

Black Sea Bass (*Centropristis striata*) Snapshot Ecosystem & Socioeconomic Profile

Spring 2025

This is a short-form update to the full Ecosystem and Socioeconomic Profile [1] highlighting the recent status of environmental, ecological, and socioeconomic factors. Black sea bass is an important Mid-Atlantic stock with high commercial value and recreational engagement. Overfishing is not occurring and the stock is not overfished. Winter bottom temperature is used in the stock assessment model as a factor that influences recruitment to incorporate the observed link between cold temperature and smaller year classes [2].

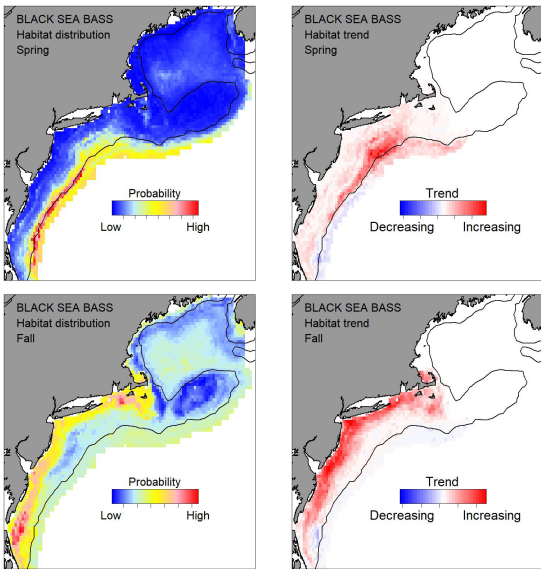


Figure source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/fisheries-habitat-northeast-us-shelf-ecosystem>

2024 in Review

Fishing Community Observations

- Steady or increasing availability
- Concerns about high discards
- Restrictive and complex regulations limit fishing opportunities
- For additional information, see [3], [4], and [5]

Commercial Fishery

- Number of active vessels declined in 2024, but total landed pounds increased from 2023
- Total revenue decreased slightly along with average prices (\$/lb)
- Average revenue per vessel increased

Recreational Fishery

- Targeted trips, catch, and landings all down from 2023 [3]
- However, number of trips is still above the historic average
- Recreational catch-per-angler index not yet updated for 2024

Ecosystem

- The stock assessment models the stock as two subunits, divided at the Hudson Canyon (see left)
- Cold winter in the north but near average in the south
- Poor or below average fish condition (i.e., weight at a given length; see below)

Key Points from the Mid-Atlantic Risk Assessment

Moderate-high to high risk of the stock not achieving optimal biomass due to:

- Very high exposure to changes in climate
- Observed and potential changes in distribution; northward shift into the Gulf of Maine
- Dependence on threatened estuarine habitat
- Decline in the biomass of benthic invertebrate prey
- Decline in black sea bass body condition (see right)

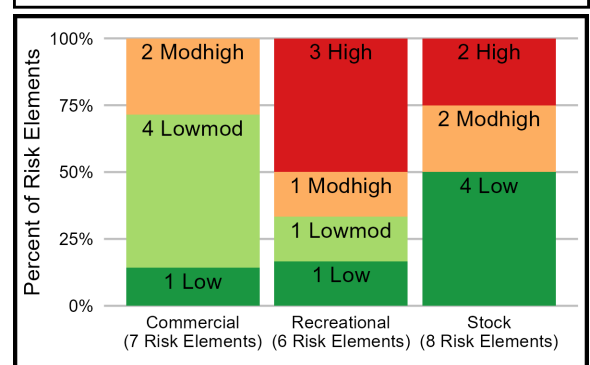
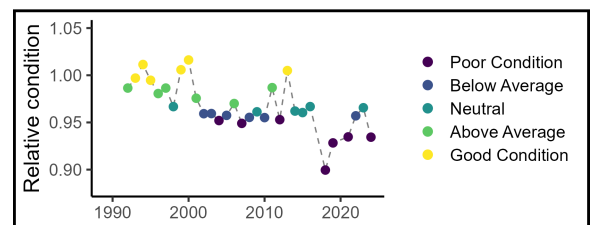
High risk of the recreational fishery not achieving optimal yield due to:

- Catch exceeding harvest limits in several years
- High regulatory complexity; frequent changes and varying interstate regulations; regulatory changes in allocations

Moderate-high risk of the commercial fishery not achieving optimal yield due to:

- Commercial revenue in wind development areas
- High discards & discard mortality

Please see the [Mid-Atlantic 2024 EAFM risk assessment update](#) for more details and explanation of the low and low-moderate risks to black sea bass and its associated fisheries.



Indicator	Status In 2024	Implications	Time Series*
Mean winter (Feb-Mar) bottom temperature (°C)	North: Below threshold South: Near long-term average	Cold winter temperatures may increase the mortality of young-of-the-year fish, resulting in smaller year classes. 2024 temperature in the northern subunit (north of Hudson Canyon) was colder than black sea bass's lower threshold of 8°C. Bottom temperature data comes from GLORYS, a modeled product [7].	
Shelf water volume (km ³)	No data for 2024	Shelf water volume [8] is a proxy for suitable winter habitat; higher shelf water volume indicates less suitable habitat, potentially leading to northern fish migrating into the southern subunit. The shelf water volume dataset is created from in situ data, and there has been no winter sampling since 2022, highlighting the need for additional indicators to inform stock subunit mixing.	
Black sea bass MRIP recreational trips (millions of annual trips)	Above long-term average	Recent trip numbers are near an all-time high, but have decreased from 2023. Catch (not shown) generally reflects trip patterns, while landings (not shown) have remained steady. High regulatory complexity may contribute to recreational fishing trends.	
Number of active black sea bass commercial vessels (#)	Below long-term average	Active vessels were defined as the number of vessels with federal permits that landed at least one pound of black sea bass in a year. The number of active vessels has been decreasing since 2017, which could impact revenue distributions and fleet composition.	
Commercial revenue per active black sea bass vessel (2024 USD)	Above long-term average	Commercial revenue per active black sea bass vessel follows an overall increasing trend most likely driven by the continued decline of active vessels and an overall increase in total commercial landed pounds over the past decade.	

* The y-axis units are included in the “Indicator” column of the table. In all figures, the dashed line represents the time series mean, and the solid green lines indicate ± 1 standard deviation. Commercial data were derived from the commercial dealer database hosted at the Greater Atlantic Regional Office. All dollar values have been adjusted to 2024 real dollars using the [Gross Domestic Implicit Price Deflator](#). The code used to create this report can be viewed online: github.com/NEFSC/READ-EDAB-bsbESP

We welcome your observations! Please contact northeast.ecosystem.highlights@noaa.gov with any on-the-water insights or changes observed in the black sea bass fishery and nefsc.esp.leads@noaa.gov with questions or comments on the information presented in this report.

References

1. R. Tabandera, A. Tyrell, M. McMahan, & P. Perez, Black sea bass ecosystem considerations and indicator development. (2024). <https://doi.org/10.25923/EZ9G-AF05>.
2. NEFSC, *Report of the black sea bass (Centropristis striata) research track stock assessment working group* (2023).
3. MAFMC, *Black sea bass fishery information document* (2024).
4. MAFMC, *Summer flounder, scup, and black sea bass fishery performance report* (2024).
5. MAFMC, *Summer flounder, scup, and black sea bass monitoring committee (MC) November 19, 2024 webinar meeting summary 2025 recreational management measures* (2024).
6. L. Jean-Michel, G. Eric, B.-B. Romain, G. Gilles, M. Angélique, D. Marie, B. Clément, H. Mathieu, L. G. Olivier, R. Charly, C. Tony, T. Charles-Emmanuel, G. Florent, R. Giovanni, B. Mounir, D. Yann, & L. T. Pierre-Yves, The Copernicus Global 1/12° Oceanic and Sea Ice GLORYS12 Reanalysis. *Frontiers in Earth Science*, **9** (2021) 698876. <https://doi.org/10.3389/feart.2021.698876>.
7. P. S. Fratantoni, T. Holzwarth, & M. H. Taylor, *Description of oceanographic conditions on the northeast U.S. Continental shelf during 2014*. (2015).

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