

Chapter 5. South Atlantic Council's Choice for the Preferred Alternatives

5.1 Modify the Fishery Management Unit (FMU) for hogfish

5.1.1 Snapper Grouper Advisory Panel (AP) Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 1.

5.1.2 Law Enforcement Advisory Panel (LE AP) Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.1.3 Scientific and Statistical Committee (SSC) Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had the following recommendations pertaining to stock structure:

The SSC reviewed the hogfish benchmark assessment conducted by FWC-FWRI. The SSC first considered the evidence of stock separation and justification for conducting separate assessments of the GA-NC and Southeast FL/FL keys stocks. Points of discussion included the following items:

- The dividing point between the GA-NC and SE Florida stocks is not well defined. One reason for this is a lack of genetic sample coverage from*
- Northern Florida through South Carolina. However, the genetic evidence does suggest a distinction between the stocks in NC and South Florida.*
- Whether there is a true biological difference in growth between the different stocks or whether the observed differences reflect age truncation due to heavy fishing.*

Alternatives* **(preferred alternatives in bold)**

1. No Action. There is a Gulf of Mexico stock and South Atlantic stock of hogfish separated at the jurisdictional boundary between the South Atlantic Fishery Management Council and the Gulf of Mexico Fishery Management Council.

2. **Modify the Snapper Grouper Fishery Management Unit (FMU) to specify two separate stocks of hogfish: (1) a Georgia through North Carolina (GA-NC) stock from the Georgia/Florida state boundary to the North Carolina/Virginia state boundary, and (2) a Florida Keys/East Florida (FLK/EFL) stock from the Florida/Georgia state boundary south to:**

2a. The South Atlantic/Gulf of Mexico Council boundary.

2b. The Monroe/Collier County line.

2c. A line just south of Cape Sable running due west.

*Refer to Chapter 2 for detailed language of alternatives

- *Sensitivity analyses show stock status is sensitive to this assumption.*
- *The SSC recommends investigating this issue by comparing size distributions from the fishery to closed areas within the EFL/FL Keys. Some evidence suggests that the apparent difference in length comps/growth is due to fishing pressure.*
- *Catch uncertainty is high, due to the dominance of harvest by the recreational fishery.*

After much discussion the SSC supported treating hogfish in the South Atlantic as two stocks. Each assessment was then evaluated with regard to fishing level recommendations.

5.1.4 Public Comments and Recommendations

Commercial fishermen in the Florida Keys who have both South Atlantic Snapper Grouper and Gulf Reef Fish permits would prefer the boundary between the Florida Keys/East Florida and Gulf of Mexico (West Florida) stocks of hogfish to be at the jurisdictional boundary between the two Councils. Other commenters supported the South Atlantic Fishery management Council's (South Atlantic Council) preferred alternative (line due west just south of Cape Sable, Florida).

5.1.5 South Atlantic Council Rationale

A recent investigation of the stock structure of hogfish (Seyoum et al. 2015) cited genetic differences and limited reproductive exchange between hogfish inhabiting East Florida and the Florida Keys and those found off Georgia and the Carolinas and recommended a sub-regional approach to management. Hogfish are currently managed as a single stock within the South Atlantic Council's area of jurisdiction. To continue to manage stocks based on the latest scientific evidence, the South Atlantic Council is adopting the recommendation to establish separate stocks of hogfish: a Georgia through North Carolina (GA-NC) stock and a Florida Keys/East Florida (FLK/EFL) stock. A third stock inhabiting the West Florida Shelf and Gulf of Mexico region is under management jurisdiction of the Gulf of Mexico Fishery Management Council (Gulf Council). Because the FLK/EFL stock is distributed throughout the Florida Keys a management boundary between the South Atlantic and Gulf Councils needed to be specified. Of the alternatives considered, **Preferred Sub-alternative 2c** (a line due west of Cape Sable, Florida) was ultimately chosen because: (1) it coincided with a Florida's Pompano Endorsement Zone boundary and would, therefore, simplify regulations; and (2) the proposed boundary is in an area where fishing effort is low because it is far enough north of the Florida Keys and far enough south of Naples and Marco Island thus aiding in enforcement.

The South Atlantic Council concluded that **Preferred Sub-alternative 2c** best meets the purpose and need to modify the hogfish management unit to align management boundaries with the best available science. The preferred alternative also best meets the

objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and other applicable law.

5.1.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 1 to modify the fishery management unit for hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that *“management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.”* **Action 1** ensures that the hogfish resource is managed in accordance with the latest scientific information and, therefore, addresses long-term sustainable management of hogfish in the South Atlantic Region.

5.2 Specify Maximum Sustainable Yield (MSY) for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.2.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 2.

5.2.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

Alternatives (preferred alternatives in bold)

1. (No Action). Do not define MSY for the GA-NC or the FLK/EFL stocks of hogfish. Currently, MSY equals the yield produced by F_{MSY} . $F_{30\%SPR}$ is used as the F_{MSY} proxy for hogfish in the South Atlantic.

2. MSY equals the yield produced by F_{MSY} or the F_{MSY} proxy. MSY and F_{MSY} are recommended by the most recent SEDAR/SSC.

2a. GA-NC stock of hogfish. $F_{MSY} = F_{30\%SPR}$. MSY unknown.

2b. FLK/EFL stock of hogfish. $F_{MSY} = 0.138$. MSY = 346,095 lbs ww

5.2.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC stated the following pertaining to the Georgia through North Carolina (GA-NC) and Florida Keys/East Florida (FLK/EFL) (referred to as “SE/SFL” in the SSC report) stocks of hogfish:

GA-NC stock: *the SSC agreed with recommendations from the CIE reviewers to not consider assessment results for the GA-NC stock as sufficient to determine stock status and inform management decisions. Although there isn’t another analysis available for this stock a statistical catch at age model is not the appropriate modeling framework to analyze the available data and therefore this assessment is not considered the best available science. The Committee recommends that catch level recommendations for the GA-NC hogfish stock be developed using the ORCS approach, as outlined in the Council’s ABC control rule.*

SE/SFL stock: *the SSC felt that despite the concerns described above this assessment represents a significant improvement from the methodological approach previously used to set ABC for hogfish. Further the Committee recognized that data-poor methods would not have been sufficient to capture all the complex biological nuances inherent to hogfish*

life history and population dynamics. Therefore, the SSC considered the benchmark assessment of SE/SFL hogfish to represent the best available science and recommended it be used for fisheries management. Specifically, the Committee accepted the estimate of steepness (h) and associated MSY reference points provide by the base run.

5.2.4 Public Comments and Recommendations

Since there is no stock assessment that can be used for the Georgia through North Carolina (GA-NC) stock of hogfish, the South Atlantic Council should not consider changes in management for that stock.

5.2.5 South Atlantic Council Rationale

The Magnuson-Stevens Act establishes maximum sustainable yield (MSY) as the basis for managing a fishery. Specification of the MSY for a stock does not in itself alter the current harvest or use of a fishery resource. This biological reference point establishes a benchmark for management of the Georgia through North Carolina (GA-NC) and Florida Keys/East Florida (FLK/EFL) hogfish stocks; it does not entail a change to regulations unless a comparison of the status of the stock(s) with the benchmark indicates that management adjustments are necessary. As a benchmark, MSY would not limit how, when, where, or with what frequency participants in the snapper grouper fishery engage in harvesting hogfish. The South Atlantic Council is revising MSY because a stock assessment was conducted for hogfish in 2014. Prior to that, MSY was defined as the yield produced by fishing at F_{MSY} or the F_{MSY} proxy (substitute), which was set at $F_{30\%SPR}$ but no actual value was specified. SEDAR 37 (2014), however, was not considered adequate to assess the GA-NC stock of hogfish due to insufficient data. Therefore, no estimate of MSY exists for that stock. For the FLK/EFL stock, the latest stock assessment (SEDAR 37 2014) produced an estimate of F_{MSY} as well as the yield produced from fishing at F_{MSY} . Hence, through this amendment, the South Atlantic Council adopted the updated MSY for the FLK/EFL stock of hogfish and changed the specification process such that adjustments to the MSY (for both stocks) could be made automatically based on the latest stock assessment or recommendation from the SSC that is accepted by the South Atlantic Council, as opposed to modifications to MSY made through a Snapper Grouper FMP amendment or framework adjustment.

The South Atlantic Council concluded that **Preferred Alternative 2** best meets the purpose and need to implement measures expected to prevent overfishing and achieve optimum yield (OY) while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternative also best meets the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.2.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 2 to specify the MSY for the GA-NC and the FLK/EFL stocks of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” **Action 2** ensures that the hogfish resource is managed in accordance with the latest scientific information and, therefore, addresses long-term sustainable management of hogfish in the South Atlantic Region.

5.3 Action 3. Specify Minimum Stock Size Threshold (MSST) for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.3.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 3.

5.3.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.3.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC stated the following pertaining to the Georgia through North Carolina (GA-NC) and Florida Keys/East Florida (FLK/EFL) (referred to as “SE/SFL” in the SSC report) stocks of hogfish:

GA-NC stock: *the SSC agreed with recommendations from the CIE reviewers to not consider assessment results for the GA-NC stock as sufficient to determine stock status and inform management decisions. Although there isn’t another analysis available for this stock a statistical catch at age model is not the appropriate modeling framework to analyze the available data and therefore this assessment is not considered the best available science. The Committee recommends that catch level recommendations for the GA-NC hogfish stock be developed using the ORCS approach, as outlined in the Council’s ABC control rule.*

SE/SFL stock: *the SSC felt that ... this assessment represents a significant improvement from the methodological approach previously used to set ABC for hogfish. Further the Committee recognized that data-poor methods would not have been sufficient to capture*

Alternatives (preferred alternatives in bold)

1 (No Action). Do not define MSST for the GA-NC and FLK/EFL stocks of hogfish. MSST for hogfish in the South Atlantic is equal to $SSB_{MSY}((1-M) \text{ or } 0.5, \text{ whichever is greater})$.

2. $MSST = SSB_{MSY}((1-M) \text{ or } 0.5, \text{ whichever is greater})$.

2a. For the GA-NC stock of hogfish.

2b. For the FLK/EFL stock of hogfish.

3. $MSST = 50\% \text{ of } SSB_{MSY}$.

3a. For the GA-NC stock of hogfish.

3b. For the FLK/EFL stock of hogfish.

4. **$MSST = 75\% \text{ of } SSB_{MSY}$.**

4a. For the GA-NC stock of hogfish.

4b. For the FLK/EFL stock of hogfish.

all the complex biological nuances inherent to hogfish life history and population dynamics. Therefore, the SSC considered the benchmark assessment of SE/SFL hogfish to represent the best available science and recommended it be used for fisheries management. Specifically, the Committee accepted the estimate of steepness (h) and associated MSY reference points provide by the base run.

5.3.4 Public Comments and Recommendations

Since there is no stock assessment that can be used for the GA-NC stock of hogfish, the South Atlantic Council should not consider changes in management for that stock.

5.3.5 South Atlantic Council Rationale

The South Atlantic Council has typically set the minimum stock size threshold (MSST) level at one minus the natural mortality (M) (or 0.5, whichever is greater) times the spawning stock biomass at MSY (SSB_{MSY}). However, when M is relatively small (i.e., less than 0.25), the current definition of MSST would trigger a rebuilding plan if biomass fell slightly below SSB_{MSY} . In this situation, natural variation in recruitment could cause stock biomass to frequently alternate between an overfished and rebuilt condition. This may lead to administrative and potentially adverse economic impacts, as the occurrence of unnecessary rebuilding plans coupled with their correspondingly restrictive management plans would increase. To avoid this, the South Atlantic Council is redefining the MSST level in this amendment for both stocks of hogfish. **Preferred Alternative 4** would set the MSST at 75% of SSB_{MSY} and thus provide a larger buffer than the current one between the levels at which the stock is considered to be at equilibrium (SSB_{MSY}) and the overfished level (MSST).

Other regions in the U.S. have set MSSTs at 50% of SSB_{MSY} , and **Alternative 3** considers setting MSST at this level. However, if MSST is set at 50% of SSB_{MSY} , by the time a stock is found to be overfished, significant management measures may be required to rebuild the stock due to the low biomass levels. **Preferred Alternative 4**, which would trigger a rebuilding plan when biomass is at 75% of SSB_{MSY} , would be expected to result in greater biological benefits than **Alternative 3**, which would have a lower biomass threshold for an overfished determination. At their October 2013 meeting, the South Atlantic Council's SSC acknowledged that the 75% SSB_{MSY} approach is an acceptable choice for MSST, and they voiced no concern regarding the adoption of this management reference point for South Atlantic Council managed species.

The change in MSST definition could result in some stocks being declared "not overfished" that would otherwise be declared "overfished" without this change. However, as noted previously, the requirement to prevent overfishing ensures that even these stocks would be subjected to fishing mortality rates that would increase biomass to levels above SSB_{MSY} , even without a formal rebuilding plan. Therefore, little risk to long-term sustainability can be expected from this change.

The South Atlantic Council understands the importance of incorporating the impacts of environmental variability on fish populations and the uncertainty around stock assessment estimates in the management process. The South Atlantic Council's choice of **Preferred Alternative 4** reflects this commitment. Further, **Preferred Alternative 4** best meets the purpose of rebuilding the FLK/EFL stock of hogfish to sustainable levels. As mentioned previously in this document, however, because a stock assessment could not be completed for the GA-NC stock of hogfish, the MSST value for that stock remains unknown. **Preferred Alternative 4** also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.3.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 3 to specify the MSST for the GA-NC and the FLK/EFL stocks of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” **Action 3** ensures that the hogfish resource is managed in accordance with the latest scientific information and, therefore, addresses long-term sustainable management of hogfish in the South Atlantic Region.

5.4 Establish Annual Catch Limits (ACLs) and **Optimum Yield (OY)** for the Georgia through North Carolina (GA-NC) stock of hogfish

5.4.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 4:

MOTION: RECOMMEND SUB-ALTERNATIVE 2A UNDER ACTION 4 AS PREFERRED ALTERNATIVE
Sub-alternative 2a. ACL = OY = ABC
APPROVED BY AP

RECOMMENDATION: FOR THE NC-GA STOCK, THE COUNCIL SHOULD CONSIDER REGULATING COMMERCIAL AND RECREATIONAL HOGFISH BASED ON TWO SEPARATE GEARS (HOOK-AND-LINE AND SPEAR). MAINTAINING SEPARATE ACLs FOR COMMERCIAL AND RECREATIONAL BUT NOT BASED ON GEAR. INTENT IS TO BETTER MANAGE USING DIFFERENT SIZE LIMITS, ETC.

5.4.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.4.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had the following recommendation for setting the acceptable biological catch (ABC) for the Georgia through North Carolina (GA-NC) stock. The SSC had no recommendation for specifying the ACL.

The SSC agreed with recommendations from the CIE reviewers to not consider assessment results for the GA-NC stock as sufficient to determine stock status and inform management decisions. Although there isn't another analysis available for this stock a

Alternatives **(preferred alternatives in bold)**

1 (No Action). The current ABC for the entire stock of hogfish is 134,824 lbs ww and ACL = OY = ABC. The commercial ACL = 49,469 lbs ww (36.69%) and the recreational ACL = 85,355 lbs ww (63.31%).

2. Establish an ACL for the GA-NC stock. Specify commercial and recreational ACLs using re-calculated sector allocations based on proposed modifications to the management unit (69.13% commercial and 30.87% recreational). The ABC for the GA-NC stock = 35,716 pounds whole weight (lbs ww).

2a. ACL = OY = ABC.

2b. ACL = OY = 95% ABC.

2c. ACL = OY = 90% ABC.

statistical catch at age model is not the appropriate modeling framework to analyze the available data and therefore this assessment is not considered the best available science. The Committee recommends that catch level recommendations for the GA-NC hogfish stock be developed using the ORCS approach, as outlined in the Council's ABC control rule.

5.4.4 Public Comments and Recommendations

- Since there is no stock assessment that can be used for the GA-NC stock of hogfish, the South Atlantic Council should not consider changes in management for that stock.
- At the proposed commercial ACL, the season will only last 9 months.
- Fishermen expressed concern that the Marine Recreational Information Program (MRIP) survey is not sampling dive boats adequately and, therefore, recreational estimates for the GA-NC stock do not reflect abundance of hogfish in that region.

5.4.5 South Atlantic Council Rationale

The optimum yield (OY) is a long-term average amount of desired yield from a stock, stock complex, or fishery that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems. The Magnuson-Stevens Act does not preclude OY from being equal to the ABC or ACL. The Magnuson-Stevens Act indicates that OY “is prescribed as such on the basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor”. The South Atlantic Council has been frequently setting OY equal to ABC and below the maximum sustainable yield to provide greater assurance that overfishing is prevented, the long-term average biomass is near or above B_{MSY} , and overfished stocks are rebuilt within the allotted timeframe for the species in question. Although the overfished/overfishing status of the GA-NC stock of hogfish is unknown, the South Atlantic Council deemed that a precautionary buffer between the ACL (and OY) and the ABC would be prudent since there is a high level of uncertainty associated with hogfish landings in that region, particularly recreational landings. In addition, because the FLK/EFL stock of hogfish is considered to be overfished and undergoing overfishing, the South Atlantic Council opted to set the ACL for that stock below the ABC (Action 6). Therefore, to maintain consistency in how hogfish is managed throughout the South Atlantic Region, the South Atlantic Council chose to set the ACLs for both stocks at 95% of the respective ABCs for each geographic sub-region.

In general, an ACL cannot exceed the ABC and may be set annually or on a multiyear plan basis. ACLs in coordination with accountability measures (AMs) must prevent overfishing. The National Standard 1 guidelines specify that Councils can choose to account for management uncertainty by setting the ACL below the ABC but states that ACL may typically be set very close to ABC. The Commercial Landings Monitoring

System (CLM) came online in June 2012 and is now being used to track commercial landings of federally managed fish species. This system is able to track individual dealer reports, track compliance with reporting requirements, project harvest closures using five different methods, and analyze why ACLs are exceeded. With vastly improved commercial monitoring mechanisms recently implemented, it is unlikely that repeated commercial ACL overages would occur. Additionally, a Joint Dealer Reporting Amendment, which was implemented on August 7, 2014 has increased the required reporting frequency for dealers to once per week, and requires a single dealer permit for all finfish dealers in the Southeast Region. On January 27, 2014, the Generic For-Hire Reporting Amendment was implemented (78 FR 78779), which required all federally permitted headboats in the South Atlantic to report landings information electronically and on a weekly basis. The new CLM quota monitoring system and actions in the Joint Generic Dealer and Generic For-Hire Reporting amendments are expected to provide more timely and accurate data reporting and would thus reduce the incidence of quota overages.

The South Atlantic Council concluded that **Preferred Alternative 2, Preferred Sub-alternative 2b**, best meets the purpose and need to implement measures expected to prevent overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.4.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 4 to specify the ACL and OY for the GA-NC stock of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” **Action 4** ensures that utilization of the GA-NC hogfish resource can continue in a

manner that responds to the latest scientific information available, promotes achieving OY, and addresses management uncertainty.

5.5 Establish a rebuilding plan for the Florida Keys/East Florida (FLK/EFL) stock of hogfish

5.5.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 5.

5.5.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.5.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had the following recommendations for the Florida Keys/East Florida (FLK/EFL) stock (referred to as “SE/SFL” in the SSC report) of hogfish:

SE/SFL stock: the SSC felt that ... this assessment represents a significant improvement from the methodological approach previously used to set ABC for hogfish. Further the Committee recognized that data-poor methods would not have been sufficient to capture all the complex biological nuances inherent to hogfish life history and population dynamics. Therefore, the SSC considered the benchmark assessment of SE/SFL hogfish to represent the best available science and recommended it be used for fisheries management. Specifically, the Committee accepted the estimate of steepness (h) and associated MSY reference points provided by the base run.

In addition to the uncertainties noted for hogfish in general, the Committee notes the following items pertaining to the SE/SFL stock:

Alternatives* **(preferred alternatives in bold)**

1 (No Action). The current ABC for the entire stock of hogfish is 134,824 lbs ww. There is no rebuilding plan in place for hogfish in the South Atlantic.

2. Define a rebuilding plan where the rebuilding strategy for the FLK/EFL stock of hogfish sets ABC equal to the yield at a constant fishing mortality rate and rebuilds the stock in 10 years with a 50% probability of rebuilding success. The Overfishing Limit (OFL) is the yield at F_{MSY} . The spawning stock biomass at MSY (SSB_{MSY}) is 2,300,391 pounds whole weight (lbs ww). Year 1 = 2017.

3. Define a rebuilding plan where the rebuilding strategy for the FLK/EFL stock of hogfish sets ABC equal to the yield at a constant fishing mortality rate and rebuilds the stock in 10 years with a 72.5% probability of rebuilding success. The OFL is the yield at F_{MSY} . The SSB_{MSY} is 2,300,391 pounds whole weight (lbs ww). Year 1 = 2017.

4. Define a rebuilding plan where the rebuilding strategy for the FLK/EFL stock of hogfish sets ABC equal to the yield at a constant fishing mortality rate and rebuilds the stock in 7 years with a 50% probability of rebuilding success. The OFL is the yield at F_{MSY} . The SSB_{MSY} is 2,300,391 pounds whole weight (lbs ww). Year 1 = 2017.

5. Define a rebuilding plan where the rebuilding strategy for the FLK/EFL stock of hogfish sets ABC equal to the yield at a constant fishing mortality rate that rebuilds the stock in 7 years with a 72.5% probability of rebuilding success. The OFL is the yield at F_{MSY} . The SSB_{MSY} is 2,300,391 pounds whole weight (lbs ww). Year 1 = 2017.

*Refer to Chapter 2 for detailed language of alternatives.

- *Productivity for the SE Florida stock is not well estimated. Estimates suggest the stock began at low biomass at the start of the time series and drops slightly over time, resulting in a lack of contrast.*
- *As noted in the general comments, observed growth rates of the SE FL stock are below that of the GA-NC stock. Whether this is due to the high exploitation indicated by the model or geographic habitat differences is unknown. From an assessment modeling perspective, there is large variability in the input growth data, yet small CV's assigned to the growth model used internally by the model.*
- *A likelihood profile on R0 was unavailable. The SSC felt this diagnostic analysis would be very informative given the narrow range of stock abundance seen in this assessment (from 9% of virgin to between 6% and 8% of virgin). This range may not provide enough contrast to infer stock productivity and determine stock status given the amount of uncertainty in the input data and model assumptions.*
- *The SSC expressed serious concern regarding the fact that data weighting procedures were not used in this assessment. Although effective sample sizes were calculated they were not used to reweight the different data sources used in the assessment.*
- *The SSC also felt that although the estimated dome-shaped selectivities seemed justified, the degree of doming (e.g., terminal selectivity fixed at zero for some fisheries) represents an additional concern. Further, although uncertainty in selectivity was reflected in the bootstraps the fact that the functional form of some selectivities was still imposed indicates that uncertainty in fishery selectivity was not fully captured and characterized.*

Since this assessment falls under Tier 1 of our ABC control rule, ABC was obtained according to a P value. A summary of results from applying the ABC control rule is presented below:*

- 1. Assessment Information: Tier 1 (0%)*
- 2. Uncertainty Characterization: Tier 3 – Medium (-5%)*
- 3. Stock Status: Tier 4 – Overfished and Overfishing is occurring (-7.5%).*
- 4. Productivity-Susceptibility Analysis: Tier 3 – High Risk (-10%): based on the MRAG report.*

In total, these results provide for an adjustment score of -22.5%, a P of 27.5%, and a PREBUILD of 72.5%. A yield stream for rebuilding will be provided after the Council either approves the probability of rebuilding recommend above or provides further input on the probability of rebuilding to be used.*

Regarding the next assessment of hogfish, the SSC recommends that it be conducted in 5 years and that it should address all the concerns put forth by the SSC and CIE reviewers. Further, the Committee recommended that the next assessment explore the use of several classes of models (of different complexity) instead of just a statistical catch at age model.

5.5.4 Public Comments and Recommendations

No specific comments regarding proposed rebuilding plan.

5.5.5 South Atlantic Council Rationale

A rebuilding plan includes two components that affect the allowable catch levels: the rebuilding schedule and the rebuilding strategy (i.e., fishing mortality rate and probability of rebuilding success). Action 5 contains alternatives for various strategies to rebuild the FLK/EFL stock of hogfish. The choice of rebuilding schedule typically affects how restrictive management regulations need to be: the shorter the rebuilding timeframe, the more restrictive the regulations and vice versa. The Magnuson-Stevens Act mandates that overfished stocks be rebuilt to SSB_{MSY} within ten years, hence the South Atlantic Council is adopting the maximum allowable timeframe to rebuild the FLK/EFL stock of hogfish stock (**Preferred Alternative 3**) in order to minimize negative socio-economic impacts that would result from additional restrictions on harvest.

The SSC recommended the South Atlantic Council select a strategy to rebuild the FLK/EFL stock of hogfish that would result in a 72.5% probability of rebuilding success within the 10-year timeframe, rather than the 50% probability of rebuilding success required by the Magnuson-Stevens Act (corresponding to **Alternative 2**). The South Atlantic Council is thus adopting the SSC's recommended approach that would consider a higher probability of rebuilding success than required.

The South Atlantic Council concluded that **Preferred Alternative 3** (rebuilding in 10 years at a constant fishing mortality rate and with a 72.5% probability of rebuilding success) best meets the purpose and need to establish a rebuilding plan to increase the FLK/EFL hogfish stock biomass to sustainable levels based on results of the recent stock assessment. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.5.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management,

(3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 5 to establish a rebuilding plan for the FLK/EFL stock of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that *“management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.”*

Action 5 responds to the latest scientific information available on the status of the FLK/EFL stock while ensuring that harvest remains at a level that promotes rebuilding of that stock within a reasonable time frame (10 years). In addition, **Action 5** responds to the broad management goal to *“adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.”*

5.6 Establish Annual Catch Limits (ACLs) **Optimum Yield (OY)** for the Florida Keys/East Florida (FLK/EFL) stock of hogfish

5.6.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 6.

5.6.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

Alternatives **(preferred alternatives in bold)**

1 (No Action). The current ABC for the entire stock of hogfish is 134,824 lbs ww and ACL = OY = ABC. The commercial ACL = 49,469 lbs ww (36.69%) and the recreational ACL = 85,355 lbs ww (63.31%).

2. Establish ACLs for the FLK/EFL stock of hogfish. Specify commercial and recreational ACLs for 2017-2025. Specify commercial and recreational ACLs using re-calculated sector allocations based on proposed modifications to the management unit (9.63% commercial and 90.37% recreational).

2a. ACL = OY = ABC.

2b. ACL = OY = 95% ABC.

2c. ACL = OY = 90% ABC.

5.6.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendation for setting an ACL for the Florida Keys/East Florida (FLK/EFL) stock.

5.6.4 Public Comments and Recommendations

No specific comments regarding proposed ACLs.

5.6.5 South Atlantic Council Rationale

The optimum yield (OY) is a long-term average amount of desired yield from a stock, stock complex, or fishery that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems. The Magnuson-Stevens Act does not preclude OY from being equal to the acceptable biological catch (ABC) or annual catch limit (ACL). The Magnuson-Stevens Act indicates that OY “is prescribed as such on the

basis of the maximum sustainable yield from the fishery, as reduced by any relevant economic, social, or ecological factor”. The South Atlantic Council has been frequently setting OY equal to ABC and below the maximum sustainable yield to provide greater assurance that overfishing is prevented, the long-term average biomass is near or above B_{MSY} , and overfished stocks are rebuilt within the allotted timeframe for the species in question. Because the FLK/EFL stock of hogfish is overfished and undergoing overfishing, the South Atlantic Council opted to set the ACL for that stock below the ABC.

In general, an ACL cannot exceed the ABC and may be set annually or on a multiyear plan basis. For the FLK/EFL stock of hogfish, ACLs would be specified annually for 2017 to 2025. However, it is likely that an update to the assessment will be completed prior to 2025 that would result in an adjustment to the ACLs. ACLs in coordination with accountability measures (AMs) must prevent overfishing. The National Standard 1 guidelines specify that Councils can choose to account for management uncertainty by setting the ACL below the ABC but states that ACL may typically be set very close to ABC. The Commercial Landings Monitoring System (CLM) came online in June 2012 and is now being used to track commercial landings of federally-managed fish species. This system is able to track individual dealer reports, track compliance with reporting requirements, project harvest closures using five different methods, and analyze why ACLs are exceeded. With vastly improved commercial monitoring mechanisms recently implemented, it is unlikely that repeated commercial ACL overages would occur. Additionally, a Joint Dealer Reporting Amendment, which was implemented on August 7, 2014 has increased the required reporting frequency for dealers to once per week, and requires a single dealer permit for all finfish dealers in the Southeast Region. On January 27, 2014, the Generic For-Hire Reporting Amendment was implemented (78 FR 78779), which required all federally permitted headboats in the South Atlantic to report landings information electronically and on a weekly basis. The new CLM quota monitoring system and actions in the Joint Generic Dealer and Generic For-Hire Reporting amendments are expected to provide more timely and accurate data reporting and would thus reduce the incidence of quota overages.

The South Atlantic Council concluded that **Preferred Alternative 2, Preferred Sub-alternative 2b**, best meets the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.6.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper

grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 6 to specify the ACL and OY for the FLK/EFL stock of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” **Action 6** ensures that utilization of the FLK/EFL hogfish resource can continue in a manner that responds to the latest scientific information available, promotes achieving OY, and addresses management uncertainty.

5.7 Establish a recreational Annual Catch Target (ACT) for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.7.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 7:

MOTION: SUPPORT THE COUNCIL'S PREFERRED FOR ACTION 7.

Preferred Alternative 2. Establish an annual catch target (ACT) for the GA-NC stock of hogfish for the recreational sector.

Sub-alternative 2a. ACT = recreational $ACL \times (1 - PSE)$ or $ACL \times 0.5$, whichever is greater.

Preferred Sub-alternative 2b. ACT = 85% recreational ACL.

APPROVED BY AP

Alternatives **(preferred alternatives in bold)**

1 (No Action). The current ACT is 59,390 lbs ww and applies to hogfish throughout the South Atlantic Council's jurisdiction. The ACT = recreational $ACL \times (1 - PSE)$ or $ACL \times 0.5$, whichever is greater, and where Percent Standard Error (PSE) = average PSE 2005-2009.

2. Establish an ACT for the GA-NC stock of hogfish for the recreational sector.

2a. ACT = recreational $ACL \times (1 - PSE)$ or $ACL \times 0.5$, whichever is greater.

2b. ACT = 85% recreational ACL.

2c. ACT = 75% recreational ACL.

3. Establish an ACT for the FLK/EFL stock of hogfish for the recreational sector.

3a. ACT = recreational $ACL \times (1 - PSE)$ or $ACL \times 0.5$, whichever is greater.

3b. ACT = 85% recreational ACL.

3c. ACT = 75% recreational ACL.

5.7.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.7.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to specifying recreational ACTs for either stock.

5.7.4 Public Comments and Recommendations

No specific comments regarding proposed recreational ACTs.

5.7.5 South Atlantic Council Rationale

The South Atlantic Council reasoned that the level of management uncertainty for the recreational component of the hogfish fishery is currently high enough to warrant specification of a recreational annual catch target (ACT). Specification of a recreational ACT is precautionary since the South Atlantic Council has not used ACTs to trigger accountability measures (AMs) because it is anticipated that improvements in reporting would significantly reduce management uncertainty. Should the South Atlantic Council, in the future, utilize ACTs to manage recreational harvest, these values will already have been specified and become part of the regulations. The current ACT incorporates the Percent Standard Error (PSE) for the recreational catch estimates into the formula and applies to the entire stock of hogfish. PSEs are incorporated into the current formula to add a larger buffer for species that are not so common in the recreational catch. For such species the PSEs are large, indicating higher uncertainty in the recreational estimates. Hence, using the PSE in the formula to set the ACT further accounts for uncertainty. On the other hand, when recreational landings estimates for a species are precise, the PSEs are small, and consequently the buffer to account for uncertainty is reduced accordingly. For hogfish, PSEs for recreational estimates in the GA-NC sub-region are large, indicating a high level of uncertainty in those estimates. If the current formula to determine the ACT for the GA-NC stock of hogfish were to be applied, the ACT would be set at 50% of the recreational ACL because the PSEs from 2010-2014 for that stock average 62% (see **Chapter 2**). Rather than establishing the recreational ACT at half the recreational ACL, the South Atlantic Council selected to specify the recreational ACT for the GA-NC stock of hogfish at 85% of the recreational ACL (**Preferred Sub-alternative 2b**). Similarly, to maintain consistency, the South Atlantic Council chose **Preferred Sub-alternative 3b** for the FLK/EFL stock of hogfish.

The South Atlantic Council concluded that **Preferred Sub-alternative 2b**, and **Preferred Sub-alternative 3b** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.7.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management,

(3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 7 to specify recreational ACTs for the GA-NC and FLK/EFL stocks of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” **Action 7** ensures that utilization of the hogfish resource can continue in a manner that responds to the latest scientific information available and addresses management uncertainty.

5.8 Increase the commercial and recreational minimum size limit for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.8.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 8:

MOTION: RECOMMEND SUB-ALTERNATIVE 2B AS PREFERRED FOR ACTION 8.

Preferred Alternative 2. Increase the commercial and recreational minimum size limit for the GA-NC stock of hogfish in the South Atlantic Region.

Sub-alternative 2b. 17 inches FL
APPROVED BY AP (6 TO 5)

MOTION: RECOMMEND SUB-ALTERNATIVE 3E AS PREFERRED FOR ACTION 8.

Preferred Alternative 3. Increase the commercial and recreational minimum size limit for the Florida Keys/East Florida (FLK/EFL) stock of hogfish in the South Atlantic Region.

Sub-alternative 3e. Increase the minimum size limit from 12" to 14" in year 1 and to 16" in year 3.
APPROVED BY AP

RECOMMENDATION: FOR THE NC-GA STOCK, THE COUNCIL SHOULD CONSIDER REGULATING COMMERCIAL AND RECREATIONAL HOGFISH BASED ON TWO SEPARATE GEARS (HOOK-AND-LINE AND SPEAR). MAINTAINING SEPARATE ACLs FOR COMMERCIAL AND RECREATIONAL

Alternatives **(preferred alternatives in bold)**

1 (No Action). The current minimum size limit for hogfish is 12 inches fork length (FL) for both the commercial and recreational sectors in federal waters of the South Atlantic Region, and state waters of South Carolina, North Carolina, and Florida. There is no minimum size limit for hogfish in state waters of Georgia.

2. Increase the commercial and recreational minimum size limit for the GA-NC stock of hogfish in the South Atlantic Region.

2a. 16 inches FL

2b. 17 inches FL

2c. 18 inches FL

2d. 19 inches FL

2e. 20 inches FL

2f. Increase the minimum size limit from 12" to 15" in year 1, to 18" in year 2, and to 20" in year 3.

3. Increase the commercial and recreational minimum size limit for the FLK/EFL stock of hogfish in the South Atlantic Region.

3a. 14 inches FL

3b. 15 inches FL

3c. 16 inches FL

3d. 17 inches FL

3e. Increase the minimum size limit from 12" to 14" in year 1 and to 16" in year 3.

BUT NOT BASED ON GEAR. INTENT IS TO BETTER MANAGE USING DIFFERENT SIZE LIMITS, ETC.

RECOMMENDATION: LOOK AT SLOT LIMIT (12 TO 16 INCHES) FOR FLORIDA HOGFISH.

5.8.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.8.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to modifications to the minimum size limit for either stock.

At their May 3-5, 2016 meeting, the SSC conducted a technical review of the recreational decision tool (see **Appendix L**) developed by the NMFS Southeast Regional Office (SERO) to analyze the effects of proposed recreational management measures. The SSC had the following recommendations:

- The hogfish decision tool was considered Best Scientific Information Available.
- The Socio-economic Panel (SEP) of the SSC had specific recommendations in its report (see Appendix 1 to the SSC's final report) regarding the consumer surplus estimates used to calculate the economic effects for the recreational sector and the order of the analysis for minimum size limits and trip limits. SERO staff agreed to incorporate these recommendations to the extent practicable. The SEP also had questions regarding an apparent pattern for landings cycling, peaking every 3 or 4 years followed by several years of big declines, and questioned whether this might be biological in origin. The SSC was also uncertain as to whether this pattern has a biological basis, but SERO staff's revised analysis after the SEP meeting using a 4-year lag to account for the apparent longer-term cycle did not produce a meaningful result.
- A retroactive validation was recommended.

5.8.4 Public Comments and Recommendations

GA-NC: Support for increase in minimum size. Suggest increase to 16 inches fork length (FL).

FLK/EFL:

- Most support for an increase in the minimum size limit to 16 inches FL.
- Some commenters supported a 17-inch minimum size limit for Florida hogfish.

- Support for the preferred 15-inch FL but even better would be increasing to 14 inches up to 16 inches over 3 years (based on the growth rates of healthier stocks like those in Dry Tortugas or the Gulf, hogfish will reach 16 inches in 2-3 years).
- Consider step-up increase in minimum size limit for Florida hogfish up to 18 inches or 20 inches.
- A large number of undersized hogfish are harvested during mini-season. An increase in minimum size limit without prohibiting harvest during mini-season could lead to massive discards.
- Also consider a possible slot limit or a soft slot limit where only one fish over 21-22 inches, for instance, can be taken per vessel so as to limit the number of large males that can be taken while still maintaining trophy fishing.
- An increase in the minimum size limit may affect dockside value and price to consumers because restaurants want a certain size fillet.

5.8.5 South Atlantic Council Rationale

Fishing mortality is likely playing a role on hogfish size at age, maturity, fecundity, and harem stability throughout their range (McBride et al. 2008, Muñoz et al. 2010). Moreover, it was noted during the SEDAR 37 (2014) assessment that growth rates differed between hogfish belonging to the Georgia through North Carolina (GA-NC) and the Florida Keys /East Florida (FLK/EFL) stocks. To what extent these differences in growth are due to life history (i.e., genetics) or fishing pressure remains unknown. However, it can be surmised that fishing pressure on adult hogfish off Georgia and the Carolinas is lower than off South Florida and the Florida Keys due to simply to accessibility (e.g., distance to fishing grounds, weather, etc.). Preliminary data suggest that hogfish belonging to the GA-NC stock mature at larger sizes than hogfish belonging to the FLK/EFL stock and sexual transition from female to male occurs at approximately 24 inches FL. Hogfish belonging to the FLK/EFL stock are known to transition from female to male at 16 inches FL. Hence, the current minimum size limit of 12 inches FL can result in more fishing pressure on the female component of the population for both stocks. Therefore, the South Atlantic Council opted for a larger minimum size limit (17 inches FL; **Preferred Sub-alternative 2b**) for the GA-NC stock and the FLK/EFL stock (16 inches FL; **Preferred Sub-alternative 3b**) to ease fishing pressure on the female component on the population and minimize the effects of fishing on size at age, maturity, fecundity, and harem stability.

The South Atlantic Council concluded that **Preferred Sub-alternative 2b**, and **Preferred Sub-alternative 3b** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.8.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 8 to modify the minimum size limits for the GA-NC and FLK/EFL stocks of hogfish does not directly respond to objectives outlined in the Vision Blueprint; however, it addresses the broad Science goal to ensure that “*management decisions for the snapper grouper fishery are based upon robust, defensible science that considers qualitative and quantitative data analyzed in a timely, clear, and transparent manner that builds stakeholder confidence.*” As explained in **Section 4.8.1**, recent scientific evidence suggests that the current minimum size limit of 12 inches (fork length) is below the size at which hogfish reach sexual maturity. Allowing harvest of immature individuals might lead to negative impacts at the population level, affect the health of the hogfish resource and ultimately have negative socio-economic repercussions. **Action 8** also addresses the broad management goal to “*adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*” Hence, **Action 8** responds to the latest scientific information available while ensuring that utilization of the hogfish resource can continue in a sustainable and biologically responsible manner.

5.9 Establish a commercial trip limit for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.9.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 9:

MOTION: RECOMMEND THAT THE COUNCIL CONSIDER ADDITIONAL SUB-ALTERNATIVES FOR 150 AND 200 POUND COMMERCIAL TRIP LIMIT FOR GA-NC (ACTION 9).
APPROVED BY AP (1 OPPOSED)

5.9.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.9.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to specification of commercial trip limits for either stock.

At their May 3-5, 2016 meeting, the Socio-Economic Panel (SEP) of the SSC conducted a technical review of the commercial decision tool (see **Appendix M**) developed by the NMFS Southeast Regional Office to analyze the effects of proposed commercial management measures. The SEP had the following recommendations:

Alternatives (preferred alternatives in bold)

1 (No Action). There is no commercial trip limit for hogfish in the South Atlantic Region.

2. Establish a commercial trip limit for the GA-NC stock of hogfish in the South Atlantic Region.

- 2a. 100 lbs ww per trip.
- 2b. 250 lbs ww per trip.
- 2c. 500 lbs ww per trip.**
- 2d. 750 lbs ww per trip.
- 2e. No trip limit

3. Establish a commercial trip limit for the FLK/EFL stock of hogfish in the South Atlantic Region.

- 3a. 25 lbs ww per trip.**
- 3b. 50 lbs ww per trip.
- 3c. 100 lbs ww per trip.
- 3d. 150 lbs ww per trip
- 3e. 200 lbs ww per trip
- 3f. No trip limit

- The SEP concurred with the use of average price per pound as a proxy measure of marginal value for the commercial sector.
- For the FLE-Keys area, there appears to be a pattern for landings to cycle, peaking every 3 or 4 years followed by several years of big declines. This could be related to the hogfish 3-5 year generation time, cycles in ocean conditions, or other factors. The SEP recommended a revised analysis that considers a 4-year lag to account for the apparent longer-term cycle.
Perform the analysis for minimum size limits first, and then perform the analysis for trip limits conditioned on the result for each proposed minimum size limit (MSL). This could be accomplished by running the analysis on trip catches after applying the percentage reduction from each proposed MSL. The issue is that it may be harder for fishermen to reach the trip limit if a minimum size limit is already limiting the number of fish they can keep.

5.9.4 Public Comments and Recommendations

GA-NC:

- Concern that the 25-pound whole weight (lbs ww) proposed commercial trip limit in Florida will cause effort shift to Carolinas.
- Council should consider a two-month spawning season (May-June) closure for hogfish in the Carolinas (for both sectors) and 500 lbs ww commercial trip limit OR no spawning closure and decrease the trip limit to 350 lbs ww.
- No commercial trip limit or the largest possible. Consider implementing commercial trip limit similar to what is currently in place in North Carolina. Otherwise, consider commercial trip limit of 700 lbs ww.
- Consider a head count trip limit for commercial sector in the Carolinas because there is a lot of variation in weight among hogfish in that region.

FLK/EFL:

- Commercial fishermen who target hogfish in the Keys stated that the proposed trip limit would impact them significantly because they engage in multi-day trips. At 25 lbs ww per trip, they would not be able to stay in business.
- If trip limit needs to go in place, consider daily trip limit for Florida hogfish.
- Consider no commercial trip limit in Florida, as the commercial sector has not hit its ACL.

5.9.5 South Atlantic Council Rationale

The South Atlantic Council has made extensive use of commercial trip limits to reduce harvest and extend the length of seasons. For the GA-NC stock of hogfish, however, a reduction in commercial harvest or a lengthening of the season are not needed since the commercial sector is not expected to land the entire commercial ACL. However, because restrictions on commercial harvest of hogfish in Florida are expected to be significant, there is some concern that fishermen may shift effort to Georgia and the

Carolinas. Therefore, the South Atlantic Council is proposing a 500-lbs ww commercial trip limit (**Preferred Sub-alternative 2c**) for this stock to ensure commercial harvest in that geographic sub-region can take place year-round. In addition, the South Atlantic Council is taking precautionary action because hogfish are most accessible to fishermen when they are aggregated to reproduce and a trip limit may help prevent localized depletion. For the FLK/EFL stock, in light of the need to achieve a substantial reduction in harvest because the stock is overfished and experiencing overfishing, the South Atlantic Council proposed to establish a 25-lbs ww commercial trip limit (**Preferred Sub-alternative 3a**). Based on historical commercial catch, the majority of commercial vessels in Florida and the Florida Keys are landing 25 lbs ww of hogfish. The South Atlantic Council acknowledges, however, that such a restrictive trip limit may significantly impact some commercial fishermen, particularly in the Florida Keys, and the effects would be disproportionate between hook-and-line and spearfishing gear. The severity of such impacts would be based on the overall dependence a vessel has on hogfish and the vessel's ability to substitute revenue from landing other species.

The South Atlantic Council concluded that **Preferred Sub-alternative 2c**, and **Preferred Sub-alternative 3a** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.9.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 9 to establish commercial trip limits for the GA-NC and FLK/EFL stocks of hogfish responds to **Objective 2** under the broad Management goal to “*adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*” **Objective 2** aims to “*develop innovative management measures that allow consistent access to the fishery for all sectors*”. While trip limits do not constitute an innovative management approach, they continue to be an

effective means to keep commercial landings within biologically acceptable limits and can be used to “spread out” the harvest over time to allow more consistent access to the resource. **Action 9** also responds to regional differences in the fishery as it proposes different trip limits for the GA-NC and FLK/EFL stocks of hogfish, and it addresses a priority action under **Strategy 2.1** (Support development of management approaches that address retention of snapper grouper species) to “*consider bag limit and trip limit adjustments*.”

5.10 Modify and/or establish recreational bag limits for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.10.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 10:

MOTION: RECOMMEND THE COUNCIL CONSIDER A RECREATIONAL BAG LIMIT FOR THE GA-NC STOCK OF 2 FISH PER PERSON PER DAY (SUB-ALTERNATIVE 2A).

Alternative 2. Establish a recreational bag limit for the GA-NC stock of hogfish in the South Atlantic Region.

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

APPROVED BY AP

MOTION: RECOMMEND THE COUNCIL CONSIDER SUB-ALTERNATIVE 3B (2 FISH PER PERSON PER DAY) FOR THE FLK/EFL STOCK OF HOGFISH

Alternative 3. Modify the recreational bag limit for the Florida Keys/East Florida (FLK/EFL) stock of hogfish in the South Atlantic Region.

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

APPROVED BY AP

Alternatives (preferred alternatives in bold)

1 (No Action). The recreational bag limit is 5 fish per person per day in federal waters off Florida and there is no recreational bag limit in federal waters off Georgia, South Carolina, and North Carolina.

2. Modify the recreational bag limit for the GA-NC stock of hogfish in the South Atlantic Region.

2a. 2 fish per person per day.

2b. 1 fish per person per day.

2c. 1 fish per vessel per day.

3. Modify the recreational bag limit for the Florida Keys/East Florida FLK/EFL stock of hogfish in the South Atlantic Region.

3a. 3 fish per person per day.

3b. 2 fish per person per day.

3c. 1 fish per person per day.

3d. 1 fish per vessel per day.

5.10.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.10.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to modification to the recreational bag limits for either stock.

At their May 3-5, 2018 meeting, the SSC conducted a technical review of the recreational decision tool (see **Appendix L**) developed by the NMFS Southeast Regional Office to analyze the effects of proposed recreational management measures. The SSC had no specific recommendations on management actions.

5.10.4 Public Comments and Recommendations

GA-NC: No opposition to preferred bag limit (2/person/day). Suggestion to establish 5 fish limit currently in place in Florida.

FLK/EFL:

- Consider a 3-fish bag limit or add to snapper aggregate.
- Support for bag limit of 2 per person per day or 2 per vessel per day, whichever is more restrictive.
- Some support for 1 hogfish per person per day.

5.10.5 South Atlantic Council Rationale

While there does not seem to be a need to constrain recreational harvest of hogfish in Georgia and the Carolinas, the South Atlantic Council prefers to adopt a precautionary approach, especially since so much uncertainty exists around recreational landings estimates for that geographic sub-region. Moreover, data suggest that a 2 fish/person recreational bag limit (**Preferred Sub-alternative 2a**) would not impact recreational catches for the GA-NC stock of hogfish. For the FLK/EFL stock, reducing the recreational bag limit from 5/fish/person/day to 1 fish/person/day (**Preferred Sub-alternative 3c**) is expected to significantly impact recreational catches but it is not expected to increase discards as data show most recreational anglers rarely harvest more than 1-2 hogfish per person. However, members of the public have expressed concern over a possible increase in regulatory discards as a result of the reduction in the recreational bag limit. Strict measures are needed, however, to achieve the necessary reduction in harvest to end overfishing and rebuild the FLK/EFL stock of hogfish.

The South Atlantic Council concluded that **Preferred Sub-alternative 2a**, and **Preferred Sub-alternative 3c** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also

best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.10.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 10 to modify/establish recreational bag limits for the GA-NC and FLK/EFL stocks of hogfish responds to **Objective 2** under the broad Management goal to “*adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*” **Objective 2** aims to “*develop innovative management measures that allow consistent access to the fishery for all sectors*”. While bag limits do not constitute an innovative management approach, they continue to be an effective means to keep recreational landings within biologically acceptable limits and can be used to “spread out” the harvest over time to allow more consistent access to the resource. **Action 10** also responds to regional differences in the fishery as it proposes different bag limits for the GA-NC and FLK/EFL stocks of hogfish, and it addresses a priority action under **Strategy 2.1** (Support development of management approaches that address retention of snapper grouper species) to “*consider bag limit and trip limit adjustments.*”

5.11 Establish a recreational fishing season for the Florida Keys/East Florida (FLK/EFL) stock of hogfish

5.11.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had the following recommendations on Action 11:

MOTION: RECOMMEND AN ADDITIONAL SUB-ALTERNATIVE 3C UNDER ACTION 11 FOR A RECREATIONAL SEASON FOR FL HOGFISH MAY 1 THROUGH SEPTEMBER 30.

NOTE: *The AP discussed Action 11 when the South Atlantic Council was considering a recreational season for both the GA-NC stock (under Alternative 2) and the FLK/EFK stock (under Alternative 3). The South Atlantic Council subsequently chose to only consider a recreational season for the FLK/EFL stock (see Appendix A for rationale); hence, the discrepancy in the sub-alternative mentioned in the AP's motion above.*

MOTION: RECOMMEND THAT THE COUNCIL CONSIDER A SPAWNING SEASON CLOSURE FOR GA-NC (MAY-JUNE) AND KEEP THE CALENDAR YEAR AS THE FISHING YEAR FOR THE RECREATIONAL SECTOR.
APPROVED BY AP

NOTE: *Under "Other Business", the AP approved the following motion regarding the fishing year for hogfish. After the meeting, the AP Chair corroborated the AP's preference for a July 1 start date for both sector.*

MOTION: RECOMMEND THE COUNCIL START THE HOGFISH COMMERCIAL AND RECREATIONAL FISHING YEAR ON JULY 1.
APPROVED BY AP

5.11.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

Alternatives (preferred alternatives in bold)

1 (No Action). There is no recreational season for hogfish in the South Atlantic.

2. Establish a season for the Florida Keys/East Florida (FLK/EFL) stock of hogfish in the South Atlantic region.

2a. May-June

2b. July-August

2c. July-September

2d. July-October

5.11.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to establishment of a recreational season for the Florida Keys/East Florida (FLK/EFL) stock of hogfish.

At their May 3-5, 2018 meeting, the SSC conducted a technical review of the Recreational Decision Tool (see **Appendix L**) developed by the NMFS Southeast Regional Office to analyze the effects of proposed recreational management measures. The SSC had no specific recommendations on management actions.

5.11.4 Public Comments and Recommendations

GA-NC:

- The South Atlantic Council should consider a two-month spawning season (May-June) closure for hogfish in the Carolinas (for both sectors) and 500-lbs ww commercial trip limit or no spawning closure and decrease the trip limit to 350 lbs ww.

FLK/EFL:

- Suggest prohibiting recreational harvest of hogfish during August (lobster mini-season) to reduce discards.
- Suggestion to close recreational harvest of hogfish during June through August.

5.11.5 South Atlantic Council Rationale

To achieve the necessary reduction in harvest to end overfishing and rebuild the FLK/EFL stock of hogfish, the South Atlantic Council has chosen to employ several management measures including establishment of a recreational season for hogfish. Based on historic landings trends and input from the public, the South Atlantic Council originally proposed a July through October (**Preferred Sub-alternative 2d**) recreational season. However, the proposed 4-month season, coupled with an increase in the minimum size limit and a decrease in the bag limit from 5 to 1 fish/person/day, would not have been long enough to allow for the entire recreational ACL to be landed. Therefore, at its June 2016 meeting, the South Atlantic Council opted to select an additional alternative as preferred (**Preferred Sub-alternative 2a**) to essentially establish a 6-month season from May through October. According to analyses presented in Chapter 4 of this document, a 6-month season would in fact be long enough for the recreational sector to land the proposed recreational ACL (**Action 6**). In addition, the spawning season for hogfish in South Florida is from December through April. Hence, the proposed recreational season would impart additional biological benefits to the stock by easing fishing pressure on the spawning segment of the population.

The South Atlantic Council concluded that **Preferred Sub-alternative 2a**, and **Preferred Sub-alternative 2d** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.11.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 11 to establish a recreational season for the FLK/EFL stock of hogfish responds directly to **Objective 3** under the broad Management goal to “*adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*”

Objective 3 is to “*ensure that management decisions help maximize social and economic opportunity for all sectors.*” **Action 11** responds directly to **Strategy 3.1** -- *consider development of management approaches that assist fishery-dependent businesses to operate efficiently and profitably* and **Strategy 3.2** -- *consider development of management approaches that support recreational fishing and allow increased opportunity for trip satisfaction*. The recreational season proposed under **Action 11** maximizes social and economic opportunity for the private recreational and for-hire sectors and ensures that recreational harvest remains within the biologically acceptable limit needed to rebuild the FLK/EFL hogfish stock. In addition, in restricting recreational harvest to a defined time period, **Action 11** indirectly responds to **Objective 2** to “*develop innovative management measures that allow consistent access to the fishery for all sectors*”.

5.12 Establish commercial and recreational accountability measures (AMs) for the Georgia through North Carolina (GA-NC) and the Florida Keys/East Florida (FLK/EFL) stocks of hogfish

5.12.1 Snapper Grouper AP Comments and Recommendations

The Snapper Grouper AP discussed Amendment 37 at their November 3-4, 2015 meeting in Charleston, South Carolina. The AP had no recommendations on Action 12.

5.12.2 Law Enforcement AP Comments and Recommendations

The LE AP received an overview of Amendment 37 at their March 7-8, 2016 meeting in Jekyll Island, Georgia. The LE AP had no comments or recommendations.

5.12.3 Scientific and Statistical Committee Comments and Recommendations

The SSC reviewed the results of the SEDAR 37 (2014) stock assessment at their October 28-30, 2014 meeting. The SSC had no recommendations pertaining to modification of accountability measures (AMs) for either stock.

*Alternatives** (preferred alternatives in bold)

1 (No Action). Current commercial and recreational AMs apply to hogfish throughout the South Atlantic Fishery Management Council's area of jurisdiction. (see **Section 2.12.1** for current AMs)

2. If commercial landings reach or are projected to reach the commercial ACL, the commercial sector will close for the remainder of the fishing year; all sale or purchase will be prohibited and harvest or possession of hogfish in or from the EEZ would be limited to the recreational bag and possession limit. This bag and possession limit applies in the South Atlantic on board a vessel for which a valid Federal commercial or charter vessel/headboat permit for South Atlantic snapper grouper has been issued, without regard to where such species were harvested, i.e., in state or Federal waters. If the commercial ACL is exceeded, the commercial ACL in the following fishing year will be reduced by the amount of the commercial overage, only if hogfish is overfished and the total ACL is exceeded.

2a. For the GA-NC stock of hogfish.

2b. For the FLK/EFL stock of hogfish

3. If recreational landings reach or are projected to reach the recreational ACL, the recreational sector will close for the remainder of the fishing year, unless NMFS determines that a closure is unnecessary.

3a. For the GA-NC stock of hogfish if the stock is overfished.

3b. For the GA-NC stock of hogfish regardless of stock status.

3c. For the FLK/EFL stock of hogfish if the stock is overfished.

3d. For the FLK/EFL stock of hogfish regardless of stock status.

4. If recreational landings exceed the recreational ACL, then during the following fishing year, landings will be monitored for a persistence in increased landings. If necessary, the length of fishing season and the recreational ACL will be reduced in the following fishing year by the amount of the recreational overage, only if the species is overfished and the total ACL is exceeded. The length of the recreational season and recreational ACL will not be reduced if NMFS determines a reduction is unnecessary.

4a. For the GA-NC stock of hogfish

4b. For the FLK/EFL stock of hogfish

* See Chapter 2 for complete language of alternatives.

5.12.4 Public Comments and Recommendations

The public had no comments on accountability measures.

5.12.5 South Atlantic Council Rationale

Because the hogfish stock under South Atlantic Council management jurisdiction has been shown to comprise two distinct genetic stocks that should be managed separately, the South Atlantic Council had to revise the existing accountability measures (AMs) to make them applicable to each stock. Because the Florida Keys/East Florida (FLK/EFL) stock is overfished and undergoing overfishing, the preferred accountability measures for the commercial and the recreational sectors are more likely to result in in-season closures or shortening of fishing seasons. Because the status of the Georgia through North Carolina (GA-NC) stock of hogfish remains unknown and commercial and recreational landings are expected to remain below their respective ACLs, the proposed AMs are not expected to be triggered frequently for that stock.

The South Atlantic Council concluded that **Preferred Sub-alternatives 2a and 2b**, **Preferred Sub-alternatives 3b and 3d**, and **Preferred Sub-alternatives 4a and 4b** best meet the purpose and need to implement measures expected to prevent and/or end overfishing and achieve OY while minimizing, to the extent practicable, adverse social and economic effects. The preferred alternatives also best meet the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.12.6 How is this Action Addressing the Vision Blueprint for the Snapper Grouper Fishery?

The Vision Blueprint for the Snapper Grouper Fishery (Vision Blueprint) was approved in December 2015 and is intended to inform management of the snapper grouper fishery through 2020. As such, the Vision Blueprint serves as a “living document” to help guide future management, builds on stakeholder input and how the South Atlantic Council envisions future management of the fishery, guides the development of new amendments that address priority objectives and strategies, and illustrates actions that could be developed through the regular amendment process. The Vision Blueprint is organized into four strategic goal areas: (1) Science, (2) Management, (3) Communication, and (4) Governance. Each goal area has a set of objectives, strategies, and actions.

Action 12 to establish commercial and recreational accountability measures (AMs) for the GA-NC and the FLK/EFL stocks of hogfish does not respond directly to objectives in the Vision Blueprint; however, **Action 12** addresses the broad management

goal to “*adopt management strategies for the snapper grouper fishery that rebuild and maintain fishery resources, adapt to regional differences in the fishery, and consider the social and economic needs of fishing communities.*” **Action 12** ensures that utilization of the hogfish resource can continue in a sustainable and biologically responsible manner.