Amendment 55

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

Reorganization of complexes; Establishment of a new Scamp and Yellowmouth Grouper complex, Status determination criteria, Rebuilding plan, Catch levels, Sector allocations, Management measures, Accountability measures; and Catch level modification for the Other South Atlantic Shallow Water Grouper complex

Regulatory Impact Review and Initial Regulatory Flexibility Analysis

December 2024

South Atlantic Fishery Management Council
4055 Faber Place Drive; Suite 201
North Charleston, SC 29405

Award Number FNA15NMF4410010

Amendment 55 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Proposed action(s): Reorganize the Other South Atlantic Shallow Water Grouper complex, establish a new Scamp and Yellowmouth Grouper complex including stock determination criteria, a rebuilding timeframe, catch levels, sector allocations, management measures, and accountability measures. Modify the catch levels for the remaining species within the Other South Atlantic Shallow Water Grouper complex.

Responsible Agencies and Contact Persons

South Atlantic Fishery Management Council
4055 Faber Place, Suite 201
North Charleston, South Carolina 29405
IPT lead: Alyson Iberle
allie.iberle@safmc.net

843-571-4366
843-769-4520 (fax)
www.safmc.net

National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701
IPT lead: Nikhil Mehta
nikhil.mehta@noaa.gov

727-824-5305
727-824-5308 (fax)
NMFS SERO

This Environmental Assessment applies CEQ's Phase 2 National Environmental Policy Act regulations (effective July 1, 2024).
Unique ID: EAXX-006-48-1SE-1730464344

Table of Contents

List of Appendices

List of Tables

List of Figures

Summary

Currently, within the South Atlantic, shallow water groupers are managed in several different groupings referred to as complexes. The term shallow water grouper refers to the following species: coney, graysby, red hind, rock hind, yellowfin grouper, yellowmouth grouper, red grouper, gag, black grouper, and scamp. The South Atlantic Shallow Water Grouper complex (SASWG) is a management complex that includes all of the previously listed species. Associated with this management complex is the annual spawning season closure established through Amendment 16 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) (SAFMC 2009b). While all the species considered shallow water grouper are subject to this spawning season closure under the SASWG complex, gag, scamp, red grouper, and black grouper are managed with individual annual catch limits (ACL) and accountability measures (AM). The remaining species, coney, graysby, red hind, rock hind, yellowmouth grouper, and yellowfin grouper are managed through the Other Shallow Water Grouper complex (OSASWG) which has a single ACL and AM for all 5 species.

The latest Southeast Data, Assessment, and Review (SEDAR) stock assessment (SEDAR 68 Operational Assessment [OA] 2022) assessed scamp and yellowmouth grouper in the South Atlantic as a single stock complex due to the low level of yellowmouth grouper landings, the overlap of vessels that land each species, and the misidentification issues between scamp and yellowmouth grouper. SEDAR 68 OA (2022) indicated that the scamp and yellowmouth grouper stock is overfished, but that overfishing is not occurring. Because this assessment provided stock status recommendations for both species in combination, the OSASWG complex, which currently contains yellowmouth grouper, needs to be reorganized. This amendment would remove yellowmouth grouper from the OSASWG complex and establish a new Scamp and Yellowmouth Grouper complex.

Because the Scamp and Yellowmouth Grouper complex has yet to be established, Amendment 55 would establish the following for the new complex: the stock maximum sustainable yield (MSY), maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), and optimum yield (OY). In addition to these status determination criteria, a rebuilding plan would be established for the new complex in response to the overfished status per the stock assessment. Under the Magnuson-Stevens Fishery Conservation and Management Act, a Council must develop a new rebuilding plan for an overfished stock two years from when it receives notification from the National Marine Fisheries Service (NMFS). NMFS notified the South Atlantic Fishery Management Council (Council) of the overfished status of scamp and yellowmouth grouper on September 21, 2023; therefore, a rebuilding plan must be implemented by September 2025.

The Council's Scientific and Statistical Committee (SSC) reviewed the assessment and recommended an overfishing limit (OFL) and acceptable biological catch (ABC). The Council would adopt these catch levels and establish a total ACL and sector ACLs. The current ACLs for scamp (individual) and yellowmouth grouper (within the OSASWG complex) were derived from data including recreational landings estimates using the Marine Recreational Information Program (MRIP) Coastal Household Telephone Survey (CHTS) method. The new catch levels

for the Scamp and Yellowmouth Grouper complex would include recreational landings estimates using the MRIP's Fishing Effort Survey (FES) method, which is considered more reliable and robust compared to the MRIP-CHTS method (see Section 1.6). After the ABC and total ACLs are established, sector allocations, sector ACLs, and AMs would be determined.

Because yellowmouth grouper would be removed from the OSASWG complex, the total ACL and sector ACLs would be modified for the remaining five species: coney, graysby, rock hind, red hind, and yellowfin grouper. This ACL is currently inclusive of recreational landings estimates using the MRIP-CHTS method. This amendment would modify the ACL to reflect the reorganization of the complexes. However, the Council is proposing to retain the ACL using recreational estimates from the MRIP-CHTS until the SSC develops new MRIP-FES based catch recommendations through an acceptable methodology. The OSASWG species are data limited and do not have a stock assessment (unassessed species). Following the Unassessed Stocks Workgroup meeting in 2020, the Council's SSC provided ABC recommendations for these five species using recreational landings estimates using the MRIP-FES method. However, the ABCs were determined using the 3rd highest landings and Only Reliable Catch methods, both of which are no longer considered the best scientific information available (BSIA). During the April 2023 meeting, the SSC recommended the OSASWG ACL be revised in the upcoming Unassessed Species Amendment. However, this would likely not be completed and provided to the Council for review until December 2024 or later, therefore, an action to update the OSASWG ABC and ACL based on the new methodology was not included in this amendment to meet its statutory deadline. Furthermore, this amendment would not modify the commercial or recreational AMs for the OSASWG complex, which can be found at 50 CFR 622.193(j).[1]

What actions are being proposed in this plan amendment?

Amendment 55 to the Snapper Grouper FMP proposes 11 actions. Below are the Council's preferred alternatives for each action.

Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new Scamp and Yellowmouth Grouper complex

> **Purpose of Action:** SEDAR 68 OA (2022) assessed scamp and yellowmouth grouper in the South Atlantic as a single stock due to the low level of yellowmouth grouper landings, the overlap of vessels that land each species, and the misidentification issues between scamp and yellowmouth grouper. The SSC provided ABC and OFL recommendations, based on the assessment, for scamp and yellowmouth grouper combined; therefore, yellowmouth grouper must be removed from the OSASWG complex to establish a new Scamp and Yellowmouth Grouper complex. In addition, the total and sector ACLs for the OSASWG complex must be adjusted accordingly.
>
> **Preferred Alternative 2**. Remove yellowmouth grouper from the Other South Atlantic Shallow Water Grouper complex and establish a new Scamp and Yellowmouth Grouper

[1] 50 CFR 622.193(j)

complex. The reorganized Other South Atlantic Shallow Water Grouper complex would contain rock hind, red hind, coney, graysby, and yellowfin grouper.

Action 2. Establish the maximum sustainable yield, maximum fishing mortality threshold, minimum stock size threshold, and optimum yield for the Scamp and Yellowmouth Grouper complex

Purpose of Action and Sub Actions: Because the Scamp and Yellowmouth Grouper complex is being established through this amendment, status determination criteria must be defined for the new complex, including MSY, MFMT, MSST, and OY.

Sub Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the maximum sustainable yield proxy as the yield when fishing at the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

Sub Action 2b. Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the maximum fishing mortality threshold equal to the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

Sub Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the minimum stock size threshold equal to 75% of the spawning stock biomass at a fishing mortality rate of 40% of spawning potential ratio.

Sub Action 2d. Establish the optimum yield for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 4. Establish an optimum yield of 95% of maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Action 3. Establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex

Purpose of Action: The results of the SEDAR 68 OA (2022) stock assessment indicated that the South Atlantic stock of scamp and yellowmouth grouper is overfished but not experiencing overfishing. A rebuilding timeframe must be established to rebuild the stock. Establishing the timeframe for rebuilding is part of the rebuilding plan.

Preferred Alternative 3. Establish a rebuilding timeframe equal to Tmax. This would equal 10 years with the rebuilding period ending in 2035. 2025 would be Year 1.

Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex

Purpose of Action: Catch levels are being established for the new South Atlantic Scamp and Yellowmouth Grouper complex to respond to the most recent stock assessment, SEDAR 68 OA (2022). The recommended ABC from SEDAR 68 OA (2022) are inclusive of recreational estimates from the MRIP-FES survey.

Preferred Alternative 2. Establish the acceptable biological catch and set it equal to the recommendation from the Scientific and Statistical Committee. Establish the total annual catch limit for the Scamp and Yellowmouth Grouper complex and set it equal to the recommended acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

Purpose of Action: Allocations need to be established for the new Scamp and Yellowmouth Grouper complex in response to ABCs recommended by the SSC based on the most recent SEDAR 68 OA (2022) stock assessment.

Preferred Alternative 2. Commercial and recreational allocation percentages and sector annual catch limits would change each year from 2025 through 2029, where they would remain in place until modified, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2018 through 2022.

Action 6. Modify the recreational bag limit for scamp and yellowmouth grouper

Preferred Alternative 3. Establish an aggregate complex bag limit of 1 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

Purpose of Action: The Council is considering establishing an aggregate commercial trip limit to achieve the reduction in harvest needed to constrain catch to the updated commercial ACL.

Preferred Alternative 3. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 300 pounds gutted weight.

Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

Purpose of Action: Accountability measures need to be established for the new Scamp and Yellowmouth Grouper complex to contribute to the rebuilding plan by ensuring that commercial annual catch limits are not exceeded and to correct for overages if they occur.

Preferred Alternative 3. If commercial landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex commercial annual catch limit, commercial harvest of scamp and yellowmouth grouper will be closed for the remainder of the fishing year.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the complex commercial annual catch limit, regardless of stock status or whether the total annual catch limit was exceeded, the complex commercial annual catch limit for the following fishing year will be reduced by the amount of the complex commercial annual catch limit overage in the prior fishing year.

Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

Purpose of Action: Accountability measures need to be established for the new Scamp and Yellowmouth Grouper complex to contribute to the rebuilding plan by ensuring that recreational annual catch limits are not exceeded and to correct for overages if they occur.

Preferred Alternative 5. If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the complex recreational annual catch limit, the length of the following year's recreational fishing season for the complex will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year, regardless of stock status.

Action 10. Revise the total annual catch limit, and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

Purpose of Action: In Action 1 the OSASWG complex was modified to remove yellowmouth grouper. The OSASWG complex ACL must therefore be updated to remove the portion that was previously allocated for yellowmouth grouper. The ABC and ACL for this complex currently include recreational landings estimates using the MRIP-CHTS method and would not change in this amendment. The current sector allocation percentages would also not change.

Preferred Alternative 2. The acceptable biological catch for the updated Other South Atlantic Shallow Water Grouper complex (contains rock hind, red hind, coney, graysby, and yellowfin grouper, and excludes yellowmouth grouper) is 104,190 pounds whole

weight. The total annual catch limit for the updated Other South Atlantic Shallow Water Grouper complex is 100,151 pounds whole weight and is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey. The commercial annual catch limit is 53,380 pounds whole weight and the recreational annual catch limit is 46,771 pounds whole weight.

Chapter 1. Introduction

1.1 What actions are being proposed in this plan amendment?

The actions in Amendment 55 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) would reorganize the Other South Atlantic Shallow Water Grouper complex (OSASWG complex) and establish a new Scamp and Yellowmouth Grouper complex in the South Atlantic (Scamp and Yellowmouth Grouper complex). For the Scamp and Yellowmouth Grouper complex, status determination criteria, a rebuilding plan, acceptable biological catch (ABC), total annual catch limit (ACL), sector allocations, sector ACLs, management measures, and accountability measures (AM) would be established. The ACL for the remaining species in the OSASWG complex would be revised.

South Atlantic Fishery Management 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-Wahoo, which is from Maine to Florida.

1.2 Who is proposing the amendment?

The South Atlantic Fishery Management Council (Council) is responsible for managing snapper grouper species in the South Atlantic region. The Council develops the amendment and submits it to the National Marine Fisheries Service (NMFS) who determines whether to approve the amendment and publish a rule to implement the 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 and other partners to sustainably manage fishery resources in the South Atlantic.

The Council and NMFS are also responsible for making this document available for public comment. The draft environmental assessment (EA) was made available to the public during the scoping process, public hearings, and Council meetings. The EA/amendment would be made available for comment during the rulemaking process.

1.3 Where is the project located?

Management of the federal snapper grouper fishery located off the southeastern United States (South Atlantic) in the 3-200 nautical miles U.S. exclusive economic zone (EEZ) is conducted under the Snapper Grouper FMP (SAFMC 1983) (Figure 1.3.1). There are 55 species managed by the Council under the Snapper Grouper FMP.

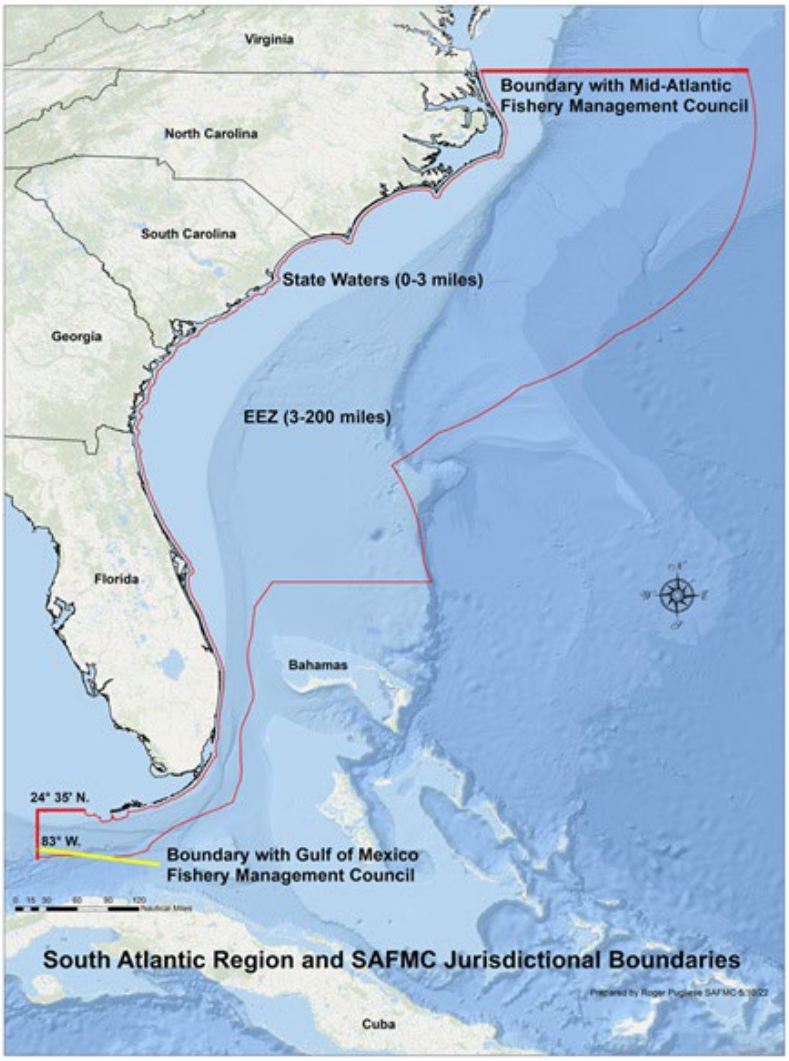

Figure 1.3.1. Jurisdictional boundaries of the Council.

1.4 Why is the Council considering action (Purpose and need statement)?

Purpose: The *purpose* of this amendment is to modify the Other South Atlantic Shallow Water Grouper complex by removing yellowmouth grouper from the complex and establishing a new Scamp and Yellowmouth Grouper complex. For the new complex, establish conservation and management measures, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures based on the results of the SEDAR 68 operational (2022) stock assessment. For the South Atlantic Other Shallow Water Grouper complex, modify catch levels.

Need: The *need* for this amendment is to rebuild the scamp and yellowmouth grouper stock, and achieve optimum yield while minimizing, to the extent practicable, adverse social and economic effects.

The Council is taking action to respond to the most recent stock assessment for scamp and yellowmouth grouper in the South Atlantic (SEDAR 68 Operational Assessment [OA] 2022). The assessment indicated that the scamp and yellowmouth grouper stock in the South Atlantic is overfished but is not experiencing overfishing. The NMFS notified the Council of the overfished status of scamp and yellowmouth grouper on September 21, 2023. Under the Magnuson-Stevens Act, a Council has to develop a rebuilding plan for an overfished stock two years from when it receives notification from NMFS. Therefore, a rebuilding plan for scamp and yellowmouth grouper in the South Atlantic must be implemented by September 2025.

1.5 What are the acceptable biological catch and overfishing limit recommendations for the Scamp and Yellowmouth Grouper complex?

The Council's Scientific and Statistical Committee (SSC) reviewed the scamp and yellowmouth grouper stock assessment (SEDAR 68 OA 2022) at its April 2023 meeting. The assessment included data through 2021 and incorporated the revised landings estimates for recreational catch using the Marine Recreational Information Program (MRIP) Fishing Effort Survey (FES). The SSC found that the assessment was conducted using the best scientific information available and was adequate for determining stock status and supporting overfishing level (OFL) and ABC recommendations (Table 1.5.1).

Table 1.5.1. OFL and ABC recommendations for the scamp and yellowmouth grouper stock provided by the SSC in April 2023. Total removals are provided in numbers and pounds (lbs) whole weight (ww).

OFL RECOMMENDATIONS	
Year	**Total Removals (lbs ww)**
2025	88,000
2026	109,000
2027	157,000
2028	210,000
2029	252,000

ABC RECOMMENDATIONS (TOTAL REMOVALS)		
Year	**Total Removals (lbs ww)**	**Total Removals (numbers)**
2025	71,000	12,000
2026	76,000	12,000
2027	79,000	13,000
2028	82,000	13,000
2029	84,000	14,000

ABC recommendations were provided in total removals by the SSC. Two methods were explored to ascertain the amount of the recommended ABC that should be attributed to landings and dead discards. Ultimately it was determined that total removals could be split into 95% landings and 5% dead discards (Table 1.5.2). For full details on this analysis see **Appendix D, section 1.1**.

Table 1.5.2. ABC recommendations in landings and dead discards.

ABC RECOMMENDATIONS		
Year	**Landings (lbs ww)**	**Dead Discards (lbs ww)**
2025	67,450	3,550
2026	72,200	3,800
2027	75,050	3,950
2028	77,900	4,100
2029	79,800	4,200

1.6 How have recreational data collection changed in the Southeast?

For a current (as of January 2024) description of the Marine Recreational Fisheries Statistics Survey Program and the surveys used, the reader is hereby referred to Snapper Grouper Amendment 53, Chapter 1.6 (SAFMC 2023a).

Recent Survey Information

In August 2023, NMFS published a report, "Evaluating Measurement Error in the MRIP Fishing Effort Survey,[2]" that summarized results from a small-scale pilot study to evaluate potential sources of bias in the FES. The pilot study, using data from four states from July to December 2015, found that switching the current sequence of survey questions resulted in fewer reporting errors and illogical responses. As a result, effort estimates for shore and private boat anglers were generally 30 to 40 percent lower. NMFS is now conducting a large-scale follow up study to gain a better understanding of differences in respondent recall and resulting effort estimates between the current survey design and revised survey design. The revised design changes the order of two fishing effort questions and increases the administration of the survey from every two months to monthly. The revised FES design being tested is producing improved data quality in alignment with prior pilot studies. However, there is still a large amount of data to collect and analyze before fully informed comparisons can be made between the current survey and the revised design.

1.7 What is the history of management for scamp and yellowmouth grouper?

Snapper grouper regulations in the South Atlantic were first implemented in 1983 (SAFMC 1983). The reader is referred to the following link for the management history, summary of changes under each amendment, implementation dates, an up-to-date list of amendments under development and more, for the Snapper Grouper FMP: https://safmc.net/fishery-management-plans/snapper-grouper/. Below are amendments to the Snapper Grouper FMP addressing scamp and yellowmouth grouper within the South Atlantic EEZ.

Snapper Grouper FMP (1983)
The Snapper Grouper FMP included provisions to prevent growth overfishing in thirteen species in the snapper grouper complex and established a procedure for preventing overfishing in other species; established minimum size limits for red snapper, yellowtail snapper, red grouper, Nassau grouper, and black sea bass; established a 4-inch trawl mesh size to achieve a 12-inch total length minimum size limit for vermilion snapper; and included additional harvest and gear limitations.

Amendment 8 (1992)
The amendment established initial eligibility for two limited entry snapper grouper permits: a non-transferable permit with a 225-pound trip limit and a transferrable unlimited permit.

Amendment 15B (2009)
The amendment prohibited the sale of bag-limit caught snapper grouper species.

Amendment 16 (2009)
The amendment established a shallow water grouper spawning season closure from January 1 to April 30.

[2] https://safmc.net/documents/03b_evaluating-measurement-error-in-the-fes-consolidated-final-w-review-pdf/

Amendment 17A (2011)
The amendment required the use of non-stainless steel circle hooks north of 28 degrees North Latitude when fishing with natural baits for snapper grouper species.

Regulatory Amendment 13 (2012)
This amendment modified the ABC, total ACL, and sector ACLs for the OSASWG complex.

Regulatory Amendment 15 (2013)
The amendment modified the AMs for the shallow water grouper complex to the following: if commercial landings, as estimated by the Scientific Research Director (SRD), reach or are projected to reach the ACL, the commercial sector will close for the remainder of the year. This amendment, however, retained the individual ACLs and AMs for black grouper, red grouper, and scamp.

Amendment 29 (2014)
The amendment set the ACL and OY equal to the ABC and the breakdown between the commercial and recreational sector ACLs for the OSASWG complex.

Amendment 34 (2016)
The amendment modified AMs for snapper grouper species, including scamp and yellowmouth grouper.

Amendment 36 (2016)
The amendment established spawning special management zones to enhance protection for snapper grouper species in spawning condition.

Regulatory Amendment 29 (2020)
The regulatory amendment required all vessels fishing for or possessing snapper grouper species in the South Atlantic to possess a descending device readily available for use. It also required the use of non-offset, non-stainless steel circle hooks north of 28 degrees North Latitude when fishing for snapper grouper species with natural baits.

Chapter 2. Proposed Actions and Alternatives

2.1 Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new South Atlantic Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There is no Scamp and Yellowmouth Grouper complex. The Other South Atlantic Shallow Water Grouper complex contains rock hind, red hind, coney, graysby, yellowmouth grouper, and yellowfin grouper.

Preferred Alternative 2. Remove yellowmouth grouper from the Other South Atlantic Shallow Water Grouper complex and establish a new Scamp and Yellowmouth Grouper complex. The reorganized Other South Atlantic Shallow Water Grouper complex would contain rock hind, red hind, coney, graysby, and yellowfin grouper.

2.1.1. Comparison of Alternatives

SouthEast Data Assessment and Review (SEDAR) 68 Operational Assessment (OA) (2022) assessed the stocks of scamp and yellowmouth grouper as a single unit, due to the low level of yellowmouth grouper landings, the overlap of vessels that land each species, and the misidentification issues between scamp and yellowmouth grouper. Catch levels recommended by the Scientific and Statistical Committee (SSC) based on this assessment were provided for scamp and yellowmouth grouper combined. Currently, the South Atlantic scamp stock has an annual catch limit (ACL) and accountability measures (AM); whereas, yellowmouth grouper is part of the Other South Atlantic Shallow Water Grouper complex (OSASWG complex), which has an ACL and AM for the following group of species: coney, graysby, red hind, rock hind, yellowmouth grouper, and yellowfin grouper.

Alternative 1 (No Action) would leave yellowmouth grouper within the OSASWG complex and would not establish a new Scamp and Yellowmouth Grouper complex. This is not a viable alternative because the assessment included scamp and yellowmouth grouper as a single stock; therefore, recommended catch levels are for both species combined. **Preferred Alternative 2** would remove yellowmouth grouper from the OSASWG complex and create a new Scamp and Yellowmouth Grouper complex, for which the recommended catch levels would be applicable. Because the assessment provided recommendations for scamp and yellowmouth grouper combined, and the assessment is based on the best scientific information available (BSIA), **Preferred Alternative 2** would provide the most biological benefit to the stock compared to **Alternative 1 (No Action)**. **Alternative 1 (No Action)** is not expected to have any economic effects, direct or indirect. **Preferred Alternative 2** is not expected to have direct economic effects. However, indirect effects are expected as a result of changes to the harvest of scamp and yellowmouth grouper, which are summarized under each respective action. With regards to social effects, neither alternative is expected to have significant effects. However, establishing

the Scamp and Yellowmouth Grouper complex may provide long term social benefits as mirroring regulations between the species would alleviate misidentification issues. **Preferred Alternative 2** is expected to have higher administrative burden up front to establish the complex and convey the changes to the public when compared to **Alternative 1 (No Action)**.

2.2 Action 2. Establish the maximum sustainable yield, maximum fishing mortality threshold, minimum stock size threshold, and optimum yield for the Scamp and Yellowmouth Grouper complex

2.2.1 Sub Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Alternative 1 (No Action). There is no maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Alternative 2. Establish the maximum sustainable yield proxy as the yield when fishing at the fishing mortality rate that produces a spawning potential ratio of 30% for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the maximum sustainable yield proxy as the yield when fishing at the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

2.2.1.1. Comparison of Alternatives

Maximum sustainable yield (MSY) is defined as the largest long-term average catch that can be taken from a stock under current conditions. Currently, scamp individually and yellowmouth grouper (as part of the OSASWG complex) have MSY proxies of fishing mortality (F) at 30% of the stock's spawning potential ratio (SPR, $F_{30\%SPR}$); however SEDAR 68 operational assessment (OA; 2022) recommended an MSY proxy for the scamp and yellowmouth grouper stock complex of $F_{40\%SPR}$. This MSY proxy recommendation was based on recent scientific literature recommending the use of $F_{30\% SPR}$ for very resilient stocks and the use of $F_{40\%SPR}$ for species such as scamp and yellowmouth grouper (see SEDAR 68 0A [2022] for more details). Table 2.2.1.1 shows the MSY proxy values for all alternatives under Sub-action 2a.

Alternative 1 (No Action) is the current status quo for the Scamp and Yellowmouth Grouper complex established in **Action 1**, which is no existing MSY or MSY proxy, since the complex has yet to have its stock determination criteria established. This alternative would not provide biological, economic, or social benefits to the stock since it does not define an MSY which is required under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). **Alternative 2** would adopt $F_{30\%SPR}$ as the MSY proxy, which is the current MSY proxy in place for scamp individually and yellowmouth grouper within the OSASWG complex. However, the Southeast Fisheries Science Center (SEFSC) indicated that this MSY proxy would not be consistent with BSIA because it is less likely than $F_{40\%SPR}$ to achieve a level of biomass that will produce the MSY. Therefore, a decision to retain $F_{30\%SPR}$ as the F_{MSY} proxy would not be consistent with BSIA and would contribute to greater than a 50% chance of overfishing.

Setting an MSY value that is not consistent with BSIA is expected to have negative biological effects on the stock. Similarly, long term negative biological effects may cause negative indirect economic and social effects. **Preferred Alternative 3** would establish the MSY proxy recommended in SEDAR 68 OA (2022) for the Scamp and Yellowmouth Grouper complex. This alternative is expected to have the highest biological benefit to the stock, resulting in long term indirect economic and social effects.

A more biologically conservative MSY, as proposed under **Preferred Alternative 3,** would help towards the rebuilding of the overfished newly formed Scamp and Yellowmouth Grouper complex, which is considered overfished, and prevent potential negative administrative burdens (law enforcement, communications, education, etc.) related to shutting down a sector in the event catch limits are exceeded.

Table 2.2.1.1. MSY values for the alternatives under Sub-Action 2a.

Alternative	MSY (1,000 lbs whole weight)
Alternative 1 (No Action)	none
Alternative 2	416.20
Preferred Alternative 3	**372.28**

2.2.2 Sub Action 2b. Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex.

Alternative 1 (No Action). There is no maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex.

Alternative 2. Establish the maximum fishing mortality threshold equal to the fishing mortality rate that produces a spawning potential ratio of 30% for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the maximum fishing mortality threshold equal to the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

2.2.2.1. Comparison of Alternatives

Maximum fishing mortality threshold (MFMT) is defined as the level of fishing mortality above which overfishing is occurring. Currently, scamp (individually) and yellowmouth grouper (as part of the OSASWG complex) have a MFMT equal to the MSY proxy of $F_{30\%SPR}$; however, SEDAR 68 OA (2022) recommended a MFMT equal to the MSY proxy of the yield at $F_{40\%SPR}$ for the scamp and yellowmouth grouper stock complex. Table 2.2.2.1 shows the MFMT values for all alternatives under Sub-action 2b.

Alternative 1 (No Action) is the current status quo for the Scamp and Yellowmouth Grouper complex established in **Action 1**, which is no MFMT, since the complex has yet to have stock determination criteria established. This alternative would not provide biological, economic, or social benefits to the stock since it does not define a MFMT, which is required under the Magnuson-Stevens Act. **Alternative 2** would establish the current MFMT (MFMT equal to the MSY proxy at $F_{30\%SPR}$) in place for scamp and yellowmouth grouper within the OSASWG complex. This alternative would establish a MFMT that is not consistent with BSIA. Setting a MFMT value that is too high and not consistent with BSIA could result in overfishing, which would be expected to have negative biological effects on the stock. Similarly, long-term negative biological effects may cause negative indirect economic and social effects. **Preferred Alternative 3** would establish a MFMT equal to the MSY proxy at $F_{40\%SPR}$, consistent with **Preferred Alternative 3** from **Sub-Action 2a**. This alternative is expected to have the highest biological benefits to the stock, resulting in long-term indirect economic and social benefits.

Administrative effects would be expected to be lower under **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**. A biologically conservative MFMT value would help prevent overfishing of the newly formed Scamp and Yellowmouth Grouper complex and prevent negative administrative burdens (law enforcement, communications, education, etc.) related to shutting down a sector in the event catch limits are exceeded.

Table 2.2.2.1. MFMT values for the alternatives under Sub-Action 2b.

Alternative	MFMT
Alternative 1 (No Action)	none
Alternative 2	0.52
Preferred Alternative 3	**0.28**

2.2.3 Sub Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex.

Alternative 1 (No Action). There is no minimum stock size threshold for the Scamp and Yellowmouth Grouper complex.

Alternative 2. Establish the minimum stock size threshold equal to the spawning stock biomass at maximum sustainable yield times either one minus the natural mortality or 0.5, whichever is greater, for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the minimum stock size threshold equal to 75% of the spawning stock biomass at a fishing mortality rate of 40% of spawning potential ratio.

2.2.3.1. Comparison of Alternatives

Minimum stock size threshold (MSST) is defined as the spawning stock biomass level below which a stock is declared overfished. Currently, scamp (individually) and yellowmouth grouper (as part of the OSASWG complex) have the MSST equal to the spawning stock biomass (SSB) at MSY (SSB_{MSY}) times either one minus the natural mortality (M) or 0.5, whichever is greater. However, SEDAR 68 OA (2022) defined the MSST as 75% of $SSB_{F40\%}$ for the scamp and yellowmouth grouper stock complex. Table 2.2.3.1 shows the MSST values for all alternatives under Sub-action 2c.

Alternative 1 (No Action) is the current status quo for the Scamp and Yellowmouth Grouper complex established in **Action 1**, which would not define the MSST, since the complex has yet to have stock determination criteria established. This alternative would not provide biological, economic, or social benefits to the stock since it does not define the MSST, which is required under the Magnuson-Stevens Act. **Alternative 2** would establish a MSST (SSB_{MSY} (1-M) or 0.5, whichever is greater) for the Scamp and Yellowmouth Grouper complex, which is currently in place for scamp (individually) and yellowmouth grouper (as part of the OSASWG complex); however, this definition of the MSST is not consistent with recommendations from SEDAR 68 OA (2022). Under **Alternative 2**, if the value of the natural mortality for a species is very small, i.e., lower than 0.25, then there is very little difference between the biomass threshold for being overfished (MSST) and the biomass threshold for being rebuilt (SSB_{MSY}). Thus, even small

fluctuations in biomass due to natural variations not related to fishing mortality may cause a stock to vary between an overfished or rebuilt/rebuilding condition. **Preferred Alternative 3** would establish a MSST consistent with the guidance from SEDAR 68 OA (2022) and would result in overfished determinations less frequently than **Alternative 2**. This alternative is expected to have the highest biological benefits to the stock, resulting in long-term indirect economic and social benefits.

Under **Alternative 2**, the buffer between MSST and SSB_{MSY} is smaller than under **Preferred Alternative 3**, and; therefore, would result in an overfished determination more frequently than **Preferred Alternative 3**. An overfished determination would then require a rebuilding plan and therefore, the administrative effects would be greatest for **Alternative 2** and least **Alternative 1 (No Action)**. However, because **Preferred Alternative 3** would allow for the greatest decrease in biomass before triggering a rebuilding plan, there could be larger administrative costs associated with rebuilding the stock than under **Alternative 2**.

Table 2.2.3.1. MSST values for the alternatives under Sub-Action 2c.

Alternative	MSST (metric tons)
Alternative 1 (No Action)	none
Alternative 2	601.12
Preferred Alternative 3	**801.60**

2.2.4 Sub Action 2d. Establish the optimum yield for the Scamp and Yellowmouth Grouper complex.

Alternative 1 (No Action). There is no optimum yield for the Scamp and Yellowmouth Grouper complex.

Alternative 2. Establish an optimum yield of 75% of maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Alternative 3. Establish an optimum yield of 90% of maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 4. Establish an optimum yield of 95% of maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

2.2.4.1. Comparison of Alternatives

The South Atlantic Fishery Management Council (Council) has defined optimum yield (OY) values for the snapper grouper stocks, but in the context of setting ACLs, has opted to set annual OYs (see the Comprehensive ACL Amendment (SAFMC 2011b)). OY is the long-term average yield desired from a stock or

fishery. OY is reduced from MSY for the fishery based on relevant economic, social, and ecological factors. **Alternatives 2** through **Preferred Alternative 4** are reduced from MSY at different percentages to account for factors in the fishery that may influence OY. Table 2.2.4.1 shows the OY values for all alternatives under Sub-action 2d. **Alternative 1 (No Action)** is the current status quo for the Scamp and Yellowmouth Grouper complex established in **Action 1**, which is no OY since the complex has yet to have stock determination criteria established. This alternative would not provide biological, economic, or social benefits to the stock since it does not define an OY which is required under the Magnuson-Stevens Act. **Alternatives 2** through **Preferred Alternative 4** would establish an OY for the Scamp and Yellowmouth Grouper complex. **Alternative 2** would set an OY equal to 75% of the MSY or MSY proxy, **Alternative 3** would set an OY equal to 90% of the MSY or MSY proxy, and **Preferred Alternative 4** would set an OY equal to 95% of the MSY or MSY proxy. Values for the OY in **Alternatives 2** through **Preferred Alternative 4** are dependent on the MSY proxy selected in **Sub-Action 2a**. OY values in **Alternatives 2** through **Preferred Alternative 4** are target values and represent a yield that would prevent overfishing. Because these are target values, they are different than the ABC and ACL. A more conservative OY is expected to have the highest biological benefit to the stock; therefore, **Alternative 2** would provide the most biological benefit to the stock, followed by **Alternative 3**, **Preferred Alternative 4**, and then **Alternative 1 (No Action)**. **Alternative 2** would result in the lowest landings and therefore the lowest short-term net economic benefit, followed by **Alternative 3**, with **Preferred Alternative 4** resulting in the highest expected short term net economic benefit due to the highest catch allowed. Similarly, social effects are expected to be highest under **Preferred Alternative 4**, followed by **Alternative 3**, then **Alternative 2**. There is not expected to be a difference in the administrative burden between alternatives.

Table 2.2.4.1. OY values for the alternatives under Sub-Action 2d.

Alternative	OY (1,000 lbs whole weight)
Alternative 1 (No Action)	none
Alternative 2	279.21
Alternative 3	335.05
Preferred Alternative 4	**353.67**

NOTE: Values are based on Preferred Alternative 3 from Sub-action 2a.

2.3 Action 3. Establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There is no timeframe for rebuilding the Scamp and Yellowmouth Grouper complex.

Alternative 2. Establish a rebuilding timeframe equal to the shortest possible time to rebuild in the absence of fishing mortality (T_{min}). This would be equal to 5 years with the rebuilding period ending in 2030. 2025 would be Year 1.

Preferred Alternative 3. Establish a rebuilding timeframe equal to T_{max}. This would equal 10 years with the rebuilding period ending in 2035. 2025 would be Year 1.

2.3.1 Comparison of Alternatives

The results of the SEDAR 68 OA (2022) assessment indicated that the Scamp and Yellowmouth Grouper complex was overfished but not experiencing overfishing. Per the Magnuson-Stevens Act, the Council has two years from the time when it receives notification that a stock is overfished from the National Marine Fisheries Service (NMFS) to prepare and implement a new rebuilding plan. The Council was notified on September 21, 2023; therefore, the plan must be implemented by September 2025. In June 2023, the Council received guidance that, in the absence of fishing mortality, assuming long-term average recruitment, the stock would be able to be rebuilt in 10 years. The Magnuson-Stevens Act National Standard 1 Guidelines indicate that if the stock is expected to rebuild in 10 years or less, then the maximum timeframe for rebuilding (T_{max}) is 10 years (50 CFR §600.310(j)(3)(i)(B)(1)).

Alternative 1 (No Action) would not establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex. This alternative would not provide biological, economic, or social benefit to the stock since it does not provide a rebuilding timeframe, which is required under the Magnuson-Stevens Act if a stock is overfished. **Alternative 2** and **Preferred Alternative 3** would establish a rebuilding plan equal to T_{MIN} (5 years) and T_{MAX} (10 years) respectively, with both alternatives starting in 2025. **Alternative 2** and **Preferred Alternative 3** would be expected to have higher biological benefits compared to **Alternative 1 (No Action)**, as they would establish a timeframe for rebuilding, whereas, failing to do so would not be expected to contribute to rebuilding. **Preferred Alternative 3** is expected to have higher net economic and social benefits than **Alternative 2** because it has a longer rebuilding schedule and would result in less restrictive catch levels. Under both **Alternative 2** and **Preferred Alternative 3**, SEDAR 68 OA (2022) indicated that there would be a greater than 50% chance of rebuilding the stock in 5 years (Figure 2.3.1).

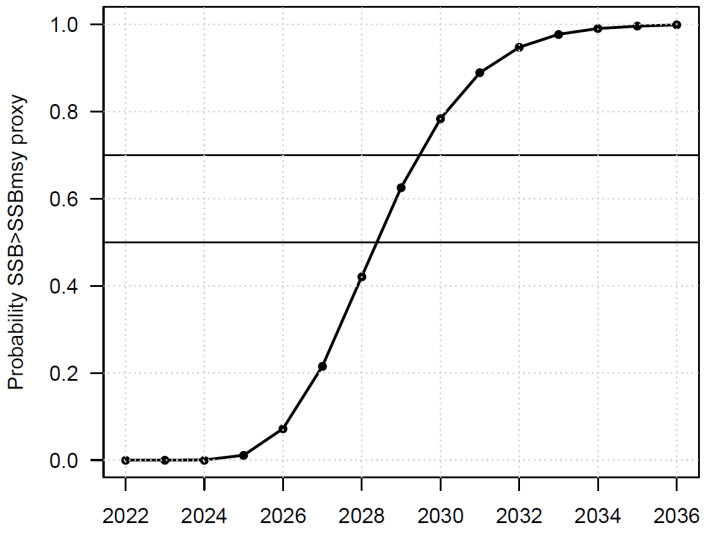

Figure 2.3.1. Projected probability of rebuilding under scenario 1— fishing mortality rate at F = 0 and long-term average recruitment. The curve represents the proportion of projection replicates for which SSB has reached the replicate-specific $SSB_{F40\%,}$ with reference lines at 0.5 and 0.7. Source: SEDAR 68 OA (2022), Figure 53.

2.4 Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There is no acceptable biological catch or total annual catch limit for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 2. Establish the acceptable biological catch and set it equal to the recommendation from the Scientific and Statistical Committee. Establish the total annual catch limit for the Scamp and Yellowmouth Grouper complex and set it equal to the recommended acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Alternative 3. Establish the acceptable biological catch and set it equal to the recommendation from the Scientific and Statistical Committee. Establish the total annual catch limit for the Scamp and Yellowmouth Grouper complex and set it equal to 95% of the recommended acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Alternative 4. Establish the acceptable biological catch and set it equal to the recommendation from the Scientific and Statistical Committee. Establish the total annual catch limit for the Scamp and Yellowmouth Grouper complex and set it equal to 90% of the recommended acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Table 2.4.1. Alternatives for Action 4 establishing the ABC and total ACL for the Scamp and Yellowmouth Grouper complex. ACLs are expressed in pounds whole weight.

Alternative 1 (No Action, no ABC)					
	2025	2026	2027	2028	2029+
ABC (landings, lbs ww)	n/a				
ACL (landings, lbs ww)					
Dead Discards (lbs ww)					
Preferred Alternative 2 (ACL = ABC)					
	2025	**2026**	**2027**	**2028**	**2029+**
ABC (landings, lbs ww)	**67,450**	**72,200**	**75,050**	**77,900**	**79,800**
ACL (landings, lbs ww)	**67,450**	**72,200**	**75,050**	**77,900**	**79,800**
Dead Discards (lbs ww)	**3,550**	**3,800**	**3,950**	**4,100**	**4,200**
Alternative 3 (ACL = 95% of ABC)					
	2025	2026	2027	2028	2029+
ABC (landings, lbs ww)	67,450	72,200	75,050	77,900	79,800
ACL (landings, lbs ww)	64,078	68,590	71,298	74,005	75,810
Dead Discards (lbs ww)	3,550	3,800	3,950	4,100	4,200
Alternative 4 (ACL = 90% of ABC)					
	2025	2026	2027	2028	2029+
ABC (landings, lbs ww)	67,450	72,200	75,050	77,900	79,800
ACL (landings, lbs ww)	60,705	64,980	67,545	70,110	71,820
Dead Discards (lbs ww)	3,550	3,800	3,950	4,100	4,200

Note: See Section 1.5 for more details on total removals, landings, and discards.

2.4.1 Comparison of Alternatives

The SSC provided the overfishing limit (OFL) and ABC recommendations based on SEDAR 68 OA (2022) at their April 2023 meeting. OFL and ABC levels were in total removals. Additional ABC values were requested in landings and dead discards in pounds (lbs) whole weight (ww), **Alternatives 2** through **4** are based on the ABC in landings (lbs ww). It was determined that of the ABC in total removals, 95% were landings and 5% were dead discards, see Appendix D, Section 1.1, for full details.

Alternative 1 (No Action) is the current status quo for the Scamp and Yellowmouth Grouper complex established in **Action 1**, which is no ABC or total ACL since the complex has yet to have catch levels established. This alternative would not provide biological, economic, or social benefits to the stock since it does not establish an ABC or ACL, which is required under the Magnuson-Stevens Act. **Preferred Alternative 2** would adopt the SSC recommended ABC values and set the ACL equal to these ABC values. **Alternative 3** would adopt the SSC recommended ABC values and set the ACL equal to 95% of these ABC values including a 5% buffer between the ABC and ACL. **Alternative 4** would adopt the SSC recommended ABC values and set the ACL equal to 90% of these ABC values including a 10% buffer between the ABC and ACL. With regards to biological benefits to the stock, **Alternative 4** provides the highest expected benefit as it has the highest buffer between the ABC and ACL to account for

management uncertainty, followed by **Alternative 3**, and **Preferred Alternative 2**. **Preferred Alternative 2** provides the highest net economic benefit when compared to **Alternative 3** and **Alternative 4** because it allows for the highest landings. Net economic benefits are expected to decrease with a reduced ACL when compared to the current scamp ACL. However, **Preferred Alternative 2** has the lowest net economic average (from 2025 to 2029) reduction of -$337,641 (2022 dollars) as opposed to an average of -$410,052 (2022 dollars) or -$443,504 (2022 dollars) for **Alternative 3** and **4**, respectively. Similarly, the social benefits are expected to be highest under **Preferred Alternative 2** followed by **Alternative 3** and **Alternative 4** as a higher ACL provides fishermen with the highest number of landings which results in positive social effects. The administrative burden is lowest with the highest ACL since it is less likely to require a closure, therefore, **Preferred Alternative 2** provides the highest administrative benefit followed by **Alternative 3** and **Alternative 4**.

2.5 Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There are no sector allocations or sector annual catch limits for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 2. Commercial and recreational allocation percentages and sector annual catch limits would change each year from 2025 through 2029, where they would remain in place until modified, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2018 through 2022.

Alternative 3. Commercial and recreational allocation percentages and sector annual catch limits would change each year from 2025 through 2029, where they would remain in place until modified, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2013 through 2022.

Table 2.5.1. Commercial ACLs and allocation percentages based on the preferred total ACL (Action 4). Commercial ACLs are expressed in pounds whole weight.

	Alternative 1 (No Action)	**Preferred Alternative 2 Split Reduction (2018-2022)**	Alternative 3 Split Reduction (2013-2022)
Total ACL (Year) (ACL=ABC)	Commercial	**Commercial %, (lbs ww)**	Commercial %, (lbs ww)
67,450 (2025)	NO ALLOCATIONS	**64.90% (43,772)**	63.40% (42,763)
72,200 (2026)	NO ALLOCATIONS	**63.92% (46,147)**	62.51% (45,132)
75,050 (2027)	NO ALLOCATIONS	**63.39% (47,572)**	62.04% (46,561)
77,900 (2028)	NO ALLOCATIONS	**62.90% (48,997)**	61.60% (47,986)
79,800 (2029)	NO ALLOCATIONS	**62.59% (49,947)**	61.32% (48,933)

Table 2.5.2. Recreational ACLs and allocation percentages based on the preferred total ACL (Action 4). Recreational ACLs are expressed in pounds whole weight.

	Alternative 1 (No Action)	**Preferred Alternative 2 Split Reduction (2018-2022)**	Alternative 3 Split Reduction (2013-2022)
Total ACL (Year) (ACL=ABC)	Recreational	**Recreational %, (lbs ww)**	Recreational %, (lbs ww)
67,450 (2025)	NO ALLOCATIONS	**35.10% (23,678)**	36.60% (24,687)
72,200 (2026)	NO ALLOCATIONS	**36.08% (26,053)**	37.49% (27,068)
75,050 (2027)	NO ALLOCATIONS	**36.61% (27,478)**	37.96% (28,489)
77,900 (2028)	NO ALLOCATIONS	**37.10% (28,903)**	38.40% (29,914)
79,800 (2029)	NO ALLOCATIONS	**37.41% (29,853)**	38.68% (30,867)

2.5.1 Comparison of Alternatives

Alternative 1 (No Action) would not establish sector allocations for the Scamp and Yellowmouth Grouper complex. Instead, the existing allocations for scamp (individually) and yellowmouth grouper (within the OSASWG complex) would be retained. These allocations are based on the current total ACL for each species, which is inclusive of Marine Recreational Information Program's (MRIP) Coastal Household Telephone Survey (CHTS) recreational estimates. These estimates are no longer considered BSIA. **Alternative 1 (No Action)** would not provide biological, economic, or social benefits to the stock since it would not establish allocations based on the ACL for the new complex. Tables 2.5.1 and 2.5.2 show the commercial and recreational ACLs along with the allocation percentages based on the preferred total ACLs in Action 4. The method for **Preferred Alternative 2** and **Alternative 3** was developed by the Council in December 2021, and used for the sector allocations of gag through Amendment 53 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 53, SAFMC 2023a). This method would specify the reductions in harvest needed to achieve the new ACL proportionally for each sector, based upon the distribution of landings under selected time periods that reflect the way the fishery for each species is currently operating (referred to as the Split Reduction Method). **Preferred Alternative 2** bases this Split Reduction Method on the five-year average commercial and recreational (MRIP-fishing effort survey [FES]) landings of both scamp and yellowmouth grouper from 2018 through 2022. **Alternative 3** bases the Split Reduction Method on the ten-year average of commercial and recreational (MRIP-FES) landings of scamp and yellowmouth grouper from 2013 through 2022. Both **Preferred Alternative 2** and **Alternative 3** allocate the new ACL proportional to each sector's landings based on the sector's landings from the baseline years. Each year thereafter, throughout the rebuilding plan, as the total ACL increases, the ACL poundage increase is allocated equally between both sectors and added to each sector's ACL from the previous year. For both **Preferred Alternative 2** and **Alternative 3**, the allocation percentages and sector ACLs in the last year would remain in place until modified. The biological effects of **Preferred Alternative 2** and **Alternative 3** are not expected to be substantially different, as the corresponding ACLs are similar between the two alternatives. Biological benefits are expected from both alternatives as they are based on the recommended ABC, which is expected to contribute to rebuilding of the stock.

The economic effects analysis for this action (Section 4.5.2) used a recent 5-year average landings baseline to calculate a de facto allocation for **Alternative 1 (No Action)**. This resulted in a 64.90% and 35.10% commercial and recreational allocation, respectively. The sector allocations proposed in **Preferred Alternative 2** match the de facto allocation in year one but shift towards the recreational sector in each subsequent year. The sector allocation percentages in **Alternative 3** would start lower for the commercial sector, therefore, the de facto allocation of **Alternative 1 (No Action)** would theoretically provide the most net economic benefits for the commercial sector. Considering only alternatives that establish an explicit allocation, **Preferred Alternative 2** followed by **Alternative 3** would provide the most net economic benefit for the commercial sector. Considering the recreational sector, the net economic benefit would be highest under **Alternative 3** followed by **Preferred Alternative 2** since the recreational sector would receive a higher allocation under **Alternative 3**. In terms of total estimated net economic benefits for both sectors, the same ranking would apply as stated for the recreational sector. In

comparison to **Alternative 1 (No Action)**, **Preferred Alternative 2** would increase annual net economic benefits by $0 in the 2025 fishing year and by $14,059 in the 2029 fishing year (2022 dollars). Over the 5-year time series **Preferred Alternative 2** would increase annual net economic benefits by $8,008 (2022 dollars). For the commercial sector, the social benefits would be highest under **Preferred Alternative 2** followed by **Alternative 3** as the allowable commercial harvest is higher under **Preferred Alternative 2**. Conversely, the social benefits for the recreational sector would be highest under **Alternative 3** followed by **Preferred Alternative 2**. Administrative effects would be expected to be higher under **Preferred Alternative 2** and **Alternative 3** when compared with **Alternative 1 (No Action)**, since both the commercial and recreational sector ACLs are expected to be met early in the fishing season.

2.6 Action 6. Modify the recreational bag limit for scamp and yellowmouth grouper

Alternative 1 (No Action). The recreational bag limit is 3 scamp or 3 yellowmouth grouper per person per day within the 3 fish grouper and tilefish combined aggregate.

Alternative 2. Establish an aggregate complex bag limit of 2 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

Preferred Alternative 3. Establish an aggregate complex bag limit of 1 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

2.6.1. Comparison of Alternatives

The Council is considering modifying the recreational retention limit for scamp and yellowmouth grouper to constrain harvest to the reduced recreational ACLs. Currently, scamp and yellowmouth grouper both have a bag limit of 3 fish per person per day within the 3 fish grouper and tilefish combined aggregate.[3] **Alternative 1 (No Action)** would retain this bag limit of 3 grouper, either scamp or yellowmouth grouper or a combination of the two species. **Alternative 2** would establish a more restrictive aggregate bag limit of 2 fish, either scamp or yellowmouth grouper or a combination of the two species within the 3-grouper aggregate. Similarly, **Preferred Alternative 3** would also establish an aggregate bag limit; however, this aggregate bag limit would be the most restrictive of the alternatives at 1 fish of either species within the new complex per person per day. **Alternative 2** and **Preferred Alternative 3** would eliminate the need for anglers to separately identify the species as the bag limit would be applicable to both species. A more conservative bag limit tends to increase the biological benefit to the stock and therefore, **Preferred Alternative 3** would have the greatest biological benefit followed by **Alternative 2** and **Alternative 1 (No Action)**. The economic and social effects can be evaluated based on the effect on trip satisfaction or the length of the season. Because less fish can be retained under **Alternative 2** and **Preferred Alternative 3**, net economic and social benefit would be expected to be reduced. Conversely, a more restrictive bag limit could potentially allow for a longer season. It is expected that **Alternative 2** and **Alternative 1 (No Action)** would not result in net economic and social effects in 2025 because harvest is projected to be limited to the recreational ACL in that year; however, in subsequent years the more restrictive bag limit is projected to prevent the ACL form being fully harvested. Therefore, for 2026 and each year thereafter net economic and social benefits would be greatest under **Alternative 1 (No Action)**, followed by **Alternative 2**, and **Preferred Alternative 3**. Administrative effects would not be expected to vary substantially between **Alternative 1 (No Action)**, **Alternative 2**, and **Preferred Alternative 3**, as recreational bag limits are already in place. Depending on the preferred alternative selected, a shorter recreational fishing season could lead to administrative burdens such as notifying the public, education, and enforcement

[3]For information on the 3-grouper aggregate see §622.187 and Appendix A to Part 622, Table 2 (https://www.ecfr.gov/current/title-50/chapter-VI/part-622#622.187)

related to shortening the length of the following year's recreational fishing season as per the current post-season recreational AM (**Preferred Alternative 5** in Action 10).

2.7 Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

Alternative 1 (No Action). There is no commercial trip limit for scamp and yellowmouth grouper.

Alternative 2. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 200 pounds gutted weight.

Preferred Alternative 3. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 300 pounds gutted weight.

Alternative 4. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 400 pounds gutted weight.

Alternative 5. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 500 pounds gutted weight.

2.7.1 Comparison of Alternatives

The Council is considering an aggregate trip limit for scamp and yellowmouth grouper to constrain harvest to the reduced commercial ACLs to possibly extend the commercial fishing season. Currently, neither scamp nor yellowmouth grouper have a trip limit. **Alternative 1 (No Action)** would not establish a trip limit for either species. **Alternative 2** would establish an aggregate trip limit for scamp and yellowmouth grouper of 200 lbs gutted weight (gw), which is the most restrictive of all the alternatives. **Preferred Alternative 3** through **Alternative 5** would increase the trip limit in 100 lbs increments to 500 lbs. The aggregate trip limit would ensure that the limit of scamp and yellowmouth grouper would address the species together and remove the need to identify between the two species. Both scamp and yellowmouth grouper have a ww to gw conversion factor of 1.18. This conversion factor was used to determine the conversion from ww to gw for each alternative. The biological benefit would be highest with the most conservative trip limit as it would limit commercial harvest. Therefore, **Alternative 2** would provide the stock with the most benefit followed by **Preferred Alternative 3**, **Alternative 4**, **Alternative 5**, and **Alternative 1 (No Action)**. Economic and social effects depend on the balance between a trip limit extending the season and whether trips are still economically efficient. Economically, a decreased trip limit may reduce potential net revenue. Based on net revenue, **Alternative 1 (No Action)** would provide the most economic benefit followed by **Alternative 5**, **Alternative 4**, **Preferred Alternative 3**, and **Alternative 2**. With regards to social effects and the preferred alternatives for other actions, **Alternative 2** is the only alternative that is not expected to result in a closure for the commercial sector. **Preferred Alternative 3** resulted in only two years where closures were expected (2025 and 2026) followed by three years (2025-2027) for **Alternative 4**, four years (2025-2028) for **Alternative 5** and all years (2025-2029) for **Alternative 1 (No Action)**. Because there is not currently a commercial trip limit for scamp or yellowmouth grouper there would be no administrative effects for **Alternative 1 (No Action)**. The administrative burden would be the same for the rest of the alternatives as they all specify a trip limit and a higher administrative burden than under **Alternative 1 (No Action)**.

2.8 Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There are no commercial accountability measures for the Scamp and Yellowmouth Grouper complex.

Alternative 2. If commercial landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex commercial annual catch limit, the commercial sector for the complex will close for the remainder of the fishing year.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the complex commercial annual catch limit, the total annual catch limit is exceeded, and the Scamp and Yellowmouth Grouper complex is overfished, the commercial annual catch limit for the complex for the following fishing year will be reduced by the amount of the commercial annual catch limit complex overage in the prior fishing year.

Preferred Alternative 3. If commercial landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex commercial annual catch limit, commercial harvest of scamp and yellowmouth grouper will be closed for the remainder of the fishing year.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the complex commercial annual catch limit, regardless of stock status or whether the total annual catch limit was exceeded, the complex commercial annual catch limit for the following fishing year will be reduced by the amount of the complex commercial annual catch limit overage in the prior fishing year.

2.8.1 Comparison of Alternatives

Alternative 1 (No Action) would not establish an AM for the Scamp and Yellowmouth Grouper complex since the complex does not currently exist. Thus, **Alternative 1 (No Action)** would not provide biological, economic, or social benefits to the Scamp and Yellowmouth Grouper complex. **Alternative 2** would establish an AM that has an in-season closure that would be triggered if the commercial landings reach or are projected to reach the commercial ACL. In addition, **Alternative 2** would specify a post-season AM where the commercial ACL would be reduced by any overage in the following fishing season if the following criteria are met: the commercial landings exceed the commercial ACL, the total ACL is exceeded, and the stock is overfished. All three of these criteria must be met for the post-season AM to be triggered. This alternative is representative of the current commercial AM in place for scamp individually and yellowmouth grouper (as part of the OSASWG complex).

Preferred Alternative 3 would establish an AM that has an in-season closure that would be triggered if the commercial landings reach or are projected to reach the commercial ACL. **Preferred Alternative 3,** like **Alternative 2**, includes a post-season AM, but would be triggered only by the commercial landings exceeding the commercial ACL, and would not be tied to the total ACL and stock status. Biological benefits increase as the AM becomes more conservative, or easily triggered as it responds more quickly to commercial landings reaching or exceeding the

ACL. Therefore, **Preferred Alternative 3** would provide the greatest biological benefit compared to **Alternative 2**. Economic and social effects are dependent on whether the post-season AM is triggered and a payback of the overage amount is incurred, reducing the duration of subsequent seasons. Longer seasons tend to provide economic and social benefit. Because the post-season AM for **Preferred Alternative 3** is more easily triggered, this alternative would provide less economic and social benefit when compared to **Alternative 2**. Administrative burden increases with any alternative where the post-season AM is more easily triggered, as the subsequent season would need to be shortened; therefore, **Preferred Alternative 3** would have higher negative administrative effects when compared to **Alternative 2**.

2.9. Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

Alternative 1 (No Action). There are no recreational accountability measures for the Scamp and Yellowmouth Grouper complex.

Alternative 2. If recreational landings for the Scamp and Yellowmouth Grouper complex, reach or are projected to reach the complex recreational annual catch limit, the recreational sector for the complex will close for the remainder of the fishing year.

If recreational landings for the Scamp and Yellowmouth Grouper complex, exceed the complex recreational annual catch limit, the total annual catch limit is exceeded, and the Scamp and Yellowmouth Grouper complex is overfished, the length of the following year's recreational fishing season for the complex will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year.

Alternative 3. If recreational landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex recreational annual catch limit, recreational harvest for the complex is closed for the remainder of the fishing year.

If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the complex recreational annual catch limit, the length of the following year's recreational fishing season will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year, regardless of stock status.

Alternative 4. If recreational landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex recreational annual catch limit, recreational harvest is closed for the remainder of the fishing year.

If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the complex recreational annual catch limit, the recreational annual catch limit for the complex is reduced in the following year by the amount of the reactional annual catch limit overage, regardless of stock status.

Preferred Alternative 5. If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the complex recreational annual catch limit, the length of the following year's recreational fishing season for the complex will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year, regardless of stock status.

2.9.1 Comparison of Alternatives

Alternative 1 (No Action) is the current status quo for the Scamp and Yellowmouth Grouper complex that would be established in **Action 1**, which is no recreational AMs. Thus, **Alternative 1 (No Action)** would not provide biological, economic, or social benefit to the Scamp and Yellowmouth Grouper complex. **Alternative 2** would establish an AM that has an

in-season closure that would be triggered if the recreational landings reach or are expected to reach the recreational ACL. In addition, **Alternative 2** would have a post-season AM where the recreational ACL would be reduced by any overage in the following fishing season if the following criteria are met: the recreational landings exceed the recreational ACL, the total ACL is exceeded, and the stock is overfished. All three of these criteria must be met for the post-season AM to be triggered. This alternative is representative of the current recreational AM in place for scamp individually and yellowmouth grouper within the OSASWG complex.

Alternative 3 would establish an AM that has an in-season closure that would be triggered if the recreational landings reach or are expected to reach the recreational ACL. **Alternative 3,** like **Alternative 2**, includes a post-season AM that would be triggered only by the recreational landings exceeding the recreational ACL, and would not be tied to the total ACL and stock status. **Alternative 4** would be most biologically conservative because it includes an in-season closure and payback provision not tied to the total ACL and stock status, which would reduce the recreational ACL for the following year by the amount of the overage in the current year.

Preferred Alternative 5 would establish an AM that does not have an in-season closure. This alternative, like **Alternative 2** would implement a post-season AM, but this AM would be triggered only by recreational landings exceeding the recreational ACL and would not be tied to the total ACL and stock status.

Biological benefits increase as the AM becomes more conservative, or easily triggered as it responds more quickly to recreational landings reaching or exceeding the ACL; therefore, **Alternative 4** would provide the most benefit followed by **Alternative 3**, **Alternative 2**, and **Preferred Alternative 5. Alternative 3** and **Alternative 4** are similar in their effects; however, an ACL payback under **Alternative 4** restricts effort in the following season if the recreational ACL is exceeded whereas the season reduction under **Alternative 4** only constrains effort to a shorter window of time. Biologically, there is more benefit to the AM that restricts effort. Negative economic and social effects are expected to increase with less fishing days. Therefore, **Preferred Alternative 5** is expected to provide the most economic benefit, as it is the only alternative that does not specify an in-season AM and the post-season AM is a season reduction and not an ACL payback. Lower economic and social benefits are expected under **Alternative 2**, followed by **Alternative 3**, and **Alternative 4** as the AMs become more conservative, and the post-season AMs are more easily triggered. Administrative effects would be expected to be higher under **Alternative 4**, followed by **Alternative 3**, **Alternative 2**, **Preferred Alternative 5**, and **Alternative 1 (No Action)**. The recreational ACLs are difficult to monitor in-season due to the timing and availability of the recreational landings. Administrative burdens would be related to in-season closures under **Alternatives 2** through **4**, and the possibility of re-opening of the recreational sector if the recreational ACLs are not utilized, and post-season AMs under **Preferred Alternative 5**.

2.10 Action 10. Revise the total annual catch limit and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

Alternative 1 (No Action). The acceptable biological catch for the Other South Atlantic Shallow Water Grouper complex (containing rock hind, red hind, coney, graysby, yellowmouth grouper, and yellowfin grouper) is 104,190 pounds whole weight. The total annual catch limit is set equal to this acceptable biological catch and is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey. The commercial annual catch limit is 55,542 pounds whole weight and the recreational annual catch limit is 48,648 pounds whole weight.

Preferred Alternative 2. The acceptable biological catch for the updated Other South Atlantic Shallow Water Grouper complex (contains rock hind, red hind, coney, graysby, and yellowfin grouper, and excludes yellowmouth grouper) is 104,190 pounds whole weight. The total annual catch limit for the updated Other South Atlantic Shallow Water Grouper complex is 100,151 pounds whole weight and is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey. The commercial annual catch limit is 53,380 pounds whole weight and the recreational annual catch limit is 46,771 pounds whole weight.

Table 2.10.1. Total and sector ACLs for the Other South Atlantic Shallow Water Grouper complex ACL and sector ACLs. The total and sector ACLs for both alternatives are based on MRIP-CHTS recreational estimates.

Alternative	ABC (lbs ww)	Total ACL (lbs ww)	Commercial ACL (lbs ww)	Recreational ACL (lbs ww)
Alternative 1 (No Action)	104,190	104,190	55,542	48,648
Preferred Alternative 2	**104,190**	**100,151**	**53,380**	**46,771**

2.10.1 Comparison of Alternatives

Both the ABC and ACL for the OSASWG complex are inclusive of recreational estimates from MRIP-CHTS. As a result of the reorganization and establishment of the new complex in **Action 1**, the OSASWG total ACL and sector ACLs need to be modified to remove the portion that was previously designated for yellowmouth grouper (Table 2.11.1, Figure 2.11.1). **Alternative 1 (No Action)** would retain the current ABC, total, and sector ACLs for the OSASWG complex. This is not a viable alternative as it would retain the ACL including yellowmouth grouper (**Action 4**).

Preferred Alternative 2 would retain the current ABC for the updated OSASWG complex but remove the 4,039 lbs ww from the total ACL that corresponds to yellowmouth grouper (Table 2.11.2). Sector ACLs for the updated OSASWG complex were calculated for **Preferred Alternative 2** based on the total ACL established in Amendment 29 to the Fishery Management Plans for the Snapper Grouper Fishery of the Southeast Region (SAFMC 2014). While this alternative addresses the establishment of the new Scamp and Yellowmouth Grouper complex,

the modified total ACL would continue to be inclusive of MRIP-CHTS recreational estimates. The OSASWG species are data limited and none of the species have been assessed. Following the Unassessed Stocks Workgroup meeting in 2020, an ABC was recommended, however, this catch level was determined using the 3rd highest and Only Reliable Catch (ORCS) methodologies, which are both no longer considered BSIA. During the April 2023 SSC meeting, the SSC recommended the OSASWG ACL be modified but retained MRIP-CHTS recreational estimates, with a recommendation that the OSASWG ABC and ACL be revised in the upcoming Unassessed Species Amendment using MRIP-FES recreational estimates. As the Unassessed Species Amendment is not expected to be completed until 2025 or later, an action to update the OSASWG ABC and ACL using MRIP-FES recreational data was not included in this amendment. The MRIP-FES based catch estimates for the OSASWG species have not been through a sufficient scientific review process, which the SSC felt was necessary prior to developing ABCs and ACLs based on the FES data. The current percentage of the sector allocations for the remaining five species will not be modified in this amendment. This amendment will not modify the commercial or recreational accountability measures for the OSASWG complex, which can be found at 50 CFR 622.193(j).[4]

As discussed in more detail in other recent Council amendments (Amendment 53, Section 1.6), NMFS' recreational data collection program has undergone significant change over the past decade. Most relevant here, MRIP transitioned from the legacy CHTS to a new mail survey (FES) beginning in 2015, and in 2018, the FES replaced the CHTS. In general, landings estimates are higher using the MRIP-FES as compared to the MRFSS-CHTS estimates. This is because the FES is designed to more accurately measure fishing activity than the CHTS, not because there was a sudden rise in fishing effort. Ultimately, NMFS has concluded that the MRIP-FES data, when fully calibrated to ensure comparability among years and across states, produced the best available data for use in stock assessments and management (NMFS 2021). However, a pilot study, using data from four states from July to December 2015, found that switching the current sequence of MRIP-FES survey questions resulted in fewer reporting errors and illogical responses. NMFS is now conducting a large-scale follow up study to gain a better understanding of differences in effort estimates between the current survey design and revised survey designs. This study is being conducted throughout 2024, with results available the following year(s).

The National Standard 2 Guidelines outline the criteria to consider when evaluating the best scientific information upon which to base management advice. These criteria include "relevance, inclusiveness, objectivity, transparency and openness, timeliness, verification and validation, and peer review, as appropriate." 50 CFR 600.315(a)(6). While the MRIP-FES based catch estimates are clearly relevant, and inclusiveness argues for utilizing all such information in developing catch recommendations, those considerations are outweighed by other factors identified in the Guidelines. Transparency and openness, timeliness, and peer review all weigh against incorporating the MRIP-FES based catch estimates.

Peer review is a fundamental consideration, which "helps ensure objectivity, reliability, and integrity of scientific information." While the FES based estimates have been developed by MRIP and subject to some level of internal agency review, they have not been subject to the same level of review and scrutiny as would be the case if the SSC used them to develop ABC recommendations for the remaining OSASWG stocks. Similarly, the SSC process provides a vital avenue for public and stakeholder access to the information and the process through which the information is used to develop catch recommendations, thereby promoting transparency and openness. While the FES based catch estimates may be accessed by the public via the internet, mere access to the data is no substitute for access to the full analysis and procedure provided by the SSC catch level recommendation process.

Finally, timeliness is a noteworthy concern. Section 600.315(a)(6)(v) states "Sufficient time should be allotted to audit and analyze recently acquired information to ensure its reliability. Data collection methods are expected to be subjected to appropriate review before providing data used to inform management decisions." While sufficient time had been provided for the development of ABCs utilizing MRIP-FES based catch estimates, new scientific information has since cast significant doubt on the methodologies through which those ABCs were developed. Taking the time to repeat the SSC data review and ABC setting process would delay Council decisions on important management actions for other stocks being addressed in the amendment. According to Section 600.315(a)(6)(v) "Mandatory management actions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis." Given that the Scamp and Yellowmouth Grouper complex is overfished, the Council is required to develop a rebuilding plan within the statutory timeline, and such action should not be delayed to incorporate the forthcoming development of FES based ABCs from the SSC.

Biological effects would not vary much between alternatives for this action as the difference in the total ACL between these alternatives is only 4,039 lbs ww, however, **Alternative 1 (No Action)** would not modify the OSASWG ACL, effectively duplicating the number of yellowmouth grouper allowed to be harvested since the ACL for the Scamp and Yellowmouth Grouper complex accounts for allowed harvest of yellowmouth grouper. This could have negative effects on yellowmouth grouper. Modifying the OSASWG ACL is not expected to have economic or social effects. There are no expected administrative effects from this action as the OSASWG complex already has ACLs and landings monitoring.

Table 2.10.2. ACLs for species included in the current OSASWG complex.

Shallow-Water Groupers complex	Species ACL (lbs ww)
Red Hind	33,084
Rock Hind	37,493
Yellowmouth Grouper	4,039
Yellowfin Grouper	9,258
Coney	2,718
Graysby	17,598
Total ACL	**104,190**

NOTE: the species and total ACL values are set equal to the ABC and values are inclusive of recreational estimates from the MRIP-CHTS.

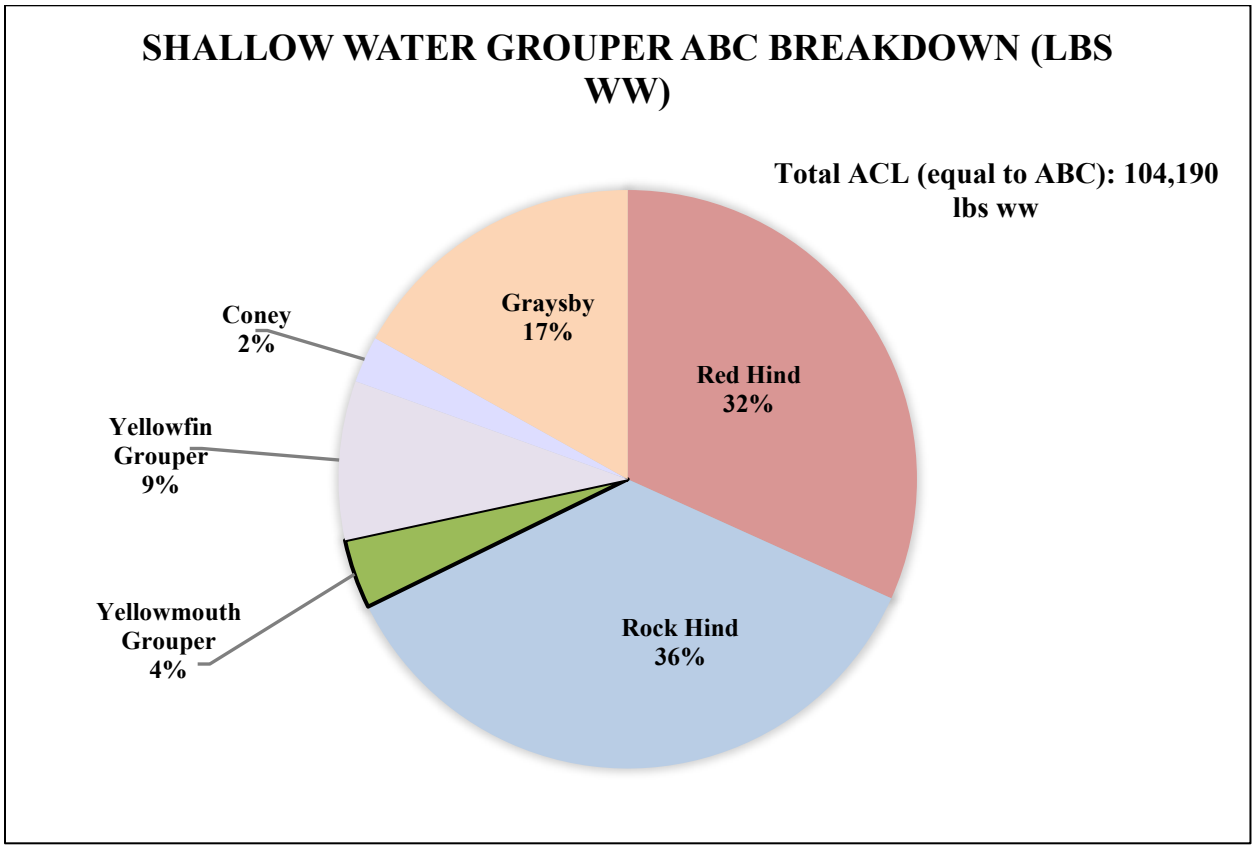

Figure 2.10.1. The percentage breakdown of the ABC amongst the 6 species within the OSASWG complex prior to the establishment of the Scamp and Yellowmouth Grouper complex.
NOTE: The current OSASWG ACL is set equal to the ABC.

Chapter 3. Affected Environment

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

- **Habitat Environment** (Section 3.1)
- **Biological and Ecological Environment** (Section 3.2)
- **Economic and Social Environment** (Sections 3.3, 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 II; SAFMC 2018) and in the SAFMC EFH User Guide (SAFMC 2024a), which are 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 EFH User Guide and spatial representations of these and other habitat-related layers are in the Council's SAFMC EFH Mapper.

3.1.1 Essential Fish Habitat

For current EFH information for species managed under the Snapper Grouper FMP information, refer to Appendix E.

3.1.2 Habitat Areas of Particular Concern

For current EFH-Habitat Areas of Particular Concern (EFH-HAPC) for species managed under the Snapper Grouper FMP, refer to Appendix E.

3.2 Biological and Ecological Environment

3.2.1 Scamp and Yellowmouth Grouper

Life History

Scamp (*Mycteroperca phenax*) are protogynous groupers (changing sex from female to male with an increasing size [age]) that range from North Carolina to Key West, the Gulf of Mexico, and along the southern shore of the Caribbean (Heemstra and Randall 1993). Scamp are found

in areas of living *Oculina* coral formations at depths of 70 to 100 meters (m) off the east coast of Florida (Gilmore and Jones 1992), and at low-profile bottoms at depths of 30 to 100 m in North Carolina (Heemstra and Randall 1993). Juveniles are found in shallow water at jetties and in mangrove areas (Heemstra and Randall 1993). Scamp are highly piscivorous (Dodrill et al. 1993) and feed on fish, cephalopods, and crustaceans (Matheson et al. 1986).

Yellowmouth grouper (*Mycteroperca interstitialis*) are also protogynous and are widely distributed throughout the western Atlantic Ocean. Yellowmouth grouper range throughout the southeastern U.S. from North Carolina through the Florida Keys and into the Gulf of Mexico and is also found in the waters off Bermuda and the Bahamas (Smith 1971). It can also be found throughout the Caribbean Sea south to Brazil (Smith 1978). Yellowmouth groupers are found in subtropical and temperate hard-bottom areas to depths of 150 m (Heemstra and Randall 1993), but are most commonly found at depths of 2 to 35 m (Bullock and Smith 1991; Gaspirini and Floeter 2001). Juveniles commonly occur in mangrove-lined lagoons (Heemstra and Randall 1993). Yellowmouth grouper are piscivorous and feed on fish and small crustaceans (Heemstra and Randall 1993).

SEDAR 68 Research Track (RT) (2021) reported a maximum age for scamp and yellowmouth grouper of 34 years with a range of ± 2 years, a maximum size of 880 millimeter (mm) fork length (FL), and maximum weight of 21 kilograms (kg). Spawning occurs during February through July with peak spawning during March through May (Harris et al. 2002). Fifty percent maturity of female age and length was2.9 years and 375.2 mm FL, respectively, and sex transition (to male) of age and length at 50% were 10.6 years and 646.9 mm FL, respectively (SEDAR 68 RT [2021]).

Stock Status

The Southeast Data, Assessment, and Review (SEDAR) process is a cooperative Fishery Management Council initiative to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and U.S. Caribbean.[5] SEDAR seeks improvements in the scientific quality of stock assessments, constituent and stakeholder participation in assessment development, transparency in the assessment process, and a rigorous and independent scientific review of completed stock assessments.

SEDAR is organized around three public workshops. First is the Data Workshop, during which fisheries monitoring and life history data are reviewed and compiled. Second is the Assessment Workshop, which may be conducted via a workshop and several webinars, during which assessment models are developed and population parameters are estimated using the information provided from the Data Workshop. Third and final is the Review Workshop, during which independent experts review the input data, assessment methods, and assessment products. The completed assessment, including the reports of all three workshops and all supporting documentation, are then forwarded to the Council's Scientific and Statistical Committee (SSC).

[5] For more details on the different types of stock assessments under SEDAR see https://sedarweb.org/.

The SSC considers whether the assessment represents the best available science and develops fishing level recommendations for Council consideration.

The South Atlantic stock of scamp was assessed for the first time through the Southeast Data, Assessment, and Review (SEDAR) 68 RT assessment in September 2021 (SEDAR 68 RT [2021]). In 2020, the first stage of the SEDAR 68 data process was a Stock ID Workshop (SEDAR 68 Stock ID Workshop [2020]), which concluded that scamp are very difficult to distinguish from yellowmouth grouper and thus, much of the assessment data likely represent both species in unknown proportions. The SEDAR 68 Stock ID Workshop (2020) recommended that the stock assessment be conducted on both scamp and yellowmouth grouper jointly, with the two species treated as a single complex (hereafter referred to as Scamp and Yellowmouth Grouper complex). In December 2022, the SEDAR 68 operational assessment (OA) was conducted with data through 2021 and considered scamp and yellowmouth grouper a single stock due to identification issues between the two species (SEDAR 68 OA [2022]).

SEDAR 68 OA (2022) indicated that the scamp and yellowmouth grouper stock is overfished, but that overfishing is not occurring (Figure 3.2.1.1). The assessment noted that stock status was driven mainly by poor recruitment, with a pattern of low recruitment in the most recent 10 to 15-year period. This pattern of low recruitment raised the question of a regime shift, which would necessitate re-evaluation of biological reference points for this stock. However, the SSC considered that there was not enough evidence to determine a regime shift had occurred, primarily referencing criteria developed by Klaer et al. (2015).

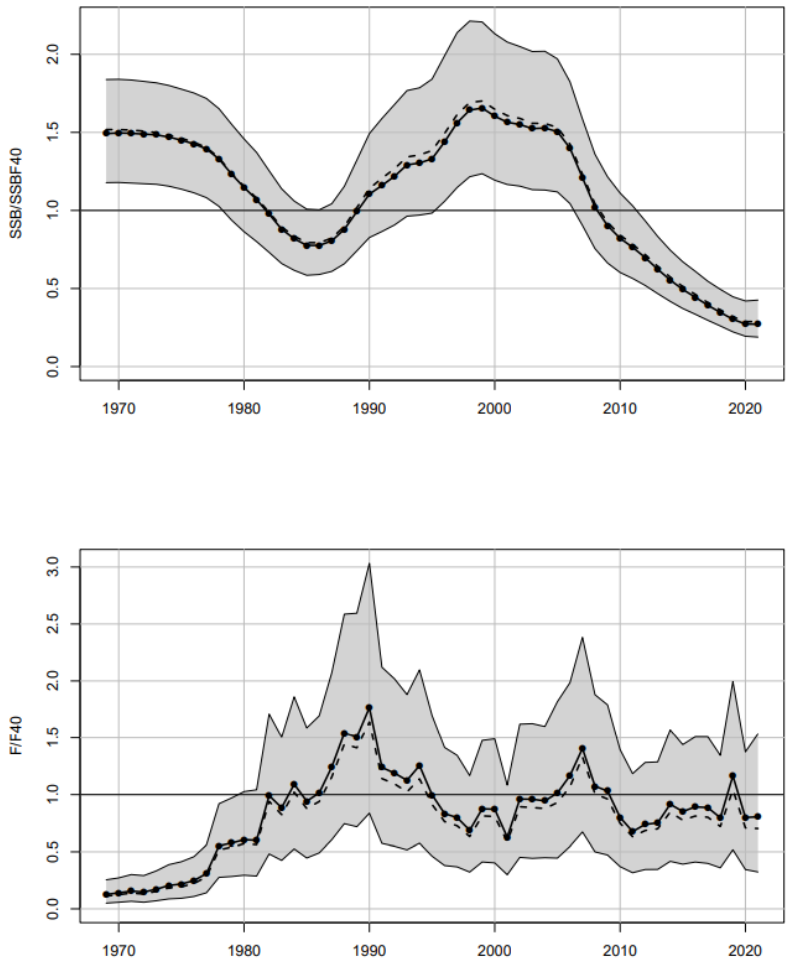

Figure 3.2.1.1. Top panel: spawning biomass relative to $SSB_{F40\%}$. Bottom panel: F relative to $F_{40\%}$. Solid line indicates estimates from the SEDAR 68 OA (2022) base run; dashed lines represent median values of the Monte Carlo/Bootstrap Ensemble (MCBE) analysis; gray error bands indicate the 5th and 95th percentiles of the MCBE.

Landings

Landings estimates for scamp and yellowmouth grouper from 1986 through 2022 are shown in Table 3.2.1.

Table 3.2.1. Aggregated annual landings estimates of scamp and yellowmouth grouper landings (pounds whole weight) from 1986-2022, by sector. Landings values mask confidentiality through 2012 and are adjusted for both confidentiality and recreational uncertainty after 2012.

Year	Commercial	Recreational (FES)	Total Landings
1986	273,134	57,253	330,387
1987	322,506	64,182	386,688
1988	301,390	134,039	435,429
1989	380,468	116,584	497,052
1990	492,038	125,523	617,561
1991	406,389	209,225	615,613
1992	294,489	109,500	403,989
1993	316,475	107,524	423,999
1994	335,955	143,997	479,952
1995	375,285	79,620	454,905
1996	307,016	82,714	389,730
1997	312,373	81,246	393,619
1998	293,928	100,564	394,492
1999	415,142	196,113	611,255
2000	327,182	353,005	680,187
2001	252,413	166,118	418,531
2002	267,783	405,779	673,563
2003	292,405	261,369	553,774
2004	289,051	287,786	576,837
2005	307,263	191,833	499,097
2006	355,599	360,588	716,187
2007	379,559	371,693	751,252
2008	283,894	168,010	451,904
2009	283,634	127,501	411,135
2010	202,699	82,033	284,732
2011	174,392	62,988	237,380
2012	177,997	88,574	266,571
2013	156,316	98,902	255,217
2014	184,257	84,856	269,113
2015	143,635	84,856	228,492
2016	125,044	70,811	195,855
2017	123,692	97,541	221,233
2018	106,892	65,497	172,389
2019	89,986	33,452	123,438
2020	73,259	26,921	100,180
2021	59,424	43,322	102,745
2022	48,139	35,121	83,260

Source: SEFSC Commercial ACL Data – September 2023; MRIP-FES Recreational data – August 2023.

3.2.3 Bycatch

The implications of bycatch on the scamp and yellowmouth grouper stock and snapper grouper fishery are discussed in Appendix G.

3.2.4 Other Species Affected

This amendment indirectly affects other species in the Snapper Grouper fishery management unit (FMU) that are caught while fishing for scamp and yellowmouth grouper (other shallow water grouper species, gag, red porgy, almaco jack, greater amberjack, and red snapper). Scamp and yellowmouth grouper are most often found at similar depth ranges and habitat types as other shallow water grouper species. This group includes gag, black grouper, coney, graysby, red hind, red grouper, rock hind, and yellowfin grouper. Off the Carolinas, scamp and gag exhibited similar preference for the same habitat variables, especially surface geologic component, biotic class, percent biotic cover and bottom temperature (Glasgow 2017). For summary information on other snapper grouper species that may be affected by the actions in this plan amendment, refer to Section 3.2 in Vision Blueprint Regulatory Amendment 27 to the FMP (SAFMC 2019a).

3.2.5 Protected Species

For information on protected species (as of January 2024), the reader is hereby referred to Snapper Grouper Amendment 53 Chapter 3.2.5 (SAFMC 2023a).

3.3 Economic Environment

3.3.1 Commercial Sector

Economic information pertaining to the commercial sector of the snapper grouper fishery is provided in the Comprehensive Commercial Electronic Logbook Amendment (under review), Amendment 45 to the Snapper Grouper FMP (SAFMC 2023b), Liese (2023), and Buck (2018), and is incorporated herein by reference. Select updates to this information specific to scamp and yellowmouth grouper are provided below. The major sources of data summarized in this section are the National Marine Fisheries Services' (NMFS) Southeast Regional Office (SERO) Permits Information Management System, the Southeast Fisheries Science Center (SEFSC) Social Science Research Group (SSRG) Socioeconomic Panel[6] data set, and the SEFSC Fishing Communities Web Query Tool. Inflation adjusted values are reported in 2022 dollars, through application of the annual, not seasonally adjusted GDP implicit price deflator provided by the U.S. Bureau of Economic Analysis.

Permits

Any fishing vessel that harvests and sells any of the snapper grouper species from the South Atlantic exclusive economic zone (EEZ) must have a valid South Atlantic commercial snapper grouper permit, which is a limited access permit. As of August 26, 2021, there were 579 valid or

[6] This data set is compiled by the SEFSC Social Science Research Group from Federal Logbook System data, supplemented by average prices calculated from the Accumulated Landings System. Because these landings are self-reported, they may diverge slightly from dealer-reported landings presented elsewhere.

renewable[7] South Atlantic Snapper Grouper unlimited permits and 112 valid or renewable 225-lb trip-limited permits. Commercial harvest of snapper grouper species in the EEZ may only be sold to dealers with a federal dealer permit. As of August 26, 2021, there were 379 entities with a federal Gulf and South Atlantic Dealers permit.

Landings, Value, and Effort

The number of federally permitted commercial vessels that landed South Atlantic scamp or yellowmouth grouper trended down from 2018 through 2022 (Table 3.3.1.1). Annual landings of scamp and yellowmouth grouper also decreased steadily during this period, with an overall decline of approximately 54%. On average (2018 through 2022), vessels that landed scamp or yellowmouth grouper did so on approximately 20% of their South Atlantic trips and these species accounted for approximately 11% of revenue on such trips. Additionally, scamp and yellowmouth grouper landings together comprised 4.1% of average annual all species revenue (2018 through 2022) for these vessels, including revenue from Gulf of Mexico trips (Table 3.3.1.1 and Table 3.3.1.2). Average all species vessel-level revenue for scamp and yellowmouth grouper harvesters decreased steadily from 2018 through 2021, then bounced back in 2022 (Table 3.3.1.2). The average annual price per pounds (lbs) gutted weight (gw) for scamp and yellowmouth grouper during this period was $7.44 (2022 dollars). Although not shown in the table, the maximum annual revenue from all species reported by a single vessels that harvested scamp or yellowmouth grouper from 2018 through 2022 was $441,332 (2022 dollars).

Liese (2023)[8] generated annual vessel-level estimates of costs (as a percentage of revenue) and net revenue from operations for vessels that harvested scamp in the South Atlantic. There is no comparable information for yellowmouth grouper available; however, given the low level of yellowmouth grouper landings, the overlap of vessels that land each species, and the misidentification issues between scamp and yellowmouth grouper that form the basis of the action to combine them into one complex, it is assumed the scamp-based economic performance measures are representative of vessels that harvest either of these species. 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 scamp was approximately 28.7% 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 $2,367 (2022 dollars) and an average annual net revenue from operations of -$742 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

[7] A renewable permit is an expired limited access permit that cannot be actively fished, but can be renewed for up to one year after expiration.

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

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 scamp in the South Atlantic. According to Liese (2023), labor, including both hired and owner's time, consumed 50% of trip revenue and fuel and supplies consumed 22.9%, leaving a trip net revenue margin of 27.1%, on average, from 2014 through 2018. Based on the relatively low average percentage of trip-level level revenue that is composed of scamp and yellowmouth grouper landings from 2018 through 2022 (11%) and anecdotal information provided in Section 3.4.1 that states these species are not typically targeted but are often caught while fishing for other snapper grouper species, it is assumed that scamp and yellowmouth grouper are predominantly incidental catch. Further justification for this assumption is provided in Liese (2023), which contains a figure that graphs the percent of trip revenue comprised by scamp against the percent of all trips that harvested scamp in 2018. This figure clearly shows that for the vast majority of scamp trips, scamp accounted for less than a quarter of trip revenue. Therefore, in assessing the economic effects of the actions contained in this amendment, it is assumed that although landings and revenue are subject to change, there is no expectation of a meaningful change in fishing behavior, effort, or trip-level operating costs. As a result, changes in producer surplus and economic profit, for the purposes of assessing the economic effects of this amendment, shall be treated equivalent to estimated changes in gross revenue, as opposed to applying the aforementioned annual vessel-level and trip-level economic measures provided in Liese (2023). These measures are, however, still useful for understanding the economic performance of the commercial fishing businesses affected by this amendment.

Table 3.3.1.1. Number of vessels, number of trips, and landings (lbs gw) by year for South Atlantic scamp and yellowmouth grouper.

Year	# of vessels that caught scamp and yellowmouth grouper (> 0 lbs gw)	# of trips that caught scamp and yellowmouth grouper	scamp and yellowmouth grouper landings (lbs gw)	Other species' landings jointly caught w/ scamp and yellowmouth grouper (lbs gw)	# of South Atlantic trips that only caught other species	Other species' landings on South Atlantic trips w/o scamp and yellowmouth grouper (lbs gw)	All species landings on Gulf trips (lbs gw)
2018	148	927	89,538	1,130,373	3,540	1,897,337	188,363
2019	153	882	73,857	940,772	3,275	1,934,076	214,670
2020	146	823	62,680	944,453	3,071	1,632,480	220,666
2021	128	641	49,407	789,905	2,814	1,480,192	141,294
2022	112	561	40,985	737,370	2,166	1,295,634	91,466
Average	137	767	63,293	908,575	2,973	1,647,944	171,292

Source: SEFSC-SSRG Socioeconomic Panel (July 2023 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 (2022 dollars) for South Atlantic scamp and yellowmouth grouper.

Year	# of vessels that caught scamp and yellowmouth grouper (> 0 lbs gw)	Dockside revenue from scamp and yellowmouth grouper	Dockside revenue from 'other species' jointly caught w/ scamp and yellowmouth grouper	Dockside revenue from 'other species' caught on South Atlantic trips w/o scamp and yellowmouth grouper	Dockside revenue from 'all species' caught on Gulf trips	Total dockside revenue	Average total dockside revenue per vessel
2018	148	$640,751	$4,593,538	$6,893,124	$807,978	$12,935,391	$87,401
2019	153	$537,745	$4,009,570	$7,175,410	$886,930	$12,609,654	$82,416
2020	146	$464,699	$4,083,192	$6,167,057	$878,839	$11,593,787	$79,409
2021	128	$376,393	$3,301,622	$5,471,000	$579,894	$9,728,910	$76,007
2022	112	$316,856	$3,426,856	$5,620,524	$386,294	$9,750,530	$87,058
Average	137	$467,289	$3,882,956	$6,265,423	$707,987	$11,323,654	$82,458

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 scamp and yellowmouth grouper landings from vessels during 2018 through 2022.[9] Like vessels, dealer participation in particular fisheries is fluid, and not all dealers purchased scamp and yellowmouth grouper in each year during this time. On average, from 2018 through 2022, scamp and yellowmouth grouper purchases comprised approximately 0.5% of all purchases made by these dealers. The average annual value of total purchases per scamp and yellowmouth grouper dealer experienced a decreasing trend with fluctuation from 2018 through 2022 (Table 3.3.1.3). Although not shown in the table, the maximum annual value of all purchases made by a single scamp and yellowmouth grouper dealer from 2018 through 2022 was approximately $14 million (2022 dollars), which occurred in 2022.

[9] 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 scamp and yellowmouth grouper than the SEFSC-SSRG socio-economic panel database.

Table 3.3.1.3. Purchase statistics for dealers that bought South Atlantic scamp and yellowmouth grouper landings (2022 dollars).

Year	Number of Dealers	Scamp and Yellowmouth Grouper landed lbs gw	Scamp and Yellowmouth Grouper Purchases	Other South Atlantic Purchases	Gulf Purchases	Average purchases value per dealer
2018	70	91,148	$650,099	$21,816,572	$64,527,761	$12,559,852
2019	63	76,054	$556,103	$25,755,027	$73,779,362	$10,731,876
2020	64	61,943	$440,472	$20,972,622	$63,862,551	$11,382,487
2021	62	50,240	$364,073	$21,973,052	$67,342,069	$6,059,289
2022	51	39,669	$305,604	$17,424,623	$52,390,499	$9,151,623
Average	62	63,811	$463,270	$21,588,379	$64,380,448	$9,977,025

Source: SEFSC Fishing Communities Web Query Tool (Version Aug 28, 2023 Years: 2018-2022).

Imports

Imports of seafood products compete in the domestic seafood market and have in fact dominated many segments of the seafood market. Imports affect the price for domestic seafood products and tend to set the price in the market segments in which they dominate. Seafood imports have downstream effects on the local fish market. At the harvest level for grouper species, imports affect the returns to fishermen through the ex-vessel prices they receive for their landings. As substitutes to the domestic production of grouper species, imports tend to cushion the adverse economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports of fish products that directly compete with the domestic harvest of grouper species. Import data for scamp or yellowmouth grouper, in particular, are not available.

Imports of fresh grouper ranged from 10.4 million lbs product weight (pw) to 12.4 million lbs pw from 2018 through 2022. During this time, total revenue from fresh grouper imports ranged from approximately $43.6 million (2022 dollars) to $63.1 million. The average annual price per lbs pw for fresh grouper ranged from $4.19 to $5.39 (2022 dollars). Imports of fresh grouper primarily originated in Mexico, Central America, or South America and entered the U.S. through the ports of Miami, Florida, Tampa, Florida, and San Diego, California. On average (2018 through 2022), monthly imports of fresh grouper were mostly stable with a peak in July.

Imports of frozen grouper ranged from 0.8 million lbs pw to 4.6 million lbs pw during 2018 through 2022. The annual value of these imports ranged from approximately $1.6 million (2022 dollars) to $6.6 million, with a peak in 2018. The average annual price per lbs pw for frozen grouper increased steadily from $1.43 in 2018 to $2.50 in 2021 and then decreased moderately in 2022 to $2.15 (2022 dollars). Imports of frozen grouper primarily originated in Mexico and India. The majority of frozen grouper imports entered the U.S. through the ports of Miami, Florida, Tampa, Florida, and New York, New York. On average (2018 through 2022), monthly imports of frozen groupers were greatest during the months of March, July, and November.

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 scamp and yellowmouth grouper in the South Atlantic were derived using the model developed for and applied in NMFS (2023) and are provided in Table 3.3.1.4.[10] 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 scamp or yellowmouth grouper, and a harvester job is "generated" for approximately every $37,872 (2022 dollars) in ex-vessel revenue. These results contrast with the number of harvesters (vessels) with recorded landings of scamp or yellowmouth grouper presented in Table 3.3.1.1.

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

Between 2018 and 2022, landings of South Atlantic scamp and yellowmouth grouper resulted in approximately $467,000 (2022 dollars) in gross revenue on average. In turn, this revenue generated employment, income, value-added, and output impacts of 52 jobs, $1.7 million, $2.4 million, and $4.6 million per year, respectively, on average (Tables 3.3.1.4).

Table 3.3.1.4. Average annual business activity (2018 through 2022) associated with the commercial harvest of scamp and yellowmouth grouper in the South Atlantic. All monetary estimates are in thousands of 2022 dollars.*

Harvesters	Direct	Indirect	Induced	Total
Employment impacts	9	1	2	12
Income impacts	252	47	113	412
Total value-added impacts	269	169	194	631
Output Impacts	467	380	376	1,224
Primary dealers/processors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	2	1	1	4
Income impacts	82	76	72	230
Total value-added impacts	88	97	135	320
Output impacts	265	200	264	729
Secondary wholesalers/distributors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	1	0	1	2
Income impacts	49	15	52	115
Total value-added impacts	52	24	88	165
Output impacts	131	48	171	351
Grocers	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	4	0	1	5
Income impacts	101	34	51	185
Total value-added impacts	108	54	86	247
Output impacts	172	88	168	428
Restaurants	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	23	2	4	29
Income impacts	405	123	232	759
Total value-added impacts	431	219	391	1,041
Output impacts	789	343	771	1,903
Harvesters and seafood industry	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	39	4	9	52
Income impacts	889	294	519	1,702
Total value-added impacts	948	563	893	2,404
Output impacts	1,825	1,059	1,751	4,634

Source: Calculated by NMFS SERO using the model developed for and applied in NMFS (2023).
*Converted to 2022 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.

Economic information pertaining to the recreational sector of the snapper grouper fishery is provided in Amendment 45 to the Snapper Grouper FMP (SAFMC 2023b) and is incorporated herein by reference. Select updates to this information specific to scamp and yellowmouth grouper are provided below.

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). As of August 26, 2021, there were 1,930 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).[11] Participation in the SRHS is based on determination by the SEFSC that the vessel primarily operates as a headboat. During 2023, 65 South Atlantic headboats were registered in the SRHS (K. Brennan, NMFS SEFSC, pers. comm. 2024). The majority of these headboats were located in Florida/Georgia (38), followed by North Carolina (15) and South Carolina (12). As a result, of the 1,930 vessels with snapper grouper for-hire permits, up to 65 may primarily operate as headboats.[12]

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

[11] All federal charter/headboat permit holders, including charter vessel owners or operators, are required to comply with the new Southeast For-Hire Electronic Reporting Program as of January 2021. 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 to submit their reports under the new 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/.

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

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.

Target effort for scamp and yellowmouth grouper was very sparse in the MRIP data, with recorded trips appearing only once for the period of 2018 through 2022. Specifically, there were 5,535 target trips recorded for the private mode in Florida in 2022.[13] As discussed in Section 3.4.2 of this document, anecdotal evidence from for-hire captains suggests that although these species are caught on occasion and valued by anglers, they are typically not targeted because they usually occur in deep waters far from shore (35 plus miles).

Estimates of scamp and yellowmouth grouper catch effort are provided in Table 3.3.2.1. Catch trips decreased steadily from 2018 through 2020, then rose sharply to a five year high in 2022 (Table 3.3.2.1). The majority of these trips occurred in Florida and the private/rental mode was the dominant mode of fishing (Table 3.3.2.1). Because scamp and yellowmouth grouper are rare event species in MRIP, the estimates presented in this section are imprecise[14] and should be viewed accordingly. It is also important to note that in 2018, MRIP transitioned from the Coastal Household Telephone Survey (CHTS) to the mail-based Fishing Effort Survey (FES). The estimates presented in this section are calibrated to the MRIP FES and may be greater than estimates that are non-calibrated.[15]

[13] This estimate was based on a single intercept with a percent standard error (PSE) of 100, indicating a highly imprecise estimate.

[14] PSEs for estimates of scamp and yellowmouth grouper catch trips (by year, mode, and state) range from around 50 up to 100.

[15] As of August 2018, all directed trip estimate information provided by MRIP (public use survey data and directed trip query results) for the entire time series was updated to account for both the Access Point Angler Intercept Survey (APAIS) design change in 2013, as well as the transition from the CHTS to the FES in 2018. Back-calibrated estimates of directed effort are not available. For more information, see: https://www.fisheries.noaa.gov/recreational-fishing-data/recreational-fishing-estimate-updates/.

Table 3.3.2.1. South Atlantic scamp and yellowmouth grouper recreational catch trips, by mode and state, 2018-2022.*

Year	FL	GA	NC	SC	Total
	Charter Mode				
2018	0	0	789	345	1,134
2019	357	65	864	322	1,609
2020	1,282	10	1,891	146	3,330
2021	1,776	0	738	755	3,269
2022	2,380	0	150	130	2,660
Average	1,159	15	886	340	2,400
	Private/Rental Mode				
2018	8,808	0	0	0	8,808
2019	644	0	1,064	2,396	4,105
2020	0	0	383	820	1,204
2021	3,938	0	2,495	0	6,433
2022	5,535	0	0	4,510	10,045
Average	3,785	0	788	1,545	6,119
	All Modes				
2018	8,808	0	789	345	9,942
2019	1,001	65	1,929	2,718	5,713
2020	1,282	10	2,274	966	4,533
2021	5,714	0	3,233	755	9,702
2022	7,915	0	150	4,640	12,705
Average	4,944	15	1,675	1,885	8,519

Source: MRIP database, SERO, NMFS (January 2024).
*Headboat data are unavailable.
Note: There were no shore trips recorded.

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.[16] From 2018 through 2022, headboat effort in the South Atlantic, in terms of angler days, fluctuated with a five-year low in 2020 (Table 3.3.2.2). Headboat effort was the highest, on average, during the summer months of June through August (Table 3.3.2.3).

[16] 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.

Table 3.3.2.2. South Atlantic headboat angler days and percent distribution by state (2018 through 2022).

	Angler Days			Percent Distribution		
Year	**FL/GA***	**NC**	**SC**	**FL/GA**	**NC**	**SC**
2018	120,560	16,813	37,611	68.9%	9.6%	21.5%
2019	119,712	15,546	41,470	67.7%	8.8%	23.5%
2020	84,005	14,154	34,080	63.5%	10.7%	25.8%
2021	120,367	19,719	47,908	64.0%	10.5%	25.5%
2022	104,989	16,140	38,748	65.7%	10.1%	24.2%
Average	109,927	16,474	39,963	66.0%	9.9%	24.1%

*East Florida and Georgia are combined for confidentiality purposes.
Source: NMFS SRHS (January, 2024).

Table 3.3.2.3. South Atlantic headboat angler days and percent distribution by month (2018 through 2022).

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Headboat Angler Days											
2018	4,428	9,862	14,080	15,167	13,264	29,038	30,235	26,233	9,715	8,072	7,673	7,217
2019	7,746	8,476	15,186	15,566	19,368	26,587	32,914	20,177	6,716	9,011	8,587	6,394
2020	6,920	7,805	8,445	407	8,711	23,250	26,565	16,320	10,973	9,855	6,251	6,737
2021	7,629	7,421	14,582	16,062	19,582	28,669	32,887	20,631	13,183	10,920	6,739	9,689
2022	6,546	8,146	10,158	13,361	17,176	24,421	27,074	20,210	10,528	8,785	6,139	7,333
Avg	6,654	8,342	12,490	12,113	15,620	26,393	29,935	20,714	10,223	9,329	7,078	7,474
	Percent Distribution											
2018	3%	6%	8%	9%	8%	17%	17%	15%	6%	5%	4%	4%
2019	4%	5%	9%	9%	11%	15%	19%	11%	4%	5%	5%	4%
2020	5%	6%	6%	0%	7%	18%	20%	12%	8%	7%	5%	5%
2021	4%	4%	8%	9%	10%	15%	17%	11%	7%	6%	4%	5%
2022	4%	5%	6%	8%	11%	15%	17%	13%	7%	5%	4%	5%
Avg	4%	5%	7%	7%	9%	16%	18%	12%	6%	6%	4%	5%

Source: NMFS SRHS (January, 2024).

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.[17] 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

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

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[18] 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 scamp and yellowmouth grouper are not currently available. There are, however, estimates for grouper species in general. Haab et al. (2012) estimated the WTP for one additional grouper 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 mean WTP for an additional grouper was estimated to be $159.79 (2022 dollars). Another study estimated the mean WTP for catching and keeping a second grouper on an angler trip at approximately $124 (2022 dollars) and lower thereafter (approximately $83 for a third grouper, $61 for a fourth grouper, and $48 for a fifth grouper) (Carter and Liese 2012). For the purposes of this amendment, the $124 per fish estimate is assumed to be the best value to use for estimating the CS associated with catching and keeping a scamp or yellowmouth grouper. The higher value provided by Haab et al. (2012) is likely less reasonable for a grouper species that is incidentally harvested.

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 2022 dollars, the average annual gross revenue for a South Atlantic headboat was approximately $251,000, while the average annual gross revenue for a South Atlantic charter vessel was approximately $142,000. 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 $343,016 (2022 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.

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

[18] 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.

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 $627 and $2,054 (2022 dollars), respectively. Given the average number of anglers per trip for each fleet, PS per angler trip is estimated to be $133 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 (2022 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	$627	$2,054
Average # of Anglers per Trip	4.7	26.6
Trip Net Cash Flow per Angler Trip	$133	$77

Source: Souza and Liese (2019).
*Although Souza and Liese (2019) break headboats out by sub-region, the South Atlantic sample size is small and thus estimates for Southeast headboats in general (Gulf and South Atlantic combined) are presented here.

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 scamp and yellowmouth grouper were calculated using average trip-level impact coefficients derived from the 2020 Fisheries Economics of the U.S. report (NMFS 2023) and underlying data provided by the National Oceanic and Atmospheric Administration (NOAA) Office of Science and Technology. Economic impact estimates in 2020 dollars were adjusted to 2022 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 (2018-2022) resulting from South Atlantic recreational scamp and yellowmouth grouper 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 scamp and yellowmouth grouper.

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 scamp and yellowmouth grouper recreational target trips in FL,* using state-level multipliers. All monetary estimates are in thousands of 2022 dollars.

	Private/Rental Mode
Target Trips	1,107
Value Added Impacts	$35
Sales Impacts	$52
Income Impacts	$17
Employment (Jobs)	0.4

Source: Effort data from MRIP; economic impact results calculated by NMFS SERO using NMFS (2023) and underlying data provided by the NOAA Office of Science and Technology.
*The average number of target trips presented in this table and used to calculate economic impacts is based on a single year of estimates recorded for the private recreational mode in Florida in 2022. No other target trips for scamp and yellowmouth grouper were recorded during the period.

3.4 Social Environment

This section describes select aspects of the social context associated with recreational and commercial pursuit of scamp and yellowmouth grouper in the South Atlantic. The principal intent here is to provide sufficient descriptive context for regulatory effects analysis in Chapter 4. In keeping with Executive Orders that call for examination of environmental equity and justice in the context of federal regulatory actions, the section also identifies social vulnerabilities among communities where the scamp/yellowmouth grouper resource is of known importance.

3.4.1 Commercial Sector

Overview

As discussed by Bacheler and Ballenger (2018), scamp is an economically significant grouper species associated with rocky pavements, ledges, and outcroppings in mesophotic ecosystems[19] along the inner Continental Shelf from Cape Hatteras south into the Gulf of Mexico and elsewhere in the Western Atlantic. SAFMC (2024b) further notes the species' preference for low profile, live bottom areas between 75 and 300 feet in depth. Descriptions of yellowmouth grouper indicate a similar distribution and association with similar habitats around the Southeast (Burton and Potts 2014), though with some indication of preference for relatively shallower areas than exhibited by scamp (Gaspirini and Floeter 2001). Both species are characteristically aggressive predators, readily feeding on various fish, crabs, shrimp, and other species (SAFMC 2024b; Sazima 2002).

Each of these biophysical factors – distribution, depth, habitat, and feeding behavior – are significant in human-social terms as these bear on the nature of fishing effort among commercial and recreational participants around the South Atlantic. As examples: (a) knowledge of where scamp and yellowmouth grouper tend to be located in terms of latitude, longitude, and depth are fundamentally important forms of knowledge among participants, with many such persons retaining and (sometimes) communicating the pertinent information to others; (b) navigating to the appropriate locations, anchoring or effectively drifting on or above such areas, and effectively deploying fishing gear and appropriate bait require knowledge, cooperation, and skill among those on board, and (c) given the aggressive nature of the species and the fishing challenges associated with preferred habitat, only skilled response to interest in the bait can enable successful retrieval and prevent loss of gear and potential mortality of hooked fish.

A useful source of information regarding commercial pursuit of scamp and yellowmouth grouper in the South Atlantic is available in Buck (2018). The author uses various archival data and information derived from extensive work with commercial fishery participants in the region to describe patterns of snapper grouper (SG) fishing over time, with emphasis on fishing activity during 2016. The author organizes the description by the following sub-regions: (a) North Carolina, South Carolina, and Georgia, (b) Florida East, and (c) the Florida Keys.

Based on relative extent of landings, and with regard to seasonality of catch and effort (including closure of the fishery during the winter months), the author asserts that scamp (along with certain other SG and non-SG species) is of primary importance to fleets in the North Carolina, South Carolina, and Georgia subset during May through August, and of secondary importance during September through December. Based on the same data, yellowmouth grouper is deemed to be of secondary importance during the spring and summer months in this sub-region. Meanwhile, scamp is classified as secondarily important to fleets active in the Florida East region during the spring and summer months, and of no apparent importance during autumn. Finally, scamp is deemed to be of secondary importance to fleets active in the Florida Keys during May through

[19] Mesophotic coral ecosystems, found in relatively shallow subtropical and tropical portions of the world's oceans, are characterized by the presence of corals, sponges, and algae (Olsen and Kellog 2010).

December, with yellowmouth grouper assuming secondary importance during the spring and summer months in that sub-region.

In sum, based on data compiled during 2016, Buck (2018) indicates that: (a) scamp can be considered a target species only among the North Carolina/South Carolina/Georgia sub-group, and only during May through August, and (b) yellowmouth grouper cannot readily be considered a target species by any of the sub-regional fleets in question. With regard to manner of pursuit by commercial fleets examined in the study, the author asserts that commercial harvest of all SG species in all sub-regions occurred primarily with electric or hydraulic-powered hook-and-line gear, rod and reel, or handline, in that order.

South Atlantic Commercial S-G Permits by State and Community

An unlimited or 225-lbs trip-limited SG permit is required for captains/vessels working to legally harvest scamp and/or yellowmouth grouper on a commercial basis. The community-level distribution of such permits indicates specific areas from which active vessels typically operate. A total of 535 unlimited SG permits were issued during 2020, the latest full year for which valid permit data are presently available. Most unlimited SG permits (67.1%) were issued during 2020 to residents or persons with mailing addresses in Florida, followed by 21.9% in North Carolina, 7.6% in South Carolina, and 1.5% in Georgia. Two or fewer unlimited permits were issued to persons with mailing addresses in New York, New Jersey, Virginia, or Texas during 2020. As indicated in Table 3.4.1.1, a high percentage of both permit types are held by participants in Key West. The combined percentage of permits attributed to persons with mailing addresses in the Carolinas during 2020 was 29.5%.

Table 3.4.1.1. Distribution of unlimited and 225-lb trip-limited SG permits among the top permit-holding communities in the South Atlantic during 2020.

Leading Communities: Unlimited S-G Permits	Permits	Leading Communities: 225-lb Trip-Limited S-G Permits	Permits
Key West, Florida	92	Key West, Florida	11
Key Largo, Florida	22	Marathon, Florida	10
Miami, Florida	21	Miami, Florida	9
Marathon, Florida	19	Jupiter, Florida	6
Murrells Inlet, South Carolina	15	Big Pine Key, Florida	5
Little River, South Carolina	15	Key Largo, Florida	4
Port Canaveral, Florida	14	Sebastian, Florida	4
Jacksonville, Florida	13	Wilmington, North Carolina	4
Southport, North Carolina	13	West Palm Beach, Florida	3
Jupiter, Florida	12	Hatteras, North Carolina	3
Morehead City, North Carolina	11	Fort Pierce, Florida	2
St. Augustine, Florida	11	Middle Torch Key, Florida	2
Sneads Ferry, North Carolina	11	Cudjoe Key, Florida	2
Fort Pierce, Florida	11	Summerland Key, Florida	2
Big Pine Key, Florida	11	Fort Lauderdale, Florida	2
Sebastian, Florida	11	Boca Raton, Florida	2
Sneads Ferry, North Carolina	10	Morehead City, North Carolina	2
Mayport, Florida	10	--	--

Leading Communities: Unlimited S-G Permits	Permits	Leading Communities: 225-lb Trip-Limited S-G Permits	Permits
Islamorada. Florida	8	--	--
Holden Beach, North Carolina	7	--	--
Wanchese, North Carolina	7	--	--
Port Orange, Florida	7	--	--
Summerland Key, Florida	7	--	--
Hatteras, North Carolina	6	--	--
Wilmington, North Carolina	6	--	--
Atlantic Beach, North Carolina	6	--	--
Carolina Beach, North Carolina	6	--	--

Source: SERO Sustainable Fisheries (SF) Access permits database, accessed January 2023.

Regional & Local Quotients: South Atlantic Scamp/Yellowmouth Grouper Landings

Figure 3.4.2.1 below depicts the community-level distribution of commercial scamp/yellowmouth grouper landings (combined) for the time-series 2018 through 2022. The distribution is expressed here as a regional quotient, or the share of community-specific landings divided by landings accruing to South Atlantic fleets as a whole. The communities are rank-ordered based on landings averaged over the time-series. As discussed elsewhere in this amendment scamp/yellowmouth grouper landings are not extensive relative to other SG species. Because less than three seafood dealers transacted scamp/yellowmouth grouper during the time-series in any the communities depicted here, actual place names are concealed to ensure anonymity of the businesses involved and to safeguard any related proprietary information.

Notably, the vast majority of scamp/yellowmouth grouper landings collectively occurred in Southeast North Carolina (SE NC) and Northeast South Carolina (NE SC) communities during the time period examined here, with a considerable volume also accruing to a coastal community in Northeast Florida (NE FL). Two communities in east-central South Carolina (EC SC) are also represented in the graphic, as is an inland community located in east-central Florida. A number of additional communities reported transaction of very small volumes of the species between 2018 and 2022—these are summed here and represented as "other communities."

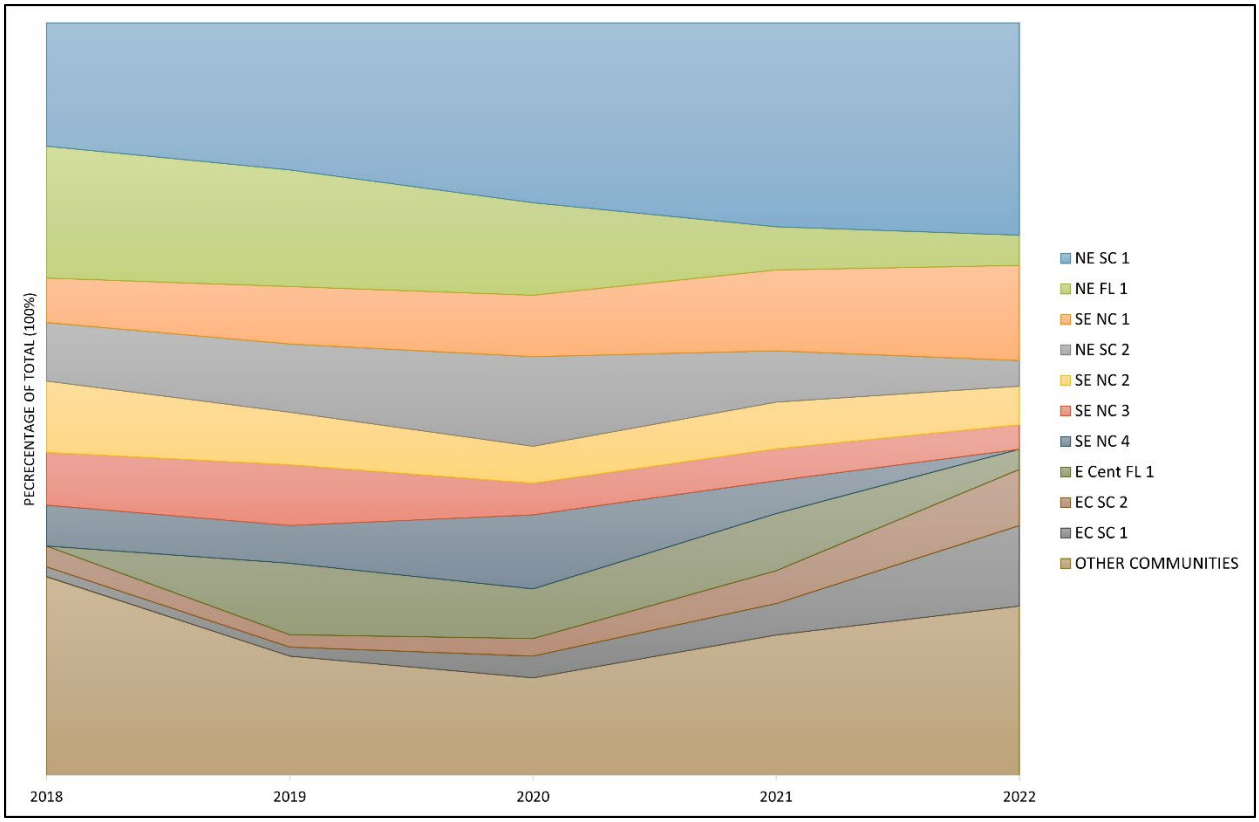

Figure 3.4.1.1. Distribution of regional landings among the top South Atlantic commercial scamp/yellowmouth grouper landings communities: 2018 through 2022.
Source: SEFSC, Community ALS Data File, Accessed January 2024.

It is noteworthy in both social and biological terms that the SE NC and NE SC communities accrued the vast majority of scamp/yellowmouth grouper landings between 2018 and 2022. All of these municipalities are situated within an ~80 mile radius along the respective coastlines of Onslow Bay and Long Bay, and all are increasingly connected urban-coastal zones where demand for seafood products is extensive. Two of the SE NC communities are situated north of Cape Fear, with participants tending to fish SG species in habitat-appropriate ocean areas around the southern portions of Onslow Bay (north of Frying Pan Shoals).

Key participants report that while scamp and yellowmouth grouper are not typically targeted, they are often captured during generalized SG trips that involve use of the same basic gear, bait, and overall approach used to pursue various species in the shallow-water SG complex. Gag grouper is especially targeted by many captains here. This reportedly is also the case for participants operating from the remainder of the SE NC communities and the NE SC communities—all of whom tend to operate above suitable S-G habitat in Long Bay (south of Frying Pan Shoals). Some commercial fishing vessels active in this overall region transect Frying Pan Shoals en route to suitable SG grounds north or south, but this is said to be a rarity. Although scamp, yellowmouth grouper, and other valued SG species are occasionally found closer to shore, ideal bottom conditions are said to occur around the 120-foot contour and deeper in this general (Cape Fear) region, requiring trip distances of 35 miles or more, depending on trajectory and point of origin. Conversational interaction with fishery participants and sustained

observation makes clear that certain captains retain their understanding of ideal fishing locations vis-à-vis past experience and various ecological cues and conditions of the day, while others sometimes share such understanding within social networks of trusted participants. Such captains may communicate with allied captains in real time, thereby bringing additional effort into any given area where and when "the bite" is active. Close attention to current and forecasted weather conditions and sea states is universal among experienced operators, and multi-day S-G trips are not uncommon here. Buck (2018) asserts that SG trips in the SE NC and NE SC region are often longer than those undertaken elsewhere in the South Atlantic, and on average involve more crew members than in other regions.

The Local Quotient (LQ) of scamp/yellowmouth grouper landings for 2022 is also useful for understanding the relative importance of the species to communities in the South Atlantic region. The LQ metric specifies the relative extent of community-specific landings for a given species in relation to all local landings accrued by vessels based in that community during a given year or years. In essence, the LQ speaks to the local importance of a given species in relation to all other species harvested in a given year by a local community-specific fleet. While a graphic is not provided in the interest of saving space in this amendment, analysis reveals that a SE NC coastal community located in close proximity to southern portions of Onslow Bay accrued the highest LQ of all South Atlantic communities during 2022, with 11.5 percent of all local landings consisting of the scamp/yellowmouth grouper resource—most of which was reported as yellowmouth grouper. Notably, the second highest LQ percentage for scamp/yellowmouth grouper landings during 2022 (~10%) can be attributed to a community situated well inland in south-central North Carolina, and the third highest LQ percentage (~6.5%) can be attributed to an inland community located in east-central Florida. The latter figures speak to the importance of social/logistical connections between seafood dealers and harvesters who are based in coastal portions of the South Atlantic, and dealers who are based in non-coastal regions where demand for seafood products can also be considerable and/or where business strategies include transaction and shipment of seafood to other locations around the region, nation, and beyond.

Community Engagement and Reliance

Figure 3.4.1.2 below provides measures of engagement and reliance among those communities with the greatest average percentage of commercial landings during the 2018 through 2022 time-series. The measure of engagement provided here is a generalizable composite indicator based on: (a) pounds of fish landed annually by local commercial fleets, (b) associated ex-vessel revenue, and (c) the number of active locally based commercial fishery participants and seafood dealers. The measure of reliance incorporates the same variables divided by the total local population figure. In addition to the RQ and LQ, the engagement and reliance measures are useful for indicating where any prospective effects of management actions are likely to be experienced. As indicated in the graphic, SE NC 2, another community situated in close proximity to southern portions of Onslow Bay, registers a particularly high score (above two standard deviations) for overall engagement in regional commercial fisheries. The northeast Florida community (labeled here as NE FL 1), along with one of the east-central South Carolina communities (labeled here as EC SC 2) score above the 0.5 standard deviation level for commercial engagement. Notably, none of the communities exceed the 0.5 standard deviation threshold for reliance on commercial fisheries, suggesting local economic alternatives to the fishing and seafood industries.

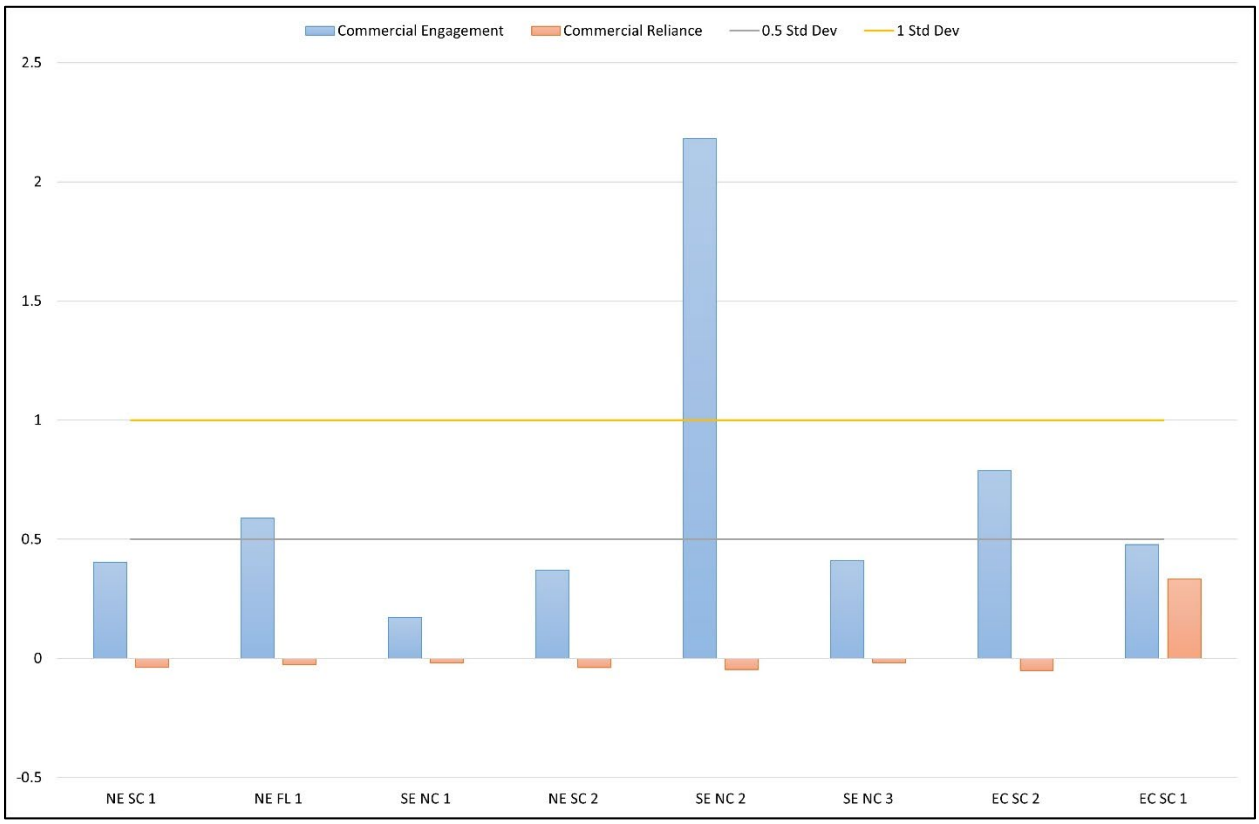

Figure 3.4.1.2. Measures of engagement and reliance among South Atlantic communities with the greatest volume of commercial scamp/yellowmouth grouper landings during the period 2018-2022.

Source: SERO, Community Social Vulnerability Indicators Database, Accessed January 2024.

3.4.2 Recreational Sector

Overview

Persons active in recreational bottom fishing around the South Atlantic may capture scamp and/or yellowmouth grouper through directed targeting of the species, or incidentally, while fishing for a different/specific snapper-grouper species and/or for any of the snapper grouper species or other bottomfish available along suitable and accessible portions of the South Atlantic shelf. Long-time for-hire captains who pursue SG species with their clients in the SE NC and NE SC areas where commercial harvest of scamp and/or yellowmouth grouper is more extensive than elsewhere in the South Atlantic region, report that while these species are captured on occasion, they very typically are not specifically targeted. Such captains also report that while scamp (and other SG species) were consistently found above suitable habitat within ~25 miles from shore in decades past, this is now increasingly rare, and that contemporary pursuit of all SG species now tends to require trips beyond the 100-foot depth contour.[20] Given the latitudinal

[20] Apart from the possibility that scamp populations may, for whatever reason, be shifting farther offshore over time in this specific sub-region, the assertion here appears to be in line with findings from the work of Bacheler and Ballenger (2018) who, based on a 27-year sampling effort, describe diminishing scamp populations along the South Atlantic coastline.

extent of the shallow water shelf in this region, trips of 35 miles or more are reportedly now more typical, with even greater distances traveled at times—depending on trajectory, point of origin, and desired destination. While trip fees tend to absorb fuel expenditures, captains and crew note that sea states in this zone can challenge certain clients, and that return clients tend to be relatively more adaptable to extensive chop and swell. Many for-hire operators here often complement bottom fishing activity (over the course of the year and/or during a given trip) with pursuit of coastal pelagic species—requiring a shift in gear and focus of attention in the water column. The same patterns hold true for private recreational participants active in the Onslow and Long Bay regions, with many captains of relatively small and medium-sized vessels pursuing a combination of nearshore pelagics and a range of benthic species that include but are not limited to members of the shallow-water SG complex. Captains and crew of larger vessels active in the SE NC and NE SC region may at times engage in distant water deep-drop SG fishing activity (for species such as snowy grouper and tilefish), though many tend to specialize in pursuit of large pelagics and may at times travel well beyond 50 miles offshore to reach suitable grounds in the western reaches of the Gulf Stream.

Distance to suitable SG grounds and the availability of the scamp/yellowmouth grouper resource vary across the South Atlantic coastline. The majority of recreational catch and effort during the past five years appears to have occurred along the east coast of Florida (e.g., see Table 3.3.2.1 in the economic environment section provided above). Readers are also referred to the work of Matter and Nuttall (2020), which indicates that the bulk of recreational scamp and yellowmouth grouper landings and discards have been registered in the Florida East region during recent years— albeit with notable shifts in the bulk of recreational landings and discards between North Carolina and the Florida East region over the course of the last four decades.

For-Hire Permits

For-hire captains seeking to harvest scamp and/or yellowmouth grouper in federal waters must possess a South Atlantic snapper grouper charter/headboat permit. A total of 2,136 such permits were issued during 2020, the most recent full year for which permit data are presently available. The vast majority of permits that year were issued to persons with mailing addresses in North Carolina, South Carolina, Georgia, and Florida. The total number of permits increased steadily during the period 2016 through 2019, with 1,867 permits issued in 2016, 1,982 in 2017, 2,126 in 2018, and 2,183 in 2019. Thus, 47 fewer permits were issued during 2020 than during 2019.

Table 3.4.3.1 below depicts the distribution of South Atlantic snapper grouper charter/headboat permits among the leading permit-holding communities during the 2020 data year. Of note in the table, most Florida permits were issued to residents or persons with postal addresses in Key West, most South Carolina permits were issued in Charleston, and most North Carolina permits were issued in Hatteras. While not depicted in the table, most Georgia permits were issued to resident or persons with mailing addresses in Savannah.

Table 3.4.2.1. Distribution of South Atlantic for-hire/headboat snapper grouper permits among the top 20 permit-holding communities in the region, 2020.

State	Leading Communities	Number of Permits in 2020
Florida	Key West	196
Florida	Islamorada	98

State	Leading Communities	Number of Permits in 2020
Florida	Marathon	81
Florida	Port Canaveral	77
South Carolina	Charleston	55
Florida	St. Augustine	44
North Carolina	Hatteras	42
Florida	Miami	41
Florida	Ponce Inlet	40
South Carolina	Murrells Inlet	36
Florida	Jacksonville	36
North Carolina	Morehead City	35
Florida	Jupiter	33
Florida	Key Largo	33
South Carolina	Little River	29
North Carolina	Manteo	28
Florida	Naples	27
Florida	Cape Canaveral	26
Florida	Port Orange	25
South Carolina	Fort Lauderdale	22
North Carolina	Carolina Beach	20
Florida	Sebastian	20
North Carolina	Wanchese	20
Florida	Stuart	19
South Carolina	Hilton Head	18

Source: SERO Sustainable Fisheries (SF) Access permits database, accessed January 2024.

Community Engagement & Reliance: South Atlantic Recreational Scamp and Yellowmouth Grouper Fishery

The full range of data indicative of engagement in the recreational pursuit and/or capture or release of scamp and yellowmouth grouper is not readily available at the level of the community. As such, it is not possible with available information to identify communities that are specifically engaged in and/or reliant on recreational fishing for these species in particular. Given data limitations, NMFS social scientists developed indices of utility for identifying communities where recreational fishing is an important aspect of the local economy in general (e.g., see Jacob et al. 2013; Jepson and Colburn 2013; Hospital and Leong 2021).

Based on available indicators, the communities depicted in Figure 3.4.3 are those in the South Atlantic region where residents are most clearly engaged in the recreational fishing industry in general. Further specificity is enabled in that the communities represented in the figure are those where the greatest number of for-hire SG permits in the South Atlantic are held. The measure of engagement depicted here derives from the number of for-hire permitted vessels and the extent of recreational fishing infrastructure actively used by residents or persons otherwise connected to a given community. The measure of reliance derives from the same variables divided by the total local population figure. In this case, very high levels of recreational engagement are noted of Jacksonville, Islamorada, and Key West in Florida, and Hatteras Village in North Carolina. Of note, Hatteras Village is the only community that exceeds the 0.5 standard deviation threshold

for *reliance* on the recreational fishing industry, indicating the particular importance of for-hire and private recreational fishing and related services and opportunities in this remote Outer Banks community. Other geographically remote communities approach the same threshold, including Islamorada in the Florida Keys, and the town of Manteo, which is situated on Roanoke Island, just west of the Outer Banks.

.

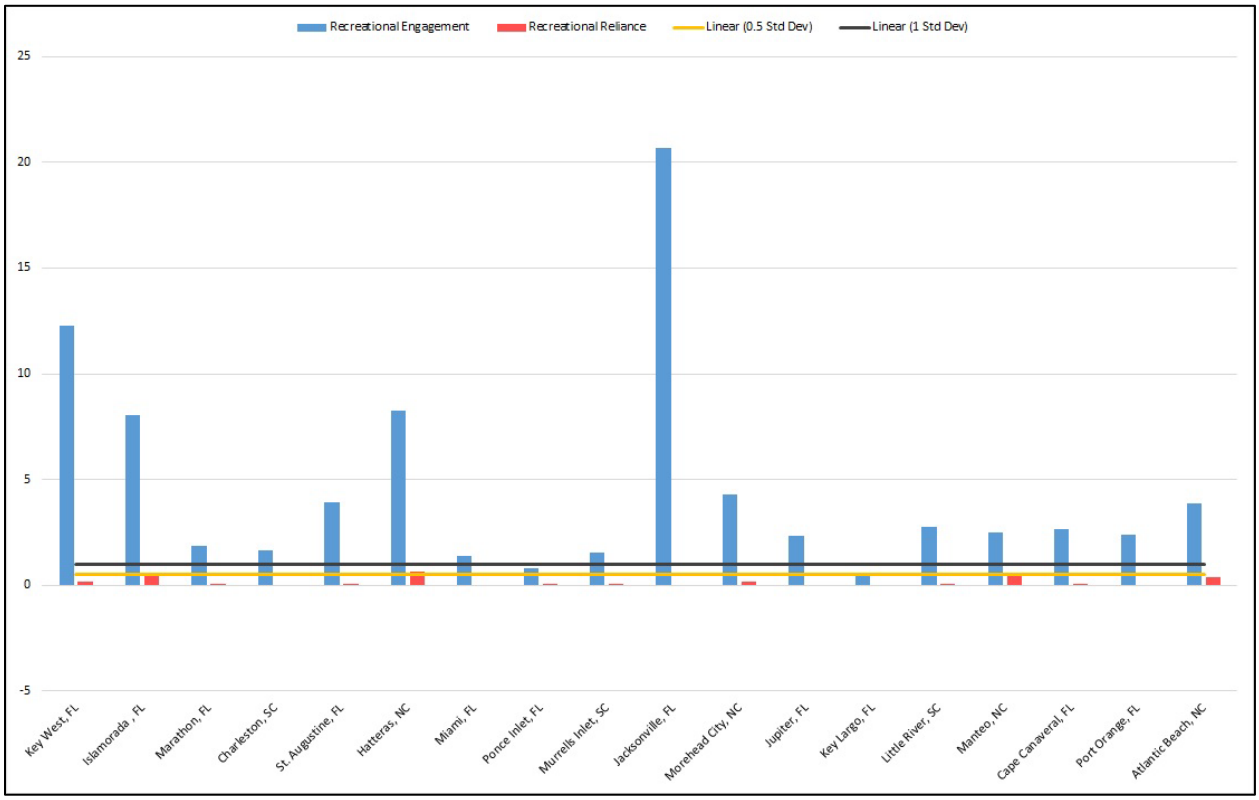

Figure 3.4.4. Measures of community involvement in the South Atlantic recreational fishing industry during 2020.
Source: SERO, Community Social Vulnerability Indicators Database.

3.4.3 Environmental Justice

Executive Order (EO) 12898 (Environmental Justice) was established in 1994 to require that federal actions be undertaken in a manner that identifies and avoids adverse human health and/or social and economic effects among low-income and minority groups and populations around the nation and its territories. Federal regulatory decisions must be undertaken in ways that ensure no individuals or populations are excluded, denied the benefits of, or are subjected to discrimination due to race, color, or nation of origin. Established in 2021, EO 13985 calls for human equity in the context of federal decision-making and policy actions. This EO requires that federal policies and programs are designed and undertaken in a manner that delivers resources and benefits equitably to all citizens, including members of historically underserved communities. Here, the phrase "underserved communities" refers to populations and persons that have been systematically denied full and equitable opportunity to participate in economic, social, and civic aspects of life in the nation. Finally, EO 14008, established in 2021, calls on agencies to make the achievement of environmental equity and justice part of their missions "by developing programs, policies, and activities that address disproportionately high and adverse human health,

environmental, climate-related and/or other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."

Various forms of data are available to indicate environmental justice issues among minority and low-income populations and/or indigenous communities potentially affected by federal regulatory and other actions. With the intent of enhancing capacity to determine whether environmental justice issues may be affecting communities around the U.S. where fishing-related industry is an important aspect of the local economy, NMFS social scientists undertook an extensive series of deliberations and review of pertinent data and literature. The scientists ultimately identified select social, economic, and demographic variables that could function to identify social vulnerabilities at the community level of analysis (see Jacob et al. 2013; Jepson and Colburn 2013). Census data, including community-specific rates of poverty, number of households maintained by single females, number of households with children under the age of five, rates of crime, and rates of unemployment exemplify the kinds of data chosen to aid in community analysis. Pertinent variables were subsequently used to develop composite indices that could be applied to assess vulnerability to environmental, regulatory, and other sources of change among the nation's fishing- and/or seafood-oriented communities.

The following figures use three composite indices, termed here as poverty, population composition, and personal disruption, to indicate relative degrees of socioeconomic vulnerability among communities with the greatest percentages of scamp/yellowmouth grouper landings in the region. Mean standardized scores are provided along the y-axis, with means for the vulnerability measures and threshold standard deviations depicted along the x-axis. Scores exceeding the 0.5 standard deviation level indicate social vulnerabilities to various sources of change.

As can be discerned from Figure 3.4.5 below, only one of the principal scamp/yellowmouth grouper landings communities—labeled here as SE NC 2—exceeds the designated vulnerability threshold for one or more indices—in this case, for personal disruption and poverty. Highly specific community description is not provided here in order to conceal the actual community and thereby safeguard the anonymity and proprietary data held by the two local seafood dealers who transact scamp and yellowmouth grouper. However, in general terms, the population size and level of diversity of the community is relatively extensive and thus demographic challenges are more likely to be indicated here than other communities in the overall region. The inverse is true of the remaining communities, where resident coastal populations are relatively (and increasingly) affluent and relatively less likely to experience similar challenges.

Finally, Figure 3.4.6 below depicts social vulnerability measures for South Atlantic communities most extensively involved in the regional recreational fishing industry. The data presented here indicate social vulnerability issues especially in the Florida communities of Daytona Beach and Fort Pierce. Both figures derive from data available in the SERO Community Social Vulnerability Indicators (CSVI) Database. Of note, the database is presently being revised to incorporate new variables and indices to better indicate vulnerability to various sources of change.

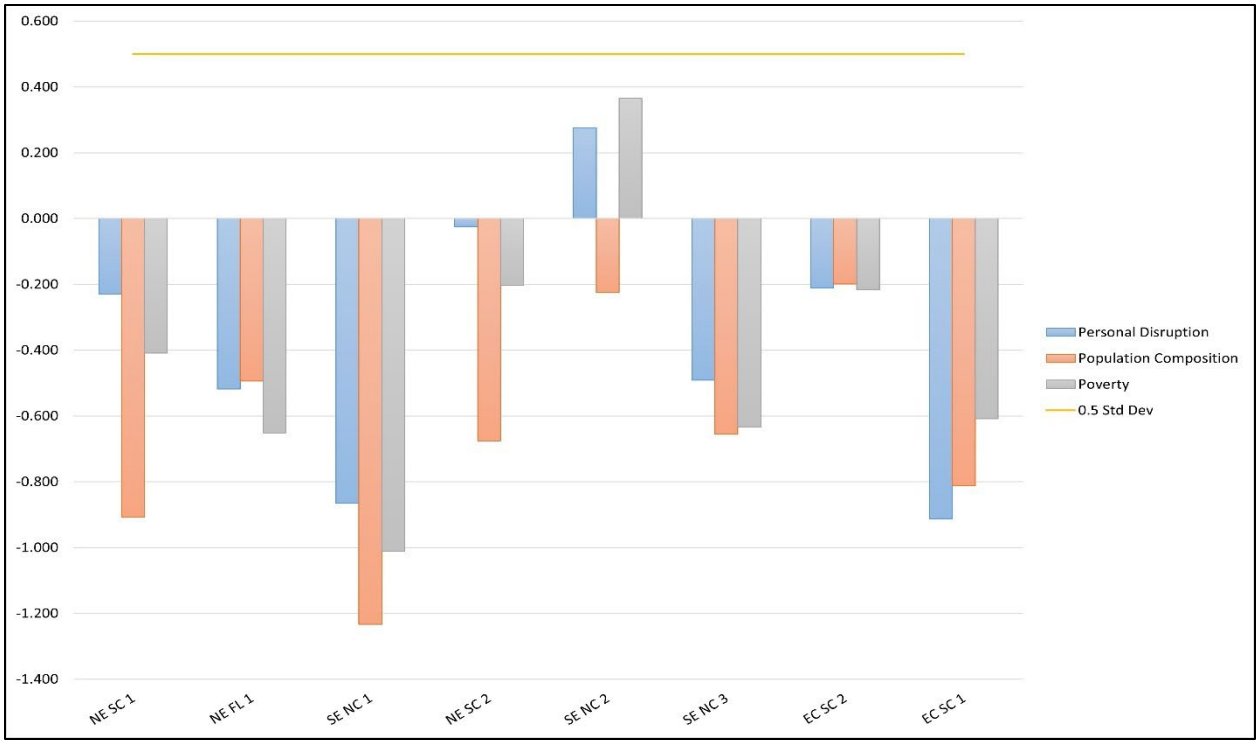

Figure 3.4.5. Socioeconomic vulnerability measures among South Atlantic communities with the greatest percentages of commercial scamp/yellowmouth grouper landings.
Source: SERO CSVI Database, accessed January 2024.

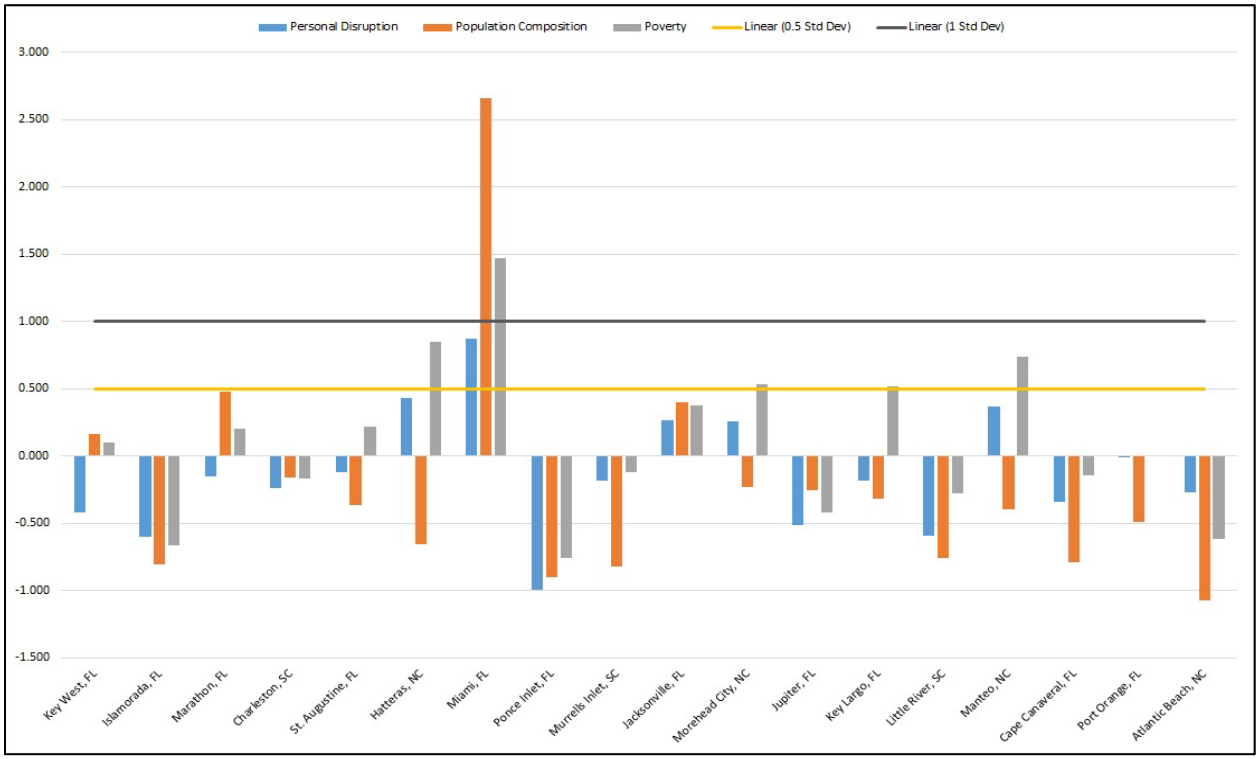

Figure 3.4.6. Socioeconomic vulnerability measures for communities most extensively involved in the South Atlantic recreational snapper grouper fisheries. Source: SERO CSVI Database.

3.5 Administrative Environment

3.5.1 Federal Fishery Management

For current (as of January 2024) Federal Fishery Management information for species managed under the Snapper Grouper FMP, the reader is hereby referred to Snapper Grouper Amendment 53 Chapter 3.5.1 (SAFMC 2023a).

3.5.2 State Fishery Management

For current (as of January 2024) state fishery management for species managed under the Snapper Grouper FMP, the reader is hereby referred to Snapper Grouper Amendment 53 Chapter 3.5.2 (SAFMC 2023a).

3.5.3 Enforcement

For current (as of January 2024) enforcement information for species managed under the Snapper Grouper FMP, the reader is hereby referred to Snapper Grouper Amendment 53 Chapter 3.5.3 (SAFMC 2023a).

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new South Atlantic Scamp and Yellowmouth Grouper complex

4.1.1 Biological Effects

Alternatives*

1. (No Action). There is no Scamp and Yellowmouth Grouper complex.

2. Remove yellowmouth grouper from the OSASWG complex and establish the new Scamp and Yellowmouth Grouper complex.

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

Alternative 1 (No Action) would be expected to have lower biological benefits compared to **Preferred Alternative 2**. **Alternative 1 (No Action)** would continue to manage scamp as an individual species and yellowmouth grouper as part of the Other South Atlantic Shallow Water Grouper (OSASWG) complex, and not allow changes to catch levels and other management measures necessary to address the overfished status of scamp and yellowmouth grouper as a complex, as per the 2022 stock assessment (Southeast Data Assessment and Review [SEDAR] 68 operational assessment [OA]) (see Sections 2.1.1 and 3.2.1). **Preferred Alternative 2** would establish a new Scamp and Yellowmouth Grouper complex and allow landings of both species to be tracked more appropriately as a complex, allow for changes to catch levels and management measures necessary to address the overfished status of these two species, and is therefore consistent with the best scientific information available (BSIA), as opposed to **Alternative 1 (No Action)**.

This action, as well as the other actions in this amendment are not likely to directly affect bycatch, and the proposed alternatives would not result in negative biological effects on co-occurring species (see Bycatch Practicability Analysis [BPA; Appendix G]).

The actions in this amendment are not expected to negatively impact snapper grouper essential fish habitat (EFH). Fishing effort is not expected to significantly increase as a result of this action, nor are changes in fishing techniques or behavior expected that would affect EFH. The predicted effects on EFH are applicable to all actions in this plan amendment.

Expected effects to protected species

The actions in this plan amendment would not significantly modify the way in which the snapper grouper fishery is prosecuted in terms of gear types, overall effort, seasons, or areas fished. Therefore, there are no additional impacts on Endangered Species Act (ESA)-listed species or designated critical habitats anticipated as a result of this action (see Section 3.2.5 for a more detailed description of ESA-listed species and critical habitat in the action area). The predicted effects on ESA-listed species and designated critical habitats are applicable to all actions in this plan amendment.

4.1.2 Economic Effects

Action 1 would not directly alter the current harvest or use of the scamp and yellowmouth grouper resource. Therefore, **Alternative 1 (No Action)** and **Preferred Alternative 2** would not be expected to have any direct economic effects. Indirect economic effects may occur from **Preferred Alternative 2** due to its effects on other actions in this amendment that would make modifications to the harvest of scamp and yellowmouth grouper. However, these economic effects are addressed in the appropriate subsequent actions.

4.1.3 Social Effects

Preferred Alternative 2 is not expected to have significant social effects when compared to **Alternative 1 (No Action)** as it is unlikely to change the way fisheries for scamp, yellowmouth grouper, and OSASWG are prosecuted. Establishing a new Scamp and Yellowmouth Grouper complex would allow management for both species to address the overfished status of both species combined, as was done in the stock assessment. Additionally, misidentification of scamp and yellowmouth grouper is an identified issue in the snapper grouper fishery. By mirroring management measures, it ensures that both stocks are sustainably harvested even when misidentified. Ensuring scamp and yellowmouth grouper are harvested sustainably and rebuilt would have long-term social benefits resulting from improved stock conditions leading to increased access to the species in the future.

4.1.4 Administrative Effects

Preferred Alternative 2 would be expected to have slightly higher administrative effects compared with **Alternative 1 (No Action)**. There would be a one-time change in the species included in the OSASWG complex and creation of the new Scamp and Yellowmouth Grouper complex to record and monitor landings data. Other administrative burdens that may result would take the form of development and dissemination of outreach and education materials for fishery participants and law enforcement.

4.2 Action 2. Establish the maximum sustainable yield, maximum fishing mortality threshold, minimum stock size threshold, and optimum yield for the Scamp and Yellowmouth Grouper complex

4.2.1 Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex

4.2.1.1 Biological Effects

Alternatives*

1. (No Action). There is no MSY for the Scamp and Yellowmouth Grouper complex.

2. MSY proxy is the yield at $F_{30\%SPR}$

3. MSY proxy is the yield at $F_{40\%SPR}$

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

As discussed in detail in Section 2.2.1.1, **Alternative 1 (No Action)** would not establish a maximum sustainable yield (MSY) for the Scamp and Yellowmouth Grouper complex; therefore, it would not satisfy the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). **Alternative 2** provides an MSY proxy of fishing mortality (F) at 30% of the spawning potential ratio (SPR) based on the current conditions for both species, but is not supported by the latest scientific literature, as these are not very resilient stocks due to their life-history characteristics (SEDAR 68 Operational Assessment (OA) [2022]). The Southeast Fisheries Science Center (SEFSC) indicated that $F_{40\%SPR}$ is more likely than $F_{30\%SPR}$ to achieve a level of biomass that will produce the MSY. Accordingly, a decision to retain $F_{30\%SPR}$ as the F_{MSY} proxy would not be consistent with BSIA and would contribute to greater than a 50% chance of overfishing. **Preferred Alternative 3** is the most conservative alternative and would be expected to have the greatest biological benefits, followed by **Alternative 2**, and **Alternative 1 (No Action)** (Table 2.2.1.1).

4.2.1.2 Economic Effects

Defining the MSY proxy for the Scamp and Yellowmouth Grouper complex would not directly alter the current harvest or use of the resource. Specification of a MSY would establish a benchmark for the complex and allow for resource evaluation from which additional management actions for the species in the complex could be based. The impacts of any management adjustments would be evaluated at the time they are proposed in a plan or framework amendment. As a benchmark, the MSY proxy would not directly limit how, when, where, or with what frequency participants in the fishery engage in harvesting species in the Scamp and Yellowmouth Grouper complex. This includes participants who directly utilize the resource (principally commercial vessels, for-hire operations, and recreational anglers), as well as participants associated with peripheral and support industries.

Since there would be no direct effects on resource harvest or use, there would be no direct economic effects on fishery participants, associated industries, or communities from Sub-Action 2a. Specifying the MSY proxy, however, establishes the platform for future management,

specifically from the perspective of bounding allowable harvest levels. In this sense, the MSY proxy may be considered to have indirect economic effects on fishery participants.

Alternative 1 (No Action) is not a viable alternative according to the Magnuson-Stevens Act, thus, it cannot be selected as a preferred alternative. **Alternative 2** would set the MSY proxy ($F_{30\%SPR}$) at a lower level than **Preferred Alternative 3** ($F_{40\%SPR}$), which would allow for comparatively higher short-term catch levels and higher associated short-term economic benefits than **Preferred Alternative 3**. However, **Alternative 2** could 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. Of the alternatives considered in this action, **Preferred Alternative 3**, which is recommended in the most recent SEDAR, provides a more solid scientific ground for subsequent management actions that have economic implications and would likely lead to comparatively higher long-term economic benefits than **Alternative 1 (No Action)** or **Alternative 2**.

4.2.1.3 Social Effects

Social effects of revised biological parameters such as the MSY proxy for a stock would be associated with both the biological and economic effects of the modified MSY proxy value. Biological parameters are part of the methodology for determining if a stock is undergoing overfishing. If the methodology does not accurately represent the stock status, the outcomes of the overfishing designation when a stock is not undergoing overfishing can have negative long- and short-term social effects associated with restricted or no access to the fish. Additionally, if an inaccurate methodology results in a stock designated as not undergoing overfishing when it is undergoing overfishing, the fishing fleets, associated businesses, and communities could be negatively impacted in the long-term due to a decline in the stock, and negative broader biological impacts of overfishing and future overfished status. Lastly, an inaccurate methodology that causes a stock to fluctuate between overfishing and not overfishing would likely have negative effects on fishermen by requiring changes in regulations on harvest too often. This could negatively affect stability and planning for commercial fishing businesses, in addition to fishing opportunities for recreational anglers, due to inconsistent access to the resource. Although for some fishermen, any access to a stock would be beneficial, the positive effects of consistency in regulations (even if access is restricted) and stability in the fishery would also be expected from a more fixed designation as overfishing or not overfishing.

Overall, social benefits would be expected from the alternative updating values based on the most recent scientific advice (**Preferred Alternative 3**). SEDAR 68 operational assessment (OA; 2022) recommended an MSY proxy for the scamp and yellowmouth grouper stock complex of F40%SPR based on recent scientific literature (see SEDAR 68 0A [2022] for more details). Not utilizing values that are based on the most up-to-date science (**Alternative 1 (No Action)** and **Alternative 2**) could result in long-term negative social effects to fishing communities by not ensuring that harvest is sustainable and not allowing for recovery of an accurately designated overfished stock.

4.2.1.4 Administrative Effects

Administrative effects would be expected to be lower under **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**. A more biologically conservative MSY

would help towards the rebuilding of the overfished newly formed Scamp and Yellowmouth Grouper complex and prevent negative administrative burdens (law enforcement, communications, education, etc.).

4.2.2 Action 2b. Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex

4.2.2.1 Biological Effects

Alternatives*

1. (No Action). There is no MFMT for the Scamp and Yellowmouth Grouper complex.

2. MFMT is equal to the fishing mortality rate that produces a spawning potential ratio of 30%.

3. MFMT is equal to the fishing mortality rate that produces a spawning potential ratio of 40%.

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

Preferred Alternative 3 is the most conservative alternative and would be expected to have the highest biological benefits, followed by **Alternative 2**, and **Alternative 1 (No Action)** (Table 2.2.2.1). As discussed in detail in Section 2.2.2.1, **Alternative 1 (No Action)** would not establish a maximum fishing mortality threshold (MFMT) for the Scamp and Yellowmouth Grouper complex, and therefore, would not satisfy the requirements of the Magnuson-Stevens Act. **Alternative 2** provides an MFMT value equal to the MSY proxy of $F_{30\%SPR}$ based on the current conditions for both species, but is not supported by the latest stock assessment (SEDAR 68 OA [2022]). **Preferred Alternative 3** is based on the recommendations of SEDAR 68 OA (2022) and uses a more conservative MFMT value equal to MSY proxy of $F_{40\%SPR}$.

4.2.2.2 Economic Effects

Since there would be no direct effects on resource harvest or use from establishing MFMT, there would be no direct effects on fishery participants, associated industries, or communities from Sub-Action 2b. Much like MSY, specifying MFMT helps establish the platform for future management, specifically from the perspective of bounding allowable harvest levels. In this sense, MFMT may be considered to have indirect economic effects on fishery participants.

Alternative 1 (No Action) is not a viable alternative based on the requirements of the Magnuson-Stevens Act, thus, it cannot be selected as a preferred alternative. **Alternative 2** would set MFMT ($F_{30\%SPR}$) at a lower level than **Preferred Alternative 3** ($F_{40\%SPR}$) which would allow for comparatively higher short-term catch levels and higher associated short-term economic benefits than **Preferred Alternative 3**. However, **Alternative 2** 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. Of the alternatives considered in this action, **Preferred Alternative 3**, which is recommended in the most recent SEDAR provides a more solid scientific ground for subsequent management actions that have economic implications and would likely lead to comparatively higher long-term economic benefits than **Alternative 1 (No Action)** or **Alternative 2**.

4.2.2.3 Social Effects

Social effects of revised biological parameters such as MFMT for a stock would be associated with both the biological and economic effects of the modified MFMT value. Biological parameters are part of the methodology for determining if a stock is overfished. If the

methodology does not accurately represent the stock status, the outcomes of the 'overfished' designation when a stock is not overfished can have negative long- and short-term social effects associated with restricted or no access to the fish. Conversely, if an inaccurate methodology results in a stock designated as not overfished when it is overfished, the fishing fleets, associated businesses, and communities could be negatively impacted in the long-term due to a decline in the stock, and negative broader biological impacts of an overfished status. Lastly, an inaccurate methodology that causes a stock to fluctuate between overfished and not overfished would likely have negative effects on fishermen by requiring changes in regulations on harvest too often. This could negatively affect stability and planning for commercial fishing businesses, in addition to fishing opportunities for recreational anglers, due to inconsistent access to the resource. Although for some fishermen, any access to a stock would be beneficial, the positive effects of consistency in regulations (even if access is restricted) and stability in the fishery would also be expected from a more fixed designation as overfished or not overfished.

Overall, social benefits would be expected from the alternative updating values based on the most recent scientific advice (**Preferred Alternative 3**). SEDAR 68 OA (2022) recommended a MFMT equal to the MSY proxy of the yield at $F_{40\%SPR}$ for the scamp and yellowmouth grouper stock complex. Not utilizing values that are based on the most up-to-date science (**Alternative 1 (No Action)** and **Alternative 2**) could result in long-term negative social effects to fishing communities by not ensuring that harvest is sustainable and not allowing for recovery of an accurately designated overfished stock.

4.2.2.4 Administrative Effects

Administrative effects would be expected to be lower under **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**. A biologically conservative MFMT value would help prevent overfishing of the newly formed Scamp and Yellowmouth Grouper complex and prevent negative administrative burdens (law enforcement, communications, education, etc.) related to shutting down a sector in the event catch limits are exceeded.

4.2.3 Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex

4.2.3.1 Biological Effects

Alternatives*

1. (No Action). There is no MSST for the Scamp and Yellowmouth Grouper complex.

2. MSST is equal to SSB_{MSY}(1-M) or 0.5 whichever is greater.

3. MSST is equal to 75% of the SSB at a fishing mortality rate of 40% of spawning potential ratio.

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

Preferred Alternative 3 would establish the minimum stock size threshold (MSST) following the most current definition of MSST (SEDAR 68 OA [2022]), which is considered BSIA, and would be expected to have the highest biological benefits, followed by **Alternative 2**, and **Alternative 1 (No Action)** (Section 2.2.3.1). **Alternative 1 (No Action)** would not establish an MSST for the Scamp and Yellowmouth Grouper complex, and therefore, would not satisfy the requirement of the Magnuson-Stevens Act. **Alternative 2** provides an MSST value equal to the spawning stock biomass (SSB) at MSY (SSB_{MSY}) times either 1 minus the natural mortality (M) or 0.5, whichever is greater, based on the current conditions for both species, but this definition is not supported by the latest scientific advice (SEDAR 68 OA [2022]). Under **Alternative 2**, if the value of the natural mortality for a species is very small, i.e., lower than 0.25, then there is very little difference between the biomass threshold for being overfished (MSST) and the biomass threshold for being rebuilt (SSB_{MSY}). Thus, even small fluctuations in biomass due to natural variations not related to fishing mortality may cause a stock vary between an overfished or rebuilt rebuild condition. **Preferred Alternative 3** is based on the recommendations of SEDAR 68 OA (2022), which defined MSST as 75% of SSB at a fishing mortality rate of 40%, which is equivalent to **Alternative 2** when M = 0.25. **Preferred Alternative 3** would establish a larger biomass buffer between an overfished and rebuilt condition than **Alternative 2**.

4.2.3.2 Economic Effects

Like MSY and MFMT, MSST does not alter the current harvest or use of the resource, and thus would have no direct economic effects on fishery participants and associated industries or communities. Unlike MSY, however, MSST is directly related to actions for rebuilding the stock, which also include actions that would have economic implications and indirect economic effects. In general, a high MSST level is susceptible to triggering rebuilding actions that could limit harvest or fishing opportunities, thereby negatively affecting the economic benefits. A low MSST level would be associated with a lower probability of enacting rebuilding actions that would negatively affect the economic benefits. To the extent that rebuilding actions necessitated by a chosen MSST would tend to have economic effects, it is possible to provide some general implications of the MSST alternatives.

With rebuilding taking place over a number of years, management actions and their economic consequences could change over time depending on a variety of factors, including the status of the stock and fishing conditions. **Alternative 1 (No Action)** is not a viable alternative according

to the Magnuson-Stevens Act, thus, it cannot be selected as a preferred alternative. Of the viable alternatives considered, **Alternative 2** would allow for comparatively greater potential short-term negative economic effects because this alternative would have the highest probability of triggering restrictive rebuilding actions. A potential mitigating factor with **Alternative 2** is the possibility that the required management actions would have adverse economic effects that would not last as long or potentially be as stringent as those that would be enacted under **Preferred Alternative 3**. **Preferred Alternative 3** would be best from a short-term economic standpoint, because it is less likely to trigger restrictive rebuilding actions in the short term and thus have the lowest chance of having short-term negative economic effects. A possible downside of **Preferred Alternative 3** is that once the stock is considered overfished, the required rebuilding actions could be very restrictive and potentially remain so for a comparatively extended period of time.

4.2.3.3 Social Effects

Social effects of revised biological parameters such as MSST for a stock would be associated with both the biological and economic effects of the modified MSST value. Biological parameters are part of the methodology for determining if a stock is overfished. If the methodology does not accurately represent the stock status, the outcomes of the 'overfished' designation when a stock is not overfished can have negative long- and short-term social effects associated with restricted or no access to the fish. Conversely, if an inaccurate methodology results in a stock designated as not overfished when it is overfished, the fishing fleets, associated businesses, and communities could be negatively impacted in the long-term due to a decline in the stock, and negative broader biological impacts of overfishing. Lastly, an inaccurate methodology that causes a stock to fluctuate between overfished and not overfished would likely have negative effects on fishermen by requiring changes in regulations on harvest too often. This could negatively affect stability and planning for commercial fishing businesses, in addition to fishing opportunities for recreational anglers, due to inconsistent access to the resource. Although for some fishermen, any access to a stock would be beneficial, the positive effects of consistency in regulations (even if access is restricted) and stability in the fishery would also be expected from a more fixed designation as overfished or not overfished.

Overall, social benefits would be expected from the alternative updating values based on the most recent scientific advice (**Preferred Alternative 3**). SEDAR 68 OA (2022) defined the MSST as 75% of $SSB_{F40\%}$ for the scamp and yellowmouth grouper stock complex. Not utilizing values that are based on the most up-to-date science (**Alternative 1 (No Action)** and **Alternative 2**) could result in long-term negative social effects to fishing communities by not ensuring that harvest is sustainable and not allowing for recovery of an accurately designated overfished stock.

4.2.3.4 Administrative Effects

An MSST value based on BSIA as per the latest scientific guidance would help with the recovery of the overfished status of the newly formed Scamp and Yellowmouth Grouper complex and prevent negative administrative burdens (law enforcement, communications, education, etc.) related to shutting down a sector in the event catch limits are exceeded. Under **Alternative 2**, the buffer between MSST and SSB_{MSY} is smaller than under **Preferred Alternative 3**, and; therefore, would result in an overfished determination more frequently than **Preferred Alternative 3**. An overfished determination would then require a rebuilding plan and therefore,

the administrative effects would be greatest for **Alternative 2** and least **Alternative 1 (No Action)**. However, because **Preferred Alternative 3** would allow for the greatest decrease in biomass before triggering a rebuilding plan, there could be larger administrative costs associated with rebuilding the stock than under **Alternative 2**.

4.2.4 Action 2d. Establish the optimum yield for the Scamp and Yellowmouth Grouper complex

4.2.4.1 Biological Effects

Alternatives*

1. (No Action). There is no OY for the Scamp and Yellowmouth Grouper complex.

2. The OY = 75% of the MSY.

3. The OY = 90% of the MSY.

4. The OY = 95% of the MSY.

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

Alternative 2 is the most conservative alternative and would be expected to have the highest biological benefits, followed by **Alternative 3**, **Preferred Alternative 4**, and **Alternative 1 (No Action)** (Table 2.2.4.1). However, optimum yield (OY) values under **Alternatives 2** through **Preferred Alternative 4** are target values and represent a yield for when the stock is in equilibrium and are therefore higher than the catch levels proposed under Actions 4 and 5. Therefore, biological effects would be more of a protective measure and not necessarily be consequential under these alternatives for the newly established stock complex. As discussed in detail in Section 2.2.4.1, **Alternative 1 (No Action)** would not establish an OY for the Scamp and Yellowmouth Grouper complex, and therefore, would not satisfy the requirements of the Magnuson-Stevens Act.

4.2.4.2 Economic Effects

Establishing OY for the Scamp and Yellowmouth Grouper complex does not directly alter the current harvest or use of the fishery resource. Therefore, the alternatives in Sub-Action 2d would not be expected to have direct economic effects. Indirect economic effects may occur from this action. Defining the OY for species complex establishes a management target for allowable harvests. If defined as a percentage of the MSY, the target would incorporate a protective buffer to ensure the biological health of the stocks is not threatened, thereby, supporting stable biologic and economic benefits. The larger the buffer, the greater the certainty of biological protection. However, an excessively large buffer (i.e., a buffer that exceeds the likely biological variability of the stock, environmental challenges, or potential for fishery-induced problems) would result in overly restrictive harvest allowances, leading to foregone economic benefits and comparatively lower total net economic benefits being derived from the fishery resource. While none of the relevant biological parameters are ever likely known with total certainty, the best OY specification would be expected to balance the risk and costs of being insufficiently conservative against the costs of potentially unnecessarily leaving a portion of the stock unharvested.

Alternative 1 (No Action) is not a viable alternative since it would not satisfy the requirements of the Magnuson-Stevens Act, thus, it cannot be selected as a preferred alternative. **Alternative 2** would lead to the lowest catch target and would result in the lowest short-term net economic benefits of the viable alternatives considered. **Alternative 3** would result in a notably higher catch target along with higher associated net economic benefits than **Alternative 2**. **Preferred Alternative 4** would result in the highest catch level of the viable alternatives considered along with the highest associated net economic benefits.

4.2.4.3 Social Effects

Although OY is the harvest target for all fisheries under the Magnuson-Stevens Act, no specific management actions are required through the specification of OY. Though, the annual catch limit (ACL; Action 4 and Action 5) is what triggers accountability measures (AM) that may result in negative social effects (detailed in Section 4.9.3 and Section 4.10.3), the long-term OY establishes a management target for allowable harvests. Generally, a higher long-term OY would result in the lowest level of negative effects on the recreational and commercial sectors as it allows for the most harvest, assuming that the appropriate biological, economic, and social factors have been considered. Commercial and recreational stakeholders have indicated that having species, including scamp and yellowmouth grouper, open for the longest portion of the year is critical as it allows them to diversify their catch. As such, **Preferred Alternative 4** would result in the most beneficial social effects, followed by **Alternative 3** and **Alternative 2**. **Alternative 1 (No Action)** would not establish an OY for the Scamp and Yellowmouth Grouper complex, and therefore, would not be consistent with BSIA.

4.2.4.4 Administrative Effects

Administrative effects would not vary among **Alternative 1 (No Action)**, and **Alternatives 2** through **Preferred Alternative 4**.

4.3 Action 3. Establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex

Alternatives*

1. (No Action). There is no rebuilding timeframe for the Scamp and Yellowmouth Grouper complex.

2. Establish a rebuilding timeframe equal to T_{min} (5 years).

3. Establish a rebuilding timeframe equal to T_{max} (10 years).

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

4.3.1. Biological Effects

In general, prescribing less time to rebuild the stock could result in lower ACLs and more restrictive management measures, but would translate into greater biological benefits for the stock. Biological effects would be expected to be higher under **Alternative 2** and **Preferred Alternative 3**, compared with **Alternative 1 (No Action)** for the rebuilding timeframe for the Scamp and Yellowmouth Grouper complex. **Alternative 2** and **Preferred Alternative 3** would be based on BSIA and both alternatives indicate a greater than 50% chance of rebuilding (Figure 2.3.1, SEDAR 68 OA [2022]). **Alternative 2** is projected to rebuild the scamp and yellowmouth grouper stock in the least amount of time (five years) assuming long-term recruitment and a reduction in scamp and yellowmouth grouper discards proportional to landings. The Council's SSC and the National Marine Fisheries Service (NMFS) SEFSC discussed the issue of low recruitment of species with life-history characteristics such as scamp and yellowmouth grouper and expressed concern over high uncertainty over when and how quickly recruitment trends could improve. The Council proposed **Preferred Alternative 3** with 10 years as a more realistic timeframe for the stock complex to rebuild. **Alternative 1 (No Action)** would not establish a rebuilding timeline for the overfished Scamp and Yellowmouth Grouper complex and therefore, would not meet the requirements of the Magnuson-Stevens Act.

4.3.2 Economic Effects

A rebuilding timeframe does not impose direct economic effects, as it does not directly constrain harvest or fishing effort. There are potential indirect economic effects that can occur due to a rebuilding timeframe, as the length of the rebuilding period selected can determine how management measures need to be structured with shorter rebuilding periods requiring more stringent measures that may decrease short-term net economic benefits.

Alternative 1 (No Action) is not viable as it does not comply with the Magnuson-Stevens Act to set a rebuilding timeframe for species that are determined to be overfished. Of the viable alternatives in Action 3, **Alternative 2** would provide the shortest rebuilding period of five years, which would be accompanied by the most restrictive catch limits and management measures as well as the largest implied decrease in short-term net economic benefits. The economic effects of such restrictive measures would be analyzed in their respective actions, thus they are not described in detail for this action. **Preferred Alternative 3** would provide the longest rebuilding period of 10 years; hence, it has the lowest implied decrease in short-term net economic benefits as relatively less restrictive catch limits and management measure could be implemented compared to **Alternative 2**.

4.3.3 Social Effects

Although defining a rebuilding schedule is an administrative action, the schedule would determine how restrictive management measures need to be to rebuild the Scamp and Yellowmouth Grouper complex within the allotted timeframe. The severity of these measures would determine the magnitude of the associated social effects that are expected to accrue during the rebuilding period. Generally, the shorter the rebuilding schedule, the more stringent the harvest restrictions. The more severe the harvest restrictions, the greater the short-term negative effects on fishing communities. Commercial and recreational fishermen may be able to adjust to management measures for scamp and yellowmouth grouper by switching to other species and/or seeking other employment or recreational pursuits, thereby mitigating any potential negative social effects. However, if other species are also depleted, regulations may prevent switching to another species or fishery and net negative social effects could potentially be more severe. If current resource users choose, or are economically forced, to exit the Scamp and Yellowmouth Grouper complex portion of the snapper grouper fishery due to measures implemented to achieve rebuilding, long-term benefits associated with recovery may be realized by a different set of resource users. Ultimately, establishing a rebuilding plan provides for the sustained participation of fishing communities in the Scamp and Yellowmouth Grouper complex of the snapper grouper fishery (Section 3.4) by ensuring the sustainability of the resource, providing long-term positive social effects throughout the fishery in the form of consistent access to the resource.

The current assessment indicated that the complex was overfished but not undergoing overfishing, however, a rebuilding schedule is still required, as proposed in **Alternative 2** and **Preferred Alternative 3**. Therefore, **Alternative 1 (No Action)**, which would not establish a rebuilding schedule, would not be based upon the BSIA. **Preferred Alternative 3** is likely to have fewer short-term negative social effects as it establishes a longer rebuilding schedule than **Alternative 2.**

4.3.4 Administrative Effects

Administrative effects would be expected to be lower under **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**. Administrative burdens would include developing, implementing, and monitoring more restrictive harvest regulations for scamp and yellowmouth grouper, in addition to annually reviewing the rebuilding progress. If the Scamp and Yellowmouth Grouper complex is not rebuilt in five years as per **Alternative 2**, administrative burdens would be higher due to revisiting the rebuilding plan by the Council and NMFS. **Alternative 1 (No Action)**, which would not establish a rebuilding timeframe, would require subsequent additional management actions, including possible interim and/or emergency rules to adopt a legally compliant rebuilding timeframe. Therefore, it would have the greatest imposed administrative burden on the Council and NMFS.

4.4 Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex

4.4.1. Biological Effects

Alternatives*

1. (No Action). There is no ABC or ACL for the Scamp and Yellowmouth Grouper complex.

2. Establish the ABC recommendation from the SSC, set the ACL=ABC.

3. Establish the ABC recommendation from the SSC, set the ACL=95% of the ABC.

4. Establish the ABC recommendation from the SSC, set the ACL=90% of the ABC.

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

Total landings for scamp and yellowmouth grouper have been declining since 2010 (Table 3.2.1). Biological benefits are generally expected to be higher under the alternative that allows a lower amount of harvest, allowing more fish to remain in the population. **Alternative 4** provides the highest (10%) buffer from the acceptable biological catch (ABC), followed by **Alternative 3** (5%), and **Preferred Alternative 2** (no buffer) (Table 2.4.1). Therefore, biological benefits would be expected to be higher under **Alternative 4**, followed by **Alternative 3**, **Preferred Alternative 2**, and **Alternative 1 (No Action)**. The total ACLs under **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** are based on the ABC recommended by the SSC, based on the latest commercial landings data and inclusive of recreational data from the Marine Recreational Information Program's (MRIP) Fishing Effort Survey (FES) (MRIP-FES) and considered to be consistent with BSIA. Although **Preferred Alternative 2** has no buffer between the ABC and total ACL, and would establish the highest level of harvest, the Council is considering AMs for both the sectors (Actions 9 and 10), and management actions such as reducing the recreational bag limit (Action 6), and establishing a commercial trip limit (Action 7), to keep harvest levels from exceeding the total ACL. **Alternative 1 (No Action)** is not based on BSIA, because it would retain an ABC and total ACL for scamp individually and for yellowmouth grouper under the OSASWG complex. These catch levels would be using outdated commercial landings data and recreational data from the older and less reliable MRIP Coastal Telephone Household Survey (CHTS) (MRIP-CHTS), and not establish an ABC and total ACL for the Scamp and Yellowmouth grouper complex.

4.4.2 Economic Effects

In general, ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable effects on the stock of a given fish. The ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. In the case of scamp and yellowmouth grouper, the ACLs being considered in **Preferred Alternative 2** through **Alternative 4** would be constraining on harvest when initially implemented and are projected to reduce landings of scamp and yellowmouth grouper for both the commercial and recreational sectors.

As noted in Section 4.4.1, **Alternative 1 (No Action)** is not a viable alternative because it is not based on BSIA. As a proxy for the status quo (**Alternative 1 (No Action)**), the five-year (2018-2022) average landings of scamp and yellowmouth grouper that include MRIP-FES data are compared to **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** to estimate the economic effects of each alternative. **Alternative 1 (No Action)** would not be expected to constrain harvest when compared to recent 5-year average landings and the existing separate ACLs for the two grouper species that currently exist. The ACL is set equal to the ABC in **Alternative 1 (No Action)** and **Preferred Alternative 2**, with the differences between the two in part due to the current versus updated ABC and how the non-headboat recreational component of the total ACL would be accounted for moving forward. Specifically, the current ABCs for scamp and yellowmouth grouper include MRIP-CHTS estimates of private recreational and charter landings, while the updated ABC includes MRIP-FES estimates. Projections that allow for conversion between both measurements for the recreational sector are not available, as there is no forward looking conversion between the two. As such, a direct comparison of **Alternative 1 (No Action)** to **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** is not possible.

The potential revised total ACLs for scamp and yellowmouth grouper in **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** would constrain harvest if implemented (Tables 4.4.2.1 and 4.4.2.2). **Alternative 4** would provide the lowest total ACL, thus would be expected to most severely limit harvest with elevated negative economic effects. **Alternative 3** offers a comparatively higher ACL and **Preferred Alternative 2** would provide the highest ACL. From an economic benefits perspective, **Preferred Alternative 2** would provide the highest potential net economic benefits of the viable alternatives being considered, followed by **Alternative 3** and **Alternative 4** (Table 4.2.2.2).

Table 4.4.2.1. South Atlantic scamp and yellowmouth grouper landings from 2018 to 2022**.**

Fishing Year	Commercial landings (lbs ww)	Recreational landings (lbs ww)	Recreational landings[a] (numbers of fish)	Total landings (lbs ww)
2018	106,892	65,497	7,359	172,389
2019	89,986	33,452	3,759	123,438
2020	73,259	26,921	3,025	100,180
2021	59,424	43,322	4,868	102,746
2022	48,139	35,121	3,946	83,260
5-year average	75,540	40,863	4,591	116,403

[a]Assumes an average weight of 8.9 pounds (lbs) whole weight (ww) per fish (MRIP Online Query, accessed May 1, 2024).
Source: SEFSC Commercial ACL Data – September 2023; MRIP-FES Recreational data – August 2023.

Table 4.4.2.2. Percent difference between the total ACLs in Action 4 compared to 5-year average landings from 2018 to 2022.[a.]

Fishing Year	Percent difference between the ACL and 5-year average annual landings for Preferred Alternative 2	Percent difference between the ACL and 5-year average annual landings for Alternative 3	Percent difference between the ACL and 5-year average annual landings for Alternative 4
2025	**-32%**	-35%	-38%
2026	**-27%**	-30%	-34%
2027	**-24%**	-28%	-32%
2028	**-21%**	-25%	-29%
2029	**-19%**	-23%	-27%

[a]Alternative 1 (No Action) is tracked in part using CHTS measurements for charter and private recreational landings while Preferred Alternative 2 through Alternative 4 would be tracked in part using FES measurements for charter and private recreational landings. As such, the economic effects of Alternative 1 (No Action) cannot be directly compared in a quantitative manner to the other alternatives since the accounting methods used to track the CHTS and FES are notably different and are not forward projecting. Thus, Alternative 1 (No Action) cannot be considered in this analysis.

The estimated change in potential landings by sector under **Preferred Alternative 2** through **Alternative 4** are provided in Table 4.4.2.3 and Table 4.4.2.5. Table 4.4.2.4 and Table 4.4.2.6 show the resulting estimated change in net economic benefits by sector and Table 4.4.2.7 shows the estimated change in net economic benefits for **Action 4** in aggregate for both sectors combined. In the 2025 fishing year, **Preferred Alternative 2** is estimated to result in a decrease in net economic benefits of $200,281 for the commercial sector (as measured in producer surplus or PS), a decrease in net economic benefits of $240,408 for the recreational sector (as measured in consumer surplus or CS), and a decrease in net economic benefits of $440,689 for both sectors combined (2022 dollars). The net economic benefits would relatively increase in subsequent years as the total ACL increases and thus, so would the allowable landings along with the associated economic benefits of the landings. On average through the 5-year time series, **Preferred Alternative 2** is estimated to result in an annual decrease in net economic benefits of $171,514 for the commercial sector, an annual decrease in net economic benefits of $206,127 for the recreational sector, and an annual decrease in net economic benefits of $377,641 for both sectors combined (2022 dollars).

Table 4.4.2.3. Estimated change in potential landings (lbs gutted weight [gw]) to the commercial sector from Action 4.

Fishing Year	Preferred Alternative 2	Alternative 3	Alternative 4
2025	**-26,919**	-28,774	-30,629
2026	**-24,307**	-26,292	-28,278
2027	**-22,739**	-24,803	-26,867
2028	**-21,172**	-23,314	-25,456
2029	**-20,127**	-22,321	-24,516

Table 4.4.2.4. Estimated change in potential net economic benefits to the commercial sector (PS) from Action 4 (2022 dollars).

Fishing Year	Preferred Alternative 2	Alternative 3	Alternative 4
2025	**-$200,281**	-$214,079	-$227,881
2026	**-$180,844**	-$195,616	-$210,388
2027	**-$169,182**	-$184,535	-$199,892
2028	**-$157,519**	-$173,458	-$189,396
2029	**-$149,745**	-$166,072	-$182,399

Table 4.4.2.5. Estimated change in potential landings (numbers of fish) to the recreational sector from Action 4.

Fishing Year	Preferred Alternative 2	Alternative 3	Alternative 4
2025	**-1,939**	-2,064	-2,197
2026	**-1,752**	-1,886	-2,029
2027	**-1,640**	-1,779	-1,927
2028	**-1,528**	-1,673	-1,826
2029	**-1,453**	-1,601	-1,759

Table 4.4.2.6. Estimated change in potential net economic benefits to the recreational sector (CS) from Action 4 (2022 dollars).

Fishing Year	Preferred Alternative 2	Alternative 3	Alternative 4
2025	**-$240,408**	-$255,959	-$272,454
2026	**-$217,245**	-$233,893	-$251,548
2027	**-$203,347**	-$220,650	-$239,004
2028	**-$189,450**	-$207,412	-$226,460
2029	**-$180,185**	-$198,585	-$218,098

Table 4.4.2.7. Estimated change in potential net economic benefits (recreational and commercial combined) from Action 4 (2022 dollars).[a]

Fishing Year	Preferred Alternative 2	Alternative 3	Alternative 4
2025	**-$440,689**	-$470,038	-$500,335
2026	**-$398,089**	-$429,509	-$461,935
2027	**-$372,529**	-$405,185	-$438,896
2028	**-$346,969**	-$380,870	-$415,856
2029	**-$329,929**	-$364,657	-$400,496

[a]Alternative 1 (No Action) is tracked in part using CHTS measurements for charter and private recreational landings while Preferred Alternative 2 through Alternative 4 would be tracked in part using FES measurements for charter and private recreational landings. As such, the economic effects of Alternative 1 (No Action) cannot be directly compared in a quantitative manner to the other alternatives since the accounting methods used to track the CHTS and FES are notably different and are not forward projecting. Thus, Alternative 1 (No Action) cannot be considered in this analysis.

Assumptions used in calculating these estimates include application of the status quo breakdown of 5-year average landings from 2018 through 2022 by sector (64.90% commercial, 35.10% recreational) applied to the new ACL for each alternative to estimate the change in economic benefits. This assumption is used since the Scamp and Yellowmouth Grouper complex has not yet been established nor have sector allocations for the complex. This apportionment of landings is then compared to the baseline scenario (i.e, a proxy for Alternative 1 (No Action)) of 5-year average landings to determine the gap between the baseline scenario and the ACL by sector under the assumption that both sectors would fully harvest their respective ACLs. For the commercial sector, the 5-year average landings of 75,540 lbs ww are converted to 64,017 lbs gw using a 1.18 conversion ratio and considered as the baseline scenario. For the recreational sector, 5-year average landings (4,591 fish; Table 4.4.2.1) in MRIP-FES units are used as the baseline scenario and compared to the resulting new recreational portion of the sector ACL under **Preferred Alternative 2** through **Alternative 4**.

To estimate the change in potential net economic benefits for the commercial sector, the difference in the current and potential future commercial portion of the total ACL is applied to the appropriate price ($7.44/lbs gw; Section 3.3.1) to estimate PS for the commercial sector. A further scaling factor is not applied to gross revenue to estimate PS since scamp and yellowmouth grouper make up a relatively small portion of total revenue for vessels that land these species. Thus, any incremental change in gross revenue occurring due to a change in landings of these species would equate to an equal change in net economic benefits. 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 scamp and yellowmouth grouper, 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 scamp and yellowmouth grouper for other species among seafood consumers.

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 CS estimate of $124 for the second grouper kept on a recreational trip is used (2022 dollars; Section 3.3.2). An average weight of 8.9 lbs ww per scamp (MRIP Online Query, accessed May 1, 2024) is used to convert the recreational portion of the ACL from lbs ww to numbers of fish. According to Section 3.3.2, there are a relatively low number of for-hire trips targeting scamp or yellowmouth grouper. As such, it is assumed that changes in the recreational portion of the total ACL would only affect catch per trip and not notably affect the overall number of trips taken due to the relatively low existing targeted effort and 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. Accordingly, there are no estimated changes in PS provided for the recreational sector.

4.4.3 Social Effects

The ACL for any stock does not directly affect resource users unless the ACL is met or exceeded, in which case AMs that restrict, or close harvest could negatively impact the commercial and recreational sectors. 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. However, restrictions on harvest contribute to sustainable management goals, and are expected to be beneficial to fishermen and communities in the long-term. Generally, the higher the ACL the greater the short-term social benefits that would be expected to accrue if harvest is sustainable.

Under **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4**, the total ACL for the Scamp and Yellowmouth Grouper complex would be based on the most recent stock assessment and updated MRIP FES estimates. Adjustments in an ACL based on updated information are necessary to ensure continuous social benefits over time, **Alternative 1 (No Action)** would not update the Scamp and Yellowmouth Grouper complex total ACL based on current information and would not provide the social benefits associated with up-to-date scientific information.

In general, a higher ACL would lower the chance of triggering a recreational or commercial AM and result in the lowest level of negative effects on the recreational and commercial sectors. Additionally, higher ACLs may provide opportunity for commercial and recreational fishermen to expand their harvest providing social benefits associated with increased income to fishing businesses within the community and higher trip satisfaction. However, commercial and recreational landings of Scamp and Yellowmouth Grouper complex in the South Atlantic have been decreasing since 2010 (Table 3.2.1). Assuming the proposed updates to the ABC and ACL allow the stock to recover as intended, **Preferred Alternative 2** would be the most beneficial for fishermen, followed by **Alternative 3**, and **Alternative 4**. Those rankings would be reversed in terms of long-term benefits if the lower proposed ACLs allow the stock to rebuild at a faster rate.

4.4.4 Administrative Effects

Administrative effects would be expected to be higher under **Alternative 4,** followed by **Alternative 3**, **Preferred Alternative 2**, and **Alternative 1 (No Action)**, because the lower the ACL, the more likely it is to be met (if no additional harvest restrictions are implemented), and the more likely an AM would be triggered. Administrative burdens would include notification of a possible closure to the public, and enforcement of such a closure.

4.5 Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

Alternatives*

1. (No Action). There are no sector allocations for the Scamp and Yellowmouth Grouper complex.

2. Commercial and recreational allocations percentages would change each year from 2025 through 2029, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2018 through 2022.

3. Commercial and recreational allocations percentages would change each year from 2025 through 2029, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2013 through 2022.

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

4.5.1. Biological Effects

Commercial and recreational landings for scamp and yellowmouth grouper have been decreasing over time (Table 4.5.1.1). From 2018 through 2022, commercial and recreational landings increased in May, after the January through April spawning season closure for both sectors, and subsequently decreased in early to mid-August (Figures 4.5.1.1 and 4.5.1.2).

Table 4.5.1.1. Aggregated annual landings estimates of scamp and yellowmouth grouper (lbs ww) during 2013-2022, by sector. Landings values are adjusted for both confidentiality and recreational uncertainty.

Year	Commercial	Recreational	Total Landings
2013	156,316	98,902	255,217
2014	184,257	84,856	269,113
2015	143,635	84,856	228,492
2016	125,044	70,811	195,855
2017	123,692	97,541	221,233
2018	106,892	65,497	172,389
2019	89,986	33,452	123,438
2020	73,259	26,921	100,180
2021	59,424	43,322	102,745
2022	48,139	35,121	83,260

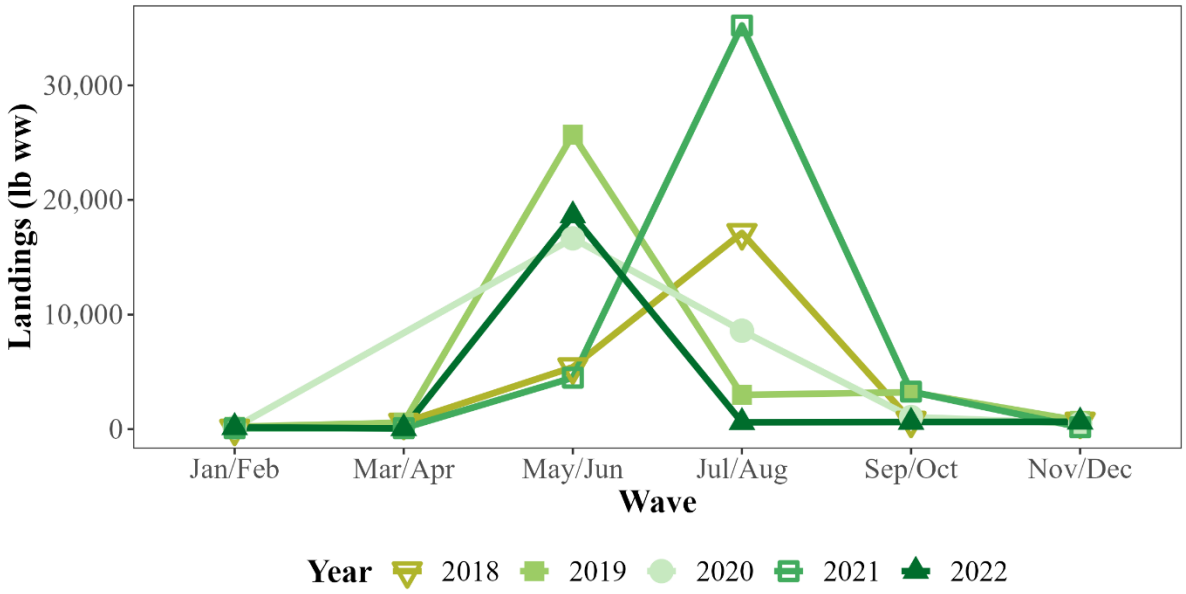

Figure 4.5.1.1. Observed recreational landing by wave, including MRIP-FES recreational landings from shore and private boat fishing modes, For-Hire Survey (FHS) landings for charter vessels, and Southeast Region Headboat Survey (SRHS) landings for headboat vessels (Source: MRIP-FES Recreational data – August 2023).

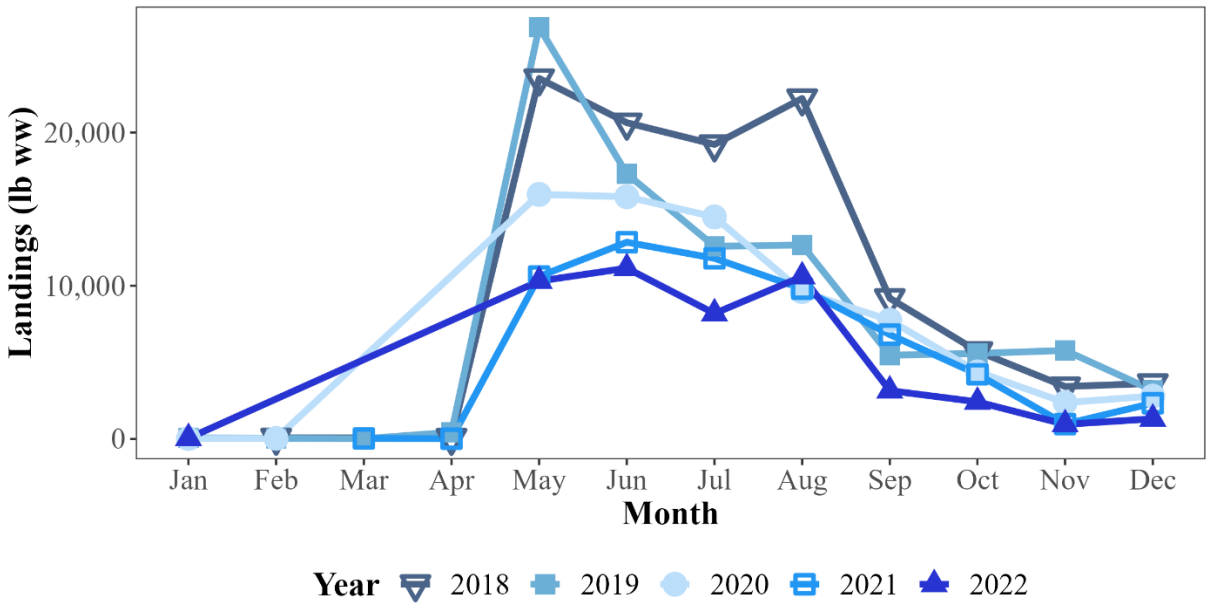

Figure 4.5.1.2. Observed commercial landings from 2018-2022 (Source: SEFSC Commercial ACL Data – September 2023).

Because **Alternative 1 (No Action)** would not establish sector allocations for the Scamp and Yellowmouth Grouper complex, the current allocations for scamp (individually) and yellowmouth grouper (under the OSASWG complex) would remain in place. These allocations are based on MRIP-CHTS recreational data, which are no longer considered BSIA.

Table 2.5.1 shows the commercial and recreational sector allocations (percent [%] and lbs ww) from 2025 through 2029 for the preferred total ACL (Action 4) and preferred sector allocations (this action). Biological effects would not be expected to be substantially different between **Preferred Alternative 2** and **Alternative 3**, because the sector allocation percentages under both alternatives are very similar from 2025 through 2029 (Tables 4.5.1.2 and 4.5.1.3).

Projected landings during 2020-2022 were used (Appendix D, Section 2.5.1) to predict when the commercial and recreational sectors would reach their respective ACLs (Tables 4.5.1.2 and 4.5.1.3). The current landing behavior shows the highest rates of harvest in the summer months immediately after the season begins, which could lead to the commercial ACL being met as early as August 21 (2025) and as late as September 15 (2029) (Table 4.5.1.2). The recreational ACL could be met in Wave 4 (July/August) in 2025 through 2027, Wave 5 (September/October) in 2028, and Wave 6 (November/December) in 2029 (Table 4.5.1.3).

Table 4.5.1.2. Predictions for when the Scamp Yellowmouth Grouper complex commercial ACLs would be met under the preferred alternatives for Action 4 (ACL Alternative 2 – ABC = Total ACL) and Action 5 (Alternative 2 – Split Reduction Method using average landings from 2018-2022).

Preferred ACL Alternative: Action 4 - Alternative 2 (ACL = ABC)	Preferred Commercial Allocation % (Action 5 - Alternative 2: Split Reduction w/ 2018-2022 landings)	Commercial ACL (lbs ww)	ACL Met	Approx. Days
67,450 (2025)	64.90%	43,772	21-Aug	112
72,200 (2026)	63.92%	46,147	29-Aug	120
75,050 (2027)	63.39%	47,572	3-Sep	125
77,900 (2028)	62.90%	48,997	10-Sep	132
79,800 (2029)	62.59%	49,947	15-Sep	137

Table 4.5.1.3. Predictions for when the Scamp Yellowmouth Grouper complex recreational ACLs would be met under the preferred alternatives for Action 4 (ACL Alternative 2 – ACL = ABC) and Action 5 (Alternative 2 – Split Reduction Method using average landings from 2018-2022).

Preferred ACL Alternative: Action 4 - Alternative 2 (ACL = ABC)	Preferred Recreational Allocation % (Action 5 - Alternative 2: Split Reduction w/ 2018-2022 landings)	Recreational ACL (lbs ww)	ACL Met	Approx. Days
67,450 (2025)	35.10%	23,678	Wave 4	104
72,200 (2026)	36.08%	25,053	Wave 4	114
75,050 (2027)	36.61%	27,478	Wave 4	120
77,900 (2028)	37.10%	28,903	Wave 5	154
79,800 (2029)	37.41%	29,853	Wave 6	203

4.5.2 Economic Effects

In general, sector ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable effects on the stock of a given fish. The ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. In the case of scamp and yellowmouth grouper, the resulting landings from **Alternative 1 (No Action),** or the sector allocations and resulting ACLs being considered under **Preferred Alternative 2** and **Alternative 3,** would constrain harvest for both sectors when initially implemented, thus creating direct economic effects, and shifts between sectors would create distributional economic effects by sector, depending on the allocation.

Commercial Sector

Alternative 1 (No Action) would not implement sector allocations for the Scamp and Yellowmouth Grouper complex. As such, it is assumed that the proportional landings of the total ACL by each sector would remain similar to recent 5-year landings (2018 through 2022) as a de facto sector allocations, with the commercial sector accounting for 64.90% of the total ACL and the recreational sector accounting for approximately 35.10% of the total ACL. **Preferred Alternative 2** would result in the same commercial sector ACL and sector allocation in the initial year of implementation, but the sector allocation would drop below the de facto allocation in **Alternative 1 (No Action)** on a percent basis in subsequent years, becoming increasingly lower each year into the rebuilding period until 2029 where it would remain at 62.59% of the total ACL indefinitely. **Alternative 3** would result in a comparatively lower commercial sector allocation for all years when compared to **Alternative 1 (No Action)** or **Preferred Alternative 2**.

All of the commercial ACL alternatives in Action 5 are estimated to be constraining when initially implemented in 2025 based on the average annual landings over the last five years of available data (Table 4.4.2.1 and Table 4.5.2.1); therefore, it is assumed that the commercial sector could fully harvest its ACL if conditions allowed, and there would be fewer potential landings of scamp and yellowmouth grouper in most years under **Preferred Alternative 2** and

Alternative 3 relative to **Alternative 1 (No Action)**. These relatively decreased landings would be expected to comparatively decrease total potential PS for the commercial sector. When compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would result in the same overall PS in fishing year 2025. By 2029, **Preferred Alternative 2** would result in an estimated annual decrease in PS of $11,622 (Table 4.5.2.2; 2022 dollars).

Estimates of net revenues or economic profit are not available for snapper grouper dealers. Therefore, it is not possible to 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, the directionality of economic benefits to dealers would be the same as stated above.

Table 4.5.2.1. Percent difference between the commercial sector ACLs in Action 5 compared to 5-year average commercial landings of scamp and yellowmouth grouper from 2018-2022 and a comparison of sector ACLs.

Fishing Year	Estimated commercial sector ACL (lbs gw)	Percent difference between 5-year average commercial landings and the sector ACL	Difference from Alternative 1 (No Action) sector ACL (lbs gw)
Alternative 1 (No Action)			
2025	37,098	-42%	-
2026	39,710	-38%	-
2027	41,278	-36%	-
2028	42,845	-33%	-
2029	43,890	-31%	-
Preferred Alternative 2			
2025	**37,098**	**-42%**	**0**
2026	**39,108**	**-39%**	**-602**
2027	**40,315**	**-37%**	**-962**
2028	**41,523**	**-35%**	**-1,322**
2029	**42,328**	**-34%**	**-1,562**
Alternative 3			
2025	36,240	-43%	-858
2026	38,247	-40%	-1,463
2027	39,420	-38%	-1,857
2028	40,666	-36%	-2,179
2029	41,469	-35%	-2,421

Table 4.5.2.2. Estimated change in potential net economic benefits for the commercial sector (PS) from the alternatives in Action 5 compared to Alternative 1 (No Action) (2022 dollars).

Fishing Year	Preferred Alternative 2	Alternative 3
2025	**$0**	-$6,381
2026	**-$4,482**	-$10,881
2027	**-$7,159**	-$13,817
2028	**-$9,837**	-$16,211
2029	**-$11,622**	-$18,015

Assumptions used in calculating the estimates in Table 4.5.2.2 include a comparison of the de facto sector ACL in **Alternative 1 (No Action)** (64.90% of the total ACL) to the appropriate sector ACL resulting from the other alternatives. To estimate the change in potential net economic benefits, the difference in lbs gw is applied to the appropriate price ($7.44/lbs gw; Section 3.3.1) to estimate PS for the commercial sector. A further scaling factor is not applied to gross revenue in this circumstance to estimate PS since scamp and yellowmouth grouper make up a relatively small portion of total revenue for vessels that land the species, thus any incremental change in gross revenue occurring due to a change in landings of the species would equate to an equal change in net benefits. It is assumed that the ex-vessel price will not change due to the change in commercial landings. Although there are no currently available estimates of the demand elasticity for scamp and yellowmouth grouper, 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 scamp and yellowmouth grouper for other species. The total ACL for which the sector ACLs are based upon is derived from Preferred Alternative 2 in Action 4.

Recreational Sector

Alternative 1 (No Action) would not specify sector allocations for scamp or yellowmouth grouper. As such, it is assumed that the proportional landings of the total ACL by each sector would remain similar to recent 5-year landings (2018 through 2022) as a de facto allocation, with the commercial sector accounting for 64.90% of the total ACL and the recreational sector accounting for approximately 35.10% of the total ACL. **Preferred Alternative 2** would result in the same recreational sector ACL and sector allocation in the initial year of implementation, but the sector allocation would increase above the de facto allocation in **Alternative 1 (No Action)** on a percent basis in subsequent years, becoming increasingly higher each year into the rebuilding period until 2029 where it would remain at 37.41% of the total ACL indefinitely. **Alternative 3** would result in a comparatively higher recreational sector allocation for all years when compared to **Alternative 1 (No Action)**.

All of the recreational ACL alternatives in Action 5 would constrain harvest when initially implemented in 2025 based on the average annual landings over the last five years of available data (Table 4.4.2.1 and Table 4.5.2.3). Therefore, it is assumed that the recreational sector could fully harvest its ACL if conditions allowed, and there would be greater potential landings of scamp and yellowmouth grouper in most years under **Preferred Alternative 2** and **Alternative 3** relative to **Alternative 1 (No Action)**. These increased landings would be expected to comparatively increase total potential CS for the recreational sector. When compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would result in the same overall CS in

fishing year 2025. By 2029, **Preferred Alternative 2** would result in an estimated annual increase in CS of $25,569 (Table 4.5.2.4; 2022 dollars).

Table 4.5.2.3. Percent difference between the recreational sector ACLs in Action 5 compared to 5-year average recreational landings of scamp and yellowmouth grouper from 2018-2022 and comparison of sector ACLs.

Fishing Year	Estimated recreational sector landings (# of fish)	Percent difference between 5-year average recreational landings and the sector ACL	Difference from Alternative 1 (No Action) sector ACL (lbs gw)
Alternative 1 (No Action)			
2025	2,660	-42%	-
2026	2,847	-38%	-
2027	2,960	-36%	-
2028	3,072	-33%	-
2029	3,147	-31%	-
Preferred Alternative 2			
2025	**2,660**	**-42%**	**0**
2026	**2,927**	**-36%**	**80**
2027	**3,087**	**-33%**	**128**
2028	**3,248**	**-29%**	**175**
2029	**3,354**	**-27%**	**207**
Alternative 3			
2025	2,774	-40%	114
2026	3,041	-34%	194
2027	3,201	-30%	241
2028	3,361	-27%	289
2029	3,468	-24%	321

Table 4.5.2.4. Estimated change in potential net economic benefits for the recreational sector (CS) from the alternatives in Action 5 compared to Alternative 1 (No Action) (2022 dollars).

Fishing Year	Preferred Alternative 2	Alternative 3
2025	**$0**	$14,100
2026	**$9,903**	$24,045
2027	**$15,820**	$29,906
2028	**$21,736**	$35,822
2029	**$25,681**	$39,808

Assumptions used in calculating the estimates in Table 4.5.2.4 include a comparison of the de facto sector ACL in **Alternative 1 (No Action)** (35.10% of the total ACL) to the appropriate sector ACL resulting from the other alternatives. To estimate net economic benefits for the recreational sector, a CS estimate of $124 for the second grouper kept on a recreational trip is used (2022 dollars; Section 3.3.2). An average weight of 8.9 lbs ww per scamp (MRIP Online Query, accessed May 1, 2024) is used to convert the recreational portion of the ACL from lbs ww to numbers of fish. According to Section 3.3.2, there are a relatively low number of for-hire trips targeting scamp or yellowmouth grouper. As such, it is assumed that changes in the

recreational portion of the total ACL would only affect catch per trip and not notably affect the overall number of trips taken due to the relatively low existing targeted effort and 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. The total ACL for which the sector ACLs are based upon is derived from Preferred Alternative 2 in Action 4.

Total

In general, higher ACLs allow for increased harvest when fishery conditions allow, thereby increasing net economic benefits. Thus, under this notion, the alternatives in Action 5 can be ranked for the commercial sector from a net economic benefits perspective with **Alternative 1 (No Action)** resulting in the highest potential benefits followed by **Preferred Alternative 2** and **Alternative 3**. For the recreational sector, the ranking would be the opposite with **Alternative 3** would result in the highest potential benefits followed by **Preferred Alternative 2** and **Alternative 1 (No Action)**. In terms of total estimated net economic benefits for the action, the same ranking would apply as stated for the recreational sector. In comparison to **Alternative 1 (No Action)**, **Preferred Alternative 2** would increase annual net economic benefits by $0 in the 2025 fishing year and by $14,059 in the 2029 fishing year (Table 4.5.2.5; 2022 dollars). Over the 5-year time series **Preferred Alternative 2** would increase annual net economic benefits by $8,008 (2022 dollars).

Table 4.5.2.5. Estimated change in potential net economic benefits from the alternatives in Action 5 compared to Alternative 1 (No Action) (2022 dollars).

Fishing Year	Preferred Alternative 2	Alternative 3
2025	**$0**	$7,719
2026	**$5,422**	$13,164
2027	**$8,661**	$16,088
2028	**$11,900**	$19,611
2029	**$14,059**	$21,793

4.5.3 Social Effects

Alternative 1 (No Action) would not establish sector allocations for the Scamp and Yellowmouth Grouper complex. Under **Preferred Alternative 2** and **Alternative 3**, commercial and recreational sector allocations would be established. These alternatives could have some negative social effects if recreational fishermen, have a negative perception of this change due to the decrease in fishing opportunity and concerns about long-term social effects, especially if other actions further decreased harvest opportunities. Alternatively, because the alternatives represent a comparatively high allocation for the commercial sector, businesses associated with commercial fishing are likely to have a positive perception of the change.

As mentioned above, there can be many different social effects that result as allocations are discussed further, and perceptions are formed. In the past there has been some resistance to establishing or further decreasing a given sector's percentage allocation. This resistance often stems from the understanding that an allocation interacts with other actions and a reduction in

allocation for a sector, which may be compounded by a restrictive choice of ABC or ACL (Action 4) or a combination of associated management actions, could result in decreased access to the resource due to triggering of AMs and perceived lost fishing opportunities.

Based on Action 4-Preferred Alternative 2 and recent commercial and recreational landings, all of the proposed commercial or recreational ACLs are expected to be met, resulting in triggering of the AMs (Action 9 and Action 10, respectively). Modifications to commercial management measures (Action 8) and recreational management measures (Action 7) are anticipated to decrease landings and lengthen the season, but not to the extent that would prevent closures during the initial fishing seasons (2025 and 2026) depending on alternative selected. While the negative social effects of closures, such as lost fishing opportunities, are usually short-term and would only be experienced in the first few seasons under modified management measures, they may at times induce other indirect effects through changes in fishing behavior. Changes in behavior or business operations could have long-term social effects associated with fishing effort switching to other species or anglers and businesses discontinuing fishing altogether.

Preferred Alternative 2 and **Alternative 3**, which divide the percent ACL proportionally based on landings, may be amenable to both commercial and recreational sector participants, if they feel the selected years accurately represent the capacity of their sector. Generally, fishing communities primarily engaged in commercial fishing activities (Section 3.4) would prefer **Preferred Alternative 2** and **Alternative 3**. Fishing communities primarily engaged in recreational fishing activities (Section 3.4) would prefer **Alternative 3** followed by **Preferred Alternative 2**.

4.5.4 Administrative Effects

Administrative effects would be expected to be higher under **Preferred Alternative 2** and **Alternative 3** when compared with **Alternative 1 (No Action)**, since both the commercial and recreational sector ACLs are expected to be met early in the fishing season. For the commercial sector, administrative burdens such as notifications to the public, education, and enforcement, could result from an in-season closure, and possible post-season ACL payback (**Preferred Alternative 3** in Action 9). For the recreational sector, administrative burdens would be related to a post-season AM of shortening the length of the recreational fishing season in the following year (**Preferred Alternative 5** in Action 10).

4.6 Action 6. Modify the recreational bag limit for scamp and yellowmouth grouper

4.6.1. Biological Effects

Alternatives*

1. (No Action). The recreational bag limit is 3 scamp or 3 yellowmouth grouper per person per day within the 3 fish grouper and tilefish combined aggregate.

2. Establish an aggregate complex bag limit of 2 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

3. Establish an aggregate complex bag limit of 1 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

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

In general, biological effects would be expected to be higher for the recreational bag limit alternative that is most conservative in harvesting scamp and yellowmouth grouper (see Section 2.6.1 for more details). The percent reduction in catch during 2018-2022 was evaluated for each alternative using MRIP-FES data (51 angler trip reports for both private recreational boats and charter vessels); and Southeast Region Headboat Survey logbook data (932 trip reports) (Appendix D, Figure 4.6.1.1.). The majority of angler trips harvested one scamp or yellowmouth grouper per person (Figure 4.6.1.1.).

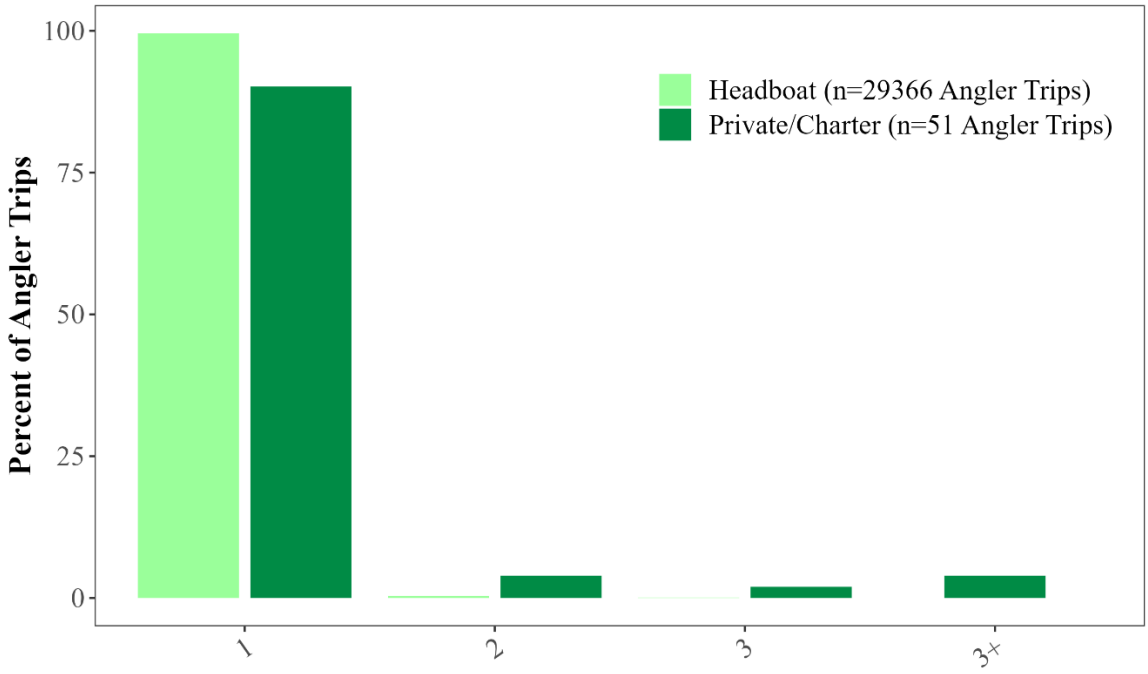

Figure 4.6.1.1. Distribution of scamp and yellowmouth grouper angler harvest from dockside intercept and headboat logbook data from 2018-2022, by recreational fleet.

The percent reduction in recreational harvest is expected to be higher under **Preferred Alternative 3** for all components of the recreational sector (private boats, charter vessels, and

headboats), followed by **Alternative 2** (private boats and charter vessels), and **Alternative 1 (No Action)** (Table 4.6.1.1.). A reduced recreational bag limit would extend the length of the recreational fishing season for scamp and yellowmouth grouper for all years of the rebuilding period, thereby, reducing regulatory discards during a closed recreational fishing season (Table 4.6.1.2). **Preferred Alternative 3** is expected to provide the longest recreational fishing opportunity, with no expected closure for the recreational sector, under **Alternative 2** or, **Alternative 1 (No Action)** (Table 4.6.1.2). While no in-season AM for the recreational sector for scamp and yellowmouth grouper is being proposed, a post-season AM of shortening of the recreational season in the following year (**Preferred Alternative 5** in Action 9) would be put in place. Therefore, biological effects would be expected to be higher for **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**.

Table 4.6.1.1. Proposed recreational bag and alternatives and associated percent reduction for each alternative under Action 6.

Alternative	Private	Charter	Headboat
Alternative 1 (No Action): 3 scamp or yellowmouth grouper per angler per day	0.0%	0.0%	0.0%
Alternative 2: 2 scamp or yellowmouth grouper per angler per day	-18.1%	-18.1%	-0.7%
Preferred Alternative 3: 1 scamp or yellowmouth grouper per angler per day	**-28.6%**	**-28.6%**	**-6.1%**

Table 4.6.1.2. Predictions for when the Scamp and Yellowmouth Grouper complex ACLs would be met under with the preferred total ACL alternative (Action 4: Alternative 2 – ABC=ACL), preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022), and each bag limit alternative (Action 6) for the recreational sector.

Year	Sector ACL (lbs ww)	Alternative 1 (No Action - No Aggregate Recreational Bag Limit)		Alternative 2 (2 fish aggregate complex bag limit)		Preferred Alternative 3 (1 fish aggregate complex bag limit)	
		ACL Met	Approx. Days	ACL Met	Approx. Days	ACL Met	**Approx. Days**
2025	23,678	Wave 4	104	Wave 5	130	-	**245**
2026	26,053	Wave 4	114	-	245	-	**245**
2027	27,478	Wave 4	120	-	245	-	**245**
2028	28,903	Wave 5	154	-	245	-	**245**
2029	29,853	Wave 6	203	-	245	-	**245**

Note: Dashes in cell represent a scenario when the ACL is not anticipated to be met. Currently, scamp and yellowmouth grouper have individual bag limits of 3 fish per person per day within the grouper aggregate.

4.6.2. 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 the satisfaction from an angler trip could be affected. Relative to **Alternative 1 (No Action)** of 3 scamp or 3 yellowmouth grouper within the 3 fish grouper and tilefish combined aggregate, setting the bag limit at 2 fish per person (**Alternative 2**) or 1 fish per person (**Preferred Alternative 3**) would have greater negative economic effects due to constraining harvest and related CS. Conversely, more restrictive retention limits would allow for longer open harvest seasons that allow for relatively increased fishing opportunities and associated economic benefits.

Projected landings for the alternatives in Action 6 are provided in Table 4.6.2.1, the difference in projected landings from **Alternative 2** and **Preferred Alternative 3** compared to **Alternative 1 (No Action)** are provided in Table 4.6.2.2, and the estimated change in net economic benefits for the recreational sector are included in Table 4.6.2.3. For **Alternative 2**, net economic benefits are anticipated to be the same as **Alternative 1 (No Action)** in 2025 because harvest would be the same and capped at the ACL selected in Action 5 for that year. In subsequent years, net economic benefits would decrease under **Alternative 2**, since the 2-fish bag limit would cause landings to be below the recreational ACL as well as projected landings under **Alternative 1 (No Action)** for those years. For **Preferred Alternative 3**, net economic benefits would be comparatively lower each year that is examined since harvest under a 1 fish bag limit would be lower than the sector ACL each year as well as the projected landings under a 3-fish aggregate bag limit (**Alternative 1 (No Action)**). Depending on whether **Alternative 2** or **Preferred Alternative 3** is selected and the fishing year examined, net economic benefits would be expected to decrease by a range of $0 to $83,579 in comparison to **Alternative 1 (No Action)**. In the 2025 fishing year, **Preferred Alternative 3** would reduce net economic benefits by an estimated $18,228. By the 2029 fishing year, **Preferred Alternative 3** would reduce net economic benefits by an estimated $83,579 (Table 4.6.2.3; 2022 dollars).

The estimated landings and change in landings are based on projected landings from the analysis completed in Appendix D. An average weight of 8.9 lbs ww per scamp (MRIP Online Query, accessed May 1, 2024) is used to convert the change in landings to numbers of fish. The estimated change in landings is then paired with a CS estimate of $83 for a third grouper kept on a recreational trip for reductions resulting from **Alternative 2** since the bag limit would be lowered from 3 fish to 2 fish. For **Preferred Alternative 3**, a CS estimate of $124 for the second grouper kept on a recreational trip is applied for any additional reductions beyond those resulting from **Alternative 2** as the bag limit would be reduced from 3 fish to 1 fish (Section 3.3.2; 2022 dollars). Since scamp and yellowmouth are rarely targeted (Section 3.3.2), it is assumed that a reduction in the bag limit would not affect the number of for-hire fishing trips in the South Atlantic region; therefore, there are no estimated changes in PS provided for the recreational sector. The effects in Table 4.6.2.3 may be an upper bound estimate of the economic effects for Action 6.

Table 4.6.2.1. Projected landings of scamp and yellowmouth grouper under the alternatives in Action 6 (lbs ww).

Year	Recreational ACL	Alternative 1 (No Action)	Alternative 2	Preferred Alternative 3
2025	23,678	23,678	23,678	**22,372**
2026	26,053	26,053	25,357	**22,372**
2027	27,478	27,478	25,357	**22,372**
2028	28,903	28,903	25,357	**22,372**
2029	29,853	29,853	25,357	**22,372**

Table 4.6.2.2. Difference in the estimated recreational landings of scamp and yellowmouth grouper compared to **Alternative 1 (No Action)** (numbers of fish)[a].

Year	Alternative 2	Preferred Alternative 3
2025	0	**-147**
2026	-78	**-414**
2027	-238	**-574**
2028	-398	**-734**
2029	-505	**-841**

[a]Assumes an average weight of 8.9 lbs ww per fish (MRIP Online Query, accessed May 1, 2024).

Table 4.6.2.3. Estimated change in potential net economic benefits for the recreational sector (CS) from the alternatives in Action 6 compared to Alternative 1 (No Action) (2022 dollars).

Year	Alternative 2	Preferred Alternative 3
2025	$0	**-$18,228**
2026	-$6,474	**-$48,138**
2027	-$19,754	**-$61,418**
2028	-$33,034	**-$74,698**
2029	-$41,915	**-$83,579**

4.6.3 Social Effects

In general, the social effects of modifying the recreational bag limit would be a tradeoff between longer seasons under lower bag limits, and the negative effects on recreational fishing opportunities because the bag limit is too low. While **Alternative 2** and **Preferred Alternative 3** would limit recreational fishing opportunities for scamp and yellowmouth grouper and change the recreational fishing experience by restricting the number of scamp and yellowmouth grouper that can be kept, the season would also likely be longer because the rate of harvest would be slower.

Different levels of recreational fishing opportunities under each alternative could affect recreational anglers and for-hire businesses targeting scamp and yellowmouth grouper. The social effects of bag limits can be associated with how many and at what times of year the recreational catch may be retained. Additionally, any long-term negative biological effects on the stock due to recreational landings from higher bag limits, or dead discards due to lower bag

limits, would also likely result in negative effects of recreational fishing opportunities in future years.

Social benefits from improved recreational fishing opportunities would result from a bag limit that has the largest portion of the year open to recreational harvest, with the highest number of fish per person. **Alternative 1 (No Action)** would be the most beneficial to recreational fishermen in the short-term but could detract from measures to rebuild the stock complex. The most restrictive recreational bag limits (**Preferred Alternative 3**), which is projected to reduce catch by 28.6% overall, may eliminate some recreational fishing opportunities for for-hire and private recreational anglers (Table 4.5.1.1). Less restrictive recreational limits in **Alternative 2** and **Alternative 1 (No Action)** would improve benefits to the recreational sector and associated businesses but would also shorten the fishing season under the recreational ACL. The length of the fishing season would ultimately depend on how the proposed bag limits interact with other proposed recreational fishing measures.

4.6.4 Administrative Effects

Administrative effects would not be expected to vary substantially between **Alternative 1 (No Action)**, **Alternative 2**, and **Preferred Alternative 3**, as recreational bag limits are already in place. Depending on the preferred alternative selected, a shorter recreational fishing season could lead to administrative burdens such as notifying the public, education, and enforcement related to shortening the length of the following year's recreational fishing season as per the current post-season recreational AM (**Preferred Alternative 5** in Action 9).

4.7 Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

4.7.1. Biological Effects

Alternatives*

1. (No Action). There is no trip limit.

2. Establish an aggregate trip limit of 200 lbs gw.

3. Establish an aggregate trip limit of 300 lbs gw.

4. Establish an aggregate trip limit of 400 lbs gw.

5. Establish an aggregate trip limit of 500 lbs gw.

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

Currently, there is no commercial trip limit for scamp or yellowmouth grouper (**Alternative 1, No Action**). Commercial logbook data from 2018 through 2022 were used to conduct a commercial trip limit analysis for the range of trip limits under **Alternatives 3** through **5** (Appendix D). Overall, the distributions were similar over the last five years, but the proportion of trips harvesting 50 lbs gw of scamp or yellowmouth grouper increased in more recent years (Figure 4.7.1.1). As a result, only the three most recent years of data were used to generate a percent reduction in landings associated with each trip limit scenario (Figure 4.7.1.2, Table 4.7.1.1 and Appendix D). Percent reduction in commercial landings would be expected to be higher under the most conservative commercial trip limit alternative. Therefore, percent reduction would be higher under **Alternative 2**, followed by **Preferred Alternative 3**, **Alternative 4**, and **Alternative 5** (Table 4.7.1.1).

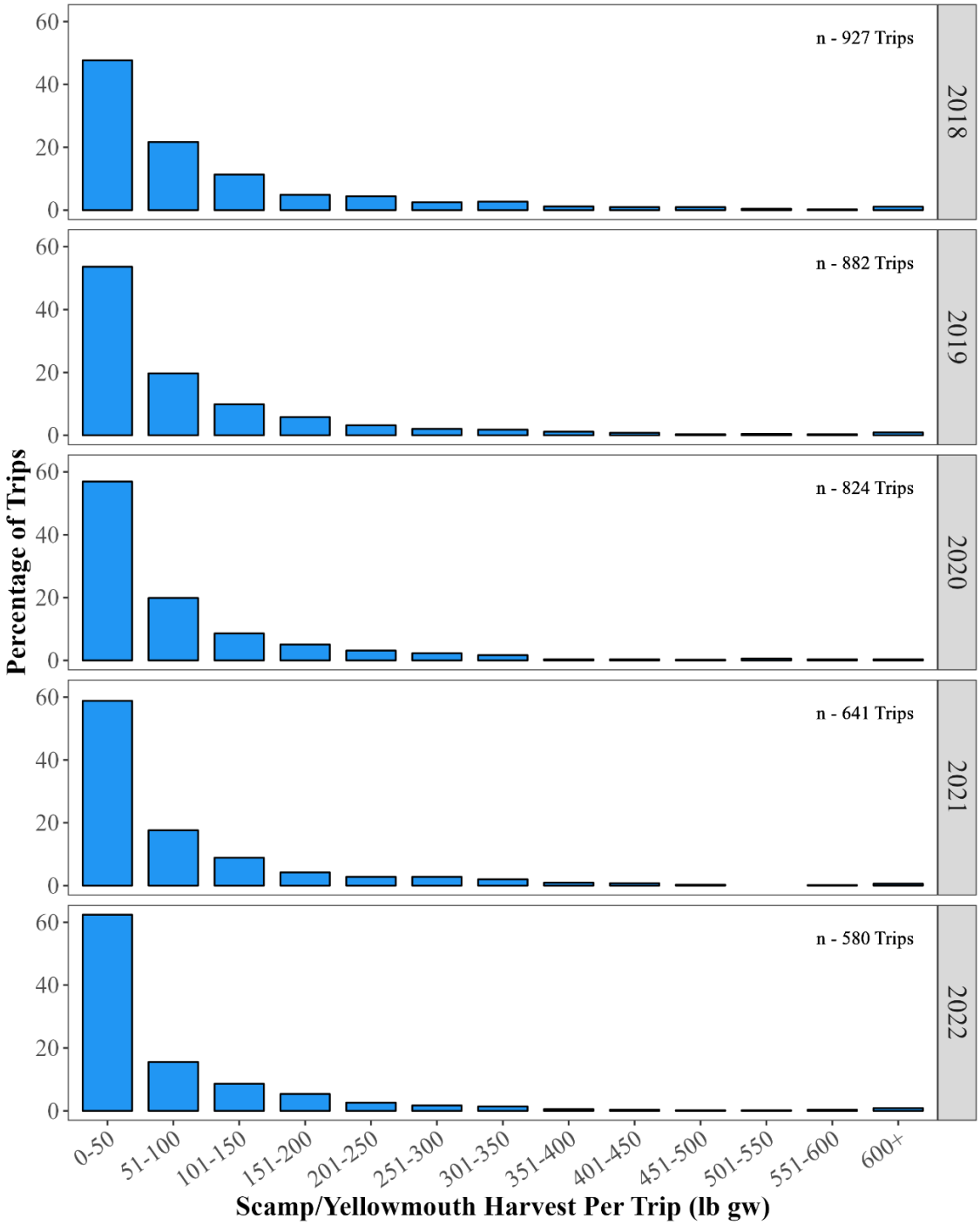

Figure 4.7.1.1. Distribution of scamp and yellowmouth grouper trip harvest between 2018 and 2022, in 50 lbs gw bins.

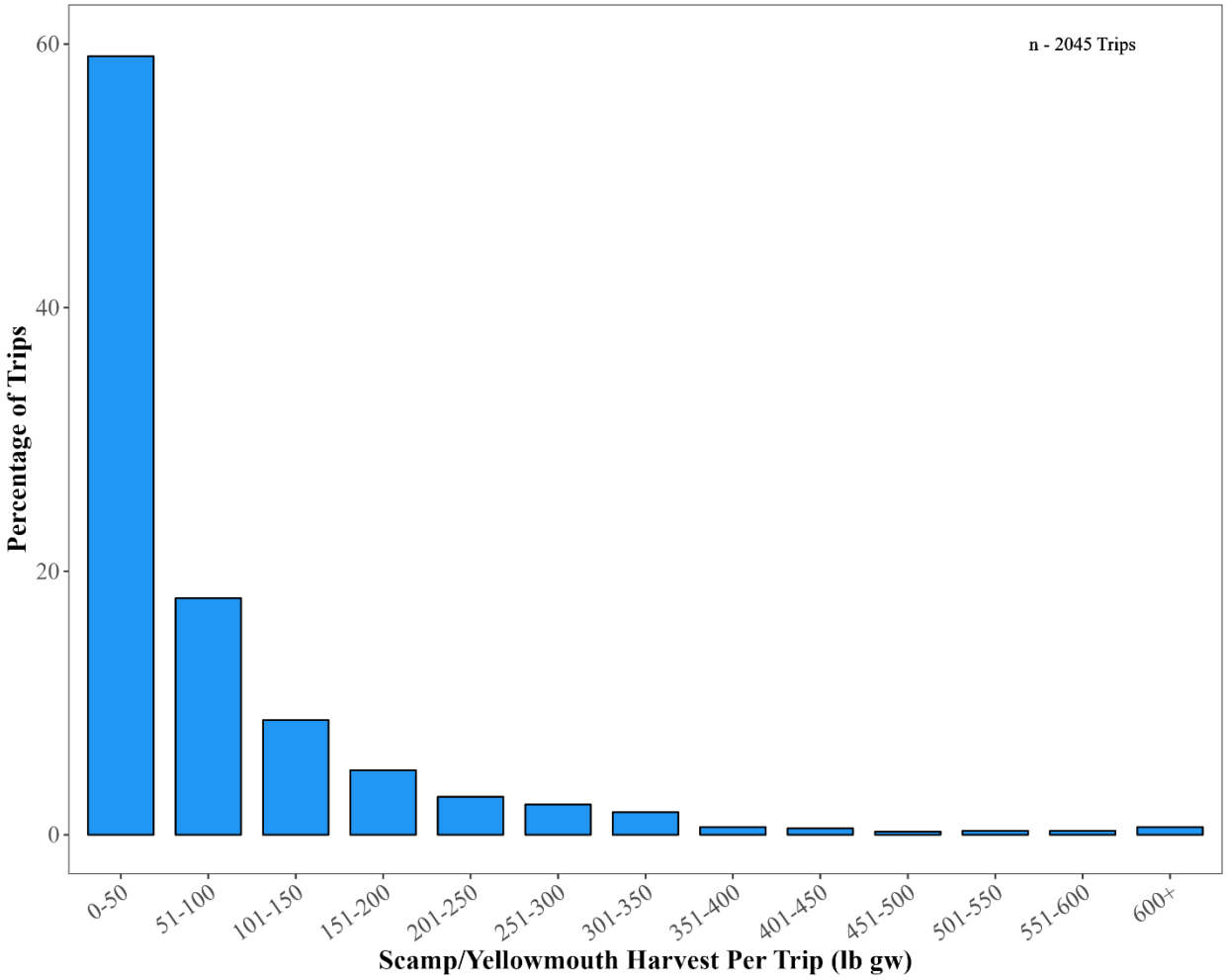

Figure 4.7.1.2. Distribution of scamp and yellowmouth grouper trip harvest between 2020 and 2022, all years combined, in 50 lbs gw bins.

Table 4.7.1.1. Percent reduction associated with each trip limit alternative associated with the commercial sector.

Alternative	% Reduction
Alternative 1: (No Action)	0.00%
Alternative 2: Establish a 200 lbs gw (236 lbs ww) trip limit	-16.52%
Preferred Alternative 3: Establish a 300 lbs gw (354 lbs ww) trip limit	**-7.96%**
Alternative 4: Establish a 400 lbs gw (472 lbs ww) trip limit	-4.35%
Alternative 5: Establish a 500 lbs gw (590 lbs ww) trip limit	-2.46%

The smaller the commercial trip limit, the longer it would take to reach the commercial ACL, unless more commercial trips were taken in the same day. Commercial trip limits would potentially reduce harvest levels during the portion of the fishing season when the largest proportion of stock landings occur. The commercial ACL is projected to be met by all the alternatives proposed under this action, with **Alternative 2** allowing the highest number of fishing days followed by **Preferred Alternative 3**, **Alternative 4**, and **Alternative 5** (Table

4.7.1.2). Biological effects would be expected to be higher under **Alternative 2**, followed by **Preferred Alternative 3**, **Alternative 4**, and **Alternative 5**. The commercial sector would have an in-season closure as its AM in addition to a post-season AM of reducing the commercial ACL in the following year by the ACL amount exceeded in the current year (**Preferred Alternative 3** in Action 8).

Table 4.7.1.2. The approximate date the commercial ACL is estimated to be met under each commercial trip limit alternative (Action 7). These projections assume the preferred alternatives from Actions 4 (total ACL) and 5 (allocations).

Year	Commercial ACL lbs ww	Commercial ACL lbs gw	Alternative 1 (No Action): No Commercial Trip Limit	Alternative 2: 200 lbs gw	**Preferred Alternative 3: 300 lbs gw**	Alternative 4: 400 lbs gw	Alternative 5: 500 lbs gw
2025	43,772	37,095	21-Aug	28-Sep	**3-Sep**	27-Aug	25-Aug
2026	46,147	39,108	29-Aug	20-Oct	**16-Sep**	6-Sep	2-Sep
2027	47,572	40,315	3-Sep	8-Nov	**24-Sep**	14-Sep	9-Sep
2028	48,997	41,523	10-Sep	9-Dec	**3-Oct**	22-Sep	17-Sep
2029	49,947	42,328	15-Sep	26-Dec	**11-Oct**	27-Sep	22-Sep

4.7.2 Economic Effects

Generally, commercial trip limits are not considered to be economically efficient because they require an increase in the number of trips and associated trip costs to land the same amount of fish. Given the ACL for scamp and yellowmouth grouper that restricts maximum harvest to sustainable levels, the alternative with the fewest number of trips that have to stop retaining the species because the trip limit has been reached would result in the least amount of direct negative economic effects on a trip level.

The commercial ACL is expected to be landed under all alternatives considered in Action 8. Thus, total landings and gross revenue from landings of scamp and yellowmouth grouper are similar across all of the alternatives and there are no quantified economic effects. Since scamp and yellowmouth grouper make up a relatively small portion of total revenue for commercial vessels that land the species and vessels could target other species, it is assumed that no trips would be canceled after the ACL has been met and there is a harvest closure for the rest of the season. However, decreasing trip limits would lead to decreased potential revenue on trips that land scamp and yellowmouth grouper, thereby, resulting in a decrease in economic benefits to commercial vessels participating in the fishery through potentially reduced net revenue. Lower trip limits would lead to lower levels of revenue over more trips, thus potentially decreasing net economic benefits through decreased net revenue. There are no quantitative estimates available for the potential change in net revenue, but the alternatives can be ranked according to their potential economic effects. In terms of potential net economic benefits, **Alternative 1 (No Action)** would provide the highest expected benefits followed by **Alternative 5**, **Alternative 4**, **Preferred Alternative 3**, and **Alternative 2**.

Estimates of net revenues or economic profit are not available for snapper grouper dealers. Therefore, it is not possible to 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, the directionality of economic benefits to dealers would be the same as stated above.

4.7.3 Social Effects

Commercial fishermen in the communities identified in Section 3.4 would likely be those affected by establishment of an aggregate commercial trip limit for scamp and yellowmouth grouper. However, it is likely that fishermen who have targeted scamp and yellowmouth grouper in recent years also target other species and would be able to adjust their businesses to adapt to regulatory changes. In general, a commercial trip limit may help slow the rate of harvest, lengthen a season, and prevent the commercial ACL from being exceeded, but trip limits that are too low may make fishing trips inefficient and too costly if fishing grounds are too far away. Additionally, if the trip limit is too low, the commercial ACL may not be met.

Alternative 2 proposes the lowest trip limit and would likely result in the largest reduction in landings, while **Alternative 5** proposes the highest trip limits and would likely result in the lowest reduction in landings when compared to **Alternative 1 (No Action)**. Given recent commercial landings of scamp and yellowmouth grouper, and assuming Action 4 – Preferred Alternative 2 and Action 5 – Alternative 2, all proposed alternatives would result in an early closure for the 2025 through 2029 fishing seasons. Under **Alternative 2** closures are predicted to occur as early as September 28th during the 2025 season. Under **Preferred Alternative 3**, a closure during the 2025 season is predicted to occur as early as September 3rd, followed by **Alternative 4** with a closure predicted to occur on August 27th, **Alternative 5** on August 25th, and **Alternative 1 (No Action)** on August 21st. Subsequent season lengths would slowly extend under all alternatives as the commercial ACL increases, but not to the extent that early season closures would not occur. While shorter seasons can result in negative social effects as described above, slowing the rate of harvest, and contributing to rebuilding goals for scamp and yellowmouth grouper would be expected to contribute to the sustainability of harvest and the health of the scamp and yellowmouth grouper stock and provide for long-term social benefits.

4.7.4 Administrative Effects

Currently, there is no commercial trip limit for scamp or yellowmouth grouper. Therefore, administrative effects would be expected to be higher under **Alternatives 2** through **5**, when compared with **Alternative 1 (No Action)**. Administrative burdens would include establishing new vessel limit regulations, communicating them to the public, and enforcement of the regulations including possible in-season closures of the commercial sector.

4.8 Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

4.8.1. Biological Effects

Alternatives*

1. (No Action). There are no commercial accountability measures for the Scamp and Yellowmouth Grouper Complex

2. If commercial landings for the Scamp and Yellowmouth Grouper complex reach the commercial ACL the commercial sector will close.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the commercial ACL, the total ACL is exceeded, and the Scamp and Yellowmouth Grouper complex is overfished, the commercial ACL for the following fishing year will be reduced.

3. If commercial landings for the Scamp and Yellowmouth Grouper complex reach the commercial ACL, the commercial sector will close.

If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the ACL, regardless of stock status or whether the total annual catch limit was exceeded the commercial ACL for the following fishing year will be reduced by the amount of the overage in the prior fishing year.

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

Biological effects would be expected to be higher under **Preferred Alternative 3**, followed by **Alternative 2**, and **Alternative 1 (No Action)**. **Preferred Alternative 3** is the most conservative of the alternatives considered for the commercial sector, with an in-season AM (closure), and a post-season AM (payback provision of the commercial ACL), regardless of the stock status and the total ACL being exceeded. **Alternative 2** is more liberal because it has the same in-season and post-season AMs, but the stock status would have to be overfished and the total ACL would have to be met, leaving the stock a bit more vulnerable. **Alternative 1 (No Action)** would not establish commercial AMs and would be expected to have negative biological effects on the stock as it would not prevent the commercial ACL from being exceeded, would not help rebuild the Scamp and Yellowmouth Grouper complex stock and could lead to overfishing. **Alternative 1 (No Action)** would also not be in compliance with the Magnuson-Stevens Act, which requires AMs for all stocks and stock complexes.

4.8.2 Economic Effects

Commercial AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest when the sector ACL has been met or exceeded, 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 foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

AMs are required under the Magnuson-Stevens Act; thus, **Alternative 1 (No Action)** is not a viable alternative and cannot be selected as a preferred alternative. **Alternative 2** and **Preferred Alternative 3** would limit harvest to the 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.

Alternative 2 and **Preferred Alternative 3** would also implement a reduction in the sector ACL the following fishing year if the sector ACL was exceeded. This would reduce overall harvest the following year and the associated economic benefits from the harvest. Under **Alternative 2**, this post-season AM would only apply if the total ACL were exceeded and the Scamp and Yellowmouth Grouper complex was overfished, while the post-season AM would apply regardless of the total ACL being exceeded or stock status under **Preferred Alternative 3**. Thus, there is a higher threshold for the post season AM being triggered under **Alternative 2** than under **Preferred Alternative 3**. As such, the potential negative economic effects associated with the post-season AM are less likely to occur under **Alternative 2** than **Preferred Alternative 3.**

Alternative 1 (No Action) would not implement AMs, thus, would have the lowest potential severity of reduced economic benefits in the short-term. However, **Alternative 1 (No Action)** is not a viable alternative and there would be long-term negative economic effects. Of the viable alternatives, **Alternative 2** would have the lowest likelihood of being triggered and a lower potential severity of reduced economic benefits compared to **Preferred Alternative 3**.

4.8.3 Social Effects

AMs can have 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. Some of those effects are similar to other thresholds being met and may involve switching to other species or discontinuing fishing altogether. Those restrictions usually translate into reduced opportunity for harvest, which in turn can change fishing behaviors. Those behaviors can increase pressure on other stocks or amplify conflict. While these negative effects are usually short term, they may at times induce other indirect effects that can have a lasting effect on a community.

Alternative 1 (No Action) would not establish accountability measures for scamp and yellowmouth grouper and would be expected to have long-term negative social effects on commercial fishing communities because it would not help rebuild the Scamp and Yellowmouth Grouper complex stock and could lead to overfishing.

Alternative 2 would establish an in-season closure and a payback provision for an overage of the sector ACL and total ACL that would reduce the sector ACL by the amount of the overage if scamp and yellowmouth grouper are overfished. Inconsistent closure dates may make it challenging for commercial businesses to plan their fishing activities. Overall, longer seasons result in increased fishing opportunities for the commercial sector and increased revenue opportunities. Reducing the season length is anticipated to result in direct negative social effects associated with loss of access to the resource.

Preferred Alternative 3 would establish an in-season closure and a payback provision for an overage of the commercial sector ACL alone that would reduce the sector ACL by the amount of the overage for the Scamp and Yellowmouth Grouper complex regardless of its stock status. This alternative is the most stringent of the AMs being considered; thus, it would likely result in the greatest potential for short-term negative economic effects from the AM being triggered but long-term economic benefits resulting from improved stock conditions due to limiting harvest to sustainable levels.

4.8.4 Administrative Effects

Administrative effects would be expected to be higher under **Preferred Alternative 3**, **Alternative 2**, and **Alternative 1 (No Action)**. As explained in the biological effects (Section 4.8.1), the possibility of administrative burdens due to an in-season closure of the commercial sector are higher under **Preferred Alternative 3** when compared with **Alternative 2**. **Alternative 1 (No Action)** is not a viable alternative and administrative burdens related to future management actions including possible interim or emergency measures to protect the stock could be realized.

4.9 Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

4.9.1. Biological Effects

Alternatives*

1. (No Action). There are no recreational accountability measures for the Scamp and Yellowmouth Grouper complex.

2. Recreational in-season closure if recreational landings reach the recreational ACL and a post-season season length reduction if the total ACL is exceeded, the recreational ACL being exceeded, and the stock status is overfished.

3. There is a recreational in-season closure if recreational landings reach the recreational ACL and a post-season season length reduction triggered only by the recreational landings exceeding the recreational ACL.

4. There is a recreational in-season closure if recreational landings reach the recreational ACL and a post-season ACL reduction triggered only by the recreational landings exceeding the recreational ACL.

5. There is no recreational in-season accountability measure, if recreational landings exceed the recreational ACL a post-season season length reduction is triggered only by the recreational landings exceeding the recreational ACL, regardless of stock status.

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

Biological effects would be expected to be higher under **Alternative 4**, followed by **Alternative 3**, **Alternative 2**, **Preferred Alternative 5**, and **Alternative 1 (No Action)**. **Alternative 4** is the most conservative of the alternatives considered for the recreational sector, with an in-season AM (closure), and a post-season AM (payback provision of the recreational ACL), regardless of the stock status and the total ACL being exceeded. **Alternative 3** and **Alternative 4** are similar in their effects. However, an ACL payback under **Alternative 3** restricts effort in the following season if the recreational ACL is exceeded whereas the season reduction under **Alternative 4** only constrains effort to a shorter window of time. Biologically, there is more benefit to the AM that restricts effort. **Alternative 2** is more liberal because it has the same in-season and post-season AMs as **Alternative 3**, but, the stock status would have to be overfished and the total ACL would have to be met, leaving the stock a bit more vulnerable. **Preferred Alternative 5** is the most liberal alternative after **Alternative 1 (No Action)**, with no in-season AM, allowing the recreational ACL to be exceeded in the current year, and a shortening of the length of the recreational season that is less conservative compared with a payback provision of the recreational ACL. **Alternative 1 (No Action)** would not establish recreational AM, and would be expected to have negative biological effects on the stock as it would not prevent the recreational ACL from being exceeded, would not help rebuild the Scamp and Yellowmouth Grouper complex stock and could lead to overfishing. **Alternative 1 (No Action)** would also not be in compliance with the Magnuson-Stevens Act, which requires AMs for all stocks and stock complexes. Recreational ACLs are difficult to monitor in-season due to the timing and availability of the recreational data. Therefore, the recreational sector may have to be reopened if some of the recreational ACL was not harvested. However, proactive management would yield better biological benefits with an in-season closure, especially for an overfished stock and non-effective monitoring and reporting requirements for the recreational sector when compared with the commercial sector.

4.9.2 Economic Effects

Recreational AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest and fishing activity when harvest has met or exceeded the sector ACL; 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 foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

AMs are required under the Magnuson-Stevens Act; thus, **Alternative 1 (No Action)** is not a viable alternative and cannot be selected as a preferred alternative. **Alternatives 2**, **3**, and **4** would limit harvest to the sector ACL through an in-season closure once the sector ACL is met. An in-season closure would limit short-term economic benefits to those that may be derived by harvesting the sector ACL but would also provide long-term economic benefits by helping maintain sustained harvest and fishing activity as well as the foregone need for more restrictive management measures that may be needed to rebuild a depleted stock.

Alternative 2 and **Alternative 3** would also implement a reduction in the following fishing season if the sector ACL was exceeded. Should a shortening of the following season occur, there would be a reduction in economic benefits in that year due to fewer available fishing days for private anglers and for-hire vessels if there was an overall reduction in fishing effort. Assuming the number of trips targeting scamp and yellowmouth grouper remain relatively low, such a reduction in economic benefits for the recreational sector would likely be minimal since overall effort would be nearly unchanged and harvest of the species would likely remain at or near the sector ACL. Under **Alternative 2**, this post-season AM would only apply if the total ACL were exceeded and the Scamp and Yellowmouth Grouper complex is overfished, while the post-season AM would apply regardless of the total ACL or stock status under **Alternative 3**. Thus, there is a higher threshold for the post season AM to be triggered under **Alternative 2** than under **Alternative 3**. As such, the potential negative economic effects associated with the post-season accountability measures are less likely to occur under **Alternative 2** than **Alternative 3.**

Alternative 4 would also implement a reduction in the ACL the following fish year if the sector ACL was exceeded. This would reduce overall harvest the following year and the associated economic benefits from the harvest. If triggered, this would likely result in the greatest decrease in net economic benefits of the alternatives considered.

Preferred Alternative 5 would not establish an in-season harvest closure; thus harvest could continue indefinitely in the first year even if the sector ACL were fully harvested or exceeded. Lack of an in-season harvest closure would potentially allow an increase in short-term economic benefits from those that may be derived by harvesting beyond the ACL but this alternative would also create potential long-term economic costs by not maintaining sustainable harvest, which could lead to more restrictive management measures if overfishing occurs and restrictive management measures go into place. The extent to which this could occur would be mitigated by the implementation of a recreational season in Action 6. **Preferred Alternative 5** would implement a reduction in the following fishing season if the sector ACL was exceeded. Should a shortening of the following season occur, there would be a reduction in economic benefits in that

year due to fewer available fishing days for private anglers and for-hire vessels if there was an overall reduction in fishing effort. Assuming the number of trips targeting scamp and yellowmouth grouper remain relatively low, such a reduction in economic benefits for the recreational sector would be minimal since overall effort would likely be similar and harvest of the species would remain at or near the sector ACL.

Alternative 1 (No Action) would have the lowest likelihood of being triggered and lowest potential severity of reduced economic benefits, however this is not a viable alternative. This would be followed in terms of likelihood of being triggered by **Preferred Alternative 5**, **Alternative 2**, **Alternative 3**, and **Alternative 4**.

4.9.3 Social Effects

AMs can have 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. Some of those effects are similar to other thresholds being met and may involve switching to other species or discontinuing fishing altogether. Those restrictions usually translate into reduced opportunity for harvest, which in turn can change fishing behaviors. Those behaviors can increase pressure on other stocks or amplify conflict. While these negative effects are usually short term, they may at times induce other indirect effects that can have a lasting effect on a community.

Alternative 1 (No Action) would not establish AMs for the Scamp and Yellowmouth Grouper complex and would be expected to have long-term negative social effects on fishing communities because it would not help rebuild the Scamp and Yellowmouth Grouper complex stock and could lead to overfishing.

Alternative 2 would establish an in-season AM for the Scamp and Yellowmouth Grouper complex and the associated negative social effects associated with loss of access to the resource during a closure. Additionally, **Alternative 2** includes a post-season reduction in the season length following an overage of the total (commercial and recreational) ACL, which is anticipated to result in direct negative social effects associated with loss of access to the resource, as described above.

Alternative 3 would establish an in-season AM for the Scamp and Yellowmouth Grouper complex and the associated negative social effects associated with loss of access to the resource during a closure. Additionally, **Alternative 3** includes a post-season reduction in the season length following an overage of the recreational ACL, making it more restrictive than **Alternative 2**, which is anticipated to result in more substantial direct negative social effects associated with loss of access to the resource, as described above.

Alternative 4 would establish an in-season AM for the Scamp and Yellowmouth Grouper complex and the associated negative social effects associated with loss of access to the resource during a closure. Additionally, **Alternative 4** would establish a post-season AM with an ACL payback if recreational ACL was exceeded. Inconsistent closure dates may make it challenging for for-hire businesses to plan their fishing activities. Overall, longer seasons result in increased

fishing opportunities for the recreational sector and increased revenue opportunities for the for-hire sector. Reducing the season length is anticipated to result in direct negative social effects associated with loss of access to the resource.

Preferred Alternative 5 would not establish an in-season AM for the Scamp and Yellowmouth Grouper complex. Not establishing an in-season AM would prevent the direct and indirect negative social effects associated with restricted harvest during a current season. Additionally, **Preferred Alternative 5** establishes a post-season reduction of season length if the recreational ACL is exceeded. Longer seasons result in increased fishing opportunities for the recreational sector and increased revenue opportunities for the for-hire sector. Reducing the season length is anticipated to result in direct negative social effects associated with loss of access to the resource.

4.9.4 Administrative Effects

Administrative effects would be expected to be higher under **Alternative 4**, followed by **Alternative 3**, **Alternative 2**, **Preferred Alternative 5**, and **Alternative 1 (No Action)**. The recreational ACLs are difficult to monitor in-season due to the timing and availability of the recreational landings. Administrative burdens would be related to in-season closures under **Alternatives 2** through **4**, and possibility of re-opening of the recreational sector if the recreational ACLs are not utilized, and post-season AMs under **Preferred Alternative 5**. Administrative burdens would be related to notifications to the public and enforcement. **Alternative 1 (No Action)** is not a viable alternative and administrative burdens related to future management actions including possible interim or emergency measures to protect the stock could be realized.

4.10 Action 10. Revise the total annual catch limit, and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

4.10.1. Biological Effects

Biological benefits would not change under **Preferred Alternative 2** when compared with **Alternative 1 (No Action)**, as the difference in the total ACL between these alternatives is only 4,039 lbs ww (Table 2.10.1). However, **Alternative 1 (No Action)** would not modify the total ACL for the OSASWG complex. This alternative is not viable as the ACL established in Action 4 includes yellowmouth grouper, thus, retaining the portion of the OSASWG allocated to yellowmouth grouper (Section 2.10.1, Figure 4.10.1.1) would duplicate the catch level.

Alternatives*

1. (No Action). The OSASWG ABC = 104,190 lbs ww. The ACL =ABC. The commercial ACL is 55,542 lbs ww and the recreational ACL is 48,648 lbs ww.

2. The OSASWG ABC = 104,190 lbs ww. The total ACL = 100,151 lbs ww. The commercial ACL is 53,380 lbs ww and the recreational ACL is 46,771 lbs ww.

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

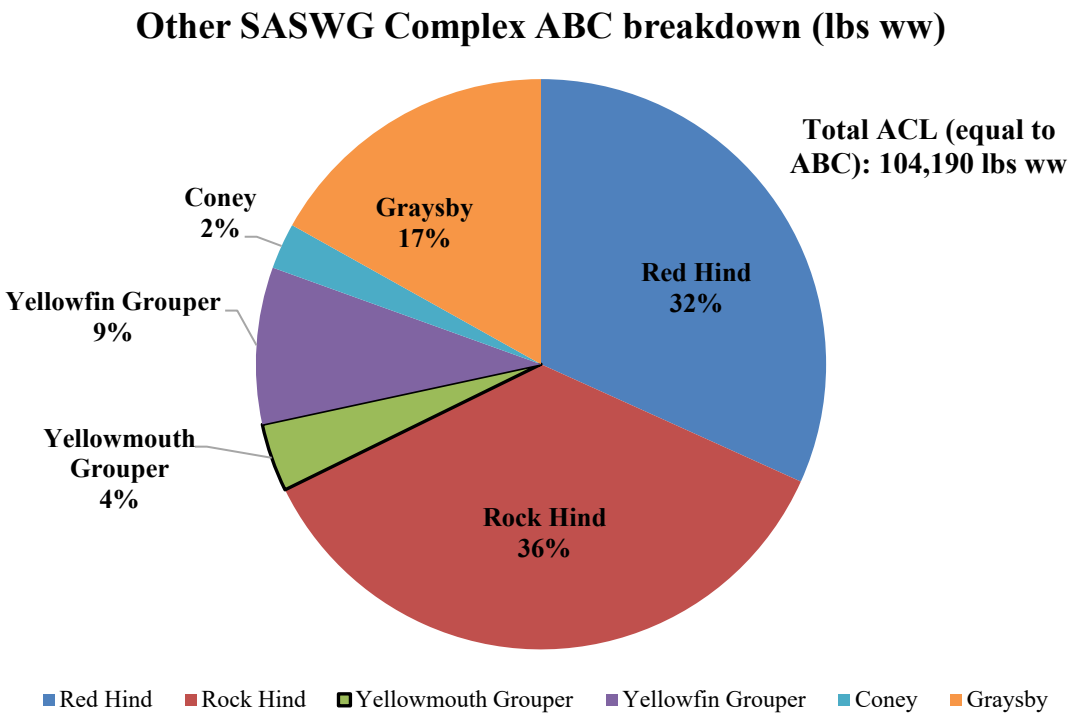

Figure 4.10.1.1. The ABC/ACL breakdown of the Other South Atlantic Shallow Water Grouper complex. Percentages are portions of the total ACL and do not reflect landings.

Preferred Alternative 2 would modify the OSASWG complex total ACL and retain the catch level inclusive of recreational landings estimates from MRIP-CHTS (Table 2.10.2). The current percentage of the sector allocations for the remaining five species in the complex would not be modified in this amendment. Commercial landings of the OSASWG complex have been below 50% of the current total ACL from 2012 to 2023, averaging 29.9% of the total ACL harvested during that time period. Recreational ACL usage exceeded 50% of the current recreational ACL twice from 2012 to 2023 (2013 and 2016), averaging 32.6% of the current recreational ACL harvested during that time period (Table 4.10.1.1). Because the proposed total ACL is only 4,039 lbs ww lower than the current total ACL and this poundage is accounted for in the total ACL under Action 4, the proposed sector ACLs are not expected to be met.

Table 4.10.1.1. The commercial and recreational ACL usage for the OSASWG complex from 2012 to 2023. For landings in lbs ww, see Table 3.2.1.

Commercial		Recreational	
Year	**ACL Usage**	**Year**	**ACL Usage**
2012	36.5%	2012	40.5%
2013	38.1%	2013	57.8%
2014	36.0%	2014	25.6%
2015	24.1%	2015	42.3%
2016	20.2%	2016	58.0%
2017	23.5%	2017	13.4%
2018	24.3%	2018	36.0%
2019	32.7%	2019	21.0%
2020	30.3%	2020	27.0%
2021	32.5%	2021	26.0%
2022	31.7%	2022	21.0%
2023*	29.0%	2023*	22.0%
Average	29.9%	**Average**	32.6%

*2023 Landings are preliminary as of January 5th 2024.

4.10.2 Economic Effects

Action 11 would not directly or indirectly alter the current harvest or use of the remaining species in the OSASWG complex since yellowmouth grouper is being removed and added to a new complex. Therefore, **Alternative 1 (No Action)** and **Preferred Alternative 2** would not be expected to have any direct or indirect economic effects.

4.10.3 Social Effects

Social effects would not change under **Preferred Alternative 2** when compared with **Alternative 1 (No Action)**, as the difference in the total ACL between these alternatives under 5,000 pounds and is intended to represent yellowmouth grouper, which would be included in the Scamp and Yellowmouth Grouper complex. Modifying the OSASWG complex should not affect fishing communities or the way the OSASWG complex or Scamp and Yellowmouth Grouper complex portion of the snapper grouper fishery is prosecuted.

4.10.4 Administrative Effects

Sector ACLs for these species are already being collected and monitored. Administrative effects would not be expected to vary between **Preferred Alternative 2** and **Alternative 1 (No Action)**.

Chapter 5. Council's Rationale for the Preferred Alternatives

5.1 Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new South Atlantic Scamp and Yellowmouth Grouper complex

5.1.1 Snapper Grouper Advisory Panel (AP) Comments and Recommendations

The South Atlantic Fishery Management Council's (Council) Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations regarding the reorganization of the Other South Atlantic Shallow Water Grouper (OSASWG) complex and the establishment of a new Scamp and Yellowmouth Grouper complex.

5.1.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations regarding the reorganization of the OSASWG complex and the establishment of a new Scamp and Yellowmouth Grouper complex.

5.1.3 Scientific and Statistical Committee (SSC) Comments and Recommendations

The Scientific and Statistical Committee (SSC) was convened in February 2024. The SSC had no comments or recommendations regarding the reorganization of the OSASWG complex and the establishment of a new Scamp and Yellowmouth Grouper complex.

5.1.4 Public Comments and Recommendations

Scoping meetings were held via webinar on July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 1. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 1.

5.1.5 Council's Rationale

The Council received the recommendations from the Southeast Data Assessment and Review (SEDAR) 68 operational assessment (OA) (2022), which assessed scamp and yellowmouth grouper as a single stock complex. Currently, catch levels for the species are separate and yellowmouth grouper is part of the OSASWG complex. SEDAR 68 OA (2022) noted that the reason for the species being combined within the assessment was the low level of yellowmouth grouper landings, the overlap of vessels that land each species, and misidentification issues between scamp and yellowmouth grouper. Catch level recommendations that resulted from SEDAR 68 OA (2022) include both scamp and yellowmouth grouper, which requires the Council create a complex for which to apply these catch levels. SEDAR 68 OA (2022) is

considered the best scientific information available (BSIA). Subsequently, the Council selected **Preferred Alternative 2**, which would establish a new complex for scamp and yellowmouth grouper. The Council determined that **Preferred Alternative 2** best meets the goals and objectives of the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP), as amended, while complying with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) and other applicable law.

5.2 Action 2. Establish the maximum sustainable yield, maximum fishing mortality threshold, minimum stock size threshold, and equilibrium optimum yield for the Scamp and Yellowmouth Grouper complex

5.2.1 Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex

5.2.1.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to the establishment of maximum sustainable yield (MSY).

5.2.1.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to the establishment of MSY.

5.2.1.3 SSC Comments and Recommendations

The SSC convened in January 2023 and reviewed SEDAR 68 OA (2022). The SSC recommended the following: the overfishing limit (OFL) should be based on the fishing mortality (F) rate at 40% of the spawning potential ratio (SPR) ($F_{40\%SPR}$), the rebuilding schedule should be based on long-term recruitment patterns, and near-term acceptable biological catch (ABC) should be determined using recent recruitment estimates. The SSC made no changes to these recommendations in any subsequent meetings.

5.2.1.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Sub-action 2a. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Sub-action 2a.

5.2.1.5 Council's Rationale

Because the new Scamp and Yellowmouth Grouper complex is being established through this amendment, stock determination criteria, including MSY, must also be established in accordance with the Magnuson-Stevens Act. In March 2023 the Council received a letter from the Southeast Fisheries Science Center (SEFSC) stating that best scientific information available (BSIA) recommends that a fishing mortality (F) level at 40% spawning potential ratio (SPR) ($F_{40\%SPR}$) is more likely than $F_{30\%SPR}$ to achieve a level of biomass that will produce the MSY. Accordingly, a decision to retain $F_{30\%SPR}$ as the F_{MSY} proxy would not be consistent with BSIA and would contribute to greater than a 50% chance of overfishing. The Council decided to select the preferred alternative (**Preferred Alternative 3**) that was consistent with the SEFSC's guidance.

The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the Scamp and Yellowmouth Grouper stock complex. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.2.2 Action 2b. Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex

5.2.2.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to the establishment of the maximum fishing mortality threshold (MFMT).

5.2.2.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to the establishment of MFMT.

5.2.2.3 SSC Comments and Recommendations

The SSC convened in January 2023 and reviewed SEDAR 68 OA (2022). The SSC recommended the following: the overfishing limit (OFL) should be based on the fishing mortality (F) rate at 40% of the spawning potential ratio (SPR) ($F_{40\%SPR}$), the rebuilding schedule should be based on long-term recruitment patterns, and near-term acceptable biological catch (ABC) should be determined using recent recruitment estimates. The SSC made no changes to these recommendations in any subsequent meetings.

5.2.2.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Sub-action 2b. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Sub-action 2b.

5.2.2.5 Council's Rationale

Because the Scamp and Yellowmouth Grouper complex is being established through this amendment, stock determination criteria, including MFMT, must also be established in accordance with the Magnuson-Stevens Act. The Council's suite of alternatives (with the exception of **Alternative 1 (No Action)**) offers options to set the MFMT equal to the MSY proxy alternatives provided in Sub-action 2a. Because the Council selected an MSY proxy at $F_{40\%SPR}$ in Sub-action 2a, to follow the recommendations from the SEFSC and BSIA, the Council selected the alternative that set the MFMT equal to the MSY at $F_{40\%SPR}$ (**Preferred Alternative 3**).

The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the scamp and yellowmouth grouper stock complex. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while

complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.2.3 Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex

5.2.3.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to the establishment of the minimum stock size threshold (MSST).

5.2.3.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to the establishment of MSST.

5.2.3.3 SSC Comments and Recommendations

During the January 2023 meeting, the SSC reviewed the results of SEDAR 68 OA (2022) including the MSST values and supported the overfished status.

5.2.3.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Sub-action 2c. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Sub-action 2c.

5.2.3.5 Council's Rationale

Because the Scamp and Yellowmouth Grouper complex is being established through this amendment, stock determination criteria, including MSST, must also be established in accordance with the Magnuson-Stevens Act. SEDAR 68 OA (2022) recommended a MSST definition of 75% of $SSB_{F40\%SPR.}$ Setting MSST at 75% of $SSB_{F40\%SPR}$ is consistent with how the Council has set MSST for other snapper grouper species and is consistent with BSIA.

The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the scamp and yellowmouth grouper stock complex. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.2.4 Action 2d. Establish the optimum yield for the Scamp and Yellowmouth Grouper complex

5.2.4.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to the establishment of the optimum yield (OY).

5.2.4.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to the establishment of OY.

5.2.4.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations pertaining to the establishment of OY.

5.2.4.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Sub-action 2d. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Sub-action 2d.

5.2.4.5 Council's Rationale

Because the Scamp and Yellowmouth Grouper complex is being established through this amendment, stock determination criteria, including OY, must also be established in accordance with the Magnuson-Stevens Act. When selecting the preferred OY, the Council acknowledged the uncertainty in landings estimates for scamp and yellowmouth grouper but noted that scientific uncertainty had been appropriately accounted for and the 5% buffer between OY and the MSY would account for social, economic, and biological factors and therefore selected **Preferred Alternative 4**. The Council felt that this OY value was sufficient to account for management uncertainty while helping to increase social and economic benefits for fishermen.

The Council determined that **Preferred Alternative 4** would best meet the purpose of rebuilding the scamp and yellowmouth grouper stock complex. **Preferred Alternative 4** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.3 Action 3. Establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex

5.3.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations regarding the establishment of a rebuilding timeframe.

5.3.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations regarding the establishment of a rebuilding timeframe.

5.3.3 SSC Comments and Recommendations

The SSC met in July of 2023 where they discussed different recruitment scenarios and their effect on the rebuilding probability. Ultimately the SSC recommended that the minimum time to rebuild (T_{MIN}) and the maximum time to rebuild (T_{MAX}) be based on long-term average recruitment. At their February 2024 meeting, the SSC had no comments or recommendations regarding the establishment of a rebuilding timeframe.

5.3.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 3. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 3.

5.3.5 Council's Rationale

The National Marine Fisheries Service notified the Council that the scamp and yellowmouth grouper in the South Atlantic is overfished in September 2023. In this plan amendment, the Council is addressing the stock's overfished determination by establishing a Scamp and Yellowmouth Grouper complex and a rebuilding plan for that complex. The Council selected the longest allowable timeframe for rebuilding as mandated by the Magnuson-Stevens Act, given that the SSC's recommended ABC levels result in a higher than 50% probability of rebuilding within the timeframe. The Council determined that the preferred timeframe for rebuilding considers the status and biology of scamp and yellowmouth grouper along with the needs of the fishing communities. The Council intends for this rebuilding time period to help reduce the severity of the required reduction in harvest and lead to fewer short-term negative social and economic impacts on fishing communities.

The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the Scamp and Yellowmouth Grouper stock complex while minimizing adverse social and economic effects, to the extent practicable. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.4 Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex

5.4.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to establishing the ABC and total ACL.

5.4.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to establishing the ABC and total ACL.

5.4.3 SSC Comments and Recommendations

The SSC met in July of 2023 where they discussed different recruitment scenarios as a basis for the ABC. Ultimately the SSC recommended that the ABC be based on short-term average recruitment. At their February 2024 meeting, the SSC had no comments or recommendations pertaining to establishing the ABC and total ACL.

5.4.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 4. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 4.

5.4.5 Council's Rationale

An ACL cannot exceed the ABC recommended by the Council's SSC. The ACL may be set annually or on a multi-year basis. ACLs, in coordination with accountability measures (AM), must prevent overfishing. The Magnuson-Stevens Act National Standard 1 Guidelines specify that Councils can choose to account for management uncertainty by setting the ACL below the ABC, but states that ACLs may be set very close to or equal to the ABC.

The Council has decided to set the total ACL equal to the ABC for the Scamp and Yellowmouth Grouper complex. This level of removals is below the MSY and the overfishing limit, and provides greater assurance that overfishing is prevented, the long-term average biomass is near or above the biomass that would produce the maximum sustainable yield (B_{MSY}), and the overfished stock complex of scamp and yellowmouth grouper is rebuilt within the Council's chosen rebuilding timeframe.

The Council concluded that **Preferred Alternative 2** best meets the purpose to establish the ABC and total ACL the Scamp and Yellowmouth Grouper complex based on the results of the most recent stock assessment. The preferred alternative also best meets the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.5 Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

5.5.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to establishing sector allocations and sector ACLs.

5.5.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to establishing sector allocations and sector ACLs.

5.5.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations pertaining to establishing sector allocations and sector ACLs.

5.5.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 5. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 5.

5.5.5 Council's Rationale

The Council is establishing sector allocations for the new complex created through Action 1. The Council selected **Preferred Alternative 2**, which would employ the Split Reduction Method of allocating between the sectors based on landings from 2018-2022. When compared to scamp landings from 2018 through 2022 (Table D.1.2.1), a reduction in harvest is needed to constrain harvest to the total ACL proposed in Action 4 (Table D.1.2.2). The Council determined that the under **Preferred Alternative 2** more fairly deals with the initial reduction in landings that results from the updated catch levels and reduces the proportion of each sector's allowable catch based on recent landings so the effect on each sector is more equitable. Similarly, the Council noted that **Preferred Alternative 2** would strike a balance between the needs of both sectors and increase each sector's allowable catch proportionately on a poundage basis throughout the rebuilding timeframe. The Council determined that this alternative allocates both the overfished stock status restrictions and recovery benefits fairly and equitably among both sectors that target scamp and yellowmouth grouper. Thus, this allocation method is considered fair and equitable to fishery participants in both the recreational and commercial sectors and would be carried out in such a manner that no particular individual, corporation, or other entity would acquire excessive shares. In addition, this allocation method is also reasonably calculated to promote conservation, since it achieves OY while maintaining harvest within the boundaries of a total ACL that is based upon an ABC recommendation that would help to rebuild the stock, incorporating the best scientific information available.

The Council concluded **Preferred Alternative 2** best meets the purpose and need, the objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.6 Action 6. Modify the recreational bag limit for scamp and yellowmouth grouper

5.61. Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. At the March 2024 meeting the AP recommended that if a vessel limit was considered (see Appendix F for actions and alternatives removed from consideration), to add an alternative for recreational for-hire vessels that are federally inspected and permitted to carry more than six passengers, to have an aggregate scamp and yellowmouth grouper vessel limit of 1-4 fish for every six passengers on board, not to exceed a maximum number of fish per vessel per trip, ranging from 8-16 fish, excluding captain and crew. Some AP members noted that 1 fish (scamp or yellowmouth grouper) per day (Action 6, **Alternative 3**) could also be considered. The AP preferred relying on a bag limit to constrain harvest versus a vessel limit or season reduction.

5.6.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to the modification of the recreational bag limit.

5.6.3 SSC Comments and Recommendations

The SSC was convened in February 2024. The SSC had no comments or recommendations pertaining to the modification of the recreational bag limit.

5.6.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Sub-action 7a. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Sub-action 7a.

5.6.5 Council's Rationale

Given the reduction in harvest needed to rebuild the Scamp and Yellowmouth Grouper stock complex, the Council is considering reducing the current bag limit, to allow recreational retention while helping to constrain harvest to the reduced recreational ACL. The Council considered alternatives with aggregate bag limits since the ACL for the complex includes both species. Projections, assuming the preferred alternatives for Actions 1 – 6, predict a recreational closure each year from 2025 through 2029 if the bag limit remains at 3 scamp and 3 yellowmouth grouper within the grouper and tilefish combined aggregate. Because of the delay in obtaining recreational landings estimates after each 2-month wave the Council had concerns about recreational ACL overages. While recreational AMs are in place, ACL overages and discards after a season closure may hinder the stock's rebuilding progress. Under **Alternative 2**, assuming the preferred alternatives for Actions 1-6, the ACL is expected to be met in 2025; whereas, under **Preferred Alternative 3** and the preferred alternatives for Actions 1-6 there are no expected closures in any years. Based on these projections and the Snapper Grouper APs feedback, the Council selected **Preferred Alternative 3**. The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the scamp and yellowmouth grouper stock and achieving OY, while minimizing adverse social and economic effects to the

extent practicable. **Preferred Alternative 3** best meet the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.7 Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

5.7.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. At the March 2024 meeting the AP noted that the 300-pound (lbs) gutted weight (gw) trip limit may have a negative effect on vessels that take 3 to 7-day trips. The AP also had concerns about whether a 300 lbs gw trip limit would be viable given the rising price of fuel, and whether it would be better for there to be a reduced commercial season instead of a trip limit to constrain commercial landings.

5.7.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations regarding the establishment of a commercial trip limit.

5.7.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations regarding the establishment of a commercial trip limit.

5.7.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 8. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 8.

5.7.5 Council's Rationale

Council members acknowledged the importance of scamp and yellowmouth grouper to the seafood market. Commercial fishermen tend to prefer to maintain access to as many species as possible throughout the year. The Council decided that limiting the commercial harvest to 300 lbs gw per trip (**Preferred Alternative 3**), increases the likelihood of the scamp and yellowmouth grouper portion of the snapper grouper fishery to remain open and available to consumers for as long as possible while reducing harvest to ensure rebuilding is achieved.

The Council determined that **Preferred Alternative 3** would best meet the purpose of rebuilding the scamp and yellowmouth grouper stock and achieving OY, while minimizing adverse social and economic effects to the extent practicable. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.8 Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

5.8.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to establishing commercial accountability measures (AMs).

5.8.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to establishing commercial AMs.

5.8.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations regarding the establishment of a commercial AMs.

5.8.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 9. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 9.

5.8.5 Council's Rationale

The reductions in catch levels are expected to constrain harvest throughout the rebuilding plan, and in-season commercial closures are expected. To achieve rebuilding, the Council felt it was imperative that the commercial AMs be as effective as possible in preventing commercial landings from exceeding the commercial ACL. Retaining the current in-season closure would ensure that landings remain at or below the commercial ACL. The Council also discussed the merits of modifying the post-season AM for the commercial sector. Currently scamp (individually) and yellowmouth grouper (within the OSASWG complex) have a commercial post-season AM dependent of three triggers, all of which need to be met for the AM to go into effect. The Council has recently been modifying *recreational* post-season AMs to remove these three triggers, effectively making the AM easier to trigger, reliant only on landings exceeding the ACL. During the March 2024 meeting the Council discussed the need to be consistent between the sectors with regards to AMs, noting that while this AM may be triggered more easily, it provides more equity between the sectors and more long-term benefit to the stock.

The Council determined that **Preferred Alternative 3** would best meet the purpose of achieving rebuilding of the Scamp and Yellowmouth Grouper complex. **Preferred Alternative 3** best meets the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.9 Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

5.9.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to establishing recreational AMs.

5.9.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to establishing recreational AMs.

5.9.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations pertaining to establishing recreational accountability measures.

5.9.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31 and August, 1 2023. No comments were received pertaining to Action 10. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 10.

5.9.5 Council's Rationale

The reductions in catch levels are expected to constrain harvest throughout the rebuilding plan, however with the establishment of a 1 fish per person bag limit (Sub-action 7a), the ACL was not projected to be met. The Council felt that recreational landings estimates are not timely enough for in-season monitoring, and since projections do not predict the recreational ACL being met in-season, the Council felt comfortable selecting a preferred alternative that did not include an in-season closure. The post-season AM matches what the Council has been establishing for similar snapper grouper species, in which a season reduction is reliant on a single trigger: the recreational landings exceeding the recreational ACL. The Council felt that because this post-season AM is more likely to be triggered and not reliant on the total ACL being exceeded or an overfished stock status that it would be the most appropriate for the recreational sector and therefore have the greatest chance of contributing to rebuilding of the scamp and yellowmouth grouper stock complex. **Preferred Alternative 5** best meets the purpose and need of this amendment and the goals and objectives of the Snapper Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

5.10 Action 10. Revise the total annual catch limit, annual optimum yield, and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

5.10.1 Snapper Grouper AP Comments and Recommendations

The Council's Snapper Grouper AP met in April 2023, October 2023, and March 2024, and was given a briefing on the amendment at each meeting. The AP did not have any recommendations pertaining to revision of the OSASWG ACL and sector ACLs.

5.10.2 Law Enforcement AP Comments and Recommendations

The Law Enforcement AP convened in January 2024 and had no comments or recommendations pertaining to revision of the OSASWG ACL and sector ACLs.

5.10.3 SSC Comments and Recommendations

The SSC convened in February 2024. The SSC had no comments or recommendations pertaining to revision of the OSASWG ACL and sector ACLs.

5.10.4 Public Comments and Recommendations

Scoping meetings were held via webinar July 31, 2023, and August 1, 2023. No comments were received pertaining to Action 11. Public hearing meetings were held via webinar on August 13 and 14, 2024. No comments were received pertaining to Action 11.

5.10.5 Council's Rationale

Because the Council is establishing a new Scamp and Yellowmouth Grouper complex (Action 1) with a catch level that accounts for both species (Action 4), the OSASWG ACL must be modified as to not have multiple catch levels that include landings of yellowmouth grouper. The OSASWG ABC values are inclusive of Marine Recreational Information Program (MRIP)-Coastal Household Telephone Survey (CHTS) recreational landings estimates. In 2020, the Unassessed Stocks Workgroup developed an ABC recommendation for the OSASWG complex inclusive of MRIP-Fishing Effort Survey (FES) recreational estimates. The catch levels for each species were developed using both the 3rd highest and Only Reliable Catch Stock methods. The 3rd highest method is no longer considered BSIA; therefore, the catch levels under this action would remain in MRIP-CHTS units. The SSC previously recommended the OSASWG ABC be revised in an upcoming amendment addressing catch levels for unassessed snapper grouper species; however, the SSC would need to develop a new method for updating ABCs for all the unassessed species that incorporate MRIP-FES recreational estimates. This will likely be presented to the Council in 2025. The Council acknowledges that the statutory timeline required by the Magnuson-Stevens Act to establish a rebuilding plan for the Scamp and Yellowmouth Grouper complex does not allow for the development of an updated ABC for the OSASWG complex. Considering this, the Council decided that retaining the MRIP-CHTS based ABC, removing the yellowmouth grouper portion of the MRIP-CHTS based OSASWG ACL, and recalculating the MRIP-CHTS based sector ACLs proportional to their current values was the most appropriate method of temporarily updating the OSASWG catch levels until revised ABC recommendations are obtained. The Council determined that **Preferred Alternative 2** best meets the purpose and needs of this amendment and the goals and objectives of the Snapper

Grouper FMP, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable laws.

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, 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.[21] For the proposed actions found in Amendment 55 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 55), the cumulative effects analysis includes an analysis of data from 2018 through the present.

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

Fishery managers implemented the first significant regulations pertaining to snapper grouper species in 1983 through the Snapper Grouper FMP (SAFMC 1983). The complete history of management of the snapper grouper fishery can be found: https://safmc.net/fishery-management-plans/snapper-grouper/ and a history of management specific to scamp and yellowmouth grouper is listed in Section 1.7 of this document. Other past, present, and reasonably foreseeable actions occurring in the South Atlantic region can be found at https://safmc.net/fishery-management-plans/snapper-grouper/. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical and socio-economic environments.

Expected Impacts from Past, Present, and Future Actions

The purpose and need of Amendment 55 can be found in Section 1.4 of this document. Amendment 55 responds to the first stock assessment for South Atlantic scamp and yellowmouth grouper (SEDAR 68 2022). Actions and alternatives are described in detail in Chapter 2 of this document. The proposed actions would establish a new stock complex, and for the new stock complex, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures to conserve and rebuild the scamp and yellowmouth grouper stock. The proposed actions in Amendment 55 are not expected to result in significant cumulative adverse biological, social, or economic effects (see Chapter 4 and Appendix H [Fishery Impact Statement]). In recent years, participants in the snapper grouper fishery and associated businesses have experienced some negative economic and social effects due to changes in annual catch limits (ACL) and early closures during the fishing years. Factors such as distance to fishing grounds, weather, and water temperature could affect availability of species to the recreational fleets in different parts of the Council's jurisdiction.

When combined with the impacts of past, present, and future actions affecting the snapper grouper fishery, minor cumulative effects are likely to accrue. For example, there could be

[21] http://safmc.net/ecosystem-management/fishery-ecosystem-plan/

beneficial cumulative effects from the actions in this amendment, in addition to actions such as reducing overfishing of snapper grouper species, requiring descending devices, and reducing bycatch. Also, there may be cumulative social and economic effects by promoting access to the fishery which would improve recreational fishing opportunities and benefits to associated businesses and communities. However, the actions in Amendment 55 are not expected to result in significant cumulative adverse biological, social, or economic effects to the snapper grouper fishery when combined with the impacts of past, present, and future actions (see Chapter 4).

6.3 Consideration of Climate Change and Other Non-Fishery Related Issues

Climate Change

Global climate changes 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 climate change 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) provide background information on climate change, including indicators that 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 (IPCC) 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 climate change. 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 climate change 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 environment effects on recruitment (Craig et al. 2021). Climate change 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. However, according to Burton et al. 2023 scamp was determined to have an overall climate vulnerability rank of very high.

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 Amendment 55 would compound or exacerbate the ongoing effects of climate change on 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 effects of the alternatives on the human environment appear in Chapter 4 of this document. None of the effects of the actions in this amendment, in combination with past, present, and future actions have been determined to be significant. Although several other management actions, in addition to this 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 effects.

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 exclusive economic zone (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). The National Marine Fisheries Service 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 non-indigenous 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 Interdisciplinary Plan Team (IPT) Members

Name	Agency/Division	Title
Allie Iberle	SAFMC	Fishery Scientist/IPT Lead
Nikhil Mehta	SERO/SF	Fishery Scientist/IPT Lead
Kyle Shertzer	NMFS/SEFSC	Fishery Biologist
Scott Crosson	SERO/SF	Economist
Chip Collier	SAFMC	Deputy Director for Science
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Ed Glazier	SERO/SF	Social Scientist
Dominique Lazarre	SERO/SF	Data Analyst
John Hadley	SAFMC	Economist
Myra Brouwer	SAFMC	Deputy Director for Management
Jennifer Lee	SERO/PR	Fishery Biologist
David Records	SERO/SF	Economist
Scott Sandorf	SERO/SF	Technical Writer & Editor
Mike Schmidtke	SAFMC	Fishery Biologist
Shepherd Grimes	NOAA GC	General Counsel
Sarah Stephenson	SERO/SF	Fishery Biologist
Mike Travis	SERO/SF	Social Science Branch Chief
Matthew Walia	SERO/OLE	Compliance Liaison Analyst
Christina Wiegand	SAFMC	Social Scientist
Manny Antonaras	SERO/OLE	Criminal Investigator
David Dale	SERO/HC	EFH Specialist
Jashira Torres-Pabon	SERO/PR	Natural Resource Specialist
Kathleen Howington	SAFMC	Habitat and Ecosystem Scientist

NOAA=National Oceanic and Atmospheric Administration, NMFS = National Marine Fisheries Service, SERO = Southeast Regional Office, SF = Sustainable Fisheries Division, PR = Protected Resources Division, HC = Habitat Conservation Division, SEFSC=Southeast Fisheries Science Center, GC = General Counsel, SAFMC = South Atlantic Fishery Management Council Staff, OLE = Office of Law Enforcement.

Chapter 8. Agencies and Persons Consulted

Responsible Agencies
South Atlantic Fishery Management Council (Administrative Lead)
4055 Faber Place Drive, Suite 201
N. Charleston, South Carolina 29405
843-571-4366/ 866-SAFMC-10 (TEL)
843-769-4520 (FAX)
www.safmc.net

NMFS, Southeast Region
263 13th Avenue South
St. Petersburg, Florida 33701
727- 824-5301 (TEL)
727-824-5320 (FAX)

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

Chapter 9. References

Bacheler, N.M., and J. C. Ballenger. 2018. Decadal scale decline of scamp (Mycteroperca phenax) abundance along the southeast United States Atlantic coast. Fisheries Research. Volume 204, pp. 74–87. Available here.

Buck, K. M. 2018. Socio-economic profile of the snapper grouper commercial fishery in the South Atlantic region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

Bullock, L. H., and G. B. Smith. 1991. Seabasses (Pisces: Serranidae). Memoirs of the Hourglass Cruises 8:131–134.

Burton, M. L., J. C. Potts, and D. R. Carr. 2014. Age, growth, and mortality of yellowmouth grouper from the Southeastern United States. Marine and Coastal Fisheries. Volume 6, Number 1, pp. 33-42. Available here.

Burton, Michael L.;Muñoz, Roldan C.;Quinlan, John A.;Nelson, Mark W.;Bacheler, Nathan M.;Runde, Brendan J.;Binion-Rock, Samantha M.;Kellison, G. Todd;Smith, Joseph W.;Laney, R. Wilson;Sedberry, George R.;Morley, James W.;Poland, Steve;Brodie, Russel;Gentry, Lauren;Gore, Karla;Rock, Jason E.;Johnson, Matthew;Reichert, Marcel;Flowers, Jared;Collier, Chip. 2023. A Climate vulnerability assessment for fish and invertebrates in the United States South Atlantic large marine ecosystem. NOAA technical memorandum NMFS-SEFSC ; 768. DOI : https://doi.org/10.25923/f90h-1z90.

Carter, D.W. and C. Liese. 2012. The Economic Value of Catching and Keeping or Releasing Saltwater Sport Fish in the Southeast USA. North American Journal of Fisheries Management, 32:4, 613-625. http://dx.doi.org/10.1080/02755947.2012.675943.

Craig, J. K., G. T. Kellison, S. M. Binion-Rock, S. D. Regan, M. Karnauskas, S.-K. Lee, R. He, D. M. Allen, N. M. Bacheler, H. Blondin, J. A. Buckel, M. L. Burton, S. L. Cross, A. Freitag, S. H. Groves, C. A. Hayes, M. E. Kimball, J. W. Morley, R. C. Muñoz, G. D. Murray, J. J. Reimer, K. W. Shertzer, T. A. Shropshire, K. I. Siegfried, J. C. Taylor, and D. L. Volkov. 2021. Ecosystem Status Report for the U.S. South Atlantic Region. NOAA Technical Memorandum NMFS-SEFSC-753, 145 p. https://doi.org/10.25923/qmgr-pr03/.

Dodrill, J., and C. S. Manooch, III, and A. B. Manooch. 1993. Food and feeding behavior of adult snowy grouper, *Epinephelus niveatus* (Valenciennes) (Pisces: Serranidae), collected off the central North Carolina coast with ecological notes on major food groups. Brimleyana 19:101-135.

Free, C. M., J. T. Thorson, M. L. Pinsky, K. L. Oken, J. Wiedenmann, and O. P. Jensen. 2019. Impacts of historical warming on marine fisheries production. Science. 363: 979-983 pp. U.S.

Global Change Research Program 2018. Fourth National Climate Assessment. Volume II: Impacts, Risks, and Adaptation in the United States. https://nca2018.globalchange.gov/.

Gaspirini, J. J., and S. R. Floeter. 2001. The shore fishes of Trindade Island, western South Atlantic. Journal of Natural History 35:1639–1656.

Gilmore R. G. and R. S. Jones. 1992. Color variation and associated behavior in the epinepheline groupers, *Mycteroperca microlepis* (Goode and Bean), and *M. phenax* (Jordan and Swain). Bull. Mar. Sci. 51: 83–103.

Glasgow, D. M.(2017). Environmental Relationships And Predator-Prey Interactions Within The Snapper-Grouper Complex In The Southeastern U.S. Atlantic – Implications For Fisheries Management. (Doctoral dissertation). Retrieved from https://scholarcommons.sc.edu/etd/4458

Haab, T., R. Hicks, K. Schnier, and J. C. Whitehead. 2012. Angler heterogeneity and the species-specific demand for marine recreational fishing. Marine Resource Economics 27(3):229-251.

Harris, P. J., Wyanski, D. M., White, D. B., and Moore, J. L. 2002. Age, growth, and reproduction of scamp, *Mycteroperca phenax*, in the southwestern north Atlantic, 1979–1997. Bulletin of Marine Science, 70: 113–132.

Heemstra, P.C. and J.E. Randall, 1993. FAO Species Catalogue. Vol. 16. Groupers of the world (family Serranidae, subfamily Epinephelinae). An annotated and illustrated catalogue of the grouper, rockcod, hind, coral grouper and lyretail species known to date. Rome: FAO. FAO Fish. Synop. 125(16):382 p.

Holland, S. M., C. Oh, S. L. Larkin, and A. W. Hodges. 2012. The operations and economics of the for-hire fishing fleets of the South Atlantic states and the Atlantic coast of Florida. University of Florida. Available: https://fred.ifas.ufl.edu/pdf/Holland.pdf. (December 2018).

Hospital J., and K. Leong. 2021. Community participation in Hawai‘i fisheries. NOAA Technical Memorandum NMFS-PIFSC-119. 89 pp. Available here.

Intergovernmental Panel on Climate Change (IPCC). 2022. https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_Chapter03.pdf/.

Jacob, S., P. Weeks, B. Blount, and M. Jepson. 2013. Development and evaluation of social indicators of vulnerability and resiliency for fishing communities in the Gulf of Mexico. Marine Policy 37:86-95. Available here.

Jepson, M., and L. L. Colburn. 2013. Development of social indicators of fishing community vulnerability and resilience in the U.S. Southeast and Northeast Regions. U.S. Dept. of Commerce, NOAA Technical Memorandum NMFS-F/SPO-129, 64 p. Available here.

Kennedy, V. S., R. R. Twilley, J. A. Kleypas, J. H. Cowan, Jr., and S. R. Hare. 2002. Coastal and Marine Ecosystems & Global Climate Change: Potential Effects on U.S. Resources. Pew Center on Global Climate Change. 52 p.

Klaer, N. L., O'Boyle, R. N., Deroba, J. J., Wayte, S. E., Little, L. R., Alade, L. A., & Rago, P. J. (2015). How much evidence is required for acceptance of productivity regime shifts in fish stock assessments: are we letting managers off the hook?. *Fisheries Research*, *168*, 49-55.

Liese, C. 2023. Economics of the U.S. South Atlantic Snapper-Grouper Fishery - 2018. NOAA Technical Memorandum NMFS-SEFSC-774. 118 p. https://doi.org/10.25923/b4k8-1890.

Matheson, R.H. III, G.R. Huntsman and C.S. Manooch III. 1986. Age, growth, mortality, food and reproduction of the scamp, *Mycteroperca phenax*, collected off North Carolina and South Carolina. Bull. Mar. Sci. 38(2) :300-312.

Matter, V. M., and M. A. Nuttall. 2020. Recreational Survey data for Scamp and Yellowmouth Grouper in the South Atlantic. SEDAR68-DW-08. SEDAR, North Charleston, SC. 26 pp. Available here.

Needham, H., D. Brown, and L. Carter. 2012. Impacts and adaptation options in the Gulf coast. Report prepared for the Center for Climate and Energy Solutions. 38 pp. http://www.c2es.org/docUploads/gulf-coast-impacts-adaptation.pdf/.

NMFS. 2011. A Users Guide to the National and Coastal State I/O Model. 2011. www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf (accessed February 2016).

NMFS. 2021. The Marine Recreational Information Program: Survey design and statistical methods for estimation of recreational fisheries catch and effort. Prepared by K. J. Papacostas and J. Foster. Original December 2018, updates March 2021, September 2021. https://media.fisheries.noaa.gov/2021-09/MRIP-Survey-Design-and-Statistical-Methods-2021-09-15.pdf/.

NMFS. 2023. Fisheries Economics of the United States, 2020. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-236, 231 p.

Olsen, J. B. C. A. Kellogg. 2010. Microbial ecology of corals, sponges, and algae in mesophotic coal environments. FEMS Microbiology Ecology. Volume 73, Issue 1, pp. 17-30. Available here.

South Atlantic Fishery Management Council (SAFMC). 1983. Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407.

SAFMC. 1992. Amendment 8 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC. 2009a. Amendment 15B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC. 2009b. Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC. 2011a. Amendment 17A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2011b. Comprehensive ACL Amendment for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. (Amendment 25 to the Snapper Grouper FMP). South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2012. Regulatory Amendment 13 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2013. Regulatory Amendment 15 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2014. Amendment 29 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2016a. Amendment 34 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2016b. Amendment 36 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2018. Fishery Ecosystem Plan II of the South Atlantic Region. South Atlantic Fishery Management Council. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2019a. Vision Blueprint Regulatory Amendment 27 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2020. Regulatory Amendment 29 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Environmental Assessment, Regulatory Impact Review, and Regulatory Flexibility Analysis. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2023a. Amendment 53 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2023b. Comprehensive Acceptable Biological Catch Control Rule Amendment (Amendment 45 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region) with Environmental Assessment, Regulatory Flexibility Act Analysis, and Regulatory Impact Review. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2024a. Users Guide to Essential Fish Habitat Designations by the South Atlantic Fishery Management Council. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2024b. Grouper, scamp (Mycteroperca phenax). Available here.

Sazima, I. 2002. Juvenile snooks (Centropomidae) as mimics of mojarras (Gerreidae), with a review of aggressive mimicry in fishes. Environmental Biology of Fishes. Volume 65, pp. 37-45.

Southeast Data, Assessment and Review (SEDAR) 68. 2021. South Atlantic Scamp Assessment. SEDAR, North Charleston, SC. https://sedarweb.org/documents/sedar-68-atlantic-scamp-final-stock-assessment-report/.

SEDAR 68. 2022. South Atlantic Scamp Operational Assessment. SEDAR, North Charleston, SC. https://sedarweb.org/documents/sedar-68oa-south-atlantic-scamp-operational-assessment-final-stock-assessment-report/.

Smith, C. L. 1971. A revision of the American groupers: *Epinephelus* and allied genera. Bulletin of the American Museum of Natural History 146:67–242.

Smith, C. L. 1978. Serranidae. In W. Fischer, editor. FAO species identification sheets for fishery purposes: western central Atlantic (fishing area 31), volume 4. Food and Agriculture Organization of the United Nations, Rome.

Souza, Philip M., Jr. and Christopher Liese. 2019. Economics of the Federal For-Hire Fleet in the Southeast - 2017. NOAA Technical Memorandum NMFS-SEFSC-740, 42 p.

U.S. Global Change Research Program (USGCRP). 2018. Fourth National Climate Assessment. Volume II: Impacts, Risks, and Adaptation in the United States. https://nca2018.globalchange.gov/.

Appendix A. Other Applicable Laws

1.1 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. Amendment 55 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 55) 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 plan amendment will have a request for public comments, which complies with the APA, and upon publication of the final rule, unless the rule falls within an APA exception, there will be a 30-day wait period before the regulations are effective.

1.2 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. Amendment 55 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.

1.3 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 plan 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.

1.4 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.

1.5 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 five-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.

1.6 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.

1.7 Executive Order 13158: Marine Protected Areas (MPAs)

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.

1.8 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 13 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 USS 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.

1.9 Paperwork Reduction Act (PRA)

The purpose of the PRA is to minimize the burden on the public. The PRA is intended to ensure that the information collected under the proposed action is needed and is collected in an efficient manner (44 U.S.C. 3501 (1)). The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget (OMB). This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications. The PRA requires NMFS to obtain approval from the OMB before requesting most types of fishery information from the public. Actions in this document are not expected to affect PRA.

1.10 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 would affect small businesses.

1.11 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act to require that a 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

2.1 Introduction

The National Marine Fisheries Service (NMFS) requires a Regulatory Impact Review (RIR) for all regulatory actions that are of public interest to satisfy the obligations under Executive Order (E.O.) 12866, as amended. In conjunction with the analysis of direct and indirect effects in the "Environmental Consequences" section of this Amendment, the RIR: 1) provides a comprehensive review of the level and incidence of impacts associated with a regulatory action; 2) provides a review of the problems and policy objectives prompting the regulatory proposals and an evaluation of the major alternatives which could be used to solve the problem; and 3) ensures that the regulatory agency systematically and comprehensively considers all available alternatives so that the public welfare can be enhanced in the most efficient and cost effective way. The RIR also serves as the basis for determining whether any proposed regulations are a "significant regulatory action" under certain criteria provided in E.O.12866. In addition, the RIR provides some information that may be used in conducting an analysis of the effects on small entities pursuant to the Regulatory Flexibility Act (RFA). This RIR analyzes the effects this regulatory action would be expected to have on the recreational and commercial sectors of the South Atlantic snapper grouper fishery. All monetary estimates in the following analysis are in 2022 dollars.

2.2 Problems and Objectives

The problems and objectives for the proposed actions are presented in Section 1.4 of this amendment and are incorporated herein by reference.

2.3 Description of Fisheries

A description of the commercial and recreational sectors of the South Atlantic snapper grouper fishery, relative to the harvest of scamp and yellowmouth, is provided in Section 3.3 of this amendment and is incorporated herein by reference.

2.4 Effects of Management Measures

Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new South Atlantic Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.1.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Action 1 would not directly alter the current harvest or use of the scamp and yellowmouth grouper resource. Therefore, **Alternative 1 (No Action)** and **Preferred Alternative 2** would not be expected to have any direct economic effects. Indirect economic effects may occur from **Preferred Alternative 2** due to its effects on other actions in this amendment that would make modifications to the harvest of scamp and yellowmouth grouper. However, these economic effects are addressed in the appropriate subsequent actions.

Sub-Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.2.1.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Defining the MSY proxy for the Scamp and Yellowmouth Grouper complex would not directly alter the current harvest or use of the resource. Specification of a MSY would establish a benchmark for the complex and allow for resource evaluation from which additional management actions for the species in the complex could be based. The impacts of any management adjustments would be evaluated at the time they are proposed in a plan or framework amendment. As a benchmark, the MSY proxy would not directly limit how, when, where, or with what frequency participants in the fishery engage in harvesting species in the Scamp and Yellowmouth Grouper complex. This includes participants who directly utilize the resource (principally commercial vessels, for-hire operations, and recreational anglers), as well as participants associated with peripheral and support industries.

Preferred Alternative 3 would set the MSY proxy at a relatively higher fishing mortality (F) at the spawning potential ratio (SPR), which would allow for comparatively lower short-term catch levels and lower associated short-term economic benefits. However, this alternative may lead to higher long-term stock levels and potentially higher associated long-term catch levels. Thus, there could be higher long-term landings and higher associated long-term economic benefits.

Of the alternatives considered in this action, **Preferred Alternative 3**, which is recommended in the most recent SEDAR, provides a more solid scientific ground for subsequent management actions that have economic implications and would likely lead to comparatively higher long-term economic benefits.

Sub-Action 2b. **Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex**

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.2.2.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Since there would be no direct effects on resource harvest or use from establishing maximum fishing mortality threshold (MFMT), there would be no direct effects on fishery participants, associated industries, or communities from Sub-Action 2b. Much like MSY, specifying MFMT helps establish the platform for future management, specifically from the perspective of bounding allowable harvest levels. In this sense, MFMT may be considered to have indirect economic effects on fishery participants.

Preferred Alternative 3 would set MFMT at a higher F_{SPR}, which would allow for lower short-term catch levels and lower associated short-term economic benefits. However, this alternative may lead to higher long-term stock levels and potentially higher associated long-term catch levels. Thus, there could be higher long-term landings and higher associated long-term economic benefits.

Of the alternatives considered in this action, **Preferred Alternative 3**, which is recommended in the most recent SEDAR provides a more solid scientific ground for subsequent management actions that have economic implications and would likely lead to comparatively higher long-term economic benefits.

Sub-Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.2.3.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Like MSY and MFMT, MSST does not alter the current harvest or use of the resource, and thus would have no direct economic effects on fishery participants and associated industries or communities. Unlike MSY, however, MSST is directly related to actions for rebuilding the stock, which also include actions that would have economic implications and indirect economic effects. In general, a high MSST level is susceptible to triggering rebuilding actions that could limit harvest or fishing opportunities, thereby negatively affecting the economic benefits. A low MSST level would be associated with a lower probability of enacting rebuilding actions that would negatively affect the economic benefits. To the extent that rebuilding actions necessitated by a chosen MSST would tend to have economic effects, it is possible to provide some general implications of the MSST alternatives.

With rebuilding taking place over a number of years, management actions and their economic consequences could change over time depending on a variety of factors, including the status of the stock and fishing conditions. Of the viable alternatives considered, **Preferred Alternative 3** would be best from a short-term economic standpoint, because it is less likely to trigger restrictive rebuilding actions in the short term and thus have the lowest chance of having short-term negative economic effects. A possible downside of **Preferred Alternative 3** is that once the stock is considered overfished, the required rebuilding actions could be very restrictive and potentially remain so for a comparatively extended period of time.

Sub-Action 2d. **Establish the optimum yield for the Scamp and Yellowmouth Grouper complex**

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.2.4.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Establishing optimum yield (OY) for the Scamp and Yellowmouth Grouper complex does not directly alter the current harvest or use of the fishery resource. Therefore, the alternatives in Sub-Action 2d would not be expected to have direct economic effects. Indirect economic effects may occur from this action. Defining the OY for species complex establishes a management target for allowable harvests. If defined as a percentage of the MSY, the target would incorporate a protective buffer to help ensure the biological health of the stocks are not threatened, thereby helping support stable biologic and economic benefits. The larger the buffer, the greater the certainty of biological protection. However, an excessively large buffer (i.e. a

buffer that exceeds the likely biological variability of the stock, environmental challenges, or potential for fishery-induced problems) would result in overly restrictive harvest allowances, leading to foregone economic benefits and comparatively lower total net economic benefits being derived from the fishery resource. While none of the relevant biological parameters are ever likely known with total certainty, the best OY specification would be expected to balance the risk and costs of being insufficiently conservative against the costs of potentially unnecessarily leaving fish in the water and unharvested. **Preferred Alternative 4** would result in the highest catch level of the viable alternatives considered along with the highest associated net economic benefits.

Action 3. Establish a rebuilding timeline for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.3.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

A rebuilding timeframe does not impose direct economic effects, as it does not directly constrain harvest or fishing effort. There are potential indirect economic effects that can occur due to a rebuilding timeframe, as the length of the rebuilding period selected can determine how catch limits and management measures need to be structured with shorter rebuilding periods requiring more stringent catch levels and measures that may decrease short-term net economic benefits. **Preferred Alternative 3** would provide the longest rebuilding period of 10 years; hence, it has the lowest implied decrease in short-term net economic benefits as relatively less restrictive catch limits and management measure could be implemented.

Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.4.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

In general, annual catch limits (ACL) that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable effects on the stock of a given fish. The ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACL is exceeded, thereby potentially triggering accountability measures (AM) such as harvest closures or other restrictive measures. In the case of scamp and yellowmouth grouper, the ACL being considered in **Preferred Alternative 2** would be constraining on harvest when initially implemented and are projected to reduce landings of scamp and yellowmouth grouper for both the commercial and recreational sectors.

In the 2025 fishing year, **Preferred Alternative 2** is estimated to result in a decrease in net economic benefits of $200,281 for the commercial sector (as measured in producer surplus or PS), a decrease in net economic benefits of $240,408 for the recreational sector (as measured in consumer surplus or CS), and a decrease in net economic benefits of $440,689 for both sectors combined. Net economic benefits would relatively increase in subsequent years as the total ACL increases as do the allowable landings along with the associated economic benefits of the

landings. By the 2029 fishing year, **Preferred Alternative 2** is estimated to result in a decrease in net economic benefits of $149,745 for the commercial sector, a decrease in net economic benefits of $180,185 for the recreational sector, and a decrease in net economic benefits of $329,929 for both sectors combined. On average through the 5-year time series, **Preferred Alternative 2** is estimated to result in an annual decrease in net economic benefits of $171,514 for the commercial sector, an annual decrease in net economic benefits of $206,127 for the recreational sector, and an annual decrease in net economic benefits of $377,641 for both sectors combined (2022 dollars).

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.5.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

In general, sector ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable effects on the stock of a given fish. The ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. In the case of scamp and yellowmouth grouper, the resulting landings from **Alternative 1 (No Action)** or sector allocations and resulting ACLs being considered **Preferred Alternative 2** would constrain harvest for both sectors when initially implemented, thus creating direct economic effects, and shifts between sectors would create distributional economic effects by sector, depending on the allocation.

Commercial Sector

Alternative 1 (No Action) would not implement sector allocations for scamp or yellowmouth grouper. As such, it is assumed that the proportional landings of the total ACL by each sector would remain similar to recent 5-year landings (2018 through 2022) as a de facto allocation for the Scamp and Yellowmouth Grouper complex, with the commercial sector accounting for 64.90% of the total ACL and the recreational sector accounting for approximately 35.10% of the total ACL. **Preferred Alternative 2** would result in the same commercial sector ACL and sector allocation in the initial year of implementation, but the sector allocation would drop below the de facto allocation in **Alternative 1 (No Action)** on a percent basis in subsequent years, becoming increasingly lower each year into the rebuilding period until 2029 where it would remain at 62.59% of the total ACL indefinitely.

All of the commercial ACL alternatives in Action 5 are estimated to be constraining when initially implemented in 2025 based on the average annual landings over the last five years of available data; therefore, it is assumed that the commercial sector could fully harvest its ACL if conditions allowed, and there would be fewer potential landings of scamp and yellowmouth grouper in most years under **Preferred Alternative 2** relative to **Alternative 1 (No Action)**. These relatively decreased landings would be expected to comparatively decrease total potential PS for the commercial sector. When compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would result in the same overall PS in fishing year 2025. By 2029, **Preferred Alternative 2** would result in an estimated annual decrease in PS of $11,622.

Estimates of net revenues or economic profit are not available for snapper grouper dealers. Therefore, it is not possible to 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, the directionality of economic benefits to dealers would be the same as stated above.

Recreational Sector

Preferred Alternative 2 would result in the same recreational sector ACL and sector allocation in the initial year of implementation, but the sector allocation would increase above the de facto allocation in **Alternative 1 (No Action)** on a percent basis in subsequent years, becoming increasingly higher each year into the rebuilding period until 2029 where it would remain at 37.41% of the total ACL indefinitely.

All of the recreational ACL alternatives in Action 5 are estimated to be constraining when initially implemented in 2025 based on the average annual landings over the last five years of available data, therefore it is assumed that the recreational sector could fully harvest its ACL if conditions allowed, and there would be greater potential landings of scamp and yellowmouth grouper in most years under **Preferred Alternative 2** relative to **Alternative 1 (No Action)**. These relatively increased landings would be expected to comparatively increase total potential CS for the recreational sector. When compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would result in the same overall CS in fishing year 2025. By 2029, **Preferred Alternative 2** would result in an estimated annual increase in CS of $25,569.

Total

In terms of total estimated net economic benefits for the action, **Preferred Alternative 2** would increase benefits. In comparison to **Alternative 1 (No Action)**, **Preferred Alternative 2** would increase annual net economic benefits by $0 in the 2025 fishing year and by $14,059 in the 2029 fishing year. Over the 5-year time series **Preferred Alternative 2** would increase annual net economic benefits by $8,008 (2022 dollars).

Sub-Action 6. Modify the recreational bag limit

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.6.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

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 satisfaction from an angler trip could be affected. Relative to **Alternative 1 (No Action)** of 3 scamp or 3 yellowmouth grouper within the 3 fish grouper and tilefish combined aggregate, setting the bag limit at 1 fish per person (**Preferred Alternative 3**) would have greater negative economic effects due to constraining harvest and related CS. Conversely, more restrictive retention limits would allow for longer open harvest seasons that allow for relatively increased fishing opportunities and associated economic benefits.

For **Preferred Alternative 3**, net economic benefits would be comparatively lower each year that is examined since harvest under a 1 fish bag limit would be lower than the sector ACL each year as well as the projected landings under a 3-fish aggregate bag limit (**Alternative 1 (No Action)**). In the 2025 fishing year, **Preferred Alternative 3** would reduce net economic benefits by an estimated $18,228. By the 2029 fishing year, **Preferred Alternative 3** would reduce net economic benefits by an estimated $83,579.

Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.7.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Generally, commercial trip limits are not considered to be economically efficient because they require an increase in the number of trips and associated trip costs to land the same amount of fish. Given the ACL for scamp and yellowmouth grouper that restricts maximum harvest to sustainable levels, the alternative with the fewest number of trips that have to stop retaining the species because the trip limit has been reached would result in the least amount of direct negative economic effects on a trip level.

The commercial ACL is expected to be landed under all alternatives considered in Action 8. Thus, total landings and gross revenue from landings of scamp and yellowmouth grouper are similar across all the alternatives and there are no quantified economic effects. Since scamp and yellowmouth grouper make up a relatively small portion of total revenue for commercial vessels that land the species and vessels could target other species, it is assumed that no trips would be canceled after the ACL has been met and there is a harvest closure for the rest of the season. However, decreasing trip limits would lead to decreased potential revenue on trips that land scamp and yellowmouth grouper, thereby resulting in a decrease in economic benefits to commercial vessels participating in the scamp and yellowmouth grouper portion of the snapper grouper fishery through potentially reduced net revenue. Lower trip limits would lead to lower levels of revenue over more trips; thus, potentially decreasing net economic benefits through decreased net revenue. There are no quantitative estimates available for the potential change in net revenue, but the alternatives can be ranked according to their potential economic effects. In terms of potential net economic benefits, **Alternative 1 (No Action)** would provide the higher expected benefits than **Preferred Alternative 3**.

Estimates of net revenues or economic profit are not available for snapper grouper dealers. Therefore, it is not possible to 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, the directionality of economic benefits to dealers would be the same as stated above.

Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.8.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Commercial AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest when the sector ACL has been met or exceeded; 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 in long-term indirect economic benefits through sustained harvest and the foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

Preferred Alternative 3 would limit harvest to the 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.

Preferred Alternative 3 would also implement a reduction in the sector ACL the following fish year if the sector ACL was exceeded. This would reduce overall harvest the following year and the associated economic benefits from the harvest. Under **Preferred Alternative 3**, the post-season AM would apply regardless of the total ACL being exceeded or stock status.

Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex

A detailed analysis and discussion of the expected economic effects of the proposed action are included in Section 4.9.2. The following discussion summarizes the expected economic effects of the Council preferred alternative relative to the No Action alternative (i.e., the status quo).

Recreational AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest and fishing activity when harvest has met or exceeded the sector ACL; 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 foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock.

Preferred Alternative 5 would not implement an in-season harvest closure; thus, harvest could continue indefinitely in the first year even if the sector ACL were fully harvested or exceeded. Lack of an in-season harvest closure would potentially allow an increase in short-term economic benefits from those that may be derived by harvesting beyond the ACL, but this alternative would also create potential long-term economic costs by not maintaining sustainable harvest which could lead to more stringent restrictive management measures if overfishing occurs and stringent management measure go into place. The extent to which this could occur would be mitigated by the implementation of a recreational season in Action 6. **Preferred Alternative 5**

would implement a reduction in the following fishing season if the sector ACL was exceeded. Should a shortening of the following season occur, there would be a reduction in economic benefits in that year due to fewer available fishing days for private anglers and for-hire vessels if there was an overall reduction in fishing effort. Assuming the number of trips targeting scamp and yellowmouth grouper remain relatively low, such a reduction in economic benefits for the recreational sector would be minimal since overall effort would likely be similar and harvest of the species would remain at or near the sector ACL.

Action 10. Revise the total annual catch limit, and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex

Action 10 would not directly or indirectly alter the current harvest or use of the remaining Other South Atlantic Shallow Water Grouper complex resource since the portion of the complex ACL for yellowmouth grouper is being removed and added to a new complex. Therefore, **Alternative 1 (No Action)** and **Preferred Alternative 2** would not be expected to have any direct or indirect economic effects.

2.5 Public Costs of Regulations

The preparation, implementation, enforcement, and monitoring of this or any federal action involves the expenditure of public and private resources, which can be expressed as costs associated with the regulations. Costs to the private sector and program-related administrative costs to National Marine Fisheries Service (NMFS) are discussed in the effects of management measures. Estimated public costs associated with the development of this action are in 2022 dollars and include:

Council costs of document preparation, meetings, public hearings, and information dissemination	$42,972
NMFS administrative costs of document preparation, meetings, and review	$108,988
TOTAL	$151,960

The estimate provided above does not include any additional law enforcement costs. Any enforcement duties associated with this action would be expected to be covered under routine enforcement costs rather than an expenditure of new funds. The estimated Council and NMFS administrative costs directly attributable to this amendment and the rulemaking process would be incurred prior to the effective date of the final rule implementing this amendment.

2.6 Net Benefits of Regulatory Action

It is important to specify the time period being considered when evaluating benefits and costs. According to OMB's Circular A-4 (2023), "The time frame for your analysis should include a period before and after the date of compliance that is long enough to encompass all the important benefits and costs likely to result from the regulation. A logical beginning point for your stream of estimates would be the year in which the regulation will begin to have effects, even if that is expected to be some time in the future. The ending point for your analysis should be far enough in the future to encompass, to the extent feasible, all the important benefits and costs likely to

result from all regulatory alternatives being assessed. You generally should not, for example, end an analysis at a point before benefits or costs are likely to change in a way that could change the sign of the estimated net benefits, change the relative ranking of regulatory alternatives, or otherwise have effects relevant to the public or policymakers."

For current purposes, the appropriate time frame is considered to be the next 5 years. There are two primary reasons for considering the next 5 years the appropriate time frame for evaluating the benefits and costs of this regulatory action rather than a longer (or shorter) time period. First, this regulatory action does not include a predetermined sunset provision. Second, based on the history of management of the Snapper Grouper fishery in the South Atlantic, regulations such as those considered in this amendment are often revisited but will presumably remain consistent through a 5-year time period. Also, the ACL for scamp and yellowmouth grouper changes annually for the first 5 years and is steady thereafter until additional action is taken. Thus, a 5-year time period captures the time when the expected benefits are dynamic. After this time period, the annual economic benefits are expected to be relatively steady and consistent.

The analyses of the changes in economic benefits indicates a decrease of $458,917 in net economic benefits in the first year of implementation. In subsequent years, the decrease in estimated net economic benefits becomes smaller as the ACL for scamp and yellowmouth grouper increases. By the 2029 fishing year, there would be an estimated decrease of $399,450 in net economic benefits annually. The majority of this decrease in net economic benefits for both sectors is attributed to the new ACL for scamp and yellowmouth grouper that will constrain catch levels below those that have occurred in recent years in discounted terms and over a 5-year time period using the analyses provided in this amendment, the total net present value of the change in net economic benefits is -$2,014,721 using a 2% discount rate[22].

The estimated non-discounted public costs resulting from the regulation are $151,960. The costs resulting from developing the amendment and the associated rulemaking process should not be discounted as they will be incurred prior to the effective date of the final rule. Based on the quantified economic effects, this regulatory action is expected to decrease net economic benefits to the Nation. Over a 5-year time period, the quantified change in net economic benefits is expected to be -$2,166,680 using a 2% discount rate. On an annualized basis over a 5-year time period, the total net present value of the change in net economic benefits is -$379,224 using a 2% discount rate.

2.7 Determination of Significant Regulatory Action

Pursuant to E.O. 12866, a regulation is considered a "significant regulatory action" if it is likely to result in: 1) an annual effect of $200 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; 2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; 3)

[22] Two percent discount rate is applied as advised in OMB Circular A-4 (2023): https://www.whitehouse.gov/wp-content/uploads/2023/11/CircularA-4.pdf

materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; or 4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this executive order. Based on the information provided above, these actions have been determined to not be economically significant for the purposes of E.O. 12866. The maximum combined sum of annual costs, benefits, and transfers, in absolute terms, is estimated to be $458,917, which would occur in the first year of implementation or 2025.

Appendix C. Initial Regulatory Flexibility Analysis

1. Introduction

The purpose of the Regulatory Flexibility Act (RFA) is to establish a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure such proposals are given serious consideration. The RFA does not contain any decision criteria; instead the purpose of the RFA is to inform the agency, as well as the public, of the expected economic impacts of various alternatives contained in the fishery management plan (FMP) or amendment (including framework management measures and other regulatory actions) and to ensure the agency considers alternatives that minimize the expected impacts while meeting the goals and objectives of the FMP and applicable statutes.

With certain exceptions, the RFA requires agencies to conduct an initial regulatory flexibility analysis (IRFA) for each proposed rule. The IRFA is designed to assess the impacts various regulatory alternatives would have on small entities, including small businesses, and to determine ways to minimize those impacts. An IRFA is primarily conducted to determine whether the proposed action would have a significant economic impact on a substantial number of small entities. The IRFA provides: 1) a description of the reasons why action by the agency is being considered; 2) a succinct statement of the objectives of, and legal basis for, the proposed rule; 3) a description and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; 4) a description of the projected reporting, record-keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities which will be subject to the requirements of the report or record; 5) an identification, to the extent practicable, of all relevant federal rules, which may duplicate, overlap, or conflict with the proposed rule; 6) a description and estimate of the expected economic impacts on small entities; and 7) a description of the significant alternatives to the proposed rule and discussion of how the alternatives attempt to minimize economic impacts on small entities.

2. Statement of the need for, objective of, and legal basis for the proposed action

The need for and objective of this proposed regulatory action is in Chapter 1. In summary, there is a need to rebuild the scamp and yellowmouth grouper stock, and achieve optimum yield (OY) while minimizing, to the extent practicable, adverse social and economic effects. The objective of this proposed action is to modify the Other South Atlantic Shallow Water Grouper complex

by removing yellowmouth grouper from the complex and establishing a new Scamp and Yellowmouth Grouper complex. The proposed action would establish conservation and management measures, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures for the new complex based on the results of the SEDAR 68 operational assessment (2022) stock assessment. It would also modify catch levels for the Other South Atlantic Shallow Water Grouper complex to account for the removal of yellowmouth grouper. The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) provides the statutory basis for this proposed action.

3. Description and estimate of the number of small entities to which the proposed action would apply

This proposed regulatory action, if implemented, would: (1) reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new South Atlantic Scamp and Yellowmouth Grouper complex, (2) establish the maximum sustainable yield (MSY), maximum fishing mortality threshold (MFMT), minimum stock size threshold (MSST), and OY for the Scamp and Yellowmouth Grouper complex, (3) establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex, (4) establish the acceptable biological catch (ABC) and total annual catch limit (ACL) for the Scamp and Yellowmouth Grouper complex, (5) establish sector allocations and sector ACLs for the Scamp and Yellowmouth Grouper complex, (6) establish an aggregate Scamp and Yellowmouth Grouper complex recreational bag limit , (7) establish an aggregate commercial trip limit for scamp and yellowmouth grouper, (8) establish commercial accountability measures (AM) for the Scamp and Yellowmouth Grouper complex, (9) establish recreational AMs for the Scamp and Yellowmouth Grouper complex, and (10) revise the total ACL and sector ACLs for the Other South Atlantic Shallow Water Grouper complex by removing the portion of the total and sector ACLs that is currently designated for yellowmouth grouper.

Actions (1) through (5) and (10), above, would apply to all commercial fishing businesses, for-hire fishing businesses, and recreational fishers (anglers) that fish for scamp or yellowmouth grouper in federal waters of the South Atlantic. Actions (6) and (9) would only apply to for-hire fishing businesses and recreational anglers. Finally, actions (7) and (8) would only apply to commercial fishing businesses. None of the proposed changes would directly apply to federally-permitted dealers. Any change in the supply of scamp or yellowmouth grouper available for purchase by dealers as a result of the proposed regulatory action, and associated economic effects, would be an indirect effect of the proposed regulatory action and would therefore fall outside the scope of the RFA.

Although many components of this proposed regulatory action would apply to for-hire vessels, they would not be expected to have any direct effects on these entities. For-hire vessels sell fishing services to recreational anglers. The proposed changes to the scamp and yellowmouth grouper catch limits and management measures would not be expected to directly alter the services sold by these vessels. Any change in demand for these fishing services, and associated economic effects, as a result of this proposed regulatory action would be a consequence of a change in anglers' behavior, secondary to any direct effect on anglers and, therefore, an indirect

effect of the proposed action. Based on the minimal level of recreational target effort for scamp and yellowmouth grouper historically in the South Atlantic and the number of substitute species available, the National Marine Fisheries Service (NMFS) does not expect any change in for-hire trip demand to result from this proposed regulatory action; however, should it occur, the associated indirect effects would fall outside the scope of the RFA. For-hire captains and crew are currently permitted to retain scamp and yellowmouth grouper under the recreational bag limit; however, they are not permitted to sell these fish. As such, for-hire captains and crew are only affected as recreational anglers. The RFA does not consider recreational anglers to be entities, so they are also outside the scope of this analysis (5 U.S.C. 603). Small entities include small businesses, small organizations, and small governmental jurisdictions (5 U.S.C. 601(6) and 601(3)-(5)). Recreational anglers are not businesses, organizations, or governmental jurisdictions. In summary, only the impacts on commercial vessels will be discussed.

As of August 26, 2021, there were 579 valid or renewable[23] South Atlantic Snapper Grouper unlimited permits and 112 valid or renewable 225-lb trip-limited permits. On average from 2018 through 2022, there were 137 federally-permitted commercial vessels with reported landings of scamp or yellowmouth grouper in the South Atlantic. Their average annual vessel-level gross revenue from all species for 2018 through 2022 was $82,458 (2022 dollars) and scamp and yellowmouth grouper accounted for approximately 4.1% of this revenue. For commercial vessels that harvest scamp or yellowmouth grouper in the South Atlantic, NMFS estimates that economic profits are -$742 (2022 dollars) or -0.9% of annual gross revenue, on average. 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. The maximum annual revenue from all species reported by a single vessel that harvested scamp and yellowmouth grouper from 2018 through 2022 was $441,332 (2022 dollars).

For RFA purposes only, NMFS has established a small business size standard for businesses, including their affiliates, whose primary industry is commercial fishing (see 50 CFR § 200.2). A business primarily engaged in commercial fishing (NAICS code 11411) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual receipts not in excess of $11 million for all its affiliated operations worldwide. All of the commercial fishing businesses directly regulated by this proposed regulatory action are believed to be small entities based on the NMFS size standard. No other small entities that would be directly affected by this proposed regulatory action have been identified.

4. Description of the projected reporting, record-keeping and other compliance requirements of the proposed action, including an estimate of the classes of small entities which will be subject to the

[23] A renewable permit is an expired limited access permit that cannot be actively fished, but can be renewed for up to one year after expiration.

requirement and the type of professional skills necessary for the preparation of the report or records

This proposed regulatory action would not establish any new reporting, record-keeping, or other compliance requirements.

5. Identification of all relevant federal rules, which may duplicate, overlap or conflict with the proposed action

No duplicative, overlapping, or conflicting federal rules have been identified.

6. Significance of economic impacts on a substantial number of small entities

Substantial number criterion

There are 691 federally-permitted vessels eligible to commercially fish for or harvest scamp or yellowmouth grouper in the South Atlantic. However, it is expected that those vessels that historically landed these species would be the most likely to be affected. From 2018 through 2022, there were 137 federally-permitted commercial vessels, on average, that harvested and sold scamp or yellowmouth grouper each year. Because all of these vessels are believed to be small entities, it is assumed that this proposed regulatory action would affect a substantial number of small entities.

Significant economic impacts

The outcome of "significant economic impact" can be ascertained by examining two factors: disproportionality and profitability.

Disproportionality: Do the regulations place a substantial number of small entities at a significant competitive disadvantage to large entities?

All entities likely to be affected by this proposed action are believed to be small entities and thus the issue of disproportionality does not arise.

Profitability: Do the regulations significantly reduce profits for a substantial number of small entities?

A detailed analysis of the economic effects associated with this proposed regulatory action can be found in Chapter 4. The following information summarizes that analysis and additionally, analyzes the effects of this proposed regulatory action on the profitability of small entities.

This proposed regulatory action would reorganize the Other South Atlantic Shallow Water Grouper complex, removing yellowmouth grouper from it, and establish a new South Atlantic

Scamp and Yellowmouth Grouper complex. For the new Scamp and Yellowmouth Grouper complex, it would establish the MSY, MFMT, MSST, and OY, as well as a 10-year rebuilding timeframe. These proposed changes would not directly constrain harvest or fishing effort and are, therefore, outside the scope of this IRFA.

This proposed regulatory action would also establish an ABC and total ACL for the new Scamp and Yellowmouth Grouper complex, based on the most recent recommendations from the Scientific and Statistical Committee (SSC) in response to the SEDAR 68 South Atlantic Scamp Operational Assessment in 2022. These catch limits would reflect a shift in recreational reporting units from the Marine Recreational Information Program (MRIP) Coastal Household Telephone Survey (CHTS) to the MRIP Fishing Effort Survey (FES). The total ACL would be set equal to the ABC in each year of the rebuilding plan according to the values provided in Table C.6.1. The 2029 values would remain in effect until changed by future South Atlantic Fishery Management Council (Council) action. Because the Scamp and Yellowmouth grouper complex has not yet been established and there are no sector allocations for the complex, a hypothetical status quo allocation of 64.90%, based on the average landings distribution by sector from 2018 through 2022, is used here to calculate a de facto commercial ACL. This allows for a rough assessment of how commercial landings for scamp and yellowmouth grouper may change under the proposed Scamp and Yellowmouth Grouper complex total ACL, absent the establishment of sector allocations or ACLs. Relative to five-year average (2018 through 2022) historical landings of 75,540 pounds (lbs) whole weight (ww) and applying a hypothetical sector allocation of 64.90%, the proposed scamp and yellowmouth grouper total ACL would result in an expected decrease in commercial landings during the rebuilding timeframe, as shown in Table C.6.1. As discussed below, this proposed action would also establish commercial and recreational allocation percentages and sector ACLs, and therefore, economic effects to small entities are quantified as part of that discussion.

Table C.6.1. Proposed ABCs and total ACLs, with commercial ACLs based on a hypothetical allocation of 64.90%, as derived from the average scamp and yellowmouth grouper landings distribution by sector from 2018 through 2022.

Year	ABC (lbs ww)	Total ACL (lbs ww)	Commercial ACL (lbs ww) (64.90% of total ACL)	Difference between proposed commercial ACL (lbs ww) and 5 year average landings
2025	67,450	67,450	43,772	-31,768
2026	72,200	72,200	46,855	-28,685
2027	75,050	75,050	48,704	-26,836
2028	77,900	77,900	50,554	-24,986
2029+	79,800	79,800	51,787	-23,753

This proposed regulatory action would set scamp and yellowmouth grouper sector allocations and sector ACLs in 2025 proportional to each sector's share of total average landings (commercial and recreational combined) from 2018 through 2022 (Table C.6.2). In subsequent years, as the total ACL increases, the total ACL poundage increase would be split equally between both sectors and added to each sector's ACL from the previous year. This, in effect, would gradually shift the allocation percentages over time. The 2029 values would remain in effect until changed by future management action. As shown in Table C.6.2, the combined economic effects of the proposed ACLs, in conjunction with the proposed revisions to the commercial allocation, are estimated to be negative, but modestly improving, from 2025 through 2029. From 2029 onwards, ex-vessel revenues are estimated to be static. This analysis utilizes a ww to gutted weight (gw) conversion factor of 1.18 and an average ex-vessel price of $7.44 per lbs gw (2022 dollars). It also assumes the full commercial ACL is harvested each year and that value is compared to average annual commercial landings from 2018 through 2022. The average per vessel estimates are calculated by dividing the average number of vessels with reported landings of scamp and yellowmouth grouper from 2018 through 2022. On average from 2025 through 2029, the per vessel loss in ex-vessel revenue would be $1,300 per year (less than 2% of average annual per vessel revenue). It is noted that scamp and yellowmouth grouper make up a relatively small portion of annual gross revenue for vessels that land the species (4.1 %), and on trips where these species are harvested, they comprise less than 11% of trip revenue, on average (2018 to 2022). Additionally, anecdotal information suggests these species are not typically targeted but are often caught while fishing for other snapper grouper species. Therefore, NMFS assumes scamp and yellowmouth grouper are harvested as secondary, if not incidental, species on trips targeting other species and that the proposed action would not materially affect fishing behavior, effort, or operating costs. As a result, the estimated reductions in annual ex-vessel revenue shown in Table C.6.2 are assumed to be straight losses in per vessel annual economic profits ranging from -$1,178 to $1,462 (2022 dollars). These decreases would exacerbate the already negative average economic profits of affected small entities. Individual fishing businesses, however, may experience varying levels of economic effects, depending on their fishing practices, operating characteristics, and profit maximization strategies.

Table C.6.2. Proposed commercial allocation percentages and commercial ACLs with changes in expected landings and ex-vessel revenue relative to the status quo.

Year	Commercial Allocation %	Commercial ACL (lbs ww)	Change in landings (lbs gw) relative to no action	Change in ex-vessel revenue relative to no action (2022 dollars)	Average per vessel change in ex-vessel revenue (2022 dollars)
2025	64.90%	43,772	-26,922	-$200,300	-$1,462
2026	63.92%	46,147	-24,909	-$185,325	-$1,353
2027	63.39%	47,572	-23,702	-$176,341	-$1,287
2028	62.90%	48,997	-22,494	-$167,356	-$1,222
2029+	62.59%	49,947	-21,689	-$161,366	-$1,178

In addition to the changes mentioned above, the proposed regulatory action would establish an aggregate commercial trip limit of 300 lbs gw for scamp and yellowmouth grouper. Under status quo management, where yellowmouth grouper is included in the Other South Atlantic Shallow Water Grouper complex and scamp is managed individually, implementation of the proposed commercial trip limit would be expected to reduce commercial scamp and yellowmouth grouper landings by 7.96% or 5,096 lbs gw per year. This reduction in landings would represent an estimated annual loss of $37,912 (2022 dollars) in ex-vessel revenue and economic profits to the commercial sector. However, the proposed trip limit would be established in conjunction with the proposed Scamp and Yellowmouth Grouper complex commercial ACLs (Table C.6.2) and NMFS expects the commercial sector to fully harvest its ACL each year of the rebuilding timeframe, even with the proposed 300 lbs gw commercial trip limit in place. Therefore, these economic effects would be subsumed under those described for the proposed allocations and commercial ACLs (Table C.6.2). In general, reducing the commercial trip limit, even if aggregate landings and ex-vessel revenue remain the same, may reduce the economic efficiency of individual trips which, in turn, may have negative consequences on economic profits. These effects cannot be quantified with existing data.

This proposed regulatory action would also establish commercial AMs for the Scamp and Yellowmouth Grouper complex, such that if commercial landings reach or are projected to reach the commercial ACL, commercial harvest of scamp and yellowmouth grouper is closed for the remainder of the fishing year. In addition, under the proposed commercial AMs, if commercial landings exceed the commercial ACL, regardless of stock status or whether the total ACL was exceeded, the commercial ACL for the following fishing year would be reduced by the amount of the commercial ACL overage in the prior fishing year. These proposed AMs would help ensure that commercial landings are constrained to the proposed commercial ACLs. In the event of an overage, commercial fishing businesses would be expected to experience reduced landings, ex-vessel revenue, and economic profits in the following year due to a reduced commercial ACL; however, this would be at least partially offset by the additional landings that occurred over and above the commercial ACL in the year of the overage. These effects cannot be quantified with available data.

Finally, the proposed regulatory action would revise the total ACL and sector ACLs for the Other South Atlantic Shallow Water Grouper complex by subtracting the 4,039 lbs ww from the total ACL that is currently designated for yellowmouth grouper. The new total ACL would be 100,151 lbs ww. Applying the current sector allocations for the Other Shallow Water Grouper complex of 53.3% commercial and 46.7% recreational, the new commercial ACL for that complex would be 53,380 lbs ww and the new recreational ACL would be 46,771 lbs ww. Because the reductions to the total and sector ACLs for the Other Shallow Water Grouper complex would be equivalent to what is currently designated for yellowmouth grouper and nothing more, no additional economic effects relative to those already described above for the proposed new Scamp and Yellowmouth Grouper complex would be expected.

7. Description of the significant alternatives to the proposed action and discussion of how the alternatives attempt to minimize economic impacts on small entities

Three alternatives were considered for the proposed action to establish an ABC and total ACL for the Scamp and Yellowmouth Grouper complex. The first alternative, the no action alternative, would not establish an ABC or total ACL and therefore would not be expected to constrain harvest or result in direct economic effects when compared to recent 5-year average landings and the existing separate ACLs for the two grouper species. This alternative was not selected by the Council because it would be inconsistent with the SSCs' latest catch limit recommendations for scamp and yellowmouth grouper, the requirements of the Magnuson-Stevens Act for the proposed new Scamp and Yellowmouth grouper complex, and the transition to MRIP-FES.

The second alternative to the proposed action would adopt the revised ABCs recommended by the SSC; however, it would set the total ACL equal to 95% of the ABC. The change in pounds between the total ACLs under this alternative and the proposed action, along with the expected change in ex-vessel revenue are provided in Table C.7.1. Relative to the proposed total ACLs and assuming a hypothetical commercial allocation of 64.90% (based on the distribution of historical landings by sector from 2018 through 2022), this alternative would reduce the de facto commercial ACL by a range of 2,188 lbs ww in 2025 to 2,589 lbs ww in 2029 and subsequent years (Table C.7.1). Assuming the commercial ACL would be harvested in full under either the proposed action or the second alternative, this translates to an additional loss in ex-vessel revenue and economic profits of $13,797 (2022 dollars) to $16,326 or $15,237 on average (2025 through 2029). The Council did not select the second alternative because they determined it would be less effective at achieving the objectives of the FMP and that the current monitoring mechanisms in the South Atlantic, coupled with the existing and proposed management measures, would be sufficient at preventing overages, thus not requiring a buffer between the ABC and total ACL.

Table C.7.1. Differences in total ACL, commercial ACL, and ex-vessel revenue under the second alternative to the proposed action.

Year	Proposed Total ACL (lbs ww)	Total ACL (lbs ww) under Alternative 2	Difference in total ACL (lbs ww)	Difference in commercial ACL (lbs ww) using allocation of 64.90%	Change in potential ex-vessel revenue (2022 dollars)
2025	67,450	64,078	-3,372	-2,188	-$13,797
2026	72,200	68,590	-3,610	-2,343	-$14,771
2027	75,050	71,298	-3,752	-2,435	-$15,352
2028	77,900	74,005	-3,895	-2,528	-$15,937

Year	Proposed Total ACL (lbs ww)	Total ACL (lbs ww) under Alternative 2	Difference in total ACL (lbs ww)	Difference in commercial ACL (lbs ww) using allocation of 64.90%	Change in potential ex-vessel revenue (2022 dollars)
2029+	79,800	75,810	-3,990	-2,589	-$16,326

The third alternative to the proposed action would adopt the revised ABCs recommended by the SSC; however, it would set the total ACL equal to 90% of the ABC. The change in pounds between the total ACLs under this alternative and the proposed action, along with the expected change in ex-vessel revenue are provided in Table C.7.2. Relative to the proposed total ACLs and assuming a hypothetical commercial allocation of 64.90% (based on the distribution of historical landings by sector from 2018 through 2022), this alternative would reduce the de facto commercial ACL by a range of 4,377 lbs ww in 2025 to 5,179 lbs ww in 2029 and subsequent years (Table C.7.2). Assuming the commercial ACL would be harvested in full under either the proposed action or the third alternative, this translates to an additional loss in ex-vessel revenue and economic profits of $27,599 (2022 dollars) to $32,652 or $30,475 on average (2025 through 2029). The Council did not select the third alternative because they determined it would be less effective at achieving the objectives of the FMP and that the current monitoring mechanisms in the South Atlantic, coupled with the existing and proposed management measures, would be sufficient at preventing overages, thus not requiring a buffer between the ABC and total ACL.

Table C.7.2. Differences in total ACL, commercial ACL, and ex-vessel revenue under the third alternative to the proposed action.

Year	Proposed Total ACL (lbs ww)	Total ACL (lbs ww) under Alternative 3	Difference in total ACL (lbs ww)	Difference in commercial ACL (lbs ww) using allocation of 64.90%	Change in potential ex-vessel revenue (2022 dollars)
2025	67,450	60,705	-6,745	-4,377	-$27,599
2026	72,200	64,980	-7,220	-4,685	-$29,542
2027	75,050	67,545	-7,505	-4,870	-$30,708
2028	77,900	70,110	-7,790	-5,055	-$31,874
2029+	79,800	71,820	-7,980	-5,179	-$32,652

Two alternatives were considered for the proposed action to establish scamp and yellowmouth grouper sector allocations and sector ACLs. The first alternative, the no action alternative, would not set sector allocations and thus commercial and recreational landings combined would

be constrained by the total ACL as opposed to a commercial ACL. As a result, it is assumed that the proportion of the total ACL harvested by each sector would remain similar to recent 5-year average landings (2018 through 2022), with the commercial sector accounting for 64.90% of the total ACL. Relative to the proposed allocation, this alternative, when applied to the proposed total ACLs in Table C.6.1, would result in an increase in ex-vessel revenue and economic profits that ranges from $0 to $85 per vessel (Table C.7.3) or $48 on average (2025 through 2029). The Council did not select the first alternative because this alternative would not establish sector allocations and, therefore, would not be as effective at achieving the objectives of the FMP, nor would it align with the purpose of this proposed regulatory action.

Table C.7.3. Comparison of commercial allocation, commercial ACL, and ex-vessel revenue under the first alternative to the proposed allocation.

Year	Proposed commercial allocation	Alternative 1 to proposed allocation	Commercial ACL (lbs ww) under Alternative 1 allocation	Change in commercial ACL (lbs ww) under Alternative 1 allocation	Change in potential ex-vessel revenue (2022 dollars)	Change in potential ex-vessel revenue per vessel
2025	64.90%	64.90%	43,772	0	$0	$0
2026	63.92%	64.90%	46,855	708	$4,461	$33
2027	63.39%	64.90%	48,704	1,132	$7,138	$52
2028	62.90%	64.90%	50,554	1,557	$9,814	$72
2029+	62.59%	64.90%	51,787	1,840	$11,599	$85

The second alternative to the proposed allocation would set scamp and yellowmouth grouper sector allocations and sector ACLs in 2025 proportional to each sector's share of total average landings (commercial and recreational combined) from 2013 through 2022 (Table C.7.4). In subsequent years, as the total ACL increases, the total ACL poundage increase would be split equally between both sectors and added to each sector's ACL from the previous year. This, in effect, would gradually shift the allocation percentages over time. The 2029 values would remain in effect until changed by future management action. Relative to the proposed allocation, this alternative, when applied to the proposed total ACLs in Table C.6.1, would result in an average annual decrease in ex-vessel revenue and economic profits of approximately $47 per vessel (Table C.7.4). The Council did not select the second alternative because they determined the 10-year average used to calculate the initial allocation in 2025 was less representative of the current fishery and, therefore, would be less effective at achieving the objectives of the FMP.

Table C.7.4. Comparison of commercial allocation, commercial ACL, and ex-vessel revenue under the second alternative to the proposed allocation.

Year	Proposed commercial allocation	Alternative 2 to proposed allocation	Commercial ACL (lbs ww) under Alternative 2 allocation	Change in commercial ACL (lbs ww) under Alternative 2 allocation	Change in potential ex-vessel revenue (2022 dollars)	Change in potential ex-vessel revenue per vessel
2025	64.90%	63.40%	42,763	-1,009	-$6,360	-$46
2026	63.92%	62.51%	45,132	-1,015	-$6,398	-$47
2027	63.39%	62.04%	46,561	-1,011	-$6,374	-$47
2028	62.90%	61.60%	47,986	-1,011	-$6,372	-$47
2029+	62.59%	61.32%	48,933	-1,014	-$6,391	-$47

Four alternatives were considered for the proposed action to establish a commercial trip limit of 300 lbs gw. The first alternative, the no action alternative, would not establish a commercial trip limit. Therefore, it would not be expected to change fishing practices or commercial harvests of scamp and yellowmouth grouper, nor would it be expected to result in direct economic effects. This alternative was not chosen by the Council because it would be less effective at constraining harvest to the proposed commercial catch levels and would lead to a shorter commercial fishing season.

The second alternative to the proposed commercial trip limit of 300 lbs gw would set the commercial trip limit at 200 lbs gw. Under status quo management, where yellowmouth grouper is included in the Other South Atlantic Shallow Water Grouper complex and scamp is managed individually, implementation of the proposed commercial trip limit would be expected to reduce commercial scamp and yellowmouth grouper landings by 16.52% or 10,576 lbs gw per year. Relative to the proposed commercial trip limit, this alternative would result in an estimated annual reduction in ex-vessel revenue and economic profit that is $40,770 (2022 dollars) greater. However, the commercial trip limit would be established in conjunction with the proposed Scamp and Yellowmouth Grouper complex commercial ACLs (Table C.6.2) and NMFS expects the commercial sector would fully harvest its ACL each year of the rebuilding timeframe, even with a 200 lbs gw commercial trip limit in place. Therefore, these economic effects would be subsumed under those described for the proposed allocations and commercial ACLs (Table C.6.2). In general, a lower commercial trip limit may reduce economic efficiency on trips, which may lead to a reduction in economic profits. These effects cannot be quantified with existing data. This alternative was not chosen by the Council because the low trip limit would make trips to catch scamp and yellowmouth grouper too costly and inefficient.

The third alternative to the proposed commercial trip limit of 300 lbs gw would set the commercial trip limit at 400 lbs gw. Under status quo management, implementation of the proposed commercial trip limit would be expected to reduce commercial scamp and

yellowmouth grouper landings by 4.35% or 2,785 lbs gw per year. Relative to the proposed commercial trip limit, this alternative would result in an estimated annual reduction in ex-vessel revenue and economic profit that is $17,194 (2022 dollars) less. However, the commercial trip limit would be established in conjunction with the proposed commercial ACLs (Table C.6.2) and NMFS expects the commercial sector would fully harvest its ACL each year of the rebuilding timeframe with a 400 lbs gw commercial trip limit in place. Therefore, these economic effects would be subsumed under those described for the proposed allocations and commercial ACLs (Table C.6.2). In general, a less restrictive commercial trip limit may increase economic efficiency on trips, which may lead to an increase in economic profits. These effects cannot be quantified with existing data. This alternative was not chosen by the Council because it would be less effective at constraining harvest to the proposed commercial catch levels and would lead to a shorter commercial fishing season.

The fourth alternative to the proposed commercial trip limit of 300 lbs gw would set the commercial trip limit at 500 lbs gw. Under status quo management, implementation of the proposed commercial trip limit would be expected to reduce commercial scamp and yellowmouth grouper landings by 2.46% or 1,575 lbs gw per year. Relative to the proposed commercial trip limit, this alternative would result in an estimated annual reduction in ex-vessel revenue and economic profit that is $26,196 (2022 dollars) less. However, the commercial trip limit would be established in conjunction with the proposed commercial ACLs (Table C.6.2) and NMFS expects the commercial sector would fully harvest its ACL each year of the rebuilding timeframe with a 500 lbs gw commercial trip limit in place. Therefore, these economic effects would be subsumed under those described for the proposed allocations and commercial ACLs (Table C.6.2). Again, a less restrictive commercial trip limit may increase economic efficiency on trips, which may lead to an increase in economic profits. These effects cannot be quantified with existing data. This alternative was not chosen by the Council because it would be less effective at constraining harvest to the proposed commercial catch levels and would lead to a shorter commercial fishing season.

Two alternatives were considered for the proposed action to establish commercial AMs for the Scamp and Yellowmouth Grouper complex. The first alternative, the no action alternative, would not establish commercial AMs and therefore would have no direct economic effects on any small entities. This alternative was not chosen by the Council because the Magnuson-Stevens Act requires AMs to be implemented.

The second alternative to the proposed commercial AMs action would establish commercial AMs for the Scamp and Yellowmouth Grouper complex, such that if commercial landings reach or are projected to reach the commercial ACL, commercial harvest of scamp and yellowmouth grouper is closed for the remainder of the fishing year. Under this alternative, if commercial landings exceed the commercial ACL, the total ACL is exceeded, and the Scamp and Yellowmouth Grouper complex is overfished, the commercial ACL for the following fishing year will be reduced by the amount of the commercial ACL overage in the prior fishing year. This alternative would be less likely to result in a payback of commercial overages than the proposed commercial AMs because there are greater requirements for such to be triggered. As a result, the second alternative would be less likely to negatively impact commercial fishing businesses through reduced commercial ACLs in years following commercial ACL overages.

This alternative was not chosen by the Council because it would be less effective at constraining harvest to the proposed commercial catch levels, thereby reducing protection to the scamp and yellowmouth grouper stock.

Finally, one alternative was considered for the proposed action to revise the total ACL and sector ACL for the Other South Atlantic Shallow Water Grouper complex. This alternative, the no action alternative, would not adjust the Other South Atlantic Shallow Water Grouper complex total and sector ACL to account for the removal of yellowmouth grouper. The total ACL for this complex would remain at 104,190 lbs ww and the commercial ACL would remain at 55,542 lbs ww. The Council did not select this alternative because it would retain catch levels that are inclusive of yellowmouth grouper and are inconsistent with the proposed new Scamp and Yellowmouth Grouper complex and associated catch levels. Under this alternative, catch levels for the remaining species in the Other South Atlantic Shallow Water Grouper complex would be too high and would not provide adequate protection to those stocks.

Appendix D. Data Analyses

1.1 Scamp/yellowmouth Grouper Removals: Proportion landings versus dead discards

Prepared by Kyle Shertzer
18 September 2023

Introduction

The SouthEast Data, Assessment, and Review (SEDAR) 68 operational assessment (OA) of scamp/yellowmouth grouper modeled total removals (landings plus dead discards) from the recreational and commercial fleets. In most South Atlantic assessments, landings and discards are modeled as separate fleets. But scamp and yellowmouth grouper were combined based on recommendations from the SEDAR 68 OA (2022) Center of Independent Experts (CIE) review panel. Should landings and dead discards need to be split for management purposes, this document describes computation of the proportion landings in total removals.

Methods and Results

For the SEDAR 68 OA (2022), data providers supplied estimates of total discards (live and dead); for use here and in the assessment, I applied a commercial discard mortality proportion (rate) of 0.39 and a recreational proportion of 0.26. Any other treatments of data, such as smoothing of recreational discard estimates and imputation of missing values, are described in the SEDAR68 OA (2022) report. The assessment fit removals in their native units, with recreational removals in numbers and commercial removals in weight. Given the different units, combining the two for computing overall proportion landings is not straightforward. Nonetheless, two approaches were explored.

The first approach computes the proportion landings (of total removals) for each fleet in their native units, and then combines those proportions as a weighted average, with weights equal to the assessment-estimated proportions of total F from each fleet (recreational weight is 0.305 and commercial weight is 0.695). This weighting is consistent with how selectivities of each fleet were combined for projections. The second approach utilizes commercial landings and dead discards in numbers, which were supplied by the data providers, but not used in the assessment. This second approach sums the landings and dead discards from both fleets, both in numbers, and then computes the proportion of total removals that are landings. The first approach might be considered more compatible with the assessment, while the second approach is simpler and perhaps easier to explain.

In both approaches, values are based on geometric means from the terminal three assessment years, 2019-2021. In addition, I computed the standard deviation of the proportion landings using data from the last ten years (2012-2021) to indicate the level of variability in the proportions. In the first approach, the proportion of total removals allocated to landings was 0.955 (Table D.1.1). In the second approach, the proportion of total removals allocated to landings was 0.954. Thus, it

seems justified to split total removals into 95% landings and 5% dead discards. These proportions appear relatively stable through time, with a standard deviation from the recreational fleet of 0.05, and a standard deviation from the commercial fleet of 0.003 (whether computed in weight or numbers).

Discussion

We recommend using the 0.95 proportion for computing a total coastwide ABC of landed catch and then the remainder would represent ABC for discards. The ABC recommended by the SAFMC's SSC is conditional on the ratio between commercial and recreational remaining close to the value from the last three years of the stock assessment. Should management choose to deviate from the commercial:recreational allocation used by the SSC and the stock assessment, then the fleet-specific proportions in Table 1 could be used to compute fleet-specific ABCs for landed and discarded catch.

Table D.1.1.1. Two methods to compute proportion of total scamp/yellowmouth grouper removals that are attributable to landings. The remainder are attributable to dead discards.

	Recreational (1000 fish)				Commercial (1000 fish)				Commercial (1000 lb)								
	Landings	Dead discards	Total	Prop L	Landings	Dead discards	Total	Prop L	Landings	Dead discards	Total	Prop L					
2012	9.0730	3.0895	12.1625	0.7460	27.5632	0.4672	28.0304	0.9833	161.3060	2.3747	163.6807	0.9855					
2013	10.5840	2.4157	12.9997	0.8142	23.9022	0.3852	24.2874	0.9841	141.1472	1.9576	143.1048	0.9863					
2014	9.0185	1.9577	10.9762	0.8216	24.2617	0.3627	24.6244	0.9853	164.5343	1.8434	166.3777	0.9889					
2015	7.4530	1.5628	9.0158	0.8267	20.5089	0.3142	20.8230	0.9849	128.1261	1.5968	129.7230	0.9877					
2016	8.5900	1.1773	9.7673	0.8795	18.8592	0.3809	19.2401	0.9802	110.9988	1.9358	112.9346	0.9829					
2017	6.3290	0.8604	7.1894	0.8803	18.7723	0.2883	19.0606	0.9849	110.3512	1.4654	111.8165	0.9869		Sum fleets (1000 fish)			
2018	4.0680	0.6870	4.7550	0.8555	14.3921	0.2489	14.6409	0.9830	96.8788	1.2649	98.1437	0.9871		Landings	Dead discards	Total	Prop L
2019	5.5790	0.6317	6.2107	0.8983	20.1060	0.2431	20.3491	0.9881	120.3583	1.2354	121.5937	0.9898		25.6850	0.8748	26.5598	0.9671
2020	4.1840	0.5826	4.7666	0.8778	10.4878	0.2035	10.6913	0.9810	62.9700	1.0342	64.0041	0.9838		14.6718	0.7861	15.4579	0.9491
2021	4.8815	0.5949	5.4764	0.8914	9.0856	0.2233	9.3089	0.9760	50.5702	1.1348	51.7050	0.9781		13.9671	0.8182	14.7853	0.9447
Gomean 2019-2021				0.8891				0.9817				0.9839			Approach 2 (in numbers)		0.9536
SD (2012-2021)				0.0472				0.0033				0.0034					
Assessment F prop				0.3050								0.6950			Approach 1 (F-wgted prop L)		0.9550

1.2 Analysis of Allocation Percentages and Catch Limits for the Proposed Scamp and Yellowmouth Grouper Complex in the South Atlantic

LAPP/DM Branch
NOAA Fisheries Service
Southeast Regional Office
June 2024

The South Atlantic stock of scamp was assessed through the Southeast Data, Assessment, and Review (SEDAR) 68 research track assessment in 2021. In the initial stages of the assessment process a Stock ID Workshop was conducted and concluded that scamp and yellowmouth grouper are difficult to distinguish from each other, therefore recommending that the two species be aggregated and considered as a single complex in the subsequent stock assessment. The results of the research track assessment indicated that scamp and yellowmouth grouper were overfished, but not experiencing overfishing. The South Atlantic Fishery Management Council (Council) has initiated Amendment 55 to remove yellowmouth grouper from the Other South Atlantic Shallow Water Grouper Complex (OSAWG) and create a new complex for both scamp and yellowmouth grouper. Additionally, this amendment will require the establishment of a rebuilding plan, specify catch levels, designate sector allocations, and define accountability measures based on the results of the SEDAR 68 operational assessment (2022). This analysis focuses on defining a historical time series that can be used to calculate allocation percentages and to provide seasonal projections for the catch levels provided by the Council's Scientific and Statistical Committee (SSC).

Defining Landings Time Series

The Marine Recreational Information Program (MRIP) uses the Access Point Angler Intercept Survey (APAIS) to collect dockside catch data from anglers fishing from shore, private boats and for-hire vessels in North Carolina, South Carolina, Georgia, and the east coast of Florida. The Fishing Effort Survey (FES) is used to collect trip information from shore and private boat recreational anglers from a mail survey. The combination of dockside APAIS data and mail survey FES effort data are used to generate catch estimates for species caught by recreational private anglers. The For-Hire Survey (FHS) is used to collect effort information from the for-hire component of the recreational sector. The combination of the dockside APAIS data and FHS effort data are used to generate catch estimates for species caught by the charter component of the recreational sector. The Southeast Fisheries Science Center combines the MRIP data from private and charter vessels with the Southeast Region Headboat Survey (SRHS) to create a complete recreational landings data set (FES ACL Monitoring Dataset – August 23, 2023) for federally managed fish species. Commercial landings come from dealer reports and are provided by the Southeast Fisheries Science Center (SEFSC, Provided September 18, 2023). These data sets were both filtered to include only records from landings identified as scamp or yellowmouth grouper from the South Atlantic region, from 1986 to 2022. This time frame was selected to

correspond with the years associated with the various allocation alternatives that are being assessed through Amendment 55.

The process of removing yellowmouth grouper from the OSAWG complex to the new scamp / yellowmouth grouper complex provides an opportunity for yellowmouth grouper landings to be easily calculated when comparing landings time series for the old and new complexes. The low magnitude of annual yellowmouth grouper landings provided concern that confidentiality might be violated, if the number of dealers or vessels contributing those landings was low. The number of contributors was assessed for annual landings values for each species, by fishing sector. No confidentiality concerns were found when reviewing the number of contributors for scamp landings, but several years of yellowmouth grouper landings are considered confidential for both fishing sectors (Recreational: 2014-2022, Commercial: 1986-2022). Various methods were investigated to generate a non-confidential landings history to replace confidential annual yellowmouth grouper landings. The first method considered was to calculate a ratio value of yellowmouth grouper (YM) to scamp landings that would be multiplied by the unchanged scamp landings to generate a new non-confidential landings value for yellowmouth grouper.

$$Ratio = \frac{Landings_{YM}}{Landings_{Scamp}}$$

$$Non - Confidential\ YM\ Landings = Ratio \times Landings_{Scamp}$$

Two ratio options were investigated, an average of the annual yellowmouth grouper to scamp ratio values over the entire confidential time period (e.g. 2014-2022 for the recreational sector) or an average of ratios grouped in 3-year bins (e.g. 2014-2016, 2017-2019, 2020-2022 for the recreational sector). The second method was to average the yellowmouth grouper landings. Landings were either averaged over the entire confidential time period or averaged over 3-year bins. The difference between the original landings and calculated non-confidential landings values were minimized for both fishing sectors by using a 3-year average of yellowmouth grouper landings. The annual estimates for scamp and the updated non-confidential yellowmouth grouper landings were then summed by sector to create annual estimates for the Scamp and Yellowmouth Grouper complex for each year in the time series (Figure D.1.2.1).

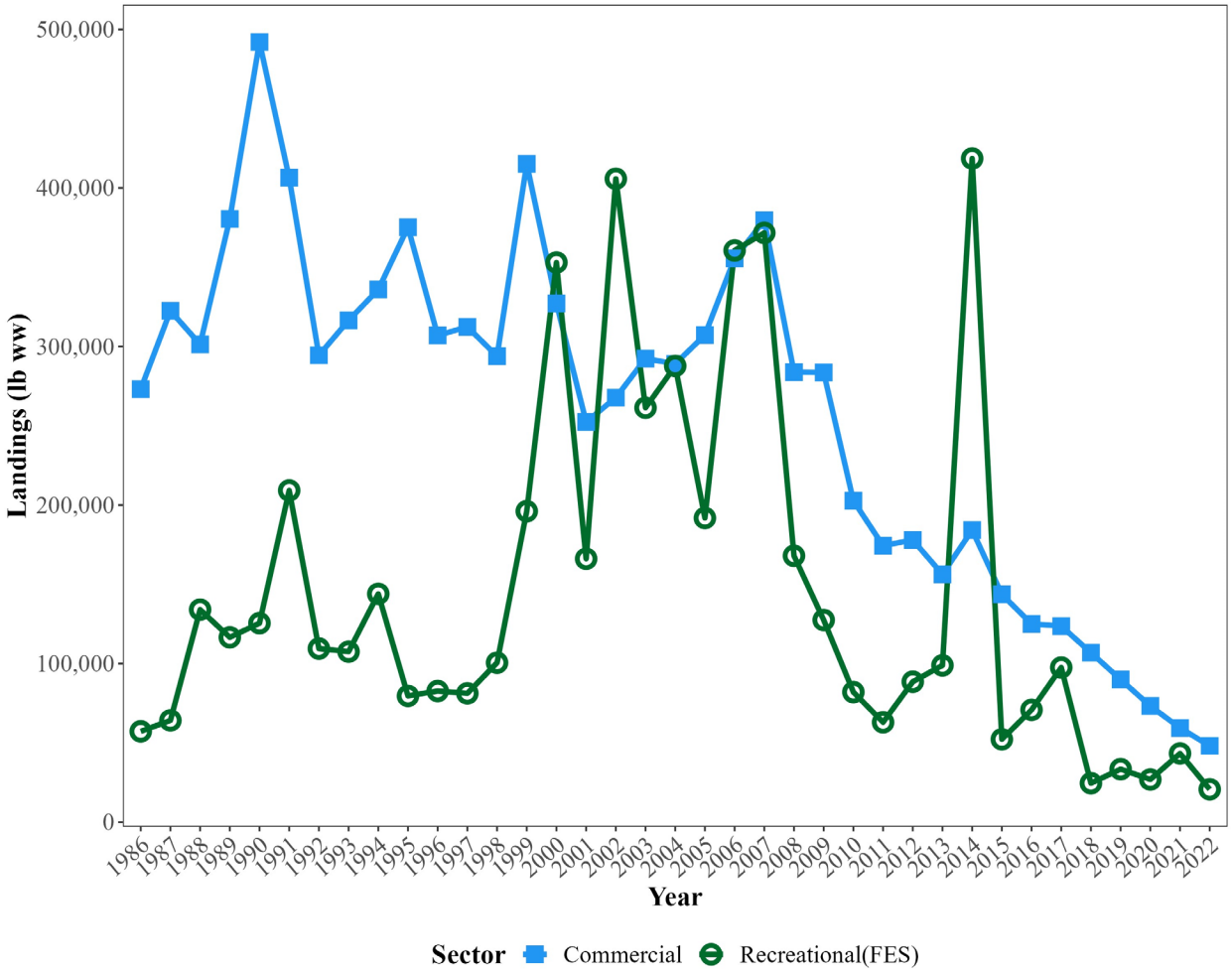

Figure D.1.2.1. Aggregated annual estimates of scamp and yellowmouth grouper landings from 1986 to 2022, by fishing sector.

In addition to assessing confidentiality, uncertainty around the recreational landings estimates was investigated. In SEDAR 68, analysts replaced landings estimates with associated uncertainty values greater than 50% with the average of the nearest two years (SEDAR 2022). In an effort to be consistent with the methodology used in the stock assessment, the percent standard error (PSE) around recreational estimates from the NOAA Query Website were reviewed (Retrieved October 24, 2023). Several years had PSE values higher than 50%: 1986, 1988, 1992, 1995-1998, 2005-2006, 2011, 2014-2015, 2018, 2022 (Figure D.1.2.2). While high PSE values are found throughout the time series, only recreational landings estimates with high PSE values after 2012 were adjusted with the method described above. The No Action allocation alternative relies on un-modified scamp landings, while the remaining alternatives rely on more recent landings from 2013-2022. The time series of landings are only adjusted to mask confidentiality through 2012 and are adjusted for both confidentiality and recreational uncertainty after 2012 (Figure D.1.2.3). Commercial landings are assumed to represent a census, and are only modified to mask confidentiality.

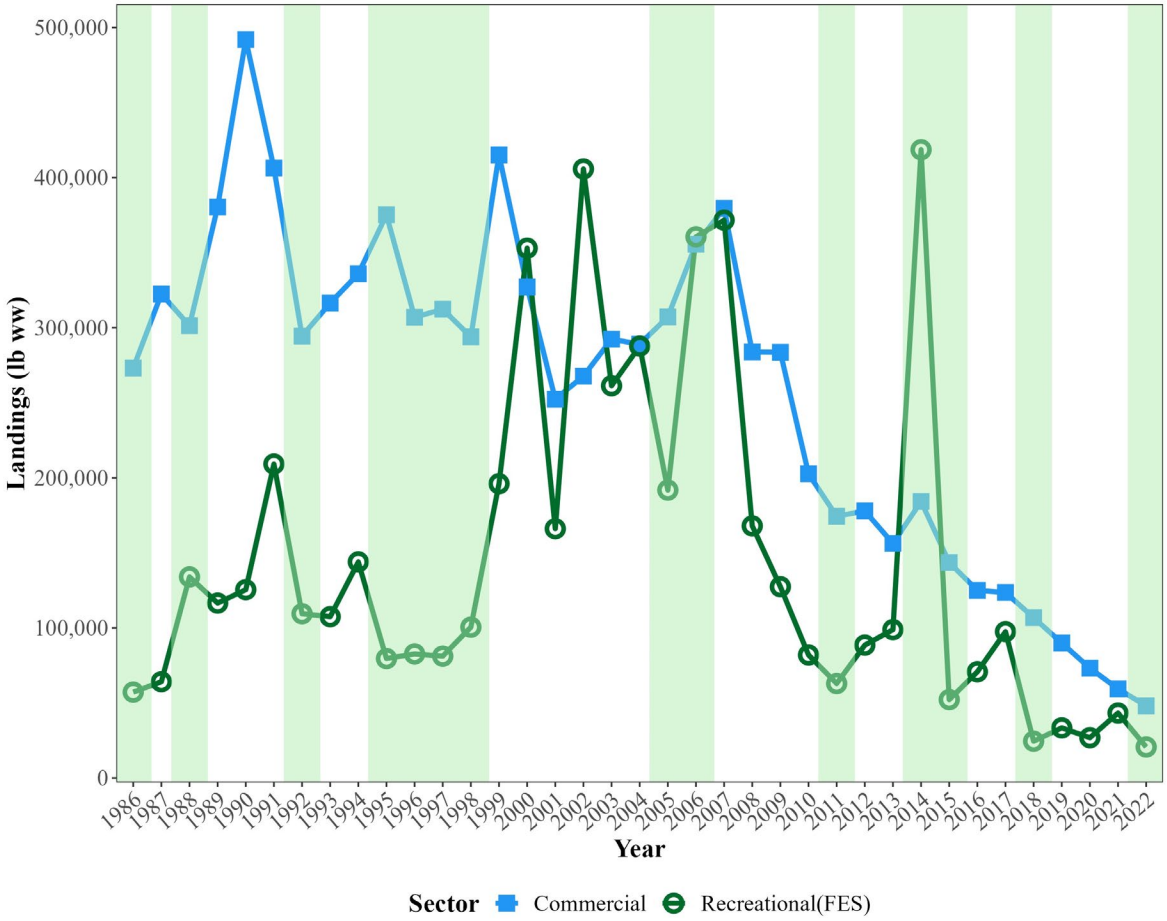

Figure D.1.2.2. Aggregated annual estimates of scamp and yellowmouth grouper landings from 1986 to 2022, by fishing sector. Light green shading indicates years with PSE values > 50% for recreational landings estimates.

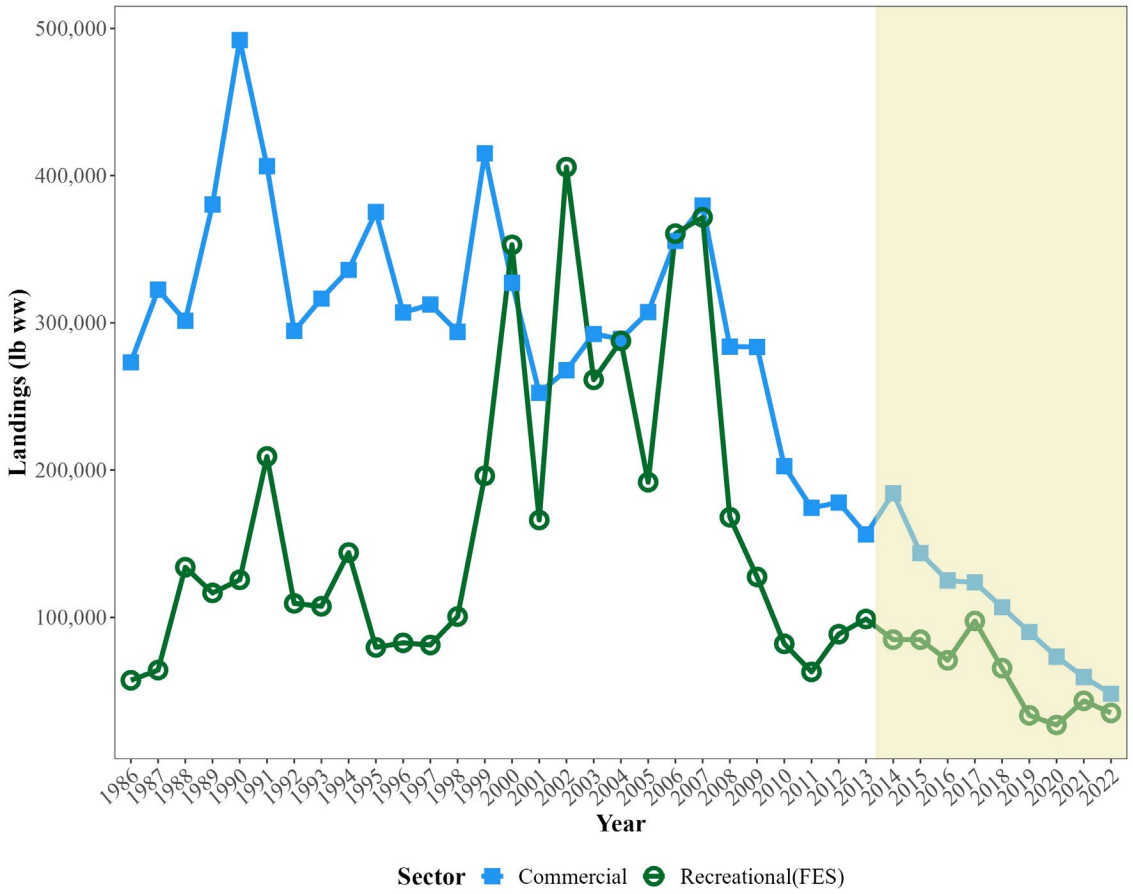

Figure D.1.2.3. Aggregated annual estimates of scamp and yellowmouth grouper landings from 1986-2022, by sector. Yellow shading indicates years where smoothed landings values were used to replace recreational estimates with PSE values >50%.

Catch Limit Alternatives

The SSC recommended acceptable biological catch (ABC) values in total removals, which represents the sum of landings and dead discards for scamp and yellowmouth grouper. However, these ABC values were reduced by 5% to account for dead discards, allowing the annual catch limit (ACL) to be monitored in landings only. The smoothed landings histories for each sector are presented in Table D.1.2.1. Three catch limit alternatives were proposed for the 5-year rebuilding period (Table D.1.2.2). The South Atlantic Council selected Alternative 2, ACL=ABC as the preferred alternative for this amendment.

Table D.1.2.1. Aggregated annual landings estimates (lbs ww) of scamp and yellowmouth grouper from 1986-2022, by sector. Landings values mask confidentiality through 2012 and are adjusted for both confidentiality and recreational uncertainty after 2012.

Year	Commercial	Recreational (FES)	Total Landings
1986	273,134	57,253	330,387
1987	322,506	64,182	386,688
1988	301,390	134,039	435,429
1989	380,468	116,584	497,052
1990	492,038	125,523	617,561
1991	406,389	209,225	615,613
1992	294,489	109,500	403,989
1993	316,475	107,524	423,999
1994	335,955	143,997	479,952
1995	375,285	79,620	454,905
1996	307,016	82,714	389,730
1997	312,373	81,246	393,619
1998	293,928	100,564	394,492
1999	415,142	196,113	611,255
2000	327,182	353,005	680,187
2001	252,413	166,118	418,531
2002	267,783	405,779	673,563
2003	292,405	261,369	553,774
2004	289,051	287,786	576,837
2005	307,263	191,833	499,097
2006	355,599	360,588	716,187
2007	379,559	371,693	751,252
2008	283,894	168,010	451,904
2009	283,634	127,501	411,135
2010	202,699	82,033	284,732
2011	174,392	62,988	237,380
2012	177,997	88,574	266,571
2013	156,316	98,902	255,217
2014	184,257	84,856	269,113
2015	143,635	84,856	228,492
2016	125,044	70,811	195,855
2017	123,692	97,541	221,233
2018	106,892	65,497	172,389
2019	89,986	33,452	123,438
2020	73,259	26,921	100,180
2021	59,424	43,322	102,745
2022	48,139	35,121	83,260

Source: SEFSC Commercial ACL Data – September 2023; MRIP-FES Recreational data – August 2023.

Table D.1.2.2. Proposed catch limit values in pounds whole weight for scamp and yellowmouth grouper in the South Atlantic region (Action 4). The preferred alternative is bolded.

Alternative	2025	2026	2027	2028	2029
Alternative 1 (No Action, no ABC)	n/a				
Preferred Alternative 2 (ACL = ABC)	**67,450**	**72,200**	**75,050**	**77,900**	**79,800**
Alternative 3 (95% of ABC)	64,078	68,590	71,298	74,005	75,810
Alternative 4 (90% of ABC)	60,705	64,980	67,545	70,110	71,820

Generation of Allocation Alternative Percentages

The final landings histories developed for the recreational and commercial sectors were used to calculate the percentages for each proposed allocation alternative listed in Table D.1.2.3. The No Action alternative corresponds with a scenario where there is no allocation, as the complex does not yet exist. **Preferred Alternative 2** and Alternative 3 require the use of the split reduction method to generate allocation percentages for each sector. This method uses an average landings estimate for each sector as a starting point. The change from the total scamp / yellowmouth grouper landings to reach the ACL value proposed for the first year in the rebuilding plan is calculated and applied evenly to the average landings for each sector. The percentage of total landings for each sector is then calculated. In each subsequent year of the rebuilding plan, the difference between the total landings of scamp / yellowmouth grouper and the next ACL is split equally between the two sectors and the percentage of landings for each sector is re-calculated. The average landings values used at the start of the split reduction method in **Preferred Alternative 2** corresponds with a 5-year average of scamp / yellowmouth grouper landings (2018-2022) and a 10-year average for Alternative 3 (2013-2022).

Table D.1.2.3. Description of the allocation alternatives proposed for evaluation. The preferred alternative is bolded.

Allocation Alternative	Method Explanation
Alternative 1 (No Action)	No Allocation
Preferred Alternative 2	**Split Reduction Method using average landings from 2018-2022**
Alternative 3	Split Reduction Method using average landings from 2013-2022

Allocation percentages were calculated for each fishing sector and year of the rebuilding period. Additionally, the sector ACL associated with each allocation alternative were calculated by multiplying the proposed allocation percentages by the ACL associated with the preferred catch limit alternative, Action 4: Alternative 2 – ACL=ABC (**Table D.1.2.4**). The council selected Alternative 2 as the preferred allocation alternative for Action 5.

Table D.1.2.4. Alternatives for allocation percentages under Action 5. The preferred Alternative is bolded.

Preferred ACL Alternative: Action 4 - Alternative 2 (ACL=ABC)	Allocation Alternatives					
	Alternative 1: No Action		*Preferred Alternative 2: Split Reduction (2018-2022)*		*Alternative 3: Split Reduction (2013-2022)*	
	Commercial	Recreational	Commercial % (lbs ww)	Recreational % (lbs ww)	Commercial % (lbs ww)	Recreational % (lbs ww)
67,450 (2025)	none	none	**64.90% (43,772)**	**35.10% (23,678)**	63.40% (42,763)	36.60% (24,687)
72,200 (2026)	none	none	**63.92% (46,147)**	**36.08% (26,053)**	62.51% (45,132)	37.49% (27,068)
75,050 (2027)	none	none	**63.39% (47,572)**	**36.61% (27,478)**	62.04% (46,561)	37.96% (28,489)
77,900 (2028)	none	none	**62.90% (48,997)**	**37.10% (28,903)**	61.60% (47,986)	38.40% (29,914)
79,800 (2029)	none	none	**62.59% (49,947)**	**37.41% (29,853)**	61.32% (48,933)	38.68% (30,867)

Catch Limit Analysis

This catch limit analysis investigates whether the scamp / yellowmouth grouper complex ACL can be reached or exceeded using recent landings data to project future landings under the preferred ACL and allocation alternatives from Action 4 and 5, respectively. First, the last five years of landings data, 2018 to 2022, were investigated for anomalies in landing patterns. The recreational and commercial landings were plotted by wave and month, respectively. Scamp / yellowmouth grouper are most prevalent for both sectors between May and August in the years investigated, but the magnitude of the landings varies by year (Figures D.1.2.4 and D.1.2.5). The three most recent years of landings data are most likely to represent current fishing, and these data were averaged to generate wave / month level projected landings estimates, by sector (Figures D.1.2.6 and D.1.2.7).

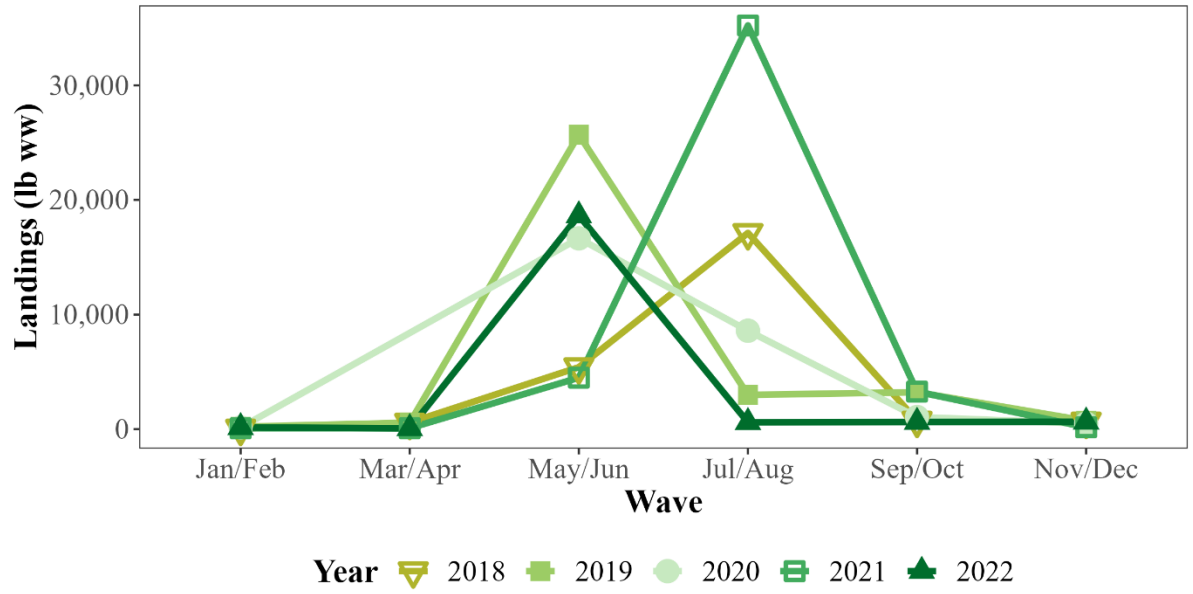

Figure D.1.2.4. Observed recreational landing by wave, including MRIP-FES recreational landings from shore and private boat fishing modes, FHS landings for charter vessels, and SRHS landings for headboat vessels (Source: MRIP-FES Recreational data – August 2023).

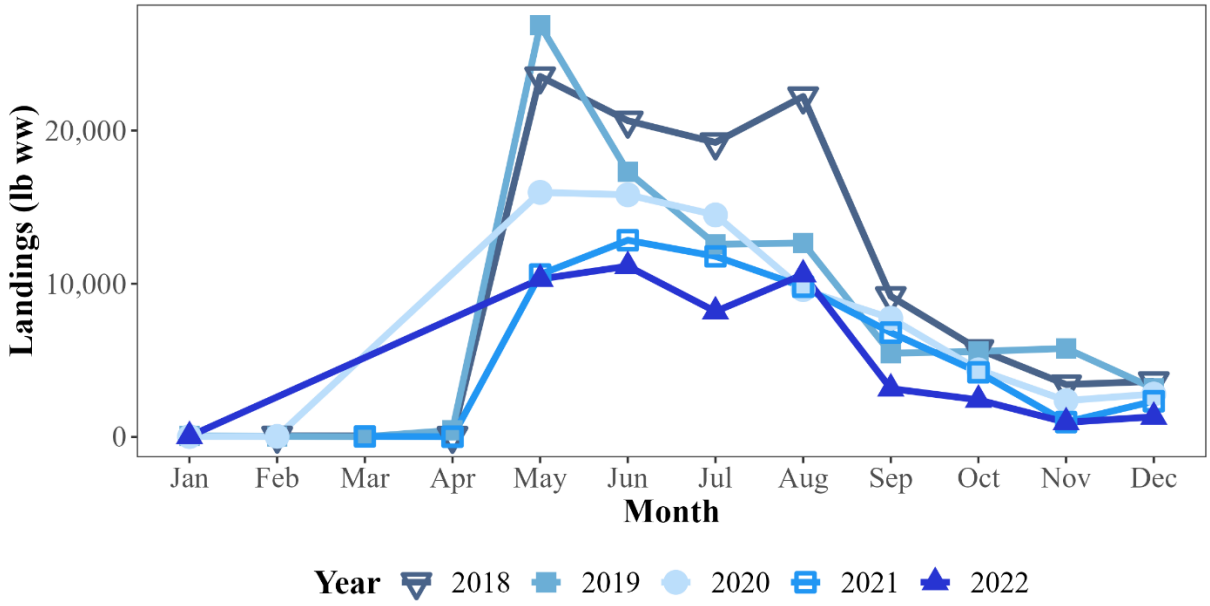

Figure D.1.2.5. Observed commercial landings from 2018-2022 (Source: SEFSC Commercial ACL Data – September 2023).

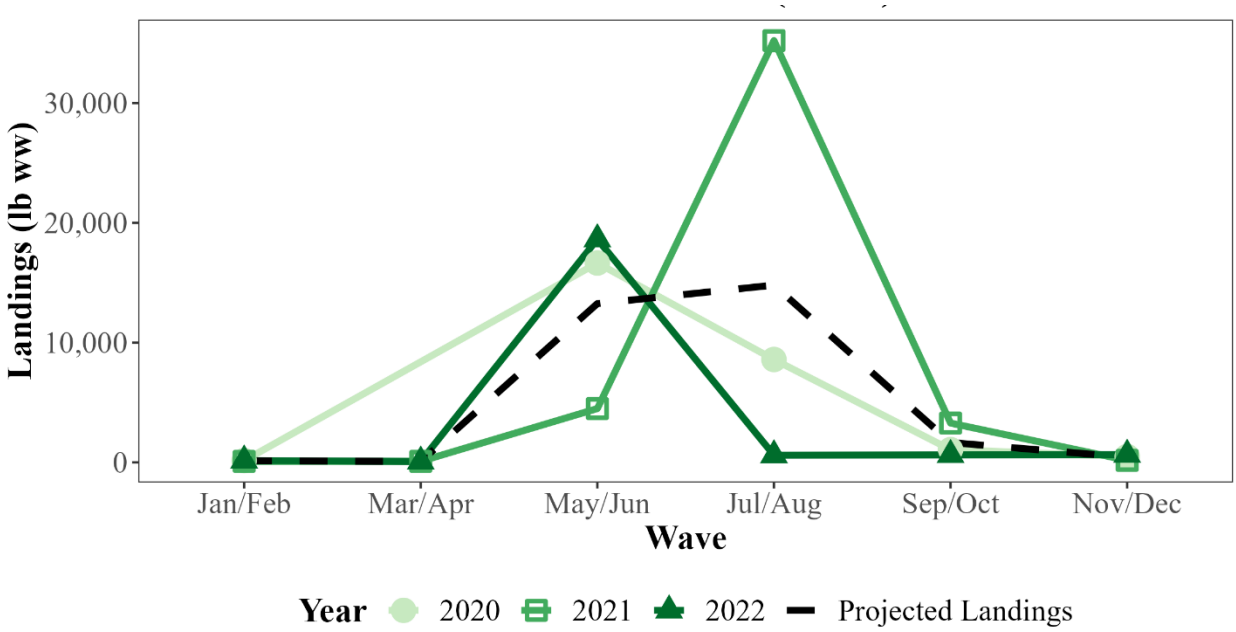

Figure D.1.2.6. Observed and projected recreational landing by wave, including MRIP-FES recreational landings from shore and private boat fishing modes, FHS landings for charter vessels, and SRHS landings for headboat vessels (Source: MRIP-FES Recreational data – August 2023).

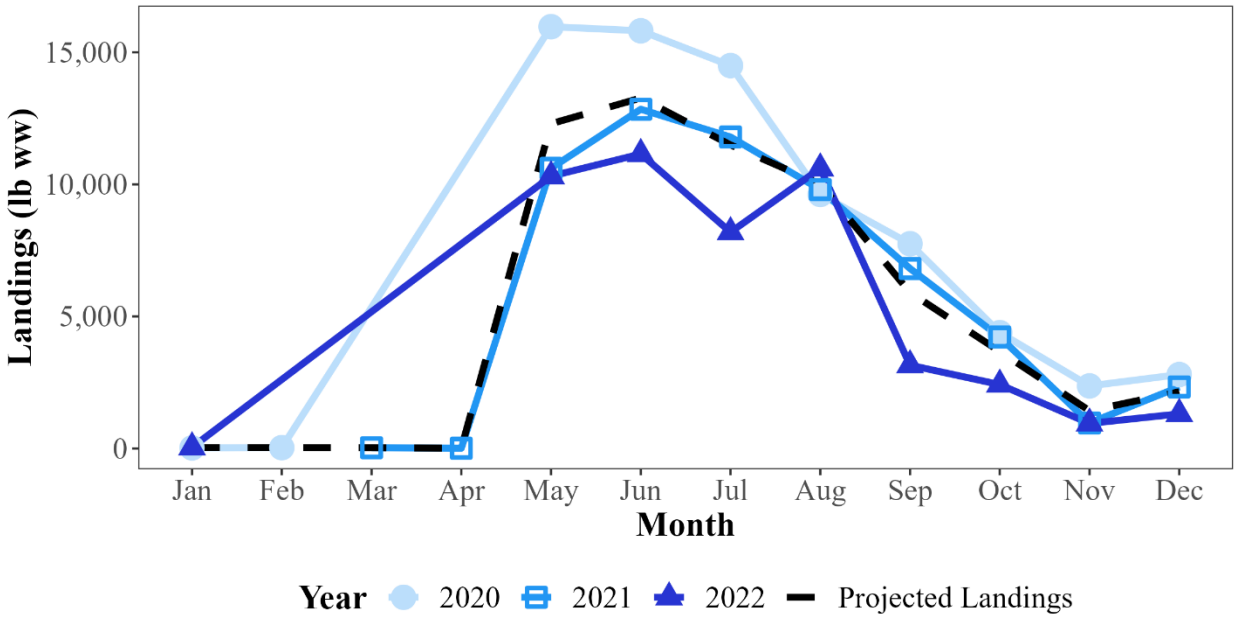

Figure D.1.2.7. Observed and projected commercial landings from 2020-2022 (Source: SEFSC Commercial ACL data – September 2023).

The projected landings were used to calculate daily recreational and commercial landings estimates. These estimates were summed cumulatively by sector and compared against the catch

limit values for each year of the rebuilding period to project when the ACLs might be met. In the first three years of the rebuilding period both fishing sectors are projected to meet their sector ACL in August or early September (Tables D.1.2.5 and D.1.2.6). This result should be expected because the stock landings (recreational and commercial landings combined) in the last three years have exceeded the proposed ACLs for every catch limit alternative, using smoothed landings (Figure D.1.2.8). The current landing behavior shows the highest rates of harvest in the summer months immediately after the season begins, which will likely lead to the ACL being met much sooner with the reduced catch levels proposed in Action 4.

Table D.1.2.5. Predictions for when scamp / yellowmouth grouper recreational ACLs would be met under the preferred alternatives for Action 4 (ACL Alternative 2 – ACL = ABC) and Action 5 (Alternative 2 – Split Reduction Method using average landings from 2018-2022).

Preferred ACL Alternative: Action 4 - Alternative 2 (ACL = ABC)	Preferred Recreational Allocation % (Action 5 - Alternative 2: Split Reduction w/ 2018-2022 landings)	Recreational ACL (lbs ww)	ACL Met	Approx. Days
67,450 (2025)	35.10%	23,678	Wave 4	104
72,200 (2026)	36.08%	26,053	Wave 4	114
75,050 (2027)	36.61%	27,478	Wave 4	120
77,900 (2028)	37.10%	28,903	Wave 5	154
79,800 (2029)	37.41%	29,853	Wave 6	203

Table D.1.2.6. Predictions for when scamp / yellowmouth grouper commercial ACLs would be met under the preferred alternatives for Action 4 (ACL Alternative 2 – ABC = Total ACL) and Action 5 (Alternative 2 – Split Reduction Method using average landings from 2018-2022).

Preferred ACL Alternative: Action 4 - Alternative 2 (ACL = ABC)	Preferred Commercial Allocation % (Action 5 - Alternative 2: Split Reduction w/ 2018-2022 landings)	Commercial ACL (lbs ww)	ACL Met	Approx. Days
67,450 (2025)	64.90%	43,772	21-Aug	112
72,200 (2026)	63.92%	46,147	29-Aug	120
75,050 (2027)	63.39%	47,572	3-Sep	125
77,900 (2028)	62.90%	48,997	10-Sep	132
79,800 (2029)	62.59%	49,947	15-Sep	137

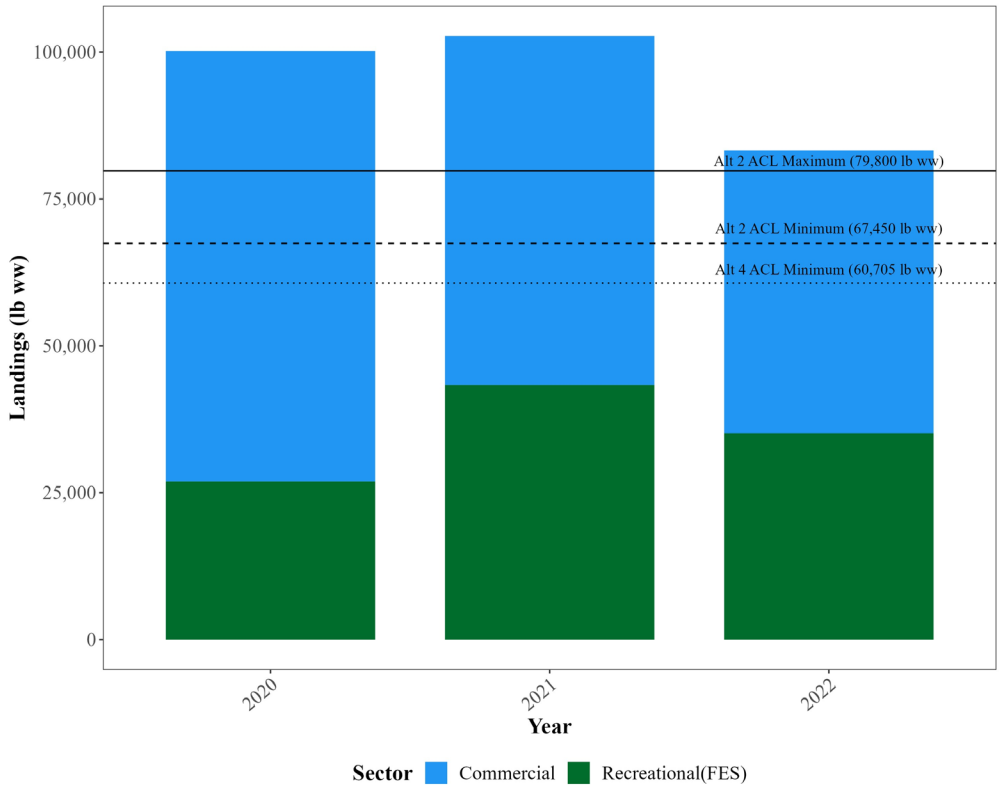

Figure D.1.2.8. Total stock landings of scamp and yellowmouth grouper by sector for the last 3 years, using the smoothed recreational landings that replace values with high PSEs. Reference lines show the highest and lowest catch limit values for Action 4: Preferred Alternative 2 (ACL=ABC) and the minimum value for catch limit Action 4: Alternative 4 (90% of ABC).

Management Measure Analyses - Data Sources

During the December 2023 South Atlantic Council Meeting, additional catch limit analyses were requested to investigate how various management measures would influence the catch limit analysis described above. These measures included evaluating the impact of seasonal closure alternatives for the recreational sector, a bag / vessel limit analysis to explore reduced harvest for the recreational sector, and a trip limit analysis to explore reduced harvest per trip alternatives for the commercial sector. These additional analyses required the continued use of the ACL Monitoring datasets provided by the SEFSC (SEFSC Commercial ACL Monitoring data – September 2023, SEFSC Recreational – FES ACL Monitoring data – August 2023) to project daily landings rates for each sector, SEFSC Commercial logbook data (March 2023), SRHS logbook data (August 2023), and publicly accessible MRIP dockside trip and catch data (https://www.fisheries.noaa.gov/recreational-fishing-data). Additional data filtering will be described for each analysis described below.

Seasonal Closure Analysis

Seasonal closure alternatives were investigated for the recreational sector (Table D.1.2.7). The catch limit analysis was updated by removing daily landings in months associated with the additional closure period proposed for each alternative. The projected landings estimates used in the original catch limit analysis were otherwise unadjusted. These daily landings estimates were summed cumulatively for the recreational sector and compared against the catch limit values for the rebuilding period associated with each sector (Table D.1.2.8). The highest harvest rates for scamp and yellowmouth grouper occur in the early months of the fishing season, between May and August. The seasonal closures will not slow the rate of harvest projected, but would only confine landing to a specific shortened time frame. The implementation of a restrictive seasonal closure may prevent the ACL from being exceeded in some years in the rebuilding period for Alternative 2 and Alternative 3, but the ACLs are likely to be met in August or September for most years. It is difficult to monitor recreational landings in season because of the survey based generation of landings estimates.

Table D.1.2.7. Seasonal closure alternatives. Months when the fishery is closed are indicated in red, and months when the fishery is open are indicated in gray (for both the commercial and recreational sectors).

Alternatives	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Preferred Alternative 1 (No Action): Season Closed January 1 to April 30												
Alternative 2: Season Closed January 1 to April 30 and September 1 to December 31												
Alternative 3: Season Closed January 1 to April 30 and October 1 to December 31												

Table D.1.2.8. Predictions for when scamp / yellowmouth grouper ACLs would be met under the preferred catch level alternative (Action 4: Alternative 2 – ABC=ACL) and preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings from 2018-2022) for each seasonal closure alternative (previously Action 6, see Appendix F for details) for the recreational sector. Dashes in cell represent a scenario when the ACL is not anticipated to be met. Preferred alternative is bolded.

Year	Recreational Sector ACL lbs (ww)	Preferred Alternative 1: No Action (Fishing Season: May 1-Dec 31)		Alternative 2: Fishing Season (May 1 - Aug 31)		Alternative 3: Fishing Season (May 1 - Sep 30)	
		ACL Met	*Approx. Days*	*ACL Met*	*Approx. Days*	*ACL Met*	*Approx. Days*
2025	23,678	**Wave 4**	**104**	Wave 4	104	Wave 4	104
2026	26,053	**Wave 4**	**114**	Wave 4	114	Wave 4	114
2027	27,478	**Wave 4**	**120**	Wave 4	120	Wave 4	120
2028	28,903	**Wave 5**	**154**	-	123	-	153
2029	29,853	**Wave 6**	**203**	-	123	-	153
Maximum	**Season Length**	**31-Dec**	**245**	31-Aug	123	30-Sep	153

Recreational Bag / Vessel Limit Analysis

Various alternatives for investigating the impacts of bag and vessel limits on the catch limit analysis for the recreational sector were proposed. To evaluate each alternative, the percent reduction in catch associated with each alternative was calculated. Publicly available MRIP trip and catch files for 2018 to 2022 were used to evaluate the expected percent reduction in catch associated with each alternative associated with the private boat and charter fleet. Only 51 records, for both private boats and charter vessels, indicated that scamp or yellowmouth grouper were harvested. Instead of adding additional years of less recent data to increase sample size, the percent reduction for the private boat and charter fleets were calculated together. This is based on the assumption that the two fleets fish in similar ways. The SRHS logbook data were restricted to the same time period, 2018 to 2022, resulting in 932 trip reports. The bag or vessel distribution was calculated for each fleet, to better understand the distribution of scamp / yellowmouth grouper catches (Figures D.1.2.9 & D.1.2.10). The majority of angler trips harvested less than 3 scamp or yellowmouth grouper, whereas total catch for vessels showed a more broad distribution of scamp and yellowmouth grouper harvest by vessel trip.

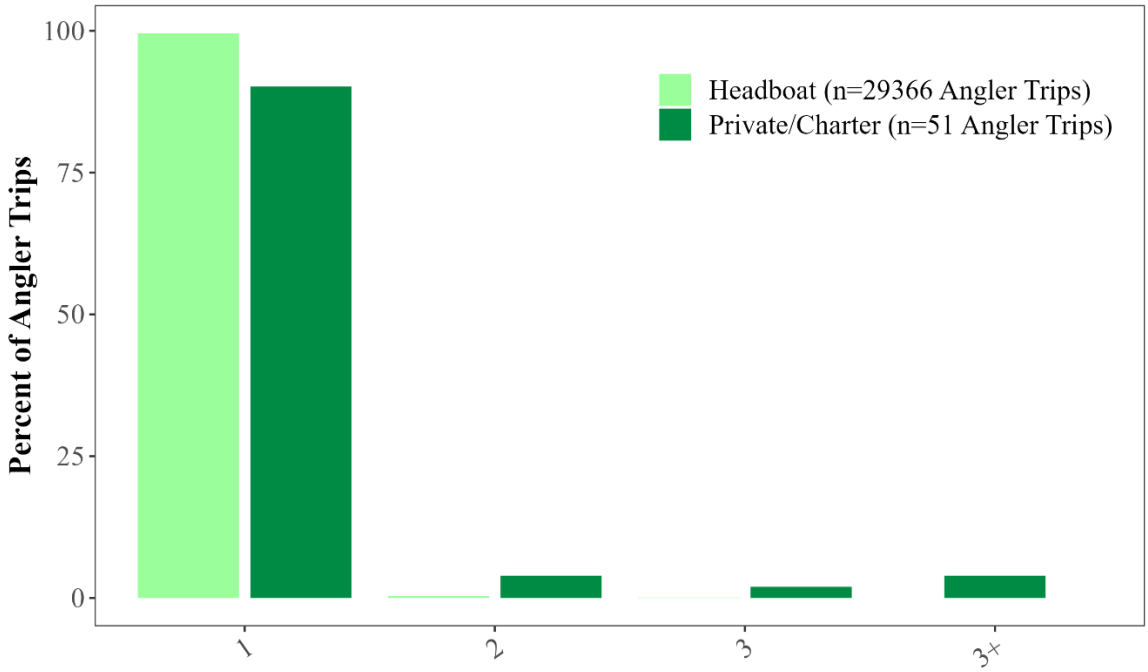

Figure D.1.2.9. Distribution of scamp and yellowmouth grouper angler harvest from dockside intercept and headboat logbook data from 2018-2022, by recreational fleet.

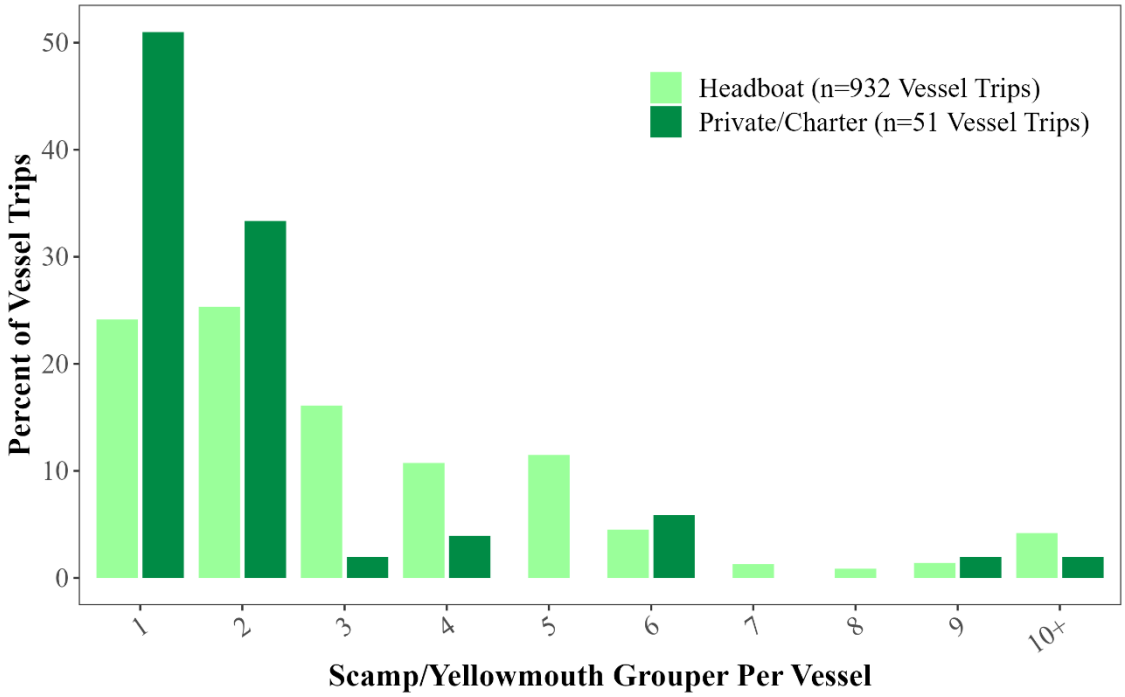

Figure D.1.2.10. Distribution of scamp and yellowmouth grouper vessel harvest from dockside intercept and headboat logbook data from 2018-2022, by recreational fleet.

To investigate each bag and vessel limit alternative, a percent reduction in landings was calculated by determining the proportion of catch associated with each alternative. If an angler bag or vessel catch value 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 2 scamp and 2 yellowmouth grouper were harvested, for previously Action 7a – Alternative 3, the bag value was changed to 1 instead of 4 to match the maximum allowable catch. The final percent reduction was calculated by dividing the harvest from each alternative by the harvest from the No Action alternative (Table D.1.2.9).

Table D.1.2.9. Proposed recreational bag and vessel limit alternatives and associated percent reduction for each alternative (previously Action 7a and b, see Appendix F for full details).

Action	Alternative	Private	Charter	Headboat
Action 7a	Alternative 1 (No Action): 3 scamp or yellowmouth grouper per angler per day	0.0%	0.0%	0.0%
	Alternative 2: 2 scamp or yellowmouth grouper per angler per day	-18.1%	-18.1%	-0.7%
	Preferred Alternative 3: 1 scamp or yellowmouth grouper per angler per day	**-28.6%**	**-28.6%**	**-6.1%**
Action 7b	**Preferred Alternative 1 (No Action): No Vessel Limit**	**0.0%**	**0.0%**	**0.0%**
	Alternative 2a: 2 fish per vessel limit for private recreational vessels; not to exceed the daily bag limit of 3 fish, whichever is more restrictive	-30.0%	0.0%	0.0%
	Alternative 2b: 4 fish per vessel limit for private recreational vessels; not to exceed the daily bag limit of 3 fish, whichever is more restrictive	-16.2%	0.0%	0.0%
	Alternative 3a: 2 fish per vessel limit for for-hire vessels; not to exceed the daily bag limit of 3 fish, whichever is more restrictive	0.0%	-30.0%	-47.1%
	Alternative 3b: 4 fish per vessel limit for for-hire vessels; not to exceed the daily bag limit of 3 fish, whichever is more restrictive	0.0%	-16.2%	-21.5%

These reductions were applied to the daily landing rate for each recreational fleet for the various bag / vessel limit alternatives, with the preferred catch limit alternative (Action 4: Alternative 2 –

ABC=ACL) and preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022). The fleet averages were then aggregated to generate a sector level daily landing rate and were then summed cumulatively and compared to each sector ACL for the rebuilding period. The introduction of a bag limit may help to extend the length of the recreational season for most years of the rebuilding period, with all years of the rebuilding period projected to avoid a closure if a 1 fish aggregate complex bag limit is adopted (Table D.1.2.10). The implementation of a vessel limit for the private boat fleet is more likely to extend the recreational fishing season, as the private boat fleet lands a higher proportion of scamp / yellowmouth grouper during summer months (Table D.1.2.11). The daily landing rates associated with each alternative were summed cumulatively and plotted for the first year of the rebuilding period, when the catch limit is most tightly constrained, for each bag and vessel limit alternative (Figures D.1.2.11, D.1.2.12, and D.1.2.13). The 4 fish per day / trip vessel limits do not extend the season much past the projections for the no action alternative because the majority of vessel trips harvest less fish than the 4 fish limit. The restrictive nature of the 2 fish per day / trip vessel limits slows the daily catch rate enough to extend the fishing season more than the 2 fish per person bag limit. For both the 2 and 4 fish vessel limit scenarios, reducing harvest in the private boat fleet has a more substantial impact on season length, as this fleet has the highest daily landing rate within the recreational fleet. It should be noted that fleet level landings were quite variable between years, with some fleets landing near zero landings for some waves and years and much higher landings for other waves and years. If landing behavior is high for all recreational fleets in a given year, the season lengths would likely be shorter than what is projected in this analysis.

Table D.1.2.10. Predictions for when scamp / yellowmouth grouper ACLs would be met under with the preferred catch limit alternative (Action 4: Alternative 2 – ABC=ACL), preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022), and each bag limit alternative (Action 7a) for the recreational sector. The fishing season is from May 1 to December 31 (previously Action 6: Preferred Alternative 1 [No Action]). Dashes in cell represent a scenario when the ACL is not anticipated to be met.

Year	Sector ACL (lbs ww)	Alternative 1 (No Action - No Recreational Bag Limit)		Alternative 2 (2 fish aggregate complex bag limit)		Preferred Alternative 3 (1 fish aggregate complex bag limit)	
		ACL Met	Approx. Days	ACL Met	Approx. Days	ACL Met	Approx. Days
2025	23,678	Wave 4	104	Wave 5	130	-	**245**
2026	26,053	Wave 4	114	-	245	-	**245**
2027	27,478	Wave 4	120	-	245	-	**245**
2028	28,903	Wave 5	154	-	245	-	**245**
2029	29,853	Wave 6	203	-	245	-	**245**

Table D.1.2.11. Predictions for when scamp / yellowmouth grouper ACLs would be met under with the preferred catch limit alternative (Action 4: Alternative 2 – ABC=ACL), preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022), and each vessel limit alternative (Action 7b) for the recreational sector. The fishing season is from May 1 to December 31 (previously Action 6: Preferred Alternative 1 [No Action]). Dashes in cell represent a scenario when the ACL is not anticipated to be met.

Year	Sector ACL (lbs ww)	Preferred Alternative 1 (No Action - No Recreational Vessel Limit)		Alternative 2a - 2 fish per vessel per day - Private Boats		Alternative 2b - 4 fish per vessel per day - Private Boats		Alternative 3a - 2 fish per vessel per trip - For Hire Vessels		Alternative 3b - 4 fish per vessel per trip - For Hire Vessels	
		ACL Met	Approx. Days	ACL Met	Approx. Days	ACL Met	Approx. Days	ACL Met	Approx. Days	ACL Met	Approx. Days
2025	23,678	**Wave 4**	**104**	Wave 5	170	Wave 4	116	Wave 4	117	Wave 4	110
2026	26,053	**Wave 4**	**114**	-	245	Wave 5	162	Wave 6	226	Wave 4	121
2027	27,478	**Wave 4**	**120**	-	245	-	245	-	245	Wave 5	170
2028	28,903	**Wave 5**	**154**	-	245	-	245	-	245	-	245
2029	29,853	**Wave 6**	**203**	-	245	-	245	-	245	-	245

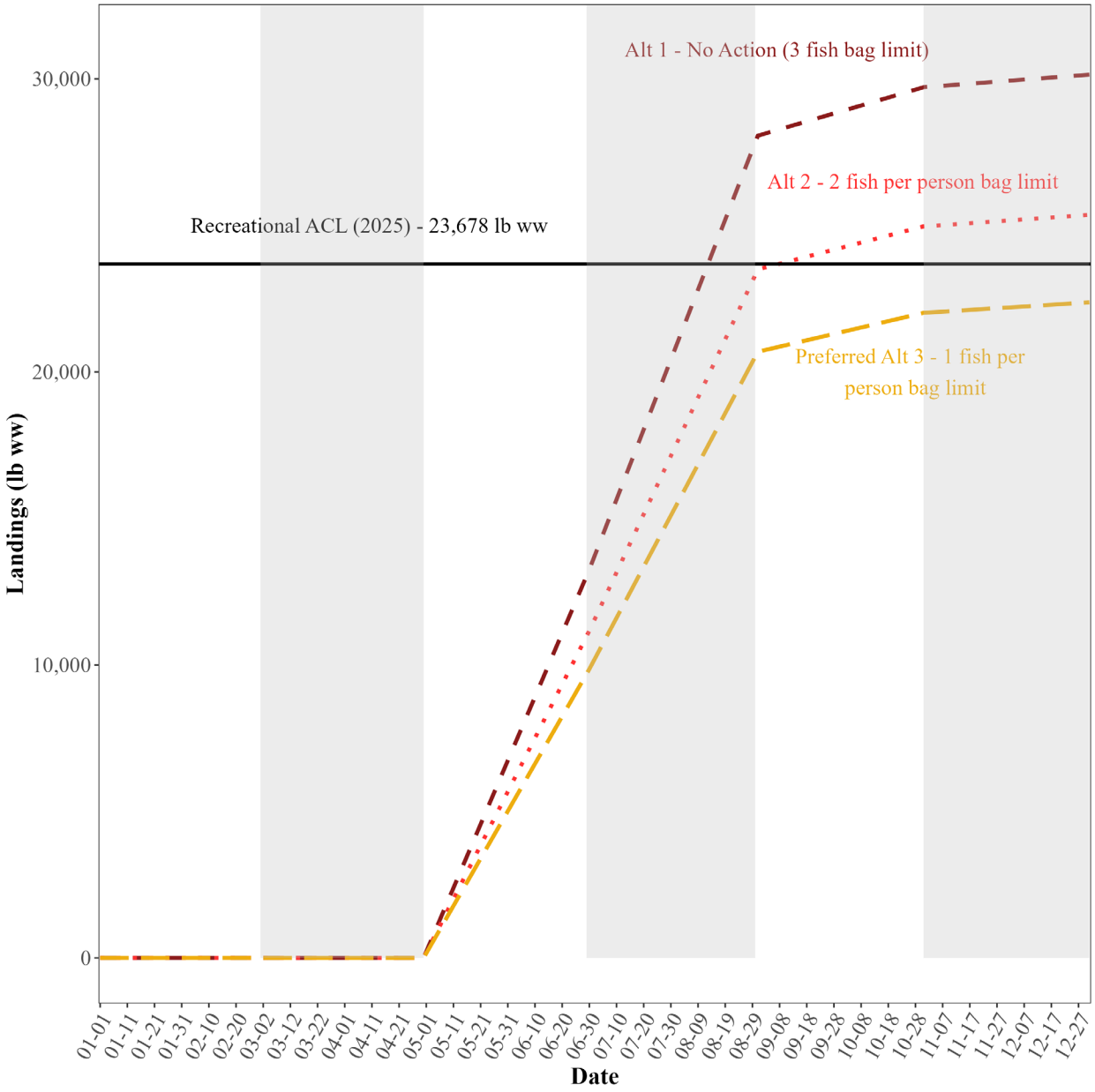

Figure D.1.2.11. Cumulative sum of projected daily landings for each bag limit alternative in Action 7a, for the first year of the rebuilding period. The transition from white to gray background indicates the start of a new fishing wave.

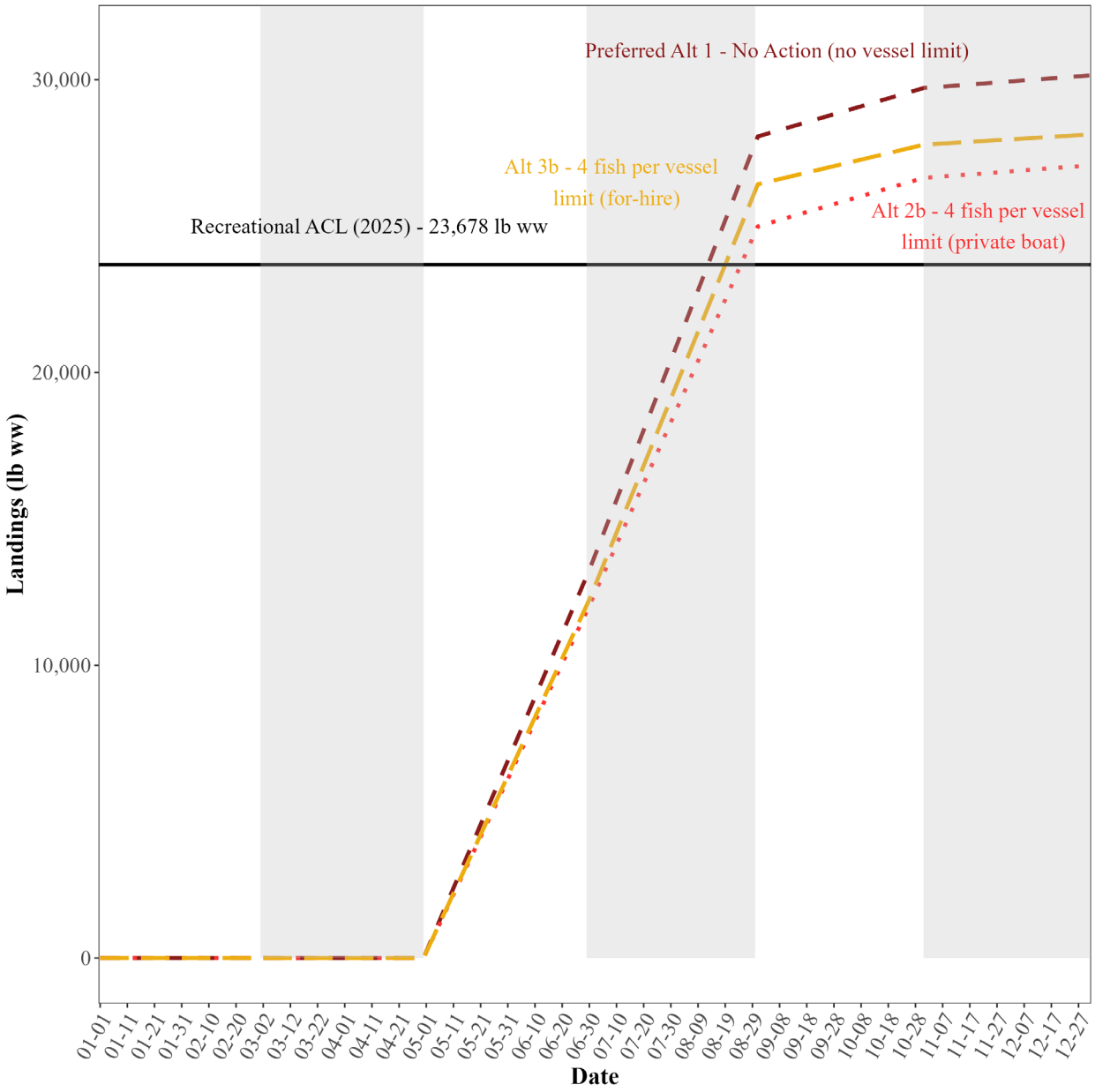

Figure D.1.2.12. Cumulative sum of projected daily landings for the 4 fish per day / trip for Action 7b, for the first year of the rebuilding period. The transition from white to gray background indicates the start of a new fishing wave.

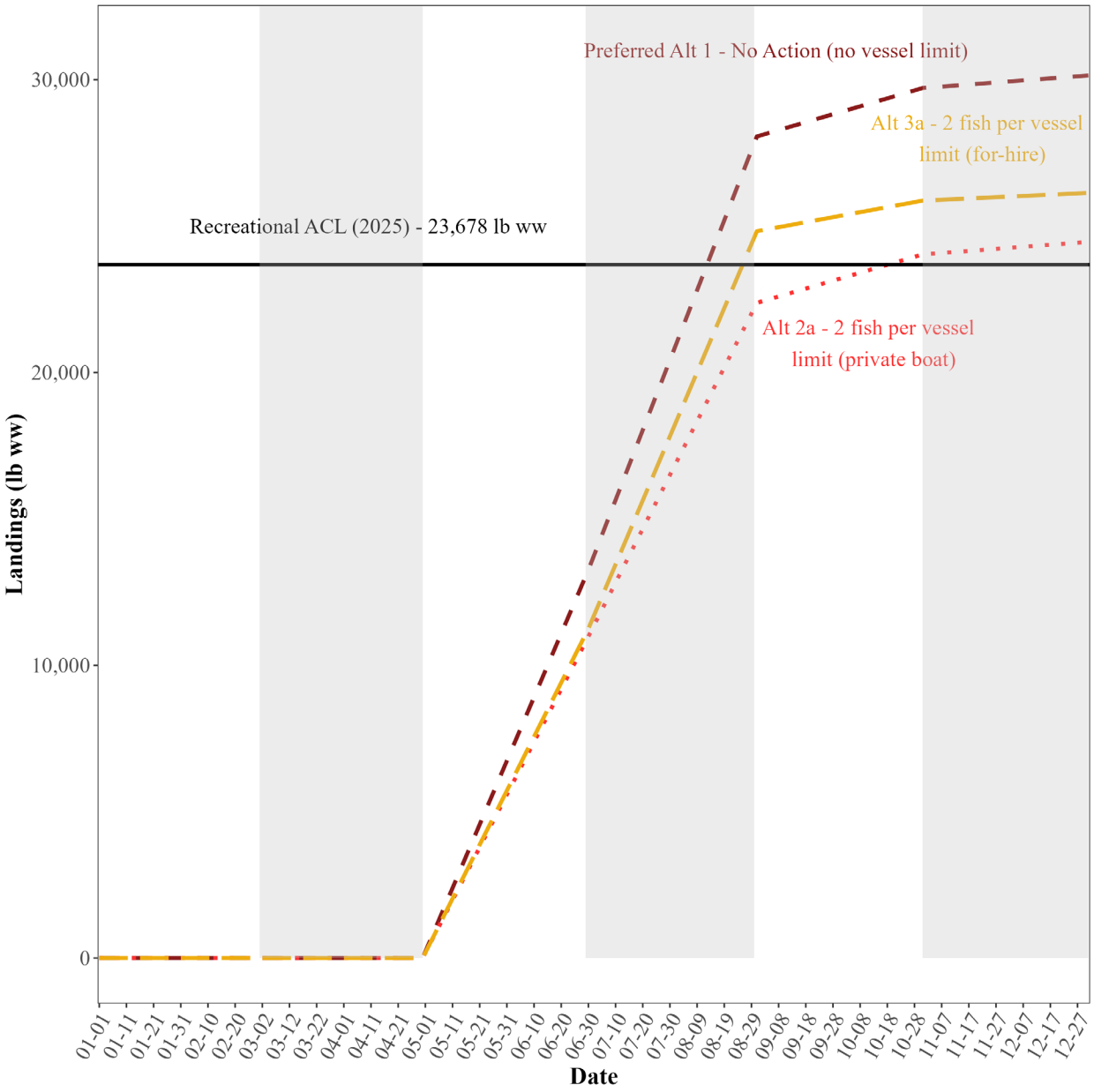

Figure D.1.2.13. Cumulative sum of projected daily landings for the 2 fish per day / trip for Action 7b, for the first year of the rebuilding period. The transition from white to gray background indicates the start of a new fishing wave.

A recreational decision tool was developed to further explore the interactions between bag and vessel limit alternatives and the seasonal closure alternatives. The decision tool allowed users to use drop down menus to select model inputs that reflected the alternatives for allocation percentages (Action 5), season duration (previously Action 6), and bag / vessel limit alternatives (Action 7). The selection of bag and/or vessel limit alternatives, by recreational fleet, resulted in the percent reductions described above being applied to reduce the projected landings in each wave (Figure D.1.2.14).

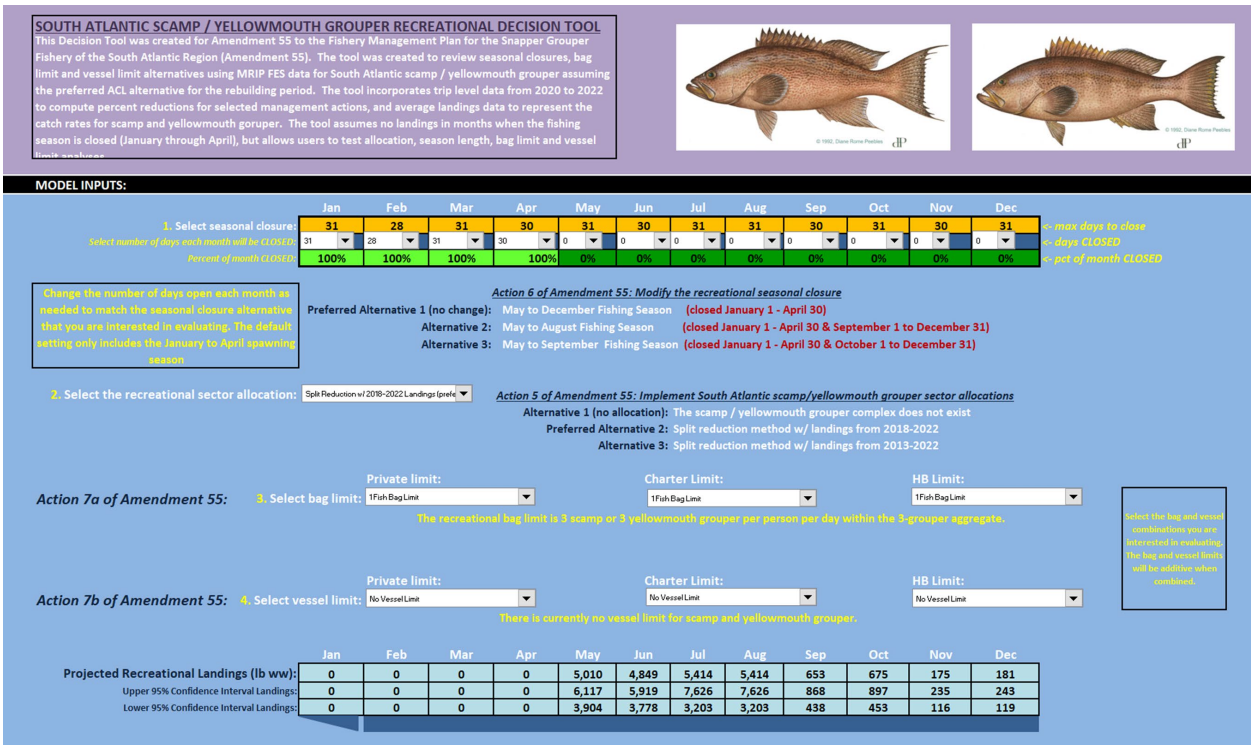

Figure D.1.2.14. Screenshot of the model input selection options for the scamp/yellowmouth recreational data tool.

The model input selections are used to automatically update projection results, using the preferred ACL catch limits for each year of the rebuilding period from Action 4. The cumulative annual landings are summed, with the upper and lower 95% confidence interval displayed. The percentage of landings that are projected to be over or under the catch limit is calculated, and highlighted in yellow when the ACL is projected to be exceeded. Additionally, a Sandbox ACL box is available, for users to enter a specific ACL value and determine if that value is projected to be exceeded (Figure D.1.2.15).

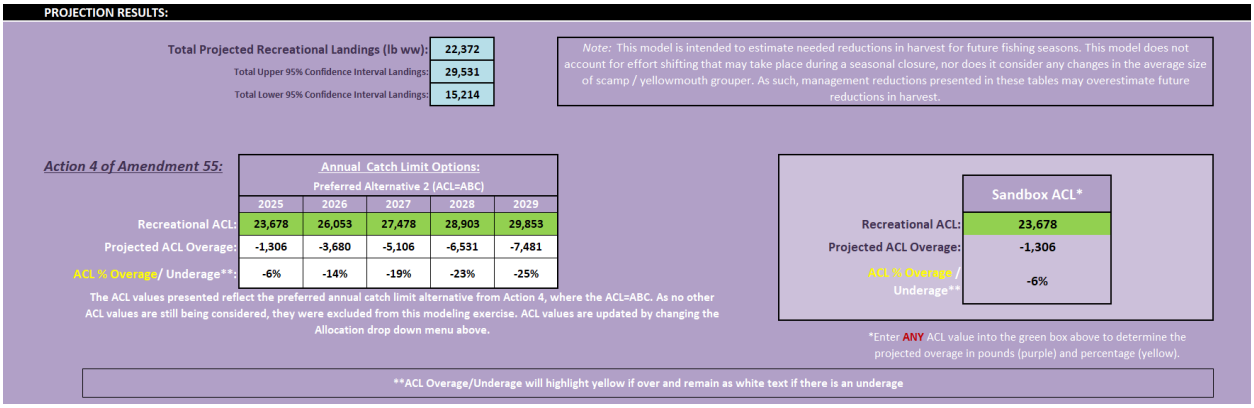

Figure D.1.2.15. Screenshot of the projected results landings in reference to the preferred ACL catch limit values (Action 4: Alternative 2).

Lastly, the decision tool provides a figure that shows the cumulative landings over a calendar year in reference to the preferred ACL catch limit values for some years of the rebuilding period and self-selected Sandbox ACL value (Figure D.1.2.16). The projected closure dates and number of fishing days in the season are also displayed. During the June Council meeting, the tool was used by Council members to compare the season duration when selecting various decision tool inputs. These investigations lead to the selection of Preferred Alternative 3, 1 fish per person bag limit for previously Action 7a. The restrictive bag limit reduces the chance for a seasonal closure, providing a longer fishing season, without the need to implement an additional vessel limit (previously Action 7b – Preferred Alternative 1: No Action).

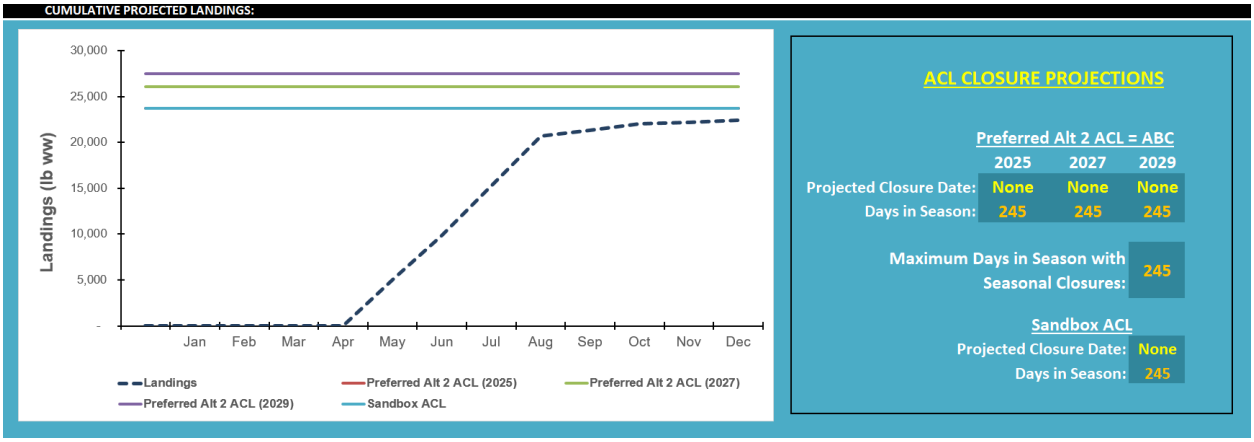

Figure D.1.2.16. Screenshot of projected cumulative landings in reference to preferred ACL catch limit values and projected closure dates.

Commercial Trip Limit Analysis

Several commercial trip limit alternatives were proposed to investigate their impact on the original catch limit analysis. Commercial logbook data were obtained from the SEFSC to conduct a trip limit analysis of commercial scamp and yellowmouth grouper harvest. South Atlantic logbook records were filtered to include only records from 2018 to 2022. The distribution of harvest (lbs ww) per trip was investigated to understand the quantity of scamp and yellowmouth grouper harvested per trip over the last 5 years to determine if landings behavior has changed over time (Figure D.1.2.17). Overall, the distributions were similar over the last 5 years, but the proportion of trips harvesting 50 lbs gw of scamp or yellowmouth grouper increased in more recent years. As a result, only the 3 most recent years of data were used to generate a percent reduction associated with each trip limit scenario (Figure D.1.2.18).

To investigate the trip limit alternatives, a percent reduction in catch was calculated by determining the proportion of harvest associated with each alternative. If a commercial trip harvested more scamp and yellowmouth grouper than the proposed alternative that value was changed to match the maximum value allowed by the proposed alternative. For example, if a commercial trip record indicated that 375 lbs gw of scamp and yellowmouth grouper were harvested, for Action 8 – Alternative 3, the trip harvest value was changed to 300 lbs gw instead of 375 lbs gw to match the maximum allowable catch. The final percent reduction was

calculated by dividing the harvest from each alternative by the harvest from the No Action alternative (Table D.1.2.12). These reductions were applied to the daily landing rate for each of the commercial trip limit alternatives, with the preferred catch limit alternative (Action 4: Alternative 2 – ABC=ACL) and allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022). The daily landings values were summed cumulatively for the commercial sector and compared to the available ACL. Closures were predicted for all trip limit alternatives proposed, but the most restrictive trip limit alternative (200 lbs gw per trip) allowed for the longest fishing season (Table D.1.2.13). Trip limits would potentially reduce harvest levels during the portion of the fishing season when the largest proportion of stock landings occur.

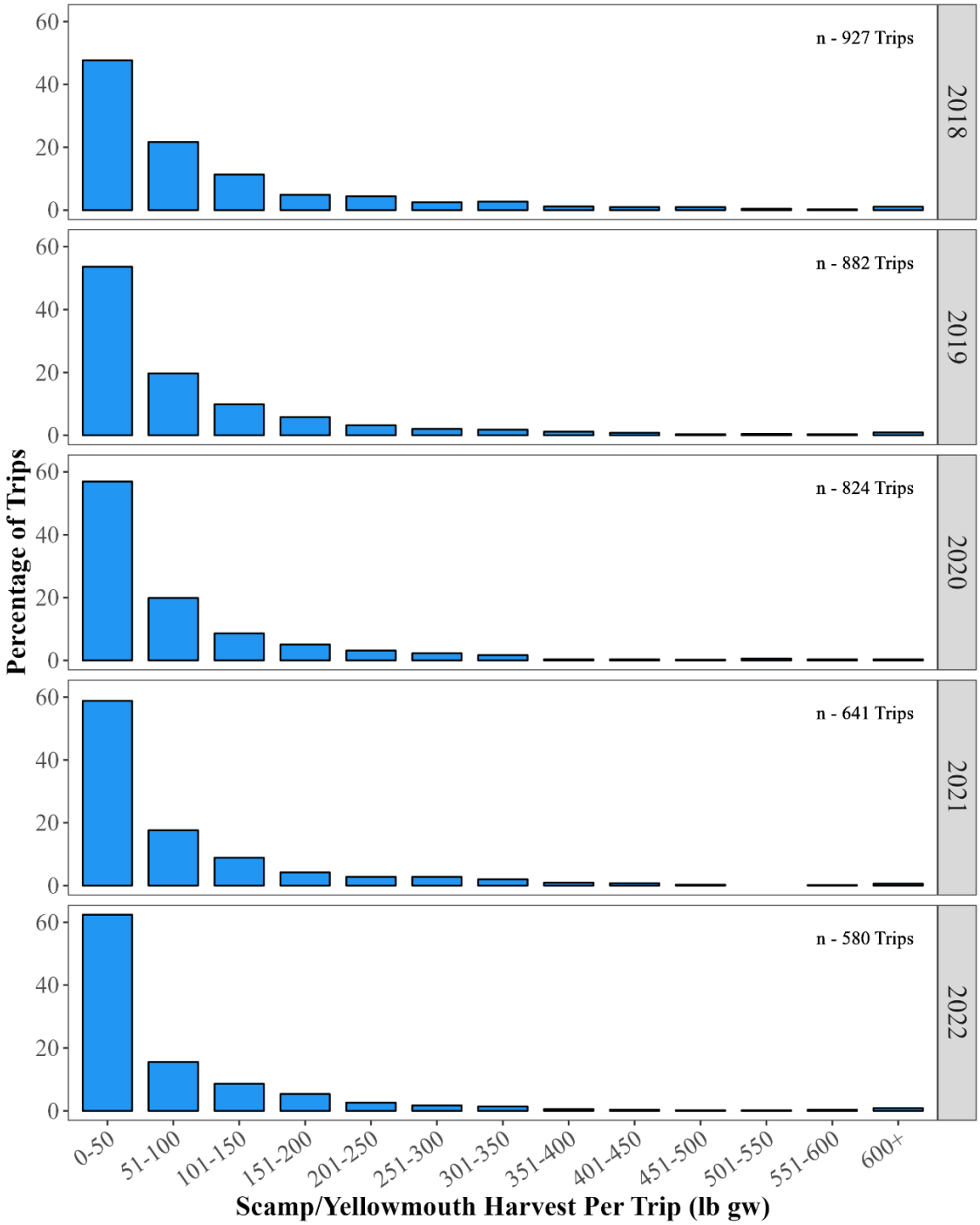

Figure D.1.2.17. Distribution of scamp and yellowmouth grouper trip harvest between 2018 and 2022, in 50 lbs ww bins.

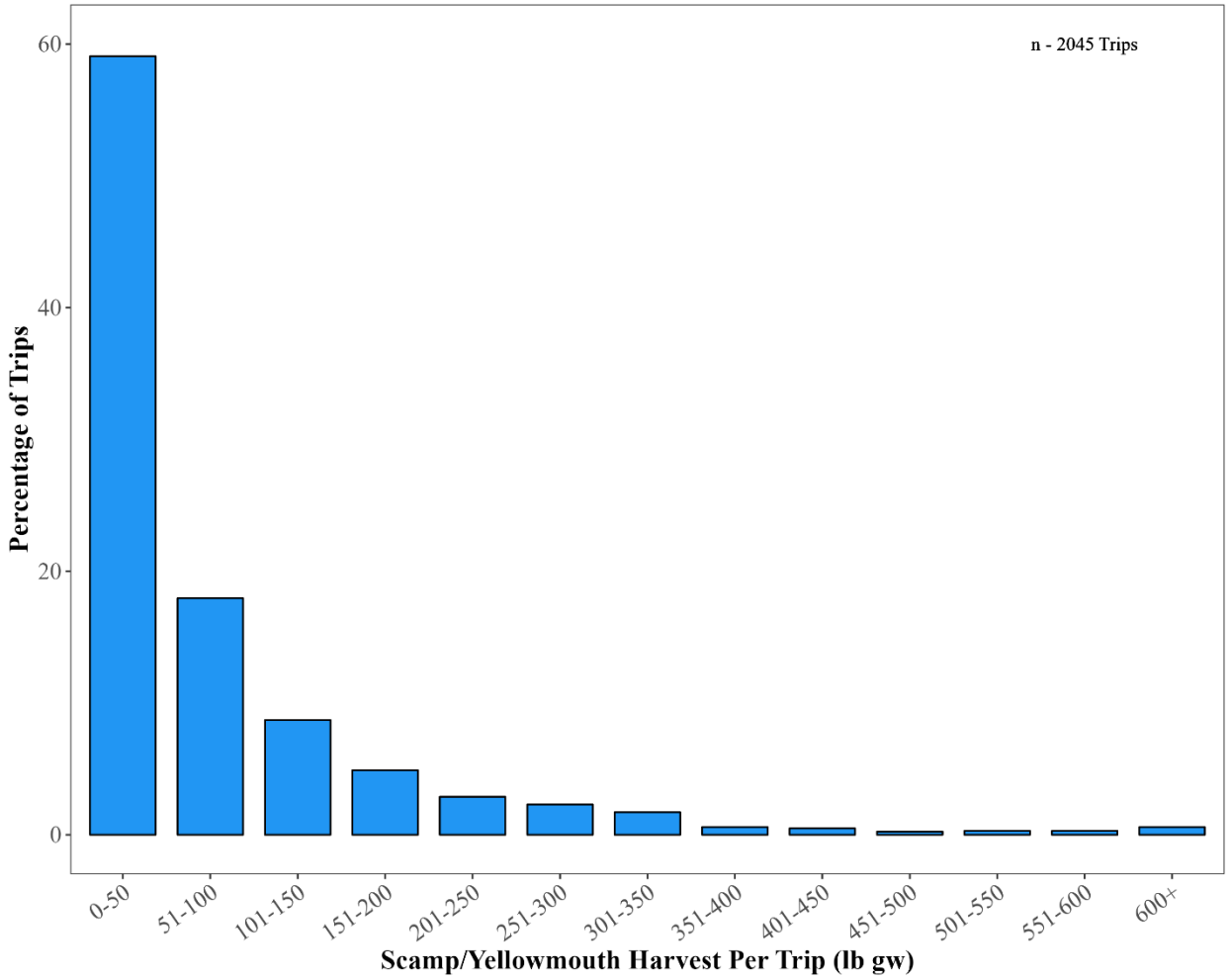

Figure D.1.2.18. Distribution of scamp and yellowmouth grouper trip harvest between 2020 and 2022, all years combined, in 50 lbs ww bins.

Table D.1.2.12. Percent reduction associated with each trip limit alternative associated with the commercial sector.

Alternative	% Reduction
Alternative 1: (No Action)	0.00%
Alternative 2: Establish a 200 lbs gw (236 lbs ww) trip limit	-16.52%
Preferred Alternative 3: Establish a 300 lbs gw (354 lbs ww) trip limit	**-7.96%**
Alternative 4: Establish a 400 lbs gw (472 lbs ww) trip limit	-4.35%
Alternative 5: Establish a 500 lbs gw (590 lbs ww) trip limit	-2.46%

Table D.1.2.13. Predictions for when scamp / yellowmouth grouper ACLs would be met under with the preferred catch limit alternative (Action 4: Alternative 2 – ABC=ACL), preferred allocation alternative (Action 5: Alternative 2 – Split Reduction Method using average landings for 2018-2022), and each trip limit alternative (previously Action 8) for the commercial sector. It is assumed that the fishing season is from May 1 to December 31. Dashes in cell represent a scenario when the ACL is not anticipated to be met.

Year	Commercial ACL lbs gw (lbs ww)	Alternative 1: No Action (No Commercial Trip Limit)		Alternative 2: 200 lbs gw (236 lbs ww) Trip Limit		Preferred Alternative 3: 300 lbs gw (354 lbs ww) Trip Limit		Alternative 4: 400 lbs gw (472 lbs ww) Trip Limit		Alternative 5: 500 lbs gw (590 lbs ww) Trip Limit	
		ACL Met	*Approx. Days*	*ACL Met*	*Approx. Days*	*ACL Met*	*Approx. Days*	*ACL Met*	*Approx. Days*	*ACL Met*	*Approx. Days*
2025	37,095 (43,772)	21-Aug	112	28-Sep	150	**3-Sep**	**125**	27-Aug	118	25-Aug	116
2026	39,108 (46,147)	29-Aug	120	20-Oct	172	**16-Sep**	**138**	6-Sep	128	2-Sep	124
2027	40,315 (47,572)	3-Sep	125	8-Nov	191	**24-Sep**	**146**	14-Sep	136	9-Sep	131
2028	41,523 (48,997)	10-Sep	132	9-Dec	222	**3-Oct**	**155**	22-Sep	144	17-Sep	139
2029	42,328 (49,947)	15-Sep	137	26-Dec	239	**11-Oct**	**163**	27-Sep	149	22-Sep	144

Literature Cited

SEDAR. 2022. SEDAR 68 South Atlantic Scamp Stock Assessment Report. SEDAR, North Charleston SC. 162 pp. available online at: https://sedarweb.org/assessments/sedar-68/

Appendix E. Essential Fish Habitat and Ecosystem Based Fishery Management

1.1 EFH and EFH-HAPC Designations and Cooperative Habitat Policy Development

Summary
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 to designate subsets of EFH to highlight priority areas 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 (SAFMC 2018). Additional detailed information supporting the EFH designations appears in FEP I (SAFMC 2009a), individual FMPs, general information on the EFH provisions of the Magnuson-Stevens Act and its implementing regulations (50 CFR 900 Subparts J and K), and the EFH User Guide (SAFMC 2024).

In addition to implementing regulations to protect habitat from degradation due to fishing activities, the Council cooperates with NMFS to comment on non-fishing projects or policies that may impact EFH. The Council established a Habitat and Ecosystem Advisory Panel (AP) and adopted a comment and policy development process that was recently revised in the Habitat Blueprint (SAFMC 2023). 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 policy statements. To access these policy statements, refer to the habitat website: https://safmc.net/fishery-management-plans/habitat/

Habitat Conservation
The Council has been proactive in advancing habitat conservation through extensive fishing 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; SAFMC 1984) and the FMP for the Sargassum Fishery of the South Atlantic Region (SAFMC 2003).

Ecosystem Approach to Conservation and Management of Deep-water Ecosystems
Building on the long-term conservation approach, the Council facilitated the evolution of the Habitat Plan into FEP (SAFMC 2009a) and FEP II (SAFMC 2018) to assemble information on the physical, biological, and human/institutional context of ecosystems within which fisheries are

managed. These two documents were intended to initiate the transition from single species management to Ecosystem-Based Fisheries Management (EBFM) in the region. To support this, the South Atlantic 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 and cultural diversity.

Through Comprehensive Ecosystem-Based Amendment 1 (CE-BA 1;SAFMC 2009b), Comprehensive Ecosystem-Based Amendment 2 (SAFMC 2011), and Coral Amendment 8 (SAFMC 2013), the South Atlantic Council established and expanded deep-water coral HAPCs (CHAPCs) and co-designated them as EFH-HAPCs.

1.2 EFH for species managed under the Snapper Grouper FMP

EFH for species managed under the Snapper Grouper FMP includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters (m) (but to at least 610 m for wreckfish) where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for larval survival and growth, up to and including settlement. In addition, the Gulf Stream is EFH because it provides a mechanism to disperse snapper grouper species larvae.

For specific life stages of estuarine dependent and nearshore snapper grouper species, EFH includes areas inshore of the 31 m contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom.

1.3 HAPC for species managed under the Snapper Grouper FMP

EFH-HAPC for species managed under the Snapper Grouper FMP include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; nearshore 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; and Council-designated Special Management Zones (SMZ).Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, post-larval, juvenile, and adult stages).

EFH-HAPCs for Golden Tilefish includes irregular bottom comprised of troughs and terraces inter-mingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300m are HAPC.

Golden tilefish are generally found in 80-540 m, but most commonly found in 200 m depths. EFH-HAPC for Blueline Tilefish includes irregular bottom habitats along the shelf edge in 45-65 m depth; shelf break; or upper slope along the 100-fathom contour (150-225 m); hard bottom habitats characterized as rock overhangs, rock outcrops, manganese-phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston Lumps) off Georgetown, South Carolina.

EFH-HAPCs for the Snapper Grouper complex include the following deep-water marine protected areas (MPA) as designated in Amendment 14 to the Snapper Grouper FMP: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

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 process, 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 on protecting the relatively small habitats, which are known to attract desirable snapper grouper species.

In CE-BA 1 (SAFMC 2009b), the Council determined that SMZs met the criteria to be EFH-HAPCs for species included in the Snapper Grouper FMP. Since CE-BA 1 (SAFMC 2009b), the Council has designated additional SMZs in the Snapper Grouper FMP including Spawning SMZs. The SMZ and EFH-HAPC designations serve similar purposes in identifying and protecting valuable and unique habitat for the benefit of fish populations, which are important to both fish and fishers. Therefore, the Council 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 also be designated as EFH-HAPCs under the Snapper Grouper FMP.

References:

GMFMC (Gulf of Mexico Fishery Management Council and SAFMC (South Atlantic Fishery Management Council). 1984. FMP for Coral, Coral Reefs of the Gulf of Mexico and South Atlantic (Coral FMP). Gulf of Mexico Fishery Management Council 4107 W Spruce St #200, Tampa, FL 33607 and the South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC (South Atlantic Fishery Management Council). 2003. Fishery Management Plan for the Sargassum Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC. 2009a. Fishery Ecosystem Plan I of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC. 2009b. Comprehensive Ecosystem-Based Amendment 1 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC. 2011. Comprehensive Ecosystem-Based Amendment 2 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC. 2013. Amendment 8 to the Fishery Management Plan for Coral, Coral Reefs, and Live/Hardbottom Habitats of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

SAFMC. 2018. Fishery Ecosystem Plan II of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC. 2023. South Atlantic Fishery Management Council Habitat Program Evaluation and Blueprint. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

SAFMC. 2024. Users Guide to Essential Fish Habitat Designations by the South Atlantic Fishery Management Council. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, North Charleston, SC 29405.

Appendix F. Actions and Alternatives Removed from Consideration

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex

> **Alternative 4.** Allocate 63.40% of the total annual catch limit of Scamp and Yellowmouth Grouper complex to the commercial sector and 36.60% to the recreational sector.
>
> **Alternative 5.** Allocate 64.90% of the total annual catch limit of Scamp and Yellowmouth Grouper complex to the commercial sector and 35.10% to the recreational sector.

Discussion: **Alternative 4** and **Alternative 5** were removed from consideration for Action 5 because of the similarity in the allocation percentage with **Preferred Alternative 2** and **Alternative 3**. The Council felt that the aforementioned alternatives provided similar allocation percentages while using a method of allocating that provided more fairness and equity between the sectors.

Action 6. Reduce the recreational fishing season for scamp and yellowmouth grouper

> **Alternative 2.** Reduce the recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone to be open May 1 through July 31. The season will be closed January 1 through April 30 (spawning season closure) and August 1 through December 31.

Discussion: **Alternative 2** and was removed from Action 6 because of how the fishery has been operating in recent years. Recreational data from 2018 through 2022 show that landings peak when the annual spawning season closure ends in May and again at the end of the summer, however after mid-August landings naturally taper off. The Council decided that this alternative would remove months that were crucial for recreational fishermen to have access to the fishery. The remaining alternatives provided a season that would allow access while still constraining the fishery, specifically when landings increase throughout the rebuilding plan.

Action 6. Reduce the recreational fishing season for scamp and yellowmouth grouper

> **Preferred Alternative 1 (No Action)**. The recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone is open May 1 – December 31. A spawning season closure is in place annually from January 1 through April 30.
>
> **Alternative 2**. Reduce the recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone to be open May 1 through August 31. The

season will be closed January 1 through April 30 (spawning season closure) and September 1 through December 31.

Alternative 3. Reduce the recreational fishing season for scamp and yellowmouth grouper in the exclusive economic zone to be open May 1 through September 30. The season will be closed January 1 through April 30 (spawning season closure) and October 1 through December 31.

Discussion: In March 2024, after the removal of previous **Alternative 2** (explained above), the Council selected **Alternative 2** as the preferred alternative for this action, noting that reducing the recreational season may help to achieve reductions in landings that are needed to rebuild the scamp and yellowmouth grouper stock complex. The Council noted that recreational landings of scamp and yellowmouth grouper are highest in May, when the shallow water grouper spawning season closure ends and then again in August, tapering off into September. The Council felt as though closing the season at the end of August might help to constrain landings while still maintaining access during peak landings months.

In June 2024 the Snapper Grouper AP provided their feedback that the recreational sector would prefer additional management measures or a reduced ACL in favor of retaining access through the end of the year. This feedback, combined with the projections which indicated that a bag limit alone would effectively limit recreational harvest without limiting access, led the Council to change the selected preferred to **Alternative 1 (No Action)**, therefore removing action 6 from consideration.

Sub-Action 7b. Establish a recreational vessel limit

Preferred Alternative 1 (No Action). There is no vessel limit for scamp and yellowmouth grouper.

Alternative 2. Establish a private recreational aggregate vessel limit for scamp and yellowmouth grouper of:

Sub-alternative 2a. 2 fish (either scamp or yellowmouth grouper combined) per vessel per **day**, not to exceed the daily bag limit, whichever is more restrictive.

Sub-alternative 2b. 4 fish (either scamp or yellowmouth grouper combined) per vessel per **day,** not to exceed the daily bag limit, whichever is more restrictive.

Alternative 3. Establish a for-hire (charter vessel/headboat) recreational aggregate vessel limit for scamp and yellowmouth grouper of:

Sub-alternative 3a. 2 fish (either scamp or yellowmouth grouper combined) per vessel per **trip,** not to exceed the daily bag limit, whichever is more restrictive.

Sub-alternative 3b. 4 fish (either scamp or yellowmouth grouper combined) per vessel per **trip,** not to exceed the daily bag limit, whichever is more restrictive.

Discussion: The Council considered establishing a recreational vessel limit to further constrain recreational harvest of scamp and yellowmouth grouper to the reduced catch levels and help to rebuild the stock. The alternatives included were developed to mirror those established for gag and black grouper, species commonly caught with scamp and yellowmouth grouper. After considering the Snapper Grouper APs input on the recreational retention and the projections for the preferred aggregate bag limit alternative, the Council decided that establishing a vessel limit would unnecessarily limit recreational landings, exacerbating adverse social and economic effects, and selected **Alternative 1 (No Action)** as the preferred alternative.

Appendix G. Bycatch Practicability Analysis

Background

Amendment 55 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 scamp and yellowmouth grouper. Actions include modifying the Other South Atlantic Shallow Water Grouper (OSASWG) complex by removing yellowmouth grouper from the complex and establishing a new Scamp and Yellowmouth Grouper complex. For the new complex, Amendment 55 would establish conservation and management measures, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures. For the OSASWG complex, Amendment 55 would modify catch levels. Development of Amendment 55 is a response to the most recent Southeast, Data, Assessment, and Review (SEDAR) operational assessment (OA) for South Atlantic scamp and yellowmouth grouper (SEDAR 68 OA; 2022). 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.[24] 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.
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).

Additionally, as of July 2022, NMFS increased observer coverage in the commercial snapper grouper fishery to include vessels using all gear types instead of only commercial vessels with vertical line gear.

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. In addition, in January 2021, NMFS implemented the Southeast For-Hire Electronic Reporting Program, which implemented mandatory electronic reporting of for-hire vessel catch data for over 3,000 vessels in the Gulf of Mexico and South Atlantic. The purpose of this program is to provide more accurate and reliable fisheries information about for-hire catch, effort, and discards.

1. Population Effects for the Bycatch Species

1.1 Amount and Type of Bycatch and Discards

Commercial Sector

Commercial discards for the top ten species in the South Atlantic snapper grouper fishery, such as black sea bass, vermilion snapper, red snapper, red porgy, and yellowtail snapper are shown in Table G.1.1.1 and Figure G.1.1.1. Scamp and yellowmouth grouper are not in the top ten list of species discarded by the commercial sector in the snapper grouper fishery. Most discards originate from handline/electric rig and trap gear, with some discards from trolling gear and relatively low discards from longline and diving 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

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

discards is not compared because commercial landings are reported in pounds and discards are reported in numbers of fish.

Table G.1.1.1. Top ten species with 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 2018-2022 period.

Note: Scamp and yellowmouth grouper are not in the top ten list of discarded species.

Stock	Handline/ Electric	Stock	Longline	Stock	Trap / Pot	Stock	Troll
Vermilion Snapper	4,514	Blueline Tilefish	155	Black Sea Bass	6,069	Black Sea Bass	236
Red Snapper	3,669	Snowy Grouper	57	Vermilion Snapper	198	Amberjacks	131
Red Porgy	2,634	Red Snapper	14	Grunts	145	Red Snapper	78
Yellowtail Snapper	1,681	Red Porgy	12	White Grunt	75	Grunts	57
Black Sea Bass	1,556	Greater Amberjack	10	Gray Triggerfish	71	King Mackerel	18
Gray Triggerfish	886	Confidential Data		Triggerfishes	64	Cobia	11
Almaco Jack	671			Red Snapper	24	Yellowtail Snapper	9
Triggerfishes	569			Red Porgy	17	Greater Amberjack	8
Blue Runner	434			Red Grouper	17	Little Tunny	6
Gray Snapper	367			Gag	13	Confidential Data	

Source: SEFSC Coastal Logbook (March 2023) and Discard Logbook (March 2023).

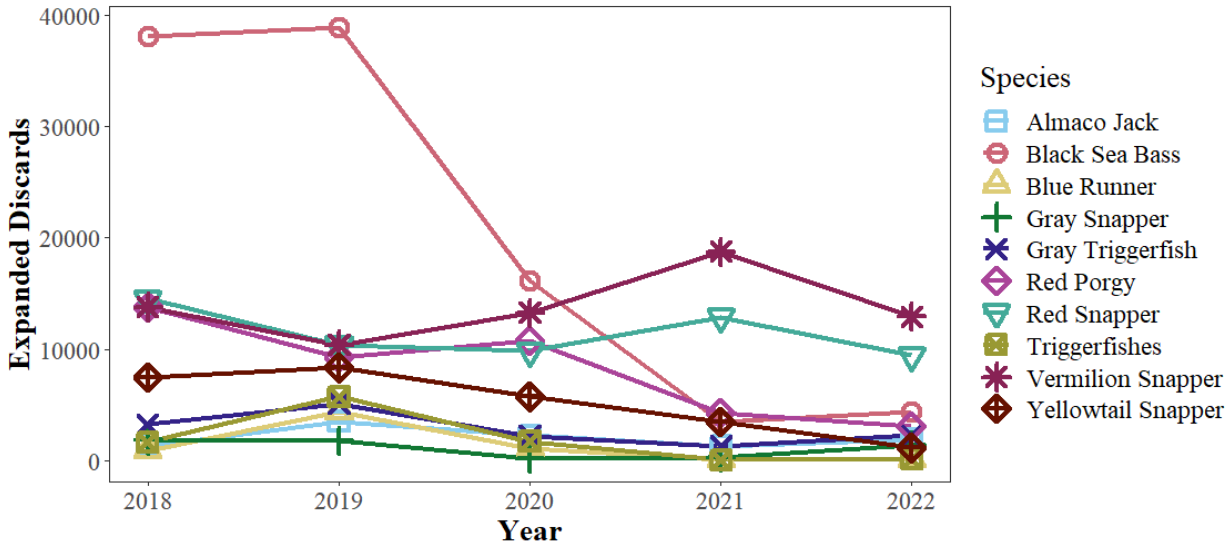

Figure G.1.1.1. Expanded annual self-reported commercial discards (numbers of fish) for the top ten species discarded during snapper grouper trips (defined as trips with 50% of landings from snapper grouper stocks) from 2018-2022.
Note: Scamp and yellowmouth grouper are not in the top ten list of discarded species.
Source: SEFSC Coastal Logbook (March 2023) and Discard Logbook (March 2023).

Of the four discard codes, regulations (i.e., not legal size and out of season) were the most common reason selected for the ten most commonly discarded snapper grouper species by the commercial sector based on self-reported discards, with the exception of blue runner (market conditions) (Table G.1.1.2).

Table G.1.1.2. 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 by the commercial sector in the South Atlantic from 2015 through 2019. Some percentages may not sum to 100% due to rounding.
Note: Scamp and yellowmouth grouper are not in the top ten list of discarded species.

Species	Not Legal Size	Out of Season	Other Regulations	Market Conditions
Almaco Jack	47%	43%	5%	5%
Black Sea Bass	100%	0%	0%	0%
Blue Runner	21%	0%	28%	51%
Blueline Tilefish	2%	9%	89%	1%
Gag	72%	25%	1%	1%
Gray Triggerfish	57%	42%	1%	0%
Greater Amberjack	91%	6%	2%	1%
Red Porgy	43%	51%	4%	2%
Red Snapper	2%	79%	18%	1%
Vermilion Snapper	91%	1%	8%	0%

Sources: SEFSC Supplemental Commercial Discard Logbook (May 2020).

Recreational Sector

From 2018 through 2022, the most discarded species on recreational trips capturing a snapper grouper species was black sea bass for all three modes (Table G.1.1.3). Red snapper, gray snapper, vermilion snapper, tomtate, yellowtail snapper, and grunt species were in the top ten list for all recreational modes (Table G.1.1.3).

Table G.1.1.3. Top ten species with discards reported on trips capturing a snapper grouper species in the South Atlantic by recreational mode from 2018 through 2022. Species are sorted by number of total discards for each mode from 2018-2022.
Note: Scamp and yellowmouth grouper are not listed in the top ten species.

Rank	HEADBOAT		CHARTER		PRIVATE BOAT	
	Species	Discards (N)	Species	Discards (N)	Species	Discards (N)
1	Black Sea Bass	1,633,530	Black Sea Bass	884,078	Black Sea Bass	28,873,282
2	Vermilion Snapper	401,382	Yellowtail Snapper	604,799	Gray Snapper	23,400,512
3	White Grunt	298,683	Red Snapper	555,294	Red Snapper	12,819,769
4	Yellowtail Snapper	266,501	Gray Snapper	419,188	Yellowtail Snapper	7,263,605
5	Red Snapper	266,431	Tomtate	353,139	White Grunt	7,132,700
6	Tomtate	250,332	Mutton Snapper	287,594	Tomtate	6,924,826
7	Gray Triggerfish	96,746	Vermilion Snapper	268,547	Vermilion Snapper	4,481,418
8	Mutton Snapper	65,575	White Grunt	237,570	Mutton Snapper	3,854,408
9	Lane Snapper	62,142	Gray Triggerfish	78,982	Lane Snapper	2,692,497
10	Gray Snapper	46,477	Greater Amberjack	63,372	Gray Triggerfish	1,947,762

Sources: MRIP FES data from SEFSC Recreational ACL Dataset (December 2023); Expanded Headboat data from SEFSC Headboat Logbook files (December 2023).

Recreational discards of several snapper grouper species are higher than the landings for certain modes of fishing (Table G.1.1.4). Red snapper, black sea bass, red grouper, and tomtate discards are much higher than their landings across all modes (Table G.1.1.4). Across most of the snapper grouper species, the magnitude of private mode discards is much higher compared to the headboat or charter modes (Table G.1.1.4).

Table G.1.1.4. South Atlantic snapper grouper headboat, charter, and private mean annual estimates of landings and discards (2018-2022). Headboat and MRIP (charter and private) landings and discards are in numbers of fish.
Note: Scamp is included in the list of key snapper grouper species, but, yellowmouth grouper is not.

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	11,205	1,736	15%	18,243	4,172	23%	88,422	245,230	277%
Black Sea Bass	33,148	326,706	986%	20,474	176,816	864%	269,012	5,774,656	2147%
Gag	561	819	146%	1,580	5,117	324%	15,960	82,585	517%
Gray Triggerfish	30,278	19,349	64%	58,620	15,796	27%	270,036	389,552	144%
Greater Amberjack	2,155	2,282	106%	20,827	12,674	61%	33,463	69,821	209%
Mutton Snapper	10,166	13,115	129%	28,813	57,519	200%	218,945	770,882	352%
Red Grouper	2,518	7,917	314%	4,873	11,640	239%	47,573	161,077	339%
Red Porgy	6,840	5,914	86%	6,188	2,126	34%	68,930	40,804	59%
Red Snapper	3,165	53,286	1684%	7,202	111,059	1542%	336,295	2,563,954	762%
Scamp	**849**	**501**	**59%**	**976**	**506**	**52%**	**2,127**	**3,667**	**172%**
Snowy Grouper	218	3	1%	1,065	355	33%	2,235	2,017	90%
Tomtate	40,243	50,066	124%	17,525	70,628	403%	544,383	1,384,965	254%
Vermilion Snapper	125,620	80,276	64%	93,776	53,709	57%	496,660	896,284	180%
White Grunt	127,661	59,737	47%	20,550	47,514	231%	575,785	1,426,540	248%
Whitebone Porgy	4,181	465	11%	2,551	39	2%	28,675	4,699	16%
Yellowtail Snapper	98,480	53,300	54%	215,676	120,960	56%	1,033,437	1,452,721	141%

Sources: MRIP FES data from SEFSC Recreational ACL Dataset (December 2023); Expanded Headboat data from SEFSC Headboat Logbook files (December 2023).

1.2 Practicability of Management Measures in Directed Fisheries Relative to their Impact on Bycatch and Bycatch Mortality

The reader is referred to Chapter 2 of Amendment 55 for detailed text of the actions and alternatives and Chapter 4 for detailed effects analysis.

Expected Impacts on Bycatch for the Subject Amendment Actions

In Action 1, the Council selected **Preferred Alternative 2** to remove yellowmouth grouper from the OSASWG complex and establish a new Scamp and Yellowmouth Grouper complex. SEDAR 68 OA (2022) assessed scamp and yellowmouth grouper in the South Atlantic as a single species due to misidentification issues between the two species. Reorganizing an existing species complex and creating a new one is not expected to affect bycatch any more or less than how they are managed now. During 2018-2022, scamp and yellowmouth grouper were not in the list of top ten species with mean estimated discards both in the commercial sector (Table G.1.1.1 and Figure G.1.1.1), or the list of top ten species with total estimated discards in the recreational sector (Table G.1.1.3).

In Action 2, the Council selected preferred alternatives to establish status determination criteria (SDC) such as maximum sustainable yield (MSY) (Sub-Action 2a), maximum fishing mortality threshold (MFMT) (Sub-Action 2b), minimum stock size threshold (MSST) (Sub-Action 2c), and optimum yield (OY) (Sub-Action 2d) for the new Scamp and Yellowmouth Grouper complex. **Preferred Alternative 3** under Sub-Action 2a would establish the MSY proxy at the fishing mortality (F) at 40% of the spawning potential ratio (SPR). **Preferred Alternative 3** under Sub-Action 2b would establish the MFMT equal to the MSY proxy of $F40\%_{SPR}$. **Preferred Alternative 3** under Sub-Action 2c would establish the MSST equal to 75% of the spawning stock biomass (SSB) at $F40\%_{SPR}$. **Preferred Alternative 4** would establish an OY of 95% of MSY. The SDC adhere to SEDAR 68 OA (2022) and are based on best scientific information available (BSIA). The SDC are also benchmarks and reference points for the new complex, and are not meant to be catch levels. Therefore, no direct or indirect effects to bycatch and discards are expected from Action 2.

Action 3 would establish a rebuilding plan for the Scamp and Yellowmouth Grouper complex. The Council selected **Preferred Alternative 3**, which proposes a 10-year rebuilding timeframe that would end in 2030. Establishing a rebuilding plan does not directly affect bycatch; thus, no changes in bycatch are expected for Action 3.

Action 4 would revise the acceptable biological catch (ABC) and the total annual catch limit (ACL) for the Scamp and Yellowmouth Grouper complex. The Council selected **Preferred Alternative 2**, which proposes an ABC level recommended by the Council's Scientific and Statistical Committee (SSC) and set it equal to the total ACL. Lower catch levels than what are currently allowed, as proposed by **Preferred Alternative 2**, could result in increased regulatory discards of scamp and yellowmouth grouper because season lengths would likely be shorter. However, it is an overfished stock complex and the lower proposed catch levels are expected to be beneficial for rebuilding. Discard mortality estimates for the commercial sector is 39% and 26% for the recreational sector (Table G.2.1, SEDAR 68 RT [2021]), and most of the harvest

under both sectors is conducted during May-August (Figures 4.5.1.1 and 4.5.1.2 in Chapter 4). As discussed under Action 1, scamp and yellowmouth grouper discards were not very high compared to the top ten snapper grouper species harvested by both sectors during 2018-2022 (Table G.1.1.1, Figure G.1.1.1, and Table G.1.1.3). During 2018-2022, mean annual estimates of landings and discards for scamp in the recreational sector showed a much smaller landings to discards ratio for the for-hire sector when compared with the private recreational sector (Table G.1.1.4). Amendment 55 does have other actions such as), recreational bag limit (Action 6), commercial trip limits (Action 7), and accountability measures (AM) (Actions 8 and 9) that could help reducing bycatch. Hook and line gear is the predominant fishing gear type used by both sectors to harvest scamp and yellowmouth grouper, and this gear type is the Sustainable Seafood Guide's recommended gear in the U.S. as a "best choice" since this gear has minimal bycatch issues, and does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2016). Fishing effort or behavior is not expected to change for the overall snapper grouper fishery; thus, no changes in bycatch are expected as a result of Action 4.

Action 5 would establish the sector allocations for the Scamp and Yellowmouth Grouper complex and sector ACLs to reflect the updated ABC level recommended by the Council's SSC and chosen by the Council. The Council selected **Preferred Alternative 2** which proposes a starting allocation of 64.90% commercial / 35.10% recreational for 2025, this proportion stays fairly similar until 2029, after which the sector allocation percentages would remain the same as in 2029 for future years, until changed again through another amendment (Tables 2.5.1 and 2.5.2 in Chapter 2). The proposed allocations are based on the total ACL (Action 4) not expected to result in changes to fishing activity or behavior in the snapper grouper fishery; thus, no changes in bycatch are expected as a result of Action 5.

Action 6 would modify the recreational bag limit for scamp and yellowmouth grouper. The Council selected **Preferred Alternative 3** under Action 6 to establish an aggregate bag limit of one fish (either scamp or yellowmouth grouper combined) per person per day within the three fish grouper and tilefish aggregate. Most of the recreational fishers harvest one fish per person per day (Figure 4.6.1.1.) and therefore, no additional effects on bycatch are expected from Action 6.

Action 7 would establish an aggregate commercial trip limit for scamp and yellowmouth grouper. The Council selected **Preferred Alternative 3,** which proposes a 300-pound gutted weight trip limit. Establishing a commercial trip limit in combination with a reduction in the commercial ACL under Action 5 could extend the length of commercial fishing. In general, reductions in commercial trip limits could increase the number of discards, as fish that would normally be retained would have to be discarded under a lower trip limit. However for scamp and yellowmouth grouper, majority of commercial trips harvested less than 100 pounds gutted weight (lbs gw) during 2018-2022 (Figures 4.7.1.1 and 4.7.1.2 in Chapter 4), and as discussed earlier, scamp and yellowmouth grouper are not among the top ten discarded snapper grouper species in the commercial sector (Table G.1.1.1 and Figure G.1.1.1), and most of the harvest tapers off mid-August (Figure 4.5.1.1 in Chapter 4). Therefore, no substantial changes in fishing activity or behavior are expected, and thus no changes in bycatch are expected as a result of Action 7.

Action 8 would establish commercial AMs for the Scamp and Yellowmouth Grouper complex. The Council selected **Preferred Alternative 3** with an in-season closure of the commercial sector and a post-season commercial ACL payback provision if the commercial ACL is exceeded. If a commercial fishing season is shortened as a result of a triggered AM, this action could increase regulatory discards in the fishery. However, as discussed in various actions thus far in this BPA, scamp and yellowmouth grouper are not among the top ten discarded snapper grouper species. No substantial changes to fishing activity or behavior are expected; thus, no changes in bycatch are expected for Action 8.

Action 9 would establish recreational AMs for the Scamp and Yellowmouth Grouper complex. The Council selected **Preferred Alternative 5** with no in-season AM such as a closure of the recreational sector and a post-season AM shortening of the length of the recreational fishing season in the following year if the recreational ACL was exceeded in the previous year. If a recreational fishing season is shortened as a result of a triggered AM, this action could increase regulatory discards in the fishery. However, as discussed in various actions thus far in this BPA, scamp and yellowmouth grouper are not among the top ten discarded snapper grouper species, and actions considering a reduced recreational bag limit (Action 6), might extend the recreational fishing season and prevent the recreational ACL from being reached. No substantial changes to fishing activity or behavior are expected; thus, no changes in bycatch are expected for Action 9.

Action 10 would revise the total ACL and sector ACLs for the five remaining species in the OSASWG complex. The current allocation percentages would not be changed. The Council selected **Preferred Alternative 2** to update the ABC and set the total ACL and sector ACLs inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey (see Section 2.10 in Chapter 2). The revised total ACL and sector ACLs are almost identical to the current catch levels for these species (Table 2.10.1 in Chapter 2). Therefore, no substantial changes to fishing activity or behavior are expected; thus, no changes in bycatch are expected for Action 10.

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 scamp and yellowmouth grouper, including actions that could reduce bycatch and bycatch mortality of these two species and other snapper grouper species, are outlined in Section 1.7 of this 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 2011a) 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 special management zones (SMZ) 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 2011b) implemented ACLs and AMs 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. New or reduced ACLs could cause some commercial and recreational fishers to reduce effort and AMs with in-season closures of a particular sector could prevent further fishing for a species for that sector.

The Council's Headboat Electronic 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 2016b) established 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. Additionally, the Council and the Gulf of Mexico Fishery Management Council are also developing a joint amendment to require that all federally permitted commercial fishing vessels in the southeast also report their logbook landings information electronically. These future actions will help to improve estimates on the composition and magnitude of catch and bycatch of species affected by this amendment, as well as all other federally managed species in the southeast region.

Amendment 42 to the Snapper Grouper FMP (SAFMC 2019b) 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.

Amendment 46 to the Snapper Grouper FMP proposes actions to focus on private recreational permit and reporting.

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 at https://safmc.net/fishery-management-plans/snapper-grouper/

2. 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.2.1). 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). Scamp and yellowmouth grouper 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 (39%) than the recreational sector (26%), likely due to the differences in average depth the two sectors prosecute the fishery (Table G.2.1).

Table G.2.1. Release mortality rates of select recreationally and commercially important snapper-grouper species from recent stock assessments.
Note: Release mortality percentages for scamp and yellowmouth grouper are from SEDAR 68 Research Track (RT) assessment in 2021.

Species	Fishery	Release mortality	Data Source
Black Sea Bass	Recreational	13.70%	SEDAR 56 (2018)
Black Sea Bass	Commercial Trap/Pot (2007- present)	6.80%	SEDAR 56 (2018)
Black Sea Bass	Commercial Vertical Line	19%	SEDAR 56 (2018)
Gag	Recreational	25%	SEDAR 10 Update (2014)
Gag	Commercial	40%	SEDAR 10 Update (2014)
Gray Triggerfish	Recreational & Commercial	12.50%	SEDAR 41 (2016)
Greater Amberjack	Recreational & Commercial	20%	SEDAR 59 (2020)
Red Porgy	Recreational	41%	SEDAR 60 (2020)
Red Porgy	Commercial	53%	SEDAR 60 (2020)
Red Snapper	Recreational - Private	23%	SEDAR 73 (2021)
Red Snapper	Recreational - Charter & Headboat	22%	SEDAR 73 (2021)
Red Snapper	Commercial	32%	SEDAR 73 (2021)
Scamp / Yellowmouth Grouper	**Recreational**	**39%**	**SEDAR 68 RT (2021)**
Scamp / Yellowmouth Grouper	**Commercial**	**26%**	**SEDAR 68 RT (2021)**
Vermilion snapper	Recreational	38%	SEDAR 55 (2018)
Vermilion snapper	Commercial	41%	SEDAR 55 (2018)
Yellowtail snapper	Recreational	15%	SEDAR 64 (2020)
Yellowtail snapper	Commercial	12.50%	SEDAR 64 (2020)

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 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.

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

Amendment 55 is not expected to result in 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.1.1.1 and G.1.1.3). Both sectors likely target a wide range of species, including dolphin 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 amendment are not expected to alter overall fishing activity or behavior in the fishery; thus, no changes in bycatch of other species are expected.

4. Effects on Marine Mammals and Birds

Marine Mammals

Under Section 118 of the Marine Mammal Protection Act (MMPA), the 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 12257; February 16, 2024).

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 occurring 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 snapper grouper fishery. Thus, the fishery is not likely to adversely affect the Bermuda petrel and the roseate tern.

5. Changes in Fishing, Processing, Disposal, and Marketing Costs

The actions proposed in Amendment 55 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.

Changes in Fishing Practices and Behavior of Fishermen

As discussed above, the actions proposed in Amendment 55 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 amendment are expected to be small, and would not jeopardize the sustainability of any target or non-target species.

6. 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 is being developed by the Council and the Gulf of Mexico Fishery Management Council, which 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 Marine Fisheries Initiative, Saltonstall-Kennedy program, and the Cooperative Research Prom. 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.

7. 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 Amendment 55 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.

8. Changes in the Distribution of Benefits and Costs

The distribution of benefits and costs expected from the proposed actions in Amendment 55 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. Additionally, the Regulatory Impact Review (Appendix B) and Regulatory Flexibility Act Analysis (Appendix C) provide additional information on changes in the distribution of benefits and costs. Overall, almost no such alterations would be caused by changes to bycatch resulting from this amendment.

9. Social Effects

The baseline social environment and social effects of the proposed actions are described in Chapters 3 and 4 of Amendment 55, respectively. In general, fishermen become frustrated as waste of the resource due to regulatory bycatch of target and non-target species increases. 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 Amendment 55 are likely to change 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.

10. 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 Amendment 55 are not likely to substantially contribute or detract from 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.

11. References

Alsop, III, F. J. 2001. Smithsonian Handbooks: Birds of North America eastern region. DK Publishing, Inc. New York, NY.

Blue Ocean Institute. 2010. The blue ocean institute guide to ocean friendly seafood. http://www.blueocean.org/files/Seafood_Guide.pdf

Campbell, M. D., W. B. Driggers, B. Sauls, and J. F. Walter. 2014. Release mortality in the red snapper fishery (*Lutjanus campechanus*) fishery: a meta-analysis of 3 decades of research. Fishery Bulletin. 112:283-296.

Cooke, S. J., D. P. Philipp, K. M. Dunmall, and J. F. Schreer. 2001. The influence of terminal tackle on injury, handling time, and cardiac disturbance of rock bass. North American Journal of Fisheries Management. Vol. 21, no. 2, pp. 333-342.

Pulver, J. R. 2017. Sink or Swim? Factors affecting immediate discard mortality for the Gulf of Mexico commercial reef fish fishery. Fisheries Research, 188:166-172.

Rudershausen, P. J., J. A. Buckel, and J. E. Hightower. 2014. Estimating reef fish discard mortality using surface and bottom tagging: effects of hook injury and barotrauma. Canadian Journal of Fisheries and Aquatic Sciences, 71:514-520.

South Atlantic Fishery Management Council (SAFMC). 2009. Amendment 16 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 608 pp. plus appendices.

SAFMC. 2010. Amendment 17A for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

SAFMC. 2011a. Comprehensive Ecosystem Based Amendment 2 for the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. (Amendment 23 to the Snapper Grouper FMP). South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC. 2011b. Comprehensive Annual Catch Limit Amendment for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 755 pp. plus appendices.

SAFMC. 2013. Amendment 31 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region, Amendment 6 to the FMP for the Dolphin and Wahoo Fishery of the Atlantic, and Amendment 22 to the FMP for Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region. Joint South Atlantic/Gulf of Mexico Generic Charter/Headboat Reporting in the South Atlantic Amendment. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 207 pp.

SAFMC. 2016. Amendment 36 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 148 pp.

SAFMC. 2017. Amendment 39 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region, Amendment 9 to the FMP for the Dolphin and Wahoo Fishery of the Atlantic, and Amendment 27 to the FMP for the Coastal Migratory Pelagics Fishery of the Gulf of Mexico and Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 221 pp.

SAFMC. 2019. Amendment 42 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 148 pp.

SAFMC. 2020. Regulatory Amendment 29 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405. 148 pp.

Seafood Watch Program. 2010. Monterey Bay Aquarium. http://www.seafoodwatch.org.

Stephen, J. A., and P. J. Harris. 2010. Commercial catch composition with discard and immediate release mortality proportions off the southeastern coast of the United States. Fisheries Research, 103:18-24.

Wilson Jr., R. R., and K. M. Burns. 1996. Potential survival of released groupers caught deeper than 40 m based on shipboard and in-situ observations, and tag-recapture data. Bulletin of Marine Science, 58(1):234-247.

Appendix H. Fishery Impact Statement

The Magnuson-Stevens Fishery Conservation and Management Act requires a Fishery Impact Statement (FIS) be prepared for all amendments to fishery management plans (FMP). The FIS contains an assessment of the expected and potential biological, economic, and social effects of the conservation and management measures on: 1) fishery participants and their communities; 2) participants in the fisheries conducted in adjacent areas under the authority of another Council; and 3) the safety of human life at sea. Detailed discussion of the expected effects for all proposed changes is provided in Chapters 1 and 2. The FIS provides a summary of these effects.

Actions Contained in Amendment 55 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 55)

Amendment 55 would modify the Other South Atlantic Shallow Water Grouper (OSASWG) complex by removing yellowmouth grouper from the complex and establishing a new Scamp and Yellowmouth Grouper complex. For the new complex, Amendment 55 would establish conservation and management measures, stock status determination criteria, a rebuilding plan, catch levels, sector allocations, and accountability measures. For the OSASWG complex, Amendment 55 would modify catch levels. The actions are based on the results of the Southeast Data and Assessment Review (SEDAR) 68 operational assessment (OA; 2022) stock assessment. The actions and their preferred alternatives are:

Action 1. Reorganize the Other South Atlantic Shallow Water Grouper complex and establish a new Scamp and Yellowmouth Grouper complex.

> **Preferred Alternative 2**. Remove yellowmouth grouper from the Other South Atlantic Shallow Water Grouper complex and establish a new Scamp and Yellowmouth Grouper complex. The reorganized Other South Atlantic Shallow Water Grouper complex would contain rock hind, red hind, coney, graysby, and yellowfin grouper.

Action 2. Establish the maximum sustainable yield, maximum fishing mortality threshold, minimum stock size threshold, and optimum yield for the Scamp and Yellowmouth Grouper complex.

Sub Action 2a. Establish the maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

> **Preferred Alternative 3.** Establish the maximum sustainable yield proxy as the yield when fishing at the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

Sub Action 2b. Establish the maximum fishing mortality threshold for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the maximum fishing mortality threshold equal to the fishing mortality rate that produces a spawning potential ratio of 40% for the Scamp and Yellowmouth Grouper complex.

Sub Action 2c. Establish the minimum stock size threshold for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish the minimum stock size threshold equal to 75% of the spawning stock biomass at a fishing mortality rate of 40% of spawning potential ratio.

Sub Action 2d. Establish the optimum yield for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 4. Establish an optimum yield of 95% of maximum sustainable yield for the Scamp and Yellowmouth Grouper complex.

Action 3. Establish a rebuilding timeframe for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 3. Establish a rebuilding timeframe equal to Tmax. This would equal 10 years with the rebuilding period ending in 2035. 2025 would be Year 1.

Action 4. Establish the acceptable biological catch and total annual catch limit for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 2. Establish the acceptable biological catch and set it equal to the recommendation from the Scientific and Statistical Committee. Establish the total annual catch limit for the Scamp and Yellowmouth Grouper complex and set it equal to the recommended acceptable biological catch. The recommended acceptable biological catch is inclusive of recreational estimates from the Marine Recreational Information Program's Fishing Effort Survey.

Action 5. Establish sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex.

Preferred Alternative 2. Commercial and recreational allocation percentages and sector annual catch limits would change each year from 2025 through 2029, where they would remain in place until modified, based on the total average commercial and recreational landings of scamp and yellowmouth grouper from 2018 through 2022.

Action 6. Modify the recreational bag limit for scamp and yellowmouth grouper.

Preferred Alternative 3. Establish an aggregate complex bag limit of 1 fish (either scamp or yellowmouth grouper combined) per person per day within the 3 fish grouper and tilefish combined aggregate.

Action 7. Establish an aggregate commercial trip limit for scamp and yellowmouth grouper.

> **Preferred Alternative 3.** Establish an aggregate commercial trip limit for scamp and yellowmouth grouper of 300 pounds gutted weight.

Action 8. Establish commercial accountability measures for the Scamp and Yellowmouth Grouper complex.

> **Preferred Alternative 3.** If commercial landings for the Scamp and Yellowmouth Grouper complex reach or are projected to reach the complex commercial annual catch limit, commercial harvest of scamp and yellowmouth grouper will be closed for the remainder of the fishing year.
>
> If commercial landings for the Scamp and Yellowmouth Grouper complex exceed the complex commercial annual catch limit, regardless of stock status or whether the total annual catch limit was exceeded the complex commercial annual catch limit for the following fishing year will be reduced by the amount of the complex commercial annual catch limit overage in the prior fishing year.

Action 9. Establish recreational accountability measures for the Scamp and Yellowmouth Grouper complex.

> **Preferred Alternative 5.** If recreational landings for the Scamp and Yellowmouth Grouper complex exceed the complex recreational annual catch limit for the complex the length of the following year's recreational fishing season for the complex will be reduced by the amount necessary to prevent the recreational annual catch limit for the complex from being exceeded in the following year, regardless of stock status.

Action 10. Revise the total annual catch limit and sector annual catch limits for the Other South Atlantic Shallow Water Grouper complex.

> **Preferred Alternative 2.** The acceptable biological catch for the updated Other South Atlantic Shallow Water Grouper complex (contains rock hind, red hind, coney, graysby, and yellowfin grouper, and excludes yellowmouth grouper) is 104,190 pounds whole weight. The total annual catch limit for the updated Other South Atlantic Shallow Water Grouper complex is 100,151 pounds whole weight and is inclusive of recreational estimates from the Marine Recreational Information Program's Coastal Household Telephone Survey. The commercial annual catch limit is 53,380 pounds whole weight and the recreational annual catch limit is 46,771 pounds whole weight.

Assessment of Biological Effects

The preferred alternatives for the actions in Amendment 55 are expected to rebuild the newly scamp and yellowmouth grouper stock which was determined to be overfished by SEDAR 68 OA (2022). The preferred alternatives are based on the best scientific information available and

are designed to constrain harvest of scamp and yellowmouth grouper to the newly established annual catch limits, with accountability measures for both sectors, and management measures such as recreational fishing season, recreational bag/vessel limits and commercial trip limits, and thus would likely have beneficial effects to the newly created scamp and yellowmouth grouper stock complex (see Chapter 4).

Scamp and yellowmouth grouper are often harvested incidentally when fishing for other snapper grouper species. Substantial changes in fishing effort or behavior are not expected as a result of this amendment, thus the proposed actions would not be expected to result in any biological effects, positive or negative, on co-occurring species (Bycatch Practicability Analysis, Appendix G). The proposed actions would not change fishing methods for snapper grouper species in the U.S. exclusive economic zone, and therefore would perpetuate the existing level of risk for interactions between Endangered Species Act-listed species, their critical habitat, and the fishery. Thus, there is likely to be no additional effects, positive or negative, to protected species or their critical habitat from the actions.

Assessment of Economic Effects

Reorganizing the Other South Atlantic Shallow Water Grouper complex and establishing a new South Atlantic Scamp and Yellowmouth Grouper complex would not directly alter the current harvest or use of the scamp and yellowmouth grouper resource. Therefore, Action 1 would not be expected to have any direct economic effects. Indirect economic effects may occur due to its effects on other actions in this amendment that would make modifications to the harvest of scamp and yellowmouth grouper. However, these economic effects are addressed in the appropriate subsequent actions.

Defining the MSY proxy for the Scamp and Yellowmouth Grouper complex in Sub-Action 2a would not directly alter the current harvest or use of the resource. Specification of this measure establishes a benchmark for fishery and resource evaluation from which additional management actions for the species would be based, should comparison of the fishery and resource with the benchmark indicate that management adjustments are necessary. The impacts of these management adjustments would be evaluated at the time they are proposed. As a benchmark, the MSY proxy would not directly limit how, when, where, or with what frequency participants in the fishery engage in harvesting the resource. As a benchmark, the MSY proxy sets the parameters that condition subsequent management actions. This action would allow for higher short-term catch levels and higher associated short-term economic benefits. However, this 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.

Since there would be no direct effects on resource harvest or use from establishing MFMT, there would be no direct effects on fishery participants, associated industries, or communities from Sub-Action 2b. Much like MSY, specifying MFMT helps establish the platform for future management, specifically from the perspective of bounding allowable harvest levels. In this sense, MFMT may be considered to have indirect economic effects on fishery participants. This action would allow for higher short-term catch levels and higher associated short-term economic

benefits. However, it 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.

Like MSY and MFMT, MSST does not alter the current harvest or use of the resource, and thus would have no direct economic effects on fishery participants and associated industries or communities from Sub-Action 2c. Unlike MSY, MSST is directly related to actions for rebuilding the stock which also include actions that would have economic implications and indirect economic effects. In general, a high MSST level is susceptible to triggering rebuilding actions that could limit harvest or fishing opportunities, thereby negatively affecting the economic benefits that fishery participants can incur from a fishery. A low MSST level would be associated with a lower probability of enacting rebuilding actions that would negatively affect the economic benefits that fishery participants can receive from a fishery. To the extent that rebuilding actions necessitated by a chosen MSST would tend to have economic effects, it is possible to provide some general implications of the MSST alternatives. With rebuilding taking place over a number of years, management actions and their economic consequences could change over time depending on a variety of factors, including the status of the stock and fishing conditions. This action would allow for comparatively greater potential short-term negative economic effects because this alternative would have the highest probability of triggering restrictive rebuilding actions.

Establishing OY for the Scamp and Yellowmouth Grouper complex does not directly alter the current harvest or use of the fishery resource. Therefore, Sub-Action 2d would not be expected to have direct economic effects. Indirect economic effects may occur from this action. Defining the OY for species complex establishes a management target for allowable harvests. If defined as a percentage of the maximum sustainable yield, the target would incorporate a protective buffer to help ensure the biological health of the stocks are not threatened, thereby helping support stable biologic and economic benefits. The larger the buffer, the greater the certainty of biological protection. However, an excessively large buffer (i.e., a buffer that exceeds the biological variability of the resource, environmental challenges, and potential for fishery-induced problems) would result in overly restrictive harvest allowances, leading to foregone economic benefits and comparatively lower total net economic benefits being derived from the fishery resource. While none of the relevant biological parameters are ever likely known with total certainty, the best OY specification would be expected to balance the risk and costs of being insufficiently conservative against the costs of potentially unnecessarily leaving fish unharvested.

A rebuilding timeframe does not impose direct economic effects, as it does not directly constrain harvest or fishing effort. There are potential indirect economic effects that can occur due to a rebuilding timeframe, as the length of the rebuilding period selected can determine how management measures need to be structured with shorter rebuilding periods requiring more stringent measures that may decrease short-term net economic benefits. Action 3 would provide the longest rebuilding period of 10 years; hence, it has the lowest implied decrease in short-term net economic benefits.

In general, ACLs that allow for more fish to be landed can result in increased positive economic effects if harvest increases without notable effects on the stock of a given fish. The ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the ACL is exceeded, thereby potentially triggering accountability measures (AM) such as harvest closures or other restrictive measures. In the case of scamp and yellowmouth grouper, the ACL being considered in Action 4 would be constraining on harvest when initially implemented and is projected to reduce landings of scamp and yellowmouth grouper and associated net economic benefits of those landings for both the commercial and recreational sectors. The sector allocations and resulting ACLs selected in Action 5 would comparatively decrease net economic benefits for the commercial sector, increase net economic benefits for the recreational sector, and increase overall net economic benefits.

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 the satisfaction from an angler trip could be affected. Setting the bag limit at 1 fish per person in Sub-Action 7a would have greater negative economic effects due to constraining harvest and related net economic benefits.

Generally, commercial trip limits are not considered to be economically efficient because they require an increase in the number of trips and associated trip costs to land the same amount of fish. Given the ACL for scamp and yellowmouth grouper that restricts maximum harvest to sustainable levels, the alternative with the fewest number of trips that have to stop retaining the species because the trip limit has been reached would result in the least amount of direct negative economic effects on a trip level. Decreasing trip limit in Action 8 would lead to decreased potential revenue on trips that land scamp and yellowmouth grouper, thereby resulting in a decrease in economic benefits to commercial vessels participating in the fishery through potentially reduced net revenue.

Commercial AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest when the sector ACL has been met or exceeded, thus potentially affecting revenues and net economic benefits for 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 foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock. Action 8 would limit harvest to the 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. This action would also implement a reduction in the sector ACL the following fish year if the sector ACL was exceeded. This would reduce overall harvest the following year and the associated economic benefits from the harvest.

Recreational AMs typically consist of corrective measures that create short-term indirect negative economic effects by curtailing harvest and fishing activity when harvest has met or

exceeded the sector ACL, thus potentially affecting net economic benefits for-hire operations and 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 foregone need for more stringent restrictive management measures that may be needed to rebuild a depleted stock. Action 10 would not implement an in-season harvest closure, thus harvest could continue indefinitely in the first year even if the sector ACL were fully harvested or exceeded. Lack of an in-season harvest closure would potentially allow an increase in short-term economic benefits from those that may be derived by harvesting beyond the ACL but this alternative would also create potential long-term economic costs by not maintaining sustainable harvest which could lead to more stringent restrictive management measures if overfishing occurs and stringent management measure go into place. This action would also implement a reduction in the following fishing season if the sector ACL was exceeded. Should a shortening of the following season occur, there would be reduction in net economic benefits in that year due to fewer available fishing days for private anglers and for-hire vessels if there was an overall reduction in fishing effort.

Action 10 would not directly or indirectly alter the current harvest or use of the remaining OSASWG resource since the portion of the complex ACL for yellowmouth grouper is being removed and added to a new complex., thus there are no expected economic effects.

Assessment of the Social Effects

Reorganizing the Other South Atlantic Shallow Water Grouper complex and establishing a new South Atlantic Scamp and Yellowmouth Grouper complex is not expected to result in changes to how fishing communities utilize scamp or yellowmouth grouper and as such, Action 1 is not expected to have significant or direct social effects. Establishing a new Scamp and Yellowmouth Grouper complex would allow management to address the overfished status of both species simultaneously and would mirror management measures, ensuring that both stocks are sustainably harvested even when misidentified. Ensuring scamp and yellowmouth grouper are harvested sustainably and rebuilt would have long-term, indirect, social benefits resulting from improved stock conditions leading to increased access in the fishery in the future.

Defining the MSY proxy for the Scamp and Yellowmouth Grouper complex is not expected to result in changes to how fishing communities utilize scamp or yellowmouth grouper and as such, Sub-Action 2a is not expected to have significant **or direct** social effects**.** If the methodology accurately represents the stock status, updating values based on the most recent scientific advice is expected to result in long-term positive social effects to fishing communities by ensuring that harvest is sustainable and allowing for recovery of an accurately designated overfished stock.

Establishing the MFMT for the Scamp and Yellowmouth Grouper complex is not expected to result in changes to how fishing communities utilize scamp or yellowmouth grouper and as such, Sub-Action 2b is not expected to have significant **or direct** social effects**.** If the methodology accurately represents the stock status, updating values based on the most recent scientific advice is expected to result in long-term positive social effects to fishing communities by ensuring that harvest is sustainable and allowing for recovery of an accurately designated overfished stock.

Similar to MFMT, establishing the MSST for the Scamp and Yellowmouth Grouper complex is not expected to result in changes to how fishing communities utilize scamp or yellowmouth grouper and as such, Sub-Action 2c is not expected to have significant **or direct** social effects**.** If the methodology accurately represents the stock status, updating values based on the most recent scientific advice is expected to result in long-term positive social effects to fishing communities by ensuring that harvest is sustainable and allowing for recovery of an accurately designated overfished stock.

Establishing OY for the Scamp and Yellowmouth Grouper complex is not expected to result in changes to how fishing communities utilize scamp or yellowmouth grouper because no specific management actions are required. As such, Sub-Action 2d is not expected to have significant **or direct** social effects. However, a higher long-term OY would result in the lowest level of negative social effects on the recreational and commercial sectors as it allows for the most harvest, assuming that the appropriate biological, economic, and social factors have been considered. Commercial and recreational stakeholders have indicated that having species, including scamp and yellowmouth grouper, open for the longest portion of the year is critical as it allows them to diversify their catch.

Although defining a rebuilding schedule in Action 3 is an administrative action, the schedule would determine how restrictive management measures need to be to rebuild the Scamp and Yellowmouth Grouper complex within the allotted timeframe. The severity of these measures would determine the magnitude of the associated social effects that are expected to accrue during the rebuilding period. Generally, the shorter the rebuilding schedule, the greater the harvest restrictions. The more severe the harvest restrictions, the greater the short-term negative effects on fishing communities. Commercial and recreational fishermen may be able to adjust to management measures for scamp or yellowmouth grouper by switching to other species and/or seeking other employment or recreational pursuits, thereby mitigating any potential negative social effects. However, if other species are also depleted, regulations may prevent switching to another species or fishery and net negative social effects could potentially be more severe.

The ACL for any stock does not directly affect resource users unless the ACL is met or exceeded, in which case accountability measures (AMs), that restrict, or close harvest could negatively impact the commercial and recreational sectors. The ACL considered in Action 4 are expected to be restrictive, triggering AMs that can have significant direct and indirect social effects because 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. However, restrictions on harvest contribute to sustainable management goals, and are expected to be beneficial to fishermen and communities in the long-term. Generally, the higher the ACL the greater the short-term social benefits that would be expected to accrue if harvest is sustainable.

Much like establishing an ACL, establishing sector allocations and sector annual catch limits for the Scamp and Yellowmouth Grouper complex in Action 5 does not directly affect resource

users unless the allocation results in a restrictive sector ACL, in which case accountability measures (AMs), that restrict, or close harvest could negatively impact the commercial or recreational sectors. Based on Action 4 and recent commercial and recreational landings, all of the proposed commercial and recreational ACLs are expected to be met, resulting in triggering of the AMs. Additionally, establishing allocations could have some negative social effects if commercial fishermen, have a negative perception of this change due to the decrease in fishing opportunity and concerns about long-term social effects, especially if other actions further decreased harvest opportunities. Alternatively, because the alternatives represent a comparatively high allocation for the commercial sector, businesses associated with commercial fishing are likely to have a positive perception of the change.

Reducing the recreational fishing season for scamp and yellowmouth grouper in Action 6 could change the level of access to scamp and yellowmouth grouper during periods when they are available and when participation in the scamp and yellowmouth grouper portion of the snapper grouper fishery is highest. However, long-term biological benefits of maintaining a healthy stock would contribute to future fishing opportunities for both the commercial and recreational sectors. The social effects would depend on when recreational effort is the highest for scamp and yellowmouth grouper and on the season length specified. Participation in the scamp and yellowmouth grouper portion of the snapper grouper fishery has historically been highest during the summer months.

The social effects of modifying the recreational retention limit for scamp and yellowmouth grouper in Sub-Action 6 would be a tradeoff between longer seasons under lower bag limits, and the negative effects on recreational fishing opportunities because the bag limit is too low. The social effects of bag limits can be associated with how many and at what times of year the recreational catch may be retained. Additionally, any long-term negative biological effects on the stock due to recreational landings from higher bag limits, or dead discards due to lower bag limits, would also likely result in negative effects of recreational fishing opportunities in future years. Generally, Social benefits from improved recreational fishing opportunities would result from a bag limit that has the largest portion of the year open to recreational harvest, with the highest number of fish per person.

Establishing an aggregate commercial trip limit for scamp and yellowmouth grouper in Action 7 is likely to have minimal direct social effects as it is likely that fishermen who have targeted scamp and yellowmouth grouper in recent years also target other species and would be able to adjust their businesses to adapt to regulatory changes. In general, a commercial trip limit may help slow the rate of harvest, lengthen a season, and prevent the commercial ACL from being exceeded, but trip limits that are too low may make fishing trips inefficient and too costly if fishing grounds are too far away. Additionally, if the trip limit is too low, the commercial ACL may not be met.

Establishing commercial accountability and recreational measures for the Scamp and Yellowmouth Grouper complex in Action 8 and Action 9, respectively, can have 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. Some of those effects are similar to other thresholds being met and may involve switching to other species or discontinuing fishing altogether. Those restrictions usually translate into reduced opportunity for harvest, which in turn can change fishing behaviors. Those behaviors can increase pressure on other stocks or amplify conflict. While these negative effects are usually short term, they may at times induce other indirect effects that can have a lasting effect on a community.

Revising the total annual catch limit, and sector annual catch limits for the OSASWG complex in Action 11 should not affect fishing communities or the way the OSASWG complex or Scamp and Yellowmouth Grouper Complex fisheries are prosecuted.

Assessment of Effects on Safety at Sea

Amendment 55 is not expected to result in direct impacts to safety at sea.