



An overview of options for ASMFC involvement in cobia management

Presented to South Atlantic
State/Federal Fisheries Management
Board

August 2, 2016



Introduction

- Range from Nova Scotia to Argentina
- Uncommon north of Maryland
- Valuable to the for hire and recreational fishery
- Primarily bycatch in the commercial fishery



Management History

- Cobia have been managed by the SAFMC through the Coastal Migratory Pelagics FMP since 1982 as a unit stock from the east coast of Florida to New York.
- Management has been precautionary with a 2 fish limit for commercial and recreational fishermen and a size limit of 33"FL.
- Amendment 18 established Allowable Catch Limits in 2012.
- Recent genetics studies indicate two separate populations of cobia, the Gulf group (East coast of Florida and Gulf of Mexico) and the Atlantic Migratory Group (AMG cobia) (Georgia/Florida line north to New York).



Management History (cont.)

- Amendment 20B revised catch limits based on the stock assessment (SEDAR 28) and modified the boundary between the Atlantic and Gulf based on the recent genetics studies.
- Framework Amendment 4 is currently being developed (2016) to address overages of the ACL by the recreational fisheries of the Atlantic migratory group.



Current Issues

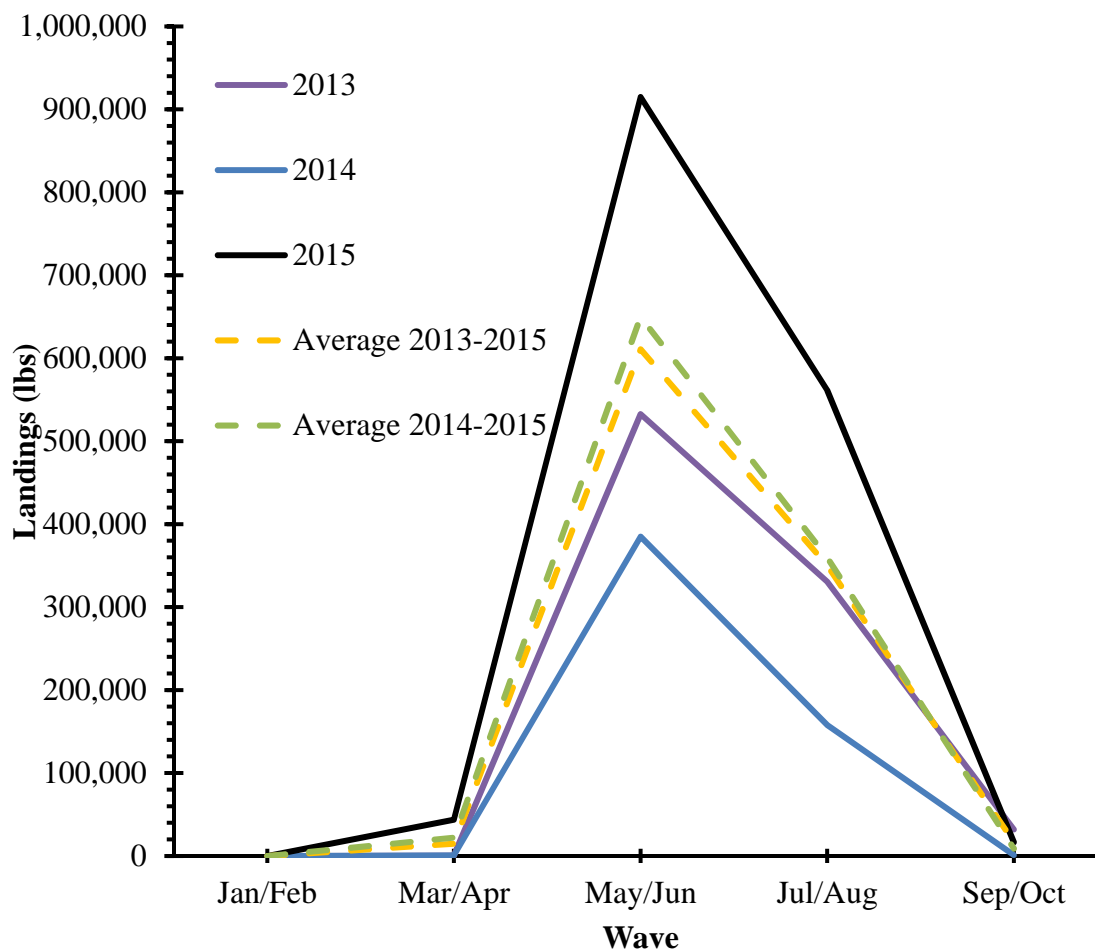
- The NMFS announced a closure to the AMG cobia effective June 20, 2016 for exceeding the ACL in 2015.
- The ACL for AMG cobia in 2015 was 630,000 pounds while landings were 1,540,776 pounds.
- The closure impacted the fishery throughout the range of the AMG cobia but impacts were greatest for the outer banks of North Carolina and all states from Virginia to the northern extent of the range.
- Virginia and North Carolina reacted to the closures by implementing state specific regulations to lessen the impact of the closure.



Recreational fisheries for AMG cobia

The recreational fishery occurs primarily from April to October in nearshore and offshore waters (82% nearshore, state waters).

The fishery generally begins as fish move nearshore off Georgia in early spring and the fishery proceeds northward.



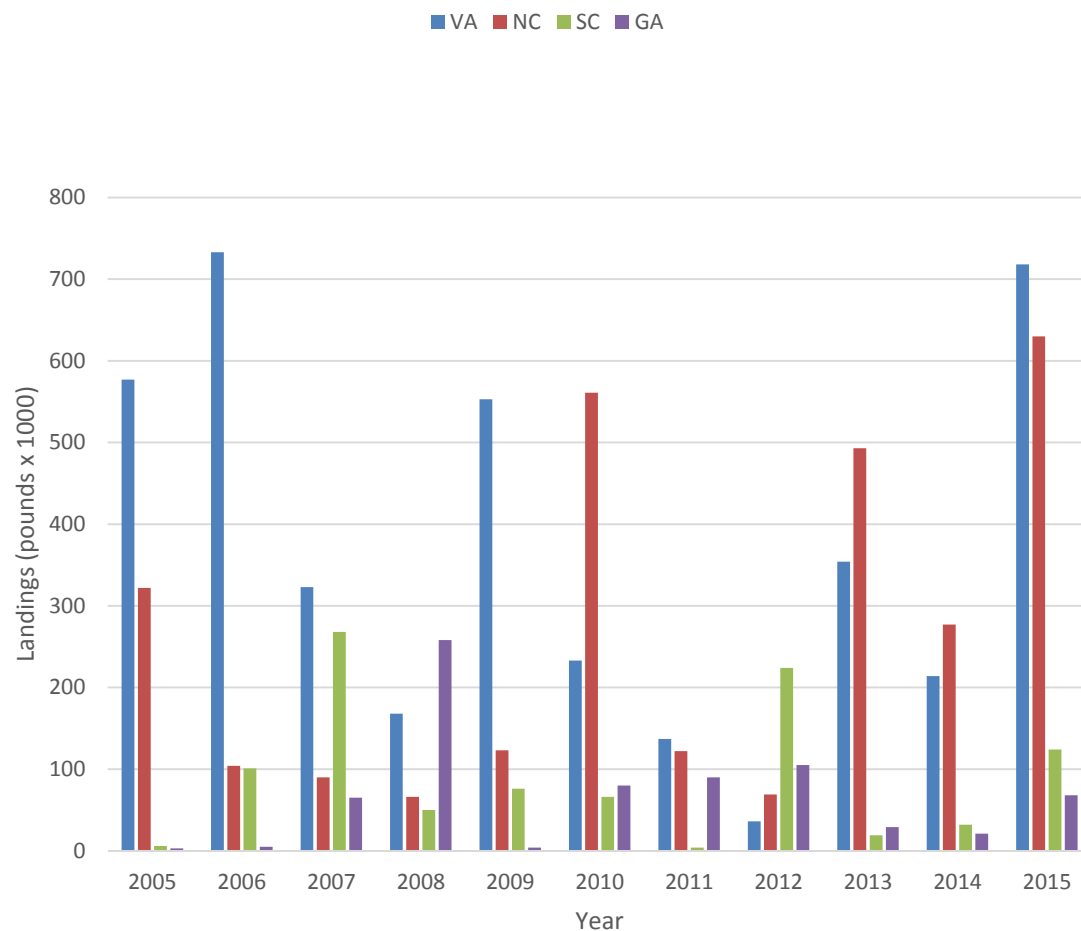


Recreational landings for AMG cobia

Majority of recreational landings occur in North Carolina and Virginia from May through July during most years.

No MRIP landings reported north of Virginia

Recreational Landings for AMG Cobia (2005-2015)





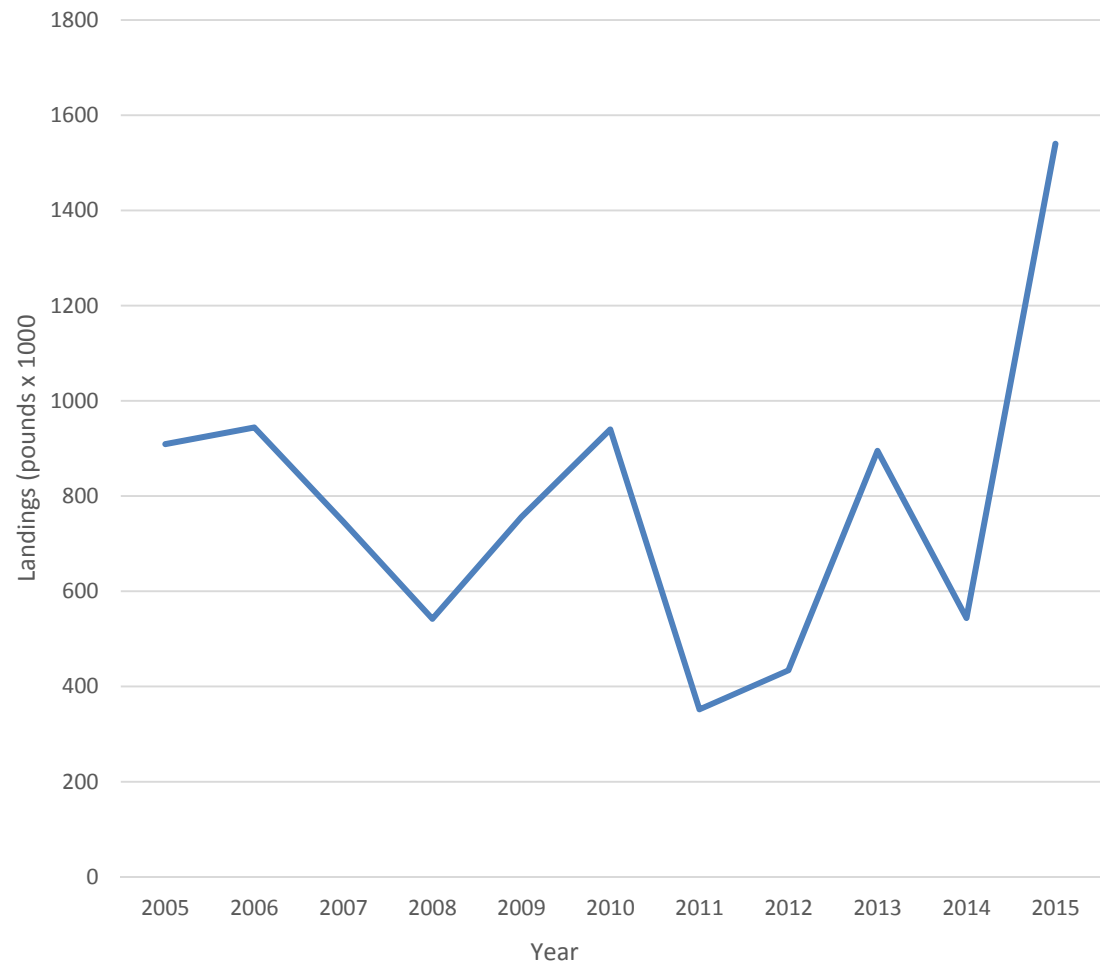
Total AMG cobia recreational landings

Recreational landings from 2005-2015.

Varying trend over the time series until 2015.

The recreational ACL (630,000 pounds) was exceeded in 7 of the last 11 years.

Recreational AMG Cobia landings (2005-2015)





AMG cobia recreational landings, including east coast of Florida

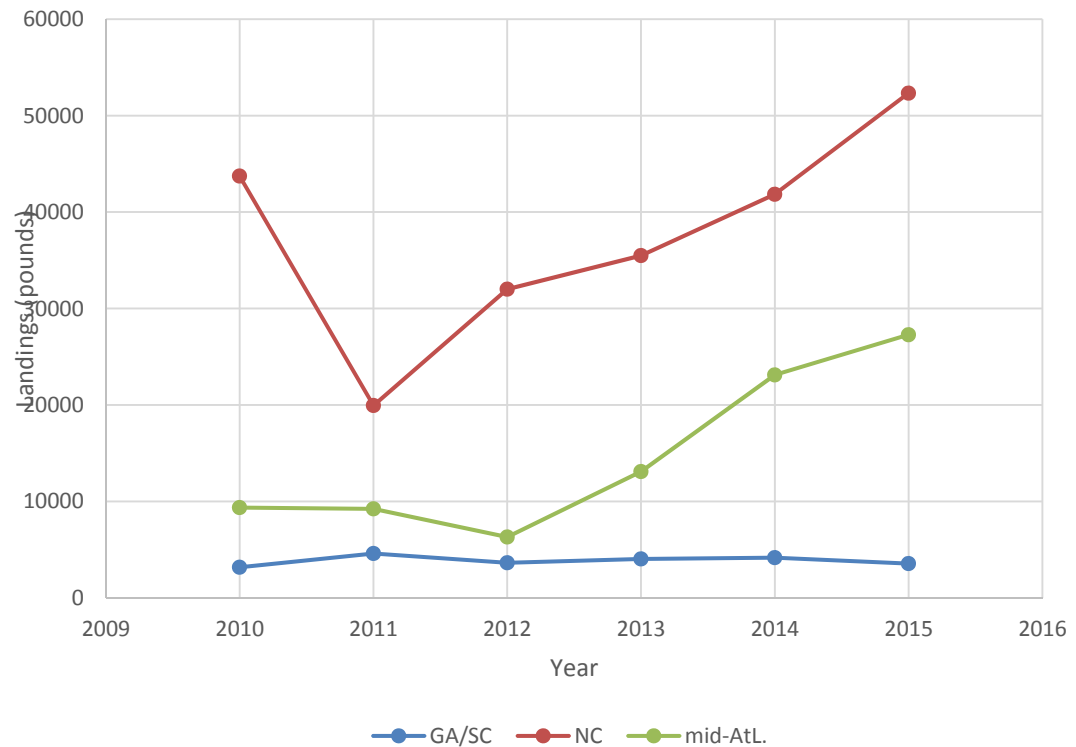
Year	Virginia	North Carolina	South Carolina	Georgia	Total AMG (VA-GA)	East Coast of Florida
2005	577,284	322,272	5,793	3,358	908,707	287,267
2006	733,740	104,259	101,018	4,824	943,841	493,334
2007	322,887	90,197	268,677	64,708	746,469	580,632
2008	167,949	66,258	50,108	257,690	542,006	438,621
2009	552,995	123,061	76,229	3,997	756,282	361,120
2010	232,987	561,486	65,688	79,855	940,015	745,228
2011	136,859	121,689	3,565	90,375	352,488	761,440
2012	36,409	68,657	224,365	105,193	434,623	370,373
2013	354,463	492,969	19,130	29,224	895,786	274,276
2014	214,427	277,489	31,927	20,642	544,485	582,423
2015	718,647	630,373	123,952	67,804	1,540,776	481,956



Commercial landings for AMG cobia by state or region

Commercial landings trends have shown an increase since 2011. ACL has been exceeded the past two years
Late season closure in 2014
Overage occurred too late for any action in 2015.
Closures raise concerns for discards in any bycatch fishery.

Commercial AMG Cobia Landings (2010-2015)





Florida East Coast commercial landings

- Florida East Coast landings are not included in the AMG cobia quotas and are managed through the Gulf Council portion of the FMP.

	East Coast Florida Commercial Cobia landings
2007	60,805
2008	57,003
2009	65,953
2010	101,564
2011	156,069



Stock Status

2013 Cobia Benchmark
SEDAR Assessment

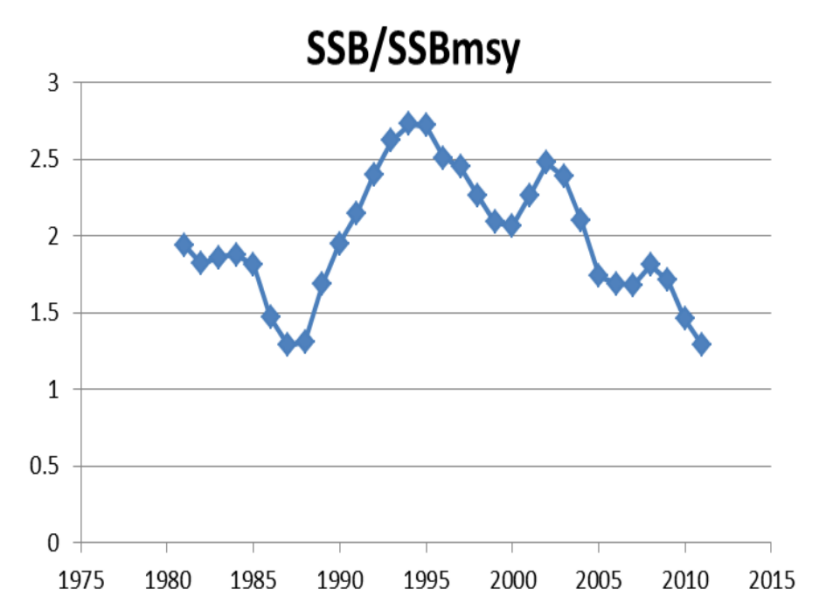
Data through 2011

Assessment indicates stock
is not overfished and
overfishing is not occurring

Assessment does indicate
an overall decline in stock
biomass

2015 recreational landings
exceeded the overfishing
limit (OFL = 699,200 lbs.),
resulting in overfishing for
2015

New benchmark stock
assessment scheduled for
2018





Stock Boundaries

- New cobia stock boundaries were established through SAFMC Amendment 20B (2014) beginning March 1, 2015: Atlantic Migratory Group cobia annual catch limits apply from Georgia through New York;
- Cobia caught off the east coast of Florida are counted against the Florida East Coast allocation of the Gulf of Mexico cobia annual catch limit.
- Cobia included in Stock ID workshop in 2017



ISFMP Board Direction

- ASMFC received letter from SAFMC requesting that ASMFC consider cobia management at some level.
- ISFMP Board directed staff to develop white paper to consider options for moving forward.



Cobia Plan Development Options

- A. Management Plan Structure
 - Option 1. ASMFC/SAFMC Complementary FMP
 - Option 2. ASMFC/SAFMC Joint Fishery Management Plan
 - Option 3. ASMFC Exclusive Management
 - Option 4. Status quo – Management by SAFMC
 - Option 5. Other?



Board Structure Options

- B. ASMFC Board Formation
 - Option 1. South Atlantic State-Federal Fisheries Management Board
 - Option 2. Stand-alone AMG cobia Board
 - Option 3. Split SA Board



Timeline (short term)

- Aug–Oct 2016 - staff develops PID for Board review and possible approval in November 2016
- Nov 2016–Jan 2017 - staff conducts public meetings and accepts public comment
- Feb 2017- Board reviews public comments and directs FMP development

Questions

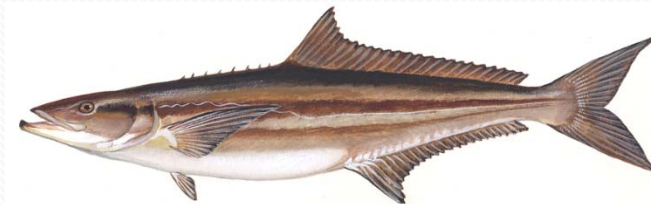




Public Hearing Summary

Coastal Migratory Pelagics (CMP) Framework Amendment 4

Management Measures for Atlantic Cobia



Prepared by Kari MacLauchlin, Council staff

CMP Framework Amendment 4- Background

- In 2015, recreational landings of Atlantic cobia were 1,540,776 lbs— but the recreational annual catch limit (ACL) was only 630,000 lbs.
- As required, NMFS reduced the 2016 recreational season to ensure recreational landings would not again exceed the recreational ACL. The season closure date was June 20, 2016.
- The early closure will have negative social and economic impacts on recreational fishermen, especially in North Carolina and Virginia.
- The South Atlantic Council is considering changes to management measures to try to ensure longer future seasons and allow fair access to cobia for fishermen in all states.



Process for CMP Framework Amendment 4

- ☑ **March 2016-** South Atlantic Council directs staff to develop amendment
- ☑ **May 2016-** Public provides input on potential actions and alternatives
- ☑ **June 2016-** South Atlantic Council reviews public input, makes changes to the amendment, and approves for public hearings
- **August 2016-** Public hearings
- **September 2016-** South Atlantic Council reviews public input, selects preferred alternatives, and approves for formal review by the Secretary of Commerce
- **Early Spring 2017-** Changes implemented



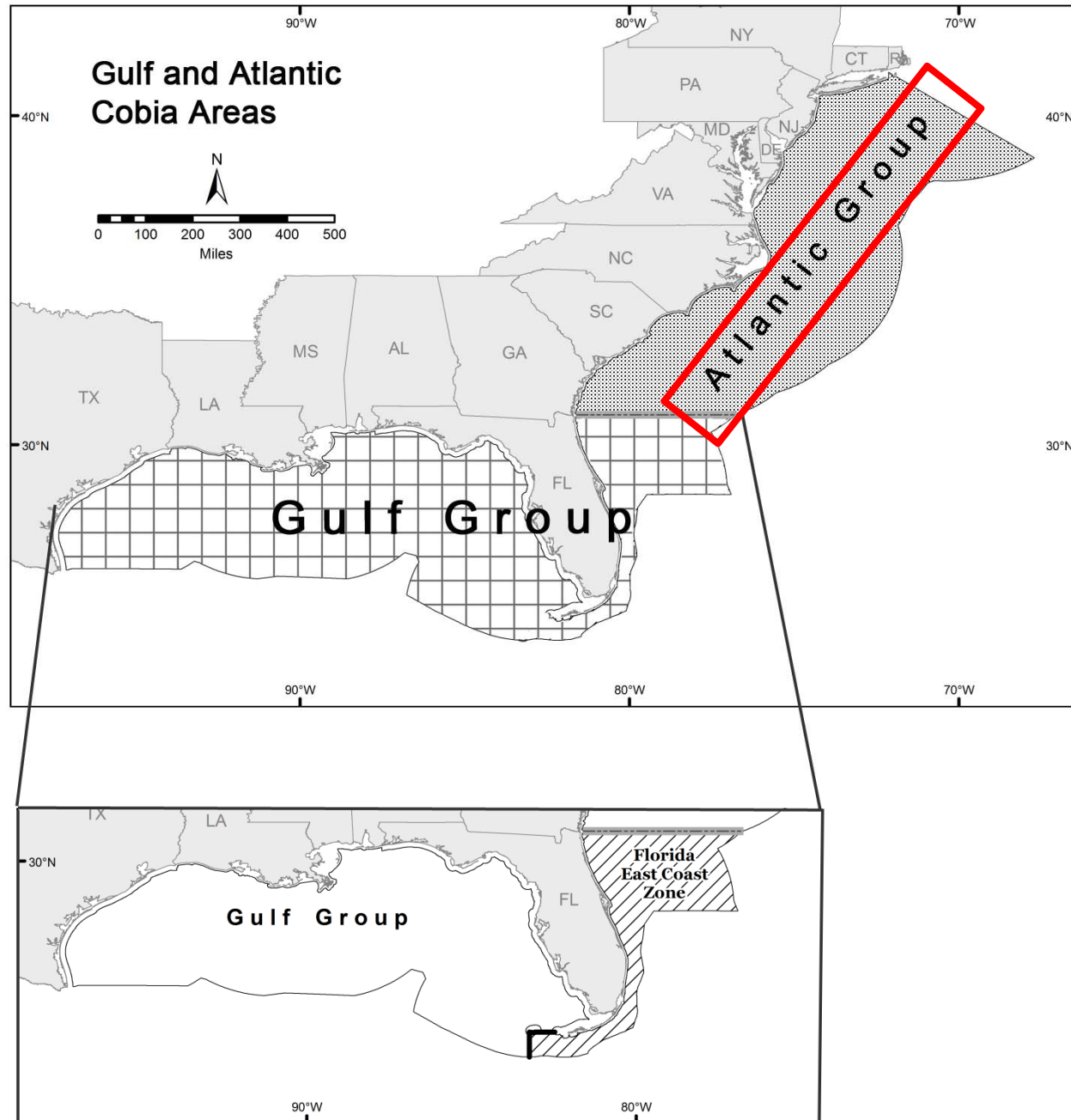
CMP Framework Amendment 4 - Actions

- Modify recreational harvest limits for Atlantic cobia (bag and vessel limits)
- Modify the recreational minimum size limit for Atlantic cobia
- Modify the recreational accountability measures for Atlantic cobia
- Establish a commercial trip limit for Atlantic cobia

There is also an action to change the recreational fishing year, but this action will need to be moved to a fishery management plan amendment – this will delay action on a potential change to the fishing year. Under the CMP Framework Procedure, fishing year cannot be changed through a framework amendment.

Public input on any potential changes to the recreational fishing year will still be reviewed by the Council in September 2016.





What areas would be affected?

The potential actions in Framework Amendment 4 would apply to fishermen harvesting Atlantic cobia in federal waters from Georgia through New York.

The boundary between the Gulf and Atlantic stocks is the GA/FL line, based on the approach used in the most recent stock assessment (SEDAR 28) and implemented in 2015 through CMP Amendment 20B.

Current Management (GA-NY)

Federal waters:

Minimum size limit – 33 inches fork length

Possession limit – 2 fish/person/day

- Minimum size limit and possession limit of 2 fish applies to commercial also; no federal commercial permit requirement but must sell to a federally permitted dealer.
- Recreational ACL = 620,000 lbs for 2016+
- Commercial ACL = 50,000 lbs for 2016+



Current Management (States)

	Bag limit	Vessel limit	Minimum Size Limit
Virginia	1 fish	2 fish	40" Total Length (~35-36" Fork Length)
North Carolina	1 fish	For-hire: 4/vessel or 1 person when less than 4 people on board Private: 2 fish on vessels with more than 1 person on board	37" Fork Length
South Carolina – north of Jeremy Inlet, Edisto Island	2 fish	None	33" Fork Length
South Carolina- south of Jeremy Inlet, Edisto Island	1 fish June 1- Apr 30 Catch and release only May 1- 31	3 fish per vessel or 1 fish per person, whichever is lower	33" Fork Length
Georgia	2 fish	None	33" Fork Length

State waters are shore to 3 miles; federal waters are 3-200 miles.



ACTION 1 - Modify the recreational management measures for Atlantic cobia

Action 1-1: Modify the recreational harvest limits for Atlantic cobia

Alternative 1 (No Action). Do not modify the possession limit of 2 fish per person per day for Atlantic cobia that are not sold.

Preferred Alternative 2. Establish a recreational bag limit for Atlantic cobia.

Preferred Sub-alternative 2a. 1 fish per person per day

Sub-alternative 2b. 2 fish per person per day

Preferred Alternative 3. Establish a recreational vessel limit for Atlantic cobia.

Sub-alternative 3a. 1 fish per vessel per day

Sub-alternative 3b. 2 fish per vessel per day

Preferred Sub-alternative 3c. 3 fish per vessel per day

Sub-alternative 3d. 4 fish per vessel per day

Sub-alternative 3e. 5 fish per vessel per day

Sub-alternative 3f. 6 fish per vessel per day

Action 1-2: Modify the minimum size limit for recreational harvest of Atlantic cobia

Alternative 1 (No Action). Do not modify the minimum size limit of 33 inches fork length (FL) for recreational and commercial harvest of Atlantic cobia.

Preferred Alternative 2. Modify the minimum size limit for Atlantic cobia for recreational ~~and~~ commercial harvest of Atlantic cobia.

Sub-alternative 2a. 34 inches FL

Sub-alternative 2b. 35 inches FL

Preferred Sub-alternative 2c. 36 inches FL

Sub-alternative 2d. 37 inches FL

Sub-alternative 2e. 38 inches FL

Sub-alternative 2f. 39 inches FL

Sub-alternative 2g. 45 inches FL

Sub-alternative 2h. 50 inches FL

NOTE: This action will affect recreational only. The Council may decide to change the commercial minimum size limit later.

Table S-2 (from public hearing summary). Estimated dates when Atlantic cobia recreational landings would meet the recreational ACL (620,000 lbs for 2016 and subsequent years) under the range of minimum size limits, bag limits, and vessel limits, under the current fishing year of **January 1- December 31**. Highlighted cells are the current Preferred Sub-alternatives in Action 1.

Minimum Size Limit (inches fork length)									
	33	34	35	36	37	38	39	45	50
Bag Limit									
1/person	2-Jul	5-Jul	10-Jul	17-Jul	23-Jul	31-Jul	5-Aug	None	None
2/person	30-Jun	3-Jul	7-Jul	14-Jul	20-Jul	28-Jul	1-Aug	None	None
Vessel Limit									
1	30-Jul	4-Aug	11-Aug	22-Aug	22-Sep	None	None	None	None
2	11-Jul	15-Jul	20-Jul	28-Jul	5-Aug	15-Aug	21-Aug	None	None
3	5-Jul	9-Jul	13-Jul	20-Jul	27-Jul	5-Aug	10-Aug	None	None
4	3-Jul	6-Jul	11-Jul	18-Jul	24-Jul	2-Aug	7-Aug	None	None
5	2-Jul	6-Jul	10-Jul	17-Jul	23-Jul	1-Aug	6-Aug	None	None
6	30-Jun	4-Jul	8-Jul	15-Jul	21-Jul	29-Jul	3-Aug	None	None



ACTION 2 - Modify the recreational fishing year for Atlantic cobia

Alternative 1 (No Action). Do not modify the current fishing year of January 1 through December 31.

Preferred Alternative 2. Modify the recreational fishing year for Atlantic cobia to be May 1 through April 30.

Alternative 3. Modify the recreational fishing year for Atlantic cobia to be June 1 through May 31.

Alternative 4. Modify the recreational fishing year for Atlantic cobia to be April 1 through March 31.

NOTE: Fishing year cannot be changed in a framework amendment, and this action will be moved to a fishery management plan amendment for future consideration.

The South Atlantic Council will still review public input on this action at their September 2016 meeting.



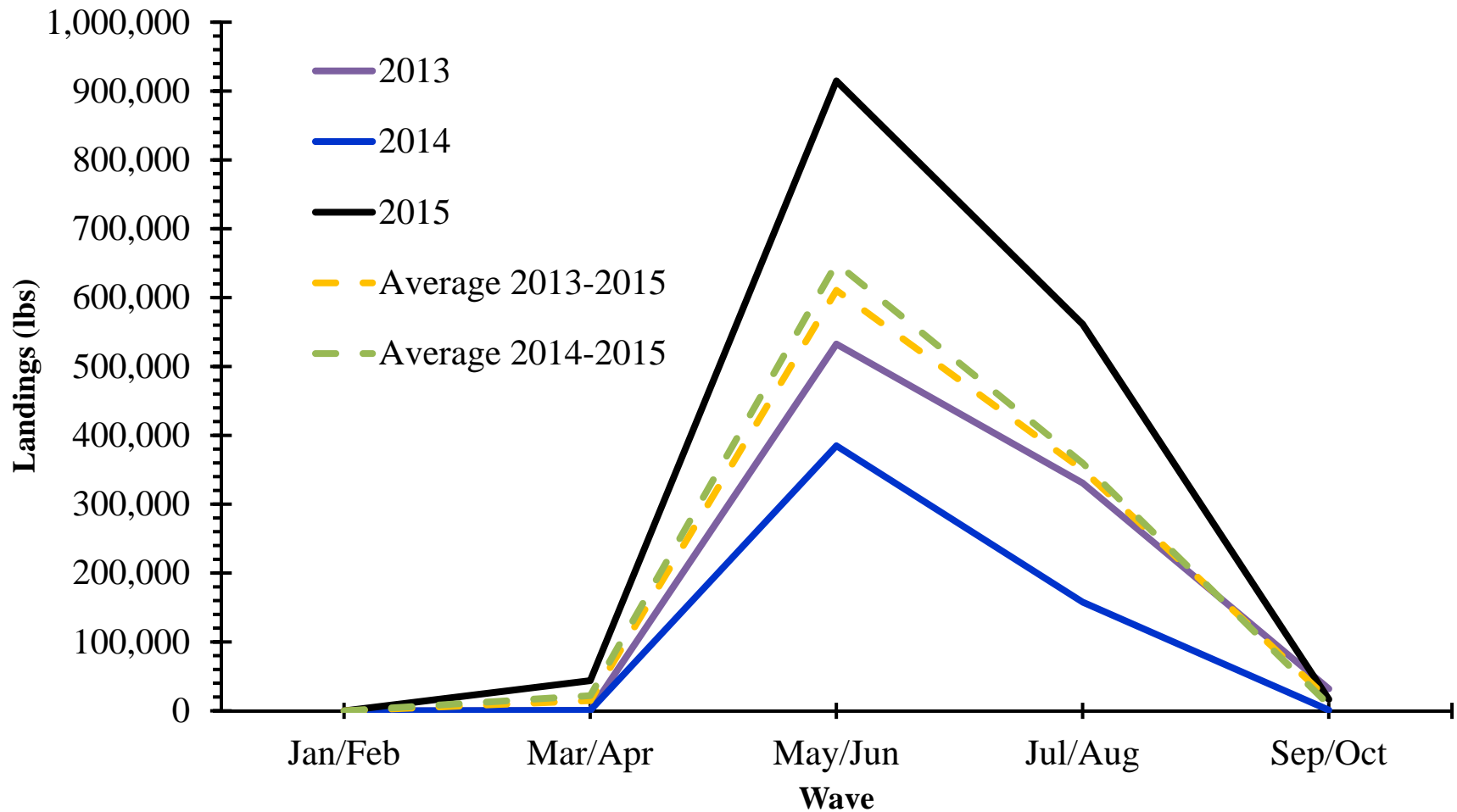


Figure S-2 from the public hearing summary. Atlantic recreational landings for January-October of 2013, 2014, 2015, average 2013-2015 landings, and average 2014-2015 landings by two-month wave. The landings for 2015 are preliminary.

Source: SEFSC Recreational ACL Dataset



Table S-3 from the public hearing summary. Estimated dates when Atlantic cobia recreational landings would meet the recreational ACL under the range of minimum size limits, bag limits, and vessel limits, if the fishing year is changed to **May 1-April 30 (Preferred Alternative 2)**. Highlighted cells are the current Preferred Sub-alternatives in Action 1.

Minimum Size Limit (inches fork length)									
	33	34	35	36	37	38	39	45	50
Bag Limit									
1/person	5-Jul	8-Jul	13-Jul	19-Jul	26-Jul	3-Aug	8-Aug	None	None
2/person	2-Jul	6-Jul	10-Jul	16-Jul	23-Jul	31-Jul	4-Aug	None	None
Vessel Limit									
1	2-Aug	7-Aug	14-Aug	25-Aug	20-Mar	None	None	None	None
2	14-Jul	18-Jul	23-Jul	31-Jul	8-Aug	18-Aug	24-Aug	None	None
3	8-Jul	12-Jul	16-Jul	23-Jul	30-Jul	8-Aug	13-Aug	None	None
4	6-Jul	9-Jul	14-Jul	21-Jul	27-Jul	5-Aug	10-Aug	None	None
5	5-Jul	8-Jul	13-Jul	20-Jul	26-Jul	4-Aug	9-Aug	None	None
6	3-Jul	7-Jul	11-Jul	18-Jul	24-Jul	1-Aug	6-Aug	None	None



Table S-4 from the public hearing summary. Estimated dates when Atlantic cobia recreational landings would meet the recreational ACL under the range of minimum size limits, bag limits, and vessel limits, if the fishing year is changed to **June 1- May 31 (Alternative 3)**. Highlighted cells are the current Preferred Sub-alternatives in Action 1.

Minimum Size Limit (inches fork length)									
	33	34	35	36	37	38	39	45	50
Bag Limit									
1/person	4-Oct	18-Apr	19-May	25-May	30-May	14-May	16-May	None	None
2/person	31-Aug	27-Oct	1-May	4-May	8-May	12-May	14-May	None	None
Vessel Limit									
1	13-May	16-May	19-May	25-May	30-May	None	None	None	None
2	3-May	5-May	8-May	12-May	16-May	21-May	24-May	None	None
3	4-Apr	2-May	4-May	8-May	12-May	16-May	19-May	None	None
4	22-Oct	1-May	3-May	7-May	10-May	14-May	17-May	None	None
5	7-Oct	21-Apr	3-May	6-May	9-May	14-May	16-May	None	None
6	7-Sep	19-Mar	2-May	5-May	8-May	13-May	15-May	None	None



Table S-5 from the public hearing summary. Estimated dates when Atlantic cobia recreational landings would meet the recreational ACL under the range of minimum size limits, bag limits, and vessel limits, if the fishing year is changed to **April 1- May 31 (Alternative 4)**. Highlighted cells are the current Preferred Sub-alternatives in Action 1.

Minimum Size Limit (inches fork length)									
	33	34	35	36	37	38	39	45	50
Bag Limit									
1/person	3-Jul	7-Jul	11-Jul	18-Jul	25-Jul	2-Aug	7-Aug	None	None
2/person	1-Jul	4-Jul	8-Jul	15-Jul	21-Jul	29-Jul	3-Aug	None	None
Vessel Limit									
1	31-Jul	6-Aug	13-Aug	23-Aug	22-Oct	None	None	None	None
2	12-Jul	17-Jul	22-Jul	30-Jul	6-Aug	16-Aug	22-Aug	None	None
3	6-Jul	10-Jul	15-Jul	22-Jul	29-Jul	7-Aug	12-Aug	None	None
4	4-Jul	8-Jul	12-Jul	19-Jul	26-Jul	3-Aug	8-Aug	None	None
5	3-Jul	7-Jul	11-Jul	18-Jul	25-Jul	2-Aug	7-Aug	None	None
6	2-Jul	5-Jul	10-Jul	16-Jul	23-Jul	31-Jul	5-Aug	None	None



ACTION 3 - Modify the recreational accountability measures (AMs) for Atlantic cobia

Alternative 1 (No Action): Do not revise the recreational accountability measures (AMs) for Atlantic cobia as established in Amendment 18 (GMFMC/SAFMC 2011).

Summary of Current AMs for Atlantic Cobia:

Recreational

- If recreational landings exceed the recreational annual catch limit (ACL), the total ACL is exceeded *and* the stock is overfished, then the following year's recreational ACL will be reduced by the amount of the overage.
- If recreational landings exceed the recreational ACL, the Regional Administrator (RA) will evaluate the overage based on the most recent three years of landings under the current ACL. The length of the following fishing year will be reduced so that landings meet the recreational annual catch target (ACT) but not exceed the ACL.

Commercial

- When commercial landings reach or are projected to reach the commercial ACL, the RA will publish a notice to close commercial harvest for the rest of the fishing year.
- If commercial landings exceed the commercial ACL, the total ACL is exceeded *and* the stock is overfished, then the following year's commercial ACL will be reduced by the amount of the overage.



ACTION 3 - Modify the recreational accountability measures (AMs) for Atlantic cobia

Preferred Alternative 2. If recreational landings, as estimated by the Science and Research Director, exceed the recreational ACL, recreational landings will be monitored for a persistence in increased landings. If necessary, the Regional Administrator shall publish a notice to reduce the length of the following fishing season to ensure that recreational landings meet the recreational ACT but do not exceed the recreational ACL, based on the recreational landings in the previous year. The length of the recreational season will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary. The ACT for 2016 and subsequent fishing years is 500,000 lbs, as established in CMP Amendment 20B.

Sub-alternative 2a. The Regional Administrator will reduce the length of the following fishing year only if the species is overfished.

Preferred Sub-alternative 2b. The Regional Administrator will reduce the length of the following fishing year only if the total ACL (commercial ACL and recreational ACL) is exceeded.

Sub-alternative 2c. The Regional Administrator will reduce the length of the following fishing year only if the species is overfished and the total ACL (commercial ACL and recreational ACL) is exceeded.



ACTION 3 - Modify the recreational accountability measures (AMs) for Atlantic cobia

Alternative 3. If recreational landings, as estimated by the Science and Research Director, exceed the recreational ACL, the Regional Administrator shall publish a notice to reduce the recreational ACL in the following fishing year by the amount of the recreational overage. The length of the recreational season will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary. The ACT would also be adjusted according to the following formula: recreational sector ACT equals sector ACL[(1-PSE) or 0.5, whichever is greater].

Sub-alternative 3a. The Regional Administrator will reduce the recreational ACL and ACT of the following fishing year only if the species is overfished.

Sub-alternative 3b. The Regional Administrator will reduce the recreational ACL and ACT of the following fishing year only if the total ACL (commercial ACL and recreational ACL) is exceeded.

Sub-alternative 3c. The Regional Administrator will reduce the recreational ACL and ACT of the following fishing year only if the species is overfished and the total ACL (commercial ACL and recreational ACL) is exceeded.



ACTION 3 - Modify the recreational accountability measures (AMs) for Atlantic cobia

Alternative 4. If recreational landings reach or are projected to reach the recreational ACL, the Regional Administrator shall publish a notice to close the recreational sector for the remainder of the fishing year, unless, using the best scientific information available, the Regional Administrator determines that a closure is unnecessary.

Sub-alternative 4a. If the species is overfished.

Sub-alternative 4b. Regardless of the overfished status of the species.



ACTION 3 - Modify the recreational accountability measures (AMs) for Atlantic cobia

Alternative 5. If recreational landings, as estimated by the Science and Research Director, exceed the recreational ACL, recreational landings will be monitored for a persistence in increased landings. If necessary, the Regional Administrator shall publish a notice to reduce the recreational vessel limit for the following fishing year to ensure that recreational landings meet the recreational ACT but do not exceed the recreational ACL, based on the recreational landings in the previous year. The recreational vessel limit will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary. The ACT for 2016 and subsequent fishing years is 500,000 lbs, as established in CMP Amendment 20B.

Sub-alternative 5a. The Regional Administrator will reduce the recreational vessel limit for the following fishing year only if the species is overfished.

Sub-alternative 5b. The Regional Administrator will reduce the recreational vessel limit for the following fishing year only if the total ACL (commercial ACL and recreational ACL) is exceeded.

Sub-alternative 5c. The Regional Administrator will reduce the recreational vessel limit for the following fishing year only if the species is overfished and the total ACL (commercial ACL and recreational ACL) is exceeded.



Considerations for Action 3: Recreational accountability measures (AMs) for Atlantic cobia

- Under the current AMs, an overage is evaluated based on landings from the most recent 3 years. Preferred Alternative 2 (reduced season for following year), Alternative 3 (reduced ACL in following year), and Alternative 5 (reduced vessel limit for following year) would change the AM so that the evaluation is based only on the landings of the year with the overage.
- The Council may select more than one preferred alternative to establish a system of AMs. Post-season AMs could be specified to be applied in a certain order to mitigate an overage or slow the rate of harvest in the next year.



ACTION 4 – Establish a commercial trip limit for Atlantic cobia

Alternative 1 (No Action). Do not modify the possession limit of 2 fish per person per day.

Alternative 2. Establish a commercial trip limit for Atlantic cobia of 2 fish per person per day. The trip limit will decrease to 1 fish per person per day when 75% of the commercial ACL has been met.

Alternative 3. Establish a commercial trip limit for Atlantic cobia of 6 fish per vessel per day. The trip limit will decrease to 3 fish per vessel per day when 75% of the commercial ACL has been met.

Alternative 4. Establish a commercial trip limit for Atlantic cobia of 2 fish per person per day, with no more than 6 fish per vessel per day. The trip limit will decrease to 1 fish per person per day, with no more than 3 per vessel per day when 75% of the commercial ACL has been met.



Table S-7 from the public hearing summary. Estimated month when actual Atlantic cobia commercial landings reached 75% of the commercial ACL (37,500 lbs ww) and the current commercial ACL (50,000 lbs ww).

Year	Total Commercial Landings	Month when landings reached 75% of ACL	Month when landings reached current ACL
2005	29,290	--	--
2006	31,990	--	--
2007	32,037	--	--
2008	33,739	--	--
2009	42,385	November	--
2010	56,393	September	November
2011	33,963	--	--
2012	42,176	September	--
2013	53,108	August	November
2014	69,197	August	September
2015 (P)	83,148	July	August



What Can the Public Do?

ATTEND PUBLIC MEETINGS OR PARTICIPATE IN THE WEBINAR:

August 1, 2016: Webinar Q&A and Public Hearing

August 3, 2016: North Charleston, SC

August 8, 2016: Midway, GA

August 9, 2016: Bluffton, SC

August 9, 2016: Virginia Beach, VA

August 10, 2016: Morehead City, NC

August 11, 2016: Murrells Inlet, SC

August 11, 2016: Kitty Hawk, NC

Please see <http://safmc.net/meetings/public-hearing-and-scoping-meeting-schedule> for location details. All hearings begin at 6pm EST.

SUBMIT COMMENTS VIA OUR ONLINE FORM:

http://safmc.net/08_2016_SAFMCPublicHearingCommentForm_CMP_FWAm4

OR MAIL COMMENTS TO: Gregg Waugh, Executive Director, SAFMC

4055 Faber Place Drive, Suite 201

North Charleston, SC 29405

***DEADLINE FOR COMMENTS TO BE INCLUDED IN THE COMMENT OVERVIEW
FOR THE SEPTEMBER 2016 SAFMC MEETING: August 19, 2016***



South Atlantic Fishery Management Council

Need more Information? Want to Get Involved in the Process?



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@SAFMC

CMP Framework Amendment 4

Questions about Cobia:

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General Questions about the SAFMC:

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Fishery Outreach Specialist

Or

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Public Information Officer



South Atlantic Fishery Management Council



Red Drum Tasks Update

South Atlantic State/Federal Fisheries
Management Board

August 2, 2016



Tasks

- **Biological Reference Points**
- **F-Based Reference Point**
- **Validity of Age-Based Models**
- **Statistical Catch-at-Age Continuity Runs**
- **Tag Return Rates**



Meetings

- Conference call with Commissioners - May 26
- Conference call with TC and SAS - June 9
- Webinar with TC and SAS - June 28
- Webinar with TC and SAS - Week of August 15
- In-person meeting with TC and SAS during Fall TC Meeting Week - September 12-16



Biological Reference Points

- Investigate whether the current biological reference point for overfishing (SPR40% target, SPR 30% threshold) is appropriate given the specie's long life history. This task is two-fold in that the Board is interested in whether spawning stock biomass is an appropriate metric and whether the 30% threshold and 40% target are suitable goals. The Board also requests the development for an overfished reference point recommendation.



Progress

- Background on the theory and use of Spawning Potential Ratios as reference points
- Overfished reference point contingent on SSB estimates
- Need for a recruitment reference point under a “stoplight” framework to supplement F-based reference points



Moving Forward

- SPR simulations to inform potential long term impacts on recruitment
- Final recommendation on SPR reference points
- Index-based recruitment reference points



F-Based Reference Point

- Given concerns regarding the appropriateness of the current reference point and the lack of data on adult red drum, the Board would like to see an investigation of the feasibility of an F-based reference point that looks strictly at the **harvest*** of juvenile red drum. The Board looks for guidance on whether this type of reference point would provide an appropriate level of information for management.



Progress

- Evaluated the relationship between current overfishing reference point (SPR) and juvenile F
- Pros and cons of juvenile F-based reference points



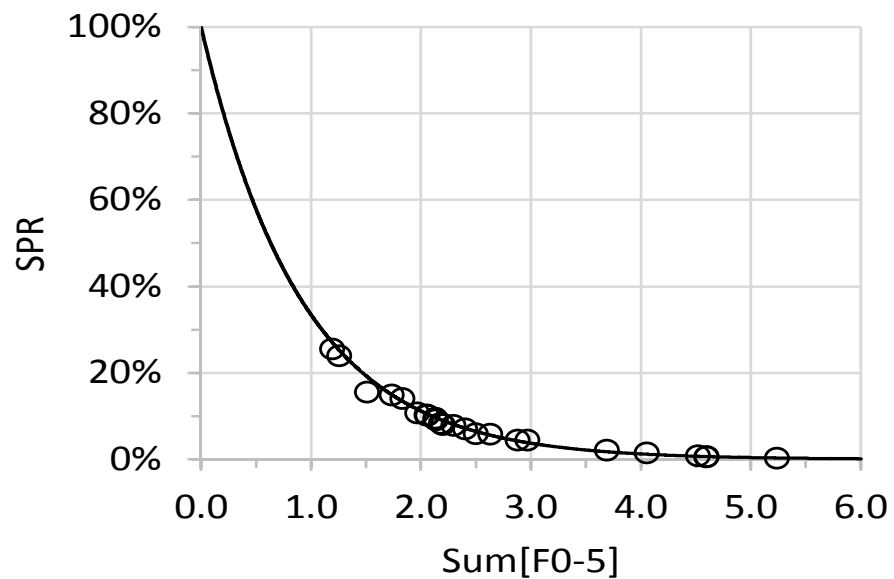
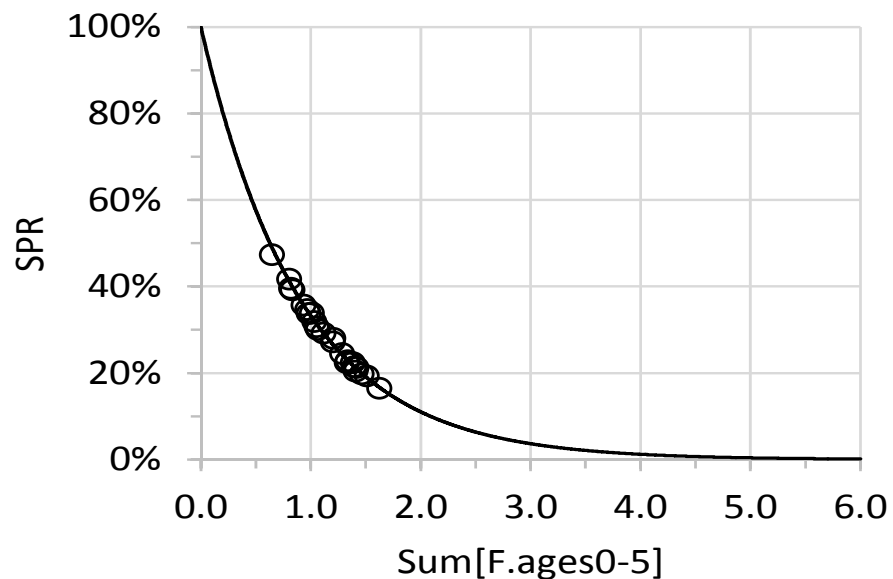
Juvenile F – SPR Relationship

Southern Stock

Northern Stock

Sub-Adult Fishing Mortality

Sub-Adult Fishing Mortality





Moving Forward

- Final recommendation on juvenile F-based reference point
- Index-based recruitment reference points



Validity of Age-Based Models

- The Board is concerned that the lack of information on adult red drum, especially in the northern stock, may impact the ability of the stock synthesis models to accurately measure stock abundance. As a result, the Board asks for an evaluation of how red drum life history and current regulations (namely the moratorium on fishing in federal waters) may limit the validity of an age-based model such as SS3.



Progress

- Summarized potential concerns about data limitations for age-structured models
- TC and SAS recommend against any type of biomass dynamics model for red drum



Moving Forward

- Description of potential implications data limitations could have on age-structured model estimates
- TC and SAS struggled mostly with the goal of this task



Statistical Catch-at-Age Continuity Runs

- The Board asks for an investigation of whether the previous statistical-catch-at-age model would be useful for management and, if so, to conduct a continuity run for both regions. The Board does not specify if the continuity run should only contain data sources used in SEDAR 18 and leaves it to the discretion of the investigators to incorporate new data sources as they see fit; if it is believed additional data sources will significantly improve the performance of the statistical-catch-at-age model, the Board encourages these additions.



Progress

- Updated model inputs to align SCAA model with SS3 model as closely as possible
 - Tag-recapture components unchanged from SEDAR 18 for Annual Meeting review



Moving Forward

- Comparison of SCAA and SS3 model estimates
- Description of discrepancies
- SAS recommendation of SCAA utility for management advice and caveats
- Completion of the SCAA as a model for management advice will likely require additional work following Annual Meeting and a peer-review



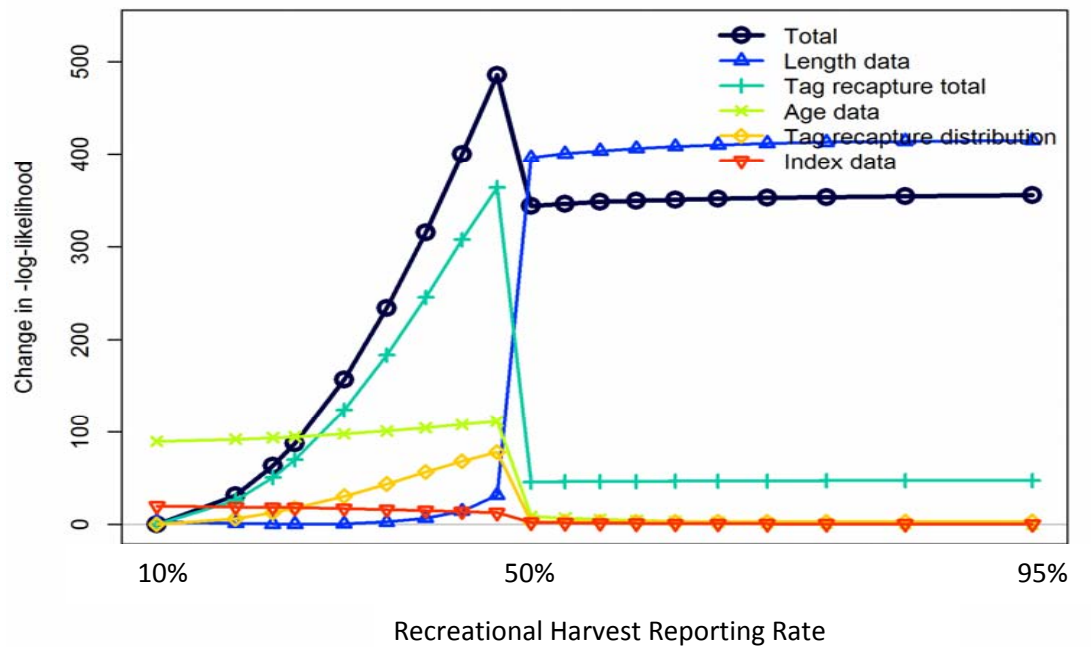
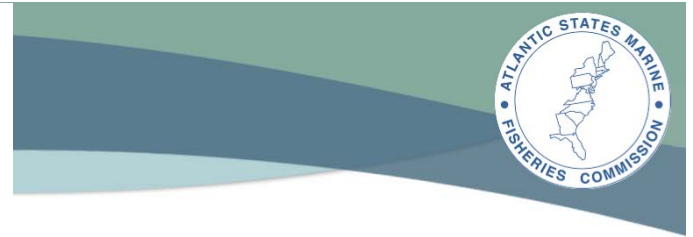
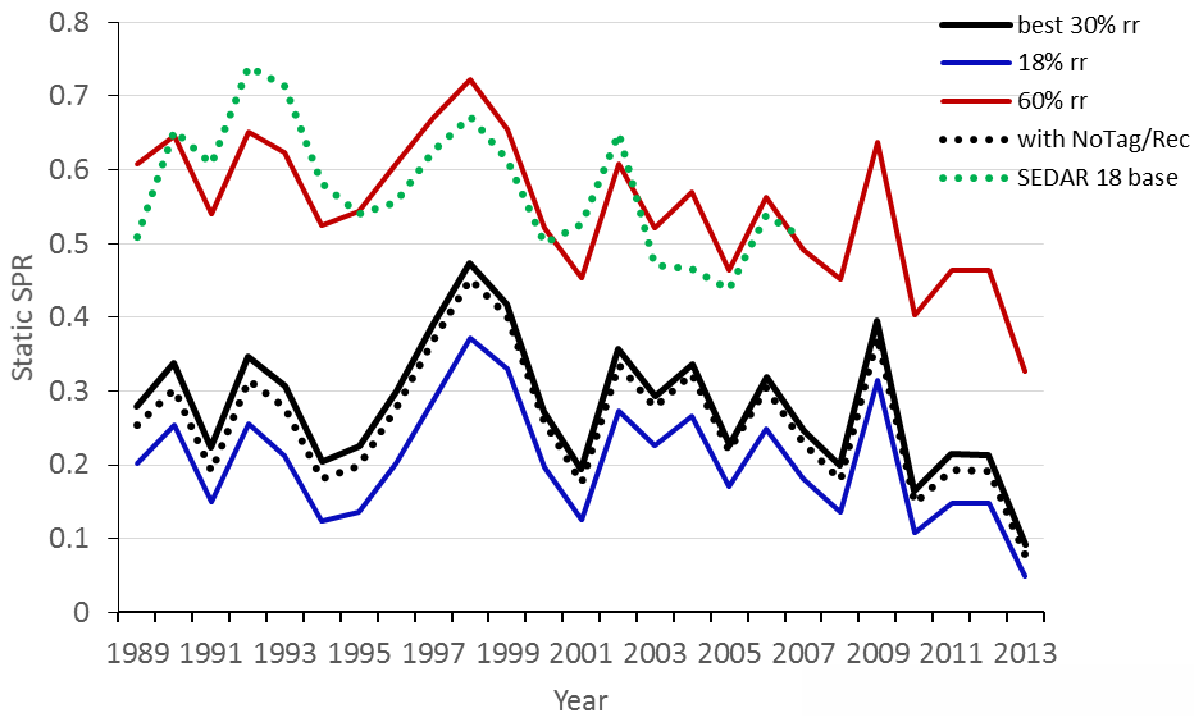
Tag Return Rates

- Given the sensitivity of the SS3 models to the tag return reporting rate, the Board asks for an evaluation of potential tag return rates for each region and determine if the tag return data should be incorporated into new model runs. The Board is specifically interested in a run which uses an 18% tag return rate, per the suggestion of the desk review report.



Progress

- Southern model
 - Sensitivity runs with reporting rate fixed at lower (18%) and higher (60%) values
- Northern model
 - Likelihood profile over the recreational harvest fleet reporting rate





Moving Forward

- External tag-recapture models to compare to SS3 tag-recapture model results
- Final recommendation on how to treat tag-recapture data in SS3 models



Questions?