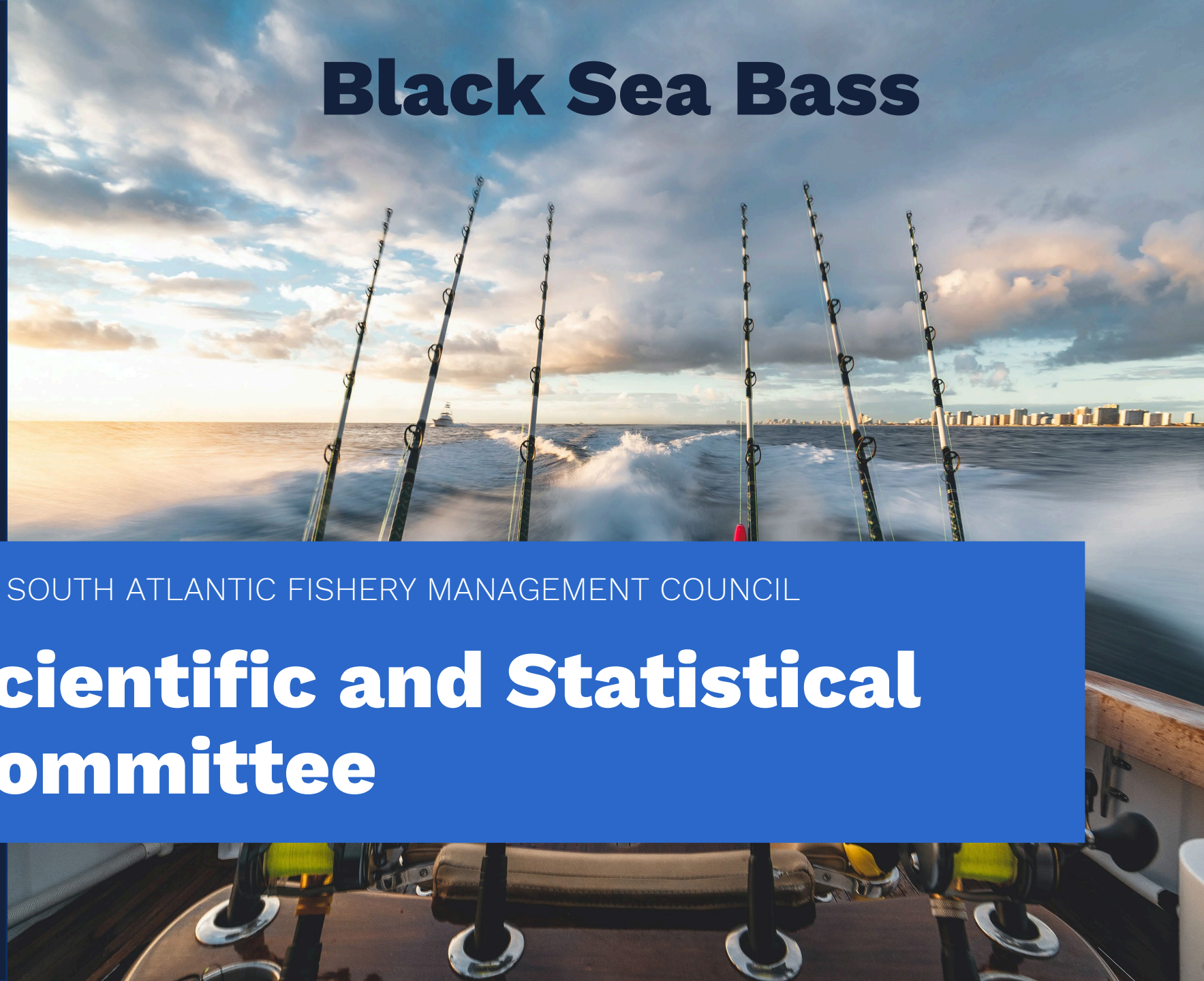


THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Scientific and Statistical Committee

April and May 2025 Meeting Report

Black Sea Bass

In October 2024 the SSC recommended additional model/projection runs using all available, updated information to

- addresses projection concerns,
- possibly provide information that SSC could use directly for 2026 ABC,
- allow for an extension of projection timeframe, and
- allow simultaneous start working on rebuilding scenarios.

REVIEW S76U in April
Considered a “new” assessment =>
applied new ABC control rule.

Black Sea Bass

Review April 2025

Several critical changes to S76, incl.:

- General recreational and headboat fleets share selectivity curve,
- Beverton-Holt stock recruitment relationship was used.
  Steepness was estimated.
- Recruitment in last 2 years (2022-2023) was calculated from
  B-H stock recruitment relationship and
  mean recruitment deviate from 2014-2021.

Black Sea Bass

Review April 2025

Uncertainties and implications for assessment extensively discussed, incl.:

- Model assumptions
- Stock-recruit relationship
- Discards
- Combining selectivities
- High F in terminal year
- Recruitment

Black Sea Bass

Review April 2025

Model assumptions:

Model assumptions of stationarity and a closed population that may no longer be accurate (also previously discussed) and can result in considerable uncertainty.

Closed population: reasonable given genetic and other information.

Low biomass likely resulting from F, environmental factors and ecosystem interactions (e.g., affecting M and recruitment), but extend to how much each contributed is unknown.

Black Sea Bass

Review April 2025

Stock Recruit relationship

- Impacts of change from mean recruitment (S76) to Beverton-Holt S-R relationship (S76U) and ability to estimate steepness are substantial.
- Steepness value (h=0.39) seems low for BSB.
- S-R relationship currently assumes stationarity,
  low h may suggest non-stationarity.
  temporal directionality over time series and
  does not fit many of most recent years (~2014-2022).
- Historical biomass trends in previous BSB assessments looked markedly different than S76U
  -> attributed to MSY estimate in S76U versus proxy used in previous assessments.
- Recommends further investigating uncertainty in steepness and related
  use of SPR-based MSY proxy in a future assessment.

Black Sea Bass

Review April 2025

Selectivity and discards

- Single selectivity curve for headboat and general rec. fishery landings and discards.
- Although landings selectivity may not be as influential, discard selectivity likely very influential because majority of discards are coming from inland/state waters.
- Discard selectivity for ages 0-2 is low, and probably not reflective of length-at-age of fish caught in state and inland waters. Inland/state catches have nearly doubled over time series while Federal catches have halved.
- Discard lengths for rec. fishery are obtained from headboat observer discard data only, none from private sector (inland, shore mode).
- Inshore vs offshore discards are trending in opposite directions.
- SSC asked if other information may be available to characterize General Recreational discards selectivity for younger age classes.

Black Sea Bass
Review April 2025

High F in terminal year.

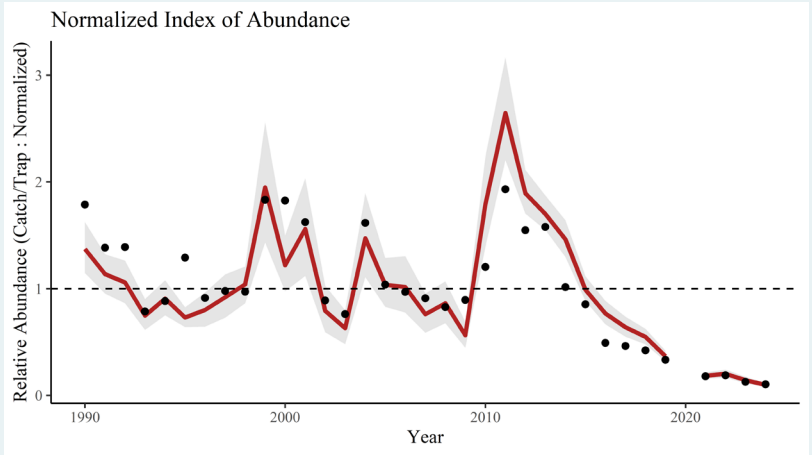
- SSC noted (possibly unreasonably) high F *(>10-fold compared to F_{msy})* in terminal year (2023).
- May be an indication that model has a hard time predicting cause of low recent biomass.
  Model can adjust M, F, or recruitment to account for the low population biomass.
  In model M is constant, and recruitment is fixed in terminal year, so model can only adjust F.
- Other potential reasons for low biomass as elevated F incl.:
  - incomplete cohorts (little age structure to inform model estimates of F),
  - incorrect selectivity curves being applied,
  - underreporting of discards, and
  - unaccounted increases in M, and
  - low recruitment that the model is explaining by high F rates.

Black Sea Bass
Review April 2025

High F in terminal year (cont'd).

- SSC discussed if a different range of years (e.g., 2020-2022) for F/F_{msy} and biomass benchmarks should be used for projections to mitigate the influential 2023 high F.

- However, this assumes more optimistic starting point for biomass projections. Given SERFS abundance Index shows further decline in 2024, SSC ultimately recommended that the use of 2021-2023 was more appropriate.



Black Sea Bass

Review April 2025

Recruitment

- Low recruitment and biomass declines in recent time period (last 15 years) highly uncertain and likely combination of fishing pressure, environmental factors, etc., but magnitude of each is unknown.

  SEFSC WG April 2024: in low recruitment BSB => fishing + Environmental. Ecosystem modeling efforts may assist investigating possible interspecific and other interactions.

- If environmental factors are an important driver of (continued) decline in recruitment, and if that pattern continues, then model is likely misspecified => population is less productive and MSY poorly estimated.

Black Sea Bass

Review April 2025

The SSC noted concerns with estimation of MSY and steepness that may affect the “overfishing” stock status determination.

Fishery independent index values estimate a ~95% decline from historic maximum supporting the “overfished” determination.

There was a broad consensus within the SSC that the black sea bass population show indications of a depleted state.

Black Sea Bass

Review April 2025

Consensus recommendation:

Assessment is consistent with BSIA under the assumption of stationarity using the Beverton-Holt stock recruitment relationship to estimate productivity.

Some model assumptions (incl. stationarity, closed stock, constant M) may not be realistic and can result in considerable uncertainty.

Regardless of the cause of the population decline, stock is at very low levels (depleted) and fishing effort will need to be reduced.

Black Sea Bass

SSC Recommendation:

- SSC recognizes that the stock is not expected to recover under current conditions given the Beverton-Holt stock-recruit model predictions unless stock recruitment improves. Likelihood of rebuilding contingent upon recruitment returning to historical levels.
- Some disagreement if stock has capacity to rebuild even with significant reductions in fishing effort.
- If low recruitment is a result of environmental factors
  -> changes stock productivity and shift the B_{msy} benchmarks.

Black Sea Bass

Review April 2025

SSC recommendation Projections:

Use long-term recruitment for OFL, and short-term recruitment for projections.
$F_{current}$ for $F_{2021\text{-}2023}$ for interim years of 2024-2026, and
F_{msy} for OFL projections starting in 2027.

SSC stock risk rating: High risk with low biomass
If Council agrees: ABC based on P* = 20%.

Requested projections were reviewed in May webinar.

Black Sea Bass
May webinar

Projections

- Model assumptions of stationarity and recruitment based on B-H stock recruit relationship and steepness are carried forward in projections.

- Projections assume landings and discards will both go down with decreases in F. Large proportion of discards occurring in state waters the discards are likely not be reduced as much with new catch level recommendations.

- Projections assume discard selectivity from base model (mostly age 3-4). Ages 0-1 are mostly unaccounted for in discard selectivity curve.
  -> potential issue that may have resulted in model misspecification.

- Recreational discards remain high, in spite of decline in recreational effort.
  -> counterintuitive and may have significant implications for assessment. Important to investigate (data related or something else?).

Black Sea Bass
May webinar

projections (cont'd):

- Fishing likely not only cause Black Sea Bass population decline off SE coast. Urgent need to further investigate this. If quantitative information becomes available, incorporate asap into future assessments.
- Reduction in fishing effort is necessary to encourage stock to rebound by protecting remaining spawning stock.
- Projections and other information indicate that rebuilding BSB will be very challenging, irrespective of available management options.
- SSC recommended ABC based on provided projections (Table 3 in SSC report).

SCIENTIFIC AND STATISTICAL COMMITTEE

April & May 2025
MEETING REPORT

MUTTON SNAPPER AND YELLOWTAIL SNAPPER STOCK ASSESSMENT REVIEW

THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

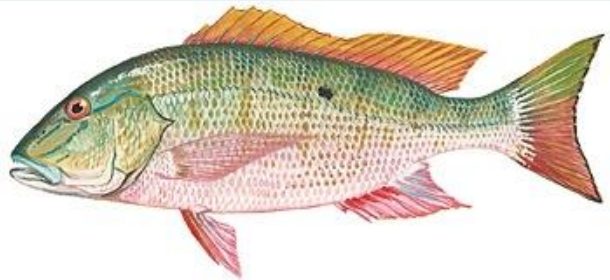
Scientific and Statistical Committee

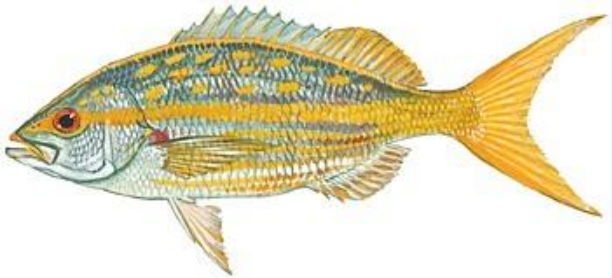
April 2025 Meeting Report

MUTTON AND YELLOWTAIL SNAPPER

JOINT SSC REVIEW

- February 25 – 26, 2025, Tampa, Florida.
- 7 SA and 15 Gulf SSC members.
- Decisions by consensus.
- SA ABC CR.



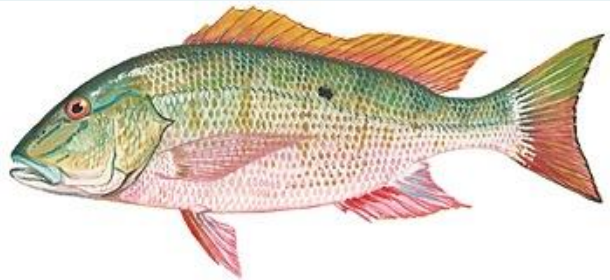


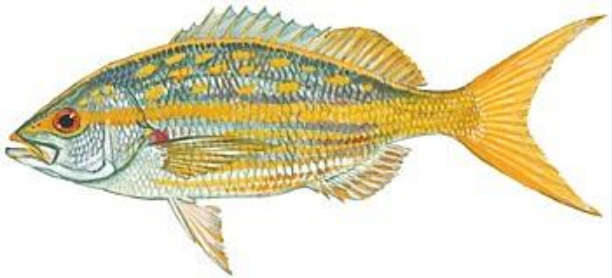
MUTTON AND YELLOWTAIL SNAPPER

JOINT SSC REVIEW

Both species

- Assessment is consistent with BSIA
  and appropriate for management advice.
- Stocks are not undergoing overfishing and are not overfished.
- Based on the currently adopted SPR-based F_{MSY} proxy of $F_{30\%SPR}$.
- Alternative ABC CR approach =>
  differences in characterization of uncertainty in OFL.
- OFL based on $F_{30\%SPR}$.
- ABC based on 75% of $F_{30\%SPR}$, for 2026 – 2028 projections.



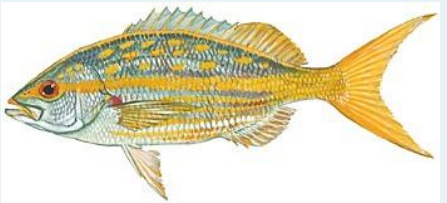


MUTTON AND YELLOWTAIL SNAPPER

JOINT SSC REVIEW

Justification for $SPR_{30\%}$

- Both stocks were managed at $SPR_{30\%}$ and saw increases in stock biomass and landings have not exceeded ACLs in recent years.
- Age composition showed that older fish are still present.
- Several closed areas may provide refuge for population, contributing to recruitment.
- Life history (incl. gonochorism & subtropical species) may indicate that $SPR_{30\%}$ may be more appropriate than $SPR_{40\%}$.



MUTTON AND YELLOWTAIL SNAPPER

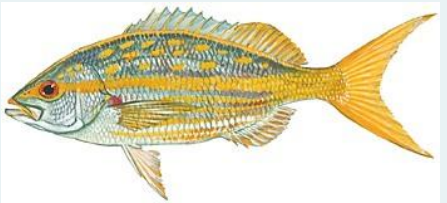
JOINT SSC REVIEW

Recruitment

Recommendation: Use geometric (Mutton) and arithmetic (yellowtail) mean of most **recent** five years of recruitment (2019 – 2023) to inform both OFL and ABC projections.

Justification: Management likely not be in place until 2026.
Fishing levels in 2024 and 2025 were below the new ABC, likely adding fish to the unexploited biomass.

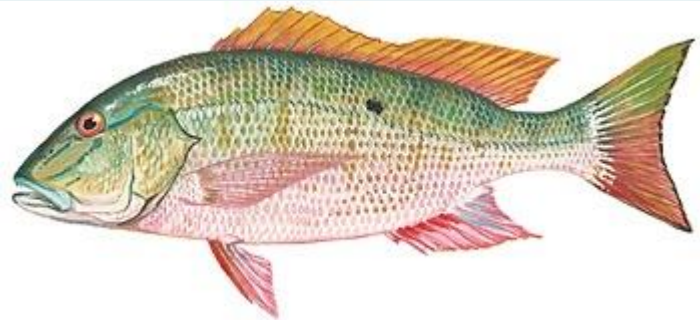
Update assessments no later than 5 years (every 5 years).
Monitor stocks (incl. landings, index values, input from AP/ stakeholders, etc.) for signs of concern.



MUTTON AND YELLOWTAIL SNAPPER SSC REVIEW

Mutton Snapper

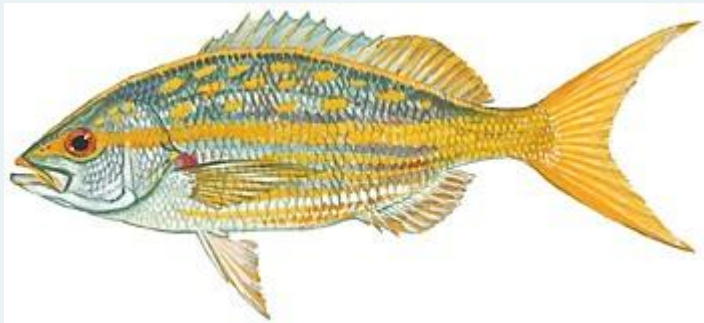
	OFL ($F_{30\%SPR}$)	ABC (75% of $F_{30\%SPR}$)
2024	3,280,143	2,498,073
2025	3,384,760	2,662,320
2026	3,363,706	2,725,359
2027	3,313,030	2,752,377
2028	3,270,355	2,772,615



Yellowtail Snapper

	OFL ($F_{30\%SPR}$)	ABC (75% of $F_{30\%SPR}$)
2024	5,076,490	3,955,300
2025	4,767,230	3,973,088
2026	4,495,187	3,925,031
2027	4,364,600	3,913,426
2028	4,307856	3,918,634

In lb ww



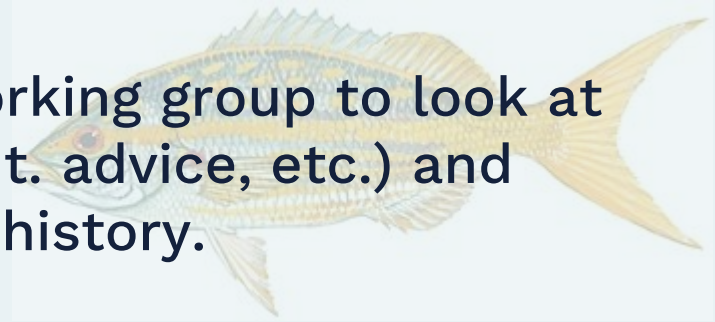
MUTTON AND YELLOWTAIL SNAPPER SSC REVIEW

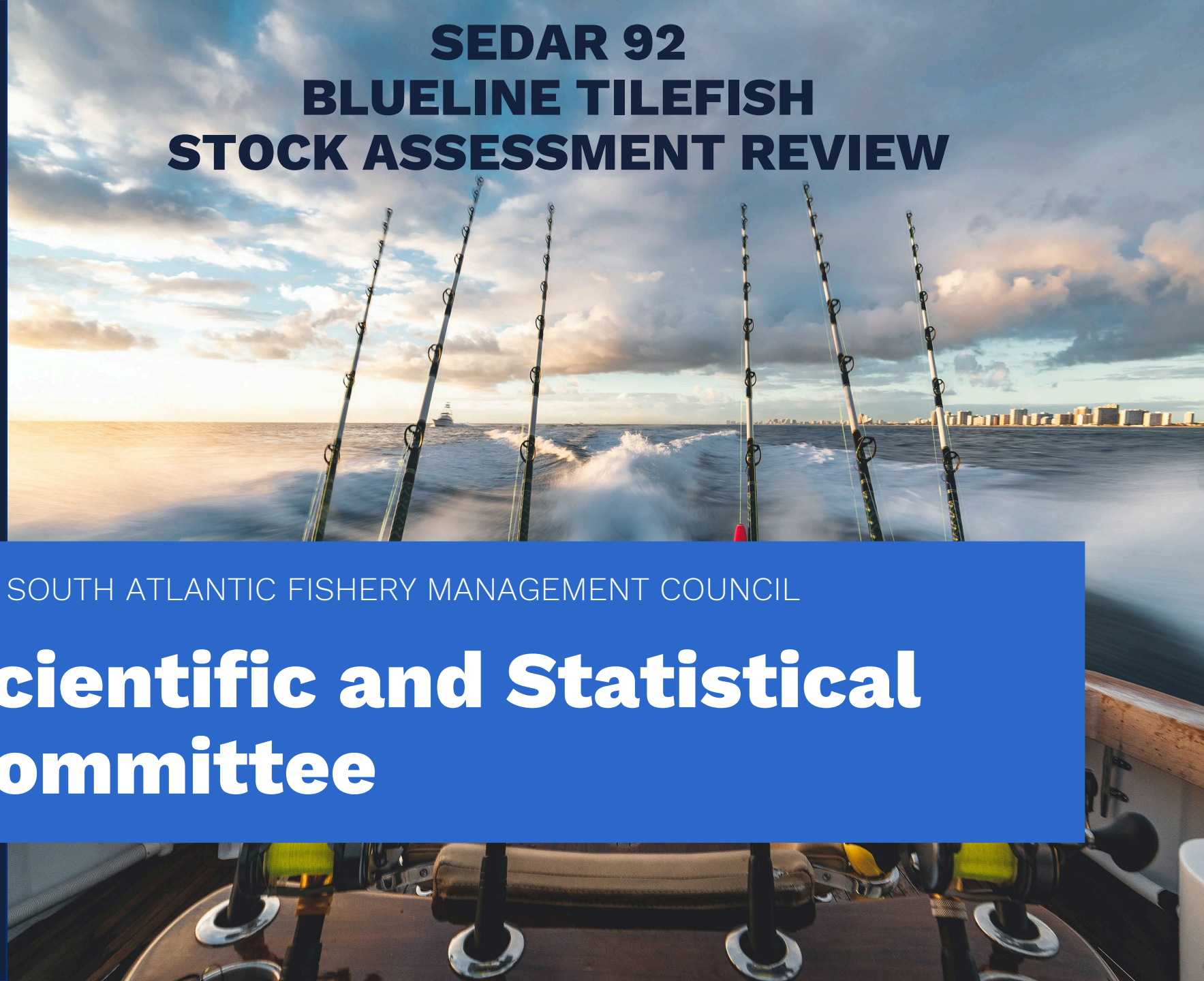
Extensive discussion about stock-recruit relationship uncertainty and proxies.

“Need to collectively address the required precision to estimate steepness and discussion of SPR proxy values given a range of life history values among fish species. Recommend a follow up joint meeting to address these topics. Essential to the consistent application of an agreed decision-making paradigm for present and future stock assessments.”

Update April 9:

Gulf Council accepted a motion to develop a joint working group to look at steepness estimation (required precision for mgmt. advice, etc.) and SPR proxy values given the species life history.





THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Scientific and Statistical Committee

April and May 2025 Meeting Report

SEDAR 92

(OPERATIONAL ASSESSMENT – TERMINAL YEAR 2023)

BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

Assessment lead: Nikolai Klibansky

Subcommittee met April 21 and 23, 2025 via webinar

Sub-Group SSC Members:
Mid-Atl. SSC Cynthia Jones, John Boreman, and Yan Jiao
S-Atl. SSC Jim Gartland and Marcel Reichert

Joint subcommittee review approach similar to SEDAR 50 (2017/18)

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

S92 addressed some of the data concerns from S50,
but significant data issues remain, incl.:

- MRIP catch estimates were used to inform total catch time series, instead of Delphi method used in S50. MRIP catch estimates were much higher than those derived from Delphi method, and uncertainty associated with MRIP estimates were very high.
- Sampling from commercial longline fleet declined since 2014, now covers <10 trips/year.
- SADL survey (incl. recent expansion) holds promise, but time-series of data (2 yrs of expansion sampling) were too short to include in S92.
- No age comps available.

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

Assessment approach: DLM (similar to S50)

2 mean length methods:

- Used in S50.
- Rejected for S92: no viable outputs (TAC 10-20X current catch & Z-M = negative F).

3 catch based methods (landings & dead discards):

a) Average catch of entire catch time-series,
b) Average catch over most recent 5 years of catch time-series,
c) 70% of average catch over most recent 5 years of catch time-series.

- Catch based method rejected in S50.
- Recommended b) for use to determine ABC.
  Best reflects current fishery conditions.
  Includes some measure of uncertainty given variability in catch estimates.

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

DLM does not produce any quantitative estimates of
population trends, stock status or stock projections

Sub-group noted increasing trend in catch, recent higher proportion of larger fish, and optimistic population and fishery signs from industry. This could represent positive signs for the population, but note variety of caveats and uncertainties.

The catch-based method was considered an ABC and not an OFL => OFL unknown.
ABC: 646,000 lbs whole W (293 mt).
(50% quantile of Average catch over most recent 5 years of catch time-series)

Given high degree of uncertainty sub-group suggested:

- Councils consider applying a management uncertainty buffer when setting ACL or ACT.
- New assessment within 5 years (incl. SADL survey).

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

Apportioning Cape Hatteras-NC/VA border and north of NC/VA border:

2 approaches considered:

a) based on landings - Not recommended - would heavily depend on effort estimates.

b) based on fishery independent SADL survey information – Recommended for use.
Similar to one used in S50, but relied 1 year of pilot study data (2017).
Since then, two years (2023 & 2024) SADL survey data are available (N ≈ 1,100 BLTF).

Several methods and uncertainties discussed (see details in report):

Sub-group recommended using combined 2023 and 2024 SADL survey CPUEs
scaled by sampling area (stratum): 30% (193,800 lbs whole W) Cape Hatteras - NC/VA border, and
70% (452,200 lbs whiole W) north of NC/VA border.

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

Full SSC reviewed subgroup recommendations in May webinar.
Agreed with subgroup recommendations.

Reiterated choice for Average Catch (AC) over Mean Length (ML) method , incl.:

- Negative F values
- The data limited methods are sensitive to length composition data.
  - Longline length comp frequencies from data inputs may not be representative of the population/fishery.
  - Length comps based on low trip n (small sample size) in localized region -> not representative of the entire region.
- ML-based methods assume population is at equilibrium, which is unlikely.
- Sensitivity run with Lc and Lbar from 2015 run (2011 to 2015 lengths) yielded similar results to average catch -> some confidence in AC output.
- K parameter in growth curve was higher than S50 (meta-analysis), but S92 used Blueline Tilefish growth curve.

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

Average Catch Assessment outcome highly uncertain.

- Data limitations (incl. lack of CPUE information and index, unreliable size or age compositions, uncertain recreational catch estimates, large variability in size at age used for growth curves).
- No estimate of stock status or OFL.
- Average Catch may be affected by management.

- Proportion estimation:
  Method uses only 2 years of SADL data. Improvement over use of a 1 yr pilot study (S50), but resulted in large change in proportion estimate (70/30 vrs. 56/44).
- Changing regional proportion could have a negative result of increasing discards for one region.

SEDAR 92 BLUELINE TILEFISH

NORTH OF CAPE HATTERAS

ABC procedure

- No OFL -> used Category 4 if ABC-CR, Category to recommend a direct ABC.
- Procedure for setting ABCs in CR Categories 2-4 are not fully developed -> urgent need for a standardized approach to avoid inconsistent ad-hoc decisions.

Monitoring, etc.:

- Monitor regional trends in commercial trips and SADL survey abundance data for proportion of catch in the areas NC/VA border to Cape Hatteras and NC/VA north.
- Re-evaluate the apportionment method based on additional years of SADL survey data. Can be done before the next assessment or on an annual basis.

- Mid-Atlantic SSC has recommended setting ABC for one year and considering additional sources of data before setting future year catch levels.
- SA SSC recommends coordinating any changes in the apportionment methodology with Mid-Atlantic as new data becomes available.

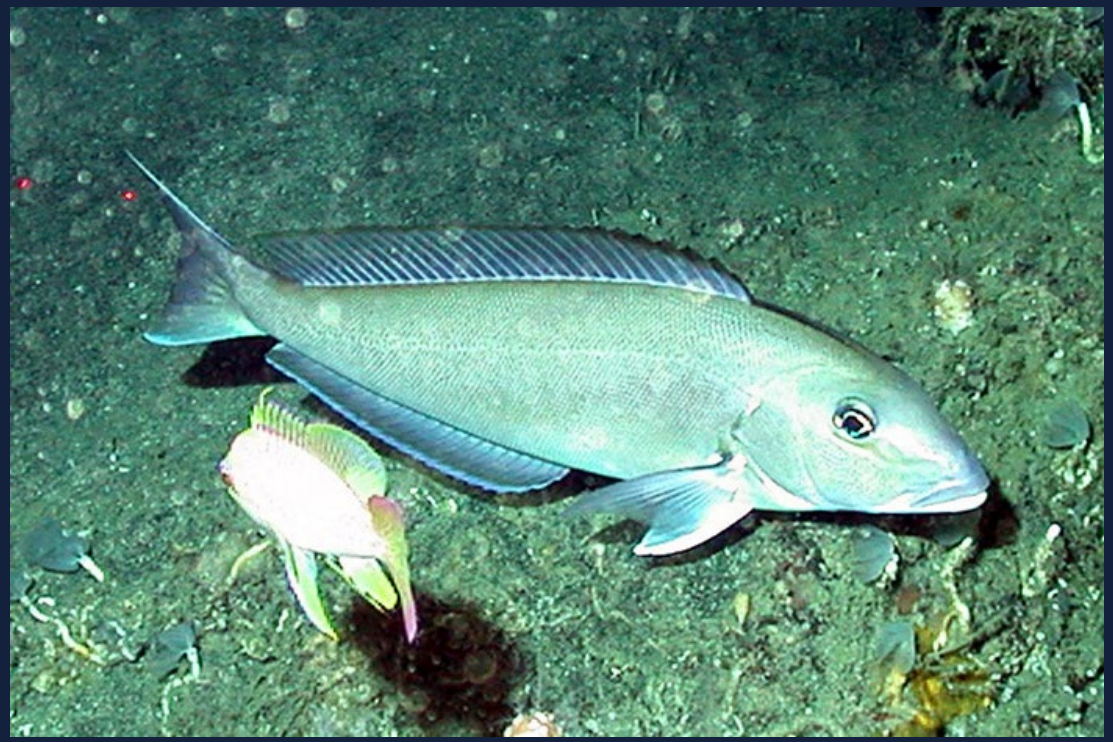
SEDAR 92 BLUELINE TILEFISH

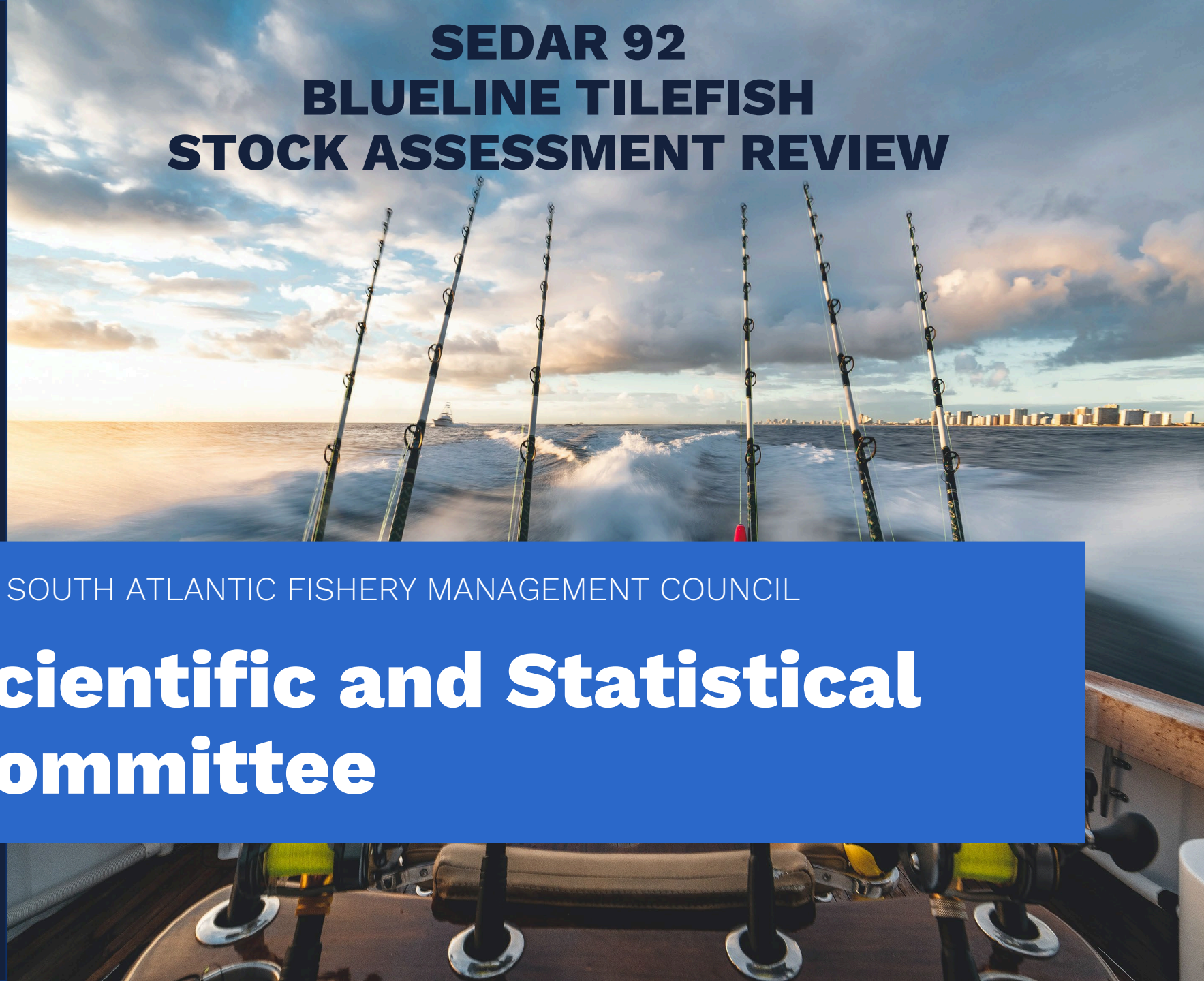
NORTH OF CAPE HATTERAS

Next assessment:

- 2028 or as soon as SADL survey data (fishery-independent index) can reliably be incorporated.
- Although Lc and Lbar are typically based on length compositions derived from the fishery, SADL survey can possibly serve as a source of length data given similarities in longline gear characteristics.
- Investigate if age data can reliably be used in the next assessment.

ABC for area Cape Hatteras - NC/VA border 193,800 lbs whole wet weight in 2026 onward until subsequent ABC recommendation is made.





THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Scientific and Statistical Committee

April and May 2025 Meeting Report

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

ASPIC not consistent with BSIA and not suitable for management.
SSC rejected stock assessment.

Recommended and requested DLM analysis
for review during May 28 webinar

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

Justification:

- >10 yrs at end of time series that are not informed by any effort data (no index available). Hand- and longline indices only available from 1993-2007.
- Landings data are not sufficient for surplus production models to provide robust results.
- No other data sources supporting increase in modelled biomass in most recent years.
- Two models fit to either longline index or handline index, indicating differing levels of productivity.
- For 17 years after termination of index, model predictions are driven solely by removals.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

Justification (continued):

- Model cannot discriminate between increasing biomass attributed to lower F rates or increases in recruitment.
- Longline and handline models had different CVs, but these were not weighted in the assessment projections.
- The SCDNR short bottom longline survey could have been considered for use in future surplus production model-based assessments for this stock. This survey shows a slight positive trend in relative abundance since 2000, which is not as steep as the model index predictions. However, the SSC recognized that the S50 recommendation not to use this index was followed for S92.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

SSC recommends Average Catch method for ABC basis.

- Similar issues to N region with Mean Length methods for S region, resulting in large variance estimates, but somewhat more realistic than N region.
- In addition, given that data types from recent years are similar for both regions, and blueline tilefish comprise one stock ->
  similar assessment approach for two regions was justifiable.
- The DLM tool does not provide quantitative estimates of biomass, F, or stock status; therefore, OFL is unknown.
- Average Catch DLM method used for ABC.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

SSC recommends Average Catch method for ABC basis.

Same three options as for N region:

a) Average catch of entire catch time-series,
b) Average catch over most recent 5 years of catch time-series,
c) 70% of average catch over most recent 5 years of catch time-series.

SSC recommendation: a) for use to determine ABC.

- Distribution of AvC catch MP shows similar shape to handline index from ASPIC, which provides additional support to the validity of the output.
- The fishery in S area established for a longer period than N of Cape Hatteras -> using longer time series was considered more appropriate.
- Includes some measure of uncertainty given variability in catch estimates.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

SSC recommends Average Catch method for ABC basis.

- Similar issues to N region. Mean Length methods for S region resulted in large variance estimates, but somewhat more realistic than N region.
- In addition, given that data types from recent years are similar for both regions, and blueline tilefish comprise one stock -> similar assessment approach for two regions was justifiable.
- SSC recommends using average catch over the full time series (AvC 1987-2023) for ABC recommendation.
  - Distribution of AvC catch MP shows similar shape to handline index from ASPIC, which provides additional support to the validity of the output.
  - The fishery in the S areas established for a longer period than N of Cape Hatteras -> using longer time series was considered more appropriate.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

Given concerns expressed in April SSC meeting regarding ASPIC model, the average catch method based on historical removals represent BSIA currently available for developing ABC recommendations for S region.

Average Catch MP outcome highly uncertain.

Some concern that setting ABC using catch-based methods -> input (catch) data can be constrained by ACLs (incl. catch/trip limits) -> TACs of catch-based MPs are affected by management constraints.

Fairly consistent catch over a long period (from 1987 to 2023) provides some support that continuing that average catch will not have negative consequences for the stock.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

ABC procedure

- No OFL -> used Category 4 if ABC-CR, Category to recommend a direct ABC.
- Procedure for setting ABCs in CR Categories 2-4 are not fully developed -> urgent need for a standardized approach to avoid inconsistent ad-hoc decisions.

Monitoring, etc.:

- Monitor trends in commercial trips and SADL survey abundance data for concerns.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

SOUTH OF CAPE HATTERAS - APRIL 2025 SSC MEETING

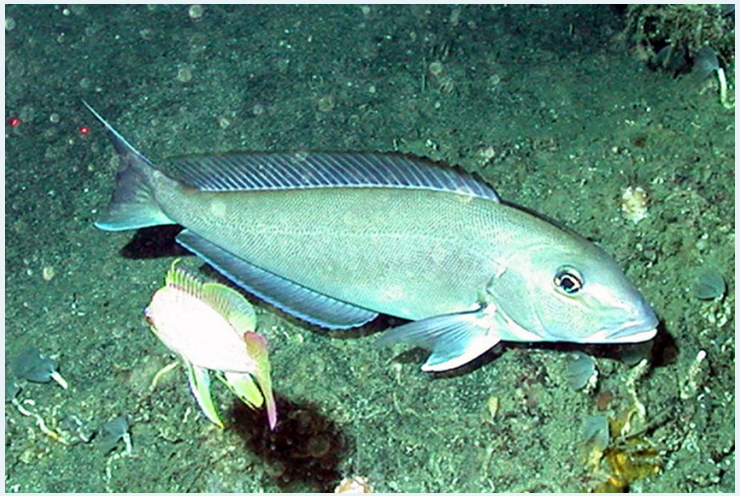
Next assessment:

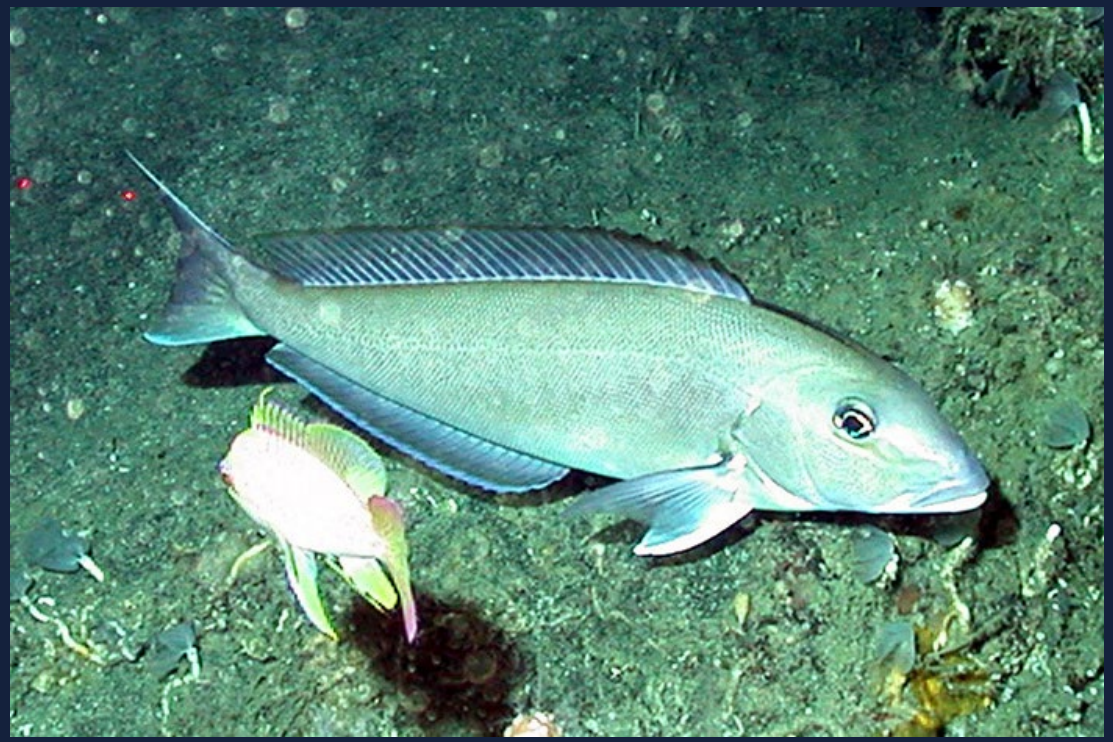
- 2028 or as soon as SADL survey data (fishery-independent index) can reliably be incorporated.
- Although Lc and Lbar are typically based on length compositions derived from the fishery, SADL survey can possibly serve as a source of length data given similarities in longline gear characteristics.
- Investigate if age data can reliably be used in the next assessment.

ABC for area south of Cape Hatteras 133,000 lbs whole wet weight in 2026 onward until subsequent ABC recommendation is made.

SEDAR 92 BLUELINE TILEFISH STOCK ASSESSMENT REVIEW

ABC for SAFMC management area 326,800 lbs whole wet weight in 2026 onward until subsequent ABC recommendation is made.





THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Scientific and Statistical Committee

April 2025 Meeting Report

DOLPHIN
MANAGEMENT STRATEGY EVALUATION

- SSC supported MSE update details and appreciates the diversity of expertise of the MSE Team.
- Advantage is open-source modeling package. => easier/better review and further development, (still takes considerable expertise + time).
- Key uncertainties:
  - Basically data limited resource, incl. lack/limited availability of length and age data.
  - MSE includes areas outside the SA jurisdiction (but have access to the resource). What impact have fleets outside on the entire system as SAFMC management is not affecting/controlling fisheries in “outside” areas?

DOLPHIN
MANAGEMENT STRATEGY EVALUATION

- Some questions about ultimate goal of the MSE given the nature of population and fishery
  -> meet stakeholder needs (fish availability) and sustainable population.
- SSC was wondering how MSE may play role in developing fishing level recommendation (may not be MSE objectives).

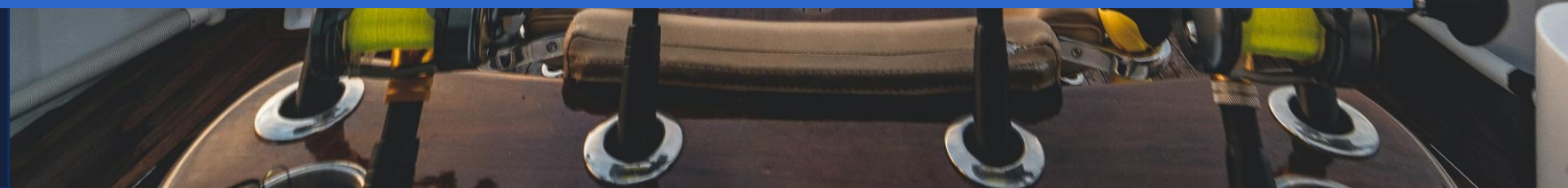
- SSC was informed about forthcoming document on how MSE fits into national management structure, and SSC looks forward report and outcome of CIE review.

Misc. other agenda items

THE SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

Scientific and Statistical Committee

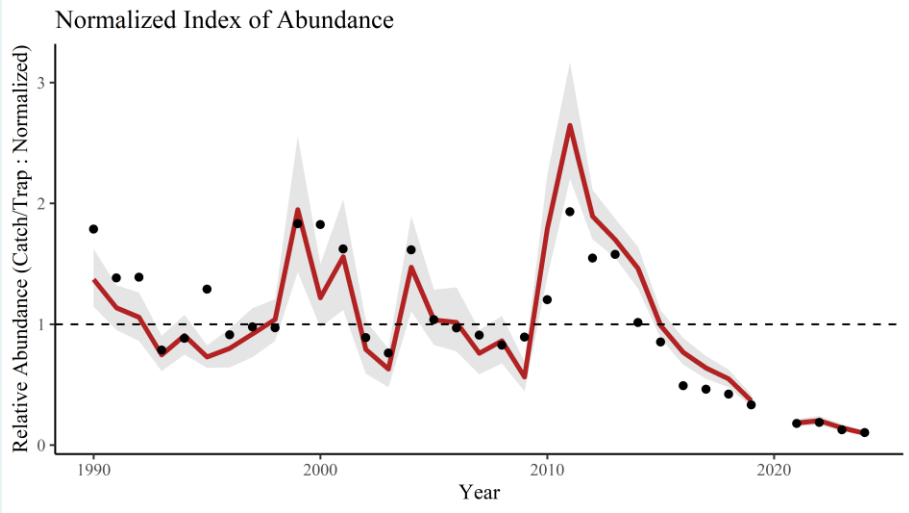
April 2025 Meeting Report



Other agenda items

Fishery independent survey (SERFS & SEAMAP) update:

- Significant information for SSC.
- E.g., 2024 Black Sea Bass Relative abundance lower than 2023
- Critical information for assessment and management
- SSC appreciates and recommends continuing the annual update.



Other agenda items

SMILE update

- Length data can be an important additional source of data.
- Especially because survey is conducted in areas undersampled by other surveys
- Recommendations:
  - Continuing program
  - Investigate possible bias due to non-random sampling
  - Investigate spatial resolution concerns (disproportionate # of samples from few locations).
  - Investigate what factors motivate participants to collect and contribute data.

Add Yellowtail Snapper as target species – good species for data validation.

Other agenda items

Ecopath with Ecosim update

- SSC appreciates the significant work and progress
- Good progress on the development of the Ecospace model
  Recommend continuation
- If possible, incorporate monthly timesteps and any interactions
  to allow Ecological Niche Models to vary seasonally.
- Functional response curves are estimated external to the model,
  important to get those right (small difference can have a big impact).
- Final product can represent a valuable tool
  to explore species interactions and other processes
  (e.g., Black Sea Bass and Red Snapper)