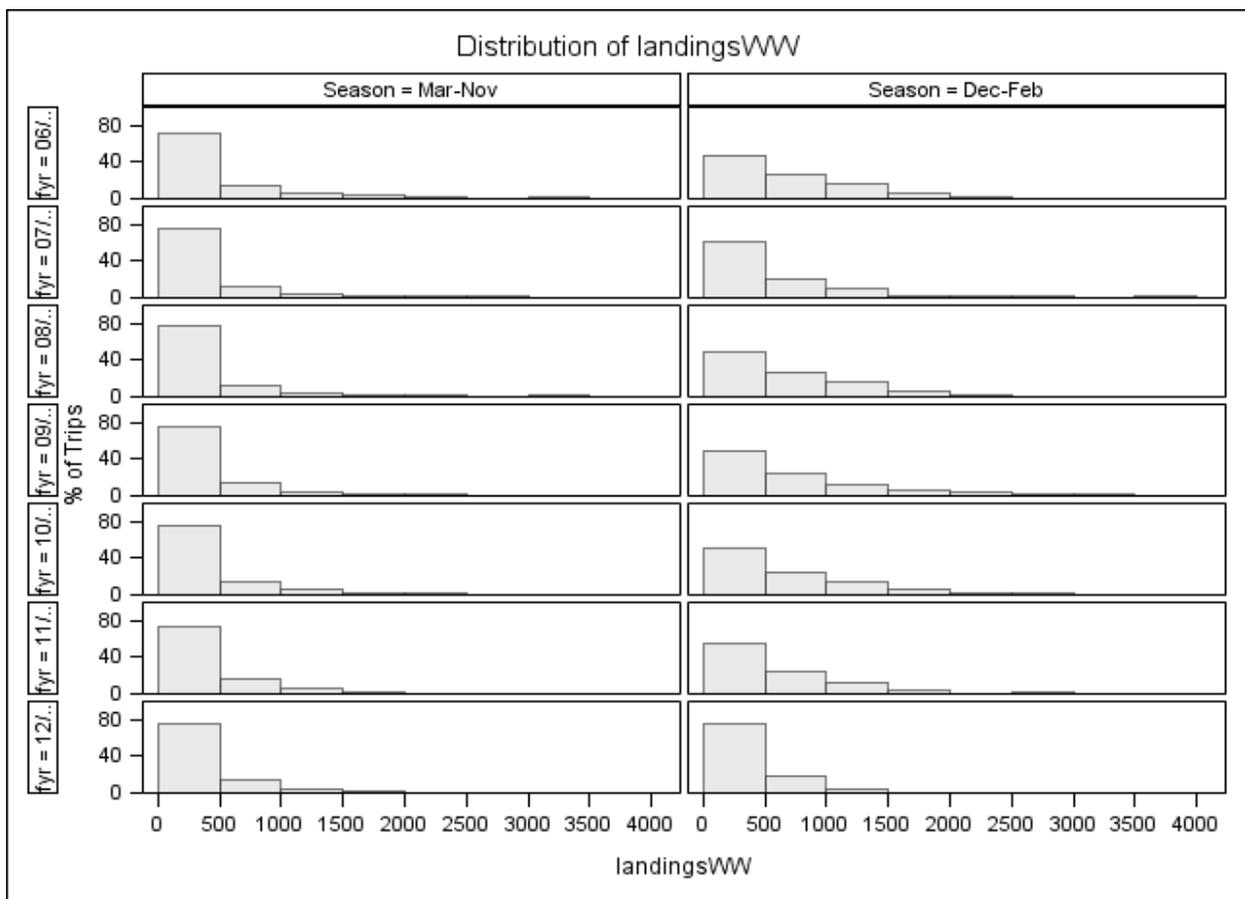
large concentrations of Spanish mackerel, the trip limit impacts projected here would be reduced. If state-licensed vessels are more likely to encounter large concentrations of Spanish mackerel, the trip limit impacts projected here might be amplified. An examination of **Figure 4** suggests that Southern Zone harvest is predominantly in Federal waters, although state harvest does increase during the time period where the trip limit impacts would factor under the action (Dec-Feb mean harvest 2006-2012 =  $26\% \pm 13\%$  from state waters).



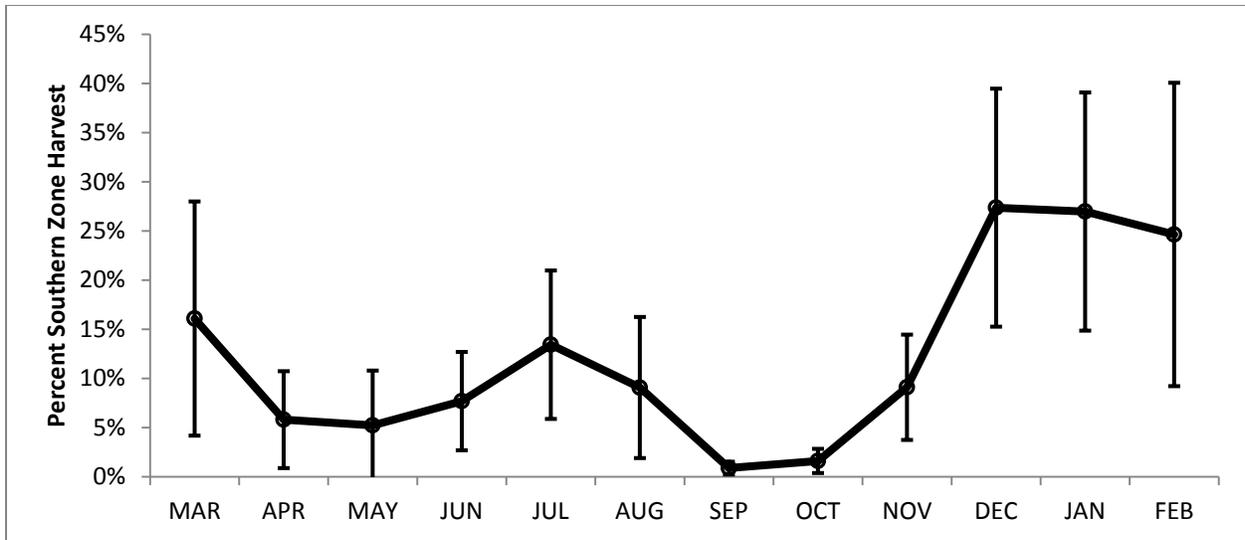
**Figure 1.** Seasonal auto-regressive integrated moving average (SARIMA) model fit to Spanish mackerel catch per day, 2004-2013. Note that best fitting model was SARIMA(1,0,0)x(0,1,1)s model with 36-month lag (Source: SEFSC ACL Data Apr 2014)



**Figure 2.** Mean (2006-2012) percent of monthly commercial Spanish mackerel harvest in South Atlantic reported landed from Southern Zone (Florida). Source: SEFSC ACL Dataset (Apr 2014).



**Figure 3.** Histograms of South Atlantic commercial catch-per-trip (Source: SEFSC Coastal Fisheries Logbook Program 2014) by fishing year and season. Seasons are shown to illustrate possible impacts of late season trip limits.



**Figure 4.** Mean (2006-2012) percent of monthly commercial Spanish mackerel harvest in South Atlantic Southern Zone reported landed from state waters. Source: SEFSC ACL Dataset (2014).