

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE



SSC Meeting Report

April 26-28, 2022

Town and County Inn

Charleston, SC

**VERSION
Final
May 25, 2022**

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Documents:

- Attachment 1. Minutes of the February 2022 meeting
- Attachment 2. SAFMC Public Comment Process
- Attachment 3a. Catch level projections workgroup – final report
- *Attachment 3b. Catch level projections workgroup – presentation
- *Attachment 4a. Goliath grouper ABC review plan – presentation
- ~~*Attachment 5a. Interim analysis strategy – document~~
- ~~*Attachment 5b. Interim analysis strategy – presentation~~
- *Attachment 6. Estimation of US Atlantic Red Snapper Abundance – presentation
- *Attachment 7. Release mortality reduction framework – presentation
- Attachment 8. Deepwater longline survey 2021 update – presentation
- Attachment 9. Blueline tilefish operational assessment terms of reference
- *Attachment 10. SEP meeting summary (post-meeting material)
- Attachment 11. SERFS fishery independent survey update – presentation
- Attachment 12a. Gag scope of work
- Attachment 12b. King Mackerel scope of work
- Attachment 12c. Red Pogy scope of work

* Indicates documents not available for the Briefing Book. These will be distributed as they become available and added to the Late Materials folder.

Background Information:

- Background 3c. Van Beveren et al. 2021. Forecasting fish recruitment in age-structured population models. *Fish and Fisheries* 22(5): 941-954
- *Background 3d. Klaer et al. 2015. How much evidence is required for acceptance of productivity regime shifts in fish stock assessments: Are we letting managers off the hook? *Fisheries Research* 168: 49-55
- Background 4b. SEDAR 47 Southeastern Goliath Grouper Stock Assessment Report

Appendices:

- Appendix A. SEP Final Report
- Appendix B. Blueline Tilefish 2022 Operational Assessment Terms of Reference
- Appendix C. Red Pogy Operational Assessment Scope of Work
- Appendix D. King Mackerel Operational Assessment Scope of Work
- Appendix E. Gag Operational Assessment Scope of Work

1. INTRODUCTION

1.1. Documents

- SSC Revised Agenda: April 2022
- Attachment 1. Minutes of the February 2022 meeting

1.2. Action

- Introductions
- Review and Approve Revised Agenda
 - *Interim analysis presentation and discussion postponed*
- February Meeting Minutes
 - *Approved without modification*

2. PUBLIC COMMENT

The public is provided this comment period for any general comments pertaining to any items on the agenda. There will also be time provided for public comment during each specific agenda item as they are discussed. Those wishing to make comment should indicate their desire to do so to the Committee Chair.

2.1. Documents

Attachment 2. SAFMC Public Comment Process

No public comment provided.

3. CATCH LEVEL PROJECTIONS WORKGROUP

3.1. Documents

Attachment 3a. Catch level projections workgroup – final report
*Attachment 3b. Catch level projections workgroup – presentation
Background 3c. Van Beveren et al. 2021 *Fish and Fisheries*
*Background 3d. Klaer et al. 2015 *Fisheries Research*

3.2. Presentation

Dr. Amy Schueller, SEFSC

3.3. Overview

The SSC has recently recommended different approaches to making recruitment assumptions in catch level projections for different stocks. To date, these recommendations have been made on a case-by-case basis in response to apparent trends or new patterns in recruitment relative to the perceived historical productivity of the stock. The SSC requested an opportunity to comprehensively review recent SSC decisions and available literature on the topic, and to develop recommendations for how recruitment assumptions be made in projections used to provide catch level recommendations. An SSC workgroup was formed to address these requests,

which met on eight separate occasions from September 2021 to April 2022. An extensive review of the more recent literature on recruitment forecasting produced several useful references that provided key pieces of information for meeting workgroup objectives. Most notably, Van Beveren et al (2021) undertook a comprehensive simulation study to evaluate the forecast skill of a wide range of recruitment forecasting methods under various circumstances, and this review was instrumental in helping guide workgroup recommendations. In addition to the recommendations for the catch level projections and the longer-term rebuilding and benchmark projections, the workgroup also recommended some additional information to be included in stock assessment reports, as well as future research recommendations.

3.4. Public Comment

No public comment provided.

3.5. Action

- *The SSC adopted the workgroup recommendations outlined in the report as best practices with the following modifications and added emphasis:*
 - *Recommendations for short-term forecasts for ABC determination*
 - *Short-term forecasts for ABC determination should be limited to a maximum of 5 years.*
 - *Short-term forecasts should use recent mean recruitment when setting short-term ABCs (see guidance below for long-term rebuilding projections).*
 - *In some circumstances, short-term ABCs may be set using a different recruitment assumption than long-term rebuilding scenario projections. The SSC emphasized the need for extreme clarity in our reports when describing the justification for such an ABC recommendation. Our report should include an explicit description of the data limitations, relevant model assumptions, and potential implications for management of using different recruitment timeframes in setting short-term ABCs vs. long-term rebuilding projections.*
 - *Recommendations for long-term forecasts for determining rebuilding and benchmarks*
 - *The SSC approved adoption of the working group's recommendation to use a 4-tiered approach to making recruitment assumptions in long-term forecasts used for calculating benchmarks and conducting rebuilding scenarios. Please see the working group's report for details on when these four tiers would be utilized.*
 - *Type A: Forecast using average recruitment and historic variability*
 - *Type B1: Forecast using stock-recruit relationship and historic variability*
 - *Type B2: Forecast using time series properties or environmental correlates*

- *Type C: Forecast using S-R model, with time-series or environmental correlates that affect longer term processes included.*
- *The SSC approved adoption of the working group’s recommendations regarding products generated by stock assessments that should be included in all reports to support ABC setting with the following modifications:*
 - *Requests for recruitment/projection-related analyses in support of ABC-setting should be incorporated as recommendations in all future Statements of Work.*
 - *The SSC emphasized the importance of conducting post-hoc analysis of previous projection performance and recommended that this be prioritized in all future Statements of Work.*
 - *The SSC expressed support for continued data preparation and simulation analysis work to develop an interim analysis approach to set ABCs. Such simulation analyses could inform decisions regarding the appropriate timeframe for projections used to set ABCs.*
 - *The SSC noted that it may deviate from the working group’s recommendations if evidence from interim analyses suggests alternative recruitment assumptions are more appropriate for projections.*
 - *On pdf page 16 of the working group’s report under sub-bullet ‘i’, the SSC added the specific guidance to use autocorrelation and partial autocorrelation analysis to inform the choice of projection timeframe used in short-term recruitment projections within the maximum timeframe of 5 years.*
 - *The SSC noted that the report focuses on methods of characterizing recruitment uncertainty used in the Beaufort Assessment Model. The SSC expanded upon the working group’s recommendations to include other modeling frameworks. All stock assessments should characterize recruitment uncertainty, regardless of the modeling framework, and the strengths and limitations of each modeling approach should be considered when setting ABCs. The SSC should be explicit in describing to the Council how the resulting ABCs are influenced by choice of modeling framework (e.g., BAM (MCBE), Stock Synthesis (MCMC), etc.).*
- *Future research recommendations*
 - *The SSC recommended the last bullet on the bottom of pdf page 16 in the working group report be edited to clarify the text as follows: “Explore autocorrelation from recent recruitment, proportional variability in full recruitment time series, and age at 50% maturity for species in the South Atlantic”.*
 - *The SSC requested a briefing at a future meeting on the final results of research being conducted at the SEFSC Beaufort*

Laboratory comparing recruitment patterns among South Atlantic stocks and exploring potential environmental influences.

4. GOLIATH GROUPEL ABC REVIEW PLAN

4.1. Documents

*Attachment 4. Goliath grouper review plan presentation

4.2. Presentation

Dr. Judd Curtis, SAFMC Staff

4.3. Overview

At their March 2022 meeting, the SAFMC passed a motion to request the SSC reconsider the current ABC (set at 0) for Goliath Grouper in South Atlantic federal waters. The request to reconsider the ABC was made following the Florida Fish and Wildlife Commission's approval of a limited, highly regulated recreational harvest for the species in Florida state waters beginning Spring 2023. Harvest of Goliath Grouper has been prohibited for decades, following years of overfishing. During the most recent stock assessment, SEDAR 47 (2014), the review panel (RP) concluded that the assessment did not constitute best scientific information available. The RP had several areas of concern including the data that were available, the treatment of the available data, the high degree of uncertainty associated with the catch and indices of relative abundance, and the structure of the chosen assessment models. The RP recommended that this assessment was not adequate to support status determination and should not be used for management advice. The SSC reviewed this assessment in October 2016 and accepted the recommendations of the RP. In particular, they agreed with the RP's research recommendations for exploring alternative assessment models and critical data needs. More recent data indices and new data streams have become available or updated since this last stock assessment. The SSC should list and discuss these data sources and other available information at the April SSC meeting and outline an approach for a more thorough SSC review of these data at the October meeting.

4.4. Public Comment

Public comment was provided. See meeting minutes.

4.5. Action

- *The SSC expressed concern that traditional stock assessment approaches are unlikely to produce management advice for Goliath Grouper, and that our ABC-Control Rules (both current and potential future changes now under consideration) do not accommodate stocks with no recent catch time series. This creates a roadblock in the typical stock status determination and catch level determination process.*

- *The SSC recommends establishing a process for data collection, analysis, and assessment for setting catch levels for stocks with $ABC=0$. This process would impact not only Goliath Grouper, but also other Council-managed species such as Speckled Hind and Warsaw Grouper.*
- *The SSC recommends the Unassessed Stocks Working Group be tasked with brainstorming new and perhaps non-traditional approaches to assessing Goliath Grouper and other species with a recent $ABC=0$.*
 - *Explore options for assessing stock dynamics using historical catch and indices that span the pre- and post-fishery closure. This may allow historical landings data to inform estimation of the magnitude of the stock (i.e., abundance/biomass) and how it has changed over time, assuming the index/indices used are proportional to abundance across the time series considered. This approach will require a relatively simple, but custom-built modeling approach that must be developed.*
 - *Other approaches that incorporate reliable indices that span pre- and post-fishery closure.*
- *Recommendations specific to Goliath Grouper:*
 - *Consider any new data streams and updated indices since last stock assessment.*
 - *The SSC recommends the Unassessed Stocks Working Group provide a summary of progress made on research recommendations from the last assessment (SEDAR47). This will help characterize the utility of new and updated data for assessment and catch level determination purposes.*
 - *The SSC suggests exploring the utility of both new and old sources of information, including but not limited to:*
 - *Identification of additional spawning aggregation locations, which could be indicative of a growing population, including ongoing acoustic telemetry research*
 - *Any information on the connectivity between juvenile (inshore) and adult (offshore) components of the stocks*
 - *Genetic samples from any sources (limited harvest or catch and release) to estimate population size (e.g., close kin-analysis methods)*
 - *Indices of abundance from the following sources:*
 - *Nearshore/Florida waters*
 - *REEF citizen science program diver program*
 - *Everglades national park juvenile index*
 - *Great Goliath Grouper count (contact: Angela Collins)*
 - *RVC - reef visual census (University of Miami)*
 - *Offshore/Federal waters*

- *SERFS video surveys - updated indices*
- *Revised/updated MRIP data*
- *The SSC expressed support for the collection of biological and catch location data associated with the fish harvested through the FWC's new, limited recreational harvest program. However, the SSC cautioned that the limited (from 200 young fish, maximum) data collected in state waters may not be reflective of the size distribution of the offshore population in federal waters and may be of limited utility in informing the ABC.*
- *The SSC recommends exploring the use of inverse sampling methods to generate an index of abundance from MRIP or other survey data.*
- *The Council may wish to consider development of a carefully planned and scientifically designed experimental fishery with strict reporting requirements to gather more data (a research recommendation from SEDAR47). Alternatively, the Council may wish to consider development of a non-retention fishery given MSA contains provisions for catch-and-release-only fisheries. However, an ABC for either a retention or non-retention (e.g., discards) fishery would still need to be generated from existing data prior to the implementation of such a fishery (see recommendations below).*
- Determine what analysis is needed to reconsider an ABC currently set at 0.
 - *To reconsider catch levels for a stock with a current ABC=0 and no catch information, the SSC would require information about both the magnitude of the population (i.e., abundance or biomass) and an estimate (or more likely a proxy for MSY), and associated benchmarks for stock status determination. A population size estimate alone will not provide the information the SSC needs to estimate a proxy for MSY.*
 - *The SSC suggested exploration of new and more advanced approaches to estimation of population size (e.g., close kin mark-recapture, traditional tagging, acoustic telemetry, etc.) that have been developed since the last assessment as well.*
 - *The SSC also suggested exploration of inverse sampling methods and proportional catch analysis to estimate abundance using bycatch/co-occurrence data from the existing fishery.*
- Outline an approach for review of these data.
 - *New/updated data sources and recommended assessment strategies to explore should be reviewed by the SSC and considered for inclusion in future assessment SOWs.*

SSC RECOMMENDATION:**5. INTERIM ANALYSIS STRATEGY (*Postponed because materials were received too late for review*)****5.1. Documents**

~~*Attachment 5a. Interim analysis strategy—document~~

~~*Attachment 5b. Interim analysis strategy—presentation~~

5.2. Presentation

~~Dr. Nikolai Klibansky and Dr. Cassidy Peterson, SEFSC~~

5.3. Overview

~~We conducted a management strategy evaluation (MSE) to investigate how management procedures that adjust catch advice between stock assessments performed compared with existing management procedures. We built operating models (OM) for four reef fish species from the US Southeast Atlantic, based on recent stock assessments including Black Sea Bass, Red Porgy, Snowy Grouper, and Vermilion Snapper. These OM contained parameters and data specific to each stock, associated fisheries, and the sampling programs that monitor them. The analysis assumed efficient implementation of management, such that observed catch was equal to total allowable catch (TAC). Our analysis focused on a base scenario intended to most closely characterize the reality of each stock. We also developed multiple alternative scenarios to investigate the sensitivity of the analysis to deviations from the base configuration. A set of management procedures (MP) was applied independently in closed loop simulation for each species and scenario, with many replicate runs. The MP varied in terms of how often stock assessments were conducted (every 1, 5, or 10 years), and how catch advice (i.e. TAC) was adjusted between stock assessments. Between assessments, TACs were either fixed, adjusted based on projections, or adjusted based on a reference index of abundance. Results varied among species and scenarios, but generally showed that healthy stock and fishery status ($SSB > SSB_{MSY}$ and $F < F_{MSY}$) and comparable levels of total catch could be maintained with stock assessments conducted every 1, 5 or 10 years, whether TACs were fixed, projected, or adjusted based on indices of abundance. But these management procedures vary in terms of average annual variability in yield (AAVY), which was highest when TACs were adjusted based on indices of abundance and lowest when TACs were fixed between assessments.~~

5.4. Public Comment**5.5. Action**

- ~~● Review, discuss, and provide feedback on the interim analysis strategy~~

- ~~Can interim analysis be a tool to improve management during the interval between assessments? If yes, how should it be implemented?~~
 - ~~What hurdles might the SSC run across in recommending/adopting new recommendations or actions based on interim analysis?~~
 - ~~How would the interim analysis strategy integrate with the proposed ABC control rule?~~
- ~~To what degree can/should interim analysis replace current stock assessments or reduce the frequency of full stock assessments?~~
- ~~Does the SSC have any advice for next steps in studying the effectiveness of interim analysis? (e.g., Is more simulation analysis required? Does this need to be done for more species?)~~

SSC RECOMMENDATION:

6. ESTIMATION OF US ATLANTIC RED SNAPPER ABUNDANCE

6.1. Documents

*Attachment 6. Estimation of US Atlantic Red Snapper Abundance – presentation

6.2. Presentation

Dr. Will Patterson, University of Florida

6.3. Overview

The SSC will receive an update on the progress of the Estimation of US Atlantic Red Snapper Abundance project that is estimating an absolute abundance of Red Snapper in the U.S. South Atlantic through the combined use of ROV visual surveys and genetic close-kin mark and recapture techniques using fin clip tissue analyses. The absolute abundance estimate generated from this study will serve as an independent estimate that will integrate into the next research track stock assessment for Red Snapper scheduled to begin in 2024.

6.4. Public Comment

No public comment provided

6.5. Action

- Comment and provide feedback
 - *Data and information from this study can be used to inform future EwE and habitat models.*
 - *The SSC requested an update on program progress at our next spring meeting, and to be alerted to any major potential obstacles that are encountered in the interim, if possible.*
- Discuss how this estimate will be integrated into next Red Snapper stock assessment process.
 - What potential obstacles might there be in using these data?
 - *The SSC noted that it may be difficult to reconcile differences between the two different methods of producing abundance estimates if they are statistically different.*
 - *SEFSC should outline a proposal and analytical strategy for the integration of the external abundance estimate in advance of the Research Track assessment. For example, the approach outlined on slide 22, 1A (below) should be doable before the Research Track assessment.*
 - *Slide 22, 1A: Scale the current assessment model to the externally derived abundance estimates (with error)*
 - *The SSC recommends that council staff form a sub-group of key members from the project team, SEFSC, Council/staff, and SSC to determine how interim analyses might be used to inform ABC-setting prior to completion of the research track assessment and subsequent operational assessment, if requested.*

7. RELEASE MORTALITY REDUCTION FRAMEWORK

7.1. Documents

*Attachment 7. Release mortality reduction framework – presentation

7.2. Presentation

Dr. Mike Schmidtke, SAFMC staff

7.3. Overview

In March 2022, the Council initiated a regulatory amendment to reduce release mortality in the snapper grouper fishery and implement catch levels for Red Snapper based on the SEDAR 73 stock assessment. SEDAR 73 indicating that the South Atlantic Red Snapper stock is overfished and experiencing overfishing but is making adequate progress according to its current rebuilding plan. The assessment indicated that the majority of Red Snapper fishing mortality occurs as release mortality rather than through landings. While increased use of best practices, including descending devices, has increased survival rates for released fish, the high number of Red Snapper caught out of season has continued the high number of fish estimated to die as a result of being caught and released. Therefore, the Council is investigating potential management measures to reduce out-of-season encounters for Red Snapper as well as other snapper grouper species, including time, area, and depth-based restrictions. As part of the information gathering process, Council staff is compiling biological, socioeconomic, information on the Snapper Grouper fishery that are relevant to seasonality of the fishery, effort within the fishery, and previous Council efforts to examine similar time, area, and depth-based restrictions.

7.4. Public Comment

No public comment provided

7.5. Action

- Overall comments:
 - *The SSC applauds the Council for pursuing regulatory action to reduce discard mortality for the snapper grouper fishery.*
 - *To significantly reduce discard mortality, reducing encounters and effort is paramount. Long-term management strategies need to focus on these reductions in order to enable greater harvest to occur.*
 - *The SSC emphasized that F-rebuild is much lower than F-current and thus dramatic reductions in overall fishery effort to reduce discards will be required. Small changes that allow only a slight reduction in effort or discard mortality rates will not be sufficient to address the challenges facing this fishery and successful rebuilding of Red Snapper.*
 - *To reconsider catch levels, a robust analysis of how efficient each proposed regulation would be needs to be conducted within the short time frame of this amendment. Substantial data, analyses, and review would be required in a very short time frame for meaningful changes in the Red Snapper ABC to occur. Given the short amendment timeframe and limited data availability, it will be incredibly difficult to thoroughly quantify the potential impact of any of these management measures. A higher degree of uncertainty surrounding the potential impact of these management strategies and how they affect discard reductions may need to be accepted by the SSC to make initial progress.*
 - *In the short-term (for this regulatory amendment), the SSC recommends pursuing temporal/spatial reductions (possibly wave-based) in bottom*

- fishing. Seasonal differences among regions within the South Atlantic should be considered when developing these regulations, if possible. The bulk of recreational discards for Red Snapper are occurring off the East Coast of Florida; thus, spatial closures may be most effective in this area.*
- *Spatial reductions by depth may be less effective in the South Atlantic as compared to the West Coast, for example, where barotrauma complications account for majority of discard mortality. A smaller proportion of Red Snapper caught in the US South Atlantic suffer from barotrauma. Also, spatial closures based on depth would need to first identify if different species have different ecological niches, and take into account the community composition, co-occurrence of species, and fleet dynamics as functions of depth.*
 - *Effectiveness of gear restrictions/changes to reduce discard mortality will be difficult to quantify within the short time frame of this amendment and should only be considered in the suite of longer-term solutions.*
 - *Similarly, the option to develop a federal recreational permit to quantify effort and potentially limit the number of anglers would be useful, but will require a much longer timeframe for implementation.*
 - Discuss uncertainty of proposed mechanisms for reducing discards. What data or analyses could improve efforts to quantify the impact of regulations directed at reducing releases and discard losses?
 - *Angler/fisher behavioral response to new regulations is highly uncertain and may result in unintended consequences that may be counterproductive. The SSC recommends literature from other regions be examined to potentially inform how changes in management might result in changes in fisher behavior.*
 - *Compensatory effects of reducing discards may result in higher encounter rate and higher catch rates*
 - *We are concerned that discard information (for both commercial and recreational sectors) is largely unvalidated and may not be accurate for the snapper-grouper complex.*
 - *Key issues of concern:*
 - *a) the majority of commercial discard information and all recreational discard information is self-reported*
 - *b) commercial logbooks only represent ~15% of trips*
 - *c) Logbook reports of 'zero discards' have increased from 30% to between 60-70% more recently in the commercial sector, which may indicate substantial underreporting of discards.*
 - Would reducing the number of Red Snapper that are discarded dead provide an opportunity for increased harvest?

- If yes,
 - How would shifting yield from discards to harvest affect assessment uncertainties and efforts to prevent overfishing?
 - Are additional projections required for the SSC to provide an updated ABC that reflects the change in discard removals?
- If no, explain.

In the short-term, this is highly unlikely. F-rebuild is substantially lower than F-current. Thus, dramatic reductions in overall fishery effort and total discards will be required. Options that go beyond the absolute minimum to stop overfishing from discards could allow more directed fishing and should be considered in the list of alternative management actions.

8. SEFSC 2021 DEEPWATER LONGLINE SURVEY

8.1. Documents

Attachment 8. SEFSC 2021 deepwater longline survey – presentation

8.2. Presentation

Dr. Todd Kellison, SEFSC

8.3. Overview

The SSC will receive an update on the SEFSC deepwater longline survey with sampling efforts and results through 2021.

8.4. Public Comment

No public comment provided

8.5. Action

- No specific actions needed.

9. BLUELINE TILEFISH OPERATIONAL ASSESSMENT TERMS OF REFERENCE

9.1. Documents

Attachment 9. Blueline Tilefish operational assessment terms of reference

9.2. Presentation

Kathleen Howington, SEDAR Staff

9.3. Overview

The SSC is asked to review and provide comments and feedback on the draft SEDAR operational assessment terms of reference for Blueline Tilefish.

9.4. Public Comment

No public comment provided

9.5. Action

- *See recommended revisions (attachment)*

10. SEP MEETING SUMMARY

10.1. Documents

*Attachment 10. SEP meeting summary (*Appendix A*)

10.2. Presentation

Dr. Scott Crosson, SEP/SSC

10.3. Overview

The SSC will receive a summary of topics discussed at the SEP meeting. The SEP meeting summary and report will be added to the final SSC report.

See Appendix A for SEP Final Report

10.4. Public Comment

No public comment provided

10.5. Action

- none

11. SOUTHEAST REEF FISH SURVEY (SERFS) UPDATE

11.1. Documents

Attachment 11. Southeast Reef Fish Survey update – presentation

11.2. Presentation

Dr. Tracey Smart, SCDNR

11.3. Overview

The SSC will receive an update on the Southeast Reef Fish Survey (SERFS) sampling efforts and results through 2021.

11.4. Public Comment

No public comment provided

11.5. Action

- No specific actions required.

12. SCOPES OF WORK FOR 2025 OPERATIONAL ASSESSMENTS

12.1. Documents

Attachment 12a. Gag scope of work
Attachment 12b. King Mackerel scope of work
Attachment 12c. Red Porgy scope of work

12.2. Presentation

Dr. Chip Collier, SAFMC staff

12.3. Overview

The SSC is asked to review the draft scopes of work planned for 2025, which include Gag, King Mackerel, and Red Porgy, and provide comments and feedback for the upcoming operational assessments. Staff divided the research recommendations from the previous assessment into categories. The SSC should discuss and provide requested model modifications appropriate for an operational assessment.

12.4. Public Comment

No public comment provided

12.5. Action

- Review draft Scopes of Work and provide comments
- *See recommendations on SOWs (attached to SSC report as appendices)*
- *General Comments:*
 - *Incorporate recommendations from catch level projections report for recommendations for SOWs*
 - *Research recommendations pulled from previous assessments → are better suited for different section than 'Model Modifications?'*

- *Retain more recent items that contain known research/data into ‘model modifications’ and make new section with ‘Future research recommendations/informational needs’*
 - *Include Abundance and Catch time series analyses to inform projection timeframes such as:*
 - *Autocorrelation and partial autocorrelation functions*
 - *Correlation matrix across species if estimates could inform single species assessments if possible*
 - *Research recommendations from previous assessments (short term and long term) are reviewed by SSC every two years. Need to make more visible on website (when ready) and compiled into one document.*
 - *Recommend that methods to characterize length and age composition data from SERFS video surveys for inclusion in future assessments (OA or RT) be investigated in the next research track assessment*
 - *Consult SSC reports from reviews of previous assessments when constructing new SOWs*
- *Gag OA (previous SEDAR71)*
 - *Research Track Assessment: add exploring distribution shifts (for both juveniles and adults). Estuarine survey data that contains juvenile gag encounters should be explored.*
 - *Operational Assessment: Include Abundance and Catch time series analyses to inform projection timeframes such as:*
 - *Autocorrelation and partial autocorrelation functions*
 - *Correlation matrix across species if estimates could inform single species assessments if possible*
 - *Topical working group:*
 - *Include recruitment research as TWG1 if additional data sources for this species are available that necessitate a TWG.*
 - *Include TWG2: “If new data are available, better characterize repro dynamics.”*
 - *If these TWGs occur, they will be conducted as webinars*
- *King Mackerel OA (previous SEDAR 38U)*
 - *Carefully examine the correlation among parameters and determine the level of correlation. Determine what is underlying cause of high max gradient (see edits in SOWs)*
 - *Include Abundance and Catch time series analyses to inform projection timeframes such as:*
 - *Autocorrelation and partial autocorrelation functions*
 - *Correlation matrix across species if estimates could inform single species assessments if possible*
 - *Run a sensitivity analysis with FISHstory length data (1950s - 1970s) to supplement existing charter fleet data. No length data*

from the charter fleet was used in previous assessment for this time period.

- *Red Porgy OA (previous SEDAR60)*
 - *Previous EwE model that examined high recent recruitment of red snapper impacts on other species → Research recommendation to examine negative relationship between red snapper and red porgy*
 - *Include Abundance and Catch time-series analyses to inform projection timeframes such as:*
 - *Autocorrelation and partial autocorrelation functions*
 - *Correlation matrix across species if estimates could inform single species assessments if possible*
 - *Negative correlations with red snapper and red lionfish*
 - *Reduced recruitment in winter spawners may be due to climate change; are there results or data that can be incorporated into the operational assessment?*
 - *Truncation for the distribution of the species - shift towards the center of distribution*

13. FISHERY MANAGEMENT PLAN AMENDMENT UPDATES

13.1. Documents

none

13.2. Presentation

Myra Brouwer and Dr. Judd Curtis, SAFMC staff

13.3. Overview

The SSC will receive an update on the various fishery management plan amendments currently being considered by the Council, and the decisions made on previous amendments that were reviewed by the SSC.

13.4. Public Comment

No public comment provided

13.5. Action

- No specific actions needed.

14. OTHER BUSINESS

- SEDAR78: South Atlantic Spanish Mackerel operational assessment update – SEDAR Staff

- *Scheduled to be ready by end of May; review at August 4th SSC meeting (webinar)*
- Yellowtail Snapper interim analysis timeline – SEDAR Staff
 - *Scheduled to be ready by early June; review at August 4th SSC meeting (webinar). Joint review by Gulf and South Atlantic SSCs*
- SEDAR79: Mutton Snapper benchmark assessment update – SEDAR Staff
 - *Postponed until July 2023, will include terminal data through 2022.*
- EwE operating model and MSE update – SAFMC staff
 - *Explore EwE forecasting of simulated recruitment and correlation among species in the model of intermediate complexity for ecosystems (MICE) model and compare with autocorrelation among species from assessments.*
 - *SSC member to serve as point person – Dr. Jie Cao*
- National SSC meeting participation and presentation questions

15. PUBLIC COMMENT

None provided.

16. CONSENSUS STATEMENTS AND RECOMMENDATIONS REVIEW

The Final SSC report will be provided to the Council by 9:00 a.m. on Friday, May 20th (approximately 3 weeks from the end of the meeting) for inclusion in the briefing book for the June Council meeting.

17. ELECTIONS

- Nominations for Chair: Jeff Buckel, approved
- Nominations for Vice-Chair: Fred Scharf, approved

18. NEXT MEETINGS

- 2022 Scientific and Statistical Committee Meeting Dates:
 - August (webinar) – August 4th, 9am – 5pm
 - October 2022 in Charleston, SC – dates TBD
 - April 2023 in Charleston, SC – dates TBD (earlier in April)
- 2022 Council Meetings
 - June 13-17 in Key West, FL
 - September 12-16 in Charleston, SC
 - December 5-9 in Wrightsville Beach, NC

ADJOURNED AT 12 P.M. EDT, APRIL 28TH, 2022

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

**SOCIO-ECONOMIC PANEL OF THE
SCIENTIFIC AND STATISTICAL COMMITTEE**



SEP Meeting Summary Report

April 25-26, 2022

Held in Charleston, SC

PURPOSE

This meeting is convened to discuss and provide input to the Scientific and Statistical Committee (SSC) and the South Atlantic Fishery Management Council (Council) on:

- Recent and developing Council actions and amendments,
- Citizen Science Program
- Research on alternative mechanisms for distributing fish to the recreational sector
- Allocation Decision Tool and stakeholder input for allocations,
- Best Fishing Practices outreach lexicon,
- Update on Snapper Grouper Regulatory Amendment 35,
- South Atlantic commercial golden tilefish fishery.

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Attachment 1a. Socio-Economic Panel Agenda Overview

Attachment 1b. Minutes from the April 2021 meeting

Attachment 2. Recent and Developing South Atlantic Council Amendments

Attachment 3. Citizen Science Program update presentation

Attachment 4. Using field experiments to assess alternative mechanisms for distributing fish to the recreational sector presentation

Attachment 5a. Allocations Decision Tool discussion document

Attachment 5b. Stakeholder input for allocations discussion document

Attachment 5c. Allocations Decision Tool presentation

Attachment 6. Best Fishing Practices outreach guidance

Attachment 7. Regulatory Amendment 35 update presentation

Attachment 8. Comparison of Tilefish Longline Behavior in the South Atlantic and Gulf of Mexico presentation

1. Introduction

1.1. Documents

- **Attachment 1a.** Socio-Economic Panel Agenda Overview
- **Attachment 1b.** Minutes from the April 2021 meeting

1.2. ACTIONS

- Introductions
- Review and approve the agenda
- Approve April 2021 Minutes
- Opportunity for public comment

The SEP approved the agenda and last year's meeting minutes. There was no public comment before the meeting.

2. Recent and Developing Council Actions

2.1. Document

- **Attachment 2.** Recent and Developing South Atlantic Council Amendments

2.2. Overview

Council staff will provide a briefing on recent and upcoming amendments and actions (*Attachment 2*). The following amendments may be of particular interest to SEP members.

Amendment 48 (Wreckfish ITQ Program Modernization)

Purpose of Amendment: The Council finished its second review of the Wreckfish ITQ program in September of 2019. As part of the review there were several recommendations made to modernize the program, which will be addressed in this amendment. The amendment also includes review of the ITQ goals and objectives and adoption of updated goals and objectives for the entire Snapper Grouper FMP.

Action Summary: moving away from a paper coupon-based program to an electronic program; fishing season and spawning closure; cost recovery; wreckfish permit requirement; allocation issues; offloading sites and times; and vessel monitoring system requirements.

Key Events:

- September 2020: Amendment development initiated.
- October 2020: Meeting of the Wreckfish shareholders and wholesale dealers held to discuss amendment development.

- March 2021: Scoping held during the Council meeting.
- September 2021: Decision made to have Amendment 48 come to the Council every other or every third meeting, depending on workload.
- March 2022: Council reviewed actions and alternatives.
- Spring 2022: Meeting of the wreckfish shareholders to discuss amendment development and voluntary pilot program for the commercial electronic logbook.

Amendment 52 (Golden Tilefish and Blueline Tilefish)

Purpose of Amendment: Respond to the latest stock assessment for golden tilefish (SEDAR 66). Golden tilefish are not overfished and overfishing is not occurring. The amendment would also respond to increased recreational effort on blueline tilefish.

Action Summary: Adjust catch levels and sector allocations for golden tilefish, consider modifications to commercial seasons (longline and hook-and-line) and recreational postseason accountability measures. Adjust the recreational bag limit and season for blueline tilefish and modify recreational postseason accountability measures.

Key Events:

- June 2021: Plan amendment initiated.
- October 2021: Snapper Grouper AP provided recommendations.
- December 2021: Approved the amendment for scoping and added actions to address blueline tilefish recreational management.
- February 2022: Scoping meetings held February 1, 2, and 3.
- March 2022: The Council reviewed scoping comments.

Regulatory Amendment 35 (Release Mortality Reduction and Red Snapper Catch Levels)

Purpose of the Amendment: Respond to the latest stock assessment for Red Snapper (SEDAR 73). Red Snapper are overfished and overfishing is occurring, mainly due to the large number of Red Snapper that are released dead. Dead releases are a major issue in the snapper grouper fishery as a whole and affect many species within the complex. The amendment would consider management changes to reduce release mortality in the snapper grouper fishery that would lead to possible adjustment to the recommended ABC for Red Snapper.

Action Summary: reduce dead discards in the snapper grouper fishery as a whole and modify the Red Snapper ABC and ACLs.

Key Events:

- June 2021: The Council received the results of SEDAR 73 and requested the SSC review the recommended ABC.
- September 2021: Reviewed the SSC's recommendation and initiated amendment.
- December 2021: Reviewed the Snapper Grouper AP's feedback and an information paper. Staff directed to investigate management changes to reduce dead discards in the snapper grouper fishery such that a possible adjustment to the ABC for Red Snapper can be considered.
- Winter 2022: Initial scoping conducted January 18-February 4.
- March 2022: The Council defined a list of potential management changes to explore further and obtain SSC feedback in April 2022.

Amendment 46 (Private Recreational Permits and Reporting)

Purpose of the Amendment: Address deficiencies in recreational data through the creation of a permit and reporting requirement for private recreational anglers.

Action Summary: This amendment will investigate requiring a permit for anglers to participate in the recreational snapper grouper fishery and whether trip reporting requirements would be required.

Key Events:

- November 2020: Council suspended work on the amendment (which was initiated in 2017) and directed staff to convene a workgroup to explore approaches for a private recreational permit and reporting requirements in the South Atlantic region. The workgroup convened three times during 2021.
- December 2021: Council requested that discussion on this amendment be added to the March 2022 agenda.
- February 2022: Recreational Reporting Workgroup met and formulated recommendations for the Council's consideration.
- March 2022: Council reviewed background information, recommendations from the workgroup, and directed staff to assemble candidates for an ad hoc advisory panel to be selected in June 2022.

Holistic Approach to Snapper Grouper Fishery Management

Purpose of the Amendment: Dead releases are a major issue in the snapper grouper fishery as a whole and affect many species within the complex. The Council has directed a management strategy evaluation (MSE) project that would consider multispecies effects of potential management changes and be used to develop a more holistic approach to management of the snapper grouper fishery. The amendment will follow the MSE project and consider implementation of management changes evaluated through the MSE.

Action Summary: This amendment will provide actions intended to incorporate recommendations from the MSE project.

Key Events:

- June 2021: The Council received the results of SEDAR 73 that indicated Red Snapper is not yet rebuilt and is undergoing overfishing.
- September 2021: The Council reviewed the SSC's recommendations and provided direction to staff to begin development of a long-term amendment to revise management measures in the snapper grouper fishery.
- December 2021: The Council reviewed a proposed work plan for a management strategy evaluation for the fishery and directed staff to continue development of this project. The management strategy evaluation is intended to inform the Council on potential tradeoffs in the fishery if different suites of actions are selected. The MSE is scheduled to begin in June 2022 and take two years to complete.

Amendment 10 (Dolphin and Wahoo Management Measures)

Purpose of the Amendment: This amendment implements catch level recommendations from the Council's SSC and revises sector allocations and ACLs for dolphin and wahoo, addresses deficiencies in the recreational AMs for dolphin and wahoo, and responds to public comments received on changes needed in the dolphin wahoo fishery.

Action Summary: Revise the total ACLs, sector allocations, and accountability measures for dolphin and wahoo. Also allow the retention of dolphin and wahoo when trap, pot, or buoy gear

are onboard a vessel, remove the operator card requirement, and reduce the recreational vessel limit for dolphin from 60 fish to 54 fish.

Key Events:

- March 2016: The Council directed staff to begin development of a joint dolphin wahoo and snapper grouper amendment to examine different ways to allocate or share quota between the commercial and recreational sectors for dolphin and yellowtail snapper.
- June 2016: Approved for scoping.
- December 2016: The Council split Dolphin Wahoo Amendment 10 from Snapper Grouper Amendment 44.
- March 2017: The Council decided to stop work on the amendment until revised MRIP data were available.
- December 2018: The Council directed staff to start work again on the amendment.
- June 2020: The Council received revised catch level recommendations for dolphin and wahoo.
- March 2021: Approve for public hearings.
- June 2021: Final vote to approve amendment for submittal to NMFS.
- October 2021: The amendment was submitted to NMFS.
- May 2, 2022: Regulations effective

2.3. Presentation and Discussion

John Hadley and Christina Wiegand, SAFMC staff

2.4. ACTIONS

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

The SEP thanked Council staff for the update.

SEP RECOMMENDATIONS:

3. Update on the Citizen Science Program

3.1. Document

- **Attachment 3.** Citizen Science Program update presentation

3.2. Overview

Julia Byrd, SAFMC staff, will provide an update program activities and recent efforts of the [SAFMC's Citizen Science Program](#). Projects currently underway include FISHstory and [SAFMC Release](#). FISHstory uses historic dock photos to document species and length composition data in the charter and headboat fisheries from the 1940s-1970s prior to when dedicated catch monitoring programs began. SAFMC Release works with commercial, for-hire, and recreational fishermen to collect information on discards using a mobile app. This project

originally started by collecting information on scamp, but has recently expanded to include other shallow water grouper species and will also soon include red snapper.

The Citizen Science Program is undergoing an initial program evaluation that will gather baseline data on knowledge, attitudes, collaborations, engagement, and trust levels of various stakeholders. As part of this process, the program will conduct interviews and develop an online survey to gather necessary information.

Presentation and Discussion

Julia Byrd, SAFMC staff

3.3. ACTIONS

Provide feedback and guidance on survey related aspects of the Citizen Science Program evaluation.

Discussion Questions:

The Citizen Science Program is operating on a limited budget, keeping that in mind please consider the following questions:

1. In your experience, what can help to get a good response rate with an online survey?

For online surveys, the SEP has had positive technical results with SurveyMonkey. The SEP agreed that it has generally become more difficult to get positive feedback from both anglers and the commercial fishing community, and financial incentives in letters (such as including a couple of dollars in the envelope) are of limited utility and can generate negative blowback from respondents.

2. With limit resources, how can we try to get participants from outside the Council's typical network of people?

The SEP noted that trying to find events where fishermen aggregate en masse—like state fisheries registration and workshops. Absent that, outreach coordinators need to get good buy-in from leaders/trusted people who can promote the research for them.

3. How long should we consider keeping the survey open?

Keep it open longer than one might expect- responses come in waves, and closing too early will miss late respondents.

SEP RECOMMENDATIONS:

See comments above.

4. Using field experiments to assess alternative mechanisms for distributing fish to the recreational sector

4.1. Document

- **Attachment 4.** Using field experiments to assess alternative mechanisms for distributing fish to the recreational sector presentation

4.2. Overview

Dr. Alexander Gordan of the SEFSC will present recent research and a potential pilot project on the use of field experiments to evaluate alternative methods for distributing fish to the recreational sector. The pilot project is designed to better inform future distributions of fisheries resources allocated to the recreational sector.

4.3. Presentation

Dr. Alexander Gordon, SEFSC

4.4. ACTIONS

Evaluate the information presented, provide feedback on the nature of data to be collected from anglers in the project, and make recommendations on the project. In general, this agenda item is meant to update the SEP on research relevant to fisheries in the Southeast.

SEP RECOMMENDATIONS:

This pilot study is designed to reduce recreational discards. In the study seasonal regulations are relaxed for anglers with multi-species “day passes”. These lucky anglers could fish in aligned seasons for similar species while still subject to bag limits. This could provide significant benefit to anglers who could keep out-of-season fish instead of throwing them back. The SEP noted that any proposal to allow anglers to fish out of season for desirable species (especially red snapper) offers a strong incentive for anglers to cooperate with whatever data collection is required to participate. Researchers should not be shy about extensive data collection requirements.

Aligned seasons could have substantial benefits. Economic research using stated preference choice experiment data finds that the willingness to pay for saltwater species that are caught and kept is greater than species that are caught and released. Further, the willingness to pay for discarded fish has a wider distribution which leads to many more negative values of fish. This reflects the observation that recreational discards sometimes die causing a welfare loss to anglers.

Anglers would receive the multi-species day pass permit in exchange for logbook data. The logbook data would be used to learn more about angler behavior. The panel suggested that the logbook data should elicit information about number of trips, target species, catch, catch and release, fishing sites, and distance travel to fishing sites (e.g., zip codes).

The SEP had comments about the nature of the field experiment. Typically, a field experiment has a control group and an experimental group. As described, the plan is to only have the experimental group which is the group of anglers who receive the day passes via lottery. The panel suggested that a control group could be those anglers who apply for the lottery but do not receive a day pass in the current year but might still agree to provide logbook data. In order to incentivize data collection for anglers without day passes, NMFS could put anglers who don't receive a day pass on a waiting list in the current year or give them another chance in year 2 or 3 to get a day pass if there is attrition.

Benefits of aligned seasons could be measured in a number of ways. First, demand for the lottery would provide an initial measure of the number of anglers who would prefer to fish with aligned seasons as anglers who want to fish outside the season would apply for the lottery. If logistical concerns preclude a field experiment then NMFS could estimate a site/season demand model with the logbook data. A simulation that counterfactually closes seasons (in accordance with current regulations) could be used to estimate the willingness to pay for aligned seasons. If a true field experiment is feasible then a demand model could be estimated with both control and experimental group anglers and test for differences in willingness to pay for catch and kept and catch and released fish across group. Finally, the panel noted that it will be important to communicate the benefits of the study to anglers.

5. Allocation Decision Tree Blueprint

5.1. Documents

- **Attachment 5a.** Allocation Decision Tree Blueprint
- **Attachment 5b.** Stakeholder input for allocations discussion document
- **Attachment 5c.** Allocation Decision Tree Blueprint presentation

5.2. Overview

Making sector allocation decisions is often a difficult and complicated process. To help the Council incorporate multiple sources of information, in addition to landings, when making sector allocations, the Council has developed a Decision Tree Approach to help the determine salient issues when discussing sector allocations and develop an organized approach to allocations. Over approximately the past year, the Allocation Decision Tree Approach has been reviewed by many of the Council's advisors, including the SEP, and revised accordingly. Questions within the approach have been refined and developed into a tool that is intended to provide concise guidance when examining to biological, economic, and social aspects of allocation decisions.

To help inform answers to some of the questions within the tool, Fishery Performance Reports (FRPs) will be relied upon where appropriate, particularly social and economic portions of the reports. Fishery Performance Reports are developed by the Council's advisory panels (APs) and rely on AP members' experience and observations on the water and in the marketplace to complement scientific and landings data. As such, the Council has asked staff to create additional questions to ask AP members when developing FPRs that will help further inform aspects of the Allocation Decision Tool, focusing on changing species distribution, importance of abundance to the recreational sector, and cultural or historic significance of a species. In

addition to the FPRs, the Council would like to solicit similar information from the public through an online form similar to the [Gulf of Mexico Fishery Management Council's Fishermen Feedback](#) (formerly 'Something's Fishy') tool. This tool would be made available at the same time a fishery performance report was conducted.

5.3. Presentation

Christina Wiegand and John Hadley, SAFMC staff

5.4. ACTIONS

Discuss and provide feedback on the Allocation Decision Tool social and economic questions. Also provide feedback and recommendations on Fishery Performance Reports and the public input tool.

Discussion Questions:

1. Allocation Decision Tool questions: Economic

- a. Keeping in mind the need to focus on readily available data and completion of the decision tree in a relatively short time (several weeks to a few months), does the SEP feel that the set of questions presented covering economic topics is adequate?

The SEP indicated that given the focus on readily available data and completion of the decision tree in a relatively short time the set of questions presented cover economic topics adequately. MRIP data can be used to show the proportion of recreational anglers in a county that are state residents vs. out-of-state visitors as a measure of economic importance. Previous NOAA Fisheries survey work (<https://spo.nmfs.noaa.gov/sites/default/files/TM134.pdf> - The Economic Contribution of Marine Angler Expenditures in the United States, 2011) has outlined differences in recreational angler expenditure patterns, at the state level, that would indicate potential differences in the economic importance of recreational angler trips based on angler type. Generally, non-resident anglers spend more money on fishing trips relative to resident anglers. However, these differences were not included in the most recent version of the NOAA Fisheries report (<https://spo.nmfs.noaa.gov/sites/default/files/TM201.pdf> - The Economic Contribution of Marine Angler Expenditures on Fishing Trips in the United States, 2017) meaning the data would be outdated. Additionally, MRIP county level estimates can be based on a very small number of interviews depending on county size and, as such, estimates of angler type (resident vs. non-resident) might be inaccurate. Based on these issues the use of this data is likely not beneficial.

- i. Given the relative lack of specific and dynamic information on demand, is the use of proxies appropriate? If not, are there recommendations for solutions or other sources of information that could be used and applied in a time-sensitive manner?

The SEP did not indicate a preferred length only that longer time frames than those presented in examples might be warranted. Another demand measure to potentially consider is actual season length relative to planned season length. SEP discussion reached a general consensus that given the lack of specific and

dynamic information on demand combined with the need to complete a decision tree in a relatively short time frame the use of proxies is appropriate

- b. Are the resulting recommendations from the economic decision trees appropriate? Will they help guide allocation decisions without being too prescriptive?

The SEP felt that the recommendations from the economic decision tree were appropriate and not too prescriptive.

2. Allocation Decision Tool questions: Social

- a. Does the SEP feel that the outlined data analyses are adequate? Are there other readily available analyses or data sources that should be examined?

The SEP indicated that the outlined data analyses were adequate.

- b. Given the need to complete any decision tree related analysis in a short amount of time, what is the best way to summarize and present available qualitative data?

The SEP indicated that given the focus on readily available data and completion of the decision tree in a relatively short time the set of questions presented cover social topics adequately.

- c. Are the resulting recommendations from the social decision trees appropriate? Are they clear enough to guide allocation decisions without being too prescriptive?

The SEP felt that the recommendations from the social decision tree were appropriate and not too prescriptive.

3. Fishery Performance Report questions:

- a. Are the proposed additional discussion questions for developing the Fishery Performance Reports sufficient to gather the information needed for future discussions of allocations?

The SEP did not note any issues with the questions being asked in the FPR process.

- b. What improvements could be made to the discussion questions to produce more valuable information? Are there topics important to allocations that are missing from the Fishery Performance Reports?

The SEP did not indicate any issue with the current set of questions, but would like to review the methods of analysis used on the FER, if any.

- c. Fishery Performance Reports are time consuming to conduct with advisory panel members, are there any questions that seem redundant or unnecessary?

None noted.

4. Public Input Tool questions:

- a. The public is asked to provide input to the Council often (public hearings, meeting public comment etc.) How can staff ensure that the new public input tool stands out and isn't overly burdensome on stakeholders?

The SEP did not indicate concerns about the tool being burdensome to stakeholders and did not put forth any recommendations on how to limit the burden on stakeholders.

- b. Given constraints associated with the PRA, how can staff structure the tool to elicit information that is important for the Council's allocation discussions?

Members of the SEP brought up concerns about employing a public input tool into the allocation decision tree process, specifically that the tool could be manipulated by different stakeholder groups in an effort to maximize their allocation share. However, the SEP generally felt the tool would be beneficial to the process.

- c. Given time constraints, other than the analyses listed, are there other ways to present the data gathered through the new public input tool.

None noted.

- d. Any ideas for a catchy name for the new public input tool?

The SEP suggested the name 'Fair Catch'.

SEP RECOMMENDATIONS:

See comments above.

6. Best Fishing Practices outreach lexicon

6.1. Document

- **Attachment 6.** Best Fishing Practices outreach guidance

6.2. Overview

The Council has partnered with Sea Grant programs in North Carolina, South Carolina, Georgia, and Florida to create a new South Atlantic Reef Fish Extension and Communication Fellowship. The Fellow will be conducting outreach on best fishing practices, Citizen Science efforts, and reef fish science being undertaken in the region. Specific emphasis will be put on methods to reduce barotrauma related release mortality in the South Atlantic snapper-grouper fishery.

Outreach efforts will include media tours (chartered fishing trips) where project partners and outdoor science writers may tag along to see best fishing practices and citizen science in action. Additionally, the fellow will visit fishing tackle and sporting good shops, sportfishing clubs, and marinas to connect with fishermen, share outreach materials, and hold seminars with key

influencers in the offshore fishing community. The goal of these outreach efforts is to generate awareness and enthusiasm for best fishing practices and citizen science projects.

6.3. Presentation

Ashley Oliver and Christina Wiegand, SAFMC staff

6.4. ACTIONS

Provide feedback and guidance on Best Fishing Practices lexicon and outreach.

Discussion Questions:

1. How can staff present best fishing practices as the responsibility of an ethical fishermen without inadvertently offending fishermen or sounding unsympathetic to the practicalities of being on the water?
2. Are there key words or jargon that staff should be using (i.e., “floaters” instead of “experiencing barotrauma”) when communicating with fishermen?
3. How can staff make an immediate impression on tackle shops, considering both time and financial constraints.
4. How can staff help encourage those who are influential in fishing communities to not just utilize but share information related to best fishing practices?

SEP RECOMMENDATIONS:

Although staff have the ability to travel the coast, they are limited overall with the number of tackle shops that they can visit , so first impressions are important. The SEP noted that visiting shops is one of the best ways to conduct extension work without imposing on stakeholders, but to be respectful of the need for shops to tend to customers first and foremost. Selling additional gear to address barotrauma is probably helpful to tackle shops, but should not be emphasized as strictly a monetary incentive. Anglers tend to rely heavily on tackle shop staff as a reputable source of information that should be recognized and respected. Lead with questions to the tackle store staff and then decide which key words or jargon they think should be used. It is also better to try to stop at fewer shops initially than the current 6-10 per day. This will allow staff to make a better impression on fewer people, but those tackle shops will spread the word amongst other shops and create a large positive influence.

Marine extension agents would be useful in this regard. If materials are handed out, utilize state fishery management agency logos, as anglers are more likely to trust information from state agencies. Pilot any hand-outs and promotion materials with tackle shops before placing a final order.

7. Update on Snapper Grouper Regulatory Amendment 35

7.1. Document

- **Attachment 7.** Regulatory Amendment 35 update presentation

7.2. Overview

In March 2022, the Council initiated a regulatory amendment to reduce release mortality in the snapper grouper fishery and implement catch levels for red snapper based on the SEDAR 73 stock assessment. SEDAR 73 indicating that the South Atlantic red snapper stock is overfished and experiencing overfishing, but is making adequate progress according to its current rebuilding plan. The assessment indicated that the majority of red snapper fishing mortality occurs as release mortality rather than through landings. While increased use of best practices, including descending devices, has increased survival rates for released fish, the high number of red snapper caught out of season has continued the high number of fish estimated to die as a result of being caught and released. Therefore, the Council is investigating potential management measures to reduce out-of-season encounters for red snapper as well as other snapper grouper species, including time, area, and depth based restrictions. As part of the information gathering process, Council staff is compiling social and economic information on the Snapper Grouper fishery that are relevant to seasonality of the fishery, effort within the fishery, and previous Council efforts to examine similar time, area, and depth based restrictions.

7.3. Presentation

Dr. Mike Schmidtke, SAFMC staff

7.4. ACTIONS

Discuss and make recommendations as appropriate. In general, this agenda item is meant to update the SEP on recent Council actions and brief the SEP on the potential need for input in the future.

SEP RECOMMENDATIONS:

The SEP emphasized that the required reduction in red snapper discards requires a reduction in fishing effort, and not only a change in fishing practices. Multiple projects are underway to model regulatory alternatives that might result in an increase in economic and social improvements in the fishery, including the Council's MSE project and the Science Center's discards modeling projects. In the short run, however, Council staff could most effectively model the required reductions by modeling the results of shutting down fishing waves, since most of the discards are a result of the recreational fishing sector. More comments are included in the SSC report.

8. South Atlantic Golden Tilefish fishery

8.1. Documents

- **Attachment 8.** Comparison of Tilefish Longline Behavior in the South Atlantic and Gulf of Mexico presentation

8.2. Overview

The Council is in the process of developing Amendment 52 to the Snapper Grouper Fishery Management Plan that will in part address management changes to the commercial golden tilefish fishery. As part of this examination of the fishery, a meeting is planned this fall for South Atlantic Golden Tilefish Endorsement holders to discuss potential changes that may be needed in the fishery.

Dr. Scott Crosson, SEFSC staff, will present recent research on the commercial golden tilefish fishery in the Southeast. This will be followed up by a discussion on potential questions that Council staff could consider asking endorsement holders on management changes that could improve the social and economic performance of the fishery.

8.3. Presentation

Dr. Scott Crosson, Christina Wiegand, and John Hadley

8.4. ACTIONS

Discuss and make recommendations as appropriate.

Discussion Questions:

1. What topics should staff consider asking shareholders that could lead to improved social and economic outcomes for the fishery?
 - I. Management measures that could lead to improvements in economic performance
 - a) Increase revenue
 - b) Reduce costs
 - c) Improve price
 - II. Management measures that could address social and equity topics
 - a) Distribution of profits
 - i. Crew wages and wellbeing
 - b) Safety at sea
 - c) Resilience and diversification

SEP RECOMMENDATIONS:

Dr. Crosson's presentation noted that the best route to getting rid of the existing tilefish derby is the implementation of some sort of catch shares, tradeable or not, so that fishermen do not feel the need to race to fish the quota. The Gini coefficient in the South Atlantic fleet is .31, which means that landings are already more equally distributed than in most other regional fisheries. If the fleet wished to get rid of the derby behavior, a first step would be to equally distribute the shares of the quota among the 22 permit owners annually. This will be a topic for the longline fleet to discuss later this year.

9. Other Business

There were no items under Other Business.

10. Opportunity for Public Comment

There were no public comments at the end of the meeting.

11. Report and Recommendations Review

12. Next SEP Meeting

- Potential Fall 2022 webinar to discuss social and economic aspects of the Snapper Grouper MSE
- Spring 2023 Annual Meeting in Charleston, SC



SEDAR

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SEDAR ## Atlantic Blueline Tilefish

Operational Assessment

Draft Terms of Reference

1. Update the approved SEDAR 50 Atlantic Blueline Tilefish models with previously provided data, adding all new and recent available data sufficient for use in the stock assessment through 2023. Data providers may decide to include preliminary or partial 2024 data that could be used in the stock assessment models or projection analyses. Data inclusion for the stock assessment models and projection analyses will be determined by the lead analyst based on quantity and quality of the most recent data.
2. Incorporate the latest ASPIC model for South of Cape Hatteras to the Gulf and South Atlantic Council boundary and the latest DLM model for North of Cape Hatteras. Include any configurations and updates to data calculation methodologies and detail the changes made between the 2017 SEDAR 50 Atlantic Blueline Tilefish benchmark assessment models and the proposed SEDAR ## models.
3. Consider new and updated information on life history, discard mortality, commercial and recreational landings and discards. Note any particular concerns or problems with data collected in 2020 and beyond. Document any changes or corrections made and provide updated input data tables. Provide commercial and recreational landings and discards in pounds and numbers.
4. Update model parameter estimates and their variances, model uncertainties, estimates of stock status and management benchmarks, and provide the probability of overfishing occurring at specified future harvest and exploitation levels. Investigate asymmetric distributions for incorporating MRIP parameters.
5. Address as many of the recommendations as possible of the South Atlantic SSC Catch Level Projections workgroup outlined on page 16 of the final workgroup report found here:
https://safmc.net/download/BB%20SSC%20April%202022/A03a_Catch%20level%20projections%20WG%20Report%20Draft_FINAL.pdf
6. Convene a topical working group including SSC representatives, industry representatives, and outside experts to meet via webinar or in-person. This group of specialists will evaluate the following subject and document specific changes in input data or deviations from the SEDAR 50 model. Include the Mid-Atlantic Council in the topical working group process.
 - Review and recommend catch and landing streams for North of Cape Hatteras.
 - Review the South Atlantic Deepwater longline Survey for potential incorporation into the assessment.
7. Explore using appropriate CVs for the landings data to capture the uncertainty in the model results as an alternate run or a base run.
8. Develop a stock assessment report to address these TORs and fully document the input data, methods, and results.



Species:

Red Porgy

Model and Additional Data Years:

- Prior Assessment: SEDAR60 Red Porgy Standard Assessment
- Prior Terminal Year: 2017
- OA Terminal Year: 2024, adding 7 years of new data
- Apply the current BAM configuration.

Requested Data Updates (Please be as specific as possible):

- Include any new and updated information on life history, discard mortality, and steepness.
- Explore using appropriate CVs for the landings data to capture the uncertainty in the model results.

Potential Modifications to previously approved assessment (Please be as specific as possible):

Staff divided the research recommendations from the previous assessment into categories. The SSC should discuss and provide requested model modifications appropriate for an operational assessment.

- Operational Assessment:
 - Investigate potential factors that may be contributing to the continued low recruitment of Red Porgy to inform projections including impacts of overharvesting and external environmental factors on winter spawners.
 - Include abundance and catch time series to inform projection timeframes
 - Autocorrelation and partial autocorrelation functions
 - Negative correlations with Red Snapper and Red Lionfish
 - Catch level projection working group topics

Is a Topical Working Group Needed? No

If Yes, Topical Working Group Topics:

- Topic 1:
- Topic 2:

Suggested Topical Working Group Process:

Is an in-person workshop requested for the Topical Working Group, or can it meet via webinar.

POTENTIAL SCHEDULE:

- Cooperators use their process to develop SoWs

- SSC reviews SoWs at April meeting, then SAFMC reviews in September, 2022
- Initial Cooperator-approved SoWs submitted to SEFSC by November 1, 2022
- SEFSC provides feedback to Cooperators via memo no later than February 1, 2023
- Cooperators/Technical review bodies review feedback and negotiate final SoWs with SEFSC
- Final SoWs provided to SEDAR Program Manager by May 1, 2023
- Assessment Species are approved at Spring SEDAR Steering Committee Meeting, May 2023.
- Terms of Reference to SSC in October, 2023 and SAFMC in March, 2024
- Data scoping workshop meet 2025
- Topical working groups (if necessary) meet 2025
- Assessment reviewed by SSC and SAFMC in late 2025/early 2026
- Research Recommendations:
 - impacts of climate change on winter spawners
 - Investigate potential factors that may be contributing to the continued low recruitment of Red Porgy, including egg production, egg quality, fertilization rate, juvenile survival, sex ratio, and size/age of sex transition
 - Investigate whether Red Porgy males establish and maintain territories as part of their spawning behavior (although territorial behavior has not previously been observed, the SSC deemed the question worthy of further investigation).
 - Investigate the potential impact(s) on Red Porgy of increased abundance of Red Lionfish and Red Snapper (or other piscivores found to have recent increased abundance) in the South Atlantic, including:
 - Predation of juvenile Red Porgy by Red Lionfish and Red Snapper and its potential impact on the apparent recruitment failure of Red Porgy
 - Competition for prey between Red Snapper and Red Porgy (e.g., diet composition and size range overlaps)
 - Exploring to what extent the resurgence in the Red Snapper South Atlantic population co-occurred with the decline in the South Atlantic Red Porgy population
- Research Track Assessment:
 - Investigate temporal trends in growth, sex at age, and female maturity at age. In the previous assessments, female maturity at age was estimated for several time blocks and included in the model as a time-varying relationship. During the current assessment process, the basis for modeling only female maturity as time-varying was called into question, given that life history parameters are often linked. The decision was made to use only a single female maturity at age relationship. However, the panel judged this to be an important area of future research.

Species:

King Mackerel

Model and Additional Data Years:

- Prior Assessment: SEDAR 38U King Mackerel Update Assessment
- Prior Terminal Year: 2017/2018 FY
- OA Terminal Year: 2024, adding 6 years of new data
- Apply the current SS3 configuration.

Requested Data Updates (Please be as specific as possible):

- Include any new and updated information on life history, discard mortality, and steepness.
- Explore using appropriate CVs for the landings data to capture the uncertainty in the model results.

Potential Modifications to previously approved assessment (Please be as specific as possible):

Staff divided the research recommendations from the previous assessment into categories. The SSC should discuss and provide requested model modifications appropriate for an operational assessment.

- Operational Assessment:
 - Research aimed at improving the documentation of data series formatting, including index standardization, for SS3 would improve modeling efficiency. This includes statistical coding for consistent database querying and data processing.
 - An evaluation of alternative age references, or age-specific time series, for the SEAMAP fishery independent survey was recommended by the data providers and noted by the analyst for future assessments.
 - An analysis of the effect of excluding sublegal fish size observations on the assessment should be undertaken. Information on the age composition of discarded fish from all fleets is needed to validate the assumption of exclusively age-0 discards. The conditional age-at-length data had a significant influence on recent recruitment estimates.
 - Evaluate model sensitivity to the age-data and explore alternative parameterizations (such as inverse age-length key), as the fleet coverage was suboptimal with zero information available for several fleets and years.
 - Run a sensitivity with FISHStory length data (1950s-1970s)
 - Explore cause of high max gradient for the model
 - Examine correlation among parameters in the .eva file and identify where smallest and largest eigenvalue is above 1 million.
 - Examine growth parameters as a potential cause
 - Describe the potential impact of cause identified for the high max gradient
 - Include abundance and catch time series to inform projection timeframes
 - Autocorrelation and partial autocorrelation functions
 - Catch level projection working group topics

Is a Topical Working Group Needed? Yes or No

If Yes, Topical Working Group Topics:

- Topic 1:
- Topic 2:

Suggested Topical Working Group Process:

Is an in-person workshop requested for the Topical Working Group, or can it meet via webinar.

POTENTIAL SCHEDULE:

- Cooperators use their process to develop SoWs
- SSC reviews SoWs at April meeting, then SAFMC reviews in September, 2022
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Species:

Gag Grouper

Model and Additional Data Years:

- Prior Assessment: SEDAR 71 Gag Operational Assessment
- Prior Terminal Year: 2019
- OA Terminal Year: 2024, adding 5 years of new data
- Apply the current BAM configuration.

Requested Data Updates (Please be as specific as possible):

- Include any new and updated information on life history, discard mortality, and steepness.
- Explore using appropriate CVs for the landings data to capture the uncertainty in the model results.

Potential Modifications to previously approved assessment (Please be as specific as possible):

Staff divided the research recommendations from the previous assessment into categories. The SSC should discuss and provide requested model modifications appropriate for an operational assessment.

- Operational Assessment
 - Incorporate methods to characterize length and age composition of gag grouper observed on videos from SERFS fishery independent surveys from other research track assessments. Trap sampling of gag was limited and potentially biased due to size selectivity of the gear.
 - Include abundance and catch time series to inform projection timeframes
 - Autocorrelation and partial autocorrelation functions
 - Catch level projection working group topics
- Potential Topical Working Group:

Is a Topical Working Group Needed? Yes

If Yes, Topical Working Group Topics:

- Topic 1: Investigate potential sources of recent recruitment declines in gag in the South Atlantic. Gag recruitment has been low over the last 10 years, possibly due to overharvest or external environmental factors. Non-traditional datasets, such as inshore estuarine surveys and larval bridge net surveys, may be helpful in better understanding recruitment dynamics of gag.
 - Better characterize population and fishery dynamics of gag during their residency in estuaries. Gag spend their first year of life in estuaries, and differences in natural mortality, growth, or harvest between the estuarine phase and the offshore stock could induce biases in the assessment.
- Topic 2: Better characterize the reproductive dynamics of gag including sex ratio, maturity schedule, batch fecundity, spawning seasonality, and spawning frequency, as well as the potential for sperm limitation. Mature male and female biomass was the measure of reproductive potential for this assessment, but may be biased if reproductive parameters vary

significantly with size and age, or if sex ratio and other life history characteristics have varied considerably over time.

Suggested Topical Working Group Process:

webinar.

POTENTIAL SCHEDULE:

- Cooperators use their process to develop SoWs
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- Research Recommendations for future:
 - Implement systematic age sampling for the general recreational and commercial sectors. Age samples were important for this assessment for identifying strong year classes, but sample sizes were limited, particularly for the general recreational sector, which accounts for the majority of the recent landings.
 - Age-dependent natural mortality was estimated by indirect methods (Lorenzen) for this assessment. Telemetry- and conventional-tagging programs can provide alternative estimates of natural mortality.