SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

SSC Meeting Overview

October 15-17, 2018

Town & Country Inn
Charleston, SC

VERSION
FINAL
September 28, 2018

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*** Indicates documents not available for the Briefing Book. These will be distributed as they become available.**

TABLES:

SAFMC PUBLIC COMMENT PROCESS

Written comment:

Written comment on SSC agenda topics is to be distributed to the Committee through the Council office, similar to all other Council briefing materials. Written comment to be considered by the SSC shall be provided to the Council office no later than one week prior to an SSC meeting. For this meeting, the deadline for submission of written comment is 12:00 pm Monday, October 8, 2018. Submit written comments to:

SAFMC – SSC Comments
4055 Faber Place Drive
Suite 201
North Charleston, SC 29405

Verbal comment:

Two opportunities for comment on agenda items will be provided at set times during SSC meetings. The first will be at the beginning of the meeting, and the second near the conclusion. Those wishing to comment should indicate such in the manner requested by the Chair, who will then recognize individuals to provide comment.

An opportunity for comment on specific agenda items will also be provided as each item comes up for discussion. Comments will be taken after all the initial presentations are given and before the SSC starts the discussion of the agenda topic. As before, those wishing to comment should indicate such in the manner requested by the Chair, who will then recognize individuals to provide comment. All comments are part of the record of the meeting.

1. INTRODUCTION

1.1. Documents

Agenda
Attachment 1. Minutes of the May 2018 meeting
Attachment 2. Minutes of the May 2018 SARIMA webinar

1.2. Action

- Introductions
- Review and Approve Agenda
- Approve Minutes

2. PUBLIC COMMENT

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

3. SEDAR ACTIVITIES

3.1. Documents

Attachment 3. SEDAR Projects Update
Attachment 4. Prelim Scope Work 2020 Assessments
Attachment 5. Tilefish Standard Assessment ToRs
Attachment 6. Snowy Grouper Update Assessment ToRs

3.2. Overview

Updates on individual SEDAR projects can be found in Attachment 3. The SEDAR projects highlighted below are those where the SSC is being asked to address specific action items.

SEDAR 68 South Atlantic and Gulf of Mexico Scamp, Research Track

A Scamp Research Track assessment was preliminarily scheduled to start the first quarter of 2018. At their May 2017 meeting, the SEDAR Steering Committee delayed the start of the Scamp Research Track assessment until 2019 due to the Research Track process not being adequately described. A Scamp planning team webinar was scheduled for September 28, 2018 to develop a project schedule and Terms of Reference for review and approval by the Gulf and South Atlantic Council's, but it has been delayed due to the impacts of Hurricane Florence. The Scamp Planning Team webinar has been rescheduled for the week of October 8, 2018 and the preliminary ToRs and schedule will not be available for the SSC is to review at this meeting. The

ToRs and schedule for Scamp will need to be reviewed and approved prior to the Committee's Spring meeting, through email or a webinar meeting.

SEDAR 66 South Atlantic Golden Tilefish, Standard Assessment

Golden Tilefish was last assessed as an update, including data through 2014. A standard assessment is scheduled to start in 2019, exact timing TBD. Planning for this project is getting underway. The SSC is asked to review the ToRs for golden Tilefish (Attachment 4) and recommend changes or additions, as appropriate. When reviewing the most recent golden Tilefish Update assessment, the SSC provided feedback on issues to consider for the next assessment. These included exploring changes in selectivity and the use of multiple selectivity blocks for the longline fleet; exploring the use of multiple likelihood functions in fitting the age and length composition data; and exploring perceived changes in recruitment. A potential new data source, CRP Bottom Longline Survey to Augment Fishery Independent Reef Fish Data Collection in Deepwater Snapper Grouper, was identified for consideration. A NOAA FATE project exploring the effect of environmental factors on fishery independent CPUE indices and simulation test alternative methods for incorporating that information in Tilefish was also identified as a potential new data source but may not be available for use in this assessment. The SSC will be asked to identify representation for this assessment after the schedule is developed.

SEDAR 36 South Atlantic Snowy Grouper, Update Assessment

Snowy Grouper was last assessed through a standard assessment (SEDAR 36), including data through 2012. An update assessment is scheduled to start in 2019, exact timing TBD. Planning for this project is getting underway. The SSC is asked to review the ToRs for Snowy Grouper (Attachment 5) and recommend changes or additions, as appropriate. During the review of SEDAR 36, the SSC had concerns over fixing the steepness parameter at the mode of the prior distribution developed by Shertzer and Conn (2012). The SSC felt that although the methodology may be scientifically sound, it can potentially result in less conservative management due to the resulting F_{MSY} estimate corresponding to $F_{26\%SPR}$. The SSC noted that this is an unusually low percentage SPR value for a long-lived, deepwater species and that values of $F_{30\%SPR}$ to $F_{40\%SPR}$ are more commonly used.

3.3. Action

- Provide guidance on current projects as necessary
- Review the ToRs and schedule for Scamp and recommend changes or additions as appropriate.
- Review the ToRs for Tilefish and recommend changes or additions as appropriate.
- Review the ToRs for Snowy Grouper and recommend changes or additions as appropriate.

4. REVIEW OF FLORIDA FWCC STUDY

4.1. Documents

Attachment 7. FL FWCC Study Presentation
Attachment 8. FL FWCC Study Report

4.2. Presentation

Study Overview: Dr. Heather Christiansen, FL FWCC

4.3. Overview

At their May 2018 meeting, the SSC reviewed several methodologies for setting an ABC for Red Snapper in the South Atlantic. During the discussion some new information was brought to the attention of the Committee. A study had recently been completed and submitted by FL FWCC, which looked at the size-selectivity of different survey gear types for Red Snapper in South Atlantic waters (Attachment 8). The basic conclusion of the study suggested that the selectivity of the Chevron traps may not be flat-topped, which is contrary to the assumption made in SEDAR 41. The study also suggests that the selectivity of the Chevron traps is not the same as the selectivity of the videos, which is also an assumption made in SEDAR 41 and why the Chevron trap and video indices were combined into a single CVID index. Since the Interim Analysis (IA), which was the Committee's preferred methodology for setting the ABC for Red Snapper, relies on these selectivity patterns, along with age and length composition data, to project the appropriate catch levels the conclusions of this study could have a significant impact on the estimates of ABC for Red Snapper.

However, the results of this study were not available to the Red Snapper ABC Workgroup and the analytical team at the time of conducting the IA. Also, this study had not been peer reviewed and the Committee was unable to deem the FWCC study as BSIA at that time. Therefore, the SSC requested that this study be brought back at this meeting for a thorough review in order for the Committee to decide on its potential impacts to the Red Snapper ABC and upcoming assessment.

4.4. Action

- Review the findings of this study, discuss the uncertainties associated with those findings, and determine if they are the best scientific information available.
- Discuss recommendations for including these findings into the Interim Analysis for Red Snapper.

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 particular focus on those directly affecting stock assessments.

5.3. Action

- No specific actions required.

6. SOUTHEAST REEFFISH SURVEY UPDATE

6.1. Documents

Attachment 9. MARMAP/SEAMAP-SA Reef Fish Survey Trends Update
Attachment 10. SEFIS Summary Report

6.2. Presentation

MARMAP/SEAMAP-SA Reef Fish Survey Trends Update: Dr. Wally Bubley, SC DNR

6.3. Overview

The Committee will receive an update on the MAARMAP/SEAMAP-SA Reef Fish Survey sampling efforts and results through 2017 (Attachment 9). The SEFIS video survey sampling summary (Attachment 10) was provided to satisfy the added priority to the South Atlantic Research Plan that an update of the SEFIS video survey index be provided to the Committee and the Council with the goal of addressing sampling effort and findings for assessed species, much as the current MARMAP/SEAM-SA Reef Fish Survey trends report does.

6.1. Action

- No specific actions required.

7. MRIP DATA REVISIONS REVIEW

7.1. Documents

Attachment 11. Background Materials
Attachment 12. MRIP Calibration Effects
Attachment 13. Landings Trends
Attachment 14. SSC Workgroup Approach

7.2. Presentation

MRIP Data Overview: Dr. Mike Errigo, SAFMC

7.3. Overview

Traditionally, recreational fishing effort data have been collected by NOAA Fisheries through the Coastal Household Telephone Survey (CHTS). The CHTS utilizes a list-assisted, random digit dialing (RDD) telephone survey approach to contact residents of coastal county households and collect information on fishing activities that occurred within a two-month reference period (wave). A 2006 review by the National Research Council (NRC) noted that the CHTS design suffers from inefficiency due to the low rate of saltwater angler participation among the general population, as well as potential coverage bias due to the survey's limitation to coastal county residences and landline-based telephone numbers. In addition, response rates to the survey have declined considerably over the past decade, increasing the potential for nonresponse bias.

An alternative to the CHTS is to identify and contact anglers through a dual-frame mail survey design. MRIP initially tested the feasibility of a dual-frame mail survey design in NC in 2009 and conducted a follow-up study aimed at enhancing response rates and the timeliness of responding in NC and LA in 2010. The methodology is described in Andrews et al Mail Survey Method (Attachment 11). These previous pilot tests were very informative and provided the basis for a revised design. The revised design again uses a mail questionnaire to collect data from households, but also addresses weaknesses identified in the prior studies. This is the design that has been implemented fully in 2018 and is now known as the Fishing Effort Survey (FES) and fully in use today. The methodology is also described in 2012 FES Pilot Review and Comments (Attachment 11). The pilot showed that the overall response rate from the FES was over 40% compared with just over 14% for the CHTS. For estimates of effort, the FES estimated 6.1 times as much effort in Shore mode as the CHTS and 2.6 as much effort in the Private Boat mode as the CHTS overall (2012 FES Pilot Review and Comments, Attachment 11).

The sizable differences in effort estimates suggested a calibration would be necessary to switch from using the CHTS to the FES. After 3 years of side-by-side running of both surveys, a calibration model was developed, and peer reviewed in June of 2017 (Report of FES Calibration Model and FES Calibration Review Report, Attachment 11). This model was used to calibrate all the effort data back to the beginning of the MRIP time series, which is 1981.

At the same time, MRIP has been working on developing a calibration model for the updated Access Point Intercept Survey (APAIS) design, which was implemented in 2013 (APAIS Calibration Approach, Attachment 11). The calibration model was peer reviewed in March 2018, after collecting over 3 years of data to inform the calibration model. Both calibrations were

applied to the MRIP data simultaneously, each having a different type and magnitude of effect (Briefing on MRIP Transition SA SSC, Attachment 11).

The change from the original APAIS design and the CHTS over to the new APAIS design and the FES, along with the subsequent calibrations of the original data back to the beginning of the time series, have had varying effects on the recreational catches (Attachments 12 and 13). In most cases, the catches have increased due to the increased estimates of effort from the FES survey (Attachment 12). There have also been changes to the catch trends for some species due to either a differential change over time in the effort estimates or changes in the proportion of the catch coming from the charter fleet (which is not affected by the change to the FES survey). The differential change in effort over time has been attributed to decreases in response rates to the CHTS and what has been called the "Wireless Effect". The Wireless Effect is the phenomenon of more and more people completely abandoning land lines in favor of using mobile phones only for communication, which are not sampled by the CHTS. This has had a secondary effect of causing the average age of the sampled population to become significantly older than that of the actual population, presumably because older people are more likely to still have a land line than younger people are.

The SSC is asked to review the effects of the calibrations to catches of species managed by the South Atlantic Council and identify if there are any patterns to the changes and what may be causing those patterns. Trends of particular concern to the Committee should be highlighted so that further investigation may be conducted. If there are stocks the Committee would like to investigate further, the SSC is asked to identify those and develop a process for conducting those investigations.

These newly calibrated catches change the time series of data used when developing ABC recommendations for unassessed stocks managed by the Council (Attachment 13). This has potentially large consequences to those ABCs because the SSC used catch-based methods to develop those recommendations. Therefore, the SSC is asked to evaluate the effects of the changes to the recreational catches from these calibrations with respect to setting ABCs for unassessed species. In order for the SSC to apply the same ABC Control Rule decisions to the stocks now, they would have to confirm several key pieces of information:

- Does the stock still fall within the same Control Rule Tier? (ORCS vs. Decision Tree)
- Is the reference period still a viable time period to use?
- Is the landings trend similar to what it was originally?
- If an ORCS stock, does the stock still fall within the same exploitation category?

The SSC is asked to discuss a procedure for tackling this demanding task. Since any new ABC from the Committee will not be able to be implemented without the Council first addressing sector allocations, there is some time for this task. However, the Council will most likely want the SSC to have final recommendations at their Spring meeting, if not earlier. Therefore, this may require work outside of the normal SSC meeting times, suggesting it may be a suitable candidate for the workgroup approach (Attachment 14).

7.4. Action

- Review the calibrated MRIP effort and catch estimates for all SAFMC stocks.
    - Identify any stocks that the SSC would like to investigate in further detail and develop a process for conducting such investigations.
    - Identify any general patterns in the calibrated estimates that may indicate new or increased biological, social, or economic concerns that the Council should be aware of.
    - Review the calibrated MRIP data with respect to changes to the ABC recommendations for unassessed stocks.
- Discuss the procedure for updating the ABC recommendations for unassessed stocks.

8. MRIP ASSESMENT REVISIONS

8.1. Documents

Attachment 15. MRIP Revision Assessments Report
Attachment 16. MRIP Revision Assessments Overview Presentation*

8.2. Presentation

Revision Assessments Overview: Dr. Erik Williams, SEFSC

8.3. Overview

Due to the changes in the MRIP catch data described in the previous Agenda item, stocks with assessments will need to have their assessments revised using the newly calibrated MRIP data to update their catch level recommendations. Presented here is a report (Attachment 15) containing the revised assessments for four recently assessed South Atlantic species: Blueline Tilefish, Red Grouper, Vermilion Snapper, and Black Sea Bass.

Blueline Tilefish

A benchmark assessment for Atlantic Blueline Tilefish (SEDAR 50) was completed in October 2017, with data through 2015. Due to a large spatio-temporal change in how the fishery operated in the latter part of the assessment and the fact that age determination was too uncertain to be used in the assessment, the Blueline Tilefish stock had to be assessed as two separate units and by different assessment methods for each unit. This unique approach to assessing this stock made it impossible to determine stock status at this time.

Some of the biggest concerns for this stock were the lack of data and the splitting of the recreational data at Cape Hatteras (where the 2 units were split). There were very few intercepts of Blueline Tilefish, resulting in odd landings and discard spikes in the data. One such data point, charter discards from NC for 2007, was so out of line with the surrounding data that it was replaced with the average of the surrounding years.

The unit south of Cape Hatteras was assessed using an age aggregated Production Model and the ABC for that portion of the stock was determined using traditional projections with OFL recommended at $F=F_{MSY}$ and ABC at $P^*=0.3$ through 2020.

A workgroup of both South Atlantic and Mid-Atlantic SSC members was formed to develop a method for determining an ABC for the unit north of Cape Hatteras and developing a means of splitting that ABC between the South Atlantic and Mid-Atlantic jurisdictions. The OFL and consequently ABC was determined using Mean Length estimators from the DLMTool. A pilot trawl survey was used to allocate that ABC between the South Atlantic and Mid-Atlantic. The ABC was determined as being at P*=0.125 and the MAFMC:SAFMC split was determined to be 56%:44%. The SSC recommended this ABC for no longer than 3 years.

Table 1. OFL and ABC of Blueline Tilefish in South Atlantic waters from the original SEDAR 50 in pounds whole weight.

Year	South Hatteras		North Hatteras		Total South Atlantic	
	OFL	ABC	OFL	ABC	OFL	ABC
2018	230,000	172,000	103,985	78,980	333,985	250,980
2019	227,000	175,000	103,985	78,980	330,985	253,980
2020	225,000	178,000	103,985	78,980	328,985	256,980

Red Grouper

A SEDAR standard stock assessment for South Atlantic Red Grouper (SEDAR 53) was completed in February 2017, with data through 2015, that indicated the stock was overfished and undergoing overfishing. The results of the assessment showed that rebuilding would not be possible by 2020, which is the terminal year of the current rebuilding plan, even with no fishery present (F=0) and the stock would likely take until at least 2030 to rebuild at F=0. The SSC reviewed SEDAR 53 at their April 2017 meeting and stated that the assessment is based on the best scientific information available.

In June 2017, after SEDAR 53 was reviewed by the SSC, the Council requested that the Southeast Fishery Science Center (SEFSC) produce rebuilding projections for Red Grouper based on SEDAR 53. The Council's SSC reviewed four rebuilding projections produced by the SEFSC at their October 2017 meeting. The projections were based on fishing mortality rates of F_{MSY} and $F_{Rebuild}$, each with long-term expected recruitment and low recruitment scenarios. Due to poor recruitment trends for the stock in recent years, the SSC recommended the projections at F_{MSY} and the low recruitment scenario for the overfishing limit, and projections for $F_{Rebuild}$ under the low recruitment scenario for the ABC, for the short term (next 5 years). The SSC noted that recruitment could increase in the future and become consistent with long-term levels that the stock is predicted to produce.

Table 2. Red Grouper OFL and ABC projections at low recruitment scenario from the original SEDAR 53 in pounds whole weight.

Year	OFL	ABC
2018	183,000	139,000
2019	191,000	150,000
2020	202,000	162,000
2021	212,000	176,000
2022	223,000	189,000

Vermilion Snapper

The SSC reviewed the Standard assessment for Vermilion Snapper prepared through SEDAR 55 at their May 2018 meeting. SEDAR 55 was completed in April 2018, with data through 2016, and found that the Vermilion Snapper stock in the South Atlantic was neither overfished nor undergoing overfishing. The SSC did comment on several uncertainties, such as the headboat index dropping dramatically in 1992, when there is a management change, and most likely not tracking the population abundance as it did prior to that time. Also, there was an issue fitting the CVID index, especially at the end of the time series, due to a disconnect between the age comps from the CVID index and those from the landings. The SSC recommended projections for the OFL at $F=F_{MSY}$ and for the ABC at P*=0.4 for no more than 5 years.

Table 3. Vermilion Snapper OFL and ABC projections from the original SEDAR 55 in pounds whole weight.

Year	OFL	ABC
2019	1,810,000	1,579,000
2020	1,614,000	1,478,000
2021	1,486,000	1,408,000
2022	1,412,000	1,362,000
2023	1,371,000	1,336,000

Black Sea Bass

The SSC reviewed the Standard assessment for Black Sea Bass prepared through SEDAR 56 at their May 2018 meeting. SEDAR 56 was completed in April 2018, with data through 2016, and found that the Black Sea Bass stock in the South Atlantic was neither overfished nor undergoing overfishing. However, the SSC noted that the terminal Spawning Stock Biomass (SSB) was only slightly above Minimum Stock Size Threshold (MSST) and trending downward. Recruitment (R) was also trending downward in the last few years.

The SSC commented on several uncertainties for Black Sea Bass. In the terminal year of the assessment, the total fishing mortality of all fleets had a selectivity pattern that differed from all other years in the time series with apical F at age 3, which was significantly lower than all other years in the time series. Looking at a different F metric, other than apical F, may give a very different picture of what is happening in this fishery. Apical F changes to different ages as selectivity changes through time. An F metric that is insensitive to changes in selectivity may show a different pattern in the exploitation history of this fishery than what is seen by using apical F.

The SSC also mentioned the lack of all fishery-dependent indices at the end of the time series, where the fishery-independent index indicated the largest changes have occurred in population size. Also, that the selectivity of the Chevron trap vs. the video index may differ, especially under situations of high R.

The SSC did have concern over which R was to be used for projections. The R estimated from the Stock-Recruitment relationship was significantly higher than the realized R in the latter part

of the assessment, especially since the terminal SSB was so close to the MSST. Ultimately, the SSC recommended using the average R from 1991 to the terminal year for projections to determine the ABC. The OFL was recommended as standard projections at $F=F_{MSY}$. The ABC was recommended as projections using the R pattern from 1991 to the terminal year with a P*=0.375. These values should be in place for no longer than 3 years.

Table 4. Black Sea Bass OFL and ABC projections from the original SEDAR 56 in pounds whole weight.

Year	OFL	ABC
2019	818,000	760,000
2020	718,000	669,000
2021	703,000	643,000

8.4. Action

Blueline Tilefish

- Is the revised assessment recommended as Best Scientific Information Available?
- What impact did the revised data have on measures of assessment uncertainty?
- Provide fishing level recommendations
  - Apply the ABC control rule and complete the fishing level recommendations table.
  - Comment on any difficulties encountered in applying the Control Rule, including any required information that is not available.
  - Identify and justify any changes in the ABC control rule application and outcome (i.e. P* value) as a result of the revised assessment.

Table 5. Revised Blueline Tilefish Recommendations (South of Hatteras only)

Criteria			**Original**	**Revised**
Overfished evaluation (SSB/MSST)			1.41	
SSB/SSB_{MSY}			1.06	
Overfishing evaluation ($F_{Current}$/MFMT)			0.92	
MFMT (F_{MSY})			0.146	
B_{MSY} (1,000 lbs. total biomass)			1,467	
MSST (1,000 lbs. total biomass, 75% B_{MSY})			1,100	
MSY (1,000 lbs.)			212	
ABC Control Rule Adjustment			20%	
P-Star			30%	
M (scalar for age-specific M)			0.17	
OFL RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number
ABC RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number

Red Grouper

- Is the revised assessment recommended as Best Scientific Information Available?
- What impact did the revised data have on measures of assessment uncertainty?
- Provide fishing level recommendations
  - Apply the ABC control rule and complete the fishing level recommendations table.
  - Comment on any difficulties encountered in applying the Control Rule, including any required information that is not available.
  - Identify and justify any changes in the ABC control rule application and outcome (i.e. P* value) as a result of the revised assessment.

Table 6. Revised Red Grouper Recommendations

Criteria			**Original**	**Revised**
Overfished evaluation (SSB/MSST)			0.38	
SSB/SSB_{MSY}			0.29	
Overfishing evaluation ($F_{Current}$/MFMT)			1.54	
MFMT (F_{MSY})			0.12	
SSB_{MSY} (mt, total mature biomass)			3,183.3	
MSST (mt, 75% SSB_{MSY})			2,387.6	
MSY (1,000 lbs.)			794.3	
Y at 75% F_{MSY} (1,000 lbs.)			772	
ABC Control Rule Adjustment			22.5%	
P-Star			27.5%	
P-Rebuild			72.5%	
M (scalar for age-specific M)			0.14	
OFL RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number
ABC RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number

Vermilion Snapper

- Is the revised assessment recommended as Best Scientific Information Available?
- What impact did the revised data have on measures of assessment uncertainty?
- Provide fishing level recommendations
  - Apply the ABC control rule and complete the fishing level recommendations table.
  - Comment on any difficulties encountered in applying the Control Rule, including any required information that is not available.
  - Identify and justify any changes in the ABC control rule application and outcome (i.e. P* value) as a result of the revised assessment.

Table 7. Revised Vermilion Snapper Recommendations

Criteria			**Original**	**Revised**
Overfished evaluation (SSB/MSST)			1.51	
SSB/SSB_{MSY}			1.13	
Overfishing evaluation ($F_{Current}$/MFMT)			0.609	
MFMT (F_{MSY})			0.41	
SSB_{MSY} (1e12 eggs)			18.3	
MSST (1e12 eggs)			13.7	
MSY (1,000 lbs.)			1,305.5	
Y at 75% F_{MSY} (1,000 lbs.)			1,288.2	
ABC Control Rule Adjustment			10%	
P-Star			40%	
M (scalar for age-specific M)			0.22	
OFL RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number
ABC RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number

Black Sea Bass

- Is the revised assessment recommended as Best Scientific Information Available?
- What impact did the revised data have on measures of assessment uncertainty?
- Provide fishing level recommendations
  - Apply the ABC control rule and complete the fishing level recommendations table.
  - Comment on any difficulties encountered in applying the Control Rule, including any required information that is not available.
  - Identify and justify any changes in the ABC control rule application and outcome (i.e. P* value) as a result of the revised assessment.

Table 8. Revised Black Sea Bass Recommendations

Criteria			**Original**	**Revised**
Overfished evaluation (SSB/MSST)			1.15	
SSB/SSB_{MSY}			0.71	
Overfishing evaluation ($F_{Current}$/MFMT)			0.64	
MFMT (F_{MSY})			0.31	
SSB_{MSY} (1e10 eggs)			300	
MSST (1e10 eggs)			186	
MSY (1,000 lbs.)			935	
Y at 75% F_{MSY} (1,000 lbs.)			701.25	
ABC Control Rule Adjustment			12.5%	
P-Star			37.5%	
M (scalar for age-specific M)			0.38	
OFL RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number
ABC RECOMMENDATIONS (Revised)				
Year	Landed LBS	Discard LBS	Landed Number	Discard Number

9. COMPREHENSIVE ABC CONTROL RULE AMENDMENT

9.1. Documents

Attachment 17. ABC Control Rule Options Paper
Attachment 18. Risk Tolerance Method
Attachment 19. Risk Tolerance Method Overview

9.2. Presentation

Overview: John Carmichael, SAFMC
Risk Tolerance Method Overview: Dr. Mike Errigo, SAFMC

9.3. Overview

The Council is developing a comprehensive amendment to revise the ABC Control Rule, to address flexibility allowed in the MSA and address issues raised over the last few years by the SSC with the existing rule. The purpose of the amendment is to revise the acceptable biological catch control rule; simplify incorporation of scientific uncertainty; modify the approach used to determine the acceptable risk of overfishing, and address flexibility in specifying catch levels. The need for this amendment is to ensure catch level recommendations are based on the best scientific information available, prevent overfishing while achieving optimum yield, and include flexibility in setting catch limits as allowed per recent changes to the Magnuson-Stevens Fishery Conservation and Management Act implementing regulations.

Changes made to the document since the last SSC review include edits to the actions and alternatives, additional discussion text, and examples of how the alternatives may impact ABC values. Significant additions and changes in actions are highlighted in the attachment (Attachment 17). Additionally, Council staff has developed a preliminary application of the risk tolerance determination process (Attachment 18). The SSC is asked to provide comments on the actions at this meeting. SSC recommendations on the actions are provided in the discussion of each action and are highlighted in the document provided for review (Attachment 17). These recommendations help the Council decide the range of feasible alternatives and select appropriate preferred recommendations.

9.4. Action

- Review and discuss the following items:
  - Example evaluation of the impact of proposed changes to the ABC Control Rule.
  - Proposed method for developing initial risk tolerance levels.
- Provide any further recommendations regarding actions and alternatives as necessary.

10. REVIEW OF NEW BAG AND SIZE LIMIT ANALYSIS METHODOLOGY

10.1. Documents

Attachment 20. New Bag & Size Limit Analysis Report
Attachment 21. New Bag & Size Limit Analysis
Attachment 22. New Bag & Size Limit Analysis Workgroup Report
Attachment 23. Analysis Methods Presentation

10.2. Presentation

Method Overview: Dr. Mike Errigo, SAFMC
Workgroup Consensus: Dr. Marcel Reichert (Workgroup Chair), SC DNR

10.3. Overview

At the request of the South Atlantic Council at their September 2015 meeting, staff put together Regulatory Amendment 25, which included options for increasing the bag limit for Black Sea Bass. The methods used previously for this type of analysis made inappropriate assumptions about trips meeting the new bag limits. Therefore, staff developed a new method of analyzing bag limit increases (Attachments 20 and 21).

The SSC reviewed this new methodology at their May 2016 meeting, where they made suggestions for improvements to the analysis. The SSC deemed it BSIA, after the changes were implemented, and useful as a bag limit analysis for other species. Staff was to make the changes and bring it back to the SSC in its final form. However, with Regulatory Amendment 25 finalized, there was no more need for this analysis at that time, so it was put on hold until SEDAR 56 for Black Sea Bass was completed and both bag limits and size limits were to be examined for changes.

Staff began developing changes to the methodology to incorporate an analysis of size limits as well as bag limits into the overall analysis (Attachments 20 and 21). At their April 2017 meeting, the SSC decided this would be a suitable candidate for the newly developed workgroup approach for reviewing complex analyses and a workgroup was formed for this task (Attachment 22). The timeline and Scope of Work was updated at the May 2018 meeting, putting the review back on track for a final review by the Committee at the October 2018 meeting.

10.4. Action

- Discuss the uncertainties associated with this analysis.
- Determine whether this analysis is the Best Scientific Information Available and is appropriate for use in managing fisheries resources.

11. SOUTH ATLANTIC ECOSYSTEM MODEL UPDATE

11.1. Documents

Attachment 24. Ecosystem Model Project Scope of Work
Attachment 25. Ecosystem Model Project Presentation

11.2. Presentation

Ecosystem Model Project Presentation: Dr. Tom Okey, UVIC (via webinar)

11.3. Overview

The Council, using the Essential Fish Habitat Plan as the cornerstone, adopted a strategy to facilitate the move to an ecosystem-based approach to fisheries management in the region. This approach required a greater understanding of the South Atlantic ecosystem and the complex relationships among humans, marine life, and the environment including essential fish habitat. To accomplish this, a process was undertaken to facilitate the evolution of the Habitat Plan into a Fishery Ecosystem Plan (FEP), thereby providing a more comprehensive understanding of the biological, social, and economic impacts of management necessary to initiate the transition from single species management to ecosystem-based management in the region.

The South Atlantic Fishery Management Council developed the Fishery Ecosystem Plan (FEP) II as a mechanism, in cooperation with NOAA Fisheries, to incorporate ecosystem principles, goals, and policies into the fishery management process. A core part of the FEP II development process involved engaging the Council's Habitat Protection and Ecosystem Based Management Advisory Panel and regional experts in developing new Sections and ecosystem specific policy statements to address South Atlantic food webs and connectivity and South Atlantic climate variability and fisheries. In addition, the Council also updated standing essential fish habitat policy statements and developed a new artificial reef habitat policy statement. In combination, these statements advance habitat conservation and the move to ecosystem-based fishery management (EBFM) in the region and provided a foundation to develop the FEP II Implementation Plan. Council policies developed through the process support data collection, model and supporting tool development, and implementation of Fishery Ecosystem Plan II. The FEP II, the FEP II Implementation Plan, and this roadmap also provide a metric for determining the incorporation of ecosystem considerations into the management process.

To help facilitate this transition, the Council worked cooperatively with the University of British Columbia and the Lenfest Sea Around Us project to develop a straw-man and preliminary food web models (Ecopath with Ecosim) to characterize the ecological relationships of South Atlantic species, including those managed by the Council. This effort was envisioned to help the Council and cooperators in identifying available information and data gaps while providing insight into ecosystem function. More importantly, the model development process provides a vehicle to identify research necessary to better define populations, fisheries, and their interrelationships.

A second collaboration built on the initial Ecopath model developed through the Sea Around Us project for the South Atlantic Bight with a focus on potential changes in forage fish populations in the region that could be associated with environmental or climate change or changes in direct exploitation of those populations.

As part of the FEP II development process a new generation South Atlantic ecosystem modeling effort funded by the South Atlantic Landscape Conservation Cooperative (SALCC), is being conducted to engage a broader scope of regional partners. This effort is drawing on existing ecosystem and other supporting models to facilitate development of a suite of ecosystem models ultimately providing evaluation tools for the SSC and Council. A new Ecopath model is under development and supporting model inputs through regional partners to refine links between the SAFMC FEP II and other regional conservation planning efforts.

11.4. Action

- Consider forming a workgroup for this project to facilitate SSC input when needed and SSC review of the final model upon completion.

12. COUNCIL WORKPLAN UPDATE

12.1. Documents

Attachment 26. SAFMC Work Plan, September 2018
Attachment 27. SAFMC Amendments Overview, September 2018

12.2. 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.

- CMP Framework 6 (King Mack Trip Limits) – Christina Wiegand
- CMP Amendment 31 (Atl. Cobia Management) – Christina Wiegand
- Corals Amendment 10/Golden Crab Amendment 10/Shrimp Amendment 11 (Access Areas) – Chip Collier
- Fishery Ecosystem Plan – Roger Pugliese
- SG Amendments 43 & 46 (Red Snapper & Recreational Reporting) – Chip Collier
- SG Commercial and Recreational Visioning Amendments – Myra Brouwer
- SG Regulatory Amendment 32 (Yellowtail Snapper) – Myra Brouwer
- SG Amendment 38 (Blueline Tilefish) – Roger Pugliese
- SG Regulatory Amendment 29 (Best Fishing Practices) – Christina Wiegand
- SG Amendment 42 (Sea Turtle Release Gear) – Christina Wiegand
- SG Regulatory Amendment 30 (Red Grouper Rebuilding) – John Hadley

- SG Amendment 47 (For-Hire Permit Modifications) – John Hadley
- Spiny Lobster Regulatory Amendment 4 (ACL and Rec Traps) – Christina Wiegand
- Spiny Lobster Amendment 13 (Coord Management w/FL) – Christina Wiegand
- DW Amendment 10 (Adaptive Management for Dolphin) – John Hadley
- Joint Commercial Logbook Amendment – John Carmichael
- Bycatch Reporting Amendment – Chip Collier
- Recreational AMs (SG Reg 31/CMP Framework 7/DW Reg 2) – Brian Cheuvront
- Abbreviated Framework 2 (Fishing levels for Black Sea Bass and Vermilion Snapper) – Brian Cheuvront

12.3. Action

- No specific actions required

13. PUBLIC COMMENT

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

14. OTHER BUSINESS

15. 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, November 13, 2018 (approximately 3 ½ weeks from the end of the meeting) for inclusion in the first briefing book for the December Council meeting.

16. NEXT MEETINGS

16.1. SAFMC SSC MEETINGS

2019 Tentative Meeting Dates

Spring

- April 9-11, 2019 in Charleston, SC
- April 23-25, 2019 in Charleston, SC

Fall

- October 15-17, 2019 in Charleston, SC
- October 22-24, 2019 in Charleston, SC

16.2. SAFMC Meetings

2018-2019 Council Meetings

December 3-7, 2018 in Kitty Hawk, NC
March 4-8, 2019 in Jekyll Island, GA
June 10-14, 2019 in Stuart, FL
September 16-20, 2019 in Charleston, SC
December 2-6, 2019 in Wilmington, NC

ADJOURN