

Amendment 29 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

DECISION DOCUMENT

**Amendment to the ABC Control Rule, ABC
Adjustments to Unassessed Species, and
Management Measures for Gray Triggerfish**



DECEMBER 2013

Background

What is the ORCS Approach?

Based on methodology in *Calculating Acceptable Biological Catch for Stocks That Have Reliable Catch Data Only (Only Reliable Catch Stocks – ORCS)* (Berkson et al. 2011), the South Atlantic Fishery Management Council’s (South Atlantic Council) Scientific and Statistical Committee (SSC) recommended an approach to compute the ABC for unassessed stocks without reliable catch data. The approach involved selection of a “catch statistic”, a scalar to denote the risk of overexploitation for the stock, and a scalar to denote the management risk level. The SSC provided the first two criteria for each stock, but the South Atlantic Council must specify their risk tolerance level for each stock.

Catch Statistic: The median was considered inadequate to represent the high fluctuation in landings—i.e., to appropriately capture the range of occasional high landings—and the maximum catch over the period 1999-2007 was chosen instead. The time period was chosen to (1) be consistent with the period of landings used in the South Atlantic Council’s Comprehensive Annual Catch Limit (ACL) Amendment, and (2) to minimize the impact of recent regulations and the economic down turn on the landings time series.

Risk of Overexploitation: Based on SSC consensus and expert judgment each stock is assigned to a final risk of exploitation category. See **Appendix A** for a detailed description of the attributes used to assess the level of risk.

A scalar scheme consistent with the Risk of Overexploitation categories is assigned to stocks as follows:

Risk of Overexploitation	Scalar Value
Low	2
Moderate Low	1.75
Moderate	1.5
Moderate High	1.25

Important Note: given characteristics specific to South Atlantic stocks the group agreed that the “catch statistic × scalar” metric developed in this stage of the process may not represent a reliable proxy for OFL and, therefore, would not be called OFL or used as such.

Risk Tolerance Level: The next step in the process involves multiplying the “catch statistic × scalar” metric by a range of scalar values that reflects the South Atlantic Council’s risk tolerance level. For instance, the South Atlantic Council may choose to be more risk-averse in computing the ABC for a stock that exhibits a moderately high risk of overexploitation. As such, the South Atlantic Council may use a scalar of 0.50 for such stocks to arrive at more conservative ABC. On the other hand, stocks with

low risk of overexploitation and thus able to tolerate a higher level of management risk, may be assigned a less conservative scalar, such as 0.90.

Council Motions Approved in September 2013

MOTION: APPROVE THE RECOMMENDED SCALAR SCHEME FOR RISK OF OVEREXPLOITATION:

Risk of Overexploitation	Scalar Value
Low	2
Moderate Low	1.75
Moderate	1.5
Moderate High	1.25

APPROVED BY COMMITTEE

MOTION: REMOVE BLUELINE TILEFISH FROM AM 29 AND INCLUDE A 3-YEAR REVIEW PROVISION FOR THE ORCS SPECIES IN THE AMENDMENT

APPROVED BY COMMITTEE

GUIDANCE TO INCLUDE A PROVISION THAT A REVIEW COULD HAPPEN SOONER AT THE REQUEST OF THE COUNCIL

GUIDANCE THAT THE SG AP REVIEW THE RECOMMENDED ABCs FOR ORCS SPECIES IN NOVEMBER 2013 (AM 29 DOC) AND PROVIDE THEIR INPUT TO THE COUNCIL. AT THE 3-YEAR REVIEW, THE AP SHOULD REVIEW EACH SPECIES AND PROVIDE THEIR INPUT PRIOR TO THE SSC'S REVIEW.

MOTION: ADD ACTIONS RELATED TO GRAY TRIGGERFISH THAT WERE PREVIOUSLY INCLUDED IN REG AM 14. IN ADDITION, INCLUDE ACTIONS TO ESTABLISH A COMMERCIAL SPLIT SEASON AND TRIP LIMIT.

APPROVED BY COMMITTEE

Proposed Purpose & Need

Purpose for Actions

The purpose of Amendment 29 is to: **update** the South Atlantic Council’s Acceptable Biological Catch (ABC) Control Rule to incorporate methodology for determining the ABC of “Only Reliable Catch Species” (ORCS); adjust ABCs for the affected species; and establish management measures for gray triggerfish in federal waters of the South Atlantic region.

Need for Actions

The need for this amendment is to: adopt the recommendations of the South Atlantic Council’s Scientific and Statistical Committee (SSC) to ~~amend~~ **update** the ABC Control Rule and adjust ABCs for “ORCS” **based on the revised ABC Control Rule, lengthen the commercial season for gray triggerfish to diminish and/or prevent derby conditions**, and ensure that overfishing does not occur pending a new assessment of the gray triggerfish stock in the South Atlantic region.

COMMITTEE ACTION: APPROVE PURPOSE AND NEED FOR AMENDMENT 29

Possible Actions and Alternatives

Action 1. Amend the South Atlantic Council’s ABC Control Rule and specify ABCs based on those modifications.

Alternative 1 (No Action). Continue to utilize the South Atlantic Council’s ABC control rule as adopted in the Comprehensive Annual Catch Limit (ACL) Amendment to specify ABCs for snapper grouper species.

Level 1 – Assessed Stocks	
Tier	Tier Classification and Methodology to Compute ABC
1. <i>Assessment Information (10%)</i>	<ol style="list-style-type: none"> 1. Quantitative assessment provides estimates of exploitation and biomass; includes MSY-derived benchmarks. (0%) 2. Reliable measures of exploitation or biomass, no MSY benchmarks, proxy reference points. (2.5%) 3. Relative measures of exploitation or biomass, absolute measures of status unavailable. Proxy reference points. (5%) 4. Reliable catch history. (7.5%) 5. Scarce or unreliable catch records. (10%)
2. <i>Uncertainty Characterization (10%)</i>	<ol style="list-style-type: none"> 1. Complete. Key determinant – uncertainty in both assessment inputs and environmental conditions are included. (0%) 2. High. Key determinant – reflects more than just uncertainty in future recruitment. (2.5%) 3. Medium. Uncertainties are addressed via statistical techniques and sensitivities, but full uncertainty is not carried forward in projections. (5%) 4. Low. Distributions of F_{MSY} and MSY are lacking. (7.5%) 5. None. Only single point estimates; no sensitivities or uncertainty evaluations. (10%)
3. <i>Stock Status (10%)</i>	<ol style="list-style-type: none"> 1. Neither overfished nor overfishing. Stock is at high biomass and low exploitation relative to benchmark values. (0%) 2. Neither overfished nor overfishing. Stock may be in close proximity to benchmark values. (2.5%) 3. Stock is either overfished or overfishing. (5%) 4. Stock is both overfished and overfishing. (7.5%) 5. Either status criterion is unknown. (10%)
4. <i>Productivity and Susceptibility Analysis (10%)</i>	<ol style="list-style-type: none"> 1. Low risk. High productivity, low vulnerability, low susceptibility. (0%) 2. Medium risk. Moderate productivity, moderate vulnerability, moderate susceptibility. (5%) 3. High risk. Low productivity, high vulnerability, high susceptibility. (10%)
Level 2 – Unassessed Stocks. Reliable landings and life history information available	
OFL derived from “Depletion-Based Stock Reduction Analysis” (DBSRA). ABC derived from applying the assessed stocks rule to determine the adjustment factor if possible, or from expert judgment if not possible.	
Level 3 – Unassessed Stocks. Inadequate data to support DBSRA	
ABC derived directly from “Depletion-Corrected Average Catch” (DCAC). Done when only a limited	

number of years of catch data for a fishery are available. Requires a higher level of “informed expert judgment” than Level 2.
Level 4 – Unassessed Stocks. Only Reliable Catch Stocks.
OFL and ABC derived on a case-by-case basis. ORCS ad hoc group is currently working on what to do when not enough data exist to perform DCAC.
Level 5 – Unassessed Stocks. No reliable catch.
OFL and ABC derived on a case-by-case basis. Stocks with very low landings that show very high variability in catch estimates (mostly caused by the high degree of uncertainty in recreational landings estimates), or stocks that have species identification issues that may cause unreliable landings estimates. Use “decision tree”:
<ol style="list-style-type: none"> 1. Will catch affect stock? NO: Ecosystem Species (Council done this already, ACL Amend) YES: Go to 2 2. Will increase (beyond current range of variability) in catch lead to decline or stock concerns? NO: ABC = 3rd highest point in the 1999-2008 time series YES: Go to 3 3. Is stock part of directed fishery or is it primarily bycatch for other species? Directed: ABC = Median 1999-2008 Bycatch/Incidental: If yes, go to 4. 4. Bycatch. Must judge the circumstance: If bycatch in other fishery: what are trends in that fishery? What are the regulations? What is the effort outlook? If the directed fishery is increasing and bycatch of stock of concern is also increasing, the Council may need to find a means to reduce interactions or mortality. If that is not feasible, will need to impact the directed fishery. The SSC’s intention is to evaluate the situation and provide guidance to the Council on possible catch levels, risk, and actions to consider for bycatch and directed components.

Note: The ABC control rule provides a hierarchy of dimensions and tiers within dimensions used to characterize uncertainty associated with stock assessments in the South Atlantic. Parenthetical values indicate (1) the maximum adjustment value for a dimension; and (2) the adjustment values for each tier within a dimension.

Alternative 2. Adopt the SSC’s recommended approach to determine ABC values for Only Reliable Catch Stocks (ORCS). This approach will become Level 4 of the ABC Control Rule and the existing Level 4 will be renumbered as Level 5:

Level 1 – Assessed Stocks	
Tier	Tier Classification and Methodology to Compute ABC
<i>1. Assessment Information (10%)</i>	<ol style="list-style-type: none"> 1. Quantitative assessment provides estimates of exploitation and biomass; includes MSY-derived benchmarks. (0%) 2. Reliable measures of exploitation or biomass, no MSY benchmarks, proxy reference points. (2.5%) 3. Relative measures of exploitation or biomass, absolute measures of status unavailable. Proxy reference points. (5%) 4. Reliable catch history. (7.5%) 5. Scarce or unreliable catch records. (10%)
<i>2. Uncertainty Characterization (10%)</i>	<ol style="list-style-type: none"> 1. Complete. Key determinant – uncertainty in both assessment inputs and environmental conditions are included. (0%) 2. High. Key determinant – reflects more than just uncertainty in future recruitment. (2.5%) 3. Medium. Uncertainties are addressed via statistical techniques and sensitivities, but full uncertainty is not carried forward in projections. (5%) 4. Low. Distributions of F_{MSY} and MSY are lacking. (7.5%) 5. None. Only single point estimates; no sensitivities or uncertainty evaluations. (10%)
<i>3. Stock Status (10%)</i>	<ol style="list-style-type: none"> 1. Neither overfished nor overfishing. Stock is at high biomass and low exploitation relative to benchmark values. (0%) 2. Neither overfished nor overfishing. Stock may be in close proximity to benchmark values. (2.5%) 3. Stock is either overfished or overfishing. (5%) 4. Stock is both overfished and overfishing. (7.5%) 5. Either status criterion is unknown. (10%)
<i>4. Productivity and Susceptibility Analysis (10%)</i>	<ol style="list-style-type: none"> 1. Low risk. High productivity, low vulnerability, low susceptibility. (0%) 2. Medium risk. Moderate productivity, moderate vulnerability, moderate susceptibility. (5%) 3. High risk. Low productivity, high vulnerability, high susceptibility. (10%)
Level 2 – Unassessed Stocks. Reliable landings and life history information available	
OFL derived from “Depletion-Based Stock Reduction Analysis” (DBSRA). ABC derived from applying the assessed stocks rule to determine the adjustment factor if possible, or from expert judgment if not possible.	
Level 3 – Unassessed Stocks. Inadequate data to support DBSRA	
ABC derived directly from “Depletion-Corrected Average Catch” (DCAC). Done when only a limited number of years of catch data for a fishery are available. Requires a higher level of “informed expert judgment” than Level 2.	
Level 4 – Unassessed Stocks. Only Reliable Catch Stocks.	
OFL and ABC derived on a case-by-case basis. Apply ORCS approach using a catch statistic, a scalar derived from the risk of overexploitation, and the Council’s risk tolerance level.	
Level 5 – Unassessed Stocks. No reliable catch.	
OFL and ABC derived on a case-by-case basis. Stocks with very low landings that show very high variability in catch estimates (mostly caused by the high degree of uncertainty in recreational landings estimates), or stocks that have species identification issues that may cause unreliable landings estimates. Use “decision tree”:	

1. Will catch affect stock?
 - a. NO: Ecosystem Species (Council done this already, ACL Amend)
 - b. YES: Go to 2

2. Will increase (beyond current range of variability) in catch lead to decline or stock concerns?
 - a. NO: ABC = 3rd highest point in the 1999-2008 time series
 - b. YES: Go to 3

3. Is stock part of directed fishery or is it primarily bycatch for other species?
 - a. Directed: ABC = Median 1999-2008
 - b. Bycatch/Incidental: If yes, go to 4.

4. Bycatch. Must judge the circumstance:
 - a. If bycatch in other fishery: what are trends in that fishery? What are the regulations? What is the effort outlook?

If the directed fishery is increasing and bycatch of stock of concern is also increasing, the Council may need to find a means to reduce interactions or mortality. If that is not feasible, will need to impact the directed fishery. The SSC's intention is to evaluate the situation and provide guidance to the Council on possible catch levels, risk, and actions to consider for bycatch and directed components.

IPT RECOMMENDATION: Structure the Sub-alternatives below into a new action.
The actions would read:

Action 1. Amend the South Atlantic Council's ABC Control Rule.

Action 2. Apply the Revised ABC Control Rule to select unassessed snapper grouper species.

Current Sub-alternatives:

Sub-alternative 2a. Use 0.75 (catch statistic x scalar) for stocks with low, moderate and moderately high risk of overexploitation.

Sub-alternative 2b. Use 0.75 (catch statistic x scalar) for stocks with low and moderate risk of overexploitation. Use 0.50 (catch statistic x scalar) for stocks with moderately high risk of overexploitation.

Sub-alternative 2c. Use 0.90 (catch statistic x scalar) for stocks with low risk of overexploitation, 0.75 (catch statistic x scalar) for stocks with moderate risk of overexploitation, and 0.50 (catch statistic x scalar) for stocks with moderately high risk of overexploitation.

Sub-alternative 2d. Use 0.90 (catch statistic x scalar) for stocks with low risk of overexploitation, 0.80 (catch statistic x scalar) for stocks with moderate risk of overexploitation, and 0.70 (catch statistic x scalar) stocks with moderately high risk of overexploitation.

Proposed Sub-alternatives:

NOTE: Not all unassessed Snapper Grouper Species were deemed by the SSC to be classified as ORCS.

Alternative 1 (No Action). Do not adjust ABCs for select unassessed snapper grouper species based on the revised ABC Control Rule.

Alternative 2. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Low Risk of Overexploitation:

Sub-alternative 2a. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Bar Jack	34,583	0.75	51,875	24,780	+27,095

Sub-alternative 2b. Apply a Risk Tolerance scalar of 0.90

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Bar Jack	34,583	0.90	62,250	24,780	+37,470

Alternative 3. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Moderate Risk of Overexploitation:

Sub-alternative 3a. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Margate	63,993	0.75	71,992	29,889	+42,103
Red Hind	27,570	0.75	31,016	24,867	+6,149
Cubera Snapper	52,721	0.75	59,311	24,680	+24,631
Blue Runner	1,328,272	0.75	1,494,306	1,125,729	+368,577
Yellowedge Grouper	46,330	0.75	52,121	30,221	+21,900
Silk Snapper	75,269	0.75	84,678	25,104	+59,574
White Grunt (South)	735,873	0.75	827,858	674,033	+153,825
Atlantic Spadefish	677,065	0.75	761,698	189,460	+572,238
Gray Snapper	1,039,277	0.75	1,169,187	795,743	+373,444
Lane Snapper	169,572	0.75	190,769	119,984	+70,785

Sub-alternative 3b. Apply a Risk Tolerance scalar of 0.80

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Margate	63,993	0.80	76,792	29,889	+46,903
Red Hind	27,570	0.80	33,084	24,867	+8,217
Cubera Snapper	52,721	0.80	63,265	24,680	+38,585
Blue Runner	1,328,272	0.80	1,593,926	1,125,729	+468,197
Yellowedge Grouper	46,330	0.80	55,596	30,221	+25,375
Silk Snapper	75,269	0.80	90,323	25,104	+65,219
White Grunt (South)	735,873	0.80	883,048	674,033	+209,015
Atlantic Spadefish	677,065	0.80	812,478	189,460	+623,018
Gray Snapper	1,039,277	0.80	1,247,133	795,743	+451,390
Lane Snapper	169,572	0.80	203,486	119,984	+83,502

Alternative 4. Assign a Risk Tolerance scalar to stocks deemed by the SSC to be under Moderately High Risk of Overexploitation:

Sub-alternative 4a. Apply a Risk Tolerance scalar of 0.70

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Rock Hind	42,849	0.70	37,493	37,953	-460
Tomtate	105,909	0.70	92,670	80,056	12,614
Hogfish	211,595	0.70	185,146	134,824	50,322
White Grunt (North)	735,873	0.70	643,889	674,033	-30,144
Scamp	596,879	0.70	522,269	509,788	12,481
Gray Triggerfish	819,428	0.70	717,000	626,518	90,482

Sub-alternative 4b. Apply a Risk Tolerance scalar of 0.75

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference of ABC
Rock Hind	42,849	0.75	40,171	37,953	2,218
Tomtate	105,909	0.75	99,290	80,056	19,234
Hogfish	211,595	0.75	198,370	134,824	63,546
White Grunt (North)	735,873	0.75	689,881	674,033	15,848
Scamp	596,879	0.75	559,574	509,788	49,786
Gray Triggerfish	819,428	0.75	768,214	626,518	141,696

Sub-alternative 4b. Apply a Risk Tolerance scalar of 0.50

Stock	Catch Statistic (Highest landings 1999-2007)	Risk Tolerance Scalar	New ABC (lbs ww)	Current ABC (lbs ww)	Difference in ABC
Rock Hind	42,849	0.50	26,781	37,953	-11,172
Tomtate	105,909	0.50	66,193	80,056	-13,863
Hogfish	211,595	0.50	132,247	134,824	-2,577
White Grunt (North)	735,873	0.50	459,921	674,033	-214,112
Scamp	596,879	0.50	373,049	509,788	-136,739
Gray Triggerfish	819,428	0.50	512,143	626,518	-114,375

SNAPPER GROUPEL AP RECOMMENDATIONS:

MOTION: AP RECOMMENDS SUB-ALTERNATIVE 2D AS THE PREFERRED **Sub-alternative 2d**. Use 0.90 (catch statistic x scalar) for stocks with low risk of overexploitation, 0.80 (catch statistic x scalar) for stocks with moderate risk of overexploitation, and 0.70 (catch statistic x scalar) stocks with moderately high risk of overexploitation.

APPROVED

MOTION: CONSIDER USING A 0.50 RISK TOLERANCE LEVEL FOR HOGFISH
APPROVED

MOTION: AP RECOMMENDS THAT THE COUNCIL CONSIDER INCREASING THE MINIMUM SIZE LIMIT FOR HOGFISH

APPROVED

LOOK AT 14 TO 18 INCHES*

Summary of Effects

NOTE: The analyses refer to the current structure of actions, alternatives, and Sub-alternatives, NOT the proposed re-structuring.

Biological

Below are the unassessed snapper grouper species that would not be subject to the ORCS approach due to SSC concerns on the reliability of catch statistics based on variability, landings or data collection issues and species identification.

Variability	Landings or Data Collection issues	Species ID
Black Snapper	Black Snapper	Almaco Jack
	Blackfin Snapper	Lesser Amberjack
	Sand Tilefish	Sailor's Choice
	Mahogany	Banded Rudderfish
	Dog Snapper	Yellowmouth Grouper
	Misty Grouper	Scup
	Sailor's Choice	Saucereye Porgy
	Coney	Jolthead Porgy
	Graysby	Knobbed Porgy

Variability	Landings or Data Collection issues	Species ID
	Saucereye Porgy	Whitebone Porgy
	Scup	
	Queen Snapper	
	Warsaw grouper	
	Speckled hind	

The most conservative ABCs would be expected to have the greatest biological benefit to the species. There is uncertainty in the selection of the risk of overexploitation scalar (SSC recommendation), and the selection of the risk tolerance scalar (South Atlantic Council selection). If the South Atlantic Council selects the risk tolerance scalar to achieve the most conservative values of ABC, biological impacts would be minimized. However, while conservative ABCs may provide the greatest biological benefit to the species, higher ABCs would not be expected to negatively impact the stock as long as harvest is maintained at sustainable levels and overfishing does not occur. Furthermore, harvest for some species listed under the sub-alternatives is currently not constrained by the ACLs. If harvest continues to be less than the ACLs resulting from the proposed ABCs for sub-alternatives, no biological effects would be expected.

Economic

A preliminary comparison of average annual commercial landings from 2008 through 2012 with the alternative ACLs suggests the proposed changes in the ACLs for 14 of the 16 (17 when white grunt is divided into northern and southern) stocks would have no economic impact (**Table 1**). Average annual commercial landings exceed the current and/or a proposed ACL for blue runner, gray triggerfish, and tomtate where highlighted.

Table 1. Average annual commercial landings (2008-2012) versus alternative commercial ACLs. Source: For gray triggerfish, NMFS SERO ALS and for all others, NMFS ALS database (excluding non-confidential data).

Stock	Lbs (rw)					
	Ave 2008-12	Alt 1	Alt 2a	Alt 2b	Alt 2c	Alt 2d
Spadefishes	26,775	35,107	141,143	141,143	141,143	150,552
Bar Jack	719	5,266	11,023	13,228	13,228	13,228
Blue Runner	182,147	177,527	235,652	235,652	235,652	251,362
Cubera Snapper	4,409	5,980	14,371	14,371	14,371	15,329
Gray Snapper	29,752	192,809	283,294	283,294	283,294	302,180
Gray Triggerfish	376,082	272,911	334,634	223,089	223,089	312,325
Hogfish	37,421	49,467	72,782	48,521	48,521	67,930
Lane Snapper	1,247	17,698	28,138	28,138	28,138	30,014
Margate	2,140	5,643	13,592	13,592	13,592	14,498
Red Hind	9,497	18,302	22,828	22,828	22,828	24,350
Rock Hind	15,607	23,113	24,464	16,310	16,310	22,833
Scamp	214,643	333,095	365,626	243,750	243,750	341,251
Silk Snapper	2,941	18,564	62,619	62,619	62,619	66,794
Tomtate	130	0	0	0	0	0
White Grunt (North)		212,927	217,933	145,289	145,289	203,405
White Grunt (South)	22,898	212,927	261,520	261,520	261,520	278,955
Yellowedge Grouper	3,581	27,432	47,310	47,310	47,310	50,464

The commercial ACL for tomtate is zero because it is not a commercial species. Any landings are counted against the combined commercial ACL for Grunts (margate, tomtate, sailor’s choice, and white grunt). In three of the five years from 2008 through 2012, there were no commercial landings of tomtate. The average of annual landings for combined grunts for these 5 years (43,160 lbs ww) is less than the combined commercial ACL of 218,539 lbs ww. Consequently, there is expected to be no loss of grunts landed by any of the alternatives. Although **Alternative 1 (No Action)** would be expected to result in a loss of average annual blue runner landings, **Sub-alternatives 2a, 2b, 2c** or **2d** would result in a gain of average annual landings of at least 4,620 lbs ww (182,147 less 177,527). Average annual commercial landings of gray snapper would be expected to decrease regardless of which alternative is chosen; however, **Sub-alternative 2b** would generate the smallest loss, followed in turn by **Sub-alternative 2d**, **Alternative 1 (No Action)** and **Sub-alternatives 2c** and **2d**.

A comparison of annual recreational landings of the relevant stocks and their ACLs in 2012 shows recreational landings of gray triggerfish and hogfish exceeded their respective ACLs (**Table 2**). Approximately 105% of the hogfish ACL and 104% of the gray triggerfish ACL was landed in 2012.

Table 2. 2012 recreational landings, ACLs and percent of ACL landed.
Source: NMFS SERO.

Species	Stock	Lbs	ACL	% ACL
Atlantic Spadefish	Atlantic Spadefish	187,106	246,365	75.9%
Bar Jack	Bar Jack	2,559	13,834	18.5%
Blue Runner	Blue Runner	619,627	1,101,612	56.2%
Cubera Snapper	Snappers	428,982	882,388	48.6%
Gray Snapper				
Lane Snapper				
Gray Triggerfish	Gray Triggerfish	383,466	367,303	104.4%
Hogfish	Hogfish	103,610	98,866	104.8%
Margate	Grunts	408,318	562,151	72.6%
Tomtate				
White Grunt				
Silk Snapper	Deepwater complex	107,849	332,039	32.5%
Yellowedge Grouper				
Scamp	Scamp	78,446	150,936	52.0%
Red Hind	Shallow-water Grouper	19,552	48,329	40.5%
Rock Hind				

If 2012 annual recreational landings were representative of average annual landings (lbs) in the next five years, **Alternative 1 (No Action)** and **Sub-alternatives 2b** and **2d** would establish an ACL lower than expected annual recreational landings of gray triggerfish and hogfish (**Table 3**). **Alternative 1 (No Action)** would also lower recreational landings of Atlantic spadefish.

Table 3. Comparison of alternatives and 2012 landings (lbs).

Species	Stock	Annual Lbs	Alt. 1	Alt. 2a	Alt. 2b	Alt. 2c	Alt. 2d
Atlantic Spadefish	Atlantic Spadefish	187,106	154,353	620,555	620,555	620,555	661,926
Bar Jack	Bar Jack	2,559	19,514	40,852	40,852	49,022	49,022
Blue Runner	Blue Runner	619,627	948,202	1,258,654	1,258,654	1,258,654	1,342,564
Cubera Snapper	Snappers	428,982	728,577	1,098,120	1,098,120	1,098,120	1,171,017
Gray Snapper							
Lane Snapper							
Gray Triggerfish	Gray Triggerfish	383,466	353,607	433,580	289,054	289,054	404,675
Hogfish	Hogfish	103,610	85,357	125,588	83,726	83,726	117,216

Species	Stock	Annual Lbs	Alt. 1	Alt. 2a	Alt. 2b	Alt. 2c	Alt. 2d
Margate	Grunts	408,318	588,113	1,096,685	939,370	939,370	1,106,871
Tomtate							
White Grunt							
Silk Snapper	Deepwater complex	107,849	334,556	336,577	336,577	336,577	336,898
Yellowedge Grouper							
Scamp	Scamp	78,446	176,693	193,948	129,299	129,299	181,018
Red Hind	Shallow-water Grouper	19,552	46,656	49,147	43,911	43,911	48,645
Rock Hind							

Through the first six months of 2013 recreational landings of deepwater complex species reached approximately 67% of its ACL. No other stock had landings greater than 40% of its ACL at that time. If the landings rates for the second half of 2013 are equal to the first half, only deepwater complex landings will exceed the recreational ACL before December 31 (**Table 4**). If annual landings are equal to three times the landings from January 1 through June 30, landings of snappers and deepwater complex would exceed their ACLs. Annual landings in 2012 for Atlantic spadefish, bar jack, blue runner, gray triggerfish, hogfish, grunts, scamp, and shallow-water grouper exceed three times the first six months of landings in 2013. Annual landings of snappers and deepwater complex in 2012 are less than double the 2013 January through June landings.

Table 4. 2013 Recreational landings (lbs) January 1-June 30, projected 2013 landings, ACL and percent ACL landed. Source: NMFS SERO for Jan 1-June 30 landings.

Species	Stock	First 6 months 2013	ACL	% ACL	First 6 months 2013 x 2	% ACL	First 6 months 2013 x 3	% ACL
Atlantic Spadefish	Atlantic Spadefish	40,515	154,352	26.2%	81,030	52.5%	121,545	78.7%
Bar Jack	Bar Jack	0	19,515	0.0%	0	0.0%	0	0.0%
Blue Runner	Blue Runner	114,370	948,223	12.1%	228,740	24.1%	343,110	36.2%
Cubera Snapper	Snappers	265,812	728,577	36.5%	531,624	73.0%	797,436	109.5%
Gray Snapper								
Lane Snapper								
Gray Triggerfish	Gray Triggerfish	107,016	353,638	30.3%	214,032	60.5%	321,048	90.8%
Hogfish	Hogfish	27,585	85,355	32.3%	55,170	64.6%	82,755	97.0%

Species	Stock	First 6 months 2013	ACL	% ACL	First 6 months 2013 x 2	% ACL	First 6 months 2013 x 3	% ACL
Margate	Grunts	85,942	588,113	14.6%	171,884	29.2%	257,826	43.8%
Tomtate								
White Grunt								
Silk Snapper	Deepwater complex	216,091	334,556	64.6%	432,182	129.2%	648,273	193.8%
Yellowedge Grouper								
Scamp	Scamp	9,864	176,688	5.6%	19,728	11.2%	29,592	16.7%
Red Hind	Shallow-water Grouper	5,132	46,656	11.0%	10,264	22.0%	15,396	33.0%
Rock Hind								

Social

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 (AMs) that restrict or close harvest could negatively impact 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 long-term recovery and rebuilding goals are met. Adhering to stock recovery and rebuilding goals is assumed to result in net long-term positive social and economic benefits. Additionally, adjustments in an ACL based on updated information from a stock assessment would be the most beneficial in the long term to fishermen and communities because catch limits would be based on the current conditions.

Because the ACLs for the species that have been designated as ORCs would not be adjusted to reflect the new SSC method to specify the ABC for these stocks, **Alternative 1 (No Action)** would not result in any social benefits expected from adopting the method developed by the SSC, which also incorporates information from fishermen and scientific experts, into setting the catch limits for the ORC species. **Alternative 2** would be expected to be more beneficial to the commercial fleet, for-hire fleet, private anglers, and other resource users because the ORCS method is expected to be an improvement on the method of assessing how much of each stock can be harvested, even if there are not accurate, up-to-date or available fishery-independent data for the stock.

In general a higher ACL would be more beneficial to commercial and recreational fishermen as long as it is set to prevent overfishing. For almost all species in this action, the ACL would increase under **Alternative 2**. In cases such as gray triggerfish and scamp, which are popular commercial and recreational species that have or may have in the future experience early closures due to the ACL being met or exceeded, an increase in

the ACL would be expected to improve harvest opportunities and extend the seasons. However, because the ACLs for most of the species have not recently met or exceeded either the commercial or recreational ACL, the increases under **Alternative 2** are not expected to affect commercial and recreational fishermen harvesting these species.

COMMITTEE ACTIONS:

- APPROVE RE-STRUCTURING AND RE-WORDING OF ACTIONS 1 & 2 AS PRESENTED ABOVE.
- SELECT PREFERRED ALTERNATIVES AND SUB-ALTERNATIVES FOR ACTIONS 1 & 2, RESPECTIVELY.

Action 2. Modify the measurement method for gray triggerfish and establish a size limit

Alternative 1 (No Action). Currently, the minimum size limit for gray triggerfish is specified in inches total length (TL) in federal waters off east Florida only. In Florida state waters, the minimum size for gray triggerfish is specified in inches fork length (FL). The minimum size limit is 12 inches TL in federal waters off Florida and 12 inches FL in Florida state waters.

Alternative 2. Specify a minimum size limit for gray triggerfish of 12 inches FL in federal waters off east Florida.

Alternative 3. Specify a minimum size limit for gray triggerfish of 12 inches FL in federal waters off North Carolina, South Carolina, Georgia, and east Florida.

IPT RECOMMENDATION:

Renumber Action 2 as Action 3 and edit as presented below:

Action 3. Modify the commercial and recreational minimum size limits for gray triggerfish

Alternative 1 (No Action). Currently, the minimum size limit for gray triggerfish is specified in inches total length (TL) in federal waters off east Florida only. In Florida state waters, the minimum size for gray triggerfish is specified in inches fork length (FL). The minimum size limit is 12 inches TL in federal waters off east Florida and 12 inches FL in east Florida state waters.

Alternative 2. Specify a minimum size limit for gray triggerfish of 12 inches fork length (FL) in federal waters off east Florida.

Alternative 3. Specify a minimum size limit for gray triggerfish of 12 inches fork length (FL) in federal waters off North Carolina, South Carolina, Georgia, and east Florida.

SG AP RECOMMENDATION:

MOTION: RECOMMEND A MINIMUM SIZE LIMIT OF 14 INCHES FOR GRAY TRIGGERFISH IN FEDERAL WATERS OFF NORTH CAROLINA, SOUTH CAROLINA, GEORGIA, AND EAST FLORIDA.
APPROVED

Summary of Effects

NOTE: The analyses refer to the current structure of actions, alternatives, and Sub-alternatives, NOT the proposed re-structuring.

Biological

Currently the recreational minimum size limit for South Atlantic gray triggerfish is 12 inches total length (TL) in federal waters off east Florida and 12 inches fork length (FL) in east Florida state waters. The South Atlantic Council is considering changing the size limit from 12 inches TL to 12 inches FL in federal waters.

A recent stock assessment for South Atlantic gray triggerfish (SEDAR 32) is currently underway and provided the conversion equation to go from TL to FL (**Table 5**). Using the conversion equation a 12-inch TL gray triggerfish converts to a 10.46 inch FL gray triggerfish.

Table 5. Meristic conversions for South Atlantic gray triggerfish. Source: SEDAR 32.

Conversion	Model
Total Length (mm) to Fork Length (mm)	Total Length = 1.19*(Fork Length) – 11.42

SEDAR 32 determined the midrange of discard mortality to be 12.5%. In this analysis discard mortality was assumed to be 12.5%.

Commercial Sector

Alternative 1 (No Action) would retain the minimum size limit for gray triggerfish at 12 inches TL in federal waters off Florida and 12 inches FL in Florida state waters.

The Comprehensive ACL Amendment implemented an ACL of 305,262 pounds lbs ww for the commercial sector of gray triggerfish in the South Atlantic on April 16, 2012. Regulatory Amendment 13 revised the commercial ACL for gray triggerfish to 272,880 lbs whole weight (ww) on July 17, 2103. Commercial landings for gray triggerfish steadily increased from 2007 to 2011 (**Table 6**). Historical landings would have exceeded the current ACL implemented by the Comprehensive ACL Amendment, and Regulatory Amendment 13 in all five years (**Table 6**).

Table 6. Annual commercial landings by area for gray triggerfish in the South Atlantic from 2007 to 2011. Annual landings were compared with the respective ACLs from the Comprehensive ACL Amendment (ACL 1) and Regulatory Amendment 13 (ACL 2).

Year	NC, SC, & GA Federal	NC, SC, & GA State	Florida Federal	Florida State	Total Landings	ACL 1	% of ACL 1	ACL 2	% of ACL 2
2007	275,669	129	62,348	295	338,441	305,262	111	272,880	124
2008	291,841	71	43,185	355	335,452	305,262	110	272,880	123
2009	313,139	5,006	55,287	678	374,110	305,262	123	272,880	137
2010	360,718	57	103,960	1,816	466,551	305,262	153	272,880	171
2011	436,688	27,985	158,388	603	623,664	305,262	204	272,880	229

Source: SEFSC ACL Data (March 2013).

Given the increasing trend in annual commercial gray triggerfish landings (**Table 6**), an analysis forecasting 2014 catches was conducted using a Seasonal Autoregressive Integrated Moving Average (SARIMA) Model (**Figure 1**). The best-fitting model explained 85% of the variability in catch rate, and predicted a slightly increasing catch rate that would require a quota closure in late July under current regulations in **Alternative 1 (No Action)** (**Figure 1** and **Table 7**).

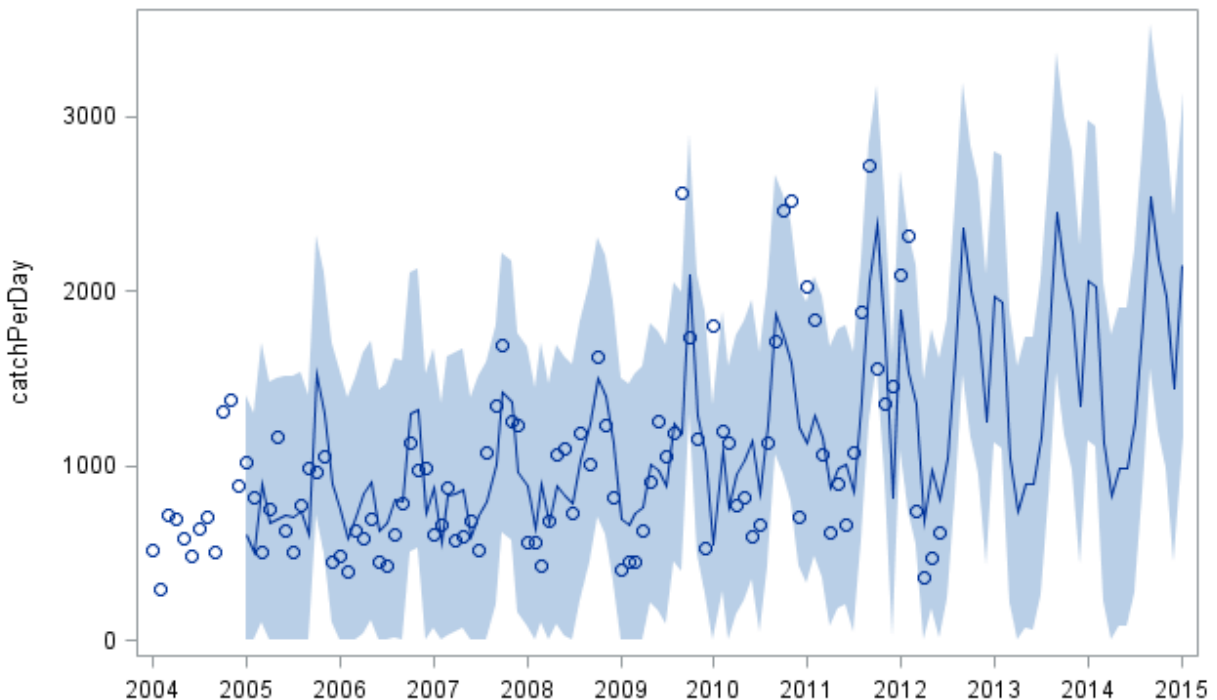


Figure 1. Predicted catch rates (blue line) relative to observed catch rates (open circles), forecast through the 2014 fishing season using the SARIMA Model. Note relatively lower catch rates during March-July of each year.

Table 7. Projected quota closure dates for the 2014 fishing season for the commercial sector of gray triggerfish in the South Atlantic.

ACL (lbs ww)	Mean	L95%	U95%
305,262	14-Aug	No overage	9-May
272,880	26-Jul	No overage	21-Apr

During 2007-2011, there was a slight increase in average length of gray triggerfish (**Table 8** and **Figure 2**).

Table 8. Average annual fork length of gray triggerfish for the South Atlantic commercial sector.

Year	Average Fork Length (inches)	n
2007	15.07	1,882
2008	14.98	1,714
2009	14.73	1,845
2010	15.36	2,148
2011	15.42	2,680

Source: SEFSC Trip Interview Program (TIP) data.

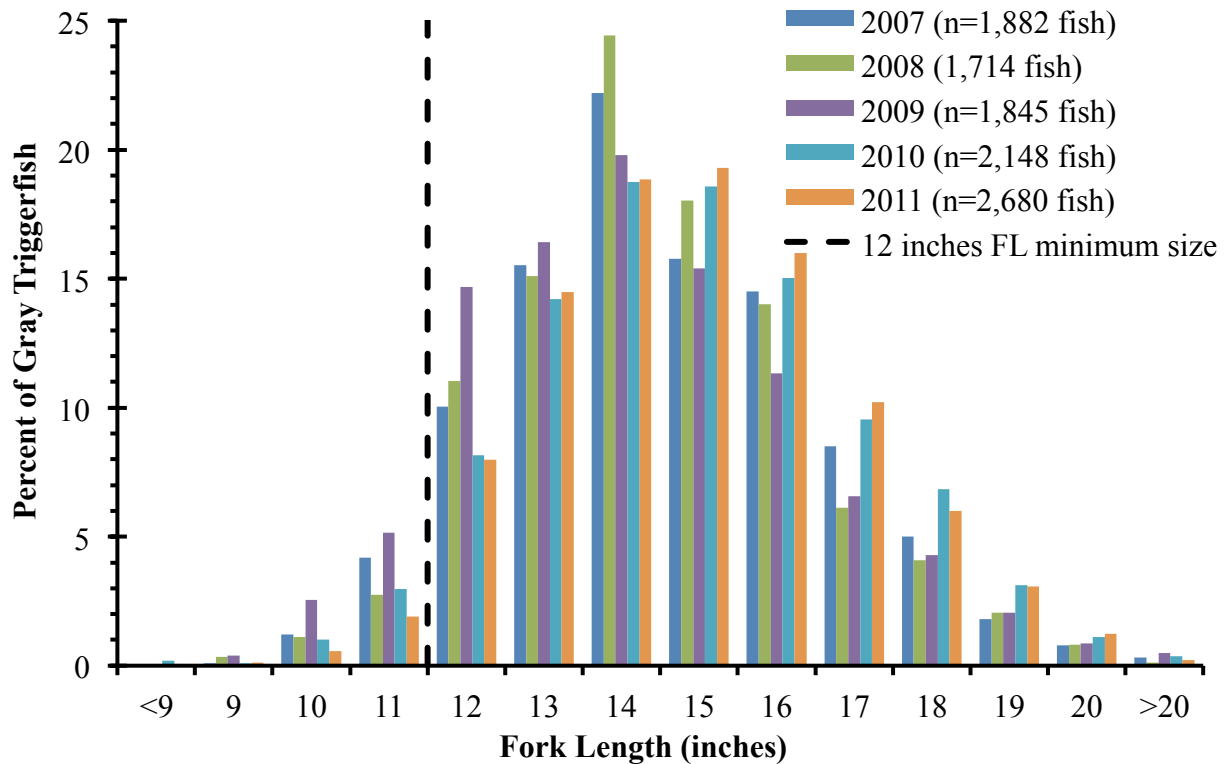


Figure 2. Distribution of gray triggerfish lengths by year for the commercial sector in the South Atlantic.

Under **Alternative 2**, the commercial harvest of gray triggerfish in Florida might be reduced by 2.1% ($\pm 2.0\%$) in 2014. On a monthly basis, this might reduce commercial landings in Florida by up to 6% (**Table 9**). On average, during 2007-2011, commercial landings in Florida accounted for 19% ($\pm 5\%$) of the annual gray triggerfish commercial harvest in the South Atlantic (**Table 6**). As this reduction is only 2.1% of 19% of the total harvest, it is relatively minor (0.4% reduction), and does not contribute significantly to extending the fishing season (**Tables 9 and 11**).

Table 9. Mean percent commercial gray triggerfish landings in Florida between 10.46 – 12 inches FL, during 2007-2012.

MONTH	MEAN (2007-2012)	SD	N
1	0%	1%	435
2	0%	0%	257
3	1%	1%	304
4	1%	1%	109
5	0%	1%	175
6	0%	0%	209
7	6%	7%	367
8	5%	6%	378
9	0%	1%	223
10	2%	6%	165
11	6%	14%	132
12	4%	5%	232

Table 10. Projected commercial gray triggerfish quota closure dates for the 2014 fishing season under Alternative 2.

ACL	Mean	L95%	U95%
305,262	15-Aug	No Closure	9-May
353,638	26-Jul	No Closure	21-Apr

Currently there is no minimum size limit off North Carolina, South Carolina, and Georgia, which account for 81% of the gray triggerfish commercial landings (**Table 6**). However, there is a minimum size limit in federal waters of Florida, which would be increased from 12 inches TL (10.46 inches FL) to 12 inches FL. Establishing a minimum size limit off Georgia, South Carolina, and North Carolina, and increasing the federal minimum size limit off Florida, would provide a slight reduction in harvest rates under **Alternative 3** (**Table 12**). These reductions would extend the gray triggerfish season by 2-5 days (**Tables 10 and 12**).

Table 11. Mean percent of commercial gray triggerfish landings less than 12 inches FL in the South Atlantic during 2007-2012.

MONTH	MEAN	SD
1	2%	2%
2	2%	1%
3	2%	1%
4	1%	1%
5	2%	1%
6	3%	1%
7	4%	4%
8	3%	3%
9	2%	1%
10	2%	3%
11	2%	3%
12	4%	1%

Table 12. Projected commercial gray triggerfish quota closure dates for the 2014 fishing season under Alternative 3.

ACL	Mean	L95%	U95%
305,262	18-Aug	No Closure	9-May
353,638	31-Jul	No Closure	23-Apr

There would be little difference in the biological benefits of **Alternatives 1 (No Action)-3**, since the establishment of a minimum size limit would not be very restrictive on the commercial harvest of gray triggerfish. A minimum size limit of 12 inch FL under **Alternative 3** could provide spawning opportunities for gray triggerfish. Therefore, biological benefits would be greatest for **Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)** for the commercial sector.

Recreational Sector

An ACL of 367,303 pounds whole weight (lbs ww) was implemented for the South Atlantic gray triggerfish recreational sector in the Comprehensive ACL Amendment on April 16, 2012. However, this ACL was based on Marine Recreational Fisheries Statistics Survey (MRFSS) data, and the recreational survey method was recently modified and changed to the Marine Recreational Information Program (MRIP). Regulatory Amendment 13 revised the gray triggerfish ACL using MRIP data, which resulted in an ACL of 353,638 lbs ww. **Table 13** provides historic recreational landings from 2008 to 2012 and compares them to the MRIP ACL. Historic landings would have exceeded the ACL; however, the most recent landings (2012) did not exceed the ACL.

Table 13. Annual South Atlantic gray triggerfish recreational landings by area from 2008 to 2012. MRIP landings were provided with the headboat landings and compared to their respective ACLs in the “ACL %” column.

Year	NC, SC, and GA Federal Landings	NC, SC, and GA State Landings	Florida Federal	Florida State	Total Landings	ACL	ACL %
2008	348,934	3,113	77,467	126,958	556,471	353,638	157
2009	243,331	17,569	68,415	198,495	527,809	353,638	149
2010	213,784	62,387	115,909	70,555	462,636	353,638	131
2011	144,715	10,241	120,575	80,795	356,327	353,638	101
2012	202,868	25,241	22,633	97,858	348,599	353,638	99

The lengths of South Atlantic gray triggerfish in the recreational sector came from MRIP recreational survey and headboat datasets. The recreational survey length data came from the catch effort files and the headboat data came from the biological profile files. Data were from 2008 to 2012.

The average length of gray triggerfish caught by recreational fishermen increased from 2008 to 2012 (**Table 14** and **Figure 3**). Changes in the fish size overtime can influence the reduction of landings estimated from changes in the minimum size limit. To control for this impact only data from the previous three years (2010-2012) were used for size limit analysis. There are also the three most recent fishing years, which will most likely represent future landings.

Table 14. Average fork length of gray triggerfish for the South Atlantic recreational sector for each year. The recreational data comes from MRIP and headboat.

Year	Average Fork Length (inches)	n
2008	13.4	832
2009	13.5	1,055
2010	13.6	1,863
2011	13.8	1,487
2012	13.8	1,490

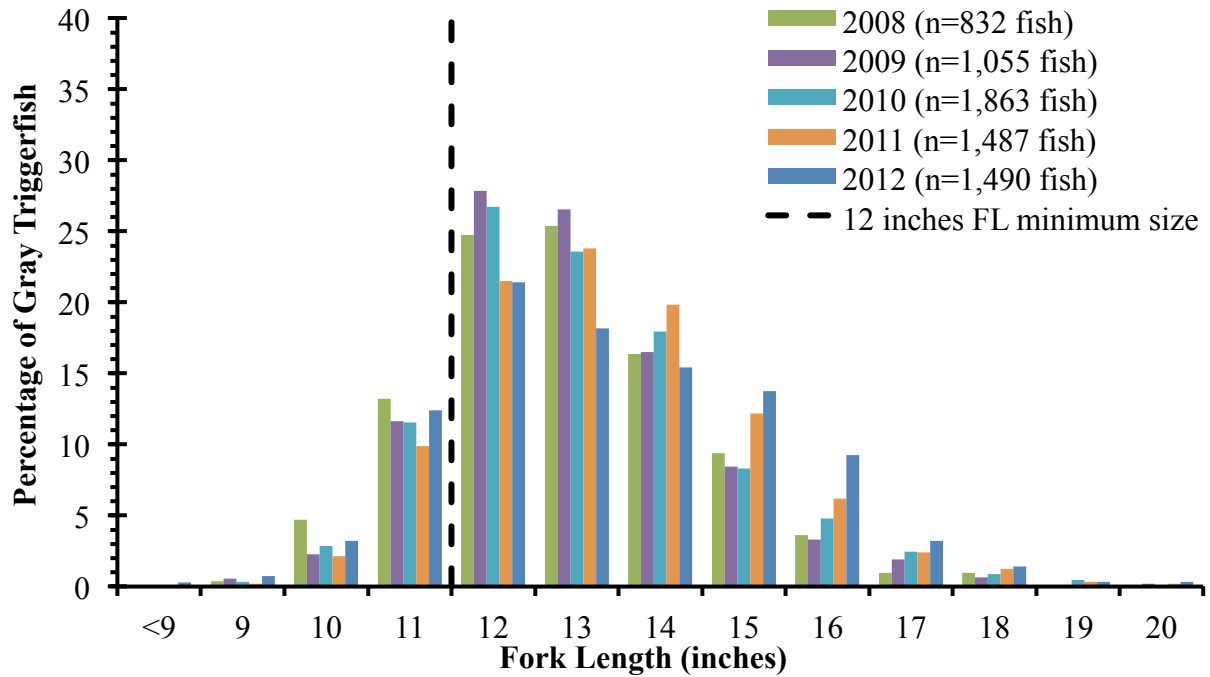


Figure 3. Distribution of South Atlantic gray triggerfish lengths by year from the recreational sector. The data are from 2008 to 2012 and contains both MRIP and headboat data.

Alternative 2

Alternative 2 changes the minimum size limit in federal waters of the east coast of Florida from 12 inches TL to 12 inches FL. This would be a change of a 10.46 inches FL to an increase to 12 inches FL.

The data were filtered so only length data from the east coast of Florida remained. From 2010-2012 there were lengths available for 146 gray triggerfish (75 in the charter sector and 71 in the private sector) in federal waters for the MRIP dataset. The headboat data were for the entire east coast of Florida, since federal and state waters fishing location information is not available, and contained lengths for 2,882 gray triggerfish. The percent reduction from increasing the minimum size to 12 inches FL was calculated from the length data. The lengths were converted to weight and the reductions were calculated in terms of weight. Additional information on the details on calculating the percent reductions can be found at SERO-LAPP-2012-02. Since the MRIP length data had location details of state and federal waters the MRIP reductions were calculated specifically with data from federal waters. **Figure 4** displays the lengths in federal versus state waters of east Florida. Additionally, the MRIP reductions were calculated for both private and charter sectors. Since location of harvest (federal vs. state waters) was not available for headboat the reductions generated from the headboat data were for the entire east coast of Florida. Monthly percent reductions were not possible with the MRIP dataset because the monthly sample sizes were small (<30 fish). However, the monthly

percent reductions were possible for the headboat dataset because each month had large samples sizes (>30 fish). **Table 15** provides the percent reduction results.

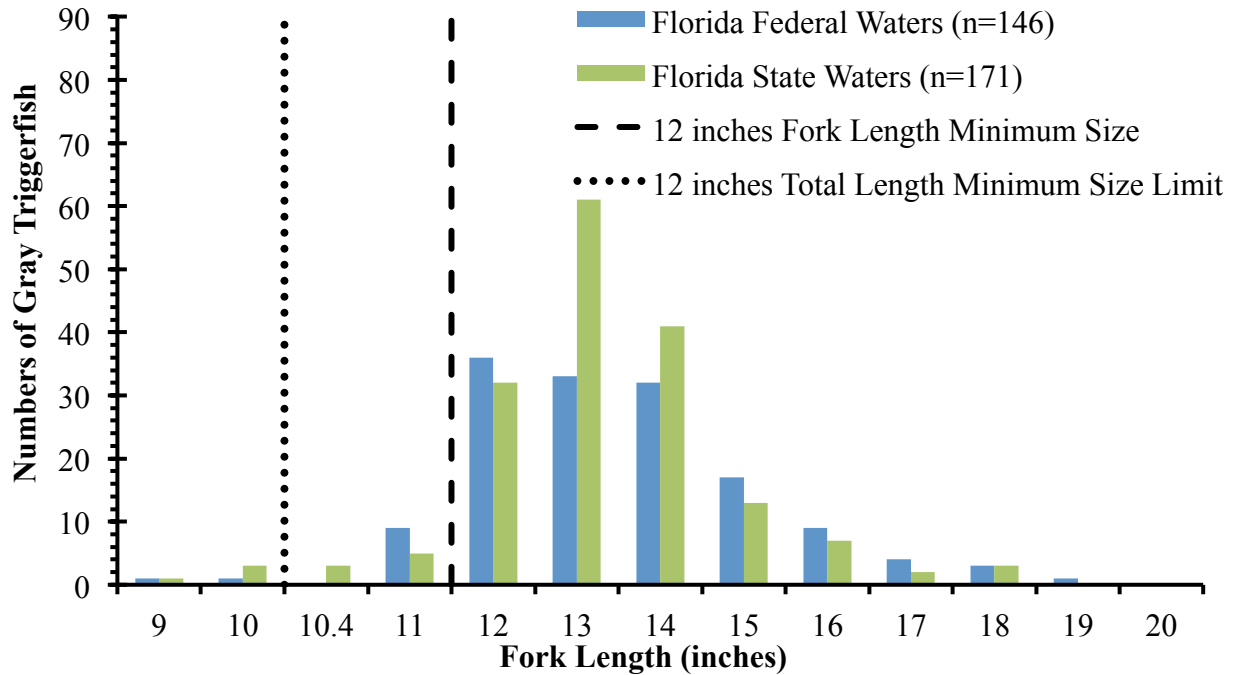


Figure 4. Distribution of Florida east coast gray triggerfish lengths from the recreational sector separated by catches in federal and state waters. The data comes from 2010 to 2012 MRIP intercepts. The headboat length data was not included since it does not have information on location of catch in federal and state waters.

Table 15. Percent reductions in South Atlantic recreational gray triggerfish landings for increasing the minimum size in Florida waters from 12 inches total length (10.46 inches FL) to 12 inches fork length.

MRIP		
	Charter	Private
12 inches FL	5.3	1.5
Headboat		
Month	Charter	
1	6.3	
2	13.7	
3	7.5	
4	10.1	
5	10.9	

Headboat	
Month	Charter
6	11.4
7	10.7
8	6.3
9	4.5
10	5.2
11	3
12	4.5

Note: The reductions were calculated in terms of gray triggerfish weight (lbs) following SERO-LAPP-2012-02. The percent reductions for MRIP were calculated for federal waters. Headboat length data did not have jurisdictional information on the catch location (federal or state waters) so the percent reductions reflect both federal and state waters combined. Monthly percent reductions were calculated for headboat data because there were sufficient sample sizes for each month.

Headboat landings, like the headboat length data, did not include the location of catch from federal or state waters. However, headboat catch-effort files (CRNF files) do have information on catch in federal or state waters. The headboat intercept file was used to determine the annual ratio of gray triggerfish caught in federal versus state waters. Then that ratio was applied to the annual headboat landings to separate them into state and federal waters.

To reflect the management change in **Alternative 2** the percent reductions were only applied to South Atlantic gray triggerfish landings from east of Florida in federal waters. Then the reduced Florida federal landings were then added to the Florida state water landings and the North Carolina, South Carolina, and Georgia gray triggerfish landings. This calculation was done for the annual landings from 2010 to 2012, and **Table 16** provides the results of the overall reduction of landings.

Table 16. Percent reductions in annual South Atlantic recreational sector gray triggerfish landings from increasing the minimum size in Florida federal waters from 12 inches TL (10.46 inches FL) to 12 inches FL. The recreational landings include MRIP landings combined with headboat landings.

Year	% Reduction in Total Landings
2010	0.82
2011	1.07
2012	1.06

Alternative 3

Alternative 3 creates a minimum size limit of 12 inches FL for the federal waters off North Carolina, South Carolina, Georgia, and east Florida. Currently there is no minimum size limit off North Carolina, South Carolina, and Georgia. However, there is a minimum size limit in federal waters of Florida, which would be increased from 12 inches TL to 12 inches FL.

Alternative 3 used the same methods for Florida waters as **Alternative 2**, and additional analysis was conducted for implementing a 12-inch FL minimum size limit in federal waters off of North Carolina, South Carolina, and Georgia. Data from the three states were pooled and treated as one region. In South Atlantic federal waters off of North Carolina, South Carolina, and Georgia from 2010-2012 there were lengths available for 896 gray triggerfish (847 in the charter sector and 49 in the private sector) in the MRIP dataset and 712 gray triggerfish in the headboat dataset. The headboat dataset did not have information on the length of gray triggerfish caught in federal or state waters. The percent reduction from increasing the minimum size to 12 inches FL was calculated from the length data. The lengths were converted to weight and the reductions were calculated in terms of weight. Additional information on the details on calculating the percent reductions can be found at SERO-LAPP-2012-02. Since the MRIP length data had location details of state and federal waters the MRIP reductions were calculated specifically with data from federal waters. Additionally, the MRIP reductions were calculated for both private and charter sectors. Since federal and state location was not available for headboat the reductions generated from the headboat data were for the entire coast from North Carolina to Georgia. Monthly percent reductions were not feasible with both the MRIP and headboat datasets because the majority of the months had very small samples sizes (<30 fish). **Table 17** provides the percent reduction results.

Table 17. Percent reductions in South Atlantic recreational sector gray triggerfish landings for implementing a minimum size limit off North Carolina, South Carolina, and Georgia waters to 12 inches FL. The reductions were calculated in terms of gray triggerfish weight (lbs). The percent reductions for MRIP were calculated for federal waters. Headboat length data did have jurisdictional information on the catch location (federal or state waters) so the percent reductions reflect both federal and state waters combined.

Mode	MRIP		Headboat
	Charter	Private	Charter
12 inches FL	6.7	1.6	8

Headboat landings, like the headboat length data, did not include the location of catch from federal or state waters. However, headboat catch-effort files (CRNF files) do have information on catch from federal or state waters. The headboat intercept files were used to determine the annual ratio of gray triggerfish caught in federal versus state waters. Then that ratio was applied to the headboat landings to separate them into state and federal waters.

To reflect the management change in **Alternative 3** the percent reductions from **Alternative 2** were applied to federal waters on the east coast of Florida and the percent reductions generated for North Carolina, South Carolina, and Georgia were also incorporated into the analysis.

The reduced Florida federal landings and reduced North Carolina, South Carolina, and Georgia federal landings were then added to the North Carolina, South Carolina, Georgia, and Florida state water landings. This calculation was done for the annual landings from 2007 to 2011, and **Table 18** provides the results of the overall reduction of landings.

Table 18. Percent reductions in annual South Atlantic recreational sector gray triggerfish landings from implementing a 12 inch FL size limit in North Carolina, South Carolina, and Georgia federal waters and increasing the minimum size in Florida federal waters from 12 inches TL (10.46 inches FL) to 12 inches FL. The recreational landings include MRIP and headboat landings.

Year	% Reduction in Total Landings
2010	3.5
2011	3.7
2012	4.8

Similar to the commercial sector, there would be little difference in the biological benefits of **Alternatives 1 (No Action) – 3**, since the establishment of a minimum size limit would not be very restrictive on the recreational harvest of gray triggerfish. A minimum size limit of 12 inch FL under **Alternative 3** could provide spawning opportunities for gray triggerfish. Therefore, biological benefits would be greatest for **Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)** for the recreational sector.

Economic

The minimum size limit for gray triggerfish is 12-inches total length (TL) in the Atlantic EEZ off Florida. **Alternative 1 (No Action)** would keep the current size limit and would have no impact beyond the baseline. The present regulatory definition of TL is the straight line from the top of the snout to the tip of the tail (caudal fin), excluding any caudal filament, while the fish is lying on its side. As such, for gray triggerfish that TL measurement is essentially a fork length (FL) measurement, which may confuse anglers.

Alternative 2 would change the minimum size limit to 12-inches FL in the Atlantic Exclusive Economic Zone (EEZ) off North Carolina, South Carolina, Georgia and Florida. According to Florida Administrative Code (68B-14.0035) no person can land or possess gray triggerfish harvested in Atlantic state waters that is less than 12-inches FL. Georgia, North Carolina and South Carolina have no minimum size limits for the species. Hence, **Alternative 2** would be compatible with Florida’s size limit, but not with the other South Atlantic States.

A gray triggerfish that measures 12-inch FL is smaller than one that measures 12-inches TL. Consequently, **Alternative 2** would be expected to reduce annual commercial and recreational landings of gray triggerfish. **Table 19** presents a 1% to 5% reduction in average annual commercial landings, and **Table 20**, the same percent reductions in 2012 annual recreational landings. If **Alternative 2** causes a 1% to 5% loss of average commercial landings, the revised average would range from 372,321 to 357,278 lbs. Similarly, a 1% to 5% loss of average annual recreational landings, assuming 2012 landings are representative, would result in average annual recreational landings ranging from 379,631 to 364,293 lbs. These revised average annual landings are compared to **Alternative 1 (No Action)** and **Sub-alternatives 2a through 2d** of Action 1 (**Tables 21 and 22**). Note that a larger reduction in landings due to **Alternative 2** of Action 2 reduces the adverse impact of the Action 1 alternatives because baseline landings are reduced by Action 2 in this presentation. It is possible that fishermen may mitigate to reduce the impacts of **Alternative 2** by increasing the length of a trip to harvest the same number of pounds before the action; however, an increase in the length of a trip would increase trip-related costs, such as fuel, bait, and risk.

Table 19. Average annual commercial landings (2008 – 2012) and 1% and 5% reductions of those averages.

Stock	Lbs (ww)		
	Ave 2008-12	1%	5%
Gray Triggerfish	376,082	3,761	18,804

Table 20. 2012 annual recreational landings reduced by 1% or 5%.

Species	Stock	2012 Lbs	1%	5%
Gray Triggerfish	Gray Triggerfish	383,466	3,835	19,173

Table 21. Comparison of losses of commercial landings due to **Alternative 1** and **Sub-alternatives 2a-2d of Action 1** with **Alternatives 1 and 2 of Action 2**.

Action 2	Reduction	Annual	Loss of Lbs				
			Alt. 1	Alt. 2a	Alt. 2b	Alt. 2c	Alt. 2d
Alt. 1		376,082	103,171	41,448	152,993	152,993	63,757
Alt. 2	1% reduction	372,321	99,410	37,687	149,232	149,232	59,996
	5% reduction	357,278	84,367	22,644	134,189	134,189	44,953

Table 22. Comparison of losses of recreational landings due to **Alternative 1** and **Sub-alternatives 2a – 2d of Action 1** with **Alternatives 1 and 2 of Action 2.**

Action 2	Reduction	Annual	Loss of Lbs				
			Alt. 1	Alt. 2a	Alt. 2b	Alt. 2c	Alt. 2d
Alt. 1		383,466	0	0	94,412	94,412	0
Alt. 2	1% reduction	379,631	0	0	90,578	90,578	0
	5% reduction	364,293	0	0	75,239	75,239	0

Social

Gray triggerfish is an increasingly important commercial and recreational species, with growing effort and market demand associated with closures for other species. Gray triggerfish is an important fishery in Georgetown and Horry Counties in South Carolina, Duval County in north Florida, and Brunswick and Carteret Counties in North Carolina, and these communities would likely be affected by changes in management measures.

Changing the size limit measurement method (**Alternatives 2 and 3**) to track the Florida size limit requirements would be beneficial to commercial and recreational fishermen by removing inconsistency between the state and federal requirements. Establishing a size limit for federal waters of North Carolina, South Carolina and Georgia (**Alternative 3**) would make the federal regulations consistent across all South Atlantic states, but could have some negative effects on recreational and commercial fishermen harvesting gray triggerfish in the EEZ of states that currently do not have size limits by limiting the number of fish that can be kept.

Some social effects of size limits under **Alternative 3** would be associated with the positive and negative biological effects of size limits on the gray triggerfish stock. Positive effects of allowing fish of a certain size to be maintained (**Alternative 3**) could help maintain sustainability of harvest and the health of the stock, which would be beneficial to recreational and commercial fishermen in the long term. Negative effects of potential increase in discard mortality due to a newly established size limit in North Carolina, South Carolina, and Georgia under **Alternative 3**, compared to allowing all fish to be landed in those states under **Alternative 1 (No Action)**, could affect the stock and in turn, commercial and recreational fishing opportunities. With the growing popularity and economic importance of gray triggerfish, changes in management measures could have considerable impacts on the stock that would in turn impact fishing opportunities in the future.

COMMITTEE ACTION: APPROVE RECOMMENDED RE-STRUCTURING AND RE-WORDING OF ACTION 2 AS PRESENTED ABOVE.

Action 3. Establish a commercial split season for gray triggerfish

Alternative 1 (No Action). The commercial fishing year for gray triggerfish is the calendar year. The commercial ACL is allocated for the entire year.

Alternative 2. Allocate the directed commercial gray triggerfish ACL 50% to the period January 1 through June 30 and 50% to the period July 1 through December 31. Any remaining ACL from season 1 would transfer to season 2. Any remaining ACL from season 2 would not be carried forward.

IPT RECOMMENDATION: Consider adding the alternative below:

Alternative 3. Allocate the directed commercial gray triggerfish ACL XX% to the period January 1 through June 30 and XX% to the period July 1 through December 31. Any remaining ACL from season 1 would transfer to season 2. Any remaining ACL from season 2 would not be carried forward.

SNAPPER GROUPE AP DISCUSSION & RECOMMENDATIONS:

- The AP did not feel they could recommend other alternatives as they did not have the distribution of landings to make an informed recommendation
- The AP noted they are catching larger triggerfish.
- Concern about triggerfish closing in March/April under the proposed split season. This would affect availability of product for seafood market.

MOTION: AP RECOMMENDS ALTERNATIVE 2 AS PREFERRED

Alternative 2. Allocate the directed commercial gray triggerfish ACL 50% to the period January 1 through June 30 and 50% to the period July 1 through December 31. Any remaining ACL from season 1 would transfer to season 2. Any remaining ACL from season 2 would not be carried forward.

APPROVED

CONSIDER A SPAWNING SEASON CLOSURE (COMMERCIAL) FOR GRAY TRIGGERFISH*

MOTION: COUNCIL SHOULD CONSIDER REDUCING THE BAG LIMIT OF GRAY TRIGGERFISH TO 8 FISH

APPROVED

Summary of Effects

NOTE: The analyses refer to the current structure of actions, alternatives, and Sub-alternatives, NOT the proposed re-structuring.

Biological

Splitting the commercial season into two distinct time periods would provide opportunities to fish for gray triggerfish throughout South Atlantic and throughout the calendar year. With the specification of an ACL for gray triggerfish through the Comprehensive ACL Amendment in 2012, and Regulatory Amendment 13 in 2013, in-season closures have taken place when the ACLs have been met. In 2012, when the commercial ACL was 305,262 lbs ww, commercial harvest of gray triggerfish closed on September 11, 2012, and reopened for a week in December. In 2013, the ACL was decreased to 272,880 lbs ww, and commercial harvest for gray triggerfish was closed on July 7 and reopened from October 18 to November 14.

By dividing the commercial ACL into two six-month fishing seasons, fishermen would be given the opportunity to fish for gray triggerfish at the beginning of the year, and during the summer. The divided commercial quota would provide fishermen in the northern and southern areas of the South Atlantic a chance to fish for gray triggerfish when weather conditions are favorable in their respective areas.

Alternative 1 (No Action) would maintain the current 12-month time period for harvest of the commercial ACL. **Table 23** shows that based on data from 2008-2012, the expected dates the new 272,880 lb ww ACL would be met range from August 13 to October 30.

Table 23. Expected dates the 272,880 lb ww ACL would have been met during 2009-2012.

Year	Date
2008	10/30
2009	10/1
2010	9/15
2011	8/13
2012	8/23

Alternative 2 would allocate 50% of the commercial gray triggerfish ACL to January 1 through June 30, and 50% to July 1 through December 31. As a result, the current 272,880 lb ww would be divided into two seasonal quotas of 136,440 lbs ww. Any remaining ACL from season 1 would transfer to season 2 but any remaining ACL from season 2 would not be carried forward. **Table 24** shows that the expected dates that a closure for gray triggerfish during January-June would be sometime between March and April based on data from 2010-2013. The 136,440 lbs ww ACL for January-June would

not have been met in 2008 or 2009. During the second season, the 272,880 lb ww ACL would likely be met during September or October.

Table 24. Expected dates the 136,440 lb ww quota would have been met during 2009-2012 for January-June and July-December split seasons.

Year	Jan-June	July-Dec
2008*	Not met	10/30
2009*	Not met	10/1
2010	4/16	10/12
2011	3/21	9/20
2012**	3/6	10/7

* Unused ACL from January-June would rollover to July-December.

** Landings during September-December 2012 are assumed to be similar to those of 2008-2011.

The biological consequences for gray triggerfish of a split season under **Alternatives 2** or **3** are likely to be neutral since overall harvest would be limited to the sector ACL and split-season ACLs, and AMs would be triggered if the ACLs were exceeded. Dividing the ACL into two time periods could result in the gray triggerfish being open for a short period of time, and possibly encourage derby conditions to a greater extent than **Alternative 1 (No Action)**. However, **Alternative 2** would establish fishing seasons that have opening and closing dates similar to vermilion snapper. Since gray triggerfish and vermilion snapper are co-occurring species, **Alternative 2** could reduce bycatch of both species. Fishermen in southern areas with better weather during winter could have an advantage in catching gray triggerfish early in the fishing year. Thus, a split season ACL would allow fishermen in different regions to target gray triggerfish when weather is good in their area. Therefore, alternatives that divide the ACL into two time periods would allow for a greater opportunity among all areas to catch gray triggerfish. Furthermore, dividing the quota into two seasons would allow fishermen to target gray triggerfish in summer when historical catches have been the best. An examination of landings during 2009-2011 reveals that 39% of the commercial landings were during January-June, and 61% were during July-December (**Table 25**).

Table 25. Percentage of commercial gray triggerfish landings by month during 2008-2011.

Month	Percent
1	9%
2	7%
3	6%
4	5%
5	7%
6	6%
7	6%
8	10%
9	13%

Month	Percent
10	14%
11	11%
12	6%

Economic

In 2012, the commercial season for gray triggerfish closed on September 11 because it was projected that landings would meet or exceed the ACL; however, but the season was later reopened from December 12 to close on December 19 because updated landings indicated the ACL had not been reached. Similarly, this year the commercial season was closed on July 7, 2013, and was reopened on October 28 and closed on November 14.

The 2012 season was open for a total of 260 days and the 2013 season for a total of 204 days. The following analysis uses the shorter open season in 2013 to assess the potential economic impacts of the alternatives.

As of November 13, 2013, 278,713 lbs ww of gray triggerfish have been landed commercially in the South Atlantic (NMFS SERO: http://sero.nmfs.noaa.gov/sustainable_fisheries/acl_monitoring/commercial_sa/index.htm), which is higher than the ACL of 272,880 lbs. The above landings as of November 13 divided by the 204 days the season was open suggests an average daily catch in 2013 of approximately 1,366 lbs ww per day. For the season to have remained open for the entire year (365 days), the average daily catch rate would have had to be approximately 748 lbs. The above estimate of average 2013 daily landings is used in the following analysis to estimate the impacts of **Alternatives 1 (No Action) and 2**. Additionally, consideration must be given to the different ACLs that could result from the various alternatives of **Action 1**. **Table 25** below indicates the various estimated lengths of the fisheries based on the criteria of the two actions taken in concert.

Table 25. Estimated length of the commercial gray triggerfish season for **Alternatives 1 (No Action) and 2** for **Action 3** give the proposed alternatives and Sub-alternatives for **Action 1**.

Action 3	Season	ACL (Lbs)				
		Action 1				
		Alt. 1	Sub-Alt. 2a	Sub-Alt. 2b	Sub-Alt. 2c	Sub-Alt. 2d
Alt. 1	Jan 1 - Dec 31	272,911	334,634	223,089	223,089	312,325
Alt. 2	Jan 1 - Jun 30	136,456	167,317	111,545	111,545	156,163
	Jul 1 - Dec 31	136,456	167,317	111,545	111,545	156,163

Action 3	Season	Days to Reach ACL If 1,366 Lbs/Day Landed				
		Action 1				
		Alt. 1	Sub-Alt. 2a	Sub-Alt. 2b	Sub-Alt. 2c	Sub-Alt. 2d
Alt. 1	Jan 1 - Dec 31	200	245	163	163	229
Alt. 2	Jan 1 - Jun 30	100	123	82	82	115
	Jul 1 - Dec 31	100	123	82	82	115

Action 3	Season	Day Season Would Close				
		Action 1				
		Alt. 1	Sub-Alt. 2a	Sub-Alt. 2b	Sub-Alt. 2c	Sub-Alt. 2d
Alt. 1	Jan 1 - Dec 31	Jul 9	Sep 2	Jun 12	Jun 12	Aug 17
Alt. 2	Jan 1 - Jun 30	Apr 10	May 3	Mar 23	Mar 23	Apr 25
	Jul 1 - Dec 31	Oct 8	Oct-31	Sep 20	Sep 20	Oct 23

Source: SERO

(http://sero.nmfs.noaa.gov/sustainable_fisheries/acl_monitoring/commercial_sa/index.html, accessed on November 13, 2013)

Sub-alternative 2a of **Action 1** would increase the commercial ACL for triggerfish by approximately 22.5% (+45 days). **Sub-alternatives 2b** and **2c** of **Action 1** would reduce the commercial ACL for triggerfish by approximately 18.5% (-37 days) and **Sub-alternative 2d** would increase it by approximately 14.5% (+29 days). Hence, the impact of **Alternative 2** of **Action 3** may be dependent on which **Sub-alternative (2a, 2b, 2c or 2d)** of **Action 1** is selected. In 2014, the Christian season of Lent runs from March 5 to April 17. **Alternative 2** (status quo) of **Action 3** would close the first half of the 2014 season before Lent ends if **Alternative 1 (No Action)** or **Sub-alternative 2b** or **2c** of **Action 1** is selected. If market demand is typically higher during that season, a closure before the Lenten season ends would cut into higher priced revenues.

At the beginning of the year, Florida's fishermen benefit from milder winters. They are less likely to cancel a trip due to adverse weather conditions than their northern counterparts. Consequently, Florida's gray triggerfish commercial fisherman may have a head start in the annual landings count. If that head start is significant, **Alternative 1 (No Action)** of **Action 3** would keep that advantage, while **Alternative 2** could work to make a more equitable playing field.

Social

Gray triggerfish is an increasingly important commercial species, with growing effort and market demand that are likely associated with closures for other species. Gray triggerfish is a specifically important commercial fishery in Georgetown and Horry Counties in South Carolina, Duval County in north Florida, and Brunswick and Carteret Counties in

North Carolina (SAFMC 2013), and these communities would be expected to experience positive or negative impacts due to changes in management.

The effects on the commercial fleet due to changing the gray triggerfish commercial fishing year into split seasons will depend on the ACL and the rate of catch. Under **Action 1**, the ACL for gray triggerfish could be increased or decreased, which would affect how a split season would provide benefits or negative effects on commercial harvesters. A lower ACL would be expected to result in shorter available fishing time in a full-year season or split seasons, and could generate derby conditions. In addition to concerns about safety at sea that arise from the race to fish, a derby could result in a large amount of gray triggerfish on the market in a very short period of time. This may cause reduced market value and lower product quality, and the bust-and-boom nature of the commercial gray triggerfish sector may hinder business stability and steady job opportunities for captain and crew.

A split season under **Alternative 2** would likely be beneficial to commercial fishermen harvesting gray triggerfish in North Carolina and South Carolina. Because the current fishing year starts in January 1 (**Alternative 1, No Action**), fishermen in North Carolina and South Carolina sometimes have limited or no access to gray triggerfish in the early months due to weather, or could risk unsafe conditions to fish. A split season under **Alternative 2** would likely increase access to the ACL for North Carolina and South Carolina.

COMMITTEE ACTION:

- CONSIDER ADDING ALTERNATIVE(S)
- SELECT PREFERRED

Action 4. Establish a commercial trip limit for gray triggerfish

Alternative 1 (No Action). There is no commercial trip limit for gray triggerfish in the South Atlantic region.

Alternative 2. Establish a commercial trip limit for gray triggerfish in the South Atlantic region.

Sub-alternative 2a. 500 lbs

Sub-alternative 2b. 1,000 lbs

Sub-alternative 2c. 1,500 lbs

IPT RECOMMENDATIONS: Consider adding a step-down alternative:

Alternative 3. When 75% of the gray triggerfish commercial ACL is met or is projected to be met, the trip limit is reduced to

Sub-alternative 3a. 200 pounds

Sub-alternative 3b. XXX pounds

Sub-alternative 3c. XXX pounds

SNAPPER GROUPER AP DISCUSSION & RECOMMENDATIONS:

- Average trip in NC is 800-1,000 pounds
- AP member stated that a 1,000-pound trip limit would be feasible.

MOTION: COUNCIL SHOULD CONSIDER TRIP STEP-DOWN ALTERNATIVES (75-85%) AND DIFFERENT POUNDAGE LIMITS
APPROVED

MOTION: RECOMMEND A COMMERCIAL TRIP LIMIT OF 1,000 POUNDS (SUB-ALTERNATIVE 2B).
APPROVED

Summary of Effects

NOTE: The analyses refer to the current structure of actions, alternatives, and Sub-alternatives, NOT the proposed re-structuring.

Biological

Alternative 1 (No Action) would not establish a trip limit for gray triggerfish. Currently, the commercial ACL is 272,880 lbs ww. Based on 2012 landings data, this ACL would have been met in early August. In 2012, the commercial ACL was 305,262 lbs ww, and gray triggerfish was closed on September 11, 2012. In 2013, gray triggerfish was closed

on July 7, 2013, but was reopened from October 28 to November 14. Thus, without a trip limit, commercial closures for gray triggerfish are expected.

The effects of trip limits proposed in **Alternatives 2** and **3** are based on 2012 logbook data. This preliminary analysis serves as a tool to help the South Atlantic Council select a reasonable range of alternatives. Once the South Atlantic Council confirms the range of alternatives to be examined, a more sophisticated analysis, which considers changes in targeting of gray triggerfish in recent years, will be conducted using 2013 data.

Alternative 2 would establish commercial trip limits ranging from 500 lbs ww to 1,500 lbs ww. Landings information from 2012 (**Table 26**) show that about 8% of the trips had landings greater than 500 lbs ww (**Sub-alternative 2a**), 2% of the trips had landings greater than 1,000 lbs ww (**Sub-alternative 2b**), and less than 1% of the trips had landings greater than 1,500 lbs ww (**Sub-alternative 2c**). Thus, commercial closures would still be expected under **Sub-alternatives 2a-2c**. Assuming landings during September-December 2012 would have been similar to those of 2008-2011, a 57% reduction in harvest would be needed to keep gray triggerfish open all year. If effort were to remain at the same levels as in 2012, a very low trip limit (i.e. 150 lbs ww) would be needed to obtain the harvest reduction needed to keep the commercial sector open all year. However, if the trip limit was set at that level, it is likely some fishermen would no longer target gray triggerfish. **Table 27** shows the expected dates that the commercial ACL would be met under **Sub-alternatives 2a-2c**. A 500 lb trip limit (**Sub-alternative 2a**) would be expected to extend the fishing season by over a month, and a 1,500 lb ww trip limit (**Sub-alternative 2b**) would be expected to extend the fishing season by about a week (**Table 27**). The trip limits may have a greater effect based on 2013 data if there has been an increase in the catch per trip.

Alternative 3 would specify a trip limit when 75% of the commercial ACL is caught. For 2011 and 2012, it is expected that 75% of the 272,880 lbs ww ACL would be met in June. Reducing the trip limit to 200 lbs ww after 75% of the ACL is met would be expected to result in a closure during September based on data from 2011 and 2012.

The biological effects of **Alternatives 1 (No Action)**, **Alternative 2**, and **Alternative 3** (including its Sub-alternatives) would be expected to be neutral because ACLs and AMs are in place to cap harvest, and take action if ACLs are exceeded. **Alternative 1 (No Action)** could present a greater biological risk to gray triggerfish in terms of exceeding the ACL than **Alternatives 2** and **3** since no trip limit would be in place to slow down the rate of harvest and help ensure the ACL is not exceeded. However, improvements have been made to the quota monitoring system, and the South Atlantic Council has approved a Dealer Reporting Amendment, which should enhance data reporting. Therefore, any biological benefits associated with trip limits would be expected to be small. Larger trip limits would not constrain catch and would result in the ACL being met earlier in the year. Early closures of gray triggerfish could result in increased bycatch of gray triggerfish when fishermen target co-occur species such as vermilion snapper and black

sea bass. However, release mortality of gray triggerfish is considered to be very low. An ongoing stock assessment for gray triggerfish in the South Atlantic estimates that 87.5% of released fish survive. Thus, commercial closures associated with meeting the ACL are not expected to negatively affect the gray triggerfish stock due to bycatch.

Table 26. Trip limit, number of trips, percentage of trips greater than trip limit, and harvest reduction provided by trip limit for 2012.

Trip Limit (lbs ww)	2012		
	# Trips	% Trips	Harvest Reduction
0	1,702	100.00%	100.00%
100	652	38.31%	65.24%
112	616	36.19%	62.53%
150	505	29.67%	55.02%
175	441	25.91%	50.81%
200	394	23.15%	47.09%
224	364	21.39%	43.84%
250	323	18.98%	40.66%
300	268	15.75%	35.40%
337	239	14.04%	32.10%
500	143	8.40%	21.31%
600	111	6.52%	16.74%
700	80	4.70%	13.24%
800	66	3.88%	10.67%
900	48	2.82%	8.69%
1,000	39	2.29%	7.16%
1,100	28	1.65%	5.98%
1,200	22	1.29%	5.08%
1,300	18	1.06%	4.36%
1,400	15	0.88%	3.76%

Trip Limit (lbs ww)	2012		
	# Trips	% Trips	Harvest Reduction
1,500	14	0.82%	3.24%
1,600	9	0.53%	2.89%
1,700	8	0.47%	2.58%
1,800	6	0.35%	2.32%
1,900	4	0.24%	2.13%
2,000	3	0.18%	2.00%
2,250	2	0.12%	1.79%
2,500	2	0.12%	1.61%
2,750	2	0.12%	1.44%
3,000	2	0.12%	1.26%
3,250	2	0.12%	1.08%
3,500	2	0.12%	0.90%
3,750	2	0.12%	0.73%
4,000	1	0.06%	0.59%
4,250	1	0.06%	0.50%
4,500	1	0.06%	0.41%
4,750	1	0.06%	0.32%
5,000	1	0.06%	0.23%
5,250	1	0.06%	0.14%
5,500	1	0.06%	0.05%
5,750	0	0.00%	0.00%

Source: Coastal logbook data from June 2013.

Table 27. Expected dates that ACL for gray triggerfish would be expected to be met under Alternatives 2 and 3.

Year	Sub-Alt 2a	Sub-Alt 2b	Sub-Alt 2c	Alt 1	75%	Sub-Alt 3a
	500 lb	1,000 lb	1,500 lb	No Trip Limit		200 lb after 75%
2008	Not met	11/17	11/7	10/30	9/12	12/14
2009	11/20	10/14	10/7	10/1	9/5	10/30
2010	10/19	9/28	9/21	9/15	7/20	10/14
2011	9/18	8/25	8/18	8/13	6/17	9/12
2012	10/5	9/6	9/1	8/23	6/15	9/27

Economic

In 2012, Florida’s east coast commercial landings of 91,230 lbs ww of gray triggerfish represented approximately 30% of the ACL that year. Although the average pounds per trip along Florida’s east coast increased dramatically in 2009 and 2010, but then declined in 2012, the average is substantially below 500 lbs ww. Consequently, on average, **Alternative 1 (No Action)** and **Sub-alternatives 2a, 2b** and **2c** would have no impact on Florida’s landings of gray triggerfish.

It is unknown what the average pounds of gray triggerfish landed per trip is for vessels north of Florida. However, it is reasonable to expect that larger vessels that make longer trips could have landings greater than 500, 1,000 or 1,500 lbs ww. If so, **Sub-alternative 2a** would have the largest adverse economic impact on commercial fishermen with historically larger landings per trip, followed in turn by **Sub-alternatives 2b** and **2c**. **Alternative 1 (No Action)** would have no adverse economic impact beyond that baseline. If there are vessels that presently land more than 500 lbs ww, **Sub-alternative 2a** could increase the length of the open season. Similarly, **Sub-alternatives 2b** and **2c** could also increase the lengths of the open season, but by not as much.

Commercial trip limits in general, are not economically efficient. They have a tendency to increase some fishing trip costs where a trip must stop targeting a specific species because the trip limit has been reached. Unless a vessel that has reached its limit of the targeted fish can easily move into targeting a different species on the same trip, trip costs associated with the species where the limit has been reached will increase because it will require more trips by vessels to catch the ACL. Although lower trip limits can lengthen an open fishing season, trip limits can also economically disadvantage larger vessels and vessels that have to travel further to reach their fishing grounds. Depending on vessel characteristics and the distance required to travel to fish, a trip limit that is too low could

result in targeted trips that are cancelled altogether, if the vessel cannot target other species on the same trip.

Until the number of trips potentially affected by the Sub-alternatives of **Alternative 2**, it is not possible to provide any precision for the estimate the economic effects of this action could have. However, it is possible to make relative, qualitative judgments on the economic effects of the alternatives and sub-alternatives of the action. **Alternative 1 (No Action)** is not expected to change the direct economic effects. In terms of least to most direct negative economic effects would be **Sub-alternative 2c**, **Sub-alternative 2b**, followed by **Sub-alternative 2a**, which would be expected to have the greatest direct negative economic effects.

Social

Gray triggerfish is an increasingly important commercial species in the South Atlantic region, specifically for Georgetown and Horry Counties in South Carolina, Duval County in north Florida, and Brunswick and Carteret Counties in North Carolina (SAFMC 2013). These communities would be expected to experience positive or negative effects due to changes in the trip limit.

In general, establishing a commercial trip limit may help slow the rate of harvest, lengthen a season, and prevent the ACL from being exceeded, but trip limits that are too low may make fishing trips inefficient and too costly if fishing grounds are too far away. Relative to **Alternative 1 (No Action)**, **Alternative 2** could reduce the risk of derby conditions and associated negative impacts that can occur due to an in-season closure or payback provision if the ACL is exceeded. However, while trip limits may extend the length of the fishing season, this management measure would be expected to alter the profitability of some trips, jeopardizing normal fishing behavior, revenues, and social benefits. The potential economic effects of a commercial trip limit for gray triggerfish are described above, and in general, it is assumed for the purposes of this discussion that the greater the economic losses, the greater the social losses. Social benefits would likely be maximized as a result of some trade-off between season length and economic changes.

COMMITTEE ACTION:

- CONSIDER ADDING ALTERNATIVE(S)
- SELECT PREFERRED