Amendment 48

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

Modernization of the Wreckfish Individual Transferable Quota Program

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

March 2023

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

Award Number FNA15NMF4410010

Amendment 48
to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Proposed actions: The actions in Amendment 48 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region would modify management of wreckfish. Actions would establish an electronic reporting system, vessel monitoring system, cost recovery and revise sector allocations, permit requirements, the fishing year and spawning season closure, and offloading site and time requirements.

Responsible Agencies and Contact Persons

South Atlantic Fishery Management Council
4055 Faber Place, Suite 201
North Charleston, South Carolina 29405
IPT lead: Christina Wiegand
christina.wiegand@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: Karla Gore
karla.gore@noaa.gov

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

This EA is being prepared using the 2020 CEQ NEPA Regulations as modified by the Phase I 2022 revisions. The effective date of the 2022 revisions was May 20, 2022 and reviews begun after this date are required to apply the 2020 regulations as modified by the Phase I revisions unless there is a clear and fundamental conflict with an applicable statute. This EA began on [DATE] and accordingly proceeds under the 2020 regulations as modified by the Phase I revisions.

Table of Contents

List of Appendices

List of Tables

List of Figures

Summary

Why is the South Atlantic Fishery Management Council considering action?

The Council is required by the Magnuson-Stevens Act to review the Wreckfish ITQ) program every five to seven years. The review evaluated progress made in meeting the goals and objectives of the Wreckfish ITQ program (a limited access privilege program). The review does not attempt to comprehensively evaluate management of the snapper grouper fishery. The Council is required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson Stevens Act; 16 U.S.C. 1801 et seq.) to review the ITQ program every five to seven years.

The Council initially reviewed the program in 2009. The review completed in 2019 was the first subsequent review. That review examined how the Wreckfish ITQ program changed between a baseline time period (2009/2010 – 2011/2012 fishing years) and the review time period (2012/2013 – 2016/2017 fishing years) with respect to various social, economic, biological, and administrative factors, and offered conclusions and recommended changes to the program based on the findings. In general, the program has been relatively successful in achieving its stated objectives, although there is still room for further improvement, particularly with respect to confidentiality issues and related constraints; moving away from a paper coupon-based program to an electronic program; cost recovery; wreckfish permit requirement; allocation issues; offloading sites and times; and economic data collection. Snapper Grouper Amendment 48 will consider actions and alternatives necessary to improve and modernize the Council's Wreckfish ITQ program.

Action 1. Revise sector allocations and sector annual catch limits for wreckfish.

Purpose of Action:
Recommendation came from the Snapper Grouper Advisory Panel. There is concern that the recreational allocation for wreckfish is too high. It was originally intended as a bycatch fishery, not a targeted one. A lower allocation may be more appropriate, especially considering the low encounter rate in the Marine Recreational Information Program (MRIP) survey.

Preferred Alternative 2. Allocate 98% of the total annual catch limit for wreckfish to the commercial sector. Allocate 2% of the total annual catch limit for wreckfish to the recreational sector.

Action 2. Implement an electronic reporting system for the wreckfish individual transferable quota (ITQ) program.

Purpose of Action:
Data management and user experience could be greatly enhanced by moving from a paper system to an electronic system. The migration to an electronic system would increase timeliness

of reported data, improve data quality, reduce cost and time for management, provide additional flexibility and benefits to fishermen, and improve program enforcement and monitoring.

Preferred Alternative 2. Implement an electronic system of reporting for the wreckfish ITQ program to electronically track ownership and transfers of quota shares, distribution, and transfers of annual allocation (quota pounds), and electronically record wreckfish landing information.

Action 3. Modify the requirement to possess a commercial vessel permit for wreckfish.

Purpose of Action:
The requirements to possess two permits (the wreckfish permit and snapper grouper unlimited permit) in addition to owning ITQ shares is duplicative and therefore unnecessarily burdensome for program participants and data managers. These requirements also unnecessarily complicate the use of data by program analysts. Additionally, requiring NMFS to determine whether an entity is an employee, contractor, or agent of the vessel owner is difficult without requesting more information than is typically requested of permit applicants and it creates additional administrative burden for applicants and NMFS.

Preferred Alternative 3. To commercially harvest or sell wreckfish, a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel, the permit must be on board, and the permit holder must be a wreckfish shareholder.

Action 4. Modify the commercial fishing year for wreckfish.

Purpose of Action:
A calendar year fishing year would reduce administrative burden and system downtime as the ITQ program moves towards an electronic reporting system.

Preferred Alternative 2. The commercial fishing year for wreckfish begins on January 1 and ends on December 31. From January 15 through April 15, each year, no person may harvest or possess wreckfish on a fishing vessel, in or from the exclusive economic zone.

Action 5. Require all commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit participating in the wreckfish portion of the snapper grouper fishery to be equipped with vessel monitoring systems.

Purpose of Action:
Wreckfish shareholders mentioned adding vessel monitoring system (VMS) requirements in order to eliminate the current offloading site and time requirements. The Law Enforcement Advisory Panel noted the VMS can be beneficial for enforcing offloading requirements, enforcing closed areas, search and rescue, and communication between owners and operators.

Preferred alternative not yet selected.

Action 6. Modify offloading site and time requirements for wreckfish.

Purpose of Action:
Wreckfish shareholders expressed that having designated landing sites and the daily unloading timeframe to be overly burdensome, particularly the hours allowed for offloading. The allowable offloading time requirement affects the efficiency of their fishing operations. Shareholders would like to see the approved offloading sites and times requirements removed.

Preferred alternative not yet selected.

Action 7. Implement a cost recovery plan and associated conditions for the wreckfish individual transferable quota program.

Purpose of Action:
Cost recovery, the collection of a fee to recover the actual cost directly related to the management, data collection, and enforcement of any Limited Access Privilege Program (LAPP), is mandated under section 304(d)(2)(A) of the Magnuson-Stevens Act.

> ***Sub-Action 7-1. Implement a cost recovery plan for the wreckfish individual transferable quota program.***

Preferred Alternative 2. Implement an individual transferable quota cost recovery plan. The transferable quota shareholder landing wreckfish would be responsible for collection and submission of the cost recovery fee to NMFS.

> ***Sub-Action 7-2. Collection of wreckfish individual transferable quota program cost recovery fees.***

Preferred Alternative 3. Fees will be collected upon the sale of such fish during a fishing season.

> ***Sub-Action 7-3. Frequency of wreckfish individual transferable quota program cost recovery fee submission.***

Preferred Alternative 4. Cost recovery fee will be submitted four times per year.

> ***Sub-Action 7-4. Determination of wreckfish individual transferable quota program cost recovery fees.***

Preferred Alternative 3. The cost recovery fee will be based on standard** ex-vessel value of the wreckfish landings as calculated by NMFS.

Chapter 1. Introduction

1.1 What actions are being proposed in this plan amendment?

The actions in Amendment 48 to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper Amendment 48) would modify management of wreckfish. Actions would establish an electronic reporting system, consider a vessel monitoring system, implement a cost recovery process, revise sector allocations, consider permit requirements, refine the fishing year and spawning season closure, and modify the offloading site and time requirements.

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). NMFS determines whether to approve, disapprove, or partially approve the amendment. NMFS also determines whether to 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 was made available for comment during the amendment review and will be available during 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, including wreckfish.

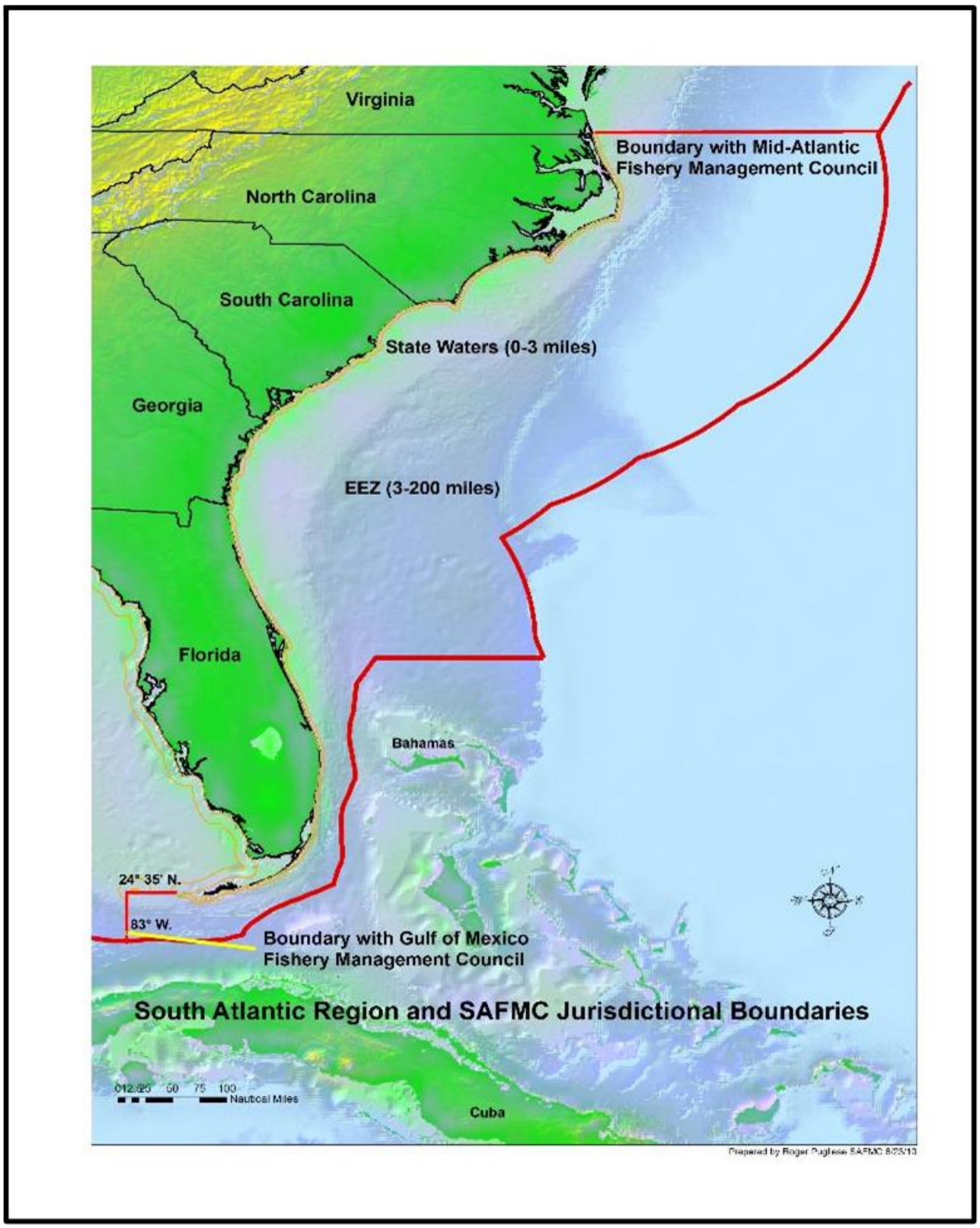

Figure 1.3.1. Jurisdictional boundaries of the Council.

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

Purpose: The *purpose* of this action is to modernize the wreckfish individual transferable quota (ITQ) program, revise management measures.

Need: The *need* for this action is to improve program monitoring and enforcement, as well as data collection and management, provide more flexibility for fishers and increase profitability in the wreckfish ITQ program.

The Council is required by the Magnuson-Stevens Act to review the Wreckfish ITQ) program every five to seven years. The review evaluated progress made in meeting the goals and objectives of the Wreckfish ITQ program (a limited access privilege program). The review does not attempt to comprehensively evaluate management of the snapper grouper fishery. The Council is required by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson Stevens Act; 16 U.S.C. 1801 et seq.) to review the ITQ program every five to seven years.

The Council initially reviewed the program in 2009. The review completed in 2019 was the first subsequent review. That review examined how the Wreckfish ITQ program changed between a baseline time period (2009/2010 – 2011/2012 fishing years) and the review time period (2012/2013 – 2016/2017 fishing years) with respect to various social, economic, biological, and administrative factors, and offered conclusions and recommended changes to the program based on the findings. In general, the program has been relatively successful in achieving its stated objectives, although there is still room for further improvement, particularly with respect to confidentiality issues and related constraints; moving away from a paper coupon-based program to an electronic program; cost recovery; wreckfish permit requirement; allocation issues; offloading sites and times; and economic data collection. Snapper Grouper Amendment 48 will consider actions and alternatives necessary to improve and modernize the Council's Wreckfish ITQ program.

1.5 Wreckfish Individual Quota Program Goals and Objectives

The review of the Wreckfish ITQ Program (2019) evaluated the program based on whether it met the original goals and objectives established in Snapper Grouper Amendment 5 (SAFMC 1991). Since the beginning of the program in 1991, the fishery has changed significantly through regulation and participation. The following goals and objectives for the Wreckfish ITQ program were listed as justification for limiting participation in the fishery through an ITQ program:

1. "Develop a mechanism to vest fishermen in the wreckfish fishery and create incentives for conservation and regulatory compliance whereby fishermen can realize potential long-run benefit …"
2. "Provide a management regime which promotes stability and facilitates long-range planning and investment by harvesters and fish dealers while avoiding, where possible,

the necessity for more stringent management measures and increasing management costs over time."

3. "Develop a mechanism that allows the marketplace to drive harvest strategies…"
4. "Promote management regimes that minimize gear and area conflicts…
5. "Minimize the tendency for over-capitalization in the harvesting and processing/distribution sectors."
6. "Provide a reasonable opportunity for fishermen to make adequate returns from commercial fishing by controlling entry so that returns are not regularly dissipated by open access, while also providing avenues for fishermen not initially included in the limited entry program to enter the program."

Wreckfish ITQ shareholders reviewed the current goals and objectives in October 2020 and agreed that the current program was successfully meeting all six goals and objectives. The shareholders did express concern about giving wreckfish fishermen an unrealistic expectation of permanent ownership in the fishery as unused shares have been reallocated in the past (Snapper Grouper Amendment 20B) (Objective One) and creating any new avenues for fishermen to enter the program because the fishery is already at maximum capacity with current effort (Objective Six). The Council reviewed the goals and objectives during their December 2020 Council meeting and chose to retain the current goals and objectives for the Wreckfish ITQ Program without modification. The Council determined no changes were needed because there have not been substantial modifications to the program and the current amendment proposes only to modernize existing systems.

1.6 How has recreational data collection changed in the southeast?

The Marine Recreational Fisheries Statistics Survey (MRFSS) was created in 1979 by NMFS. MRFSS included the Intercept survey, a dockside intercept program. MRFSS also included Coastal Household Telephone Survey (CHTS), which used random digit dialing of homes in coastal counties to contact anglers to determine fishing effort. In 2000, the For-Hire Survey (FHS) was implemented to incorporate for-hire effort due to lack of coverage of charter boat anglers by the CHTS. The FHS used a directory of all known charter boats and a weekly telephone sample of the charter boat operators to obtain effort information.

MRIP[1] replaced MRFSS in 2013 to meet increasing demand for more precise, accurate, and timely recreational catch estimates. MRIP is a more scientifically sound methodology for estimating catch because it reduces some sources of potential bias as compared to MRFSS resulting in more accurate catch estimates. Specifically, CHTS was improved to better estimate private angling effort. Instead of random telephone calls, MRIP-CHTS used targeted calls to anglers registered with a federal or state saltwater fishing registry. The MRIP also incorporated a new survey design called the Access Point Angler Intercept Survey (APAIS) in 2013. APAIS consists of onsite interviews at marinas and other points where recreational anglers fish, to determine catch. The APAIS design addressed concerns regarding the validity of the survey approach, specifically that trips recorded during a given time period are representative of trips for a full day (Foster et al. 2018). The more complete temporal coverage with the APAIS survey

[1] https://media.fisheries.noaa.gov/2021-09/MRIP-Survey-Design-and-Statistical-Methods-2021-09-15.pdf/

design provides for consistent increases or decreases in angler catch rate statistics, which are used in stock assessments and management, for at least some species (NMFS 2021).

MRIP also transitioned from the legacy CHTS to a new mail survey (FES) beginning in 2015, and in 2018, the FES replaced the CHTS. Both survey methods collect data needed to estimate marine recreational fishing effort (number of fishing trips) by shore and private/rental boat anglers on the Atlantic and Gulf coasts. FES yields higher quality data by providing nearly complete coverage of coastal states, more efficient sampling, and higher response rates than CHTS. The new mail-based FES uses angler license and registration information as one way to identify and contact anglers (supplemented with data from the U.S. Postal Service, which includes virtually all U.S. households). NMFS conducted side-by side testing of the two methods from 2015 to 2018 and developed calibration procedures to convert the historical catch estimates (MRFSS, MRIP-CHTS, MRIP-APAIS, MRFSS-Intercept Survey) into MRIP-FES. In general, landings estimates are higher using the MRIP-FES as compared to the MRFSS 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. NMFS developed a calibration model to adjust historic effort estimates so that they can be accurately compared to new estimates from the FES. The new effort estimates alone do not lead to definitive conclusions about stock size or status in the past or at current. NMFS determined 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).

1.7 What is the history of management for the wreckfish portion of the snapper grouper fishery?

Snapper grouper regulations in the South Atlantic were first implemented in 1983. The reader is referred to Appendix I for the management history of the species in the FMP for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP). Below are amendments to the Snapper Grouper FMP addressing wreckfish within the South Atlantic EEZ.

Wreckfish was not managed under the FMP originally but was added to the FMP in Amendment 3 to the Snapper Grouper FMP (Amendment 3; SAFMC 1990). The stock on the Charleston Bump was discovered accidentally in the mid-1980s by swordfish fishermen recovering lost longline gear in the area (Gauvin, Ward, and Burgess 1994).

Entrance into the fishery was relatively easy due to the lack of regulations (e.g., no permit requirements) and the low cost of converting boats with mechanized hydraulic gear from the swordfish, shark, snapper grouper, and deepwater shrimp fisheries. The wreckfish were larger (~30 lb) than local grouper species and trips were correspondingly lucrative. Fearing a biological collapse, the Council passed Amendment 3 (SAFMC 1990) at its February/March 1990 meeting, which included the following management actions:

1. Added wreckfish to the management unit.
2. Defined optimum yield (OY).
3. Defined overfishing.
4. Required a permit to fish for, land, or sell wreckfish.

5. Established a data collection system for management.
6. Established a control date of March 28, 1990, for a limited-entry program.
7. Established a fishing year beginning April 1.
8. Established a total allowable catch - initially set at 2 million pounds (mp).
9. Established a 10,000 lb trip limit.
10. Established a spawning season closure from January 15 through April 15.

The initial management measures were quickly found to be insufficient for restricting landings to the total allowable catch (TAC), as the newly permitted fishermen caught the entire 2 mp TAC in the first four months of the 1991-1992 season. Amendment 4 to the Snapper Grouper FMP (1991b) was not primarily directed at regulating wreckfish but did add one significant restriction with the banning of bottom longline gear in the wreckfish fishery. Before that longline ban went into effect in October 1991, however, the Council passed Amendment 5 (SAFMC 1991a), which introduced the ITQ program that is still in place.

The wreckfish ITQ is the oldest finfish ITQ in the United States and the second oldest ITQ overall (after ocean quahog/surf clam). Amendment 5 introduced a regulatory system of transferable and divisible privileges to catch and sell wreckfish in the area under the Council's jurisdiction. On the first page of Amendment 5, the ITQs are defined in two separate but related ways. Percentage shares are an individual "fisherman's permanent holding in the fishery based on the initial allocation of shares that can be modified by trading." Individual quotas are "the quantity of wreckfish that a percentage share translates into in a particular year." Amendment 5 introduced a system for tracking and monitoring both percentage share and individual quota transactions, and these systems are still in use. The ITQ program did not replace the wreckfish vessel permit requirement established in Amendment 3 (SAFMC 1990), and so wreckfish fishermen are still required to have this permit to harvest wreckfish. Wreckfish dealers have also been required to be permitted since Amendment 5. Fishermen and dealers must comply with the data reporting requirements of the wreckfish ITQ as outlined in Amendment 5.

Following the implementation of the ITQ program, the fishery experienced a steady drop in landings throughout the latter half of the 1990s and early 2000s. The reasons for this are discussed extensively in Yandle and Crosson (2015)5 , who concluded that shareholders had chosen to invest in other, more lucrative fisheries following a drop in wreckfish prices. Most shareholders were not active in the wreckfish fishery, and most of the wreckfish shares went unharvested during this time.

Amendment 20A (SAFMC 2012) revised the Wreckfish ITQ program with the following actions:

1. Define and revert inactive wreckfish shares. Inactive shares were defined as shares belonging to any ITQ shareholder who had not reported wreckfish landings between April 16, 2006, and January 14, 2011. Inactive shares were eligible for redistribution among active shareholders.
2. Redistribute reverted quota shares to remaining shareholders using total wreckfish landings from April 16, 2006, through January 14, 2011.

3. Establish a share cap of 49% of the total shares of wreckfish quota a single entity may own, and
4. Establish an appeals process for redistribution of reverted wreckfish quota shares. Five percent of the wreckfish shares for fishing year 2012/2013 were set aside to resolve appeals for a period of 90-days starting on the effective date of the final rule, October 26, 2012 (77 FR 59129).

The goal of Amendment 20A was to help achieve OY from the wreckfish commercial sector in accordance with the Magnuson-Stevens Act. Given that the program has been in place for more than two decades, but was also significantly modified in 2012 (Amendment 20A), the Council should use this review to evaluate:

1. whether the goals and objectives of the program have been met or if further progress is needed toward achieving the goals, and

2. should the goals and objectives be modified to address changes in the fishery that have come about because of the ITQ program.

Chapter 2. Proposed Actions and Alternatives

2.1 Action 1. Revise sector allocations and sector annual catch limits for wreckfish.

2.1.1 Alternatives

Alternative 1 (No Action). Retain the current commercial sector and recreational sector allocations as 95% and 5%, respectively, of the total annual catch limit for wreckfish.

Preferred Alternative 2. Allocate 98% of the total annual catch limit for wreckfish to the commercial sector. Allocate 2% of the total annual catch limit for wreckfish to the recreational sector.

Alternative 3. Allocate 99% of the total annual catch limit for wreckfish to the commercial sector. Allocate 1% of the total annual catch limit for wreckfish to the recreational sector.

Alternative 4. Allocate 99.5% of the total annual catch limit for wreckfish to the commercial sector. Allocate 0.5% of the total annual catch limit for wreckfish to the recreational sector.

Discussion:
The Snapper Grouper Advisory Panel and Wreckfish Shareholders recommended that the South Atlantic Fishery Management Council (Council) revisit sector allocations for wreckfish. There is concern that the recreational allocation for wreckfish is too high. It was originally intended as a bycatch fishery, not a targeted one. The Shareholders felt that a lower allocation may be more appropriate, especially considering the low encounter rate in the MRIP survey.

Amendment 25 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 25) (SAFMC 2011) made the first specific allocation of wreckfish to the recreational sector. That amendment allocated 95% of the total wreckfish ACL to the commercial sector and 5% to the recreational sector. Prior to Amendment 25 (SAFMC 2011) it was illegal for recreationally harvested wreckfish to be possessed unless the fisherman also held and South Atlantic Commercial Snapper Grouper Permit.

According to Southeast Region Headboat Survey data, no wreckfish have been landed by South Atlantic headboats since the recreational sector was given its allocation (K. Donnelly, pers. comm., Beaufort Laboratory, 3/19/2019). Recreational landings are currently tracked using the Marine Recreational Information Program (MRIP). Wreckfish intercepts by MRIP are exceedingly rare. Since 1981, only one intercepted trip by a charter vessel off of Hatteras, NC in 2012 reported harvest of wreckfish (Pers. comm., NMFS, Fisheries Statistics Division, 3/19/2019). With wreckfish MRIP intercepts being so rare, it is uncertain how many wreckfish are being caught by the recreational sector, though it is likely the recreational sector is not fully utilizing its current allocation.

2.1.2 Comparison of Alternatives:

Biological effects are not expected to be substantially different between **Alternative 1 (No Action)** and **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** since the allocation percentages do not affect the total ACL established for this fishery and the commercial sector is well regulated under an IFQ program. Substantial changes in fishing effort or behavior are not expected because of this action, thus the proposed allocations under this action would not be expected to result in any biological effects, positive or negative, on co-occurring species.

In general, sector ACLs that allow for more fish to be landed can result in increased positive economic and social effects if harvest increases without notable long-term effects on the health of a stock. The sector ACL does not directly impact the fishery for a species unless harvest changes, fishing behavior changes, or the sector ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. As such, sector ACLs that are set above observed landings in a fishery for a species and do not change harvest or fishing behavior may not have realized economic effects each year. Nevertheless, sector ACLs set above observed average harvest levels do create a gap between the sector ACL and typical landings that may be utilized in years of exceptional abundance or accessibility of a species, thus providing the opportunity for increased landings and a reduced likelihood of triggering restrictive AMs. As such there are potential economic benefits from sector ACLs that allow for such a gap (**Table 2.1.1.1**). Under this notion, **Alternative 4** would allow for the highest potential economic benefits for the commercial sector followed by **Alternative 3**, **Preferred Alternative 2**, and **Alternative 1 (No Action)**. The opposite would be true for the recreational sector, where **Alternative 1 (No Action)** would allow for the highest potential economic benefits followed by **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4**.

Table 2.1.1.1. Commercial and recreational allocation alternatives and resulting annual catch limits.

Action 1	Commercial Allocation	Commercial ACL (lbs ww)	Recreational Allocation	Recreational ACL (lbs ww)
Alternative 1 (No Action)	95%	369,645	5%	19,455
Preferred Alternative 2	**98%**	**381,318**	**2%**	**7,782**
Alternative 3	99%	385,209	1%	3,891
Alternative 4	99.5%	387,155	0.5%	1,946

Note: Total wreckfish ACL is 389,100 pounds round weight for 2020 and subsequent fishing years.

There can be additional social effects that result as allocations are discussed further, and perceptions are formed. In the past there has been some resistance to further decreasing a given sector's percentage allocation. Under **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** there would be a decrease in the recreational percentage compared to **Alternative 1 (No Action)**. 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. However, the recreational sector has not met their ACL in recent years, which may subvert any negative perceptions.

The overall administrative effects are likely going to be minimal and the same across the viable alternatives. The commercial sector of the wreckfish fishery is already managed under an ITQ

program, which is a considerable administrative burden to the agency. Upon implementation of one of the action alternatives, there would be a temporary increased administrative burden to reallocate quota share to individuals in the program. However, this burden will be only at the implementation stage and minimal moving forward.

2.2 Action 2. Implement an electronic reporting system for the wreckfish individual transferable quota (ITQ) program.

2.2.1 Alternatives

Alternative 1 (No Action). Retain the current ITQ paper-based reporting system including, share certificates, allocation coupons, vessel logbooks, and dealer reports.

Preferred Alternative 2. Implement an electronic system of reporting for the wreckfish ITQ program to electronically track ownership and transfers of quota shares, distribution, and transfers of annual allocation (quota pounds), and electronically record wreckfish landing information as part of the coastal fisheries logbook program.

Discussion:
Data management and user experience could be greatly enhanced by moving from a paper system to an electronic system. The migration to an electronic system would increase timeliness of reported data, improve data quality, reduce cost and time for management, provide additional flexibility and benefits to fishermen, and improve program enforcement and monitoring.

2.2.2 Comparison of Alternatives:

The current Wreckfish ITQ program operates via paper-based logbook and paper coupons. Moving to an electronic ITQ system is an administrative action that would streamline an already existing program and would not directly affect the physical or biological environment but may have an indirect effect. There may be positive indirect biological effects because the electronic system may be more efficient for both fishermen and managers and would allow for better tracking of catch and allocation.

In general, positive economic and social effects of electronic reporting requirements would likely be associated with decreased time and financial burden for Wreckfish ITQ holders, crew, and dealers to meet the requirements when compared to the paper-based reporting system. If dealers and shareholders currently involved in the fishery do not already have the necessary equipment and internet connection to report electronically, **Preferred Alternative 2** would introduce a new cost. However, it is likely that these businesses are already equipped for electronic reporting, so this would not be a new or additional cost.

From an administrative perspective, program performance could be improved by moving to an electronic system as proposed in **Preferred Alternative 2**. The current structure of the wreckfish program lends itself well to the electronic reporting system already in place for other Catch Share programs managed or hosted by the regional office (e.g., Gulf of Mexico IFQ programs, Highly Migratory Species' Bluefin Tuna Individual Bycatch Quota program, pilot catch share program for the Gulf Headboat Collaborative, etc.).

Benefits of moving from the paper-based program (**Alternative 1 (No Action)**) to the electronic program (**Preferred Alternative 2**) may include:

- One database containing all program activity (e.g., landings, effort, and participation; transfers of quota shares and quota lb; ex-vessel, share, and quota pound prices, etc.).
- More timely and accurate data reporting and real-time monitoring.
- Improved method and reduced time to transfer shares and quota lb.
- Automated share cap calculations.
- Ability to match shareholder agents/contractors more accurately from permit records with shareholder accounts.
- Participants able to view their transfer and landings history.
- Elimination of coupons, which would:
    - Allow quota lb to be transferred or landed in one pound increments rather than 100 and 500 lb increments, which would eliminate loss of quota lb due to denominational restrictions.
    - Eliminate the need to print coupons and mail coupons to the shareholders.
    - Eliminate the need to mail in coupons to the SEFSC.

Preferred Alternative 2 would increase the administrative burden on NMFS initially related to development and implementation of an electronic system. These costs could be minimized by working through already developed systems as described above. After development of the electronic system, the administrative burden of manually maintaining the existing ITQ program will be reduced.

2.3 Action 3. Modify the requirement to possess a commercial vessel permit for wreckfish.

2.3.1 Alternatives

Alternative 1 (No Action). To commercially harvest or sell wreckfish, a commercial vessel permit for wreckfish and a commercial permit for South Atlantic snapper grouper must have been issued to the vessel and the permit must be on board. To obtain a commercial vessel permit for wreckfish, the applicant must be a wreckfish shareholder; and either the shareholder must be the vessel owner, or the owner or operator must be an employee, contractor, or agent of the shareholder.

Alternative 2. To commercially harvest or sell wreckfish, a commercial vessel permit for wreckfish and a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel and the permit must be on board. To obtain a commercial vessel permit for wreckfish, the permit holder must be a wreckfish shareholder.

Preferred Alternative 3. To commercially harvest or sell wreckfish, a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel, the permit must be on board, and the permit holder must be a wreckfish shareholder.

Alternative 4. To commercially harvest or sell wreckfish, a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel, the permit must be on board.

Discussion:
In order to obtain a wreckfish permit, the entity must first be a wreckfish shareholder or the shareholder's agent, employee, or contractor (hereafter referred to as agent). In order to harvest wreckfish, the vessel owner or the operator of the vessel must be the wreckfish shareholder or agent of the shareholder and must also possess the limited access South Atlantic commercial Snapper/Grouper permit. Therefore, the only restriction on entry into the Wreckfish ITQ program as a shareholder is the availability of wreckfish shares, while the restriction to harvest wreckfish is also limited by Snapper/Grouper permits. Since Snapper/Grouper permits can only be obtained by transfer, except for specific exceptions, an entity must obtain and exchange two such permits for one new permit, which may inhibit participation in the program.

The wreckfish permit was originally implemented via Amendment 3 to the Snapper Grouper FMP. The purpose of the permit was to allow for collection of critical data such as catch per unit effort, size composition, reproduction and feeding habits. These data are important in monitoring the biological status of the fishery and its exploitation level. Upon implementation of the ITQ program, the wreckfish permit was retained. The permit allows enforcement officials an additional target for sanctions if a fisherman is in violation. To obtain a wreckfish permit, an applicant must possess a certificate of percentage share.

The requirements to possess two permits in addition to owning ITQ shares is duplicative, and therefore, may be considered to be unnecessarily burdensome for program participants and data

managers. These requirements also unnecessarily complicate the use of data by program analysts. Additionally, requiring NMFS to determine whether an entity is an employee, contractor, or agent of the vessel owner is difficult without requesting more information than is typically requested of permit applicants and it creates additional administrative burden for applicants and NMFS.

2.3.2 Comparison of Alternatives:

Changing the permit requirement for wreckfish shareholders is an administrative action that would not directly affect the physical or biological environment. There may be positive indirect biological effects because **Alternative 2** and **Preferred Alternative 3** would remove the ability for an employee, contractor, or agent of the shareholder to participate in the fishery, leading to more direct involvement in the fishery by the wreckfish permit holder. **Alternative 4** would eliminate the wreckfish permit but would require that the shareholder have an unlimited permit for the snapper grouper fishery. However, this action would not change how the fishery is prosecuted and as such would not have a direct biological impact on wreckfish, other affected species or protected species.

When compared to **Alternative 1 (No Action)** the proposed alternatives would be less burdensome on shareholders as well as NMFS (Table 2.3.2.1). **Alternative 2** is slightly more restrictive than **Preferred Alternative 3** as it maintains the requirement to purchase a commercial wreckfish permit. However, **Alternative 2** would require less information to be provided by the shareholder when compared to the requirements under **Alternative 2 (No Action)**. Additionally, **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4** would create fewer requirements to participate into the fishery, with **Alternative 4** having the lowest threshold for participation.

Additional or similar requirements for entry as those under **Alternative 1 (No Action)** may be implemented as part of the electronic reporting system (Action 2) which would affect the social effects of this action.

Table 2.3.2.1. Requirements to commercially harvest or sell wreckfish under each Action 3 alternative.

Requirement	Alternative 1	Alternative 2	Pref. Alternative 3	Alternative 4
Wreckfish Permit	X	X		
SG Unlimited Permit	X	X	X	
Shareholder	X	X	X	X
Employee, contractor, or agent of the shareholder.	X			

The administrative impacts of this action are expected to be minimal and similar between **Alternative 1**, **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4**. The impacts will be associated with education and outreach, compliance, and law enforcement. In the electronic system, the vessel's permit holder must exactly match the shareholder account to account for harvesting rights, landings, cost recovery fees, etc. There are times when the shareholder's agent utilize a vessel permitted to the agent and not the shareholder. Under this scenario, the system

would not be able to accurately account for the vessel with the wreckfish permit that is not directly permitted to the shareholder.

There may be a reduced administrative burden with **Alternative 2** and **Preferred Alternative 3** if the electronic ITQ system is developed under **Action 2**. The electronic system will be able to keep track of vessel shares amongst the active vessels. Under Alternative 1, the existing Catch Share will have to significantly reorganized to handle the shareholder's agent's ability to harvest under a vessel not permitted to the shareholder. This will add significant administrative burden and delay implementation. **Alternative 4** would remove the requirement for a wreckfish permit thus eliminating some of the administrative burden. Even under **Alternative 4**, a vessel would still require allocation to harvest wreckfish. Allocation must be transferred from a wreckfish shareholder. The Council will need to consider some actions relating to maintenance and transferability of shares and allocation if the system moves to an electronic system. Therefore Alternative 4 could function similar in the fishery to Alternatives 3 and 2 if restrictions were placed on allocation transfer (e.g., transfer of allocation only allowed to accounts with shares). This would be a more streamlined approach than using a separate permit to accomplish the same end.

2.4 Action 4. Modify the commercial fishing year for wreckfish.

2.4.1 Alternatives

Alternative 1 (No Action). The commercial fishing year for wreckfish begins on April 15 and ends on April 14.

Preferred Alternative 2. The commercial fishing year for wreckfish begins on January 1 and ends on December 31.

Discussion:

The current electronic reporting systems have a required shut down time from December 31st at 6pm EST to January 1st 2pm EST to reset the system for the next year. By consolidating the reporting system downtimes, impacts can be reduced on other electronic programs in an online system. A calendar year fishing year would reduce administrative burden and system downtime as the Wreckfish ITQ program moves towards an electronic reporting system. Additional system downtimes may affect all programs in the online system which currently include Gulf of Mexico Red Snapper IFQ, Gulf of Mexico Grouper-Tilefish IFQ, Highly Migratory Species' Bluefin Tuna IBQ, and law enforcement's ability to enter Turtle Excluder Device reports.

2.4.2 Comparison of Alternatives:

Regardless of the alternative selected, this action is not anticipated to have negative biological impacts on wreckfish. Neither alternatives would modify the fishery in such a way that it would result in impacts to wreckfish, other affected species or protected species.

The commercial fishing year does not directly affect landings or fishing behavior; therefore, the economic and social effects of **Alternative 1 (No Action)** and **Preferred Alternative 2** would likely be similar. Net economic benefits are not expected to change between the two alternatives.

If Alternative 2, under Action 2 is selected as preferred, this action would be needed to align the electronic system maintenance and updates with those of other catch share programs managed by NMFS. The need for this action is purely administrative and **Preferred Alternative 2** under Action 4 would significantly reduce the administrative burden compared to **Alternative 1** (**No Action**) because the updates and maintenance of the ITQ program can happen at the same time as the other programs.

2.5 Action 5. Require all commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit participating in the wreckfish portion of the snapper grouper fishery to be equipped with vessel monitoring systems.

2.5.1 Alternatives

Alternative 1 (No Action). Commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit are not required to be equipped with vessel monitoring systems when participating in the wreckfish portion of the snapper grouper fishery.

Alternative 2. Require all commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit participating in the wreckfish portion of the snapper grouper fishery to be equipped with vessel monitoring systems.

Discussion:
The requirement to report be equipped with a vessel monitoring system (VMS) is an administrative process for providing a means of collecting location data from wreckfish fishermen and does not directly affect the biological or physical environment but may have an indirect effect. Wreckfish shareholders mentioned adding VMS requirements to allow more flexibility the current offloading site and time requirements. The Law Enforcement Advisory Panel noted the VMS can be beneficial for enforcing offloading requirements, enforcing closed areas, search and rescue, and communication between owners and operators.

2.5.2 Comparison of Alternatives:

Alternative 2 would require commercial vessels participating in the wreckfish fishery to be equipped with vessel monitoring systems. Neither **Alternative 1 (No Action)** nor **Alternative 2** would have direct impacts on the physical, biological, or ecological environment but ultimately provide more information about the fishery that may result in biological benefits to the species. Because **Alternative 2** only proposes vessel monitoring with a snapper-grouper unlimited permit and for use in the wreckfish fishery, it is tied to **Action 3.**

Currently South Atlantic Unlimited Snapper-Grouper permitted vessels operating in the wreckfish fishery do not require VMS (**Alternative 1 (No Action)**), thus requiring VMS (**Alternative 2**) would implement new costs for these participants. Also, there will be additional administrative costs on NMFS from monitoring VMS data under **Alternative 2**. As such, net economic benefits would be higher under **Alternative 1 (No Action)** compared to **Alternative 2.**

In general, the expected social effects would likely be associated with a financial burden on wreckfish ITQ shareholders and businesses to purchase and maintain any required equipment, These negative direct effects would be greatest under the most expensive devices, which would require a permanently installed VMS unit.

Alternative 2 would increase the administrative burden on NMFS significantly as it would require the development of infrastructure to monitor vessel monitoring tracks. **Alternative 2**

would require outreach on education and compliance. Vessel monitoring systems are being used in other fisheries and likely those systems could be modified for use in the wreckfish fishery. However, there will be an administrative burden associated with approving systems, education, and compliance.

2.6 Action 6. Modify offloading site and time requirements for wreckfish.

2.6.1 Alternatives

Alternative 1 (No Action). Wreckfish may only be offloaded between the hours of 8 a.m. and 5 p.m., local time. Wreckfish must be offloaded only at the fixed facility of a dealer with a Gulf of Mexico and South Atlantic Dealer Permit. Wreckfish may be offloaded at a location other than a fixed facility of a dealer who holds a Gulf of Mexico and South Atlantic dealer permit, if the wreckfish shareholder or the vessel operator advises the NMFS Office for Law Enforcement of the location not less than 24 hours prior to offloading.

Alternative 2. Wreckfish may only be offloaded between the hours of 6 a.m. and 6 p.m., local time. Wreckfish must be offloaded only at the fixed facility of a dealer with a Gulf of Mexico and South Atlantic Dealer Permit. Wreckfish may be offloaded at a location other than a fixed facility of a dealer who holds a Gulf of Mexico and South Atlantic dealer permit, if the wreckfish shareholder or the vessel operator advises the NMFS Office for Law Enforcement of the location not less than 24 hours prior to offloading.

Alternative 3. Wreckfish may only be offloaded between the hours of 5 a.m. and 8 p.m., local time. Wreckfish must be offloaded only at the fixed facility of a dealer with a Gulf of Mexico and South Atlantic Dealer Permit. Wreckfish may be offloaded at a location other than a fixed facility of a dealer who holds a Gulf of Mexico and South Atlantic dealer permit, if the wreckfish shareholder or the vessel operator advises the NMFS Office for Law Enforcement of the location not less than 24 hours prior to offloading.

Alternative 4. Remove the requirement to offload wreckfish between the hours of 8 a.m. and 5 p.m., local time. Wreckfish must be offloaded only at the fixed facility of a dealer with a Gulf of Mexico and South Atlantic Dealer Permit. Wreckfish may be offloaded at a location other than a fixed facility of a dealer who holds a Gulf of Mexico and South Atlantic dealer permit, if the wreckfish shareholder or the vessel operator advises the NMFS Office for Law Enforcement of the location not less than 24 hours prior to offloading.

Discussion:

The program limits offloading of wreckfish between daylight hours, 8 am – 5 pm local time and only at fixed dealer facilities. Landing at other locations may be approved if the vessel captain or shareholder notifies Law Enforcement at least 24 hours prior to offloading.

Wreckfish shareholders expressed that having designated landing sites and the daily unloading timeframe to be overly burdensome, particularly the hours allowed for offloading. The allowable offloading time requirement affects the efficiency of their fishing operations. Shareholders would like to see the approved offloading sites and times requirements removed.

2.6.2 Comparison of Alternatives:

Regardless of the alternative selected, this action is not anticipated to have negative biological impacts on wreckfish. The commercial sector is constrained by an ACL and operates under a well-regulated ITQ system. The offloading hours are used to ensure that law enforcement may be available to safely witness wreckfish being landed at a dealer facility.

Offloading time requirements implement a cost on fishery participants since they may hinder fishing activity that otherwise would have occurred should such restrictions not be in place. Thus, less restrictive time requirements offer comparative economic benefits**. Alternative 1 (No Action)** offers the fewest hours that wreckfish may be offloaded (9 hours), followed by **Alternative 2** (12 hours), **Alternative 3** (15 hours), and **Alternative 4** (24 hours). As such, **Alternative 4** offers the highest potential economic benefits to fishery participants, followed by **Alternative 3**, **Alternative 2**, and **Alternative 1 (No Action)** (Table 2.6.2.1).

Table 2.6.2.1. Allowable offloading times for wreckfish under Action 6 alternatives.

	Hour of the Day (UTC)																							
Alternative	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
1 (No Action)																								
2																								
3																								
4																								

Additionally, Wreckfish ITQ shareholders have expressed frustration with the current offloading time requirements under **Alternative 1 (No Action)**. **Alternative 2**, **Alternative 3**, and **Alternative 4** would address a problem in the fisheries identified by stakeholders and may help to improve perceptions of the management process.

By increasing the time window for offloads, the administrative burden on the agency is increased. **Alternative 2** and **Alternative 3** would increase the window for offloads, providing a bit more flexibility for fishermen but increasing the potential administrative burden on law enforcement. Additionally, the increased time allotment for **Alternative 2** matches the offloading times used in the Gulf of Mexico IFQ programs and provide a consistency for law enforcement. These hours were chosen in the Gulf as they typically represent what would occur outside daylight hours across the entire year. **Alternatives 3** would increase the hours and could jeopardize officer safety risk for law enforcement as it includes non-daylight hours throughout the year. **Alternative 4** would remove administrative burden from law enforcement and fishermen but may not provide the oversight the program requires.

2.7 Action 7. Implement a cost recovery plan and associated conditions for the wreckfish individual transferable quota program.

2.7.1 Sub-Action 7-1. Implement a cost recovery plan for the wreckfish individual transferable quota program.

2.7.1.1 Alternatives

Alternative 1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

This is not a legally viable alternative.

Preferred Alternative 2. Implement an individual transferable quota cost recovery plan. The transferable quota shareholder landing wreckfish would be responsible for collection and submission of the cost recovery fee to NMFS.

Alternative 3. Implement an individual transferable quota cost recovery plan. The dealer receiving wreckfish would be responsible for collecting the cost recovery fee from the shareholder landing the wreckfish and submitting the fee to NMFS.

Discussion:

Cost recovery, the collection of a fee to recover the actual cost directly related to the management, data collection, and enforcement of any limited access privilege program (LAPP), is mandated under section 304(d)(2)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

2.7.1.2 Comparison of Alternatives

Cost recovery was not included in the Wreckfish ITQ program when it was implemented in 1992 and cost recovery is currently not in place. Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

Preferred Alternative 2 and **Alternative 3** are differ in that in **Alternative 3**, NMFS allows the dealer to collect the fee on its behalf. This agent would then be responsible for submitting the fee to the agency. Submission may occur at time frames outside the required collection time frames listed in Magnuson-Stevens Act and in Sub-Action 7-2. **Preferred Alternative 2** does not utilize an agent on behalf of NMFS to collect the fee as stated in Action 7-2.

NMFS will determine the percentage of the ex-vessel value of wreckfish landings that would be collected. The program would impose a fee of up to three percent of the ex-vessel value of wreckfish harvested under the ITQ program. Negative social and economic effects of the cost recovery fee would be associated with the cost of the fee itself was well as the time and materials required for completing the paperwork and paying the fee.

Preferred Alternative 2 and **Alternative 3** would have similar administrative impacts to the agency. With the electronic ITQ program as proposed in **Action 2**, it is expected that the

electronic system will track and collate these fees. The system will send the dealer to pay.gov to pay the fee.

2.7.2 Sub-Action 7-2. Collection of wreckfish individual transferable quota program cost recovery fees.

2.7.2.1 Alternatives

Alternative 1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

This is not a legally viable alternative.

Alternative 2. Fees will be collected at the time of landing or report of landing.

Preferred Alternative 3. Fees will be collected upon the sale of such fish during a fishing season.

Alternative 4. Fees will be collected in the last quarter of the calendar year in which the fish is harvested.

Discussion:

Cost recovery, the collection of a fee to recover the actual cost directly related to the management, data collection, and enforcement of any LAPP, is mandated under section 304(d)(2)(A) of the Magnuson-Stevens Act. The Magnuson-Stevens Act requires that NMFS collect the fees at the timeframe listed in the above Alternatives and does not allow any other alternatives.

2.7.2.2 Comparison of Alternatives

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

A cost recovery plan under **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4** would result in additional burden on Wreckfish ITQ shareholders when compared to **Alternative 1 (No Action)**. However, **Alternative 1 (No Action)** is not a legally viable alternative. Negative economic and social effects of the cost recovery fee would be associated with the cost of the fee itself as well as the time and materials required for completing the paperwork and paying the fee. **Alternatives 2** and **3**, allow for the collection of fees to be submitted in more frequent increments, thereby creating a smaller payment per transaction than **Alternative 4**.

Alternative 4 may require less effort to collect fees since it would only be required once per year, and thus there may be a slightly lesser burden associated with this alternative in relation to **Alternatives 2** and **3 (Preferred)**. **Alternative 4** would require the entire fee to be paid in one payment and not allow the expense to be paid in increments throughout the year.

Alternative 2 would have increased administrative impacts compared to **Preferred Alternative 3** and **Alternative 4**. Under **Alternative 2**, fees would be collected upon landing resulting. **Preferred Alternative 3** may not differ as landing and sales often occur in the same time frame

and ex-vessel price is required to calculate the cost recovery fee. **Alternative 4** would result in the fewest transactions between the permit holder and NOAA Fisheries. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these payments in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program.

2.7.3 Sub-Action 7-3. Frequency of wreckfish individual transferable quota program cost recovery fee submission.

2.7.3.1 Alternatives

Alternative 1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

This is not a legally viable alternative.

Alternative 2. Cost recovery fee will be submitted once per year.

Alternative 3. Cost recovery fee will be submitted twice per year.

Preferred Alternative 4. Cost recovery fee will be submitted four times per year.

Alternative 5. Cost recovery fee will be submitted twelve times per year.

Discussion:

Cost recovery, the collection of a fee to recover the actual cost directly related to the management, data collection, and enforcement of any LAPP, is mandated under section 304(d)(2)(A) of the Magnuson-Stevens Act. This option is only available if NMFS uses an agent to collect the fee on their behalf. If no agent is used, the fee must be collected by NMFS at the timeframes listed in Action 7-2.

2.7.3.2 Comparison of Alternatives

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

Alternative 1 (No Action), represents the lowest costs to fishery participants and lowest benefits to NMFS. However, **Alternative 1 (No Action)** is not a legally viable alternative. This option is only available if NMFS uses an agent to collect the fee on their behalf. The total fees submitted would be similar across **Alternatives 2**, **3**, **4 (Preferred)** and **5** as the fee is based on the ex-vessel value. Less frequency between when the fees must be submitted may lead to less administrative related costs from those submitting the fees to the agency and thus comparatively higher economic benefits. Under this notion, **Alternative 2** may require less administrative burden on the part of the entity submitting the fees to NMFS, since it would only be required once per year, this would be followed by slightly higher administrative related costs associated with **Alternative 3** (submittal twice per year), **Preferred Alternative 4** (submittal four times per year), and **Alternative 5** (submittal 12 times per year).

Negative social effects of the cost recovery fee would be associated with the cost of the fee itself was well as the time and materials required for completing the paperwork and paying the fee. **Alternative 5** may require less effort to collect fees since it would only be required once per year, thus there may be slightly time burden associated with this alterative in relation to **Alternatives 2**, **Alternative 3** and **Preferred Alternative 4**.

Pay.gov will be used for NMFS to collect the cost recovery fees. Pay.gov allows payment submission through credit cards or Automated Clearing House (ACH). ACH deducts payments directly form the checking account listed. Within pay.gov, credit card payments are limited to less than $30,000 and allows for instant refunds for overpayment. There is no maximum limit for ACH payments, but refunds for ACH payments require additional paperwork and signatures from SERO and other NMFS staff. Refunds for ACH payments may take weeks to be realized.

Cost recovery plans for ITQ programs are a requirement of the Magnuson-Stevens Act and as such **Alternative 1 (No Action**) is not a viable alternative. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these fees in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program. The administrative burden on the fishermen and the agency is expected to be less with less transactions and as such the administrative burden would be greatest for **Alternative 5** and the least for **Alternative 2**.

2.7.4 Sub-Action 7-4. Determination of wreckfish individual transferable quota program cost recovery fees.

2.7.4.1 Alternatives

Alternative 1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

This is not a legally viable alternative.

Alternative 2. The cost recovery fee will be based on actual* ex-vessel value of the wreckfish landings.

Preferred Alternative 3. The cost recovery fee will be based on standard** ex-vessel value of the wreckfish landings as calculated by NMFS.

* actual ex-vessel value is calculated by multiplying the wreckfish landings by the actual ex-vessel price, where the actual ex-vessel price is the total monetary sale amount a fisherman receives per pound of fish for ITQ landings from a registered ITQ dealer before any deductions are made for transferred allocation and goods and services (e.g. bait, ice, fuel, repairs, machinery replacement, etc.).

** standard ex-vessel value is calculated by multiplying the wreckfish landings by the standard ex-vessel price, which is based on the average ex-vessel price for the previous fishing year and any expected price change in the current fishing year.

Discussion:

Cost recovery, the collection of a fee to recover the actual cost directly related to the management, data collection, and enforcement of any LAPP, is mandated under section 304(d)(2)(A) of the Magnuson-Stevens Act.

2.7.4.2 Comparison of Alternatives

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species. **Alternative 1 (No Action)**, represents the lowest costs to fishery participants and lowest benefits to NMFS. The costs for fishery participants related to **Alternative 2** and **Preferred Alternative 3** would be situational and variable, therefore a comparison of economic and social benefits is not possible at this time. There will be no difference in the fishermen impacts of **Alternative 2** and **Preferred Alternative 3**. **Preferred Alternative 3** will have increased administrative burden as the agency will need to calculate the standard ex-vessel price and publish the value in the federal register. Consideration of confidentiality will need to be explored when calculating the standard ex-vessel value if there are less than 3 dealers or shareholders available for the calculation of standard ex-vessel price. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these fees in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program.

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 environment** (Sections 3.3)
- **Social environment** (Sections 3.4)
- **Administrative environment** (Section 3.5)

3.1 Habitat Environment

3.1.1 Inshore/Estuarine Habitat

Many snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories: larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges, caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions. Additional information on the habitat utilized by species in the Snapper Grouper Complex is included in Volume II of the Fishery Ecosystem Plan (FEP; SAFMC 2009b).

3.1.2 Offshore Habitat

Predominant snapper grouper offshore fishing areas are located in live bottom and shelf-edge habitats where water temperatures range from 11º to 27º C (52º to 81º F) due to the proximity of the Gulf Stream, with lower shelf habitat temperatures varying from 11º to 14º C (52º to 57º F). Water depths range from 16 to 27 meters (54 to 90 ft) or greater for live-bottom habitats, 55 to 110 meters (180 to 360 ft) for the shelf-edge habitat, and from 110 to 183 meters (360 to 600 ft) for lower-shelf habitat areas.

The exact extent and distribution of productive snapper grouper habitat on the continental shelf north of Cape Canaveral, Florida is unknown. Current data suggest from 3 to 30% of the shelf is

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

Rock outcroppings occur throughout the continental shelf from Cape Hatteras, North Carolina to Key West, Florida (MacIntyre and Milliman 1970, Miller and Richards 1979, Parker et al. 1983), which are principally composed of limestone and carbonate sandstone (Newton et al. 1971), and exhibit vertical relief ranging from less than 0.5 to over 10 meters (33 ft). Ledge systems formed by rock outcrops and piles of irregularly sized boulders are also common. Parker et al. (1983) estimated that 24% (9,443 km2) of the area between the 27 and 101 meters (89 and 331 ft) depth contours from Cape Hatteras, North Carolina to Cape Canaveral, Florida is reef habitat. Although the bottom communities found in water depths between 100 and 300 meters (328 and 984 ft) from Cape Hatteras, North Carolina to Key West, Florida is relatively small compared to the whole shelf, this area, based upon landing information of fishers, constitutes prime reef fish habitat and probably significantly contributes to the total amount of reef habitat in this region.

Artificial reef structures are also utilized to attract fish and increase fish harvests; however, research on artificial reefs is limited and opinions differ as to whether or not these structures promote an increase of ecological biomass or merely concentrate fishes by attracting them from nearby, natural un-vegetated areas of little or no relief.

The distribution of coral and live hard bottom habitat as presented in the Southeast Marine Assessment and Prediction Program (SEAMAP) bottom mapping project is a proxy for the distribution of the species within the snapper grouper complex. The method used to determine hard bottom habitat relied on the identification of reef obligate species including members of the snapper grouper complex. The Florida Fish and Wildlife Research Institute (FWRI), using the best scientific information available on the distribution of hard bottom habitat in the South Atlantic region, prepared ArcView maps for the four-state project.

Plots of the spatial distribution of offshore species were generated from the Marine Resources Monitoring, Assessment, and Prediction Program (MARMAP) data. The plots serve as point confirmation of the presence of each species within the scope of the sampling program. These plots, in combination with the hard bottom habitat distributions previously mentioned, can be employed as proxies for offshore snapper grouper complex distributions in the south Atlantic region. Maps of the distribution of snapper grouper species by gear type based on MARMAP data can also be generated through the South Atlantic Council's Internet Mapping System at the above address.

3.1.3 Essential Fish Habitat

Essential fish habitat (EFH) is defined in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) as "those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity" (16 U.S. C. 1802(10)). Specific categories of EFH identified in the South Atlantic Bight, which are utilized by federally managed fish and invertebrate species, include both estuarine/inshore and marine/offshore areas. Specifically, estuarine/inshore EFH includes Estuarine emergent and mangrove wetlands, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested systems, aquatic beds, and estuarine water column. Additionally, marine/offshore EFH includes live/hard bottom habitats, coral and coral reefs, artificial and manmade reefs, Sargassum species, and marine water column.

EFH utilized by snapper grouper species in this region 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 [600 ft (but to at least 2,000 ft for wreckfish)] where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical fish complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including Sargassum, required for survival of larvae and growth up to and including settlement. In addition, the Gulf Stream is also EFH because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine-dependent and near shore snapper grouper species, EFH includes areas inshore of the 30-meter (100-ft) 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 habitats.

EFH utilized by wreckfish (Polyprion americanus) off the coast of South Carolina and Georgia, is an area of extensive hard bottom habitat known as the Charleston Bump, on the northern Blake Plateau (Sedberry et al. 2001). This topographic feature is located in the Gulf Stream at depths of 400–800 m and roughly 160 km offshore. The rough topography of the Charleston Bump includes over 100 m of nearvertical steep rocky relief with carbonate outcroppings, overhangs, and phosphorite–manganese flat hard bottom (Popenoe and Manheim 2001, Sedberry et al. 2001). The high topographic relief of the bottom deflects the Gulf Stream offshore and creates eddies, gyres, and upwellings in the Gulf Stream flow (Sedberry et al. 2001), which advect nutrients from the bottom into the euphotic zones, creating areas of high productivity (Lee et al. 1991).

Refer to Appendix D for more information about EFH and Ecosystem Based Management in the South Atlantic.

3.1.4 Habitat Areas of Particular Concern

Areas which meet the criteria for Essential Fish Habitat-Habitat Areas of Particular Concern (EFHHAPCs) for species in the snapper grouper management unit include medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely

periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic Sargassum; Hoyt Hills for wreckfish; the Oculina Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; South Atlantic Council-designated Artificial Reef Special Management Zones (SMZs); and deep water MPAs.

Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, post larval, juvenile, and adult stages). Refer to Appendix I for detailed information on EFH and EFH-HAPCs for all Council managed species.

3.2 Biological and Ecological Environment

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

3.2.1 Wreckfish

3.2.1.1 Life History

The wreckfish, Polyprion americanus, is a large grouper-like fish that has a global anti-tropical distribution, but it was rarely captured in the western North Atlantic until the late 1980s, when a bottom hook-and-line fishery that targets wreckfish developed on the Blake Plateau (Vaughan et al. 2001). Wreckfish occur in the Eastern and Western Atlantic Ocean, on the Mid-Atlantic Ridge, on Atlantic islands and seamounts, and in the Mediterranean Sea, southern Indian Ocean, and southwestern Pacific Ocean (Heemstra 1986, Sedberry 1995; Sedberry et al. 1994, 2001). In the western Atlantic, they occur from Grand Banks (44°50' N) off Newfoundland (Scott and Scott 1988) to the Valdes Peninsula (43°30' S) in Argentina (Menni et al. 1981). Genetic evidence suggests that there are three stocks: one that encompasses the entire North Atlantic and Mediterranean, one from Brazil, and the third from Australia/New Zealand in the South Pacific (Ball et al. 2000, Sedberry et al. 1996). Active adult migration is also possible based on the observation of European fish hooks present in western North Atlantic wreckfish suggest migration across great distances (Sedberry et al. 2001).

Wreckfish have supported substantial fisheries in the eastern North Atlantic, Mediterranean, Bermuda, and the western South Atlantic, but concentrations of wreckfish adequate to support a

fishery off the southeastern United States were not discovered until 1987. The fishery off the southeastern United States occurs over a complex bottom feature that has over 100 m of topographic relief, known as the Charleston Bump, located 130-160 km southeast of Charleston, South Carolina, at 31°30' N and 79°00' W on the Blake Plateau (Sedberry et al. 2001). Fishing occurs at water depths of 450-600 m. Primary fishing grounds comprise an area of approximately 175-260 km2 characterized by a rocky ridge and trough feature with a slope greater than 15° (Sedberry et al. 1994, 1999, 2001).

Adults are demersal and attain lengths of 200 cm TL (79 in; Heemstra 1986) and 100 kg (221 pounds; Roberts 1986). Wreckfish landed in the southeastern United States average 15 kg (33 pounds) and 100 cm TL (39 inches TL) (Sedberry et al. 1994). Goldman and Sedberry (2011) found that wreckfish predominantly consumed bony fish and squid. Juvenile wreckfish (< 60 cm TL) are pelagic, and often associate with floating debris, which accounts for their common name. The absence of small pelagic and demersal wreckfish on the Blake Plateau has led to speculation that young wreckfish drift for an extended period, up to four years, in surface currents until reaching the eastern Atlantic, or perhaps that they make a complete circuit of the North Atlantic (Sedberry et al. 2001).

Vaughan et al. (2001) reported a maximum age of 35 years; however, off Brazil the maximum age for wreckfish has been reported as 76 years (Peres and Haimovici 2004). In a recent Marine Resources Monitoring, Assessment, and Prediction (MARMAP) report (Wyanski and Meister 2002), mature gonads were present in 60% of females at 751-800 mm, 57% at 801-850 mm, and 100% at larger sizes. The smallest mature female was 692 mm, and a portion of the females was immature at lengths between 576 and 831 mm. The estimate of length at 50% maturity (L50) was 790 mm (Gomperz model; 95% CI = 733-820). Mature gonads were present in 40% of males between 651 and 800 mm and 100% at larger sizes. The smallest mature male was 661 mm, and a portion of males was immature between 518 and 883 mm. L50 was not estimated for males because transition to maturity was abrupt.

Wreckfish spawn from December through May based on female gonadal maturity. Spawning activity peaks from February to March. The highest percentages of ripe males occurred from December through May, which corresponded with the female spawning season; however, males in spawning condition were collected throughout the year. The male spawning peak was also during February and March.

3.2.1.2 Stock Status

In the 2022 3rd quarter report of status of stocks to U.S. Congress, wreckfish in the South Atlantic is listed as not undergoing overfishing and is not overfished https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates#2022-quarterly-updates). As of this writing, wreckfish has never been determined to be overfished or subject to overfishing.

A statistical catch-at-age assessment of the wreckfish stock in the South Atlantic was initially conducted in 2012 (Butterworth and Rademeyer 2012) and determined that wreckfish in the South Atlantic was not undergoing overfishing and was not overfished. Following the November 2012 Council's Scientific and Statistical Committee (SSC) meeting, and based on the recommendations of the SSC, the Council adopted a new third-party peer review process in 2013

and determined that this 18 assessment should be subject to that process. The SSC reviewed the revised assessment at their April/May 2014 meeting (Rademeyer and Butterworth 2014), accepted it as representing the best scientific information available on the current status of wreckfish in South Atlantic waters, and recommended it as appropriate for management decisions.

3.2.1.3 Landings

During fishing years 2009/2010-2016/2017, an average of 269,785 lb whole weight (ww) wreckfish were landed with an average weight of 32 lb ww (Table 3.2.1.3.1; Table 3.2.1.3.2)

Table 3.2.1.3.1. Wreckfish landings, average weight (lb ww), and percent (%) quota/ACL caught during fishing years 2009/2010-2016-2017.

Fishing Year	Landings (lb ww)	Quota/ACL (lb ww)	Average Weight (lb ww)	% Quota/ACL caught
2009/2010	217,229	2,000,000	35.8	11%
2010/2011	266,270	2,000,000	36.8	13%
2011/2012	318,809	2,000,000	38.6	16%
2012/2013	213,701	223,250	36.7	96%
2013/2014	216,542	223,250	34.5	97%
2014/2015	190,639	223,250	35.9	85%
2015/2016	359,081	433,000	27.5	83%
2016/2017	376,013	423,700	29.9	89%
Average	269,785	-	34.5	-

Source: Wreckfish Program Logbooks and Dealer Records, SEFSC Logbooks.

Table 3.2.1.3.2. Acceptable biological catch (ABC) and ACLs for wreckfish specified under Regulatory Amendment 22 (SAFMC 2015) where ACL = optimum yield (OY) = ABC. The ACL for 2020/2021 would remain in place until modified.

Fishing Year	New ABC (lb ww)	ACL (lb ww)	Commercial ACL (95%)	Recreational ACL (5%)
2015/2016	433,000	433,000	411,350	21,650
2016/2017	423,700	423,700	402,515	21,185
2017/2018	414,200	414,200	393,490	20,710
2018/2019	406,300	406,300	385,985	20,315
2019/2020	396,800	396,800	376,960	19,840
2020/2021	389,100	389,100	369,645	19,455
2021/2022	389,100	389,100	369,645	19,455

Source: SAFMC 2015 (http://safmc.net/wp-content/uploads/2016/06/Reg22_022615_FINAL.pdf).

3.2.2 Bycatch

Very little is known outside of the fishery dependent data available from the fishery conducted at the Charleston Bump off South Carolina. Available life history data reflect data from older and bigger fish, with low sample sizes for smaller, younger fish. Rademeyer and Butterworth (2014) estimated natural mortality (M) for wreckfish at 0.037 per year. Lytton et al. (2016) recommends using M at 0.09 for wreckfish stock assessment. In the wreckfish commercial sector, barrelfish (*Hyperoglyphe perciformes*) and red bream (*Beryx decadactylus*) are caught as bycatch

(Goldman and Sedberry 2011) and are likely sold or used for personal consumption. Other species collected by Goldman and Sedberry (2011) on vertical lines with baited hooks from 400 to 800 m depth, on and around Charleston Bump were: splendid alfonsino (*Beryx splendens*), conger eel (Conger oceanicus), gulper shark (*Centrophorus granulosus*), roughskin dogfish (*Cirrhigaleus asper*), and shortspine dogfish (*Squalus mitsukurii*). Fishermen could harvest one of these species and return co-occurring species to the water as "regulatory discards" (e.g., if the fish are under the size limit) or if undesirable; however, a portion of the discarded fish would not survive due to the depths at which these fish are caught. Wreckfish are rarely encountered by recreational fishermen and discard mortality would be 100% due to the depths at which they are captured.

3.2.3 Other Species Affected

This amendment is administrative in nature and would only apply to the wreckfish fishery.

3.2.4 Protected Species

NMFS manages marine protected species in the Southeast region under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). There are 29 ESA-listed species or distinct population segments (DPS) of marine mammals, sea turtles, fish, and corals managed by NMFS that may occur in federal waters of the South Atlantic or Gulf of Mexico. There are 91 stocks of marine mammals managed within the Southeast region plus the addition of the stocks such as North Atlantic right whales (NARW), and humpback, sei, fin, minke, and blue whales that regularly or sometimes occur in Southeast region managed waters for a portion of the year (Hayes et al. 2017). All marine mammals in U.S. waters are protected under the MMPA. The MMPA requires that each commercial fishery be classified by the number of marine mammals they seriously injure or kill. NMFS's List of Fisheries (LOF)3 classifies U.S. commercial fisheries into three categories based on the number of incidental mortality or serious injury they cause to marine mammals.

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

NMFS completed a formal consultation and resulting biological opinion (Bi-Op) on the conservation regulations under the ESA and the authorization of the South Atlantic snapper grouper fishery in federal waters under the Magnuson-Stevens Act, including the fishery managed by the Snapper Grouper FMP, on threatened and endangered species and designated critical habitat dated December 1, 2016. NMFS concluded that the activities addressed in the consultation are not likely to jeopardize the continued existence of any threatened or endangered species.

Since completing the December 2016 Bi-Op, NMFS published several final rules that listed additional species and designated critical habitat. NMFS has reinitiated formal consultation to address these listings and concluded the authorization of the South Atlantic snapper grouper fishery in federal waters during the re-initiation period will not violate ESA Sections 7(a)(2) or 7(d). For summary information on the protected species that may be adversely affected by the snapper grouper fishery and how they are affected refer to Section 3.2.5 in Vision Blueprint Regulatory Amendment 27 to the Snapper Grouper FMP (SAFMC 2019a).

3.3 Economic Environment

The Wreckfish ITQ Program is one component of the Snapper Grouper FMP. As such, wreckfish harvesters are a small portion of the larger group of commercial fishing operations under the Council's and NMFS's jurisdiction. Additional economic information on the commercial sector of the snapper grouper fishery can be found in Snapper Grouper Abbreviated Framework Amendment 3 (SAFMC 2022), Snapper Grouper Regulatory Amendment 30 (SAFMC 2020), Snapper Grouper Regulatory Amendment 27 (SAFMC 2020), Snapper Grouper Regulatory Amendment 28(SAFMC 2020), Snapper Grouper Abbreviated Framework Amendment 2 (SAFMC 2019), and Snapper Grouper Abbreviated Framework Amendment 1 (SAFMC 2018) to the Snapper Grouper FMP. This section will concentrate on components of the economic environment that are relevant to the Wreckfish ITQ Program.

3.3.1 Shareholders

The primary purpose of Amendment 20A (SAFMC 2012) was to remove "inactive" shareholders (i.e., those who had not harvested the quota pounds derived from their shares in many years) and redistribute the "inactive" shares they possessed to entities that had been harvesting the quota pounds associated with their shares. Inactive shareholders held a significant percentage of the shares and thus of the coupons/quota lb. Further, the limited number of share and coupon transfers suggested that the share and quota pound markets were not operating as intended to correct the problem, which in turn did not allow those quota pounds to be harvested. As Table 3.3.1.1 illustrates, Amendment 20A was successful in significantly reducing the number of shareholders. The number of shareholders in this table reflect the total number of share certificates held at any time during the fishing year.[2]There has been a notable increase in shareholders since the 2018/2019 fishing season. The number of shareholders had remained at 6 from the 2014/2015 season to the 2017/2018 fishing season. In the 2018/2019 season there were 50% more shareholders than in the previous four years.

[2] The number of entities possessing share certificates in a single year will generally exceed the number of certificates.

Table 3.3.1.1. Number of wreckfish ITQ shareholders, fishing years 2009-2021.

Fishing Year	Number of Shareholders
2009/2010	27
2010/2011	26
2011/2012	33
2012/2013	11
2013/2014	7
2014/2015	6
2015/2016	6
2016/2017	6
2017/2018	6
2018/2019	9
2019/2020	8
2020/2021	9
2021/2022	9

Source: SERO SF, Permits and Shareholder databases.

Most of Amendment 20A's intended effects actually occurred prior to the effective date of the final rule (October 26, 2012) as numerous share transfers occurred in the preceding months. The high number of share transfers is reflected by the relatively large number of shareholders in 2011/2012. Inactive shareholders had an incentive to sell their shares prior to the effective date of the final rule as their shares would have been reverted to NMFS after that date and thus, they would not have received any economic compensation for those shares. Although the inactive shareholders may not have received as much as they would have liked, they were economically better off by selling their shares to active shareholders who intended to remain in the program. In addition, Amendment 20A provided information to active shareholders regarding what percentage of additional shares they could expect to receive as a result of inactive shares being reverted and redistributed. Although no entity would be allowed to acquire more than 49% of the total shares as a result of the new share cap established under Amendment 20A, some active shareholders wanted to increase their shares by more than what they were likely to get as a result of redistribution, and so those shareholders had an incentive to buy more shares than what they would have acquired as a result of redistribution.

Statistics regarding the distribution of shares across shareholders (share certificates) from 2017/2018 through 2021/2022 are provided in Table 3.3.1.2. These statistics only include shareholders that possessed shares at the end of each fishing year. These statistics also do not account for affiliations between shareholders (e.g., where a particular entity may have an ownership interest in multiple share certificates). One shareholder has maintained 49% of the share at the current cap from 2017-2021. Mean share ownership varied slightly over this time period and was 11.21% on average per shareholder from 2017-2021. Median share ownership has fallen in recent years to 5.19% whereas in years past median share ownership has been 16.67% (SAMFC 2019).

Table 3.3.1.2. Quota Share Statistics, 2017/2018-2021/2012. Shares are in percentages.

Statistic	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022
Number of Shareholders	6	9	8	9	9
Minimum Shares	2.99	0.03	0.03	0.03	0.03
Maximum Shares	49.00	49.00	49.00	49.00	49.00
Median Shares	16.66	5.17	5.25	5.17	5.17
Mean Shares	10.23	11.11	12.5	11.11	11.11

Source: SERO SF, Permits and Shareholder databases.

3.3.2 Permits

Wreckfish shareholders must possess a valid South Atlantic snapper grouper unlimited permit (SG1) in order to harvest wreckfish. A vessel with a Snapper Grouper 1 (SG1) permit can harvest up to the full commercial trip limits for all snapper grouper species including wreckfish, per trip. Snapper grouper permits are limited access permits, meaning that no new permits can be issued. Snapper grouper permits expire approximately one year from renewal and will terminate if not renewed within one year of the expiration date.

In 2009, the number of SG1 permits was 639. The number of SG1 permits has decreased steadily over time, in large part due to the requirement, in most circumstances, to exchange two such permits for one new permit when requesting a permit transfer (Table 3.2.2.1).[3] Overall the cumulative decline in valid SG1 permits from 2009-2020 has been 16.2% (Table 3.2.2.1).

[3] Exceptions to this requirement are specified in CFR Section 622.171, paragraphs (b)(1)(i) and (ii).

Table 3.3.2.1. Number of valid and renewable South Atlantic commercial snapper grouper permits by calendar year, 2009-2016.

Year	Number of SG1 permits	Change in SG1 Permits	% Change in SG1 Permits
2009	639	-25	-3.76%
2010	624	-15	-2.35%
2011	615	-9	-1.44%
2012	604	-11	-1.79%
2013	592	-8	-1.32%
2014	584	-8	-1.35%
2015	571	-13	-2.23%
2016	565	-6	-1.05%
2017	554	-11	-1.95%
2018	549	-5	-0.90%
2019	543	-6	-1.09%
2020	535	-8	-1.47%

Source: SERO SF-Permits Database, accessed 9/14/2022.

According to MacLauchlin (2018), the average price of an SG1 permit was about $42,918 (2021$) in 2011. As of early 2018, the average price had increased to around $75,107 (2021$), or by 75% since 2011. Also, temporary use of an SG1 permit has become common. Although leasing of permits is not allowed under the regulations, fishermen have found ways around this restriction, such as by entering contracts indicating that a vessel that has an SG1 permit is being leased. Current data are insufficient to determine exactly how many permits are being "leased" under this and other types of private arrangements. However, MacLauchlin (2018) estimates that the average price of a 1-year "lease" associated with an SG1 permit was about $7,511 (2021$) in early 2018.[4]

In addition to having a valid SG1 permit, commercial vessels must also have a valid wreckfish permit to harvest wreckfish. Commercial wreckfish permits have open access as well as limited access characteristics. Commercial wreckfish permits are only issued to vessels owned by entities with shares in the Wreckfish ITQ program, or to agents of those entities, and thus are limited to a large extent by the number of shareholders in the program (see Section 3.3.1). However, shareholders that own multiple vessels can have permits on each vessel they own, and thus the number of permits can be larger than the number of shareholders. Also, commercial wreckfish permits are only issued for a single fishing year and thus expire but do not terminate, unlike limited access permits. Table 3.3.2.1 illustrates how the number of commercial wreckfish permits has changed from 2009 through 2020.

The number of permits declined from about 15 permits to 8 permits per year on average between the 2009-2016 time period or by almost 50%. The decline in permits is directly related to the

[4] Depending on the nature of the agreement, this price may not only reflect the cost of the SG1 permit.

decrease in shareholders as discussed in Section 3.3.1. The decline is directly and indirectly related to the Council's action to revert and redistribute "inactive" shares in Amendment 20A. The number of issued permits is still typically higher than the number of active vessels in each year (see Section 3.2.3), indicating shareholders apply for permits but sometimes do not actually use them for harvesting wreckfish in a particular year. .

Also, although the number of shareholders was significantly greater than the number of permits from 2009-2011, the number of shareholders has been about the same as the number of permits in subsequent years. The number of permits was actually greater than the number of shareholders in 2014, 2016, 2019, and 2020 as some shareholders own multiple vessels and chose to put permits on more than one vessel. Also, when compared to the number of active vessels, the number of permits was more than double the number of active vessels in each year from 2009-2011. And though this was still the case in 2012, the number of permits and active vessels have largely been about the same in subsequent years, in large part due to the removal of "inactive" shareholders and thus permit holders as a result of Amendment 20A.

Table 3.3.2.1. Number of commercial wreckfish permits by calendar year, 2009-2016.

Year	Number of Permits
2009	15
2010	14
2011	17
2012	12
2013	7
2014	7
2015	5
2016	8
2017	8
2018	9
2019	12
2020	13

Source: SERO SF-Permits Database, accessed 9/14/2022.

3.3.3 Vessels

The information in Table 3.2.3.1 describe the activity of all 8 vessels that were active in the Wreckfish ITQ program from calendar years 2017 to 2021, including their activities in South Atlantic and Gulf of Mexico non-IFQ fisheries. Landings of wreckfish fluctuated during this time period, but on average have been increasing during the 2017-2019 time period. Average landings of wreckfish per vessel flucated between roughly 31,500 lbs gutted weight (gw) and 51,100 lbs. gw. The maximum annual gross revenue earned by a single vessel during this time was $621,343 (2021 dollars), though the mean gross revenue was lower at about $223,938 and the median was lower still at around $187,800. Wreckfish in recent years has begun to make up the majority of these vessels total gross revenue, on average accounting for 63% of total gross revenue from 2017-2021. In 2021 wreckfish landings accounted for 72% of gross revenue for these vessels. Vessel participation was slightly fluid as not all of these vessels were active in the wreckfish ITQ fishery, or any other fishery covered by the Southeast Coastal logbooks in every

year during this time. The number of vessels that were active in the ITQ program in each year varied between 5 and 6 vessels, as can be seen in Table 3.2.3.1.

Table 3.3.3.2. Total revenue and revenue per vessel statistics for the 8 vessels active in the Wreckfish IFQ Program from 2017-2021 by year.

Year	Number of Vessels	Statistic	Wreckfish Landings (gw)	IFQ Revenue	Other Logbook Revenue	Total Gross Revenue
2017	6	Max	85,819	$506,666	$604,908	$610,122
		Median	35,540	$145,813	$81,865	$298,553
		Mean	44,680	$176,141	$184,305	$282,625
		Total	223,401	$1,056,848	$921,527	$1,978,375
2018	5	Max	116,105	$621,343	$189,495	$621,343
		Median	38,338	$68,196	$65,344	$180,836
		Mean	51,095	$182,246	$89,649	$226,579
		Total	255,474	$911,229	$448,245	$1,359,473
2019	6	Max	96,541	$485,470	$180,558	$485,470
		Median	31,092	$81,161	$93,685	$156,497
		Mean	35,589	$145,115	$100,501	$210,528
		Total	213,536	$870,691	$603,006	$1,473,697
2020	6	Max	84,207	$505,002	$149,747	$505,002
		Median	27,821	$3,399	$98,452	$162,744
		Mean	37,515	$129,763	$88,207	$203,269
		Total	225,087	$778,580	$441,036	$1,219,616
2021	5	Max	105,137	$509,688	$101,205	$509,688
		Median	18,226	$72,262	$71,929	$140,427
		Mean	31,479	$169,472	$66,556	$196,690
		Total	220,352	$847,359	$332,782	$1,180,141

Source: Wreckfish Program Logbooks and SEFSC Logbook Series.

3.3.4 Dealers

Six dealers purchased wreckfish from shareholders from 2017 to 2020. Just as the number of active shareholders has fluctuated during this time period, so has the number of purchasing dealers, with between five and six dealers active in the wreckfish markets in any given year covered. The dealers are geographically dispersed, generally located near one of the active shareholders.

Wreckfish purchases have declined since 2017. Purchases of wreckfish landings declined by 43% in 2020 relative to 2017. Other species purchased by wreckfish dealers also declined greatly from 2017-2020. Other species purchases declined by 75% in 2019 relative to 2017. A modest increase in other species purchases occurred 2020, but was still less than half the purchases made in 2017. Overall gross revenue declined for wreckfish dealers by 63% in 2020 relative to 2017.

Table 3.3.4.1 summarizes the average annual purchase information on wreckfish and non-wreckfish purchases by the six dealer's active in the program.

Table 3.3.4.1. Average annual purchases for the dealers active in the Wreckfish ITQ Program from 2017-2020. All dollar estimates are in 2021 dollars.

Year	Number of Dealers	IFQ Purchases	Other Purchases	Total Gross Revenue
2017	5	$229,499	$2,075,907	$2,305,406
2018	5	$166,784	$496,653	$663,438
2019	6	$123,916	$499,422	$623,338
2020	6	$129,763	$726,898	$856,661

Source: Wreckfish Dealer Records, Southeast Fisheries Science Center ALS.

3.3.5 Economic Returns

Economic return measures for the wreckfish ITQ fishery have been estimated three times throughout the program's history, once in the first season of the ITQ program (Richardson 1994), the second for the 2012-2013 season (Yandle and Crosson 2015), and the latest being Liese and Crosson (Southeast Fisheries Science Center, pers. comm. 2023) for the 2021-2022 season. All analyses are based on a combination of wreckfish logbook data, wreckfish dealer data, and an economic survey at the vessel level. The economic surveys collect data on gross revenue, variable costs, fixed costs, as well as some auxiliary economic variables (e.g., market value of the vessel).

However, Liese and Crosson (2023) methodology has been updated to be comparable to those done for other SEFSC-monitored fisheries (e.g. Overstreet et al. 2017). Therefore, the estimates from these three studies are not directly comparable in terms of economic returns. Results from Liese and Crosson are reported in Table 3.3.5.1.

Table 3.3.5.1 provides estimates of the important economic variables at the annual level for all active wreckfish vessels in the calendar year 2021. Similar to the trip level, three of the most important estimates of economic returns are net cash flow, net revenue from operations,[5] and economic return on asset value. Of these measures, net revenue from operations most closely represents economic profits to the owner(s). Net revenue from operations 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. Net cash flow is total annual revenue minus the costs for fuel, other supplies, hired crew, vessel repair and maintenance, insurance, overhead, loan payments, and purchases of annual allocation. Economic return on asset value is calculated by dividing the net revenue from operations by the vessel value. Net cash flow and net revenue from operations at the annual vessel level were both positive in 2021, generally indicating that wreckfish vessels in the commercial sector were profitable, though some vessels earned much greater profits than others did. Net cash flow and net revenue from operations averaged 36.4% and 30.4%, respectively,

[5] Net revenue from operations accrues to the vessel owner and, when applicable, the IFQ shareholder, who may not be the same entity.

while the economic return on asset value was approximately 50.8% during this time.

Table 3.3.5.1. Economic characteristics of Wreckfish trips in 2021. All monetary estimates are in 2021 dollars.

	Mean	% Of Revenue
Vessel Statistics		
Owner-operated 40%	47%	-
For Hire Active	0%	-
Days - Wreckfish	57	-
Days - Other Commercial fisheries	76	-
Days - For-Hire Fishing	0	-
Days - Non-fishing	0	-
Vessel Value	$207,738	-
Has Insurance	0%	-
Total Revenue	**$346,746.00**	**100.0%**
Commercial Fishing - Wreckfish	$204,609.00	59.0%
Commercial Fishing - Other fisheries	$142,137.00	41.0%
For-Hire Fishing	$0.00	0.0%
Costs		
Fuel	$21,356	6.2%
Other Supplies	$47,750	13.8%
Hired Crew	$108,778	31.4%
Vessel Repair & Maintenance	$21,163	6.1%
Insurance	$0	0.0%
Overhead	$4,942	1.4%
Loan and IFQ purchase payments	$16,650	4.8%
OC Owner-Captain Time	$26,837	7.7%
Depreciation	$10,387	3.0%
Net Cash Flow	**$126,108**	**36.4%**
Net Revenue from Operations	**$105,534**	**30.4%**
Economic Return (on Vessel Asset Value)	**50.8%**	

Source: Liese and Crosson (Southeast Fisheries Science Center, pers. comm. 2023).

3.3.6 Imports

Imports of foreign seafood products compete in the domestic seafood market and have in fact dominated many segments of the domestic seafood market. Imports aid in determining the price for domestic seafood products and tend to set the price in the market segments in which they dominate. Seafood imports can have downstream effects on the local fish market. At the harvest level, imports can affect the returns to fishermen through the ex-vessel prices they receive for their landings. As substitutes to domestic production, imports tend to cushion the adverse

economic effects on consumers resulting from a reduction in domestic landings. The following describes the imports of fish products that directly compete with domestic harvest of snapper grouper species including the species in this amendment.

Snappers

According to NMFS' foreign trade data, snapper are not exported from the U.S. to other countries. Thus, the following describes the imports of fresh and frozen snapper products, which directly compete with domestic harvest of snapper species. All monetary estimates are in 2021 dollars. As shown in Table 3.3.6.1, imports of fresh snapper products were 31.2 million lbs product weight (pw) in 2017. They peaked at 36.0 million lbs pw in 2021, an increase of 15% relative to 2017. Total revenue from snapper imports increased from $99.0 million (2021 dollars) in 2017 to a five-year high of $148.6 million in 2021. The average price per pound for fresh snapper products was $3.54 from 2017-2021 and has been steadily increasing reaching the highest price per pound in 2021. Imports of fresh snapper products primarily originated in Mexico or Central America and primarily entered the U.S. through the port of Miami.

Table 3.3.6.1. Annual pounds and value of fresh snapper imports and share of imports by country, 2017-2021.

	2017	2018	2019	2020	2021
Pounds of fresh snapper imports (product weight, million pounds)	31.2	30.5	32.8	32.4	36.0
Value of fresh snapper imports (millions $, 2021$)	99.0	103.5	115.3	113.4	148.6
Average price per lb (2021$)	$3.17	$3.39	$3.52	$3.50	$4.13
Share of Imports by Country					
Mexico	35.8	32.5	34.9	40.4	32.8
Nicaragua	15.4	17.0	14.6	15.1	13.3
Panama	14.8	16.6	13.9	11.0	14.0
All others	33.9	33.9	36.6	33.5	39.9

Source: NOAA Foreign Trade Query Tool, accessed 11/16/22

As shown in Table 3.3.6.2, imports of frozen snapper products were 12.8 million lbs pw in 2017. They peaked at 18.2 million lbs pw in 2021, an increase of 42% relative to 2017. Total revenue from frozen snapper imports increased from $38.2 million (2021 dollars) in 2017 to a five-year high of $66.6 million in 2021. The average price per pound for frozen snapper products was $3.20 from 2017-2021, but has been increasing in recent years . Imports of frozen snapper products primarily originated in Brazil or South America and primarily entered the U.S. through the port of Miami.

Table 3.3.6.2. Annual pounds and value of frozen snapper imports and share of imports by country, 2017-2021.

	2017	2018	2019	2020	2021
Pounds of frozen snapper imports (product weight, million pounds)	12.8	12.2	11.4	15.9	18.2
Value of frozen snapper imports (millions $, 2021$)	38.2	37.6	36.7	48.4	66.6
Average price per lb (2021$)	$2.98	$3.08	$3.22	$3.05	$3.65
Share of Imports by Country					
Brazil	61.0	63.8	54.6	55.4	58.6
Indonesia	11.0	11.3	6.8	5.4	3.9
Suriname	7.9	6.9	13.5	10.3	10.5
All others	20.1	17.9	25.0	28.9	27.0

Source: NOAA Foreign Trade Query Tool, accessed 11/16/22

Groupers

According to NMFS' foreign trade data,[6] grouper are not exported from the U.S. to other countries. Thus, the following describes the imports of fresh and frozen grouper products, which directly compete with domestic harvest of reef fish species. As shown in Table 3.3.6.3, imports of fresh grouper products were 12.3 million lb. pw in 2017. They peaked at 12.4.million lb. pw in 2018, but declined to 10.4 .million lb. pw by 2020. Total revenue from fresh grouper imports decreased from 2018 to 2020, but in 2021 remained the same as in 2016 at 55.7 million dollars. The average price per pound for fresh grouper products was $4.49 from 2017-2021, with a large decrease coming in 2020. Imports of fresh grouper products primarily originated in Mexico, Panama and Brazil.

[6] https://www.fisheries.noaa.gov/foss/

Table 3.3.6.3. Annual pounds and value of fresh grouper imports and share of imports by country, 2017-2021.

	2017	2018	2019	2020	2021
Pounds of fresh Grouper imports (product weight, million pounds)	12.3	12.4	11.3	10.4	12.2
Value of fresh Grouper imports (millions $, 2021$)	55.7	57.2	53.0	40.6	57.7
Average price per lb (2021$)	$4.54	$4.61	$4.68	$3.89	$4.73
Share of Imports by Country					
Mexico	58.8	58.0	57.9	67.6	53.8
Panama	12.2	9.0	8.1	8.0	12.0
Brazil	10.1	15.9	16.9	12.3	17.7
All others	19.0	17.1	17.0	12.2	16.5

Source: NOAA Foreign Trade Query Tool, accessed 01/25/23

As shown in Table 3.3.6.4, imports of frozen grouper products were 1.4 million lb. pw in 2017. They peaked at 4.6.million lb. pw in 2018, but declined to 2.2 million lb. pw by 2021. Total revenue from frozen grouper increased from $2.0 million (2021 dollars) in 2017 to $6.2 million in 2018, but subsequently declined to $5.1 million in 2021. The average price per pound for frozen grouper products was $1.67 from 2017-2021, and increased by 60% in 2021 relative to 2017. Imports of frozen grouper products primarily originated in Mexico, India, and Indonesia.

Table 3.3.6.4. Annual pounds and value of frozen grouper imports and share of imports by country, 2017-2021.

	2017	2018	2019	2020	2021
Pounds of frozen Grouper imports (product weight, million pounds)	1.4	4.6	3.5	0.8	2.2
Value of frozen Grouper imports (millions $, 2021$)	2.0	6.2	4.8	1.5	5.1
Average price per lb (2021$)	$1.46	$1.34	$1.37	$1.85	$2.33
Share of Imports by Country					
Mexico	47.2	79.2	79.2	33.7	54.3
India	29.3	11.2	11.2	25.9	18.1
Indonesia	16.3	4.0	3.0	1.1	10.9
All others	7.2	5.5	6.5	39.3	16.7

Source: NOAA Foreign Trade Query Tool, accessed 05/14/22

3.3.7 Economic Impacts of the ITQ Program

The commercial harvest and subsequent sales and consumption of fish generates business activity as fishermen expend funds to harvest the fish and consumers spend money on goods and services, such as red grouper 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 and services. 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.

Estimates of the U.S. average annual business activity associated with the commercial harvest of wreckfish in the South Atlantic were derived using the model[7] developed for, and applied in NMFS (2022), and are provided in Table 3.3.7.1. This business activity is characterized as full-time equivalent jobs, income impacts (wages, salaries, and self-employed income), and output (sales) impacts (gross business sales). Income impacts should not be added to output (sales) impacts because this would result in double counting.

The results provided should be interpreted with caution and demonstrate the limitations of these types of assessments. These results are based on average relationships developed through the analysis of many fishing operations that harvest many different species. Separate models for individual species are not available. From 2017 to 2021, on average wreckfish landings resulted in approximately $898,504 million in gross revenue (2021$). In turn, this revenue generated employment, income, value-added and output impacts of 107 jobs, $3.3 million, $4.6 million, and $8.9 million, respectively.

[7] A detailed description of the input/output model is provided in NMFS (2011). "A Users Guide to the National and Coastal State I/O Model." www.st.nmfs.noaa.gov/documents/commercial_seafood_impacts_2007-2009.pdf

Table 3.3.7.1. Economic impacts of the Wreckfish ITQ program, 2017-2021. All dollar estimates are in thousands of 2021 dollars and employment is measured in full-time equivalent jobs.

Harvesters	Direct	Indirect	Induced	Total
Employment impacts	19	3	4	25
Income impacts	485	90	218	793
Total value-added impacts	517	324	373	1,214
Output Impacts	899	731	723	2,353
Primary dealers/processors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	4	2	3	8
Income impacts	158	146	138	442
Total value-added impacts	169	186	260	615
Output impacts	509	384	508	1,401
Secondary wholesalers/distributors	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	2	0	2	4
Income impacts	94	28	99	222
Total value-added impacts	101	47	169	317
Output impacts	253	92	329	674
Grocers	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	8	1	2	10
Income impacts	194	64	97	356
Total value-added impacts	207	104	165	475
Output impacts	332	169	324	824
Restaurants	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	48	3	8	59
Income impacts	778	236	446	1,460
Total value-added impacts	829	422	751	2,002
Output impacts	1,517	660	1,482	3,659
Harvesters and seafood industry	**Direct**	**Indirect**	**Induced**	**Total**
Employment impacts	81	9	18	107
Income impacts	1,710	564	998	3,272
Total value-added impacts	1,823	1,083	1,718	4,623
Output impacts	3,509	2,036	3,366	8,910

3.4 Social Environment

As discussed in past amendments and reviews of the South Atlantic wreckfish fishery and associated ITQ program, the limited size of the fishery presents data confidentiality concerns that constrain the nature and extent of information that can be used for descriptive purposes. This section attends to such concerns while providing insight into the contemporary social environment associated with the fishery—as prescribed by National Standard 8 (NS-8) of the MSFMCA. In essence, NS-8 calls for an assessment of linkages between fishery resources and communities where such resources may be of local socioeconomic importance. As such, the following text focuses primarily on identification of communities from which participants in the wreckfish fishery administer and/or undertake their fishing operations, and on basic sociodemographic attributes of such communities.

A variety of sources are available to further inform interested readers about the social-environmental history of the wreckfish fishery and its evolution into a federally managed ITQ program. These include SAFMC (1991, 2011, 2019), Gauvin et al. (1994), and Yandle and Crosson (2015), among others.

3.4.1 Social Aspects of the Fishery and Community Distribution of Permits

As indicated in Table 3.4.1, vessels permitted for the wreckfish ITQ fishery were most recently homeported in coastal communities in Florida, Georgia, and South Carolina. This relates to the fact that the species is almost exclusively captured by intent at the aforementioned bathymetric feature known as the Charleston Bump (NOAA Fisheries 2023; Sedberry et al. 1999), an ocean area most readily accessible by capable vessels, captains, and crew operating from communities in southeast South Carolina.

For sake of reference, the central portions of the Charleston Bump are situated approximately 90 miles from Folly Beach in southeaster South Carolina; 190 miles from Jacksonville Beach in northern Florida; and 125 miles from Myrtle Beach in northeastern South Carolina. As such, while vessels moored at longitudes parallel to the wreckfish grounds can reach the area relatively quickly, voyages of considerable duration are required of vessels moored in northern and central Florida, and in southeastern North Carolina where small numbers of wreckfish-permitted vessels were homeported in years past. It should be noted, however, that distances can be minimized by captains who moor their vessels in harbors relatively close to the wreckfish grounds when the regulatory season is open between mid-April and mid-January.

Irrespective of place of mooring, all participating captains and crew must travel many scores of ocean miles to reach the preferred fishing grounds. As discussed by Buck (2018) in relation to other deepwater snapper grouper species in the South Atlantic, the effort requires sustained presence at sea. In turn, this necessitates sufficient fuel, food, water, and other essentials, including bait (typically squid), along with planning and preparation for shifting weather patterns, dynamic sea states and currents, and other factors related to navigating and fishing safely far from port for multiple days and nights.

With regard to harvest strategy, only vertically deployed hook-and-line gear may be used to legally harvest wreckfish. Given that wreckfish are often caught in particularly deep water, mainlines are necessarily long and therefore retrieved with hydraulic (bandit) reels. NOAA Fisheries (2023) reports that 1/8” cables are often used for mainlines, and discussions with

captains indicate that leader and (multiple) circle hooks are particularly stout and used with heavy bottom weights. Gear and its use are pertinent in socioeconomic terms, in this case requiring considerable investment, skilled deployment at sea, and application of time and energy to its proper maintenance.

When used in deepwater zones for various bottom-dwelling snapper grouper species, including wreckfish, the requisite gear and the overall approach is colloquially termed "deep-drop," with certain captains considered deep-drop specialists. Maintaining the desired position over targeted areas is said to be a particularly challenging aspect of such operations, requiring extensive skill and practice. While recreational pursuit of the wreckfish resource is possible, it is presently allowable only during July and August, with a bag limit of one fish per day per vessel (SAFMC 2023). Historic harvest levels were scant at best (e.g., see SAFMC 2019:48), ostensibly due to extensive time at sea requirements, challenging deepwater conditions, and the need for accumulated ecological knowledge to effectively pursue the species. Identification and reporting challenges associated with rarely caught species may also be involved.

Based on the recent levels of shareholder participation and investment in the wreckfish fishery, and the capacity of captains, crew members, and vessels to successfully reach and harvest the species, the number of permitted vessels remains limited in extent. Notably, wreckfish permit applicants must be ITQ shareholders, but shareholders need not need be vessel owners or operators—though some are—and while some shareholders own and/or operate single vessels for pursuit of wreckfish, others own and/or operate more than one such vessel.

The community distribution of wreckfish permits has tended to shift over time. For example, prior to 2015, a small number of permits were held by persons with mailing addresses in states outside the South Atlantic region. All permits beyond that date have been held only by persons with community addresses in Florida, Georgia, or South Carolina. Shifts in the continuity of permit-holding have also occurred. For example, a wreckfish permitted vessel that formerly was consistently homeported in Madeira Beach, Florida is longer present in that municipality, and there has been a recent increase in wreckfish permits held outside of Florida, namely along the central and southeast Georgia coastline, and in the Low Country region of coastal South Carolina. The greatest number of wreckfish permits has consistently been held by addressees in in Port Orange, a central Florida municipality of 62,596 persons, as documented by the U.S. Census Bureau in 2020.

Table 3.4.1 Community distribution of permitted wreckfish vessels: 2011 through 2020.

Community	Year									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Port Orange, FL	3	2	2	3	1	4	4	3	3	4
Key Largo, FL	1	1	2	2	2	2	2	3	3	3
Charleston, SC	1	1	1	1	1	1	1	1	1	1
Georgetown ,SC	--	--	--	--	--	--	--	1	1	1
Crescent, GA	--	--	--	--	--	--	--	--	1	2
Townsend, GA	--	--	--	--	--	--	--	--	1	1
Indian Rocks Bch, FL	--	--	--	--	--	--	--	--	-	1
Daytona Beach, FL	--	--	--	--	--	--	--	--	1	--
New Smyrna, FL	2	2	--	--	--	--	--	--	--	--
Johns Island, SC	1	1	1	--	--	--	--	--	--	--
Jacksonville, FL	1	1	--	--	--	--	--	--	--	--
Wilmington, NC	1	1	--	--	--	1	--	--	--	--
Hatteras NC	1	1	--	--	--	1	--	--	--	--
Miami, FL	1	1	--	--	--	--	--	--	--	--
Galveston, TX	1	--	--	--	--	1	--	--	--	--
Darien, GA	1	--	--	--	--	--	--	--	--	--
Long Key, FL	1	--	--	--	--	--	--	--	--	--
St. Augustine, FL	1	--	--	--	--	--	--	--	--	--
Madeira Beach, FL	1	--	1	--	1	1	1	1	--	--
Holden Beach, NC	--	--	--	1	--	--	--	--	--	--
Total	17	11	7	7	5	11	8	9	11	13

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

In addition to changes in the geographic distribution of permitted vessels, shifts in the continuity of *active* participation in the wreckfish fishery, defined here in terms of permitted vessels with documented landings, are also notable. Active participation is of particular social-environmental importance given an historical context in which wreckfish permits were and/or are not presently used on a consistent basis by certain shareholders. As discussed in SAFMC (2011), this occurs for a variety of reasons, including periodic focus on other species, changing regulatory conditions in other fisheries, shifting dollar values of wreckfish in the seafood marketplace, failing capacities of certain captains to fish in the far offshore zone, and the retirement of formerly active captains, among others.

Yandle and Crosson (2015) provide similar insight into punctuated use and non-use of wreckfish permits, asserting that, in historical terms, certain participants departed or periodically minimized their participation in the fishery for reasons that include but are not limited to: heightened or renewed interest in other fisheries, concerns about safety at sea, and ITQ allocations that were perceived or experienced as economically insufficient. Importantly, however, the authors conclude that a pattern of sustained involvement by an increasingly limited number of vessels may signify a maturing and increasingly well-ordered fishery/ITQ program rather than one that has faltered.

Finally, patterns of participation in the wreckfish fishery were also described in a 2019 review of the wreckfish ITQ program (SAFMC 2019:34). Here, the authors discuss and graphically depict highly variable activity among the total of 18 vessels that were involved in the fishery during the period 2009 through 2016. The discussion states that: “some vessels participated for one year only, while others entered and left [the fishery] only to enter again a year or two later,” and that

[Vessel x] "was the *only* [operation] that consistently participated over the [seven-year] time period." Figure 3.4.1 below is provided as an update to that analysis. Of note in the figure is an apparent increase in the continuity of participation during the time-series by numerous vessels—arguably supporting the assertion of Yandle and Crosson (2015:209) that, although the size of the fleet has diminished, the fishery itself is increasingly sustainable in social terms as it matures over time.

	Year				
Vessel	**2017**	**2018**	**2019**	**2020**	**2021**
1	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓
3	✓	✓	✓	✓	✓
4			✓	✓	✓
5			✓	✓	✓
6	✓	✓	✓	✓	
7	✓	✓			
8	✓				
Total	**6**	**5**	**6**	**6**	**5**

Figure 3.4.1 Vessels with landings in the South Atlantic wreckfish fishery: 2017-2021.
Source: NMFS Wreckfish ITQ Program Logbook Data (accessed January 2023).

3.4.2 Distribution of Wreckfish Landings by State

Given the data confidentiality concerns noted at the outset of this section, the small number of persons involved in the wreckfish fishery precludes numerical description of landings by individual community. However, it is possible review trends in the geographic distribution of landings in more general terms. As discussed in the most recent review of the wreckfish ITQ program (SAFMC 2019), the species was landed primarily in Florida and South Carolina coastal communities during the period 2010 through 2016, with contributing vessels homeported in Florida, southeast North Carolina, and southeast South Carolina. More recent information, inclusive of calendar years 2017 through 2020, indicates that while wreckfish continued to be landed in harbors along the Florida and South Carolina coastline, a small percentage of the wreckfish catch was landed in North Carolina during the latter part of the time-series. Contributing vessels during this timeframe were homeported in communities along the Florida, Georgia, and South Carolina coastlines.

3.4.3 Engagement among Communities Involved in the Wreckfish Fishery

Figure 3.3.2 below depicts overall levels of engagement in the commercial fishing industry among communities that are in some manner involved in the regional wreckfish fishery, whether it be operation of wreckfish permitted vessels, holding of wreckfish shares, and/or transacting the species in the marketplace. Given the need to use the most valid and reliable data possible in the present analysis, the time-series presented here incorporates accumulative landings system

(ALS) data for the years 2016 through 2020. ALS data for 2021 are presently being refined and validated per standardized NOAA Fisheries protocol.

The measure of engagement provided in the graphic is a generalizable composite indicator based on: (a) pounds of all seafood landed by the local commercial fleets, (b) associated ex-vessel revenues, and (c) the number of commercial fishery participants and seafood dealers present in a given community. The measure is a useful means for indicating where any social effects of prospective management actions for the wreckfish fishery could be experienced.

As can be discerned from the graphic, there is a notable decline in generalized engagement in commercial fisheries among the majority of South Atlantic communities recently involved in the wreckfish fishery. Noteworthy here is an extensive and widespread decline in commercial fisheries engagement among virtually all of the communities during 2020. It is posited that diminished engagement relates in part to the arrival of the COVID-19 virus in the U.S. early in 2020, resulting widespread industry shutdowns, and limited socioeconomic recovery that year (see Glazier et. al 2022). Up until that point in time, available data indicate that most of the communities depicted were extensively engaged in the commercial fishing industry, albeit with a gradual overall decline during the time-series. The communities of Crescent in Georgia and Wadmalaw Island in South Carolina are exceptions, though U.S. Census data indicate that neither of these sparsely populated rural communities has supported regionally significant levels economic activity in years past.

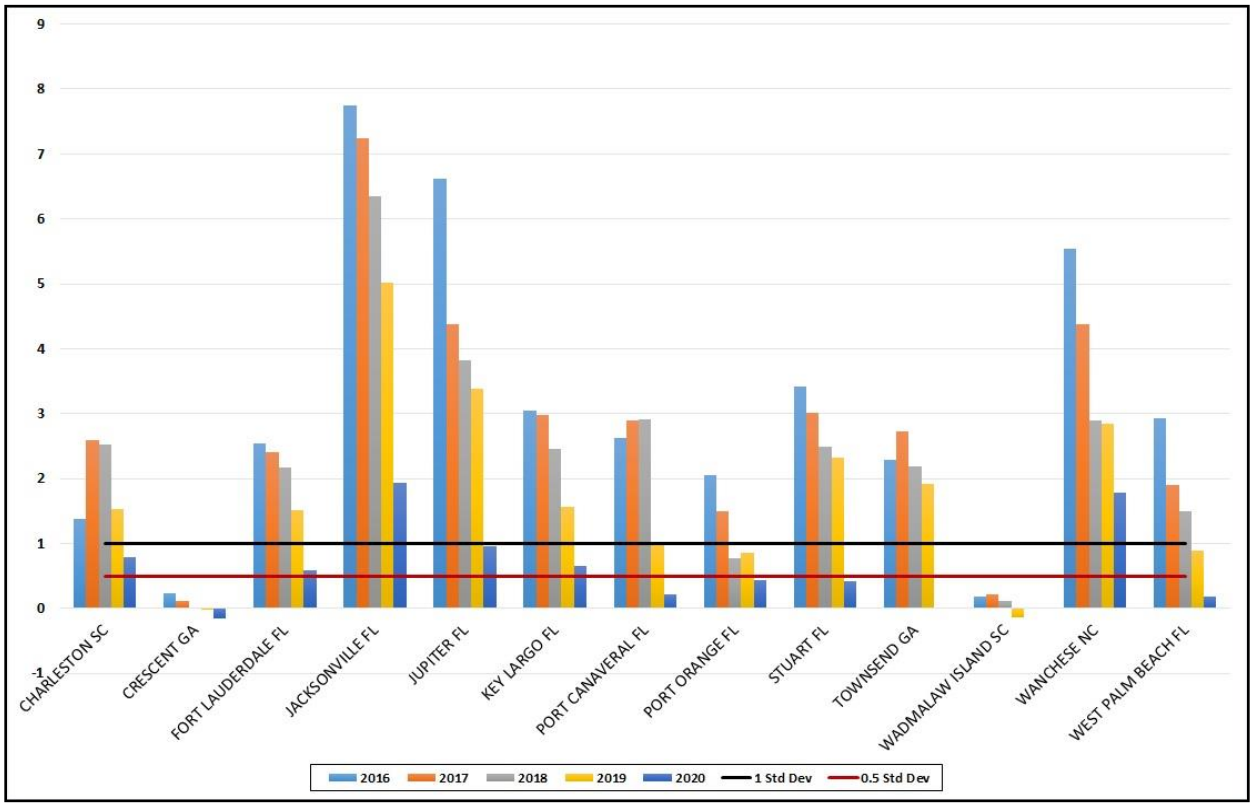

Figure 3.4.1. Overall levels of commercial fishing engagement among communities with some manner of involvement in the South Atlantic wreckfish fishery/ITQ program: 2016-2020.
Source: SEFSC, Community ALS Data File (accessed January 2023).

3.4.4 Environmental Justice

Executive Order (EO) 12898 was established in 1994 to require that personnel working in federal agencies examine the human health and socioeconomic implications of federal regulatory actions among low-income and minority groups and populations around the nation. The order requires that such agencies conduct programs, policies, and activities in a manner that ensures no individuals or populations are excluded, denied the benefits of, or subjected to discrimination due to race, color, or nation of origin. Of particular relevance in the context of marine fisheries, federal agencies are further required to collect, maintain, and analyze data regarding patterns of consumption of fish and wildlife among persons who rely on such foods for dietary and cultural purposes. In sum, the principal intent of EO 12898 is to require assessment and due consideration of any "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories."

Established in 2021, Executive Order 13985 also calls for social equity in the context of federal decision-making and policy actions. Titled "Advancing Racial Equity and Support for Underserved Communities through the Federal Government," this order requires that federal policies and programs are designed and undertaken in a manner that delivers resources and benefits equitably to all citizens, including those who are 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.

Similarly, Executive Order 14008, established in 2021**,** calls on federal agencies incorporate Environmental Justice as part of their ongoing missions. This is to be accomplished through development of programs, policies, and activities that address any disproportionately high and/or adverse "human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts."

Various data are available to indicate environmental justice issues among minority and low-income populations and/or indigenous populations and other historically underserved 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, NOAA Fisheries social scientists undertook an extensive series of deliberations and review of pertinent data and literature. The scientists ultimately selected key 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 such as 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 types of information 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 communities where fishing and related activities are important aspects of local society.

As provided in the Figure 3.4.3 below, three composite indices—termed here as poverty, population composition, and personal disruption—are applied to indicate relative degrees of socioeconomic vulnerability among those communities that are in some manner involved in the South Atlantic wreckfish fishery/ITQ program. Mean standardized scores for each community are provided along the y-axis, with means for the vulnerability measures and threshold standard deviations depicted along the x-axis. Scores exceeding the .5 standard deviation level indicate local social vulnerability to regulatory and other sources of change.

As can be discerned from the figure, available sociodemographic data sources discussed indicate that few of the communities recently involved in the South Atlantic wreckfish fishery appear vulnerable to regulatory or other sources of social or economic change. Exceptions include Crescent, Georgia which exceeds the two-standard deviation (std. dev.) threshold level for personal disruption, and the .5 std. dev. level for localized poverty. Poverty issues are also indicated for Fort Lauderdale and Key Largo in Florida, both of which meet the .5 std. dev. threshold for that set of variables. Finally, vulnerabilities are indicated for Fort Lauderdale and West Palm Beach, which respectively exceed and meet the .5 and 1.0 std. dev. thresholds for population composition.

The full range of data are not currently available to compatibly assess potential social vulnerabilities in the small communities of Townsend, Georgia and Wadmalaw Island, South Carolina. For sake of context, Wadmalaw Island is classified as a Census County Division (CCD; Charleston County), with a 2021 population of 2,504 persons, a 16.5% poverty rate, a median household income of $69,706, and a median age of 51.6 years (Census Reporter 2023). Townsend, Georgia is also classified as a CCD (McIntosh County), with a 2021 population of 3,350 persons, a 21% poverty rate, a median household income of $51,286, and a median age of 57 years. By way of comparison, the estimated 2021 poverty rate for Fort Lauderdale (pop. 181,666) is 13.8%, with a median household income of $64,912, and a median age of 45.1 years. The the national poverty rates estimated for the same year is 12.8%, with a median household income of $69,717, and a median age of 38.8 years (Census Reporter 2023).

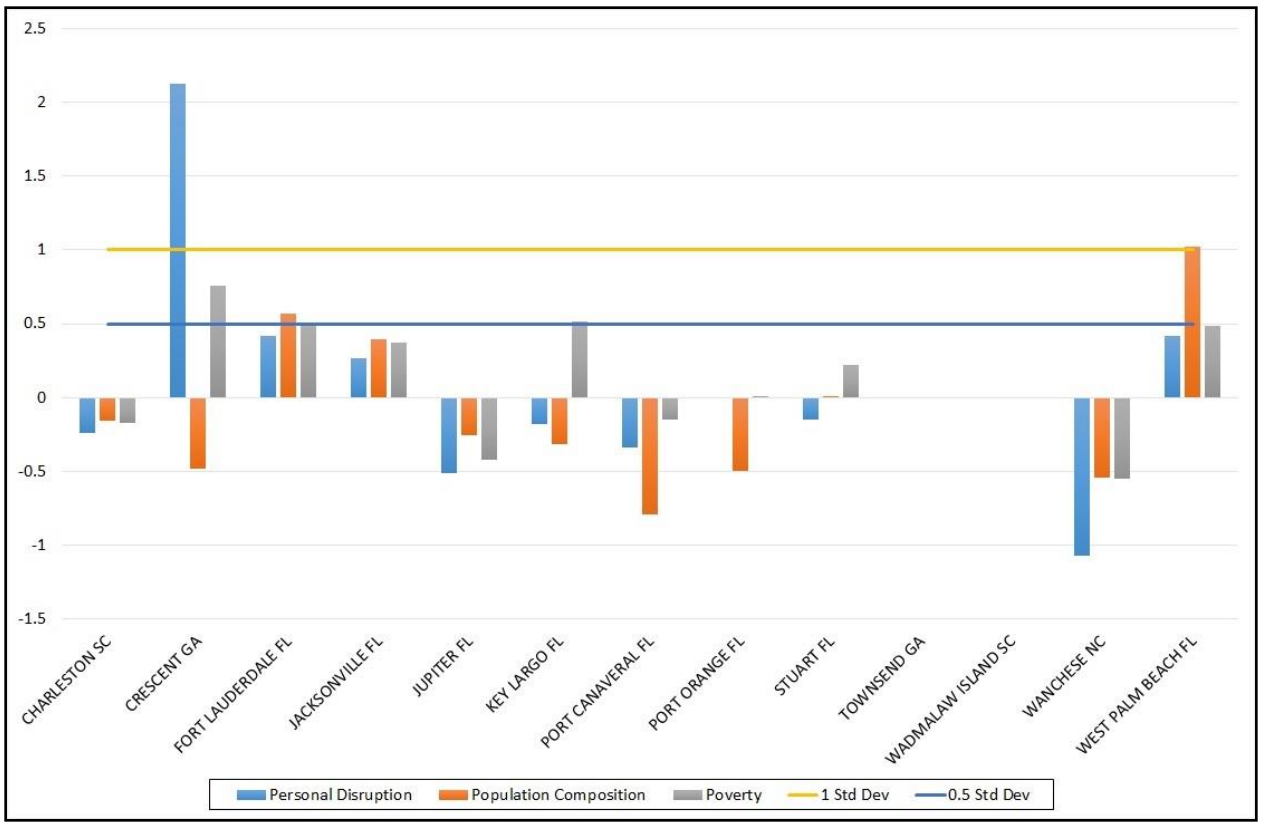

Figure 3.4.3. Social vulnerability indicators among communities involved in the South Atlantic Wreckfish Fishery/ITQ program.
Source: NMFS SERO Community Social Vulnerability Indicators Database (Accessed January 2023).

3.5 Administrative Environment

3.5.1 Federal Fishery Management

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

Responsibility for federal fishery management decision-making is divided between the U.S. Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for collecting and providing the data necessary for the councils to prepare fishery management plans and for promulgating regulations to implement proposed plans and amendments after ensuring that management measures are consistent with the Magnuson-Stevens Act and with other applicable laws. In most cases, the Secretary has delegated this authority to NMFS.

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

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

3.5.2 State Fishery Management

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

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

NMFS's State-Federal Fisheries Division is responsible for building cooperative partnerships to strengthen marine fisheries management and conservation at the state, inter-regional, and national levels. This division implements and oversees the distribution of grants for two national

(Inter-jurisdictional Fisheries Act and Anadromous Fish Conservation Act) and two regional (Atlantic Coastal Fisheries Cooperative Management Act and Atlantic Striped Bass Conservation Act) programs. Additionally, it works with the ASMFC to develop and implement cooperative State-Federal fisheries regulations.

3.5.3 Enforcement

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

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

The NOAA Office of General Counsel Penalty Policy and Penalty Schedule is available online at http://www.gc.noaa.gov/enforce-office3.html.

Chapter 4. Environmental Effects and Comparison of Alternatives

4.1 Action 1. Revise sector allocations and sector annual catch limits for wreckfish.

Alternatives*

1 (No Action). Retain the current commercial sector and recreational sector allocations as 95% and 5%, respectively.

2. Allocate 98% of the annual catch limit for wreckfish to the commercial sector and 2% to the recreational sector.

3. Allocate 99% of the annual catch limit for wreckfish to the commercial sector and 1% to the recreational sector.

4. Allocate 99.5% of the annual catch limit for wreckfish to the commercial sector and 0.5% to the recreational sector.

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

4.1.1 Biological Effects

Biological effects are not expected to be substantially different between **Alternative 1 (No Action)** and **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** since the allocation percentages do not affect the total ACL established for this fishery and the commercial sector is well regulated under an IFQ program.

Amendment 25 (SAFMC 2011) made the first specific allocation of wreckfish to the recreational sector. That amendment allocated 95% of the total wreckfish ACL to the commercial sector and 5% to the recreational sector. Prior to Amendment 25 (SAFMC 2011) it was illegal for recreationally harvested wreckfish to be possessed unless the fisherman also held and South Atlantic Commercial Snapper Grouper Permit.

According to Southeast Region Headboat Survey data, no wreckfish have been landed by South Atlantic headboats since the recreational sector was given its allocation (K. Donnelly, pers. comm., Beaufort Laboratory, 3/19/2019). Recreational landings are currently tracked using the Marine Recreational Information Program (MRIP). Wreckfish intercepts by MRIP are exceedingly rare. Since 1981, only one intercepted trip by a charter vessel off of Hatteras, NC in 2012 reported harvest of wreckfish (Pers. comm., NMFS, Fisheries Statistics Division, 3/19/2019). With wreckfish MRIP intercepts being so rare, it is uncertain how many wreckfish are being caught by the recreational sector, though it is likely the recreational sector is not fully utilizing its current allocation.

Substantial changes in fishing effort or behavior are not expected as a result of this action, thus the proposed allocations under this action would not be expected to result in any biological effects, positive or negative, on co-occurring species (refer to BPA in Appendix G). This action would not have an impact on protected species.

4.1.2 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 long-term effects on the health of a stock. The sector ACL does not directly impact the fishery for a species unless harvest changes, fishing

behavior changes, or the sector ACL is exceeded, thereby potentially triggering AMs such as harvest closures or other restrictive measures. As such, sector ACLs that are set above observed landings in a fishery for a species and do not change harvest or fishing behavior may not have realized economic effects each year. Nevertheless, sector ACLs set above observed average harvest levels do create a gap between the sector ACL and typical landings that may be utilized in years of exceptional abundance or accessibility of a species, thus providing the opportunity for increased landings and a reduced likelihood of triggering restrictive AMs. As such there are potential economic benefits from sector ACLs that allow for such a gap. Under this notion, **Alternative 4** would allow for the highest potential economic benefits for the commercial sector followed by **Alternative 3**, **Preferred Alternative 2**, and **Alternative 1 (No Action)**. The opposite would be true for the recreational sector, where **Alternative 1 (No Action)** would allow for the highest potential economic benefits followed by **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4**.

4.1.3 Social Effects

Sector allocations exist for the recreational and commercial sectors already, **Alternative 1 (No Action)** would maintain the current allocation percentages. Under **Preferred Alternative 2**, **Alternative 3**, and **Alternative 4** there would be a decrease in the recreational percentage compared to **Alternative 1 (No Action)**. 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. However, the recreational sector has not met their ACL in recent years, which may subvert any negative perceptions.

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 further decreasing a given sector's percentage allocation. It is difficult to predict the social effects with any allocation scheme as it would depend upon other management measures in conjunction with this one.

4.1.4 Administrative Effects

The overall administrative effects are likely going to be minimal and the same across the viable alternatives. The wreckfish fishery is already managed under an ITQ program, which is a considerable administrative burden to the agency. Upon implementation of one of the action alternatives, there would be a temporary increased administrative burden to reallocate quota share to individuals in the program. However, this burden will be only at the implementation stage and minimal moving forward. 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. Administrative effects would not vary between **Alternative 1 (No Action)** and **Preferred Alternative 2, Alternative 3**, **and Alternative 4**.

4.2 Action 2. Implement an electronic reporting system for the wreckfish individual transferable quota (ITQ) program.

Alternatives*

1 (No Action). Retain the current ITQ paper-based reporting system.

2. Implement an electronic system of reporting for the wreckfish ITQ program.

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

4.2.1 Biological Effects

The current wreckfish ITQ program operates via paper-based logbook and paper coupons. Moving to an electronic ITQ system is an administrative action that would streamline an already existing program and would not directly affect the physical or biological environment but may have an indirect effect. There may be positive indirect biological effects because the electronic system may be more efficient for both fishermen and managers and would allow for better tracking of catch and allocation. The wreckfish fishery has not exceeded their ACL since the inception of the paper based ITQ program but it is expected that an electronic ITQ program will allow for better management and execution of the fishery.

4.2.2 Economic Effects

The reporting burden under **Alternative 1 (No Action)** would likely be similar to that under **Alternative 2**. If dealers and shareholders currently involved in the fishery do not already have the necessary equipment and internet connection to report electronically, **Preferred Alternative 2** would introduce a new cost. However, it is likely that these businesses are already equipped for electronic reporting, so this would likely not be a new or additional cost. **Preferred Alternative 2** would allow for more timely monitoring of the wreckfish ITQ program in comparison to **Alternative 1 (No Action)**. Additionally, once the program is set up there would be decreased administrative costs since agency staff would not need to input wreckfish landings reported on paper into an electronic system. As such, **Preferred Alternative 2** would result in increased net economic benefits in comparison to **Alternative 1 (No Action)**.

4.2.3 Social Effects

Section 3.4 (Social Environment) includes detailed information about fishermen and communities that may be affected by changes to reporting requirements for commercial wreckfish businesses. In general, positive social effects of electronic reporting requirements would likely be associated with decreased time and financial burden for wreckfish ITQ holders and crew to meet the requirements when compared to the paper-based reporting system.

The requirement for increased electronic reporting under **Preferred Alternative 2** would affect vessel owners who do not already use computer systems in their businesses or could result in errors. However, requiring all wreckfish ITQ shareholders to report electronically is expected to result in broad social benefits by improving quota monitoring. There may also be some positive benefits for individual fishing businesses associated with having a consistent record of catch on their trips under. This information could be used for marketing purposes to demonstrate the ability and knowledge of the captain and crew. Additionally, a database could be established that would allow business owners to access their own records and compare them to summarized reports at a local or regional level.

4.2.4 Administrative Effects

The monitoring program is a paper-based system that is managed through two different line offices: SERO and SEFSC. This creates a division in the management of the program, and thus all the information regarding activity in the program is not retained within a single location or database.

Maintaining data across multiple datasets and locations creates a challenge for monitoring the program in its entirety. While each line office effectively manages the components of the monitoring program for which it is responsible at present, this structure prevents NMFS from monitoring activity on a real- time basis, inhibits analysis of the program, and increases the costs of monitoring the program and evaluating its performance. Managing the system in one location may decrease costs and increase management and analysis of the program. To that end, program performance could be improved by moving to an electronic system as proposed in **Preferred Alternative 2**. The current structure of the wreckfish program lends itself well to the electronic reporting system already in place for other Catch Share programs managed or hosted by the regional office (e.g., Gulf of Mexico IFQ programs, Highly Migratory Species' Bluefin Tuna Individual Bycatch Quota program, pilot catch share program for the Gulf Headboat Collaborative, etc.).

Benefits of moving from the paper-based program (**Alternative 1**) to the electronic program (**Preferred Alternative 2**) may include:

- One database containing all program activity (e.g., landings, effort, and participation; transfers of quota shares and quota lb; ex-vessel, share, and quota pound prices, etc.).
- More timely and accurate data reporting and real-time monitoring.
- Improved method and reduced time to transfer shares and quota lb.
- Automated share cap calculations.
- Ability to match shareholder agents/contractors more accurately from permit records with shareholder accounts.
- Participants able to view their transfer and landings history.
- Elimination of coupons, which would:
    - Allow quota lb to be transferred or landed in one pound increments rather than 100 and 500 lb increments, which would eliminate loss of quota lb due to denominational restrictions.
    - Eliminate the need to print coupons and mail coupons to the shareholders.
    - Eliminate the need to mail in coupons to the SEFSC.

Alternative 1 (No Action) would result in no increase in administrative burden on NMFS as the ITQ program has developed and implemented. **Preferred Alternative 2** would increase the administrative burden on NMFS initially related to development and implementation of an electronic system. These costs could be minimized by working through already developed systems as described above. After development of the electronic system, the administrative burden of manually maintaining the existing ITQ program will be reduced. **Preferred Alternative 2** would also have an increased administrative impact associated with education and outreach. This is expected to be significant during the outset of the program and will be reduced as the program becomes more familiar to the participants.

4.3 Action 3. Modify the requirement to possess a commercial vessel permit for wreckfish.

Alternatives*

1 (No Action). To obtain a commercial vessel permit for wreckfish, the applicant must be a wreckfish shareholder; and either the shareholder must be the vessel owner, or the owner or operator must be an employee, contractor, or agent of the shareholder.

2. To obtain a commercial vessel permit for wreckfish, the applicant must be a wreckfish shareholder; and the shareholder must be the vessel owner.

3. To commercially harvest or sell wreckfish, a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel, the permit must be on board, and the permit holder must be a wreckfish shareholder.

4. To commercially harvest or sell wreckfish, a commercial permit for South Atlantic snapper grouper (unlimited) must have been issued to the vessel, the permit must be on board.

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

4.3.1 Biological Effects

Changing the permit requirement for wreckfish shareholders is an administrative action that would not directly affect the physical or biological environment. There may be positive indirect biological effects because **Alternative 2** and **Preferred Alternative 3** would remove the ability for an employee, contractor, or agent of the shareholder to participate in the fishery, leading to more direct involvement in the fishery by the wreckfish permit holder. **Alternative 4** would eliminate the wreckfish permit but would require that the shareholder have a permit for the snapper grouper fishery. However, this action would not change how the fishery is prosecuted and as such would not have a direct biological impact on wreckfish, other affected species or protected species.

4.3.2 Economic Effects

Alternative 2 is similar to **Alternative 1 (No Action)** but is slightly more restrictive, and there may be economic benefits to existing participants that meet the qualifying criteria but additional costs for new entrants or existing participants that do not meet these criteria. **Preferred Alternative 3** would be less stringent than **Alternative 1 (No Action)** and **Alternative 2**, since it would remove the requirement that the shareholder must be the vessel owner. **Alternative 4** would be the least restrictive of the alternatives being considered since it would remove the need to own wreckfish shares and would potentially open the wreckfish fishery to new vessels that already have a South Atlantic snapper grouper unlimited permit. **Alternative 4** would open the leasing of wreckfish shares to non-shareholders which may allow for a more efficient market for shares by allowing shares to go to the area with the highest value, but it would also have the potential to add "armchair fishing" to the ITQ program where shareholders do not need to be actively involved in the fishery.

From a barrier to entry standpoint and potential costs to enter the fishery, **Alternative 2** would potentially requirement the highest barriers to entry followed by **Alternative 1 (No Action)**, **Preferred Alternative 3**, and **Alternative 4**.

4.3.3 Social Effects

When compared to **Alternative 1 (No Action)** the proposed alternatives would be less burdensome on shareholders as well as NMFS. **Alternative 2** is slightly more restrictive than **Preferred Alternative 3** as it maintains the requirement to purchase a commercial wreckfish permit. However, **Alternative 2** would require less information to be provided by the shareholder when compared to the requirements under **Alternative 2 (No Action)**. Additionally, **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4** would create fewer requirements to enter into the fishery, with **Alternative 4** having the lowest threshold for entrance.

Additional or similar requirements for entry as those under **Alternative 1 (No Action)** may be implemented as part of the electronic reporting system (Action 2) which would affect the social effects of this action.

4.3.4 Administrative Effects

In order to obtain an open access wreckfish permit, the entity must first be a wreckfish shareholder or the agent of a wreckfish shareholder. In order to harvest wreckfish, the vessel owner or the operator of the vessel must be the wreckfish shareholder or an employee, contractor, or agent of the shareholder and must also possess the limited access South Atlantic commercial Snapper/Grouper permit. Therefore, the only restriction on entry into the Wreckfish ITQ program as a shareholder is the availability of wreckfish shares, while the restriction to harvest wreckfish is also limited by Snapper/Grouper permits. Since Snapper/Grouper permits can only be obtained by transfer, except for specific exceptions, an entity must obtain and exchange two such permits for one new permit, which may inhibit participation in the program.

The administrative impacts of this action are expected to be minimal and similar between **Alternative 1 (No Action)**, **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4**. The impacts will be associated with education and outreach, compliance, and law enforcement. In the electronic system, the vessel's permit holder must exactly match the shareholder account to account for harvesting rights, landings, cost recovery fees, etc. There are times when the shareholder's agent utilize a vessel permitted to the agent and not the shareholder. Under this scenario, the system would not be able to accurately account for the vessel with the wreckfish permit that is not directly permitted to the shareholder.

There may be a reduced administrative burden with **Alternative 2** and **Preferred Alternative 3** if the electronic ITQ system is developed under **Action 2**. The electronic system will be able to keep track of vessel shares amongst the active vessels. Under Alternative 1, the existing Catch Share will have to significantly reorganized to handle the shareholder's agent's ability to harvest under a vessel not permitted to the shareholder. This will add significant administrative burden and delay implementation. **Alternative 4** would remove the requirement for a wreckfish permit thus eliminating some of the administrative burden. Even under **Alternative 4**, a vessel would still require allocation to harvest wreckfish. Allocation must be transferred from a wreckfish shareholder. The Council will need to consider some actions relating to maintenance and transferability of shares and allocation if the system moves to an electronic system. Therefore Alternative 4 could function similar in the fishery to Alternatives 3 and 2 if restrictions were placed on allocation transfer (e.g., transfer of allocation only allowed to accounts with shares). This would be a more streamlined approach than using a separate permit to accomplish the same end.

4.4 Action 4. Modify the commercial fishing year for wreckfish.

4.4.1 Biological Effects

Regardless of the alternative selected, this action is not anticipated to have negative biological impacts on wreckfish. The commercial sector is constrained by ACLs and operates under a well-regulated ITQ system. Any changes made to the ITQ system under Action 2 would not impact this action. There is not expected to be any difference in the biological impacts of **Alternative 1 (No Action)** and **Preferred Alternative 2**. Neither alternatives will modify the fishery in such a way that it would result in impacts to wreckfish, other affected species or protected species.

Alternatives*

1 (No Action). The commercial fishing year for wreckfish begins on April 15 and ends on April 14.

2. The commercial fishing year for wreckfish begins on January 1 and ends on December 31.

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

4.4.2 Economic Effects

The fishing year does not directly affect landings or fishing behavior, therefore the economic effects of **Alternative 1 (No Action)** and **Preferred Alternative 2** would likely be similar. Net economic benefits are not expected to change between the two alternatives.

4.4.3 Social Effects

The fishing year does not directly affect landings or fishing behavior, therefore the social effects of **Alternative 1 (No Action)** and **Preferred Alternative 2** would likely be similar. Social effects are not expected to change between the two alternatives.

4.4.4 Administrative Effects

If Alternative 2, under Action 2 is selected as preferred, this action would be needed to align the electronic system maintenance and updates with those of other catch share programs managed by NMFS. The need for this action is purely administrative and **Preferred Alternative 2** would significantly reduce the administrative burden compared to **Alternative 1 (No Action)** because the updates and maintenance of the ITQ program can happen at the same time as the other programs.

4.5 Action 5. Require all commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit participating in the wreckfish portion of the snapper grouper fishery to be equipped with vessel monitoring systems.

Alternatives*

1 (No Action). Commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit are not required to be equipped with vessel monitoring systems when participating in the wreckfish portion of the snapper grouper fishery.

2. Require all commercial vessels with a South Atlantic Unlimited Snapper-Grouper Permit participating in the wreckfish portion of the snapper grouper fishery to be equipped with vessel monitoring systems.

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

4.5.1 Biological Effects

The requirement to report be equipped with a vessel monitoring system is an administrative process for providing a means of collecting location data from wreckfish fishermen and does not directly affect the biological or physical environment but may have an indirect effect. It is expected that with more complete location information, managers would be able to make better decisions about future management.

Alternative 2 would require commercial vessels participating in the wreckfish fishery to be equipped with vessel monitoring systems. Neither **Alternative 1 (No Action)** nor **Alternative 2** would have direct impacts on the physical, biological or ecological environment but ultimately provide more information about the fishery that may result in biological benefits to the species. Because **Alternative 2** only proposes vessel monitoring with a snapper-grouper unlimited permit and for use in the wreckfish fishery, it is tied to **Action 3.**

4.5.2 Economic Effects

Currently South Atlantic Unlimited Snapper-Grouper permitted vessels operating in the wreckfish fishery do not require VMS (**Alternative 1 (No Action)**), thus requiring VMS (**Alternative 2**) would implement new costs for these participants. Also, there may be additional administrative costs from monitoring VMS data under **Alternative 2**. As such, net economic benefits would be higher under **Alternative 1 (No Action)** compared to **Alternative 2.**

4.5.3 Social Effects

Additional effects would not be expected from **Alternative 1 (No Action)**, as there would be no increased burden on wreckfish ITQ shareholders. The effects **Alternative 2** would pertain to the increased burden to purchase, learn to use, and maintain the vessel monitory system hardware/software. Additionally, there has been opposition to the required use of vessel monitory systems by participants in other fisheries who have expressed concern with how these data may be used and who would have access to the data.

In general, the expected social effects would likely be associated with a financial burden on wreckfish ITQ shareholders and businesses to purchase and maintain any required equipment, These negative direct effects would be greatest under the most expensive devices, which would require a permanently installed VMS unit.

4.5.4 Administrative Effects

Alternative 1 (No Action), the status quo alternative, would not be expected to result in an increase in administrative burden to NMFS as this alternative does not change the current requirements. **Alternative 2** would increase the administrative burden significantly as it would require the development of infrastructure to monitor vessel monitoring tracks. Alternative 2 would require outreach on education and compliance. Vessel monitoring systems are being used in other fisheries and likely those systems could be modified for use in the wreckfish fishery. However, there will be an administrative burden associated with approving systems, education and compliance.

4.6 Action 6. Modify offloading site and time requirements for wreckfish.

Alternatives*

1 (No Action). Wreckfish may only be offloaded between the hours of 8 a.m. and 5 p.m., local time.

2. Wreckfish may only be offloaded between the hours of 6 a.m. and 6 p.m., local time.

3. Wreckfish may only be offloaded between the hours of 5 a.m. and 8 p.m., local time.

4. Remove the requirement to offload wreckfish between the hours of 8 a.m. and 5 p.m., local time.

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

4.6.1 Biological Effects

The program limits offloading of wreckfish between daylight hours, 8 am – 5 pm EST and only at fixed dealer facilities. Landing at other locations may be approved if the vessel captain or shareholder notifies Law Enforcement at least 24 hours prior to offloading.

Regardless of the alternative selected, this action is not anticipated to have negative biological impacts on wreckfish. The commercial sector is constrained by an ACLs and operates under a well-regulated ITQ system. The offloading hours are used to ensure that law enforcement may be available to witness wreckfish being landed at a dealer facility. **Alternative 4** would be the most flexible for fishermen, by allowing them to offload their catch whenever is most convenient for them. There is not expected to be any difference in the biological impacts of **Alternative 1 (No Action)**, **Alternative 2, Alternative 3 or Alternative 4**. These alternatives would give flexibility to the fishermen, but the fishery would still be constrained by the ACL, the ITQ program and validated by dealer reports. Neither alternatives will modify the fishery in such a way that it would result in impacts to wreckfish, other affected species or protected species.

4.6.2 Economic Effects

Offloading time requirements implement a cost on fishery participants since the may hinder fishing activity that otherwise would have occurred should such restrictions not be in place. Thus, less restrictive time requirements offer comparative economic benefits**. Alternative 1 (No Action)** offers the fewest hours that wreckfish may be offloaded (9 hours), followed by **Alternative 2** (12 hours), **Alternative 3** (15 hours), and **Alternative 4** (24 hours). As such, **Alternative 4** offers the highest potential economic benefits to fishery participants, followed by **Alternative 3**, **Alternative 2**, and **Alternative 1 (No Action)**.

4.6.3 Social Effects

Wreckfish ITQ shareholders have expressed frustration with the current offloading time requirements under **Alternative 1 (No Action)**. Restrictive hours can be prevent fishermen from offloading the days catch and extend the amount of time they need to be at dock and away from fishing grounds. **Alternative 4** would provide fishing businesses the most flexibility in offloading time, followed by **Alternative 3** and **Alternative 2**. Additionally, **Alternative 2**, **Alternative 3**, and **Alternative 4** would address a problem in the fisheries identified by stakeholders and may help to improve perceptions of the management process.

4.6.4 Administrative Effects

By increasing the time window for offloads, the administrative burden on the agency is increased. **Alternative 1 (No Action)** provides for a 12 hour window for offloads, which has proved burdensome on the fishermen if they arrive after the 5:00 pm. In those situations, they would need to wait with fish onboard the vessel until the next day to begin the offload process. **Alternative 2** and **Alternative 3** would increase the window for offloads, providing a bit more flexibility for fishermen but increasing the potential administrative burden on law enforcement. Additionally, the increased time allotment for **Alternative 2** matches the offloading times used in the Gulf of Mexico IFQ programs and provide a consistency for law enforcement. These hours were chosen in the Gulf as they typically represent what would occur outside daylight hours across the entire year. **Alternatives 3** would increase the hours and could jeopardize officer safety risk for law enforcement as it includes non-daylight hours throughout the year. **Alternative 4** would remove administrative burden from law enforcement and fishermen but may not provide the oversight the program requires. However, fishermen report that, even during the current offload time frame, they do not see law enforcement presence at the offload sites.

4.7 Action 7. Implement a cost recovery plan and associated conditions for the wreckfish individual transferable quota program.

4.7.1 Sub-Action 7-1. Implement a cost recovery plan for the wreckfish individual transferable quota program.

Alternatives*

1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

2. Implement an individual transferable quota cost recovery plan. The transferable quota shareholder landing wreckfish would be responsible for collection and submission of the cost recovery fee to NMFS.

3. Implement an individual transferable quota cost recovery plan. The dealer receiving Wreckfish would be responsible for collecting the cost recovery fee from the shareholder landing the wreckfish and submitting the fee to NMFS.

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

4.7.1.1 Biological Effects

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

4.7.1.2 Economic Effects

A cost recovery plan would implement an additional cost on wreckfish fishery participants but a benefit to fishery management agencies, in this case the National Marine Fisheries Service (NMFS), by offsetting administrative costs. **Alternative 1 (No Action)**, represents the lowest cost to fishery participants and lowest benefits to NMFS, but it is not a legally viable alternative. **Preferred Alternative 2** and **Alternative 3** represent the same costs to fishery participants and same benefits to NMFS, both of which are higher than **Alternative 1 (No Action)**. The difference between these two alternatives would be what entity bears the burden and associated cost related to collection and submittal of the cost recovery fee. Under **Preferred Alternative 2**, the cost related to collection and submittal of the cost recovery fee would be incurred by the quota shareholder while this cost would be incurred by the dealer receiving the wreckfish under **Alternative 3**.

4.7.1.3 Social Effects

Alternative 1 (No Action) does not provide for a cost recovery program while **Preferred Alternative 2** and **Alternative 3** establish a program for the wreckfish ITQ fishery. However, **Alternative 1 (No Action)** is not a legally viable alternative. **Preferred Alternative 2** and **Alternative 3** are similar in all respects, except with respect to the responsibility for fee collection and submission. This responsibility resides on the IFQ shareholder under **Preferred Alternative 2** and on the IFQ dealer/processor under **Alternative 3**. NMFS will determine the percentage of the ex-vessel value of wreckfish landings that would be collected. The program would impose a fee of up to three percent of the ex-vessel value of wreckfish harvested under the IFQ program. Negative social effects of the cost recovery fee would be associated with the cost of the fee itself was well as the time and materials required for completing the paperwork and paying the fee.

4.7.1.4 Administrative Effects

Cost recovery was not included in the Wreckfish ITQ program when it was implemented in 1992 and cost recovery is currently not in place. Cost recovery plans for ITQ programs are a requirement of the Magnuson-Stevens Act and as such **Alternative 1 (No Action**) is not a viable alternative. **Preferred Alternative 2** and **Alternative 3** would have similar administrative impacts to the agency. However, **Preferred Alternative 2** would increase the administrative burden on individual permit holders and **Alternative 3** would increase the administrative burden on wreckfish dealers. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these payments in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program.

4.7.2 Sub-Action 7-2. Collection of wreckfish individual transferable quota program cost recovery fees.

Alternatives*

1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

2. Fees will be collected at the time of landing.

3. Fees will be collected upon the sale of such fish during a fishing season.

4. Fees will be collected in the last quarter of the calendar year in which the fish is harvested.

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

4.7.2.1 Biological Effects

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

4.7.2.2 Economic Effects

A cost recovery plan would implement an additional cost on wreckfish fishery participants but a benefit to fishery management agencies, in this case the National Marine Fisheries Service (NMFS), by offsetting administrative costs. **Alternative 1 (No Action)**, represents the lowest costs to fishery participants and lowest benefits to NMFS. The total fees would be similar across **Alternatives 2**, **3 (Preferred)**, and **4**. **Alternative 4** may require less effort to collect fees since it would only be required once per year, thus there may be slightly lower costs associated with this alterative in relation to **Alternatives 2** and **3 (Preferred)**.

4.7.2.3 Social Effects

A cost recovery plan under **Alternative 2**, **Preferred Alternative 3**, and **Alternative 4** would result in additional burden on wreckfish ITQ shareholders when compared to **Alternative 1 (No Action)**. However, **Alternative 1 (No Action)** is not a legally viable alternative. Negative social effects of the cost recovery fee would be associated with the cost of the fee itself was well as the time and materials required for completing the paperwork and paying the fee. **Alternative 4** may require less effort to collect fees since it would only be required once per year, thus there may be slightly time burden associated with this alterative in relation to **Alternatives 2** and **3 (Preferred)**.

4.7.2.4 Administrative Effects

Cost recovery plans for ITQ programs are a requirement of the Magnuson-Stevens Act and as such **Alternative 1 (No Action**) is not a viable alternative.

Alternative 2 would have increased administrative impacts compared to **Preferred Alternative 3** and **Alternative 4**. Under **Alternative 2**, fees would be collected upon landing resulting in many transactions of cost recover fees between the permit holder or dealer (depending on what alternative is selected in **Action 8**). **Preferred Alternative 3** may reduce the number of transactions as the fees would be collected upon sale of fish during a fishing season. **Alternative 4** would result in the fewest transactions between the permit holder and NOAA Fisheries; however, it may increase the permit holder's administrative impacts with a need to maintain records. With the electronic ITQ program as proposed in **Action 2**, it is expected that the

electronic system will be able to track and collect these payments in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program.

4.7.3 Sub-Action 7-3. Frequency of wreckfish individual transferable quota program cost recovery fee submission.

4.7.3.1 Biological Effects

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species.

Alternatives*

1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

2. Cost recovery fee will be submitted once per year.

3. Cost recovery fee will be submitted twice per year.

4. Cost recovery fee will be submitted four times per year.

5. Cost recovery fee will be submitted twelve times per year.

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

4.7.3.2 Economic Effects

Alternative 1 (No Action) represents the lowest costs to fishery participants and lowest benefits to NMFS. The total fees would be similar across **Alternatives 2**, **3**, **4 (Preferred)** and **5**. Less frequency between when the fees must be submitted may lead to less reporting-related costs from those submitting the fees to the agency and thus comparatively higher economic benefits. Under this notion, **Alternative 2** may require less administrative burden on the part of the entity submitting the fees to NMFS, since it would only be required once per year, this would be followed by slightly higher administrative related costs associated with **Alternative 3** (submittal twice per year), **Preferred Alternative 4** (submittal four times per year), and **Alternative 5** (submittal 12 times per year).

4.7.3.3 Social Effects

A cost recovery plan under **Alternative 2**, **Alternative 3**, **Preferred Alternative 4** and **Alternative 5** would result in additional burden on wreckfish ITQ shareholders when compared to **Alternative 1 (No Action)**. However, **Alternative 1 (No Action)** is not a legally viable alternative. Negative social effects of the cost recovery fee would be associated with the cost of the fee itself was well as the time and materials required for completing the paperwork and paying the fee. **Alternative 5** may require less effort to collect fees since it would only be required once per year, thus there may be slightly time burden associated with this alterative in relation to **Alternatives 2**, **Alternative 3** and **Preferred Alternative 4**.

4.7.3.4 Administrative Effects

Cost recovery plans for ITQ programs are a requirement of the Magnuson-Stevens Act and as such **Alternative 1 (No Action**) is not a viable alternative. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these fees in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program. The administrative burden on the fishermen and the agency is expected to be less with less transactions and as such the administrative burden would be greatest for **Alternative 5** and the least for **Alternative 2**.

4.7.2 Sub-Action 7-4. Determination of wreckfish individual transferable quota program cost recovery fees.

4.7.4.1 Biological Effects

Typically, the collection of cost recovery fees is not expected to affect the physical or biological environment, nor have any impacts on the stock, associated species or protected species

Alternatives*

1 (No Action). Do not implement a cost recovery plan for the wreckfish individual transferable quota program.

2. The cost recovery fee will be based on actual* ex-vessel value of the wreckfish landings.

3. The cost recovery fee will be based on standard ex-vessel value of the wreckfish landings as calculated by NMFS.**

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

4.7.4.2 Economic Effects

Alternative 1 (No Action), represents the lowest costs to fishery participants and lowest benefits to NMFS. The costs for fishery participants related to **Alternative 2** and **Preferred Alternative 3** would be situational and variable, therefore a comparison of economic benefits is not possible at this time.

4.7.4.3 Social Effects

Alternative 1 (No Action), represents the lowest burden to fishery participants but is not a legally viable alternative. The costs for fishery participants related to **Alternative 2** and **Preferred Alternative 3** would be situational and variable, therefore a comparison of social benefits is not possible at this time.

4.7.4.4 Administrative Effects

Cost recovery plans for ITQ programs are a requirement of the Magnuson-Stevens Act and as such **Alternative 1 (No Action**) is not a viable alternative. There will be no difference in the administrative impacts of **Alternative 2** and **Preferred Alternative 3**. With the electronic ITQ program as proposed in **Action 2**, it is expected that the electronic system will be able to track and collect these fees in a way that is less burdensome to permit holders, dealers and the agency compared to a paper-based program.

Chapter 5. Council's Conclusions for the Preferred Alternatives

To be completed.

Chapter 6. Cumulative Effects

To be completed.

Chapter 7. List of Interdisciplinary Plan Team Members

Name	Agency/Division	Title
Christina Wiegand	SAFMC	Social Scientist/IPT Lead
John Hadley	SAFMC	Economist
Myra Brouwer	SAFMC	Deputy Director for Management/IPT Lead
Nick Smillie	SAFMC	Digital Communications
Roger Pugliese	SAFMC	Senior Fishery Biologist
Judd Curtis	SAFMC	Quantitative Scientist
Karla Gore	SERO/SF	Fishery Biologist/IPT Lead
Rick DeVictor	SERO/SF	South Atlantic Branch Chief
Britni LaVine	SERO/LAPP	Fishery Biologist
Alisha DiLeone	SERO/SF	Data Analyst
Al Taylor	SERO/LAPP	Fishery Biologist
Adam Bailey	SERO/SF	Technical Writer and Editor
Patrick O'Pay	SERO/PR	Biologist
Nikhil Mehta	SERO/SF	Fishery Biologist/NEPA Coordinator
Ed Glazier	SERO/SF	Social Scientist
Mike Travis	SERO/SF	Social Science Branch Leader
David Dale	SERO/Habitat	Regional EFH Coordinator
Jessica Stephen	SERO/LAPP	Data Management Branch Leader
Kevin McIntosh	SERO/CS	Constituency Services Branch Chief
Scott Crosson	SEFSC	Economist
Alan Lowther	SEFSC	Survey Design, Data Management and Dissemination Branch Chief
Adam Brame	SERO/PR	Sawfish Recovery Coordinator
Monica Smit-Brunello	NOAA GC	General Counsel
Manny Antonaras	SERO/OLE	Deputy Special Agent in Charge
Matthew Walia	SERO/OLE	Compliance Liaison Analyst

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

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

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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 50 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 50) 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 50 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, in implementing regulations, must make an assessment of how those regulations will 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 an FMP or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions. No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment. No concerns have been raised by South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions.

Appendix B. Regulatory Impact Review

To be completed.

Appendix C. Initial Regulatory Flexibility Analysis

To be completed.

Appendix D. Essential Fish Habitat and Ecosystem Based Fishery Management

I. EFH and EFH-HAPC Designations and Cooperative Habitat Policy Development and Protection

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

a. South Atlantic Council EFH User Guide

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

b. South Atlantic Council EFH Policy and EFH Policy Statements

Policy for Protection and Restoration of EFH

South Atlantic Council Habitat and Environmental Protection Policy

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

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

South Atlantic Council EFH Policy Statements

Considerations to Reduce or Eliminate the Impacts of Non-Fishing Activities on EFH

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

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

II. Habitat Conservation and Fishery Ecosystem Plans

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

Building on the long-term conservation approach, the South Atlantic Council facilitated the evolution of the Habitat Plan into the first FEP to provide a clear description and understanding of the fundamental physical, biological, and human/institutional context of ecosystems within which fisheries are managed and identify information needed and how that information should be used in the context of FMPs. Developing a South Atlantic FEP required a greater understanding of the South Atlantic ecosystem, including both the complex relationships among humans, marine life, the environment and essential fish habitat and a more comprehensive

understanding of the biological, social, and economic impacts of management necessary to initiate the transition from single species management to EBFM in the region. To support the move towards EBFM, the South Atlantic Council adopted broad goals: (1) maintaining or improving ecosystem structure and function; (2) maintaining or improving economic, (3) social, and cultural benefits from resources; and (4) maintaining or improving biological, economic, and cultural diversity.

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

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

IV. FEP II Development

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

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

FEP II Dashboard (In transition to new Habitat and Ecosystem Page)

The FEP II Dashboard and associated online tools provided a clear description of the fundamental physical, biological, human, and institutional context of South Atlantic ecosystems within which fisheries are managed. The Council's new website (under development) will

include a new Habitat and Ecosystem page where the FEP II Dashboard layout shown below will be refined and integrated.

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

V. NOAA EBFM Activities Supporting FEP II

a. *NOAA EBFM Policy and Road Map*

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

b. *FEP II Implementation Plan Structure and Framework*

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

c. *FEP II Two Year Roadmap*

The FEP II Two Year Roadmap draws from the Implementation Plan and presents three to five priority actions for each of the nine approved policy statements of the South Atlantic Council which would be initiated or completed over the next two years (2019-2020). The Roadmap provides "Potential Partners" and other potential regional collaborators, a focused list of priority actions they could cooperate with the South Atlantic Council on to advance policies supporting the move to EBFM in the South Atlantic region.

d. *Monitoring/Revisions to FEP II Implementation Plan*

FEP II and this supporting Implementation Plan are considered active and living documents. The Implementation Plan will be reviewed and updated periodically. During their spring meeting in 2021 and every three years following, the Habitat Protection and Ecosystem Based Management AP will engage regional experts as needed, to determine whether additional actions addressing council policies should be added to the implementation plan. The South Atlantic Council's Habitat Protection and Ecosystem Based Management Committee will review, revise and refine those recommendations for South Atlantic Council consideration and approval for inclusion into the implementation plan.

VI. Regional Habitat and Ecosystem Partners

The South Atlantic Council, with the Habitat Protection and Ecosystem Based Management AP as the foundation, collaborates with regional partners to create a comprehensive habitat and ecosystem network in the region to enhance habitat conservation and EBFM.
Detailed information and links to partners are highlighted online:
https://ocean.floridamarine.org/safmc_dashboard/partners.html.

VII. Regional Ecosystem Modeling in the South Atlantic

a. *South Atlantic Ecopath with Ecosim Model*

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

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

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

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

The South Atlantic Council developed a Habitat Conservation and Ecosystem Management Section which provided access to the FEP II Digital Dashboard and associated tools which is under development with the new website. Florida's FWRI maintains and distributes GIS data,

imagery, and documents relevant to habitat conservation and ecosystem-based fishery management in their jurisdiction. Web Services and spatial representations of EFH and other habitat related layers are accessible through the Council's SAFMC Atlas, a platform for searching and visualizing GIS data relevant to the Council's mission and download of GIS layers and information on regional partners is available through the SAFMC Digital Dashboard. The online systems provide access to the following Services:

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

IX. Ecosystem-Based Action, Future Challenges and Needs

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

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

of mapping of near-shore, mid-shelf, shelf edge, and deep-water habitats in the South Atlantic region and refinement in the characterization of species use of habitats.

Appendix E. Actions and Alternatives Removed from Consideration

To be completed, if needed.

Appendix F. Data Analyses

To be completed, if needed.

Appendix G. Bycatch Practicability Analysis

To be completed, if needed.

Appendix H. Fishery Impact Statement

To be completed.

Appendix I. History of Management

The snapper grouper fishery is highly regulated; some of the species included in this amendment have been regulated since 1983. The following webpage includes a summary of the amendments to the original Snapper Grouper Fishery Management Plan (FMP), as well as some events not covered in amendment actions: https://safmc.net/fishery-management-plans/snapper-grouper/ For management history specific to wreckfish, see Section 1.7.

Appendix J. Allocation Review Trigger Policy

In a letter to the NOAA Assistant Administrator dated July 16, 2019, the South Atlantic Fishery Management Council (Council) responded to NOAA's Fisheries Allocation Review Policy (NMFS Policy Directive 01-119) and the associated Procedural Directive on allocation review triggers (NMFS Procedural Directive 01-119-01). The Policy established the responsibility for the Regional Fishery Management Councils to set allocation review triggers and consider three types of trigger criteria: indicator, public interest, and time. Councils were directed to establish triggers for consideration of allocation reviews by August 2019. The Council's response follows:

The Council has reviewed species allocations on numerous occasions in the past. However, these reviews may not have been formally documented in a fishery management plan amendment if a decision was made not to modify sector allocations. This new policy will ensure all species currently having sector allocations will be reviewed on a regular basis and will formalize the allocation review process so the Council's consideration of allocations will be documented.

The Council reviewed their current sector allocations and began discussions on the Policy and Procedural Directives and criteria for considering fishery allocation reviews at their December 2018 meeting. At their June 2019 meeting, the Council adopted two types of criteria for triggering consideration of an allocation review: indicator and time.

The Council chose several indicator-based criteria as triggers:

- Either sector exceeds its ACL or closes prior to the end of its fishing year three out of five consecutive years,
- Either sector under harvests its ACL or OY by at least 50% three out of five consecutive years,
- After a stock assessment is approved by the SSC and presented to the Council, and
- After the Council reviews a species Fishery Performance Report.

The Council chose a time-based trigger to ensure allocation reviews are regularly considered. Each species will have its sector allocations reviewed not less than every seven years. Table 1 shows by species when the next sector allocation review will be considered by the Council should an indicator-based criterion not be triggered. Regardless of whether consideration of an allocation review is triggered by an indicator or time criterion once it occurs the next one will automatically be scheduled for consideration seven years later. For species which are jointly managed with the Gulf of Mexico Fishery Management Council, the timing for consideration of allocation reviews was coordinated with that council.

A public interest-based criterion was not selected because the Council currently receives substantial and regular comment from the public through scoping and public hearing sessions, general public comment periods held at every Council meeting, the public comment form on the

Council's website, and through other more informal channels. Thus, the Council decided the existing Council process provides sufficient opportunity for public input on allocation.