

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE



SSC Final Report

February 9, 2024

Via Webinar

VERSION
FINAL
2/23/2024

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**Indicates materials not available for briefing book at time of posting. These materials will be added to the recent materials section when available.*

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SAFMC PUBLIC COMMENT PROCESS

Written comment:

Written comments on SSC agenda topics are provided to the Committee through an online form, similar to all other Council briefing materials. Written comment can be submitted at [this link](#). For this meeting, the deadline for submission of written comment is 5:00 p.m., February 8, 2024.

Verbal comment:

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

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

Meeting Format:

This meeting will be held via webinar. Online registration for the meeting can be found at the Council's website: <https://safmc.net/events/feb-2024-ssc-meeting/>

1. INTRODUCTIONS

1.1 Documents

Attachment 1a. SSC February 2024 Agenda

Attachment 1b. Minutes from the Oct 2023 meeting

1.2 Action

- Introductions
- Review and approve agenda. *Agenda approved.*
- Approve minutes from October 2023 meeting. *Minutes approved with minor editorial corrections.*

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 comments should indicate their desire to do so to the Committee Chair.

3. SEDAR 76: BLACK SEA BASS OPERATIONAL ASSESSMENT

3.1 Documents

*Attachment 3a. Black Sea Bass OA SEFSC Presentation - Revised

*Attachment 3b. Black Sea Bass OA Feb 2023 ABC-OFL Scenarios - Revised

Attachment 3c. Black Sea Bass OA Stock Assessment Report

*Attachment 3d. Black Sea Bass OA Addendum 1 Oct 2023

*Attachment 3e. Black Sea Bass OA Addendum 2 Oct 2023

3.2 Presentation

Dr. Matthew Vincent, SEFSC

3.3 Overview

The SEDAR 76 Black Sea Bass Operational Assessment was reviewed by the SSC at the April, July, and October 2023 meetings. Recommendations from the working group and SSC meeting reports have been integrated into the most recent assessment run and projections. The SSC should review the most recent projections (attachment 3b) and set catch levels based on the projections or other methodology if appropriate. These catch level recommendations will be made to the Council at their March 2024 meeting.

3.4 Public Comment

3.5 Action

- Review most recent projections and characterize uncertainties with the operational assessment.
- *The most recent Black Sea Bass (BSB) projections represent the first time the SEFSC is using Constant F discards as opposed to the landings:discards ratio that has been commonly used for projections in other assessments.*
 - *Recommend monitoring discards in the near future to determine if discard projections are tracking actual discards. Reliability of MRIP discards is highly uncertain and other information that can inform the discard monitoring should be utilized where available (e.g. citizen science approaches).*
- *The number of discards far exceeds landings for this species. The constant discard mortality rate for the recreational sector is based on a weighting of the depth of discards (inshore vs offshore) and discard condition. Research to determine if higher resolution data would improve this approach is needed.*
- *The SSC strongly recommends an interim analysis be conducted in 2026 to review assessment projections and catch levels and recommend that an operational assessment be conducted in 2028-2029.*
 - *Although the index used in SEDAR 76 is based on the combined trap/video data, the trap index for BSB tracks well with the model and makes it an ideal candidate species for interim analysis. The addition of the video survey data would be beneficial when possible, though this may affect the timeliness of data inputs for interim analysis. The video data are available around August 1 in the year after sampling; thus, the 2025 video data would be available after August 1 of 2026 to be used within the Conn modeling method. If the video data are not available in the terminal year of the assessment the Conn modeling method (or other analytical tool that is robust to missing data) can be used to model both data sets when available and to get predictions for years when only trap data are available. The SSC is confident in this approach given how closely the trap index matches the video index for black sea bass.*
 - *Investigate alternative methods (e.g. artificial intelligence) to increase timeliness of video reads.*
 - *Recruitment trends through 2025 would be valuable to compare with model projections of recruitment to evaluate progress and accuracy of projections used in management.*
 - *Scopes of work for species that are on the 2027 assessment schedule to be developed for Red Porgy and BSB.*
- *The magnitude of BSB discards relative to landings is a huge problem. The high levels of bycatch for BSB are severely hindering rebuilding and substantial reductions in effort are needed to reduce overall F for the BSB stock. This is a pervasive challenge for several species managed by the SAFMC. Bycatch continues to drive overall removal rates, which limits the effectiveness of management strategies that limit landings only. Strategies to control effort more broadly will be essential to the recovery and sustainable harvest of SAFMC fishery resources.*

- Set catch levels based on projections or other methodology and fill out Table 1. If projections from the assessment run are not used to set catch levels, provide justification for the alternate methodology.
- *The SSC recommends using the OFL and ABC projection scenarios from Table 1 and 2 in attachment 03a (attached below).*
 - *ABC projections extend through 2026.*
 - *This timing follows the recommendation of 5 years post terminal year that is consistent with the SSC's Catch Level Projections Workgroup report (terminal year 2021): https://safmc.net/documents/a03a_catch-level-projections-wg-report-draft_final-pdf/*
 - *Given the recommended best practice of limiting projections to 5 years when setting ABC, the SSC is only providing two years of ABC values for management (2025 and 2026).*
 - *If no new estimates of ABC are available prior to 2027, the ABC value for 2026 would be used for 2027 and onward until new ABC estimates are available as part of the next stock assessment (recommended above to occur in 2028/29). This underscores the importance of revisiting OFL/ABC recommendations through the use of an interim analysis in 2026.*

Table 1. Projection results with fishing mortality rate fixed at $F_{\text{Landed}} = F_{\text{Rebuild}70\%}$ and $F_{\text{Discard}} = F_{\text{current}}$ starting in 2025 and longterm recruitment starting in 2023. R = number of age-0 recruits (in millions), F = fishing mortality rate (per year), S = spawning stock (1000 lb), L = landings and D = discards expressed in numbers (n , in 1000s) or whole weight (w , in 1000 lb), $pr.reb$ = proportion of stochastic projection replicates with $SSB \geq SSB_{F40\%}$. The extension b indicates expected values (deterministic) from the base run; the extension med indicates median values from the stochastic projections.

Year	R.b	R.med	F.b	F.med	S.b	S.med	L.b(n)	L.med(n)	L.b(w)	L.med(w)	D.b(n)	D.med(n)	D.b(w)	D.med(w)	pr.reb
2022	71	116	0.936	0.801	2469	3155	222	212	271	265	994	1293	359	459	0.002
2023	71	115	0.936	0.801	3644	4881	179	171	212	206	1489	1971	516	663	0.084
2024	71	114	0.936	0.801	5370	7280	168	160	179	174	2481	3309	892	1168	0.293
2025	71	116	0.383	0.474	6753	9078	39	49	39	48	3174	4266	1299	1709	0.450
2026	71	114	0.383	0.474	7721	10244	66	79	68	80	3331	4471	1430	1880	0.536
2027	71	115	0.383	0.474	8403	11009	100	118	109	125	3354	4500	1454	1906	0.592
2028	71	114	0.383	0.474	8901	11555	140	162	165	185	3356	4505	1456	1917	0.629
2029	71	115	0.383	0.474	9249	11862	170	193	211	233	3356	4497	1457	1906	0.655
2030	71	114	0.383	0.474	9487	12125	188	212	244	266	3356	4501	1457	1914	0.672
2031	71	115	0.383	0.474	9647	12244	199	224	266	289	3356	4491	1457	1906	0.681
2032	71	116	0.383	0.474	9754	12341	206	231	280	302	3356	4482	1457	1904	0.691
2033	71	115	0.383	0.474	9824	12469	211	235	290	311	3356	4473	1457	1907	0.695
2034	71	115	0.383	0.474	9869	12479	214	237	296	316	3356	4477	1457	1900	0.700

Table 2. Projection results with fishing mortality rate fixed at $F_{\text{Landed}} = F_{\text{Rebuild}70\%}$ and $F_{\text{Discard}} = F_{\text{current}}$ starting in 2025 and recent average recruitment starting in 2023. R = number of age-0 recruits (in millions), F = fishing mortality rate (per year), S = spawning stock (1000 lb), L = landings and D = discards expressed in numbers (n , in 1000s) or whole weight (w , in 1000 lb), $pr.reb$ = proportion of stochastic projection replicates with $SSB \geq SSB_{F40\%}$. The extension b indicates expected values (deterministic) from the base run; the extension med indicates median values from the stochastic projections.

Year	R.b	R.med	F.b	F.med	S.b	S.med	L.b(n)	L.med(n)	L.b(w)	L.med(w)	D.b(n)	D.med(n)	D.b(w)	D.med(w)	pr.reb
2022	25	44	0.936	0.801	2469	3155	222	212	271	265	924	1192	355	454	0.002
2023	25	43	0.936	0.801	2620	3449	178	169	211	206	1109	1454	458	582	0.005
2024	25	43	0.936	0.801	2734	3740	159	151	176	171	1151	1602	492	659	0.009
2025	25	43	0.383	0.474	2876	3979	32	40	35	43	1164	1678	503	708	0.012
2026	25	43	0.383	0.474	3062	4216	46	54	54	62	1167	1713	506	726	0.013

Table 1. Black Sea Bass Catch Level Recommendations

Criteria		Deterministic		Probabilistic	
Overfished evaluation (SSB ₂₀₂₁ /MSST)		0.57		0.72	
Overfishing evaluation ($F_{2019-2021}/F_{40\%}$)		0.79		0.61	
MFMT ($F_{40\%}$)		1.18		1.28	
$B_{F40\%}$ (1000 lbs.)		17689		22071	
SSB _{F40%} (1000 lbs.)		8736		10219	
MSST (1000 lbs.)		5460		5807	
ABC Control Rule Adjustment		20%			
P-Star		30%			
SSC recommended $P_{Rebuild}$		70%			
M		0.375			
Generation Time		6 years			
OFL RECOMMENDATIONS					
Year	Landed (1000 lbs ww)	Discard (1000 lbs ww)	Landed (number, 1000s)	Discard (number, 1000s)	
2025	39	1299	39	3174	
2026	68	1430	66	3331	
2027	109	1454	100	3354	
2028	165	1456	140	3356	
2029	211	1457	170	3356	
ABC RECOMMENDATIONS					
Year	Landed (1000 lbs ww)	Discard (1000 lbs ww)	Landed (number, 1000s)	Discard (number, 1000s)	
2025	35	503	32	1164	
2026	54	506	46	1167	
2027	-	-	-	-	
2028	-	-	-	-	
2029	-	-	-	-	

4. SNAPPER GROUPER MANAGEMENT STRATEGY EVALUATION

4.1 Documents

*Attachment 4a. Snapper Grouper MSE Presentation

4.2 Presentation

Dr. Adrian Hordyk and Dr. Tom Carruthers, Blue Matter Science

4.3 Overview

Management Strategy Evaluation (MSE) is internationally recognized as best practice for evaluating the performance of alternative management approaches and identifying the mode of management that is most likely to meet the various management objectives of a fishery. The MSE process is designed to support evidence-based decision-making in the face of uncertainty on the status and dynamics of a fishery system. It was developed in response to a common situation where there were conflicting interpretations of a stock assessment process, and there was no clear path for making an informed and transparent management decision. In short, the MSE process involves building a range of models which span the key uncertainties in the fishery system and using computer simulations to evaluate the performance of alternative management methods against established management objectives.

Stakeholder participation is a fundamental component of the MSE process. Discussions with stakeholders are used to establish the three main areas of the MSE process: 1) Uncertainties in the Fishery System, 2) Feasible Management Options, and 3) Objectives for Evaluating Performance. Stakeholder input and feedback will be primarily obtained from the SAFMC Snapper-Grouper Advisory Panel.

The SSC is requested to review the updates made to the Snapper Grouper MSE, discuss potential uncertainties with the model framework and data inputs, and how these uncertainties may affect model performance. The SSC will have the opportunity to review the final operating models produced by the MSE process at a later meeting.

4.4 Public Comment

4.5 Action

- Provide feedback on the methods and potential uncertainties.
 - *Spatial structure*
 - *Reduce extent of offshore areas from entire SAFMC management area to edge of continental shelf (the furthest extent of abundance for these species).*
 - *Estimated density maps from a multispecies VAST model can provide better abundance by depth information with a fine spatial resolution (Gag and RS).*
 - *SERFS data may provide relative abundance and size (age) by depth information.*
 - *The assumption that areas 5 and 6 have 2x the abundance of red snapper relative to areas 3 & 4 off Florida may be incorrect.*
 - *Red snapper survey data to inform this include the SADL survey preliminary data and SARSRP ROV data (UFL – Will Patterson) for areas 5 & 6 in Florida.*

- *Gag recruitment between inshore/offshore areas may not be well accounted for given the estuarine dependent early life history of gag and proximity to the inshore area from the estuaries. The proportions of age-0 gag should be 0 in offshore (>100 ft depth) waters.*
- *Additional operating models:*
 - *Low and High Recruitment scenarios*
 - *Simulation testing to look at different SSB0 starting points.*
- *Additional management strategies:*
 - *Required retention (zero discards) and Total F would be adjusted.*
 - *Explore separate reduction in effort by fleet (management procedure #4); for example, reduction of effort for recreational fleet only.*
 - *The SSC applauds the effort of the scientists to define additional management scenarios with the stakeholders.*
- *The SSC applauds efforts to look at recruitment correlation between red snapper and gag. Consider examining correlation in effort across species, spatial areas, and within species and spatial areas. These are worth investigating because taking these correlations into account can decrease PSEs of estimates.*

5. SEDAR: TERMS OF REFERENCE, SCHEDULES, AND PARTICIPANTS

5.1 Documents

Attachment 5a. Red Snapper Terms of Reference
 Attachment 5b. Red Snapper Assessment Schedule
 Attachment 5c. Yellowtail Snapper Terms of Reference
 Attachment 5d. Yellowtail Snapper Assessment Schedule

5.2 Presentation

Dr. Julie Neer, SEDAR Staff

5.3 Overview

The SSC will review the terms of reference, schedules, and select participants for the Red Snapper Assessment and Yellowtail Snapper Operational Assessment. The current Red Snapper assessment type is a research track assessment; however, a benchmark assessment may be more desirable to provide quicker management advice. The SSC should discuss which assessment type is most appropriate to meet both scientific and management needs.

5.4 Public Comment

5.5 Action

- Review and approve terms of reference and schedule for Yellowtail Snapper.
 - *Under 1, first bullet add: “and use where appropriate in updated assessment”*
 - *The SSC approved the terms of reference*
- Select 3-4 participants to participate in the Yellowtail Snapper topical working group.
 - *Jim Gartland*
 - *Kai Lorenzen*
 - *Steve Turner*
- Determine which assessment type (Research Track or Benchmark) for Red Snapper is most appropriate.
 - *SSC recommends a Benchmark type assessment for Red Snapper so that management advice can occur earlier.*
- Review and approve terms of reference and schedules for Red Snapper.
 - *Given the fact that the TORs were developed for a research track, the SSC gave SEDAR and Council staff license to adjust the TOR language to make it consistent with Benchmark Assessment language, if the Council agrees to that assessment type. This includes providing biological reference points, stock status information, and projections.*
- Select participants to participate in each phase of the Red Snapper assessments.
 - ADT – Data and Assessment (Research Track) (4-5)
 - *Dustin Addis (currently on ADT or assessment)*
 - *Wally Bubley, (ADT or assessment)*
 - *Jie Cao, (ADT or assessment)*
 - *Steve Turner, (ADT or assessment)*
 - Data workshop (3)
 - *Steve Turner*
 - *Wally Bubley (if not ADT)*

6. **OTHER BUSINESS**

- Discussion of Tilefish/Blueline Tilefish assessments’ process
 - *The SSC was updated on the ongoing tilefish assessments.*
- Citizen Science Survey Update
 - *The SSC was updated on the Citizen Science Survey.*
- SEDAR82: Gray Triggerfish RW Chair Appointment
 - *Marcel Reichert*
- Chair and Vice-Chair
 - *The SSC will have elections for both the Chair and Vice-Chair at its April meeting.*
- Upcoming SSC Agenda Items (excel spreadsheet)

7. PUBLIC COMMENT

The public is provided one final opportunity to comment on SSC recommendations and agenda items. Electronically submitted comments can be viewed [here](#).

8. CONSENSUS STATEMENT AND RECOMMENDATIONS

The Committee is provided with an opportunity to review its report, final consensus statements, and final recommendations.

The draft SSC report will be provided to the Council at their March Council meeting. The final SSC report will be posted on the Council website two weeks following the end of this meeting (approximately Feb 23rd).

9. NEXT MEETINGS

9.1 Scientific and Statistical Committee Meetings

- April 15-16, 2024 in Charleston, SC (SEP)
- April 16-18, 2024 in Charleston, SC (SSC)
- July/Aug webinar (TBD)
- October 22-24, 2024 in Charleston, SC

9.2 South Atlantic Fishery Management Council Meetings

- March 4-8, 2024 in Jekyll Island, GA
- June 10-14, 2024 in Daytona, FL
- September 16-20, 2024 in Charleston, SC
- December 2-6, 2024 in Wrightsville Beach, NC

ADJOURN