



SEDAR

SouthEast Data, Assessment, and Review

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MEMORANDUM

TO: John Carmichael, Executive Director, SAFMC
FROM: Kathleen Howington, SEDAR Coordinator
DATE: November 15, 2021
RE: Request for approval of the Project Schedule, Terms of Reference and council appointees for SEDAR 82 South Atlantic Gray Triggerfish Research Track

SEDAR 82 will assess the South Atlantic stock of Gray Triggerfish. Attached you should find the draft Project Schedule, draft Terms of Reference, and draft participant list for the SEDAR 82 Research Track assessment of South Atlantic Gray Triggerfish.

The assessment will be conducted over a series of webinars and two in-person workshops:

- Data process dates: webinars held May 2022 – January 2023 with an in person workshop in September 2022
- Assessment process dates: webinars held March 2023 – September 2023
- Review process dates: mid-September – December 2023 with an in person review workshop mid October 2023

This schedule and terms of reference have been produced through discussions with the planning team with acknowledgement of other known meetings, time constraints and in accordance with SEDAR procedures. The assessment will be available for review by December 2023.

Additionally, as the Council is responsible for appointing participants to the various workshop panels according to the South Atlantic SEDAR procedures, I am requesting the approval of the number of participants for the Panel and ADT associated with SEDAR 82.

The suggested maximum number of participants for the Panels are as follows:

SEDAR 82 ADT members: 4 participants

SEDAR 82 additional data panelists: 9 Participants

SEDAR will be responsible for paying for 12 participants

SAFMC will be responsible for paying for 0 participants

ASMFC will be responsible for paying for 1 ACCSP representatives

Please see the following pages for suggested participants.



I would appreciate it if this schedule, the terms of reference, and the council appointees could be included for discussion and approval at your December 2021 Council meeting. Please inform me of the results of your consideration by December 31, 2021.

Thank you for your attention to this matter.

cc

Chip Collier



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SEDAR 82

South Atlantic Gray Triggerfish

Research Track Assessment

Draft Terms of Reference

Data Workshop Terms of Reference

- 1) Review stock structure and unit stock definitions.
 - a) Characterize changes in spatial distribution of Gray Triggerfish catches including catches in the Mid Atlantic.
- 2) Review, discuss, and summarize available life history information.
 - a) Evaluate age, growth, natural mortality, meristic conversions (length-weight relationship, length-length relationship), and reproductive characteristics (maturity, fecundity, sex ratio, and spawning season).
 - b) Evaluate the aging structure and its ability to provide reliable ages. Evaluate age data and methodology across ageing facilities and discuss validation techniques.
 - c) Provide appropriate models to describe population and fleet specific (if warranted) growth, maturity, and fecundity by age, sex, or length as applicable.
 - d) Evaluate and discuss the sources of uncertainty and error, and data limitations (such as temporal and spatial coverage) for each data source. Provide estimates or ranges of uncertainty for natural mortality and other model based parameter values.
 - e) Discuss the adequacy of available life history information for conducting stock assessments and recommend life history information for use in population modeling.
- 3) Provide measures of population abundance that are appropriate for stock assessment
 - a) Consider all available and relevant fishery-dependent and -independent data sources
 - b) Document all programs evaluated; address program objectives, methods, coverage, sampling intensity, and other relevant characteristics.
 - c) Provide maps of fishery dependent and independent survey coverage.
 - d) Develop fishery and survey CPUE indices, standardize as appropriate, generate measures of precision, and document all methods.
 - e) Document pros and cons of available indices regarding their ability to represent abundance.
 - i) Characterize species identification issues and identify whether the index is representative of Gray Triggerfish Stock.

- f) For recommended indices, document any known or suspected temporal patterns in catchability not accounted for by standardization.
 - g) Categorize the available indices into one of three tiers: suitable and recommended, suitable and not recommended, or not suitable; provide justifications for the categorization.
 - h) For any recommended fishery independent surveys provide age and length composition as appropriate.
- 4) Provide commercial catch statistics, including both landings and discards in both pounds and numbers.
- a) Characterize any species identification issues and correct for these instances as appropriate.
 - b) Review SEDAR 41 methods for pooling gear types into a single commercial gear and, if appropriate, maintain that fleet structure; otherwise recommend an alternative fleet structure.
 - c) Evaluate and discuss the adequacy of available data for accurately characterizing landings and discards by fishery sector or gear. Discuss any temporal trends in the reliability of the commercial estimates and potential impacts of COVID-19. Compare discard rates from other sectors within the South Atlantic and with analogous fisheries in adjoining regions.
 - d) Provide length and age distributions for both landings and discards as appropriate.
 - e) Provide maps of fishery effort and harvest by fishery sector or gear.
 - f) Develop catch streams (landings and discards), generate measures of precision, and document all methods.
- 5) Provide recreational catch statistics for each stock being assessed, including both landings and discards in both pounds and number.
- a) Characterize any species identification issues and correct for these instances as appropriate.
 - b) Review SEDAR 41 methods for pooling gear types into two recreational gears and, if appropriate, maintain that fleet structure; otherwise recommend an alternative fleet structure.
 - c) Evaluate and discuss the adequacy of available data for accurately characterizing landings and discards by fishery sector or gear. Discuss any temporal trends in the reliability of the recreational estimates.
 - d) Evaluate the potential source of outliers in MRIP catch data and potential impacts of COVID-19.
 - e) Provide length and age distributions for both landings and discards as appropriate.
 - f) Provide maps of fishery effort and harvest by fishery sector or gear.
 - g) Develop catch streams (landings and discards), generate measures of precision, and document all methods.
- 6) Recommend discard mortality rates.
- a) Review available research and published literature.
 - i) Consider research directed at Gray Trigger as well as similar species from the southeastern United States and other areas.

- b) Provide estimates of discard mortality rate by fleet and temporal structure as appropriate.
 - c) Provide estimates of uncertainty around recommended discard mortality rates
 - d) Document the rationale for recommended rates and uncertainties.
- 7) Describe any known evidence regarding ecosystem, climate, species interactions, habitat considerations, and/or episodic events (*such as red tide and upwelling events*) that would reasonably be expected to affect Gray Trigger population dynamics.
- a) Identify available analysis that could improve the understanding of important ecosystem relationships or trends that can be accounted for in the assessment.
- 8) Provide recommendations for future research in areas such as sampling, fishery monitoring, and stock assessment.
- 9) Prepare a Data Workshop report providing complete documentation of workshop actions and decisions in accordance with project schedule deadlines.

Assessment Process Terms of Reference

- 1) Review any changes in data or analyses following the Data Workshop. Summarize data as used in each assessment model. Provide justification for any deviations from Data Workshop recommendations.
- 2) Develop population assessment model(s) that are appropriate for the available data.
- a) Provide standard model outputs such as parameter estimates and derived quantities.
 - b) Evaluate model diagnostics.
 - c) If multiple models are applied then compare and contrast model performances and appropriateness.
 - d) Identify modeling issues encountered.
 - e) Comment on the data component weighting used in this stock assessment, if necessary.
- 3) Recommend biological reference points for use in management.
- 4) Characterize uncertainty in the assessment and estimated values.
- a) Incorporate uncertainty of appropriate input data.
 - b) Provide measures of uncertainty for estimated parameters and derived quantities, including biological reference points and stock status that incorporates appropriate input parameter and data uncertainty.
- 5) Provide recommendations for future research to improve the assessment. Distinguish between long term research needs and short term research recommendations that could potentially be implemented for Gray Triggerfish Operational Assessments.
- 6) Complete an Assessment Workshop Report in accordance with project schedule deadlines.

Review Workshop Terms of Reference

- 1) Evaluate the data used in the assessment. Consider the following:
 - a) Are data decisions made by the DW and AW justified?
 - b) Are data uncertainties acknowledged, reported, and properly characterized?
 - c) For model derived data and parameter inputs (e.g. indices of abundance, life history quantities) are the methods appropriate?
- 2) Evaluate and discuss the strengths and weaknesses of the methods used to assess the stock, taking into account the available data. Consider the following:
 - a) Are the methods appropriate for the available data?
 - b) Are assessment models configured properly and used in a manner consistent with standard practices?
 - c) Were modeling issues clearly identified and addressed? If not, recommend potential methods for addressing these issues.
- 3) Consider how uncertainties in the assessment are addressed.
 - a) Comment on the degree to which methods used to evaluate uncertainty reflect and capture the significant sources of uncertainty in the input data.
 - b) Comment on sources of uncertainty not accounted for and possible approaches for incorporating these sources into future assessments (e.g. ecosystem, management policies).
- 4) Provide, or comment on, recommendations to improve the assessment
 - a) Consider the research recommendations provided by the Data and Assessment workshops in the context of overall improvement to the assessment, and make any additional research recommendations warranted.
 - b) If applicable, provide recommendations for improvement or for addressing any inadequacies identified in the data or assessment modeling. These recommendations should be described in sufficient detail for application, and should be practical for short-term implementation (e.g., achievable within ~6 months). Longer-term recommendations should instead be listed as research recommendations above.
- 5) Provide recommendations on possible ways to improve the Research Track Assessment process.
- 6) Prepare a Review Workshop Summary Report describing the Panel's evaluation of the Research Track stock assessment and addressing each Term of Reference.



**SEDAR 82
South Atlantic Gray Triggerfish
Draft Schedule of Events
October 2021**

Planning Team Established..... May 2021
 ToR and Milestone Schedule Development Summer/Fall 2021
 ToR and Schedule Approved..... December 2021
 Assessment Development Team Appointments December 2021
 Data Workshop Participant Appointments December 2021

Data Scoping Conference Call (DW Panel)..... Week of May 23, 2022
 Data Webinar I..... Week of July 25, 2022
 Deadline for unprocessed data (includes lengths, raw age data)..... August 1, 2022
 MRIP Data Due/Raw Data Deadline August 19, 2022
 Preliminary Data Products to Analysts September 2, 2022
 DW Working Paper to SEDAR Staff..... September 2, 2022
 Pre-Data Workshop Webinar week of September 12, 2022
Data Workshop: (Charleston, SC or virtual) September 19-22, 2022

Post-Data Workshop Webinar I..... week of October 3, 2022
 Post-Data Workshop Webinar II..... week of October 24, 2022
 Final analytical products due November 11, 2022

Draft DW Reports to DW panel for review December 2, 2022
 Report Comments due to Editors December 16, 2022
 Final DW reports to SEDAR Staff..... January 13, 2023
 Data workshop report distribution January 23, 2023

All dates tentative from this point forward, depending on data analysis

Assessment webinar I week of March 20, 2023
 AW working paper submission to SEDAR Staff..... April 28, 2023
 Assessment webinar II..... week of May 15, 2023
 Assessment webinar III week of June 19, 2023
 Assessment web IV..... week of July 17, 2023
 ADT to Determine Assessment will be ready for 2023 Review..... week of July 17, 2023
 Assessment Web V week of August 7, 2023

Assessment Report Draft to panel for review August 25, 2023
 Assessment Panel report comments due to editors September 8, 2023
 Final Assessment Report to SEDAR staff September 22, 2023

RW Working Paper Submission September 27, 2023
 Final distribution to review panel September 27, 2023

Review Workshop: (Beaufort, NC or virtual).....week of October 16, 2023
First Draft Review Reports (end of workshop)
Review Workshop Panel Drafts due to ChairNovember 3, 2023
Review Workshop Addenda/Revision Reports due to Chair & SEDAR Staff.....
.....November 17, 2023
Review Workshop Reports due to SEDAR Staff..... December 1, 2023
Complete Assessment Report Submitted to Council/SERO/SEFSC December 6, 2023

Assessment Information and Contacts

Prior Assessment: SEDAR 41

Terminal year of prior assessment: 2014

Terminal year for this assessment: 2020

Lead Analysts and Agency: SEFSC, Nikolai Klibansky <nikolai.klibansky@noaa.gov>

Data Point of Contact: SEFSC, TBD

SEDAR Coordinator: Kathleen Howington <kathleen.howington@safmc.net>

SEDAR Cooperator: South Atlantic Fishery Management Council