

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE



SSC Meeting Report

April 25-27, 2017

Town & Country Inn

Charleston, SC

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- Attachment 3. Landings update presentation*
- Attachment 4. Landings trends 1986-2015
- Attachment 5. Vermilion Snapper Project Schedule
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1. INTRODUCTION

1.1. Documents

Agenda

Attachment 1. Minutes of the October 2016 meeting

Attachment 2. Minutes of the November 2016 webinar meeting

1.2. Action

- Introductions
- Review and Approve Agenda
 - *Agenda approved by Committee.*
- Approve Minutes
 - *Minutes approved by Committee with one correction: On page 58 of the October 2016 Minutes the statement attributed to Mr. Grimes should be attributed to Dr. Grimes.*
 - *Council staff provided a very brief overview of the Citizen Science program, with a solicitation for SSC members to consider participating or recruiting participants.*

2. PUBLIC COMMENT

The public was provided an opportunity to comment on SSC agenda items as they were being discussed during the meeting. Comments were taken after any initial presentations were given on any topic, but before the SSC began their discussion of the topic. There was also an opportunity for comment at the start and end of the meeting. Those wishing to make comment indicated their desire to do so to the Committee Chair.

3. 2016-2017 LANDINGS AND ACLS

3.1. Documents

Attachment 3. Landings update presentation*

Attachment 4. Landings trends 1986-2015

3.2. Presentation

Landings and ACLs: Mike Larkin, SERO, via Webinar

3.3. Overview

The SSC will be provided an update on 2016 and preliminary 2017 landings, catch limits, and application of accountability measures.

3.4. Action

- Review and comment, with attention toward any ABC recommendation updates.
 - Emphasis should be placed on Level 4 and 5 stocks which have concerning landings trends as compared to their ABC values.
- Consider assessment schedule and research plan implications

SSC RECOMMENDATIONS:

- Review and comment, with attention toward any ABC recommendation updates.
 - Emphasis should be placed on Level 4 and 5 stocks which have concerning landings trends as compared to their ABC values.
 - *Mike Larkin clarified that the landings do not include discards.*
- Consider assessment schedule and research plan implications
 - *See notes under the next agenda item for schedule and research plan discussion.*

4. **SEDAR ACTIVITIES**

4.1. Documents

Attachment 5. Vermilion Snapper Project Schedule

Attachment 6. Draft Vermilion Snapper ToRs

Attachment 7. SEDAR Research Track Background

Attachment 8. SEDAR Research Track Presentation

Attachment 9. Long Term Assessment Plan and Tilefish Assessment Info

4.2. Overview

SEDAR Projects statuses are summarized below. Specific action items are noted with each project.

SEDAR 48, Black Grouper: In progress. A benchmark assessment of Black Grouper will be prepared during 2017 with Florida Fish and Wildlife Conservation Commission providing the analytical team. This is a jointly managed stock with the GMFMC so both Councils made appointments and approved the schedule and Terms of Reference. The SAFMC made appointments and provided approvals in December 2016. The Data Workshop was held March 15-17, 2017 in St. Petersburg, FL. The Assessment Workshop is scheduled for June 27-29, 2017 and the Review Workshop November 14-16, 2017. The assessment will be considered by the SAFMC SSC in April 2018 and recommendations will be provided to the Council in June 2018.

ACTION

Dr. Luiz Barbieri, FL FWCC, recently informed SEDAR that this assessment will be halted due to data issues. Further details will be provided to the SSC as they become available.

- Review and comment on schedule and priority changes
- Suggest alternatives for addressing black grouper

SSC RECOMMENDATIONS:

- Review and comment on schedule and priority changes
 - *The SSC voiced concerns about assessing the likelihood of assessment completion when starting an assessment and deciding when not to proceed.*
 - *Before assessments are initiated, there should be a process to determine if data are adequate. Before planning an assessment, determine the likelihood of successful completion based on data quality/quantity.*
 - *A review of earlier assessments may point out these problems before we get to the data workshop stage.*
 - *The Committee pointed out that the Data Workshop (DW) is the place where the data are evaluated and the appropriate modeling approach is decided upon, if a quantitative assessment is even possible. This allows for a more complete evaluation of the data and parameter inputs and whether they are appropriate to support a quantitative stock assessment. The Committee suggests that this be explicitly spelled out in the ToRs.*
 - *Species ID issues caused the Black Grouper assessment to be halted due to the large amount of uncertainty in the ratios used to separate Gag and Black Grouper in the commercial catch. However, the Gag assessment went forward using these same ratios. The SSC brought up the issue that uncertainty in the Black Grouper portion of the landings should have an impact on the Gag assessment since the two rely on the same ratio to determine their portion of the commercial landings. More detailed information on this will be provided in the SEDAR 48 DW report and in a SEDAR Working Paper the analytical team is preparing to document the problems that were identified.*
 - *The concerns raised during SEDAR 48 also have implications for the previous Black Grouper assessment because the fishery is being managed based on an assessment that has known species ID concerns.*
- Suggest alternatives for addressing black grouper
 - *The SSC discussed multiple alternatives for addressing the Black Grouper assessment issue. After considering having the Committee review the Data Workshop report and available working papers at the October meeting to evaluate next steps for Black Grouper, the SSC decided this would cause too*

long a delay in evaluating a way forward. After much discussion, the Committee reached consensus on the following recommendations:

- *The SSC recommends that the SEDAR Steering Committee postpone any decisions on Black Grouper until the SSC gets a chance to review the SEDAR 48 DW report and associated working papers. Given the fact that Black Grouper are managed jointly by the SAFMC and the GMFMC the SSC pointed out it would be important to involve the Gulf SSC in this review.*
- *The SSC recommends that ToRs for future assessments should have a plan B for how to handle stocks that are deemed unsuitable for a quantitative, model-based stock assessment. This would facilitate decisions by the DW Panel to proceed with a viable alternative instead of simply stopping the stock assessment project altogether.*
- *The SSC reiterated its interest in being included in the SEDAR Steering Committee. The Committee felt that its more active participation would be beneficial to the assessment planning process and would like to have representation in some capacity on the Committee.*

SEDAR 56, Black Sea Bass: In progress. A standard assessment was requested to allow consideration of new video data and to reconsider the use of length and age data. The terminal year is 2015 and the assessment will be developed through a series of five webinars held between February and August 2017. The assessment will be submitted to the SSC for review in October 2017 and recommendations provided to the Council in December 2017. Note that the timing of this assessment does not allow including revised MRIP data. The new estimated timeframe for when revised MRIP estimates will become available is mid-2018.

SEDAR 50, Blueline Tilefish: In progress. A benchmark assessment has been underway since mid-2016. Significant events to date include a recommendation from the August 2016 Age Workshop that age determinations are not reliable and should not be used in the assessment; and a recommendation from the June 2016 Stock ID workshop that the biological stock extends from the Mid-Atlantic through the Gulf of Mexico. Following discussion of the stock ID recommendation, the SEDAR Steering Committee recommended a joint SSC review of the stock ID findings; this review was held October 28, 2016. The Steering Committee recommended a regional science and management leadership level review of the joint SSC findings to provide ToR guidance, conducted during a conference call on November 14, 2016. The Council-Agency leadership group recommended conducting the SEDAR 50 assessment with a Gulf-South Atlantic stock dividing line at the Gulf-South Atlantic Council boundary. The SAFMC passed a motion in December 2016 to modify the ToRs in accordance with this recommendation. The Data Workshop was held January 23-27, 2017, the Assessment Process will be a combination of in-person workshop on May 23-26, 2017 and a series of webinars held between April and July 2017, and the Review Workshop will be August 29-31, 2017. The assessment will be considered by the SSC in October 2017 and recommendations provided to the Council in December 2017.

Stock ID and Meristics Workshop: Postponed Indefinitely. The Data Best Practices workshop in 2015 recommended a workshop devoted to addressing Stock ID and Meristics issues for upcoming assessments. Initial planning began in 2016 for a workshop and independent peer review in 2017. However, due to budget concerns for 2017, this workshop was cancelled in December 2016. Stock ID for upcoming research track assessments of Gulf of Mexico/South Atlantic Scamp and Atlantic Cobia will be addressed through the Research Track Process.

Given that stock ID has become particularly challenging with recent assessments, and there is considerable confusion regarding how such decisions should be made and for which stocks past decisions should be reconsidered, a general discussion of stock ID determinations, including both the process and the stocks to review, is under consideration for a possible joint meeting of the SAFMC and GMFMC SSCs. This will be discussed further under the MRIP uncertainty topic.

MRIP Revision Assessments: Requested stocks for revision assessments are Red Snapper, Red Grouper, Blueline Tilefish, and Black Sea Bass. Revision assessments will include an update of the MRIP data, based on calibrations applied to address the effort survey change. No additional changes or data will be considered, and the terminal year of the assessment will not be advanced. Revision assessments were initially scheduled for development in late 2017 for SSC review in April 2018. Due to delays in the calibration process and recommendations from the calibration team and Council to include the full 3 years of side-by-side survey information (2015-2017), the Council has requested the revision assessments be prepared in 2018.

SEDAR 55, South Atlantic Vermilion Snapper: Planning Underway. A standard assessment was requested to allow consideration of new video index data and to reconsider error distributions for fitting age and length composition data. The terminal year will be 2016 and assessment webinars will be held in late 2017 and early 2018. Preliminary scheduling provides the assessment for SSC consideration in April 2018 and Council consideration in June 2018. The Council will be asked to make appointments for the assessment panel and approve the schedule and ToRs at the June 2017 meeting.

ACTION

- The SSC is asked at this meeting to review ToRs and schedule and recommend participants for this assessment.
- The SSC should consider how the delay in calibrated MRIP estimates based on the effort survey change may affect the planned vermilion snapper assessment.

SSC RECOMMENDATIONS:

- The SSC is asked at this meeting to review ToRs and schedule and recommend participants for this assessment.

- *The SSC suggests changing the wording in the first ToR to clarify that the Vermilion Snapper assessment is a Standard assessment, not an Update. Other than that, the SSC approves the ToRs as written.*
- *Participants: Luiz Barbieri, George Sedberry*
- The SSC should consider how the delay in calibrated MRIP estimates based on the effort survey change may affect the planned vermilion snapper assessment.
 - *There is considerable concern over proceeding with assessments when major revisions to the recreational data are expected within the next year.*
 - *The changes in recreational catch estimates may have a large effect on assessment outcomes, as well on sector allocations. Proceeding with assessments knowing that the revised data may have large consequences to stock status and management may simply create double work as the assessments may have to be re-done once the revised recreational catch estimates become available.*
 - *However, not conducting the assessments scheduled for this year may be more problematic than revising the assessments when the calibrated numbers are available.*
 - *The delay to the new assessments will most likely be longer than one year, especially if the calibrated data have large effects on these assessments, resulting in terminal years that are 4-6 years old. This raised some concern in terms of using the assessment for management advice.*
 - *SSC Recommendation: Proceed with the Vermilion Snapper Standard assessment as scheduled.*
 - *Possibly consider including Vermilion Snapper in the MRIP Revisions.*

Gulf of Mexico and South Atlantic Scamp: Early planning stages. A Research Track assessment is tentatively scheduled to start in 2018. Schedule and Terms of Reference will be developed in the upcoming months.

Atlantic Cobia: Early planning stages. A Research Track assessment is tentatively scheduled to start in 2018. Schedule and Terms of Reference will be developed in the upcoming months.

SEDAR Research Track Process

In September 2017 the SEDAR Steering Committee reviewed a proposed change in the SEDAR assessment process, suggested by the SEFSC, to replace the existing assessment categories with “Research Track” and “Operational” assessments. The change is intended to improve assessment models and increase productivity. The research track approach would be somewhat similar to the existing benchmark process, although the resulting model would not include the most recent information and would not be used to provide stock status. Instead, the process would focus on developing a robust assessment model and greater exploration of issues and uncertainties related to the modelling effort. Once

the framework so developed is peer reviewed by an independent panel and evaluated by the SSC, it would be updated with the most recent information through an “Operational Assessment” which would provide management advice and be reviewed by the SSC.

The Steering Committee recommended applying the research track approach to the upcoming Gulf of Mexico/South Atlantic Scamp and Atlantic Cobia assessments. SEDAR staff is working with the SEFSC data and assessment team leads to define the research track process. Further discussion is planned for the Steering Committee meeting on May 5, 2017 and again in September 2017.

ACTION

- Review the process and provide guidance and suggestions for consideration by the Council SEDAR Steering Committee representatives.

SSC RECOMMENDATIONS:

- Review the process and provide guidance and suggestions for consideration by the Council SEDAR Steering Committee representatives.
 - *An SSC webinar meeting may be needed in July or August to obtain SSC feedback on SEDAR Steering Committee decisions so that this feedback is available for the September SAFMC meeting.*
 - *Many aspects of the Research Track are unclear. It is critical to clearly specify the Research Track process and what the specific role of the SSC and its members is in this process.*
 - *The idea behind the Research Track is to test modeling changes outside of management advice to determine the effect of the modeling technique on the model outputs rather than on stock status.*
 - *Need to consider if the Research Track will replace a Benchmark or not, if there will be a phase-in process, and the level of involvement of the SSC in both the Research Track and the Operational Assessments.*
 - *Good to have a clear timeline for both Research Track and Operational Assessments for planning purposes.*
 - *The expectation was that the Research Track would be used very sparingly, for example in situations such as species that have never been assessed, new and innovative modeling approaches that have been developed, data that have never been considered before and for which we don't know what effect they would have on the status and when the current modeling framework fails to provide believable, consistent results.*
 - *The Mid-Atlantic SSC uses Data Updates (rumble strips) to see if certain stocks are on track between assessments. This may aid in determining if an operational assessment or research track should be recommended.*
 - *Some of the NEFSC Operational Assessments involve multiple stocks (such as 20 groundfish stocks). Research Tracks are used to tackle specific concerns*

within assessments such as retrospective patterns and tuning indices. For Research Tracks to be successful, assessment scientists must have the time to do the research needed to improve the assessments.

- *Research Tracks can be used to address an issue affecting multiple species, such as stock ID.*
- *The difficulty with developing SEDAR priorities lies in the large number of products desired vs. a limited number of individuals available to produce these items. Consumers want the most labor intensive version of the product if given the option and there are several consumers competing for the attention of the suppliers. The normal answer to this is that you would need a pricing structure to help sort this out, a market-like mechanism that provides different levels of the product and consumers can trade credits with one another based on perceived needs now and in the future.*
- *The stock assessment process should retain the data step, assessment step and review step, with SSC input (representatives present) at each step.*
- *The Research Track also provides stimulating research opportunities to assessment scientists conducting routine stock assessments, with the potential for deriving new (and publishable) data, methods, models, etc.*

Assessment Priorities

The Council reviewed the SSCs application of the NMFS Stock Assessment Prioritization Tool in December 2016 and March 2017. For the March 2017 SAFMC meeting, Council staff provided an evaluation of the scoring metrics (Attachment 9), and the Council recommended several changes in the primary assessment and data stocks listing:

- Add Cobia, Hogfish, and Gray Snapper to the primary data collection species.
- Continue to support a White Grunt assessment in 2021.
- Add Atlantic Spadefish and Silk Snapper to the secondary data collection species.
- Identify Almaco Jack, Lane Snapper, and Wahoo as top priorities among the secondary species.
- Identify Dolphin as a special data collection stock due to its life history and stock unit challenges.
- Provide separate rankings for assessed and unassessed stocks for future assessment priority evaluations.

The proposed priority changes are also discussed under the research plan topic.

In March the Council requested a standard assessment of golden Tilefish be developed in the space now filled by the MRIP revision assessments in 2017. This is discussed in detail under topic 5.

Planned assessments through 2020 are shown in Table 1, and future priorities in Table 2. Current projects and priorities through 2019 will be reviewed by the SEDAR Steering

Committee in May 2017, and priorities for 2020 and 2021 will be determined in September 2017.

ACTION

- Provide guidance on future assessment priorities
- The SSC is asked consider how the delay in the revised MRIP data, and the MRIP revisions assessments, will affect future assessment plans.
 - Which of the 2018 assessments should be delayed to accommodate the MRIP revisions?

SSC RECOMMENDATIONS:

- Provide guidance on future assessment priorities
 - *The fate of the research priorities are important, especially when considering which stocks to assess. It is difficult to move forward with assessments when important research needs have not been addressed.*
 - *The SSC supports the first five Council recommendations, but cautions that the Council needs to be very clear and realistic about what can be achieved for Secondary stocks.*
 - *The SSC recommends that SEDAR convene a workshop to evaluate data needs and timing requirements for conducting assessments of Secondary Priority stocks.*
- The SSC is asked consider how the delay in the revised MRIP data, and the MRIP revisions assessments, will affect future assessment plans.
 - Which of the 2018 assessments should be delayed to accommodate the MRIP revisions?
 - *The SSC is unable to comment until the SEDAR Steering Committee has had a chance to discuss the upcoming schedule and the Research Track process.*

Table 1. SAFMC SEDAR Projects April 2017

Plan Year	SEDAR #	Stock	Approach	Terminal Data	Assessment Complete	Lead Agency
2017	50	Blueline Tilefish	Benchmark	2015	October 2017	SEFSC
	55	Vermilion Snapper	Standard	2016	April 2018	SEFSC
	56	Black Sea Bass	Standard	2015	Oct 2017	SEFSC
	48	Black Grouper	Benchmark	2015	Jan 2018	FL FWCC
	R	MRIP Revisions1	Revision	2016	June 2018	SEFSC
2018	B	Yellowtail Snapper	Benchmark	2016	Spring 2019	FL FWCC
	RT	Scamp, Gulf + SA	Research Track	2016	Mid-2019	SEFSC
	RT	Atlantic Cobia	Research Track	2016	Mid-2019	SEFSC
	S	Greater Amberjack	Standard	2017	Jan 2019	SEFSC
	S	Red Porgy	Standard	2017	Jan 2019	SEFSC
	B	King Mackerel	Benchmark	2016	Mid 2019	SEFSC
2019	S	Snowy Grouper	Standard	2017	Late 2019	SEFSC
	S	Spanish Mackerel	Standard	2017	Late 2019	SEFSC
	S	Gag	Standard	2018	Early 2020	SEFSC
2020	O	Scamp, Gulf + SA	Operational	2018	Late 2020	SEFSC
	O	Atlantic Cobia	Operational	2019	Late 2020	SEFSC

Table 2. Currently identified future assessment priorities.

Year	Stock	Approach
2020	Red Snapper	TBD
	Tilefish	Research Track
	Red Grouper	Update (Operational)
2021	White Grunt	Research Track
	Gray Triggerfish	Research Track

4.3. Action

- Provide guidance on Black Grouper
- Provide guidance on addressing the MRIP revisions assessment delay.
- Review the ToRs and schedule for Vermilion Snapper and recommend changes or additions as appropriate.
- Identify SSC representation for Vermilion Snapper.
- Provide comments and recommendations on the SEDAR Research Track Proposal.
- Recommend assessment priorities for 2020 and beyond.

5. UPDATE ON SEFSC RESEARCH EFFORTS

5.1. Documents

None.

5.2. Overview

The Committee will be updated on research projects currently ongoing within the SEFSC, with a focus on those directly affecting stock assessments.

5.3. Action

- No specific actions required.

SSC RECOMMENDATIONS:

- *The SSC valued the update and would like to see this continued.*
- *When asked, Dr. Williams indicated that there was no active research on likelihood estimators ongoing at the SEFSC.*

6. GOLDEN TILEFISH ABC

6.1. Documents

Attachment 10. Golden Tilefish Projections Report

6.2. Presentation

Tilefish Projections Overview: Dr. Erik Williams, SEFSC

6.3. Overview

At their December 2016 meeting, the Council expressed interest in having more flexibility in selecting the risk of overfishing within the ABC Control Rule. In anticipation of this, the Council requested that the SEFSC provide projections for Tilefish at P* levels of 0.40 and 0.45 for consideration at their March 2017 meeting (Attachment 10).

Those projections were provided to the Council at the March 2017 meeting and a discussion ensued regarding changes in the Tilefish fishery that were not known at the time of the SEDAR 25 update. Specifically, the longline fishery began targeting larger fish in recent years. This was seen in the composition data, but the assumption of a single selectivity pattern was made for the entire time series, causing the model to assume larger

fish were also selected for back in time. This had the effect of reducing the estimated stock biomass and productivity.

Another issue that has arisen since the SEDAR 25 update for Tilefish was completed is the adequacy of the approach for fitting composition data. The Tilefish update, as well as SEDAR 41 (Red Snapper) and SEDAR 36 (Snowy Grouper), used a robust multinomial distribution to fit the composition data. Studies published since the SEDAR 25 update for Tilefish have found that using any multinomial distribution to fit composition data is inappropriate and may lead to biased model results. Therefore, SEDAR 53 for Red Grouper used a very different approach for fitting composition data. It appears that the fitting approach using the robust multinomial distribution had the same effect in all South Atlantic assessments in which it was used: productivity and overall stock biomass was reduced.

Due to these uncertainties, the Council has asked the SSC to consider an interim ABC value for Tilefish using the yield at 75% F_{MSY} in lieu of projections at any P^* value until a new assessment can be conducted. The Council requested a SEDAR standard assessment of Tilefish in late 2017, provided to the SSC for consideration in April 2018, with a terminal year of 2016. This request will be considered by the SEDAR Steering Committee at its May 5, 2017 meeting.

The Council also expressed interest in requesting that NMFS issue an interim rule to address overfishing of Tilefish. Under the provisions of the MSA, the Council has 2 years to develop a management response to overfishing of Tilefish, starting from December 2016 when NMFS provided the status determination to the Council. The interim rule will enable the Council to reduce the harvest levels and reduce overfishing while management measures are developed and implemented to address the ABC recommendation.

Below is the full request of the Council.

REQUEST THE SSC TO CONSIDER ESTABLISHING AN INTERIM ABC FOR TILEFISH BASED ON THE PROJECTED YIELD AT 75% F_{MSY} , AND COMPARE AND CONTRAST THE RISKS AND UNCERTAINTY WITH ESTABLISHING THE ABC FOR TILEFISH AT THE 75% F_{MSY} YIELD VERSUS THAT PROVIDED BY THE P^* APPROACH. THE INTERIM ABC WOULD BE IN EFFECT UNTIL A NEW TILEFISH ASSESSMENT IS PREPARED TO ADDRESS:

- **MULTIPLE SELECTIVITY PERIODS TO ACCOUNT FOR A SELECTIVITY SHIFT IN THE LONGLINE FISHERY, TOWARD LARGER (PRESUMABLY OLDER) FISH OVER TIME, AS SUPPORTED BY BOTH THE TESTIMONY OF TILEFISH FISHERMEN AND THE SELECTIVITY PATTERN USED IN THE 2016 UPDATE ASSESSMENT.**
- **THE LATEST BEST SCIENTIFIC INFORMATION MODEL FITTING ALGORITHMS AS APPLIED IN THE RED GROUPER STOCK ASSESSMENT UPDATE.**

- AN ADVANCEMENT OF THE TILEFISH TERMINAL YEAR, GIVEN THAT:
 - (1) THE MOST RECENT PROJECTIONS INCORPORATE A 5 YEAR LAG BETWEEN THE ASSESSMENT TERMINAL YEAR AND CHANGES IN MANAGEMENT,
 - (2) THE SEFSC MEMO REGARDING RED SNAPPER PROJECTIONS INDICATED THAT PROJECTION UNCERTAINTY IS “GENERALLY HIGH AFTER 3-5 YEARS”, AND
 - (3) THE UNCERTAINTY IN TILEFISH IS EXACERBATED BY THE 7 YEAR LAG OF ESTIMATED RECRUITMENT DEVIATIONS IN THE TILEFISH ASSESSMENT, DUE TO THE HIGH AGE OF SELECTIVITY FOR TILEFISH AND THE LACK OF ANY ABUNDANCE INFORMATION FOR AGES BELOW THE AGE OF FISHERY SELECTIVITY, THAT RESULTS IN 2006 BEING THE LAST YEAR CLASS INFORMED BY DATA IN THE ASSESSMENT.

6.4. Action

- Review the updated Tilefish projections and further consider fishing level recommendations.
- Compare and contrast the risks and uncertainties with establishing an ABC for Tilefish at the yield at 75% F_{MSY} vs. that provided by the P^* analysis.

SSC RECOMMENDATIONS:

- Review the updated Tilefish projections and further consider fishing level recommendations.
 - *P^* projections are very similar to each other and to 75% F_{MSY} . In other words, having the SSC change a previously-provided catch level recommendation that followed the protocol of our ABC Control Rule without resolving the management issue in question seemed to be unwarranted.*
 - *In addition, the SSC felt that no compelling new information was available that justified deviation from the ABC control rule. As a result, the SSC did not see any justification for deviating from the previous fishing level recommendation of projections at $P^*=0.3$ for ABC.*
 - *The SSC strongly supports the Council’s request to undertake as soon as possible a new Standard assessment for Tilefish that incorporates changes in selectivity, differences in modeling techniques, and perceived changes in recruitment since the last update.*
 - *The SSC feels that an ABC Control Rule methodology should be used rather than being presented with a suite of ABC possibilities and being*

asked if any of these are plausible or if any are significantly different from one another.

- *SSC fishing level recommendations should be based on yield projections derived from runs with the P^* determined to be appropriate for the stock, not by making runs for a variety of P^* s and selecting a particular output from these runs.*
- Compare and contrast the risks and uncertainties with establishing an ABC for Tilefish at the yield at 75% F_{MSY} vs. that provided by the P^* analysis.
 - *By definition, projections at $P^*=0.3$ have less risk than those at higher P^* values, including those at 75% F_{MSY} (which falls between $P^*=0.4$ and 0.45). Furthermore, the SSC reminds the Council that the assessment results indicated that the stock was close to being overfished.*

7. RED GROUPER ASSESSMENT REVIEW

7.1. Documents

Attachment 11. SEDAR 53 SAR, Red Grouper
 Attachment 12. Projections from SEDAR 19
 Attachment 13. Assessment Overview Presentation*
 Attachment 14. ABC Control Rule

7.2. Presentation

Assessment Overview: Dr. Kyle Shertzer, SEFSC

7.3. Overview

The Committee is asked to review the Red Grouper Standard assessment prepared through SEDAR 53 and provide fishing level recommendations (Attachment 11).

Red Grouper was assessed in SEDAR 19, and was determined to be overfished and experiencing overfishing. This led to the Council developing a rebuilding plan in Amendment 24. Rebuilding began in 2011 and ends in 2020. The SSC set ABC equal to the yield at the F value which results in a 70% chance of the stock rebuilding to SSB_{MSY} by 2020 ($F_{Rebuild}$). The Council chose the yield at 75% of F_{MSY} for the rebuilding plan since this value was below $F_{Rebuild}$. The yield at F_{MSY} was set as the OFL for the stock. The projections for Red Grouper in SEDAR 19 predicted the stock rebuilding to SSB_{MSY} with a 50% probability by 2016 and an 81% probability by 2020 under the chosen rebuilding strategy (Attachment 12).

7.4. Action

- Review assessment
 - Does the assessment address the ToRs to the SSCs satisfaction?
 - Does the assessment represent Best Scientific Information Available?
 - Does the assessment provide an adequate basis for determining stock status and supporting fishing level recommendations?
- Identify and discuss assessment uncertainties
 - Are key uncertainties identified, and if not, indicate additional uncertainties and comment on their possible impacts on the assessment and fishing level recommendations
 - Are risks and consequences of uncertainties identified and evaluated? Summarize the major uncertainties.
 - Are methods of addressing uncertainty consistent with SSC expectations?
 - List and comment on the effects of those uncertainties that most contribute to risk and impact status determinations and future yield predictions.
 - Is adequate rebuilding progress being made? Comment on reasons why progress differs from projections.
- Provide fishing level recommendations
 - Apply the ABC control rule and complete the fishing level recommendations table.
- Provide advice on monitoring the stock until the next assessment
 - What indicators or metrics should the council monitor and could the SSC evaluate to evaluate the stock until the next assessment?
 - Is there a recommended trigger level for these metrics? How should the Council respond if a trigger is activated?
- Provide research recommendations and guidance on the next assessment
 - Review the included research recommendations, and indicate those most likely to reduce risk and uncertainty in the next assessment.
 - Provide any additional research recommendations the SSC believes will improve future stock assessments.
 - Provide guidance on the next assessment, addressing its timing and type.

SSC RECOMMENDATIONS:

- Review assessment
 - Does the assessment address the ToRs to the SSCs satisfaction?
 - *The ToRs were addressed to the satisfaction of the Committee.*
 - Does the assessment represent Best Scientific Information Available?
 - *This assessment represents BSIA.*

- Does the assessment provide an adequate basis for determining stock status and supporting fishing level recommendations?
 - *Overall, the assessment is robust given the consistency in model outputs (estimates of stock size, fishing mortality, and recruitment) in all of the sensitivity runs.*
 - *This assessment provides an adequate basis for determining stock status and supports fishing level recommendations.*
- Identify and discuss assessment uncertainties
 - Are key uncertainties identified, and if not, indicate additional uncertainties and comment on their possible impacts on the assessment and fishing level recommendations
 - *Public comment suggested that episodic larval transport or movement of older stages from the Gulf into the South Atlantic may have caused the high recruitment levels seen in the SEDAR 53 assessment, such as the recruitment spike in 2003-2004. A 2004 genetic study found that there was no genetic difference between the Gulf of Mexico stock and the South Atlantic stock, suggesting there is enough mixing between the Gulf and South Atlantic to cause genetic homogeneity. In other words, although the information available is incomplete and no formal analysis has been conducted, some lines of evidence seem to point to the fact that the dynamics of Red Grouper in the South Atlantic Region is not completely independent of episodic inputs from the Gulf. Although at this point the SSC considers this just as a working hypothesis, this might explain the fact that Red Grouper SSB has been under SSB_{MSY} and F above F_{MSY} for pretty much the entire time series used in this assessment.*
 - *The causes and periodicity of the episodic high recruitment events are unknown, and a source of uncertainty in this assessment and the projections. Sensitivities were run removing the highest recruitment spikes, showing little effect to stock status and model estimates. Multiple recruitment scenarios were presented, attempting to address this recruitment uncertainty in the projections.*
 - *Uncertainties in parameters such as M and h are well characterized within the MCB analysis.*
 - *Although uncertainty in landings is characterized in the MCB analysis, a CV was used that is smaller than the actual CV of the data. This resulted in an overly narrow range of uncertainty.*
 - *There is uncertainty due to unmeasured effects of lionfish.*
 - *Although the level of exploitation during the earlier part of the time series do not match the trajectory of the SSB, the value of F_{MSY} in this assessment was computed from the terminal years of*

the assessment. This value will be different in different periods of selectivity back in time.

- *The selectivity of the Chevron Trap survey was changed from dome-shaped to flat-topped based on analyses that had not been conducted during the previous assessment. This changed the magnitude of the peaks and valleys in the index.*
- Are risks and consequences of uncertainties identified and evaluated? Summarize the major uncertainties.
- Are methods of addressing uncertainty consistent with SSC expectations?
 - *The SSC agrees that the uncertainties were addressed in a manner consistent with the Committee's expectations.*
- List and comment on the effects of those uncertainties that most contribute to risk and impact status determinations and future yield predictions.
 - *Recruitment levels in the years after the SEDAR 19 stock assessment were lower than predicted by the SEDAR 19 stock-recruitment curve. Alternative recruitment strategies are needed and were provided in the SEDAR 53 assessment.*
 - *Due to the low variability in the rest of the recruitment time series, the effect of the occurrence of the two recruitment spikes is relatively small, as demonstrated in the Spawner-Recruit plots.*
- Is adequate rebuilding progress being made? Comment on reasons why progress differs from projections.
 - *Rebuilding has not progressed as projected in SEDAR 19 due to lower than expected recruitment since the terminal year of SEDAR 19. In retrospect, the projections from SEDAR 19 used an overly optimistic level of recruitment that was not realized.*
 - *The exploitation rate has remained above F_{MSY} since the terminal year of SEDAR 19, adding to the decline in SSB and lack of progress in stock rebuilding.*
 - *Uncertainty in connectivity between Gulf and South Atlantic and episodic recruitment might lead to incorrect conclusions on status. Recruitment from the Gulf, or inestimable episodic recruitment, can cause the model to underestimate or overestimate stock productivity at MSY levels, which can lead to false determinations of overfishing and being overfished or can cause the model to estimate a healthy population when it is overfished.*
- Provide fishing level recommendations
 - Apply the ABC control rule and complete the fishing level recommendations table.
 - *Level I. Assessment Information: 2 (2.5%)*

- *Level II. Uncertainty Characterization: 2 (2.5%)*
- *Level III. Stock Status: 4 (7.5%)*
- *Level IV. PSA: 3 (10%)*
- *Overall correction: 22.5%*
- *$P^* = 27.5\%$*
- *$P_{Rebuild} = 72.5\%$*
- *The projections show rebuilding is not possible within the current rebuilding timeline (ending in 2020), even under an $F=0$ scenario.*
- *Under the low recruitment scenario, the projections show rebuilding is not possible under an $F=0$ scenario out to 2030.*
- *When management starts in 2019, rebuilding with a fishery present is only possible beyond 2030. The stock is predicted to rebuild by 2032 with a 50% probability at $F=75\% F_{MSY}$. Under the SSC's $P_{Rebuild}$, the predicted year of rebuilding is 2037. This is under the assumption that recruitment has returned to the average level by 2019.*
- Provide advice on monitoring the stock until the next assessment
 - What indicators or metrics should the council monitor and could the SSC evaluate to evaluate the stock until the next assessment?
 - *Close monitoring of discards and indices of age-1 fish to give an indication of recruitment.*
 - *Increased landings may indicate a higher abundance of Red Grouper, especially since current landings of both the commercial and recreational sectors are significantly below their ACLs*
 - *Need to combine the monitoring of landings with the fishery distribution. The Fishery Performance Reports may be very helpful here.*
 - *Size and age structure of catch and survey.*
 - *Need to protect SSB until higher recruitment is realized.*
 - Is there a recommended trigger level for these metrics? How should the Council respond if a trigger is activated?
- Provide research recommendations and guidance on the next assessment
 - Review the included research recommendations, and indicate those most likely to reduce risk and uncertainty in the next assessment.
 - Provide any additional research recommendations the SSC believes will improve future stock assessments.
 - *A review of stock structure and early life history is needed to account for recruitment and connectivity between the Gulf of Mexico stock and the South Atlantic stock.*

- *Compare age structure of Red Grouper between northern areas and southern areas in the South Atlantic.*
- *Explore the episodic recruitment events for Red Grouper and investigate if these events co-occur for other species in the South Atlantic. In particular, the 2003-2004 recruitment events that followed Hurricane Charlie may indicate immigration of several species from the Gulf of Mexico after such events.*
- *Examine annual changes in sex ratio and size/age at maturity and transition.*
- *Investigate other methods to estimate M.*
- Provide guidance on the next assessment, addressing its timing and type.
 - *Due to the status of the stock and recent low recruitment, an Update or Standard assessment (based on the availability of new information) should be performed within the next 3-5 years.*
 - *This recommendation is contingent on successful completion of some of the research recommendations to advance the knowledge of this species.*

Table 3. Red Grouper Recommendations

Criteria	Deterministic	Probabilistic
Rebuilding evaluation (SSB/SSB _{MSY})	0.29	0.27
Overfished evaluation (SSB/MSST)	0.38	0.37
Overfishing evaluation	1.54	1.58
MFMT (F _{MSY})	0.12	0.13
SSB _{MSY} (mt, total mature biomass)	3,183.4	3,145.4
MSST (mt, 75% SSB _{MSY})	2,387.6	2,359
MSY (1000 lbs.)	794.3	806.7
Y at 75% F _{MSY} (1000 lbs.)	772.0	779.7
ABC Control Rule Adjustment	22.5%	
P-Star	27.5%	
P-Rebuild	72.5%	
M (Average across ages)	0.14	

- *The above table reflects the output from the SEDAR 53 assessment model. For stock status and management reference points, the Deterministic estimates should be used. Projection streams for OFL and ABC were not provided here for several reasons.*

- i. *There are two recruitment scenarios presented and two different years for when management could take effect for this stock.*
- ii. *Red Grouper is in a rebuilding plan and per all the projection runs, none of them will rebuild the stock within the current rebuilding timeframe. Therefore, the Council will need to implement a new rebuilding plan for Red Grouper for new projections to be run.*
- iii. *The SSC can recommend a probability of rebuilding success, but it is the Council that ultimately decides on what that probability of success will be.*

8. MODIFICATIONS TO THE ABC CONTROL RULE

8.1. Documents

Attachment 15. ABC Control Rule Decision Document
Attachment 16. RG Fishery Performance Report Outline
Attachment 17. Cobia Fishery Performance Report Outline
Attachment 18. Dolphin Fishery Performance Report Outline

8.2. Presentation

Overview and Update: John Carmichael, SAFMC Staff

8.3. Overview

In October 2014, the SSC convened a workshop to evaluate the effectiveness of the current CR and consider any modifications. A review of the workshop findings in April 2015 determined no changes to the CR were warranted at that time due to the lack of information to evaluate the effectiveness of the CR. However, the SSC suggested some future modifications to add flexibility to the CR and formed the ABC CR Workgroup to begin working on this topic. The Workgroup reported its findings to the SSC in May 2016. Although there still existed a lack of progress on information to evaluate the current CR, they did suggest that stock status be removed from the current CR because it is NMFS that makes that determination, which often happened after the SSC calculates the P* value.

In June 2016, the Council also recommended removing stock status from the CR for two reasons. The first mirrors the reasoning given by the Workgroup. The second is because status is an outcome of the assessment and not a characteristic of it that affects uncertainty. Status is more appropriately used when the Council is determining its risk tolerance.

In October 2016, the SSC reviewed proposed revisions to the CR and made the following recommendations:

- Stock status is determined by NMFS, and is a factor that the SSC considers appropriate for the Council to consider when determining the

- acceptable risk of overfishing. As such, the SSC recommends removing stock status from the ABC control rule.
- The Productivity and Susceptibility Assessment (PSA) information is also a factor that the SSC recommends the Council should consider when determining the acceptable risk of overfishing. The SSC recommends removing the PSA consideration from the ABC control rule. However, the SSC recommends that the current PSA information should be updated and reviewed by the SSC if the Council wishes to use it to establish risk levels.
 - Modifications to the ABC control rule as a result of the above recommendations will require changes to the overall scoring system. The SSC requests that staff work with the SSC leadership to develop some possible options for modifying scores to maintain the range of adjustments.
 - The SSC recommends that P* values based on the existing ABC control rule be compared to recommendations based on the modified ABC control rule.

For this meeting, Council staff revised the ABC Control Rule decision document (Attachment 15) to address the recommendations of the SSC and Council, and incorporate changes allowed under the recent National Standard 1 revisions. The SSC is asked to review the document and consider the ABC control rule changes and revisions it proposes.

8.4. Action

- Review the Decision Document
- Comment on Action 1: Simplifying the CR to 3 Categories
- Comment on Action 2: Details and Criteria for Category 1
- Comment on Action 3: Criteria considerations for Category 2
- Comment on Action 4: Approaches for the Council's consideration of evaluation of risk
- Comment on Action 5: Allowing multi-year specification of a fixed ABC
- Comment on Action 6: Allowing phase-in of catch changes based on revised ABC recommendations
- Comment on Action 7: Clarify ABC control rule application to rebuilding stocks
- Comment on Action 8: Allowing carry over of unused or unharvested ABC
- Comment on Action 9: Clarify that the SSC may deviate from the ABC control rule

- Review the draft Fishery Performance Reports and comment on their utility.
 - Are the discussion questions appropriate to elicit the information required by the SSC?
 - Is there any other information that should be included in these reports?

SSC RECOMMENDATIONS:

- Review the Decision Document
 - *The SSC agrees that the ABC Control Rule adjustments being proposed should be implemented within a comprehensive amendment addressing all FMPs.*
 - *The SSC recommends adding a section to the ABC Control Rule that lays out the conditions under which an ABC recommendation can be remanded back to the SSC by the Council. Suggest using the MAFMC's ABC remand conditions as a starting point.*
- Comment on Action 1: Simplifying the CR to 3 Categories
 - *The SSC supports the overall format proposed in Action 1.*
 - *The SSC recommends placing all quantitatively assessed stocks, such as those assessed via catch at age or catch at length models, in Category 1.*
 - *The SSC recommends placing all qualitatively assessed stocks, such as those where the DLM Toolkit could be used, in Category 2.*
 - *The SSC recommends placing stocks for which only catch or landings data are available, such as those where ORCS and the Decision Tree are used, into Category 3.*
 - *Based on results of data review and recommendations made during the stock assessment Data Workshop (DW) stocks can be placed into a certain category, and the quality of the data going into an assessment can influence in which category a stock is placed. Therefore, DW participants can give a recommendation to the SSC about where they think a particular stock might fall within the categories.*
 - *Perhaps can have 3 Control Rule categories based on the approaches used to determine the ABC (Cat 1: assessment is capable of estimating MSY or its proxy as well as a probability density function (PDF) of OFL that allows application of the P* method; Cat 2: assessment is quantitative but not capable of estimating MSY or its proxy. A PDF on OFL cannot be produced but assessment is not based only on Catch/Landings data; Cat 3: assessment is based on Catch/Landings data only. No estimate of MSY or its proxy, nor can a PDF of OFL be produced).*

- Comment on Action 2: Details and Criteria for Category 1
 - *Analysis is able to produce a PDF of OFL.*
 - *The SSC would like to consider an approach in which the CR is set up to modify the CV on the PDF of the OFL. The Committee would like to see some examples on how this approach might work.*
- Comment on Action 3: Criteria considerations for Category 2
 - *The SSC addresses the scientific uncertainty penalty and the Council addresses the risk uncertainty penalty.*
- Comment on Action 4: Approaches for the Council's consideration of evaluation of risk
 - *The SSC agrees that the Council should specify the range of risk of overfishing (P^*) that the control rule should center on.*
 - *The SSC would like to consider an approach like Alt 3, which incorporates the biology of a particular species when determining the risk tolerance of overfishing. Consider scaling the maximum P^* value in relation to the current stock biomass level relative to B_{MSY} .*
 - *Need to consider that once biomass drops below MSST, the P^* approach is no longer relevant.*
 - *If a PSA score is used, an evaluation needs to be done to compare the MRAG approach vs. the NMFS approach, and any other modifications that the Committee may wish to consider.*
 - *The SSC recommends having the Committee review the PSA (or equivalent) when it reviews the ToRs for an assessment.*
- Comment on Action 5: Allowing multi-year specification of a fixed ABC
 - *A simple average of annual ABC values does not result in a probability of fishing equal to the P^* value specified.*
 - *Projections can be done under a constant catch assumption for a given P^* value over a specified number of years.*
 - *The SSC recommends performing a retrospective analysis of assessment projections to evaluate how well the projection assumptions were actually realized.*
 - *There are advantages to providing multi-year ABC projections, such as reduced management uncertainty in controlling catch and keeping the cumulative landings under the cumulative ABC for sectors such as the recreational sector.*
 - *The trajectory and rate of change of the abundance of a stock may affect the length of time a multi-year ABC would be appropriate.*
 - *Typical rule of thumb for projection length is 3-5 years.*

- *Even if multi-year specifications are used, monitoring (landings, size compositions, sex ratios, etc.) should be conducted annually to evaluate the effectiveness of the ABC recommendation.*
- Comment on Action 6: Allowing phase-in of catch changes based on revised ABC recommendations
 - *Both biological and socio-economic impacts need to be considered when looking at a phase-in approach.*
 - *Setting specific percentages for implementing a phase-in based on socio-economic factors may be difficult given that a large percent cut in one fishery may have a much lower socio-economic impact than a small percent cut in another fishery.*
 - *An approach to a phase-in would have to be spelled out ahead of time to develop projections that incorporate the phase-in aspects.*
 - *Must be careful to stick to the reduction schedule specified in the phase-in approach.*
 - *Stock must be above the MSST for a phase-in approach to be used.*
- Comment on Action 7: Clarify ABC control rule application to rebuilding stocks
 - *The SSC agrees with the clarifying language proposed under this Action.*
- Comment on Action 8: Allowing carry-over of unused or unharvested ABC
 - *Those stocks with a lower M are more appropriate for a carry-over than those with a high M.*
 - *Carry-over should not be considered within a rebuilding plan.*
 - *Carry-over is appropriate in fisheries that are coming close to their ACLs and should not be used for fisheries that are consistently well below their ACLs.*
- Comment on Action 9: Clarify that the SSC may deviate from the ABC control rule
 - *Recommend placing language in the CR clarifying that the SSC can deviate from the current Control Rule, providing a strong justification for its reason for deviating, referencing the guidance from NSI.*

- Review the draft Fishery Performance Reports (FPRs) and comment on their utility.
 - *Very important for interpreting trends in landings data and results in assessments.*
 - *The Mid-Atlantic uses FPRs to help in setting ABCs.*
 - Are the discussion questions appropriate to elicit the information required by the SSC?
 - *These reports are done in a way that helps separate the opinion of an individual with observations of the AP as a whole, which is very helpful for the SSC.*
 - *These reports serve to document current conditions, which will become historic, helping with the issue of shifting baselines.*
 - Is there any other information that should be included in these reports?
 - *The SEP report has additional information regarding this item.*

9. SNAPPER GROUPE AMENDMENT 43

9.1. Documents

Attachment 19. SEDAR 41 RS Base Run Correction Erratum

Attachment 20. SEDAR 41 RS Base Run Correction Presentation*

Attachment 21. Red Snapper Guidance Request

Attachment 22. Amendment 43 Options Paper

Attachment 23. Index Based ABC Options Paper

9.2. Presentation

RS Assessment Correction Presentation: Dr. Erik Williams, SEFSC

Red Snapper Amendment Overview: Dr. Chip Collier, SAFMC Staff

Index Based ABC: Dr. Chip Collier, SAFMC Staff

9.3. Overview

During the March 2017 Council meeting, Dr. Bonnie Ponwith (SEFSC) addressed the Council's request for Red Snapper ABC projections under a discards-only scenario. Dr. Ponwith explained that the SEFSC was not able to provide those projections due to the length of time since the completion of the assessment, uncertainty in the landings since most landings are coming from discards, and the change in MRIP methodology for estimating landings and discards. Attachment 19 contains the SEFSC's reply to the Council's request. At the same meeting, Dr. Roy Crabtree went on record stating that the Council has likely taken sufficient actions to address overfishing of Red Snapper in the South Atlantic and should focus on developing a methodology to obtain an ABC for Red Snapper (Attachment 19). Council staff was directed to continue work on Amendment 43 but focus on best fishing practices items pending resolution on obtaining an ABC for Red Snapper. Therefore, Actions 1-5 and 11 have been temporarily removed from this

amendment until a new ABC can be developed. The remaining items in Amendment 43 include options for Red Snapper bag, trip, and size limit and seasons for recreational and commercial sectors as well as potential area and season combination. Actions 9 and 10 are actions that could establish a permit and reporting requirements for private recreational fishermen. Action 12 includes alternatives for best fishing practices. Included in this will be a new estimation for discard mortality for Red Snapper using the same approach developed in SEDAR 41 and consideration for decreasing discard mortality due to the use of descending devices and venting.

Due to the issues laid out by the SEFSC, the Council requested that the SEFSC and the SSC collaborate to explore approaches to arrive at an ABC for Red Snapper. The Council also made the following requests of the SEFSC:

1. The SEFSC concurs with our determination that alternative methods are necessary to specify ABC and MSY for red snapper and that SEDAR 41 (original and revised) cannot be used to specify ABC or MSY for 2017 and beyond for the reasons outlined in your memo to Michelle Duval dated February 15, 2017. This is necessary to inform the SSC on the status of its existing ABC recommendation and to determine which sources of information used in the SEDAR 41 assessment can be considered for future ABC recommendations.
2. The SEFSC provide an evaluation of data limited techniques that can be considered by the SSC to develop an index-based ABC.
3. The SEFSC provide additional details on the proposed evaluation of the effect of MRIP changes on the Red Snapper assessment, particularly the types of evaluations to be considered and when they will be available for SSC review.

Given that the SEFSC will be providing the SSC a revised SEDAR 41 Red Snapper assessment to correct errors with some of the headboat data, it is critical that a response to these issues also be provided to the SSC. This will help inform the SSC on how to review the revised assessment.

9.4. Action

- Actions 9 and 10 are designed to improve landings and discard estimates from private recreational fishermen. Review and provide comments on potential issues with permits and reporting requirements.
- Action 12 will include a new estimation of Red Snapper Discard Mortality caught from headboats and charter boats. Additionally, descending devices and venting are alternatives to reduce discard mortality. Review and provide comments on estimation methods.
- Review and provide comments on approaches for obtaining a Red Snapper ABC.

SSC RECOMMENDATIONS:

- *The SSC received a brief presentation with the corrected Red Snapper assessment. The correction was noted in the document history section of the report on pdf page 2. Specifically, the data for the headboat discard index were corrected. Dr. Williams indicated that the differences between the original and corrected assessment were minimal. Upon a question from the SSC, Dr. Williams indicated that the new likelihood estimator was not investigated in the corrected assessment. However, the SSC noted that the corrected MSY is 7% lower than in the original assessment, and a side by side comparison was not included in the report. The results of the corrected assessment were not further discussed as the SSC was unable to provide an ABC recommendation (see below) at this point.*
- *Clarification was provided by NMFS to the SSC that the assessment is still considered BSIA. However, the data available to monitor the landings and discards are too uncertain to track any projected ABC. Therefore, an index-based approach is being proposed to track and monitor the condition of Red Snapper.*
- *The current projected yield streams are still considered BSIA, but are not useful for management and monitoring because of the uncertainty in the catch data (as most of the catch is discarded).*
- **Actions 9 and 10 are designed to improve landings and discard estimates from private recreational fishermen. Review and provide comments on potential issues with permits and reporting requirements.**
 - *Success of both actions depends on compliance and enforcement.*
 - *Timing of reporting is critical. The shorter the reporting time, the more accurate the reports will likely be. Electronic reporting is recommended.*
 - *See SEP report for additional comments.*
 - *Initial results concerning private recreational electronic reporting are very encouraging and several pilot studies will soon be completed.*
 - *Methods need to be developed to verify trip reports, both for landed catch and discards.*
 - *Consideration needs to be given to target species when choosing a subsample of people to report. E.g. a “deep dropping” trip will affect precision of estimates for rarely encountered deep water species.*
 - *Florida currently runs a vessel-based survey specialized for offshore trips.*
 - *There may be a difference in the willingness to report between an individual and a vessel owner who needs to report for a group.*
- **Action 12 will include a new estimation of Red Snapper Discard Mortality caught from headboats and charter boats. Additionally, descending**

devices and venting are alternatives to reduce discard mortality. Review and provide comments on estimation methods.

- *There is a difference between verifying compliance of hook use vs. descending device use. Due to the added difficulty, time, and effort required to use a descending device, compliance may be lower than that for circle hooks. Incentives (e.g. allowing more catch to be retained) could increase compliance.*
- *The SSC strongly supports use of descending devices to reduce discard mortality. Instruction and outreach on the use of descending devices would be a useful Citizen Science project.*
- *The concern with the proposed methodology for estimating discard mortality (restricting analysis to red snapper tag recapture data from south Atlantic) is the reduced sample size, which quickly reduces precision in a proportional hazards model.*
- *As a check on the above, the analysts could try to run the model with the Gulf of Mexico data, but statistically correct for any spatial differences and then compare results between the combined South Atlantic/Gulf of Mexico model and the South Atlantic only model.*
- *If there is concern over the precision of the discard estimates for Red Snapper, concerns will also be raised on the estimated reductions in fish killed due to discard mortality.*
- Review and provide comments on approaches for obtaining a Red Snapper ABC.
 - *The SSC acknowledged that at this point it is unable to provide an ABC recommendation for Red Snapper.*
 - *One possibility is to look at the relationship between the independent index and the SSB projection in the near term and predict where it should be when the population is rebuilt. This type of approach will require external peer review given how novel it is.*
 - *Video data could be provided on a one-year delay.*
 - *If a short season is allowed, a permit requirement should be enacted to place some of the data collection burden on anglers; however, there are unknown scientific and statistical issues in developing a permit system for private recreational vessels and fishermen.*
 - *The Committee supports attempts to apply the DLMTool Kit, as well as newer data limited methods recently developed by SEFSC, to Red Snapper to provide more information for review by the SSC. Perhaps a workshop on the DLMTool Kit can be considered.*
 - *These new techniques that use the fishery independent index data projected out from the terminal year or scaled to SSB will require cooperation among the SSC, Council, and Science Center to develop.*

The length of time for use of these techniques will dictate the rigor of analyses and review that can be applied.

- *Although estimates of discards may be highly uncertain, a continuing upward trend in the fishery independent index has a high probability of reflecting increases in population size.*
- *Using a short season to obtain a representative age sample will require a scientific design that takes samples from pre-determined areas using a pre-determined methodology.*
- *The SSC recommends prioritizing research into developing a method to determine size of fish (i.e., fish length composition) from the video survey.*

10. UNCERTAINTY AND OUTLIERS IN MRIP ESTIMATES

10.1. Documents

Attachment 24. Letter from SAFMC to NOAA

10.2. Overview

The uncertainty in the Recreational estimates of landings and discards is not a new issue. The Council has been faced with this problem since ABCs and ACLs were first implemented. However, recent trends in landings outliers and fisheries closures have brought this issue to the forefront of the Council's agenda. Examples of recent events include the closure of the Hogfish fishery in 2015 when an estimate of landings of 228,494 lbs. (3.8 times the entire annual ACL) was derived for Wave 2. Given that from 1986 to 2014, the annual landings of Hogfish exceeded 100,000 lbs. 4 times, the 2015 Wave 2 estimate seems like an outlier.

The uncertainty in the MRIP estimates is one of the reasons cited for why the value of F/F_{MSY} could not be accurately determined in SEDAR 41 for Red Snapper and also why the projections of a discard only fishery were not considered BSIA by the Science Center. At the October 2016 meeting, the SSC was asked by the Council to evaluate the MRIP estimates for Red Snapper and determine if they are reliable and adequate for management.

In the Snapper Grouper fishery, 45% of the stocks have an annual PSE value for landings above 50% and 64% of the stocks have an annual PSE value for landings above 40% (on average from 2014-2016). At the Wave level, which is how we monitor a stock when we close it in-season, there are almost no Snapper Grouper stocks with average PSE values below 50% in any given Wave.

One of the reasons why PSEs for federally managed species tend to be so high is because trips in federal waters only make up about 8% of the total effort surveyed by MRIP. The

Council now recognizes that no generalized survey, such as MRIP, is capable of providing accurate and robust estimates of these “rare event” species in a cost effective manner.

At the October 2015 meeting, MRIP staff provided a presentation that outlined several alternative approaches for estimating catch and effort for rare recreational species for use in comparing to ACLs to determine when closures should take place. The SSC considered the alternatives reasonable and appropriate and able to provide estimates with increased precision. There was also discussion regarding efforts to develop precision standards within the MRIP program. In order to get this effort started, the Council has written a letter to NMFS requesting that MRIP staff participate in a joint meeting of the South Atlantic and Gulf of Mexico Council’s Scientific and Statistical Committees, devoted to this topic, that the South Atlantic Council has requested be held later this year (Attachment 21). The Council also emphasized that it would be critical for MRIP/Center to provide outputs of various methods for review prior to the Joint SSC meeting. Having MRIP/Center representatives at the Joint SSC meeting to present these outputs would greatly improve the efficiency of developing alternative methods for recreational ACL tracking.

At this meeting, the SSC is asked to consider the Council’s request to hold a joint Gulf-South Atlantic SSC meeting to address MRIP issues and propose regional solutions.

10.3. Action

- Provide comments on the proposed joint meeting with the GMFMC SSC to address MRIP issues and the stock ID process.
 - Does the SSC support this approach?
 - Could the meeting be held in conjunction with the Fall SSC meeting (e.g., 2.5 days of SSC meeting and 2.5 days of joint meeting) at a central location such as Atlanta?
 - What information would be useful in the briefing documents?
 - Are there any suggested participants, in addition to MRIP and SEFSC representatives?

SSC RECOMMENDATIONS:

- Provide comments on the proposed joint meeting with the GMFMC SSC to address MRIP issues and the stock ID process.
 - Does the SSC support this approach?
 - *The Committee is supportive of the proposed joint meeting with the GMFMC SSC.*

- Could the meeting be held in conjunction with the Fall SSC meeting (e.g., 2.5 days of SSC meeting and 2.5 days of joint meeting) at a central location such as Atlanta?
- What information would be useful in the briefing documents?
- Are there any suggested participants, in addition to MRIP and SEFSC representatives?
 - *The Mid-Atlantic has expressed interest in being a participant in a joint meeting*

11. RESEARCH AND MONITORING PLAN REVIEW

11.1. Documents

Attachment 25. Draft 2017 Research and Monitoring Plan
Attachment 26. SA Research Plan Source document

11.2. Overview

The Committee is provided an opportunity to review the research and monitoring plan, as well as the source document. The Council will consider the research plan at its June 2017 meeting.

11.3. Action

- Review and provide comments and recommendations on the plan and source document.

SSC RECOMMENDATIONS:

- Review and provide comments and recommendations on the plan and source document.
 - *Under monitoring indicate whether these activities refer to fishery independent or fishery dependent initiatives.*
 - *Further prioritization within each research category would be beneficial.*
 - *Add to Long Term Needs: Development and implementation of enhancements to the MRIP survey to increase sampling and decrease uncertainty of estimates for federally managed offshore species. This should have a very high priority.*
 - *The Committee recommends evaluating how well the projections from assessments align with the realized landings, recruitment, and biomass levels, and considers this a high priority.*

12. STOCK ASSESSMENT IMPROVEMENT PLAN REVIEW

12.1. Documents

Attachment 27. Draft Stock Assessment Improvement Plan

12.2. Overview

The Committee is provided an opportunity to review the NMFS draft Stock Assessment Improvement Plan. NMFS presented their latest Stock Assessment Improvement Plan at the February 2017 Council Coordination Committee and Councils have been allowed until June 15 to provide comments.

12.3. Action

- Review and provide comments and recommendations on the plan.

SSC RECOMMENDATIONS:

- Review and provide comments and recommendations on the plan.
 - *The plan has no mention of the Research Track or Data Limited methods.*
 - *The plan should be written in a way to show priorities and strategies to accomplish these goals. The plan can be written to better solicit funding from Congress (e.g., where immediate funding would lead to the highest benefit).*

13. SOUTHEAST REEFFISH SURVEY UPDATE

13.1. Documents

Attachment 28. SERFS Report Presentation*

13.2. Presentation

SERFS Sampling Update: Joey Ballenger, SC DNR

13.3. Overview

The Committee will receive an update on SERFS sampling efforts and results through 2016.

13.1. Action

- No specific actions required.

14. UPDATE ON NATIONAL SSC EFFORTS

14.1. Documents

None.

14.2. Overview

The Committee will be updated on the progress of the Scientific Coordination Subcommittee (SCS), who are responsible for planning the upcoming National SSC Workshop VI.

14.3. Action

- No specific actions required.

15. METHODS FOR REVIEWING A NEW BAG AND SIZE LIMIT ANALYSIS

15.1. Documents

Attachment 29. Scope of Work document

15.2. Overview

The new bag and size limit analysis was presented to the Committee at their May 2016 meeting. Several recommendations were made and work has continued and is ongoing on this analysis. Since this is a very complex analysis and is to be used in amendments and to make management decisions, it is being suggested as a candidate for the Committee's Complex Analysis Review process.

15.3. Action

- Determine whether this analysis would be a good candidate for the Complex Analysis Review process.
- Assign a workgroup to work with the analyst before bringing this analysis back to the full SSC for review, if applicable.

SSC RECOMMENDATIONS:

- Determine whether this analysis would be a good candidate for the Complex Analysis Review process.
 - *The SSC agrees that this analysis is a good candidate for the Complex Analysis Review process.*

- Assign a workgroup to work with the analyst before bringing this analysis back to the full SSC for review, if applicable.
 - *Eric Johnson, Carolyn Belcher, Robert Ahrens, Laura Lee*

16. GUIDANCE ON NATURAL MORTALITY ESTIMATION

16.1. Documents

None.

16.2. Overview

At the April 2016 meeting, the Committee reviewed SEDAR 41 for Red Snapper and Gray Triggerfish. Each of these assessments had large uncertainties related to Natural Mortality (M). Then et al. (2014) had recently published a paper updating the Hoenig estimator of M using maximum age, which unexpectedly shifted the estimates of M for certain species. The Committee had asked to have Drs. Then or Hoenig come and discuss the methodology of this new analysis; however, staff was unclear as to the intent of the Committee.

16.3. Action

- Provide guidance on the future review of natural mortality estimation.
- Indicate information the SSC would like to receive in presentation by Dr. Then or Dr. Hoenig.
- Clarify any SSC concerns with current methods of estimating natural mortality, and what type of response the SSC may consider taking to address those concerns
- Clarify the possible role of the SAFMC SSC, versus other regional resources, such as SEDAR and the SEFSC in addressing natural mortality estimation in stock assessments.

SSC RECOMMENDATIONS:

- Provide guidance on the future review of natural mortality estimation.
- Indicate information the SSC would like to receive in presentation by Dr. Then or Dr. Hoenig.
- Clarify any SSC concerns with current methods of estimating natural mortality, and what type of response the SSC may consider taking to address those concerns
 - *There were concerns with some of the data used in the new estimates of M.*
 - *Concerns were expressed that the process was too prescriptive concerning which estimator of M should be used.*
 - *There are many estimators for M, but there is no ideal way to determine which is the most appropriate in any given situation.*
- Clarify the possible role of the SAFMC SSC, versus other regional resources, such as SEDAR and the SEFSC in addressing natural mortality estimation in stock assessments.
 - *The SSC recommends that this topic be addressed through the SEDAR process, perhaps via a SEDAR workshop or a NMFS national stock assessment workshop. The SEDAR Best Practices group may be able to provide guidance on this.*
 - *Handling this under SEDAR would bring consistency across the regions.*

17. SOCIO-ECONOMIC PANEL REPORT**17.1. Documents**

Attachment 30. SEP Agenda

17.2. Overview

The SEP met prior to this SSC meeting on April 24-25, 2017. A general report was given on the meeting, while specific recommendations were discussed under the appropriate SSC agenda item. Any additional items from the SEP report not previously covered under other agenda items were discussed here.

- *SEP recommendations were discussed under the various agenda items and there was no additional discussion. Please see the attached SEP report for more information.*

18. UPDATE ON CITIZEN SCIENCE EFFORTS

18.1. Documents

Attachment 31. Citizen Science Blueprint

18.2. Overview

The Committee will be updated on the progress of the Scientific Coordination Subcommittee (SCS), who are responsible for planning the upcoming National SSC Workshop VI.

18.3. Action

- No specific actions required.

19. COUNCIL WORKPLAN UPDATE

19.1. Documents

Attachment 32. SAFMC Work Plan, April 2017

Attachment 33. SAFMC Amendments Overview, April 2017

19.2. Overview

These documents are provided at each meeting to keep the Committee informed of Council activities. Regular detailed reviews of each amendment are no longer requested of the SSC as amendments are developed; instead the Committee is asked to comment on specific technical items that may arise. However, members are welcome to review any ongoing amendments and to provide comments and suggestions directly to staff. Current versions of each amendment are included in the Council Briefing Books distributed to SSC members. Questions or comments about specific items should be addressed to the staff assigned to each FMP, as summarized below.

- Coastal Migratory Pelagic – Kari MacLauchlin
- Corals – Chip Collier
- Fishery Ecosystem Plan – Roger Pugliese
- Snapper Grouper – Myra Brouwer
- Snapper Grouper Amendment 36 (Spawning SMZs) – Gregg Waugh
- Snapper Grouper Amendment 43 (Red Snapper) – Chip Collier
- Snapper Grouper Commercial and Recreational Visioning Amendments – Myra Brouwer
- Spiny Lobster – Kari MacLauchlin
- Golden Crab – Brian Chevront
- Dolphin-Wahoo – John Hadley

- South Atlantic For-Hire Reporting Amendment – John Carmichael

19.3. Action

- No specific actions required

20. PUBLIC COMMENT

The public was provided an additional opportunity to comment on SSC recommendations and agenda items.

21. REPORT AND RECOMMENDATIONS REVIEW

The Committee is provided an opportunity to review its report and final recommendations.

The Final SSC report will be provided to the Council by 9 am on Tuesday, May 23, 2017 for inclusion in the first briefing book for the June Council meeting.

22. NEXT MEETINGS

22.1. SAFMC SSC MEETINGS

2017 Meeting Dates

October 24 – 26, 2017 in Charleston, SC

22.2. SAFMC Meetings

2017 Council Meetings

June 12 - 16, 2017 in Ponte Vedra Beach, FL

September 11-15, 2017 in Charleston, SC

December 4-8, 2017 in Atlantic Beach, NC

ADJOURN

Addenda

Appendix I.

Report of the Socio-Economic Panel Meeting

April 24 - 25, 2017

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SOCIO-ECONOMIC PANEL OF THE SCIENTIFIC AND STATISTICAL COMMITTEE



SEP Meeting Overview

April 24-25, 2017

**Town and Country Inn
2008 Savannah Highway
Charleston, SC**

PURPOSE

This meeting is convened to discuss and provide input to the SSC and Council on:

- Recent and developing Council actions
- Social and economic sections in the updated Fishery Ecosystem Plan
- Potential red snapper management and analysis of fishing behavior
- ABC Control Rule -- economic and social indicators of stock status
- The outline of the Snapper Grouper socio-economic profile

CONTENTS

1.	Introduction.....	Error! Bookmark not defined.
2.	Update on the Citizen Science Program.....	Error! Bookmark not defined.
3.	Recent and Developing Council Actions	Error! Bookmark not defined.
4.	Social and economic information for the updated Fishery Ecosystem Plan	Error! Bookmark not defined.
5.	Red snapper management and analysis of fishing behavior ...	Error! Bookmark not defined.
6.	ABC Control Rule - economic and social indicators of stock status	Error! Bookmark not defined.
7.	Socio-economic profile of the Snapper Grouper fishery.....	Error! Bookmark not defined.
8.	Other Business	Error! Bookmark not defined.
9.	Report and Recommendations Review	Error! Bookmark not defined.
10.	Next SEP Meeting.....	Error! Bookmark not defined.

DOCUMENTS

Attachment 1: SAFMC Citizen Science Program Blueprint Proposal

Attachment 2a. Recent and Developing SAFMC Amendments

Attachment 2b. Core Variables for the SAFMC logbook

Attachment 3. Summary of Social and Economic Components of FMPs.

Attachment 4a. Graphic of potential red snapper adaptive management plan

Attachment 4b. Snapper Grouper Amendment 43 Options Paper

Attachment 5a: ABC Control Rule SSC Decision Document (Oct 2016)

Attachment 5b: 2017 Mid-Atlantic Golden Tilefish Fishery Performance Report

Attachment 5c: 2016 Mid-Atlantic Bluefish Fishery Performance Report

Attachment 6. Outline for SG Socio-Economic Profile**1. Introduction****1.1 Documents**

Agenda

Minutes, May 2016

1.2 ACTIONS

- Approve Agenda
- Approve May 2016 Minutes
- Introductions

2. Update on the Citizen Science Program**2.1 Documents****Attachment 1.** SAFMC Citizen Science Program Blueprint Proposal

This is the guiding document generated by the SAFMC Citizen Science Planning Workgroup, which includes details on the program identity, goals and objectives, partnerships, and administration. More details about the Citizen Science Program are available here: <http://safmc.net/citizen-science-initiative/>.

2.2 Overview

For many years, the Council has grappled with the challenge of ensuring adequate and timely science to support management despite limited resources, a multitude of species to manage, and a complex and highly diverse ecosystem. Discussions of data shortcomings and the resulting scientific uncertainties often lead to offers from fishermen to provide their vessels as research platforms, collect samples and record their own observations to help increase scientific knowledge and 'fill the gaps'. The Council recognizes the desire of constituents to get involved and the need to have a well-designed program and accompanying sampling protocols to ensure that information collected through such efforts is useful. To meet this growing need, the Council developing a comprehensive Fishery Citizen Science Program. Amber Von Harten, SAFMC staff, will brief the SEP on the SAFMC Citizen Science Program and make the panel aware that the program is currently seeking applicants for the advisory panel.

2.3 Discussion

Amber Von Harten, SAFMC staff

2.4 ACTIONS

No specific action is being requested of the SEP, but interested SEP members are encouraged to apply for the SAFMC Citizen Science Advisory Panel.

The SEP noted that the potential synergy between citizen science efforts and efforts to change incentives for behavior and data collection. The SEP asked for clarification on the process,

specifically that membership on advisory panels will not create a conflict of interest that would preclude funding for research projects and whether the advisory panels will include socioeconomic issues, including fishing community issues.

3. Recent and Developing Council Actions

3.1 Document

Attachment 2a. Recent and Developing SAFMC Amendments

Attachment 2b. Core Variables for the SAFMC logbook

This document includes the variables that will have been included in the version of the for-hire electronic logbook that is currently being used in the SAFMC-ACCSP electronic reporting pilot study.

3.2 Overview

Council staff will provide a briefing on recent and upcoming amendments and actions (**Attachment 2a**). The briefing will go into specific details on the recently approved For-Hire Electronic Reporting Amendment and the Snapper Grouper visioning amendments (Vision Blueprint Regulatory Amendment 26 and 27).

South Atlantic For-Hire Electronic Reporting Amendment

During the March 2015 meeting, the South Atlantic Council approved actions and alternatives to require weekly electronic reporting by charter vessels, patterned after headboat electronic reporting requirements. The South Atlantic and Gulf of Mexico Councils reviewed the amendment at the Joint Council meeting in Key West in June 2015. In September 2015, the South Atlantic Council directed staff and the IPT to revise the amendment to apply to charter vessels in South Atlantic fisheries only. In December 2015, the Council approved the amendment for public hearings, which were held in January/February 2016. At the March 2016 meeting, the Council revised the expected timeline for the amendment, to allow time to develop core data elements. The Council reviewed the revised amendment in June 2016, developed a list of core variables and scheduled final approval for December 2016 to allow consideration of preliminary feedback from the SAFMC-ACCSP electronic reporting pilot study. In December 2016, the Council approved the amendment for formal review. The Gulf Council approved the CMP portion of the amendment at their January/February 2017 meeting. The amendment was transmitted for formal review on March 4, 2017.

Council staff is working with partners at ACCSP and the states to pilot a mobile application for electronic reporting of charter trips. The application was designed with Harbor Lights Software, Inc., during spring 2016. Volunteer participants were identified and equipment purchased during Summer and Fall 2016 and data collection began in Winter 2016. As part of this data collection effort, a limited number of economic related questions are being included in the core variables (fuel usage, price per gallon, and charter fee) in an effort to help better estimate net operating revenue on charter trips, especially as they may pertain to certain species or groups of species managed by the SAFMC (**Attachment 2b**). Mike Errigo, SAFMC staff, will provide an update on the project.

Limited Entry For-Hire Permits for Snapper Grouper

At several recent meetings, the Council has discussed establishing a limited entry permit for the for-hire sector of the Snapper Grouper fishery. Currently, the for-hire permit is open access, with approximately 1,400 to 1,600 active permits. To inform the Council's discussion of this topic, staff prepared a [white paper](#) for the March 2017 Council meeting. However, the Council did not have sufficient time to discuss how or whether to move forward with possibly implementing limited entry for the for-hire component of the snapper grouper fishery, and will continue the discussion at the next meeting in June 2017.

Snapper Grouper Vision Blueprint Regulatory Amendment 26 – Recreational Management Measures

In June 2016, the Council directed staff to begin development of an amendment to address items identified in the Vision Blueprint addressing recreational management measures. In September 2016, the Council reviewed an options paper and directed staff to prepare a scoping document for review at the December 2016 meeting. Scoping hearings (conducted via webinar and in-person) were held from January 14 to February 8, 2017. At the March Council meeting, staff presented a summary of the scoping comments and the Council provided guidance on actions and alternatives that should remain in the document and be further analyzed. Actions being considered in this amendment pertain to the recreational sector and are listed below:

1. Establish a recreational aggregate bag limit and recreational season for deep-water species;
2. Establish a recreational aggregate bag limit for shallow-water grouper species;
3. Modify the 10-snapper and 20-fish recreational aggregate bag limits;
4. Modify the seasonal prohibition on recreational harvest and possession of shallow-water groupers;
5. Remove the recreational minimum size limits for deep-water snapper species;
6. Reduce the recreational minimum size limit for black sea bass; and
7. Reduce the recreational minimum size limit for gray triggerfish in federal waters off East Florida.

In June 2017, the Council will review and approve the amendment for public hearings.

Snapper Grouper Vision Blueprint Regulatory Amendment 27 - Commercial Management Measures

In June 2016, the Council directed staff to begin development of an amendment to address items identified in the Vision Blueprint addressing commercial management measures. In September 2016, the Council directed staff to prepare a scoping document for review at the December 2016 meeting. Scoping hearings (conducted via webinar and in-person) were held from January 14 to February 8, 2017. At the March Council meeting, staff presented a summary of the scoping comments and the Council provided guidance on actions and alternatives that should remain in the document and be further analyzed. Actions being considered in this amendment pertain to the commercial sector and are listed below:

1. Establish a commercial split season for blueline tilefish;
2. Establish a commercial split season for red porgy;
3. Establish a commercial split season for snowy grouper;
4. Establish a commercial split season for greater amberjack;
5. Modify the commercial trip limit for vermilion snapper in the second season;
6. Implement a commercial trip limit for the Other Jacks Complex;
7. Modify the seasonal prohibition on commercial harvest and possession of shallow-water groupers;
8. Remove the commercial minimum size limits for deep-water snapper species; and
9. Reduce the commercial minimum size limit for gray triggerfish in federal waters off East Florida.

In June 2017, the Council will review and approve the amendment for public hearings.

3.3 Presentation and Discussion

John Hadley, SAFMC staff

3.4 ACTIONS

Discuss and make recommendations as necessary. In general, this agenda item is meant to brief the SEP on potential Council actions that may be presented to the group for review in the future.

SEP RECOMMENDATIONS:

The SEP had several comments on the For-Hire Electronic Reporting Amendment. The amendment includes a list of core variables to be collected via electronic trip reports. In addition to these variables, it was suggested that the zip codes for paying passengers be collected to facilitate the computation of travel costs for recreational demand models. The amendment was submitted for formal review in March 2017 and a separate Council action would be required to add this variable to the list of approved core variables. Council staff noted that passengers still may be intercepted by the MRIP program which does collect zip codes.

The SEP had no comments on the other proposed management actions.

4. Social and economic information for the updated Fishery Ecosystem Plan

4.1 Documents

Attachment 3. Summary of Social and Economic Components of fishery management plans.

This document provides an overview of the social and economic components included in the “Description of the Economic Environment” and “Description of the Social Environment” sub-chapters of SAFMC FMPs.

Additional reference for discussion:

L. Colburn, M. Jepson, C. Weng, T. Seara, J. Weiss, J. Hare. Indicators of climate change and social vulnerability in fishing dependent communities along the Eastern and Gulf Coasts of the United States. *Marine Policy*, 74 (2016) 323–333. Available online at: http://ac.els-cdn.com/S0308597X16302123/1-s2.0-S0308597X16302123-main.pdf?_tid=d9487a14-1baf-11e7-86ff-00000aab0f01&acdnat=1491582953_fb57857b20e569ed77708967a75b3a1a

4.2 Overview

The Fishery Ecosystem Plan, will again be the vehicle to update and refine information supporting designation and future review of EFH and EFH-HAPCs for managed species as well as supporting the Councils move to Ecosystem Based Fishery Management (EBFM). The Council's Habitat Protection and Ecosystem Based Management Advisory Panel is central to supporting the cooperative regional process to develop Fishery Ecosystem Plan II. Fishery Ecosystem Plan II writing and review teams composed of Panel members and other regional experts, have been working on the next generation FEP. This new effort has engaged innovative coordination, facilitation and interactive online capabilities and engaged participants far beyond the initial members identified.

Core sections of FEP II were drafted during 2016 leading to a complete core document in 2017. An innovative process was undertaken to refine and update snapper grouper and other managed species information for FEP II and make that information more useful and accessible during the stock assessment process, during EFH policy development and permit review and by the Council and other regional partners as well as the amendment development process. This process involved developing concise species summaries for FEP II as well as operationalizing the South Atlantic Ecospecies online species information system (<http://saecospecies.azurewebsites.net/>) cooperatively developed with FWRI in lieu of exclusively updating text from the original FEP. Detailed species life history, habitat, and fisheries will be available online through Ecospecies and other supporting Council- (e.g., SAFMC Habitat and Ecosystem Atlas - <http://safmc.net/habitat-and-ecosystems/safmc-habitat-and-ecosystem-atlas/> and Digital Dashboard - http://ocean.floridamarine.org/safmc_dashboard/) and regional partner links (e.g., <http://www.southatlanticlcc.org/blueprint/>).

Updating EFH support information and integrating newly approved EFH policies is critical to advancing the EFH conservation directive and meeting the needs identified in the past 5 Year EFH Review. This more concise and focused Fishery Ecosystem Plan II has core issue areas highlighted in new sections on “South Atlantic Food Webs and Connectivity” and “South Atlantic Climate Variability and Fisheries” as the basis for further policy development, consideration in habitat and fish stock assessment and future management of fisheries and habitat supporting more a more comprehensive view of conservation and management supporting the move to EBFM in the South Atlantic Region.

With completion of the core Fishery Ecosystem Plan II in mid-2017, the Council will be again engaging the Habitat and Ecosystem Advisory Panel and regional partners in developing a focused implementation strategy. The current version of the FEP is available online at <http://safmc.net/ecosystem-management/fishery-ecosystem-plan/>. Council staff will provide background information on the FEP and the progress of the FEP II development.

4.3 Presentation

Roger Pugliese, SAFMC staff, will provide an overview of FEP II development and anticipated structure and function.

4.4 ACTIONS

SAFMC staff will provide an overview of Socio-Economic Sections for Fishery Management plans which is what is being used as the core of the FEP II development (*Attachment 3*). This provides the most up to date information for the fishery accessible through links and interactive capabilities of FEP II which will support future amendment development process. The Panel will discuss the existing Section structure and provide input to the staff on potential refinements or enhancements of social and economic information supporting FEP II into implementation. Future refinement of information for analyzing community and fisheries to assess and add vulnerability as was done for the Northeast and Mid-Atlantic regions (*see additional reference material*) will be possible once baseline work on species vulnerabilities is accomplished by NOAA Fisheries in cooperation with regional partners.

Specific Questions:

1. Does the social and economic information provided in FMPs represent the best readily available information to profile a species and fishery?
 - *The list of social and economic information was comprehensive. There was a question about whether the use of I/O models would double-count fishery impacts if applied on a species-by-species basis for the commercial sector, but after some discussion it was noted that the procedure should be OK as long as the analysis uses revenues from the individual species only rather than total trip revenues. The SEP suggested including an analysis based on revenues from the species complex as well. Also, it was noted that I/O analysis should account for changes in fishing activities at the various margins.*
 - *The SEP suggests focusing on the socioeconomic status of affected populations to gauge who is in the position to go fishing and the fleet/effort capacity in a communities. The SEP also recognizes the need for greater inclusion of human demography variables in fishery management. A related concern is the extent to which fishery tourism infrastructure is present within a community and the promotion of fishing tourism, leading to additional participants in recreational fishing.*

2. Are there other readily available social or economic data that should be included?
 - *No other social or economic data were suggested.*
 - *Because of the large number of species in the Council's jurisdiction, the fishery profiles could require hundreds of pages to present and interpret all of the variables listed in Attachment 3 for each species. It was suggested that one way to limit the size of the final report is to generate profiles for individual species that are actively managed and then create profiles for groups consisting of other species.*
 - *The SEP notes that even if a community is not home to some of the highest levels of landings, it is entirely possible that the landings of individual license-holders comprise a substantial amount of their household incomes. Thus while the community's regional quotient (RQ) and overall landings might be insignificant, they may still need to be recognized as fishing communities because of their reliance on the fishing.*

5. Red snapper management and analysis of fishing behavior

5.1 Document

Attachment 4a. Graphic of potential red snapper adaptive management plan

Attachment 4b. Snapper Grouper Amendment 43 Options Paper

Additional references for discussion:

National Geographic Blog Post: [Can Behavioral Economics Help Save Coral Reefs and Fisheries?](#)

Excerpt from: M. Cassell, C. Jackson, and B. Chevront. Health communication on the Internet: an effective channel for health behavior change? *Journal of Health Communication*, 3 (1998) 71–79.

5.2 Overview

During the March 2017 Council meeting, the Snapper Grouper Committee received a briefing from Dr. Bonnie Ponwith (Southeast Fisheries Science Center, SEFSC) on the Council's request for red snapper ABC projections under a discards-only scenario. Dr. Ponwith explained that the SEFSC was not able to provide those projections due to the length of time since the completion of the assessment, uncertainty in the landings since most landings are coming from discards, and the change in MRIP methodology for estimating landings and discards. Council staff presented a summary of the scoping comments received on Amendment 43 during the January/February rounds of hearings and the Snapper Grouper Committee discussed options for management approaches for red snapper. Dr. Roy Crabtree went on record stating that the Council has likely taken sufficient actions to address overfishing of red snapper in the South Atlantic and should focus on developing a methodology to obtain an ABC for red snapper. Council staff were directed to continue work on Amendment 43 but focus on best fishing practices items pending resolution on obtaining an ABC for red snapper. The Scientific and Statistical Committee (SSC) and the SEFSC will collaborate to explore approaches to arrive at an ABC for red snapper.

The Council is working to development management measures that will allow for red snapper to be harvested, but are challenged with the current removal levels and dead discards estimates as the red snapper stock grows. One primary management objective for the Council is to discourage targeting of red snapper should limited harvest be allowed in order to keep recreational harvest near target levels. Another primary objective is to reduce the number of dead discards through regulations or through best practices. In addition to actions addressing these management objectives, the Council will also need to be able to provide data to verify that fishermen are complying and that the actions are actually reducing dead discards and discard mortality.

Council staff will facilitate discussion of recently considered management options (**Attachment 4a** and **4b**) to reduce discards of red snapper and improve the survival of released fish.

5.3 Presentation

John Hadley/Kari MacLauchlin, SAFMC staff

5.4 ACTIONS

Discuss and provide recommendations to the Council and staff on potential ways to change fishing behavior, and how to measure the effects of such changed behavior.

Specific Questions:

1. Are there ways to economically or socially incentivize a change in fishing behavior for the private recreational sector to use best release practices or to actively avoid red snapper “hot spots” and targeting in an effort to reduce the number of dead discards? Can you think of examples from other areas of social science study (ex: healthcare, behavioral economics, workforce management) that could be applied to help build “conservation inertia” as it relates to recreational fishing behavior?
 - *Fishermen might be more willing to change their fishing behavior if they had some way to compare their performance relative to the performances of their peers.*
 - *The focus should need to be on showing off how a person was successful in avoiding red snapper and pride in contributing to rebuilding the stock (a positive incentive).*
 - *There was extensive discussion about the potential to reward conservation-based changes in fishing behavior. One mechanism could be to offer partial rebates of permit fees as a reward for changes in fishing behavior, where the permit fee consists of fixed and variable components with all or part of the variable component being eligible for the rebate.*
 - *Another mechanism may be to set the initial price of a license high, and then offer discounts if the individual provides information, reports on time, etc. There would need to be some research to determine the acceptable prices and step-downs.*
 - *Non-economic rewards such as conservation certificates may also be used. The NC DMF Citation program provides certificates of accomplishment for anglers who catch species over a certain size; a certificate for conservation measures might be similarly valued.*
 - *Also, emphasize protection of a species for future generations.*
 - *Providing small bits of information can help ease the transition to the desired behavior. Incorporate a large education component to explain stock assessment and benefits of conservation oriented behavior.*
 - *Fishermen are usually guarded about their fishing spots, and providing information like hotspots can backfire, as happened when information provided to the Alaskan crab fleet on areas to avoid for catching flatfish resulted in faster targeting of that species instead.*
 - *Use social media to allow people to show how they use best handling practices and encourage a “race to the top” through social competition.*
 - *Provide real-time data processing to give feedback to fishery participants (ex: # of red snapper “saved” per trip). Include some type of recognition.*

2. What methods could be used to quantitatively measure how fishing behavior changes to provide guidance in how discard mortality estimates should be adjusted in reaction to a change in fishing behavior?
 - *Fishing reporting apps can include GPS-based landings if programmed properly*
 - *It can be difficult to tell if a decline in reported landings is due to avoiding species or because*

- species abundance has declined.*
- *MRIP dockside interviews are of course another potential tool to measure changes in fishing location or depth, changes in species targeted, changes in the incidence of catching red snapper, changes in disposition of red snapper when caught, and changes in methods used to release red snapper.*
3. In regards to a potential Red Snapper or Snapper Grouper Permit: What type of socio-economic or behavioral data should be reported by the permit holder (who, where fishing, demographic information, trip costs)? What data elements could be included with the permit or as a stipulation of the permit as a way to measure a change in fishing behavior?
- *Applicants for permits should provide contact information, such as an e-mail address, and agree to participate in an online survey about fishing activities, if selected.*
 - *Applicants for permits could provide additional basic background information about themselves to facilitate future surveys and studies of fishing behavior.*
 - *The SEP suggests elements were age, occupation (last occupation, if retired), household income, gender, ethnicity, zip code, vessel number (or name of for-hire vessel most often used, if known), where do you most often fish for snapper/grouper (click a spot on an online map).*
 - *An electronic reporting app provides the opportunity to combine real-time data with survey data.*
 - *The topic of motivating changes in fishing behavior might be a relevant topic for the Citizen Science Program.*

6. ABC Control Rule - economic and social indicators of stock status

6.1 Documents

Attachment 5a: ABC Control Rule SSC Decision Document (Oct 2016)

Attachment 5b: 2017 Mid-Atlantic Golden Tilefish Fishery Performance Report

Attachment 5c: 2016 Mid-Atlantic Bluefish Fishery Performance Report

6.2 Overview

The SSC is considering modifying to the Acceptable Biological Catch (ABC) Control Rule, and created an ABC Control Rule sub-group to discuss and provide recommendations to the SSC in May 2016. The SSC continued the discussion at their October 2016 meeting and have made some recommendations for alternatives for the control rule (**Attachment 5a**). The SSC will be continuing development of the modified ABC Control Rule and may consider incorporating economic and social indicators into the Control Rule.

One example that has been used in the Mid-Atlantic is incorporating feedback provided via fishery performance reports (**Attachment 5b** and **5c**). The Mid-Atlantic SSC receives annual reports from the FMP Advisory Panels on fishery performance, which are incorporated into the SSC's decision for setting the ABCs for the managed species. Similar to the [Beige Book](#) generated by the Federal Reserve, the fishery performance reports are intended to supplement quantitative data with anecdotal and qualitative data from the field. Examples of the fishery performance reports are available here: <http://www.mafmc.org/fishery-performance-reports/>.

At the South Atlantic Snapper Grouper Advisory Panel (AP), Mackerel Cobia AP, and Dolphin Wahoo AP meetings (April 17-21, 2017), Council staff will facilitate discussions with the APs to create fishery performance reports for cobia, dolphin, and red grouper. The draft performance reports will be provided to the SEP as soon as they are available. These reports will focus on feedback from questions such as:

- How would you rate the stability of the fishery?
- How would you rate the quality of the fishery?
- What factors have influenced recent landings (market or otherwise)?
- Are there recent major changes that you have observed in the fishery?
- Are the current fishery regulations appropriate? How could they be improved?

6.3 Presentation

John Hadley/Kari MacLauchlin, SAFMC staff

6.4 ACTIONS

Discuss and provide guidance to staff on the usefulness and content of fishery performance reports in setting ABCs; discuss other ways that social and economic information can be incorporated into the ABC Control Rule.

- *The SEP suggested asking the AP members for the fishery performance reports:*
 - *if there were any reason that they took more or fewer trips for the species in the previous year, and*
 - *if anything changed the cost of fishing trips in the previous year.*
- *Other information that can be incorporated into the control rule include:*
 - *Social-ecological systems analysis results, as has been done for Golden Crab ([Crosson, Yandle, and Stoffle 2013](#)) and Wreckfish ([Yandle and Crosson 2015](#)).*
 - *Variance in ex-vessel prices, fuel costs, unemployment rates, and interest rates. Note that these indicators may also change in a way that will cause landings to increase.*
 - *Variance in the landings of concurrently caught species or substitute species.*
 - *Weather, in particular weather that limits offshore trips.*
 - *Changes in the volume of tourism or in boat registrations.*
 - *Changes in the number of for-hire permits.*

7. Socio-economic profile of the Snapper Grouper fishery

7.1 Document

Attachment 6. Outline for SG Socio-Economic Profile

7.2 Overview

As part of Vision Blueprint Regulatory Amendment 27 (Commercial Management Measures), the public was asked to comment on management approaches that would meet the needs of “traditional bandit boats.” In addition, the Council expressed the need for an in-depth characterization of the fishery before considering substantial changes to how the fishery is managed. Hence, in March 2017 the Council directed staff to begin work on a socio-economic characterization of the commercial Snapper Grouper (SG) fishery that would address items such

as descriptive statistics (location, permit portfolios, corporation v. individual, demographics, etc.) about SG permit holders and changes over time; leased permits (via vessel leasing); latent permits; vessel characteristics (for evaluation of ‘traditional bandit boat’ definition); qualitative descriptions of fishing communities; SG participant catch portfolios; SG dealer information; economic importance of the total fishery and by species sub-complex; seasonality and regional distribution of landings; and growth potential analysis (*Attachment 6*). Council staff will provide an overview of the work plan, timing for the project, and preliminary results as available.

Council staff will also present on a potential social/economic survey for the region.

7.3 Presentation

John Hadley/Kari MacLauchlin, SAFMC staff

7.4 ACTIONS

Discuss and provide guidance to the staff on the SG characterization project (specific questions included in the attachment), and recommendations for a potential social/economic survey.

RE: Description of Fishing Communities:

Is this geographic division of regions sufficient? Should states/regions be consolidated? Should states/regions be further divided?

- *Lumping communities into regions is appropriate if county level data are being used*

RE: Descriptive statistics of Snapper Grouper permit holders; Permits and Permitted Vessel Characteristics

- *Include home state of permit holder in addition to home port of vessel.*

Do you think that using data from 2014 through 2016 (i.e. three years) is sufficient for the purposes of this section?

- *There appears to be a lot of overlap regarding the discussions of the socio-economic profile in agenda item (6) and the social and economic information that are needed for the fishery ecosystem plan, agenda item (3). Council staff may wish to present data for five years to match the proposed presentation of data for the Fishery Ecosystem Plan.*
- *Longer time series may be used for landings and ex-vessel revenues. Measures of current fishery performance should be interpreted within the context of a comparison with past performance.*
- *Staff clarified that the profiles are for all parts of the commercial snapper grouper fishery, not just the section using bandit reels.*
- *Suggestion to use data from the same five years as the period being used in the FEP so that the results of the SG socioeconomic profile can be incorporated into the FEP.*

Is there available information not included in the outline that could help better describe the social and economic characteristics of the commercial Snapper Grouper fishery?

- *The Science Center has additional information about harvesting and ownership costs that could be used to compare changes in profitability over time.*

Is there utility in expanding this profile to include information on the recreational sector where data are available and as time allows?

- *The focus for the Council's request for information is the commercial sector and traditional bandit boats. If the report's focus was expanded to include the recreational sector, then there is the risk that final presentation of information for the commercial sector would be delayed. An analysis of the recreational sector could be conducted separately and with a separate release date.*
- *Some recreational data will already be tied into the analysis as outlined from overlap between Snapper Grouper participants that hold both recreational and commercial permits.*

8. Other Business

9. Report and Recommendations Review

10. Next SEP Meeting

- Spring 2018, Charleston SC