DRAFT Regulatory Amendment 37

to the Fishery Management Plan for the Snapper Grouper Fishery of the South

Annual Catch Targets, Accountability Measures, and Management Measure Modifications for Black Sea Bass

Including Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review

December 2025 DRAFT

South Atlantic Fishery Management Council
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Award Number FNA15NMF4410010

Regulatory Amendment 37 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Proposed action(s):

Actions would establish annual catch targets, revise accountability measures, revise recreational bag and size limits, and establish a spawning closure for South Atlantic black sea bass.

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Summary

Why is the South Atlantic Fishery Management Council considering action?

Purpose:
The purpose of this framework amendment is to establish annual catch targets and modify management and accountability measures for South Atlantic black sea bass to immediately address declining landings and abundance while updates to the black sea bass stock assessment are completed in 2026 and longer-term actions are developed through a separate process.

Need: The need for this framework amendment is to limit further declines in South Atlantic black sea bass abundance by reducing fishing mortality from harvest and dead discards.

What actions are being proposed in this amendment?

Regulatory Amendment 37 proposes the following changes to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region:

Action 1. Establish annual catch targets and revise the accountability measures for South Atlantic black sea bass

Purpose of Action: Reduce annual harvest of South Atlantic black sea bass by establishing and managing the fishery to annual catch targets set lower than recent levels of harvest.

Sub-Action 1a. Establish annual catch targets for black sea bass

Alternative 1 (No Action). No annual catch targets are currently in place for South Atlantic black sea bass.

Preferred Alternative 2. Establish a commercial annual catch target of 48,557 pounds whole weight and a recreational annual catch target of 63,143 pounds whole weight for South Atlantic black sea bass. The annual catch limits for each sector would remain unchanged.

Sub-Action 1b. Revise in-season accountability measures for the commercial sector

Alternative 1 (No Action). If the National Marine Fisheries Service estimates that commercial landings of South Atlantic black sea bass will reach or are projected to reach the commercial quota, currently set at the commercial **annual catch limit**, the National Marine Fisheries Service will close the commercial harvest of black sea bass for the remainder of the fishing year.

Preferred Alternative 2. If the National Marine Fisheries Service estimates that commercial landings of South Atlantic black sea bass will reach or are projected to reach the commercial quota, set at the commercial **annual catch target** in Sub-Action 1a, Alternative 2, the National

Marine Fisheries Service will close the commercial harvest of black sea bass for the remainder of the fishing year.

Sub-Action 1c. Revise accountability measures for the recreational sector

Alternative 1 (No Action). The National Marine Fisheries Service will project the length of the South Atlantic black sea bass recreational fishing season based on when the recreational **annual catch limit** is projected to be met and announce the recreational fishing season end date in the Federal Register prior to the start of the recreational fishing year on April 1.

Preferred Alternative 2. The National Marine Fisheries Service will project the length of the South Atlantic black sea bass recreational fishing season based on when the recreational **annual catch target** is projected to be met and announce the recreational fishing season end date in the Federal Register prior to the start of the recreational fishing year on April 1.

Action 2. Establish a spawning season closure for South Atlantic black sea bass

Purpose of Action: Reduce harvest of South Atlantic black sea bass during their spawning season, allowing for greater survival, spawning output, and recruitment.

Alternative 1 (No Action). There is no spawning seasonal closure for black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC.

Preferred Alternative 2. Establish a commercial seasonal closure during which commercial sale, purchase, harvest, or possession of black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC, is prohibited and the commercial trip limit is zero.

> **Sub-Alternative 2a.** The commercial seasonal closure occurs from January 1 through January 31.
>
> **Preferred Sub-Alternative 2b.** The commercial seasonal closure occurs from February 1 through the end of February.
>
> **Preferred Sub-Alternative 2c.** The commercial seasonal closure occurs from March 1 through March 31.
>
> **Sub-Alternative 2d.** The commercial seasonal closure occurs from April 1 through April 30.

Preferred Alternative 3. Establish a recreational seasonal closure during which recreational harvest or possession of black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC, is prohibited and the bag limit is zero.

> **Sub-Alternative 3a.** The recreational seasonal closure occurs from January 1 through January 31.

Preferred Sub-Alternative 3b. The recreational seasonal closure occurs from February 1 through the end of February.

Preferred Sub-Alternative 3c. The recreational seasonal closure occurs from March 1 through March 31.

Sub-Alternative 3d. The recreational seasonal closure occurs from April 1 through April 30

Action 3. Reduce the recreational bag limit for South Atlantic black sea bass

Purpose of Action: Reduce the recreational harvest rate of South Atlantic black sea bass to allow for a longer season under a lower annual catch target and allow survival and growth of a greater portion of the population to later life stages.

Alternative 1 (No Action). The recreational bag limit for South Atlantic black sea bass is 7 fish per person per day.

Alternative 2. Reduce the recreational bag limit for South Atlantic black sea bass to 1 fish per person per day.

Preferred Alternative 3. Reduce the recreational bag limit for South Atlantic black sea bass to 2 fish per person per day.

Alternative 4. Reduce the recreational bag limit for South Atlantic black sea bass to 3 fish per person per day.

Alternative 5. Reduce the recreational bag limit for South Atlantic black sea bass to 4 fish per person per day.

Action 4. Reduce the recreational minimum size limit for South Atlantic black sea bass

Purpose of Action: Reduce the number of recreational dead releases by enabling anglers to reach (lower, via Action 3) bag limits faster and move to other fishing areas or methods.

Preferred Alternative 1 (No Action). The recreational minimum size limit for South Atlantic black sea bass is 13 inches total length.

Alternative 2. Reduce the recreational minimum size limit for South Atlantic black sea bass to 12 inches total length.

Alternative 3. Reduce the recreational minimum size limit for South Atlantic black sea bass to 11 inches total length.

Chapter 1. Introduction

1.1. What Actions are Being Proposed?

The actions proposed in Regulatory Amendment 37 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) would establish annual catch targets (ACT) for black sea bass, revise the accountability measures, establish a spawning season closure for both the commercial and recreational sectors, and reduce the recreational bag and minimum size limits.

South Atlantic Fishery Management Council (Council)

- Responsible for conservation and management of fish stocks in the South Atlantic Region.
- Consists of 13 voting members and 4 non-voting members; voting members include 1 representative from each of the 4 South Atlantic state fishery management agencies, 8 members appointed by the Secretary of Commerce, and the Southeast Regional Administrator of NMFS.
- Responsible for developing fishery management plans and amendments under the Magnuson-Stevens Act; recommends actions to NMFS for implementation.
- Management area is from 3 to 200 nautical miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida through Key West, except for mackerel which is from New York to Florida, and dolphin and wahoo, which is from Maine to Florida.

1.2. Who is Proposing the Actions?

The Council is responsible for managing fish stocks in the South Atlantic Region for the Snapper Grouper FMP. The Council develops the framework amendment and sends it to the National Marine Fisheries Service (NMFS), who publishes a rule to implement the framework amendment on behalf of the Secretary of Commerce. NMFS is an agency of the National Oceanic and Atmospheric Administration within the Department of Commerce. Guided by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Council works with NMFS, other partners, and stakeholders to assess the status of fish stocks, specify annual catch limits (ACL), reduce bycatch, and enforce fisheries regulations.

The Council and NMFS are also responsible for making this framework amendment available for public comment. The draft environmental assessment (EA) was combined with the framework amendment and was made available to the public during public hearings and in Council meeting briefing books. The final EA and framework amendment will be made available for public comment during the proposed rule stage of the rulemaking process. The final EA and framework amendment will be found on the Council's website at http://www.safmc.net.

1.3. Where is the Project Located?

Management of the federal snapper grouper fishery located off the South Atlantic in the 3-200 nautical miles U.S. EEZ is conducted under the Snapper Grouper FMP, which includes 55 species (SAFMC 1983) (Figure 1.3.2). In the South Atlantic, the black sea bass stock, specifically, is managed from Cape Hatteras, North Carolina, south through the Council's

boundary with the Gulf Council. All actions in this amendment pertain only to the South Atlantic stock of black sea bass, in the jurisdiction of the Council.

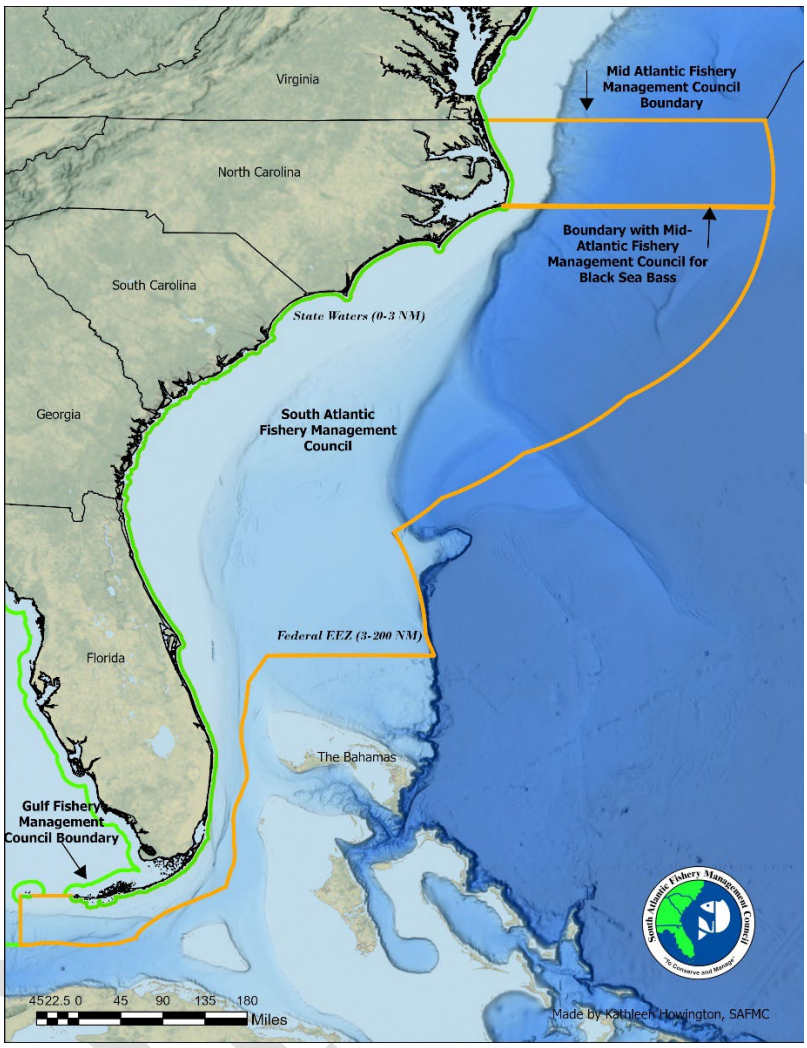

Figure 1.3.3. Jurisdictional boundaries of the South Atlantic Council for the Snapper Grouper Fishery Management Plan, in general, and specifically noting the different northern boundary for management of black sea bass.

1.4. Why are the Council and NMFS Considering Action? (Purpose and Need)

Purpose: The purpose of this framework amendment is to establish annual catch targets and modify management and accountability measures for South Atlantic black sea bass to immediately address declining landings and abundance while updates to the black sea bass stock assessment are completed in 2026 and longer-term actions are developed through a separate process.

Need: The need for this framework amendment is to limit further declines in South Atlantic black sea bass abundance by reducing fishing mortality from harvest and dead discards.

Background

South Atlantic black sea bass were assessed through Southeast Data, Assessment, and Review (SEDAR) 76. Due to various concerns from the Scientific and Statistical Committee (SSC) and Council over catch level projection assumptions, several iterations of projections for this assessment were developed between 2023 and 2025. The SEDAR 76 Update stock assessment, which added data through 2023 and included some additional modeling changes from the original assessment, was completed in March 2025. All iterations of the assessment indicated strong declines in black sea bass spawning stock biomass and abundance since 2012.

In preparation for catch level recommendations from the SEDAR 76 Update (2025), the Council began development of an amendment (Amendment 56 to the Snapper Grouper FMP). In April – May 2025, the SSC reviewed the SEDAR 76 Update (2025), and recommended acceptable biological catch (ABC) levels, beginning in 2027, to the Council, based on this stock assessment. In June 2025, the SEDAR 76 Update (2025) was presented to the Council. The Council expressed concerns with modeling decisions and assumptions used to develop reference points, estimate stock status, and project future sustainable catch levels. The Council also noted expected changes to recreational catch estimates in 2026 based on the Marine Recreational Information Program's (MRIP) review of its Fishing Effort Survey (FES), and determined that a potential long-term rebuilding plan for black sea bass would be best informed by incorporating these catch estimates. Therefore, the Council requested additional review and potential modification of the SEDAR 76 Update to address any modeling changes and incorporate updated recreational catch information before using it to develop long-term management measures. The Council postponed work on Amendment 56 until after this review and any additional modifications to the black sea bass stock assessment are completed. Updates to the stock assessment are now expected in 2026, at which time the Council will receive new ABC advice from the SSC. New scientific advice and revised ABCs from the SSC will inform Amendment 56 to address long-term changes to South Atlantic black sea bass management based on the most recent version of the stock assessment.

While additional review and modifications of the stock assessment are being developed, the Council recognizes the persistent, strong declines in biomass, abundance, fishery-independent indices, and landings, as reflected in the SEDAR 76 Update (2025). To limit these population declines and increase stock biomass and recruitment in the short-term, the Council is considering actions intended to: 1) reduce fishing mortality from harvest and dead discards, and 2) increase spawning output and recruitment through spawning season closures.

1.5. Are These Actions Within the Bounds of the Scientific Recommendations?

While the SEDAR 76 Update (2025) continues to undergo review and modification and until the SSC recommends new ABC advice in 2026, the overfishing limit, ABCs, and ACLs would continue to be based on SEDAR 56 (see Table 1.6.1). However, to incorporate recent declining trends in abundance indices and catch that were used in the SEDAR 76 Update (2025), the Council is considering establishing ACTs and revising AMs to lower annual landings to half the average landings from the last five years for each sector. Additionally, declines in recruitment that were observed for black sea bass in the SEDAR 76 Update (2025) have also been observed

in other winter-spawning species in the South Atlantic (e.g., gag, scamp). Therefore, consideration of a spawning season closure intended to protect spawning opportunities and increase recruitment addresses another concern raised by recent scientific advice. Finally, black sea bass are removed from the population by fishing as landings and dead discards. Changes to the recreational bag limit and minimum size limit are being considered to reduce the rate of landing (bag limit) and discarding (size limit) to accommodate a recreational fishing season that, along with the establishment of lower annual catch levels through ACTs, is expected to result in fewer overall removals of black sea bass.

1.6. What is the Management and Stock Assessment History for Black Sea Bass?

The snapper grouper fishery is highly regulated and regulations have been in place for black sea bass since the initial development of the Snapper Grouper FMP in 1983. More information on management for all species in the snapper grouper fishery management unit may be found at https://safmc.net/fishery-management-plans/snapper-grouper/. Stock assessment information can be found at www.sedarweb.org and Section 3.2.2. Below are select amendments to the Snapper Grouper FMP that are relevant to consideration of annual catch targets, recreational size and bag limits, and a spawning closure for South Atlantic black sea bass.

Snapper Grouper FMP (SAFMC 1983)
The Snapper Grouper FMP included provisions to prevent growth overfishing in 13 species in the snapper grouper complex and established a procedure for preventing overfishing in other species; established minimum size limits for black sea bass and other snapper grouper species; specified an 8-inch TL minimum size limit and a 4-inch trawl mesh size.

Amendment 4 (SAFMC 1991)
Amendment 4 established permit, gear, and vessel identification requirements for black sea bass pots.

Emergency Rule (1992) and Extension (1992)
This emergency rule temporarily modified the definition of a black sea bass pot, allowed multi-gear trips for black sea bass, and allowed retention of incidentally-caught fish on black sea bass trips.

Regulatory Amendment 4 (SAFMC 1993)
This framework amendment modified the definition of a black sea bass pot, allowed multi-gear trips for black sea bass, and allowed retention of incidentally-caught fish on black sea bass trips.

Amendment 9 (SAFMC 1999a)
For black sea bass, the amendment implemented a 10-inch minimum size limit for both sectors, a 20 fish recreational bag limit, and required escape vents and escape panels with degradable fasteners in black sea bass pots.

Amendment 13C (SAFMC 2006)
The amendment set the black sea bass total ACL equal to the ABC; based on sector allocations as 43% commercial and 57% recreational, specified a commercial ACL of 477,000 lbs gw in yr 1

and then 308,000 lbs gw in Year 3 and onward until modified; Specified a recreational allocation of 633,000 lbs gw in Year 1 and 409,000 lbs gw in Year 3 an onwards until modified; increased the recreational minimum size limit from 10 in TL to 11 in TL in Year 1 and 12 in TL in Year 2 and onward until modified; reduced the recreational bag limit from 20 to 15 fish; required the use of at least 2-inch mesh for the entire back panel of black sea bass pots, required black sea bass pots be removed from the water when the quota is met, and changed the commercial fishing year to June 1 through May 31.

Amendment 16 (SAFMC 2009)

The amendment established a shallow-water grouper spawning season closure from January 1 through April 30. It also set a commercial quota for gag that when met, closed the shallow-water grouper complex.

Amendment 15A (SAFMC 2007)

The amendment established rebuilding plans and status determination criteria for black sea bass and several other snapper grouper species.

Regulatory Amendment 17B (SAFMC 2010)

The framework amendment specified ACLs, ACTs, and AMs, where necessary, for 9 species undergoing overfishing, including black sea bass.

Regulatory Amendment 9 (SAFMC 2010)

The framework amendment reduced the black sea bass recreational bag limit from 15 to 5 fish.

Amendment 18A (SAFMC 2012)

The amendment defined a rebuilding strategy, catch levels (ABC, ACLs, ACT) for black sea bass, modified the black sea bass AMs for both sectors, increased the recreational minimum size limit from 12 to 13 in TL and increased the commercial established a limited access commercial black sea bass pot endorsement, revised identification requirements for pots, limited the number of pots to 35 per vessel, and required that all pots be brought back to shore at the conclusion of each trip.

Regulatory Amendment 19 (SAFMC 2013)

The framework amendment adjusted black sea bass catch levels and established an annual prohibition on the use of black sea bass pots from November 1 through April 30 to minimize interactions between pots and large whale migrations.

Regulatory Amendment 14 (SAFMC 2014)

The framework amendment modified the fishing years for black sea bass to April 1 through March 31 for the recreational sector, and from January 1 through December 31 for the commercial sector; revised the commercial trip limits; and modified the recreational AM for black sea bass to annually announce the recreational fishing season start and end dates.

Regulatory Amendment 25 (SAFMC 2016)

The framework amendment increased the recreational bag limit for black sea bass from 5 to 7 fish per person per day.

Abbreviated Framework Amendment 2 (SAMFC 2018)

The abbreviated framework action adjusted the ACLs for South Atlantic black sea bass (and vermilion snapper) in response to the results of the latest stock assessments. For black sea bass, the amendment increased the OFL to 703,000 lbs ww in 2021, increased the ABC to 643,000 lbs ww in 2021 and set it to remain in place until modified, and set the total ACL equal to the ABC.

Current Regulations

Table 1.6.1. A summary of current South Atlantic black sea bass regulations at the time of framework amendment development. For current regulations, reference 50 CFR Part 622. All amendments referenced are under the Snapper Grouper FMP.

Overfishing Limit	703,000 lbs ww (2021+)
Acceptable Biological Catch	643,000 lbs ww (2021+)
Total ACL	643,000 lbs ww (2021+)
Commercial ACL	276,490 lbs ww (2021+)
Recreational ACL	366,510 lbs ww (2021-2022+)
Commercial Allocation Percentage	43.00%
Recreational Allocation Percentage	57.00%
Commercial In-season Closure?	Yes
Commercial Payback?	Yes
Rec In-season Closure?	No – National Marine Fisheries Service will announce recreational season each year
Rec Payback?	No
Fishing year	Commercial: January 1-December 31; Recreational: April 1-March 31
Commercial Management Measures	Trip limit: 1,000 lbs gw (1,180 lbs ww) Hook-and-Line trip limit: 300 lbs gw January 1 -April 30 (standard trip limit, otherwise) Minimum size limit: 11 inches total length (TL) Nearshore area pot closure: Nov 1- Apr 30 (closure area varies within this time period)
Recreational Management Measures	Minimum size limit: 13 inches TL Bag limit: 7 fish Sale of recreationally caught fish prohibited.

Chapter 2. Proposed Actions

2.1. Action 1. Establish annual catch targets and revise the accountability measures for South Atlantic black sea bass

2.1.1. Sub-Action 1a. Establish annual catch targets for black sea bass

Alternative 1 (No Action). No annual catch targets are currently in place for South Atlantic black sea bass.

Preferred Alternative 2. Establish a commercial annual catch target of 48,557 pounds whole weight and a recreational annual catch target of 63,143 pounds whole weight for South Atlantic black sea bass. The annual catch limits for each sector would remain unchanged.

Discussion

The South Atlantic Fishery Management Council (Council) recognizes the persistent downward trends in catch and relative abundance of black sea bass, and the need for immediate actions to reduce harvest from recent levels before longer-term actions are developed through Amendment 56 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP). Current annual catch limits (ACL) were based on SEDAR 56 (2018). While these ACLs have not been exceeded during the years since that assessment, the primary fishery-independent abundance index has continued to trend down (Finch et al. 2025), indicating that a lower amount of mortality is necessary to stabilize and increase the black sea bass stock. As such, the Council is considering lowering fishing mortality due to harvest by establishing annual catch targets (ACT) below recent harvests (Sub-Action 1a) and revising accountability measures (AM) (Sub-Actions 1b and 1c) to achieve these targets. The current sector allocations and ACLs (see Table 1.6.1.1) would remain in effect. Abbreviated Framework 2 to the Snapper Grouper FMP modified the ACLs for black sea bass, and those ACLs are currently in place. Beginning in 2021 and until modified, the commercial ACL is 276,490 lbs ww, and the recreational ACL is 366,510 lbs ww (Table 1.6.1.1.).

For the recreational sector, the current ACL is based on recreational catch estimates developed using the Marine Recreational Information Program (MRIP) Coastal Household Telephone Survey (CHTS) to estimate recreational effort, rather than the more recently developed mail-based MRIP Fishing Effort Survey (FES). A recent pilot study of the MRIP FES identified potential bias in estimates from this survey, however, and that survey is now undergoing a more extensive review to determine the extent of any biases. Results of that review are expected to be available for managers in 2026 and are expected to necessitate revision of catch histories as well as methods for future catch estimation.

As this amendment is being considered ahead of longer-term actions that would be based on a revised stock assessment, the current recreational ACL and the proposed recreational ACT are both based on catch estimates calibrated to the CHTS methodology for estimating recreational effort. Thus, recreational landings would continue to be monitored against the ACL and ACT using CHTS-calibrated estimates.

The Council is considering establishment of ACTs rather than revision of ACLs due to the timing and requirements of different regulatory actions. ACTs can be used to prevent ACLs from being exceeded if they are set below the ACL. Generally, the Council has chosen not to use ACTs to trigger AMs. However, there has been an observed decline in black sea bass biomass and abundance over the last decade, reflected in the SEDAR 76 Update (2025), fishery-independent indices, and landings. This decline necessitates more immediate action to reduce fishing mortality than would be possible if the Council were to change ACLs according to acceptable biological catch levels based on the SEDAR 76 Update 2025, which have been provided starting in 2027. Additional review of this stock assessment and potential sector reallocation discussions due to changes in recreational effort estimation (which would require a longer plan amendment process rather than a shorter framework amendment process) would further prolong the process of revising catch levels. Therefore, the Council has decided to consider establishing ACTs and adjusting AMs to reduce fishing removals and potentially increase spawning output and recruitment as the Council continues to develop long-term management changes through Amendment 56 to the Snapper Grouper FMP.

Sub-Action 1a **- Preferred Alternative 2** would establish ACTs for each sector at 50% of the average annual landings for the 5 most recent years of catch information available at the time of framework amendment development. The recreational sector's fishing year for black sea bass does not align with the calendar year (which is used for the commercial sector); the recreational fishing year begins on April 1. Therefore, the year ranges used in **Preferred Alternative 2** are 2019 through 2023 for the commercial sector and 2019/2020 (indicating April 1, 2019, through March 31, 2020) through 2023/2024 for the recreational sector (Table 2.1.1.1). **Preferred Alternative 2** would establish a commercial ACT of 48,557 lbs ww and a recreational ACT of 63,143 lbs ww[1].

Table 2.1.1.1. Commercial (2019-2023) and recreational (2019/2020-2023/2024) landings of South Atlantic black sea bass for the five most recent years of data at the time of amendment development. Annual catch targets (ACT) proposed through Sub-Action 1a – **Preferred Alternative 2** are 50% of the 5-year average.

	Commercial Landings (lbs ww)		**Recreational landings (lbs ww)**
2019	199,058	2019/2020	170,190
2020	80,690	2020/2021	104,202
2021	57,250	2021/2022	117,789
2022	78,566	2022/2023	110,660
2023	70,005	2023/2024	128,587
Average	97,114	**Average**	126,285
50% of Average/ACT	48,557	**50% of Average/ACT**	63,143

Source: NOAA Annual Catch Limit monitoring website

[1] The conversion factor for whole weight to gutted weight is 1.18 for both sectors.

2.1.2. Sub-Action 1b. Revise the in-season accountability measures for the commercial sector

Alternative 1 (No Action). If the National Marine Fisheries Service estimates that commercial landings of South Atlantic black sea bass will reach or are projected to reach the commercial quota, currently set at the commercial **annual catch limit**, the National Marine Fisheries Service will close the commercial harvest of black sea bass for the remainder of the fishing year.

Preferred Alternative 2. If the National Marine Fisheries Service estimates that commercial landings of South Atlantic black sea bass will reach or are projected to reach the commercial quota, set at the commercial **annual catch target** in Sub-Action 1a, Alternative 2, the National Marine Fisheries Service will close the commercial harvest of black sea bass for the remainder of the fishing year.

Discussion

Sub-Action 1b would revise the in-season commercial accountability measures (AM) for black sea bass. The current AM closes the commercial season if landings reach or are projected to reach the ACL. To accomplish the Council's objective for Action 1 of reducing fishing mortality from harvest of black sea bass, **Preferred Alternative 2** would close the commercial season if landings reach or are projected to reach the lower commercial ACT from Sub-Action 1a. This would reduce commercial landings relative to recent levels.

The commercial sector also has a post-season AM that states: if commercial landings exceed the quota, currently set at the ACL, then the ACL in the following fishing year will be reduced by the amount of the overage in the prior fishing year, unless the National Marine Fisheries Service (NMFS) determines that no reduction is necessary based on the best scientific information available. This post-season AM is not being considered for revision, and will continue to be based on the commercial ACL (currently, 276,490 lbs ww).

2.1.3. Sub-Action 1c. Revise accountability measures for the recreational sector

Alternative 1 (No Action). The National Marine Fisheries Service will project the length of the South Atlantic black sea bass recreational fishing season based on when the recreational **annual catch limit** is projected to be met and announce the recreational fishing season end date in the Federal Register prior to the start of the recreational fishing year on April 1.

Preferred Alternative 2. The National Marine Fisheries Service will project the length of the South Atlantic black sea bass recreational fishing season based on when the recreational **annual catch target** is projected to be met and announce the recreational fishing season end date in the Federal Register prior to the start of the recreational fishing year on April 1.

Discussion

Sub-Action 1c would revise the in-season recreational AM for black sea bass. Under the current AM, the NMFS annually projects the recreational season length based on the previous year's landings relative to the recreational ACL and announces the projected season's end date. To

accomplish the Council's objective for Action 1 of reducing fishing mortality from harvest of black sea bass, **Preferred Alternative 2** would maintain the process of NMFS announcing the season end date but would be based on when landings are projected to meet the lower recreational ACT from Action 1a, rather than the recreational ACL.

On and after the effective date of the recreational closure notification, the bag and possession limit for black sea bass in or from the South Atlantic EEZ would be zero. This bag limit applies for all components of the recreational sector in the South Atlantic EEZ. For recreational charter and headboat vessels specifically, this bag and possession limit would continue to apply in the South Atlantic on board a vessel for which a valid Federal charter vessel/headboat permit for South Atlantic snapper-grouper has been issued, without regard to where such species were harvested, i.e. in state or Federal waters.

2.1.4. Comparison of Alternatives

*Note: This section will compare Alternative 1 (No Action) for all Sub-Actions 1a-1c, against **Preferred Alternative 2** for all Sub-Actions 1a-1c.

There is no ACT currently in place for black sea bass for either sector. Under **Alternative 1 (No Action)**, the current commercial in-season AM and recreational AM in place for black sea bass would not be modified and would be triggered by the current sector ACLs. **Preferred Alternative 2** would establish an ACT that is set below the ACL for both sectors with the intent that each sector's AMs would be based on these reduced values (**Preferred Alternative 2**). **Preferred Alternative 2** would trigger the AMs more frequently compared to **Alternative 1 (No Action)**, because the lower ACTs are likely to be met earlier during the season. This would reduce landings relative to recent levels, which would accomplish the Council's objective for Action 1 of reducing fishing mortality from harvest of black sea bass.

Preferred Alternative 2 would establish ACTs for the commercial and recreational black sea bass fisheries that are equal to 50% of the 5-year average harvest for each sector respectively. In general, catch limits, such as ACTs, that allow for fewer fish to be landed can result in decreased net economic benefits if harvest decreases. In the long-term, the ACTs may contribute to improving the black sea bass stock which would allow for long-term economic benefits as future catch levels increase for the fishery.

The ACT for any stock does not directly affect resource users unless the ACT is met or exceeded and used to trigger AMs that restrict, or close harvest which could negatively impact the commercial, for-hire, and private recreational sectors. Commercial and recreational AMs can have significant direct and indirect social effects because, when triggered, they can restrict harvest in the current season or subsequent seasons. While the negative effects are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term social effects, such as increased pressure on another species, or fishermen having to stop fishing altogether due to regulatory closures. Overall, if **Preferred Alternative 2** contributes to the long-term sustainability of the black sea bass stock, long-term social benefits are anticipated for fishing communities in the form of consistent access to a valuable fishing stock.

When compared with **Alternative 1 (No Action)** under each of the Sub-Actions, **Preferred Alternative 2** would not result in significant administrative cost or time burdens other than notifying fishery participants. The administrative burden on law enforcement would not change substantially under these alternatives since AMs are currently enforced.

2.2. Action 2. Establish a spawning season closure for South Atlantic black sea bass

2.2.1. Alternatives

Alternative 1 (No Action). There is no spawning seasonal closure for black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC.

Preferred Alternative 2. Establish a commercial seasonal closure during which commercial sale, purchase, harvest, or possession of black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC, is prohibited and the commercial trip limit is zero.

> **Sub-Alternative 2a.** The commercial seasonal closure occurs from January 1 through January 31.
>
> **Preferred Sub-Alternative 2b.** The commercial seasonal closure occurs from February 1 through the end of February.
>
> **Preferred Sub-Alternative 2c.** The commercial seasonal closure occurs from March 1 through March 31.
>
> **Sub-Alternative 2d.** The commercial seasonal closure occurs from April 1 through April 30.

Preferred Alternative 3. Establish a recreational seasonal closure during which recreational harvest or possession of black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC, is prohibited and the bag limit is zero.

> **Sub-Alternative 3a.** The recreational seasonal closure occurs from January 1 through January 31.
>
> **Preferred Sub-Alternative 3b.** The recreational seasonal closure occurs from February 1 through the end of February.
>
> **Preferred Sub-Alternative 3c.** The recreational seasonal closure occurs from March 1 through March 31.
>
> **Sub-Alternative 3d.** The recreational seasonal closure occurs from April 1 through April 30.

Discussion

The Council may select multiple sub-alternatives as preferred to establish a closure that lasts for more than one month.

Through Action 2, the Council is considering establishment of spawning season closures for South Atlantic black sea bass. Spawning season closures are intended to protect and increase the stock biomass by allowing fish to spawn for some time in their spawning season without any

fishing mortality from harvest (though there may still be some fishing mortality from fish that are caught and released). A January – April spawning season closure has been implemented since 2010 to reduce mortality during spawning for several shallow water grouper species. For all three species that have been assessed since 2010 and are included in the January-April shallow water grouper closure (gag, scamp, and red grouper), removals (landings plus dead discards in number of fish) declined in 2010, the first year of implementation, and remained lower than typical levels observed prior to 2010 (SEDAR 71, SEDAR 68, SEDAR 53).

Sub-alternatives under **Preferred Alternative 2** and **Preferred Alternative 3** consider closures in 1-month increments, from January through April. These months were chosen because they overlap with the peak spawning season for black sea bass (February-April), and closures for several other snapper grouper species, some of which are caught with black sea bass, also occur during these months. Other species in the South Atlantic snapper grouper fishery management unit that are closed to harvest from January through April include: black grouper, blueline tilefish (recreational only), gag, greater amberjack (closed only in April), East Florida/Florida Keys hogfish (recreational only), red grouper, red porgy (recreational only), scamp, snowy grouper (recreational only), wreckfish (recreational closed January-April; commercial closed January 15 - April 15), red hind, rock hind, yellowmouth grouper, yellowfin grouper, graysby, and coney.

From November through April, specified nearshore areas within the South Atlantic region (see Snapper Grouper Regulatory Amendment 16 for area definitions) are closed to commercial fishing with black sea bass pots. The alternatives in Action 2 do not change this seasonal area closure, but depending on the alternatives selected, there may be overlap in the closures, as Action 2- **Preferred Alternative 2**'s sub-alternatives would prohibit all commercial harvest of black sea bass in the specified month(s).

2.2.2. Comparison of Alternatives

Preferred Alternatives 2 and **3** and their sub-alternatives would establish a spawning season closure for black sea bass that would close one or more months for the commercial and recreational sectors. Alternatives that better align the timeframe of regulations with the biology of the species and co-occurring species would indirectly result in beneficial biological effects (Table 3.2.1.1). A closure for one or more months would be expected to 1) protect spawning fish, allowing enhanced recruitment for future years, and 2) reduce fishing mortality (from landings) and allow increased survival during the closure, potentially leading to long-term increases in stock biomass.

In general, **Preferred Alternatives 2** and **3** (and their sub-alternatives) would result in positive indirect biological effects if greater harvest restrictions are applied to the "spawning months." Of these, combining more than one sub-alternative under each alternative would indirectly provide the greatest biological benefit to the black sea bass stock because it would encompass a longer amount of time (up to 4 months). A longer spawning closure would have the greatest potential of capturing more black sea bass spawning activity in the South Atlantic. A longer spawning closure timeframe would be expected to have a positive indirect effect on recruitment by allowing female black sea bass, which spawn in multiple batches throughout the spawning season, the opportunity to release a greater number of eggs. Indirect positive or negative effects

on bycatch and discard mortality could be realized if implementation of the spawning season closures alter general snapper grouper fishing effort or behavior.

In general, increased protection for spawning black sea bass would be expected to potentially result in improvements in stock abundance and biomass and create indirect long-term economic benefits through the availability of increased numbers of fish and associated catch levels in the future. However, there may be some direct short-term negative economic effects from reduced fishing opportunities during the months that the harvest closure occurs. The temporal nature of the economic effects for the commercial sector will depend on the sub-alternative that is selected as preferred. Five-year (2019-2023) average commercial harvest levels have been highest in January (**Sub-Alternative 2a**) followed by February (**Preferred Sub-Alternative 2b**), April (**Sub-Alternative 2d**), and March (**Preferred Sub-Alternative 2c**). Thus, associated negative seasonal economic effects for the commercial sector would be highest under **Sub-Alternative 2a**, followed by **Preferred Sub-Alternative 2b**, **Sub-Alternative 2d**, **Preferred Sub-Alternative 2c**, and **Alternative 1 (No Action)**. For the recreational sector, the temporal nature of these trip level effects will depend on the sub-alternative that is selected as preferred. Five-year (2019-2023) average recreational harvest levels have been highest in March (**Preferred Sub-Alternative 3c**) followed by April (**Sub-Alternative 3d**), January (**Sub-Alternative 3a**), and February (**Preferred Sub-Alternative 3b**). Thus, associated negative seasonal economic effects would be highest under **Preferred Sub-Alternative 3c**, followed by **Sub-Alternative 3d**, **Sub-Alternative 3a**, **Preferred Sub-Alternative 3b**, and **Alternative 1 (No Action)**.

Assuming a seasonal spawning closure would ensure sustainable harvest of black seas bass, as envisioned, long-term benefits to fishing communities, in the form of consistent access in the future to the resource, would be highest under a spawning season closure that aligns with black sea bass spawning season of February through April (**Sub-alternatives 2b-2d** and **Sub-alternatives 3b-3d**).

The administrative effects of **Sub-alternatives 2a** through **2d** and **3a** through **3d** would increase the administrative burden compared to **Alternative 1 (No Action)**. Designating a spawning season closure for black sea bass could be confusing to the public and add to the administrative burden in the form of cost, time, and law enforcement efforts compared to **Alternative 1 (No Action)**. Additionally, the public would have to be informed and educated on additional restrictions on harvest.

2.3. Action 3. Reduce the recreational bag limit for South Atlantic black sea bass

2.3.1. Alternatives

Alternative 1 (No Action). The recreational bag limit for South Atlantic black sea bass is 7 fish per person per day.

Alternative 2. Reduce the recreational bag limit for South Atlantic black sea bass to 1 fish per person per day.

Preferred Alternative 3. Reduce the recreational bag limit for South Atlantic black sea bass to 2 fish per person per day.

Alternative 4. Reduce the recreational bag limit for South Atlantic black sea bass to 3 fish per person per day.

Alternative 5. Reduce the recreational bag limit for South Atlantic black sea bass to 4 fish per person per day.

Discussion

Action 3 would reduce the recreational bag limit for South Atlantic black sea bass. Because the recreational ACT considered through Action 1 would reduce recreational harvest to half of the average of recent landings, bag limit alternatives only include approximately half of the current bag limit and fewer fish per person per day.

The federal bag limit applies for all anglers who harvest black sea bass from the South Atlantic (south of Cape Hatteras, NC, for black sea bass) EEZ. The federal bag limit also applies for anglers on federally-permitted charter and headboat vessels, regardless of whether black sea bass are harvested from the EEZ or state waters. State water bag limits, which would apply for vessels that are not federally-permitted, can vary from the federal bag limit, which can impact effects of this measure (Table 3.2.2.4).

2.3.2. Comparison of Alternatives

Alternatives 2 through **5** would likely slow the rate of South Atlantic black sea bass landings, resulting in a longer recreational season. A slower harvest rate is biologically beneficial because it allows more fish to complete stages of their life cycle, such as growth and reproduction, prior to dying from fishing mortality. The greatest biological benefits would be expected from **Alternatives 2, 3 (Preferred), 4,** followed by **Alternative 5**, as these alternatives would constrain the rate of recreational harvest more than **Alternative 1 (No Action)**.

Generally, angler satisfaction increases with the number of fish that can be harvested and the size of the fish. The smaller the bag limit, the greater the probability that angler satisfaction and thus economic benefits that are derived from an angler trip could be affected. Alternatively, lower bag limits can be an effective tool to lower overall harvest rates, thereby increasing the length of

recreational fishing seasons which can spread out economic benefits for a longer period of time. Relative to the bag limit in **Alternative 1 (No Action)** of 7 black sea bass per person, setting the bag limit between 1 fish (**Alternative 2**) and 4 fish per person (**Alternative 5**) would have negative economic effects due to constraining harvest and related consumer surplus at the trip level. In terms of economic benefits from harvest on a fishing trip, **Alternative 1 (No Action)** would offer the highest potential economic benefits, followed by **Alternative 5**, **Alternative 4**, **Preferred Alternative 3**, and **Alternative 2**. Alternatively, the ranking of alternatives would be the opposite in terms of economic benefits of having a prolonged recreational fishing season.

If slowing the rate of harvest and lengthening the season, as expected provides additional fishing opportunities to the recreational fishing communities, **Alternative 2** (no closure) would be the most beneficial, followed by **Preferred Alternative 3** (283 fishing days), **Alternative 4** (237 fishing days), **Alternative 5** (213 fishing days) and **Alternative 1 (No Action)** (168 fishing days).

Compared to **Alternative 1 (No Action)**, which would incur minimal new administrative burdens by maintaining the current recreational bag limit of seven fish, **Alternatives 2** through **5** would each be expected to have slightly higher administrative effects. Although there is a bag limit already in place for black sea bass in the South Atlantic Region, **Alternatives 2** through **5** would also increase the incompatibility among the state bag limits which could increase confusion to the public and law enforcement.

2.4. Action 4. Reduce the recreational minimum size limit for South Atlantic black sea bass

2.4.1. Alternatives

Preferred Alternative 1 (No Action). The recreational minimum size limit for South Atlantic black sea bass is 13 inches total length.

Alternative 2. Reduce the recreational minimum size limit for South Atlantic black sea bass to 12 inches total length.

Alternative 3. Reduce the recreational minimum size limit for South Atlantic black sea bass to 11 inches total length.

Discussion

Action 4 considers reducing the recreational minimum size limit for South Atlantic black sea bass. The Council intends for this action, along with a reduction in the bag limit, to contribute to reduced fishing mortality by reducing discards of black sea bass, the primary source of fishing-related removals in numbers of fish. With a lower bag limit and anglers being more likely to retain fish that are caught, it is more likely that they will hit their bag limit earlier in the trip, potentially motivating them to switch to a different fishing method (e.g., trolling) or move to a different area where they would be less likely to encounter black sea bass.

Alternative 3 would make the recreational minimum size limit equal to the 11-inch commercial minimum size limit. This alternative would reduce regulatory differences between sectors without changing the commercial minimum size limit. The Council is not considering a change to the commercial minimum size limit because regulations concerning the sizes of openings in black sea bass pots, the primary commercial gear, were originally developed based on a 10-inch minimum size limit (Snapper Grouper Amendments 9 and 13C; SAFMC 1999a and 2006). Moving further away from this to a higher minimum size limit would be likely to increase commercial discards.

2.4.2. Comparison of Alternatives

If the recreational minimum size limit is lowered to 12 and 11 inches under **Alternatives 2** and **3**, respectively, recreational anglers are projected to reach their quota faster compared to **Preferred Alternative 1 (No Action). Preferred Alternative 1 (No Action)** would be more biologically beneficial compared to the alternatives considered under this action because it allows less harvest of smaller reproductively mature individuals. However, this alternative could increase regulatory discards if smaller fish under the minimum size limit are caught and released. Conversely, **Alternatives 2** and **3** would have reduced biological benefits to the black sea bass stock compared to **Preferred Alternative 1 (No Action)** by allowing fewer individuals to grow to larger sizes which would maximize reproductive activity before being harvested.

In general, the lower the size limit, the more that harvest may increase in the short-term at the trip level, thereby increasing economic benefits incurred from such harvest. These economic benefits may accrue in the form of increased trip satisfaction for recreational anglers, thus

increasing CS for the recreational sector. Under this notion, the highest economic benefits would occur at the trip level under **Alternative 3**, followed by **Alternative 2**, and **Preferred Alternative 1 (No Action)**.

In general, reducing the recreational size limit for black sea bass under **Alternative 2** and **Alternative 3** may result in positive effects as smaller fish may be retained under a smaller size limit. The degree of effects would relate to the size of the decrease, with greater positive effects from a minimum size limit that matches the size of fish most commonly encountered on a recreational trip.

Alternatively, a lower size limit is also anticipated to result in the recreational ACT being met faster, resulting in a shorter recreational season. **Alternative 3** would result in the lowest number of estimated fishing days (41 days), followed by **Alternative 2** (64 days) and **Preferred Alternative 1 (No Action)** (168 days). The magnitude of the positive and negative effects would likely vary by angler preference for a longer fishing season and higher minimum size limit or a shorter season with a lower minimum size limit.

Compared to **Preferred Alternative 1 (No Action)**, which would incur minimal new administrative burdens by maintaining the current recreational size limit of 13 inches, **Alternatives 2** and **3** would each be expected to have slightly higher administrative effects. **Alternative 3** would create consistent minimum size limits for both sectors throughout the South Atlantic Council's jurisdiction, which would help the public avoid confusion with regulations and aid law enforcement. However, since there is a minimum size limit already in place for black sea bass in the South Atlantic Region under **Preferred Alternative 1 (No Action)**, changing the minimum size limit under **Alternatives 2** and **3** would not be unusually burdensome.

Chapter 3. Affected Environment

This section describes the affected environment in the proposed project area. The affected environment is divided into six major components:

- **Habitat Environment** (Section 3.1)
- **Biological and Ecological Environment** (Section 3.2)
- **Economic Environment** (Sections 3.3)
- **Social Environment** (Section 3.4)
- **Administrative Environment** (Section 3.5)

3.1. Habitat Environment

Information on the habitat utilized by species managed under the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) is included in Volume II of the Fishery Ecosystem Plan (FEP; SAFMC 2009c) which is incorporated here by reference. South Atlantic Fishery Management Council (Council)-designated essential fish habitat (EFH) and EFH-Habitat Areas of Particular Concern (HAPC) are described in the SAFMC User Guide.

3.1.1. Essential Fish Habitat

Inshore/Estuarine Habitat

Many snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories; larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions. The life history of black sea bass is summarized in Section 3.2.1.

Offshore Habitat

Predominant snapper grouper offshore fishing areas are located in live bottom and shelf-edge habitats where water temperatures range from 11º to 27º C (52º to 81º F) due to the proximity of the Gulf Stream, with lower shelf habitat temperatures varying from 11º to 14º C (52º to 57º F).

Water depths range from 16 to 55 meters (54 to 180 ft) or greater for live-bottom habitats, 55 to 110 meters (180 to 360 ft) for the shelf-edge habitat, and from 110 to 183 meters (360 to 600 ft) for lower-shelf habitat areas.

The exact extent and distribution of productive snapper grouper habitat in South Atlantic continental shelf habitats is unknown. Current data suggest from 3% to 30% of the shelf is suitable habitat for these species. These live-bottom habitats may include low relief areas, supporting sparse to moderate growth of sessile (permanently attached) invertebrates, moderate relief reefs from 0.5 to 2 meters (1.6 to 6.6 ft), or high relief ridges at or near the shelf break consisting of outcrops of rock that are heavily encrusted with sessile invertebrates such as sponges and sea fan species. Live-bottom habitat is scattered irregularly over most of the shelf north of Cape Canaveral but is most abundant offshore from northeastern Florida. South of Cape Canaveral the continental shelf narrows from 56 to 16 kilometers (35 to 10 miles) wide off the southeast coast of Florida and the Florida Keys. The lack of a large shelf area, presence of extensive, rugged living fossil coral reefs, and dominance of a tropical Caribbean fauna are distinctive benthic characteristics of this area.

Rock outcroppings occur throughout the continental shelf from Cape Hatteras, North Carolina to Key West, Florida (MacIntyre and Milliman 1970; Miller and Richards 1979; Parker et al. 1983), which are principally composed of limestone and carbonate sandstone (Newton et al. 1971), and exhibit vertical relief ranging from less than 0.5 to over 10 meters (33 ft). Ledge systems formed by rock outcrops and piles of irregularly sized boulders are also common. Parker et al. (1983) estimated that 24% (9,443 km^2) of the area between the 27 and 101 meters (89 and 331 ft) depth contours from Cape Hatteras, North Carolina to Cape Canaveral, Florida is reef habitat. Although the bottom communities found in water depths between 100 and 300 meters (328 and 984 ft) from Cape Hatteras, North Carolina to Key West, Florida is relatively small compared to the whole shelf, this area, based upon landing information of fishers, constitutes prime reef fish habitat and probably significantly contributes to the total amount of reef habitat in this region.

Artificial reef structures are also utilized to attract fish and increase fish harvests; however, research on artificial reefs is limited and opinions differ as to whether or not these structures promote an increase of ecological biomass or merely concentrate fishes by attracting them from nearby, natural un-vegetated areas of little or no relief. There are several notable shipwrecks along the southeast coast in state and federal waters including *Lofthus* (eastern Florida), *SS Copenhagen* (southeast Florida), *Half Moon* (southeast Florida), *Hebe* (Myrtle Beach, South Carolina), *Georgiana* (Charleston, South Carolina), *U.S.S. Monitor* (Cape Hatteras, North Carolina), *Huron* (Nags Head, North Carolina), and *Metropolis* (Corolla, North Carolina).

The distribution of coral and live hard bottom habitat as presented in the Southeast Marine Assessment and Prediction Program (SEAMAP) bottom mapping project is a proxy for the distribution of the species within the snapper grouper complex.

3.1.2. Habitat Areas of Particular Concern

An EFH-HAPC designation adds an additional layer to the EFH designation. Under the Snapper Grouper FMP, EFH-HAPCs are designated based upon ecological importance, susceptibility to human-induced environmental degradation, susceptibility to stress from development, or rarity of

habitat type. EFH-HAPC for species in the Snapper Grouper FMU in the Atlantic include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., primary and secondary nursery areas designated in North Carolina); pelagic and benthic Sargassum; Hoyt Hills for wreckfish; the Oculina Bank HAPC; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; Council-designated artificial reef special management zones; and deep-water marine protected areas. Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, post-larval, juvenile, and adult stages).

The Council established the special management zone (SMZ) designation process in 1983 in the Snapper Grouper FMP, and SMZs have been designated in federal waters off North Carolina, South Carolina, Georgia, and Florida since that time. The purpose of the original SMZ designation, and the subsequent specification of SMZs, was to protect snapper grouper populations at the relatively small, permitted artificial reef sites and "create fishing opportunities that would not otherwise exist." Thus, the SMZ designation process was centered around protecting the relatively small habitats, which are known to attract desirable snapper grouper species.

In the Comprehensive Ecosystem-Based Amendment 1 (CE-BA1; SAFMC 2009a), the Council determined that the designated SMZs met the criteria to be EFH-HAPCs for species included in the Snapper Grouper FMP. Since CE-BA 1, the Council has designated additional SMZs in the Snapper Grouper FMP. The SMZ and EFH-HAPC designations serve similar purposes in pursuit of identifying and protecting valuable and unique habitat for the benefit of fish populations, which are important to both fish and fishers. Therefore, the Council has determined that a designated SMZ meets the criteria for an EFH-HAPC designation, and the Council intends that all SMZs designated under the Snapper Grouper FMP are also designated as EFH-HAPCs under the Snapper Grouper FMP.

The potential impacts the actions in this amendment may have on EFH and EFH-HAPCs are discussed in Chapter 4 of this document.

3.2. Biological and Ecological Environment

The waters off the South Atlantic coast are home to a diverse population of fish. The Snapper Grouper FMU contains 55 species of fish, many of them neither "snappers" nor "groupers." These species live in depths from a few feet (typically as juveniles) to hundreds of feet. As far as north/south distribution, the more temperate species tend to live in the upper reaches of the South Atlantic management area (e.g., black sea bass, red porgy) while the tropical variety's core residence is in the waters off south Florida, Caribbean Islands, and northern South America (e.g., black grouper, mutton snapper). These are reef-dwelling species that live amongst each other. These species rely on the reef environment for protection and food. There are several reef tracts that follow the southeastern coast. The fact that these fish populations congregate dictates the nature of the fishery (multi-species) and further forms the type of management regulations proposed in this document.

3.2.1. Fish Populations Affected by this Amendment

Life History

Life history information for snapper grouper species affected by this amendment may be found in Vision Blueprint Regulatory Amendment 27 (SAFMC 2019) and is hereby incorporated by reference. In addition, timing of spawning for several snapper grouper species in the South Atlantic region is summarized in Table 3.2.1.1.

Table 3.2.1.1. Timing of spawning (gray shading) and peak spawning (black shading) for exploited Atlantic Ocean reef fish stocks off the southeastern United States. Months in bold denote core SERFS core fishery-independent sampling months.

Stock	Jan	Feb	Mar	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	Oct	Nov	Dec	Citation
Gray triggerfish													[10]
Greater amberjack													[7]
White grunt													[14, 17]
Cubera Snapper													WDH, pers. comm.
Red snapper													[17, 18]
Vermilion snapper													[2, 17]
Blueline tilefish													[6]
Tilefish													[4, 17]
Black sea bass													[15, 17]
Gag													[13, 17]
Red grouper													[1]
Scamp (NC)													[12]
Scamp (FL)													[5]
Scamp (29.95–32.95 °N)													[8, 17]
Snowy grouper													[16, 19]
Speckled hind													[20]
Warsaw Grouper													[11, 17]
Red porgy													[3, 17]

doi:10.1371/journal.pone.0172968.t006

Source: Farmer et al. 2017 and references therein.

3.2.2. Black sea bass, *Centropristis striata*

Life History

Black sea bass (*Centropristis striata*) occur in the Western Atlantic, from Maine to northeastern Florida, and in the eastern Gulf of America. The species can be found in extreme south Florida during cold winters (Robins and Ray 1986). Separate populations were reported to exist to the north and south of Cape Hatteras, North Carolina (Wenner et al. 1986; McCartney and Burton 2011). Recent genetic studies have indicated that these are two distinct stocks (Roy et al 2012) and they are managed separately. This species is common around rock jetties and on rocky bottoms in shallow water (Robins and Ray 1986) at depths from 2-120 m (7-394 ft). Most adults occur at depths from 20-60 m (66-197 ft) (Vaughan et al. 1995).

Black sea bass are protogynous hermaphrodites (change sex from female to male) and can undergo transition throughout the year. Black sea bass appear to compensate for the loss of larger males by changing sex at smaller sizes and younger ages. McGovern et al. (2002) noted that the size at maturity and the size at transition of black sea bass was smaller in the 1990s than

during the early 1980s. Maximum reported size is 66.0 cm (26.1 in) total length (TL) and 3.6 kg (7.9 lbs) (McGovern et al. 2002).

The minimum size and age of maturity for females studied off the southeastern U.S. coast is 10 cm (3.6 in) standard length and age 0; 50% of females achieved sexual maturity at 174.6 mm TL (6.9 in TL) and approximately 1 years of age, and all females are mature by 18 cm (7.1 in) standard length and age 3 (McGovern et al. 2002). In the eastern Gulf of America and off North Carolina, females dominate the first 5-year classes. The age at 50% transition to male was estimated to be 3.83 years (27.04-30.72 cm TL (10.6-12.1 inches TL) (SEDAR 76 Update (2025)). Individuals over the age of five are more commonly males. Black sea bass can live for at least 10 years.

Wenner et al. (1986) reported that spawning occurs from March through May in the South Atlantic Bight. Black sea bass females are in developing condition during January and February, with peak spawning ranging from February through May (McGovern et al 2002, SEDAR 76 Update (2025); Farmer 2017) (Table 3.2.1.1). Females can spawn as many as 27 times in one spawning season (McGovern et al. 2002). Timing of spawning for males occurred throughout the year with the majority occurring from January through June (McGovern et al 2002). Some spawning also occurs during the fall for both males and females. Peak spawning lines up with peak spawning of other snapper grouper species, including greater amberjack, blueline tilefish, golden tilefish, gag, red grouper, scamp and red porgy (Table 3.2.1.1).

The diet of this species is generally composed of shrimp, crab, and fish (Sedberry 1988). Sedberry (1988) indicated that black sea bass consume primarily amphipods, decapods, and fishes off the Southeastern United States. Smaller black sea bass eat more small crustaceans and larger individuals feed more on decapods and fishes.

Stock Status

Southeast Data, Assessment, and Review (SEDAR) is the cooperative process by which stock assessment projects are conducted in NOAA Fisheries' Southeast Region. The Caribbean, Gulf, and South Atlantic Fishery Management Councils (Council) manage SEDAR in coordination with the National Marine Fisheries Service (NMFS) and the Atlantic and Gulf States Marine Fisheries Commissions. SEDAR was initiated to improve planning and coordination of stock assessment activities and to improve the quality and reliability of assessments. SEDAR strives to provide an open and transparent approach for development and review of the scientific information on fish stocks that is critical to management decision-making. Detailed information about the SEDAR process is available at www.sedarweb.org.

South Atlantic black sea bass was previously listed as overfished throughout the 2000s, a 10-year rebuilding plan was implemented in 2006, and the stock was rebuilt in 2013. In 2018, SEDAR 56 showed the stock was not undergoing overfishing, and, although the stock was below the SSB_{MSY} threshold, it was not overfished. In 2023, the most recent assessment, SEDAR 76, used an updated version of the Beaufort Assessment Model with data through 2021.

An update to SEDAR 76 was completed in March 2025, with data through 2023 (SEDAR 76 Update (2025)). The SSC and Council discussed concerns with several assumptions and modeling decisions made in SEDAR 76 Update (2025) to estimate reference points, stock status, and future sustainable catch levels.

Due to these concerns, the Council requested additional review of several elements of the stock assessment (see the June 2025 Snapper Grouper Committee Report for the Council's full request) prior to using it to develop acceptable biological catch levels. The Council agreed with the assessment's output that the black sea bass stock has declined significantly since about 2011, which motivated the development of Regulatory Amendment 37 as a short-term response to stock declines observed in both fishery-dependent and fishery-independent data sources.

Abundance

External review of the SEDAR 76 Update (2025) could impact absolute estimates of biomass. Therefore, relative abundance from the primary fishery-independent index used in black sea bass stock assessments, the Southeast Reef Fish Chevron Trap Survey, is included to show recent and historical population trends. Relative abundance has historically fluctuated around the long-term average until about 2010, when a large increase in the population was observed, peaking in 2011. Since 2012, relative abundance has steadily decreased, with the 9 most recent years of data through 2024 (no data were collected in 2020) being the lowest in the time series (Figure 3.2.2.1.).

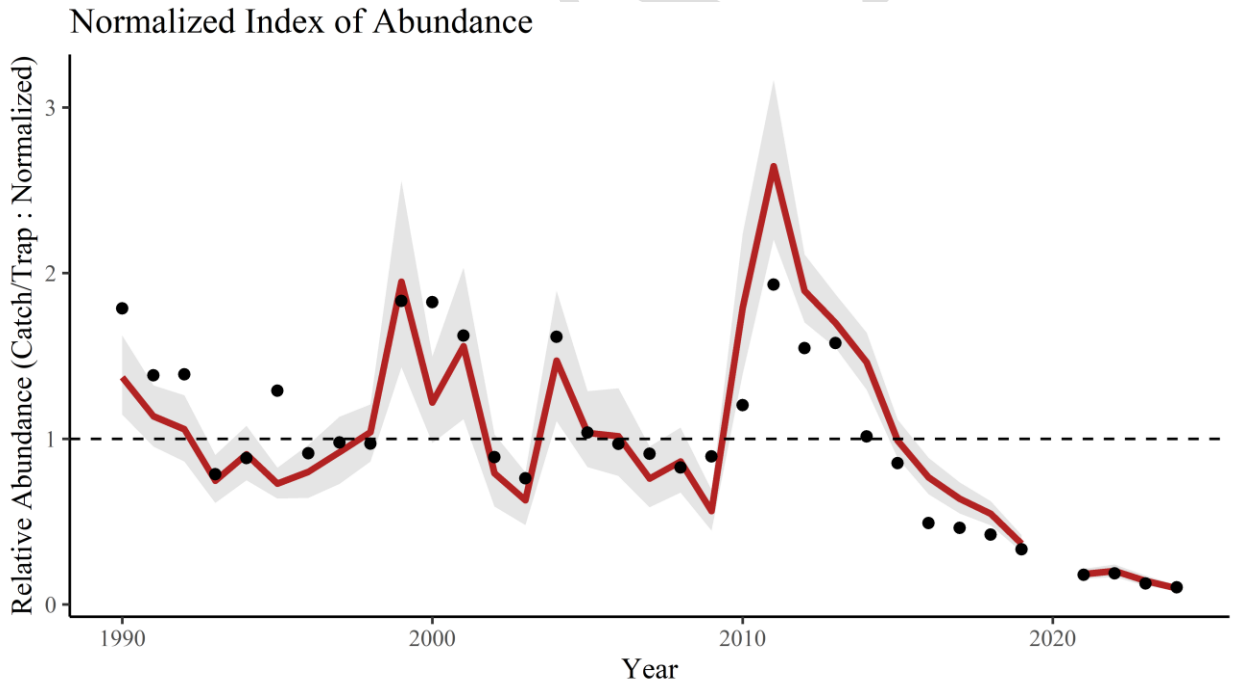

Figure 3.2.2.1. Relative abundance of black sea bass in the Southeast Reef Fish Chevron Trap Survey (Finch et al. 2025).

Landings and Discards

Recent landings over the last decade have not approached the commercial or recreational ACL (Tables 3.2.2.1 and 3.2.2.2 and Figures 3.2.2.2 and 3.2.2.4). Commercial landings are highest during winter months in the beginning and end of the year in January, February and December (Figure 3.2.2.3). Recreational landings are highest during Wave 3 (May/June) at the beginning of the fishing year that begins in April (Figure 3.2.2.5).

Commercial

Table 3.2.2.1. South Atlantic black sea bass commercial landings for fishing years 2015 through 2023.

Fishing Year	Landings (lbs ww)	ACL (lbs ww)	ACL%
2015	497,553	780,020	63.8
2016	263,604	780,020	33.8
2017	336,084	755,274	44.5
2018	249,298	755,274	33.0
2019	199,058	326,800	60.9
2020	80,690	287,670	28.0
2021	57,250	276,490	20.7
2022	78,566	276,490	28.4
2023	70,005	276,490	25.3

Source: SEFSC Commercial ACL dataset provided June 2025

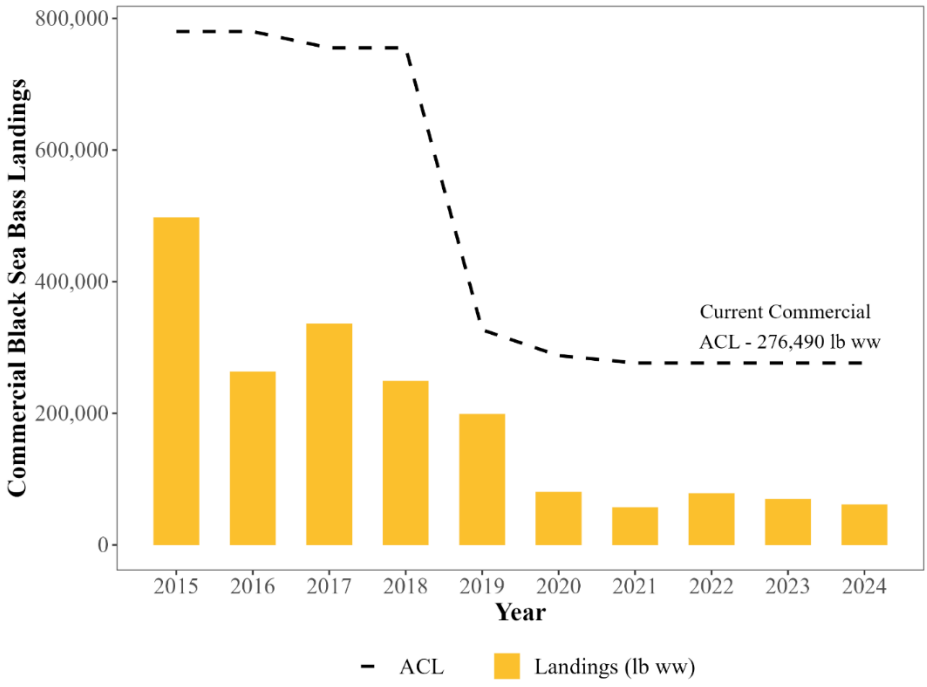

Figure 3.2.2.2. South Atlantic black sea bass commercial landings for fishing years 2015 through 2023.

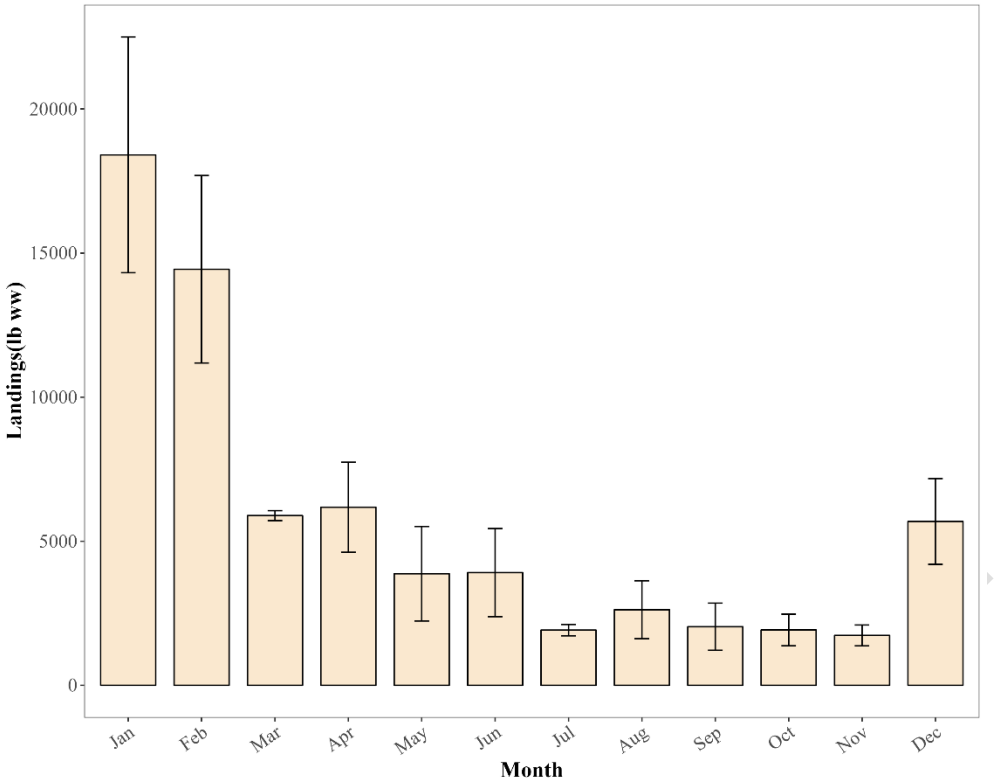

Figure 3.2.2.3. Commercial black sea bass landings (lbs ww) by month, averaged from 2021 to 2023. Error bars represent standard error.

Recreational

Table 3.2.2.2. South Atlantic black sea bass recreational landings for fishing years 2015/2016 through 2023/2024.

Fishing Year	Landings (lbs ww)	ACL (lbs ww)	ACL%
2015-2016	380,896	1,033,980	36.8
2016-2017	385,646	1,001,177	38.5
2017-2018	335,356	1,001,177	33.5
2018-2019	188,335	1,001,177	18.8
2019-2020	170,190	433,200	39.3
2020-2021	104,201	381,330	27.3
2021-2022	117,789	366,510	32.1
2022-2023	110,659	366,510	30.2
2023-2024	128,587	366,510	35.1

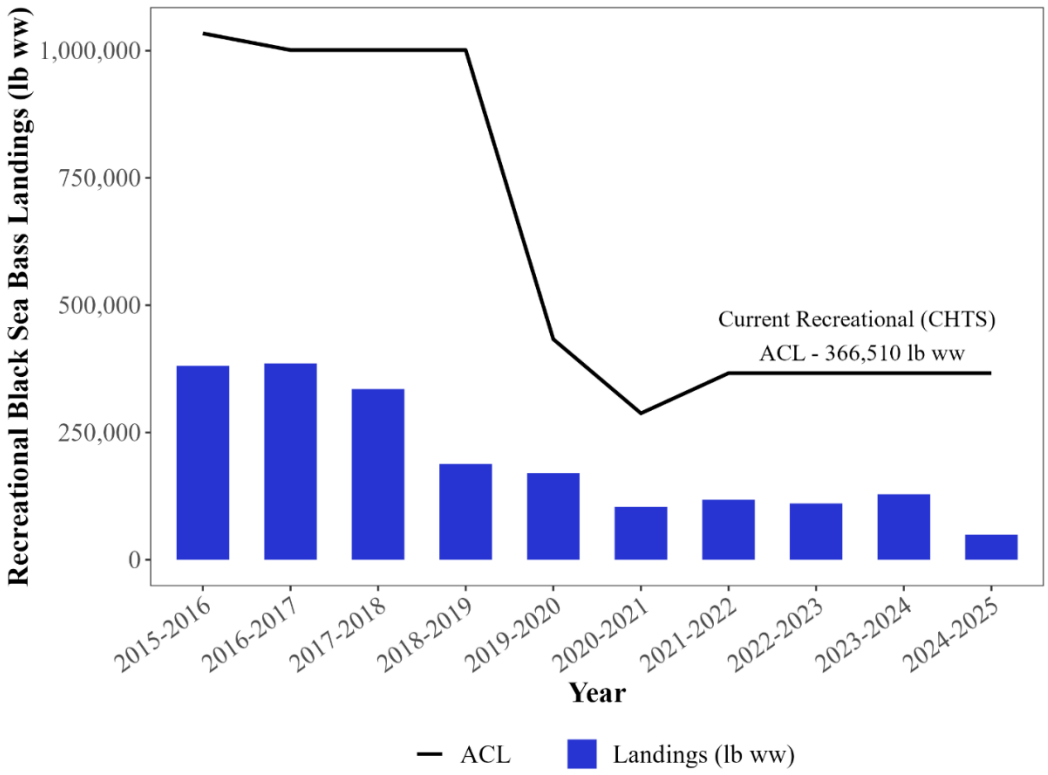

Figure 3.2.2.4. Recreational black sea bass landings (lbs ww) by fishing year against the ACL from 2015/2016 through 2023/2024.

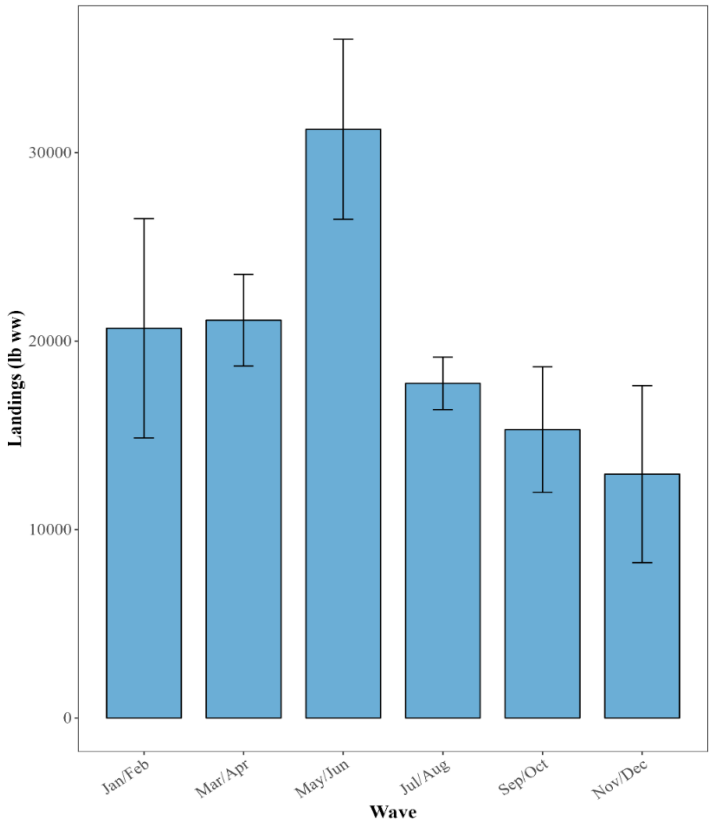

Figure 3.2.2.5. Recreational black sea bass landings by wave, averaged from 2021/2022 to 2023/2024. Error bars represent standard error.

Discards

A complication of management and assessment of black sea bass is that a large portion of the recreational catch and half or more of recreational releases occur in state waters (within 3 miles of shore) (Table 3.2.2.3). These fish are often below the minimum size limit, as larger, older black sea bass are more typically found further offshore. Additionally, hook mortality may have disproportionate effects on the smaller fish within state waters because anglers in those waters commonly use J-hooks rather than circle hooks, potentially leading to a higher discard mortality on young fish in nearshore waters than is observed for larger fish further offshore. The difference in size and gear used across state and federal jurisdictions can complicate scientists' ability to estimate fishing mortality at different life stages (Table 3.2.2.4). It can also complicate the projection of future management effects. Based on current information, the effects of changes to recreational management should all be considered with the expectation that state regulations remain unchanged.

Table 3.2.2.3. South Atlantic (shore, charter, and private trips) landings, releases, and catch of black sea bass in numbers of fish from 2019-2023 for state waters (inland, ocean<=3 miles) and federal ocean (>3 miles) waters.

Year	Inland	Ocean <= 3 miles	Ocean> 3 miles
	Landings (number)		
2019	2,270	14,650	162,962
2020	5,346	3,478	72,689
2021	9,483	1,572	93,341
2022	9,657	1,836	83,621
2023	12,152	4,446	79,506
	Releases (number)		
2019	742,222	304,775	1,930,162
2020	559,806	205,393	1,005,273
2021	494,573	200,780	940,233
2022	566,395	243,523	966,563
2023	584,311	178,476	538,325
	Catch (number)		
2019	744,492	319,425	2,093,124
2020	565,152	208,871	1,077,962
2021	504,056	202,351	1,033,573
2022	576,052	245,358	1,050,184
2023	596,462	182,922	617,831

Source: SEFSC Recreational (CHTS) ACL Monitoring file from May 25, 2025. Units include MRIP (CHTS)

Note: All headboat landings are aggregated into the Ocean>=3 miles column since the headboat data cannot be split into state and federal waters.

Table 3.2.2.4. Current recreational bag and minimum size limits for South Atlantic black sea bass in state and South Atlantic federal waters.

Region	Recreational Bag Limit (# fish per person per day)	Minimum Size Limit (inches TL)
South Atlantic EEZ	7	13 (rec), 11 (comm)
North Carolina (S of Cape Hatteras)	7	13
South Carolina	7	13
Georgia	15	12
Florida	7	13

3.2.3. Protected Species

NMFS manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). There are 29 ESA-listed species or distinct population segments (DPS) of marine mammals, sea turtles, fish, and corals managed by NMFS that may occur in federal waters of the South Atlantic or Gulf of America. There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales (NARW), humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2017). All marine mammals in U.S. waters are protected under the MMPA. The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF)[2] classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals.

Five of the marine mammal species (sperm, sei, fin, blue, and NARW) protected by the MMPA, are also listed as endangered under the ESA. In addition to those five marine mammals, six species or DPSs of sea turtles [green (the North Atlantic DPS and the South Atlantic DPS), hawksbill, Kemp's ridley, leatherback, and the Northwest Atlantic DPS of loggerhead]; nine species or DPSs of fish (the smalltooth sawfish; five DPSs of Atlantic sturgeon; Nassau grouper; oceanic whitetip shark, and giant manta ray); and seven species of coral (elkhorn coral, staghorn coral, rough cactus coral, pillar coral, lobed star coral, mountainous star coral, and boulder coral) are also protected under the ESA and occur within the action area of the snapper grouper fishery. Portions of designated critical habitat for NARW, the Northwest Atlantic DPS of loggerhead sea turtles, and *Acropora* corals occur within the Council's jurisdiction.

NMFS completed a formal consultation and resulting biological opinion (Bi-Op) on the conservation regulations under the ESA and the authorization of the South Atlantic snapper grouper fishery in federal waters under the Magnuson-Stevens Act, including the fishery

[2] https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-protection-act-list-fisheries

managed by the Snapper Grouper FMP, on threatened and endangered species and designated critical habitat dated December 1, 2016. NMFS concluded that the activities addressed in the consultation are not likely to jeopardize the continued existence of any threatened or endangered species, including the North Atlantic right whale, loggerhead sea turtle Northwest Atlantic DPS, leatherback sea turtle, Kemp's ridley sea turtle, green sea turtle North Atlantic DPS, green sea turtle South Atlantic DPS, hawksbill sea turtle, smalltooth sawfish U.S. DPS, or Nassau grouper.

Since completing the December 2016 Bi-Op, NMFS published several final rules that listed additional species and designated critical habitat. On January 22, 2018, the giant manta ray (*Manta birostris*) was listed as threatened under the ESA, effective February 21, 2018. On January 30, 2018, the oceanic whitetip shark (*Carcharinus longimanus*) was listed as threatened under the ESA, effective March 1, 2018. Giant manta rays and oceanic whitetip sharks are found in the South Atlantic exclusive economic zone (EEZ) and may be affected by the subject fishery via incidental capture in snapper grouper fishing gear. NMFS has reinitiated formal consultation to address these listings and concluded the authorization of the South Atlantic snapper grouper fishery in federal waters during the re-initiation period will not violate ESA Sections 7(a)(2) or 7(d). For summary information on the protected species that may be adversely affected by the snapper grouper fishery and how they are affected refer to Section 3.2.5 in Vision Blueprint Commercial Regulatory Amendment 27 to the Snapper Grouper FMP (SAFMC 2019).

On August 14, 2023, and in 2024, NMFS updated the 7(a)(2) analysis to address the impacts to listed species during the longer than initially expected reinitiation time period and reaffirmed the lack of irreversible and irretrievable commitments of resources consistent with 7(d). For additional information on North Atlantic right and humpback whales, including range, abundance and population dynamics, threats, and ESA and MMPA listings histories, refer to Section 3.2.3 and Appendix M of Regulatory Amendment 16 (SAFMC 2016).

3.3. Economic Environment

3.3.1. Commercial Sector

From 2019 to 2023, the number of federally permitted commercial vessels that landed South Atlantic black sea bass significantly decreased from 194 to 108, representing a decline of approximately 44.3% (86 vessels) (Table 3.3.1.1). Annual landings of black sea bass saw a substantial decline during this period, from 158,262 lbs gw in 2019 to 58,282 lbs gw in 2023, an overall decrease of 63.2% (99,980 lbs gw). On average over the five-year period (2019-2023), black sea bass was landed on approximately 32.8% of South Atlantic trips where black sea bass or other species were caught (1,007 black sea bass trips out of 3,074 other species trips), and it accounted for about 12.2% of the dockside revenue from black sea bass and jointly caught 'other species' on those trips ($284,803 black sea bass revenue out of $2,323,307 combined black sea bass and jointly caught 'other species' revenue). On average annually (2019-2023), black sea bass landings comprised approximately 2.9% of the total all species revenue for these vessels ($291,690 black sea bass revenue out of $9,951,201 total dockside revenue). The average all species vessel-level revenue for black sea bass harvesters decreased from $68,261 in 2019 to $61,553 in 2023, a change of -$6,708 (Table 3.3.1.1). The average annual price per lb gw for black sea bass from 2019 to 2023 in 2024 dollars was approximately $3.79 ($291,690 average dockside revenue from black sea bass / 76,964 lbs gw average black sea bass landings).

Liese (2023)[3] generated annual vessel-level estimates of costs (as a percentage of revenue) and net revenue from operations for vessels that harvested black sea bass in the South Atlantic. Estimates of producer surplus (PS) can be calculated from the cost information contained in Liese (2023) in conjunction with estimates of annual revenue from the SEFSC-SSRG Socioeconomic Panel. PS is total annual revenue minus the costs for fuel, other supplies, hired crew, and the opportunity cost of an owner's time as captain. Net revenue from operations, which most closely represents economic profits to the owner(s), is total annual revenue minus the costs for fuel, other supplies, hired crew, vessel repair and maintenance, insurance, overhead, and the opportunity cost of an owner's time as captain, as well as the vessel's depreciation. According to Liese (2023), PS for commercial vessels that harvested South Atlantic black sea bass was approximately 29.7% of their annual gross revenue, on average, from 2014 through 2018. Net revenue from operations was -0.9% of their annual gross revenue, on average, during this period. Applying these percentages to the results provided in Table 3.3.1.2 would result in an estimated per vessel average annual PS of $19,997 (2024 dollars) and an average annual net revenue from operations of -$606 per year. It is important to note that the net revenue from operations estimate included in Liese (2023) considers implicit costs in its calculation, namely the opportunity cost of an owner's time as captain and vessel depreciation. As a result, the negative value for net revenue presented here does not necessarily mean the average business is operating at a loss in an accounting sense, but rather, the owner is not being fully compensated for their time or asset depreciation when compared to the next best use of their labor and capital resources. In other words, the data suggest that the average owner's time and vessel would generate greater returns doing something else.

Liese (2023) also provides annual trip-level estimates of costs (as a percentage of trip revenue) and trip net revenue for vessels that harvested black sea bass in the South Atlantic. According to Liese (2023), labor, including both hired and owner's time, consumed 52.9% of trip revenue and fuel and supplies consumed 23.4%, leaving a trip net revenue margin of 23.7%, on average, from 2014 through 2018.

[3] This report is available via the NOAA repository: https://repository.library.noaa.gov/view/noaa/56480.

Table 3.3.1.1. Number of vessels, number of trips, and landings (lbs gw) by year for South Atlantic black sea bass.

Year	# of vessels that caught black sea bass (> 0 lbs gw)	# of trips that caught black sea bass	black sea bass landings (lbs gw)	Other species' landings jointly caught w/ black sea bass (lbs gw)	# of South Atlantic trips that only caught other species	Other species' landings on South Atlantic trips w/o black sea bass (lbs gw)	All species landings on Gulf trips (lbs gw)
2019	194	1,459	158,262	688,789	4,150	2,662,200	26,783
2020	165	1,042	61,040	501,162	3,414	2,189,514	64,445
2021	137	879	45,567	404,201	2,827	1,761,166	35,419
2022	135	901	61,667	431,157	3,000	2,100,428	2,407
2023	108	755	58,282	273,179	1,977	1,327,190	4,597
Average	148	1,007	76,964	459,698	3,074	2,008,100	26,730

Source: SEFSC-SSRG Socioeconomic Panel (July 2025 version).
Note: South Atlantic trips refer to trips taken in Council jurisdictional waters and Gulf trips refer to trips taken in Gulf of Mexico Fishery Management Council jurisdictional waters.

Table 3.3.1.2. Number of vessels and ex-vessel revenue by year (2024 dollars) for South Atlantic black sea bass.

Year	# of vessels that caught black sea bass (> 0 lbs gw)	Dockside revenue from black sea bass	Dockside revenue from 'other species' jointly caught w/ black sea bass	Dockside revenue from 'other species' caught on South Atlantic trips w/o black sea bass	Dockside revenue from 'all species' caught on Gulf trips	Total dockside revenue	Average total dockside revenue per vessel
2019	194	$639,691	$3,114,492	$9,430,397	$58,146	$13,242,727	$68,261
2020	165	$226,667	$2,301,278	$7,925,686	$164,208	$10,617,839	$64,351
2021	137	$171,721	$1,726,721	$6,505,179	$165,857	$8,569,478	$62,551
2022	135	$234,181	$1,971,479	$8,464,561	$8,067	$10,678,287	$79,098
2023	108	$186,191	$1,325,044	$5,122,916	$13,522	$6,647,674	$61,553
Average	148	$291,690	$2,087,803	$7,489,748	$81,960	$9,951,201	$67,329

Source: SEFSC-SSRG Socioeconomic Panel (July 2023 version).

Dealers

The information in Table 3.3.1.3 illustrates the purchasing activities of dealers that bought South Atlantic black sea bass landings from vessels during 2019 through 2023.[4] Like vessels, dealer participation in particular fisheries is fluid, and not all dealers purchased black sea bass in each year during this time. On average, from 2019 through 2023, black sea bass purchases comprised approximately 0.5% of all purchases made by these dealers. The average annual value of total purchases per black sea bass dealer experienced a decreasing trend with fluctuation from 2019 through 2023 (Table 3.3.1.3). Although not shown in the table, the maximum annual value of all purchases made by a single black sea bass dealer from 2019 through 2023 was approximately $14 million (2022 dollars), which occurred in 2022.

[4] The estimates in this table are based on Accumulated Landings System data, which tends to produce slightly different estimates of landings and ex-vessel value for black sea bass than the SEFSC-SSRG socio-economic panel database.

Table 3.3.1.3. Purchase statistics for dealers that bought South Atlantic black sea bass landings (2024 dollars).

Year	Number of Dealers	Black sea bass landed lbs gw	Black sea bass Purchases	Other South Atlantic Purchases	Gulf Purchases	Average purchases value per dealer
2019	85	476,943	$1,762,731	$89,432,115	$3,815,957	$1,117,774
2020	71	298,761	$972,091	$76,782,421	$4,457,436	$1,157,915
2021	63	257,496	$953,397	$71,723,838	$6,014,517	$1,249,075
2022	70	197,266	$714,837	$68,159,985	$7,161,566	$1,086,234
2023	63	131,883	$416,275	$55,992,697	$6,628,673	$1,000,598
Average	70	272,470	$963,866	$72,418,211	$5,615,630	$1,122,319

Source: SEFSC Fishing Communities Web Query Tool (Version Apr 04, 2025 Years: 2014-2023).

Imports

Imports of foreign seafood products compete within the domestic seafood market, and in the U.S., imports dominate many segments of that market. Imports also tend to be price setters (products that are able to set prices in a market, due to the influence of having a majority of market share). Seafood imports can have downstream effects on the local fish market. At the harvest level, imports can affect ex-vessel prices fishermen receive for landings. As substitutes to domestic production, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports[5] of fish products that directly compete with the domestic harvest of black sea bass, including snappers and groupers. Import data for black sea bass, in particular, are not available.

Groupers

Imports of fresh and frozen grouper products, which also directly compete with domestic harvest of snapper and grouper species including black sea bass, are described in this section. As shown in Table 3.3.1.4, imports of fresh grouper products peaked in 2023. Total value of fresh grouper imports has been increasing in recent years and averaged $61.5 million annually. The average price per pound (lb) product weight (pw) for fresh grouper products was $5.26 from 2019-2023, and these products primarily originated from Mexico, Brazil, and Panama.

[5] NOAA Fisheries Service purchases fisheries trade data from the Foreign Trade Division of the U.S. Census Bureau. Data are available for download at https://www.fisheries.noaa.gov/national/sustainable-fisheries/foreign-fishery-trade-data

Table 3.3.1.4. Annual pounds and value of fresh grouper imports and share of imports by country, 2019-2023.

	2019	2020	2021	2022	2023
Pounds of fresh Grouper imports (product weight, million pounds)	11.3	10.4	12.2	11.7	12.6
Value of fresh Grouper imports (millions $, 2024$)	60.5	46.4	65.4	66.9	68.2
Average price per lb (2024$)	$5.35	$4.46	$5.36	$5.72	$5.41
Share of Imports by Country					
Mexico	57.9	67.6	54.4	44	45
Brazil	16.9	12.3	18.1	23.9	19.8
Panama	8.1	8	10.9	13.4	12.7
All others	17	12.2	16.6	18.7	22.4

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

As shown in Table 3.3.1.5, imports of frozen grouper products peaked at 3.5 million lb pw in 2019 declining to a low of 0.8 million lb pw in 2020. The total value of frozen grouper imports decreased from 2019 to 2020 but increased to $5.8 million in 2021. The average price per lb pw for frozen grouper products was $2.26 from 2019-2023. Imports of frozen grouper products primarily originated in Brazil, Suriname, and Indonesia in 2019-2022.

Table 3.3.1.5. Annual pounds and value of frozen grouper imports and share of imports by country, 2019-2023.

	2019	2020	2021	2022	2023
Pounds of frozen Grouper imports (product weight, million pounds)	3.5	0.8	2.2	1.3	1.2
Value of frozen Grouper imports (millions $, 2024$)	5.5	1.7	5.8	2.9	2.7
Average price per lb (2024$)	$1.57	$2.13	$2.64	$2.23	$2.25
Share of Imports by Country					
Brazil	79.2	33.7	23.5	26.2	14
Suriname	11.2	25.9	30.6	16.2	0
Indonesia	3	1.1	22.2	5.9	0
All others	6.5	39.3	23.7	51.7	86

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

Snappers

Imports of fresh and frozen snapper products, which directly compete with domestic harvest of snapper species are described in this section. As shown in Table 3.3.1.6, imports of fresh snapper products were 32.8 million lb pw in 2019. They peaked at 36.0 million lb pw in 2021. The total value of snapper imports increased to a five-year high of $169 million in 2021 (2024$). The average price per pound for fresh snapper products was $4.37 from 2019-2023 and prices varied over this period. Imports of fresh snapper products primarily originated in Mexico, Nicaragua, or Panama, entering the U.S. through the port of Miami.

Table 3.3.1.6. Annual pounds and value of fresh snapper imports and share of imports by country, 2019-2023. All monetary estimates are in 2024$.

	2019	2020	2021	2022	2023
Pounds of fresh Snapper imports (product weight, million pounds)	32.8	32.4	36	32.2	32.1
Value of fresh Snapper imports (millions $, 2024$)	131.7	129.4	169.00	150.9	142.6
Average price per lb (2024$)	$4.02	$3.99	$4.69	$4.69	$4.44
Share of Imports by Country					
Mexico	34.9	40.4	32.8	31.2	32.3
Nicaragua	13.9	15.1	13.3	14.9	14.4
Panama	14.6	11	14	10.6	10.3
All others	36.6	33.5	39.9	43.4	42.8

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

As shown in Table 3.3.1.7, the total value of frozen snapper imports increased from $49.1 million (2024$) in 2019 to a five-year high of $75.7 million in 2021 (2024$) followed by a 49% decrease through 2023. The average price per pound for frozen snapper products was $3.83, with a notable decrease in 2023. Frozen snapper product imports primarily originated in Brazil or Suriname and entered through the port of Miami.

Table 3.3.1.7 Annual pounds and value of frozen snapper imports and share of imports by country, 2019-2023.

	2019	2020	2021	2022	2023
Pounds of frozen Snapper imports (product weight, million pounds)	11.4	15.9	18.2	16.9	11.7
Value of frozen Snapper imports (millions $, 2024$)	41.9	55.2	75.7	7.08	42.5
Average price per lb (2024$)	$3.68	$3.47	$4.16	$4.19	$3.63
Share of Imports by Country					
Brazil	54.6	55.4	58.6	64.1	60.6
Suriname	13.5	10.3	10.5	5.5	12.3
Indonesia	6.8	5.4	3.9	8.0	7.0
All others	25	28.9	27	22.4	20.1

Source: NOAA Foreign Trade Query Tool, accessed 10/20/24.

Business Activity

The commercial harvest and subsequent sales and consumption of fish generate business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as seafood purchased at a local fish market and served during restaurant visits. These expenditures spur additional business activity in the region(s) where the harvest and purchases are made, such as jobs in local fish markets, grocers, restaurants, and fishing supply establishments. In the absence of the availability of a given species for purchase, consumers would spend their money on substitute goods, such as other finfish or seafood products, and services, such as visits to different food service establishments. As a result, the analysis presented below represents a distributional analysis only; that is, it only shows how economic effects may be distributed through regional markets and should not be interpreted to represent the impacts if these species are not available for harvest or purchase.

In addition to these types of impacts, economic impact models can be used to determine the sources of the impacts. Each impact can be broken down into direct, indirect, and induced economic impacts. "Direct" economic impacts are the results of the money initially spent in the study area (e.g., country, region, state, or community) by the fishery or industry being studied. This includes money spent to pay for labor, supplies, raw materials, and operating expenses. The direct economic impacts from the initial spending create additional activity in the local economy, i.e., "indirect" economic impacts. Indirect economic impacts are the results of business-to-business transactions indirectly caused by the direct impacts. For example, businesses initially benefiting from the direct impacts will subsequently increase spending at other local businesses. The indirect economic impact is a measure of this increase in business-to-business activity,

excluding the initial round of spending which is included in the estimate of direct impacts. "Induced" economic impacts are the results of increased personal income caused by the direct and indirect economic impacts. For example, businesses experiencing increased revenue from the direct and indirect impacts will subsequently increase spending on labor by hiring more employees, increasing work hours, raising salaries/wage rates, etc. In turn, households will increase spending at local businesses. The induced impact is a measure of this increase in household-to-business activity.

Estimates of the U.S. average annual business activity associated with the commercial harvest of black sea bass in the South Atlantic were derived using the model developed for and applied in NMFS (2024) and are provided in Table 3.3.1.4.[6] This business activity is characterized as jobs (full- and part-time), output impacts (gross business sales), income impacts (wages, salaries, and self- employed income), and value-added impacts, which represent the contribution made to the U.S. Gross Domestic Product (GDP). These impacts should not be added together because this would result in double counting. These results are based on average relationships developed through the analysis of many fishing operations that harvest many different species. Separate models to address individual species are not available. For example, the results provided here apply to a general "reef fish" category, rather than just black sea bass, and a harvester job is "generated" for approximately every $41,670 (2024 dollars) in ex-vessel revenue. These results contrast with the number of harvesters (vessels) with recorded landings of black sea bass presented in Table 3.3.1.1.

Between 2019 and 2023, landings of South Atlantic black sea bass resulted in approximately $291,690 (2024 dollars) in gross revenue on average. In turn, this revenue generated employment, income, value-added, and output impacts of 39 jobs, $1.1 million, $1.5 million, and $2.9 million per year, respectively, on average (Tables 3.3.1.4).

[6] A detailed description of the input/output model is provided in (NMFS 2011).

Table 3.3.1.4. Average annual business activity (2019 through 2023) associated with the commercial harvest of black sea bass in the South Atlantic. All monetary estimates are in thousands of 2024 dollars.*

Harvesters	Direct	Indirect	Induced	Total
Employment impacts	5	1	1	7
Income impacts	157	29	71	257
Total value-added impacts	168	105	121	394
Output Impacts	292	237	235	764
Primary dealers/processors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	1	0	1	2
Income impacts	51	47	45	144
Total value-added impacts	55	60	84	200
Output impacts	165	125	165	455
Secondary wholesalers/distributors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	1	0	1	1
Income impacts	31	9	32	72
Total value-added impacts	33	15	55	103
Output impacts	82	30	107	219
Grocers	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	2	0	0	3
Income impacts	63	21	32	115
Total value-added impacts	67	34	54	154
Output impacts	108	55	105	267
Restaurants	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	14	1	2	17
Income impacts	253	77	145	474

Total value-added impacts	269	137	244	650
Output impacts	492	214	481	1,188
Harvesters and seafood industry	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	23	3	5	39
Income impacts	555	183	324	1,062
Total value-added impacts	592	352	558	1,501
Output impacts	1,139	661	1,093	2,893

Source: Calculated by NMFS SERO using the model developed for and applied in NMFS (2024).
*Converted to 2024 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

3.3.2. Recreational Sector

The recreational sector is composed of the private and for-hire modes. The private mode includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire mode is composed of charter vessels and headboats. Charter vessels generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person. The type of service, from a vessel- or passenger-size perspective, affects the flexibility to search different fishing locations during the course of a trip and target different species because larger concentrations of fish are required to satisfy larger groups of anglers.

Permits

For anglers to fish for or possess snapper grouper species in or from the South Atlantic EEZ on for-hire vessels, those vessels are required to have an open access South Atlantic Snapper Grouper Charter/Headboat permit (snapper grouper for-hire permit). In 2024, there were 2,106 valid for-hire snapper grouper permits. This sector operates as an open access fishery and not all permitted vessels are necessarily active in the fishery, as evidenced in Souza and Liese (2019). Some vessel owners may have obtained open access permits as insurance for uncertainties in the fisheries in which they currently operate.

Although the for-hire permit application collects information on the primary method of operation, the permit itself does not identify the permitted vessel as either a headboat or a charter vessel and vessels may operate in both capacities. However, only federally permitted headboats are required to submit harvest and effort information to the NMFS Southeast Region Headboat Survey (SRHS).[7] Participation in the SRHS is based on determination by the SEFSC that the

[7] All federal charter/headboat permit holders, including charter vessel owners or operators, are required to comply with the Southeast For-Hire Integrated Electronic Reporting (SEFHIER) program. Under this program, all such permit holders must submit logbooks weekly, by 11:59 pm, local time, the Tuesday following a reporting week (Monday-Sunday). Those vessels selected to report to the SRHS (i.e., federally permitted headboats) will continue

vessel primarily operates as a headboat. During 2024, 63 South Atlantic headboats were registered in the SRHS (R. Cheshire, NMFS SEFSC, pers. comm. 2025). The majority of these headboats were located in Florida/Georgia (36), followed by South Carolina (20) and North Carolina (7). As a result, of the 2,106 vessels with snapper grouper for-hire permits, up to 63 may primarily operate as headboats.[8]

There are no specific permitting requirements for recreational anglers to harvest snapper grouper species. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions. As a result, it is not possible to identify with available data how many individual anglers would be expected to be affected by this proposed amendment.

Angler Effort

Recreational effort derived from the Marine Recreational Information Program (MRIP) database can be characterized in terms of the number of trips as follows:

- Target effort - The number of individual angler trips, regardless of duration, where the intercepted angler indicated that the species or a species in the species group was targeted as either the first or the second primary target for the trip. The species did not have to be caught.
- Catch effort - The number of individual angler trips, regardless of duration and target intent, where the individual species or a species in the species group was caught. The fish did not have to be kept.
- Total recreational trips - The total estimated number of recreational trips in the South Atlantic, regardless of target intent or catch success.

Estimates of black sea bass target and catch effort are provided in Table 3.3.2.1 and Table 3.3.2.2, respectively. The overall number of target and catch trips fluctuated during 2019 through 2023, with a peak in 2022. North Carolina and South Carolina recorded the most target trips, whereas North Carolina and Florida recorded the most catch trips. The private/rental mode was the dominant mode of fishing for black sea bass target and catch trips (Table 3.3.2.1 and Table 3.3.2.2). On average (2019 through 2023), there were approximately 14 times more catch trips than target trips, which indicates black sea bass is often caught incidentally while fishing for other species.

to submit their reports under the SEFHIER requirements directly to the SRHS program. For more information, see: https://www.fisheries.noaa.gov/southeast/recreational-fishing-data/southeast-hire-integrated-electronic-reporting-program/.

[8] This estimate is based on the SEFSC criteria; however, there may be additional vessels not included in the SRHS that also identify as headboats.

Table 3.3.2.1. South Atlantic black sea bass recreational target trips, by mode and state, 2019-2023.

	FL	GA	NC	SC	Total
	Shore Mode				
2019	0	9,560	23,701	429	33,690
2020	0	2,512	0	219	2,731
2021	0	0	0	5,173	5,173
2022	0	3,138	14,605	23,922	41,666
2023	0	0	0	2,333	2,333
Average	0	3,042	7,661	6,415	17,119
	Charter Mode				
2019	2,192	0	282	1,716	4,190
2020	0	189	1,318	1,221	2,727
2021	0	581	493	3,997	5,071
2022	0	0	1,028	1,659	2,687
2023	1,630	1,308	1,925	50	4,914
Average	764	416	1,009	1,729	3,918
	Private/Rental Mode				
2019	13,258	8,788	27,662	53,737	103,444
2020	15,859	37,074	23,462	27,752	104,147
2021	9,915	20,228	19,360	27,213	76,716
2022	78,090	10,422	27,851	50,158	166,521
2023	41,880	6,457	53,251	5,689	107,277
Average	31,800	16,594	30,317	32,910	111,621
	All Modes				

	FL	GA	NC	SC	Total
2019	15,451	18,348	51,644	55,882	141,325
2020	15,859	39,774	24,780	29,192	109,605
2021	9,915	20,809	19,853	36,383	86,959
2022	78,090	13,560	43,484	75,740	210,874
2023	43,510	7,764	55,177	8,072	114,524
Average	32,565	20,051	38,988	41,054	132,657

Source: MRIP database, SERO, NMFS (August 2025)
Note: Headboat data are unavailable.

Table 3.3.2.2. South Atlantic black sea bass recreational catch trips, by mode and state, 2019-2023.

	FL	GA	NC	SC	Total
	Shore Mode				
2019	92,389	23,202	144,600	224,082	484,273
2020	104,720	28,759	134,223	76,723	344,425
2021	7,231	116,695	186,668	118,699	429,292
2022	34,259	67,617	541,374	107,009	750,259
2023	96,404	72,302	272,800	116,536	558,042
Average	67,001	61,715	255,933	128,610	513,258
	Charter Mode				
2019	14,993	1,070	12,089	23,466	51,617
2020	3,470	853	13,830	16,724	34,876
2021	9,754	3,005	8,361	20,661	41,781
2022	6,273	2,560	9,595	16,824	35,252
2023	6,880	2,947	34,069	22,337	66,233
Average	8,274	2,087	15,589	20,002	45,952

	FL	GA	NC	SC	Total
	Private/Rental Mode				
2019	462,523	118,289	410,339	258,784	1,249,934
2020	587,325	98,138	467,266	231,865	1,384,594
2021	241,071	67,300	428,520	313,953	1,050,843
2022	255,247	148,270	654,550	348,208	1,406,276
2023	334,483	66,400	520,712	283,986	1,205,582
Average	376,130	99,679	496,277	287,359	1,259,446
	All Modes				
2019	569,904	142,561	567,028	506,332	1,785,825
2020	695,514	127,751	615,319	325,312	1,763,895
2021	258,056	187,000	623,548	453,313	1,521,917
2022	295,779	218,447	1,205,519	472,042	2,191,787
2023	437,767	141,649	827,582	422,859	1,829,857
Average	451,404	163,482	767,799	435,972	1,818,656

Source: MRIP database, SERO, NMFS (August 2025).
Note: Headboat data are unavailable.

Target trips were greatest during MRIP waves 3 and 4 (May-Aug) on average (2019-2023); however, there were notable fluctuations within each year and across years (Jan-Feb) (Figure 3.3.2.1). Catch trips on the other hand followed a much more consistent pattern, with effort starting off low at the beginning of the year, increasing steadily through wave 4 (Jul-Aug), then tapering off through the end of the year (Figure 3.3.2.2).

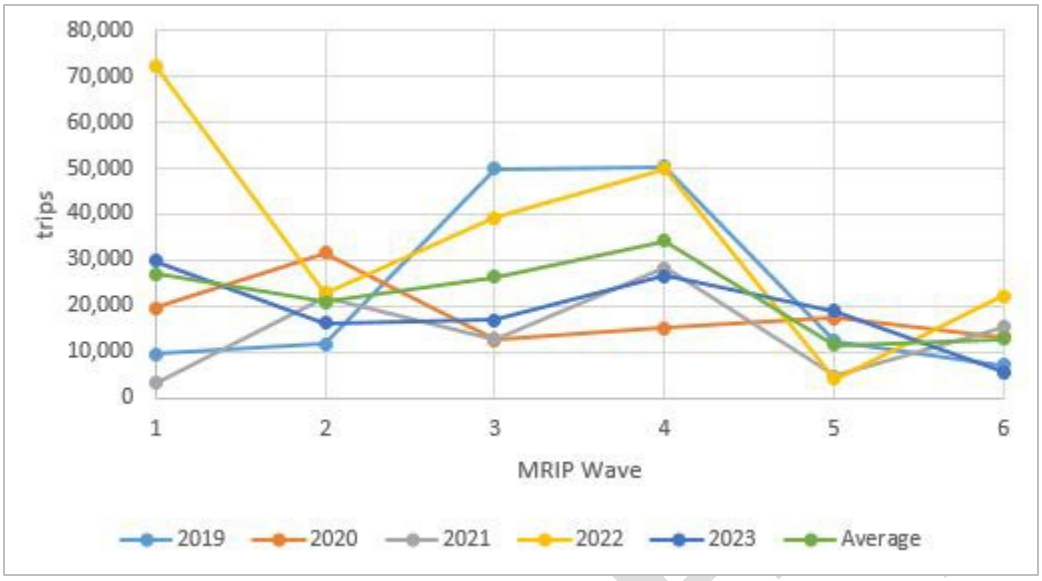

Figure 3.3.2.1. South Atlantic black sea bass recreational target trips, by MRIP wave, 2019-2023.
Source: MRIP database, SERO, NMFS (August 2025).

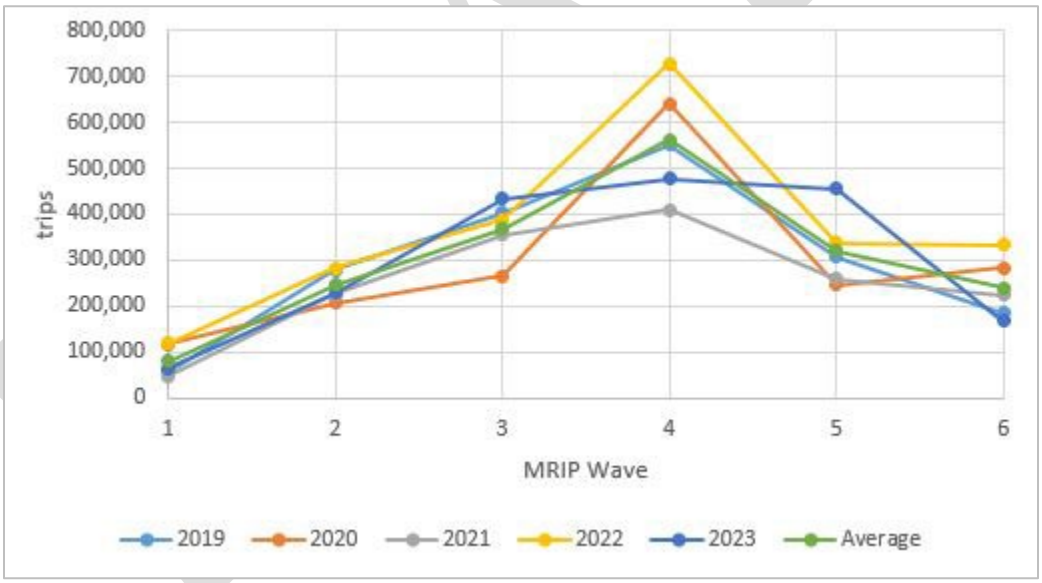

Figure 3.3.2.2. South Atlantic black sea bass recreational catch trips, by MRIP wave, 2019-2023.
Source: MRIP database, SERO, NMFS (August 2025).

Similar analysis of recreational angler trips is not possible for the headboat mode because headboat data are not collected at the angler level. Estimates of effort by the headboat mode are provided in terms of angler days, or the total number of standardized full-day angler trips.[9] From

[9] Headboat trip categories include half-, three-quarter-, full-, and 2-day trips. A full-day trip equals one angler day, a half-day trip equals .5 angler days, etc. Angler days are not standardized to an hourly measure of effort and actual trip durations may vary within each category.

2019 through 2023, headboat effort in the South Atlantic, in terms of angler days, fluctuated with a five-year low in 2020 (Table 3.3.2.3). Headboat effort was the highest, on average, during the summer months of June through August (Figure 3.3.2.3).

Table 3.3.2.3. South Atlantic headboat angler days and percent distribution by state (2019 through 2023).

	Angler Days			Percent Distribution		
Year	FL/GA*	NC	SC	FL/GA	NC	SC
2019	119,712	15,546	41,470	68%	9%	23%
2020	84,005	14,154	34,080	64%	11%	26%
2021	120,367	19,719	47,908	64%	10%	25%
2022	104,989	16,140	38,748	66%	10%	24%
2023	105,673	16,115	35,814	67%	10%	23%
Average	106,949	16,335	39,604	66%	10%	24%

*East Florida and Georgia are combined for confidentiality purposes.
Source: NMFS SRHS (2023).

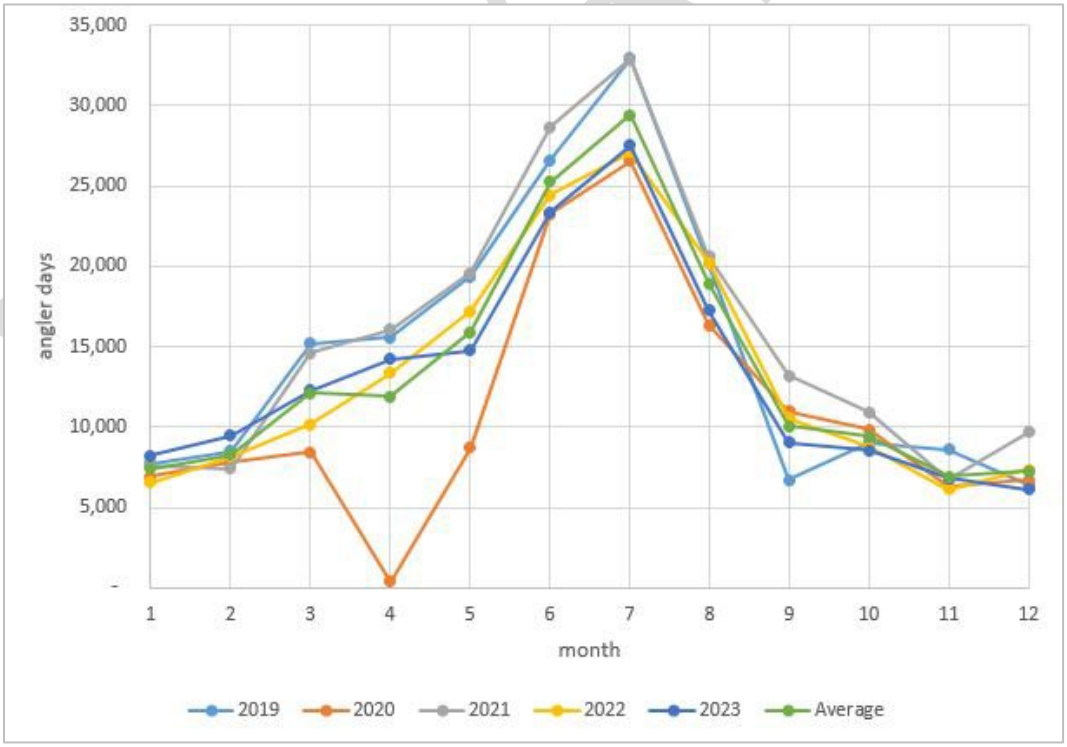

Figure 3.3.2.3. South Atlantic headboat angler days by month and year (2019-2023).
Source: NMFS SRHS (2023).

Economic Value

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is consumer surplus (CS), which is the difference between the maximum amount an angler would be willing to pay for a fish and the amount they actually do pay.[10] CS represents a savings of one's income that can be spent later on other goods and services, leading to an overall increase in utility or satisfaction for the angler and a benefit to the economy. All else equal, the amount anglers are willing to pay and the costs of fishing can vary depending on expected catch rates, harvest rates, and existing regulations. The economic value of changes in expected catch rates, harvest rates, or existing regulations can be measured by any associated changes in CS. However, because recreationally-caught fish are non-market goods and there are no transaction data available, CS cannot be measured directly. Instead, using survey elicitation methods and stated or revealed preference models, it is possible to estimate willingness to pay (WTP) values[11] that are a close approximation to the individual CS an angler would derive from an additional fish that is caught and kept. Direct estimates of the WTP for black sea bass are not currently available; however, Haab et al. (2012) estimated the WTP for one additional snapper, inclusive of black sea bass and several other species, caught and kept in the Southeastern U.S. using four separate econometric modeling techniques. The finite mixture model, which takes into account variation in the preferences of fishermen, had the best prediction rates of the four models and, as such, was selected for presentation here. The estimated mean WTP for an additional snapper was $15.50 (2024 dollars).

The foregoing estimates of economic value should not be confused with economic impacts associated with recreational fishing expenditures. Although expenditures for a specific good or service may represent a proxy or lower bound of value (a person would not logically pay more for something than it was worth to them), they do not represent the net value (benefits minus cost), nor the change in value associated with a change in the fishing experience.

Estimates of average annual gross revenue for South Atlantic charter vessels and headboats in 2009 are provided in Holland et al. (2012). In 2024 dollars, the average annual gross revenue for a South Atlantic headboat was approximately $265,000, while the average annual gross revenue for a South Atlantic charter vessel was approximately $150,000. However, a more recent estimate of average annual gross revenue for South Atlantic headboats is available from D. Carter (NMFS, pers. comm., 2018). D. Carter (NMFS, pers. comm., 2018) recently estimated that average annual gross revenue for South Atlantic headboats was approximately $364,373 (2024 dollars) in 2017. This estimate is likely the best current estimate of annual gross revenue for South Atlantic headboats, as it is based on a relatively large sample and is more recent. The difference in the Holland et al. (2012) and D. Carter (NMFS, pers. comm., 2018) estimates for headboats suggests that the estimate for charter vessels based on Holland et al. (2012) is likely an underestimate of current average annual revenue for charter vessels in the South Atlantic. Estimates of annual PS and economic profit for South Atlantic charter vessels and headboats are not available.

[10] Holding income and the prices of other goods constant.

[11] These are measures of compensating surplus, or the amount of money that an angler would be willing to pay in order to harvest the additional fish, while maintaining the same level of utility.

With regard to for-hire trips, economic value can be measured by PS per angler trip, which represents the amount of money that a vessel owner earns in excess of the cost of providing the trip. Estimates of revenue, costs, and trip net revenue for trips taken by charter vessels and headboats in 2017 are available from Souza and Liese (2019). They also provide estimates of trip net cash flow per angler trip, which are an approximation of PS per angler trip. According to Table 3.3.2.4, after accounting for transactions fees, supply costs, and labor costs, net revenue per trip was 40% of revenue for South Atlantic charter vessels and 54% of revenue for Southeast headboats or $665 and $2,179 (2024 dollars), respectively. Given the average number of anglers per trip for each fleet, PS per angler trip is estimated to be $141 for South Atlantic charter vessels and $77 for Southeast headboats (Table 3.3.2.4).

Table 3.3.2.4. Trip-level economics for offshore trips by South Atlantic charter vessels and Southeast headboats in 2017 (2024 dollars).

	South Atlantic Charter Vessels	Southeast Headboats*
Revenue	100%	100%
Transaction Fees (% of revenue)	3%	6%
Supply Costs (% of revenue)	29%	19%
Labor Costs (% of revenue)	28%	22%
Net Revenue per trip including Labor costs (% of revenue)	40%	54%
Net Revenue per Trip	$665	$2,179
Average # of Anglers per Trip	4.7	28.2
Trip Net Cash Flow per Angler Trip	$141	$77

Source: Souza and Liese (2019).
*Because the sample size for headboats in Souza and Liese (2019) is small (n=30), they do not break headboats out by sub-region.

Business Activity

The desire for recreational fishing generates economic activity as consumers spend their income on various goods and services needed for recreational fishing. This income spurs economic activity in the region where recreational fishing occurs. It should be clearly noted that, in the absence of the opportunity to fish, the income would presumably be spent on other goods and services and these expenditures would similarly generate economic activity in the region where the expenditure occurs. As such, the analysis below represents a distributional analysis only. Estimates of the business activity (economic impacts) associated with recreational angling for South Atlantic black sea bass were calculated using average trip-level impact coefficients derived from the 2022 Fisheries Economics of the U.S. report (NMFS 2024) and underlying data provided by the National Oceanic and Atmospheric Administration (NOAA) Office of Science

and Technology. Economic impact estimates in 2022 dollars were adjusted to 2024 dollars using the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Business activity (economic impacts) for the recreational sector is characterized in the form of value-added impacts (contribution to the GDP in a state or region), output impacts (gross business sales), income impacts (wages, salaries, and self-employed income), and jobs (full- and part-time). Estimates of the average annual economic impacts (2019-2023) resulting from South Atlantic recreational black sea bass target trips are provided in Table 3.3.2.5. These estimates only apply at the state-level, as opposed to the regional (or national) level, and may underestimate the actual amount of total business activity, because state-level impact multipliers do not account for interstate and interregional trading. It is important to note that these economic impacts estimates are based on trip expenditures only and do not account for durable expenditures. Durable expenditures cannot be reasonably apportioned to individual species or species groups. As such, the estimates provided in Tables 3.3.2.5 may be considered a lower bound on the economic activity associated with those trips that targeted black sea bass.

Estimates of the business activity associated with headboat effort are not available. Headboat vessels are not covered in MRIP, so, in addition to the absence of estimates of target effort, estimation of the appropriate business activity coefficients for headboat effort has not been conducted.

Table 3.3.2.5. Estimated economic impacts from South Atlantic black sea bass recreational target trips by state, using state-level multipliers. All monetary estimates are in 2024 dollars in thousands.

	NC	SC	GA	FL
	Charter Mode			
Target Trips	1,009	1,729	416	764
Value Added Impacts	$406	$710	$124	$343
Sales Impacts	$662	$1,156	$200	$544
Income Impacts	$288	$471	$88	$239
Employment (Jobs)	7	13	2	5
	Private/Rental Mode			
Target Trips	30,317	32,910	16,594	31,800
Value Added Impacts	$781	$625	$377	$810
Sales Impacts	$1,354	$1,090	$660	$1,362

	NC	SC	GA	FL
Income Impacts	$439	$294	$183	$381
Employment (Jobs)	8	7	3	8
	Shore			
Target Trips	7,661	6,415	3,042	0
Value Added Impacts	$415	$96	$148	$0
Sales Impacts	$699	$161	$248	$0
Income Impacts	$253	$52	$85	$0
Employment (Jobs)	5	1	2	0
	All Modes			
Target Trips	38,988	41,054	20,051	32,565
Value Added Impacts	$1,602	$1,431	$649	$1,152
Sales Impacts	$2,715	$2,408	$1,109	$1,906
Income Impacts	$981	$816	$356	$620
Employment (Jobs)	21	21	7	13

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2024) and underlying data provided by the NOAA Office of Science and Technology.

3.4. Social Environment

This regulatory amendment affects the commercial and recreational management of black sea bass in the South Atlantic. The following description presents baseline information on fishing participants and fishing communities. This description includes the current status of the fishery in order to present the communities that are expected to be primarily affected by the actions in this amendment because they are the most engaged in and/or reliant on the fishery and is used to inform the social effects. Community level data are presented whenever possible in order to meet the requirements of National Standard 8 of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), which requires consideration of the importance of fishery resources to human communities when changes to fishing regulations are considered.

The following description includes permits and endorsements related to the commercial and recreational snapper grouper fishing and black sea bass pot fishing by state in order to provide a geographic distribution of fishing involvement. Top communities based on the number of permits and endorsements are presented. Commercial and recreational landings by state are

included to provide information on the geographic distribution of fishing involvement. The top communities in the South Atlantic by commercial landings are identified, South Atlantic communities with headboat landings are depicted, and their commercial engagement and reliance are described. Descriptions of the top communities based on recreational engagement are also included. Lastly, social vulnerability data are presented for all top-ranking communities.

3.4.1. Commercial Sector

Landings by State

The greatest proportion of commercial black sea bass catch was landed in North Carolina (average of 66.4% from 2019-2023, SEFSC Commercial ACL Monitoring File), followed by South Carolina (31.1%), and Georgia and Florida (2.3%). Georgia and Florida are combined because of confidentiality issues. A minor amount of catch was landed in states north of Virginia, but caught in South Atlantic waters.

Permits

The majority of snapper grouper unlimited permits are issued to vessels with homeports in Florida (68.5%), followed by North Carolina (21.1%), South Carolina (7.7%), and Georgia (1.6%, SERO Permits Office, 2024). Vessels with homeports in other states and territories (Maryland, New Jersey, Virginia, and the U.S. Virgin Islands) also hold snapper grouper unlimited permits, but these states and territories represent a small percentage of the issued permits.

South Atlantic snapper grouper unlimited permits are held by those with homeports in 115 communities (SERO Permits Office, 2024). Communities with the most snapper grouper unlimited permits are located in Florida, South Carolina, and North Carolina (Table 3.4.1.1). The communities with the most snapper grouper unlimited permits are Key West (17.9 % of snapper grouper unlimited permits), Key Largo (4.1%), and Miami, Florida (3.3%).

Table 3.4.1.1. Top communities by number of South Atlantic snapper grouper unlimited permits and snapper grouper 225-lb trip-limited permits.

State	Community	Unlimited Permits	State	Community	225-lb Trip-Limited Permits
FL	Key West	91	FL	Marathon	10
FL	Key Largo	21	FL	Key West	9
FL	Miami	17	FL	Miami	6
FL	Marathon	16	FL	Jupiter	5
FL	Saint Augustine	15	NC	Wilmington	5
FL	Sebastian	15	FL	Sebastian	4
SC	Murrells Inlet	13	FL	Big Pine Key	3
FL	Ponce Inlet	12	FL	Cape Canaveral	3
SC	Little River	12	FL	Cudjoe Key	3

State	Community	Unlimited Permits	State	Community	225-lb Trip-Limited Permits
FL	Big Pine Key	11	FL	Key Largo	3
FL	Mayport	11	FL	West Palm Beach	3
FL	Port Canaveral	11			
NC	Sneads Ferry	11			
FL	Fort Pierce	10			
FL	Jacksonville	10			
NC	Carolina Beach	9			
NC	Wilmington	9			

Source: SERO Permits Office, 2024.

The majority of snapper grouper 225-lb trip-limited permits are issued to vessels with homeports in Florida (86%), followed by North Carolina (12.8%, SERO Permits Office, 2024). Vessels with homeports in another state (New Jersey) also hold snapper grouper 225-lb trip-limited permits, but this state represents a small percentage of the issued permits.

South Atlantic commercial snapper grouper 225-lb trip-limited permits are held by those with homeports in 39 communities (SERO Permits Office, 2024). Communities with the most commercial snapper grouper 225-lb trip-limited permits are located in Florida and North Carolina (Table 3.4.1.1). The communities with the most snapper grouper 225-lb trip-limited permits are Marathon (11.6% of snapper grouper 225-lb trip-limited permits), Key West (10.5%), and Miami, Florida (7%).

The greatest proportion of sea bass pot endorsements are issued to vessels with homeports in North Carolina (50%), followed by South Carolina (21.9%), Florida (18.8%), and Georgia (9.4%, SERO Permits Office, 2024). South Atlantic commercial sea bass pot endorsements are held by those with homeports in 21 communities (SERO Permits Office, 2024). The communities with the most commercial sea bass pot endorsements are Little River, South Carolina (18.8% of sea bass pot endorsements) and Sneads Ferry, North Carolina (12.5%, SERO Permits Office, 2024).

Regional Quotient

The descriptions of communities include information about the top communities based on a "regional quotient" (RQ) of commercial landings for black sea bass. The RQ is the proportion of landings out of the total landings of that species for that region and that year, and is a relative measure. The RQ is reported individually only for the top ten communities by total landings for the years of 2019 through 2023 and communities are presented in the order of their total landings combined for all years. All other communities that landed red snapper are grouped as "Other Communities." Figure 3.4.1.1 shows the RQ in percentage of pounds from 2019 to 2023. Black sea bass landings by community are highly variable by year. The top black sea bass communities are located in North Carolina and South Carolina. About 56% black sea bass landings from 2019 to 2023 is landed in the top two communities of Beaufort and Wanchese,

North Carolina, combined. About 92% of black sea bass landings is landed in the top ten communities.

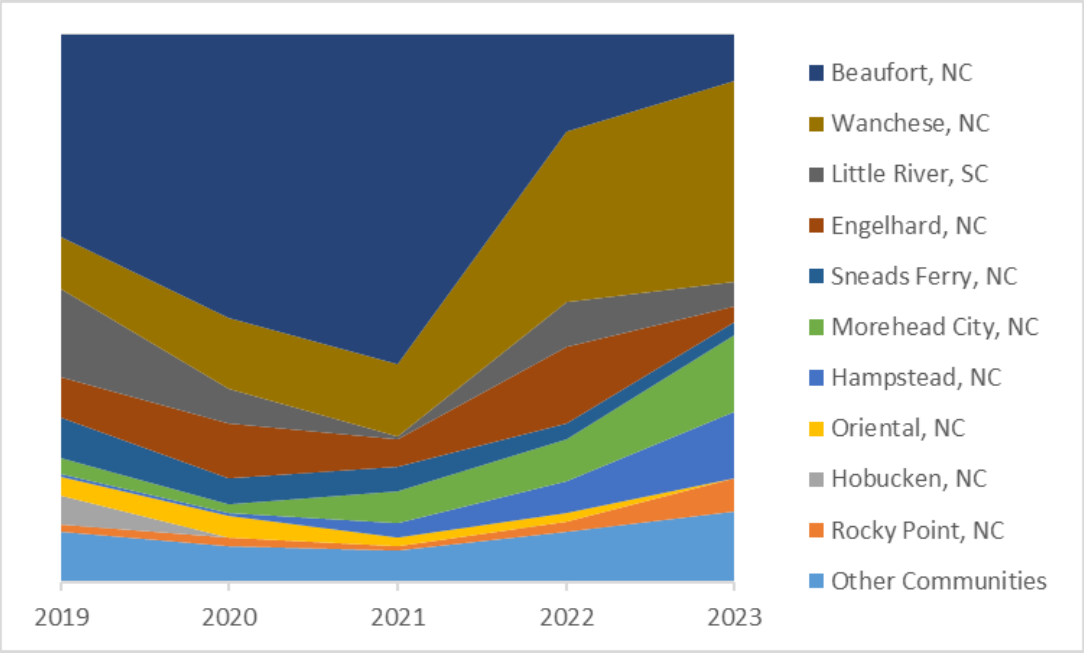

Figure 3.4.1.1. Regional Quotient (pounds) for top South Atlantic communities by black sea bass landings from 2019 through 2023. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.
Source: SERO, Community ALS.

Engagement and Reliance

In addition to examining the RQs to understand how South Atlantic communities are engaged and reliant on fishing, indices were created using secondary data from permit and landings information for the commercial sector (Jepson and Colburn 2013, Jacob et al. 2013). Fishing engagement is primarily based on the absolute numbers of permits, landings, and value. The analysis used the number of vessels designated commercial by homeport and owner address, value of landings, and total number of commercial permits for each community. Fishing reliance includes the same variables as fishing engagement divided by population to give an indication of the per capita influence of this activity.

Taking the communities with the highest RQs, factor scores of both engagement and reliance for commercial fishing were plotted. Two thresholds of one and one-half standard deviation above the mean are plotted onto the graphs to help determine a threshold for significance. The factor scores are standardized; therefore, a score above one is also above one standard deviation. A score above one-half standard deviation is considered engaged or reliant, with anything above one standard deviation to be very engaged or reliant.

Figure 3.4.1.2 is an overall measure of a community's commercial fishing engagement and reliance and includes the communities with the strongest relationship to the commercial sector for black sea bass as depicted in Figure 3.4.1.1. Most of the communities in Figure 3.4.1.2 would be considered to be highly or moderately engaged in commercial fishing, as several are at or above 1 standard deviation of the mean factor score and one is above one-half standard deviation. Hobucken and Rocky Point, North Carolina show the least amount of engagement in commercial fishing overall. Several communities would be considered highly or moderately reliant on commercial fishing (Beaufort, Wanchese, Sneads Ferry, and Oriental, North Carolina). Little River, South Carolina and Morehead City, Hampstead, Hobucken, and Rocky Point, North Carolina all demonstrate low commercial reliance.

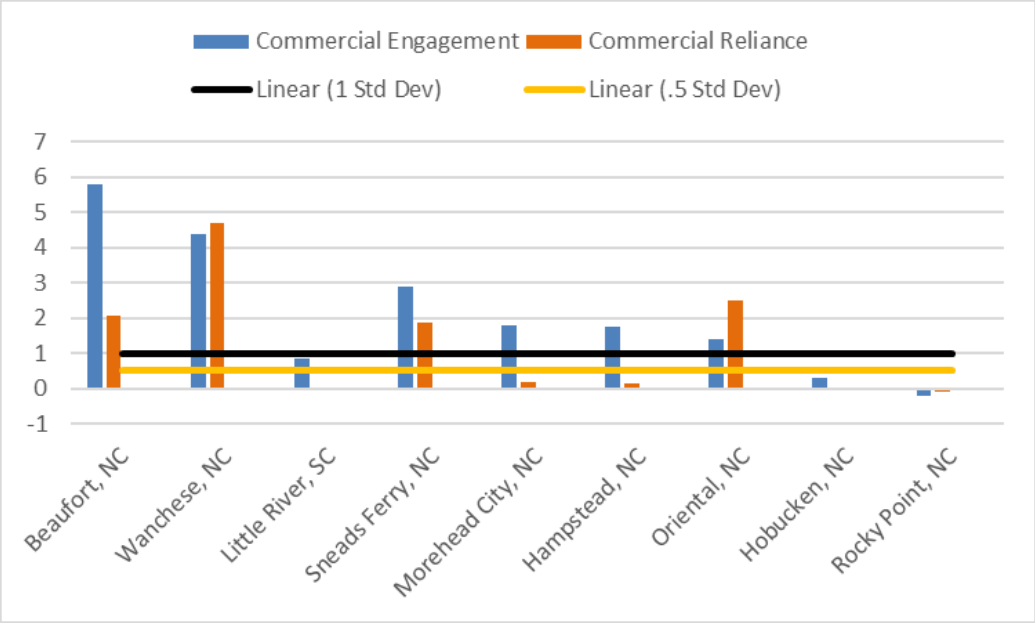

Figure 3.4.1.2. Commercial fishing engagement and reliance for top black sea bass communities.
Source: SERO, Community Social Vulnerability Indicators Database 2021.

3.4.2. Recreational Sector

Landings by State
The greatest proportion of recreational black sea bass landings came from waters adjacent to North Carolina (average of 39.1% in pounds for the 2019-2020 fishing year to the 2023-2024 fishing year, SEFSC Recreational CHTS ACL Monitoring File), followed by Georgia and Florida (31.2%), and South Carolina (29.6%). Georgia is combined with Florida because of the manner in which headboat data are provided and in order to protect confidentiality.

Permits
The majority of for-hire snapper grouper permits are issued to vessels with homeports in Florida (62.7%), followed by North Carolina (18.4%), South Carolina (9.3%), and Georgia (2.9%, SERO Permits Office, 2024). Vessels with homeports in other Gulf states (Alabama, Mississippi, Louisiana, and Texas) also hold a sizable amount of for-hire snapper grouper permits (2.2%). Vessels with homeports in other states and territories (Alaska, Delaware, Massachusetts, Maryland, Minnesota, Montana, New Hampshire, New Jersey, New York, Oklahoma, Pennsylvania, Puerto Rico, Rhode Island, and Virginia) also hold for-hire snapper grouper permits.

South Atlantic for-hire snapper grouper permits are held by those with homeports in 328 communities (SERO Permits Office, 2024). Communities with the most for-hire snapper grouper permits are located in Florida, North Carolina, and South Carolina (Table 3.4.2.1). Several communities with the most for-hire snapper grouper permits are located in the Florida Keys (Key West, Marathon, Islamorada, and Key Largo). The communities with most South Atlantic for-hire snapper grouper permits are Key West (8.8% of for-hire snapper grouper permits), Marathon (5.2%), Islamorada (4.6%), and Port Canaveral, Florida (3.3%).

Table 3.4.2.1. Top communities by number of South Atlantic for-hire snapper grouper permits.

State	Community	Permits
FL	Key West	186
FL	Marathon	109
FL	Islamorada	97
FL	Port Canaveral	69
FL	Saint Augustine	57
NC	Morehead City	50
FL	Miami	46
FL	Sebastian	42
SC	Charleston	41
FL	Key Largo	40
FL	Ponce Inlet	40
SC	Murrells Inlet	40
NC	Hatteras	38
SC	Little River	34
FL	Jacksonville	33
SC	Hilton Head Island	30

Source: SERO Permits Office, 2024.

Regional Quotient

Figure 3.4.2.1 includes all South Atlantic communities based on a RQ of recreational headboat landings for black sea bass. The RQ is the proportion of landings out of the total SRHS landings for that region, and is a relative measure. The RQ is reported individually for all South Atlantic homeports with SRHS landings of black sea bass, includes the average proportion of the total number of black sea bass landings by SRHS vessels for 2019 through 2023, and presents communities in the order of their average proportion of landings for all years. The top communities with headboat landings of black sea bass are located in North Carolina and along the northern coast of South Carolina.

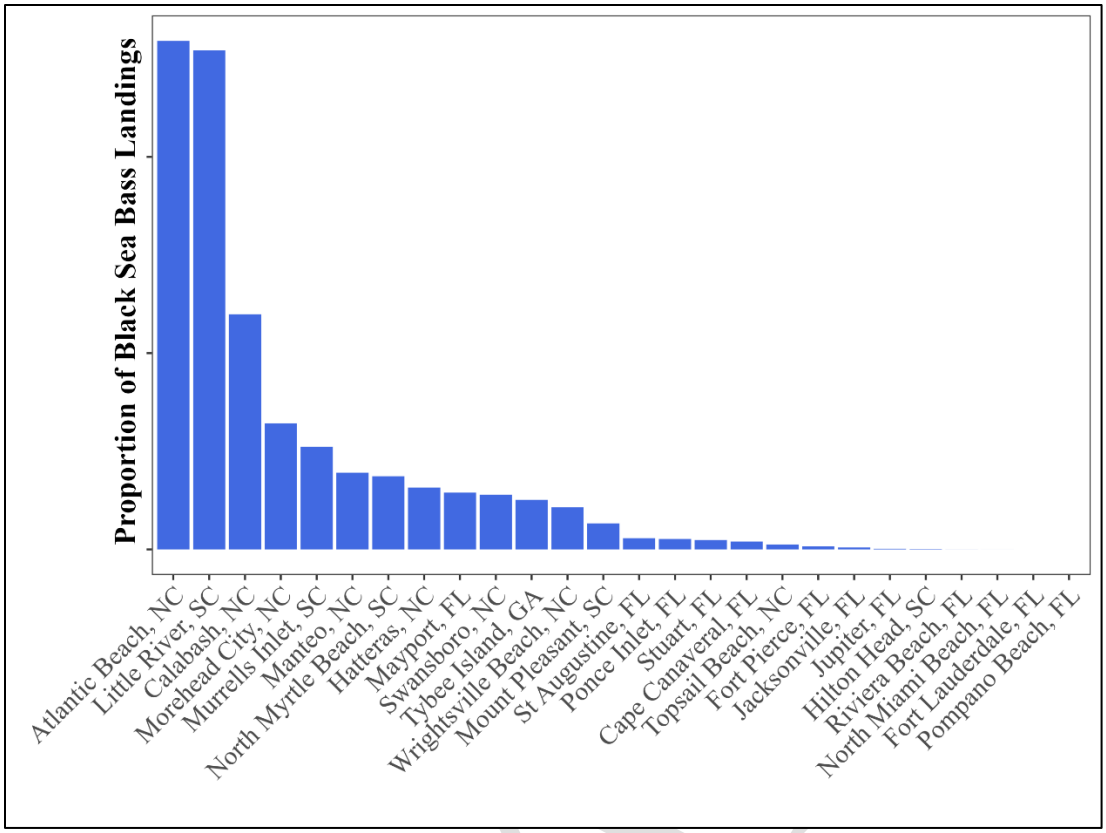

Figure 3.4.2.1. Regional Quotient for all South Atlantic communities included in the SRHS with black sea bass landings. The actual RQ values (y-axis) are omitted from the figure to maintain confidentiality.

Engagement and Reliance

Landings for the recreational sector based on MRIP data are not an accurate representation of the species caught at the community level, making it difficult to identify communities as dependent on recreational fishing for black sea bass or snapper grouper in general. Because limited data are available concerning how communities are engaged and reliant on specific species or species groups in the recreational sector, indices were created using secondary data from permit and infrastructure information for the southeast recreational fishing sector at the community level (Jacob et al. 2013; Jepson and Colburn 2013). Recreational fishing engagement is represented by the number of for-hire permits and vessels designated as "recreational" by homeport and owner address and the number of recreational fishing survey sites in a particular community. Fishing reliance includes the same variables as fishing engagement, divided by population. Factor scores of both engagement and reliance were plotted by community.

Figure 3.4.2.2 identifies the top communities that are engaged and reliant upon recreational fishing in general. All included communities demonstrate high levels of recreational engagement. Six communities (Key West, Florida; Marathon, Florida; Hatteras, North Carolina; Manteo, North Carolina; Ponce Inlet, Florida; and Atlantic Beach, North Carolina) demonstrate high levels of recreational reliance.

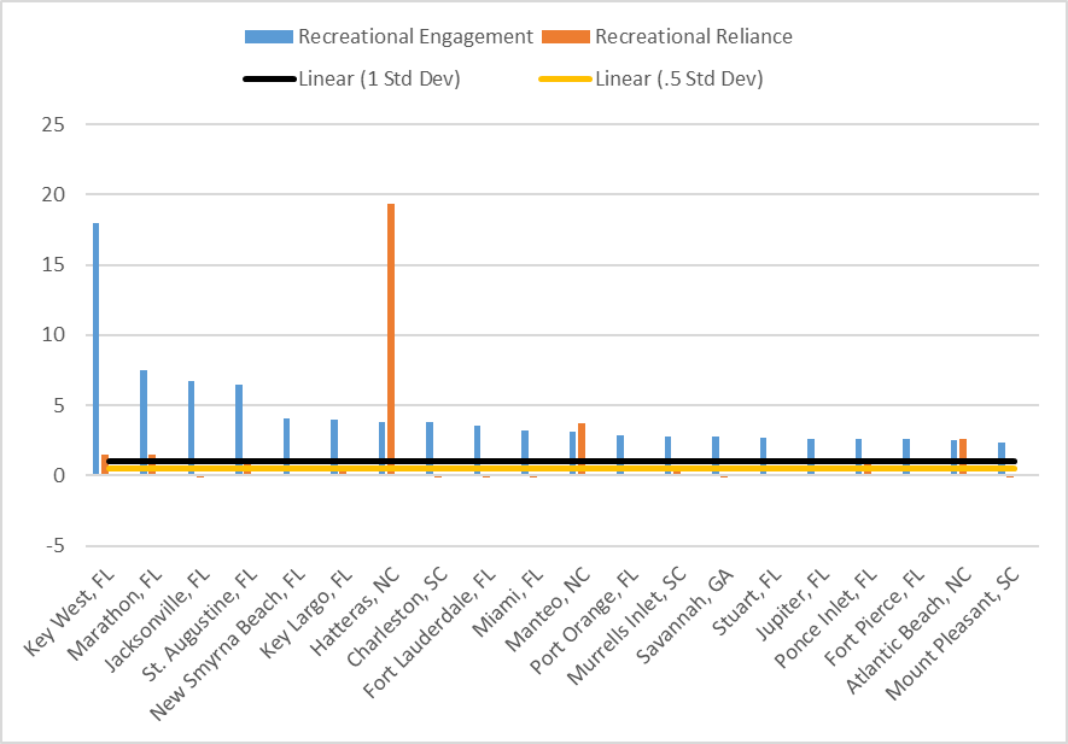

Figure 3.4.2.2. Top 20 communities by recreational fishing engagement and reliance.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

3.4.3. Social Vulnerability

A suite of indices were created using census data to examine the social vulnerability of coastal communities within the region. The three indices are poverty, population composition, and personal disruption. The variables included in each of these indices have been identified through the literature as being important components that contribute to a community's vulnerability. Poverty includes poverty rates for different groups; population composition includes more single female-headed households, households with children under the age of five, minority populations, and those that speak English less than well; and personal disruption includes disruptions such as higher separation rates, higher crime rates, and unemployment. Increased rates in the indicators are signs of populations experiencing vulnerabilities. Again, for those communities that exceed the threshold it would be expected that they would exhibit vulnerabilities to sudden changes or social disruption that might accrue from regulatory change.

Figures 3.4.3.1 and 3.4.3.2 provide social vulnerability rankings for place-based communities identified in Section 3.4 as important to commercial and recreational fishing for black sea bass specifically or fishing for snapper grouper in general. Several communities exceed the threshold of one standard deviation above the mean for at least one of the indices (Fort Pierce, Miami, North Miami Beach, Pompano Beach, and West Palm Beach, Florida and Calabash and Rocky Point, North Carolina). These communities would be the most likely to exhibit vulnerabilities to social or economic disruption resulting from regulatory change.

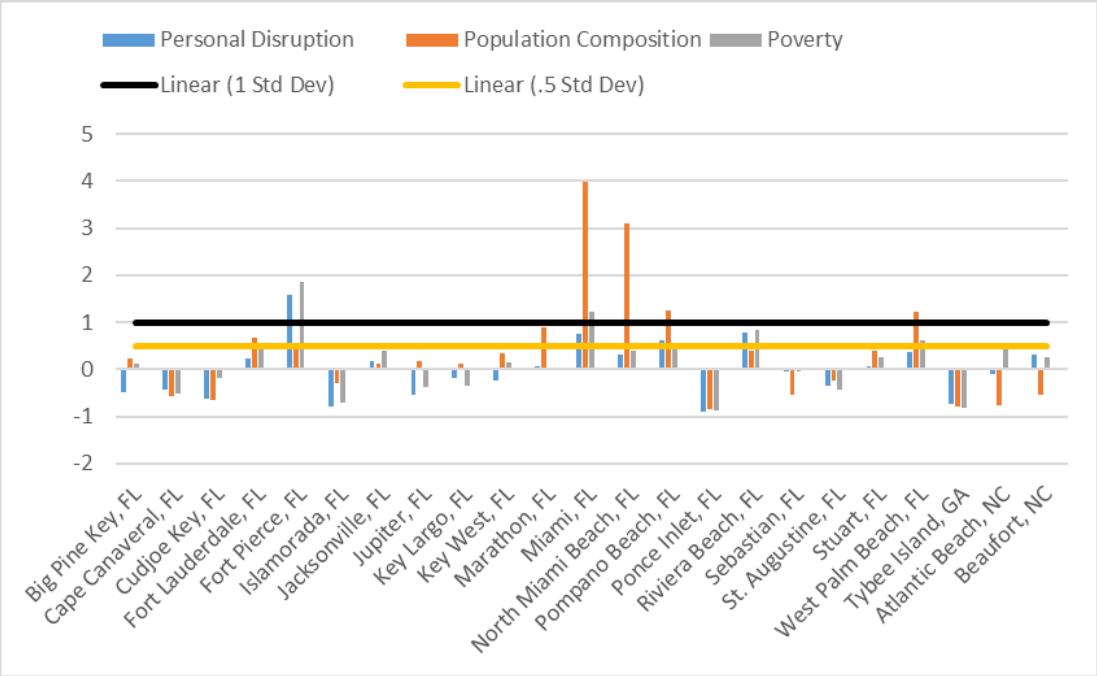

Figure 3.4.3.1. Social vulnerability indices for top commercial and recreational snapper grouper and black sea bass communities.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

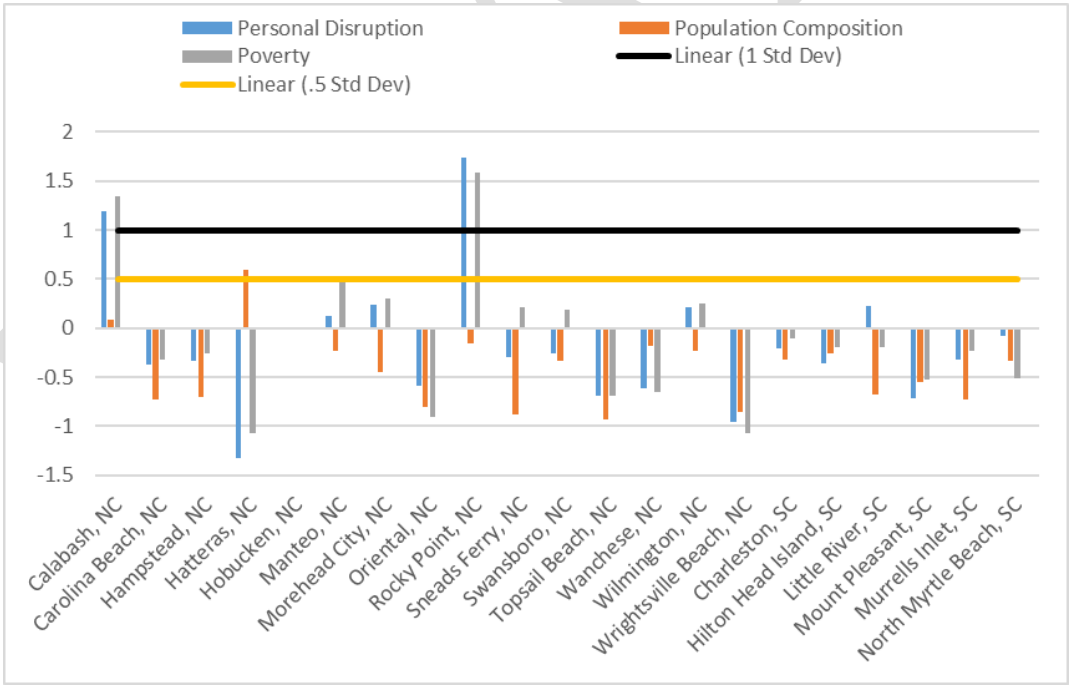

Figure 3.4.3.2. Social vulnerability indices for top commercial and recreational snapper grouper and black sea bass communities continued.
Source: SERO, Community Social Vulnerability Indicators Database 2022.

The description of fishing activities presented here highlights which communities may be most involved in South Atlantic black sea bass fishing. It is expected that the impacts from the regulatory action in this regulatory amendment, whether positive or negative, will most likely affect those communities identified above.

3.5. Administrative Environment

3.5.1. Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. §§ 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management authority over most fishery resources within the EEZ, an area extending 200 nm from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the U.S. EEZ.

To assist the Secretary of Commerce (Secretary) in fishery management, the Magnuson-Stevens Act established eight regional fishery management councils that represent the expertise and interests of constituent states. Each council has a scientific and statistical committee (SSC) that provides ongoing scientific advice to that council for fishery management decisions, as well as advisory panels (AP) to assist the council in carrying out its functions under the Magnuson-Stevens Act. Councils, SSCs and APs conduct their business in public meetings, pursuant to procedures prescribed by the Magnuson-Stevens Act and written procedures established by each council. NMFS, with the advice of the regional councils, manages fisheries needing conservation and management within each council's jurisdiction. The Secretary is responsible for collecting and providing the data necessary for the councils to prepare fishery management plans, and the Secretary is responsible for promulgating regulations to implement approved fishery management plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act and with other applicable laws (Appendix A). In most cases, the Secretary has delegated this authority to NMFS.

The Council is responsible for conservation and management of fishery resources in federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 miles offshore from the seaward boundary of North Carolina, South Carolina, Georgia, and east Florida to Key West. The Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the Council, there are two public members from each of the four South Atlantic States. Non-voting members include representatives of the U.S. Fish and Wildlife Service, U.S. Coast Guard (USCG), State Department, and Atlantic States Marine Fisheries Commission. For the Council's Snapper Grouper Committee, the Council has adopted procedures whereby the non-voting members serving on the Council Committees have full voting rights at the Committee level but not at the full Council level. Council members serve three-year terms and are recommended by state governors and appointed by the Secretary from lists of nominees submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

Public interests also are involved in the fishery management process through participation on Advisory Panels and through council meetings, which, with few exceptions for discussing personnel and legal matters, are open to the public. The Council uses its SSC to review the data and science being used in assessments and fishery management plans/amendments. In addition, the regulatory process is in accordance with the Administrative Procedure Act, usually in the form of "notice and comment" rulemaking.

3.5.2. State Fishery Management

The state governments of North Carolina, South Carolina, Georgia, and Florida have the authority to manage fisheries that occur in waters extending three nautical miles from their respective shorelines. North Carolina's marine fisheries are managed by the Marine Fisheries Division of the North Carolina Department of Environmental Quality. The Marine Resources Division of the South Carolina Department of Natural Resources manages South Carolina's marine fisheries. Georgia's marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Division of Marine Fisheries Management of the Florida Fish and Wildlife Conservation Commission is responsible for managing Florida's marine fisheries. Each state fishery management agency has a designated seat on the Council. The purpose of state representation at the Council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters.

The South Atlantic states are also involved through the Atlantic States Marine Fisheries Commission (ASMFC) in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries Cooperative Management Act, to compel adoption of complementary state regulations to conserve coastal species. The ASFMC is also represented at the Council but does not have voting authority at the Council level.

NMFS's State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national (Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

3.5.3. Enforcement

Both the NMFS Office for Law Enforcement (NOAA/OLE) and the USCG have the authority and the responsibility to enforce Council regulations. NOAA/OLE agents, who specialize in living marine resource violations, provide fisheries expertise and investigative support for the overall fisheries mission. The USCG is a multi-mission agency, which provides at sea patrol services for the fisheries mission.

Neither NOAA/OLE nor the USCG can provide a continuous law enforcement presence in all areas due to the limited resources of NOAA/OLE and the priority tasking of the USCG. To supplement at sea and dockside inspections of fishing vessels, NOAA entered into Cooperative Enforcement Agreements with all but one of the states in the Southeast Region (North Carolina), which granted authority to state officers to enforce the laws for which NOAA/OLE has jurisdiction. In recent years, the level of involvement by the states has increased through Joint Enforcement Agreements, whereby states conduct patrols that focus on federal priorities and, in some circumstances, prosecute resultant violators through the state when a state violation has occurred.

The NOAA Office of General Counsel Penalty Policy and Penalty Schedule is available online at https://www.noaa.gov/general-counsel/gc-enforcement-section/penalty-policy-and-schedules.

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1. Action 1. Establish annual catch targets and revise the accountability measures for South Atlantic black sea bass

Alternatives

Sub-Action 1a. Establish ACTs for black sea bass

1. (No Action). There are no ACTs currently in place for black sea bass.

2. Establish a commercial annual catch target of 48,557 pounds whole weight and a recreational annual catch target of 63,143 pounds whole weight.

Sub-Action 1b. Revise in-season AMs for commercial sector

1. (No Action). If commercial landings reach the ACL, NMFs will close the sector.

2. If commercial landings reach the ACT, NMFs will close the sector.

Sub-Action 1c. Revise AMs for recreational sector

1. (No Action). NMFS will project the length of the season based on when the ACL will be met.

2. NMFS will project the length of the season based on when the ACT will be met.

*See Chapter 2 for detailed language of alternatives. **Preferred indicated in bold.**

4.1.1. Biological Effects

Expected effects to black sea bass, co-occurring species, and bycatch

Sub-Action 1a - Establish ACTs for black sea bass

There is no annual catch target (ACT) currently in place for black sea bass for either sector. The current annual catch limits (ACL) were based on SEDAR 56 (2018) and implemented through Abbreviated Framework Amendment 2 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. The current accountability measures (AM) for the commercial and recreational sectors are based on the ACL of 276,490 pounds whole weight (lbs ww), and 366,510 lbs ww, respectively. **Preferred Alternative 2** would establish an ACT that is set below the ACL for both sectors with the intent that each sector's AMs would be based on these reduced values (**Preferred Alternative 2** under Sub-Actions 1b & 1c**)**.

Sub-Action 1b and 1c - Revise AMs for black sea bass

Under **Alternative 1 (No Action)** for both Sub-Actions 1b and 1c, the current commercial in-season AM and recreational AM in place for black sea bass would not be modified. Table 4.1.1.1 summarizes the current ACLs and proposed ACTs, as well as the current and proposed commercial and recreational AMs for black sea bass. The commercial in-season AM triggers an in-season closure when the commercial ACL is met or projected to be met. Under the post-season commercial AM, which is not being modified in this framework amendment, if the commercial landings exceed the ACL, then the National Marine Fisheries Service (NMFS) announces a reduction in the commercial ACL for the following year by the amount of the overage, unless NMFS determines that no overage is necessary. Under the current recreational

AM, NMFs projects and announces the recreational fishing season beginning and end date, when information becomes available.

Table 4.1.1.1. Summary table of alternatives addressed under Action 1, including the current ACLs and AMs, and the proposed ACTs and AMs for South Atlantic black sea bass.

	Sub-Action 1a, 1b, and 1c Alternative 1 (No Action)	**Sub-Action 1a, 1b, and 1c Alternative 2**
Commercial ACL/ACT	ACL = 276,490 lbs ww No ACT	ACL = 276,490 lbs ww ACT = 48,557 lbs ww
Commercial In-season AM	In-season closure when ACL (quota) is met or projected to be met	In-season closure when ACT is met or projected to be met
Commercial Post-Season AM	Payback in following year if ACL (quota) exceeded, and reduce following fishing season length if necessary	No change to this AM
Recreational ACL/ACT	ACL = 366,510 lbs ww No ACT	ACL=366,510 lbs ww ACT = 63,143 lbs ww
Recreational AM	Announce fishing season beginning and end date based on when ACL (quota) is projected to be met	Announce fishing season beginning and end date based on when ACT is projected to be met

Preferred Alternative 2 for both Sub-Actions 1b and 1c would retain the AMs in place, but the AM trigger would be based on the lower ACTs established under Sub-Action 1a**- Preferred Alternative 2**. Therefore, this aspect of the current system of AMs would not change from the status quo, but the fishing season would likely be shorter due to the reduced ACTs being reached faster than the current ACLs in place. Therefore, black sea bass would likely realize some biological benefits under this combination of the sub-actions being considered due to AMs that are triggered more readily.

Predicted closure dates for the commercial sector under Sub-Action 1b alternatives

Preferred Alternative 2 under Sub-action 1b would trigger a commercial in-season AM more frequently compared to **Alternative 1 (No Action)**, because the commercial ACT is likely to be met earlier during the season. Over the past five years, average commercial landings have only been about one third of the ACL (Table 2.1.1.1). Therefore, if current trends continue, the commercial sector would likely not close in-season under **Alternative 1 (No Action)**. Since the commercial ACT triggers an in-season commercial closure at 48,557 lbs ww, it is unlikely that the commercial ACL of 276,490 lbs ww would be met or exceeded; therefore, a commercial post-season AM to reduce the following season by the commercial ACL overage would not be necessary. Under Sub-Action 1b, positive long-term biological benefits may be expected under

Preferred Alternative 2 compared to **Alternative 1 (No Action)** because the commercial fishery would close with fewer annual commercial landings and have a longer time period when black sea bass are not commercially targeted. A shortened commercial season is not expected to significantly increase commercial discards of black sea bass because the majority of commercial landings occur in the beginning of the fishing year and the primary commercial gear, black sea bass pots (which are required to be removed from the water if a commercial closure occurs), would not be deployed if the commercial season is closed.

Predicted closure dates for the recreational sector under Sub-Action 1c alternatives

Under **Preferred Alternative 2**, the recreational season would be projected based on landings reaching the recreational ACT and its duration would be announced prior to the start of the season. Since the recreational ACT of 63,143 lbs ww is smaller than the recreational ACL of 366,510 lbs ww, the season could be expected to be shorter than the recent recreational seasons. Over the past five years, average recreational landings have only been about one half of the recreational ACL (Table 2.1.1.1). Therefore, if current trends continue, the recreational sector would likely not need to close early under **Alternative 1 (No Action)**. However, Appendix F (Data Analyses) shows that under the new recreational ACT, the projected closure date would be September 16 (168 fishing days). Under **Sub-Action 1c**, positive long-term biological benefits may be expected under **Preferred Alternative 2** compared to **Alternative 1 (No Action)** because recreational removals and fishing mortality would be expected to be lower. Biological benefits would be maximized if recreational fishermen are able to avoid catching black sea bass during closures, as this would reduce fishing mortality from recreational dead releases. However, previous comments from the Snapper Grouper Advisory Panel have indicated that this is difficult to accomplish while targeting South Atlantic snapper grouper species, as black sea bass inhabit the same locations as other species, especially in the northern (North Carolina – Georgia) part of the region.

Trap/pot gear show high levels of commercially discarded black sea bass, which is the targeted species of this gear type, but low levels of bycatch for other species. Implementing a lower commercial ACT, and revising the commercial in-season AM to close when the commercial ACT is met, could reduce the instances black sea bass are caught and discarded, if the commercial fishery is closed. A commercial closure would be expected to lower commercial discards more for the pot component of the fishery than the hook-and-line component, as black sea bass pots would not continue to be deployed, but commercial fishermen would continue to use hook-and-line gear to bottom fish for other snapper grouper species. For the recreational sector, implementing a lower ACT than the current ACL, which would result in a shorter season, could also reduce the instances black sea bass are caught and discarded, if the fishery is closed and fishermen direct efforts to other areas or other types of fishing. However, for the hook-and-line component of both sectors, bycatch of black sea bass could increase if the black sea bass fishery is closed and fishermen continue bottom fishing for other snapper grouper species and need to discard them due to out of season regulations. For more information on bycatch and discards, see **Appendix G** (BPA).

Expected effects to essential fish habitat (EFH) and protected species

The actions in this framework amendment could modify the way in which the snapper grouper fishery is prosecuted in terms of gear types, overall effort, or areas fished, but none of the

anticipated impacts, direct or indirect, are expected to be significantly adverse to EFH or protected species. Therefore, there are no additional or adverse impacts on Endangered Species Act (ESA)-listed species or designated critical habitats or essential fish habitats or habitat areas of particular concern including corals, sea grasses, or other habitat types, anticipated as a result of this action (see Section 3.1 and 3.2.3 for a more detailed description of ESA-listed species and critical habitat in the action area).

4.1.2. Economic Effects

Sub-Action 1a

In general, catch limits, such as annual catch targets (ACTs), that allow for fewer fish to be landed can result in decreased net economic benefits if harvest decreases. The ACT does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACT is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. In the case of black sea bass, the ACTs being considered in **Preferred Alternative 2** would be constraining on harvest when initially implemented and are projected to reduce landings of black sea bass for both the commercial and recreational sectors.

In **Alternative 1 (No Action)**, the black sea bass fishery would continue to be managed under the existing total and sector annual catch limits (ACLs), which have not been fully harvested by either sector for several years and presumably would continue to not be fully utilized. Thus, there would be no change in short-term economic benefits under this alternative. **Alternative 1 (No Action)** would allow for comparatively higher short-term catch levels and higher associated short-term economic benefits than **Preferred Alternative 2**. However, **Alternative 1 (No Action)** may lead to lower long-term stock levels and potentially lower associated long-term catch levels. Thus, there could be lower long-term landings and lower associated long-term economic benefits.

Preferred Alternative 2 would establish ACTs for the commercial and recreational black sea bass fisheries that are equal to 50% the 5-year average of harvest for each sector respectively. In doing so, short-term economic benefits would decrease for both sectors due to a decrease in harvest. In the long-term, the ACTs may contribute to improving the black sea bass stock which would allow for long-term economic benefits as future catch levels increase for the fishery.

The estimated change in potential landings and associated economic benefits by sector under **Preferred Alternative 2** in comparison to **Alternative 1 (No Action)** is provided in Table 4.2.2.1 and Table 4.2.2.2. **Preferred Alternative 2** is estimated to result in an annual decrease in net economic benefits of $46,320 for the commercial sector (as measured in producer surplus or PS), a decrease in net economic benefits of $741,458 for the recreational sector (as measured in consumer surplus or CS), and a decrease in net economic benefits of $787,778 for both sectors combined (2024 $).

Table 4.2.2.1. Estimated annual change in landings and associated net economic benefits (PS) to the commercial sector from a comparison of **Alternative 1 (No Action)** to **Preferred Alternative 2** in Sub-Action 1a.

Change in commercial landings (lbs gw)	Change in net economic benefits (2024 $)

-41,150	-$46,320

Table 4.2.2.2. Estimated change in landings and associated net economic benefits (CS) to the recreational sector from a comparison of **Alternative 1 (No Action)** to **Preferred Alternative 2** in Sub-Action 1a.

Change in recreational landings (# of fish)	Change in net economic benefits (2024 $)
-47,836	-$741,458

To estimate the change in net economic benefits for the commercial sector, the difference in the 5-year average landings and potential sector ACT is applied to a whole weight (ww) to gutted weight (gw) conversion factor of 1.18, the appropriate price ($3.79/lbs gw; Tables 3.3.1.1. and 3.3.12.), and a scaling factor of 29.7% of gross revenue (Section 3.3.1) to estimate PS for the commercial sector. It is assumed that the ex-vessel price would not change due to the change in commercial landings. Although there are no currently available estimates of the demand elasticity for black sea bass, it is assumed that there would be no expected change to CS from the commercial perspective since there is likely a high degree of substitutability of black sea bass for other species among seafood consumers and black sea bass are available from other regions such as the Mid-Atlantic and New England. Estimates of net revenues or economic profit are not available for snapper grouper dealers, therefore, it is not possible to quantitatively estimate the effect of changes in purchases on their profits. However, in general, dealers are indirectly affected whenever gross revenues to commercial fishing vessels are expected to change (e.g., increases in gross revenues are expected to indirectly benefit dealers and vice versa). Thus, economic benefits to dealers would be directionally the same as stated above for commercial vessels.

To estimate net economic benefits for the recreational sector, a proxy CS estimate of $15.50 for a black sea bass kept on a recreational trip is used (2024 $; Section 3.3.2). This estimate is based on the Haab et. al (2012) finite mixture model value for a generic "other" snapper since a specific estimate for black sea bass is not available. An average weight of 1.32 lbs ww per black seas bass (SEDAR 76; Tables 16 and 17; recreational landings from 2019-2021) is used to convert the recreational portion of the ACT from lbs ww to numbers of fish. According to Table 3.3.2.1, there are a relatively low number of for-hire trips targeting black sea bass. It is assumed that implementing a recreational ACT would only affect catch per trip and not notably affect the overall number of trips taken due to a large number of potential substitute target species. This assumption includes no notable direct change to for-hire fishing activity and thus no change in direct economic effects for the for-hire component of the recreational sector. As such, there are no estimated changes in PS provided for the recreational sector.

Sub-Action 1b

Commercial AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest when the sector catch limit has been met or is projected to be met, thus potentially affecting revenues and PS of commercial operations and seafood dealers. In the long-term, these measures help reduce the risk of overfishing a stock to the point of depletion, which results long-term indirect economic benefits through sustained harvest and the forgone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

Alternative 1 (No Action) would continue to limit harvest to the commercial sector ACL through an in-season closure once the ACL is met. An in-season closure would limit short-term economic benefits to those that may be derived by harvesting the ACL but would also provide long-term economic benefits by helping maintain sustained harvest as well as the foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock by helping prevent overfishing from occurring. Recent landings have been well below the current commercial sector ACL, thus it is unlikely that the current AM would be triggered under existing fishery conditions. **Preferred Alternative 2** would maintain the in-season closure as the commercial AM but the mechanism that triggers the AM would be tied to the sector ACT established in Sub-Action 1a. Since the sector ACT is notably lower than the sector ACL and recent commercial landings, it is likely that the AM would be triggered, thus incurring the aforementioned changes to short-term and long-term economic benefits described here and under Sub-Action 1a.

Sub-Action 1c

Recreational AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest when the sector annual catch limit has met or is projected to be met, thus potentially affecting net revenues of for-hire operations and CS on recreational fishing trips. In the long-term, these measures help reduce the risk of overfishing a stock to the point of depletion, which results long-term indirect economic benefits through sustained harvest and fishing activity as well as the forgone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

Alternative 1 (No Action) would continue to limit harvest to the recreational sector ACL through a projected season length that is intended to restrain harvest at or below the sector ACL. A fishing season that is less than the fishing year would limit short-term economic benefits to those that may be derived by harvesting the ACL but would also provide long-term economic benefits by helping maintain sustained harvest as well as the foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock by helping prevent overfishing from occurring. Recent landings have been well below the current recreational sector ACL, thus it is unlikely that the current AM would be implement a restrictive fishing season under current fishery conditions. **Preferred Alternative 2** would maintain a projected season length as the recreational AM but the mechanism that triggers the AM would be tied to the sector ACT established in Sub-Action 1a. Since the recreational sector ACT is notably lower than the sector ACL and recent recreational landings, it is likely that the AM would be triggered, thus incurring the aforementioned changes to short-term and long-term economic benefits described here and under Sub-Action 1a.

4.1.3. Social Effects

Communities that demonstrate high levels of reliance on commercial or recreational fishing and high landings of black sea bass are most likely to be affected by management changes. Beaufort, Wanchese, Sneads Ferry, and Oriental, North Carolina are highly or moderately reliant on commercial fishing and account for over 50% of commercial black sea bass landings. Communities located in North Carolina and along the northern coast of South Carolina have the

highest recreational landings of black sea bass. Of those communities, Hatteras, Manteo, and Atlantic Beach, North Carolina are highly reliant on recreational fishing (Section 3.4). The ACT (**Sub-Action 1a**) for any stock does not directly affect resource users unless the ACT is met or exceeded and used to trigger AMs that restrict, or close harvest which could negatively impact the commercial, for-hire, and private recreational sectors. An updated stock assessment for black sea bass (SEDAR 76 Update 2025) is currently in progress and establishing an ACT lower than the current ACL (**Sub-Action 1a**, **Preferred Alternative 2**) is a proactive move by the Council based on declining landings and abundance trends over the last ten years. Adjustments in catch levels based on updated information is necessary to ensure continuous social benefits over time. Specifically, updated information ensures the sustainability of fishing activities, which can stabilize business operations and planning for the future. **Alternative 1 (No Action)** would not update the black sea bass ACT to reflect declining trends. Generally, the higher the ACT is the greater the short-term social benefits that would be expected to accrue if harvest is sustainable.

Commercial and recreational AMs (**Sub-Action 1b** and **1c**) can have significant direct and indirect social effects because, when triggered, can restrict harvest in the current season or subsequent seasons. While the negative effects are usually short-term, they may at times induce other indirect effects through changes in fishing behavior or business operations that could have long-term social effects, such as increased pressure on another species, or fishermen having to stop fishing altogether due to regulatory closures. Those behaviors can increase pressure on other stocks or amplify conflict. However, restrictions on harvest contribute to sustainable management goals, and are expected to be beneficial to fishermen and communities in the long term.

Sub-action 1b, Preferred Alternative 2 and **Sub-Action 1c, Preferred Alternative 2** would revise the current accountability measures to be triggered by the ACT as opposed to the current ACL in order to ensure any biological benefits of the new ACT are realized. The social effects of revising the AMs would depend on how easily commercial and for-hire businesses and private recreational fishermen could adjust their fishing practices to an in-season closure (commercial) or a shorter fishing season (for-hire and recreational). Additional social effects may depend on whether fishing communities feel proactive action for the black sea bass fishery is a necessary step. If Council action matches what fishermen are seeing on the water, it is more likely to improve trust in the science and management process. Alternatively, if fishermen are seeing black sea bass on the water in high levels, they may feel proactive action is unnecessary resulting in decreased trust in the science and management process.

Overall, if **Sub-action 1a, Preferred Alternative 2, Sub-action 1b, Preferred Alternative 2,** and **Sub-action 1c, Preferred Alternative 2** contribute to the long-term sustainability of the black sea bass stock, long-term social benefits are anticipated for fishing communities in the form of consistent access to a valuable fishing stock.

4.1.4. Administrative Effects

Specifying an ACT alone would not increase the administrative burden over the status quo, other than adding an additional layer of precautionary monitoring to the system of AMs. Harvest levels are already monitored against the ACLs, and AMs are already in place for black sea bass; therefore, negative administrative impacts of this action are likely to be minimal. When

compared with **Alternative 1 (No Action)** under each of the Sub-Actions, **Preferred Alternative 2** would not result in significant administrative cost or time burdens other than notifying fishery participants. Therefore the administrative burden on law enforcement would not change substantially under these alternatives since AMs are currently enforced.

4.2. Action 2. Establish a spawning season closure for South Atlantic black sea bass

4.2.1. Biological Effects

Expected effects to black sea bass, co-occurring species and bycatch

Black sea bass spawning occurs from February through May with peak spawning at the end of March (SEDAR 76, 2023; Farmer 2017). Spawning is optimized when fish survive through the full spawning season. Currently, there is no designated spawning season closure for black sea bass in the South Atlantic. Alternatives that better align the timeframe of regulations with the biology of the species and co-occurring species would indirectly result in beneficial biological effects (Table 3.2.1.1). A closure for one or more months would be expected to 1) protect spawning fish, allowing enhanced recruitment for future years, and 2) reduce fishing mortality (from landings) and allow increased survival during the closure, potentially leading to long-term increases in stock biomass.

Amendment 16 (SAFMC 2008) established a spawning season closure during January through April that applies to both the commercial and recreational sectors for gag. In addition, the amendment implemented no fishing for and/or possession of the following species: black grouper, red grouper, scamp, red hind, rock hind, yellowmouth grouper, tiger grouper, yellowfin grouper, graysby, and coney. The intent of Snapper Grouper Amendment 16 was to improve the status of all shallow water grouper species, some of which are taken incidentally when targeting gag and vermilion snapper. **Preferred Alternatives 2** and **3** and their **sub-alternatives** would establish a spawning season closure for black sea bass that would close one or more months for the commercial and recreational sectors. For all three species that have been assessed since 2010 and are included in the

Alternatives

1 (No Action). There is no spawning seasonal closure for black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC.

2. Establish a commercial seasonal closure in or from South Atlantic federal waters south of Cape Hatteras, NC, and the commercial trip limit is zero.

Sub-Alternative 2a. The commercial seasonal closure occurs from January 1 through January 31.

Sub-Alternative 2b. The commercial seasonal closure occurs from February 1 through the end of February.

Sub-Alternative 2c. The commercial seasonal closure occurs from March 1 through March 31.

Sub-Alternative 2d. The commercial seasonal closure occurs from April 1 through April 30.

3. Establish a recreational seasonal closure in or from South Atlantic federal waters south of Cape Hatteras, NC, and the commercial trip limit is zero.

Sub-Alternative 3a. The recreational seasonal closure occurs from January 1 through January 31.

Sub-Alternative 3b. The recreational seasonal closure occurs from February 1 through the end of February.

Sub-Alternative 3c. The recreational seasonal closure occurs from March 1 through March 31.

Sub-Alternative 3d. The recreational seasonal closure occurs from April 1 through April 30.

*See Chapter 2 for detailed language of alternatives.
Preferred indicated in bold.

January-April shallow water grouper closure (gag, scamp, and red grouper), removals (landings plus dead discards in number of fish) declined significantly in 2010, the first year of the closure's implementation, and remained lower than typical levels observed prior to 2010 (SEDAR 71, SEDAR 68, SEDAR 53). Depending on the sub-alternatives selected under this action, the spawning closure for black sea bass could closely align with the current grouper spawning season closure.

Projecting the commercial sector season under Alternative 2

The commercial sector landings of black sea bass are highest in the earliest months of the calendar year, specifically January and February, showing a declining trend through November (Figure 3.2.1.3). Because this fishery is seasonal and dependent on alignment with cooler waters and movement of black sea bass, there is some uncertainty about how the commercial sector would potentially change fishing behavior in response to a spawning closure during what has historically been the peak harvest time for black sea bass. With landings being managed to a commercial ACT (Action 1 – Sub-Action 1c – **Preferred Alternative 2**) below the current ACL, and no spawning season established, the commercial season would be expected to close at the end of May, or 149 fishing days (**Alternative 1 (No Action)**) (Table 4.4.1.1).

Sub-Alternatives 2a and **2b (Preferred)** would close the months of January and February, respectively, to commercial fishing for black sea bass and are projected to considerably reduce total commercial landings for the year compared to **Alternative 1 (No Action)**, allowing for the longest possible black sea bass season (**Table 4.4.1.1**). The biological effects on the black sea bass stock would be positive because annual landings would be expected to reach the commercial ACT under all of these sub-alternatives. Since **Sub-Alternatives 2c (Preferred)** and **2d** would close the season during the months of March and April, respectively, closing during these months is projected to only extend the season by 29 and 34 fishing days, respectively, compared to **Alternative 1 (No Action)**. These alternatives would reduce bycatch on other grouper species because these months are closed for these other species throughout the South Atlantic which would have positive biological effects.

Table 4.4.1.1. Predictions for when black sea bass annual catch target (48,557 lbs ww) would be met under Action 2 spawning closure sub-alternatives 2a through 2d for the **commercial sector**.

Action 2 Alternatives	**Average Landings**	
	Closure Date	*Fishing Days*
Alternative 1: No Action (No Spawning Closure)	30-May	149
Sub-Alternative 2a: Closure Jan 1 - Jan 31	23-Dec	325
Preferred Sub-Alternative 2b: Closure Feb 1 - end of Feb	**1-Dec**	**306**
Preferred Sub-Alternative 2c: Closure Mar 1 - Mar 31	**29-Jul**	**178**
Sub-Alternative 2d: Closure Apr 1 - Apr 30	2-Aug	183

Projecting the recreational sector season under Alternative 3

Recreational landings peak during Wave 3 (May/June), which is at the beginning of the recreational fishing year (April – March) (Section 3.2.2, Figure 3.2.2.5). With a new, reduced recreational ACT in place (Action 1 – Sub-Action 1c – **Preferred Alternative 2**), and no spawning seasonal closure established (Action 2 **– Alternative 1 (No Action)**), the recreational season is projected to close in mid-September (or 168 fishing days) (Table 4.4.1.2). Because the proposed spawning season closures under **Sub-Alternatives 3a** through **3c** are at the end of the recreational fishing year, after the recreational season has been projected to close under the proposed ACT in September, none of these sub-alternatives are likely to lengthen the recreational season compared to **Alternative 1 (No Action**), (Table 4.4.1.2). Therefore, closing the season under any of these alternatives will have some positive biological effects on the black sea bass spawning stock because of the reduced recreational ACT and AMs that would be in place from Action 1. On the other hand, **Sub-Alternative 3d** would close during the first month of the fishing year and is projected to allow for the longest possible black sea bass season (179 fishing days), compared to **Alternative 1 (No Action**) and all the **Preferred Alternative 3 Sub-alternatives** (Table 4.4.1.2). This alternative would have the greatest positive biological effects on the black sea bass stock and other grouper species since the closure would also occur during peak black sea bass spawning season, as well as during the shallow water grouper spawning closure.

Table 4.4.1.2. Predictions for when black sea bass annual catch target (63,143 lbs ww) would be met under the Action 2 spawning closure sub-alternatives 3a through 3d for the **recreational sector**.

Alternatives	**Average Landings**	
	Closure Date	*Fishing Days*
Alternative 1: No Action (No Spawning Closure)	16-Sep	168
Sub-Alternative 3a: Closure Jan1 - Jan 31	16-Sep	168
Preferred Sub-Alternative 3b: Closure Feb 1 - Feb 28	**16-Sep**	**168**
Preferred Sub-Alternative 3c: Closure Mar 1 - Mar 31	**16-Sep**	**168**
Sub-Alternative 3d: Closure Apr 1 - Apr 30	27-Oct	179

In general, **Preferred Alternatives 2** and **3** (and their sub-alternatives) would result in positive indirect biological effects if greater harvest restrictions are applied to the "spawning months." Of these, combining more than one sub-alternative under each alternative would indirectly provide the greatest biological benefit to the black sea bass stock in that it would encompass a longer amount of time (up to 4 months) and has the greatest potential of capturing the bulk of black sea bass spawning activity in the Council's area of jurisdiction in the South Atlantic which would co-occur with the shallow water grouper spawning closure from January through April. A longer spawning closure timeframe would be expected to have a positive indirect effect on

recruitment by allowing female black sea bass, which spawn in multiple batches throughout the spawning season, the opportunity to release a greater number of eggs.

Establishing the annual timeframe during which potentially stricter management measures would apply is not expected to directly affect bycatch or regulatory discards. However, selecting one or more months for black sea bass to be closed to harvest (for either sector) may increase discards of black sea bass caught using hook-and-line gear when fishermen are targeting other snapper grouper species. Commercial discards caught using pot gear would be expected to decrease due to pots not being deployed during the closure. In that respect, therefore, all of the alternatives considered under this action, including **Alternative 1 (No Action)**, would result in neutral biological effects with respect to discard mortality. Indirect positive or negative effects on bycatch and discard mortality could be realized if implementation of the spawning season closures alter general snapper grouper fishing effort or behavior.

4.2.2. Economic Effects

In general, providing increased protection for spawning black sea bass would be expected to potentially result in improvements in stock abundance and biomass and create indirect long-term economic benefits through the availability of increased numbers of fish and associated catch levels in the future. However, there may be some direct short-term negative economic effects from reduced fishing opportunities during the months that harvest is closed.

Implementing a spawning season closure to allow for commercial quantities of black sea bass to be harvested and sold under **Preferred Alternative 2** would seasonally and potentially annually decrease commercial landings and associated net economic benefits, as measured in PS. The temporal nature of the economic effects for the commercial sector will depend on the sub-alternative that is selected as preferred. For the four months being considered in the sub-alternatives, the five-year (2019-2023) average commercial harvest levels have been highest in January (**Sub-Alternative 2a**) followed by February (**Preferred Sub-Alternative 2b**), March (**Preferred Sub-Alternative 2c**), and April (**Sub-Alternative 2d**). Thus, associated negative seasonal economic effects for the commercial sector would be highest under **Sub-Alternative 2a**, followed by **Preferred Sub-Alternative 2b**, **Preferred Sub-Alternative 2c**, **Sub-Alternative 2d**, and **Alternative 1 (No Action)**.

While seasonal economic effects will be variable and cannot be estimated with available data, the economic effects of changes in total harvest can be quantified. For **Preferred Alternative 2** and all its sub-alternatives individually, net economic benefits in relation to total harvest are anticipated to be the same as **Alternative 1 (No Action)** because total harvest would be the same and capped at the ACT selected in Sub-Action 1a. If multiple sub-alternatives are chosen as preferred and projected harvest under a spawning season closure is below the ACT selected in Sub-Action 1a, then a reduction in net economic benefits to the commercial sector may occur and would be dependent on the sub-alternatives that are selected. For harvest to be constrained below the ACT, at least three sub-alternatives for **Preferred Alternative 2** would need to be selected based on projections using 5-year (2019-2023) average commercial landings (Appendix F). Even under this scenario effort may shift to the open harvest months, leading to no reduction in total harvest. Thus, the economic effects of **Preferred Alternatives 2b** and **2c** would be similar to **Alternative 1 (No Action)** in relation to net benefits derived from total harvest.

Implementing a black sea bass spawning season closure and harvest prohibition for the recreational sector would be expected to reduce landings of black sea bass for part of the year and, consequently, CS as well on the trip level under **Preferred Alternative 3** and its sub-alternatives in comparison to **Alternative 1 (No Action)**. Otherwise legal black sea bass caught on a trip during the spawning season closure would need to be released. The temporal nature of these trip level effects will depend on the sub-alternative that is selected as preferred. For the four months being considered in the sub-alternatives, five-year (2019-2023) average recreational harvest levels have been highest in March (**Preferred Sub-Alternative 3c**) followed by April (**Sub-Alternative 3d**), January (**Sub-Alternative 3a**), and February (**Preferred Sub-Alternative 3b**). Thus, associated negative seasonal economic effects would be highest under **Preferred Sub-Alternative 3c**, followed by **Sub-Alternative 3d**, **Sub-Alternative 3a**, **Preferred Sub-Alternative 3b**, and **Alternative 1 (No Action)**.

While seasonal trip level effects will be variable and cannot be estimated with available data, the economic effects of changes in total harvest can be quantified. For **Preferred Alternative 3** and all of its sub-alternatives, net economic benefits in relation to total harvest are anticipated to be the same as **Alternative 1 (No Action)** because total harvest would be the same and capped at the ACT selected in Sub-Action 1a. This applies to each sub-alternative individually or together with up to all four in aggregate (Appendix F).

4.2.3. Social Effects

The potential effects on recreational fishing, commercial fishing businesses, and coastal communities of establishing a black sea bass spawning seasonal closure would be a trade-off between the biological benefits of the seasonal closure and resulting long-term social benefits from a heathier stock, and the loss of recreational and commercial fishing opportunities during the proposed closure. In general, a longer seasonal closure may be biologically beneficial to the stock and contribute to sustainable fishing opportunities in the future if the closure appropriately lines up with spawning, but a longer closure would be more likely to restrict access to black sea bass. Additionally, closures during months with traditionally high commercial or recreational black sea bass landings may extend the number of available fishing days under the reduced ACTs (Action 1).

Commercial harvest of black sea bass is highest in January and February, as such a commercial spawning season closure (**Preferred Alternative 2**) during those months (**Sub-alternative 2a** and **Preferred Sub-alternative 2b**) is likely to result in disruptions to commercial fishing businesses in communities that are reliant on commercial fishing and involved in the commercial black sea bass fishery. Alternatively, **Sub-alternative 2a** and **Preferred Sub-alternative 2b** are predicted to result in the highest number fishing days (325 days and 306 days, respectively). **Preferred Sub-alternative 2c** (178 days) and **Sub-alternative 2d** (183 days) would avoid closures during peak landing months and would still extend the season beyond that predicted under **Alternative 1 (No Action)** (149 days). The overall social effects would depend on how well individual fishing businesses are able to adapt to fishing during other time periods vs. a shorter fishing season.

Recreational landings of black sea bass are highest in May and June, the beginning of the fishing year (April through March), as such a spawning season closure in January (**Sub-alternative 3a)**, February (**Preferred Sub-alternative 3b**), March (**Preferred Sub-alternative 3c**) or April (**Sub-alternative 3d**) are not anticipated to have substantial negative social effects as they would not substantially decrease fishing opportunities for black sea bass. **Sub-alternative 3d** is estimated to extend the fishing season by eleven days when compared to **Alternative 1 (No Action)** and may have positive social effects associated with a longer fishing season for fishermen already operating primarily in May and June. **Sub-Alternative 3a**, **Preferred Sub-alternative 3b**, and **Preferred Sub-alternative 3c** are not anticipated to extend the number of fishing days beyond what is predicted for **Alternative 1 (No Action)** so there would not be any positive social effects associated with a longer fishing season.

Assuming a seasonal spawning closure ensure sustainable harvest of black seas bass, as envisioned, long-term benefits to fishing communities in the form of consistent access in the future to the resource, long-term benefits would be highest under a spawning season closure that aligns with black sea bass spawning season of February through March (**Sub-alternatives 2b-2d** and **Sub-alternatives 3b-3d**).

4.2.4. Administrative Effects

The administrative effects of **Sub-alternatives 2a** through **2d** and **3a** through **3d** would increase the administrative burden compared to **Alternative 1 (No Action)**. Designating a spawning season closure for black sea bass could be confusing to the public and add to the administrative burden in the form of cost, time, and law enforcement efforts compared to **Alternative 1 (No Action)**. Additionally, the public would have to be informed and educated on additional restrictions on harvest.

As discussed in Section 4.4.1, **Preferred Alternatives 2** and **3** and their **sub-alternatives** would establish a spawning season closure for black sea bass that would close one or more months for the commercial and recreational sectors. Selecting one or a combination of Sub-Alternatives under **Preferred Alternatives 2** and **3** could align the black sea bass closure with the current grouper spawning closure, which would ease confusion to the public and also law enforcement.

4.3. Action 3. Reduce the recreational bag limit for South Atlantic black sea bass

Alternatives

1 (No Action). The recreational bag limit is 7 fish per person per day.

2. The recreational bag limit is 1 fish per person per day.

3. The recreational bag limit is 2 is 2 fish per person per day.

4. The recreational bag limit is 3 fish per person per day.

5. The recreational bag limit is 4 fish per person per day.

*See Chapter 2 for detailed language of alternatives.
Preferred indicated in bold.

4.3.1. Biological Effects

Expected effects to black sea bass, co-occurring species and bycatch

In general, constraining recreational harvest by means of bag limits results in neutral biological effects because the ACL limits overall harvest to a level that is sustainable over the long-term. However, bag limits slow the fishing mortality rate throughout the year, allowing for more growth and reproduction prior to being harvested. More restrictive bag limits also result in higher numbers of discarded fish, which can incur some mortality, though at a lower rate than harvested fish. The intent of bag limits is to slow the rate of removal of fish (via harvest or as dead discards) to allow for growth and survival of a greater portion of the population into the spawning season.

As such, **Alternatives 2** through **5** would provide greater biological benefits over **Alternative 1 (No Action)**. The greatest biological benefits would be expected from **Alternatives 2, 3 (Preferred), 4,** and **5**, in that order, as these alternatives would constrain the rate of recreational harvest more than **Alternative 1 (No Action)**, allowing a greater probability of black sea bass surviving to spawn.

Projecting the recreational sector season length from the bag limit reduction

Using the five most recent years of data from (2019-2023), over 60% of recreational angler trips harvested one or (less than one[12]) black sea bass (Figure 4.2.1.1). As discussed in Action 1, the majority of recreational landings mostly occur during Wave 3 (May/June) (Figure 3.2.1.5). A percent reduction in catch was estimated from these dockside angler trip records to investigate each bag limit alternative in Action 3 (See **Appendix F** for more information**)**.

[12] The harvest per angler for headboat trips was calculated by dividing the vessel trip harvest by the number of anglers on board, which may result in estimates of partial fish being harvested per angler.

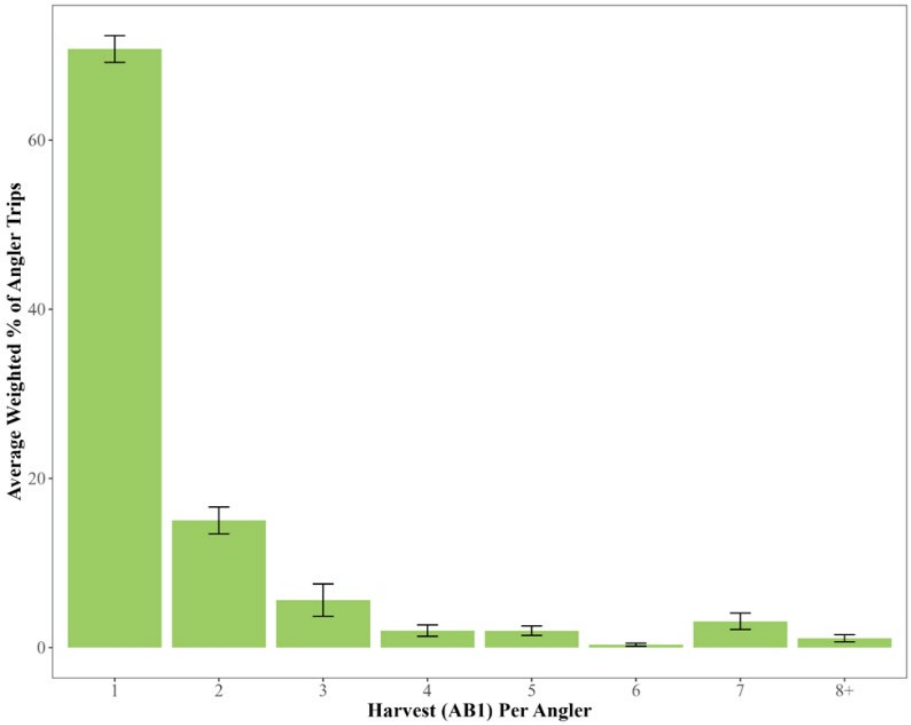

Figure 4.3.1.1. Weighted distribution of angler harvest (AB1) by recreational anglers intercepted by Marine Recreational Information Program Access Point Angler Intercept Survey samplers or reported to the Southeast Region Headboat Survey electronic logbook reports.

Under Action 3, **Alternatives 2** through **5** would likely slow the rate of South Atlantic black sea bass landings, resulting in a longer recreational season. A slower harvest rate is biologically beneficial because it allows more fish to complete stages of their life cycle, such as growth and reproduction, prior to dying from fishing mortality. With a lower recreational ACT in place (Sub-Action 1a – **Alternative 2**) compared to the current recreational ACL, and no change in the recreational bag limit, the recreational season would be expected to close in mid-September (Action 3 **– Alternative 1 (No Action)**) with about 168 fishing days (Table 4.2.1.2). If the bag limit is reduced to four fish per person per day, the season could be extended until the end of October (213 fishing days per year) (**Alternative 5**), until late November (237 fishing days) with a bag limit of three fish (**Alternative 4**), and early January (283 fishing days) under a two-fish bag limit (**Preferred Alternative 3**). The season is not projected to close under a one fish per person per day bag limit (**Alternative 2**). Therefore, the greatest biological benefits would be expected via indirect effects from **Alternatives 2, 3 (Preferred), 4,** and **5**, in that order, as these alternatives would constrain the rate of recreational harvest more than **Alternative 1 (No Action)**. However, with an ACT, ACL, and AMs in place to prevent overfishing, the effects would be neutral, overall, in terms of harvested fish.

Table 4.3.1.1. Predictions for when black sea bass recreational annual catch target (63,143 lb ww) would be met under each of the Action 3 alternatives for the recreational sector.

Action 3 Alternatives	Closure Date	Fishing Days
Alternative 1 (No Action): 7 fish per person per day	16-Sep	168
Alternative 2: 1 fish per person per day	-	365
Preferred Alternative 3: 2 fish per person per day	**9-Jan**	**283**
Alternative 4: 3 fish per person per day	24-Nov	237
Alternative 5: 4 fish per person per day	31-Oct	213

Bycatch and discards could increase, decrease, or remain the same with this action. Although the current bag limit is seven fish per person per day, Figure 4.2.1.1. shows that over 60% of recreational angler trips harvested one or (less than one) black sea bass. A more restrictive bag limit could increase the number of discards of black sea bass per trip if fishermen continue fishing for other species once their bag limit is caught. It could also lengthen the recreational black sea bass season and increase the duration during which black sea bass is targeted and undersized fish are caught and released, which could increase the number of dead discards. Conversely, a lengthened black sea bass season could also reduce discards as caught black sea bass could be kept, instead of discarded, for a longer portion of the year. Overall fishing activity or behavior in the snapper grouper recreational sector is not expected to substantially change as a result of this action, thus no changes in bycatch of co-occurring species are expected as a result of Action 3.

4.3.2. Economic Effects

Generally, angler satisfaction increases with the number of fish that can be harvested and the size of the fish. The smaller the bag limit the greater the probability that angler satisfaction and thus economic benefits that are derived from an angler trip could be affected. Alternatively, lower bag limits can be an effective tool to lower overall harvest rates, thereby increasing the length of recreational fishing seasons which can spread out economic benefits for a longer period of time. Relative to the bag limit in **Alternative 1 (No Action)** of 7 black sea bass per person, setting the bag limit between 1 fish (**Alternative 2**) and 4 fish per person (**Alternative 5**) would have negative economic effects due to constraining harvest and related CS at the trip level. Conversely, more restrictive retention limits would allow for longer open harvest seasons that allow for relatively increased fishing opportunities and associated economic benefits. In terms of economic benefits from harvest on a fishing trip, **Alternative 1 (No Action)** would offer the highest potential economic benefits, followed by **Alternative 5**, **Alternative 4**, **Preferred Alternative 3**, and **Alternative 2**. Alternatively, the ranking of alternatives would be the opposite in terms of economic benefits of having a prolonged recreational fishing season.

While trip level impacts will be variable by angler and cannot be estimated with available data, the economic effects of changes in total harvest can be quantified. For **Alternatives 3 (Preferred)**, **4**, and **5**, net economic benefits in relation to total harvest are anticipated to be the same as **Alternative 1 (No Action)** because total harvest would be the same and capped at the ACT selected in Sub-Action 1a. Under **Alternative 2**, a 1-fish bag limit would reduce harvest by an estimated additional 298 fish below the ACT based on 5-year average landings (2019-

2023). The associated reduction in net economic benefits would be $4,619 annually (2024 $). Depending on the alternative that is selected, net economic benefits would be expected to decrease by a range of $0 to $4,619 in comparison to **Alternative 1 (No Action)**.

The estimated change in landings is based on projections from the analysis completed in Appendix F. To estimate net economic benefits for the recreational sector, a proxy CS estimate of $15.50 for a black sea bass kept on a recreational trip is used (2024 $; Section 3.3.2). This estimate is based on the Haab et. al (2012) finite mixture model value for a generic "other" snapper since a specific estimate for black sea bass is not available. An average weight of 1.32 lbs ww per black seas bass (SEDAR 76; Tables 16 and 17; recreational landings from 2019-2021) is used to convert projected recreational landings from lbs ww to numbers of fish. It is assumed that implementing a lower recreational bag limit would only affect catch per trip and not notably affect the overall number of trips taken due to a number of potential substitute target species. This assumption includes no notable direct change to for-hire fishing activity and thus no change in direct economic effects for the for-hire component of the recreational sector. As such, there are no estimated changes in PS provided for the recreational sector.

4.3.3. Social Effects

In general, a reduction in the recreational bag limit (**Alternative 2**, **Preferred Alternative 3**, **Alternative 4**, **Alternative 5**) may help slow the rate of harvest, lengthen a season, and prevent the ACL from being exceeded. However, bag limits that are too low may make fishing trips inefficient and lower angler satisfaction. The higher bag limit under **Alternative 1 (No Action)** would likely have little effect on recreational fishermen in the short-term but could result in negative effects in the future if the recreational ACL is regularly exceeded. Slowing the rate of harvest and ensuring sustainable harvest of the black sea bass stock would provide for long term social benefits.

If slowing the rate of harvest and lengthening the season, as expected provides additional fishing opportunities to the recreational fishing communities, **Alternative 2** (no closure) would be the most beneficial, followed by **Preferred Alternative 3** (283 fishing days), **Alternative 4** (237 fishing days), **Alternative 5** (213 fishing days) and **Alternative 1 (No Action)** (168 fishing days).

4.3.4. Administrative Effects

Compared to **Alternative 1 (No Action)**, which would incur minimal new administrative burdens by maintaining the current recreational bag limit of seven fish, **Alternatives 2** through **5** would each be expected to have slightly higher administrative effects. Rulemaking and a new fishery bulletin would be required for informing fishery participants about the reduced recreational bag limit, requiring staff time for drafting, review, and dissemination of the material. Additionally, law enforcement would need to be trained on the new regulations to ensure consistent and accurate enforcement. Although there is a bag limit already in place for black sea bass in the South Atlantic Region, **Alternatives 2** through **5** would also increase the incompatibility among the state bag limits which could increase confusion to the public and law enforcement.

4.4. Action 4. Reduce the recreational minimum size limit for South Atlantic black sea bass

Alternatives

1 (No Action). 1 (No Action). The recreational minimum size limit is 13 inches total length.

2. The recreational minimum size limit is 12 inches total length.

3. The recreational minimum size limit is 11 inches total length.

*See Chapter 2 for detailed language of

4.4.1. Biological Effects

Expected effects to black sea bass, co-occurring species and bycatch

The maximum reported size of black sea bass is 26.1 inches (in) total length (TL) and 7.9 lbs (McGovern et al. 2002). The minimum size and age of maturity for females studied off the southeastern U.S. coast is 3.6 in standard length and age 0. All female black sea bass are mature by 7.1 in standard length and age three (McGovern et al. 2002). According to the report for the SEDAR 76 (2025) assessment of the black sea bass stock, 50% of females achieved sexual maturity at 6.9 inches TL and approximately one year of age. Black sea bass is a protogynous hermaphrodite, and the age at 50% transition to male was estimated to be 3.83 years (SEDAR 76 (2023)). McGovern et al. (2002) noted that the size at maturity and the size at transition of black sea bass was smaller in the 1990s than during the early 1980s. Black sea bass appear to compensate for the loss of larger males by changing sex at smaller sizes and younger ages. In the eastern Gulf of America and off North Carolina, females dominate the first 5-year classes. Individuals over the age of five are more commonly males.

The overall biological benefit of Action 4 alternatives depends on whether a change in size limit impacts fishing behavior, leading to a net reduction in fishing mortality (due to landings and discards, combined). If anglers meet their (potentially lower, from Action 4) bag limit while catching fewer fish overall (i.e., fewer fish discarded) and the number of dead discards under the current size limit is greater than the number of additionally-harvested fish under the lower size limit, then **Alternatives 2** or **3** could have greater biological benefits. To accomplish this, anglers would need to stop bottom fishing in areas with black sea bass after reaching their bag limit.

If anglers continue bottom fishing for other species even after catching their bag limit of black sea bass or if the number of harvested fish at a lower size limit is greater than the number of dead discards at a higher size limit, **Preferred Alternative 1 (No Action)** would be more biologically beneficial compared to the other alternatives considered under this action because it allows less harvest of smaller, potentially reproductively immature fish. However, this alternative would also be expected to have higher regulatory discards of fish smaller than the minimum size limit. **Alternatives 2** and **3** would have reduced biological benefits to the black sea bass stock compared to **Preferred Alternative 1 (No Action)** by allowing fewer individuals to grow to larger sizes which would maximize reproductive activity before being harvested.

Projecting the recreational sector season length from the minimum size limit reduction

Current state-at-sea observation data demonstrate a distribution that many sub-legal sized fish are being discarded by the recreational fishery (Figure 4.3.1.1). If the recreational minimum size limit is lowered as proposed in Action 4 (12 and 11 inches under **Alternatives 2** and **3**,

respectively) recreational anglers are projected to reach their quota faster compared to **Preferred Alternative 1 (No Action)** (Table 4.3.1.1). With a lower recreational ACT in place (**Action 1, Sub-Action 1a, Alternative 2**) compared to the current recreational ACL, and no change to the current minimum size limit of 13 in TL (**Preferred Alternative 1 (No Action)**), the recreational season can be expected to close in mid-September or 168 fishing days per year (Table 4.3.1.1). If the minimum size limit is reduced to 12 in TL, the season could be reduced until early June or 64 fishing days per year (**Alternative 2**), and mid-May (41 fishing days per year) under a minimum size limit of 11 in TL (**Alternative 3**).

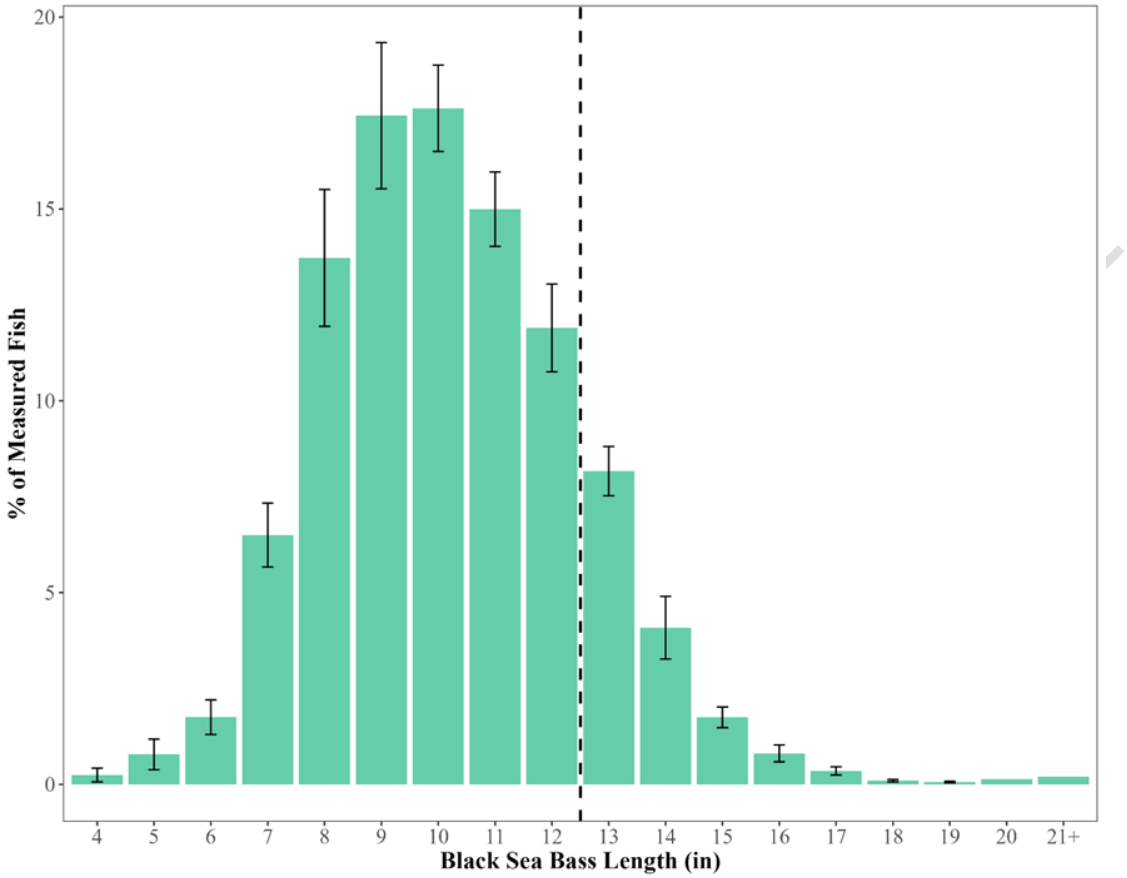

Figure 4.4.1.1. Distribution of black sea bass lengths sampled by state at-sea observers on recreational headboat trips from 2021/2022 to 2023/2024 fishing years, in one-inch bins. Data from all states and years combined.

Table 4.4.1.1. Predictions for when black sea bass annual catch target (63,143 lbs ww) would be met under each of the Action 4 alternatives for the recreational sector.

Action 4 Alternatives	Closure Date	Fishing Days
Preferred Alternative 1 (No Action): 13 in TL	**16-Sep**	**168**
Alternative 2: 12 in TL	4-Jun	64
Alternative 3: 11 in TL	12-May	41

Recreational discards of black sea bass are higher than their landings across all modes (Appendix G, Table G.2.4). Black sea bass recreational discards to landings ratios are high (Appendix G, Table G.2.4). Therefore, reducing the minimum size limit could allow smaller fish to be retained which could reduce discards. Bycatch and discards could also decrease if fishers stop fishing or move to water unlikely to encounter a black sea bass if the minimum size limit is revised and the bag limit has been met. Overall, smaller minimum size limits will potentially reduce additional discards. This, in turn, would help to minimize the overall mortality of this stock per season. However, there will likely be a tradeoff between fewer discards due to a smaller minimum size limit, but greater discards resulting from a shorter fishing season.

4.4.2. Economic Effects

Reducing the recreational minimum size limit for black sea bass under **Alternative 2** or **Alternative 3** would increase harvest at the trip level since smaller fish that were previously discarded due to the current 13-inch minimum size limit (**Preferred Alternative 1 (No Action)**) could be kept. This would provide positive economic effects for the recreational sector provided there are no negative effects for the stock from the increased harvest. In general, the lower the size limit, the more that harvest may increase in the short-term at the trip level, thereby increasing economic benefits incurred from such harvest. These economic benefits may accrue in the form of increased trip satisfaction for recreational anglers, thus increasing CS for the recreational sector. Under this notion, the highest economic benefits would occur at the trip level under **Alternative 3**, followed by **Alternative 2**, and **Preferred Alternative 1 (No Action)**. The economic effects of increased harvest on the trip level may be offset through a reduced season length since total harvest is capped at the annual catch target in Sub-Action 1a. There would be a tradeoff as harvest rates increase, it is likely that the length of the open harvest season will decrease, thereby leading to negative economic effects (Appendix F). From the perspective of economic benefits derived from an extended open harvest season, **Preferred Alternative 1 (No Action)** would offer the highest economic benefits since it would offer the longest open harvest season, followed by **Alternative 2**, and **Alternative 3.**

While trip level and seasonal impacts will be highly variable by angler and cannot be estimated with available data, the economic effects of changes in total harvest can be quantified. For **Alternative 2** and **Alternative 3**, net economic benefits in relation to total harvest are anticipated to be the same as **Preferred Alternative 1 (No Action)** because total harvest would be the same and capped at the ACT selected in Sub-Action 1a.

4.4.3. Social Effects

In general, reducing the recreational size limit for black sea bass (**Alternative 2** and **Alternative 3**) may result in positive effects as smaller fish may be retained under a smaller size limit. The degree of effects would relate to the size of the decrease, with greater positive effects from a minimum size limit that matches the size of fish most commonly encountered on a recreational trip. Regulations that mirror fishermen experiences on the water can support confidence in landings information and systems of management. Additionally, a minimum size limit of 11-inches total length would match the current minimum size limit for the commercial sector. Aligning regulations between the two sectors would provide clarity and consistency for fishermen operating in multiple sectors of the black sea bass fishery. Additional effects would

not be expected from retaining the current minimum size limit for black sea bass of 13-inches total length (**Preferred Alternative 1 (No Action)**).

Alternatively, a lower size limit is also anticipated to result in the recreational annual catch target (Action 1) being met faster, resulting in a shorter recreational season. **Alternative 3** would result in the lowest number of estimated fishing days (41 days), followed by **Alternative 2** (64 days) and **Preferred Alternative 1 (No Action)** (168 days). Decreasing the minimum size limit to 12-inches total length or 11-inches total length (**Alternative 2** and **Alternative 3**, respectively) would be expected to result in some positive effects and negative effects. The magnitude of the positive and negative effects would likely vary by angler preference for a longer fishing season and higher minimum size limit or a shorter season with a lower minimum size limit.

4.4.4. Administrative Effects

Compared to **Preferred Alternative 1 (No Action)**, which would incur minimal new administrative burdens by maintaining the current recreational size limit of 13 inches, **Alternatives 2** and **3** would each be expected to have slightly higher administrative effects. Rulemaking and a new fishery bulletin would be required for informing fishery participants about the new recreational size limit, requiring staff time for drafting, review, and dissemination of the material. Additionally, NOAA law enforcement would need to be trained on the new regulations to ensure consistent and accurate enforcement. However, **Alternative 3** would create consistent minimum size limits for both sectors throughout the South Atlantic Council's jurisdiction, which would help the public avoid confusion with regulations and aid law enforcement. However, since there is a minimum size limit already in place for black sea bass in the South Atlantic Region under **Preferred Alternative 1 (No Action)**, changing the minimum size limit under **Alternatives 2** and **3** would not be unusually burdensome.

Chapter 5. Council's Choice for the Preferred Alternative

5.1. Action 1. Establish annual catch targets and revise the accountability measures for South Atlantic black sea bass

Alternatives

Sub-Action 1a. Establish ACTs for black sea bass

1. (No Action). There are no ACTs currently in place for black sea bass.

2. Establish a commercial annual catch target of 48,557 pounds whole weight and a recreational annual catch target of 63,143 pounds whole weight.

Sub-Action 1b. Revise in-season AMs for commercial sector

1. (No Action). If commercial landings reach the ACL, NMFS will close the sector.

2. If commercial landings reach the ACT, NMFs will close the sector.

Sub-Action 1c. Revise AMs for recreational sector

1. (No Action). NMFS will project the length of the season based on when the ACL will be met.

2. NMFS will project the length of the season based on when the ACT will be met.

*See Chapter 2 for detailed language of alternatives.
Preferred indicated in bold.

5.1.1. Snapper Grouper Advisory Panel Comments and Recommendations

The Snapper Grouper Advisory Panel (AP) discussed Regulatory Amendment 37 at their meeting on October 27-29, 2025. Along with specific comments and recommendations related to the considered actions, AP members commented that sub-regional effects should be considered in long-term changes for black sea bass to account for differences between the northern and southern portions of the South Atlantic region.

Specifically, for Action 1, the AP recommends approval of **Alternative 2** under each of Sub-Actions 1a, 1b, and 1c, to establish and manage to annual catch targets. Some members commented that waters off North Carolina, South Carolina, and Georgia have not seen the same decline observed in Florida. Therefore, the extent of harvest decrease proposed does not seem necessary for all parts of the region. While this may not be achievable in the timeline for this amendment, sub-regional management should be considered in Snapper Grouper Amendment 56.

5.1.2. Law Enforcement Advisory Panel Comments and Recommendations

Comments on Regulatory Amendment 37 were requested from the Law Enforcement Advisory Panel (LE AP) via email, in November 2025.

One LE AP member stated that the proposed changes from Action 1 should not significantly affect enforcement, relative to the current accountability measures.

5.1.3. Scientific and Statistical Committee Comments and Recommendations

Comments on Regulatory Amendment 37 were requested from the Scientific and Statistical Committee (SSC) via email, in November 2025.

One SSC member commented that it would be beneficial to clarify that the SSC has recommended an acceptable biological catch based on the SEDAR 73 Update for 2027 and future years. As of December 2025, this continues to be the SSC's recommendation to go into effect in 2027.

5.1.4. Public Comments and Recommendations

Public hearings were conducted via webinar on November 3 and November 12, 2025, and written comments were accepted from October 20 through November 14, 2025. One comment was received during the webinar hearings, but this commenter did note that they also submitted a written comment online. Twelve comments were received via the online public comment form; these comments can be read here. All comments received online were from the recreational sector, with 5 comments from the for-hire component.

Comments outside of the proposed actions were provided. Several of these comments stated that black sea bass are abundant and expressed displeasure with increased management restrictions that have been proposed. Others stated that the decline of black sea bass is due to the increase in red snapper. Comments also expressed displeasure with scientific data collection and assessment methods.

One comment specifically addressed Action 1 (annual catch target). This comment stated that a black sea bass season that extends from April to at least October is essential for the function of their headboat business.

5.1.5. Council Rationale

The intent of Action 1, establishing and revising accountability measures to manage to sector annual catch targets (ACT), is to immediately reduce fishing mortality caused by harvest of black sea bass. A reduction in fishing mortality is necessary because of the persistent declines in both harvest and abundance of black sea bass to all-time low levels in the most recent years. The Council intends for a lower amount of annual harvest, along with other actions in this amendment, to contribute to increasing the South Atlantic black sea bass population.

Preferred Alternative 2 under Sub-Actions 1a (establish sector ACTs), 1b (revise commercial Ams), and 1c (revise recreational Ams) would establish a management regime under which landings would be constrained to an ACT that is 50% lower than average landings for each sector during the most recent 5 years of available, finalized data (2019-2023). While the Council acknowledges the short-term, negative effects this can have on the fishery, the Council has determined that these are outweighed by the long-term, positive effects of increasing this population to levels that can sustain harvest of maximum sustainable yield (MSY) in the future.

5.2. Action 2. Establish a spawning season closure for South Atlantic black sea bass

Alternatives

1 (No Action). There is no spawning seasonal closure for black sea bass in or from South Atlantic federal waters south of Cape Hatteras, NC.

2. Establish a commercial seasonal closure in or from South Atlantic federal waters south of Cape Hatteras, NC, and the commercial trip limit is zero.

Sub-Alternative 2a. The commercial seasonal closure occurs from January 1 through January 31.

Sub-Alternative 2b. The commercial seasonal closure occurs from February 1 through the end of February.

Sub-Alternative 2c. The commercial seasonal closure occurs from March 1 through March 31.

Sub-Alternative 2d. The commercial seasonal closure occurs from April 1 through April 30.

3. Establish a recreational seasonal closure in or from South Atlantic federal waters south of Cape Hatteras, NC, and the commercial trip limit is zero.

Sub-Alternative 3a. The recreational seasonal closure occurs from January 1 through January 31.

Sub-Alternative 3b. The recreational seasonal closure occurs from February 1 through the end of February.

Sub-Alternative 3c. The recreational seasonal closure occurs from March 1 through March 31.

Sub-Alternative 3d. The recreational seasonal closure occurs from April 1 through April 30.

*See Chapter 2 for detailed language of alternatives. **Preferred indicated in bold.**

5.2.1. Snapper Grouper Advisory Panel Comments and Recommendations

For Action 2, the AP recommends approval of **Preferred Alternative 2 – Preferred Sub-Alternatives 2b** and **2c**, as well as **Preferred Alternative 3 – Preferred Sub-Alternatives 3b** and **3c**, which would establish a spawning closure prohibiting harvest of black sea bass for both sectors from February through March.

AP members discussed that this closure is expected to have significant effects on the recreational for-hire component of the fishery. During this time of year, due to seasonal weather and the shallow water grouper closure, black sea bass is one of a few species that are accessible to be targeted by for-hire trips. Black sea bass move closer to shore when the water cools, so during February and March, they are more accessible in nearshore waters than during warmer summer months. One AP member noted that due to shallower depths and cooler temperatures, the survival rate of released black sea bass is likely higher during colder months. Additionally, artificial bait can be used while targeting black sea bass in these months to improve the probability of catching fish that are larger than the minimum size limit.

For-hire AP members commented that trips sold primarily to target black sea bass during February through March are important for the survival of their businesses. Late in the year, weather worsens, so businesses often use this time to complete necessary boat repairs from the previous season, incurring additional expenses. When weather is occasionally favorable in February-March, revenue from the few trips that do go out sustains the businesses into spring, when trips and income can become more consistent. Therefore, while the number of trips, harvest, or revenue during February-March may be small

compared to the rest of the year, the revenue during these months is critically necessary to help offset additional expenses and reduced income during the winter months.

5.2.2. Law Enforcement Advisory Panel Comments and Recommendations

One LE AP member stated that alignment of the proposed spawning season closure with other existing closures (e.g. shallow water grouper closure) would simplify enforcement.

5.2.3. Scientific and Statistical Committee Comments and Recommendations

The SSC did not provide any comments or recommendations specific to Action 2.

5.2.4. Public Comments and Recommendations

One comment specifically addressed Action 2 (spawning season). This comment supported a spawning closure in January, February, or March, and possibly into early April.

5.2.5. Council Rationale

The intent of Action 2, establishing and spawning season closures for harvest of black sea bass, is to increase stock biomass and recruitment by allowing greater spawning production. An increase in recruitment is necessary to increase the stock to levels that would sustain harvest of MSY. Along with the decline in biomass to all-time low levels, black sea bass recruitment has been at all-time low levels in recent years, as well (SEDAR 76 Update 2025). Protection of spawning fish allows greater spawning output and potentially a greater number of offspring surviving to maturity.

Preferred Alternatives 2 and **3** with **Preferred Sub-Alternatives 2b**, **2c**, **3b**, and **3c** would establish a seasonal closure from February 1 through March 31 for the commercial and recreational sectors, during which harvest of black sea bass would be prohibited. This time period overlaps with the beginning of peak spawning for black sea bass (February – March). Recent average harvests (2021-2023) for both sectors during February and March are near or above average monthly values, indicating there could be substantial biological benefits from reducing fishing mortality caused by landings during this time. Closing only during February and March also maintains access to the fishery during critical times of year for the commercial (January) and recreational (spring) sectors. The application of this closure to both sectors is consistent with the intent to increase spawning production and recruitment.

5.3. Action 3. Reduce the recreational bag limit for South Atlantic black sea bass

5.3.1. Snapper Grouper Advisory Panel Comments and Recommendations

For Action 3, the AP recommends **Alternative 4**, which would reduce the recreational bag limit to 3 fish per person per day. Recreational AP members preferred a 3-fish bag limit rather than a 2-fish bag limit (**Preferred Alternative 3**), due to the small difference in projected season length between these alternatives and greater potential for recreational for-hire trips to be sold with a 3-fish bag limit.

Alternatives

1 (No Action). The recreational bag limit is 7 fish per person per day.

2. The recreational bag limit is 1 fish per person per day.

3. The recreational bag limit is 2 is 2 fish per person per day.

4. The recreational bag limit is 3 fish per person per day.

5. The recreational bag limit is 4 fish per person per day.

*See Chapter 2 for detailed language of alternatives.
Preferred indicated in bold.

5.3.2. Law Enforcement Advisory Panel Comments and Recommendations

One LE AP member stated that regulatory consistency of the federal bag limit with adjacent state jurisdictional bag limits would be the best scenario for enforcement.

5.3.3. Scientific and Statistical Committee Comments and Recommendations

The SSC did not provide any comments or recommendations specific to Action 3.

5.3.4. Public Comments and Recommendations

Five comments specifically addressed Action 3 (bag limit). Three comments opposed a 2-fish bag limit and supported a higher bag limit of 3 fish or 4 fish. One comment stated that a higher bag limit was a higher priority than keeping the recreational sector open past October. One comment proposed a bag limit of about 5 fish. One comment noted that a low bag limit would not be worth the cost of fuel and gear. One comment stated that a 7 fish bag limit may be too much.

5.3.5. Council Rationale

The intent of Action 3, reducing the recreational bag limit, is to allow a season under the lower recreational ACT that mitigates negative effects for the recreational sector, while working toward the long-term benefit of the stock and fishery. Given the smaller size of black sea bass (relative to other snapper grouper and reef-associated species), a 1-fish bag limit (**Alternative 2**) would likely have low angler satisfaction, such that anglers would not go on trips that have targeted black sea bass in the past. A 2-fish bag limit (**Preferred Alternative 3**) would have

greater angler satisfaction, and would a season that is projected to be open for almost all of the 10 months possibly months with inclusion of the spawning season closure in February and March (Action 2). Bag limits of 3 fish (**Alternative 4**) or 4 fish (**Alternative 5**) would have shorter seasons, which could result in increased negative effects. **Preferred Alternative 2** prioritizes maintaining access through a longer season rather than potentially shortening the season for a higher bag limit.

5.4. Action 4. Reduce the recreational minimum size limit for South Atlantic black sea bass

Alternatives

1 (No Action). The recreational minimum size limit is 13 inches total length.

2. The recreational minimum size limit is 12 inches total length.

3. The recreational minimum size limit is 11 inches total length.

*See Chapter 2 for detailed language of alternatives. **Preferred indicated in bold.**

5.4.1. Snapper Grouper Advisory Panel Comments and Recommendations

For Action 4, the AP recommends **Preferred Alternative 1 (No Action)** which would retain the current 13-inch recreational minimum size limit for black sea bass. AP members commented that the projected reduction in season length is not worth gaining the ability to keep smaller black sea bass.

5.4.2. Law Enforcement Advisory Panel Comments and Recommendations

One LE AP member stated that consistent size limits between the commercial and recreational sectors simplifies enforcement.

5.4.3. Scientific and Statistical Committee Comments and Recommendations

The SSC did not provide any comments or recommendations specific to Action 4.

5.4.4. Public Comments and Recommendations

Five comments specifically addressed Action 4 (size limit). Two comments supported keeping the 13-inch minimum size limit. One comment noted fish smaller than that size have thinner filets and less meat overall. Three comments supported consideration of increasing the minimum size limit to larger than 13 inches (15- or 16-inch size limits were proposed).

5.4.5. Council Rationale

The intent of Action 4, which considers reducing the minimum size limit for black sea bass, is to reduce mortality caused by catching and releasing of black sea bass by the recreational sector. A smaller minimum size limit would allow greater retention of black sea bass, potentially allowing a lower bag limit (Action 3) to be filled and for fishing effort to be directed toward other species. This could reduce the number of fish that die from being caught and released. However, the increased retention under a smaller size limit is projected to significantly reduce the length of the recreational season because fish would be caught and landed at a higher rate.

Preferred Alternative 1 (No Action) would prioritize maintaining recreational access by keeping the current minimum size limit, which is projected to allow the longest recreational season among alternatives considered in this amendment. The Council determined that a large

potential reduction in season length was not worth the benefit of retaining 12-inch or 11-inch black sea bass.

Chapter 6. Cumulative Effects

6.1. Affected Area

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West (South Atlantic exclusive economic zone [EEZ]), which is also the South Atlantic Fishery Management Council's (Council) area of jurisdiction. In light of the available information, the extent of the boundaries would depend upon the degree of fish immigration/emigration and larval transport, whichever has the greatest geographical range. The ranges of affected species are described in Volume II of the Fishery Ecosystem Plan. Black Sea Bass are managed along the Atlantic coast in federal waters from Cape Hatteras, North Carolina southward along the east coast of Florida by the Council. For the proposed actions found in Regulatory Amendment 37 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP), the cumulative effects analysis includes an analysis of data from 2017 through the present.

6.2. Past, Present, and Reasonably Foreseeable Actions Impacting the Affected Area

The complete history of management of the snapper grouper fishery in the South Atlantic region can be found on the National Marine Fisheries Service (NMFS) website (Rules and Regulations webpage) and on the Council website (Snapper Grouper FMP webpage). Described below are the most relevant past, present, and reasonably foreseeable future actions.

Past Actions

Regulatory Amendment 16 the Snapper Grouper FMP (SAFMC 2016), effective February 21, 2017, revised the seasonal prohibition on the use of black sea bass pot gear in the South Atlantic and added a gear-marking requirement for black sea bass pot gear to aid in identification in the event of a whale entanglement.

Present Actions

The Comprehensive Commercial Electronic Logbook Amendment, which includes Amendment 54 to the Snapper Grouper FMP, was developed jointly with the Gulf of Mexico Fishery Management Council. The amendment would modify the FMPs for South Atlantic Snapper Grouper, Atlantic Dolphin Wahoo, Atlantic and Gulf Coastal Migratory Pelagics, and Gulf Reef Fish to require commercial logbooks be submitted via electronic reporting forms instead of the currently used paper-based forms. The amendment was approved by the Council in September 2023 and the Notice of Availability published on November 20, 2025 (90 FR 52349).

Regulatory Amendment 36 to the Snapper Grouper FMP (SAFMC 2024), in part, will revise stowage requirements for black sea bass pots equipped with on-demand gear while transiting marine protected areas and spawning special management zones. The framework amendment was approved by the Council in September 2024.

The Southeast For-Hire Integrated Electronic Reporting (SEFHIER) Improvement Amendment, which includes Amendment 58 to the Snapper Grouper FMP, is currently under development and would improve the SEFHEIR program to better collect data from the for-hire sector for the snapper grouper, dolphin wahoo and coastal migratory pelagic fisheries.

Amendment 60 to the Snapper Grouper FMP (under development) is intended to revise policies and requirements for the snapper grouper commercial unlimited (SG1) permit and increase commercial trip efficiency.

Reasonably Foreseeable Future Actions

Seasonal closure for black sea bass pots were initially established to reduce interactions with migrating whales. Given that on-demand gear is effective at reducing these interactions while allowing pot fishing to occur, the Council may consider changes to the current nearshore seasonal closures. This action could be included for consideration in Amendment 56, although it could also be considered in a later amendment.

Amendment 56 to the Snapper Grouper FMP (on hold) is intended to respond to the most recent stock assessment for South Atlantic black sea bass. Actions being initially considered for Amendment 56 include revisions of catch levels, sector allocations, stock determination criteria, and other measures intended to increase the stock.

Amendment 61 to the Snapper Grouper FMP would evaluate whether 17 species currently in the fishery management unit should remain, be removed, or be designated as ecosystem component species.

6.3. Consideration of Changing Environmental Factors and Other Non-Fishery Related Issues

Environmental Factors

Environmental changes on a world-wide scale could have significant effects on Atlantic fisheries, though the extent of these effects on the snapper grouper fishery is not known at this time. The Environmental Protection Agency's webpage (https://www.epa.gov/climate-indicators/marine-species-distribution), and NOAA's Office of Science and Technology climate webpage (https://www.fisheries.noaa.gov/topic/climate), provides background information on environmental changes, including indicators which measure or anticipate effects on oceans, weather and climate, ecosystems, health and society, and greenhouse gases. The United Nations Intergovernmental Panel on Climate Change's Sixth Assessment Report (February 28, 2022), U.S. Global Change Research Program (USGCRP)'s Fourth Climate Assessment (2018), and the Ecosystem Status Report for the U.S. South Atlantic Region (Craig et al. 2021) also provide a compilation of scientific information on environmental changes. Those findings are summarized below.

Ocean acidification, or a decrease in surface ocean pH due to absorption of anthropogenic carbon dioxide emissions, affects the chemistry and temperature of the water. Increased thermal stratification alters ocean circulation patterns, and causes a loss of sea ice, sea level rise, increased wave height and frequency, reduced upwelling, and changes in precipitation and wind patterns. Changes in coastal and marine ecosystems can influence organism metabolism and

alter ecological processes such as productivity, species interactions, migration, range and distribution, larval and juvenile survival, prey availability, and susceptibility to predators. The "center of biomass," a geographical representation of each species' weight distribution, is being used to identify the shifting of fish populations. Warming sea temperature trends in the southeast have been documented, and animals must migrate to cooler waters, if possible, if water temperatures exceed survivable ranges (Needham et al. 2012). Rising water temperatures, ocean acidification, retreating arctic sea ice, sea level rise, high-tide flooding, coastal erosion, higher storm surge, and heavier precipitation events are projected to continue, putting ocean and marine species at risk, decreasing the productivity of certain fisheries, and threatening communities that rely on marine ecosystems for livelihoods and recreation (USGCRP 2018). Harvesting and habitat changes also cause geographic population shifts. Changes in water temperatures may also affect the distribution of native and exotic species, allowing invasive species to establish communities in areas they may not have been able to survive previously. The numerous changes to the marine ecosystem may cause an increased risk of disease in marine biota. An increase in the occurrence and intensity of toxic algae blooms will negatively influence the productivity of keystone animals, such as corals, and critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002; IPCC 2022). Free et al. (2019) investigated the impacts of historical warming on marine fisheries production and found that environmental changes is altering habitats for marine fishes and invertebrates, but the net effect of these changes on potential food production is unknown.

Climate driven movement of fish stocks is causing commercial, small-scale, artisanal, and recreational fishing activities to shift poleward and diversify harvests (IPCC 2022). In the South Atlantic Region, species richness and abundance of offshore hard bottom reef fishes have generally declined over time while richness and abundance of demersal fishes in soft sediment habitats on the nearshore shelf have increased. Potential explanations for these patterns include changes in harvest (directed and bycatch), trophic interactions, and environmental effects on recruitment (Craig et al. 2021). Environmental changes may impact snapper grouper species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur.

Patterns from stock assessments in the South Atlantic Region indicate biomass of most assessed species generally show declines from the 1970s through the 1990s with some species showing signs of recovery beginning in the early to mid-2000s. Recruitment of a number of snapper grouper species has declined since the early 2010s; whereas, recruitment of red snapper and some pelagic species has increased in recent years (Craig et al. 2021). In the near term, it is unlikely that the actions in Regulatory Amendment 37 would compound or exacerbate the ongoing effects of environmental changes snapper grouper species.

Weather Variables

Hurricane season is from June 1 to November 30, and accounts for 97% of all tropical activity affecting the Atlantic basin. These storms, although unpredictable in their annual occurrence, can devastate areas when they occur. Although these effects may be temporary, those fishing related businesses whose profitability is marginal may go out of business if a hurricane strikes.

6.4. Overall Impacts Expected from Past, Present, and Future Actions

The proposed management actions are summarized in Chapter 2 of this document. Detailed discussions of the magnitude and significance of the impacts of the alternatives on the human environment appear in Chapter 4 of this document. None of the impacts of the actions in this framework amendment, in combination with past, present, and future actions have been determined to be significant. Although several other management actions, in addition to this framework amendment, are expected to affect snapper grouper species, any additive effects, beneficial and adverse, are not expected to result in a significant level of cumulative impacts.

The proposed actions would not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places as these are not in the South Atlantic EEZ. These actions are not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific, cultural, or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas as the proposed action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The U.S.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the South Atlantic EEZ. The proposed actions are not likely to cause loss or destruction of these national marine sanctuaries because the actions are not expected to result in appreciable changes to current fishing practices. Additionally, the proposed actions are not likely to change the way in which the snapper grouper fishery is prosecuted; therefore, the actions are not expected to result in adverse impacts on health or human safety beyond the status quo.

6.5. Monitoring and Mitigation

Fishery-independent and fishery-dependent data comprise a significant portion of information used in stock assessments. Fishery-independent data are being collected through the Southeast Fishery Information Survey and the Marine Resources Monitoring Assessment and Prediction Program. The effects of the proposed actions are, and would continue to be, monitored through collection of recreational landings data by all the four states in the South Atlantic Region (Florida, Georgia, South Carolina, and North Carolina). NMFS would continue to monitor and collect information on snapper grouper species for stock assessments and stock assessment updates, life history studies, economic and social analyses, and other scientific observations. The proposed actions relate to the harvest of indigenous species in the Atlantic, and the activities/regulations being altered do not introduce nonindigenous species and are not reasonably expected to facilitate the spread of such species through depressing the populations of native species. Additionally, these alternatives do not propose any activity, such as increased ballast water discharge from foreign vessels, which is associated with the introduction or spread on non-indigenous species.

Chapter 7. List of Preparers

Name	Agency/Division	Title
Mike Schmidtke	SAFMC	Fishery Scientist/IPT Lead
Myra Brouwer	SAFMC	Deputy Director for Management
Chip Collier	SAFMC	Deputy Director for Science and Statistics
Christina Wiegand	SAFMC	Fishery Social Scientist
John Hadley	SAFMC	Fishery Economist
Kathleen Howington	SAFMC	Habitat & Ecosystem Scientist
Mary Vara	SERO/SF	Fishery Biologist/IPT Lead
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Adam Bailey	SERO/SF	Technical Writer and Editor
Dominique Lazarre	SERO/SF	Data Analyst
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IPT = Interdisciplinary Planning Team, SAFMC = South Atlantic Fishery Management Council, SERO = Southeast Regional Office, SF = Sustainable Fisheries Division, PR = Protected Resources Division, HC = Habitat Conservation Division, NOAA=National Oceanic and Atmospheric Administration, GC = General Counsel, OLE = Office of Law Enforcement, SEFSC = Southeast Fisheries Science Center.

Chapter 8. Agencies and Persons Consulted

Responsible Agencies

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National Marine Fisheries Service, Southeast Region
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List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Snapper Grouper Advisory Panel
SAFMC Scientific and Statistical Committee
North Carolina Coastal Zone Management Program
South Carolina Coastal Zone Management Program
Georgia Coastal Zone Management Program
Florida Coastal Zone Management Program
Florida Fish and Wildlife Conservation Commission
Georgia Department of Natural Resources
South Carolina Department of Natural Resources
North Carolina Division of Marine Fisheries
North Carolina Sea Grant
South Carolina Sea Grant
Georgia Sea Grant
Florida Sea Grant
Atlantic States Marine Fisheries Commission
National Marine Fisheries Service
- -Washington Office
- -Office of Ecology and Conservation
- -Southeast Regional Office
- -Southeast Fisheries Science Center

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Appendix A. Other Applicable Law

A.1. Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Among other things under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day wait period from the time a final rule is published until it takes effect, with some exceptions. Regulatory Amendment 37 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 37) complies with the provisions of the APA through the South Atlantic Fishery Management Council's (Council) extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this framework amendment will have a request for public comments, which complies with the APA, and upon publication of the final rule, unless the rule fall within an APA exception, there will be a 30-day wait period before the regulations are effective.

A.2. Information Quality Act (IQA)

The IQA (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-443)) which took effect October 1, 2002, directed the Office of Management and Budget (OMB) to issue government-wide guidelines that "provide policy and procedural guidelines to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies." OMB directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with OMB guidelines, and report periodically to OMB on the number and nature of complaints. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the IQA. Regulatory Amendment 37 uses the best available information and made a broad presentation thereof. The information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

A.3. Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal CZMA of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. While it is the goal of the Council to have management measures that complement those of the states, federal and state administrative procedures vary, and regulatory changes are unlikely to be fully instituted at the same time. The Council believes the actions in this framework amendment are consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. Pursuant to Section 307 of the CZMA, this determination will be submitted to the responsible

state agencies who administer the approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

A.4. Executive Order 12612: Federalism

Executive Order (E.O.) 12612 requires agencies to be guided by the fundamental federalism principles when formulating and implementing policies that have federalism implications. The purpose of the Order is to guarantee the division of governmental responsibilities between the federal government and the states, as intended by the framers of the Constitution. No federalism issues have been identified relative to the actions proposed in this document and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 12612 is not necessary.

A.5. Executive Order 12962: Recreational Fisheries

E.O. 12962 requires federal agencies, in cooperation with states and tribes, to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities through a variety of methods. Additionally, the Order establishes a seven-member National Recreational Fisheries Coordination Council responsible for, among other things, ensuring that social and economic values of healthy aquatic systems that support recreational fisheries are considered by federal agencies in the course of their actions, sharing the latest resource information and management technologies, and reducing duplicative and cost-inefficient programs among federal agencies involved in conserving or managing recreational fisheries. The National Recreational Fisheries Coordination Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan to include a 5-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

The alternatives considered in this document are consistent with the directives of E.O. 12962.

A.6. Executive Order 13089: Coral Reef Protection

E.O. 13089, signed by President William Clinton on June 11, 1998, recognizes the ecological, social, and economic values provided by the Nation's coral reefs and ensures that federal agencies are protecting these ecosystems. More specifically, the Order requires federal agencies to identify actions that may harm U.S. coral reef ecosystems, to utilize their program and authorities to protect and enhance the conditions of such ecosystems, and to ensure that their actions do not degrade the condition of the coral reef ecosystem.

The alternatives considered in this document are consistent with the directives of E.O. 13089.

A.7. Executive Order 13158: Marine Protected Areas (MPA)

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. ocean and coastal resources through the use of MPAs. The E.O. defined MPAs as "any area of the marine

environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein." It directs federal agencies to work closely with state, local and non-governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources."

The alternatives considered in this document are consistent with the directives of E.O. 13158.

A.8. National Marine Sanctuaries Act (NMSA)

Under the NMSA (also known as Title III of the Marine Protection, Research and Sanctuaries Act of 1972), as amended, the U.S. Secretary of Commerce is authorized to designate National Marine Sanctuaries to protect distinctive natural and cultural resources whose protection and beneficial use requires comprehensive planning and management. The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division of NOAA. The NMSA provides authority for comprehensive and coordinated conservation and management of these marine areas. The National Marine Sanctuary Program currently comprises 16 sanctuaries around the country, including sites in American Samoa and Hawaii. These sites include significant coral reef and kelp forest habitats, and breeding and feeding grounds of whales, sea lions, sharks, and sea turtles. The three sanctuaries in the South Atlantic exclusive economic zone are the U.S.S. Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries.

The alternatives considered in this document are not expected to have any adverse impacts on the resources managed by the National Marine Sanctuaries.

A.9. Small Business Act (SBA)

Enacted in 1953, the SBA requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise. The objectives of the SBA are to foster business ownership by individuals who are both socially and economically disadvantaged; and to promote the competitive viability of such firms by providing business development assistance including, but not limited to, management and technical assistance, access to capital and other forms of financial assistance, business training, and counseling, and access to sole source and limited competition federal contract opportunities, to help firms achieve competitive viability. Because most businesses associated with fishing are considered small businesses, NMFS, by implementing regulations, must make an assessment of how those regulations will affect small businesses.

A.10. Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act to require that a fishery management plan (FMP) or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions. No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in

this amendment. No concerns have been raised by South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions.

Appendix B. Regulatory Impact Review

TO BE COMPLETED

Appendix C. Regulatory Flexibility Act Analysis

TO BE COMPLETED

Appendix D. Essential Fish Habitat and Move to Ecosystem Based Management

D.1. EFH and EFH-HAPC Designations and Cooperative Habitat Policy Development and Protection

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires federal fishery management Councils and the National Marine Fisheries Service (NMFS) to designate essential fish habitat (EFH) for species managed under federal fishery management plans (FMP). Federal regulations that implement the EFH program encourage fishery management Councils and NMFS also to designate subsets of EFH to highlight priority areas within EFH for conservation and management. These subsets of EFH are called EFH-Habitat Areas of Particular Concern (EFH-HAPCs or HAPCs) and are designated based on ecological importance, susceptibility to human-induced environmental degradation, susceptibility to stress from development, or rarity of the habitat type. Information supporting EFH and EFH-HAPC designations was updated (pursuant to the EFH Final Rule) in Fishery Ecosystem Plan (FEP) II.

D.1.1. South Atlantic Council EFH User Guide

The EFH Users Guide developed during the FEP II development process is available through the FEP II Dashboard and provides a comprehensive list of the designations of EFH and EFH-HAPCs for all species managed by the South Atlantic Fishery Management Council (Council) and the clarifications identified during FEP II development. As noted above, additional detailed information supporting the EFH designations appears in FEP, FEP II, and in individual FMPs, and general information on the EFH provisions of the Magnuson-Stevens Act and its implementing regulations (50 CFR 900 Subparts J and K). These sources should be reviewed for information on the components of EFH assessments, steps to EFH consultations, and other aspects of EFH program operation.

D.1.2. South Atlantic Council EFH Policy and EFH Policy Statements Policy for Protection and Restoration of EFH South Atlantic Council Habitat and Environmental Protection Policy

In recognizing that species are dependent on the quantity and quality of their essential habitats, it is the policy of the Council to protect, restore, and develop habitats upon which fisheries species depend; to increase the extent of their distribution and abundance; and to improve their productive capacity for the benefit of present and future generations. For purposes of this policy, "habitat" is defined as the physical, chemical, and biological parameters that are necessary for continued productivity of the species that is being managed. The objectives of the Council policy will be accomplished through the recommendation of no net loss or significant environmental degradation of existing habitat. A long-term objective is to support and promote a net-gain of fisheries habitat through the restoration and rehabilitation of the productive capacity of habitats that have been degraded, and the creation and development of productive habitats where increased fishery production is probable. The

Council will pursue these goals at state, Federal, and local levels. The Council shall assume an aggressive role in the protection and enhancement of habitats important to fishery species and shall actively enter federal decision-making processes where proposed actions may otherwise compromise the productivity of fishery resources of concern to the Council.

D.1.3. South Atlantic Council EFH Policy Statements Considerations to Reduce or Eliminate the Impacts of Non-Fishing Activities on EFH

In addition to implementing regulations to protect habitat from degradation due to fishing activities, the Council in cooperation with NMFS, actively comments on non-fishing projects or policies that may impact fish habitat. The Council established a Habitat Protection and Ecosystem Based Management Advisory Panel (AP) and adopted a comment and policy development process. Members of the AP serve as the Council's habitat contacts and professionals in the field and have guided the Council's development of the following Policy Statements:

- EFH Policy Statement on South Atlantic Climate Variability and Fisheries (December 2016)
- EFH Policy Statement on South Atlantic Food Webs and Connectivity (December 2016)
- Protection and Restoration of EFH from Marine Aquaculture (June 2014)
- Protection and Enhancement of Marine Submerged Aquatic Vegetation (June 2014)
- Protection and Restoration of EFH from Beach Dredging and Filling, Beach Re-nourishment and Large Scale Coastal Engineering (March 2015)
- Protection and Restoration of EFH from Energy Exploration, Development, Transportation and Hydropower Re-Licensing (December 2015)
- Protection and Restoration of EFH from Alterations to Riverine, Estuarine and Nearshore Flows (June 2014)
- Policies for the Protection of South Atlantic Marine & Estuarine Ecosystems from Non-Native and Invasive Species (June 2014)
- Policy Considerations for Development of Artificial Reefs in the South Atlantic Region and Protection of Essential Fish Habitat (September 2017)

D.2. Habitat Conservation and Fishery Ecosystem Plans

The Council views habitat conservation as the foundation in the move to Ecosystem Based Fishery Management (EBFM) in the region. The Council has been proactive in advancing habitat conservation through extensive gear restrictions in all Council FMPs and by directly managing habitat and fisheries affecting those habitats through two FMPs, the FMP for Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP) and the FMP for the Sargassum Fishery of the South Atlantic Region. The FMP for the Dolphin and Wahoo Fishery in the Atlantic represents a proactive FMP which established fishery measures and identified EFH in advance of overfishing or habitat impacts from the fisheries.

Building on the long-term conservation approach, the Council facilitated the evolution of the Habitat Plan into the first FEP to provide a clear description and understanding of the fundamental physical, biological, and human/institutional context of ecosystems within which

fisheries are managed and identify information needed and how that information should be used in the context of FMPs. Developing a South Atlantic FEP required a greater understanding of the South Atlantic ecosystem, including both the complex relationships among humans, marine life, the environment and essential fish habitat and a more comprehensive understanding of the biological, social, and economic impacts of management necessary to initiate the transition from single species management to EBFM in the region. To support the move towards EBFM, the Council adopted broad goals: (1) maintaining or improving ecosystem structure and function; (2) maintaining or improving economic, social, and cultural benefits from resources; and (3) maintaining or improving biological, economic, and cultural diversity.

D.3. Ecosystem Approach to Conservation and Management of Deep-water Ecosystems

Through Comprehensive Ecosystem-Based Amendment 1, Comprehensive Ecosystem-Based Amendment 2, and Coral Amendment 8, the Council established and expanded deep-water coral HAPCs (CHAPCs) and co-designated them as EFH-HAPCs to protect the largest continuous distribution (>23,000 square miles) of pristine deep-water coral ecosystems in the world from fishing and non-fishing activities.

D.4. FEP II Development

The Council developed FEP II in cooperation with NMFS, as a mechanism to incorporate ecosystem principles, goals, and policies into the fishery management process, including consideration of potential indirect effects of fisheries on food web linkages when developing harvest strategies and management plans. Council policies developed through the process support data collection, model and supporting tool development, and implementation of FEP II. FEP II and the FEP II Implementation Plan provide a system to incorporate ecosystem considerations into the management process.

FEP II was developed employing writing and review teams established from the Council's Habitat Protection and Ecosystem Based Management AP, and experts from state, federal, non-governmental organizations (NGOs), academia and other regional organizations and associations. Unlike the original Plan, FEP II is a living continually developing online information system presenting core sections and sections with links to documents or other online systems with detailed updated information on species, habitat, fisheries and research. A core part of the FEP II development process involved engaging the Council's Habitat Protection and Ecosystem Based Management AP and regional experts in developing new sections and ecosystem-specific policy statements to address South Atlantic food webs and connectivity and South Atlantic climate variability and fisheries. In addition, standing essential fish habitat policy statements were updated and a new artificial reef habitat policy statement was approved. In combination, these statements advance habitat conservation and the move to EBFM in the region. They also serve as the basis for further policy development, consideration in habitat and fish stock assessments and future management of fisheries and habitat. They also support a more comprehensive view of conservation and management in the South Atlantic and identify long-term information needs, available models, tools, and capabilities that will advance EBFM in the region.

D.4.1. FEP II Dashboard (In Transition to New Habitat and Ecosystem Page)

The FEP II Dashboard and associated online tools provided a clear description of the fundamental physical, biological, human, and institutional context of South Atlantic ecosystems within which fisheries are managed. The Council's new website (under development) will include a new Habitat and Ecosystem page where the FEP II Dashboard layout shown below will be refined and integrated.

- Introduction
- South Atlantic Ecosystem
- South Atlantic Habitats
- Managed Species
- Social and Economic
- Essential Fish Habitat
- SAFMC Managed Areas
- Research & Monitoring
- SAFMC Tools

D.5. NOAA EBFM Activities Supporting FEP II

D.5.1. NOAA EBFM Policy and Road Map

To support the move to EBFM, NMFS developed an agency-wide EBFM Policy and Road Map available through Ecosystem page (under revision) of the FEP II Dashboard that outlines a set of principles to guide actions and decisions over the long-term to: implement ecosystem-level planning; advance our understanding of ecosystem processes; prioritize vulnerabilities and risks to ecosystems and their components; explore and address trade-offs within an ecosystem; incorporate ecosystem considerations into management advice; and maintain resilient ecosystems.

D.5.2. FEP II Implementation Plan Structure and Framework

The Implementation Plan is structured to translate approved policy statements of the Council into actionable items. The plan encompasses chapters beginning with an introduction to the policy statement, a link to the complete policy statement, and a table which translates policies and policy components into potential action items. The actions within the plan are recommendations for activities that could support the Council's FEP II policies and objectives.

D.5.3. FEP II Two Year Roadmap

The FEP II Two Year Roadmap draws from the Implementation Plan and presents three to five priority actions for each of the nine approved policy statements of the Council. The Roadmap provides "Potential Partners" and other potential regional collaborators, a focused list of priority actions they could cooperate with the Council on to advance policies supporting the move to EBFM in the South Atlantic region.

D.5.4. Monitoring/Revisions to FEP II Implementation Plan

FEP II and this supporting Implementation Plan are considered active and living documents. The Implementation Plan will be reviewed and updated periodically. The Council's Habitat Protection and Ecosystem Based Management Committee will review, revise and refine those recommendations for Council consideration and approval for inclusion into the implementation plan.

D.6. Regional Habitat and Ecosystem Partners

The Council, with the Habitat Protection and Ecosystem Based Management AP as the foundation, collaborates with regional partners to create a comprehensive habitat and ecosystem network in the region to enhance habitat conservation and EBFM.

Detailed information and links to partners are highlighted online: https://ocean.floridamarine.org/safmc_dashboard/partners.html.

D.7. Regional Ecosystem Modeling in the South Atlantic

D.7.1. South Atlantic Ecopath with Ecosim Model

The Council worked cooperatively with the University of British Columbia and the Sea Around Us project to develop a straw-man and preliminary food web models (Ecopath with Ecosim) to characterize the ecological relationships of South Atlantic species, including those managed by the Council. This effort helped the Council and cooperators identify available information and data gaps while providing insight into ecosystem function. More importantly, the model development process provided a vehicle to identify research necessary to better define populations, fisheries, and their interrelationships. While individual efforts were underway in the South Atlantic, only with significant investment of resources through other programs was a comprehensive regional model further developed.

The current South Atlantic Ecopath with Ecosim (EwE) model provides a more complete view of the system and supports potential future evaluations that may be possible with the model. With the model complete and tuned to the available data it can be used to address broad strategic issues and explore "what if" scenarios that could then be used to address tactical decision-making questions such as provide ecosystem context for single species management, address species assemblage questions, and address spatial questions using Ecospace.

A modeling team comprised of FWRI staff, Council staff and other technical experts as needed, will coordinate with members of the original Ecosystem Modeling Workgroup to maintain and further refine the South Atlantic model.

D.8. Tools supporting Habitat Conservation and EBFM in the South Atlantic Region

The Council developed a Habitat Conservation and Ecosystem Management Section which provided access to the FEP II Digital Dashboard and associated tools which is under development with the new website. Florida's FWRI maintains and distributes GIS data, imagery, and documents relevant to habitat conservation and ecosystem-based fishery management in their jurisdiction. Web Services and spatial representations of EFH and other habitat related layers are accessible through the Council's SAFMC Atlas, a platform for searching and visualizing GIS data relevant to the Council's mission and download of GIS layers and information on regional partners is available through the SAFMC Digital Dashboard. The online systems provide access to the following Services:

i. South Atlantic Fisheries Webservice: Provides access to species distribution and spatial presentation of regional fishery independent data from the Southeast Area Monitoring and Assessment Program (South Atlantic) SEAMAP-SA, the Marine Resources Monitoring, Assessment, and Prediction program (MARMAP), and NOAA Southeast Fishery-Independent Survey (SEFIS).
ii. South Atlantic EFH Webservice: Provides access to spatial representation of EFH and EFH-HAPCs for Council-managed species and Highly Migratory Species.
iii. South Atlantic Managed Areas Service: Provides access to spatial presentations of Council and other managed areas in the region.
iv. South Atlantic Artificial Reefs Web Application: Provides a regional view of artificial reefs locations, contents and imagery associated with programs in the southeastern U.S. overseen by individual states (Florida, Georgia, South Carolina, North Carolina).
v. South Atlantic ACCSP Web Map and Application: The web map displays Atlantic Coastal Cooperative Statistics Program (ACCSP) Statistical Areas representing catch and values of Council-managed species across time with the application displaying charts of landings and values for ACCSP Statistical Areas.

D.9. Ecosystem-Based Action, Future Challenges and Needs

One of the greatest challenges to enhance habitat conservation and EBFM in the region is funding high priority research, including comprehensive benthic mapping and ecosystem model and management tool development. In addition, collecting detailed information on fishing fleet dynamics including defining fishing operation areas by species, species complex, and season, as well as catch relative to habitat is critical for assessment of fishery, community, and habitat impacts and for Council use in place-based management measures. Additional resources need to be dedicated to expanding regional coordination of modeling, mapping, characterization of species use of habitats, and full funding of regional fishery independent surveys (e.g., MARMAP, SEAMAP, and SEFIS) which are linking directly to addressing high priority management needs. Appendix A of the FEP II Implementation Plan highlights research and data needs excerpted from the SEAMAP 5 Year Plan because they represent short and long-term research and data needs that support EBFM and habitat conservation in the South Atlantic Region.

Development of ecosystem information systems to support Council management should build on existing tools (e.g., Regional Habitat and Ecosystem GIS and Arc Services) and provide resources to regional cooperating partners for expansion to address long-term Council needs. NOAA should support and build on the regional coordination efforts of the Council as it transitions to a broader management approach. Resources need to be provided to collect information necessary to update information supporting FEP II, which support refinement of EFH designations and spatial representations and future EBFM actions. These are the highest priority needs to support habitat conservation and EBFM, the completion of mapping of near-shore, mid-shelf, shelf edge, and deep-water habitats in the South Atlantic region and refinement in the characterization of species use of habitats.

Appendix E. Alternatives Considered but Eliminated from Detailed Analysis

TO BE COMPLETED

Appendix F. Data Analyses

Analysis of Season Duration in Response to Proposed Measures to Reduce Landings and Discards of Black Sea Bass in the South Atlantic

LAPP/DM Branch
NOAA Fisheries Service
Southeast Regional Office
August 2025

The South Atlantic stock of black sea bass was assessed through the Southeast Data, Assessment, and Review (SEDAR) 76 Update assessment in 2025. The results of the assessment indicated that black sea bass stock is experiencing a significant decline in population, in part due to low recruitment and high fishing mortality. The South Atlantic Fishery Management Council (Council) has initiated Regulatory 37 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) in order to modify management and accountability measures associated with black sea bass. This amendment aims to establish an annual catch target (ACT), reduce the recreational bag limit, reduce the recreational size limit, and investigate establishing a spawning season closure for both the commercial and recreational sector. This analysis focuses on providing season duration projections for each of the proposed changes to current management measures.

Data Sources

The Southeast Fisheries Science Center (SEFSC) compiles monitoring datasets that are used to track landings of all federally managed species in the commercial and recreational sector. Commercial landings come from dealer reports provided to the SEFSC (SEFSC Commercial ACL Monitoring Dataset – June 2, 2025). Federally administered surveys generate landings estimates for all headboat vessels and landings from shore, private boat and charter vessels. The Southeast Regional Headboat survey produces landings estimates for species caught by headboats operating in the southeastern United States by combining dockside intercept and logbook data. Federal estimates of shore, private boat and charter anglers were initially generated by the Marine Recreational Fisheries Statistics Survey (MRFSS), which used a combination of dockside intercept survey and phone effort survey data to estimate landings. This survey was replaced by the Marine Recreational Information Program (MRIP) in 2008 to improve precision, accuracy and timeliness of recreational catch estimates. MRIP uses the Access Point Angler Intercept Survey (APAIS) to collect dockside catch data from anglers fishing from shore, private boats and charter vessels. Fishing effort data for the shore and private boat fishing modes was collected by the Coastal Household Telephone Survey (CHTS) and charter effort was estimated from data collected by the telephone For-Hire Survey (FHS). In 2018, the CHTS was replaced by a mail survey, the Fishing Effort Survey (FES). The changes to the federal survey over time has led to recreational landings being estimated in three different units associated with the major changes to the surveys. MRFSS units represent the earliest iteration of the federal survey, MRIP CHTS incorporates updates to the dockside APAIS and implementation of the improved CHTS phone survey, and MRIP FES incorporates the change from a phone to mail effort survey. The

SEFSC creates three separate final recreational landings data sets that combine SRHS landings estimates, FHS charter landings estimates, with either the MRFSS, MRIP CHTS, or MRIP FES survey estimates. The SEDAR 76 stock assessment used MRIP FES units to inform stock status projections for black sea bass. The Council has requested additional review of these assessment results by the South Atlantic Scientific and Statistical Committee before they are used to inform a rebuilding plan, but acknowledged the need to implement interim measures to reduce harvest and discarding of black sea bass in the South Atlantic. This report will use recreational estimates that include MRIP CHTS units to evaluate changes to current management measures (SEFSC Recreational CHTS ACL Monitoring Dataset – May 15, 2025).

Landings History

The annual catch limit (ACL) monitoring datasets for each species were filtered to include black sea bass landings records in the South Atlantic region, from 2015 to 2023/2024. The landings for both sectors were aggregated by calendar year to show the recent landing behavior for the fishery (**Figure F.1**). Both sectors show a declining trend in landings over this time period. Neither fishing sector has landed their full allocation of the ACL in recent years. Action 1 aims to set an ACT at 50% of the 5-year recent average for each sector. Commercial landings were aggregated by calendar year (**Table F.1**), but recreational landings were aggregated by fishing year, April 1 through March 31 of the subsequent year (**Table F.2**). The five year landings average for the commercial sector is 97,114 pounds whole weight (lb ww), which would result in an ACT of 48,557 lb ww. For the recreational sector, the average landings for the 5 most recent fishing years was 126,285 lb ww, which would result in an ACT of 63,143 lb ww. These ACT values were used in subsequent analyses to project season duration for Actions 2, 3 and 4.

Table F.1. Annual calendar year commercial landings from 2015 to 2023, in lb ww.

Year	Landings (lb ww)
2015	497,553
2016	263,604
2017	336,084
2018	249,298
2019	199,058
2020	80,690
2021	57,250
2022	78,566
2023	70,005

Table F.2. Annual fishing year recreational landings from the 2015-2016 through 2023-2024 fishing years, in lb ww.

Fishing Year	Landings (lb ww)
2015-2016	380,896
2016-2017	385,646
2017-2018	335,356
2018-2019	188,335
2019-2020	170,190
2020-2021	104,201
2021-2022	117,789
2022-2023	110,659
2023-2024	128,587

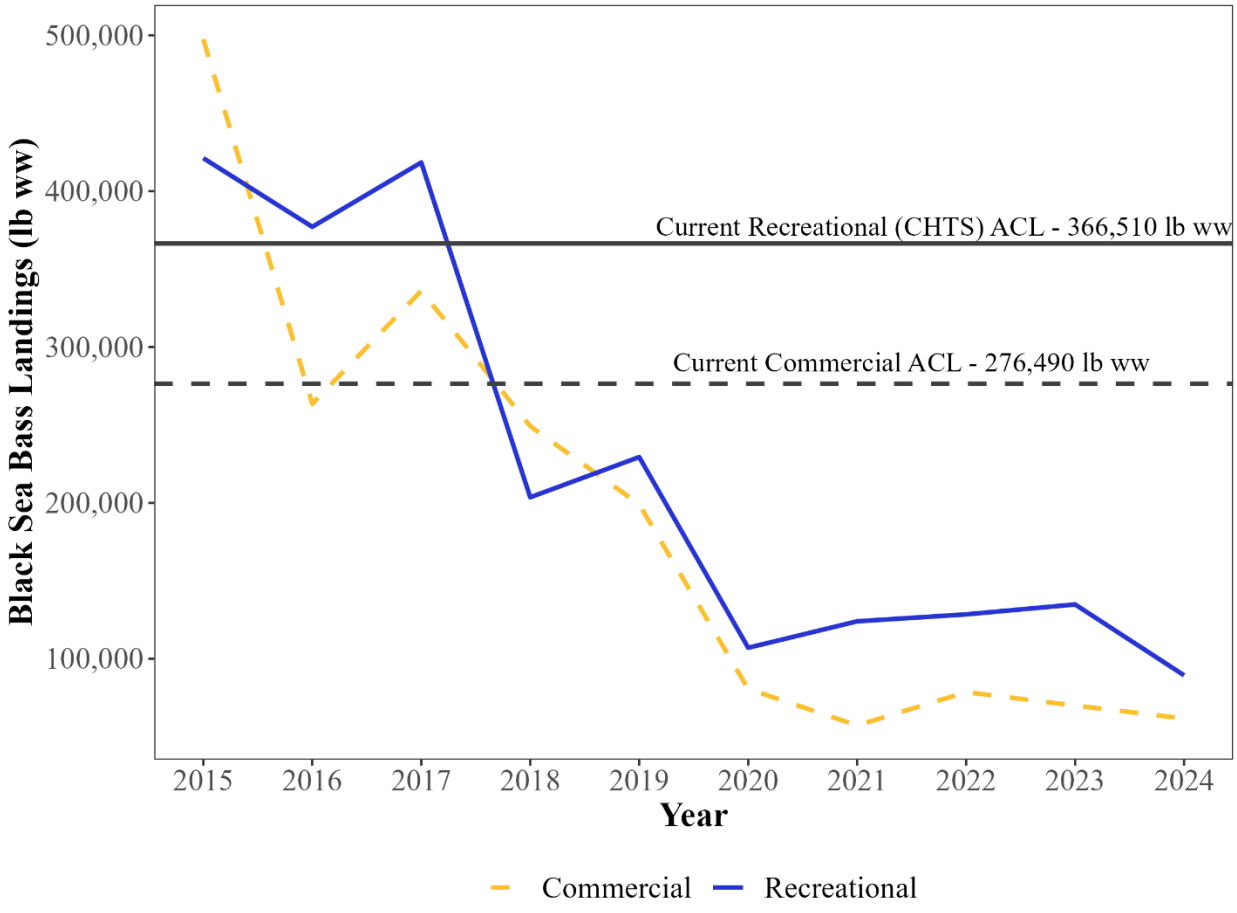

Figure F.1. Aggregated annual calendar year annual estimates of black seas bass landings from 2014 to 2024, by fishing sector. Landings are presented by calendar year to provide a direct comparison between sectors, but fishing year aggregations are used for season duration projections.

Season Duration Analysis – Landings Estimates

Actions 2 through 4 propose changes to various management measures for the commercial and recreational sectors. To project season duration for each Action, the landings behavior of each sector was investigated at a finer temporal scale. The average landings for the three most recent calendar / fishing years for the commercial and recreational sector were plotted by month and wave, respectively. The commercial sector's landings were highest in the earliest months of the year, specifically January and February, showing a declining trend through November (**Figure 2**). Concerns were raised at the June 2025 South Atlantic Council Meeting that landings behaviors might vary based on the gear used to prosecute the commercial fishery. The commercial landings were investigated to better understand the contribution of each gear grouping to overall commercial landings. The gears were aggregated into two categories: Dive / Line or Net/Pot gears. Landings were split evenly by gear groupings in each month of the year, but a much lower number of dealers/participants were associated with landings from the Net/Pot gears. The landings for the recreational sector were highest in Wave 3 (May/June), with similar landings estimates for other waves, with a slight declining trend from July through December (**Figure 3**). These landing averages were used to calculate the daily catch rates for each sector, by assuming equal daily landings rates within each month or wave for the commercial and recreational sectors, respectively.

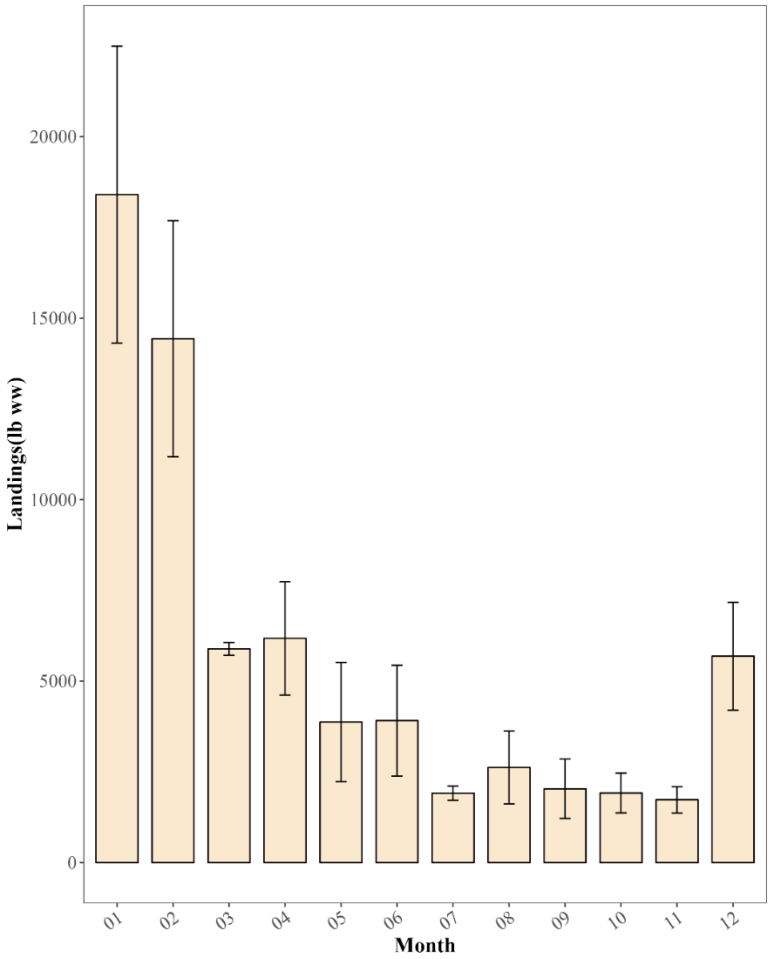

Figure F.2. Commercial black sea bass landings (lb ww) by month, averaged from 2021 to 2023. Error bars represent standard error.

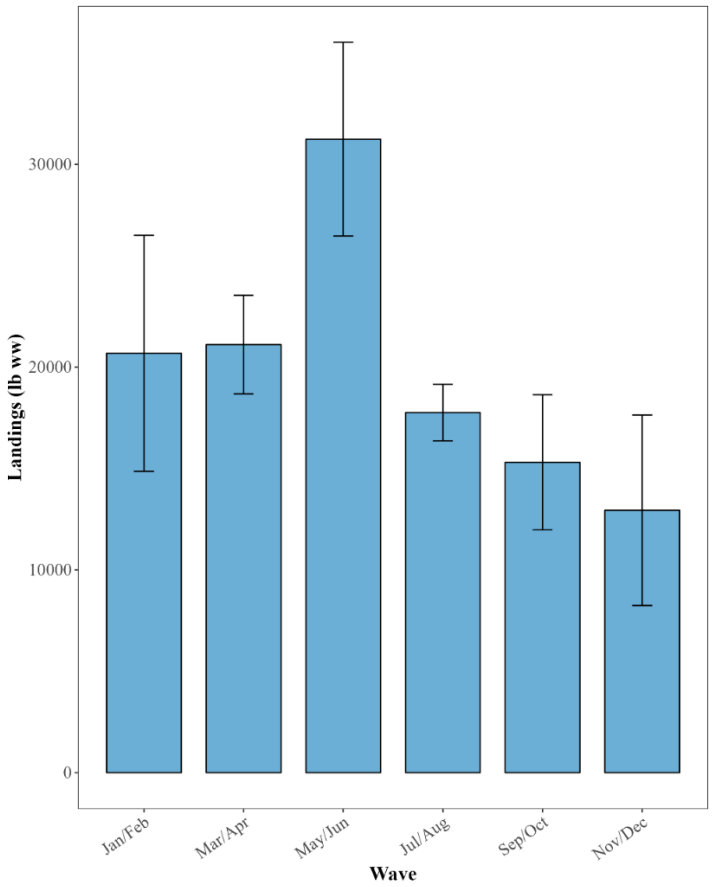

Figure F.3. Recreational black sea bass landings by wave, averaged from 2021/2022 to 2023/2024. Error bars represent standard error.

Recreational Season Duration Analysis – Bag and Size Limits

In Action 2, the Council proposed reducing the daily bag limit for the recreational sector of the black sea bass fishery. Available recreational trip records were investigated to describe the current landing behavior for anglers. MRIP APAIS dockside angler trip records and SRHS electronic logbook data from the 5 most recent years (2019-2023) were used to generate a distribution of harvest per angler trip (**Figure F.4**). The harvest per angler for headboat trips was calculated by dividing the vessel trip harvest by the number of anglers on board, which may result in estimates of partial fish being harvested per angler. Over 60% of recreational angler trips harvested one or less than one black sea bass. To investigate each bag limit alternative in Action 2, a percent reduction in catch was calculated by determining the proportion of catch associated with each alternative. If an angler harvest record was higher than the proposed alternative, that value was changed to match the maximum value allowed by the proposed alternative. For example, if an angler trip record indicated that three black sea bass were harvested for Action 2 – Alternative 2, the bag value for that record was changed to one to match the maximum allowable catch for that alternative. The final percent reductions for each Action 2 alternative was calculated by dividing the harvest total from each alternative by the harvest total from the No Action alternative (**Table F.3**).

In **Action 3**, the Council proposed reducing the minimum size limit for the recreational sector. Available harvest lengths from the MRIP APAIS and SRHS dockside sampling surveys are limited in range by the current minimum size limit, with few fish intercepted below the current size limit. This data is not sufficient to determine the impact of changing the size limit, as it would likely underestimate the number of sub-legal size fish caught by the recreational sector. State biologists conduct at-sea observer surveys in each state within the South Atlantic region that record length measurements from both retained catch and discarded (sub-legal) fish on headboat trips. Length data from the North Carolina through Georgia programs was provided by the SEFSC (Data provided July 15, 2025) and Florida Fish and Wildlife Research Institute (FWRI) provided black sea bass length data from Florida observer trips (Data provided March 25, 2025). These data were filtered to represent the last five years (2019-2023), and the proportion of fish in one inch bins was calculated to quantify the distribution of lengths caught by the headboat fleet (**Figure F.5**). There is no other available data to represent both sub-legal and legal sized black sea bass, so the headboat fleet data was used as a proxy for the entire recreational sector. This distribution showed that many sub-legal sized fish are being discarded by the recreational fishery. The proposed alternatives in Action 3 would result in an increase in harvest, if the size limit is lowered. To investigate each size limit alternative in Action 3, a percent increase in catch was calculated by determining the proportion of catch associated with each size limit alternative. The final percent increase for each Action 3 alternative was calculated by dividing the number of fish associated with each alternative by the number of fish associated with the No Action alternative (**Table F.4**). The Action 3 alternatives are proposed to increase landings by two to four times the current harvest levels, due to the large number of discarded fish that are at least 11 inches in length.

The evaluation of potential closure dates was accomplished by scaling the average daily landings rate by both the percent reduction for each bag limit alternative and the percent increase from each size limit alternative. This allowed for the interactive effect of each bag and size alternative to be evaluated together. The scaled daily landings estimates were summed cumulatively and compared to the proposed ACT (63,143 lb ww) to determine which date the fishery was projected to be closed and the total number of open fishing days for each scenario. Three landings estimates were used to provide projections that incorporated uncertainty: average landings, average landings + 1 standard error and average landings + 2 standard error. This range of landings estimates may represent increased or shifting effort due to more stringent management. Projections were evaluated from an April 1 start date for each alternative, to match the fishing year convention for the recreational black sea bass fishery. All but one scenario is projected to close the recreational fishing season before the end of the fishing year when both a bag and size limit change is implemented. Scenarios that include a lower size limit lead to a shorter projected season length for the recreational sector, while reducing the bag limit to one fish per person has the potential to provide opportunities for a longer recreational season.

Table F.3. Proposed recreational bag limit alternatives and associated percent reduction for each Action 2 alternative.

Alternatives	Percent Reduction
Alternative 1 (No Action): 7 fish per person per day	0%
Alternative 2: 1 fish per person per day	50%
Alternative 3: 2 fish per person per day	30%
Alternative 4: 3 fish per person per day	21%
Alternative 5: 4 fish per person per day	15%

Table F.4. Percent increase for each Action 3 alternative.

Alternatives	Size Limit Scalar
Alternative 1 (No Action): 13 inch total length	1.00
Alternative 2: 12 inch total length	2.24
Alternative 3: 11 inch total length	3.87

Table F.5. Predictions for when black sea bass annual catch target (63,143 lb ww) would be met under the bag limit (Action 2) and size limit (Action 3) alternatives proposed for the recreational sector.

Action 3	**Alternative 1 (No Action): 13 inch total length**		**Alternative 2: 12 inch total length**		**Alternative 3: 11 inch total length**	
Action 2	*Closure Date*	*Fishing Days*	*Closure Date*	*Fishing Days*	*Closure Date*	*Fishing Days*
AVERAGE LANDINGS						
Alternative 1 (No Action): 7 fish per person per day	16-Sep	168	4-Jun	64	12-May	41
Alternative 2: 1 fish per person per day	-	365	22-Aug	143	13-Jun	73
Alternative 3: 2 fish per person per day	9-Jan	283	28-Jun	88	26-May	55
Alternative 4: 3 fish per person per day	24-Nov	237	19-Jun	79	20-May	49
Alternative 5: 4 fish per person per day	31-Oct	213	14-Jun	74	18-May	47
AVERAGE LANDINGS + 1 STANDARD ERROR						
Alternative 1 (No Action): 7 fish per person per day	20-Aug	141	29-May	58	9-May	38
Alternative 2: 1 fish per person per day	24-Feb	329	30-Jul	120	6-Jun	66
Alternative 3: 2 fish per person per day	19-Nov	232	18-Jun	78	21-May	50
Alternative 4: 3 fish per person per day	14-Oct	196	10-Jun	70	16-May	45
Alternative 5: 4 fish per person per day	27-Sep	179	6-Jun	66	14-May	43
AVERAGE LANDINGS + 2 STANDARD ERROR						
Alternative 1 (No Action): 7 fish per person per day	30-Jul	120	24-May	53	6-May	35
Alternative 2: 1 fish per person per day	18-Jan	292	10-Jul	100	31-May	60
Alternative 3: 2 fish per person per day	17-Oct	199	11-Jun	71	17-May	46
Alternative 4: 3 fish per person per day	17-Sep	169	4-Jun	64	12-May	41
Alternative 5: 4 fish per person per day	2-Sep	154	31-May	60	10-May	39

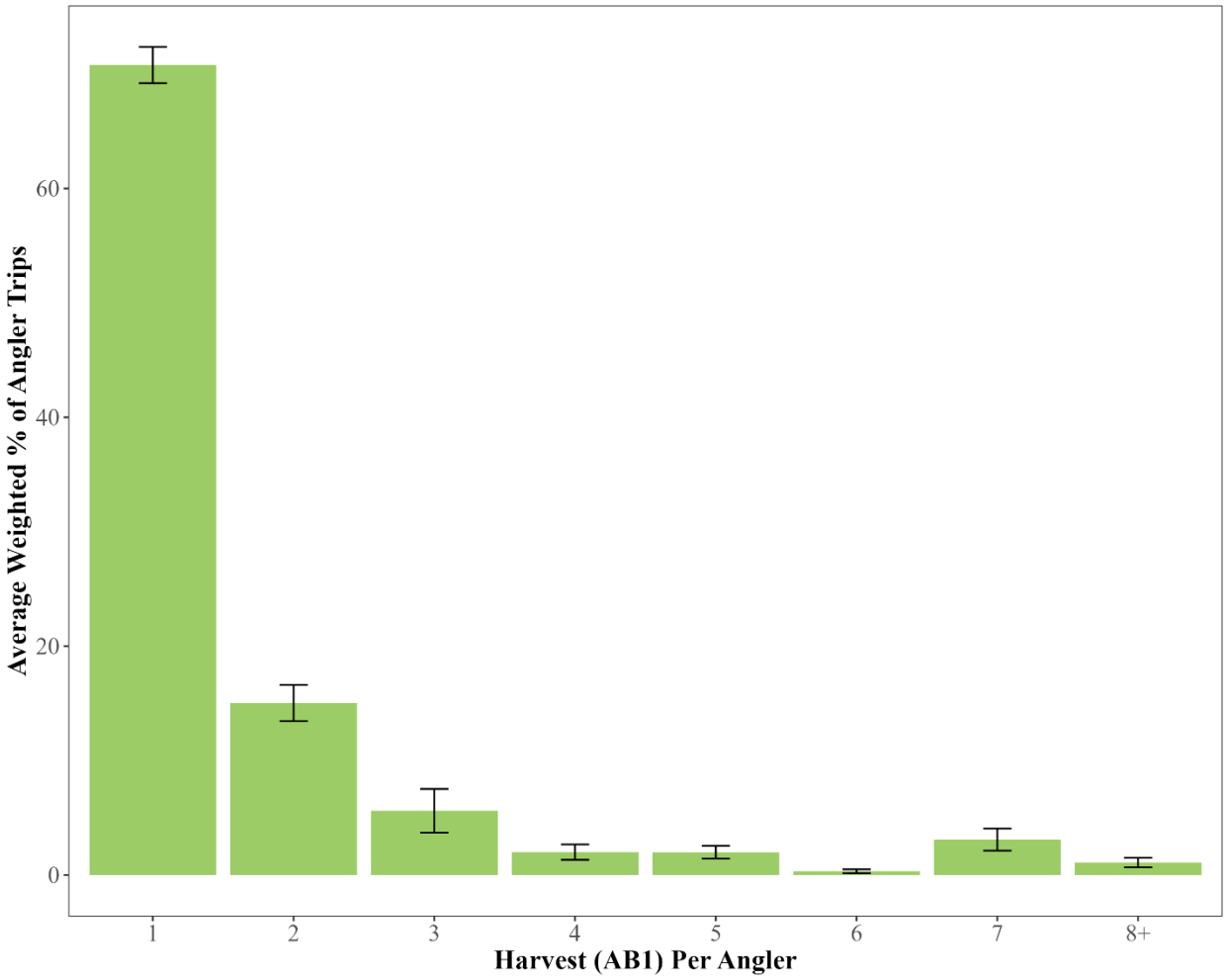

Figure F.4. Weighted distribution of angler harvest (AB1) by recreational anglers intercepted by MRIP APAIS samplers or reported to the Southeast Region Headboat Survey electronic logbook reports.

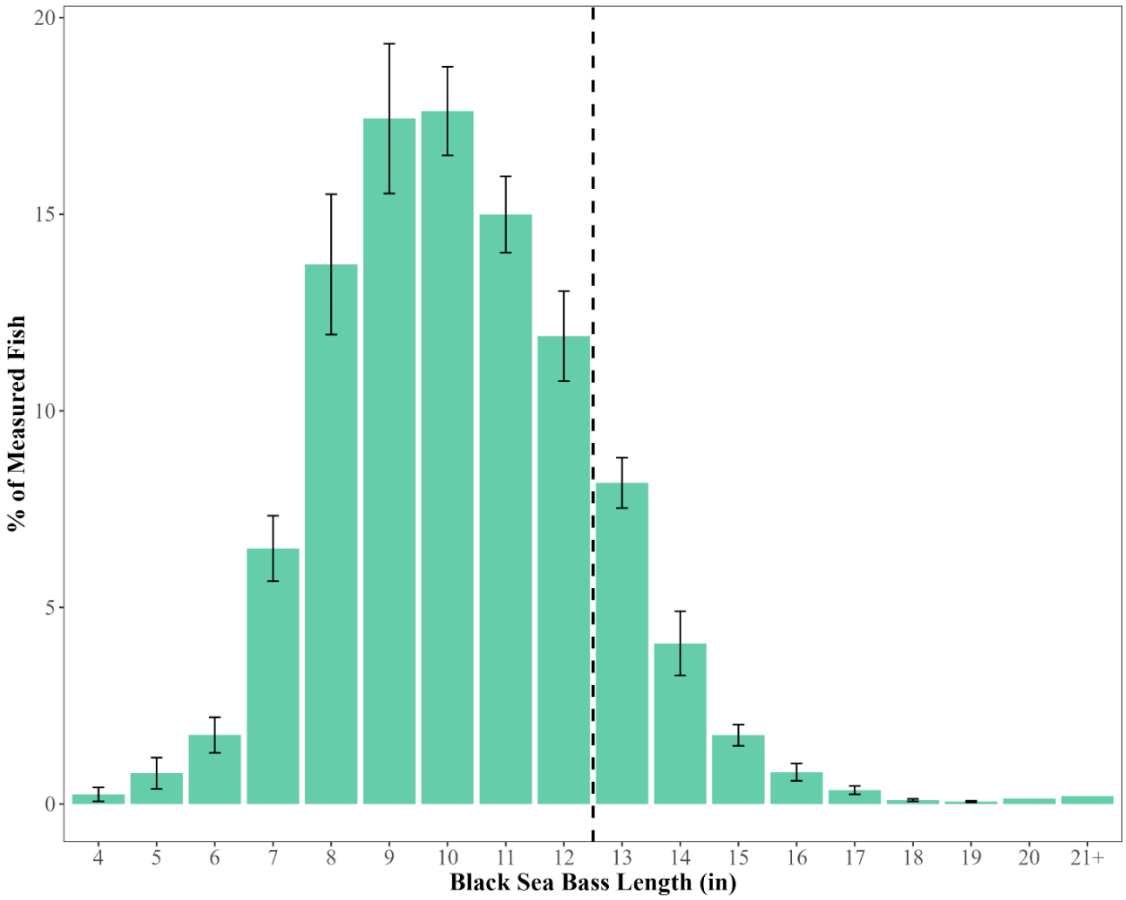

Figure F.5. Distribution of black sea bass lengths sampled by state at-sea observers on recreational headboat trips from 2021/2022 to 2023/2024 fishing years, in one inch bins.

Season Duration Analysis – Spawning Closures

Action 4 of Regulatory Amendment 37 proposes to implement a spawning closure early in the calendar year to protect black sea bass from harvest. Any black sea bass spawning closure alternatives selected during the first four months of the year will align with the shallow water grouper closure that occurs in the South Atlantic region between January 1st and April 30th each year. To evaluate the impact of each closure alternative, the daily landings rates is assumed to be zero for each day of the proposed spawning closure. Similar to the bag and size limit projections described above, three landings values are used in the projections: average landings, average landings + 1 standard error and average landings +2 standard error. This range of values may reflect additional landings potential after a closure period and uncertainty around landings estimates in recent years. The daily landings estimates for each sector were then cumulatively summed and compared to the ACT value proposed in Action 1 to determine if the catch limit would be exceeded. The commercial projections were based on a January 1 season start, whereas the recreational projections were based on an April 1 fishing year start date. The bag and size limit alternatives proposed in Actions 2 and 3 are not considered in conjunction with the Action 4 spawning closure alternatives.

The commercial sector landings of black sea bass are highest in the earliest months of the calendar year, therefore Alternatives 2a and 2b are projected to significantly reduce landings from the status quo and allow for the longest possible black sea bass season (**Table F.6**). The proposed spawning closure alternatives are not projected to impact the season length for the recreational sector, with the exception of Alternative 3d (April 1st to 30th closure). The high landings from summer months will likely lead to an in-season closure before the start of the proposed spawning closure Alternatives 3a, 3b and 3c (**Table F.7**). The projected closure dates are not directly additive, so a combination of alternatives would need to be re-analyzed to provide a projected closure date, based on implementing a multi-month spawning closure.

Table 6. Predictions for when black sea bass annual catch target (48,557 lb ww) would be met under each of the Action 4 spawning closure alternatives for the commercial sector.

Alternatives	**Average Landings**		**Average Landings +1 SE**		**Average Landings +2 SE**	
	Closure Date	*Fishing Days*	*Closure Date*	*Fishing Days*	*Closure Date*	*Fishing Days*
Alternative 1: No Action (No Spawning Closure)	30-May	149	10-Apr	99	7-Mar	65
Alternative 2a: Closure January 1 - January 31	23-Dec	325	6-Sep	217	23-Jun	142
Alternative 2b: Closure February 1 - February 28	1-Dec	306	22-Jul	174	30-May	121
Alternative 2c: Closure March 1 - March 31	29-Jul	178	5-May	93	5-Apr	63
Alternative 2d: Closure April 1 - April 30	2-Aug	183	14-May	103	7-Mar	65

Table 7. Predictions for when black sea bass annual catch target (63,143 lb ww) would be met under each of the Action 4 spawning closure alternatives for the recreational sector.

Alternatives	**Average Landings**		**Average Landings +1 SE**		**Average Landings +2 SE**	
	Closure Date	*Fishing Days*	*Closure Date*	*Fishing Days*	*Closure Date*	*Fishing Days*
Alternative 1: No Action (No Spawning Closure)	16-Sep	168	20-Aug	141	30-Jul	120
Alternative 3a: Spawning Closure in January	16-Sep	168	20-Aug	141	30-Jul	120
Alternative 3b: Spawning Closure February	16-Sep	168	20-Aug	141	30-Jul	120
Alternative 3c: Spawning Closure March	16-Sep	168	20-Aug	141	30-Jul	120
Alternative 3d: Spawning Closure in April	27-Oct	179	27-Sep	149	6-Sep	128

Appendix G. Bycatch Practicability Analysis

G.1. Background

Regulatory Amendment 37 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) would modify management of South Atlantic black sea bass. Actions include establishing annual catch targets, revising accountability measures, revising recreational bag and size limits, and establishing a spawning closure for South Atlantic black sea bass. The National Marine Fisheries Service (NMFS) outlines at 50 CFR § 600.350(d) (3) (i) ten factors that should be considered in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable.

1. Population effects for the bycatch species.
2. Ecological effects due to changes in the bycatch of that species (effects on other species in the ecosystem).
3. Changes in the bycatch of other species of fish and the resulting population and ecosystem effects.
4. Effects on marine mammals and birds.
5. Changes in fishing, processing, disposal, and marketing costs.
6. Changes in fishing practices and behavior of fishermen.
7. Changes in research, administration, and enforcement costs and management effectiveness.
8. Changes in the economic, social, or cultural value of fishing activities and non-consumptive uses of fishery resources.
9. Changes in the distribution of benefits and costs.
10. Social effects.

Bycatch Reporting Requirements and Methodology

For the commercial sector, the vessel reporting requirement is achieved through logbooks. Fishermen with Commercial South Atlantic Unlimited Snapper Grouper or 225-lb Trip Limit Snapper Grouper Permits, who are selected by the Science and Research Director, are required to maintain and submit fishing records through the NMFS Southeast Fisheries Science Center (SEFSC) Commercial Logbook. Discard data are collected using the Supplemental Discard Logbook that is sent to a 20% stratified random sample of the active commercial permit holders in the fishery. In addition to the number of self-reported discards per trip and gear, the SEFSC Supplemental Discard Logbook attempts to quantify the reason why discarding occurs using four codes.[13] Fishermen can specify multiple reasons for a species discarded on the same trip and gear.

1) Regulation – Not legal size: Animals that would have been sold, however local or federal size limits forbid it.
2) Regulation – Out of season: Animals that would have been sold, however the local or federal fishing season is closed.

[13] More information on the discard logbook is available here https://www.fisheries.noaa.gov/about/southeast-fisheries-science-center.

3) Regulation – Other: Animals that would have been sold, however a local or federal regulation other than size or season, forbids it (other than size or season; i.e., protected species, not properly permitted).
4) Market conditions: Animals that have no market value (rotten, damaged).

For the recreational sector, estimates of discards from private recreational and charter fishermen are collected through the Marine Recreational Information Program (MRIP)/Fishing Effort Survey (FES). MRIP/FES replaced the Marine Recreational Fishery Statistics Survey. The Southeast Region Headboat Survey, which includes limited headboat observer sampling, collects discard information from headboat vessels.

G.2. Population Effects for the Bycatch Species

Commercial Sector

Commercial discards in the South Atlantic snapper grouper fishery are shown in Table G.2.1 and Figure G.2.1. Most discards originate from handline/electric rig and trap gear, with some discards from trolling gear and relatively low discards from longline gear. Trap/pot gear show high levels of discarded black sea bass, which is the targeted species of this gear type, but low levels of bycatch for other species. It is possible that trip-level reporting leads to the relatively high discard estimates from trolling gear; these may be sets using another gear type (i.e., handline/electric rig) on a trip declared as a trolling gear trip. The ratio of commercial landings to commercial discards is not compared because commercial landings are reported in pounds and discards are reported in numbers of fish.

Of the four discard codes, regulations (i.e., not legal size and out of season) was the most common reason selected for the most commonly discarded snapper grouper species based on self-reported discards (Table G.2.1). The minimum size limit appears to be the primary driver and high percentage of commercial discards for black sea bass, greater amberjack, vermilion snapper, and gag.

Table G.2.1. Expanded mean estimated South Atlantic commercial discards (number of fish) during snapper grouper trips (defined as trips >50% of landings from snapper grouper stocks), sorted from largest to smallest, by gear, for the 2019-2023 period.

Stock	Handline/ Electric	Stock	Longline	Stock	Trap / Pot	Stock	Troll
Vermilion Snapper	14,760	Blueline Tilefish	267	**Black Sea Bass**	**11,145**	Red Snapper	143
Red Snapper	11,156	Snowy Grouper	146	Gray Triggerfish	205	King Mackerel	25
Red Porgy	6,167	Red Porgy	102	Gag	49	Greater Amberjack	16
Yellowtail Snapper	5,113	Red Snapper	32	Red Snapper	36	Cobia	11
Black Sea Bass	**3,079**	Greater Amberjack	19	Red Porgy	35	Yellowtail Snapper	10
Gray Triggerfish	2,675	Vermilion Snapper	16	-	-	**Black Sea Bass**	**7**
Almaco Jack	2,336	Goliath Grouper	9	-	-	Little Tunny	6
Blue Runner	1,658	Golden Tilefish	7	-	-	Lesser Amberjack	5
Greater Amberjack	1,094	Warsaw Grouper	6	-	-	Gag	4
Gag	949	Almaco Jack	4	-	-	Banded Rudderfish	3

Source: SEFSC Coastal Logbook (May 2025) and Discard Logbook (May 2025).

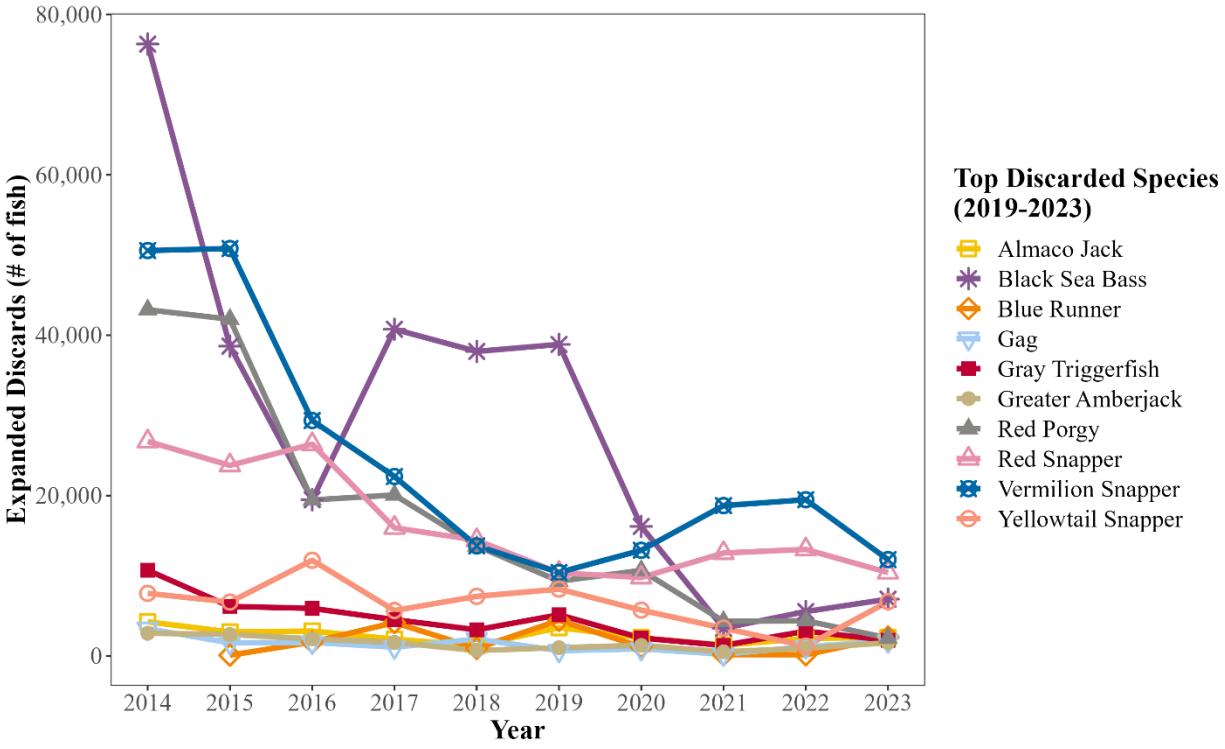

Figure G.2.1. Expanded self-reported commercial discards (numbers of fish) for the top ten species discarded during snapper grouper trips (defined as trips with 50% of landings from snapper grouper stocks) from 2019-2023.
Source: SEFSC Coastal Logbook (May 2025) and Discard Logbook (May 2025).

Table G.2.2. The percentage of unexpanded discards for each discard reason out of the total number of self-reported discards reported to the Supplemental Discard Logbook for the top ten snapper grouper species discarded in the South Atlantic from 2019 through 2023. Some percentages may not sum to 100% due to rounding.

Species	Not Legal Size	Out of Season	Other Regulations	Market Conditions
Almaco Jack	65%	25%	5%	5%
Black Sea Bass	**100%**	**0%**	**0%**	**0%**
Blue Runner	25%	0%	50%	24%
Gag	69%	29%	2%	1%
Gray Triggerfish	78%	21%	2%	0%
Greater Amberjack	94%	3%	3%	1%
Red Porgy	52%	40%	6%	2%
Red Snapper	2%	85%	12%	1%
Vermilion Snapper	96%	1%	4%	0%
Yellowtail Snapper	99%	1%	0%	0%

Source: SEFSC Supplemental Commercial Discard Logbook (March 2023).

Recreational Sector

From 2019 through 2023, the most discarded species on trips capturing a snapper grouper species was black sea bass for all three modes (Table G.2.3). In addition, red snapper, tomtate, white grunt, yellowtail snapper, gray triggerfish, mutton snapper, and gray snapper were in the top ten for all modes.

Table G.2.3. Top ten species with discards reported on trips capturing a snapper grouper species in the South Atlantic by recreational mode from 2019 through 2023. Species are sorted by number of total discards for each mode from 2019-2023. Private boat landings use MRIP (CHTS) estimates.

Rank	HEADBOAT		CHARTER		PRIVATE BOAT	
	Species	Discards (N)	Species	Discards (N)	Species	Discards (N)
1	**Black Sea Bass**	**1,516,748**	**Black Sea Bass**	**858,061**	**Black Sea Bass**	**5,180,956**
2	Vermilion Snapper	372,221	Yellowtail Snapper	618,097	Gray Snapper	4,848,329
3	White Grunt	304,380	Red Snapper	553,262	Red Snapper	2,297,861
4	Yellowtail Snapper	285,420	Gray Snapper	545,504	White Grunt	1,551,425
5	Red Snapper	254,945	Tomtate	338,939	Yellowtail Snapper	1,446,188
6	Tomtate	236,088	Vermilion Snapper	307,530	Tomtate	1,038,147
7	Gray Triggerfish	86,380	Mutton Snapper	293,344	Mutton Snapper	908,826
8	Lane Snapper	75,115	White Grunt	258,121	Vermilion Snapper	757,798
9	Mutton Snapper	64,076	Gray Triggerfish	82,564	Lane Snapper	573,082
10	Graysby	51,027	Greater Amberjack	68,615	Gray Triggerfish	321,436

Sources: MRIP CHTS data from SEFSC Recreational ACL Dataset (May 2025); Expanded Headboat data from SEFSC Headboat Logbook files (February 2025).

Recreational discards of several snapper grouper species are higher than the landings for certain modes of fishing (Table G.2.4). Black sea bass, gag, red snapper, red grouper, mutton snapper, and tomtate discards are higher than their landings across all modes. Across most of the snapper grouper species, the magnitude of private mode discards is much higher compared to the headboat or charter modes. Black sea bass recreational discards to landings ratios are high (Table G.2.4).

Table G.2.4. South Atlantic snapper grouper headboat, charter, and private mean annual estimates of landings and discards (2019-2023). Headboat and MRIP (charter and private) landings and discards are in numbers of fish. Private boat landings use MRIP (CHTS) estimates.

Species	HEADBOAT			CHARTER			PRIVATE		
	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)	Landings (N)	Discards (N)	Ratio (D:L)
Almaco Jack	11,606	1,718	15%	19,204	4,101	21%	16,581	42,408	256%
Black Sea Bass	**29,047**	**303,350**	**1044%**	**19,821**	**171,612**	**866%**	**45,405**	**1,036,191**	**2282%**
Gag	491	962	196%	2,137	5,934	278%	3,521	16,340	464%
Gray Triggerfish	27,556	17,276	63%	55,115	16,513	30%	54,557	64,287	118%
Greater Amberjack	2,336	2,296	98%	22,046	13,723	62%	8,629	14,237	165%
Mutton Snapper	9,182	12,815	140%	28,855	58,669	203%	49,273	181,765	369%
Red Grouper	1,977	9,610	486%	5,521	12,746	231%	10,002	36,723	367%
Red Porgy	5,111	4,134	81%	4,479	2,883	64%	7,638	6,495	85%
Red Snapper	2,655	50,989	1920%	8,074	110,652	1371%	45,068	459,572	1020%
Scamp	791	571	72%	1,118	908	81%	1,330	1,624	122%
Snowy Grouper	216	3	1%	913	285	31%	886	333	38%
Tomtate	40,803	47,218	116%	23,455	67,788	289%	61,657	207,629	337%
Vermilion Snapper	121,820	74,444	61%	108,723	61,506	57%	99,798	151,560	152%
White Grunt	125,552	60,876	48%	21,094	51,624	245%	115,340	310,285	269%
Whitebone Porgy	3,989	231	6%	2,186	39	2%	5,971	802	13%
Yellowtail Snapper	94,982	57,084	60%	227,482	123,619	54%	199,637	289,238	145%

Sources: MRIP CHTS data from SEFSC Recreational ACL Dataset(May 2025); Expanded Headboat data from SEFSC Headboat Logbook files (February 2025).

G.3. Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality

Expected Impacts on Bycatch for the Subject Amendment Actions

Action 1 would establish ACTs and revise the AMs for South Atlantic black sea bass. Trap/pot gear show high levels of commercially discarded black sea bass, which is the targeted species of this gear type, but low levels of bycatch for other species. Therefore, implementing a lower commercial ACT, and revising the commercial in-season AM to close when the commercial ACT is met, likely shortening the length of the commercial fishing season. Vessels that primarily use their trap/pot gear to target black sea bass could reduce the instances black sea bass

are caught and discarded if the commercial fishery is closed. Commercial and recreational anglers that use hook and line gear may still catch and discard black sea bass after an in-season closure, on trips that target co-occurring reef fish species.

For the recreational sector, implementing a lower ACT than the current ACL and closing the season earlier than recent years could also reduce the instances black sea bass are caught and discarded if the fishery is closed. However, for the hook-and-line components of both sectors, bycatch of black sea bass could increase if the black sea bass fishery is closed and fishermen continue fishing for other snapper grouper species and need to discard them due to out-of-season regulations.

Action 2 would reduce the recreational bag limit for South Atlantic black sea bass. Although the current bag limit is seven fish per person per day, Figure 4.2.1.1. shows that over 60% of recreational angler trips harvested one or (less than one) black sea bass. A more restrictive bag limit could increase the number of discards of black sea bass per trip if fishermen continue fishing for other species once their bag limit is caught. It could also lengthen the recreational black sea bass season and allow for continued interactions with black sea bass, which could lead to an increase in dead discards, relative to the projection of the lower ACT from Action 1 and the current bag limit. If anglers stop bottom fishing in areas with black sea bass after meeting their bag limit, the lengthened black sea bass season could reduce discards as caught black sea bass could be kept, instead of discarded, for a longer portion of the year. Overall fishing activity or behavior in the snapper grouper recreational sector is not expected to substantially change as a result of this action, thus no changes in bycatch of co-occurring species are expected as a result of Action 2.

Action 3 would reduce the recreational minimum size limit for South Atlantic black sea bass. Recreational discards of black sea bass are higher than their landings across all modes (Table G.2.4). Black sea bass recreational discards to landings ratios are high (Table G.2.4). Therefore, reducing the minimum size limit could allow smaller fish to be retained which could reduce discards. Overall, smaller minimum size limits will potentially reduce additional discards. This, in turn, would help to minimize the overall mortality of this stock per season. However, there will likely be a tradeoff between fewer discards due to a smaller minimum size limit, but greater discards resulting from a shorter fishing season.

Action 4 would establish a spawning season closure for South Atlantic black sea bass ranging from one to four months (January through April) for both sectors. These months would align with the four-month grouper spawning closure from January through April, which overlap with most of the black sea bass spawning season (February through May). For black sea bass, if no additional months are selected to be closed, and fishing for black sea bass continues during these months, then bycatch of other species would continue under the present circumstances. However, selecting one or more months for black sea bass to be closed to harvest (for either sector) may increase discards of black sea bass caught using hook-and-line gear when fishermen are targeting other snapper grouper species. Commercial discards caught using pot gear would be expected to decrease due to pots not being deployed during the closure.

Past, Current, and Future Actions to Prevent Bycatch and Improve Monitoring of Harvest, Discards, and Discard Mortality

Actions taken in the Snapper Grouper FMP related to management of black sea bass are outlined in Section 1.6 of this framework amendment. Other past, current, and future actions that could prevent bycatch and/or improve monitoring of harvest, discards, and discard mortality are included below.

Amendment 16 to the Snapper Grouper FMP (SAFMC 2009) required the use of dehooking devices, which could help reduce bycatch mortality of snapper grouper species. Dehooking devices can allow fishermen to remove hooks with greater ease and more quickly without removing the fish from the water. If a fish does need to be removed from the water, de-hookers reduce handling time thus increasing survival (Cooke et al. 2001).

Amendment 17A to the Snapper Grouper FMP (SAFMC 2010) required circle hooks for snapper grouper species north of 28 degrees latitude, which has likely reduced bycatch mortality of some snapper grouper species.

The Comprehensive Ecosystem-Based Amendment 2 (CE-BA 2; SAFMC 2011b) included actions that modified management of SMZs off South Carolina; revised sea turtle release gear requirements for the snapper grouper fishery that were established in Amendment 15B to the Snapper Grouper FMP (SAFMC 2008); and designated new essential fish habitat (EFH) and EFH-Habitat Areas of Particular Concern in the South Atlantic. CE-BA 2 also included an action that limited harvest and possession of snapper grouper and coastal migratory pelagic (CMP) species to the bag limit in SMZs off South Carolina. This action likely reduced bycatch around SMZs by restricting commercial harvest in the area but has probably had limited effect on the magnitude of overall bycatch of snapper grouper species in the South Atlantic.

The Comprehensive ACL Amendment (SAFMC 2011a) implemented ACLs and accountability measures (AM) for species not undergoing overfishing in the FMPs for snapper grouper, dolphin and wahoo, golden crab, and *Sargassum*, in addition to other actions such as allocations and establishing annual catch targets for the recreational sector. ACLs and AMs have likely reduced bycatch of target species as well as incidentally caught species.

The Council's Comprehensive Headboat Reporting Amendment (SAFMC 2013) changed the reporting frequency by headboats from monthly to weekly and required that reports be submitted electronically. The action is expected to provide more timely information on landings and discards. Improved information on landings would help ensure ACLs are not exceeded. Furthermore, more timely and accurate information would be expected to provide a better understanding of the composition and magnitude of catch and bycatch, enhance the quality of data provided for stock assessments, increase the quality of assessment output, and lead to better decisions regarding additional measures to reduce bycatch.

Amendment 36 to the Snapper Grouper FMP (SAFMC 2016) established spawning SMZs and is expected to reduce bycatch of many snapper grouper species, especially speckled hind and Warsaw grouper.

The Council developed a For-Hire Reporting Amendment (SAFMC 2017) that requires all federally permitted charter vessels report landings information weekly to the SEFSC electronically.

Amendment 42 to the Snapper Grouper FMP (SAFMC 2019) modified sea turtle release gear regulations for the commercial snapper grouper fishery and modified the snapper grouper framework so the Council may more quickly modify sea turtle and other protected resources release gear and handling requirements in the future.

Regulatory Amendment 29 to the Snapper Grouper FMP (SAFMC 2020) required descending devices be on board all commercial, for-hire, and private recreational vessels while fishing for or possessing snapper grouper species; the use of non-offset, non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear and natural baits north of 28° N latitude; and all hooks be non-stainless steel when fishing for snapper grouper species with hook-and-line gear and natural baits throughout South Atlantic federal waters. The Council has also implemented an extensive outreach and public education program, which along with its citizen science initiative is promoting best fishing practices for all the species it manages.

The Joint Commercial Electronic Logbook Reporting Amendment (Snapper Grouper Amendment 54; SAFMC 2024), which is currently under Secretarial review, would require all federally permitted commercial fishing vessels in the southeast to also report their logbook landings information electronically. This and previous amendments for other components of the fishery will help to improve estimates on the composition and magnitude of catch and bycatch of federally managed species in the southeast region.

These past, current, and potential future actions will help to improve estimates on the composition and magnitude of catch and bycatch of federally managed species in the southeast region and minimize discard mortality. Additional information on fishery related actions from the past, present, and future considerations can be found in Chapter 6 (Cumulative Effects) of the amendment.

G.4. Ecological Effects Due to Changes in Bycatch

Release mortality rates for the snapper grouper fishery are widely variable species to species and sector to sector, and are dependent on fishing mode (Table G.4.1). For instance, recreational discards of red snapper in the South Atlantic are a main driver in the overfishing determination for the stock (SEDAR 73 2021). However, discard mortality estimates for snapper grouper species are variable and highly uncertain. Generally, release mortality is highly correlated with depth for snapper grouper species, with highest mortality among fish captured in deep water (Campbell et al. 2014; Pulver 2017; Rudershausen et al. 2014; Stephen and Harris 2010; Wilson and Burns 1996). Gag can be captured over a broad depth range or transition to different depth zones throughout their life history, so release mortality rates can be variable. The commercial sector shows a slightly higher discard mortality rate (40%) than the recreational sector (25%), likely due to the differences in average depth the two sectors prosecute the fishery. Release mortalities for black sea bass are listed in Table G.4.1.

Table G.4.1 Release mortality rates of select recreationally and commercially important snapper grouper species from recent SEDAR stock assessments.

Species	Fishery	Release Mortality	Data Source
Black Sea Bass	**Recreational - General**	**13.7%**	**SEDAR 76 (2023)**
Black Sea Bass	**Recreational - Headboat**	**15.2%**	**SEDAR 76 (2023)**
Black Sea Bass	**Commercial Trap/Pot (pre-2007)**	**14.0%**	**SEDAR 76 (2023)**
Black Sea Bass	**Commercial Trap/Pot (2007-present)**	**48.3%**	**SEDAR 76 (2023)**
Black Sea Bass	**Commercial Vertical Line**	**19.0%**	**SEDAR 76 (2023)**
Gag	Recreational	25.0%	SEDAR 10 Update (2014)
Gag	Commercial	40.0%	SEDAR 10 Update (2014)
Gray Triggerfish	Recreational & Commercial	59.0%	SEDAR 82 (2024)
Greater Amberjack	Recreational & Commercial	20.0%	SEDAR 59 (2020)
Mutton Snapper	Recreational	30.0%	SEDAR 79 (2024)
Mutton Snapper	Commercial	30.0%	SEDAR 79 (2024)
Red Porgy	Recreational	41.0%	SEDAR 60 (2020)
Red Porgy	Commercial	53.0%	SEDAR 60 (2020)
Red Snapper	Recreational - Private	23.0%	SEDAR 73 (2021)
Red Snapper	Recreational - Charter & Headboat	22.0%	SEDAR 73 (2021)
Red Snapper	Commercial	32.0%	SEDAR 73 (2021)
Scamp / Yellowmouth Grouper	Recreational	39.0%	SEDAR 68 (2021)
Scamp / Yellowmouth Grouper	Commercial	26.0%	SEDAR 68 (2021)
Vermilion snapper	Recreational	38.0%	SEDAR 55 (2018)
Vermilion snapper	Commercial	41.0%	SEDAR 55 (2018)
Yellowtail snapper	Recreational -General	30.0%	SEDAR 96 (2025)
Yellowtail snapper	Recreational - Headboat	20.0%	SEDAR 96 (2025)
Yellowtail snapper	Commercial	15.0%	SEDAR 96 (2025)

It is likely that most mortality is a function of hooking and handling of the fish when the hook is being removed. Regulatory Amendment 29 to the Snapper Grouper FMP (SAFMC 2020) required descending devices be on board all commercial, for-hire, and private recreational vessels while fishing for or possessing snapper grouper species; the use of non-offset, non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear and natural baits north of 28° N latitude; and all hooks be non-stainless steel when fishing for snapper grouper species with hook-and-line gear and natural baits throughout South Atlantic federal waters. The Council also implemented an extensive outreach and public education program, which along with its citizen science initiative is promoting best fishing practices for all

the species it manages. The goal of these regulations is to reduce discard mortality for snapper grouper species.

The actions contained in this framework amendment are not expected to result in substantial changes to bycatch in the snapper grouper fishery; thus, ecological effects due to changes in bycatch in this fishery are expected to be negligible. For more details on ecological effects, see Chapters 3 and 4 of this amendment.

G.5. Changes in the Bycatch of Other Fish Species and Resulting Population and Ecosystem Effects

Regulatory Amendment 37 is not expected to result in significant changes in bycatch of other fish species. The snapper grouper fishery is characterized by a high number of discards for all species and sectors (Table G.2.1. and G.2.3). Both sectors likely target a wide range of species, including dolphin and wahoo, snapper grouper, and coastal migratory pelagic species during each trip. This results in a varied amount and type of bycatch of species. However, the actions in this framework amendment are not expected to alter overall fishing activity or behavior in the fishery; thus, no changes in bycatch of other species are expected.

G.6. Effects on Marine Mammals and Birds

Marine Mammals

Under Section 118 of the Marine Mammal Protection Act (MMPA), NMFS must publish, at least annually, a List of Fisheries (LOF) that places all U.S. commercial fisheries into one of three categories based on the level of incidental serious injury and mortality of marine mammals that occurs in each fishery. The longline and hook-and-line gear components of the snapper grouper fishery are determined to have remote likelihood of / no known interactions with marine mammals (Category III, LOF, 89 FR 77789; September 24, 2024).

The black sea bass pot sector is considered a Category II fishery by NMFS because of its potential to occasionally interact with marine mammals. The Atlantic mixed species trap/pot fishery has had interactions with threatened and endangered species including fin and humpback whales (79 FR 77919; January 28, 2015). Some pot gear in other areas are Category I fisheries under the LOF, such as the Northeast/Mid-Atlantic American lobster and Jonah crab trap/pot fishery, because they frequently cause incidental mortalities or serious injuries of marine mammals. Category I fisheries have been documented to cause serious injury and death to North Atlantic right whales (Johnson et al. 2005, Knowlton et al. 2012). Other trap/pot fisheries are classified as Category III fisheries, such as the Southeastern U.S. Atlantic and Gulf of America golden crab trap/pot fishery, because there is a remote likelihood of or no known incidental mortality or serious injury of marine mammals.

Entanglements incidental to commercial fishing are the primary threat to right whales; however, less is known about the source of entanglement. Black sea bass gear has not been definitively identified in entanglements, although it cannot be ruled out as gear that has resulted in serious injuries or deaths to right whales.

Regulatory Amendment 36 to the Snapper Grouper FMP (currently under Secretarial Review) would provide additional practicality in switching gear types from traditional roped gear to on-demand gear which would reduce the number of lines in the water and thus lower the probability of negative interactions with marine mammals. Allowing for practical storage of on-demand black sea bass pots during transit could increase the likelihood that fishermen will use on-demand gear. Various alternatives are being considered, potentially facilitating the increased use of on-demand black sea bass pots and reducing the number of vertical lines in the water.

Sea Birds

The Bermuda petrel and roseate tern occur within the action area. Bermuda petrels are occasionally seen in the waters of the Gulf Stream off the coasts of North Carolina and South Carolina during the summer. Sightings are considered rare and only occur in low numbers (Alsop 2001). Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished US Fish and Wildlife Service data). Interaction with fisheries has not been reported as a concern for either of these species. Although, the Bermuda petrel and roseate tern occur within the action area, these species are not commonly found and neither has been described as associating with vessels or having had interactions with the dolphin wahoo fishery. Thus, the fishery is not likely to adversely affect the Bermuda petrel and the roseate tern.

G.7. Changes in Fishing, Processing, Disposal, and Marketing Costs

The actions proposed in Regulatory Amendment 37 are not expected to substantially alter fishing practices, processing, disposal, or marketing costs in the near or short term in relation to bycatch or discards in the snapper grouper fishery. As shown in the analyses in Chapter 4 of the preferred alternatives for actions potentially affecting catch, costs are not expected to change. Similarly in the long term, it is more likely that current fishing, processing, disposal, and marketing costs would be maintained at or near their status quo levels, thus leading to no anticipated changes.

G.8. Changes in Fishing Practices and Behavior of Fishermen

As discussed above, the actions proposed in Regulatory Amendment 37 are not expected to change fishing practices or fishing behavior and are likely to have little effect on the overall magnitude of discards. Also, any changes to fishing behavior and subsequent changes in the level of discards or discard mortality that may result from the actions in the framework amendment are expected to be small and would not jeopardize the sustainability of any target or non-target species.

G.9. Changes in Research, Administration, and Enforcement Costs and Management Effectiveness

Research

Research and monitoring are ongoing to understand the effectiveness of implemented management measures and their effect on bycatch. The SEFSC is developing electronic logbooks, which could be used to enable fishery managers to obtain information on species

composition, size distribution, geographic range, disposition, and depth of fishes that are released. Further, a joint Commercial Logbook Reporting Amendment was developed by the Council and the Gulf Fishery Management Council (formally known as the Gulf of Mexico Fishery Management Council) and is currently under review. The amendment would require electronic reporting of landings information by federally permitted commercial vessels to increase the timeliness and accuracy of landings and discard data. The For-Hire Reporting Amendment should improve timeliness and quality of data for the charter and headboat components of the recreational sector.

Cooperative research projects between science and industry are available each year in the form of grants from the Marine Fisheries Initiative, Saltonstall-Kennedy program, and the Cooperative Research Program. These programs can provide research funds for observer programs, as well as gear testing and testing of electronic devices. A condition of funding for these projects is that data are made available to the Councils and NMFS upon completion of a study.

Administration

The proposed actions are not expected to significantly impact administrative costs.

Enforcement

The proposed actions are not expected to significantly impact enforcement costs.

G.10. Changes in the Economic, Social, or Cultural Value of Fishing Activities and Non-Consumptive Uses of Fishery Resources

Changes in economic, social, or cultural values are discussed in Chapter 4. None of the actions and alternatives in Regulatory Amendment 37 are likely to change the current level of bycatch of target or non-target species in the South Atlantic and thus are unlikely to change the social, economic, or cultural value of fishing activities and non-consumptive uses of the snapper grouper fishery.

G.11. Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from the proposed actions in Regulatory Amendment 37 are discussed in the economic and social effects analysis in Chapter 4. These effects are discussed in relation to the baseline economic and social conditions of the fishery and fishing communities outlined in Chapter 3 of the document. Overall, almost no such alterations would be caused by changes to bycatch resulting from this framework amendment.

G.12. Social Effects

The baseline social environment and social effects of the proposed actions are described in Chapters 3 and 4 of Regulatory Amendment 37, respectively. In general, fishermen become frustrated as waste of the resource increases due to regulatory bycatch of target and non-target species. This often results in a distrust of science in that regulations are intended to protect stocks and rebuild overfished stocks by reducing such bycatch. However, none of the actions and alternatives in Regulatory Amendment 37 are likely to significantly increase the current

level of bycatch of target or non-target species in the South Atlantic and thus are unlikely to result in the negative social effects described.

G.13. Conclusion

This BPA evaluates the practicability of taking additional action to minimize bycatch and bycatch mortality using the ten factors provided at 50 CFR section 600.350(d)(3)(i). In summary, the proposed actions in Regulatory Amendment 37 are not likely to significantly contribute to the current level of bycatch in the snapper grouper fishery. The Council, NMFS, and the SEFSC have implemented and plan to implement numerous management measures and reporting requirements that have improved or are likely to improve monitoring efforts of discards and discard mortality.

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