

Framework Amendment 1 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region

Spanish Mackerel Annual Catch Limits



May 29, 2014



Final Environmental Assessment Regulatory Impact Review Regulatory Flexibility Analysis

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Abbreviations and Acronyms Used in the FMP

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

Framework Amendment 1 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region with Final Environmental Assessment and Regulatory Impact Review

Proposed action:	Modify annual catch limit, optimum yield, and recreational annual catch target for Atlantic migratory group Spanish mackerel; and modify annual catch limit for Gulf migratory group Spanish mackerel
Lead agency:	Framework Amendment – South Atlantic Fishery Management Council Environmental Assessment – National Marine Fisheries Service (NMFS) Southeast Regional Office
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Summary

A Southeast Data, Assessment, and Review (SEDAR) stock assessment for Gulf of Mexico (Gulf) and Atlantic Spanish mackerel and cobia was finalized in 2013. The South Atlantic Fishery Management Council (South Atlantic Council)'s Scientific and Statistical Committee (SSC) reviewed the result of the stock assessment in April 2013 and requested projections from the Southeast Fisheries Science Center (SEFSC). In June 2013, the South Atlantic Council received the SSC's recommendations for the Atlantic Spanish mackerel acceptable biological catch (ABC), but the South Atlantic Council requested that the SSC review the Spanish mackerel projections and revisit recommendations for the overfishing limit (OFL) and the ABC. In October 2013, the SSC reviewed the projections again and recommended an OFL value of 7.03 million pounds (mp) in 2014/2015, 6.62 mp in 2015/2016, and 6.519 mp in 2016/2017. The SSC also recommended a revised ABC value of 6.063 mp for 2014/2015-2016/2017.

The Gulf of Mexico Fishery Management Council (Gulf Council)'s SSC reviewed the results of the Gulf Spanish mackerel stock assessment in May 2013 and requested projections from the SEFSC. In August 2013, the Gulf Council received and accepted the SSC recommendations for the Gulf Spanish mackerel OFL and ABC for 2013/2014-2016/2017. OFL was set at 14.4 mp for 2013/2014, 12.9 mp for 2014/2015, 12.0 mp for 2015/2016, and 11.5 mp for 2016/2017. The Gulf SSC recommended ABCs at 14.2 mp for 2013/2014, 12.7 mp for 2014/2015, 11.8 mp for 2015/2016, and 11.3 mp for 2016/2017.

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 1 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (Framework Amendment 1) is to revise the annual catch limit (ACL), optimum yield (OY) and recreational annual catch target (ACT) for Atlantic migratory group Spanish mackerel, and revise the ACL for Gulf migratory group Spanish mackerel based on both Council's SSC recommendations. Framework Amendment 1 with the integrated Environmental Assessment was available for public review before and during each Gulf Council and South Atlantic Council meeting when actions were discussed, public hearings held in January 2014, during the proposed rule phase of the rulemaking process, and online at www.safmc.net and www.gulfcouncil.org.

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Chapter 1. Introduction

1.1 What Actions are Being Proposed?

In Framework Amendment 1, the South Atlantic Fishery Management Council (South Atlantic Council) and Gulf of Mexico Fishery Management Council (Gulf Council) propose to modify the annual catch limits (ACLs) for Atlantic migratory group Spanish mackerel and Gulf of Mexico (Gulf) migratory group Spanish mackerel based on the outcome of the stock assessments (SEDAR 28 2012, 2013) and recommendations for the acceptable biological catch (ABC) values from each Council's Scientific and Statistical Committee (SSC). The framework amendment also proposes to update the optimum yield (OY) and recreational annual catch target (ACT) for Atlantic migratory group Spanish mackerel.

The current ACL for Atlantic migratory group Spanish mackerel is 5.69 million pounds (mp). The recreational allocation is 2.56 mp (45% of ACL) with an ACT of 2.32 mp, and the commercial allocation is 3.13 mp (55% of ACL). The current stock ACL for Gulf migratory group Spanish mackerel is 5.15 mp, with no separate allocation between commercial and recreational sectors.

1.2 Who is Proposing the Actions?

The South Atlantic Council and Gulf Council (Councils) are proposing the actions. The Councils develop the fishery management plans and amendments, and submit them to the National Marine Fisheries Service (NMFS) who ultimately approves, disapproves, or partially approves the actions in the amendment on behalf of the Secretary of Commerce. NMFS is an agency in the National Oceanic and Atmospheric Administration.

South Atlantic 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.
- 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 are the South Atlantic and Gulf Councils Considering Action?

The Councils are responding to updated stock assessments (SEDAR 28 2012, 2013) for both stocks and therefore, proposing revised ACL values for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel. The revised ACLs are based on recommended ABC values from the SSCs, to ensure overfishing does not occur in the coastal migratory pelagics fishery, and help achieve OY. The Atlantic assessment was completed in 2012 and revised in 2013, while the Gulf assessment was completed and revised in 2013.

Management Plan Objectives

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

- 1) The primary objective of this FMP is to stabilize yield at the maximum sustainable yield (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 coastal migratory pelagic fisheries.

The actions proposed in the amendment specifically help to meet FMP Objectives 1, 2, and 8.

Purpose for Actions

The purpose of this framework amendment is to revise the ACLs for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel based on the results of recently completed stock assessments.

Need for Actions

The need for this framework amendment is to ensure the annual catch limits are based on the best available scientific information, and to ensure overfishing does not occur in the coastal migratory pelagics fishery.

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 and are separated into Atlantic migratory groups and Gulf migratory groups, for management purposes. The proposed actions in this framework amendment would affect Atlantic and Gulf migratory groups of Spanish mackerel, and could affect anglers harvesting Spanish mackerel in the federal waters in the Gulf of Mexico, South Atlantic, and Mid-Atlantic regions.

The CMP FMP (GMFMC/SAFMC 1982) approved in 1982 and implemented by regulations effective February 1983, treated Spanish mackerel as one U.S. stock. The present management regime for mackerel recognizes two migratory groups of Spanish mackerel, the Gulf migratory group and the Atlantic migratory group with the boundary fixed at the Miami-Dade/Monroe County border on Florida's southeast coast (**Figure 1.4.1**). Amendment 20B to the CMP FMP, which was submitted on May 22, 2014, for review by the Secretary of Commerce, proposes to separate the commercial ACL for Atlantic migratory group Spanish mackerel into a Northern Zone quota and a Southern Zone quota (as shown in **Figure 1.4.1**).

The designation of a Northern Zone and Southern Zone (pending approval of Amendment 20B) would not affect the recreational sector. The Northern Zone commercial allocation would be calculated using combined commercial landings from North Carolina, Virginia, Maryland, Delaware, Pennsylvania, New Jersey, and New York. The Southern Zone commercial allocation would be calculated using combined landings from South Carolina, Georgia, and the Florida east coast and Florida Keys on the Atlantic side. The Atlantic migratory group Spanish mackerel commercial ACL would be allocated between the zones based on landings from the 2002/2003-2011/2012 fishing seasons. Thus, 19.9% of the commercial ACL would be allocated to the Northern Zone and 80.1% of the commercial ACL would be allocated to the Southern Zone. NMFS would monitor the commercial quotas and close the exclusive economic zone in each zone when the respective quota is met or expected to be met. All current commercial accountability measures would remain in place.

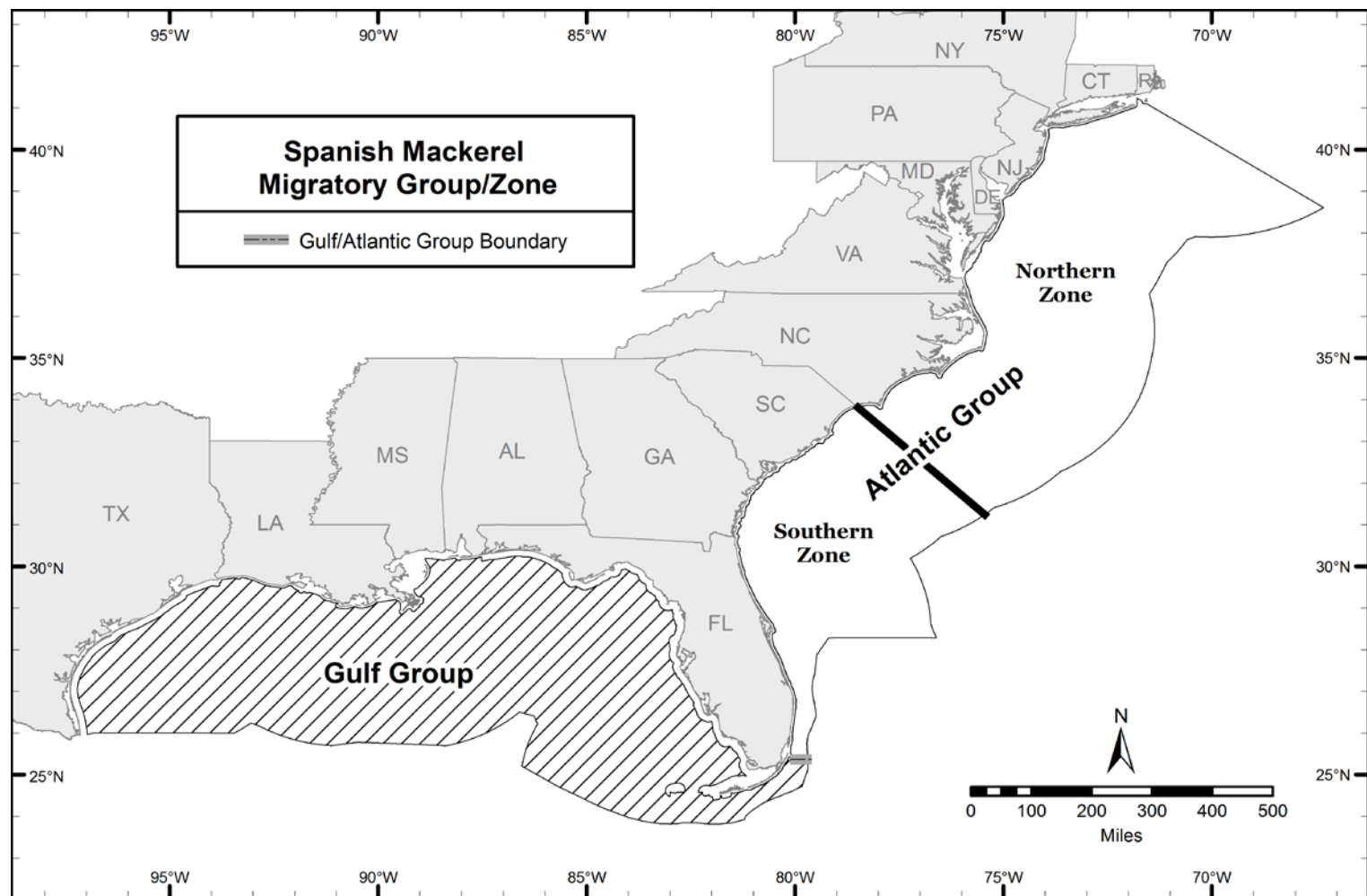


Figure 1.4.1. Fixed boundary between Atlantic and Gulf migratory groups of Spanish mackerel, with the proposed Northern and Southern Zones in the Atlantic Group (pending approval of CMP Amendment 20B).

Chapter 2. Proposed Actions and Alternatives

Action 1. Modify the Annual Catch Limit (ACL) for Atlantic migratory group Spanish mackerel

Alternative 1 (No Action). Retain the ACLs, optimum yield (OY), and recreational annual catch target (ACT) for Atlantic migratory group Spanish mackerel:

ACL = OY = ABC = 5.69 million pounds (mp)

Commercial ACL (55%) = 3.13 mp

Recreational ACL (45%) = 2.56 mp

Recreational ACT = 2.32 mp

Current acceptable biological catch (ABC) = 5.69 mp, recommended by the Scientific and Statistical Committee (SSC) during the 2010 and 2011 meetings based on the third highest point over a ten-year period (equivalent to the 80th percentile) for the time series ranging from 1999-2008. The recreational ACT equals sector ACL[(1-PSE) or 0.5], whichever is greater, where the percent standard error (PSE) is an average from the Marine Recreational Fisheries Survey and Statistics (MRFSS) program based on landings in weight from 2005-2009. The average PSE from MRFSS for 2005-2009 is 9.4. The values would remain until modified.

Preferred Alternative 2. Revise the ACL (including sector ACLs), OY, and recreational ACT for Atlantic migratory group Spanish mackerel for 2014-2016. The ABC recommended by the SSC is 6.063 mp. Set ACL = OY = ABC, and the recreational ACT = recreational ACL[(1-PSE) or 0.5], whichever is greater.

ACL = OY = ABC = 6,063,000 lbs (6.063 mp)

Commercial ACL (55%) = 3,330,000 lbs (3.330 mp)

Recreational ACL (45%) = 2,727,000 lbs (2.727 mp)

Recreational ACT = 2,364,388 lbs (2.364 mp)

The ABC, ACL, and recreational ACT values are based on landed catch only; discards are accounted for in specifying the ABC in terms of landed catch and not total mortality. The average PSE from MRIP for 2005-2009 is 13.34. The values would remain until modified.

Two Alternatives Considered

The National Marine Fisheries Service (NMFS) acknowledges there are two alternatives for this action. Section 1502.14(a) of the National Environmental Policy Act (NEPA) states that “agencies shall: rigorously explore and objectively evaluate all reasonable alternatives...” NMFS and the South Atlantic Council have identified two reasonable alternatives for this action, including the no action alternative. **Preferred Alternative 2** (ACL=ABC=OY) represents the accepted formula used for specifying ACLs for the majority of assessed species that are not overfished nor undergoing overfishing.

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established ACL=ABC=OY for Atlantic migratory group Spanish mackerel. This formula was also used for snapper grouper species in the

Comprehensive ACL Amendment (SAFMC 2011a) and red grouper in Amendment 24 to the Snapper Grouper FMP (SAFMC 2011b). CMP Amendment 18, as well as the South Atlantic snapper grouper amendments, considered alternatives that set ACL below the ABC; however, the South Atlantic Fishery Management Council (South Atlantic Council) and Gulf of Mexico Fishery Management Council (Gulf Council) chose as their preferred alternative $ACL=ABC=OY$.

The Councils and NMFS are not considering options beyond the two alternatives listed because: 1) setting $ACL=ABC=OY$ was the preferred alternative in CMP Amendment 18 (GMFMC/SAFMC 2011) and snapper grouper amendments; 2) the Councils and NMFS have approved, and NMFS will implement on August 7, 2014, an amendment that will require dealers to report landings electronically once a week (GMFMC/SAFMC 2013a), which will improve the timeliness of data collection; and 3) recreational landings have remained well below the recreational ACL since it was implemented through CMP Amendment 18 (GMFMC/SAMFC 2011). Therefore, the Councils and NMFS determined it is not reasonable to include additional alternatives that incorporate a buffer between the ABC and ACL.

Discussion:

In Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011), the ACL and OY for Atlantic migratory group Spanish mackerel were set equal to the ABC recommended by the South Atlantic Council's SSC. Amendment 18 also established a recreational ACT based on the recreational ACL. When the SSC reviewed information for Atlantic migratory group Spanish mackerel during meetings in 2010 and 2011, the ABC value was based on landings data rather than assessment information. The SSC developed a new interim approach for determining ABC at their April 2011 meeting and recommended using the 80th percentile, or in this case the third highest point in landings over a ten-year period (1999-2008) for use as the ABC. The SSC determined the overfishing limit (OFL) for Atlantic migratory group Spanish mackerel to be unknown.

Southeast Data, Assessment, and Review (SEDAR 28) included a benchmark assessment for Atlantic migratory group Spanish mackerel that was completed in 2012 (and revised in 2013). In April 2013, the SSC reviewed the results. The SSC accepted the benchmark assessment as representing the best available scientific information on the status of Spanish mackerel in South Atlantic waters and considered it appropriate for South Atlantic Council management decisions.

The current stock status in the base run from the Beaufort Assessment Model (BAM) was estimated to be $SSB_{2011}/MSST=2.29$, and $SSB_{2001}/SSB_{MSY}=1.49$. MSST is the overfished threshold and is equal to 65% of SSB_{MSY} , where $MSST=1-\text{natural mortality rate} \times SSB_{MSY}$. The MSY level is set at 6.063 mp. The current level of fishing is $F_{2009-2011}/F_{MSY} = 0.526$, with $F_{2011}/F_{MSY} = 0.521$ ¹. $F_{30\%SPR}$ was used as a proxy for F_{MSY} in the stock assessment. The SSC concluded the Atlantic migratory group Spanish mackerel stock is not overfished or experiencing overfishing. Because this assessment falls under Tier 1 of the SSC's ABC control

¹ SSB_{2011} = Static Stock Biomass in fishing year 2011; MSST = Minimum Stock Size Threshold; $F_{2009-2011}$ = Fishing Mortality in fishing years 2009-2011; MSY = Maximum Sustainable Yield; F_{MSY} = Fishing Mortality at Maximum Sustainable Yield. Results and additional details about the model are available in the SEDAR 28 report (<http://www.sefsc.noaa.gov/sedar/>).

rule, ABC was obtained according to a P* (P-star) value.² A summary of results from applying the ABC control rule is presented below:

Assessment Information: Tier 2 (2.5%)
 Uncertainty Characterization: Tier 2 (2.5%)
 Stock Status: Tier 1 (0%)
 Risk Analysis: Tier 2 (5%)
 Total adjustment 10%
 P* value: 40%

At the June 2013 South Atlantic Council meeting, the SSC recommended using five-year projections at P*=50% for OFL and at P*=40% for ABC. When the South Atlantic Council received the projections from the Southeast Fisheries Science Center (SEFSC) at their June 2013 meeting, the South Atlantic Council requested the SSC review the Spanish mackerel projections and revisit the recommendations for OFL and ABC. The South Atlantic Council asked the SSC to consider basing OFL and ABC on equilibrium projections of the maximum sustainable yield (MSY), in light of effects of selectivity and recruitment patterns on short-term yield estimates. The additional language was added to provide guidance and clarification was provided to the SSC's recommendation: 'SSC as follows: "Considering the high degree of confidence that the stock is healthy (not overfished nor experiencing overfishing). Current biomass is high (SSB/MSST = 2.29) and exploitation is low ($F/F_{MSY} = 0.53$) and the stock has not experienced overfishing over the assessment period, the Council believes that use of a less risk-averse reference point such as the equilibrium MSY, (6.063 million pounds (mp)) as OFL for 2013-2015 is justified. Due to the exploitation history and stock status, the Council believes such a reference point does not significantly increase the probability of overfishing during these years."

In October 2013, the SSC reviewed projections and recommended the OFL and ABC values for Atlantic migratory group Spanish mackerel shown in **Table 2.1**.

Table 2.1. SSC recommendations for Atlantic migratory group Spanish mackerel, October 2013.

Fishing Year (March-February)	OFL (Landings-mp)	ABC (Landings-mp)
2014-2015	7.03	6.063
2015-2016	6.62	6.063
2016-2017	6.52	6.063

Comparison of Alternatives:

Alternative 1 (No Action) would not modify the Atlantic group Spanish mackerel ACL based on the results of the stock assessment. **Preferred Alternative 2** would modify the ACL by using the new ABC in the formula of $ACL = OY = ABC$. Thus, the total ACL would be 6.063 mp. The commercial ACL, recreational ACL, and recreational ACT would be adjusted accordingly, based on existing sector allocations and the formula used for the recreational ACT in

² P* refers to the probability for overfishing to occur at the harvest level. For example, e.g., when the SSC requests projections for P*=50%, the SEFSC provides projections for landings that are expected to result in only a 50% probability of causing overfishing of the stock. Lower selected P* values will produce more restrictive projections for landings because the risk of overfishing occurring is lower.

Amendment 18 (GMFMC/SAFMC 2011). Because **Alternative 1 (No Action)** would constrain harvest to a lower level than **Preferred Alternative 2**, the biological benefits under **Alternative 1 (No Action)** would be expected to be greater than **Preferred Alternative 2**. However, results of the most recent assessment for the Atlantic migratory group of Spanish mackerel indicate the stock is not overfished nor undergoing overfishing (SEDAR 28 2012). Therefore, there is no biological need to constrain harvest at a level lower than that determined to be appropriate by the SSC.

In general, higher ACLs are advantageous for both sectors as long as they are not exceeded and/or do not require overage paybacks in future seasons. **Preferred Alternative 2** would have the greatest positive direct economic effects. **Alternative 1 (No Action)** would not incorporate the results of the recent stock assessment and the ACL would not reflect the stock status at this time nor would the current ACL be based on the most recent and best scientific information. Changes in the ACL for any stock would not directly affect resource users unless the ACL is met or exceeded, in which case accountability measures, which restrict or close harvest, could negatively affect the commercial fleet, for-hire fleet, and private anglers. In general, the higher the ACL, the greater the short-term social and economic benefits that would be expected to accrue, assuming information is up-to-date and accurate to allow sustainable harvest.

Alternative 1 (No Action) would not incorporate the results of the recent stock assessment and the current ACL may not reflect the stock status at this time. **Preferred Alternative 2** would increase the ACL based on the best information available from a recent assessment, which would be beneficial to fishermen by allowing them to increase fishing effort on Spanish mackerel but would not negatively affect the stock. Administrative impacts of this action are likely to be minimal.

Figure 2.1 compares total landings (commercial + recreational) of Atlantic migratory group Spanish mackerel with the ACLs proposed in the alternatives. **Figures 2.2-2.4** show the comparison of sector landings to the proposed sector ACLs and recreational ACT in the alternatives.

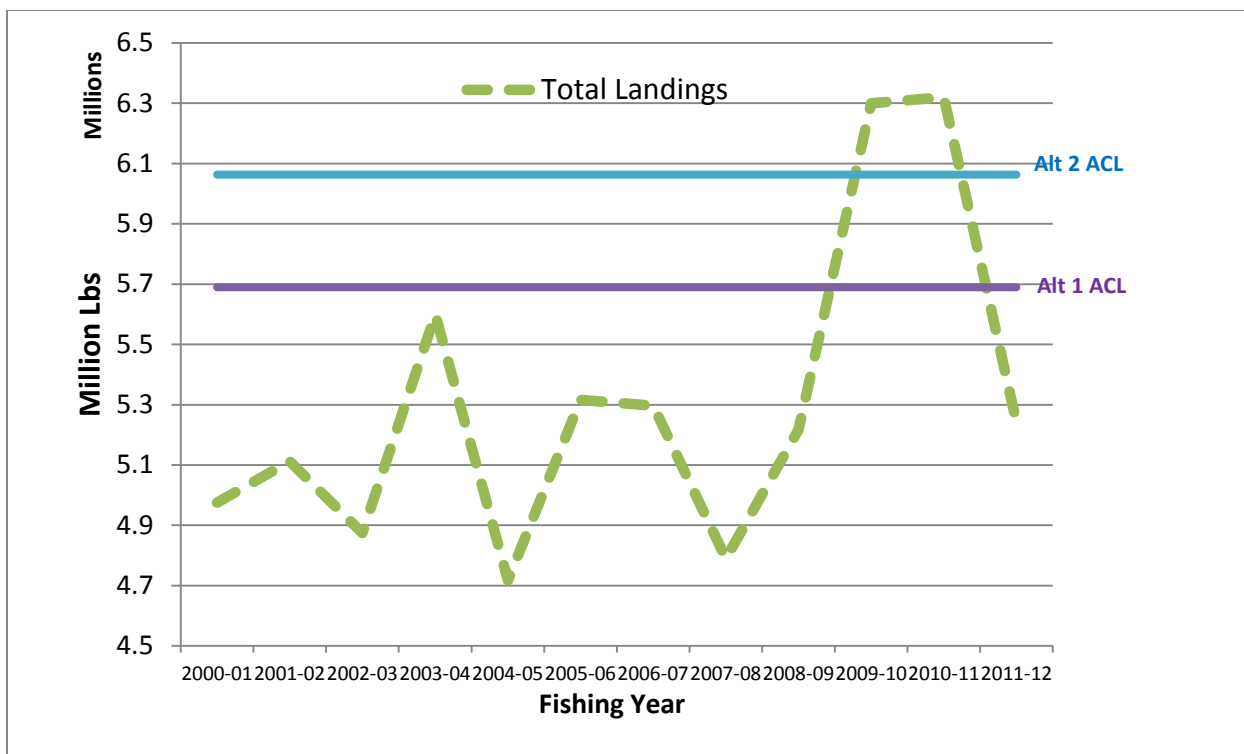


Figure 2.1. Total landings of Atlantic migratory group Spanish mackerel for the 2000/2001-2011/2012 fishing seasons and the proposed ACLs in **Action 1**. The fishing season is March-February. Data source: SERO.

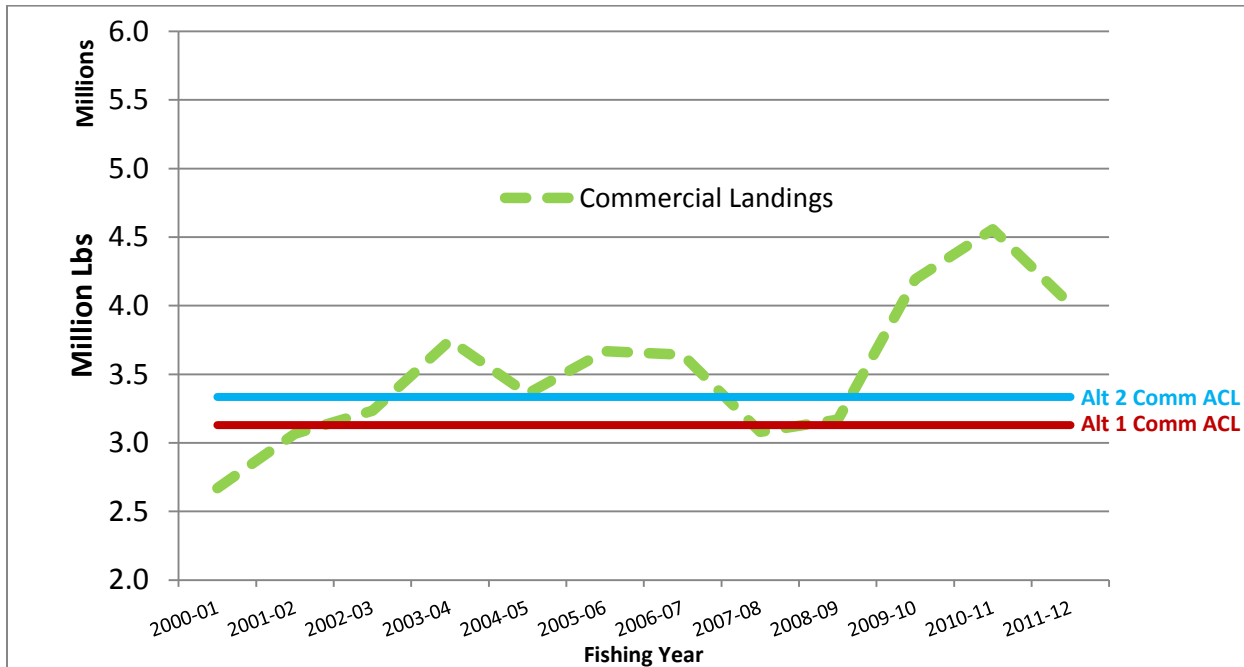


Figure 2.2. Commercial landings of Atlantic migratory group Spanish mackerel for the 2000/2001-2011/2012 fishing seasons and the proposed commercial ACLs in **Action 1**. The fishing season is March-February. Data source: SERO.

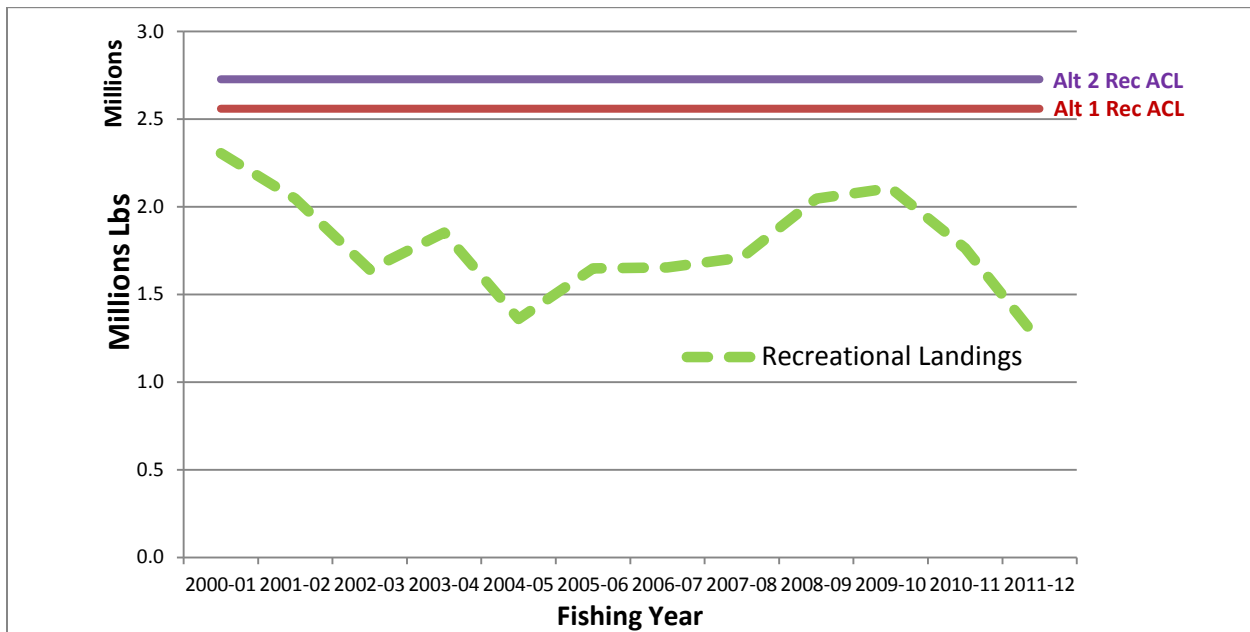


Figure 2.3. Recreational landings of Atlantic migratory group Spanish mackerel for the 2000/2001–2011/2012 fishing seasons and the proposed recreational ACLs in **Action 1**. The fishing season is March–February. Data source: SERO.

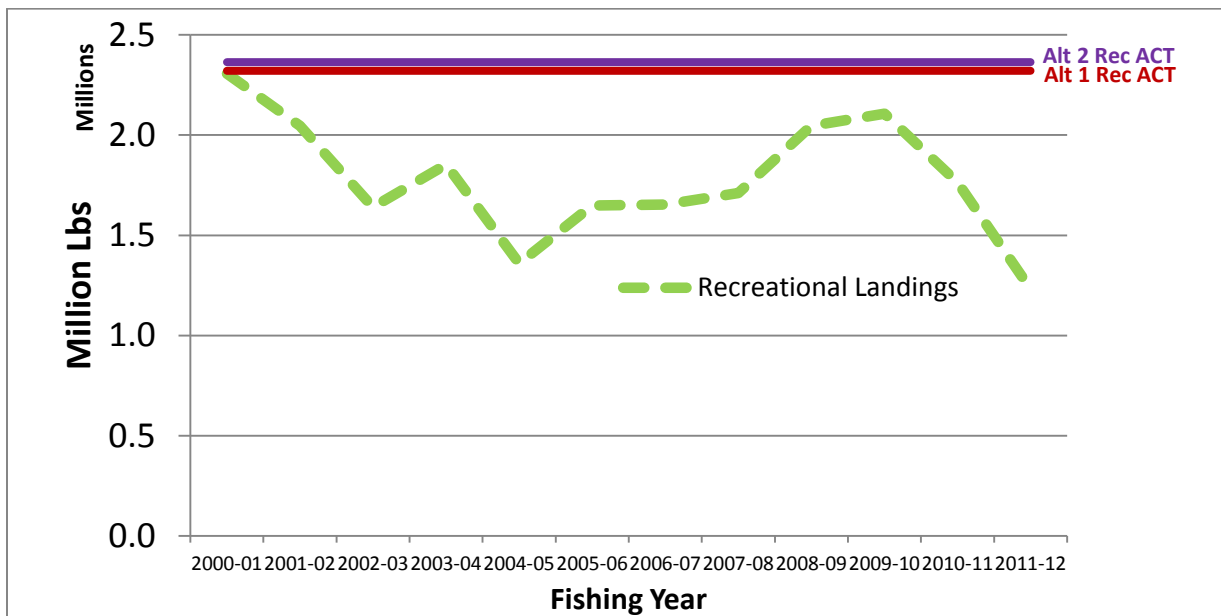


Figure 2.4. Recreational landings of Atlantic migratory group Spanish mackerel for the 2000/2001–2011/2012 fishing seasons and the proposed recreational ACTs in **Action 1**. The fishing season is March–February. Data source: SERO

Action 2. Modify the Annual Catch Limit (ACL) for Gulf migratory group Spanish mackerel

Alternative 1 (No Action). Retain the current ACL for Gulf migratory group Spanish mackerel:

ACL= ABC = 5.15 mp (commercial and recreational sectors combined into a single Gulf-wide stock ACL).

Preferred Alternative 2. Revise ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 as shown below, and set ACL = ABC.

Table 2.2. ABCs and ACLs for 2014-2016 from the SEDAR 28 Gulf Spanish mackerel stock assessment and the Gulf Council/SSC-approved projections for Gulf migratory group Spanish mackerel in millions of pounds

Fishing Year (April-March)	ABC	Total ACL
2014-2015	12.7 mp	12.7 mp
2015-2016	11.8 mp	11.8 mp
2016-2017	11.3 mp	11.3 mp

Discussion:

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011), established the ACL for Gulf migratory group Spanish mackerel based on the ABC value recommended by the Gulf Council's SSC. Amendment 18 also discontinued the use of separate commercial and recreational ACLs in the Gulf of Mexico (Gulf), instead selecting a single stock ACL to include both sectors.

SEDAR 28 included a benchmark assessment for Gulf migratory group Spanish mackerel and was completed and revised in 2013 (SEDAR 28 2013). In August 2013, the SSC reviewed the results. The SSC accepted the benchmark assessment as representing the best available scientific information on the current stock status of Spanish mackerel in Gulf waters and considered it appropriate for Gulf Council management decisions.

The current stock status in the base run from the Stock Synthesis Model was estimated to be $SSB_{2011}/MSST=2.96$ and $SSB_{2001}/SSB_{MSY}=1.84$ (**Table 2.3**). MSST is the overfished threshold and is equal to 62% of the SSB_{MSY} , where $MSST=1-\text{natural mortality rate} * SSB_{MSY}$. The MSY value is 23,345,467 lbs. The current level of fishing (the geometric mean of the 2009-2011 levels) is $F_{2009-2011}/F_{MSY} = 0.40$. The $F_{30\%SPR}$ was used as a proxy for fishing at maximum sustainable yield (F_{MSY}) used in the stock assessment was $F_{30\%SPR}$... The SSC concluded that Gulf migratory group Spanish mackerel is healthy not overfished and is not undergoing overfishing. Following the discussion regarding the ABC buffer, the SSC recommended an ABC yield stream using the base model and a probability of overfishing of $P^* = 43.4\%$ applied to the OFL. Although the SSC voted to set ABC according to its control rule for years 2013

through 2016, the SSC felt that the Gulf Council should take into account their concerns raised regarding the narrow OFL buffer and the equilibrium yield level when determining where to set ACL levels.

Table 2.3. Spanish mackerel status and fishing level recommendations. Deterministic values for evaluation criteria from analyses and projections provided to the Gulf Council SSC after the SEDAR 28 assessment, for determining OFL and ABC.

Criteria	Deterministic
Overfished evaluation	No ($SSB/MSST=2.96$)
Overfishing evaluation	No ($F_{2009-2011}/F_{MSY}=0.40$)
MFMT	0.38
MSST	14,474,190 lbs
MSY	23,345,467 lbs
P* Value	43.4%

In August 2013, the SSC reviewed projections for Gulf migratory group Spanish mackerel and recommended the OFL and ABC values shown in **Table 2.4**. Although the values are higher than recent landings, the ABC would decrease in subsequent years toward equilibrium levels. This is because the current biomass level is estimated to be well above spawning stock biomass at maximum sustainable yield (SSB_{MSY}). Consequently, catch levels above equilibrium ABC can occur, but would result in the stock being fished down to its equilibrium SSB_{MSY} level. At the August 2013 Gulf Council meeting, the SSC provided their recommendation to use four-year projections at $P^*=50\%$ for OFL and at $P^*=43.4\%$ for ABC (**Table 2.3**). The Gulf Council subsequently approved the SSC's recommendations for OFL and ABC.

Table 2.4. SSC recommendations for OFL and ABC for Gulf of Mexico migratory group Spanish mackerel, August 2013. Yields include landings and discards, presented in millions of pounds (ww).

Year	ABC Values		OFL Values	
	P*	ABC	P*	OFL
2013-2014	0.434	14.2	0.5	14.4
2014-2015	0.434	12.7	0.5	12.9
2015-2016	0.434	11.8	0.5	12.1
2016-2017	0.434	11.3	0.5	11.5

Comparison of Alternatives:

The Councils and NMFS are not considering options beyond the two alternatives listed because: 1) setting $ACL=ABC=OY$ was the preferred alternative in CMP Amendment 18 (GMFMC/SAFMC 2011) and snapper grouper amendments; 2) the Councils and NMFS have approved, and NMFS will implement on August 7, 2014, an amendment that will require dealers to report landings electronically once a week (GMFMC/SAFMC 2013a), which will improve the timeliness of data collection; and 3) recreational landings have remained well below the recreational ACL since it was implemented through CMP Amendment 18 (GMFMC/SAMFC 2011). Therefore, the Councils and NMFS determined it is not reasonable to include additional alternatives that incorporate a buffer between the ABC and ACL.

Alternative 1 would not update ACLs based on results from the recent stock assessment, and would therefore not result in a change to the current biological environment. **Preferred Alternative 2** proposes to increase the ACL, which could lead to additional removals from the population. **Preferred Alternative 2** would employ the same formula as specified in **Alternative 1 (No Action)**, and set the $ACL = ABC$. However, since the ACL is equal to the SSC-recommended ABC, there is little risk of any direct or indirect negative biological effects.

Alternative 1 (No Action) would maintain a Gulf migratory group Spanish mackerel ACL of 5.15 mp, and would not be expected to have economic effects. Between 2000 and 2011, Gulf Spanish mackerel landings averaged 3.93 mp annually. During the same time interval, the maximum harvest level was 4.88 mp. This value is lower than the 5.15 mp current ACL. It is therefore highly unlikely that economic benefits from the ACL increase under consideration in **Preferred Alternative 2** would materialize. In the future, should commercial and recreational fishermen elect to take advantage of the additional fishing opportunities provided by **Preferred Alternative 2**, direct economic benefits proportional to the ACL increases could be realized. Since current landings of Gulf migratory group Spanish mackerel usually have not met the current ACL under **Alternative 1 (No Action)**, the proposed increase in the ACL under **Preferred Alternative 2** is not expected to change fishing behavior or access to the resource, and would likely be beneficial to the fleet while maintaining sustainable harvest. Administrative impacts of this action are likely to be minimal.

Chapter 3. Affected Environment

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

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

3.1 Habitat Environment

3.1.1 South Atlantic

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. For coastal migratory pelagics, management extends through the Mid-Atlantic. 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 kilometers (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) is influenced primarily by the Gulf Stream and secondarily by winds and tides. On the mid-shelf (20-40 meters), the water column is almost equally affected by the Gulf Stream, winds, and tides. Inner shelf waters (0-20 meters) 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, North Carolina; Cape Lookout, North Carolina; and Cape Hatteras, North Carolina, affect longshore coastal currents and interact with Gulf Stream intrusions to produce local upwelling (Blanton et al. 1981; Janowitz and Pietrafesa 1982). Shoreward of the Gulf Stream, seasonal horizontal temperature and salinity gradients define the mid-shelf and inner-shelf fronts. In coastal waters, river discharge and estuarine tidal plumes contribute to the water column structure.

The water column from Dry Tortugas, Florida, to Cape Hatteras, North Carolina, serves as habitat for many marine fish and shellfish. Most marine fish and shellfish release pelagic eggs when spawning and thus, most species utilize the water column during some portion of their early life history (Leis 1991; Yeung and McGowan 1991). 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.

3.1.2 Gulf of Mexico

The Gulf of Mexico (Gulf) has a total area of approximately 600,000 square miles (1.5 million km²), including state waters (Gore 1992). It is a semi-enclosed, oceanic basin connected to the Atlantic Ocean by the Straits of Florida and to the Caribbean Sea by the Yucatan Channel. Oceanic conditions are primarily affected by the Loop Current (**Figure 3.1.2.1**), the discharge of freshwater into the northern Gulf, and a semi-permanent, anti-cyclonic gyre in the western Gulf.

The Gulf is both a warm temperate and a tropical body of water (McEachran and Fechhelm 2005). Based on satellite derived measurements from 1982 through 2009, mean annual sea surface temperature ranged from 73 through 83° F (23-28° C) including bays and bayous (**Figure 3.1.2.1**). In general, mean sea surface temperature increases from north to south depending on time of year with large seasonal variations in shallow waters (NODC 2012: <http://accession.nodc.noaa.gov/0072888>).

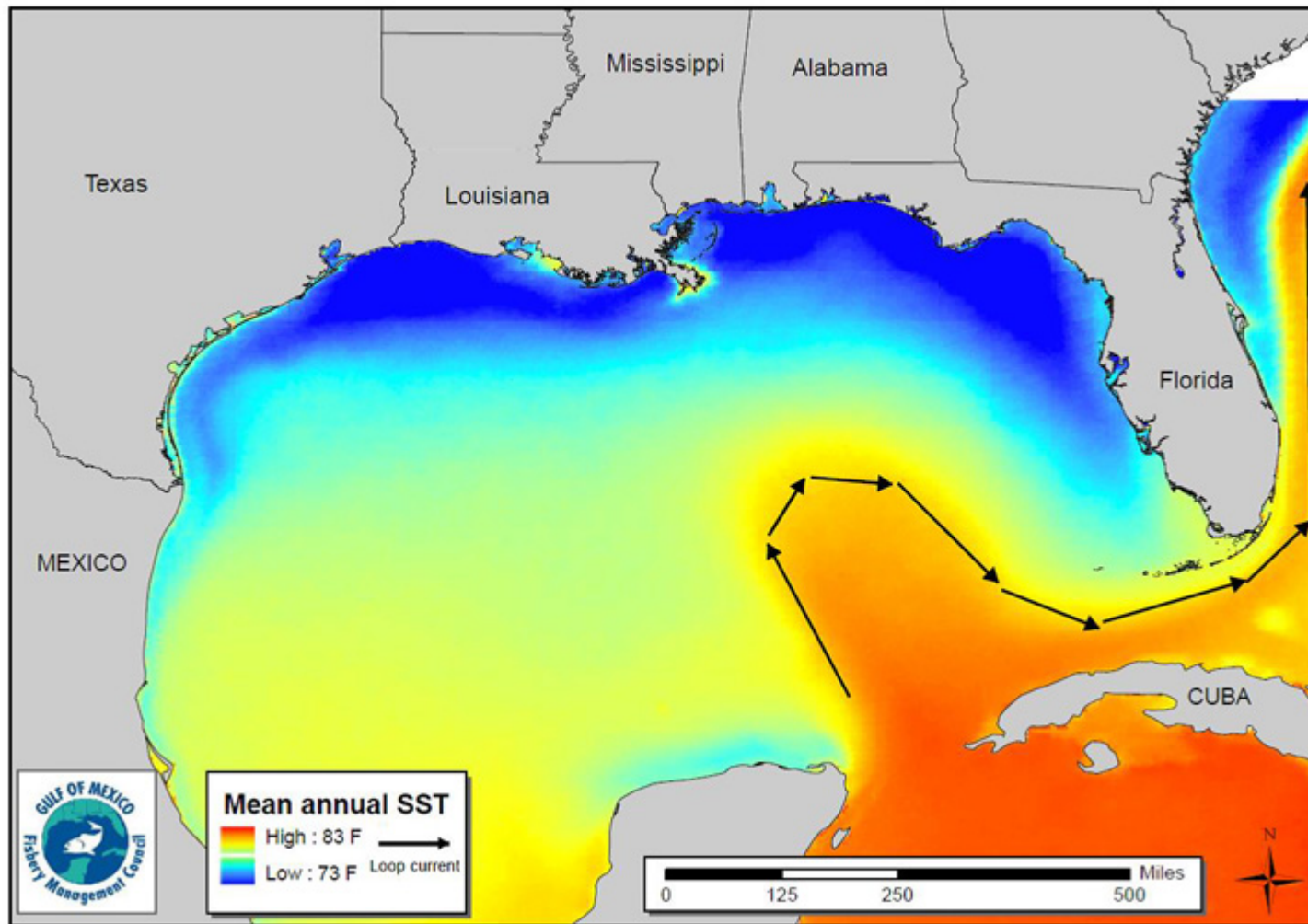


Figure 3.1.2.1. Mean annual sea surface temperature derived from the Advanced Very High Resolution Radiometer (AVHRR) Pathfinder Version 5 sea surface temperature data set (<http://pathfinder.nodc.noaa.gov>).

Deepwater Horizon Oil Spill

The Deepwater Horizon MC252 oil spill affected at least one-third of the Gulf from western Louisiana east to the Florida Panhandle and south to the Campeche Bank of Mexico. Oil flowed from the ruptured wellhead at a rate of 52,700 – 62,200 barrels/day for a total of 4,928,100 barrels (www.restorethegulf.gov 2010). The impacts of the Deepwater Horizon MC252 oil spill on the physical environment may be significant and long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants (both at the surface and at the wellhead), oil was also documented as being suspended within the water column (Camilli et al. 2010; Kujawinski et al. 2011). Floating and suspended oil washed onto coastlines in several areas of the Gulf along with non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are persistent in the environment and can be transported hundreds of miles (Goodman 2003). The Associated Press reported on September 6, 2012 that researchers from Louisiana State University had linked oil discovered on Elmer's Island and Grand Isle to the Deepwater Horizon MC252 oil spill after the landfall and dissipation of Hurricane Isaac (Burdeau and Reeves 2012).

The oil and dispersant from the spill may have (had) direct negative impacts on egg and larval stages. Oil present in surface waters could affect the survival of eggs and larvae, affecting future recruitment. Effects on the physical environment such as low oxygen and the inter-related effects that culminate and magnify through the food web could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encounter oil. In addition, effects of oil exposure may not always be lethal, but can create sub-lethal effects on the early life stages of fish. There is the potential that the stressors can be additive, and each stressor may increase the susceptibility to the harmful effects of the other.

If eggs and larvae were affected, impacts on harvestable-size CMP fish will begin to be seen when the 2010 year class becomes large enough to enter the fishery and be retained. Spanish mackerel mature at age 1-2; therefore, a year class failure in 2010 could be observed as early as 2011 or 2012. The impacts would be realized as reduced fishing success and reduced spawning potential, and would need to be taken into consideration in the next SEDAR assessment update.

Indirect and inter-related effects of the actions in this framework amendment, especially in concert with the Deepwater Horizon MC252 oil spill on the biological and ecological environment are not well understood. Changes in the population size structure as a result of shifting fishing effort to specific geographic segments of the CMP populations, combined with any anthropogenically induced natural mortality that may occur from the impacts of the oil spill, could lead to changes in the distribution and abundance of Spanish mackerel throughout the Gulf. The impacts on the food web from phytoplankton, to zooplankton, to baitfish, to top predators are unknown and may lead to negative impacts in the future. Impacts to CMP species from the oil spill will similarly impact other species that may be preyed upon by Spanish mackerel, or might benefit from a reduced stock.

3.2 Biological Environment

3.2.1 Fish Populations Affected by this Framework Amendment

A description of the biological environment for 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 bonito. These species are among the most important commercial and sport fishes. The habitat of adults in the coastal pelagic management unit is the coastal waters out to the edge of the continental shelf in the Atlantic Ocean. Within the area, the occurrence of CMP species is governed by temperature and salinity. All species are seldom found in water temperatures less than 20°C (68°F). Salinity preference varies, but these species generally prefer high salinity, less than 36 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 actions in this framework amendment specifically affect Spanish mackerel (*Scomberomorus maculatus*). Spanish mackerel are migratory and move into specific areas to spawn, and mature at age 1-2 years. They primarily eat other fish species (herring, sardines, menhaden) and to a lesser extent crustaceans and squid at all life stages (larvae to adult). They are eaten primarily by larger pelagic predators like sharks, tuna, and bottlenose dolphin.

Spanish mackerel is also a pelagic species occurring in depths up to 75 meters (225 feet) but primarily found in depths of 20 meters (60 feet) or less. The species occurs throughout the coastal zones of the western Atlantic from southern New England to the Florida Keys and throughout the Gulf of Mexico (Collette and Russo 1979). Adults usually are found from the low-tide line to the edge of the continental shelf, and along coastal areas. They inhabit estuarine areas (especially 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 (68°F) and 32°C (89.6°F) and salinities between 28 and 37 ppt. They are found frequently in water depths from 9 meters (27 feet) to about 84 meters (252 feet), but are most common in < 50 meters (150 feet).

Juveniles are most often found in coastal and estuarine habitats and at temperatures greater than 25°C (77°F) 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).

3.2.2 Protected Species

All sea turtle species occurring in the Atlantic Ocean are listed as either endangered or threatened under the Endangered Species Act (ESA). The alternatives discussed in this framework amendment may potentially affect five sea turtle species: the endangered leatherback, the endangered hawksbill, the endangered Kemp's ridley, the Northwest Atlantic distinct population segment (DPS) of the threatened loggerhead, and the threatened green, except for breeding populations of green turtles in Florida, which are listed as endangered.

The threatened Gulf sturgeon, the endangered shortnose sturgeon, the South Atlantic and Carolina DPS of the threatened Atlantic sturgeon, and the endangered smalltooth sawfish, also occur within the area encompassed by the alternatives analyzed within this framework amendment. Additionally, two threatened *Acropora* coral species, elkhorn and staghorn, can be found in areas of Florida. Additionally, NMFS has proposed rules to reclassify *Acropora* Corals as endangered, list 6 additional species of corals that occur in the Southeast Region, and designate critical habitat for loggerhead sea turtles.

Species of large whales protected by the ESA that occur throughout the Gulf and Atlantic Ocean include the blue whale, humpback whale, fin whale, North Atlantic right whale, sei whale, and the sperm whale. Additionally, the West Indian manatee also occurs in both the Gulf of Mexico and Atlantic Ocean; the West Indian manatee is under the jurisdiction of the United States Fish and Wildlife Service (USFWS). These species are also considered depleted under the Marine Mammal Protection Act (MMPA). Depleted and endangered designations afford special protections from captures, and further measures to restore populations to recovery or the optimum sustainable population are identified through required Recovery Plans (ESA species) or Conservation Plans (MMPA depleted species). Numerous other species of marine mammals listed under the MMPA occur throughout the Atlantic Ocean and/or Gulf of Mexico. Aside from the aforementioned protected species, portions of designated critical habitat for Gulf sturgeon, *Acropora* corals, and the North Atlantic Right Whale also occur within areas encompassed by the alternatives in this framework amendment.

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 (NMFS 2007). Other listed species are not likely to be adversely affected, including Endangered Species Act-listed whales, Gulf sturgeon, and *Acropora* corals. In a separate consultation memorandum dated May 18, 2010, NMFS concluded the continued authorization of the CMP fishery is not likely to adversely affect *Acropora* critical habitat.

Subsequent to the 2007 biological opinion and the May 2010 memorandum, NMFS made several modifications to the list of protected species for which they are responsible. These changes included: 1) the determination that the loggerhead sea turtle population consists of nine DPSs (76 FR 58868), 2) the listing of five DPSs of Atlantic sturgeon, and 3) the proposed listing of 66 coral species and reclassification of *Acropora* from threatened to endangered (77 FR 73220). Potential or likely effects on Atlantic Sturgeon due to activity in the CMP fishery have never been analyzed in a Section 7 consultation and therefore, NMFS has re-initiated consultation on

this fishery. In a memorandum from January 11, 2013, NMFS determined the continued authorization of the CMP FMP during the re-initiation period is not likely to jeopardize the continued existence of or impede the recovery of any Atlantic sturgeon DPS. Therefore, the fishery remains open while NMFS's Protected Resources Division continues to work towards a new biological opinion for the CMP FMP.

The Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2014 Marine Mammal Protection Act List of Fisheries (79 FR 14418) as a Category III fishery. This means 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 Category II fishery in the 2014 MMPA List of Fisheries (79 FR 14418). 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 Human Environment

A description of the social and economic environments for CMP species is provided in Amendment 18 (GMFMC/ SAFMC 2011), is incorporated herein by reference, and is summarized below.

Description of the fishery

A commercial Spanish mackerel permit is required for vessels fishing in the Gulf or Atlantic. This permit is open access. For-hire vessels must have a charter/headboat CMP permit for the area fished. The commercial permit has an income requirement of 25% of earned income or \$10,000 from commercial or charter/headboat fishing activity in one of the previous three calendar years; however, the South Atlantic and Gulf of Mexico Fishery Management Councils (Councils) have approved an action in Amendment 20A to remove this requirement. As of May 1, 2014, there were 1,707 valid federal Spanish mackerel permits. The number of permits varies but typically is between 1,600 and 1,800 permits³.

Gulf migratory group Spanish mackerel are considered a single stock throughout the Gulf from the southern border of Texas to the Miami-Dade/Monroe county border on the east coast of Florida. A single ACL for both commercial and recreational sectors was implemented through Amendment 18 (GMFMC/SAFMC 2011) beginning with the 2012/2013 fishing year. Before that, the commercial and recreational sectors had separate quotas. The fishing year is April 1-

³ Information on the number of permits is available on the SERO website:

http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/index.html

March 31. When the stock ACL has been landed, both sectors are closed to fishing for the remainder of the fishing year.

The fishing year for Atlantic migratory group Spanish mackerel is March-February, which was implemented in August 2005; before then, the fishing year was April-March. The 2005/2006 fishing year has only 11 months of landings. To make it comparable with other years, the 2005/2006 fishing year has been normalized for comparison with other years⁴.

For trip limits, the Atlantic migratory group of Spanish mackerel is divided into two areas separated at the Georgia-Florida state line. The commercial trip limit north of the Georgia-Florida line is 3,500 lbs. In waters off Florida, the trip limit can be adjusted during the season depending on how much of the Atlantic migratory group Spanish mackerel commercial ACL has been landed between December 1 and the end of February. Beginning December 1 until 75% of the adjusted quota (commercial ACL minus 250,000 lbs) has been landed, there is no trip limit on weekdays and a trip limit of 1,500 lbs on weekends. When 75% of the adjusted quota has been landed, the trip limit is 1,500 lbs on all days. When 100% of the adjusted quota has been landed, the trip limit in waters off Florida is 500 lbs. When the total commercial ACL has been landed, the commercial sector is closed in federal waters.

One commercial ACL is set for the Mid-Atlantic and South Atlantic regions. In CMP Amendment 20B, the Gulf and South Atlantic Councils are considering creating allocations of the Atlantic migratory group Spanish mackerel commercial ACL to a northern zone (North Carolina to New York) and a southern zone (South Carolina, Georgia, and Florida (see **Figure 1.4.1**). Each zone would have a separate quota and separate accountability measures.

Landings compiled for the current Southeast Data, Assessment, and Review (SEDAR 28 2013) stock assessment divided the two migratory groups at the boundary between the Councils, which is the line of demarcation between the Atlantic Ocean and the Gulf of Mexico, 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 management boundary and calendar year are included here.

Commercial landings over the past five years have averaged 1.3 mp annually in the Gulf and 3.7 mp annually in the Atlantic (**Table 3.3.1**). Recreational landings in have averaged 2.6 mp each fishing year in the Gulf and 1.9 mp in the Atlantic (**Table 3.3.2**).

⁴ Data on catch rates from previous years were used to estimate the level of landings in hypothetical Month 12 in the fishing year 2005/2006.

Table 3.3.1. 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

Source: SEFSC, ALS database; NEFSC, CFDBS database

*For 1999/2000-2004/2005, the Atlantic fishing year is Apr-Mar; for 2006/2007 onward, the fishing year is Mar-Feb.

Table 3.3.2. 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

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

Distribution of Fishing Activity

Jurisdiction of the CMP fishery is divided between the federal and state governments. However, Spanish mackerel most commonly occur in state jurisdictional waters (ASMFC 2012).

For purposes of the following discussion, the level of activity in the CMP fishery is divided into two mutually exclusive groups: those that harvest quantities of Spanish mackerel greater than the bag limits and those that harvest quantities of these species under the bag limits. Vessels that take CMP in quantities under the bag limits are divided into three groups: commercial fishing vessels, charter vessels and headboats, and angler/recreational vessels.

Commercial fishermen who harvest Spanish mackerel in federal waters with a permit are limited by daily trip limits, except for those who harvest Spanish mackerel in federal waters of the Gulf where the daily catch is unlimited. Daily trip limits vary by location and gear and may be adjusted when landings reach 75% or another percent of the annual quota (**Table 3.3.3**).

Table 3.3.3. Commercial trip limits for Spanish mackerel.

Species	Migratory Group	Zone	Daily Trip Limit
Spanish Mackerel	Atlantic	Northern	3,500 lbs
		Southern	3,500 lbs ¹
	Gulf	-	Unlimited

¹ The 3,500-lb trip limit begins Mar 1. In waters off Florida, unlimited trip limits begin Dec 1 and continue until 75% of adjusted quota is harvested and trip limit is reduced to 1,500 lbs in federal waters off Florida's east coast. Daily trip limits during the unlimited season: unlimited Mon-Fri and 1,500 lbs on Sat-Sun. In federal waters off Florida's east coast, the trip limit is reduced to 500 lbs through Mar 31 if 100% of the adjusted quota is harvested.

Any vessel in the exclusive economic zone (EEZ) without a federal Spanish mackerel commercial permit is restricted to a bag limit of 15 per person per day. As of May 1, 2014, there were 1,201 valid or renewable Gulf CMP for-hire permits, 29 Gulf Historical Captain CMP for-hire permits, and 1,388 Atlantic CMP for-hire permits⁵. For-hire fishing vessels must have either a Gulf or a South Atlantic charter vessel/headboat CMP permit, depending on where they fish in the EEZ. The Gulf permit is a limited access permit, while the South Atlantic permit is an open access permit. Each charter/headboat permit allows the for-hire fishing vessel to be used to catch any CMP species in quantities no greater than the recreational bag/possession limits in federal waters. Some vessels may have both federal charter vessel/headboat and federal Spanish mackerel commercial permits. When a vessel is operating as a charter vessel or headboat, a person aboard must adhere to the recreational bag limit. Private recreational fishing vessels must be registered in their state or documented by the U.S. Coast Guard. Saltwater anglers aboard these vessels must be registered with the National Saltwater Angler Registry or licensed in their exempted state in order to fish for CMP in the EEZ. All states require a commercial fishing license to sell Spanish mackerel landed in their waters. Texas requires an additional permit beyond a commercial fishing license to bring any fish taken in the EEZ into state waters. Operators of commercial fishing vessels with a federal Spanish mackerel permit and who are commercially licensed in a state can land and sell quantities of these species greater than the respective bag limits (and under quota).

3.3.1 Economic Environment

3.3.1.1 Economic Description of the Commercial Sector

Number of Vessels, Harvest, and Ex-vessel Value

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 3.3.1.1**. Landings information is provided in Section 3.3.1.

⁵ Information on the number of permits is available on the SERO website:

http://sero.nmfs.noaa.gov/operations_management_information_services/constituency_services_branch/freedom_of_information_act/common_foia/index.html

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

Spanish Mackerel	Number of Vessels	Ex-vessel Value (millions)	Ex-vessel Value All Species (millions)	Average Ex-vessel Value per Vessel
Gulf migratory group	208	\$0.28	\$10.33	\$49,700
Atlantic migratory group	387	\$1.87	\$11.99	\$31,000

Notes: Each row should be interpreted individually, as there will be substantial double counting across rows in columns 2 and 4, e.g., the same vessel might fish for different migratory groups of the same 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).

All value analyses account for inflation by adjusting dollar amounts reported from 2007-2012 (i.e., current dollars) to 2011 dollars (i.e., constant dollars) using price indices from the Bureau of Labor Statistics, specifically SERIES CUUR0000SA0, CPI-U, ALL ITEMS, NOT SEASONALLY ADJUSTED, BASE=1982-84.

Source: NMFS SEFSC Coastal Fisheries Logbook for landings and NMFS Accumulated Landings System for prices. Note that small amounts (1.95% of Spanish mackerel) are landed in the Northeast and are not counted here. Similar, landings and revenue from State waters by vessels without federal permits are not included.

Economic Activity

An alternative, regional perspective on the economics of the CMP fishery is an economic impact assessment or analysis. The desire to consume CMP species, and availability of these species generate economic activity as consumers spend their incomes on CMP-derived commodities (including services), such as Spanish mackerel purchased at a local fish market and served during restaurant visits. This spurs additional economic activity in the region(s) where CMP species are purchased and fishing occurs, such as jobs in local fish markets, restaurants and fishing supply establishments. It should be clearly noted that, in the absence of CMP species for purchase, consumers would spend their incomes on substitute proteins and other commodities. As such, the economic impact analysis presented below represents a distributional analysis only; that is, it only shows how economic effects can be distributed through regional markets.

Estimates of average annual economic activity (impacts) associated with the commercial fisheries for CMP species addressed in the framework amendment were derived using the model developed for and applied in NMFS (2009a) and are provided in **Table 3.3.1.2**. Business activity for the commercial sector 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.

As noted in **Table 3.3.1.2**, the annual period refers to the fishing year, as appropriate to the management of the species. The estimates of economic activity include the direct effects (effects in the sector where an expenditure is actually made), indirect effects (effects in sectors providing goods and services to directly affected sectors), and induced effects (effects induced by the personal consumption expenditures of employees in the direct and indirectly affected sectors). Estimates are provided for the economic activity associated with the ex-vessel revenues from the

individual CMP species as well as the revenues from all species harvested by these same vessels.

Table 3.3.1.2. Average annual economic activity associated with the commercial sector of the CMP fishery. Includes ex-vessel revenues and economic activity associated with the average annual harvests of all species harvested by vessels that harvested the subject CMP species.

Species	Average Ex-vessel Value ¹ (millions)	Total Jobs	Harvester Jobs	Output (Sales) Impacts (millions)	Income Impacts (millions)
Atlantic migratory group Spanish mackerel	\$1.87	337	44	\$24.62	\$10.49
- all species	\$11.99	2,163	282	\$157.87	\$67.28
Gulf migratory group Spanish mackerel	\$0.28	51	7	\$3.69	\$1.57
- all species	\$10.33	1,863	243	\$136.01	\$57.97

¹2011 dollars.

3.3.1.2 Economic Description of the Recreational Sector

The recreational sector is comprised of the private sector and for-hire sector. The private sector includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire sector is composed of the charter vessel and headboat (also called party boat) sectors.

Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person.

Effort

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

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

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

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

Estimates of average annual recreational effort, 2007-2011, for Spanish mackerel are provided in **Tables 3.3.1.3 – 3.3.1.6**. In each table, where appropriate, the “total” refers to the total number of target or catch trips, as appropriate, while “all trips” refers to the total number of trips across all species regardless of target intent or catch success. The estimates were evaluated by calendar year and not fishing year. As a result, while the results may not be fully reflective of effort associated with specific stocks (e.g., Gulf migratory group versus Atlantic migratory group), the results are consistent with fishing activity based on area fished.

Spanish mackerel is subject to a fair amount of target and catch effort for the Gulf states (**Table 3.3.1.3**). Spanish mackerel is also subject to more catch effort than target effort. West Florida dominates other areas in both target and catch effort for Spanish mackerel. The effort situation is somewhat different for the South Atlantic states (**Table 3.3.1.4**). Spanish mackerel target and catch effort are lower than in the Gulf. Further, target effort is about the same as catch effort. East Florida dominates for catch effort but North Carolina dominates for target effort.

Table 3.3.1.3. Average annual (calendar year) recreational effort (thousand trips) in the Gulf of Mexico for Spanish mackerel by state, across all modes, 2007-2011, out of 23.6 million recreational trips.

Target Trips				
W Florida	Alabama	Mississippi	Louisiana	Total
762	68	1	0	830
Catch Trips				
1,070	83	13	18	1,185

Source: NMFS MRFSS/MRIP and SERO.

Note: Data unavailable for Texas.

Table 3.3.1.4. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic for Spanish mackerel by state, across all modes, 2007-2011, out of 19.9 million recreational trips.

Target Trips				
E Florida	Georgia	South Carolina	North Carolina	Total
186	4	64	258	512
Catch Trips				
242	9	54	200	505

Source: NMFS MRFSS/MRIP and SERO.

If examined by mode, in the Gulf, the shore mode dominates target effort, while the private mode accounts for the most catch trips (**Table 3.3.1.5**). In the South Atlantic, the private mode leads for both effort types (**Table 3.3.1.6**).

Table 3.3.1.5. Average annual (calendar year) recreational effort (thousand trips) in the Gulf of Mexico for Spanish mackerel by mode, across all states, 2007-2011, out of 23.6 million recreational trips.

Target Trips			
Shore	Charter	Private	Total
534	17	280	830
Catch Trips			
529	55	600	1,185

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.6. Average annual (calendar year) recreational effort (thousand trips) in the South Atlantic for Spanish mackerel by mode, across all states, 2007-2011, out of 19.9 million recreational trips.

Target Trips			
Shore	Charter	Private	Total
231	8	273	512
Catch Trips			
189	22	294	505

Source: NMFS MRFSS/MRIP and SERO.

Table 3.3.1.7 contains estimates of the average annual (2007-2011) target trips and catch trips for Spanish mackerel, by state and mode. For each fishing mode, West Florida dominates all other areas in both types of effort for Spanish mackerel.

Table 3.3.1.7. Average annual (calendar year) recreational effort (thousand trips) for Spanish mackerel, by state and by mode, 2007-2011.

	Shore		Charter		Private		Total	
	Target	Catch	Target	Catch	Target	Catch	Target	Catch
Mississippi	0	1	0	6	0	6	1	13
Louisiana	0	1	0	2	0	15	0	18
Alabama	38	36	2	7	28	40	68	83
West Florida	495	491	15	40	252	539	762	1,070
East Florida	119	116	1	3	67	123	186	242
Georgia	2	2	0	1	2	7	4	9
South Carolina	43	31	3	7	17	16	64	54
North Carolina	67	41	4	12	187	148	258	200

Source: NMFS MRFSS/MRIP and SERO.

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

Headboat effort and harvest data, however, are collected through the NMFS Southeast Fisheries Science Center Headboat Survey (Headboat Survey) program. The average annual (2007-2011) number of headboat angler days is presented in **Table 3.3.1.8**. Due to confidentiality issues, Georgia estimates are combined with those of East Florida on the Atlantic, while Alabama is combined with West Florida as part of the summarization process for the Gulf (i.e., as part of the estimation process and not a result of confidentiality merging). As shown in **Table 3.3.1.8**, in both regions, Florida dominates, followed by Texas in the Gulf and South Carolina in the South Atlantic.

Table 3.3.1.8. Southeast headboat angler days, 2007-2011.

	Gulf of Mexico				
	West Florida/ Alabama	Mississippi	Louisiana	Texas	Total
2007	136,880	0	2,522	63,764	203,166
2008	130,176	0	2,945	41,188	174,309
2009	142,438	0	3,268	50,737	196,443
2010	111,018	*	217	47,154	158,389
2011	157,025	1,771	1,886	47,284	207,966
5-year Average	135,507	1,771**	2,168	50,025	189,471
	South Atlantic				
	East Florida/ Georgia	South Carolina	North Carolina	Total	
2007	157,150	60,729	29,002	246,881	
2008	124,119	47,287	16,982	188,388	
2009	136,420	40,919	19,468	196,807	
2010	123,662	44,951	21,071	189,684	
2011	124,041	44,645	18,457	187,143	
5-year Average	133,078	47,706	20,996	201,781	

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

*Confidential.

**Because the average totals are used to represent expectations of future activity, the 2011 number of trips is provided as best representative of the emergent headboat sector in Mississippi.

Economic Value, Expenditures, and Economic Activity

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

The estimated consumer surplus per fish kept for king mackerel to anglers in both the Gulf and South Atlantic, based on the estimated willingness-to-pay to avoid a reduction in the bag limit, is \$7 (assumed 2006 dollars; Whitehead 2006). A comparable estimate has not been identified for Spanish mackerel.

While anglers receive economic value as measured by the consumer surplus associated with fishing, for-hire businesses receive value from the services they provide. Producer surplus is the measure of the economic value these operations receive. Producer surplus is the difference between the revenue a business receives for a good or service, such as a charter or headboat trip,

and the cost the business incurs to provide that good or service. Estimates of the producer surplus associated with for-hire trips are not available. However, proxy values in the form of net operating revenues are available (D. Carter, NMFS SEFSC, personal communication, August 2010). These estimates were culled from several studies – Liese and Carter (2011), Dumas et al. (2009), Holland et al. (1999), and Sutton et al. (1999). Estimates of net operating revenue per angler trip (2009 dollars) on representative charter trips (average charter trip regardless of area fished) are \$146 for Louisiana through east Florida, \$135 for east Florida, \$156 for northeast Florida, and \$128 for North Carolina. For charter trips into the EEZ only, net operating revenues are \$141 in east Florida and \$148 in northeast Florida. For full-day and overnight trips only, net operating revenues are estimated to be \$155-\$160 in North Carolina. Comparable estimates are not available for Georgia, South Carolina, or Texas.

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

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

The desire for recreational fishing generates economic activity as consumers spend their income on the various goods and services needed for recreational fishing. This spurs economic activity in the region where the recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services. As such, the analysis below represents a distributional analysis only.

Estimates of the regional economic activity (impacts) associated with the recreational fishery for Spanish mackerel were derived using average coefficients for recreational angling across all fisheries (species), as derived by an economic add-on to the MRFSS, and described and utilized in NMFS (2009b) and are provided in **Tables 3.3.1.9** and **3.3.1.10**. Business activity is characterized in the form of full-time equivalent (FTE) jobs, income affects (wages, salaries, and self-employed income), output impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income and value-added impacts are not equivalent, though similarity in the magnitude of multipliers may result in roughly equivalent values. Neither income nor value-added impacts should be added to output (sales) impacts because this would result in double counting. Job and output (sales) impacts, however, may be added across sectors.

Estimates of the average expenditures by recreational anglers are provided in NMFS (2009b) and are incorporated herein by reference. Estimates of the average recreational effort (2007-2011) and associated economic impacts (2008 dollars) are provided in **Table 3.3.1.9** and **Table**

3.3.1.10. Target trips were used as the measure of recreational effort. As previously discussed, more trips may catch some species than target the species. Where such occurs, estimates of the economic activity associated with the average number of catch trips can be calculated based on the ratio of catch trips to target trips because the average output impact and jobs per trip cannot be differentiated by trip intent. For example, if the number of catch trips were three times the number of target trips for a particular state and mode, the estimate of the associated activity would equal three times the estimate associated with target trips. **Tables 3.3.1.9 and 3.3.1.10** contain summaries of the average annual (2007-2011) target trips for each state and mode, and associated economic activity.

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

Table 3.3.1.9. Summary of Spanish mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), Gulf states. Output and value added impacts are not additive.

	West Florida	Alabama	Mississippi	Louisiana	Texas
Shore Mode					
Target Trips	495,146	37,870	151	380	unknown
Output Impact	\$35,782,871	\$2,954,402	\$2,168	\$28,628	
Value Added Impact	\$20,788,675	\$1,589,297	\$1,081	\$14,451	
Jobs	356	34	0	0	
Private/Rental Mode					
Target Trips	251,992	27,594	237	0	unknown
Output Impact	\$12,200,175	\$1,712,022	\$7,207	\$0	
Value Added Impact	\$7,254,682	\$937,293	\$3,454	\$0	
Jobs	114	17	0	0	
Charter Mode					
Target Trips	14,793	2,153	165	0	unknown
Output Impact	\$4,953,425	\$1,195,368	\$54,669	\$0	
Value Added Impact	\$2,936,871	\$658,010	\$30,806	\$0	
Jobs	48	15	1	0	
All Modes					
Target Trips	761,931	67,617	553	380	unknown
Output Impact	\$52,936,471	\$5,861,791	\$64,044	\$28,628	
Value Added Impact	\$30,980,228	\$3,184,600	\$35,341	\$14,451	
Jobs	518	66	1	0	

Source: Effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a). Excludes headboat effort and economics.

Table 3.3.1.10. Summary of Spanish mackerel target trips (2007-2011 average) and associated economic activity (2012 dollars), South Atlantic states. Output and value added impacts are not additive.

	East Florida	Georgia	South Carolina	North Carolina
Shore Mode				
Target Trips	118,706	1,623	43,394	66,917
Output Impact	\$3,616,236	\$27,878	\$4,712,022	\$17,872,953
Value Added Impact	\$2,099,424	\$16,717	\$2,623,766	\$9,952,630
Jobs	36	0	54	202
Private/Rental Mode				
Target Trips	66,616	2,113	17,139	187,165
Output Impact	\$2,686,302	\$35,204	\$804,136	\$10,894,222
Value Added Impact	\$1,605,208	\$21,354	\$469,203	\$6,142,915
Jobs	26	0	9	110
Charter Mode				
Target Trips	595	89	3,000	4,404
Output Impact	\$248,659	\$5,966	\$1,078,834	\$1,828,200
Value Added Impact	\$146,393	\$3,482	\$609,497	\$1,025,990
Jobs	2	0	13	22
All Modes				
Target Trips	185,917	3,825	63,533	258,486
Output Impact	\$6,551,197	\$69,049	\$6,594,993	\$30,595,375
Value Added Impact	\$3,851,024	\$41,553	\$3,702,465	\$17,121,534
Jobs	65	1	76	334

Source: effort data from the NMFS MRFSS/MRIP, economic activity results calculated by NMFS SERO using the model developed for NMFS (2009a). Excludes headboat effort and economics.

As previously noted, the values provided in **Tables 3.3.1.9** and **3.3.1.10** only reflect effort derived from the MRFSS/MRIP. Because the headboat sector in the Southeast Region is not covered by the MRFSS/MRIP, the results in **Tables 3.3.1.9** and **3.3.1.10** do not include estimates of the economic activity associated with headboat anglers. While estimates of headboat effort are available, species target information is not collected in the Headboat Survey, which prevents the generation of estimates of the number of headboat target trips for individual species. Further, because the model developed for NMFS (2009b) was based on expenditure data collected through the MRFSS/MRIP, expenditure data from headboat anglers was not available and appropriate economic expenditure coefficients have not been estimated. As a result, estimates of the economic activity associated with the headboat sector comparable to those of the other recreational sector modes cannot be provided.

3.3.2 Social Environment

Descriptions of the social environment of the CMP fishery and associated coastal communities are contained in Amendment 20A to the CMP FMP (GMFMC/SAFMC 2013) and are incorporated herein by reference where appropriate. The referenced description focuses on available geographic and demographic data to identify communities with strong relationships

with harvest of coastal migratory pelagic species (i.e., significant landings and revenue). This section focuses on communities that are the most likely to experience positive or negative impacts from regulatory changes for Spanish mackerel.

The descriptions include information about the top communities based upon a regional quotient of commercial landings and value for Spanish mackerel. These top communities are herein referred to as “Spanish mackerel communities”, because they would be most likely to experience the effects of proposed actions that could change the Spanish mackerel component of the fishery. They would be most likely to experience affects to participants, associated businesses, and communities within the regions. Additionally, descriptions in Amendment 20A (GMFMC/SAFMC 2013b) for the Gulf of Mexico, South Atlantic, and Mid-Atlantic regions also include reliance and engagement indices to identify other areas in which Spanish mackerel fishing is important. These indices provide information of how a community is involved with commercial and recreational fishing and 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 and permit information for the recreational sector (Jepson and Colburn 2013; Jacob et al. 2013). Fishing engagement is primarily the absolute numbers of permits, landings, and value. For commercial fishing, the analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community. For recreational engagement, we used the number of recreational permits, vessels designated as recreational by homeport and owners address. Fishing reliance has the same variables as engagement divided by population to give an indication of the per capita influence of this activity (see Amendment 20A for more details about the reliance and engagement indices and methodology). The identified communities in this section are referenced in Sections 4.1.3 and 4.2.3 in order to provide information on how the alternatives could affect specific areas.

Gulf of Mexico Region

Commercial Spanish Mackerel Communities in the Gulf

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013b), Destin, Florida, lands one quarter of all Spanish mackerel landings in the Gulf and those landings represent over 25% of the value. The second ranked community of Bayou La Batre, Alabama, includes about 20% of the landings and about 15% of the value of Spanish mackerel. Ten other Florida communities make up the top fifteen (including two Florida Keys communities), three additional Alabama communities, and one Louisiana community. No Texas or Mississippi communities are included in the top 15 for Spanish mackerel.

Reliance on and Engagement with Commercial and Recreational Fishing in the Gulf

The reliance and engagement indices provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013b). The primary commercial communities that could be affected by change in the Spanish mackerel component of the fishery include Bayou La Batre and Houma, LA. Florida communities include Destin, Everglades, Key West, Marathon, St. Petersburg, and Tarpon Springs. The primary

recreational communities in the Spanish mackerel component of the fishery are all in Florida and include Destin, Key West, Marathon, Port St. Joe, St. Petersburg, and Tarpon Springs.

South Atlantic Region

Commercial Spanish Mackerel Communities in the South Atlantic

Using the regional quotient to identify Spanish mackerel communities, as detailed in Amendment 20A (GMFMC/SAFMC 2013b), Fort Pierce, Florida, has almost 32% of the landings and over 25% of the value. Cocoa, Florida, is second with about 17% of landings and 17% of value. Although Hatteras, North Carolina ranked third for value, the community had lower landings than Palm Beach Gardens, Florida. No South Carolina or Georgia communities are included in the top fifteen for Spanish mackerel.

Reliance on and Engagement with Commercial and Recreational Fishing in the South Atlantic

The reliance and engagement indices provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 20A for more details, GMFMC/SAFMC 2013b). The primary commercial communities in the Spanish mackerel component of the fishery include Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; Stuart, Florida; and Wanchese, North Carolina. The primary recreational communities in the Spanish mackerel component of the fishery are Fort Pierce, Florida; Marathon, Florida; Miami, Florida; Sebastian, Florida; and Wanchese, North Carolina.

Mid-Atlantic Region

The South Atlantic Council manages Atlantic migratory groups of king mackerel, Spanish mackerel, and cobia through the Mid-Atlantic region as well as in the South Atlantic region. Overall, landings of these species in the Mid-Atlantic region are very low, and management actions by the South Atlantic Council likely have minimal impacts on Mid-Atlantic communities. More detailed information about these communities and how they were identified is described in Amendment 20A (GMFMC/SAFMC 2013b).

Commercial Spanish Mackerel Communities in the Mid-Atlantic

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

Reliance on and Engagement with Commercial and Recreational Fishing in the Mid-Atlantic

The primary communities that demonstrate relatively high levels of commercial fishing engagement and reliance are Montauk, New York, and Hampton Bays, New York. Communities with relatively substantial recreational engagement and reliance include Montauk, New York; Virginia Beach, Virginia; Chincoteague, Virginia; and Freeport, New York.

3.3.3 Environmental Justice Considerations

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

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

In order to identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If the value for the community or county was greater than or equal to 1.2 times the state average, then the community or county was considered an area of potential EJ concern. Census data for the year 2010 was used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in **Tables 3.3.3.1** and **3.3.3.2**; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table.

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

State	County/Parish	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold ¹
Florida		47.4	56.88	13.18	15.81
	Dixie	8.7	38.7	19.6	-3.79
	Franklin	19.2	28.2	23.8	-7.99
	Gulf	27	20.4	17.5	-1.69
	Jefferson	38.5	8.9	20.4	-4.59
	Levy	17.9	29.5	19.1	-3.29
	Taylor	26.2	21.2	22.9	-7.09
Alabama		31.5	37.8	16.79	20.15
	Mobile	39.5	-1.7	19.1	1.05
Mississippi		41.9	50.28	15.82	18.98
Louisiana		39.1	46.92	15.07	18.08
	Orleans	70.8	-25	23.4	-1.29
Texas		39.1	46.92	15.07	18.08
	Cameron	87.4	-24.7	35.7	-15.57
	Harris	63.5	-0.8	16.7	3.43
	Kenedy	71.7	-9	52.4	-32.27
	Kleberg	75	-12.3	26.1	-5.97
	Matagorda	51.9	10.8	21.9	-1.77
	Nueces	65.5	-2.8	19.7	0.43
	Willacy	89	-26.3	46.9	-26.77

¹The 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. No counties in Mississippi exceed the state minority or poverty thresholds.

Table 3.3.3.2. 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 ¹
Florida		47.4	56.88	13.18	15.81
	Broward	52.0	-4.6	11.7	4.11
	Miami-Dade	81.9	-34.5	16.9	-1.09
	Orange County	50.3	-2.9	12.7	3.11
	Osceola	54.1	-6.7	13.3	2.51
Georgia		50.0	60.0	15.0	18.0
	Liberty	53.2	-3.2	17.5	0.5
South Carolina		41.9	50.28	15.82	18.98
	Colleton	44.4	-2.5	21.4	-2.42
	Georgetown	37.6	4.3	19.3	-0.32
	Hampton	59.0	-17.1	20.2	-1.22
	Jasper	61.8	-19.9	9.9	-0.92
North Carolina		39.1	46.92	15.07	18.08
	Bertie	64.6	-25.50	22.5	-4.42
	Chowan	39.2	-0.1	18.6	-0.52
	Gates	38.8	0.3	18.3	-0.22
	Hertford	65.3	-26.2	23.5	-5.42
	Hyde	44.5	-5.4	16.2	1.88
	Martin	48.4	-9.3	23.9	-5.82
	Pasquotank	43.4	-4.3	16.3	1.78
	Perquimans	27.7	11.4	18.6	-0.52
	Tyrrell	43.3	-4.2	19.9	-1.82
	Washington	54.7	-15.6	25.8	-7.72

¹The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded.

Another type of analysis uses a suite of the indices created to examine the social vulnerability of coastal communities, and is depicted in **Figures 3.3.3.1** and **3.3.3.2**. The three indices are poverty, population composition, and personal disruptions. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Indicators such as increased poverty rates for different groups; more single female-headed households; more households with children under the age of 5; and disruptions like higher separation rates, higher crime rates, and unemployment all are signs of populations experiencing vulnerabilities. The data used to create these indices are from the 2005-2009 American Community Survey estimates at the U.S. Census Bureau. The thresholds of 1 and ½ standard deviation are the same for these standardized indices. Again, for those communities that exceed the threshold for all indices it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

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

With regard to social vulnerabilities, the following South Atlantic and Gulf communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figure 3.3.3.1**): Bayou La Batre, Alabama; Cocoa, Fort Pierce, Miami and Stuart in Florida; Golden Meadow and Grand Isle in Louisiana; and Wanchese, North Carolina. The communities of Bayou La Batre and 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.

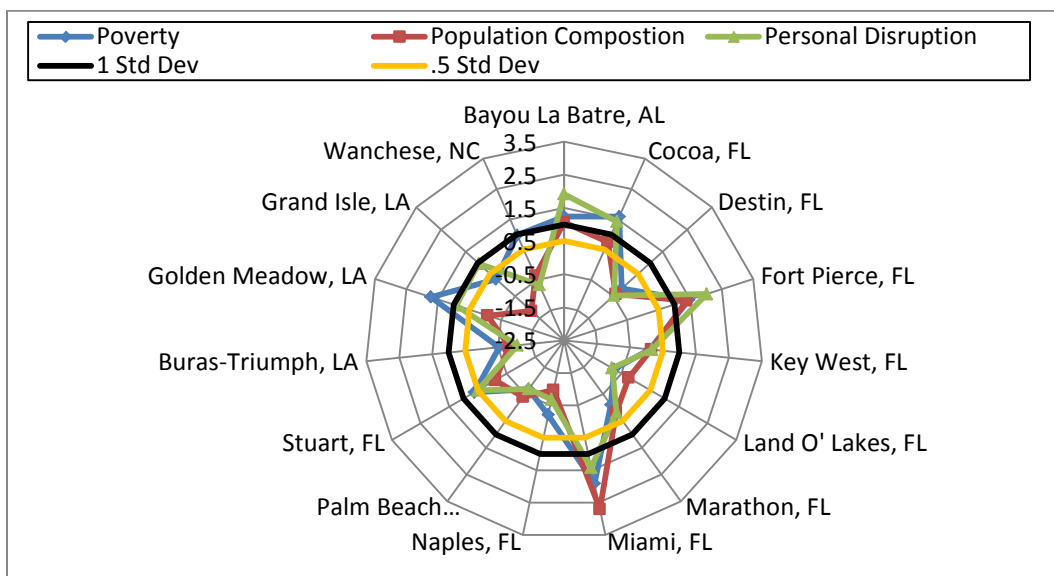


Figure 3.3.3.1. Social vulnerability indices for fifteen communities with the top regional quotients for coastal pelagics in the Gulf and South Atlantic regions. Source: SERO Social Indicator Database 2013

With regard to social vulnerabilities for the Mid-Atlantic Region, the following communities exceed the threshold of 0.5 standard deviation for at least one of the social vulnerability indices (**Figure 3.3.3.2**): Norfolk, Virginia; Hampton, Virginia; Chincoteague, Virginia; and Freeport, New York. The Virginia communities of Norfolk and Hampton exceed at least two thresholds on all three social vulnerability indices, but no communities exceed thresholds of all three indices. These communities are expressing substantial vulnerabilities and may be susceptible to further effects from any regulatory change depending upon the direction and extent of that change.

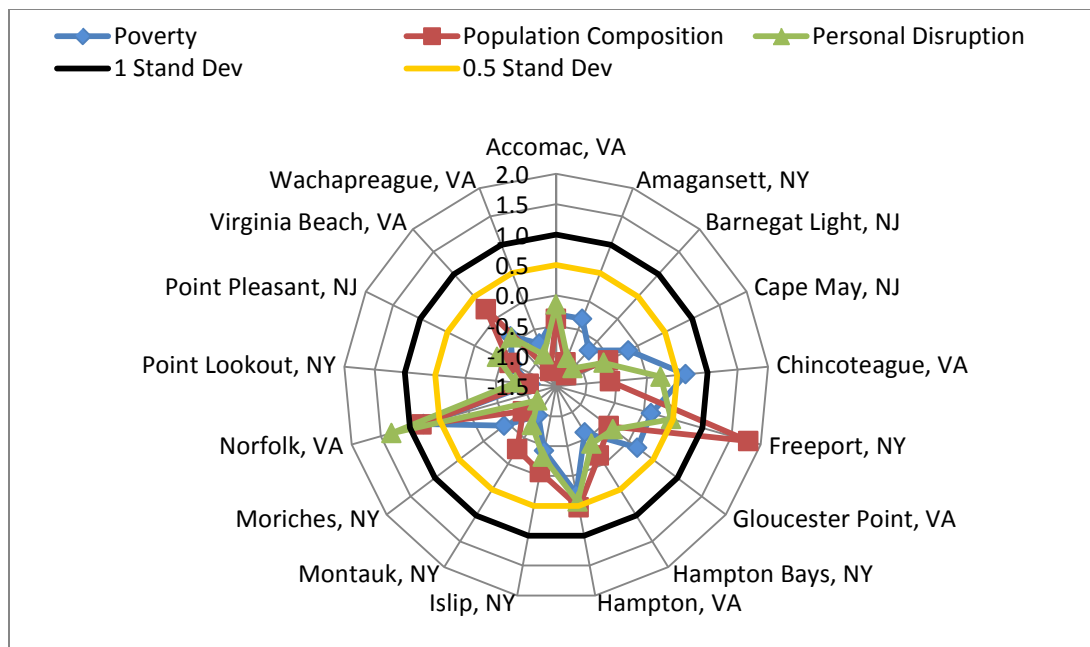


Figure 3.3.3.2. Social vulnerability indices for fifteen communities with the top regional quotients for coastal pelagics in the Mid-Atlantic region. Source: SERO Social Indicator Database 2013

While 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 framework amendment. No adverse human health or environmental effects are expected to accrue to this framework amendment, nor are these measures expected to result in increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons.

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

Finally, the general participatory process used in the development of fishery management measures (e.g., public hearings, and open South Atlantic, Mid-Atlantic and Gulf Council meetings) provides 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. Additionally, to provide individuals in the Mid-Atlantic region an opportunity to comment on the proposed actions, information was publicized in the Mid-Atlantic region about public hearings dates and locations, briefing materials and presentations that were available online, and information on how to submit written comments (via mail, fax, and email).

3.4 Administrative Environment

3.4.1 The Fishery Management Process and Applicable Laws

3.4.1.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens 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 Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending 200 nautical miles 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 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 Gulf Council is responsible for fishery resources in federal waters of the Gulf of Mexico. These waters extend to 200 nautical miles offshore from the nine-mile seaward boundary of the states of Florida and Texas, and the three-mile seaward boundary of the states of Alabama, Mississippi, and Louisiana. The Gulf Council consists of 17 voting members, 11 of whom are appointed by the members appointed by the Secretary, the NMFS Regional Administrator, and one each from each of five Gulf states marine resource agencies. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), U.S. Department of State, and Gulf States Marine Fisheries Commission.

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 miles 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, U.S. Department of State, USCG, and Atlantic States Marine Fisheries Commission.

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 Councils use their respective Scientific and Statistical Committees 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, 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 few exceptions for discussing personnel or legal matters, 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.

3.4.1.2 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 (GSMFC) and the Atlantic States Marine Fisheries Commission (ASMFC) in management of marine fisheries. These commissions were created to coordinate state regulations and develop management plans for interstate fisheries. The ASMFC also has a management plan for Spanish mackerel harvest, and many of the South Atlantic and Mid-Atlantic states have adopted the plan recommendations for Spanish mackerel harvest in state waters.

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/>

3.4.1.3 Enforcement

Both the NMFS Office for Law Enforcement (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.

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Modify the Annual Catch Limit (ACL) for Atlantic migratory group Spanish mackerel

Alternative 1 (No Action). Retain the ACL, optimum yield (OY), and recreational annual catch target (ACT) for Atlantic migratory group Spanish mackerel:

ACL = OY = ABC = 5.69 million pounds (mp)

Commercial ACL (55%) = 3.13 mp

Recreational ACL (45%) = 2.56 mp

Recreational ACT = 2.32 mp

Preferred Alternative 2. Revise the ACL (including sector ACLs), OY, and recreational ACT for Atlantic migratory group Spanish mackerel for 2014-2016. The ABC recommended by the SSC is 6.063 mp. Set ACL = ABC, and the recreational ACT = $ACL[(1-PSE) \text{ or } 0.5]$, whichever is greater.

ACL = OY = ABC = 6,063,000 lbs (6.063 mp)

Commercial ACL (55%) = 3,330,000 lbs (3.330 mp)

Recreational ACL (45%) = 2,727,000 lbs (2.727 mp)

Recreational ACT = 2,364,388 lbs (2.364 mp)

4.1.1 Biological Effects

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established an acceptable biological catch (ABC) control rule for Atlantic migratory group Spanish mackerel. In accordance with National Standard (NS) 1 guidelines, the control rule takes into account scientific and data uncertainty. The South Atlantic Fishery Management Council (South Atlantic Council)'s Scientific and Statistical Committee (SSC) reviewed the 2012 assessment in April 2013 and again in October 2013, and determined the Atlantic group Spanish mackerel stock is neither overfished nor undergoing overfishing.

The SSC is the responsible entity for recommending an ABC for managed species. Section 600.310(b)(2)(v)(B) of the NS 1 guidelines state that "each SSC shall provide its Regional Fishery Management Council recommendations for ABC as well as other scientific advice, as described in Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) section 302(g)(1)(B)." Because the ABC is recommended by the SSC based on the approved ABC control rule, and was accepted by the South Atlantic Council at their September

2013 meeting, no additional alternatives are presented for choosing an ABC. The ABC is an established value from which other management references points such as the ACL, OY, and ACT are based. The new ABC recommendation and subsequent proposed annual ACLs are based on biologically sound principals and an ABC control rule accepted by the SSC and the South Atlantic Council. As the new ABC recommended by the SSC is larger than the current ABC in **Alternative 1 (No Action)**, a corresponding increase in the ACLs may be justified.

Alternative 1 (No Action) would maintain the current harvest limit (the total ACL), which would cap total harvest at 5.69 million pounds (mp). **Alternative 1 (No Action)** would not update the ACL for Atlantic migratory group Spanish mackerel, and the total ACL and OY would remain. **Preferred Alternative 2** would update the ACL and OY based on the ABC recommended by the SSC resulting in the total ACL increasing to 6.063 mp. **Preferred Alternative 2** would specify the ACL and OY using the status quo formula of $ACL=ABC=OY$, which was established in Amendment 18 to the CMP FMP.

Because **Alternative 1 (No Action)** would constrain harvest to a lower level than **Preferred Alternative 2**, the biological benefits under **Alternative 1 (No Action)** would be expected to be greater than **Preferred Alternative 2**. However, results of the most recent assessment for the Atlantic migratory group of Spanish mackerel indicate the stock is not overfished nor undergoing overfishing. Therefore, there is no biological need to constrain harvest at a level lower than that determined to be appropriate by the SSC.

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) NS 1 establishes the relationship between conservation and management measures, preventing overfishing, and achieving OY from each stock, stock complex, or fishery. The NS 1 guidelines discuss the relationship of the overfishing limit (OFL) to the maximum sustainable yield (MSY) and ACT or ACL to OY. The OFL is an annual amount of catch that corresponds to the estimate of maximum fishing mortality threshold applied to a stock or complex's abundance; MSY is the long-term average of such catches. The ACL is the limit that triggers accountability measures (AMs), and ACT, if specified, would be the management target for a species. Management measures for a species should, on an annual basis, prevent the ACL from being exceeded.

The long-term objective is to achieve OY through annual achievement of an ACL or ACT. Amendment 18 to the CMP FMP set OY equal to the ACL. **Preferred Alternative 2** would maintain this formula, thereby providing greater assurance that OY is achieved, and overfishing is prevented.

The South Atlantic Council and their SSC have established an ABC control rule that takes into consideration scientific and management uncertainty to ensure catches are maintained below a MSY level. Setting the ACL equal to the ABC leaves no buffer between the two harvest parameters, which may increase risk that harvest could exceed the ABC. The South Atlantic Council considered alternatives in Amendment 18 to the CMP FMP that would set the ACL below the ABC but selected $ACL=ABC=OY$ as their preferred alternative because the South Atlantic Council's SSC ABC control rule takes into account scientific uncertainty. Furthermore,

the NS 1 Guidelines indicate ACL may typically be set very close to the ABC. Setting a buffer between the ACL and ABC would be appropriate in situations where there is uncertainty in whether or not management measures are constraining fishing mortality to target levels. The South Atlantic Council did not feel that there was a great deal of uncertainty in commercial landings, and recreational landings were below the recreational ACL being proposed.

ACTs, which are not required, can also be set below the ACLs to account for management uncertainty and provide greater assurance overfishing does not occur. An ACT is in place for the recreational sector to serve as a performance standard to measure the effectiveness of ACLs and AMs. According to the NS 1 Guidelines, if catch exceeds the ACL for a given stock or stock complex more than once in the last four years, the system of ACLs and AMs should be re-evaluated, and modified if necessary, to improve its performance and effectiveness (74 FR 3178). If the ACL were exceeded more than once over the course of four years, the South Atlantic Council would reassess the system of ACLs and AMs for Spanish mackerel.

With the new requirements for mackerel dealers to obtain a dealer permit, improved commercial monitoring mechanisms recently implemented, and improvements to dealer reporting, it is unlikely that repeated commercial ACL overages would occur. The Southeast Fisheries Science Center (SEFSC) worked with NMFS Southeast Regional Office (SERO), the Gulf of Mexico Fishery Management Council (Gulf of Mexico Council), and South Atlantic Council to develop a Joint Dealer Reporting Amendment (GMFMC/SAFMC 2013a), which will be effective August 7, 2014. The Joint Dealer Reporting Amendment is expected to enhance reporting of commercial data by requiring dealers have a federal permit to purchase mackerel. Further, the Joint Dealer Reporting Amendment will increase required reporting frequency for dealers to once per week, and requires a single dealer permit for all finfish dealers in the Southeast Region. Currently there is no dealer permit requirement for CMP species, but the new regulations will require dealers who purchase CMP species to obtain the universal dealer permit. Dealers will not be allowed to purchase Spanish mackerel unless they are current with reporting their previous week's purchases.

The Commercial Landings Monitoring (CLM) system was implemented in June 2012 and is now being used to track commercial landings of federally managed fish species. This system is able to track individual dealer reports, track compliance with reporting requirements, project harvest closures using five different methods, and analyze why ACLs are exceeded. The CLM performs these tasks by taking into account: 1) spatial boundaries for each stock based on fishing area; 2) variable quota periods such as overlapping years or multiple quota periods in one year; and 3) overlapping species groups for single species as well as aggregated species. Data sources for the CLM system include the Standard Atlantic Fisheries Information System for Georgia and South Carolina, and the Bluefin Data file upload system for Florida and North Carolina. The CLM system is also able to track dealer reporting compliance with a direct link to the permits database in SERO.

The CLM and the new dealer reporting requirements constitute major improvements to how commercial fisheries are monitored, and go far beyond monitoring efforts that were in place

when the NS 1 guidelines were developed. The new CLM quota monitoring system and actions in the Joint Generic Dealer Reporting Amendment (GMFMC/SAFMC 2013a) are expected to provide more timely and accurate data reporting and would thus reduce the incidence of commercial quota overages.

In early 2013, a new headboat electronic reporting system came online and headboats are reporting their landings electronically rather than through paper logbooks. Additionally, the Councils jointly developed and approved generic amendments, which have been implemented by NMFS, requiring all headboats to report their landings on a weekly basis using the new electronic reporting system (GMFMC 2013d; GMFMC/SAFMC 2013c). The SEFSC is also developing an electronic reporting system for charter boats operating in the Southeast Region. When the charterboat reporting system is close to being finalized, the Councils would develop an amendment that would require electronic reporting for charter boats with a set reporting frequency. These recreational harvest-monitoring efforts could substantially increase the accuracy and timeliness of in-season reporting and reduce the risk of recreational ACL overages, which would be biologically beneficial for the Spanish mackerel stock. Therefore, there is a low risk of exceeding the increased ACL, and setting ACL equal to ABC is appropriate.

Alternative 1 (No Action) and **Preferred Alternative 2** are unlikely to result in any direct adverse impacts on protected habitat areas of particular concern (HAPCs). This alternative is likely to perpetuate the existing level of risk to Endangered Species Act (ESA)-listed species. Although **Preferred Alternative 2** would increase the ACL from the status quo, this option would not change current fishing practices for Spanish mackerel. An increase in the ACL would increase fishing opportunities for Spanish mackerel without negatively affecting the Spanish mackerel stock. Total harvest would be constrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely the action would result in significantly increased fishing effort for Spanish mackerel; therefore, no adverse biological impact on protected species or HAPCs is expected under this action.

The actions in this framework amendment pertain to the harvest of Spanish mackerel and are not expected to have impacts on food web dynamics or ecosystem function.

4.1.2 Economic Effects

In principle, ACL increases for the Atlantic migratory group of Spanish mackerel would be accompanied by increases in economic benefits as more revenues (and possibly profits) would be derived by the commercial sector from increases in landings and as more fishing opportunities would be available to the recreational sector. Both short-term and long-term economic consequences would ensue from an increase in the ACL.

Since the 2002/2003 fishing season, the commercial sector has exceeded its current ACL of 3.13 mp for Atlantic migratory group Spanish mackerel every season except the 2007/2008 season (**Table 3.3.1**). Although there is an AM that would, in effect, close commercial fishing for Spanish mackerel when the ACL is met or predicted to be met, no closure has been implemented in the last few years because quota monitoring reports did not show the ACL being met before

the end of the fishing year. If commercial landings remained below the ACL in the next few years, or no quota closures are implemented even if the ACL is exceeded, then both **Alternative 1 (No Action)** and **Preferred Alternative 2** would have about the same short-term economic implications for the commercial sector. However, the **Preferred Alternative 2** would allow commercial vessels more time to harvest at a higher trip limit before 75% of the ACL is reached. This would lead to higher revenues and profits per trip during that extra time before the lower trip limit applies. In the event that quota closures are implemented, as is more likely under the new reporting requirements, vessel revenues would likely be higher under the **Preferred Alternative 2** as there would likely be extra fishing days afforded by the higher ACL even under a lower trip limit. Because the stock is not overfished (and not undergoing overfishing), no payback would be required in the case of quota overages.

As shown in **Table 3.3.2**, the recreational sector has not exceeded its current ACL of 2.56 mp from the 2000/2001 fishing season through the 2010/2011 fishing season. If recreational harvests of Atlantic migratory group Spanish mackerel remained at about the same level as the last ten years, both **Alternative 1 (No Action)** and **Preferred Alternative 2** would have the same short-term economic effects on the recreational sector. Further, **Preferred Alternative 2** would increase the recreational ACL, thus providing more assurance that the AM, which would reduce the following year's season or bag limit, would not be triggered. Given the historically low recreational harvests of Atlantic migratory group Spanish mackerel, the effects of **Preferred Alternative 2** would likely remain as potential economic benefits for quite some time in the future. In the rather remote possibility that harvest overages occur in the recreational sector, no payback would be required as the stock is not overfished.

Considering that Atlantic migratory group Spanish mackerel are not overfished and not undergoing overfishing, the economic benefits (should they occur) under the **Preferred Alternative 2** would likely remain in the medium term and possibly in the long term as well. Future stock assessments would provide some guidance on whether the potential benefits under the **Preferred Alternative 2** would hold true in the long term.

4.1.3 Social Effects

Changes in the ACL for any stock would not directly affect resource users unless the ACL is met or exceeded, in which case AMs that restrict or close harvest could negatively affect the commercial fleet, for-hire fleet, and private anglers. In general, the higher the ACL, the greater the short-term social and economic benefits that would be expected to accrue, assuming information is up-to-date and accurate in order to allow sustainable harvest. Adhering to harvest below the OFL designated by the SSC would result in net long-term positive social and economic benefits. Additionally, adjustments to an ACL based on updated information from a stock assessment would be the most beneficial in the long term to fishermen and communities, because ACLs would be based on the current conditions.

Alternative 1 (No Action) would not incorporate the results of the recent stock assessment and the current ACL may not best reflect the actual health of the resource. Additionally, this alternative could prevent fish that could be harvested from being landed, which would eliminate

the social benefits associated with economic benefits of achieving OY. **Preferred Alternative 2** would increase and update the ACL based on the best information available, which would be beneficial to fishermen by allowing additional Spanish mackerel to be harvested but without negatively affecting the stock.

Figure 2.2 shows that in the last few fishing years, commercial landings have exceeded the proposed commercial ACLs for both alternatives. However, **Figure 2.3** illustrates that recreational landings are lower than the proposed recreational ACLs for both alternatives in this action. Because the current AMs do not require a payback of any sector overages if the total ACL is not exceeded because the stock is not overfished, no negative effects on the commercial fleet would be expected. However, in-season closures for the commercial fleet could affect some businesses and communities that depend on access to the Atlantic migratory group Spanish mackerel resource.

4.1.4 Administrative Effects

Administrative impacts of this action are likely to be minimal. **Alternative 1 (No Action)** could result in slightly higher administrative impacts because the lower ACLs are more likely to cause AMs to be triggered in-season, which would require development of outreach materials and internal agency documents to close the commercial sector and assess whether or not the recreational ACL has been exceeded. **Preferred Alternative 2** would not result in significant additional administrative cost or time burdens other than notifying fishery participants of the increase in the sector ACLs and continued monitoring of the sector ACLs. The burden on law enforcement would not change under either alternative because commercial quota closures implemented when the commercial ACLs are projected to be met are currently enforced.

4.2 Action 2. Modify the Annual Catch Limit (ACL) for Gulf migratory group Spanish mackerel

Alternative 1 (No Action). Retain the current ACL for Gulf migratory group Spanish mackerel:

ACL= ABC =5.15 mp (commercial and recreational sectors combined into a single Gulf-wide ACL).

Preferred Alternative 2. Revise ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 as shown below, and set ACL = ABC.

Year	ABC	Total ACL
2014-2015	12.7 mp	12.7 mp
2015-2016	11.8 mp	11.8 mp
2016-2017	11.3 mp	11.3 mp

4.2.1 Biological Effects

Spanish mackerel are typically caught at the ocean surface and therefore neither hook-and-line nor run-around gillnet gear typically encounter bottom habitat. Fishing gear still have the potential to snag and entangle bottom structures and cause tear-offs or abrasions (Barnette 2001). If gear is lost or improperly disposed of, it can entangle marine life. Entangled gear often becomes fouled with algal growth. If fouled gear becomes entangled on corals, the algae may eventually overgrow and kill the coral. If an increase in the ACL for Gulf of Mexico (Gulf) migratory group Spanish mackerel results in an increase in overall fishing effort, the amount of fishing gear lost in pursuit of Spanish mackerel may also increase.

Amendment 18 to the CMP FMP established an ABC control rule for Gulf migratory group Spanish mackerel. The ABC is recommended by the SSC based on the approved ABC control rule, and was accepted by the Gulf of Mexico Fishery Management Council (Gulf Council). Because the current management strategy has the ACL set equal to the ABC, no other alternatives are presented for explicitly choosing an ABC. As the new ABC recommended by the SSC is larger than the current ABC, a corresponding increase in the ACLs may be justified, since there is currently no buffer between ABC and ACL for Gulf migratory group Spanish mackerel.

Management actions that affect the biological environment mostly relate to the impacts of fishing on a species' population size, life history, and the role of the species within its habitat. The actions in this amendment pertain to the harvest of Spanish mackerel and are not expected to have impacts on food web dynamics or ecosystem function.

Removal of fish from the population through fishing can reduce the overall population size if fishing mortality is not maintained at sustainable levels. However, biomass is expected to remain stable if fishing effort restricts catch levels to the yield at F_{MSY} . **Alternative 1 (No Action)** would not update ACLs based on results from the recent stock assessment, and would therefore not result in a change to the current biological environment. **Preferred Alternative 2** proposes to increase the ACL, which could lead to additional removals from the population. **Preferred Alternative 2** would employ the same formula as specified in CMP Amendment 18 (GMFMC/SAFMC 2011) and set the $ACL = ABC$.

The Gulf Council and their SSC have established an ABC control rule that takes into consideration scientific and management uncertainty to ensure catches are maintained below a MSY level. Setting the ACL equal to the ABC leaves no buffer between the two harvest parameters, which may increase risk that harvest could exceed the ABC. The Gulf Council considered alternatives in Amendment 18 to the CMP FMP that would set the ACL below the ABC but selected $ACL = ABC$ as their preferred alternative because they thought both current measures, and those proposed in the near future, would be sufficient to ensure the stock ACL is not exceeded.

The NS 1 Guidelines indicate ACL may typically be set very close to the ABC. Setting a buffer between the ACL and ABC would be appropriate in situations where there is uncertainty in whether management measures are constraining fishing mortality to target levels. As detailed in Section 4.1.1 of this amendment, setting ACL equal to ABC is appropriate because recent Council actions have improved the ability of NMFS to constrain landings within the ACL.

Alternative 1 (No Action) and **Preferred Alternative 2** are unlikely to result in any direct adverse impacts on protected species such as endangered or threatened whales, sea turtles, corals, or protected HAPCs. Although **Preferred Alternative 2** would increase the ACL from the status quo, this option would not change current fishing practices for Spanish mackerel. An increase in the ACL would increase fishing opportunities for Spanish mackerel without negatively affecting the Spanish mackerel stock. Total harvest would be constrained by the commercial and recreational ACLs, and AMs would still be used to help prevent overfishing. It is unlikely the action would result in significantly increased fishing effort for Spanish mackerel; therefore, no adverse biological impact on protected species or HAPCs is expected under this action.

4.2.2 Economic Effects

Alternative 1 (No Action) would maintain a Gulf migratory group Spanish mackerel ACL of 5.15 mp and would not be expected to result in changes to the harvest or other customary uses of Gulf migratory group Spanish mackerel. Therefore, economic effects are not expected to result from **Alternative 1 (No Action)**. **Preferred Alternative 2** would increase the Gulf migratory group Spanish mackerel ACL to 12.7 mp in 2014/2015. In 2015/2016 and 2016/2017, **Preferred Alternative 2** would set the ACL to 11.8 mp and 11.3 mp, respectively. Although ACL increases are typically expected to result in direct economic benefits stemming from

additional fishing opportunities, **Preferred Alternative 2** would not be expected to result in economic effects in the future due to the relative magnitude of Gulf migratory group Spanish mackerel ACL and observed landings. Between 2000 and 2011, Gulf migratory group Spanish mackerel landings averaged 3.93 mp annually. During the same time interval, maximum harvest levels were 4.88 mp. These values are all well below the 5.15 mp current ACL. It is therefore highly unlikely that economic benefits that could result from ACL increases under consideration in **Preferred Alternative 2** would materialize. In the future, should commercial and recreational fishermen elect to take advantage of the additional fishing opportunities provided by **Preferred Alternative 2**, economic benefits proportional to the ACL increase could be realized.

Considering that Gulf migratory group Spanish mackerel are not overfished and not undergoing overfishing, the economic benefits (should they occur) under the **Preferred Alternative 2** would likely remain in the medium term and possibly in the long term as well. Future stock assessments would provide some guidance on whether the potential benefits under **Preferred Alternative 2** would hold true in the long term.

4.2.3 Social Effects

The general social effects of changing ACLs and associated AMs are discussed in Section 4.1.3. **Alternative 1 (No Action)** would not incorporate the results of the recent stock assessment and under this alternative, and therefore, the current Gulf migratory group Spanish mackerel ACL may not best reflect the stock status at this time. Additionally, this alternative could prevent fish from being landed, which would eliminate the social and economic benefits associated with achieving OY. **Preferred Alternative 2** would increase and update the ACL based on the best scientific information available, which would be beneficial to fishermen by allowing additional harvest of Spanish mackerel without negatively affecting the stock.

Overall, landings of Gulf migratory group Spanish mackerel usually do not meet the current ACL under **Alternative 1 (No Action)**. The proposed increase in the ACL under **Preferred Alternative 2** is not expected to change fishing behavior or access to the resource, and would likely be beneficial to the fleet while maintaining sustainable harvest.

4.2.4 Administrative Effects

Administrative impacts of this action are likely to be minimal. **Alternative 1 (No Action)** could result in slightly higher administrative impacts because the lower ACLs are more likely to cause AMs to be triggered in-season, which would require development of outreach materials and internal agency documents to close the commercial sector and assess whether the recreational ACL has been exceeded. However, landings have been well below the current ACL and no closures have been implemented. **Preferred Alternative 2** would increase the ACL, without resulting in significant additional administrative costs or time burdens, other than notifying fishery participants of the increase in, and continued monitoring of, the ACLs. The burden on law enforcement would not change under either alternative since commercial quota closures implemented when the commercial ACLs are projected to be met are currently enforced.

Chapter 5. Councils' Choice for the Preferred Alternatives

5.1 Action 1. Modify the Annual Catch Limit (ACL) for Atlantic migratory group Spanish mackerel

5.1.1 Public Comments and Recommendations

All public comment received indicated support for **Preferred Alternative 2**.

5.1.2 Councils' Choice for Preferred Alternative

The Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council (Councils) selected **Alternative 2** as **Preferred** for Action 1. The alternative would specify the following for Atlantic migratory group Spanish mackerel until modified:

Preferred Alternative 2. Revise the ACL (including sector ACLs), OY, and recreational ACT for Atlantic migratory group Spanish mackerel for 2014-2016. The ABC recommended by the SSC is 6.063 mp. Set $ACL = ABC$, and the recreational $ACT = ACL[(1-PSE) \text{ or } 0.5]$, whichever is greater.

$ACL = OY = ABC = 6,063,000 \text{ lbs (6.063 mp)}$
Commercial ACL (55%) = 3,330,000 lbs (3.330 mp)
Recreational ACL (45%) = 2,727,000 lbs (2.727 mp)
Recreational ACT = 2,364,388 lbs (2.364 mp)

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established an acceptable biological catch (ABC) control rule for Atlantic migratory group Spanish mackerel. In accordance with National Standard 1 guidelines, the control rule take into account scientific and data uncertainty that may exist for coastal migratory pelagics. **Preferred Alternative 2** is consistent with the ABC control rule and how the Councils have chosen to specify the annual catch limit (ACL) and optimum yield (OY) for coastal migratory pelagic species.

The South Atlantic Fishery Management Council (South Atlantic Council) specifically noted that: there is a high degree of confidence with the Atlantic migratory group Spanish mackerel stock status (not overfished nor undergoing overfishing), the current biomass of the stock is high ($SSB/MSST = 2.29$), exploitation is low ($F/F_{MSY} = 0.53$), and the stock has not experienced overfishing over the assessment period. The South Atlantic Council's Scientific and Statistical Committee (SSC) agreed that use of a less risk-averse reference point such as the equilibrium maximum sustainable yield, (6.063 million pounds (mp)) as the overfishing limit for 2014-2016 was justified, and that due to the exploitation history and stock status, the reference point would

not significantly increase the probability of overfishing during these years. The Councils concluded setting the ACL at the values provided by the SSC was sufficiently conservative while addressing the economic and social needs of the recreational and commercial fishing sectors.

The Councils concluded **Preferred Alternative 2** best meets the purpose of revising the Atlantic migratory group Spanish mackerel ABC, OY, ACL, sector ACLs, and recreational ACT, and addresses the need to ensure the Atlantic migratory group Spanish mackerel ACL is based upon the best available science. Further, **Preferred Alternative 2** enhances social and economic benefits to fishermen and fishing communities that utilize the Atlantic migratory group Spanish mackerel resource. **Preferred Alternative 2** also best meets the objectives of the joint CMP FMP, as amended, while complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and other applicable law.

5.2 Action 2. Modify the Annual Catch Limit (ACL) for Gulf of Mexico migratory group Spanish mackerel

5.2.1 Public Comments and Recommendations

All public comment received indicated support for **Preferred Alternative 2**.

5.2.2 Councils' Choice for Preferred Alternative

The Councils selected **Alternative 2** as **Preferred** for Action 2. The alternative would specify the following for Gulf migratory group Spanish mackerel until modified:

Preferred Alternative 2. Revise ACL for Gulf migratory group Spanish mackerel for 2014 through 2016 as shown below, and set ACL = ABC.

Table 5.1. ABCs and ACLs for 2014-2016 from the SEDAR 28 Gulf Spanish mackerel stock assessment and the Gulf Council/SSC-approved projections for Gulf migratory group Spanish mackerel. 'mp' = million pounds.

Fishing Year (April-March)	ABC	Total ACL
2014-2015	12.7 mp	12.7 mp
2015-2016	11.8 mp	11.8 mp
2016-2017	11.3 mp	11.3 mp

Amendment 18 to the CMP FMP (GMFMC/SAFMC 2011) established an ABC control rule for Gulf of Mexico (Gulf) migratory group Spanish mackerel. In accordance with National Standard 1 guidelines, the control rule takes into account scientific and data uncertainty that may exist for coastal migratory pelagics. **Preferred Alternative 2** is consistent with the ABC control rule and how the Councils have chosen to specify ACL and OY for coastal migratory pelagic species.

The Councils concluded **Preferred Alternative 2** best meets the purpose of revising the Gulf migratory group Spanish mackerel ACL, and addresses the need to ensure the Gulf migratory group Spanish mackerel ACL is based upon the best available science. Further, **Preferred Alternative 2** enhances social and economic benefits to fishermen and fishing communities that

utilize the Gulf migratory group Spanish mackerel resource. **Preferred Alternative 2** also best meets the objectives of the joint CMP FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

Chapter 6. Cumulative Effects

As directed by the National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct impacts, but cumulative impacts of actions as well. The NEPA defines a cumulative impact as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time” (40 CFR 1508.7). Cumulative effects can be either additive or synergistic. A synergistic effect occurs when the combined effects are greater than the sum of the individual effects. The following are some past, present, and future actions that could affect the environment in the area where the Coastal Migratory Pelagics (CMP) fishery is prosecuted. The history of management for the CMP fishery can be found in **Appendix C**.

One immediate impact area would be the federal 200-mile limit of the Atlantic coasts off North Carolina, South Carolina, Georgia, and east Florida to Key West, which is the South Atlantic Fishery Management Council’s (South Atlantic Council) area of jurisdiction. The South Atlantic Council also manages the CMP Fishery through the mid-Atlantic region. The other immediate impact area would be the federal 200-mile limit in the Gulf of Mexico (Gulf) off Texas, Louisiana, Mississippi, Alabama, and Florida, which is the Gulf of Mexico Fishery Management Council’s (Gulf Council) area of jurisdiction. The ranges of affected species are described in **Section 3.2.1**.

Past Actions

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 years. The oil spill affected more than one-third of the Gulf area from western Louisiana east to the Panhandle of Florida and south to the Campeche Bank in Mexico. The impacts of the Deepwater Horizon MC252 oil spill on the physical environment are expected to be significant and may be long-term. Oil was dispersed on the surface, and because of the heavy use of dispersants, oil was also documented as being suspended within the water column, some even deeper than the location of the broken well head. Floating and suspended oil washed onto shore in several areas of the Gulf of Mexico (Gulf) as well as non-floating tar balls. Whereas suspended and floating oil degrades over time, tar balls are more persistent in the environment and can be transported hundreds of miles. In a study conducted during the summer of 2011, University of South Florida researchers found more unhealthy fish in the area of the 2010 oil spill compared to other areas. Although some scientists have suggested that these incidences of sick fish may be related to the spill, others have pointed out that there is no baseline from which to judge the prevalence of sick fish, and no connection has been determined. Studies are continuing to check whether the sick fish suffer from immune system and fertility problems (Tampa Bay Times 2012).

The highest concern is that the oil spill may have impacted spawning success of species that spawn in the summer months, either by reducing spawning activity or by reducing survival of the eggs and larvae. The oil spill occurred during spawning months for both king and Spanish mackerel; however, both species have a protracted spawning period that extends beyond the months of the oil spill. Further, mackerels are migratory and move into specific areas to spawn. Atlantic king mackerel, for example, move from the northern portion of their range to southern areas for the spawning season. Eggs and larvae spawned in the southern area are carried north by the Gulf stream, allowing them full access to a wide range of suitable juvenile habitats. In the Gulf, that movement is from Mexico and south Florida to the northern Gulf (Godcharles and Murphy 1986). However, environmental factors, such as temperature can change the timing and extent of their migratory patterns (Williams and Taylor 1980). The possibility exists that mackerels would be able to detect environmental cues when moving toward the area of the oil spill that would prevent them from entering the area. These fish might then remain outside the area where oil was in high concentrations, but still spawn.

Effects on the physical environment, such as low oxygen, could lead to impacts on the ability of larvae and post-larvae to survive, even if they never encountered oil. In addition, oil exposure could create sub-lethal effects on the eggs, larva, and early life stages. A study by Incardona et al. (2014) indicated that embryos of bluefin tuna, yellowfin tuna, and amberjack exposed to environmentally realistic levels of hydrocarbons showed defects in heart function. Other studies of the effects of hydrocarbon are ongoing. The stressors could potentially be additive, and each stressor may increase susceptibility to the harmful effects of the other. If eggs and larvae were affected, impacts on harvestable-size coastal migratory pelagic fish may begin to be seen when the 2010-year class becomes large enough to enter the fishery and be retained. Spanish mackerel mature at 1-2 years (Powell 1975); therefore, a year class failure in 2010 may have been felt by the fishery as early as 2011 or 2012. However, no obvious decreases in CMP stocks in the Gulf have been recorded at this time.

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

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

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

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

Present Actions

Currently a formal consultation is underway for the CMP fishery, triggered by the listing in 2012 of the Carolina and South Atlantic distinct population segments (DPSs) of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) as endangered under the Endangered Species Act. Additionally, in December 2012, the National Marine Fisheries Service (NMFS) issued a proposal to list 82 coral species as threatened or endangered (seven species are found in the South Atlantic region) including a proposal to relist two *Acropora* species (elkhorn and staghorn coral) as endangered.

Generic amendments have been implemented requiring headboats in the South Atlantic and Gulf to report each week through electronic means (GMFMC 2013d; GMFMC/SAFMC 2013c). Regulations in the South Atlantic went into place on January 27, 2014, and regulations in the Gulf went into place on March 5, 2014. Weekly electronic reporting will also be required for federal dealers, now including CMP dealers (who previously did not have a permit or reporting requirement), starting August 7, 2014 (GMFMC/SAFMC 2013a).

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 13 species or species groups in the South Atlantic was prohibited before the end of the year due to annual catch limits (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

The following are actions affecting the CMP fishery that have been implemented recently or are expected to be implemented within the next year.

- Amendment 20A to the CMP FMP (GMFMC/SAFMC 2013b) contains actions that would prohibit some sale of king and Spanish mackerel harvested under the bag limit and would remove the income requirement for king and Spanish mackerel commercial permits.
- Amendment 20B would modify fishing years, trip limits, establish regional quotas for king and Spanish mackerel in the South Atlantic, adjust the framework, revise ACLs and establish regional allocations between the Gulf of Mexico and South Atlantic for cobia, and establish transit provisions. If both Framework Amendment 1 and Amendment 20B are implemented, the ACL increases proposed in this amendment would be divided based on the regional quotas specified in Amendment 20B.
- A South Atlantic framework action addresses allowing transfer at-sea of Spanish mackerel.
- A generic amendment will require for the first time a federal dealer permit (and associated reporting requirements) for individuals buying CMP species. Regulations will be effective on August 7, 2014.
- Amendment 24 would consider re-allocating allowable catch between the commercial and recreational sectors for Gulf group king mackerel and Atlantic group Spanish mackerel.
- Amendment 26 would consider establishing separate regional commercial permits for king and Spanish mackerel; currently, commercial permits are valid in both the Gulf of Mexico and South Atlantic regions.
- A stock assessment for South Atlantic and Gulf king mackerel will be completed in 2014, and the results could increase or decrease the available fish for harvest.
- A framework amendment considers modifying the system of quota and trip limit adjustments for Atlantic migratory group Spanish mackerel.

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 (Solomon et al. 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 affect biological factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. Currently, the level of impacts cannot be quantified, nor is the time frame known in which these impacts would occur. These climate changes could have significant effects on southeastern fisheries; however, the extent of these effects is not known at this time (IPCC 2007).

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, and 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 (Needham et al. 2012; Kennedy et al. 2002). 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 framework amendment are not expected to significantly contribute to climate change through the increase or decrease in the carbon footprint from fishing.

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. However, while these effects may be temporary, those fishing-related businesses whose profitability is marginal may go out of business if a hurricane strikes.

Monitoring

The effects of the proposed action are, and will continue to be, monitored through collection of landings data by NMFS, stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. Landings data for the recreational sector in the Gulf are collected through the Marine Recreational Information Program, NMFS' Headboat Survey, and the Texas Marine Recreational Fishing Survey. Commercial data are collected through trip ticket programs, port samplers, and logbook programs. Currently, a Southeast Data Assessment and Review assessment of king mackerel is scheduled to be completed in 2014. In response to the Deepwater Horizon MC252 incident, increased frequency of surveys of the recreational sector's catch and effort, along with additional fishery-independent information regarding the status of the stock, were conducted. This will

allow future determinations regarding the impacts of the Deepwater Horizon MC252 incident on various fishery stocks.

Overall Impacts Expected from Past, Present, and Future Actions

The cumulative biological, social and economic effects of past, present, and future actions may be described as limiting fishing opportunities in the short term, with some exceptions of actions that alleviate some negative social and economic impacts. The intent of these actions is to improve prospects for sustained participation in the respective fisheries over time and the proposed actions in this framework amendment are expected to result in some important long-term benefits to the commercial and for-hire fishing fleets, fishing communities and associated businesses, and private recreational anglers. The proposed changes in management for CMP species would contribute to changes in the fishery within the context of the current economic and regulatory environment at the local and regional level.

None of the impacts from the proposed management actions (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. None of the actions in Framework Amendment 1 are expected to have significant biological, social, or economic effects because, even though the actions could extend fishing opportunities, accountability measures are also considered and in place to ensure overfishing does not occur. None of the actions are expected to have impacts on food web dynamics or ecosystem function. Therefore, the cumulative effects of the actions proposed in Framework Amendment 1 are not expected to affect the magnitude of bycatch, diversity and ecosystem structure of fish communities, or safety at sea of fishermen targeting CMP species, and other species managed by the Gulf and South Atlantic Councils. Based on the cumulative effects analysis presented herein, the proposed actions would not have any significant cumulative impacts compared to 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
Ryan Rindone	GMFMC	IPT Lead/Fishery Biologist
Karla Gore	SERO /SF	IPT Lead/Fishery Biologist
Brian Chevront	SAFMC	Fishery Economist
Anik Clemens	SERO	Technical Writer and Editor
David Dale	SERO /HC	EFH Specialist
Assane Diagne	GMFMC	Economist
Susan Gerhart	SERO/SF	Fishery Biologist
David Keys	NMFS/SER	Regional NEPA Coordinator
Michael Jepson	SERO/SF	Anthropologist
Tony Lamberte	SERO/SF	Economist
Michael Larkin	SERO	Fishery Biologist
Ava Lasseter	GMFMC	Fishery Anthropologist
Jennifer Lee	SERO/PR	Fishery Biologist
Christopher Liese	SEFSC	Economist
Anna Martin	SAFMC	Coral Biologist
Christina Package-Ward	SERO/SF	Fishery Social Scientist
Katie Siegfried	SEFSC	Statistician
Carrie Simmons	GMFMC	Deputy Director
Monica Smit-Brunello	NOAA GC	Attorney Advisor
Jack McGovern	SERO/SF	Fishery Biologist
Gregg Waugh	SAFMC	Deputy Director

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 1

South Atlantic Fishery Management Council (Administrative Lead)

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

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Gulf of Mexico Fishery Management Council

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NMFS, Southeast Region

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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

Texas Parks and Wildlife Department

Alabama Department of Conservation and Natural Resources/Marine Resources Division

Louisiana Department of Wildlife and Fisheries

Mississippi Department of Marine Resources

Gulf States Marine Fisheries Commission

Atlantic States Marine Fisheries Commission

National Marine Fisheries Service

- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

Chapter 9. References

Atkinson L. P., D. W. Menzel, and K. A. E. Bush. 1985. Oceanography of the southeastern U.S. continental shelf. American Geophysical Union, Washington, DC.

Atlantic States Marine Fisheries Commission (ASMFC). 2012. Omnibus Amendment to the Interstate Management Plan for Spanish Mackerel, Spot, and Spotted Seatrout. ASMFC, Arlington, VA. Available at: http://www.asmfc.org/uploads/file/omnibusAmendment_TechAdd1A_Feb2012.pdf

Barnette, M.C. 2001. A review of the fishing gear utilized within the Southeast Region and their potential impacts on essential fish habitat. NOAA Technical Memorandum NMFS-SEFSC-449, 62pp.

Blanton, J. O., L. P. Atkinson, L. J. Pietrafesa, and T. N. Lee. 1981. The intrusion of Gulf Stream water across the continental shelf due to topographically-induced upwelling. Deep-Sea Research 28:393-405.

Brooks, D. A., and J. M. Bane. 1978. Gulf Stream deflection by a bottom feature off Charleston, South Carolina. Science 201:1225-1226.

Burdeau, C. and J. Reeves. 2012, APNewsBreak: Tests confirm oil came from BP spill. Published by the Associated Press on 6 September 2012 at 17:32 EDT. Available at: http://hosted2.ap.org/ZEBRA/98df8c7abf974deb9b6bf92f727c328d/Article_2012-09-06/id-2bc024be85d64e399c5529ce20cef665_on_11_September_2012.

Camilli, R., C. M. Reddy, D. R. Yoerger, B. A. S. Van Mooy, M. V. Jakuba, J. C. Kinsey, C. P. McIntyre, S. P. Sylva, and J. V. Maloney. 2010. Tracking Hydrocarbon Plume Transport and Biodegradation at Deepwater Horizon. Science 330(6001): 201-204.

Collette, B.B. and J.L. Russo. 1979. An introduction to the Spanish mackerels, genus *Scomberomorus*. p. 3-16. In E.L. Nakumua and H.R. Bullis (eds.) Proceedings of the Mackerel Colloquium. Gulf States Marine Fisheries Commission no. 4.

Dumas, C.F., J.C. Whitehead, J.E. Landry, and J.H. Herstine. 2009. Economic Impacts and Recreational Value of the North Carolina For-hire Fishing Fleet. North Carolina Sea Grant FRG Grant Report 07-FEG-05.

GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 1982. Joint fishery management plan for coastal migratory pelagic resources (mackerels) in the Gulf of Mexico and South Atlantic including environmental impact statement and regulatory impact review. Gulf of Mexico Fishery Management Council, Tampa,

Florida, and South Atlantic Fishery Management Council, Charleston, South Carolina. Available at: <http://safmc.net/Library/pdf/MackerelFMP.pdf>

GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 2011. Amendment 18 to the fishery management plan for coastal migratory pelagic resources in the Gulf of Mexico and Atlantic regions including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: http://safmc.net/Library/pdf/Final_CMP_Amend18.pdf

GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 2013a. Generic Dealer Amendment to the Fishery Management Plans in the Gulf of Mexico and South Atlantic Regions including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: http://www.gulfcouncil.org/docs/amendments/Dealer_Reporting_Amendment.pdf

GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 2013b. Amendment 20A to the fishery management plan for coastal migratory pelagic resources in the Gulf of Mexico and Atlantic regions including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_sa/cmp/2014/am20a/documents/pdfs/cmp_am20a_ea.pdf

GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 2013c. Joint South Atlantic/Gulf of Mexico Generic Charter/Headboat Reporting in the South Atlantic Amendment including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: http://sero.nmfs.noaa.gov/sustainable_fisheries/s_atl/2013/for_hire_reporting/documents/pdfs/for_hire_reporting_amend_final.pdf

GMFMC (Gulf of Mexico Fishery Management Council) /SAFMC (South Atlantic Fishery Management Council). 2013d. Framework Action to the Fishery Management Plans for Reef Fish Resources of the Gulf of Mexico and Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic Headboat Electronic Reporting Requirements including regulatory impact review and Regulatory Flexibility Act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida. Available at: <http://www.gulfcouncil.org/docs/amendments/Draft%20Electronic%20Reporting%20for%20Headboats%206-18-13.pdf>

Godcharles, M. F., and M. D. Murphy. 1986. Species profiles: life history and environmental requirements of coastal fishes and invertebrates (south Florida) -- king mackerel and Spanish mackerel. U. S. Fish and Wildlife Service Biological Report 82(11.58). U.S. Army Corps of Engineers TR EL-82-4. Vicksburg, Mississippi.

Gore, R. H. 1992. The Gulf of Mexico: A treasury of resources in the American Mediterranean. Pineapple Press. Sarasota, Florida.

Holland, S. M., A. J. Fedler, and J. W. Milon. 1999. The Operation and Economics of the Charter and Headboat Fleets of the Eastern Gulf of Mexico and South Atlantic Coasts. University of Florida Office of research, Technology, and Graduate Education. Report prepared for the National Marine Fisheries Service. Grant Number NA77FF0553.

Incardona, J.P., L. D. Gardnerb, T. L. Linbo, T. L. Brown, A. J. Esbaugh, E. M. Mager, J. D. Stieglitz, B. L. French, J. S. Labenia, C. A. Laetz, M. Tagal, C. A. Sloan, A. Elizur, D. D. Benetti, M. Grosell, B. A. Block, and N. L. Scholz. 2014. Deepwater Horizon crude oil impacts the developing hearts of large predatory pelagic fish. *Proceedings of the National Academy of Sciences of the United States of America* 111(15): 1510-1518.

IPCC (Intergovernmental Panel on Climate Change). 2007. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. M. L. Parry, O. F. Canziani, J. P. Palutikof, P. J. van der Linden, and C. E. Hanson (eds). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Jacob, S., P. Weeks, B. Blount, and M. Jepson. 2013. Development and evaluation of social indicators of vulnerability and resiliency for fishing communities in the Gulf of Mexico. *Marine Policy* 37:86-95.

Janowitz, G. S., and L. J. Pietrafesa. 1982. The effects of alongshore variation in bottom topography on a boundary current - topographically-induced upwelling. *Continental Shelf Research* 1:123-141.

Jepson, M., and L.L. Colburn. 2013. Development of social indicators of fishing community vulnerability and resilience in the U.S. Southeast and Northeast regions. NOAA Technical Memorandum NMFS-F/SPO-129.

Kennedy, V. S., R. R. Twilley, J. A. Kleypas, J. H. Cowan, and S. R. Hare. 2002. Coastal and marine ecosystems & global climate change. Report prepared for the Pew Center on Global Climate Change. 52p. Available at: http://www.c2es.org/docUploads/marine_ecosystems.pdf.

Kujawinski, E. B., M. C. Kido Soule, D. L. Valentine, A. K. Boysen, K. Longnecker, and M. C. Redmond. 2011. Fate of dispersants associated with the Deepwater Horizon Oil Spill. *Environmental Science and Technology* 45: 1298-1306.

Lee, T. N., C. Rooth, E. Williams, M. F. McGowan, A. F. Szmant, and M. E. Clarke. 1992. Influence of Florida Current, gyres and wind-driven circulation on transport of larvae and recruitment in the Florida Keys coral reefs. *Continental Shelf Research* 12:971-1002.

Lee, T. N., M. E. Clarke, E. Williams, A. F. Szmant, and T. Berger. 1994. Evolution of the Tortugas Gyre. *Bulletin of Marine Science* 54(3):621-646.

Leis, J. M. 1991. The pelagic stage of reef fishes: the larval biology of coral reef fishes. Pages 183-230 in P. F. Sale editor. *The ecology of fishes on coral reefs*. Academic Press, New York, NY.

Leise, C. and D.W. Carter. 2011. Collecting Economic Data from the For-Hire Fishing Sector: Lessons from a Cost and Earnings Survey of the Southeast U.S. Charter Boat Industry. 14 p. In Beard, T.D., Jr., A.J. Loftus and R. Arlinghaus (editors). *The Angler and the Environment*. American Fisheries Society. Bethesda, MD.

McEachran, J. D. and J. D. Fechhelm. 2005. *Fishes of the Gulf of Mexico. Volume 2* University of Texas Press, Austin.

Menzel D. W., editor. 1993. Ocean processes: U.S. southeast continental shelf. DOE/OSTI -- 11674. U.S. Department of Energy.

Needham, H., D. Brown, and L. Carter. 2012. Impacts and adaptation options in the Gulf coast. Report prepared for the Center for Climate and Energy Solutions. 38 p. Available at: <http://www.c2es.org/docUploads/gulf-coast-impacts-adaptation.pdf>.

NMFS (National Marine Fisheries Service). 2007. Biological Opinion on The Continued Authorization of Fishing under the Gulf of Fishery Management Plan for Coastal Migratory Pelagic Resources in the Atlantic and Gulf of Mexico. Protected Resources Division, Southeast Regional Office, St. Petersburg, Florida.

NMFS (National Marine Fisheries Service). 2009a. Fisheries Economics of the United States 2009. U.S. Depart. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-97. 158 p. Available on line at http://www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2009.html.

NMFS (National Marine Fisheries Service). 2009b. "Economic Value of Angler Catch and Keep in the Southeast United States: Evidence from a Choice Experiment." NOAA SEFSC SSRG.

Powell, D. 1975. Age, growth, and reproduction in Florida stocks of Spanish mackerel, *Scomberomorus maculatus*. Florida Department of Natural Resources. Florida Marine Resources Publication Number 5.

SAFMC (South Atlantic Fishery Management Council). 2011a. Comprehensive Annual Catch Limit Amendment for the South Atlantic Region with Final Environmental Impact Statement,

Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: <https://www.dropbox.com/s/mp3xwedsrarfpjn/Comp%20ACL%20Am%20101411%20FINAL.pdf>

SAFMC (South Atlantic Fishery Management Council). 2011b. Amendment 24 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Regulatory Flexibility Analysis, Regulatory Impact Review, and Fishery Impact Statement. South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: <http://www.safmc.net/Library/pdf/SGAmend24.pdf>

Schwartz, F. J. 1989. Zoogeography and ecology of fishes inhabiting North Carolina's marine waters to depths of 600 meters. Pages 335-374 *In* R. Y. George, and A. W. Hulbert, editors. North Carolina coastal oceanography symposium. U.S. Dep. Commerce, NOAA-NURP Rep. 89-2.

SEDAR 28. 2012. Southeast Data, Assessment, and Review Stock Assessment of South Atlantic Spanish Mackerel and Cobia. Available at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=28

SEDAR 28. 2013. Southeast Data, Assessment, and Review Stock Assessment of Gulf of Mexico Spanish Mackerel and Cobia. Available at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=28

Smith, N. P. 1994. Long-term Gulf-to-Atlantic transport through tidal channels in the Florida Keys. *Bulletin of Marine Science* 54:602-609.

Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K. B. Averyt, M. Tignor, and H. L. Miller. Intergovernmental Panel on Climate Change 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* Cambridge University Press, Cambridge, United Kingdom and New York, New York. Available at: http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm.

Sutton, S.G., R.B. Ditton, J.R. Stoll, and J.W. Milon. 1999. A cross-sectional study and longitudinal perspective on the social and economic characteristics of the charter and party boat fishing industry of Alabama, Mississippi, Louisiana, and Texas. Texas A&M Univ., College Station, TX. Memo. Rpt. 198 pp.

Tampa Bay Times article: USF study finds more sick fish in oil spill area than rest of Gulf of Mexico, January 14, 2012. Available at: <http://www.tampabay.com/news/environment/wildlife/article1210495.ece>

Vondruska, J. 2010. Fishery analysis of the commercial fisheries for eleven coastal migratory pelagic species. SERO-FSSB-2010-01. National Marine Fisheries Service, Southeast Regional Office. St. Petersburg, Florida.

Whitehead, J. C. 2006. "A comparison of contingent valuation method and random utility model estimates of the value of avoiding reductions in king mackerel bag limits." *Applied Economics* 38(15):1725-1735.

Wang, J. D., J. van de Kreeke, N. Krishnan, and D. Smith. 1994. Wind and tide response in Florida Bay. *Bulletin of Marine Science* 54:579-601.

Yeung, C., and M. F. McGowan. 1991. Differences in inshore-offshore and vertical distribution of phyllosoma larvae of *Panulirus*, *Scyllarus*, and *Scyllarides* in the Florida Keys in May-June, 1989. *Bulletin of Marine Science* 49:699-714.

Appendix A. Glossary

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

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

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

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

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

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

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

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

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

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

Constant F Rebuilding Strategy: A rebuilding strategy where the fishing mortality of an overfished species is held constant until stock biomass reached B_{MSY} 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 percentage of total fish discarded that do not survive being captured and released at sea.

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

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

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

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

F: Fishing mortality.

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

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

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

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

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

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

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

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

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

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

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

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

Framework: An established procedure within a fishery management plan that has been approved and implemented by NMFS, which allows specific management measures to be modified via a framework 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 fished either 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: percentage 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 that 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 part of the Allowable Biological Catch (ABC), which also considers bycatch.

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

Appendix B. Actions and Alternatives Considered but Rejected

No Actions or Alternatives were considered but rejected in this framework amendment.

Appendix C. History of Management

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (CMP FMP; GMFMC/SAFMC 1982), with 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 FMP treated king and Spanish mackerel as unit stocks in the Atlantic and Gulf of Mexico (Gulf). The FMP established allocations for the recreational and commercial sectors harvesting these stocks, and the commercial allocations were divided between net and hook-and-line fishermen.

FMP Amendments

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

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

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

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

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

- Extended the management area for Atlantic migratory groups of mackerels through the Mid-Atlantic Council's area of jurisdiction;
- Revised problems in the fishery and plan objectives;
- Revised the fishing year for Gulf Spanish mackerel from July-June to April-March;
- Revised the definition of "overfishing";

- Added cobia to the annual stock assessment procedure;
- Provided that the South Atlantic Fishery Management Council (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 of Mexico Fishery Management Council (Gulf Council) will be responsible for Gulf migratory groups;
- Continued to manage the two recognized Gulf migratory groups of king mackerel as one until management measures appropriate to the eastern and western migratory groups can be determined;
- Re-defined recreational bag limits as daily limits;
- Deleted a provision specifying that bag limit catch of mackerel may be sold;
- Provided guidelines for corporate commercial vessel permits;
- Specified that Gulf migratory group king mackerel may be taken only by hook-and-line and run-around gillnets;
- Imposed a bag and possession limit of two cobia per person per day;
- Established a minimum size of 12 in FL or 14 in TL for king mackerel and included a definition of "conflict" to provide guidance to the Secretary.

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

- Identified additional problems and an objective in the fishery;
- Provided for rebuilding overfished stocks of mackerels within specific periods;
- Provided for biennial assessments and adjustments;
- Provided for more seasonal adjustment actions;
- Allowed for Gulf migratory group king mackerel stock identification and allocation when appropriate;
- Provided for commercial Atlantic migratory group Spanish mackerel possession limits;
- Changed commercial permit requirements to allow qualification in one of three preceding years;
- Discontinued the reversion of the bag limit to zero when the recreational quota is filled;
- Modified the recreational fishing year to the calendar year; and
- Changed the minimum size limit for king mackerel to 20 in FL, and changed all size limit measures to 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 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 of Mexico and South Atlantic Councils' intent to evaluate the impacts of permanent jurisdictional boundaries between the Gulf of Mexico and South Atlantic Councils and development of separate FMPs for coastal pelagic species in these areas;
- Established a moratorium on commercial king mackerel permits until no later than October 15, 2000, with a qualification date for initial participation of October 16, 1995;
- Increased the income requirement for a king or Spanish mackerel permit to 25% of earned income or \$10,000 from commercial sale of catch or charter or head boat fishing in one of the three previous calendar years, but allowed for a one-year grace period to qualify under permits that are transferred;
- Legalized retention of up to five cut-off (damaged) king mackerel on vessels with commercial trip limits;
- Set an optimum yield target at 30% static spawning potential ratio 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 National Marine Fisheries Service (NMFS) or trip tickets from Florida; allowed transfer of gillnet endorsements to immediate family members (son, daughter, father, mother, or spouse) only; and prohibited the use of gillnets or any other net gear for the harvest of Gulf migratory group king mackerel north of an east/west line at the Collier/Lee County line;
- Increased the minimum size limit for Gulf migratory group king mackerel from 20 in to 24 in FL;
- Allowed the retention and sale of cut-off (damaged), legal-sized king and Spanish mackerel within established trip limits.

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

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

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

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

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

Amendment 15, with EA, implemented August 8, 2005, established an indefinite limited access program for the commercial king mackerel fishery in the EEZ under the jurisdiction of the Gulf, South Atlantic Council, and Mid-Atlantic Fishery Management 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 15, 2006, established a limited access system on for-hire reef fish and Coastal Migratory Pelagics permits. Permits are renewable and transferable in the same manner as currently prescribed for such permits. There will be a periodic review at least every 10 years on the effectiveness of the limited access system.

Amendment 18, with EA, established annual catch limit, annual catch targets, and accountability measures for king mackerel, Spanish mackerel, and cobia. The amendment also established both Atlantic and Gulf migratory groups for cobia; modified the framework procedures; and removed the following species from the fishery management unit: cero, little tunny, dolphin and bluefish. The South Atlantic and Gulf of Mexico Councils approved the amendment for formal review in August 2011. The Secretary of Commerce approved the amendment in December 2011.

Appendix D. Bycatch Practicability Analysis

Bycatch Practicability Analysis

1.1 Population Effects for the Bycatch Species

Background

The Joint Framework Amendment 1 to the Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region (Framework Amendment 1 to the CMP FMP) includes actions that would increase the allowable biological catch (ABC) and annual catch limit (ACL) of Atlantic migratory group Spanish mackerel and Gulf of Mexico (Gulf) migratory group Spanish mackerel, and the recreational annual catch target (ACT) for the Atlantic Spanish mackerel based on revised stock assessments.

Southeast Data, Assessment, and Review (SEDAR) stock assessments for Gulf Spanish mackerel, Atlantic Spanish mackerel, and cobia were completed in 2012. The South Atlantic Fishery Management Council (South Atlantic Council)'s Scientific and Statistical Committee (SSC) reviewed the result of the stock assessment for Atlantic group Spanish mackerel in April 2013, and requested projections from the Southeast Fisheries Science Center (SEFSC). In June 2013, the South Atlantic Council received the SSC's recommendations for the Atlantic Spanish mackerel ABC, but the South Atlantic Council requested that the SSC review the Spanish mackerel projections and revisit recommendations for the overfishing limit (OFL) and the ABC. In October 2013, the SSC reviewed the projections again and recommended an OFL value of 7.03 million pounds (mp) in 2014/2015, 6.62 mp in 2015/2016, and 6.519 mp in 2016/2017. The SSC also recommended a revised ABC value of 6.063 mp for 2014-2016.

The Gulf of Mexico Fishery Management Council (Gulf Council)'s SSC reviewed the results of the Gulf Spanish mackerel stock assessment in May 2013, and requested projections from the SEFSC. In August 2013, the Gulf Council received and accepted the SSC recommendations for the Gulf Spanish mackerel OFL and ABC for 2013-2016. OFL was set at 14.4 mp for 2013/2014, 12.9 mp for 2014/2015, 12.0 mp for 2015/2016, and 11.5 mp for 2016/2017. Likewise, using a P* value of 43.4%, ABC was set at 14.2 mp for 2013/2014, 12.7 mp for 2014/2015, 11.8 mp for 2015/2016, and 11.3 mp for 2016/2017.

In the Gulf and Atlantic (Florida through New York) regions, most king mackerel and cobia are harvested with hook and line gear; however, gillnets and cast nets are the predominant gear type used to harvest Spanish mackerel.

Commercial Sector

Currently, discard data are collected using a supplemental form that is sent to a 20% stratified random sample of the active commercial permit holders in the Coastal Migratory Pelagics (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. During 2008 through 2012, the commercial sector for Spanish mackerel in both the Gulf and Atlantic landed 5,131,508 pounds and discarded 1,712 fish (**Table 1**).

Recreational Sector

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

- Type A - Fishes that were caught landed whole and available for identification and enumeration by the interviewers.
- Type B - Fishes that were caught but were either not kept or not available for identification:
 - Type B1 - Fishes that were caught and filleted, released dead, given away, or disposed of in some way other than Types A or B2.
 - Type B2 - Fishes that were caught and released alive.

For the CMP FMP during 2008 through 2012, the private recreational landings and discards for CMP species in the Gulf of Mexico and U.S. Atlantic Ocean (Florida to New York) were also higher than those in the headboat/charterboat category (**Table 1**). Landings (number of fish) and subsequent discards for the private recreational category for Spanish mackerel were 2,708,586 and 2,541,893, respectively (**Table 1**). In the charter boat category, landings of Spanish mackerel were 334,701 and discards were 102,409 (**Table 1**). However, in the headboat category, landings were 11,997 for Spanish mackerel with discards at 1,458 (**Table 1**).

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

Harvest from headboats is monitored by NMFS at the SEFSC Beaufort Laboratory. Collection of discard data began in 2004. Daily catch records (trip records) are filled out by headboat operators or by NMFS-approved headboat samplers based on personal communication with the captain or crew. In addition, headboats are now required to report the catch and discard information each week through electronic means. Headboat trips are subsampled for data on species lengths and weights. Biological samples (scales, otoliths, spines, reproductive tissues, and stomachs) are obtained as time allowed. Lengths of discarded fish are occasionally obtained but these data are not part of the headboat database.

Recent improvements were Marine Recreational Information Program (MRIP). Beginning in 2013, samples are drawn from a known universe of fishermen rather than randomly dialing coastal households. Other improvements have been and/or will be made that intend to better estimate recreational catches and the variances around those catch estimates.

Table 1. Average of 2008 through 2012 Headboat, MRFSS, and commercial landings and discards in the Gulf of Mexico and U.S. Atlantic Ocean (Florida to New York). Headboat, MRFSS (charter and private) landings are in numbers of fish (N); commercial landings are in pounds whole weight (lbs ww). MRFSS Discards represent numbers of fish that were caught and released alive (B2).

	HEADBOAT				MRFSS CHARTER				MRFSS PRIVATE				COMMERCIAL		
	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Catch (N)	Landings (N)	Discards (N)	Percent Discards	Landings (lbs ww)	Discards (N)	Percent Discards
Spanish Mackerel	13,455	11,997	1,458	11%	437,110	334,701	102,409	23%	5,250,479	2,708,586	2,541,893	48%	5,131,508	1,712	<0.04%

Sources: MRFSS data from SEFSC Recreational ACL Dataset (May 2013); Headboat data from SEFSC Headboat Logbook CRNF files (expanded; May 2013); Commercial landings data from SEFSC Commercial ACL Dataset (July 10, 2013) with discard estimates from expanded SEFSC Commercial Discard Logbook (June 2013).

Notes: Commercial discard estimates are for vertical line gear only. Commercial king mackerel includes "king and cero mackerel" category. Estimates of commercial discards are highly uncertain; No reported discards for Commercial and Headboat Cobia. King mackerel, cobia, and Spanish mackerel data include both Atlantic coast and Gulf of Mexico. Note that discard estimates for commercial and headboat include only the Gulf of Mexico and SAFMC jurisdiction; discards from the Mid-Atlantic would likely be relatively low, but are not reported here.

Finfish Bycatch Mortality

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

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) determined that Spanish mackerel and cobia stocks in the South Atlantic and the Gulf of Mexico are neither overfished nor undergoing overfishing. SEDAR 28 (2013) recommended identical discard mortality for Spanish mackerel as SEDAR 17 (2008) for gillnets and shrimp trawls (100%), but recommended a 10% discard mortality rate for commercial handlines, and 20% for recreational handlines.

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

Bycatch information is currently being collected in the CMP fishery. The anticipated effects on bycatch mortality of target and non-target species as a result of the actions contained in Framework Amendment 1 are likely to be negligible. Current harvest is not being constrained by the existing ACLs, and increasing the ACLs through this framework amendment is not expected to have an immediate change on harvest.

This action is not expected to modify the way in which the Spanish mackerel portion of the CMP fishery is prosecuted; however, it may lead to an increased fishing effort in the future due to the increase of ACL.

Mathers et al. (2012) provides recent information on retained and discarded species in drift gillnets, sink gillnets, and strike gillnets used to target shark and mackerel species in 2012 http://www.sefsc.noaa.gov/labs/panama/documents/observer_documents/Southeast%20Gillnet%20Observer%20Program-2013/Reports/NMFS-SEFSC-648.pdf. Bycatch information from gillnets for previous years can be found at <http://www.sefsc.noaa.gov/labs/panama/ob/gillnet.htm>. There were no interactions of sea turtles or marine mammals reported (Mathers et al. 2012).

The Southeast Region Current Bycatch Priorities and Implementation Plan FY04 and FY05 reported the South Atlantic Spanish mackerel portion of the CMP fishery has 51 species reported as bycatch with approximately 81% reported as released alive. Bycatch was not reported for the Gulf Spanish mackerel sector. Additionally, the supplementary discard program to the logbook reporting requirement shows no interactions of gillnet gear with marine mammals or birds. **Table 2** and **Table 3** lists the species most often caught with Spanish mackerel in the South Atlantic. There is very little bycatch in the Spanish mackerel sector with gillnet gear. The king mackerel portion of the CMP fishery has a low level of bycatch. Framework Amendment 1 would not modify the gear types or fishing techniques in the mackerel segments of the CMP

fishery. Therefore, bycatch and subsequent bycatch mortality in the CMP fishery is likely to remain very low if the framework amendment is implemented.

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

Species	Percent Caught with Spanish Mackerel Gillnets
Spanish mackerel	91.16%
Blue runner	4.14%
King & Cero mackerel	3.91%
Unclassified jacks	0.58%
Crevalle jack	0.14%
Black sea bass	0.03%
Sheepshead	0.02%

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

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

Species	Percent Caught with Spanish Mackerel All Gear Types
Spanish mackerel	88%
King & Cero mackerel	8%
Blue runner	2%
Crevalle jack	1%

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

Additional information on fishery related actions from the past, present, and future considerations are in **Chapter 6** (Cumulative Effects) of Framework Amendment 1.

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 improperly managed, either form of mortality could potentially reduce stock biomass to an unsustainable level. The Gulf and South Atlantic Councils, and NMFS are in the process of developing actions that would improve bycatch monitoring in all fisheries including the CMP fishery. Better bycatch and discard data would provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, provide better estimates of interactions with protected species, and lead to better decisions regarding additional measures to reduce bycatch. Management measures that affect gear and effort for a target species can influence fishing mortality in other species. Therefore, enhanced catch and bycatch monitoring would provide better data that could be used in multi-species assessments.

Ecosystem interactions among CMP species in the marine environment are poorly understood. 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.

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

Framework Amendment 1 is not expected to affect bycatch of other, non-mackerel fish species. Measures proposed in the framework amendment are intended to respond to the most recent stock assessment and modify the ABC, ACL, and recreational ACT for the South Atlantic migratory group Spanish mackerel, and modify the ABC and ACL for Gulf migratory group Spanish mackerel. Although this action could lead to an increase in fishing effort in the future, the Spanish mackerel portion of the CMP fishery has low bycatch rates and a significant increase in bycatch of non-target fish species is not expected.

1.3 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 List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (79 FR 14418, effective April 14, 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 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.

Although the Bermuda petrel and roseate tern occur within the action area, these species are uncommon and neither have been described as associating with vessels nor having interacted with the CMP fishery. Thus, it is thought that the CMP fishery is not likely to negatively affect the Bermuda petrel and the roseate tern.

Spanish mackerel are among species targeted with gillnets in North Carolina state waters. Observer coverage for gillnet is up to 10% and provided by the North Carolina Division of Marine Fisheries, primarily during the fall flounder fishery in Pamlico Sound. In areas where it gillnet harvest is allowed, gillnets are used 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.

There is approximately 11% observer coverage by NMFS for shark and coastal gillnet. In 2012, 5 trips were observed using drift gillnets to target either sharks or Spanish mackerel; 6 trips were observed using strike gillnet to target king mackerel; and 62 trips were observed using sink gillnets to target smooth dogfish, Spanish mackerel, southern kingfish, and mixed teleosts (Mathers et al 2013). The Shark Gillnet Observer Program is a mandate of the Atlantic Highly Migratory Species FMP, the Atlantic Large Whale Take Reduction Plan (ALWTRP) (50 CFR Part 229.32), and the Biological Opinion for the Continued Authorization of the Atlantic Shark Fishery 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.

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

Framework Amendment 1 would increase the ABC and ACL for the Atlantic and Gulf migratory groups and the recreational ACT for Atlantic migratory group. Harvest in the Gulf has not been constrained by the existing ACLs; thus, increasing the ACLs in this amendment is not expected to result in an immediate increase in harvest in the Gulf. Harvest has been constrained by the ACL in the South Atlantic and increasing the ACL will likely lead to an increase in harvest. Therefore, actions in this amendment are not expected to lead to changes in fishing processing, disposal or marketing costs in the Gulf but may lead to an increase in the South Atlantic. Chapter 4 of this amendment analyzes potential economic and social impacts of these actions.

1.5 Changes in Fishing Practices and Behavior of Fishermen

Actions proposed in Framework Amendment 1 are not expected to result in a modification of fishing practices by commercial fishermen. Measures proposed in the amendment respond to the most recent stock assessment. Catch in the Gulf is currently not being constrained by the existing ACLs; however, there is the potential for fishermen to increase fishing effort in order to catch the entire ACL. Harvest has been constrained by the ACL in the South Atlantic and increasing the ACL will likely lead to an increase in harvest. In some cases fish houses may tell Spanish

mackerel fishing vessels how many fish they are willing to purchase to maintain price stability. Fishermen may modify their fishing behavior in order to avoid a glut in the fish market.

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

The actions in Framework Amendment 1 are not expected to modify research needs, administration, or management effectiveness.

Research and monitoring is ongoing to understand the effectiveness of proposed management measure and their effect on bycatch. In 1990, the SEFSC initiated a logbook program for vessels catching king and Spanish mackerel. Approximately 20% of commercial fishermen from snapper grouper, dolphin wahoo, and CMP fisheries are asked to fill out discard information in logbooks; however, a greater percentage of fishermen could be selected with emphasis on individuals that dominate landings. Recreational discards are obtained from the MRIP and logbooks from the NMFS headboat program.

Amendments have been implemented in the Gulf and South Atlantic that require weekly electronic reporting of landings and discards by headboats in the snapper grouper, dolphin wahoo, and CMP fisheries. The Councils are also developing an amendment to improve commercial logbook reporting for these fisheries. The SEFSC, Marine Fisheries Initiative, and Cooperative Research Programs (CRP) have provided some observer information for the snapper grouper fishery; however, more information is needed for the snapper grouper, dolphin wahoo, and CMP fisheries. Observer program reporting is in place for 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. 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 (<http://www.safmc.net/LinkClick.aspx?fileticket=XGaVZzxLePY%3d&tabid=745>).

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

Stranding networks have been established in the Southeast Region. The NMFS SEFSC is the base for the Southeast United States Marine Mammal Stranding Program (<http://sero.nmfs.noaa.gov/pr/strandings.htm>). NMFS authorizes organizations and volunteers under the MMPA to

respond to marine mammal strandings throughout the United States. These organizations form the stranding network whose participants are trained to respond to, and collect samples from live and dead marine mammals that strand along southeastern United State beaches. The SEFSC is responsible for: coordinating stranding events; monitoring stranding rates; monitoring human caused mortalities; maintaining a stranding database for the southeast region; and conducting investigations to determine the cause of unusual stranding events including mass strandings and mass mortalities (<http://www.sefsc.noaa.gov/species/mammals/strandings.htm>).

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

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

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

Proposed management measures, and any changes in economic, social, or cultural values are discussed in **Chapter 4**. In summary, the social and economic impacts of both actions in Framework Amendment 1 are expected to be positive.

1.8 Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from actions in the Framework Amendment 1 are discussed in **Chapter 4**. These actions are not associated with negative impacts or costs since they would not reduce the ability to fish for the subject species.

1.9 Social Effects

The social effects of all the measures are described in **Chapter 4** of this document. In summary, the social environment would benefit from both actions in Framework Amendment 1. Fishing opportunities would be maximized for Atlantic migratory group Spanish mackerel and Gulf migratory Spanish mackerel without negatively affecting the sustainability of either stock.

1.10 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).

Measures proposed in the framework amendment respond to the most recent stock assessment and would increase the ABC and the ACL for the Atlantic and Gulf migratory groups of Spanish mackerel, and the recreational ACT for the Atlantic migratory group. These actions are not expected to increase or decrease the magnitude of bycatch or bycatch mortality in the CMP fishery. Both sectors of the CMP fishery have relatively low baseline levels of bycatch, which are not expected to change as a result of implementation of this amendment. Thus, no additional measures to minimize bycatch and bycatch mortality were considered in this framework amendment.

References Cited

Mathers, A.N., M.S. Passerotti, and J.K. Carlson. 2013. Catch and bycatch in U.S. Southeast gillnet fisheries, 2012. NOAA Technical Memorandum NMFS-SEFSC-648.

SEDAR 17. 2008. Stock Assessment Report. South Atlantic Spanish Mackerel. Available at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=17

SEDAR 28. 2013. Stock Assessment Report. South Atlantic Spanish Mackerel. Available at: http://www.sefsc.noaa.gov/sedar/Sedar_Workshops.jsp?WorkshopNum=28

Van Voorhees, D., J.W. Schlechte, D.M. Donaldson, T.R. Sminkey, K.J. Anson, J.R. O'Hop, M.D.B. Norris, J.A. Shepard, T. Van Devender, and R.F. Zales, II. 2000. The new Marine Fisheries Statistics Survey method for estimating charter boat fishing effort. Abstracts of the 53rd Annual Meeting of the Gulf and Caribbean Fisheries Institute.

Appendix E. Regulatory Impact Review

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 regulatory action; (2) it provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives which could be used to solve the problem; and (3) it ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way.

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

1.1 Problems and Objectives

The purpose and need, issues, problems, and objectives of this action are presented in **Chapter 1** of Framework Amendment 1 to the Coastal Migratory Pelagic Resources in the Gulf of Mexico and South Atlantic Region, and are incorporated herein by reference.

1.2 Methodology and Framework for Analysis

This RIR assesses management measures from the standpoint of determining the resulting changes in costs and benefits to society. To the extent practicable, the net effects of the proposed measures for an existing fishery should be stated in terms of producer and consumer surplus, changes in profits, and employment in the direct and support industries. Where figures are available, they are incorporated into the analysis of the economic impacts of the different actions and alternatives.

1.3 Description of the Fishery

A description of the Gulf of Mexico and South Atlantic coastal migratory pelagic fishery is contained in **Chapter 3** of this framework amendment and is incorporated herein by reference.

1.4 Effects of the Management Measures

Action 1, Alternative 2 (Preferred). Since the 2002/2003 fishing season, the commercial sector in the Atlantic region has exceeded its ACL and the proposed ACL for Spanish mackerel every year except in 2007/2008. However, because the recreational sector had not reached its ACL in these years, is not expected that the increased Annual Catch Limit (ACL) for Spanish mackerel will be fully landed. **Preferred Alternative 2** would allow commercial vessels more time to

harvest at a higher trip limit before 75% of the ACL is reached. This would lead to higher revenues and profits per trip during that extra time before the lower trip limit applies. In the event that quota closures are implemented, as is more likely under the new reporting requirements, vessel revenues would likely be higher under **Preferred Alternative 2** as there would likely be extra fishing days afforded by the higher ACL even under a lower trip limit. Higher ACLs, even where the ACL has not been met in the past, increase the probability there will be a yearlong fishery without closures. Considering that Atlantic migratory group Spanish mackerel are not overfished and not undergoing overfishing, the economic benefits under **Preferred Alternative 2** would likely remain in the medium term and possibly in the long term as well.

1.5 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 amendment include, but are not limited to Council costs of document preparation, meeting, and other costs; NMFS administration costs of document preparation, meetings and review, and annual law enforcement costs. A preliminary estimate is up to \$150,000 before annual law enforcement costs are included.

1.6 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a “significant regulatory action” if it is expected 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) raising 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 regulatory action would not meet the first criterion. Therefore, this regulatory action is determined to not be economically significant for the purposes of E.O. 12866.

Appendix F. Regulatory Flexibility Analysis

Introduction

The purpose of the Regulatory Flexibility Act (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 that 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 FMP or amendment (including framework management measures and other regulatory actions). The RFA is also intended to ensure that the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct a regulatory flexibility analysis for each proposed rule. The regulatory flexibility analysis 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. In addition to analyses conducted for the RIR, the regulatory flexibility analysis provides: 1) A statement 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 practical, of all relevant Federal rules which may duplicate, overlap, or conflict with the proposed rule; and, 6) a description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and which minimize any significant economic impact of the proposed rule on small entities.

Additional information on the description of affected entities may be found in **Chapter 3**, and additional information on the expected economic effects of the proposed action may be found in **Chapter 4**.

Statement of Need for, Objectives of, and Legal Basis for the Rule

The purpose and need of the proposed rule are presented in Section 1.3. In essence, the purpose of this proposed rule is to revise the annual catch limits (ACLs) for Atlantic migratory group Spanish mackerel and Gulf migratory group Spanish mackerel based on the results of recently completed stock assessments.

The need of this proposed rule is to ensure the ACLs are based on the best available scientific information, and to ensure overfishing does not occur in the coastal migratory pelagics fishery.

The Magnuson-Stevens Fishery Conservation and Management Act, as amended, provides the statutory basis for this proposed rule.

Identification of All Relevant Federal Rules Which May Duplicate, Overlap or Conflict with the Proposed Rule

No duplicative, overlapping, or conflicting Federal rules have been identified with this proposed rule.

Description and Estimate of the Number of Small Entities to Which the Proposed Rule will Apply

This proposed rule is expected to directly affect commercial fishermen and for-hire operators in the South Atlantic, Mid-Atlantic, and Gulf. The Small Business Administration established size criteria for all major industry sectors in the U.S. including fish harvesters and for-hire operations. A business involved in fish harvesting is classified as a small business if independently owned and operated, is not dominant in its field of operation (including its affiliates), and its combined annual receipts are not in excess of \$19.0 million (NAICS code 114111, finfish fishing) for all of its affiliated operations worldwide. For for-hire vessels, other qualifiers apply and the annual receipts threshold is \$7.0 million (NAICS code 713990, recreational industries). The SBA periodically reviews and changes, as appropriate, these size criteria. On June 20, 2013, the SBA issued a final rule revising the small business size standards for several industries effective July 22, 2013 (78 FR 37398). This rule increased the size standard for commercial finfish harvesters from \$4.0 million to \$19.0 million. Neither this rule, nor other recent SBA rules, changed the size standard for for-hire vessels.

From 2007/2008 through 2011/2012, an annual average of 387 vessels with valid commercial Spanish mackerel permits landed at least one pound of Atlantic group Spanish mackerel. These vessels generated average dockside revenues of approximately \$11.99 million (2011 dollars) from all species caught during the year. Each vessel, therefore, generated an average of approximately \$31,000 in gross revenues. For the same period, an annual average of 208 vessels with valid commercial Spanish mackerel permits at least one pound of Gulf group Spanish mackerel. These vessels generated dockside revenues of approximately \$10.33 million (2011 dollars) from all species caught during the year. Each vessel, therefore, generated an average of approximately \$49,700 in gross revenues. Based on revenue information, all commercial vessels affected by the rule can be considered small entities.

From 2007/2008 through 2011/2012, an annual average of 1,813 vessels had valid or renewable South Atlantic charter/headboat permits for pelagic fish. As of May 2, 2014, 1,395 vessels held these permits and about 77 are estimated to have operated as headboats in 2013. For the same period, an annual average of 1,424 vessels had valid or renewable Gulf charter/headboat permits for pelagic fish. As of May 2, 2014, 1,202 vessels held these permits and about 67 are estimated to have operated as headboats in 2014. The for-hire fleet consists of charter boats, which charge

a fee on a vessel basis, and headboats, which charge a fee on an individual angler (head) basis. Average annual revenues (2011 dollars) for charter boats are estimated to be \$126,032 for Florida vessels, \$53,443 for Georgia vessels, \$100,823 for South Carolina vessels, and \$101,959 for North Carolina vessels. For headboats, the corresponding estimates are \$209,507 for Florida vessels and \$153,848 for vessels in the other states. Revenue figures for states other than Florida are aggregated to avoid disclosure of confidential information. For the Northeast (states north of North Carolina), in 2010, the average gross revenues were approximately \$214,000 and \$28,000 for headboats and charter vessels, respectively. The Northeast information is not currently available on a state by state basis. Based on these average revenue figures, all for-hire operations that would be affected by the rule can be considered small entities.

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 requirement and the type of professional skills necessary for the preparation of the report or records

The proposed rule would not introduce any changes to reporting, record-keeping, and other compliance requirements that are currently required.

Substantial Number of Small Entities Criterion

The proposed rule is expected to directly affect all Federally permitted commercial vessels harvesting Atlantic or Gulf group Spanish mackerel and for-hire vessels with South Atlantic or Gulf charter/headboat permits for pelagic fish. All directly affected entities have been determined, for the purpose of this analysis, to be small entities. Therefore, it is determined that the proposed action will affect a substantial number of small entities.

Significant Economic Impact Criterion

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

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

All entities that are expected to be affected by this proposed rule are considered small entities, so the issue of disproportional effects on small versus large entities does not presently arise.

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

The proposed rule consists of increasing the South Atlantic and Gulf Spanish mackerel ACLs. The potential effects of this rule would be an increase in revenues and possibly profits to commercial and for-hire vessels harvesting Atlantic or Gulf group Spanish mackerel.

Conclusion

The information provided above supports a determination that this rule would not have a significant adverse economic impact on a substantial number of small entities. In view of this, consideration of significant alternatives to the proposed rule is not needed. The public is highly encouraged to submit comments on this determination.

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.

Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act of 1972 (CZMA), as amended, requires federal activities that affect any land or water use or natural resource of a state’s coastal zone be conducted in a manner consistent, to the maximum extent practicable, with approved state coastal management programs. The requirements for such a consistency determination are set forth in NOAA regulations at 15 C.F.R. part 930, subpart C. According to these regulations and CZMA Section 307(c)(1), when taking an action that affects any land or water use or natural resource of a state’s coastal zone, 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, North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York to the maximum extent possible. Their determination will then be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management programs for these states.

Data Quality Act

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

Specifically, the DQA directs the Office of Management and Budget (OMB) to issue government wide guidelines that “provide policy and procedural guidance to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies.” Such guidelines have been issued, directing all federal agencies to create and disseminate agency-specific standards to: 1) ensure information quality and develop a pre-dissemination review process; 2) establish administrative mechanisms allowing affected persons to seek and obtain correction of information; and 3) report periodically to OMB on the number and nature of complaints received.

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

Endangered Species Act

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

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 2013 proposed List of Fisheries classifies the Gulf and South Atlantic coastal migratory pelagic hook-and-line fishery as a Category III fishery (78 FR 53336, August 29, 2013). Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. The Gulf and South Atlantic coastal migratory pelagic gillnet fishery is classified as Category II fishery. This classification indicates an occasional incidental mortality or serious injury of a marine mammal stock resulting from the fishery (1-50 % annually of the potential biological removal). The fishery has no documented interaction with marine mammals; NMFS classifies this fishery as Category II based on analogy (similar risk to marine mammals) with other gillnet fisheries.

Executive Orders

E.O. 12630: Takings

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

E.O. 12866: Regulatory Planning and Review

Executive Order 12866: Regulatory Planning and Review, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that either implement a new fishery management plan or significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society of proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O. 12866 and whether proposed regulations would have a significant economic impact on a substantial number of small entities in compliance with the Regulatory Flexibility Act.

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

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

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

E.O. 12962: Recreational Fisheries

This Executive Order requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects.

Additionally, it establishes a seven-member National Recreational Fisheries Coordination Council (Council) responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

E.O. 13132: Federalism

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

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

Essential Fish Habitat

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

**Finding of No Significant Impact (FONSI) for the Environmental Assessment of
Framework Amendment 1 to the Fishery Management Plan for Coastal Migratory Pelagic
Resources in the South Atlantic and Gulf of Mexico Region (Framework Amendment 1)**

**National Marine Fisheries Service (NMFS)
October 21, 2014**

Framework Amendment 1 will increase the annual catch limits (ACL) for Atlantic and Gulf of Mexico (Gulf) migratory groups of Spanish mackerel, and increase the recreational annual catch target (ACT) for Atlantic migratory group Spanish mackerel. Additionally, the final rule will revise the adjusted commercial quota for Atlantic migratory group Spanish mackerel, based on the revised commercial ACL (commercial quota). **Framework Amendment 1**, the final rule, and FONSI will be made available on the Southeast Regional Office (SERO) webpage at http://sero.nmfs.noaa.gov/sustainable_fisheries/gulf_sa/cmp/2014/framework_am1/index.html.

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality (CEQ) regulations at 40 CFR 1508.27 state the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant in making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of these actions is analyzed based on the CEQ's context and intensity criteria, NAO 216-6 criteria and NMFS Instruction 30-124-1, July 22, 2005, Guidelines for Preparation of FONSI. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

Response: No. The proposed action is not reasonably expected to jeopardize the sustainability of any target species. **Framework Amendment 1** will increase the ACLs for Atlantic migratory group Spanish mackerel and Gulf migratory groups of Spanish mackerel based on the outcome of recent Southeast Data, Assessment, and Review (SEDAR) stock assessments (SEDAR 28 2013), and recommendations for the acceptable biological catch (ABC) values from each Council's Scientific and Statistical Committee (SSC). The amendment also proposes to update the optimum yield and recreational ACT for Atlantic migratory group Spanish mackerel. As explained in Chapter 4 of the Environmental Assessment (EA), an increase in the ACLs for Atlantic and Gulf migratory groups of Spanish mackerel is expected to increase fishing opportunities for Spanish mackerel without negatively affecting the Spanish mackerel stock. The biological impacts analysis (Section 4.1.1 of the EA) indicates the biological impacts of this action are not likely to be significant. ACLs for Atlantic and Gulf migratory groups of Spanish mackerel are not currently being met, and increased harvest is not expected with the change in the ACLs proposed in **Framework Amendment 1**. If harvest does increase, total harvest is constrained by the commercial and recreational ACLs and accountability measures, which will prevent overfishing.

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

Response: No. As discussed in Section 4.1 of the EA, it is unlikely the action would result in significantly increased fishing effort for Spanish mackerel; therefore, no adverse biological impact on non-target species or protected species. Furthermore, the Bycatch Practicability Analysis in Appendix D, states that the anticipated effects on bycatch mortality of target and non-target species as a result of the actions contained in **Framework Amendment 1** are likely to be negligible. Current harvest is not being constrained by the existing ACLs, and increasing the ACLs through this framework amendment is not expected to have an immediate change on harvest. Even if harvest does increase, the Spanish mackerel portion of the Coastal Migratory Pelagics (CMP) fishery has relatively low levels of bycatch and the Bycatch Practicability Analysis concludes that these low levels of bycatch are not expected to change as a result of implementation of the framework amendment.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and identified in fishery management plans?

Response: No. Section 3.1 describes the habitat requirements of coastal migratory pelagic species, specifically Spanish mackerel. As the federal action agency in this matter, the Sustainable Fisheries Division has determined the proposed actions would not adversely affect EFH. The NMFS SERO Habitat Conservation Division has reviewed the actions and agrees with this determination. Further consultation on this matter is not necessary unless future modifications are proposed and such actions may result in adverse impacts to EFH. Support for this finding is contained in the Biological Effects subsection in Chapter 4 of the EA.

Framework Amendment 1 will increase the ACLs for Atlantic and Gulf Spanish mackerel based on recent stock assessments and ABC recommendations from the Councils' SSCs. Section 4.1.1 indicates that it is unlikely the action will result in significantly increased fishing effort for Spanish mackerel. Harvest is not currently being constrained by the existing ACLs, and increasing the ACLs through this framework amendment is not expected to result in significant increase in fishing effort. Therefore, no adverse biological impact on habitat or Habitat Areas of Particular Concern are expected under this action.

4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

Response: No. The actions in **Framework Amendment 1** are not expected to have any adverse impacts on public health or safety. **Framework Amendment 1** will modify the ACLs based on recent stock assessments and are not expected to change fishing techniques or operations in a way that would impact the safety of commercial or recreational fishermen. An analysis of the social impacts of these actions is included in Section 4.1.3 and Section 4.2.3.

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

Response: No, the proposed action is not expected to adversely affect endangered or threatened species, their critical habitat, or marine mammals because the proposed action is not expected to substantially alter the manner in which the fishery is conducted. As discussed in Section 3.2.2, a 2007 biological opinion for the CMP fish fishery determined the fishery is not likely to jeopardize the continued existence of any endangered or threatened species under the jurisdiction of NMFS or result in the destruction or adverse modification of critical habitat. Subsequent to the 2007 opinion, NMFS determined that the continued authorization of the CMP fishery is not likely to adversely affect coral critical habitat. The effects of the continued authorization of the fishery on the 5 distinct population segments (DPS) of Atlantic sturgeon have never been evaluated and NMFS requested reinitiation of consultation on the CMP fishery on November 26, 2012. NMFS determined the continued authorization of the CMP fishery management plan during the re-initiation period is not likely to jeopardize the continued existence of or impede the recovery of any Atlantic sturgeon DPS.

Since the submission of the framework action, NMFS listed 20 new coral species under the ESA; five of which occur in the Caribbean (including Florida). NMFS also designated 38 occupied marine areas within the Atlantic Ocean and Gulf as critical habitat for the Northwest Atlantic Ocean loggerhead sea turtle distinct population segment. With the concurrence of the Protected Resources Division, the Sustainable Fisheries Division has determined that the continued authorization of the CMP fishery is not likely to adversely affect the newly listed corals or loggerhead critical habitat.

Section 3.2.2. of the framework action also discusses the potential impacts of the CMP fishery on marine mammals. The Gulf and South Atlantic CMP hook-and-line fishery is classified in the 2015 Marine Mammal Protection Act Proposed List of Fisheries (79 FR 50589, August 25, 2014) as a Category III fishery. This means 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 Category II fishery in the 2015 MMPA Proposed List of Fisheries (79 FR 50589, August 25, 2014). 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.

Based on the analysis of impacts relative to protected species or critical habitats contained in Chapter 4 of the EA, the proposed actions are not expected to result in adverse effects to endangered or threatened species, marine mammals, or critical habitats of these species beyond those previously identified. Although **Framework Amendment 1** increases the ACL from the status quo, this would not change current fishing practices for Spanish mackerel. Current harvest is not being constrained by the existing ACLs, and increasing the ACLs will not result in significantly increased fishing effort for Spanish mackerel.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: No. The proposed action is not expected to substantially impact the biodiversity and/or ecosystem function within the affected area. Each alternative is analyzed with respect to biological impacts on target species, non-target species, habitat, other fish species and protected species (Chapter 4). Based on this analysis, actions in **Framework Amendment 1** are not likely to have a significant impact on biodiversity and/or ecosystem function. The proposed actions are not expected to alter fishing methods or activities in such a manner that would affect benthic productivity or predator-prey relationships.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: No. As indicated in the social and economic impacts analysis contained in Sections 4.1 and 4.2, the economic benefits for Atlantic and Gulf CMP fishery participants would likely remain in the medium term and possibly in the long term as well. As discussed in Section 4.1.3, **Framework Amendment 1** is not be expected to change fishing behavior or access to Atlantic migratory group Spanish mackerel, and would likely be beneficial to the fleet while maintaining sustainable harvest. Section 4.2.3 indicates that landings of Gulf migratory group Spanish mackerel do not meet the current ACL, and the proposed increase in the ACL is not expected to change fishing behavior or access to the resource, and would likely be beneficial to the fleet while maintaining sustainable harvest. Therefore, there are no significant social or economic impacts interrelated with natural or physical environmental effects because significant social or economic impacts are not expected to occur.

8) Are the effects on the quality of the human environment likely to be highly controversial?

Response: No. **Framework Amendment 1** would modify the ACLs based on a recent stock assessment and recommendations from the Councils' SSCs. The analyses and data used in the decision-making process were based on standard techniques used to evaluate fish stocks and fisheries. Comments received on the proposed rule, which would implement the amendment were also generally supportive.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

Response: No. The U.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic exclusive economic zone (EEZ). Several notable shipwrecks can also be found in South Atlantic federal and state waters including Loftus (eastern Florida), SS Copenhagen (Southeast Florida), Half-Moon (Southeast Florida), Hebe (Myrtle Beach), Georgiana (Charleston, South Carolina), Monitor (Cape Hatteras, North Carolina), Huron (Nags Head, North Carolina), and Metropolis (Corolla, North Carolina). Within the Gulf

of Mexico EEZ, the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places.

The proposed actions are not expected to result in substantial impacts to these unique areas or other historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas because of their limited scope. As explained in Chapter 4 of the EA, increases in the ACLs for Spanish mackerel is not expected to result in appreciable changes to current fishing practices (described in Section 3.3).

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: No. Actions in the framework amendment would modify the ACLs for Atlantic and Gulf Spanish mackerel based on ABC recommendations from the Councils' SSCs. As described in Section 3.3 and Chapter 4, **Framework Amendment 1** would not result in impacts with highly uncertain or unknown risks as fishing for Spanish mackerel already occurs in the action area and the actions would not modify the catch limits by a significant amount. Adjustments to quotas and target catch levels are made regularly in many fisheries, based on updated information regarding the status of a specific stock or stocks. Any impacts on the socioeconomic environment are predictable and have been analyzed in the document (see Chapter 4, Social and Economic Impacts).

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: No. Chapter 6 includes an analysis of cumulative impacts. The actions proposed in this amendment combined with past and reasonably foreseeable actions would not lead to significant cumulative impacts. Other past, present and reasonably foreseeable actions are not related to other actions with individually insignificant, but cumulatively significant impacts.

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

Response: No. Section 3.1 describes the habitat area and Section 3.3 describes the Spanish mackerel portion of the CMP fishery in the Atlantic and Gulf. In the Atlantic, several notable shipwrecks can be found in federal and state waters including Loftus (eastern Florida), SS Copenhagen (Southeast Florida), Half-Moon (Southeast Florida), Hebe (Myrtle Beach), Georgiana (Charleston, South Carolina), Monitor (Cape Hatteras, North Carolina), Huron (Nags Head, North Carolina), and Metropolis (Corolla, North Carolina). The U.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are also within the boundaries of the South Atlantic exclusive economic zone (EEZ). Within the Gulf of Mexico EEZ, the *U.S.S. Hatteras*, located in federal waters off Texas, is listed in the National Register of Historic Places.

Fishing activity already occurs in the vicinity of these sites and the actions in this amendment are not likely to adversely affect the above listed historic resources because the actions are not expected to result in appreciable changes to current fishing practices.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: No. The proposed action is not expected to result in the introduction or spread of any non-indigenous species including lionfish. **Framework Amendment 1** addresses the management of naturally occurring species in the Atlantic and Gulf. Additionally, the action 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. Section 3.3 describes the fisheries. As discussed in the Biological Effects sections in Chapter 4 of the EA, the actions contained in **Framework Amendment 1** are not expected to change fishing practices in such a way that would introduce or spread non-indigenous species.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Response: No. As discussed in Section 3.3, ACLs and accountability measures have been used to manage Atlantic and Gulf migratory groups of Spanish mackerel stock since 2011. Thus, modifying the ACLs through **Framework Amendment 1** does not establish a precedent for future action with significant effects or represent a decision in principle about a future consideration. **Framework Amendment 1** will modify the ACLs based on recent stock assessments and ABC recommendations from the Councils' SSCs.

15) Can the proposed action reasonably be expected to threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment?

Response: No. An analysis of other applicable laws related to the implementation of proposed actions analyzed in the EA was conducted in Appendix G of the EA. These analyses do not indicate any reasonable expectation that the actions contained in **Framework Amendment 1** threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: No. The impacts of the proposed alternatives on the biological, physical, and human environment are analyzed in Chapter 4. A cumulative effects analysis (Chapter 6) was conducted for **Framework Amendment 1** and revealed no cumulative adverse effects that could have a substantial effect on the target species or non-target species. Proposed actions and analysis contained in **Framework Amendment 1** are based on the best available scientific information.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting EA prepared for **Framework Amendment 1**, it is hereby determined that the proposed actions would not significantly affect the quality of the human environment as described above and in the supporting EA. In addition, all beneficial and adverse impacts of the proposed actions have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an environmental impact statement is not necessary for these proposed actions.

Miles M. Croom

10/21/2014

for Roy E. Crabtree, Ph.D.
Regional Administrator
National Marine Fisheries Service
Southeast Regional Office

Date