

6. SEDAR 28 STOCK ASSESSMENT REVIEW

6.1. Documents

Attachment 9. SEDAR 28 Cobia Stock Assessment Report

Attachment 10. SEDAR 28 Spanish Mackerel Stock Assessment Report

Attachment 11. CIE Reviews

6.2. Presentation

Presentations will be made through a webinar.

6.3. Overview

The SSC is asked to review the SEDAR 28 benchmark stock assessments of cobia and Spanish mackerel, and provide fishing level recommendations.

6.4. Action

The following Terms of Reference should be considered for both assessments.

- Consider whether the assessment is adequate for providing management advice.
- Provide Fishing Level Recommendations for cobia consistent with the ABC control rule.
- Provide guidance and advice on assessment uncertainties

- Provide recommendations on the next assessment (type and timing)

SSC RECOMMENDATIONS:

Spanish mackerel

The SSC accepts this benchmark assessment as representing the best available scientific information on the current status of Spanish mackerel in South Atlantic waters and considers it appropriate for SAFMC management decisions.

The current stock status in the base run from the Beaufort Assessment Model was estimated to be $SSB_{2011}/MSST=2.29$. The current level of fishing is $F_{2009-2011}/F_{MSY} = 0.526$, with $F_{2011}/F_{MSY} = 0.521$. Therefore, the stock is not overfished and is not undergoing overfishing. The qualitative results on terminal stock status were similar across presented sensitivity runs, indicating that the stock status results were robust given the provided data and can be used for management.

Since this assessment falls under Tier 1 of our ABC control rule, ABC was obtained according to a P-star value. A summary of results from applying the ABC control rule is presented below:

<i>Assessment Information:</i>	<i>Tier 2 (2.5%)</i>
<i>Uncertainty Characterization:</i>	<i>Tier 2 (2.5%)</i>
<i>Stock Status:</i>	<i>Tier 1 (0%)</i>
<i>Risk Analysis:</i>	<i>Tier 2 (5%)</i>
<i>Total adjustment</i>	<i>10%</i>
<i>P-star value:</i>	<i>40%</i>

The SSC recommends using 5-year projections at $P^=50\%$ for OFL and at $P^*=40\%$ for ABC (see tables below). These were provided following the SSC meeting. Full details on the projection results and methods are included in a revision to the SEDAR 28 Stock Assessment Report for Spanish Mackerel.*

ABC values

Year	F	P*	SSB mt	Probability (SSB > SSBmsy)	Total Yield (landings + discards) 1,000 pounds
2013	0.59	0.4	4222	0.89	4808
2014	0.58	0.4	3943	0.72	4508
2015	0.56	0.4	3919	0.66	4396

OFL Values

Year	F	P*	SSB mt	Probability (SSB > SSBmsy)	Total Yield (landings + discards) 1,000 pounds
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2013	0.66	0.5	4198	0.88	5312
2014	0.66	0.5	3722	0.65	4878
2015	0.65	0.5	3628	0.58	4712

Spanish Mackerel Status and Fishing Level Recommendations

Criteria	Deterministic	Probabilistic
Overfished evaluation	No (SSB/MSST=2.29)	87% MCB runs above SSB _{msy}
Overfishing evaluation	No (F/F _{msy} =0.526)	89% MCB runs below F _{msy}
MFMT	0.69	0.67 (median)
MSST	2,127 mt	2,234 mt (median)
MSY	2,750 mt	2,732 mt (median)
ABC Control Rule Adjustment	10%	
P-Star	40%	
OFL		P*=0.5 for 2013-2016
ABC Recommendation (list by year if appropriate)		P*=0.4 for 2013-2016

The SSC recommends having the Spanish mackerel assessment updated in 2017.

Cobia

The SSC accepts this benchmark assessment as representing the best available scientific information on the current status of cobia in South Atlantic waters and considers it appropriate for SAFMC management decisions.

The current stock status in the base run from the Beaufort Assessment Model was estimated to be $SSB_{2011}/MSST=1.75$. The current level of fishing is $F_{2009-2011}/F_{MSY} = 0.599$, with $F_{2011}/F_{MSY} = 0.423$. Therefore, the stock is not overfished and is not undergoing overfishing. The qualitative results on terminal stock status were similar across presented sensitivity runs, indicating that the stock status results were robust given the provided data and can be used for management.

Since this assessment falls under Tier 1 of our ABC control rule, ABC was obtained according to a P-star value. The SSC had an extensive discussion over application of dimension IV of the ABC Control Rule (Risk Analysis) since the PSA evaluation was done for the entire range of the stock, whereas SEDAR 28 was done with a range starting at the GA-FL line and north—which is a very small portion of the landings and may have different biological parameters than for considering the entire population as a whole.

After much discussion, the group consensus was to change the age at maturity category in the PSA analysis for Cobia from high to low. The new PSA score puts Cobia at a medium risk.

A summary of results from applying the ABC control rule is presented below:

<i>Assessment Information:</i>	<i>Tier 2 (2.5%)</i>
<i>Uncertainty Characterization:</i>	<i>Tier 2 (2.5%)</i>
<i>Stock Status:</i>	<i>Tier 1 (0%)</i>
<i>Risk Analysis:</i>	<i>Tier 2 (5%)</i>
<i>Total adjustment</i>	<i>10%</i>
<i>P-star value:</i>	<i>40%</i>

The SSC agreed this assessment thoroughly characterized uncertainty. The Committee recommends using 3-year projections at P=50% for OFL and at P*=40% for ABC (see tables below). These results are based on the probabilistic projections provided following the SSC meeting, and documented in Addendum 2.*

ABC values

Year	F	P*	SSB mt	Probability (SSB > SSBmsy)	Total Yield (landings + discards) 1,000 pounds
2013	0.412	0.4	587.2	0.57	815.1
2014	0.404	0.4	567.5	0.54	768.6
2015	0.388	0.4	561.4	0.53	726.7
2016	0.379	0.4	563.5	0.53	706.5

OFL Values

Year	F	P*	SSB mt	Probability (SSB > SSBmsy)	Total Yield (landings + discards) 1,000 pounds
2013	0.478	0.5	575.0	0.55	922.7
2014	0.478	0.5	536.4	0.50	845.5
2015	0.472	0.5	517.3	0.48	792.8
2016	0.469	0.5	508.1	0.47	766.7

Cobia Status and Fishing Level Recommendations

Criteria	Deterministic	Probabilistic
Overfished evaluation	No (SSB/SSBmsy=1.75)	SSB>MSST for 90% of MCB runs
Overfishing evaluation	No (F/Fmsy=0.599)	F<MFMT for 94% of MCB runs
MFMT	0.461	0.480

MSST	397.2 mt	379.2 mt
MSY	808,000 lb	772,600
ABC Control Rule Adjustment	10%	
P-Star	40%	
OFL		P*=0.5 for 2013-2016
ABC Recommendation (list by year if appropriate)		P*=0.4 for 2013-2016

Finally, the SSC recommended updating the assessment in 2017, but consider Cobia a low priority stock (i.e., not overfished and not undergoing overfishing).