Amendment 18B

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

Golden Tilefish Management

Environmental Assessment Initial Regulatory Flexibility Analysis Regulatory Impact Review

Fishery Impact Statement

August 2012

Definitions of Abbreviations and Acronyms Used in the Amendment

ABC	acceptable biological catch
ACL	annual catch limits
AM	accountability measures
ACT	annual catch target
B	a measure of stock biomass in either weight or other appropriate unit
$\mathbf{B_{MSY}}$	the stock biomass expected to exist under equilibrium conditions when fishing at F_{MSY}
$\mathbf{B_{OY}}$	the stock biomass expected to exist under equilibrium conditions when fishing at F_{OY}
$\mathbf{B_{CURR}}$	The current stock biomass
CPUE	catch per unit effort
EA	environmental assessment
EEZ	exclusive economic zone
EFH	essential fish habitat
F	a measure of the instantaneous rate of fishing mortality
$\mathbf{F_{30\%SPR}}$	fishing mortality that will produce a static SPR = 30%
$\mathbf{F_{CURR}}$	the current instantaneous rate of fishing mortality
$\mathbf{F_{MSY}}$	the rate of fishing mortality expected to achieve MSY under equilibrium conditions and a corresponding biomass of B_{MSY}
$\mathbf{F_{OY}}$	the rate of fishing mortality expected to achieve OY under equilibrium conditions and a corresponding biomass of B_{OY}
FEIS	final environmental impact statement
FMP	fishery management plan
FMU	fishery management unit
GW	gutted weight
M	natural mortality rate
MARMAP	Marine Resources Monitoring Assessment and Prediction Program
MFMT	maximum fishing mortality threshold
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistics Survey
MRIP	Marine Recreational Information Program
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSST	minimum stock size threshold
MSY	maximum sustainable yield
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	overfishing limit
OY	optimum yield
RIR	regulatory impact review
SAMFC	South Atlantic Fishery Management Council
SEDAR	Southeast Data Assessment and Review
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office
SIA	social impact assessment
SPR	spawning potential ratio

SSC	Scientific and Statistical Committee
WW	whole weight

Amendment 18B

to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Environmental Assessment, Initial Regulatory Flexibility Act Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement

Proposed actions:	Limit participation and effort in the golden tilefish portion of the snapper grouper fishery
Lead agency:	FMP Amendment – South Atlantic Fishery Management Council EA - NOAA Fisheries Service
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Abstract

The South Atlantic Fishery Management Council (South Atlantic Council) is concerned that regulations implementing several recent snapper grouper amendments could increase the incentive to fish for golden tilefish. Therefore, the South Atlantic Council is proposing management measures that would limit participation in the golden tilefish sector of the snapper grouper fishery.

Actions in Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region consider alternatives that could:

- Limit Participation in the Golden Tilefish Portion of the Snapper Grouper Fishery
- Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement
- Establish an Appeals Process
- Allocate Commercial Golden Tilefish Quota Among Gear Groups
- Allow for Transferability of Golden Tilefish Endorsements
- Adjust Golden Tilefish Fishing Year
- Modify the Trip Limit for Fishermen Who Receive a Golden Tilefish Longline Endorsement
- Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

This Environmental Assessment has been prepared to analyze the effects of implementing regulations to achieve the actions listed above.

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Amendment 18B List of Actions

Action 1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

Alternative 2 (Preferred). Limit golden tilefish effort through a golden tilefish longline endorsement program: Distribute golden tilefish longline endorsements to snapper grouper permit holders that qualify under the eligibility requirements specified under Action 2.

Action 2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

Alternative 2. Establish initial eligibility requirements for a golden tilefish longline endorsement based on the following criteria:
Sub-alternative 2h (Preferred). To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

Action 3. Establish an Appeals Process

Alternative 2 (Preferred). A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The Regional Administrator (RA) will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. The RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

Action 4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

Alternative 2 (Preferred). Allocate the golden tilefish commercial ACL as follows: 75% to the longline sector and 25% to the hook-and-line sector (currently would be 405,971 pounds gw to longline and 135,324 pounds gw to hook-and-line).

Action 5. Allow for Transferability of Golden Tilefish Endorsements

Alternative 2 (Preferred). A valid (not expired) golden tilefish endorsement or a renewable (expired but renewable) golden tilefish endorsement can be transferred between any two individuals or entities that hold, or simultaneously obtain a South Atlantic Unlimited Snapper Grouper Permit. Endorsements would be transferable, independently from the South Atlantic Unlimited Snapper Grouper Permit. Landings of golden tilefish using the golden tilefish longline endorsement would be associated with the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked at the time the landings take place.
Sub-alternative 2a (Preferred). Transferability allowed upon program implementation.

Action 6. Adjust Golden Tilefish Fishing Year

Alternative 1 (No Action) (Preferred). Retain the existing calendar year as the golden tilefish fishing year (January 1 through December 31).

Action 7. Modify the Golden Tilefish Trip Limit

Alternative 2 (Preferred). Remove the 300-pound gw trip limit when 75% of the ACL is taken.

Action 8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Alternative 4 (Preferred). Establish a trip limit of 500 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

SUMMARY

of
AMENDMENT 18B
to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region

Golden Tilefish, *Lopholatilus chamaeleonticeps*

AUGUST 2012

Why is the South Atlantic Council taking Action?

Recent amendments to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) have imposed more restrictive harvest limitations on snapper grouper fishermen. In an effort to identify other species to harvest, more fishermen may target golden tilefish. Increased effort for golden tilefish would intensify the "race to fish" that already exists, which has resulted in a shortened fishing season for the last six years. The fishing season for golden tilefish in recent years has already been shortened to such a degree that South Carolina longline fishermen -- who are typically unable to fish until April or May due to weather conditions -- and hook-and-line fishermen from Florida --who typically do not fish until the fall -- are increasingly unable to participate in the golden tilefish segment of the snapper grouper fishery. The South Atlantic Fishery Management Council (South Atlantic Council) is concerned an increase in effort on golden tilefish could deteriorate profits.

Purpose for Action

The ***purpose*** of Amendment 18B is to limit participation in the golden tilefish component of the snapper grouper fishery through establishment of longline endorsements, changes to the fishing year, allocation of the annual catch limit (ACL) between gear groups, and modifications to golden tilefish trip limits.

The actions proposed in this amendment will address issues that have arisen as a result of a more stringent regulatory regime in the South Atlantic region.

Need for Action

The ***need*** for action in Amendment 18B is to reduce overcapacity in the golden tilefish component of the snapper grouper fishery.

What Are the Proposed Actions?

There are 8 actions being proposed in Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 18B). Each *action* has a range of *alternatives*, including a 'no action alternative' and a 'preferred alternative'.

Proposed Actions in Amendment 18B

1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery
2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement
3. Establish an Appeals Process
4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups
5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. Modify the Golden Tilefish Trip Limit
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

What Is the Status of the Golden Tilefish Stock?

Golden tilefish were assessed through the Southeast Data, Assessment and Review (SEDAR) process in 2011 using data through 2010.

SEDAR is a cooperative Fishery Management Council process initiated to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and US Caribbean. The Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils manage SEDAR in coordination with NOAA Fisheries Service and the Atlantic and Gulf States Marine Fisheries Commissions. SEDAR seeks improvements in the scientific quality of stock assessments, constituent and stakeholder participation in assessment development, transparency in the assessment process, and a rigorous and independent scientific review of completed stock assessments.

Golden Tilefish Life History
An Overview

- On the Atlantic coast, they occur from Nova Scotia to South Florida.
- Most often found around 600 feet, over mud or sand bottom.
- May live up to 50 years.
- Spawn from March to July with peak in April.
- Not undergoing overfishing, not overfished.

Following the assessment, the South Atlantic Council's Scientific and Statistical Committee (SSC) reviews the stock assessment information and advises the South Atlantic Council on whether the best available data were utilized and whether the outcome of the assessment is suitable for management purposes.

The stock assessment for golden tilefish (SEDAR 25 2011) indicated that the South Atlantic population is **not overfished nor undergoing overfishing**. The current level of spawning stock biomass (SSB_{2010}) is estimated to be well above the minimum stock size threshold (MSST) -- $SSB_{2010}/MSST = 2.43$. The current level of fishing is slightly higher than one-third of F_{MSY} ($F_{2008\text{-}2010}/F_{MSY} = 0.36$).

What Are the Alternatives?

Proposed Actions in Amendment 18B

1. **Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery**
2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement
3. Establish an Appeals Process
4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups
5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. Modify the Golden Tilefish Trip Limit
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

Alternative 1 (No Action). Do not limit effort in the golden tilefish component of the snapper grouper fishery through an endorsement program.

Alternative 2 (Preferred). Limit golden tilefish effort through a golden tilefish longline endorsement program: Distribute golden tilefish longline endorsements to snapper grouper permit holders that qualify under the eligibility requirements specified under Action 2.

Summary of Effects

Biological: **Alternative 2 (Preferred)** addresses establishment of an endorsement program for the longline sector. Longline gear is more efficient than hook-and-line gear in capturing golden tilefish. Yet, allowing more efficient gear to capture golden tilefish would not be expected to negatively impact the stock since annual catch limits (ACLs) and accountability measures (AMs) are in place to prevent overfishing. Furthermore, a longline endorsement could slow the rate the golden tilefish ACL is met and help prevent overages, thus having biological benefits. While it has not been very well documented, longline gear could be more likely to interact with protected species and negatively impact bottom habitat than hook-and-line gear. Currently anyone with a commercial snapper grouper permit can use longline gear. Thus, capping the number of individuals who can use longline gear could have greater biological benefits for the stock and protected species than **Alternative 1 (No Action)**.

Economic: Given that the longline sector has accounted for over 90% of commercial landings of golden tilefish, an endorsement system for this sector would help to address overcapacity and effort expansion in the commercial sector. The endorsement coupled with a quota increase, as proposed in Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12), can better address overcapacity and forestall a derby than

either measure alone. Together, they offer a higher likelihood of extending the fishing season and thereby providing opportunities for the industry to remain profitable. However, it is recognized that the effects of an endorsement system, even if combined with a quota increase, would be transitory. Unlike a management system, such as a catch share program, that provides harvesting privileges to qualified participants, an endorsement system would not eliminate the underlying incentive to "race to fish". With the incentive to "race to fish" still intact, fishermen could adapt to the new quota and the endorsement system and increase their effort over time. Effort increases and capital stuffing (the tendency to invest excessively in productive inputs such as hull, engine or gear) would even intensify if fishermen perceive the endorsement system as a prelude to a catch share program.

Social: Although this proposed action would not limit total golden tilefish harvest, restricting participation may affect the total amount of golden tilefish harvested as well as change product flow through the various communities and dealers. If the more significant harvesters receive endorsements, total volume and the communities where most golden tilefish are landed should not be affected. Therefore, the proposed endorsement system should preserve, and possibly increase, the social benefits to the more active producers and dealers, and associated communities. However, absent fishermen landing in multiple ports and selling to multiple dealers in the same city, reduced social and economic benefits could be experienced by some communities and dealers as well as the fishermen who do not receive an endorsement.

2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

Alternative 1 (No Action). Do not establish initial eligibility requirements for a golden tilefish longline endorsement.

Alternative 2. Establish initial eligibility requirements for a golden tilefish longline endorsement based on the following criteria:

Sub-alternative 2a. To receive a golden tilefish longline endorsement, the individual must have a total of 2,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

Sub-alternative 2b. To receive a golden tilefish longline endorsement, the individual must have a total of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

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2. **Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement**
3. Establish an Appeals Process
4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups
5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. Modify the Golden Tilefish Trip Limit
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Sub-alternative 2c. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

Sub-alternative 2d. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.

Sub-alternative 2e. To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.

Sub-alternative 2f . To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.

Sub-alternative 2g. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.

Sub-alternative 2h (Preferred). To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

Sub-alternative 2i. To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

Summary of Effects

Biological: All of the sub-alternatives under **Alternative 2** would result in a reduction in the number of participants but not necessarily limit effort or harvest (**Table S-1**).

Table S-1. Number of longline endorsements for sub-alternatives under **Action 2**.

Sub-alternatives for Longline Endorsements	Eligibility Requirement	Number of Endorsements
2a	At least 2,000 pounds gw when landings from 2006 through 2008 are aggregated	17
2b	At least 5,000 pounds gw when landings from 2006 through 2008 are aggregated	12
2c	At least 5,000 pounds gw when landings from 2006 through 2008 are averaged	11
2d	Average of 5,000 pounds gw golden tilefish caught from 2007 through 2009	12
2e	Average of 10,000 pounds gw golden tilefish caught from 2007 through 2009	8
2f	Average of 10,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2010	14
2g	Average of 5,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2010	18
2h (Preferred)	**Average of 5,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2011**	**23**
2i	Average of 10,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2011	16

It is possible that alternatives that limit the number of participants could also result in a reduction in the amount of gear deployed and magnitude of golden tilefish landed. If this were the case, then biological benefits could be expected for golden tilefish and the chance of interactions with protected species could be reduced. **Sub-alternative 2h (Preferred)** would result in 23 longline endorsements (**Table S-1**). Therefore, the biological benefits of this sub-alternative could be less than under other sub-alternatives that result in fewer longline endorsements. However, it is also possible that effort would remain the same regardless of the number of vessels fishing. Therefore, the biological effects of **Sub-alternatives 2a-2i** could be very similar.

Economic: **Sub-alternative 2h (Preferred)** would qualify 23 permit holders (of the possible 38 permit holders) for the longline endorsement. These eligible permit holders employed 24 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011[1]. On average, eligible permitted vessels landed approximately 288,000 pounds gw of golden tilefish annually. These landings accounted for 94% of golden tilefish landings by all "longline" vessels (eligible and ineligible) and 75% of the eligible vessels' landing of all species caught in the trip[2]. Eligible vessels generated approximately $788,000 (in 2010 dollars) of revenues from golden tilefish. These revenues accounted for 94% of all revenues from golden tilefish by all "longline" vessels (eligible and ineligible) and 83% of the eligible vessels' revenues from all species caught in the trip. **Sub-alternative 2h (Preferred)** would disqualify 15 (38 minus 23) permit holders from obtaining a longline endorsement. These permit holders employed 19 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011. Ineligible permitted vessels landed approximately 18,000 pounds gw of golden tilefish, which accounted for 6% of golden tilefish landings by all "longline" vessels (eligible and ineligible), and 11% of the ineligible vessels' landing of all species caught in the trip. These ineligible vessels' landings of golden tilefish generated approximately $47,000 in revenues, which accounted for 6% of all "longline" vessel revenues from golden tilefish and 17% of these vessels' revenues from all species caught in the trip. Losses to non-qualifying vessels would not necessarily turn out as losses to the longline sector or to the commercial sector as a whole. The remaining longline participants have enough capacity to harvest whatever is given up by non-qualifying vessels. Because of recent closures that occurred in the commercial golden tilefish segment of the snapper grouper fishery, it is likely that qualifying vessels could recoup losses to non-qualifying vessels in the near future. This could likely happen even if the quota is raised (as proposed in Regulatory Amendment 12) because the longline sector appears to have the necessary capacity to increase its harvest of golden tilefish.

Social: Typically, the fewer the eligible individuals, the more likely negative social impacts could result due to diminished golden tilefish harvest opportunities. Under this

[1] One eligible permit was transferred to another vessel during 2005-2011, so the data show that two vessels participated under one permit during this period.
[2] Vessels that caught golden tilefish also caught other species on the same trip and thereby also generated revenues from these other species.

assumption, **Sub-alternative 2h (Preferred)** would have the least negative social impact by allocating endorsements to the most fishermen, while **Sub-alternative 2e** would be most likely to result in negative impacts. However, under any allocation scenario, fishermen who receive an endorsement would be expected to benefit due to less competition in fishing and in the markets.

The estimated number of permits that would qualify for a longline endorsement in each state, based on the reported home port along with a column showing the number of permits with golden tilefish landings with longline from 2006 through 2011, is shown in **Table S-2** to provide a baseline for comparison. Florida would receive the most endorsements under each sub-alternative. Although the highest number of Florida permits (19) would qualify under **Sub-alternative 2h (Preferred)**, over 30% of the total number of Florida permits with recent golden tilefish landings by longline would not receive an endorsement. The other sub-alternatives would allow less than half of the permits in Florida with recent landings to qualify for a longline endorsement. However, of the 28 permits with longline landings, 10 permits had less than 5,000 pounds gw total golden tilefish landings from 2006-2011, which suggests that some of the permit holders that do not qualify for a longline endorsement may not be dependent on the longline golden tilefish portion of the snapper grouper fishery and would not be impacted by the endorsement program.

No vessel in Georgia would receive an endorsement under any of the sub-alternatives but no landings have been reported in Georgia from 2006-2011. Only one North Carolina permit would receive an endorsement under **Sub-alternative 2a** but not under any other sub-alternative. Two out of the three North Carolina vessels with golden tilefish longline landings have less than 5,000 pounds total landings from 2006-2011, so the endorsement program may not negatively affect these fishermen. Of the five South Carolina vessels with recent landings, at least one qualifies under each sub-alternative. **Sub-alternatives 2f-2i** would be expected to result in the most (4 out of 5) South Carolina permits qualifying for an endorsement.

Table S-2. Number of Snapper Grouper permits with golden tilefish landings with longline from 2006 through 2011 and estimated number of permits that would qualify for a long line endorsement based on homeport of associated vessel.

	Permits with any landings 2006-2011	**Sub -alt 2a**	**Sub -alt 2b**	**Sub -alt 2c**	**Sub -alt 2d**	**Sub -alt 2e**	**Sub-alt 2f**	**Sub-alt 2g**	**Sub-alt 2h**	**Sub-alt 2i**
FLORIDA	28	13	9	8	10	7	10	14	**19**	12
Brevard County	6	2	2	2	2	2	4	4	**5**	4
Indian River County	2	0	0	0	0	0	0	1	**2**	1
Martin County	4	3	1	0	1	0	1	2	**2**	1
Miami-Dade County	2	2	1	1	3	2	1	2	**2**	1
Monroe County	2	0	0	0	0	0	0	0	**0**	0
Palm Beach County	5	0	0	0	0	0	0	0	**2**	0
St Lucie County	2	2	1	1	1	1	1	1	**1**	1
Volusia County	5	4	4	4	3	2	3	4	**5**	4
NORTH CAROLINA	3	1	0	0	0	0	0	0	**0**	0
Dare County	3	1	0	0	0	0	0	0	**0**	0
SOUTH CAROLINA	5	3	3	3	2	1	4	4	**4**	4
Georgetown County	1	1	1	1	1	1	1	1	**1**	1
Horry County	4	2	2	2	1	0	3	3	**3**	3
TOTAL	36	17	12	11	12	8	14	18	**23**	16

3. Establish an Appeals Process

Alternative 1 (No Action). Do not specify provisions for an appeals process associated with the golden tilefish endorsement program.

Alternative 2 (Preferred). A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The Regional Administrator (RA) will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. The RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

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4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups
5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. Modify the Golden Tilefish Trip Limit
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Alternative 3. A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The RA will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. A special board composed of state directors/designees will review, evaluate, and make individual recommendations to the RA on appeals. Hardship arguments will not be considered. The special board and the RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

Summary of Effects

Biological: Establishing an appeals process is an administrative action. Therefore, it is not anticipated to directly or indirectly affect the physical, biological, or ecological environments in a positive or negative manner.

Economic: The number of appeals received largely determines the economic impacts of an appeals program. Fishermen excluded from the endorsement program who decide to appeal may incur costs associated with trying to prove their case. However, access to NMFS' logbook landings or state trip tickets should be at little or no cost to a fisherman. Some complications may arise in the case of transferred permits for the new permit where the new owner may not have access to NMFS logbook landings for the previous owner. Access to state trip tickets in this situation would depend on the respective state's rule on access to trip ticket information.

Social: The absence of an appeals process under **Alternative 1 (No Action)** would be expected to increase the likelihood that one or more appropriate qualifiers would not receive an endorsement, resulting in less social benefits than would occur if an appeals process is established under **Alternative 2 (Preferred)** and **Alternative 3**. There would likely be minimal difference in the social effects between **Alternative 2 (Preferred)** and **Alternative 3**.

4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

Alternative 1 (No Action). Do no allocate the commercial golden tilefish ACL among gear groups (*commercial ACL = 541,295 pounds gw).

Alternative 2 (Preferred). Allocate the golden tilefish commercial ACL as follows: 75% to the longline sector and 25% to the hook-and-line sector (currently would be 405,971 pounds gw to longline and 135,324 pounds gw to hook-and-line).

Alternative 3. Allocate the golden tilefish commercial ACL as follows: 85% to the longline sector and 15% to hook-and-line sector (currently would be 460,101 pounds gw to longline and 81,194 pounds gw to hook-and-line).

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4. **Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups**
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7. Modify the Golden Tilefish Trip Limit
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Longline Endorsement

Alternative 4. Allocate the golden tilefish commercial ACL as follows: 90% to the longline sector and 10% to hook-and-line sector (currently would be 487,165 pounds gw to longline and 54,130 pounds gw to hook-and-line).

NOTE: Existing commercial accountability measures would apply separately to the longline and hook-and-line sector ACLs.

*ACL values reflect the South Atlantic Council's preferred commercial ACL alternative in Regulatory Amendment 12 to the Fishery Management Plan for the South Atlantic Region, which is under review by the Secretary of Commerce (Secretary).

Summary of Effects

Biological: The biological effect of **Alternatives 1 (No Action)-4** would be similar since it is likely that the quota would be met regardless of which alternative is selected. However, alternatives that allocate a greater percentage of the commercial golden tilefish ACL to the hook-and-line sector could be expected to have a greater biological benefit if it eases the rate at which the overall commercial ACL of 541,295 pounds gw is met. It is difficult to monitor landings in a derby fishery and overruns of the quota can have negative effects on the stock. Furthermore, alternatives that allocate a greater portion of the harvest to longline gear could have a greater negative impact on habitat since longline gear is considered to do greater damage to hard bottom habitat than vertical hook-and-line gear (SAFMC 2007). However, damage to bottom habitat with longline gear has not been well documented.

Economic: In general, an allocation provision that would change the "current" harvest distribution of golden tilefish between the longline and hook-and-line gear groups would tend to economically benefit one group at the expense of the other. Relative to the baseline allocation ratio, each allocation alternative would redistribute the harvest from the longline sector to the hook-and-line sector. This, in theory, would result in negative effects on the longline sector and positive effects on the hook-and-line sector. However, because the commercial quota will increase (if Regulatory Amendment 12 is approved by the Secretary) well above the baseline landings of both sectors, each allocation alternative would yield positive revenue effects to both sectors. The revenue effects to each sector would directly correlate with the size of its allocation—the higher a sector's allocation the larger would be its revenue effects. Revenue gains of about $80,000 (**Alternative 4**) to $302,000 (**Preferred Alternative 2**) would accrue to the hook-and-line sector. The corresponding revenue gains to the longline sector would range from about $271,000 (**Preferred Alternative 2**) to $493,000 (**Alternative 4**). The net (total) revenue effects would be about $573,000, which would be the same for each alternative because revenues were derived using the same price for both sectors.

Social: The allocation specified in **Alternative 2 (Preferred)** would not be consistent with the recent performance of this component of the snapper grouper fishery. **Alternatives 3** and **4** would be more consistent with the recent history of the commercial golden tilefish sector than **Alternative 2 (Preferred)**, and would benefit the longline component of the commercial sector. **Alternatives 2 (Preferred)-4** would also benefit the hook-and-line sector more than **Alternative 1 (No Action)** by preserving access to the resource through gear allocations. The majority of permits that would receive longline endorsements under **Action 2** are from Florida. Therefore, those alternatives that allocate a larger portion of the ACL to the hook-and-line sector would likely have positive social benefits for individuals with federal snapper grouper commercial permits from states other than Florida. **Alternative 2 (Preferred)** would provide greater assurance than other alternatives that fishermen from all states would be able to fish for golden tilefish during periods of the year when the weather and economic conditions are favorable.

5. Allow for Transferability of Golden Tilefish Endorsements

Alternative 1 (No Action). Golden tilefish longline endorsements cannot be transferred.

Alternative 2 (Preferred). A valid (not expired) golden tilefish endorsement or a renewable (expired but renewable) golden tilefish endorsement can be transferred between any two individuals or entities that hold, or simultaneously obtain a South Atlantic Unlimited Snapper Grouper Permit. Endorsements would be transferable, independently from the South Atlantic Unlimited Snapper Grouper Permit. Landings of golden tilefish using the golden tilefish longline endorsement would be associated with the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked at the time the landings take place.

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Sub-alternative 2a. (Preferred). Transferability allowed upon program implementation.

Sub-alternative 2b. Transferability not allowed during the first 2 years of the program.

Summary of Effects

Biological: The biological effects of **Alternatives 1 (No Action)** and **2 (Preferred)** would be very similar, as landings would be constrained by the ACL. Therefore, the effects of these alternatives may be more economic and social than biological.

Economic: Under **Alternative 1 (No Action)** fishermen would be able to sell their snapper grouper permit but they would not be able to sell their golden tilefish gear endorsement, which could result in difficultly selling their permit, vessel, and gear since permits are often sold with the vessel and gear. Since longline gear is restricted for many of the South Atlantic species, sale of the gear and a larger vessel suitable for targeting golden tilefish with longline gear would be difficult without sale of the golden tilefish longline endorsement. If participation remains steady over the years of the program during which transferability is not allowed, aggregate profitability of golden tilefish harvest could remain steady. If, however, landings drop due to people leaving the golden

tilefish component of the snapper grouper fishery and not transferring the endorsement due to restrictions, aggregate profitability would decline. However, at the same time, individual average profitability could increase because there would be less people sharing the same amount of landings as under **Alternative 1 (No Action)**.

Preferred Alternative 2 would provide the opportunity for new entrants without an increase in the overall number of participants. Conceptually, the degree of transfer flexibility influences the aggregate profitability of the fishery and the average individual profitability. The greater the degree of transferability allowed, the greater the value of the permit is expected, as a broad group of individuals would be allowed to bid for the endorsement. It is likely the highest bidder would also be the more efficient fishing operator because of the additional cost to entering the fishery. Also, the greater the degree of transferability allowed, the greater the profitability of the individual who owns the permit because they have the ability to sell their permit when they need to switch to more profitable fisheries or when they are unable to fish. As more efficient operators enter the fishery, industry efficiency could increase, thus enhancing the aggregate profitability of the sector. However, **Sub-alternatives a (Preferred)** and **b** would likely influence the degree of enhancement to possible profitability. **Sub-alternative 2a (Preferred)** would allow for transferability of permits to take place immediately upon implementation. **Sub-alternative 2b** would allow for the longest delay in transferability allowances. The rationale behind delaying transferability of catch privilege assets, like Individual Fishing Quota shares, or of entry restricting assets, like endorsements, is to allow people time to develop an understanding of the value of the assets before selling them. In general, the value of an asset under a catch share program increases over time as people come to understand the possibilities for improved management of the fishery and the impact that might have on the asset. That is, if catch shares appear to be resulting in better stock management, greater dockside prices, or lower fishing costs, quota share values tend to increase. However, an endorsement program does not have the same characteristics as a catch share program, and therefore a two-year delay (**Sub-alternative 2b**) in transferability allowances might not be necessary. While **Sub-alternative 2b** might allow for people to best assess the value of gear endorsements and make more accurate market transactions, it would delay transfers that could benefit fishermen and the industry.

Social: Generally, social and economic benefits are expected to be greater when individuals are given broader freedom to manage their assets (freedom to sell the endorsement without time constraints). This is particularly true as situations can arise where a decision to stop fishing is not discretionary, as may be the case should an adverse health situation or personal financial crisis arise. Therefore, to the extent that a reduced ability to transfer endorsements results in reduced benefits, the longer the restriction on transferring endorsements applies, the greater the expected reduction in social benefits.

6. Adjust the Golden Tilefish Fishing Year

Alternative 1 (No Action) (Preferred). Retain the existing calendar year as the golden tilefish fishing year (January 1 through December 31).

Alternative 2. Specify the golden tilefish fishing year as September 1 through August 31.

Alternative 3. Specify the golden tilefish fishing year as August 1 through July 31.

Alternative 4. Specify the golden tilefish fishing year as May 1 through April 30.

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7. Modify the Golden Tilefish Trip Limit
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Summary of Effects

Biological: While there is little biological benefit to changing the fishing year, a shift in the fishing year would allow hook-and-line fishermen to target golden tilefish in the fall. However, a change in the fishing year would also result in multiple species being open at the same time. It is noted that **Action 4**, which includes alternatives that would allocate portions of the ACL to the longline and hook-and-line sector, would have a similar effect in ensuring fishermen would be able catch golden tilefish with hook-and-line gear.

Golden tilefish spawn off the southeast coast of the U.S. from March through late July, with a peak in April. **Preferred Alternative 1 (No Action)** would continue to open the fishing season before the start of the spawning season.

Economic: **Preferred Alternative 1 (No Action)** would make golden tilefish available to dealers during January-May, when other snapper grouper species are closed. This could increase the dockside price paid to fishermen for golden tilefish. Even if dockside prices do not increase in the early part of the year, keeping the start date at January 1 could help dealers maintain supply and therefore keep customers.

Social: Because **Alternative 1 (No Action, Preferred)** would not make any regulatory change in the fishing year, no changes in the manner in which the golden tilefish component of the snapper grouper fishery is prosecuted would be expected and, as a result, no changes in the current social benefits of the snapper grouper fishery would be expected to occur. While adjusting the start of the fishing year, in conjunction with the

ACL and AMs, would not affect the total available ACL, commencement of the fishing year in September (**Alternative 2**), August (**Alternative 3**), or May (**Alternative 4**) would be expected to allow increased participation and recovery of historic harvests. The earlier the start (May), the greater the opportunity for participation by North Carolina and South Carolina fishermen, with continued potential jeopardy for Florida hook-and-line vessels (quota management could still close the fishery in the fall). The later the start (September) the reverse would occur; Florida hook-and-line fishermen should be able to fish the entire fall whereas North Carolina and South Carolina fishermen could face abbreviated fishing opportunities depending on fall and winter weather conditions and the pace at which the ACL is harvested. Both **Alternative 2** and **Alternative 3** would be expected to result in similar fishing opportunities for Florida fishermen, and improved opportunities relative to **Alternative 4**, whereas Carolina fishermen should face better opportunities under **Alternative 3** relative to **Alternative 2**, but reduced opportunities relative to **Alternative 4**.

7. Modify the Golden Tilefish Trip Limit

Alternative 1 (No Action). The commercial trip limit is 4,000 pounds gw; if 75% is harvested by September 1, the trip limit is reduced to 300 pounds gw.

Alternative 2 (Preferred). Remove the 300-pound gw trip limit when 75% of the ACL is taken.

Alternative 3. Prohibit longline fishing after 75% of the ACL is taken.

Summary of Effects

Biological: **Preferred Alternative 2** would remove the 300-pound gw trip limit when 75% of the ACL is met. Reducing the 4,000-pound gw trip limit to 300 pounds gw when 75% of the ACL is met was originally intended to allow golden tilefish to remain open all year, and allow for commercial hook-and-line fishermen from Florida to target golden tilefish in the fall. Furthermore, the action was intended to allow fishermen from the Carolinas to harvest golden tilefish when weather conditions were most favorable. Based on data from 2007 to 2011, golden tilefish did not remain open all year even when the trip limit was reduced to 300 pounds gw. As a derby fishery has developed for golden tilefish and the ACL has been met very rapidly in recent years, the 300-pound gw trip limit has not had the intended effect of providing hook-and-line fishermen access to golden tilefish in the fall. However, the current advantage of retaining the 300-pound gw trip limit when 75% of the ACL is met is that it can slow the rate at which the ACL is filled and increase the chance the ACL would not be exceeded. However, during 2010 and 2012, golden tilefish were being harvested so quickly that the landings could not be tracked accurately. As a result, an overage of the ACL occurred and the 300-pound gw trip limit was not triggered.

The expected biological effect of removing the trip limit reduction when 75% of the ACL is met is expected to be minimal. In the commercial sector, most golden tilefish (90% during 2004-2010) are taken with longline gear deployed by large vessels that make long trips and depend on large catches (> 3,000 pounds gw) to make a trip economically feasible. Therefore, a 300-pound gw trip limit when 75% of the ACL is met should shut down the commercial longline sector, and might reduce their potential annual catch.

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5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. **Modify the Golden Tilefish Trip Limit**
8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Economic The two-tiered structure of the trip limit under **Alternative 1 (No Action)** was implemented to leave commercial fishing season open year round, thereby allowing hook-and-line fishermen in Florida to harvest golden tilefish in the fall as they used to and fishermen in the Carolinas to harvest the fish when weather conditions are favorable. In addition to preserving the presence of these other fishermen in harvesting golden tilefish, the two-tiered trip limit would, in principle, also allow these other fishermen to receive relatively good price for their harvest, as larger harvests by longline fishermen would not glut the market. In recent years, harvest of golden tilefish has been so rapid that it was not possible to track commercial harvests with the existing NMFS quota monitoring program, and thus the 300-pound gw step-down trip limit was not triggered before the fishing season was closed. An increase in the ACL (as proposed in Snapper Grouper Regulatory Amendment 12) alone would likely not alleviate the situation especially in the medium term because there is enough capacity to harvest the new ACL. Under this scenario, **Alternative 2 (Preferred)** would only make the situation worse. **Alternative 3** would not help if tracking of commercial harvest remains a problem.

Given the other provisions in this amendment, particularly the endorsement system and the sector allocation of the commercial ACL, **Alternative 2 (Preferred)** would provide opportunity for longline fishermen to efficiently use their capacity without adversely affecting the hook-and-line sector. Both **Alternative 1 (No Action)** and **Alternative 3** would introduce some inefficiency into the longline operations. In addition, under the general understanding that a 300-pound gw trip limit would render a longline trip unprofitable, it is likely that some longline allocations would not be taken under **Alternative 3**. While this would be beneficial to the stock, it would have adverse economic consequences on the longline sector. One possible downside of **Alternative 2 (Preferred)** is that large longline harvests would tend to glut the market even after 75% of the commercial ACL is taken. This would reduce the price that hook-and-line fishermen as well as longline fishermen would receive. Of course, this market glut would also occur before 75% of the commercial ACL is taken.

Social: Regardless of the decision on the proposed change in the fishing year **(Action 6)**, elimination of the step-down trip limit would be expected to accelerate quota closure of the fishery by not reducing the pace of harvest. The magnitude of impact of accelerated quota closure on vertical line fishermen would depend on how harvests are affected by the proposed endorsement requirement and change in the fishing year, if any. Nevertheless, in tandem with the other proposed golden tilefish management changes, it is expected that the elimination of the 300-pound gw step-down trip limit would result in increased social benefits relative to **Alternative 1 (No Action)**.

8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

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5. Allow for Transferability of Golden Tilefish Endorsements
6. Adjust Golden Tilefish Fishing Year
7. Modify the Golden Tilefish Trip Limit
8. **Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement**

Alternative 1 (No Action). Currently there is a commercial trip limit of 4,000 pounds gw until 75% of the quota is taken. The trip limit is then reduced to 300 pounds gw.

Alternative 2. Establish a trip limit of 300 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 3. Establish a trip limit of 400 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 4 (Preferred). Establish a trip limit of 500 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 5. Establish a trip limit of 100 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 6. Establish a trip limit of 200 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Summary of Effects

Biological: Alternatives with more restrictive trip limits would be expected to have greater biological effects for golden tilefish as they would likely constrain the overall harvest. However, golden tilefish are not overfished and are not experiencing

overfishing. Furthermore, ACL and AMs are in place to prevent overfishing from occurring. Thus, there is not a biological need for a more restrictive trip limit.

Economic: Based on 2005-2011 average landings and revenues of hook-and-line vessels and longline vessels excluded from the endorsement system, the trip limit alternatives would reduce revenues in the range of about $69,000 with **Alternative 4 (Preferred)** to $76,000 with **Alternative 5**. It is expected that the preferred alternative would have the least revenue reductions because it provides for the highest trip limit.

The revenue reductions from the various trip limit alternatives appear to be relatively high because of the inclusion of those longline trips that would not be taken by vessels excluded from the endorsement system. If these trips were excluded, the revenue effects would most likely be very low especially for a 500-pound gw trip limit (**Preferred Alternative 4**). However, these trips are included in the present analysis because they would now be subject to the trip limits.

A trip limit may be considered to have relatively short-term effects. A vessel incurring revenue reductions due to a trip limit may recoup its losses by taking more trips as long as those trips are still profitable. A relatively high trip limit, such as in **Alternative 4 (Preferred)**, would likely remain profitable for hook-and-line vessels. This trip limit would affect only 14 trips out of the 2005-2011 average of 249 trips. It is then likely that a trip limit, as in **Alternative 4 (Preferred)**, would not be too constraining as to leave unharvested a good portion of the hook-and-line sector's quota.

Table S-3. Effects of trip limit alternatives on the harvest and revenues of vessels not qualifying for the longline endorsement, assuming the preferred alternative in **Action 2** and using average 2005-2011 landings, revenues, and trips.

Trip Limit Alternative	Reductions in Pounds (gw)	Reductions in Revenue (2010 dollars)	Affected Trips
A-2: 300 pound	25,625	$71,931	17
A-3: 400 pound	24,921	$70,067	15
A-4: 500 pound	**24,403**	**$68,687**	**14**
A-5: 100 pound	27,019	$75,733	25
A-6: 200 pound	26,142	$73,364	19

Social: **Alternative 1 (No Action)** would be expected to generate little or no social impacts (positive or negative) because the only trip limit for vessels harvesting golden tilefish using gear other than longline would be the existing South Atlantic 225-Pound Trip Limit Snapper Grouper Permit holders, as long as the step-down approach was removed in **Action 7**. The highest proposed trip limit under **Alternative 4 (Preferred)** would be the most beneficial to vessels with South Atlantic Unlimited Snapper Grouper Permits, and **Alternative 5** would be the most restrictive to those vessels. Although lower trip limits may contribute to a longer fishing season, the more restrictive limits may cause some vessels to target other species to increase the economic efficiency of fishing trips.

Chapter 1. Introduction

1.1 What Actions Are Being Proposed?

Fishery managers are proposing changes to regulations through Amendment 18B to the Fishery Management Plan (FMP) for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 18B). Several actions are being proposed to limit effort in the golden tilefish portion of the snapper grouper fishery.

1.2 Who is Proposing the Actions?

The South Atlantic Fishery Management Council (South Atlantic Council) is proposing the actions. The South Atlantic Council recommends management measures and submits them to the National Marine Fisheries Service (NOAA Fisheries Service) who ultimately approves, disapproves, or partially approves, and implements the actions in the amendment through the development of regulations on behalf of the Secretary of Commerce. NOAA Fisheries Service is an agency in the National Oceanic and Atmospheric Administration within the Department of Commerce.

South Atlantic Fishery Management Council

- Responsible for conservation and management of fish stocks in the South Atlantic Region
- Consists of 13 voting members: 8 appointed by the Secretary of Commerce, 1 representative from each of the South Atlantic states, and the Southeast Regional Director of NOAA Fisheries Service; and 4 non-voting members
- Management area is from 3 to 200 miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida
- Develops management plans and recommends regulations to NOAA Fisheries Service for implementation

1.3 Where is the Project Located?

Management of the federal snapper grouper fishery, located off the South Atlantic in the 3-200 nautical miles (nm) U.S. Exclusive Economic Zone (EEZ), is conducted under the FMP for the Snapper Grouper Fishery of the South Atlantic Region (SAFMC 1983) (**Figure 1-1**). The management area is from 3 to 200 miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida.

1.4 Why is the South Atlantic Council Considering Action?

Recent amendments to the Snapper Grouper FMP have imposed more restrictive harvest limitations on snapper grouper fishermen. In an effort to identify other species to harvest, more fishermen may shift effort to target golden tilefish. An increase in effort on these species would intensify the "race to fish" that already exists, which has resulted in a shortened fishing season for the last six years.

The fishing season for golden tilefish in recent years has already been shortened to such a degree that South Carolina longline fishermen -- who are typically unable to fish until April or May due to weather conditions -- and hook-and-line fishermen from Florida -- who typically do not fish until the fall -- are increasingly unable to participate in the golden tilefish segment of the snapper grouper fishery. The South Atlantic Council is concerned an increase in effort on these species could deteriorate profits.

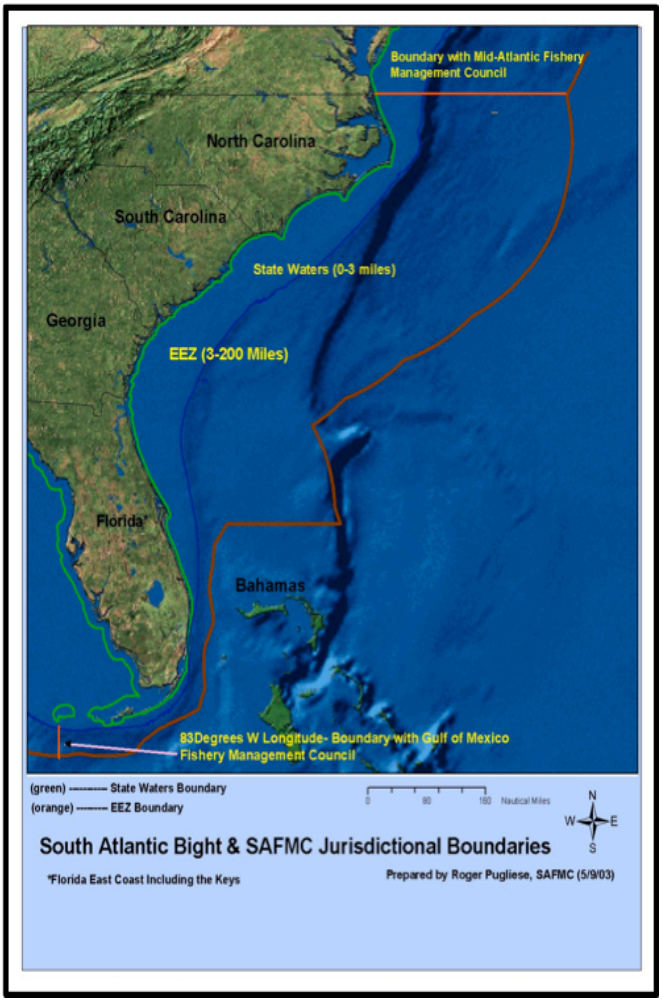

Figure 1-1. Jurisdictional boundaries of the South Atlantic Council.

1.5 Purpose and Need

Purpose for Action

The ***purpose*** of Amendment 18B is to limit participation in the golden tilefish component of the snapper grouper fishery through establishment of longline endorsements, changes to the fishing year, allocation of the annual catch limit (ACL) between gear groups, and modifications to golden tilefish trip limits.

The actions proposed in this amendment will address issues that have arisen as a result of a more stringent regulatory regime in the South Atlantic region.

Need for Action

The ***need*** for action in Amendment 18B is to reduce overcapacity in the golden tilefish component of the snapper grouper fishery.

Chapter 2. Proposed Actions

This section contains the proposed actions being considered to meet the purpose and need. Each action contains a range of alternatives, including the no action (status-quo). Alternatives the South Atlantic Council considered but eliminated from detailed study during the development of this amendment are described in **Appendix A**.

Proposed Actions in Amendment 18B

1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

3. Establish an Appeals Process

4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

5. Allow for Transferability of Golden Tilefish Endorsements

6. Adjust Golden Tilefish Fishing Year

7. Modify the Golden Tilefish Trip Limit

8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

2.1 Action 1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

Alternative 1 (No Action). Do not limit effort in the golden tilefish component of the snapper grouper fishery through an endorsement program.

Alternative 2 (Preferred). Limit golden tilefish effort through a golden tilefish longline endorsement program: Distribute golden tilefish longline endorsements to snapper grouper permit holders that qualify under the eligibility requirements specified under Action 2.

Comparison of Alternatives

Alternative 1 (No Action) would maintain the current level of participation in the golden tilefish component of the snapper grouper fishery, and may allow overcapitalization of golden tilefish in the future. **Alternative 2 (Preferred)** would limit golden tilefish effort through a golden tilefish longline endorsement program. This endorsement would be required for fishermen with commercial snapper grouper permits to land golden tilefish with longline gear. Fishermen who do not have a longline endorsement but have a federal commercial South Atlantic Unlimited Snapper Grouper Permit would still be able to land golden tilefish with hook-and-line gear. Longline gear is more efficient than hook-and-line gear in capturing golden tilefish. Currently, anyone with a South Atlantic Unlimited Snapper Grouper Permit or a South Atlantic 225 Pound Trip Limit Snapper Grouper Permit can use longline gear. As there were 763 of these permits in 2010, there is substantial potential for increase in the number of commercial snapper grouper fishery who can use longline gear (Table 3-4 from Amendment 18A SAFMC 2011f). The commercial ACL for golden tilefish can be expected to be met rapidly and promote derby conditions when there are a large number of individuals using longline gear. Allowing more efficient gear to capture golden tilefish would not be expected to negatively impact the stock since annual catch limits (ACLs) and accountability measures (AMs) are in place to prevent overfishing. However, when the ACL is met very rapidly, it is difficult to monitor landings with the existing NMFS quota monitoring system and the ACL can be exceeded, which could negatively impact the stock. **Alternative 2 (Preferred)** could have positive biological effects on the stock if it slows the rate at which the ACL is met and helps to prevent overages from occurring. Furthermore, while it has not been well documented, longline gear may be more likely to interact with protected species and negatively impact bottom habitat than hook-and-line gear. Therefore, **Alternative 2 (Preferred)**, which would place limits on the number of individuals who can use longline gear, would be expected to have greater positive effects for protected species than **Alternative 1 (No Action)**.

Given that the longline sector has accounted for over 90% of commercial landings of golden tilefish, an endorsement system for this sector would help in addressing overcapacity and effort expansion in the commercial sector. It is likely, however, that the effects of an endorsement system would be temporary. Effort and capital stuffing (the tendency to invest excessively in productive inputs such as hull, engine or gear) would not be totally constrained because eligible longline participants could still expand, especially if they perceive the endorsement system as a prelude to a catch share program. In addition, expansion of the hook-and-line sector could still occur. Perhaps, the best an endorsement can do is to prevent a surge in effort from other sources than those included in the longline endorsement and the hook-and-line sector. The endorsement program coupled with a quota increase, as proposed by the South Atlantic Fishery Management Council (South Atlantic Council) in Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12), can

better address overcapacity and forestall a derby than either measure alone. Together, they offer a higher likelihood of extending the fishing season and thereby providing opportunities for the industry to remain profitable.

Preferred Alternative 2, in addition to the eligibility criteria for the longline component of the commercial golden tilefish sector in **Action 2**, is expected to return golden tilefish harvests to the more traditional/historical participation and harvest patterns. Although this proposed action would not limit total commercial golden tilefish harvest, restricting participation may affect the total amount of golden tilefish harvested commercially as well as change product flow through the various communities and dealers. If the more significant harvesters receive endorsements, total volume and the communities where most golden tilefish is landed should not be affected. Most golden tilefish are harvested on commercial longline trips that are directly targeting golden tilefish. Therefore, the longline endorsement program in **Preferred Alternative 2** is expected to preserve, and possibly increase, the social benefits to the more active producers, dealers, and associated communities. However, absent fishermen landing in multiple ports and selling to multiple dealers in the same city, reduced social and economic benefits could be experienced by some communities and dealers.

The most significant impact of implementation of a longline endorsement program under **Preferred Alternative 2** will likely be loss of income and jobs, and/or opportunity for fishermen who do not qualify for a longline endorsement. These effects are discussed in detail in **Section 4.1.3**.

The least administratively burdensome alternative would be **Alternative 1 (No Action)**, followed by **Alternative 2 (Preferred).** However, due to the small number of participants that would qualify for an endorsement, the administrative burden is expected to be minimal.

Table 2-1. Summary of effects under **Action 1**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Negative impacts from current derby conditions and resulting amount of fishing gear in the water for the duration of the season.	Least socio-economic benefits as it may allow for overcapitalization in the future. Least administratively burdensome.
Alternative 2 (Preferred)	Biological benefits due to possible reduction in effort and helping to ensure the commercial ACL is not exceeded.	Economic benefits to those who qualify for endorsements. Increased social benefits to active producers but decreased benefits to some communities and dealers. Administrative burden higher than **Alternative 1 (No Action)**.

2.2 Action 2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

Alternative 1 (No Action). Do not establish initial eligibility requirements for a golden tilefish longline endorsement.

Alternative 2. Establish initial eligibility requirements for a golden tilefish longline endorsement based on the following criteria:

Sub-alternative 2a. To receive a golden tilefish longline endorsement, the individual must have a total of 2,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

Sub-alternative 2b. To receive a golden tilefish longline endorsement, the individual must have a total of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

Sub-alternative 2c. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.

Sub-alternative 2d. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.

Sub-alternative 2e. To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.

Sub-alternative 2f. To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.

Sub-alternative 2g. To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.

Sub-alternative 2h (Preferred). To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

Sub-alternative 2i. To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

Comparison of Alternatives

Sub-alternative 2h (Preferred) would implement the least restrictive requirement resulting in issuance of 23 longline endorsements. **Sub-alternative 2e** would implement the most restrictive endorsement eligibility requirement resulting in 8 qualifying permits. All of the sub-alternatives under **Alternative 2** would result in a cap placed on the number of participants but not necessarily limit the effort or harvest in the golden tilefish portion of the snapper grouper fishery. Therefore, the biological

effects of **Sub-alternatives 2a-2i** would be expected to be similar. It is possible that sub-alternatives, which limit the number of participants, could also result in a reduction in the amount of gear deployed and golden tilefish landed. If this were the case, then biological benefits could be expected for golden tilefish. The biological benefits of **Sub-alternative 2e**, which results in 8 endorsements, could be greater compared to other sub-alternatives, which result in a larger number of endorsements. However, it is also possible that effort would remain the same regardless of the number of vessels fishing.

Sub-alternative 2h (Preferred) would qualify 23 permit holders (of a possible 38 permit holders) for the longline endorsement. These eligible permit holders employed 24 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011[3]. On average, eligible permitted vessels landed approximately 288,100 pounds gw of golden tilefish annually (**Table 4-6**). These landings accounted for 94% of golden tilefish landings by all "longline" vessels (eligible and ineligible) and 75% of the eligible vessels' landing of all species caught in the trip. Eligible vessels generated approximately $788,000 (in 2010 dollars) of revenues from golden tilefish. These revenues accounted for 94% of all revenues from golden tilefish by all "longline" vessels (eligible and ineligible) and 83% of the eligible vessels' revenues from all species caught in the trip. **Sub-alternative 2h (Preferred)** would disqualify 15 permit holders from obtaining a longline endorsement (**Table 4-7**). These permit holders employed 19 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011. Ineligible permitted vessels landed approximately 18,000 pounds gw of golden tilefish, which accounted for 6% of golden tilefish landings by all "longline" vessels (eligible and eligible) and 11% of the ineligible vessels' landing of all species caught in the trip. These ineligible vessels' landing of golden tilefish generated approximately $47,000 in revenues, which accounted for 6% of all "longline" vessel revenues from golden tilefish and 17% of these vessels' revenues from all species caught in the trip.

If some of the current participants and practically all of the most recent and future participants were prevented from harvesting golden tilefish, effort increases would not be as much as when those other participants were allowed to harvest golden tilefish. In a sense, the endorsement system would slow down the speed at which the longline sector profit would be dissipated. Qualifying vessels would experience lower reductions in profits while non-qualifying vessels would forgo lower profits, resulting in relatively higher overall profit to the longline sector. This condition assumes particular significance since the longline sector is by far the major participant in the commercial harvest of golden tilefish.

Alternative 2 establishes eligibility criteria to receive an endorsement and, in general, the higher the landings requirements over a longer period of time, the fewer the fishermen who would be eligible for endorsements. Typically, the fewer eligible individuals may be more likely to result in negative social impacts due to not being allowed to harvest golden tilefish with longline gear. Under this assumption, **Sub-alternative 2h (Preferred)** would have the least negative social impact by allocating endorsements to the most fishermen, while **Sub-alternative 2e** would be most likely to result in negative impacts on fishermen who do not receive an endorsement (**Table 4-8**). However, under any allocation scenario, fishermen who receive an endorsement would be expected to benefit due to less competition in fishing and in the markets.

The estimated number of permits that would qualify for a longline endorsement in each state, based on the reported home port along with a column showing the number of permits with golden tilefish landings with longline from 2006 through 2011 is shown in **Table 4-8**, to provide a baseline for comparison.

[3] One eligible permit was transferred to another vessel during 2005-2011, so the data show that two vessels participated under one permit during this period.

Florida would receive the most endorsements under each sub-alternative. Although the highest number of Florida permits (19) would qualify under **Sub-alternative 2h (Preferred)**, 32% of the total number of Florida permits with recent golden tilefish landings by longline would not receive an endorsement. The other sub-alternatives would allow less than half of the permits in Florida with recent landings to qualify for a longline endorsement, including **Sub-alternative 2f**. However, of the 28 permits with longline landings, 10 permits had less than 5,000 pounds gw total golden tilefish landings from 2006-2011, which suggests that some of the permit holders that do not qualify for a longline endorsement may not be dependent on the longline golden tilefish portion of the snapper grouper fishery and would not be impacted by the endorsement program.

No vessel in Georgia would receive an endorsement under any of the sub-alternatives but no landings have been reported in Georgia in recent years (2006-2011). Only one North Carolina permit would receive an endorsement under **Sub-alternative 2a** but not under any other sub-alternative. Two out of the three North Carolina vessels with golden tilefish longline landings have less than 5,000 pounds total landings from 2006 through 2011, so the endorsement program may not negatively affect these fishermen. Of the five South Carolina vessels with recent landings, at least one qualifies under each sub-alternative. **Sub-alternatives 2f-2i** would be expected to result in the most (4 out of 5) South Carolina permits qualifying for an endorsement.

The administrative time and cost burden associated with this action and **Sub-alternative 2h (Preferred)** is likely to be moderate. The difference between the administrative burdens associated with each alternative differs only in the number of endorsements that need to be issued under each sub-alternative. This difference is not expected to result in any large disparity among the administrative impacts of **Sub-alternatives 2a-2i**. However, it is likely that the lower the number of endorsements issued the lower the administrative burden would be in the short-term for initial issuance, and in the long-term for future endorsement transfers.

Table 2-2. Summary of effects under **Action 2**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Least biological benefit because endorsement program would not be established.	Least benefit because endorsement program would not be established and derby fishery could continue. Administrative impacts are least with this alternative.
Sub-alternative 2a	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2b	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2c	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2d	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2e	Most beneficial if less endorsements means less gear in the water.	Greatest negative economic impact to those that do not qualify for the endorsement
Sub-alternative 2f	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2g	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.
Sub-alternative 2h (Preferred)	Least biological benefits if more endorsements mean more gear in the water.	Most socioeconomic benefits to those that qualify for endorsement. Most administrative burden.
Sub-alternative 2i	Benefits intermediate between **Alternative 1 (No Action)** and **Sub-alternative 2e**.	Socioeconomic and administrative impacts intermediate. Minimal administrative burden.

2.3 Action 3. Establish an Appeals Process

Alternative 1 (No Action). Do not specify provisions for an appeals process associated with the golden tilefish endorsement program.

Alternative 2 (Preferred). A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The Regional Administrator (RA) will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. The RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

Alternative 3. A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The RA will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. A special board composed of state directors/designees will review, evaluate, and make individual recommendations to the RA on appeals. Hardship arguments will not be considered. The special board and the RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

Comparison of Alternatives

Establishing an appeals process is an administrative action. Therefore, it is not anticipated to directly or indirectly affect the physical, biological, or ecological environments in a positive or negative way. There is likely to be no difference between **Preferred Alternative 2** and **Alternative 3** in the level of potential biological impact as a result of their implementation.

The number of appeals received largely determines the economic impacts of an appeals program. Fishermen excluded from the endorsement program who decide to appeal may incur costs associated with trying to prove their case. Access to NOAA Fisheries Service logbook landings or state trip tickets should be at little or no cost to a fisherman. However, some complications may arise in the case of transferred permits for then the new permit owner may not have access to NOAA Fisheries Service logbook landings for landings contributed by the previous owner. Access to state trip tickets in this situation would depend on the respective state's rule on access to trip ticket information.

Because a golden tilefish endorsement system is assumed appropriate and would be expected to result in increased social benefits relative to the absence of an endorsement system, social benefits would be expected to be maximized if all appropriate fishermen, i.e., those fishermen whose receipt of an endorsement would best achieve the objectives of the program, receive an endorsement. The exclusion of any appropriate fishermen would be expected to result in decreased social benefits. The absence of an appeals process, as would occur under **Alternative 1 (No Action)**, would be expected to increase the likelihood that one or more appropriate qualifiers would not receive an endorsement, resulting in less social benefits than would occur if an appeals process is established. Both **Alternative 2 (Preferred)** and **Alternative 3** would establish an appeals process, and would be expected to result in greater social benefits than **Alternative 1 (No Action)**. However, under **Alternative 2 (Preferred)** the final appeal decision is made by the RA and under **Alternative 3** the decision is made by the RA with individual input from members of an appeals board.

The appeals process described in **Preferred Alternative 2** would be developed by NOAA Fisheries Service and would be similar to appeals processes developed for other limited access privilege programs. It is expected that any appeals process would be somewhat burdensome to administer. Overall, a moderate short-term impact may be expected as a result of this action depending upon the number of appeals received by NOAA Fisheries Service. Because the appeals process is limited to 90-days, any administrative burden associated with the review of appeals applications would be limited to a finite amount of time that is not likely to extend far beyond the 90-day time period.

Table 2-3. Summary of effects under **Action 3**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	n/a	Reduced social and economic benefits; reduced administrative burden.
Alternative 2 (Preferred)	n/a	Greater social and economic benefits; greater administrative burden.
Alternative 3	n/a	Greater social and economic benefits; greatest administrative burden.

2.4 Action 4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

Alternative 1 (No Action). Do no allocate the commercial golden tilefish ACL among gear groups (*commercial ACL = 541,295 pounds gw).

Alternative 2 (Preferred). Allocate the golden tilefish commercial ACL as follows: 75% to the longline sector and 25% to the hook-and-line sector (currently would be 405,971 pounds gw to longline and 135,324 pounds gw to hook-and-line).

Alternative 3. Allocate the golden tilefish commercial ACL as follows: 85% to the longline sector and 15% to hook-and-line sector (currently would be 460,101 pounds gw to longline and 81,194 pounds gw to hook-and-line).

Alternative 4. Allocate the golden tilefish commercial ACL as follows: 90% to the longline sector and 10% to hook-and-line sector (currently would be 487,165 pounds gw to longline and 54,130 pounds gw to hook-and-line).

NOTE: Existing commercial accountability measures would apply separately to the longline and hook-and-line sector ACLs.

*Values reflect South Atlantic Council's preferred commercial ACL alternative in Regulatory Amendment 12 (SAFMC 2012) to the Fishery Management Plan for the South Atlantic Region, which is under review by the Secretary of Commerce (Secretary).

Comparison of Alternatives

Longline vessels typically fish for golden tilefish at the start of the year when the trip limit is 4,000 pounds gw. Amendment 13C (SAFMC 2006) implemented a reduced trip limit of 300 pounds gw that goes into place when 75% of the quota is met. The intent of the 300-pound gw trip limit was to diminish regulatory discards and reserve a portion of the golden tilefish quota for the hook-and-line sector. Reducing the trip limit to 300 pounds when 75% of the quota is met would effectively allocate 25% of the golden tilefish quota to the hook-and-line sector since the small trip limit is not profitable for longline fishermen. However, in recent years, effort for golden tilefish has increased with longline gear due to restrictions in the shark longline fishery. As a result, there is a derby for golden tilefish, which has resulted in a shortened fishing season for the last six years (**Table 4-1**). In the last two years, golden tilefish have been caught too quickly to implement the 300-pound gw trip limit when 75% of the quota has been met. The fishing season has been shortened to such a degree that Carolina fishermen, who are typically unable to fish until April or May due to weather conditions, and hook-and-line fishermen from Florida who typically fish in the fall, are increasingly unable to participate in the golden tilefish segment of the snapper grouper fishery.

Alternatives 2 (Preferred)-4 provide options for dividing the commercial ACL between hook-and-line and longline gear users. Historical landings indicate that from 2004-08, 90% of the golden tilefish was taken by longline gear while the remaining 10% was taken by hook-and-line gear users. However, during the 1970s, golden tilefish were only harvested with hook-and-line gear. **Alternative 4** results in an allocation most similar to recent harvest levels; **Alternative 3** would allocate a greater proportion of the

ACL to hook-and-line users than **Alternative 4**. **Alternative 2 (Preferred)** provides an allocation that benefits hook-and-line fishermen the most and is closest to historical catch during 2001-2003 and prior to 1981.

The biological effect of the alternatives would be similar since it is likely the commercial ACL would be met regardless of which alternative is selected. However, alternatives allocating a greater portion of the commercial ACL to hook-and-line gear users could have greater biological benefits for protected species (e.g., sea turtles) and the benthic habitat. While it has not been very well documented, longline gear could be more likely to interact with protected species and negatively impact bottom habitat than hook-and-line gear. Furthermore, alternatives that allocate a greater percentage of the commercial ACL to the hook-and-line sector could have greater biological benefits if they cause the commercial ACL to be met more slowly and help prevent overruns, both of which would negatively affect the stock.

In general, an allocation provision that would change the "current" harvest distribution of golden tilefish between the longline and hook-and-line gear groups would tend to economically benefit one group at the expense of the other. Relative to the baseline, each allocation alternative would redistribute the harvest from the longline sector to the hook-and-line sector. This, in theory, would result in negative effects on the longline sector and positive effects on the hook-and-line sector. However, because the commercial quota will increase (if Regulatory Amendment 12 is approved by the Secretary) well above the baseline landings of both sectors, each allocation alternative would yield positive revenue effects to both sectors. The revenue effects to each sector would directly correlate with the size of its allocation—the higher a sector's allocation, the larger would be its revenue effects. Revenue gains of about $80,000 (**Alternative 4**) to $302,000 (**Preferred Alternative 2**) would accrue to the hook-and-line sector. The corresponding revenue gains to the longline sector would range from about $271,000 (**Preferred Alternative 2**) to $493,000 (**Alternative 4**). The net (total) revenue effects would be about $573,000, which would the same for each alternative because revenues were derived using the same price for both sectors.

The negative social effects of the gear allocations specified in **Alternatives 2 (Preferred)-4** would be expected to be greatest for those alternatives with the greatest difference from recent harvest patterns. Based on the NMFS Accumulative Landings System (ALS) information in **Table 4-9** the longline sector has historically (2004-2009) harvested, on average, 89% of the golden tilefish quota and the hook-and-line sector between 12%. Thus, the allocation specified in **Alternative 2 (Preferred)** would not be consistent with the historical performance of this component of the snapper grouper fishery and could impact the longline golden tilefish sector by limiting the longline quota to about 10-15% below what the longline sector has been harvesting in recent years. However, the longline ACL is expected to be higher than the quota available to the longline vessels in recent years, which could minimize expected impacts on the longline fleet. **Alternatives 3** or **4** would be more consistent with the recent history of the commercial golden tilefish portion of the snapper grouper fishery than **Alternative 2 (Preferred)**, and would benefit the longline component of the commercial sector. However, **Alternative 2 (Preferred)** would allow the hook-and-line sector to increase harvest by establishing a hook-and-line ACL that is about two times larger than hook-and-line harvest in recent years. **Alternative 2 (Preferred)** and **Alternatives 3** and **4** would also benefit the hook-and-line sector more than **Alternative 1 (No Action)** by preserving access to the resource through gear allocations. Although this analysis is based on historic landings by gear, in general the longline landings are from Florida vessels and allocations that are beneficial to the longline fleet will benefit Florida, and allocations that are beneficial to the hook-and-line fleet will benefit North Carolina, South Carolina, and Georgia as well.

Establishing any of the allocation scenarios through **Alternatives 2 (Preferred)-4** would involve minor administrative impacts in the form of rulemaking, monitoring quota, and developing education and outreach materials. However, the administrative impacts between the alternatives are minimal.

Table 2-4. Summary of effects under **Action 4**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Status quo.	Status quo.
Alternative 2 (Preferred)	Increase due to increased hook-and-line sector allocation; increase protection to benthic habitat and sea turtles.	Increased social and economic benefits for hook-and-line sector from status quo. Administrative impacts minimal.
Alternative 3	Slight increase due to increased hook-and-line sector allocation; increase protection to benthic habitat and sea turtles.	Increased social and economic benefits for hook-and-line sector from status quo. Administrative impacts minimal.
Alternative 4	Similar to status quo-No change in biological impacts.	No change in social and economic benefits from status quo. Administrative impacts minimal.

2.5 Action 5. Allow for Transferability of Golden Tilefish Endorsements

Alternative 1 (No Action). Golden tilefish longline endorsements cannot be transferred.

Alternative 2 (Preferred). A valid (not expired) golden tilefish endorsement or a renewable (expired but renewable) golden tilefish endorsement can be transferred between any two individuals or entities that hold, or simultaneously obtain a South Atlantic Unlimited Snapper Grouper Permit. Endorsements would be transferable, independently from the South Atlantic Unlimited Snapper Grouper Permit. Landings of golden tilefish using the golden tilefish longline endorsement would be associated with the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked at the time the landings take place.

Sub-alternative 2a (Preferred). Transferability allowed upon program implementation.

Sub-alternative 2b. Transferability not allowed during the first 2 years of the program.

Comparison of Alternatives

Alternative 1 (No Action) would not allow for transferability of golden tilefish endorsements and could result in decreased participation in the golden tilefish portion of the snapper grouper fishery over time as fishermen with endorsements exit the fishery permanently. Decreased participation could result in a corresponding decrease in effort and landings of golden tilefish. However, it is also possible that effort would not decrease with decreased participation and the same amount of golden tilefish would be caught, albeit with fewer participants. Therefore, **Alternative 1 (No Action)** could have the greatest biological benefit for the golden tilefish stock if it results in decreased landings of golden tilefish. However, a recent stock assessment indicates the golden tilefish stock is no longer experiencing overfishing and biomass is well above B_{MSY}. Therefore, there is no biological need to decrease landings of golden tilefish. Rather, there is a need to decrease the rate at which golden tilefish are harvested to ease derby conditions.

Alternative 2 (Preferred), which would allow transferability of golden tilefish endorsements, would not be expected to negatively impact the golden tilefish stock. The biological effects of **Alternatives 1 (No Action)** and **2 (Preferred)** would likely be very similar. Between **Sub-alternatives 2a (Preferred) and 2b**, the latter would have the greatest positive effect for golden tilefish because it would delay the transferability of endorsements. However, as stated under **Alternative 1 (No Action)**, effort might not show a corresponding decrease with the number of participants in the fishery.

Under **Alternative 1 (No Action)** fishermen would be able to sell their snapper grouper permit but they would not be able to sell their golden tilefish gear endorsement, which could result in difficultly selling their permit, vessel, and gear since permits are often sold with the vessel and gear. Since longline gear is restricted for many of the South Atlantic species, sale of the gear and a larger vessel suitable for targeting golden tilefish with longline gear would be difficult without sale of the golden tilefish longline endorsement. **Alternative 2 (Preferred)** would provide the opportunity for new entrants without an increase in the overall number of participants. If participation remains steady over the years of the program during which transferability is not allowed, aggregate profitability of golden tilefish harvest could remain steady. If landings drop due to people leaving the golden tilefish component of the snapper grouper fishery and not transferring the endorsement due to restrictions, aggregate profitability would decline. However, at the same time, individual average profitability could increase because there would be less people sharing the same amount of landings as under **Alternative 1 (No Action)**.

Alternative 2 (Preferred) includes options for when transferability would be allowed. The rationale behind delaying transferability of catch privilege assets, like endorsements, is to allow people time to develop an understanding of the value of the endorsements before selling them. **Sub-alternative 2a (Preferred)** would allow for transferability of permits to take place immediately upon implementation and this is expected to maximize economic benefits. **Sub-alternative 2b** would require waiting for two years before transferability could occur. While this might allow people to best assess the value of the gear endorsements and make more accurate permit market transactions, it would delay transfers that could benefit fishermen.

Any ability to transfer endorsements may result in equity criticisms, similar to complaints associated with transferable catch share programs. Although the golden tilefish endorsement would not contain an entitlement to a specific harvest quantity, it would bestow asset rights to the recipient because endorsement possession would enable harvest, and the recipient would possess a new marketable asset. The value of this asset (the endorsement) would represent a windfall profit for the endorsement recipient, in addition to any benefits from actual harvests, a circumstance that may seem inequitable to entities denied an endorsement upon their initial issuance. While transferability would allow those denied an endorsement, or others in the snapper grouper fishery who previously did not harvest golden tilefish, an opportunity to acquire an endorsement and harvest this species, they could do so only if they purchased the endorsement. The market price would be expected to increase with fewer available endorsements to purchase, and endorsement price should increase as the total value of harvest increases.

The least administratively burdensome alternative would be **Alternative 1 (No Action),** which would not allow endorsement transferability. **Preferred Alternative 2** would allow some form of transferability between users. These alternatives are expected to have similar administrative impacts. **Preferred Sub-alternative 2a** would allow for endorsement transferability immediately and would have a moderate increase in administrative burden due to tracking endorsements. An administrative burden would also be felt by fishermen through all of the alternatives, through the process of transferring the endorsements.

Table 2-5. Summary of effects under **Action 5**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Increase biological benefits to stock if endorsements are not used.	Decrease in social and economic benefits to the fishery due to unused endorsements.
Alternative 2 (Preferred)	Reduced biological benefits as there would be less chance for endorsements to go unused.	Increased flexibility result in increased economic and social benefits to fishermen. Increased administrative burden.

2.6 Action 6. Adjust Golden Tilefish Fishing Year

Alternative 1 (No Action) (Preferred). Retain the existing calendar year as the golden tilefish fishing year (January 1 through December 31).

Alternative 2. Specify the golden tilefish fishing year as September 1 through August 31.

Alternative 3. Specify the golden tilefish fishing year as August 1 through July 31.

Alternative 4. Specify the golden tilefish fishing year as May 1 through April 30.

Comparison of Alternatives

Preferred Alternative 1 (No Action) would retain the January 1 fishing year start date. Retention of **Alternative 1 (No Action)** would allow fishermen to target golden tilefish when other snapper grouper species (i.e., shallow water groupers, red porgy, red snapper, black sea bass, and vermilion snapper) are closed. **Alternative 2** would begin the fishing year for golden tilefish in September, the period of time when the greatest commercial hook-and-line catches of golden tilefish have historically occurred. **Alternative 3** would begin the fishing year in August and also allow hook-and-line fishermen to fish during the period of time when their catches have been greatest. **Alternative 4** would start the fishing year in May but would still allow hook-and-line fishermen to fish for golden tilefish in the fall but there is a greater chance the quota would be met sometime during September through November.

The biological effects in terms of level of harvest of **Preferred Alternative 1 (No Action)** and **Alternatives 2-4** would be very similar. The commercial hook-and-line catch of golden tilefish is small (~8-36%). Therefore, changing the fishing year is not likely to substantially increase the commercial hook-and-line catch. Furthermore, a change in the fishing year probably would not alter the number of months the commercial longline sector operates as the percentage of golden tilefish landed was evenly distributed among all months before more restrictive regulations were implemented. Although golden tilefish has closed before the end of the year from 2007 to 2011, it is unlikely that golden tilefish would be taken incidentally as bycatch since the majority of the catch is targeted with longline gear. Furthermore, golden tilefish do not occupy the same habitat of other deepwater species (e.g., snowy grouper, blueline tilefish, blackbelly rosefish, etc.). Golden tilefish prefer a mud habitat whereas the other deepwater species occur in a rocky habitat. While there is little biological benefit to changing the fishing year, a shift in the fishing year would allow hook-and-line fishermen to target golden tilefish in the fall; however, a change in the fishing year would also result in multiple species being open at the same time.

The economic impacts of **Preferred Alternative 1 (No Action)** through **Alternative 4** are distributional and could benefit hook-and-line users and Carolina fishermen primarily. However, as stated above, since **Preferred Alternative 1 (No Action)** allows fishing for golden tilefish during months when other species are closed, **Preferred Alternative 1 (No Action)** could result in higher dockside prices for golden tilefish than in the past and could help dealers maintain customers.

Because **Preferred Alternative 1 (No Action)** would not make any regulatory change in the fishing year, no changes in the manner in which the golden tilefish component of the snapper grouper fishery is

prosecuted would be expected and, as a result, no changes in the current social benefits of the snapper grouper fishery would be expected to occur. Any decline in social benefits resulting from shifting harvest patterns away from the historic/traditional harvest pattern, as discussed in the previous paragraph, would be expected to continue. Increased deviation from historic patterns, and associated social and economic benefits, could occur if fishing effort and patterns shift in response to increasingly restrictive management on other snapper grouper species. **Alternatives 2-4** attempt to recover these reduced benefits, and prevent further losses, by adjusting the start of the fishing year. While adjusting the start of the fishing year, in conjunction with the commercial ACL and AMs, would not affect the total available commercial ACL, commencement of the fishing year in September (**Alternative 2**), August (**Alternative 3**), or May (**Alternative 4**) would be expected to allow increased participation and recovery of historic harvests. The earlier the start (May), the greater the opportunity for participation by North Carolina and South Carolina fishermen, with continued potential jeopardy for Florida hook-and-line vessels (quota management could still close the fishery in the fall). The later the start (September) the reverse would occur; Florida hook-and-line fishermen should be able to fish the entire fall whereas North Carolina and South Carolina fishermen could face abbreviated fishing opportunities depending on fall and winter weather conditions and the pace at which the commercial ACL is harvested. Both **Alternative 2** and **Alternative 3** would be expected to result in similar fishing opportunities for Florida fishermen, and improved opportunities relative to **Alternative 4**, whereas Carolina fishermen should face better opportunities under **Alternative 3** relative to **Alternative 2**, but reduced opportunities relative to **Alternative 4**.

Preferred Alternative 1 (No Action) would result in no new administrative burden. **Alternatives 2-4** would adjust golden tilefish management measures to change the start date of the fishing year. Implementing a change in the fishing year would incur minor adverse administrative impacts in the form of developing outreach materials such as fishery bulletins.

Table 2-6. Summary of effects under **Action 6**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action) (Preferred)	Unlikely to increase or decrease pressure on stock.	Improved economic and social impacts.
Alternative 2	Unlikely to increase or decrease pressure on stock.	Improved economic and social impacts.
Alternative 3	Unlikely to increase or decrease pressure on stock.	Improved economic and social impacts.
Alternative 4	Unlikely to increase or decrease pressure on stock.	Slightly reduced economic and social impacts.

2.7 Action 7. Modify the Golden Tilefish Trip Limit

Alternative 1 (No Action). The commercial trip limit is 4,000 pounds; if 75% is harvested by September 1, the trip limit is reduced to 300 pounds gw.

Alternative 2 (Preferred). Remove the 300-pound gw trip limit when 75% of the ACL is taken.

Alternative 3. Prohibit longline fishing after 75% of the ACL is taken.

Comparison of Alternatives

Alternative 1 (No Action) would retain the trip limit reduction from 4,000 pounds gw to 300 pounds gw when 75% of the commercial ACL is met. **Alternative 2 (Preferred)** would remove the step-down. The step down was originally intended to allow golden tilefish to remain open all year, reduce discards, and allow for commercial hook-and-line fishermen to target golden tilefish in the fall. However, a derby fishery has developed for golden tilefish and the commercial ACL has been met very rapidly in recent years. Thus, the 300-pound gw trip limit has not had the intended effect of providing the hook-and-line sector access to golden tilefish. The advantage of retaining the 300-pound gw trip limit when 75% of the commercial ACL is met is that it can slow the rate of fishing and increase the chance the commercial ACL would not be exceeded. The expected biological effect of **Alternative 2 (Preferred)** would be minimal. In the commercial sector, most golden tilefish (92%) are taken with longline gear deployed by large vessels that make long trips and depend on large catches (> 3,000 pounds) to make a trip economically feasible. Therefore, a 300-pound gw trip limit when 75% of the commercial ACL is met would theoretically shut down commercial longline sector and might reduce their potential annual catch. **Alternative 3** would close the longline sector once 75% of the commercial ACL is taken. This would allow a slower rate of harvest of the remaining commercial ACL for the hook-and-line sector. The South Atlantic Council is considering alternatives in **Action 4** that would increase access to golden tilefish by the commercial hook-and-line sector. Furthermore, a trip limit is being considered in **Action 8** for fishermen with federal snapper grouper permits who do not qualify for a longline endorsement.

The economic effects of **Alternatives 1 (No Action)-3** are largely distributional. **Alternative 2 (Preferred)** would benefit longline fishermen while **Alternative 3** benefits hook-and-line fishermen compared to the status quo. If social and economic benefits are being reduced under the status quo, this would be expected to be corrected under **Alternative 2 (Preferred)**, particularly if considered in combination with other proposed actions for golden tilefish. In tandem with the other proposed golden tilefish management changes, it is expected that elimination of the 300-pound gw step-down limit would result in increased social and economic benefits relative to **Alternative 1 (No Action)**. While **Alternative 3** would attempt to help recover the historic golden tilefish harvest patterns of Florida hook-and-line vessels by closing the longline commercial sector if the 300-pound gw trip limit is triggered, **Alternative 3** may not have any substantive effect on either the longline or hook-and-line sectors because it is generally assumed that using longline gear for golden tilefish is no longer profitable at the lower trip limit.

Of the alternatives, **Alternative 1 (No Action)** is the most administratively burdensome. **Alternative 1 (No Action)** requires rulemaking when 75% of the commercial ACL is reached, and rulemaking when the fishery is closed. Associated with the rulemaking is the development of fishery bulletins and other outreach materials. **Preferred Alternative 2**, which would remove the 300-pound gw trip limit once 75% of the ACL is reached, would be less administratively burdensome.

Table 2-7. Summary of effects under **Action 7**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Slight increase in biological impacts.	Economic benefits to hook-and-line sector. Social benefits to fishery.
Alternative 2 (Preferred)	Minimal biological impacts.	Economic benefits to longline fishermen. Social impacts may increase.
Alternative 3	Minimal biological impacts.	Economic benefits to hook-and-line sector. Social impacts may increase.

2.8 Action 8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Alternative 1 (No Action). Currently there is a commercial trip limit of 4,000 pounds gw until 75% of the quota is taken. The trip limit is then reduced to 300 pounds gw.

Alternative 2. Establish a trip limit of 300 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 3. Establish a trip limit of 400 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 4 (Preferred). Establish a trip limit of 500 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 5. Establish a trip limit of 100 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 6. Establish a trip limit of 200 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Comparison of Alternatives

Alternatives 2-6 would specify a trip limit for fishermen who do not qualify for a longline endorsement under **Action 2.** The intent is to enhance the opportunity for hook-and-line fishermen from all states to participate in the golden tilefish portion of the snapper grouper fishery. The biological impacts would be greater for those alternatives with more restrictive trip limits since they would be more likely to constrain catch. However, there is not a biological need to restrict catch of golden tilefish since it is neither overfished or experiencing overfishing. Furthermore, commercial ACLs and AMs are in place to ensure overfishing does not occur.

The effects of the various trip limit alternatives are presented in **Table 4-12**. Included in the analysis are all trips by hook-and-line vessels and longline vessels excluded from the endorsement system that landed at least one pound golden tilefish during 2005-2011. The revenue reductions would range from about $69,000 with **Alternative 4 (Preferred)** to about $76,000 with **Alternative 5**. It is expected that

the preferred alternative would have the least revenue reductions because it provides for the highest trip limit. The revenue reductions from the various trip limit alternatives appear to be relatively high because of the inclusion of those longline trips that would not be taken by vessels excluded from the endorsement system. If these trips were excluded, the revenue effects would most likely be very low especially for a 500-pound gw trip limit (**Preferred Alternative 4**). However, these trips are included in the present analysis because they would now be subject to the trip limits.

A trip limit may be considered to have relatively short-term effects. A vessel incurring revenue reductions due to a trip limit may recoup its losses by taking more trips as long as those trips are still profitable. A relatively high trip limit, such as in **Alternative 4 (Preferred)**, would likely remain profitable for hook-and-line vessels. As shown in **Table 4-12**, this trip limit would affect only 14 trips out of the 2005-2011 average of 249 trips. It is then likely that a trip limit, as in **Alternative 4 (Preferred)**, would not be too constraining as to leave unharvested a good portion of the hook-and-line sector's quota.

In general, trip limits may be effective in slowing harvest and lengthening a season, which would be somewhat beneficial to crew, dealers, and communities because golden tilefish may be available for a longer period and market gluts could be avoided. Trip limits also have the potential to restrict efficiency of fishing trips. The negative social impacts of trip limits are associated with the economic costs if a vessel has the capacity to harvest more than the proposed trip limits. However, the 127 vessels that have snapper grouper permits with the South Atlantic 225 Pound Trip Limit Snapper Grouper Permit (of which 113 are Florida vessels, **Table 3-30**) will not experience any additional impacts from a proposed trip limit higher than 225 pounds gw (**Alternatives 2-4 (Preferred)**).

Administrative impacts would be greater under **Alternatives 2-6** due to enforcement and increase in the number of possible participants.

Table 2-8. Summary of effects under **Action 8**.

Alternatives	Biological Effects	Socioeconomic/Administrative Effects
Alternative 1 (No Action)	Status quo.	Status quo.
Alternative 2	Little biological impact from status quo.	Moderate economic/social benefits for hook-and-line sector. Increased administrative burden.
Alternative 3	Little biological impact from status quo.	Moderate economic/social benefits for hook-and-line sector. Increased administrative burden.
Alternative 4 (Preferred)	Little biological impact from status quo.	Greatest economic/social benefits for hook-and-line sector. Increased administrative burden.
Alternative 5	Little biological impact from status quo.	Least economic/social benefits for hook-and-line sector. Increased administrative burden.
Alternative 6	Little biological impact from status quo.	Moderate economic/social benefits for hook-and-line sector. Increased administrative burden.

Chapter 3. Affected Environment

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

- **Habitat environment** (Section 3.1)

  Examples include coral reefs and seagrass beds

- **Biological environment** (Section 3.2)

  Examples include populations of golden tilefish, corals, and turtles

- **Human environment** (Sections 3.3 & 3.4)

  Examples include fishing communities and economic descriptions of the fisheries

- **Administrative environment** (Section 3.5)

  Examples include the fishery management process and enforcement activities

3.1 Habitat Environment

3.1.1 Inshore/Estuarine Habitat

Many deepwater snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories; larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions. More detail on these habitat types can be found in Volume II of the Fishery Ecosystem Plan (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 feet) or greater for live-bottom habitats, 55 to 110 meters (180 to 360 feet) for the shelf-edge habitat, and from 110 to 183 meters (360 to 600 feet) for lower-shelf habitat areas.

The exact extent and distribution of productive snapper grouper habitat on the continental shelf north of Cape Canaveral 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 feet), 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, the continental shelf narrows from 56 to 16 kilometers (35 to 10 miles) wide, thence reducing 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 feet). Ledge systems formed by rock outcrops and piles of irregularly sized boulders are also common. Parker et al. (1983) estimated that 24% (9,443 km^2) of the area between the 27 and 101 meters (89 and 331 feet) 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 feet) 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 (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 available information on the distribution of hard bottom habitat in the south Atlantic region, prepared ArcView maps for the four-state project. These maps, which consolidate known distribution of coral, hard/live bottom, and artificial reefs as hard bottom, are available on the South Atlantic Fishery Management Council's (South Atlantic Council) Internet Mapping System website: http://ocean.floridamarine.org/efh_coral/ims/viewer.htm.

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 feet (but to at least 2,000 feet 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-foot) 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.

3.1.3.1 Habitat Areas of Particular Concern

Areas which meet the criteria for Essential Fish Habitat-Habitat Areas of Particular Concern (EFH-HAPCs) 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; and South Atlantic Council-designated Artificial Reef Special Management Zones (SMZs).

Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages). In addition to protecting habitat from fishing related degradation though fishery management plan (FMP) regulations, the South Atlantic Council, in cooperation with NOAA Fisheries Service, actively comments on non-fishing projects or policies that may impact essential fish habitat. With guidance from the Habitat Advisory Panel, the South Atlantic Council has developed and approved policies on: energy exploration, development, transportation and hydropower re-licensing; beach dredging and filling and large-scale coastal engineering; protection and enhancement of submerged aquatic vegetation; alterations to riverine, estuarine and near shore flows; offshore aquaculture; marine invasive species and estuarine invasive species.

3.2 Biological and Ecological Environment

The reef environment in the South Atlantic management area affected by actions in this amendment is defined by two components (**Figure 3-1**). Each component will be described in detail in the following sections.

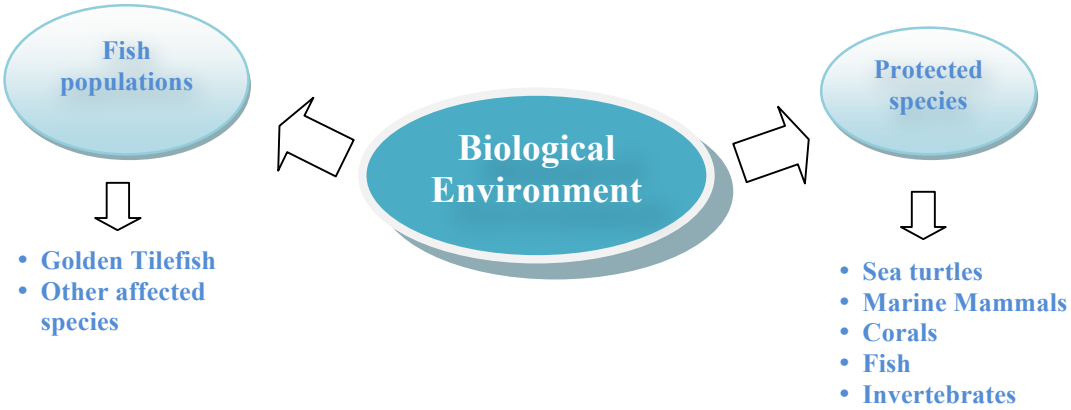

Figure 3-1. Two components of the biological environment described in this amendment.

3.2.1 Fish Populations

The waters off the South Atlantic coast are home to a diverse population of fish. The snapper grouper fishery management unit currently contains 60 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 (black sea bass, red grouper) while the tropical variety's core residence is in the waters off south Florida waters, Caribbean Islands, and northern South America (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 together dictates the nature of the fishery (multi-species) and further forms the type of management regulations proposed in this amendment.

Snapper grouper species commonly taken with golden tilefish could be affected by actions in this amendment. Golden tilefish are found primarily over mud habitat where no other snapper grouper species commonly occur. However, longline gear is also deployed in mud and rock habitat where snowy grouper (*Epinephelus niveatus*), blueline tilefish (*Caulolatilus microps*), and yellowedge grouper (*Epinephelus flavolimbatus*) can be caught along with golden tilefish.

Golden Tilefish Life History
An Overview

- On the Atlantic coast, they occur from Nova Scotia to South Florida.
- Most often found around 600 feet, over mud or sand bottom.
- May live up to 50 years.
- Spawn from March to July with peak in April.
- Not undergoing overfishing, not overfished.

3.2.1.1 Golden Tilefish

Golden tilefish (*Lopholatilus chamaeleonticeps*) are distributed throughout the Western Atlantic, occurring as far north as Nova Scotia, to southern Florida, and in the eastern Gulf of Mexico (Robins and Ray 1986). According to Dooley (1978), golden tilefish occurs at depths of 80-540 meters (263-1,772 feet). Robins and Ray (1986) report a depth range of 82-275 meters (270-900 feet) for golden tilefish. It is most commonly found at about 200 meters (656 feet), usually over mud or sand bottom but, occasionally, over rough bottom (Dooley 1978).

Maximum reported size is 125 centimeters (50") total length and 30 kilograms (66 pounds) (Dooley 1978; Robins and Ray 1986). Maximum reported age is 40 years (Harris et al. 2001). Radiocarbon aging indicates golden tilefish may live for at least 50 years (Harris, South Carolina Department of Natural Resources, personal communication). A recent Southeast Data Assessment and Review (SEDAR) assessment estimated natural mortality (M) at 0.08 (SEDAR 4 2004). Golden tilefish spawn off the southeast coast of the U.S. from March through late July, with a peak in April (Harris et al. 2001). Grimes et al. (1988) indicate peak spawning occurs from May through September in waters north of Cape Canaveral. Golden tilefish primarily prey upon shrimp and crabs, but also eat fishes, squid, bivalves, and holothurians (Dooley 1978).

3.2.1.2 Stock Status of Golden Tilefish

Golden tilefish were assessed through the Southeast Data, Assessment and Review (SEDAR) process in 2011 with data through 2010. SEDAR is a cooperative Fishery Management Council process initiated to improve the quality and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and U.S. Caribbean. The Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils manage SEDAR in coordination with NOAA Fisheries and the Atlantic and Gulf States Marine Fisheries Commissions. SEDAR seeks improvements in the scientific quality of stock assessments, constituent and stakeholder participation in assessment development, transparency in the assessment process, and a rigorous and independent scientific review of completed stock assessments.

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

SEDAR workshops are public meetings organized by SEDAR. Workshop participants appointed by the lead Council are drawn from state and federal agencies, non-government organizations, Council members, Council advisors, and the fishing industry with a goal of including a broad range of disciplines and perspectives. All participants are expected to contribute to this scientific process by preparing working papers, contributing data, providing assessment analyses, evaluating and discussing information presented and completing the workshop report.

Assessment History

The golden tilefish stock was assessed for the 1988, 1990, and 1999 fishing years (Huntsman et al. 1993; Potts and Brennan 2001). The stock assessments for 1988 and 1990 fishing year data used limited age information from Georgia and reproductive biology data were not available. The assumption of ½ $L\infty$ as the age of maturity was used for estimating the static spawning potential ratio (SPR). Static SPR values were 31% and 21% for 1988 and 1990, respectively. The assessment of the 1999 fishing year used age and reproductive biology data from North Carolina and South Carolina. The resulting static SPR was 27%.

In 2004, golden tilefish was assessed as part of SEDAR 4, using landings, age, length, and abundance index data through 2002. For this assessment two models were considered: (1) a statistical catch-at-age (SCAA) model, and (2) an age-aggregated production model. The results of the primary SCAA model indicated overfishing of the resource post-1988 with spawning stock biomass hovering right around the value corresponding to the maximum sustainable yield (MSY) for that same time period. The terminal 2002 model estimates suggested the golden tilefish stock was undergoing overfishing and that the stock was very close to being overfished. Static SPR in this assessment was estimated to be about 31% in 2002.

Current Status

The SEDAR 25 (2011) assessment of the golden tilefish stock indicated that the U.S. southeast stock of tilefish is currently **not overfished** and **overfishing is not occurring**. The stock assessment results show that the biomass of golden tilefish has increased substantially since the last assessment and is now above B_{MSY} (**Figure 3-2**).

Estimated time series of stock status (spawning stock biomass (SSB)/minimum stock size threshold (MSST)) shows a decline in the early 1980s, and then an increase since the mid-2000s. Estimates of SSB remained below MSST throughout the 1990s and early 2000s. Current stock status was estimated to be $SSB_{2010}/MSST = 2.43$. If this ratio is greater than one, then the stock is not overfished. The uncertainty analysis suggested that the conclusion that the stock is not overfished (i.e., SSB > MSST) is robust. Age structure estimated by the model shows fewer older fish than the (equilibrium) age structure expected at MSY. However, in the terminal year (2010), ages 1-7 approached the MSY age structure.

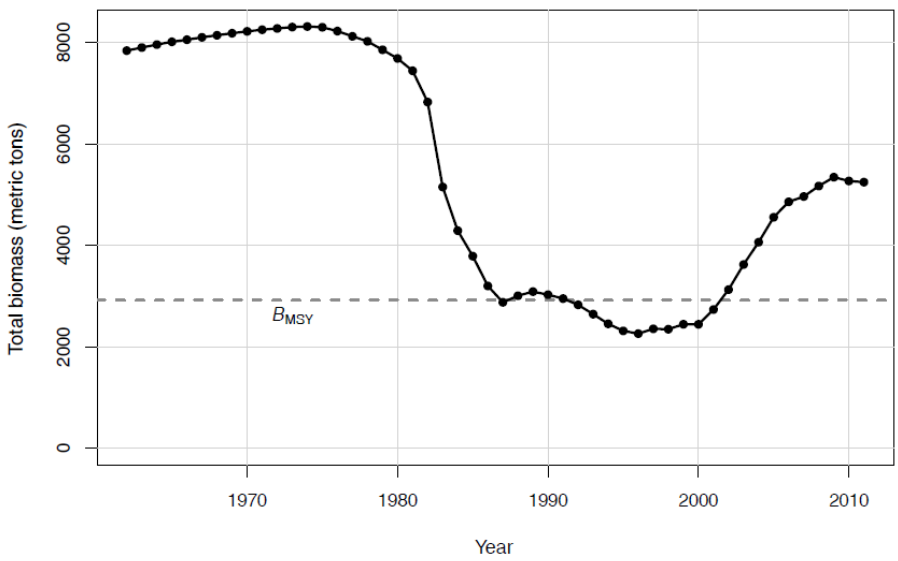

Figure 3-2. Estimated total biomass (metric tons) at start of year. Horizontal dashed line indicates B_{MSY}.
Source: Figure 3-11, SEDAR 25 (SEDAR 25 2011).

The estimated time series of F/F_{MSY} suggests that overfishing has occurred throughout some of the assessment period. Spikes in the early 1980s through 2004 are due primarily to the longline fleet. Current fishery status in the terminal year, with current F represented by the geometric mean from 2008-2010, is estimated to be $F_{2008\text{-}2010}/F_{MSY} = 0.36$. If this ratio is below one, then the stock is not undergoing overfishing. This estimate indicates that overfishing is not occurring and appears robust across the uncertainty analyses.

The South Atlantic Council's SSC reviewed the assessment results and accepted the base run and the recommendations of the SEDAR 25 Review Panel. The SSC recommended using the values from the SEDAR 25 Review Workshop Report, which are specified in Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12 (SAFMC 2012)). The SSC recommended establishing the acceptable biological catch (ABC), based on the South Atlantic Council/SSC ABC Control Rule, at a level that would result in a 35% probability (P*) of overfishing. The overfishing limit (OFL) is specified by the South Atlantic Council's SSC based on the yield at F_{MSY}. Values for OFL for 2012-2015, based on the most recent stock assessment (SEDAR 25 2011), are shown in **Table 3-1a**.

Table 3-1a. OFL, ABC, and ACL for golden tilefish based on projections of yield at F_{MSY} (OFL), equilibrium yield at 75%F_{MSY} from SEDAR 25, and ABC from SEFSC (January 27, 2012 Regulatory Amendment 12 (SAFMC 2012)). Values are in pounds **whole weight** (conversion factor for gutted weight for golden tilefish is 1.12).

Year	OFL	ABC	ACL
2012	1,386,000	668,000	625,000
2013	1,242,000	669,000	625,000
2014	1,124,000	666,000	625,000
2015	1,031,000	655,000	625,000
Avg 2012-15	1,195,750	664,500	625,000

Based on results from SEDAR 25 (SEDAR 25 2011) Regulatory Amendment 12 proposes to increase the golden tilefish commercial ACL from 282,819 pounds gutted weight to 541,295 pounds gutted weight (606,250 pounds whole weight) and the recreational ACL from 1,578 fish to 3,019 fish based on the 97% commercial and 3% recreational allocation established in Amendment 17B (SAFMC 2010b).

Below are current values in whole weight (ww) and gutted weight (gw) when the stock is at equilibrium for MSY and OY from SEDAR 25 based on specifications in Amendment 17B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (SAFMC 2010b).

MSY = 638,000 pounds ww (569,643 pounds gw)
ACL and OY = yield at 75%F_{MSY} = 625,000 pounds ww (558,036 pounds gw)

3.2.1.3 Other Fish Species Affected

Golden tilefish are primarily taken with longline gear over mud habitat where no other snapper grouper species commonly occur. However, longline gear is also deployed in mud and rock habitat where snowy grouper (*Epinephelus niveatus*), blueline tilefish (*Caulolatilus microps*), and yellowedge grouper (*Epinephelus flavolimbatus*) will be caught along with golden tilefish. A detailed description of the life history of these species is provided in the snapper grouper SAFE report (NMFS 2005) and the Fishery Ecosystem Plan (SAFMC 2009b).

3.2.2 Protected Species

There are 31 different species of marine mammals that may occur in the exclusive economic zone (EEZ) of the South Atlantic region. All 31 species are protected under the Marine Mammal Protection Act (MMPA) and six are also listed as endangered under the ESA (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales). In addition to those six marine mammals, five species of sea turtle (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the

smalltooth sawfish; and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]) are protected under the ESA. Also, since the completion of the June 7, 2006 Biological Opinion, Atlantic sturgeon has been listed under the ESA, effective April 6, 2012 [77 FR 5914; February 6, 2012]. Portions of designated critical habitat for North Atlantic right whales and *Acropora* corals also occur within the South Atlantic Council's jurisdiction. Descriptions of the life history characteristics of the protected species can be found in the FEP (SAMFC 2009b) and in the Comprehensive ACL Amendment (SAFMC 2011c), and are herein incorporated by reference.

3.3 Human Environment

3.3.1 Economic Description of the Commercial Snapper Grouper Fishery

Additional information on the commercial snapper grouper fishery is contained in previous amendments [Amendment 13C (SAFMC 2006), Amendment 15A (SAFMC 2008a), Amendment 15B (SAFMC 2008b), Amendment 16 (SAFMC 2009a), and Amendment 18A (SAFMC 2011f)] and is incorporated herein by reference.

3.3.1.1 Vessel, Harvest, and Revenue (1993-2011)

The golden tilefish portion of the snapper grouper fishery has seen a declining trend in the total number of trips taken and the number of vessels participating in the fishery since 1993 (**Table 3-1b**). Snapper Grouper Amendment 6 (SAFMC 1993) reduced the quota of golden tilefish from approximately 1.8 million pounds to about 600,000 pounds. From 1993 to 1996, approximately 100 vessels per year participated in the fishery (**Table 3-1b**). By 2009 and 2010, that number had been reduced by approximately 50%. Presumably because of the very short season, in 2011 there were only about one third the number of participating vessels compared to the earliest years in the time series. Regulatory actions in Amendment 6 (SAFMC 1993) account for the decrease in dealers that purchased golden tilefish from 1993 to 1994. From 1994 until 2011, there was a gradual trend in reducing the number of federally permitted snapper grouper dealers. The last year, 2011, saw only 12 dealers purchasing golden tilefish.

Table 3-1b also tracks changes over time in the dockside price per pound as well as total annual dockside revenue for golden tilefish. The columns labeled with "(nominal $)" indicate the price paid per pound or the overall annual revenue of golden tilefish using the value of that year's dollar. The columns labeled with "(2010 $)" indicate the price paid per pound or the overall annual revenue of golden tilefish using the value of the dollar in 2010. Dollar comparisons from one year to the next should only be made with dollar values in the "(2010 $)" columns as they are all on the same scale. Higher revenues were associated with the larger landings in the earlier years of the time series where it was not unusual for landings to be valued at $1,000,000 or greater (2010 $). However, the higher total revenue figures in the early years were partially due to the greater number of pounds landed. When the price per pound is compared across years, there is a gradual trend shifting upwards over time. In 1993 the average

price per pound paid for golden tilefish was $2.20 (2010 $). By 2011, that amount had increased to $2.97 (2010 $), or an increase of 35% in price per pound value. This increase led to the revenues in 2010 and 2011 returning to levels greater than $1,000,000 (2010 $), in spite of lower quotas.

Table 3-1b. Golden tilefish sector statistics, 1993-2011.

Year	Trips with a least one pound of GT	Number of Vessels that landed GT	Avg # trips taken per vessel	Number of Dealers that purchased GT	GT pounds, gutted weight	Dockside price per pound (nominal $)	Dockside price per pound (2010 $)	GT revenue (nominal $)	GT revenue (2010 $)
1993	869	107	8	90	1,190,353	$1.46	$2.20	$1,747,252	$2,636,670
1994	767	99	8	25	751,649	$1.69	$2.48	$1,266,321	$1,863,218
1995	688	102	7	19	623,048	$1.78	$2.54	$1,093,914	$1,565,187
1996	518	96	5	24	365,547	$2.01	$2.79	$707,401	$983,129
1997	554	91	6	22	346,966	$1.78	$2.42	$574,138	$780,026
1998	462	84	6	19	419,622	$1.85	$2.48	$763,541	$1,021,439
1999	553	84	7	20	520,650	$1.97	$2.58	$1,019,049	$1,333,792
2000	715	97	7	14	706,373	$2.10	$2.66	$1,467,817	$1,858,690
2001	472	87	5	20	437,705	$2.03	$2.49	$867,138	$1,067,671
2002	570	86	7	22	393,783	$2.07	$2.51	$792,300	$960,343
2003	397	65	6	20	309,851	$2.04	$2.42	$627,546	$743,696
2004	343	67	5	18	279,485	$2.09	$2.42	$572,598	$660,977
2005	358	66	5	15	324,127	$2.41	$2.69	$768,694	$858,261
2006	339	61	6	19	366,974	$2.40	$2.60	$894,157	$967,145
2007	595	67	9	15	285,431	$2.83	$2.97	$764,811	$804,331
2008	370	57	6	18	300,241	$2.68	$2.71	$769,115	$778,949
2009	384	49	8	14	313,311	$2.55	$2.60	$770,172	$782,805
2010	352	51	7	13	369,556	$3.02	$3.02	$1,097,989	$1,097,989
2011	247	34	7	12	365,205	$2.97	$2.97	$1,084,601	$1,084,601

Source: NMFS Logbooks, October 19, 2011. GT = Golden Tilefish.

The 2009 through 2011 golden tilefish seasons were greatly truncated compared to previous years (**Table 3-2**). From October 2006 through July 2009, the quota was fully harvested earlier, by about a month sooner each subsequent year. In 2010, the season lasted until mid April, and the 2011 season closed in early March. Even averaged out across all six years in the series shown in **Table 3-2**, the majority of the quota was landed by the end of March.

Table 3-2. Golden tilefish landings in pounds (gw) by month, 2006-2011.

	Year						Avg %	Cum %
Month	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**by month**	**by month**
January	26,605	34,105	73,243	86,393	106,000	192,271	26%	26%
February	16,602	48,914	37,872	61,961	142,923	150,345	23%	49%
March	23,370	47,668	40,025	68,952	94,493	22,465	15%	64%
April	47,427	56,296	63,085	46,042	9,137	100	11%	75%
May	68,986	15,397	49,190	12,717	-	-	7%	82%
June	44,829	4,814	5,936	30,016	-	-	4%	86%
July	13,714	5,498	7,583	7,154	16,796	-	3%	89%
August	32,030	30,513	19,088	-	-	23	4%	93%
September	42,667	41,701	162	6	70	-	4%	97%
October	50,696	455	34	26	138	-	3%	100%
November	49	70	103	-	-	-	0%	100%
December	-	-	3,921	43	-	-	0%	100%

Source: NMFS Logbooks, October 19, 2011.

Similarly, in **Table 3-3** revenues closely track the landings, indicating there is minimal fluctuation in the dockside price per pound regardless of when in the season it is caught. While the price per pound fluctuates between seasons, it is relatively stable within a given season. Based on information shown in **Tables 3-2 and 3-3**, the overall length of the season does not seem to influence the dockside price of the fish. Based on these data, it is not possible to tell what leads to price per pound fluctuations between years.

Table 3-3. Golden tilefish landings revenue by month, 2006-2011.

Month	Year 2006	2007	2008	2009	2010	2011	Avg % by month	Cum % by month
January	$60,832	$89,672	$191,172	$214,782	$345,992	$576,630	27%	27%
February	$40,340	$133,881	$79,580	$129,883	$404,508	$439,474	23%	50%
March	$57,063	$123,328	$114,210	$155,892	$275,368	$68,273	15%	65%
April	$122,665	$129,215	$159,353	$134,248	$31,055	$216	11%	76%
May	$169,631	$41,993	$119,230	$31,609	-	-	7%	83%
June	$92,881	$14,436	$16,261	$83,222	-	-	4%	86%
July	$29,482	$17,460	$21,785	$20,370	$40,649	-	2%	89%
August	$82,121	$92,639	$54,888	-	-	$11	4%	93%
September	$111,017	$120,631	$411	$24	$158	-	4%	97%
October	$128,079	$1,397	$101	$55	$258	-	2%	100%
November	$47	$158	$385	-	-	-	0%	100%
December	-	-	$11,740	$87	-	-	0%	100%

Source: NMFS Logbooks, October 19, 2011.

Table 3-4 shows the number of vessels for each year that landed at least one pound of golden tilefish aggregated into revenue groupings that allows one roughly to see the distribution of vessels by revenue grouping while still maintaining confidentiality. Three grouping bins in the table, one in 2006 and two in 2011 had confidential information. To account for all participating vessels, the revenues from those bins were added to adjoining bins. All revenue groupings in **Table 3-4** are in nominal, non-inflated dollars.

Prior to 2010, at least 50% of all vessels that had at least one pound of golden tilefish, regardless of the total number of participating vessels, had less than $1,000 revenue from the fishery. A number of years had closer to 60% of the vessels with revenues less than $1,000. Approximately 13% to 22% of the vessels had annual revenue over $25,000 from the golden tilefish sector with a few exceptions. Between 1993 and 2003, roughly 40% of vessels had revenue between $100 and $5,000. Beginning in 2004, vessels earning in that range increased to about 60% of the participating vessels. In 2011, 20 of the 34 participating vessels (69%) had revenues greater than $5,000. For the first time, the 2011 fishing year had 41% of the participating vessels with revenues greater than $25,000. The cause of the increased percent of high-liners might have been due to the shortness of the season. However, instances of such similar revenues by a similar number of vessels only occur prior to 2000.

Table 3-4. Annual number of vessels by revenues from golden tilefish, 1993-2011.

Year	Up to $100	$100.01 - $1,000	$1,000.01 - $5,000	$5,000.01 - $25,000	More than $25,000	Total Vessels
1993	35	24	11	15	22	107
	33%	22%	10%	14%	21%	100%
1994	28	25	12	16	18	99
	28%	25%	12%	16%	18%	100%
1995	31	28	15	14	14	102
	30%	27%	15%	14%	14%	100%
1996	30	26	15	14	11	96
	31%	27%	16%	15%	11%	100%
1997	30	27	16	10	8	91
	33%	30%	18%	11%	9%	100%
1998	23	26	11	12	12	84
	27%	31%	13%	14%	14%	100%
1999	29	23	12	6	14	84
	35%	27%	14%	7%	17%	100%
2000	22	34	15	12	14	97
	23%	35%	15%	12%	14%	100%
2001	26	26	12	12	11	87
	30%	30%	14%	14%	13%	100%
2002	25	24	17	11	9	86
	29%	28%	20%	13%	10%	100%
2003	19	21	8	6	11	65
	29%	32%	12%	9%	17%	100%
2004	13	24	13	9	8	67
	19%	36%	19%	13%	12%	100%
2005	14	21	13	12	6	66
	21%	32%	20%	18%	9%	100%
2006	19	17	15	*conf.	10	61
	31%	28%	25%	-	16%	100%
2007	9	22	14	15	7	67
	13%	33%	21%	22%	10%	100%
2008	12	23	10	6	6	57
	21%	40%	18%	11%	11%	100%
2009	9	16	11	5	8	49
	18%	33%	22%	10%	16%	100%
2010	4	11	15	10	11	51
	8%	22%	29%	20%	22%	100%
2011	*conf	14	*conf	6	14	34
	-	41%	-	18%	41%	100%

* Represents confidential data. Dollars are nominal values and not adjusted for inflation.
(Source: NMFS SEFSC logbook data as of 10/19/2011)

Table 3-5 shows total landings of golden tilefish for the years 2006-2011 for all vessels that landed at least one pound of golden tilefish. Vessels are aggregated according to the same groupings as in **Table 3-4** based on the total revenues from the golden tilefish catch for all the vessels in that bin for the given year. It appears that the relatively small number vessels whose annual revenue from golden tilefish landings is greater than $25,000 are considered to be the high-liners in the fishery with roughly 80-90% of landings. In general, participants in the golden tilefish portion of the snapper grouper fishery who have revenues greater than $5,000 tend to be longline vessels (see **Table 3-6**). Many of the vessels landing up to $5,000 annually are not targeting golden tilefish specifically, but primarily land the species as they are bottom fishing with hook-and-line or bandit gear for snappers and groupers, in general. All revenue groupings in **Table 3-5** are in nominal, non-inflated values.

In each year from 2006 through 2010 roughly 10-20% of the vessels harvesting golden tilefish account for 75-94% of the landings (**Table 3-5**).

3.3.1.2 Vessels, Harvest, and Revenue by Gear (1993-2011)

The longline sector dominated commercial landings of golden tilefish in recent years. Longline landings of golden tilefish from 1993 through 2011 ranged from a low of 86% of the total golden tilefish landings in 2007 to a high of 99% of the golden tilefish landings in 1993 (**Table 3-6**). In recent years, the longline sector accounted for 93-95% of all golden tilefish landings. The 300-pound gw trip limit did not keep longline vessels from fishing for golden tilefish. The total number of vessels for each year is less than the sum of the vessels by gear type as often vessels will land golden tilefish using multiple gear types.

Table 3-6 shows by year the average landings, both pounds and revenues, for all vessels that participated in the fishery by gear. The average annual pounds landed by vessels using hook-and-line gear ranged from a low of 215 pounds gw in 1996 to a high of 774 pounds gw in 2010. Conversely, the average annual pounds landed by vessels using longline gear ranged from a low of 9,504 pounds gw in 1996 to a high of 30,234 pounds gw in 2006. Other gear used to land golden tilefish included fish traps, spears, and gill nets among others and landings from other gear made up a very small portion of the overall landings in each year. There is a significant hook-and-line component, however, even with the current regulations requiring a 300-pound gw trip limit after 75% of the ACL is caught, a number of longline vessels in the past have continued to fish the lower 300-pound gw trip limit, which adds to the total annual revenue of longline vessels.

Table 3-5. Average percent of pounds and revenues of the total catch of golden tilefish on trips by vessels where at least one pound of golden tilefish was caught by annual landings revenue groupings, 2006-2011.

Year	Total Annual Golden Tilefish Landings Value	Number of vessels	Total Pounds	Percent of Overall Total Pounds
	Up to $100	19	430	0%
	$100.01 - $1,000	17	3,047	1%
	$1,000.01 - $5,000	15	18,607	5%
	$5,000.01 - $25,000	conf.*	-	-
	More than $25,000	10	344,890	94%
2006	Total	61	366,974	
	Up to $100	9	146	0%
	$100.01 - $1,000	22	2,380	1%
	$1,000.01 - $5,000	14	12,364	4%
	$5,000.01 - $25,000	15	57,505	20%
	More than $25,000	7	213,037	75%
2007	Total	67	285,431	
	Up to $100	12	273	0%
	$100.01 - $1,000	23	4,036	1%
	$1,000.01 - $5,000	10	13,408	4%
	$5,000.01 - $25,000	6	25,397	8%
	More than $25,000	6	257,126	86%
2008	Total	57	300,241	
	Up to $100	9	182	0%
	$100.01 - $1,000	16	2,152	1%
	$1,000.01 - $5,000	11	10,807	3%
	$5,000.01 - $25,000	5	38,045	12%
	More than $25,000	8	262,125	84%
2009	Total	49	313,311	
	Up to $100	4	84	0%
	$100.01 - $1,000	11	1,223	0%
	$1,000.01 - $5,000	15	11,701	3%
	$5,000.01 - $25,000	10	31,607	9%
	More than $25,000	11	324,941	88%
2010	Total	51	369,556	
	Up to $100	conf.*	-	-
	$100.01 - $1,000	14	2,099	1%
	$1,000.01 - $5,000	conf.*	-	-
	$5,000.01 - $25,000	3	10,660	3%
	More than $25,000	14	352,446	97%
2011	Total	34	365,205	

*confidential data – values are combined with neighboring category bins. Source: NMFS Logbooks, October 19, 2011.

Table 3-6. Golden tilefish sector statistics by gear, 1993-2011.

Year	Gear	Pounds Golden Tilefish	Percent of Total GT Landings	GT Revenue (nominal)	GT Revenue (2010 $)	Number of Vessels	Average pounds (gw) by Vessel	Average Revenue by Vessel (nominal)	Average Revenue by Vessel (2010 $)
1993	H & L	13,312	1%	$19,362	$30,140	61	218	$317	$494
	Longline	1,175,917	99%	$1,726,233	$2,687,177	48	24,498	$35,963	$55,983
	Other	1,123	0%	$1,657	$2,580	9	125	$184	$287
	Total	1,190,353		$1,747,252	$2,719,897	107	11,125	$16,329	$25,420
1994	H & L	18,339	2%	$30,655	$46,528	63	291	$487	$739
	Longline	731,683	97%	$1,232,983	$1,871,431	43	17,016	$28,674	$43,522
	Other	1,627	0%	$2,683	$4,072	8	203	$335	$509
	Total	751,649		$1,266,321	$1,922,030	99	7,592	$12,791	$19,414
1995	H & L	20,251	3%	$35,918	$53,014	72	281	$499	$736
	Longline	602,582	97%	$1,057,660	$1,561,082	35	17,217	$30,219	$44,602
	Other	216	0%	$336	$496	4	54	$84	$124
	Total	623,048		$1,093,914	$1,614,593	102	6,108	$10,725	$15,829
1996	H & L	13,540	4%	$28,259	$40,513	63	215	$449	$643
	Longline	351,646	96%	$678,416	$972,608	37	9,504	$18,336	$26,287
	Other	361	0%	$726	$1,041	4	90	$182	$260
	Total	365,547		$707,401	$1,014,162	96	3,808	$7,369	$10,564
1997	H & L	27,742	8%	$50,282	$70,470	71	391	$708	$993
	Longline	318,772	92%	$522,970	$732,937	25	12,751	$20,919	$29,317
	Other	451	0%	$885	$1,240	4	113	$221	$310
	Total	346,966		$574,138	$804,647	91	3,813	$6,309	$8,842
1998	H & L	24,262	6%	$44,139	$60,911	55	441	$803	$1,107
	Longline	393,479	94%	$715,730	$987,703	27	14,573	$26,509	$36,582
	Other	1,881	0%	$3,671	$5,067	8	235	$459	$633
	Total	419,622		$763,541	$1,053,681	84	4,995	$9,090	$12,544
1999	H & L	25,167	5%	$50,136	$67,692	56	449	$895	$1,209
	Longline	490,425	94%	$959,015	$1,294,837	22	22,292	$43,592	$58,856
	Other	5,058	1%	$9,898	$13,364	13	389	$761	$1,028
	Total	520,650		$1,019,049	$1,375,894	84	6,198	$12,132	$16,380
2000	H & L	36,493	5%	$77,264	$100,927	63	579	$1,226	$1,602
	Longline	666,420	94%	$1,382,013	$1,805,276	27	24,682	$51,186	$66,862
	Other	3,459	0%	$8,540	$11,155	19	182	$449	$587
	Total	706,373		$1,467,817	$1,917,359	97	7,282	$15,132	$19,767
2001	H & L	21,928	5%	$41,627	$52,872	57	385	$730	$928
	Longline	414,884	95%	$823,644	$1,046,130	28	14,817	$29,416	$37,362
	Other	892	0%	$1,866	$2,371	11	81	$170	$216
	Total	437,705		$867,138	$1,101,372	87	5,031	$9,967	$12,659
2002	H & L	39,463	10%	$77,611	$97,042	64	617	$1,213	$1,516
	Longline	349,833	89%	$705,723	$882,405	24	14,576	$29,405	$36,767
	Other	4,487	1%	$8,965	$11,209	12	374	$747	$934
	Total	393,783		$792,300	$990,656	86	4,579	$9,213	$11,519

Table 3-6, Continued. Golden tilefish sector statistics by gear, 1993-2011.

Year	Gear	Pounds Golden Tilefish	Percent of Total GT Landings	GT Revenue (nominal)	GT Revenue (2010 $)	Number of Vessels	Average pounds (gw) by Vessel	Average Revenue by Vessel (nominal)	Average Revenue by Vessel (2010 $)
2003	H & L	15,869	5%	$31,788	$38,861	50	317	$636	$777
	Longline	293,671	95%	$595,113	$727,523	17	17,275	$35,007	$42,795
	Other	311	0%	$645	$789	8	39	$81	$99
	Total	309,851		$627,546	$767,172	65	4,767	$9,655	$11,803
2004	H & L	22,062	8%	$47,496	$56,557	49	450	$969	$1,154
	Longline	257,360	92%	$524,924	$625,070	22	11,698	$23,860	$28,412
	Other	conf.	conf.	conf.	conf.	conf.	conf.	conf.	conf.
	Total	279,485		conf.	conf.	67	4,171	conf.	conf.
2005	H & L	33,854	10%	$81,428	$96,963	51	664	$1,597	$1,901
	Longline	288,688	89%	$683,323	$787,025	16	18,043	$42,708	$49,189
	Other	1,585	0%	$3,944	$4,542	11	144	$359	$413
	Total	324,127		$768,694	$888,529	66	4,911	$11,647	$13,414
2006	H & L	32,180	9%	$78,455	$87,538	54	596	$1,453	$1,621
	Longline	332,578	91%	$811,305	$905,229	11	30,234	$73,755	$82,294
	Other	2,216	1%	$4,397	$4,906	8	277	$550	$613
	Total	366,974		$894,157	$997,673	61	6,016	$14,658	$16,355
2007	H & L	38,921	14%	$113,021	$122,613	56	695	$2,018	$2,190
	Longline	245,477	86%	$648,832	$703,898	16	15,342	$40,552	$43,994
	Other	1,033	0%	$2,958	$3,209	6	172	$493	$535
	Total	285,431		$764,811	$829,720	67	4,260	$11,415	$12,384
2008	H & L	19,746	7%	$49,694	$51,918	46	429	$1,080	$1,129
	Longline	279,312	93%	$716,302	$748,360	13	21,486	$55,100	$57,566
	Other	1,183	0%	$3,119	$3,258	11	108	$284	$296
	Total	300,241		$769,115	$803,537	57	5,267	$13,493	$14,097
2009	H & L	13,745	4%	$35,852	$37,590	36	382	$996	$1,044
	Longline	298,975	95%	$733,103	$768,648	13	22,998	$56,393	$59,127
	Other	591	0%	$1,218	$1,277	5	118	$244	$255
	Total	313,311		$770,172	$807,515	49	6,394	$15,718	$16,480
2010	H & L	24,774	7%	$72,408	$74,693	32	774	$2,263	$2,334
	Longline	343,673	93%	$1,021,981	$1,054,240	22	15,622	$46,454	$47,920
	Other	1,109	0%	$3,600	$3,714	7	158	$514	$531
	Total	369,556		$1,097,989	$1,132,647	51	7,246	$22,209	$22,910
2011	H & L	9,341	3%	$27,741	$28,617	16	584	$1,734	$1,789
	Longline	355,648	96%	$1,056,283	$1,089,625	17	20,920	$62,134	$64,096
	Other	216	0%	$577	$595	3	72	$192	$198
	Total	369,556		$1,097,989	$1,118,837	34	10,869	$32,907	$33,946

*confidential – data are combined with the "Longline" category
Source: NMFS Logbooks, October 19, 2011.

3.3.1.3 Vessels, Harvest, and Revenue by State (1993-2011)

Table 3-7 shows golden tilefish landings by state from 1993 through 2011. Landings from Georgia are combined with Florida because landings from Georgia are limited and confidential in nearly all years in which they occurred. In every year in the time series, except 1993 and 2004, Florida had more landings than all the other states combined. The highest concentration of landings percentages has been in Florida since 2007. In each of the last five years of the time series, Florida landed at least 86% of the entire golden tilefish quota.

Since 2007, the negative economic impacts of shortened seasons are proportionately less on Florida compared to other states. In fact, more fish are caught in Florida during the shorter season. The quota has remained the same for the past several years while the stock has been rebuilding. Consequently, the fact that there are more fish means the fish are caught more quickly in the season. Golden tilefish are more plentiful further north in their range in late summer and fall. When the golden tilefish commercial sector closed earlier in the calendar year, as has been happening in recent years, vessels from the Carolinas did not land proportionally as much fish as in previous years unless they were willing to migrate south to participate in the fishery off the east coast of Florida when it occurs there when the fishery opens each year in January.

Table 3-7. Golden tilefish sector statistics by state, 1993-2011.
Source: NMFS Logbooks, October 19, 2011.

Year	State	Pounds Golden Tilefish	Percent of Total GT Landings	GT Revenue (nominal)	GT Revenue (2010 $)	Number of Vessels	Average pounds (gw) by Vessel	Average Revenue by Vessel (nominal)	Average Revenue by Vessel (2010 $)
1993	NC	100,037	8%	$166,163	$258,662	18	5,558	$9,231	$14,370
	SC	127,144	11%	$175,521	$273,228	21	6,054	$8,358	$13,011
	GA/FL-East	586,591	49%	$863,121	$1,343,595	60	9,777	$14,385	$22,393
	Other	376,580	32%	$542,447	$844,412	24	15,691	$22,602	$35,184
	Total	1,190,353		$1,747,252	$2,719,897	107	11,125	$16,329	$25,420
1994	NC	120,723	16%	$238,652	$362,228	22	5,487	$10,848	$16,465
	SC	145,879	19%	$227,819	$345,785	10	14,588	$22,782	$34,578
	GA/FL-East	421,528	56%	$698,187	$1,059,713	60	7,025	$11,636	$17,662
	Other	63,519	8%	$101,663	$154,305	16	3,970	$6,354	$9,644
	Total	751,649		$1,266,321	$1,922,031	99	7,592	$12,791	$19,414
1995	NC	72,420	12%	$136,087	$200,862	28	2,586	$4,860	$7,174
	SC	140,636	23%	$233,166	$344,148	11	12,785	$21,197	$31,286
	GA/FL-East	409,180	66%	$723,450	$1,067,796	57	7,179	$12,692	$18,733
	Other	812	0%	$1,210	$1,786	14	58	$86	$128
	Total	623,048		$1,093,914	$1,614,593	102	6,108	$10,725	$16,695
1996	NC	53,762	15%	$128,220	$183,823	18	2,987	$7,123	$10,212
	SC	64,579	18%	$85,054	$121,937	11	5,871	$7,732	$11,085
	GA/FL-East	194,913	53%	$396,414	$568,317	49	3,978	$8,090	$11,598
	Other	52,293	14%	$97,713	$140,085	26	2,011	$3,758	$5,388
	Total	365,547		$707,401	$1,014,162	96	3,808	$7,369	$10,564
1997	NC	35,774	10%	$80,576	$112,926	18	1,987	$4,476	$6,274
	SC	112,019	32%	$128,247	$179,736	12	9,335	$10,687	$14,978
	GA/FL-East	195,538	56%	$360,597	$505,372	50	3,911	$7,212	$10,107
	Other	3,634	1%	$4,718	$6,613	23	158	$205	$288
	Total	346,966		$574,138	$804,647	91	3,813	$6,309	$8,842
1998	NC	17,861	4%	$41,670	$57,504	16	1,116	$2,604	$3,594
	SC	101,498	24%	$165,725	$228,699	11	9,227	$15,066	$20,791
	GA/FL-East	241,860	58%	$457,050	$630,726	44	5,497	$10,387	$14,335
	Other	58,403	14%	$99,096	$136,752	19	3,074	$5,216	$7,197
	Total	419,622		$763,541	$1,053,681	84	4,995	$9,090	$12,544

Table 3-7, Continued. Golden tilefish sector statistics by state, 1993-2011.

Year	State	Pounds Golden Tilefish	Percent of Total GT Landings	GT Revenue (nominal)	GT Revenue (2010 $)	Number of Vessels	Average pounds (gw) by Vessel	Average Revenue by Vessel (nominal)	Average Revenue by Vessel (2010 $)
1999	NC	5,021	1%	$10,580	$14,285	15	335	$705	$952
	SC	103,666	20%	$193,600	$261,394	9	11,518	$21,511	$29,044
	GA/FL-East	372,019	71%	$745,325	$1,006,318	47	7,915	$15,858	$21,411
	Other	39,944	8%	$69,544	$93,896	24	1,664	$2,898	$3,912
	Total	520,650		$1,019,049	$1,375,893	84	6,198	$12,132	$16,380
2000	NC	16,481	2%	$49,742	$64,976	13	1,268	$3,826	$4,998
	SC	134,142	19%	$247,132	$322,820	6	22,357	$41,189	$53,803
	GA/FL-East	529,985	75%	$1,124,114	$1,468,392	58	9,138	$19,381	$25,317
	Other	25,764	4%	$46,830	$61,172	29	888	$1,615	$2,109
	Total	706,373		$1,467,817	$1,917,360	97	7,282	$15,132	$19,767
2001	NC	16,574	4%	$31,185	$39,609	12	1,381	$2,599	$3,301
	SC	121,440	28%	$222,640	$282,781	7	17,349	$31,806	$40,397
	GA/FL-East	270,355	62%	$561,346	$712,980	50	5,407	$11,227	$14,260
	Other	29,336	7%	$51,966	$66,003	29	1,012	$1,792	$2,276
	Total	437,705		$867,138	$1,101,372	87	5,031	$9,967	$12,659
2002	NC	2,637	1%	$6,098	$7,745	14	188	$436	$545
	SC	156,879	40%	$285,292	$362,356	7	22,411	$40,756	$50,960
	GA/FL-East	207,892	53%	$453,433	$575,916	47	4,423	$9,648	$12,063
	Other	26,375	7%	$47,477	$60,302	27	977	$1,758	$2,199
	Total	393,783		$792,300	$1,006,319	86	4,579	$9,213	$11,519
2003	NC	14,764	5%	$40,600	$49,634	11	1,342	$3,691	$4,512
	SC	114,368	37%	$208,494	$254,883	10	11,437	$20,849	$25,488
	GA/FL-East	170,143	55%	$358,720	$438,534	29	5,867	$12,370	$15,122
	Other	10,576	3%	$19,731	$24,121	23	460	$858	$1,049
	Total	309,851		$627,546	$767,171	65	4,767	$9,655	$11,803
2004	NC	35,929	13%	$94,190	$112,160	6	5,988	$15,698	$18,693
	SC	93,357	33%	$170,761	$203,339	8	11,670	$21,345	$25,417
	GA/FL-East	112,661	40%	$243,286	$289,701	42	2,682	$5,793	$6,898
	Other	37,537	13%	$64,361	$76,640	17	2,208	$3,786	$4,508
	Total	279,485		$572,598	$681,840	67	4,171	$8,546	$10,177

Table 3-7, Continued. Golden tilefish sector statistics by state, 1993-2011.

Year	State	Pounds Golden Tilefish	Percent of Total GT Landings	GT Revenue (nominal)	GT Revenue (2010 $)	Number of Vessels	Average pounds (gw) by Vessel	Average Revenue by Vessel (nominal)	Average Revenue by Vessel (2010 $)
2005	NC	688	0%	$1,227	$1,282	12	57	$102	$118
	SC	55,652	17%	$118,732	$124,046	8	6,957	$14,842	$17,094
	GA/FL-East	203,836	63%	$514,703	$537,739	41	4,972	$12,554	$14,459
	Other	63,951	20%	$134,031	$140,030	15	4,263	$8,935	$10,291
	Total	324,127		$768,694	$803,097	66	4,911	$11,647	$13,414
2006	NC	1,840	1%	$3,988	$4,449	9	204	$443	$494
	SC	109,290	30%	$243,853	$272,084	8	13,661	$30,482	$34,010
	GA/FL-East	253,010	69%	$640,610	$714,773	34	7,441	$18,841	$21,023
	Other	2,834	1%	$5,706	$6,367	16	177	$357	$398
	Total	366,974		$894,157	$997,673	61	6,016	$14,658	$16,355
2007	NC	1,383	0%	$3,904	$4,236	6	231	$651	$706
	SC	24,295	9%	$50,957	$55,282	4	6,074	$12,739	$13,820
	GA/FL-East	258,406	91%	$706,808	$766,795	46	5,618	$15,365	$16,669
	Other	1,347	0%	$3,141	$3,407	16	84	$196	$213
	Total	285,431		$764,811	$829,720	67	4,260	$11,415	$12,384
2008	NC	5,665	2%	$6,883	$7,191	7	809	$983	$1,027
	SC	17,427	6%	$38,326	$40,042	4	4,357	$9,582	$10,010
	GA/FL-East	276,322	92%	$722,068	$754,385	40	6,908	$18,052	$18,860
	Other	827	0%	$1,836	$1,919	11	75	$167	$174
	Total	300,241		$769,115	$803,537	57	5,267	$13,493	$14,097
2009	NC	1,972	1%	$6,030	$6,323	5	394	$1,206	$1,265
	SC	22,796	7%	$50,293	$52,732	4	5,699	$12,573	$13,183
	GA/FL-East	279,723	89%	$689,712	$723,153	39	7,172	$17,685	$18,542
	Other	8,820	3%	$24,136	$25,307	7	1,260	$3,448	$3,615
	Total	313,311		$770,172	$807,514	49	6,394	$15,718	$16,480
2010	NC	5,688	2%	$15,446	$15,934	4	1,422	$3,862	$3,983
	SC	28,331	8%	$79,101	$81,598	6	4,722	$13,183	$13,600
	GA/FL-East	318,118	86%	$961,283	$991,626	41	7,759	$23,446	$24,186
	Other	17,420	5%	$42,159	$43,490	6	2,903	$7,026	$7,248
	Total	369,556		$1,097,989	$1,132,647	51	7,246	$21,529	$22,209
2011	NC	347	0%	$957	$1,003	5	69	$191	$201
	SC	28,720	8%	$83,027	$87,053	4	7,180	$20,757	$21,763
	GA/FL-East	336,138	92%	$1,000,617	$1,049,133	39	8,619	$25,657	$26,901
	Total	365,205	100%	$1,084,601	$1,137,189	7	52,172	$154,943	$162,456

3.3.1.4 Economic Activity

The commercial economic impacts associated with the harvesting of golden tilefish by U.S. commercial fishing vessels and the activities of the seafood and retail industries that depend on fish and seafood products can be estimated using a model developed for NOAA/NMFS (2009). For consistency with this model, revenues are expressed in 2008 dollars. These impacts are expressed in terms of full-time equivalent employment (jobs), personal income, and output (sales by U.S. businesses). Using 2005-2011 average revenues of $866,680 (2008 dollars) from golden tilefish, the harvesting sector accounted for 21 jobs, $715,000 in income, and $1,858,000 in output. When harvester data are combined with all aspects of the seafood industry (retail, restaurants, etc.) related to golden tilefish harvest, the values increase to 163 jobs, $4,863,000 in income, and $11,411,000 in output (**Table 3-8**).

Table 3-8. Impacts are expressed in terms of full-time employment (jobs), personal income, and output (sales by U.S. businesses).

	Harvester	Harvester and Seafood Industry
Employment	21	163
Income	$715,000	$4,863,000
Output (Sales)	$1,858,000	$11,411,000

Source: Revenue data from NOAA/NMFS logbooks and accumulated landings, economic activity results calculated by NMFS SERO using the model developed for NOAA/NMFS (2009).

3.3.2 Economic Description of the Recreational Fishery

Additional information on the recreational sector of the snapper grouper fishery contained in previous or concurrent amendments is incorporated herein by reference [see Amendment 13C (SAFMC 2006), Amendment 15A (SAFMC 2008a), Amendment 15B (SAFMC 2008b), Amendment 16 (SAFMC 2009a), Amendment 17A (SAFMC 2010a), Amendment 17B (SAFMC 2010b), Regulatory Amendment 9 (SAFMC 2011a), Comprehensive ACL Amendment for the South Atlantic Region (SAFMC 2011c), Amendment 24 (SAFMC 2011d)]. The following description of the recreational sector focuses on golden tilefish as this is the main species considered in this amendment.

The recreational sector is comprised of the private sector and for-hire sector. The private sector includes anglers fishing from shore (all land-based structures) and private/rental boats. The for-hire sector is composed of the charterboat and headboat (also called partyboat) sectors. Charterboats generally carry fewer passengers and charge a fee on an entire vessel basis, whereas headboats carry more passengers and payment is per person.

The major sources of harvest and effort data for the recreational sector are the NOAA/NMFS Marine Recreational Fisheries Statistical Survey (MRFSS) and NOAA/NMFS Headboat Survey.

The NOAA/NMFS Marine Recreational Information Program (MRIP) database is not used for the current purpose as the method for generating target effort and catch effort for a specific species is still being worked out. Because the Headboat Survey did not show any record of golden tilefish harvest for the period 2005-2010, the following description relies largely on the MRFSS database. However, headboat angler days, based on the Headboat Survey, are still presented in order to provide general information about the headboat sector.

3.3.2.1 Harvest

Recreational golden tilefish harvest in the South Atlantic was variable during the period 2005-2010. For this period, only Florida and North Carolina reported some harvest of the species, although there were years when no harvests were reported by these two states. On average, the private/rental mode accounted for the largest harvests at approximately 22,000 pounds (whole weight), or 5,000 fish (**Table 3-9**). Average charter harvests were approximately 42,000 pounds (whole weight) or 11,000 fish. The shore mode did not report any harvest of golden tilefish.

Recreational harvests of golden tilefish also fluctuated from year to year for the period 2005-2010. On average, North Carolina accounted for most of the golden tilefish harvest in the South Atlantic at approximately 47,000 pounds whole weight or 14,000 fish (**Table 3-10**). Florida accounted for harvests of approximately 17,000 pounds whole weight, or 3,000 fish. Georgia and South Carolina reported no harvest of the species during the period.

Table 3-9. Average harvest (whole weight) of golden tilefish in the South Atlantic, by mode, 2005-2010.

Harvest Type	Charterboat	Headboat	Private/Rental Boat	Total
Pounds (WW)	41,681	0	22,211	63,892
No. of Fish	11,444	0	4,842	16,286

Source: MRFSS database, NOAA Fisheries, NMFS, SERO.

Table 3-10. Average harvest (whole weight) of golden tilefish in the South Atlantic, by state, 2005-2010.

Harvest Type	Florida	Georgia	South Carolina	North Carolina
Pounds (WW)	17,106	0	0	46,786
No. of Fish	2,675	0	0	13,611

Source: MRFSS database, NOAA Fisheries, NMFS, SERO.

MRFSS reports data by two-month waves for a total of six waves. The following breaks the waves into months by apportioning a wave into its component months based on the number of days per month.

On average, overall harvest of golden tilefish peaks in July-August and troughed in January-February (**Table 3-11**). May and June were the peak months for charterboat harvests of golden tilefish harvest while July and August were the peak months for golden tilefish harvest by the private/rental mode. The lowest harvest occurred in January/February and November/December for charterboats and May/June for the private/rental mode.

There are observable differences between Florida and North Carolina on the specific months with recorded highest and lowest harvest of golden tilefish (**Table 3-12**). North Carolina had the highest harvest in July/August and lowest in January/February and November/December. Florida had its highest harvest in November/December and lowest in May/June.

Table 3-11. Average monthly distribution of golden tilefish harvest in the South Atlantic, by mode across all states, 2005-2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Pounds (Whole Weight)											
Charter	0	0	467	467	10,072	10,072	9,428	9,428	873	873	0	0
Headboat	0	0	0	0	0	0	0	0	0	0	0	0
Priv/Rental	585	585	1,672	1,672	399	399	4,012	4,012	1,547	1,547	2,891	2,891
Total	585	585	2,140	2,140	10,471	10,471	13,440	13,440	2,420	2,420	2,891	2,891
	Number of Fish											
Charter	0	0	93	93	2,940	2,940	2,425	2,425	265	265	0	0
Headboat	0	0	0	0	0	0	0	0	0	0	0	0
Priv/Rental	143	143	130	130	79	79	1,309	1,309	172	172	588	588
Total	143	143	223	223	3,018	3,018	3,734	3,734	437	437	588	588

Source: MRFSS database, NOAA Fisheries, NMFS, SERO

Table 3-12. Average monthly distribution of golden tilefish harvest in the South Atlantic, by state across all modes, 2005-2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Pounds (Whole Weight)											
NC	0	0	467	467	9,947	9,947	12,106	12,106	873	873	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0
GA	0	0	0	0	0	0	0	0	0	0	0	0
FL	585	585	1,672	1,672	524	524	1,335	1,335	1,547	1,547	2,891	2,891
TOTAL	585	585	2,140	2,140	10,471	10,471	13,440	13,440	2,420	2,420	2,891	2,891
	Number of Fish											
NC	0	0	93	93	2,903	2,903	3,544	3,544	265	265	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0
GA	0	0	0	0	0	0	0	0	0	0	0	0
FL	143	143	130	130	115	115	189	189	172	172	588	588
TOTAL	143	143	223	223	3,018	3,018	3,734	3,734	437	437	588	588

Source: MRFSS database, NOAA Fisheries, NMFS, SERO

3.3.2.2 Effort

Recreational effort derived from the Marine Recreational Fisheries Statistical Survey (MRFSS database can be characterized in terms of the number of trips as follows:

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

Estimates of annual golden tilefish recreational effort in terms of target and catch trips are provided in **Tables 3-13** through **3-16**. Noticeable in these tables is the low levels of target and catch trips for golden tilefish. In addition, target trips are significantly lower than catch trips. While some angler trips recorded harvest of golden tilefish, many fewer angler trips recorded golden tilefish as a target species.

The private/rental mode recorded higher target and catch trips than the charter mode (**Table 3-13**), although both types of trips are relatively low which is consistent with the relatively low harvest of golden tilefish. Moreover, Florida recorded higher target and catch trips than North Carolina (**Table 3-14**). This effort distribution does not quite match with the harvest distribution described earlier. The shore mode did not report any target or catch trips.

Table 3-13. Average recreational effort (trips) for golden tilefish in the South Atlantic, by mode across all states, 2005-2010.

Type of Trips	Charterboat	Private/Rental Boat	Shore	Total
Target Trips	105	1,635	0	1,740
Catch Trips	1,975	2,719	0	4,694

Source: MRFSS, NOAA Fisheries, NMFS, SERO.

Table 3-14. Recreational effort (trips) for golden tilefish in the South Atlantic, by state across all modes, 2005-2010.

Type of Trips	Florida	Georgia	South Carolina	North Carolina
Target Trips	1,595	0	0	145
Catch Trips	2,432	0	0	2,262

Source: MRFSS, NOAA Fisheries, NMFS, SERO.

As with the presentation of harvests, fishing effort is presented by month. For this purpose, the MRFSS two-month waves are split into their component months based on the number of days per month.

On average, target trips and catch trips for golden tilefish peaked in November/December (**Table 3-15**). There were no target trips in July/August. Catch trips had their lowest level in January/February. Very low levels of charter target trips were recorded, with non-zero entries only in May/June and September/October. Although private target trips were higher than charter target trips, they were still relatively low and in fact were zero in May/June and July/August. A good portion of private target trips occurred in November/December. There were no charter catch trips in January/February and November/December, with most of the trips occurring in the summer months. Private catch trips were distributed throughout the year with relatively high levels in November/December and low levels in May/June.

The very low level of target trips in North Carolina took place only in May/June and September/October (**Table 3-16**). Target trips in Florida were substantially higher in November/December than in other months; there were no target trips in May through August. Catch trips in North Carolina were substantially higher in July/August than in other months; there were no catch trips in January/February and November/December. Catch trips in Florida were spread throughout the year, with peaks in November/December and troughs in July/August.

Table 3-15. Average monthly distribution of recreational effort (trips) for golden tilefish in the South Atlantic, by mode across all states, 2005-2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Target Trips												
Charter	0	0	0	0	35	34	0	0	18	19	0	0
Private	113	102	95	92	0	0	0	0	58	60	549	567
Shore	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	113	102	95	92	35	34	0	0	76	79	549	567
Catch Trips												
Charter	0	0	19	19	425	411	496	496	54	56	0	0
Private	158	142	134	130	80	77	275	275	131	135	581	600
Shore	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	158	142	154	149	505	488	771	771	184	190	581	600

Source: MRFSS, NOAA Fisheries, NMFS, SERO.

Table 3-16. Average monthly distribution of recreational effort (trips) for golden tilefish in the South Atlantic, by state across all modes, 2005-2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Target Trips												
NC	0	0	0	0	35	34	0	0	37	39	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0
GA	0	0	0	0	0	0	0	0	0	0	0	0
FL	113	102	95	92	0	0	0	0	39	40	549	567
TOTAL	113	102	95	92	35	34	0	0	76	79	549	567
Catch Trips												
NC	0	0	19	19	364	353	699	699	54	56	0	0
SC	0	0	0	0	0	0	0	0	0	0	0	0
GA	0	0	0	0	0	0	0	0	0	0	0	0
FL	158	142	134	130	140	136	72	72	131	135	581	600
TOTAL	158	142	154	149	505	488	771	771	184	190	581	600

Source: MRFSS, NOAA Fisheries, NMFS, SERO.

Similar analysis of recreational effort is not possible for the headboat sector because the headboat data are not collected at the angler level. Estimates of effort in the headboat sector are provided in terms of angler days, or the number of standardized 12-hour fishing days that account for the different half-, three-quarter-, and full-day fishing trips by headboats. **Table 3-17** displays the annual angler days and **Table 3-18** displays their average monthly distribution. Confidentiality issues required combining Georgia estimates with those of Northeast Florida.

Headboat angler days varied from year to year but generally declined since 2006 (**Table 3-17**). Southeast Florida registered the highest number of angler trips, followed by Georgia/Northeast Florida, South Carolina, and North Carolina. Florida dominated all other states in terms of headboat angler days.

On average, overall angler days peaked in June and troughed in December (**Table 3-18**). North Carolina and South Carolina had similar peaks and troughs as the overall average. Angler days in Georgia/Northeast Florida peaked in June and troughed in November while those in Southeast Florida peaked in April and troughed in September.

Table 3-17. South Atlantic headboat angler days, by state, 2005-2010.

	NC	SC	GA/NEFL	SEFL	TOTAL
2005	40,916	52,036	74,663	82,870	250,485
2006	25,736	56,074	48,908	126,614	257,332
2007	29,002	60,729	53,762	103,388	246,881
2008	16,982	47,287	52,521	71,598	188,388
2009	19,468	40,919	66,447	69,973	196,807
2010	21,071	44,951	53,676	69,986	189,684
Average	25,529	50,333	58,330	87,405	221,596

Source: The Headboat Survey, NOAA Fisheries, SEFSC, Beaufort Lab.

Table 3-18. Average monthly distribution of headboat angler days in the South Atlantic, by state, 2005-2010.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
NC	220	194	813	1,647	2,740	4,640	5,118	4,440	2,309	2,273	1,062	75
SC	153	272	1,828	3,791	5,201	9,772	12,245	8,949	3,603	3,031	1,337	153
GA/NEFL	2,668	3,423	5,672	6,380	6,056	8,402	8,229	5,688	3,175	3,173	2,637	2,826
SEFL	7,432	8,517	9,647	9,764	7,962	8,635	9,609	7,006	4,112	4,135	4,829	5,758
TOTAL	10,473	12,405	17,960	21,582	21,958	31,449	35,202	26,082	13,199	12,612	9,864	8,811

Source: The Headboat Survey, NOAA Fisheries, SEFSC, Beaufort Lab.

3.3.2.3 Permits

For-hire vessels are required to have a for-hire snapper grouper permit to fish for or possess snapper grouper species in the South Atlantic EEZ. The number of vessels with for-hire snapper grouper permits for the period 2005-2010 is provided in **Table 3-19**. This sector operates as an open access fishery and not all permitted vessels are necessarily active in the fishery. Some vessel owners obtain open access permits as insurance for uncertainties in the fisheries in which they operate.

The number of for-hire permits issued for the South Atlantic snapper grouper fishery increased from 1,904 permits in 2005 to 2,104 permits in 2008, but subsequently decreased to 2,091 in 2009 and 1,815 in 2010. The majority of snapper grouper for-hire permitted vessels were home-ported in Florida; a relatively high proportion of these permitted vessels were also home-ported in North Carolina and South Carolina. Many vessels with South Atlantic for-hire snapper grouper permits were home-ported in states outside of the South Atlantic Council's area of jurisdiction, particularly in the Gulf states of Alabama through Texas. Although the number of vessels with South Atlantic for-hire snapper grouper permits home-ported in states outside of the South Atlantic Council's area of jurisdiction increased from 2005 to 2009, they still accounted for approximately the same proportion (9-10%) of the total number of permits. For-hire snapper grouper permits in these other areas fell in 2010.

Table 3-19. Number of South Atlantic for-hire snapper grouper vessel permits, 2005-2010.

Home Port State	2005	2006	2007	2008	2009	2010	Avg.
North Carolina	294	317	353	399	391	333	348
South Carolina	136	142	152	160	167	147	151
Georgia	37	36	37	35	36	28	35
Florida	1,267	1,304	1,312	1,310	1,280	1,110	1,264
Gulf States (AL-TX)	102	84	79	84	87	84	87
Other States	68	84	93	116	130	113	101
Total	1,904	1,967	2,026	2,104	2,091	1,815	1,985

Source: Southeast Permits Database, NOAA Fisheries, SERO.

For-hire permits do not distinguish charterboats from headboats. Based on a 1997 survey, Holland et al. (1999) estimated that a total of 1,080 charter vessels and 96 headboats supplied for-hire services in all South Atlantic fisheries during 1997. By 2010, the estimated number of headboats supplying for-hire services in all South Atlantic fisheries had fallen to 85, indicating a decrease in fleet size of approximately 11% between 1997 and 2010 (K. Brennan, Beaufort Laboratory, SEFSC, personal communication, Feb. 2011).

There are no specific permitting requirements for recreational anglers to harvest snapper grouper. Instead, anglers are required to possess either a state recreational fishing permit that authorizes saltwater fishing in general, or be registered in the federal National Saltwater Angler Registry system, subject to appropriate exemptions.

3.3.2.4 Economic Value and Expenditures

Participation, effort, and harvest are indicators of the value of saltwater recreational fishing. However, a more specific indicator of value is the satisfaction that anglers experience over and above their costs of fishing. The monetary value of this satisfaction is referred to as consumer surplus. The value or benefit derived from the recreational experience is dependent on several quality determinants, which include fish size, catch success rate, and the number of fish kept. These variables help determine the value of a fishing trip and influence total demand for recreational fishing trips.

While anglers receive economic value as measured by the consumer surplus associated with fishing, for-hire businesses receive value from the services they provide. Producer surplus is the measure of the economic value these operations receive. Producer surplus is the difference between the revenue a business receives for a good or service, such as a charter or headboat trip, and the cost the business incurs to provide that good or service. Estimates of the producer surplus associated with for-hire trips are not available. However, proxy values in the form of net operating revenues are available (David Carter, NMFS SEFSC, personal communication, August 2010). These estimates were culled from several studies – Liese et al. (2009), Dumas et al. (2009), Holland et al. (1999), and Sutton et al. (1999). Estimates of net operating revenue per angler trip (2009 dollars) on representative charter trips (average charter trip regardless of area fished) are $146 for Louisiana through east Florida, $135 for east Florida, $156 for northeast Florida, and $128 for North Carolina. For charter trips into the EEZ only, net operating revenues are $141 in east Florida and $148 in northeast Florida. For full-day and overnight trips only, net operating revenues are estimated to be $155-$160 in North Carolina. Comparable estimates are not available for Georgia, South Carolina, or Texas.

Net operating revenues per angler trip are lower for headboats than for charterboats. Net operating revenue estimates for a representative headboat trip are $48 in the Gulf of Mexico (all states and all of Florida), and $63-$68 in North Carolina. For full-day and overnight headboat trips, net operating revenues are estimated to be $74-$77 in North Carolina. Comparable estimates are not available for Georgia and South Carolina.

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

Estimates of the economic activity (impacts) associated with recreational fishing for any species could be derived using average coefficients for recreational angling across all fisheries (species), as derived by an economic add-on to the MRFSS, and described and utilized in NOAA/NMFS (2009). Business activity is characterized in the form of full time equivalent jobs, income impacts (wages, salaries, and self-employed income), output (sales) impacts (gross business sales), and value-added impacts (difference between the value of goods and the cost of materials or supplies). Job and output (sales) impacts are equivalent metrics across both the commercial and recreational sectors. Income and value-added impacts are not equivalent, though similarity in the magnitude of multipliers may result in roughly equivalent values. Neither income nor value-added impacts should be added to output (sales) impacts because this would result in double counting. Job and output (sales) impacts, however, may be added across sectors.

The current model to derive business activity is based on the number of recreational trips for a species. Because these trips for golden tilefish are relatively sparse (see **Tables 3-13** through **3-16**), estimates of economic activity generated by the recreational sector for the golden tilefish

portion of the snapper grouper fishery reflect such sparse data. Estimates of the average golden tilefish recreational effort (2005-2010) and associated economic impacts (2008 dollars) are provided in **Table 3-20**. Target trips were used as the measure of recreational effort. As previously discussed, more trips may catch a species than target the species. Where such occurs, estimates of the economic activity associated with the average number of catch trips can be calculated based on the ratio of catch trips to target trips because the average output impact and jobs per trip cannot be differentiated by trip intent.

It should be noted that output impacts and value added impacts are not additive and the impacts for individual species should not be added because of possible duplication (some trips may target multiple species). Also, the estimates of economic activity should not be added across states to generate a regional total because state-level impacts reflect the economic activity expected to occur within the state before the revenues or expenditures "leak" outside the state, possibly to another state within the region. Under a regional model, economic activity that "leaks" from, for example, Florida into Georgia would still occur within the region and continue to be tabulated. As a result, regional totals would be expected to be greater than the sum of the individual state totals. Regional estimates of the economic activity associated with golden tilefish recreational fishing are unavailable at this time.

Table 3-20. Summary of golden tilefish target trips (2005-2010 average) and associated economic activity (2008 dollars). Output and value added impacts are not additive.

	North Carolina	South Carolina	Georgia	East Florida
	Shore Mode			
Target Trips	0	0	0	0
Output Impact	$0	$0	$0	$0
Value Added Impact	$0	$0	$0	$0
Jobs	0	0	0	0
	Private/Rental Mode			
Target Trips	40	0	0	1595
Output Impact	$2,183	$0	$0	$60,315
Value Added Impact	$1,231	$0	$0	$36,042
Jobs	0	0	0	1
	Charter Mode			
Target Trips	105	0	0	0
Output Impact	$40,875	$0	$0	$0
Value Added Impact	$22,939	$0	$0	$0
Jobs	1	0	0	0
	All Modes			
Target Trips	145	0	0	1595
Output Impact	$43,058	$0	$0	$60,315
Value Added Impact	$24,170	$0	$0	$36,042
Jobs	1	0	0	1

Source: Effort data from the MRFSS, economic activity results calculated by NMFS SERO using the model developed for NOAA/NMFS (2009).

Because the headboat sector in the Southeast is not covered by the MRFSS/MRIP, the current model used in deriving estimates could not provide this sector's estimates of economic activity. In the particular case of golden tilefish, estimating economic activity of the headboat sector is also unnecessary because this sector did not report any landings of the species during the period considered.

3.3.2.5 Financial Operations of the Charter and Headboat Sectors

Holland et al. (1999) estimated that the charterboat fee in the South Atlantic ranged from $292 to $2,000. The actual cost depended on state, trip length, and the variety of services offered by the charter operation. Depending on the state, the average fee for a half-day trip ranged from $296 to $360, for a full day trip the range was $575 to $710, and for an overnight trip the range was $1,000 to $2,000. Most (>90%) Florida charter operators offered half-day and full-day trips and about 15% of the fleet offered overnight trips. In comparison, only about 3% of operations in the other South Atlantic states offered overnight trips.

For headboats, the average fee in Florida was $29 for a half-day trip and $45 for a full day trip. For North and South Carolina, the average base fee was $34 per person for a half-day trip and $61 per person for a full day trip. Most of these headboat trips operated in Federal waters in the South Atlantic (Holland et al. 1999).

Capital investment in charter vessels averaged $109,301 in Florida, $79,868 for North Carolina, $38,150 for South Carolina and $51,554 for Georgia (Holland et al. 1999). Charterboat owners incur expenses for inputs such as fuel, ice, and tackle in order to offer the services required by their passengers. Most expenses incurred in 1997 by charter vessel owners were on crew wages and salaries and fuel. The average annual charterboat business expenditures incurred was $68,816 for Florida vessels, $46,888 for North Carolina vessels, $23,235 for South Carolina vessels, and $41,688 for vessels in Georgia in 1997. The average capital investment for headboats in the South Atlantic was approximately $220,000 in 1997. Total annual business expenditures averaged $135,737 for headboats in Florida and $105,045 for headboats in other states in the South Atlantic.

The 1999 study on the for-hire sector in the Southeastern U.S. presented two sets of average gross revenue estimates for the charter and headboat sectors in the South Atlantic (Holland et al. 1999). The first set of estimates were those reported by survey respondents and were as follows: $51,000 for charterboats on the Atlantic coast of Florida; $60,135 for charterboats in North Carolina; $26,304 for charterboats in South Carolina; $56,551 for charterboats in Georgia; $140,714 for headboats in Florida; and $123,000 for headboats in the other South Atlantic states (Holland et al. 1999). The authors generated a second set of estimates using the reported average trip fee, average number of trips per year, and average number of passengers per trip (for the headboat sector) for each vessel category for Florida vessels. Using this method, the resultant average gross revenue figures were $69,268 for charterboats and $299,551 for headboats. Since the calculated estimates were considerably higher than the reported estimates (22% higher for charterboats and 113% higher for headboats), the authors surmised that this was due to

sensitivity associated with reporting gross receipts, and subsequent under reporting. Alternatively, the respondents could have overestimated individual components of the calculated estimates. Although the authors only applied this methodology to Florida vessels, assuming the same degree of under reporting in the other states results in the following estimates in average gross revenues: $73,365 for charterboats in North Carolina, $32,091 for charterboats in South Carolina; $68,992 for charterboats in Georgia; and $261,990 for headboats in the other South Atlantic states.

It should be noted that the study's authors were concerned that while the reported gross revenue figures may be underestimates of true vessel income, the calculated values could overestimate gross income per vessel from for-hire activity (Holland et al. 1999). Some of these vessels are also used in commercial fishing activities and that income is not reflected in these estimates.

A more recent study of the North Carolina for-hire fishery provides some updated information on the financial status of the for-hire fishery in the state (Dumas et al. 2009). Depending on vessel length, regional location, and season, charter fees per passenger per trip ranged from $168.14 to $251.59 for a full-day trip and from $93.63 to $123.95 for a half-day trip; headboat fees ranged from $72.50 to $81.78 for a full-day trip and from $38.08 to $45 for a half-day trip. Charterboats generated a total of $55.7 million in passenger fees, $3.2 million in other vessel income (e.g., food and beverages), and $4.8 million in tips. The corresponding figures for headboats were $9.8 million in passenger fees, $0.2 million in other vessel income, and $0.9 million in tips. Non-labor expenditures (e.g., boat insurance, dockage fees, bait, ice, fuel) amounted to $43.6 million for charterboats and $5.3 million for headboats. Summing across vessel lengths and regions, charter vessels had an aggregate value (depreciated) of $120.4 million and headboats had an aggregate value (depreciated) of $10.2 million.

3.4 Social and Cultural Environment

Descriptions of the social and cultural environment of the snapper grouper fishery are contained in Jepson et al. (2005) and Amendment 17B (SAFMC 2010b), and are incorporated herein by reference. Because so many communities in the South Atlantic benefit from snapper grouper fishing, discussion of affected communities focuses on "indicator communities", defined as communities thought to be most heavily impacted by snapper grouper regulations.

Indicator communities were identified primarily based on permit and employment activity using data obtained from the U.S. Bureau of the Census (Census) and from state and federal permitting agencies. Census data must be used with caution because it is collected every ten years and may not reflect shifting community demographics or key changes in business activity. Further, census estimates do not include seasonal visitors and tourists, those that live less than half the year in the surveyed area, and some types of labor, such as day laborers, undocumented crew members, or family members that help with bookkeeping responsibilities.

To help fill information gaps, members of the South Atlantic Council's Snapper grouper Advisory Panel, South Atlantic Council members, and representatives from the angling public identified communities they believed would be most impacted by the management measures proposed in Amendment 13C on the species addressed by this amendment. Details of their designation of particular communities, and the factors considered in this designation, can be found in Amendment 13C (SAFMC 2006).

3.4.1 North Carolina

Overview

Of the four states in the South Atlantic region, North Carolina (**Figure 3-3**) is often recognized as possessing the most "intact" commercial fishing industry; that is, it is more robust in terms of viable fishing communities and fishing industry activity than the other three South Atlantic states. North Carolina offers a wide variety of fishing opportunities, including sound fishing, trolling for tuna, bottom fishing, and shrimping. Perhaps because of the wide variety of fishing opportunities, fishermen have been better able to adapt to regulations and coastal development pressures, adjusting their annual fishing patterns as times have changed. More detailed information on North Carolina fishing communities can be found in Amendment 17B (SAFMC 2010b).

Many fishermen in North Carolina work under the dual jurisdiction of the Mid-Atlantic Fishery Management Council and the South Atlantic Fishery Management Council.

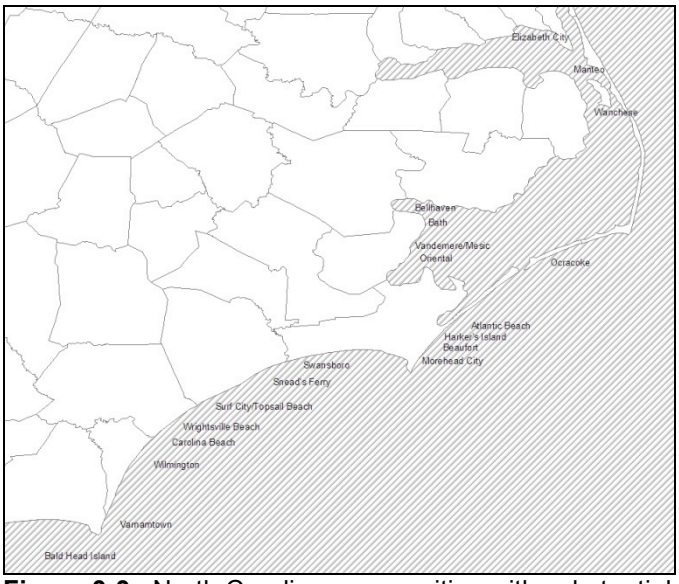

Figure 3-3. North Carolina communities with substantial fishing activity, as identified by South Atlantic Advisory Panels.
Source: Jepson et al. (2005).

Commercial Fishing

There has been a steady decline in the number of federal commercial snapper grouper permits North Carolina since 1999, with 194 South Atlantic Unlimited Snapper Grouper Permits in 1999, but only 114 in 2012 (**Table 3-21**). The number of South Atlantic 225-Pound Trip Limit Snapper Grouper Permits have similarly declined from 36 to 7 over the same period. Brunswick County and Carteret County have the largest number of permits, making up over half of all federal permits in North Carolina. Carteret County and Dare County also have the largest number of snapper grouper dealer permits in the state.

Table 3-21. Federal commercial snapper grouper permits and snapper grouper dealer permits in North Carolina (2012).

County*	Unlimited SG Permits	225-pound Limit SG Permits	SG Dealer Permits
Brunswick	34	2	5
Carteret	21	0	10
Dare	16	3	9
New Hanover	16	1	7
Onslow	10	1	6
Pender	9	0	2
Other	8	0	6
Total	**114**	**7**	**45**

* Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012

North Carolina fishermen demographics are detailed in Cheuvront and Neal (2004). Ninety-eight percent of surveyed fishermen were white and 58% had completed some college or had graduated from college. Of those who chose to answer the question, 27% of respondents reported a household income of less than $30,000 per year, and 21% made at least $75,000 per year. On average, respondents had been fishing for 18 years, and had lived in their communities for 27 years.

Cheuvront and Neal (2004) also provided an overview of how North Carolina commercial snapper grouper fishermen carry out their fishery. Approximately 65% of surveyed fishermen indicated year-round fishing. Golden tilefish is harvested by commercial fishermen, but on a smaller scale than the two dominant species, black sea bass and vermilion snapper. Fishermen also target gag grouper, king mackerel, red grouper, scamp, snowy grouper, grunts, and triggerfish. Non-snapper grouper complex species landed by at least 5% of the fishermen in any given month included Atlantic croaker, yellowfin tuna, bluefin tuna, dolphin, and shrimp.

According to Accumulative Landing System (ALS) data[4] from the Southeast Fisheries Science Center, North Carolina golden tilefish annual landings during 1986 to 1996 ranged from about 70,000 pounds to over 180,000 pounds, with almost all landings in New Hanover County and Brunswick County. In the past 15 years, all golden tilefish commercial landings in North Carolina have declined with very low landings only in Dare County in recent years. In general, commercial fishing communities targeted black sea bass and vermilion snapper, with cumulative landings between 1-2 million pounds for Dare, Brunswick, New Hanover, Onslow and Carteret Counties.

Recreational Fishing

Recreational fishing is well developed in North Carolina and, due to natural geography, is not limited to areas along the coast. Golden tilefish is recreationally harvested on charter trips, although private anglers also target and catch the species (see **Section 3.3.2** for more detail on recreational landings and effort). Because golden tilefish live in deep water and in muddy habitat, special gear and knowledge are required to deep-drop fish for tilefish.

North Carolina offers several types of private recreational licenses for residents and visitors, and for different durations (10-day, annual, and lifetime). Non-resident recreational license sales are high, indicating how coastal recreational fishing is tied to coastal tourism in the state. In general recreational license sales have remained stable or increased, with the exception of annual non-resident license sales, which have declined in recent years (**Table 3-22**)

[4] This information is not shown in a table because most of the data are confidential (fewer than 3 dealers) at the county level.

Table 3-22. Coastal recreational fishing license sales by year and type.

License Type	2007	2008	2009	2010	2011
Annual Resident	23,793	19,222	19,398	20,254	19,270
Annual non-Resident	179,923	143,810	142,569	141,475	130,743
10-day Resident	40,255	39,110	45,724	47,619	45,467
10-day Non-Resident	131,105	125,564	132,193	137,066	130,026

Source: NC Division of Marine Fisheries, 2011

Golden tilefish are also important to the for-hire recreational sector, and are targeted along with other deepwater snapper grouper species on deep-drop charter trips. In 2012, there were 251 South Atlantic federal charter permits for snapper grouper registered to individuals in North Carolina (**Table 3-23**). A majority of the charter permits are from Dare County, Brunswick County, and Carteret County, while a lesser quantity are in New Hanover, Wake, and Onslow counties.

Table 3-23. Federal charter permits for snapper grouper in North Carolina (2012).

County*	Charter SG Permits
Brunswick	43
Carteret	31
Craven	2
Currituck	4
Dare	79
Guilford	3
Hyde	5
Mecklenburg	3
New Hanover	25
Onslow	7
Pasquotank	3
Pender	6
Pitt	3
Wake	12
Other	25
Total	**251**

* Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012

3.4.2 South Carolina

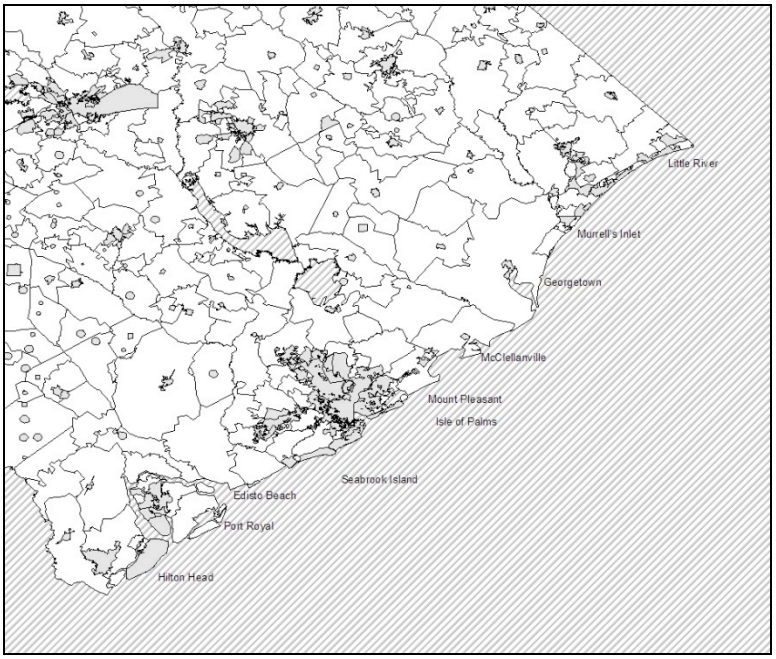

Figure 3-4. South Carolina communities with substantial fishing activity, as identified by South Atlantic Advisory Panels.
Source: Jepson et al. (2005).

Overview

South Carolina communities with substantial fishing activity are less developed than those in North Carolina and, over the past 20 to 30 years, the state has seen much more tourist-oriented development along its coasts than Georgia or North Carolina. In Horry County, the urban area of Myrtle Beach has expanded greatly in the past few decades, and much of the coastal area has been developed as vacation homes, condominiums, and golf courses. The communities most impacted by this development are Little River, Murrells Inlet, Pawleys Island, and Georgetown, although the latter three are located in Georgetown County (**Figure 3-4**). The same is true of rapid developing Charleston County, and the cities and communities of McClellanville, Mt. Pleasant, Sullivans Island, Wadmalaw and Edisto Islands feel the impact of urban sprawl from the city of Charleston. Further south along the coast, the Hilton Head Island resort development has been the impetus for changing coastal landscapes in the small towns of Port Royal, Beaufort, St. Helena Island, and Bluffton. More information about South Carolina fishing communities can be found in Amendment 17B (SAFMC 2010b).

Commercial Fishing

While pockets of commercial fishing activities remain in the state, most are being displaced by the development forces and associated changes in demographics. The number of South Atlantic Unlimited Snapper Grouper Permits, however, increased from 74 in 1999 to 87 in 2004, but declined to 54 by 2012. The number of South Atlantic 225 Pound Trip Limit Snapper Grouper Permits decreased from 12 to only two permits since 1999 (**Table 3-24**).

Table 3-24. Federal commercial snapper grouper permits and snapper grouper dealer permits in South Carolina (2012).

County*	Unlimited SG Permits	225-pound Limit SG Permits	SG Dealer Permits
Beaufort	0	1	0
Berkeley	1	0	0
Charleston	9	0	6
Florence	2	0	0
Georgetown	13	0	2
Hampton	2	0	0
Horry	19	1	6
Other	8	0	0
Total	**54**	**2**	**14**

*Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012

According to ALS data (and as with North Carolina, the information is not shown because most of the data are confidential at the county level), Horry County and Georgetown County reported the highest levels of golden tilefish commercial landings from 1986 to about 2000. After 2000, Horry County had the highest landings but all landings dropped off significantly in 2006. Since 2006, only Charleston County and Horry County have reported any golden tilefish commercial landings.

Recreational Fishing

Many areas that used to be dedicated to commercial fishing endeavors are now geared towards the private recreational angler and for-hire sector. The number of federal snapper grouper charter permits held by South Carolina residents increased from 41 in 1999 to 111 in 2004, and in 2012 there were 109 charter permits registered to individuals in South Carolina (**Table 3-25**). Most of the permits were based in Georgetown and Horry counties, with some permits also in the counties of Georgetown and Charleston.

Table 3-25. Federal charter permits for snapper grouper in South Carolina (2012).

County*	Charter SG Permits
Beaufort	18
Charleston	41
Georgetown	16
Horry	23
Other	11
Total	**109**

*Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012

The majority of South Carolina saltwater anglers target coastal pelagic species such as king mackerel, Spanish mackerel, tunas, dolphins, and billfish. A lesser number focus primarily on bottom fish such as snapper and groupers and often these species are the specialty of the headboats that run out of Little River, Murrells Inlet, and Charleston. There are 35 coastal marinas in the state and 34 sport fishing tournaments. South Carolina offers private recreational licenses for residents and visitors, and sales of all license types have more than doubled since 2006 (**Table 3-26**).

Table 3-26. Sales of all saltwater recreational license types in South Carolina.

Year	Number of Licenses Sold
2006	106,385
2007	119,255
2008	132,324
2009	124,193
2010	208,204
2011	218,834

Source: SC DNR.

3.4.3 Georgia

Overview

Only one community in Georgia (Townsend) lands a substantial amount of snapper grouper species but in general golden tilefish is not a significant part of the commercial harvest. Other parts of the state involved in the commercial harvest of seafood are focused on penaeid shrimp, blue crabs, and other finfish such as flounder, shad, croaker, and mullet. For more detailed information on Georgia fishing communities, see Amendment 17B (SAFMC 2010b).

Commercial Fishing

In 2012, there are only nine commercial South Atlantic Unlimited Snapper Grouper Permits registered to Georgia permit holders, and only two Snapper Grouper Dealer Permits (**Table 3-27**). Many Georgia fishermen target shrimp or hold state commercial fishing permits.

Table 3-27. Federal commercial snapper grouper permits and snapper grouper dealer permits in Georgia (2012).

Home Port (County)	Unlimited SG Permits	SG Dealer Permits
Chatham	1	0
Glynn	1	1
McIntosh	4	1
Other	3	0
Total	**9**	**2**

Source: NMFS Permits Database, 2012

According to ALS data (which are not shown because most of the data are confidential at the county level), golden tilefish were landed in McIntosh County annually between 1986 and 1998, with the highest level of landings reaching almost 100,000 pounds in one year. Commercial landings have been minimal in all Georgia counties since 1999, and in 2010 and 2011 no commercial landings of golden tilefish were reported from Georgia counties.

Recreational Fishing

As observed in other areas, the number of charter permits held by Georgia residents increase markedly from five permits in 1999 to 29 permits in 2012 (**Table 3-28**). However, the number of charter vessels is small relative to other states in the South Atlantic. Most of the charter operations are based in Savannah, Tybee Island, and around St. Simons. For-hire fishing services and private recreational fishing are tied to coastal tourism in Georgia.

Table 3-28. Federal charter permits for snapper grouper in Georgia (2012).

County*	Charter SG Permits
Bryan	2
Chatham	10
Glynn	6
McIntosh	1
Other	10
Total	**29**

*Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012

Private recreational licenses in Georgia are included in a combination saltwater/freshwater license and offered in short-term and long-term licenses. Although license holders may or may not fish for saltwater species, license sales over the past five years (**Table 3-29**) suggest that in general, private recreational fishing in Georgia has stayed fairly steady with the exception of 2009, when license sales dropped for one year.

Table 3-29. Sales of recreational fishing license types that include saltwater in Georgia.

Year	Number of Licenses Sold
2007	592,633
2008	526,294
2009	325,189
2010	567,175
2011	529,850

Source: GA DNR, 2011.

3.4.4 Florida

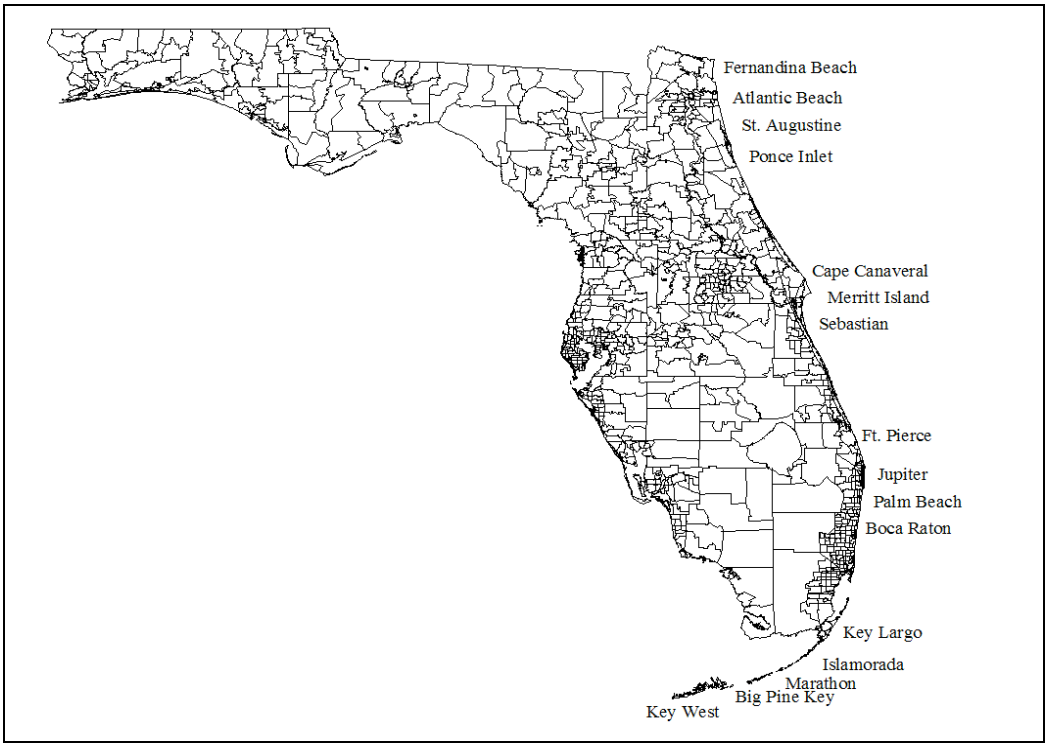

Figure 3-5. Florida communities with substantial fishing activity. Identified by South Atlantic Advisory Panels.
Source: Jepson et al. (2005).

Overview

Florida stands apart from other states in the South Atlantic region in fishing behaviors, history, and demographics. Along with being heavily populated on land, coastal waters off Florida are also heavily used by recreational users of all kinds. This growth of a leisured class occupying coastal areas has led, in part, to conflicts over natural resource access and use-rights.

The natural geography of Florida also sets it apart from other South Atlantic states, particularly in the area from central Florida through the Keys. The weather is amenable to fishing almost year round, though hurricanes in 2004 and 2005 were particularly devastating and took a toll on all fisheries in the state, on both east and west coasts. There was also a cold-water event that started near West Palm Beach in 2003, which moved up the east coast causing a substantial decline in snapper grouper fishing that year. The continental shelf is much narrower in Florida than elsewhere in the region, allowing fishermen to access deep waters quickly and return the same day. Finally, the species of snapper grouper available to fishermen in southern Florida are different than further north, with yellowtail snapper, gag and black grouper, and other alternative species such as stone crab, spiny lobster, dolphin, kingfish, and billfish allowing a greater variety of both commercial and recreational fishing opportunities. These fisheries are

important to many Florida communities identified by the Snapper grouper Advisory Panel as shown in **Figure 3-5**.

Commercial and recreational fishermen in the Florida Keys commonly fish both Gulf and Atlantic sides, and work under dual jurisdiction of the South Atlantic Council and the Gulf of Mexico Fishery Management Council.

Commercial Fishing

Despite the high population growth rates and emphasis on a tourism economy in Florida, the commercial fishing sector in Florida is still robust in some areas. There are several important communities that target snapper grouper species such as Mayport, Jacksonville, and Cocoa Beach, along with Key West, Marathon, and Tavernier in the Florida Keys. Additional detailed information about Florida fishing communities can be found in Amendment 17B (SAFMC 2010b).

Florida has almost always had the highest levels of commercial landings of golden tilefish (see **Section 3.3.1**). In 2012, 489 federal snapper grouper commercial permits (376 Unlimited and 113 Limited) are registered to individuals in Florida (**Table 3-30**). Monroe County (Florida Keys) has the most unlimited and South Atlantic 225 Pound Trip Limit Snapper Grouper Permits, and the most snapper grouper dealer permits. Miami-Dade, Palm Beach, Duval, Volusia, and Brevard Counties also have high levels of commercial permits in the state.

Table 3-30. Federal commercial snapper grouper permits and snapper grouper dealer permits in Florida (2012).

County*	Unlimited SG Permits	225-pound Limit SG Permits	SG Dealer Permits
Brevard	20	5	6
Broward	6	5	13
Duval	27	1	3
Indian River	9	3	2
Martin	6	1	2
Miami-Dade	67	8	9
Monroe	163	59	22
Nassau	4	0	0
Palm Beach	30	16	8
St Johns	7	2	2
St Lucie	5	4	2
Volusia	17	0	7
Other	19	9	24
Total	**376**	**113**	**100**

*Based on the mailing address of the permit holder.
Source: NMFS Permits Database, 2012.

According to ALS data (not available to be shown due to confidentiality concerns at the county level), Volusia County, St. Lucie County and Brevard County have reported the highest levels of golden tilefish landings since 1986. Golden tilefish landings overall peaked in the mid-1990s and have declined significantly, and St. Lucie County in particular experienced the largest drop in landings. In the most recent five years, Brevard County has increased landings but not to as high of a level as St. Lucie and Volusia. Additionally, Palm Beach County, Martin County, and Indian River County have also increased golden tilefish landings in recent years.

Recreational Fishing

Similar to North Carolina and South Carolina, recreational fishing for golden tilefish is growing in popularity as the special type of fishing known as deep-dropping, which targets deepwater fish such as tilefish and snowy grouper, increases. Golden tilefish are not often caught by private anglers and recreational fishermen on charter trips due to the specific gear and knowledge required to deep-drop.

In 2012 there are 903 federal charter permits for snapper grouper issued to individuals in Florida (**Table 3-31**). Similar to federal commercial snapper grouper permits, Monroe County held the majority on charter permits, followed by Brevard, Palm Beach, Miami-Dade, Volusia, and Broward Counties.

Table 3-31. Federal charter permits for snapper grouper in Florida (2012).

County*	Charter SG Permits
Brevard	62
Broward	62
Duval	18
Indian River	19
Martin	12
Miami-Dade	43
Monroe	310
Nassau	6
Palm Beach	54
St Johns	21
St Lucie	6
Volusia	35
Other	255
Total	**903**

Source: NMFS Permits Database, 2012.

In 2010/2011, there were approximately 860,000 resident licenses and 394,000 non-resident licenses sold in Florida (FWC 2012). Eastern Florida recreational anglers took 10 million fishing trips: 5.4 million by private/rental boats, 4.5 million from shore, and 180,000 by party/charter boat (NOAA/NMFS 2009).

3.4.5 Environmental Justice Considerations

Executive Order 12898 requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. This executive order is generally referred to as environmental justice (EJ).

To evaluate EJ considerations for the proposed actions, information on poverty and minority rates is examined at the county level. Information on the race and income status for groups at the different participation levels (vessel owners, crew, dealers, processors, employees, employees of associated support industries, etc.) is not available. Because the proposed actions would be expected to affect fishermen and associated industries in several communities along the South Atlantic coast and not just those profiled, it is possible that other counties or communities have poverty or minority rates that exceed the EJ thresholds.

To identify the potential for EJ concern, the rates of minority populations (non-white, including Hispanic) and the percentage of the population that was below the poverty line were examined. The threshold for comparison that was used was 1.2 times the state average for minority population rate and percentage of the population below the poverty line. If the value for the community or county was greater than or equal to 1.2 times the state average, then the community or county was considered an area of potential EJ concern. Census data for the year 2000 were used. Estimates of the state minority and poverty rates, associated thresholds, and community rates are provided in **Table 3-32**; note that only communities that exceed the minority threshold and/or the poverty threshold are included in the table**.**

While some communities expected to be affected by this proposed amendment may have minority or economic profiles that exceed the EJ thresholds and, therefore, may constitute areas of concern, significant EJ issues are not expected to arise as a result of this proposed amendment. No adverse human health or environmental effects are expected to accrue to this proposed amendment, nor are these measures expected to result in increased risk of exposure of affected individuals to adverse health hazards. The proposed management measures would apply to all participants in the affected area, regardless of minority status or income level, and information is not available to suggest that minorities or lower income persons are, on average, more dependent on the affected species than non-minority or higher income persons.

Golden tilefish are an important commercial species throughout the South Atlantic region, and specifically in Florida, and the fish are also targeted by recreational fishermen. The actions in this proposed amendment are expected to incur social and economic benefits to users and communities by implementing management measures that would contribute to conservation of the golden tilefish stock and to maintaining the commercial and recreational sectors of the fishery. Although there will be some short-term impacts due to limitation of participation through the commercial endorsements and implementation of catch limits and other management measures, the overall long-term benefits of maintaining the golden tilefish stock at optimum yield are expected to contribute to the social and economic health of South Atlantic communities.

Table 3-32. Environmental Justice thresholds (2010 U.S. Census data) for counties in the South Atlantic region. Only coastal counties (east coast for Florida) with minority and/or poverty rates that exceed the state threshold are listed.

State	County	Minority Rate	Minority Threshold*	Poverty Rate	Poverty Threshold*
Florida		**47.4**	**56.88**	**13.18**	**15.81**
	Broward	52.0	-4.6	11.7	4.11
	Miami-Dade	81.9	-34.5	16.9	-1.09
	Orange County	50.3	-2.9	12.7	3.11
	Osceola	54.1	-6.7	13.3	2.51
Georgia		**50.0**	**60.0**	**15.0**	**18.0**
	Liberty	53.2	-3.2	17.5	0.5
South Carolina		**41.9**	**50.28**	**15.82**	**18.98**
	Colleton	44.4	-2.5	21.4	-2.42
	Georgetown	37.6	4.3	19.3	-0.32
	Hampton	59.0	-17.1	20.2	-1.22
	Jasper	61.8	-19.9	9.9	-0.92
North Carolina		**39.1**	**46.92**	**15.07**	**18.08**
	Bertie	64.6	-25.50	22.5	-4.42
	Chowan	39.2	-0.1	18.6	-0.52
	Gates	38.8	0.3	18.3	-0.22
	Hertford	65.3	-26.2	23.5	-5.42
	Hyde	44.5	-5.4	16.2	1.88
	Martin	48.4	-9.3	23.9	-5.82
	Pasquotank	43.4	-4.3	16.3	1.78
	Perquimans	27.7	11.4	18.6	-0.52
	Tyrrell	43.3	-4.2	19.9	-1.82
	Washington	54.7	-15.6	25.8	-7.72

*The county minority and poverty thresholds are calculated by comparing the county minority rate and poverty estimate to 1.2 times the state minority and poverty rates. A negative value for a county indicates that the threshold has been exceeded.
Source: U.S. Census Database, 2010.

Finally, the general participatory process used in the development of fishery management measures in this amendment (e.g., scoping meetings, public hearings, and open South Atlantic Council meetings) provided sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process and have their concerns factored into the decision process. Public input from individuals who participate in the fishery has been considered and incorporated into management decisions throughout development of the amendment.

3.5 Administrative Environment

3.5.1 The Fishery Management Process and Applicable Laws

3.5.1.1 Federal Fishery Management

Federal fishery management is conducted under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (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 U.S. EEZ, an area extending 200 nautical miles 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 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 of Commerce (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 NOAA Fisheries Service.

The South Atlantic Council is responsible for conservation and management of fishery resources in Federal waters of the U.S. South Atlantic. These waters extend from 3 to 200 miles offshore from the seaward boundary of the States of North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has thirteen voting members: one from NOAA Fisheries Service; 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 South Atlantic 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, State Department, and Atlantic States Marine Fisheries Commission (ASMFC). The South Atlantic Council has adopted procedures whereby the non-voting members serving on the South Atlantic Council Committees have full voting rights at the Committee level but not at the full Council level. South Atlantic Council members serve three-year terms and are recommended by State Governors and appointed by the Secretary of Commerce 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 matters, are open to the public. The South Atlantic Council uses a Scientific and

Statistical Committee 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 Procedures Act, in the form of "notice and comment" rulemaking.

3.5.1.2 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 Environment and Natural Resources. The Marine Resources Division of the South Carolina Department of Natural Resources regulates South Carolina's marine fisheries. Georgia's marine fisheries are managed by the Coastal Resources Division of the Department of Natural Resources. The Marine Fisheries Division 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 the Atlantic States Marine Fisheries Commission (ASMFC) in management of marine fisheries. This commission was created to coordinate state regulations and develop management plans for interstate fisheries. It has significant authority, through the Atlantic Striped Bass Conservation Act and the Atlantic Coastal Fisheries Cooperative Management Act, to compel adoption of consistent state regulations to conserve coastal species. The ASFMC is also represented on the Council and has voting authority at the Committee level but not at the Council level.

NOAA Fisheries Service' 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.

3.5.1.3 Enforcement

Both the National Oceanic and Atmospheric Administration (NOAA) Fisheries Office for Law Enforcement (NOAA/OLE) and the United States Coast Guard (USCG) have the authority and the responsibility to enforce South Atlantic 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.

NOAA General Counsel issued a revised Southeast Region Magnuson-Stevens Act Penalty Schedule in June 2003, which addresses all Magnuson-Stevens Act violations in the Southeast Region. In general, this Penalty Schedule increases the amount of civil administrative penalties that a violator may be subject to up to the current statutory maximum of $120,000 per violation. NOAA General Counsel requested public comment through December 20, 2010 on a new draft policy.

Chapter 4. Environmental Consequences

4.1 Action 1. Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

Alternative 1 (No Action). Do not limit effort in the golden tilefish component of the snapper grouper fishery through an endorsement program.

Alternative 2 (Preferred). Limit golden tilefish effort through a golden tilefish longline endorsement program: Distribute golden tilefish longline endorsements to snapper grouper permit holders that qualify under the eligibility requirements specified under Action 2.

4.1.1 Biological Effects

Alternative 1 (No Action) would not limit effort in the golden tilefish component of the snapper grouper fishery. Due to recently implemented regulations for snapper grouper and shark species, there could be an increased incentive to target golden tilefish. An increase in participation in the golden tilefish sector would intensify the "race to fish" that already exists and has resulted in a shortened fishing season for the last six years. Since the reduced quota was put into place in October 2006, the fishing seasons for golden tilefish have been shortened to such a degree that South Carolina longline fishermen--who are typically unable to fish until April or May due to weather conditions--and commercial hook-and-line fishermen from Florida--who typically do not fish until the fall--are increasingly unable to fish for golden tilefish (**Table 4-1**). Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12 (SAFMC 2012)), if implemented by the Secretary of Commerce (Secretary), it would increase the commercial quota/annual catch limit (ACL) from 282,819 pounds gutted weight (gw) to 541,295 pounds gw. Regulatory Amendment 12 was approved by the South Atlantic Fishery Management Council (South Atlantic Council) and submitted to NOAA Fisheries Service for review by the Secretary. A Proposed Rule was published on July 20, 2012.

During 2004 to 2011, an average of 15 vessels with active snapper grouper permits used longline gear to catch golden tilefish; the number of vessels that used longline gear was highest in 2004 and 2010 (20 vessels) and lowest in 2006 (11 vessels; **Table 4-2**). Consistently more golden tilefish were taken with longline gear than hook-and-line gear. During 2004-2010, 92% of the golden tilefish landings from vessels with active snapper grouper permits were from longline gear and 8% were from hook-and-line gear (**Table 4-3**).

Current regulations for golden tilefish include a 4,000-pound gw trip limit until 75% of the quota is caught, after which a 300-pound gw trip limit is imposed. The South Atlantic Council is concerned an increase in participation in this portion of the snapper grouper fishery could deteriorate profits for current golden tilefish fishermen. In addition, more participants could make it more difficult to track the

commercial quota in a timely fashion and prevent overages given the existing NMFSS/NOAA quota monitoring program.

Table 4-1. Golden tilefish quota (pounds gw), quota monitoring system landings (pounds gw), date 300 pound gw trip limit went into effect, and date quota met.

Year	Quota	ALS Landings Data	Date 300-pound trip limit went into effect	Date Quota Met
2006	295,000	402,934	13C Effective 10/23/06	10/23/06
2007	295,000	300,724	5/17/07	10/3/07
2008	295,000	312,623	5/28/08	8/17/08
2009	295,000	337,488	4/21/09	7/15/09
2010	295,000	396,525	3/18/10	4/12/10
2011	282,819	356,843	Was not implemented	3/10/11
2012	282,819	365,171	Was not implemented	2/17/12

Source: Data for 2006-2011 from NMFS Accumulate Landings System (ALS) Database 9/2011. Preliminary landings for 2011 from SEFSC projection analyses. Preliminary landings for 2012 from SEFSC quota monitoring system.

Table 4-2. Number of vessels that caught golden tilefish with longline (LL) during 2004-2011. Data linked to active permits.

Year	# LL
2004	20
2005	13
2006	11
2007	16
2008	12
2009	12
2010	20
2011	18
Average	15

Source: NMFS logbook data associated with valid permits, 2011.

Table 4-3. Percentage of golden tilefish taken with longline and hook-and-line gear during 2004-2011.

Year	% H&L	% LL
2004	8%	92%
2005	10%	89%
2006	9%	91%
2007	14%	86%
2008	7%	93%
2009	4%	95%
2010	7%	93%
2011	3%	96%
Average	8%	92%

Source: NMFS Logbooks, October 19, 2011.

Alternative 2 (Preferred) would limit golden tilefish effort through a golden tilefish longline endorsement program. This endorsement would be required for fishermen with commercial snapper grouper permits to land golden tilefish with longline gear. Fishermen who did not have a longline endorsement but have a snapper grouper federal commercial permit would still be able to land golden tilefish with hook-and-line gear. Longline gear is more efficient than hook-and-line gear in capturing golden tilefish. Currently, anyone with a commercial snapper grouper permit can use longline gear or hook-and-line gear. As there were 763 commercial snapper grouper permits in 2010, there is substantial potential for an increase in the number of commercial snapper grouper vessels using longline gear (Table 3-4 from Amendment 18A SAFMC 2011f).

The commercial annual catch limit (ACL) for golden tilefish can be expected to be met rapidly and promote derby conditions when there are a large number of individual vessels using longline gear. Allowing more efficient gear to capture golden tilefish would not be expected to negatively impact the stock since ACLs and accountability measures (AMs) are in place to prevent overfishing. However, when the ACL is met very rapidly, it is difficult to monitor landings with the existing NMFS/NOAA quota monitoring system and the ACL can be exceeded, which could negatively impact the stock. **Alternative 2 (Preferred)** could have positive biological effects on the stock if it slows the rate at which the commercial ACL is met and helps to prevent overages from occurring.

Alternative 1 (No Action) would likely perpetuate the existing level of risk for interactions between Endangered Species Act (ESA)-listed species and the golden tilefish portion of the snapper grouper fishery. None of the alternatives are likely to have adverse effects on listed *Acropora* species. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect these species. Alternatives in this amendment are unlikely to alter fishing behavior in a way that would cause new adverse effects to *Acropora* species. **Alternative 2 (Preferred)** is unlikely to have adverse effects on listed Atlantic sturgeon since golden tilefish are harvested well offshore from where Atlantic sturgeon occur. The impacts from **Alternative 2 (Preferred)** on sea turtles and smalltooth sawfish are unclear. However, the degree of risk reduction to ESA-listed species is relative to overall effort reduction. If **Alternative 2 (Preferred)** reduce fishing effort in the golden tilefish component of the snapper grouper fishery, the risk of interaction between sea turtles and smalltooth sawfish would likely decrease.

4.1.2 Economic Effects

One way of addressing overcapacity or impending overcapacity in the commercial sector of the golden tilefish portion of the snapper grouper fishery is through the establishment of an endorsement program. Overcapacity may be considered capacity in excess of management targets, such as quotas. In a capacity study using 2004 data, golden tilefish was found to have a fishing capacity well below the quota (NMFS 2008). In 2006, the quota was reduced by approximately 71% in order to address the overfishing condition of the stock. With such quota reduction, overcapacity may have characterized the fishery since then. This is partly demonstrated by quota overages and diminishing fishing season over the last 6 years.

The most recent stock assessment (SEDAR 25 2011) concluded golden tilefish is neither overfished nor undergoing overfishing, thus paving the way for a likely upward quota adjustment through Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12), which is under review by the Secretary. If fishing capacity were the same as in 2004, a quota increase would lessen overcapacity in the golden tilefish segment of the snapper grouper fishery. There are, however, certain indications that fishing capacity has not remained constant since 2004. Several amendments to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP), including the 4-month seasonal closure on shallow-water grouper (Amendment 16 to the Snapper Grouper FMP; SAFMC 2009a), imposed increasing restrictions on the various segments of the fishery to address overfished and overfishing concerns over those stocks, and compelled redirection of physical and human capital to harvesting golden tilefish. Moreover, the shortened fishing seasons over the past years invited more effort into the golden tilefish portion of the snapper grouper fishery, leaving certain regular participants, such as the longline fishermen in South Carolina and hook-and-line fishermen in Florida, unable to continue their golden tilefish fishing activities. It would appear then that the quota increase proposed by the South Atlantic Council in Regulatory Amendment 12 (SAFMC 2012) (under Secretarial Review) would not be sufficient to address overcapacity in the golden tilefish segment of the snapper grouper fishery.

Alternative 1 (No Action) would not limit participation or effort in the golden tilefish portion of the snapper grouper fishery. The incentive to "race to fish" would remain fully intact. As a result, an increase in the number of fishermen targeting golden tilefish could occur, and the probability of a full derby fishery developing would increase. The unintended consequences of a derby fishery, such as decrease profitability, poor business planning, and safety at sea concerns, would ensue. A quota increase may be expected to address these issues but likely on a short-term basis only.

An endorsement system proposed under **Alternative 2 (Preferred)** would limit the number of commercial participants who harvest golden tilefish using longline gear. Some of the alternatives on endorsement eligibility in **Action 2** would even reduce the number of longline participants. Given that the longline sector has accounted for over 90% of commercial landings of golden tilefish, an endorsement system for this sector along with the quota increase proposed by the South Atlantic Council in Regulatory Amendment 12 (SAFMC 2012) (under Secretarial Review) would help to address overcapacity and effort expansion in the commercial sector.

However, it is likely that the effects of an endorsement system would be temporary. Unlike a management system, such as a catch share program, that provides harvesting privileges to qualified participants, an endorsement system would not eliminate the underlying incentive to "race to fish". Effort

and capital stuffing (the tendency to invest excessively in productive inputs such as hull, engine or gear) would not be totally constrained because eligible longline participants would still have the incentive expand effort, especially if they perceive the endorsement system as a prelude to a catch share program. In addition, expansion of the hook-and-line sector could still occur. Perhaps, the best an endorsement program can do is to prevent a surge in effort from other sources than those who would be included in the longline endorsement program and the hook-and-line sector in the short term.

An endorsement program coupled with a quota increase, as proposed by the South Atlantic Council in Regulatory Amendment 12 (under review by the Secretary), can better address overcapacity and delaying the development of a full derby than either measure alone. Together, they offer a higher likelihood of extending the fishing season and thereby providing opportunities for the industry to remain profitable. Nevertheless, it is recognized that the combined effects of an endorsement and quota increase would be transitory. With the incentive to "race to fish" still intact, fishermen could adapt to the new quota and the endorsement system and increase their effort over time.

4.1.3 Social Effects

Alternative 1 (No Action) would not make any changes to the current management of golden tilefish. As a result, all current fishing practices would be allowed to continue and no changes in status quo social benefits would be expected. As discussed in **Section 3.3**, however, these status quo conditions are expected to continue a functional reallocation of the golden tilefish commercial quota to Florida fishermen at the expense of fishermen in North Carolina and South Carolina. This is due to recent management restrictions and traditional fishing patterns where weather is a key determinant of when fishermen from different states are able to participate in this component of the snapper grouper fishery. While Florida has traditionally recorded the majority of golden tilefish harvests (see **Section 3.3.1**), recent harvest restrictions have resulted in shortened seasons and reduced harvests by North Carolina and South Carolina fishermen.

Increased target effort by fishermen in response to increased restrictions on other species could exacerbate this circumstantial reallocation as well as displace fishermen that have not been adversely affected by the recent regulations. While ACLs and AMs should be effective in protecting the biological health of the resource, from the perspective that traditional fishing participation and patterns results in greater social benefits, shift of harvests away from these traditional users, businesses, and communities would be expected to result in lower social benefits than protection and preservation of the more traditional participation and harvest patterns.

Preferred Alternative 2, in addition to the eligibility criteria for the longline component of the commercial golden tilefish sector in **Action 2**, is expected to return golden tilefish harvests to the more traditional/historical participation and harvest patterns. Although this proposed action would not limit total golden tilefish harvest, restricting participation may affect the total amount of golden tilefish harvested as well as change product flow through the various communities and dealers. If the more significant harvesters receive endorsements, total volume and the communities where most golden tilefish is landed should not be affected. Most golden tilefish are harvested on commercial longline trips (**Table 3-6**) that are directly targeting golden tilefish. Therefore, the longline endorsement program in **Preferred Alternative 2** is expected to preserve, and possibly increase, the social benefits to the more active producers, dealers, and associated communities. However, absent fishermen landing in multiple ports and

selling to multiple dealers in the same city, reduced social and economic benefits could be experienced by some communities and dealers.

The most significant impact of implementation of a longline endorsement program under **Preferred Alternative 2** will likely be loss of income and jobs, and/or opportunity for fishermen who do not qualify for a longline endorsement. These effects are discussed in detail in **Section 4.2.3**.

4.1.4 Administrative Effects

Establishing an endorsement program would have some level of administrative burden on the agency related to developing and administering the program as well as providing information to the fishing community on the program. The least administratively burdensome alternative would be **Alternative 1 (No Action)**, followed by **Preferred Alternative 2**. However, due to the small number of participants that would qualify for an endorsement, the administrative burden is expected to be minimal.

4.2 Action 2. Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

Alternative 1 (No Action). Do not establish initial eligibility requirements for a golden tilefish longline endorsement.

Alternative 2. Establish initial eligibility requirements for a golden tilefish longline endorsement based on the following criteria:

> **Sub-alternative 2a.** To receive a golden tilefish longline endorsement, the individual must have a total of 2,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.
>
> **Sub-alternative 2b.** To receive a golden tilefish longline endorsement, the individual must have a total of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.
>
> **Sub-alternative 2c.** To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2006 through 2008.
>
> **Sub-alternative 2d.** To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.
>
> **Sub-alternative 2e.** To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) from 2007 through 2009.
>
> **Sub-alternative 2f.** To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.
>
> **Sub-alternative 2g.** To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2010.
>
> **Sub-alternative 2h (Preferred).** To receive a golden tilefish longline endorsement, the individual must have an average of 5,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.
>
> **Sub-alternative 2i.** To receive a golden tilefish longline endorsement, the individual must have an average of 10,000 pounds gw golden tilefish caught (with longline gear) for the best 3 years within the period 2006 through 2011.

4.2.1 Biological Effects

Alternative 1 (No Action) would result in the greatest biological benefit for golden tilefish, when compared to the other alternatives under consideration, because the quota would be met more quickly and gear would be removed from the water for the longest period of time. **Sub-alternatives 2a-2i** would require certain harvest levels in aggregate or average during various years to receive a longline endorsement. **Sub-alternative 2h (Preferred)** would implement the least restrictive requirement resulting in issuance of 23 longline endorsements using 24 vessels. The federal commercial snapper grouper permits that qualify for a golden tilefish longline endorsement represent 94% of the longline landings of golden tilefish during 2005-2011 (**Table 4-4**). **Sub-alternative 2e** would implement the most restrictive endorsement eligibility requirement resulting in issuance of 8 longline endorsements using 11 vessels (**Table 4-5**).

Table 4-4. Total and average landings (2005-2011) of golden tilefish taken with longline gear by permits that qualify for a golden tilefish endorsement under **Preferred Sub-alternative 2h** along with the total number of snapper grouper permits that landed golden tilefish using longline gear during 2005-2011.

	# of Permits	Total	Average	
Qualifying Permits	23	2,016,756	288,108	94%
Total # Permits Landing Golden Tilefish with LL	31	2,145,913	306,559	

Source: NMFS logbook database, 2011.

All of the sub-alternatives under **Alternative 2** would result in a reduction in the number of participants but not necessarily limit the effort or harvest in the golden tilefish segment of the snapper grouper fishery. It is possible that alternatives, which limit the number of participants, could also result in a reduction in the amount of gear deployed and golden tilefish landed. If this were the case, then biological benefits could be expected for golden tilefish and the chance of interactions with protected species could be reduced. **Sub-alternative 2h (Preferred)** would result in the most longline endorsements (23). Therefore, the biological benefits of this sub-alternative could be less than under other sub-alternatives. However, it is also possible that effort would remain the same regardless of the number of vessels fishing. Therefore, the biological effects of **Sub-alternatives 2a-2i** could be very similar (**Table 4-5**). By limiting the number of participants in the golden tilefish commercial sector, the race for fish could be reduced allowing for a longer fishing season and greater participation by individuals who met the endorsement requirements. Thus, the effects of **Sub-alternatives 2a-2i** are expected to be positive with respect to **Alternative 1 (No Action)**.

Alternative 1 (No Action) would likely perpetuate the existing level of risk for interactions between ESA-listed species and the fishery. **Sub-alternatives 2a-2i** are unlikely to have adverse effects on listed *Acropora* species. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect these species. These alternatives are unlikely to alter fishing behavior in a way that would cause new adverse effects to *Acropora* species. **Sub-alternatives 2a-2i** are unlikely to have adverse effects on listed Atlantic sturgeon since golden tilefish are harvested well offshore from where Atlantic sturgeon occur. The impacts from **Alternative 2** and associated sub-alternatives on sea turtles and smalltooth sawfish are unclear. Ultimately, the degree of risk reduction to ESA-listed species is relative to overall effort reduction. If **Alternative 2** and the associated sub-alternatives reduce fishing effort in the golden tilefish component of the snapper grouper fishery, the risk of interaction between sea turtles and smalltooth sawfish would likely decrease.

4.2.2 Economic Effects

Alternative 1 (No Action) would not introduce any changes to the current trends in the commercial harvest of golden tilefish by longline gear, regardless of the alternative selected in **Action 1**. The expected effects of this alternative would be the same as those discussed for the no action alternative of **Action 1**. A total of 38 permit holders reported landings of golden tilefish using longline in any one year from 2005 through 2011. The same number of permit holders, or possibly lower because of diminishing fishing season length, would continue to harvest golden tilefish. Overcapacity and an emergent derby condition would continue to characterize the commercial golden tilefish sector. A quota increase, as proposed in Regulatory Amendment 12 (SAFMC 2012) (under review by the Secretary), would mainly delay the development of derby conditions in the commercial harvest of golden tilefish.

Alternative 2 and its sub-alternatives describe eligibility requirements to obtain a golden tilefish longline endorsement. The sub-alternatives identify how many pounds are needed to qualify for an endorsement and in what years those landings need to have been made. This would be based on logbook data associated with an individual's permit at the time of implementation. The number of longline endorsements under each sub-alternative is shown in **Table 4-5**. **Sub-alternative 2h (Preferred)** would implement the least restrictive requirement resulting in issuance of 23 longline endorsements using 24 vessels. **Sub-alternative 2e** would implement the most restrictive endorsement eligibility requirement resulting in 8 permits using 11 vessels that would qualify for a longline endorsement.

The following two tables show the economic implications of the various alternatives for the longline endorsement on vessels that would <u>qualify</u> (**Table 4-6**) and those that would <u>not qualify</u> for the endorsement (**Table 4-7**). Information on these tables is based on the average performance of vessels that landed at least 1 pound of golden tilefish using longline in any one year during 2005-2011. For this period, 43 vessels landed at least 1 pound of golden tilefish using longline. These vessels can be assigned to 38 permits, noting that a permit holder can, and some did, employ multiple vessels during 2005-2011.

Table 4-5. Number of permits that qualify for longline endorsements under each sub-alternative.

Longline Sub-alternatives	Eligibility Requirement	Number of Endorsements
Sub-alternative 2a	At least 2,000 pounds gw golden tilefish when landings from 2006 through 2008 are aggregated	17
Sub-alternative 2b	At least 5,000 pounds gw golden tilefish when landings from 2006 through 2008 are aggregated	12
Sub-alternative 2c	Average of 5,000 pounds gw golden tilefish caught from 2006 through 2008 are averaged	11
Sub-alternative 2d	Average of 5,000 pounds gw golden tilefish caught from 2007 through 2009	12
Sub-alternative 2e	Average of 10,000 pounds gw golden tilefish caught from 2007 through 2009	8
Sub-alternative 2f	Average of 10,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2010	14
Sub-alternative 2g	Average of 5,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2010	18
Sub-alternative 2h (Preferred)	**Average of 5,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2011**	**23**
Sub-alternative 2i	Average of 10,000 pounds gw golden tilefish caught for the best 3 years within the period 2006 through 2011	16

Source: NMFS logbook database, 2011.

Table 4-6. Golden tilefish pounds (gw) and revenues (2010 $) of permitted vessels **eligible for a longline endorsement** under each sub-alternative, 2005-2011 average.

Alt.	Number of Eligible Permits	Number of Eligible Vessels	Pounds			Revenue		
			Pounds (GW)	Percent of Total Commercial Golden Tilefish Landed by All Vessels	Percent of All Landed Species	Revenue (2010 $)	Percent of Total Revenue from Golden Tilefish	Percent of Total Revenue from All Species
2a	17	21	247,056	81	71	671,123	80	79
2b	12	16	230,313	75	74	625,971	75	82
2c	11	15	218,006	71	73	591,154	71	82
2d	12	17	233,576	76	79	639,215	77	87
2e	8	11	200,340	65	78	548,362	66	87
2f	14	18	256,969	84	73	699,618	84	82
2g	18	23	275,635	90	74	751,710	90	83
2h	**23**	**24**	**288,108**	**94**	**75**	**787,761**	**94**	**83**
2i	16	20	269,121	88	74	734,027	88	83

Source: NOAA/NMFS logbooks, accumulative landings system, and permits as provided by SEFSC.

Table 4-7. Golden tilefish pounds (gw) and revenues (2010 $) of permitted vessels **ineligible for a longline endorsement** under each sub-alternative, 2005-2011 average.

Alt.	Number of Ineligible Permits	Number of Ineligible Vessels	Pounds			Revenue		
			Pounds (GW)	Percent of Total Commercial Golden Tilefish Landed by All Vessels	Percent of All Landed Species	**Revenue** (2010 $)	Percent of Total Revenue from Golden Tilefish	Percent of Total Revenue from All Species
2a	21	22	59,504	19	29	163,712	20	44
2b	26	27	76,247	25	31	208,863	25	46
2c	27	28	88,554	29	35	243,681	29	49
2d	26	26	72,984	24	29	195,619	23	40
2e	30	32	106,220	35	36	286,472	34	49
2f	24	25	49,591	16	24	135,217	16	37
2g	20	20	30,925	10	17	83,124	10	27
2h	**15**	**19**	**18,451**	**6**	**11**	**47,073**	**6**	**17**
2i	22	23	37,439	12	20	100,808	12	31

Source: NOAA/NMFS logbooks, accumulative landings system, and permits as provided by SEFSC.

An example on how to interpret the numbers in **Tables 4-6** and **4-7** for **Sub-alternative 2h (Preferred)** is presented below. **Sub-alternative 2h (Preferred)** would qualify 23 permit holders (of the possible 38 permit holders) for the longline endorsement. These eligible permit holders employed 24 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011[5]. On average,

[5] One eligible permit was transferred to another vessel during 2005-2011, so the data show that two vessels participated under one permit during this period.

eligible permitted vessels landed approximately 288,000 pounds gw of golden tilefish annually (**Table 4-6**). These landings accounted for 94% of golden tilefish landings by all "longline" vessels (eligible and ineligible) and 75% of the eligible vessels' landing of all species caught in the trip[6]. Eligible vessels generated approximately $788,000 (in 2010 dollars) of revenues from golden tilefish. These revenues accounted for 94% of all revenues from golden tilefish by all "longline" vessels (eligible and ineligible) and 83% of the eligible vessels' revenues from all species caught in the trip. **Sub-alternative 2h (Preferred)** would disqualify 15 (38 minus 23) permit holders from obtaining a longline endorsement (**Table 4-7**). These permit holders employed 19 vessels that landed at least one pound of golden tilefish in any one year during 2005-2011. Ineligible permitted vessels landed approximately 18,000 pounds gw of golden tilefish, which accounted for 6% of golden tilefish landings by all "longline" vessels (eligible and eligible) and 11% of the ineligible vessels' landing of all species caught in the trip. These ineligible vessels' landings of golden tilefish generated approximately $47,000 in revenues, which accounted for 6% of all "longline" vessel revenues from golden tilefish and 17% of these vessels' revenues from all species caught in the trip.

The amount of golden tilefish landed by vessels under the various alternatives would not vary directly with the number of qualifying permitted vessels. For example, golden tilefish landings under **Sub-alternative 2f** , which would allow 18 permitted vessels to qualify for an endorsement, amounted to about 257,000 pounds gw (**Table 4-6**). On the other hand, golden tilefish landings under **Sub-alternative 2a**, which would qualify 21 permitted vessels, were about 247,000 pounds gw.

Of the 9 sub-alternatives for the longline endorsement, **Sub-alternative 2h (Preferred)** would allow for the most number of permitted vessels to receive the endorsement and **Sub-alternative 2e**, the least (see **Table 4-5**). Under each sub-alternative, the amount of golden tilefish landings and revenues by qualifying permitted vessels accounted for the majority of total golden tilefish landings and revenues by all "longline" vessels. Their golden tilefish landings range from 65% with **Sub-alternative 2e** to 94% with **Sub-alternative 2h (Preferred)** of total golden tilefish landings by all "longline" vessels. Their revenues from golden tilefish range from 66% with **Sub-alternative 2e** to 94% with **Sub-alternative 2h (Preferred)** of total revenues from golden tilefish by all "longline" vessels. These very high percentages appear to indicate that each alternative would include most of the big producers in the longline segment of the golden tilefish commercial sector.

Qualifying (and non-qualifying) vessels under each endorsement sub-alternative also landed other species. Qualifying vessels' golden tilefish landings and revenues accounted for a greater majority of their total landings and revenues. As a percentage of their total landings, their golden tilefish landings range from 71% with **Sub-alternative 2a** to 79% with **Sub-alternative 2d**. As a percentage of their total revenues from all species, their golden tilefish revenues range from 79% with **Sub-alternative 2a** to 87% with **Sub-alternatives 2d** and **2e**. For **Sub-alternative 2h (Preferred)**, the corresponding percentages are 75% in landings and 83% in revenues. These relatively high percentages of golden tilefish landings and revenues are suggestive of these vessels' heavy reliance on golden tilefish.

With the exception of **Sub-alternatives 2g** and **2h (Preferred)**, all sub-alternatives would result in more ineligible than eligible vessels. Under each sub-alternative, ineligible vessels accounted for a relatively low percentage of total longline landings of golden tilefish (6% to 35%) and revenues (6% to

[6] Vessels that caught golden tilefish also caught other species on the same trip and thereby also generated revenues from these other species.

34%). However, it appears that ineligible vessels generated a good portion of their total trip revenues from golden tilefish. Their revenues from golden tilefish accounted for a low of 17% under **Sub-alternative 2h (Preferred)** to a high of 49% under **Sub-alternatives 2c** and **2e** of their revenues from all species. Thus, ineligible vessels would lose a relatively high percent of their total revenues, particularly if they could not be as effective in harvesting golden tilefish using other gear types such as hook-and-line.

Ineligible vessels would forgo annual revenues ranging about $47,000 (2010 dollars) under **Sub-alternative 2h (Preferred)** to $286,000 (2010 dollars) under **Sub-alternative 2e**. It is possible these revenue losses would be very burdensome for some vessels. In the absence of sufficient information, it cannot be ascertained if these revenue reductions would result in significant profit reductions. Nonetheless, it would be relatively difficult for these vessels to recoup their revenue (and possibly profit) losses by increasing their fishing effort on other snapper grouper species as several recent regulations have restricted the harvest of other snapper grouper species. They could continue harvesting golden tilefish using other gear types such as hook-and-line, but it is unlikely they would totally recoup their losses.

Losses to non-qualifying vessels would not necessarily turn out as losses to the longline sector or to the commercial sector as a whole. The remaining longline participants have enough capacity to harvest whatever is given up by non-qualifying vessels. Because of recent closures that occurred in the commercial golden tilefish segment of the snapper grouper fishery, it is likely that qualifying vessels could recoup losses to non-qualifying vessels in the near future. This could likely happen even if the quota is raised, as proposed by the South Atlantic Council in Regulatory Amendment 12 (under Secretarial Review), because the longline sector appears to have the necessary capacity to increase its harvest of golden tilefish.

One underlying issue regarding the ability of qualifying vessels to recoup losses by non-qualifying vessels pertains to its effects on industry profit. There are at least three possible outcomes. First, if net profit losses to non-qualifying vessels exactly matched net profit gains to those qualified to receive the endorsement and the administrative cost were negligible, the net effect would be practically zero. Second, if profit losses to non-qualifying vessels were more than recouped by those that received the endorsement, the net effect would be positive. This can happen if the expectation that vessels qualifying for the endorsement would become more profitable were to actually occur. Under this condition, profit losses to less profitable vessels would translate to higher profits to more profitable vessels. Third, if net profit losses to non-qualifying vessels more than offset profit gains to qualifying vessels, the net effect would be negative. This can happen even if qualifying vessels became more profitable but only on a temporary basis. An endorsement system would restrict the number of individuals participating in the longline segment of the golden tilefish commercial sector but not necessarily effort. If effort significantly increased, these qualifying vessels could face the same or possibly worse profit condition than before, giving rise to the possibility that profit losses to the non-qualifying vessels would not be fully recouped. The likelihood of an effort increase from individuals that qualify for the endorsement would be high if they perceived the endorsement system as a first step to a catch share program. They would be motivated to harvest as much golden tilefish as they can to maximize their share in a catch share program.

It cannot be ascertained which of the three scenarios described above would occur, noting the absence of profit information for vessels commercially harvesting golden tilefish.

4.2.3 Social Effects

Although the alternative thresholds for endorsement qualification are intended to allow historic participants to maintain harvest, an endorsement program may reduce but likely not eliminate the current problem of shifting the season away from when North Carolina and South Carolina fishermen can safely fish for golden tilefish because providing an endorsement would not eliminate the weather-related seasonal harvest access-issues of the status quo. While social effects of not qualifying for an endorsement would likely have negative social impacts at an individual level, there would be some long-term social benefits for the fishery as a whole if fewer fishermen qualified for an endorsement as this would help maintain stock size, and allow eligible fishermen to continue harvest. However, this would only be to a certain degree (a threshold for number of endorsed fishermen), as if the number of fishermen eligible to harvest golden tilefish was too small, the resource could be underutilized. However, under any allocation scenario, fishermen who receive an endorsement would be expected to benefit due to less competition in fishing and in the markets.

Alternative 1 (No Action) would not establish longline endorsement eligibility criteria, and no endorsements would be distributed. This would allow current participation to continue, which would have some short-term social benefits but is likely to result in long-term negative social impacts by continuing current longline effort in the golden tilefish commercial sector. **Alternative 2** establishes eligibility criteria to receive an endorsement and, in general, the higher the landings requirements over a longer period of time, the fewer the fishermen who would be eligible for endorsements. Typically, the fewer the eligible individuals the more likely negative social impacts that would accrue due to diminished opportunity to harvest of golden tilefish with longline gear. Under this assumption, **Sub-alternative 2h (Preferred)** would have the least negative social impact by allocating endorsements to the most fishermen, while **Sub-alternative 2e** would be most likely to result in negative impacts on fishermen who do not receive an endorsement (**Table 4-8**). However, under any allocation scenario, fishermen who receive an endorsement would be expected to benefit due to less competition in fishing and in the markets.

Table 4-8 shows the estimated number of permits that would qualify for a longline endorsement in each state, based on the reported home port along with a column showing the number of permits with golden tilefish landings with longline from 2006 through 2011, to provide a baseline for comparison. Florida would receive the most endorsements under each sub-alternative. Although the highest number of Florida permits (19) would qualify under **Sub-alternative 2h (Preferred)**, 32% of the total number of Florida permits with recent golden tilefish landings by longline would not receive an endorsement. The other sub-alternatives would allow less than half of the permits in Florida with recent landings to qualify for a longline endorsement, including **Sub-alternative 2f**. However, of the 28 permits with longline landings, 10 permits had less than 5,000 pounds gw total golden tilefish landings from 2006-2011, which suggests that some of the permit holders that do not qualify for a longline endorsement may not be dependent on the longline golden tilefish portion of the snapper grouper fishery and would not be impacted by the endorsement program.

No vessel in Georgia would receive an endorsement under any of the sub-alternatives but no landings have been reported in Georgia in recent years. Only one North Carolina permit would receive an endorsement under **Sub-alternative 2a** but not under any other sub-alternative. Two out of the three North Carolina vessels with golden tilefish longline landings have less than 5,000 pounds gw total

landings from 2006-2011, so the endorsement program may not negatively affect these fishermen. Of the five South Carolina vessels with recent landings, at least one qualifies under each sub-alternative. **Sub-alternatives 2f-2i** would be expected to result in the most (4 out of 5) South Carolina permits qualifying for an endorsement.

Table 4-8. Number of Snapper Grouper permits with golden tilefish landings with longline from 2006 through 2011 and estimated number of permits that would qualify for a long line endorsement based on homeport of associated vessel.

	Permits with any landings 2006-2011	Sub-alt 2a	Sub-alt 2b	Sub-alt 2c	Sub-alt 2d	Sub-alt 2e	Sub-alt 2f	Sub-alt 2g	Sub-alt 2h	Sub-alt 2i
FLORIDA	28	13	9	8	10	7	10	14	**19**	12
Brevard County	6	2	2	2	2	2	4	4	**5**	4
Indian River County	2	0	0	0	0	0	0	1	**2**	1
Martin County	4	3	1	0	1	0	1	2	**2**	1
Miami-Dade County	2	2	1	1	3	2	1	2	**2**	1
Monroe County	2	0	0	0	0	0	0	0	**0**	0
Palm Beach County	5	0	0	0	0	0	0	0	**2**	0
St Lucie County	2	2	1	1	1	1	1	1	**1**	1
Volusia County	5	4	4	4	3	2	3	4	**5**	4
NORTH CAROLINA	3	1	0	0	0	0	0	0	**0**	0
Dare County	3	1	0	0	0	0	0	0	**0**	0
SOUTH CAROLINA	5	3	3	3	2	1	4	4	**4**	4
Georgetown County	1	1	1	1	1	1	1	1	**1**	1
Horry County	4	2	2	2	1	0	3	3	**3**	3
TOTAL	**36**	**17**	**12**	**11**	**12**	**8**	14	**18**	**23**	**16**

Source: NOAA/NMFS logbooks, accumulative landings system, and permits as provided by SEFSC.

Table 4-8 also includes the estimated number of federal commercial snapper grouper permits in associated home ports for each sub-alternative to provide detail of the impacts at the community level. In general, there are fewer fishermen with reported golden tilefish landings by longline gear when compared to hook-and-line gear, but these landings make up a significant proportion of the commercial harvest. In Florida, Brevard County and Martin County would receive only four endorsements and one endorsement, respectively, under **Sub-alternative 2f**. For the fishermen that do not qualify for an endorsement, this could be a significant impact. Volusia County, Florida would likely experience the least significant impacts because all or nearly all recent participants qualify for an endorsement under **Sub-alternatives 2a-2c**, **2g**, **2h (Preferred)**, and **2i** and three are expected to qualify for an endorsement under **Sub-alternative 2f**. Fishermen in Horry County, South Carolina would receive fewer endorsements than the number of recent participants under **Sub-alternatives 2a-2d** and none would likely qualify under **Sub-alternative 2e**, but almost all recent participants are expected to qualify under **Sub-alternatives 2f-2i**. In North Carolina, fishermen in Dare County with recent landings by longline are not expected to qualify under **Sub-alternatives 2b-2i**, which may have an impact on the communities in that county because

fishermen would have to stop fishing for golden tilefish with longline gear or purchase an endorsement from another fisherman.

4.2.4 Administrative Effects

Alternative 1 (No Action) would result in the smallest administrative impact, as it would not change the level of participation or the distribution of golden tilefish longline endorsements. **Sub-alternatives 2a-2i** would limit participation in the golden tilefish longline sector. The administrative impacts for this action would primarily be borne by the NOAA Fisheries Service Permits Office and the Sustainable Fisheries Division.

If approved, Sustainable Fisheries Division staff would identify the qualifying South Atlantic Unlimited Snapper Grouper Permit holders that would receive an endorsement. The Permits Office would then notify each permit holder of their eligibility and issue the endorsement. The administrative time and cost burden associated with this action and **Sub-alternative 2h (Preferred)** is likely to be moderate. The difference between the administrative burdens associated with each alternative differs only in the number of endorsements that need to be issued under each sub-alternative. This difference is not expected to result in any large disparity among the administrative impacts of **Sub-alternatives 2a-2i**. However, it is likely that the lower the number of endorsements issued the lower the administrative burden would be in the short-term for initial issuance, and in the long-term for future endorsement transfers.

General characteristics of the golden tilefish longline endorsement

Golden tilefish longline endorsements would be limited entry and independently transferable under the preferred transferability alternative under **Action 5**, though fishery participants would not be allowed to fish for golden tilefish with longline gear without also having a valid or renewable South Atlantic Unlimited Snapper Grouper Permit. In other words, the golden tilefish longline endorsement must be associated with a valid South Atlantic Unlimited Snapper Grouper Permit in order for it to be effective. Each golden tilefish longline endorsement would be assigned a unique number and endorsements would be issued with an expiration date to coincide with the expiration date of the South Atlantic Unlimited Snapper Grouper Permit issued to the same vessel.

Initial issuance of golden tilefish longline endorsements

The list of qualified vessels would be established as of the publication date of the final rule. NOAA Fisheries Service Permits Office would then determine which of those vessels would still have a valid South Atlantic Unlimited Snapper Grouper Permit at the start date of the fishing season. This may require prioritizing renewal or transfer requests for qualified South Atlantic Unlimited Snapper Grouper Permits in advance of the effective date of the final rule. Upon publication of the final rule in the *Federal Register*, all transfers of South Atlantic Unlimited Snapper Grouper Permits among qualifying vessels would be frozen for a period of time in order to establish a stable universe of qualified vessels and permits to which golden tilefish longline endorsements would automatically be issued via United States Postal Service. The freeze on transfers for this group of vessels would not exceed a 45-day period, until endorsements are issued to all qualified vessels. NOAA Fisheries Service Permits Office would automatically issue golden tilefish longline endorsements to the qualified South Atlantic Unlimited

Snapper Grouper Permit holders along with a letter of explanation prior to the endorsements becoming effective. South Atlantic Unlimited Snapper Grouper permit holders of qualified but expired permits would be issued a letter to notify them of the need to renew their South Atlantic Unlimited Snapper Grouper Permit in order to receive the golden tilefish longline endorsement. The Office of Sustainable Fisheries would conduct some form of outreach, possibly in the form of letters, to non-qualifying South Atlantic Unlimited Snapper Grouper Permit holders with golden tilefish landings using longline gear to notify them of their ineligibility for the endorsement program. Instructions for the appeals process, outlined under **Action 3** of this document, would be included in the non-eligibility outreach materials.

Renewal details for golden tilefish longline endorsements

Endorsements would be renewed each year when the snapper grouper federal permit is renewed. However, renewal of the endorsement would be separate from renewal of the permit.

4.3 Action 3. Establish an Appeals Process

Alternative 1 (No Action). Do not specify provisions for an appeals process associated with the golden tilefish endorsement program.

Alternative 2 (Preferred). A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The Regional Administrator (RA) will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. The RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

Alternative 3. A period of 90 days will be set aside to accept appeals to the golden tilefish endorsement program starting on the effective date of the final rule. The RA will review, evaluate, and render final decisions on appeals. Hardship arguments will not be considered. A special board composed of state directors/designees will review, evaluate, and make individual recommendations to RA on appeals. Hardship arguments will not be considered. The special board and the RA will determine the outcome of appeals based on NMFS' logbooks. If NMFS' logbooks are not available, the RA may use state landings records. Appellants must submit NMFS' logbooks or state landings records to support their appeal.

4.3.1 Biological Effects

Establishing an appeals process is largely an administrative action. Therefore, it is not anticipated to directly affect the physical, biological, or ecological environments in a positive or negative manner. **Alternative 1 (No Action)** would indirectly benefit the biological environment because it would not allow any additional golden tilefish effort in that portion of the snapper grouper fishery after the initial endorsements are distributed to eligible South Atlantic Unlimited Snapper Grouper Permit holders. By limiting the number of endorsements and thus the effort in the fishery, risk of bycatch and protected species interactions decreases. There is likely to be no difference between **Preferred Alternative 2** and **Alternative 3** in the level of potential biological impact that could occur as a result of their implementation. In theory, the RA would reach the same conclusion regardless of how the appeals process is executed because both alternatives do not allow for consideration of hardship claims and the decision to issue an endorsement would be based on logbook data and landings records.

Indirect effects on the biological environment may be caused if additional South Atlantic Unlimited Snapper Grouper Permit holders are issued golden tilefish endorsements as a result of implementing an appeals process. However, golden tilefish effort could potentially increase above the expected number of qualifying vessels due to issuance of endorsements through appeals, those impacts on the biological environment including target and non-target species and critical habitat are not likely to be significant. Furthermore, overall harvest of golden tilefish would be constrained by the sector ACLs and AMs established for the species. Therefore, regardless of how many endorsements are issued through appeals, the only discernible biological impact could be reaching the commercial quota earlier in the fishing season, which could help protect spawning individuals and protected species. The more endorsements that are issued through the appeals process the earlier the commercial season is likely to close.

4.3.2 Economic Effects

The number of appeals received largely determines the economic impacts of an appeals program. Fishermen excluded from the endorsement program who decide to appeal may incur costs associated with trying to prove their case. Access to NOAA Fisheries Service logbook landings or state trip tickets should be at little or no cost to a fisherman. However, some complications may arise in the case of transferred permits for then the new permit owner may not have access to NOAA Fisheries Service logbook landings for landings contributed by the previous owner. Access to state trip tickets in this situation would depend on the respective state's rule on access to trip ticket information.

Both **Alternative 2 (Preferred)** and **Alternative 3** would likely result in the same outcome because they differ only in structure. **Alternative 3** would introduce an additional administrative burden that may not improve the appeals process because the only appealable issues are eligibility and landings. At any rate, only few appeals may be expected to be successful because of the limited basis for appeals under either alternative.

4.3.3 Social Effects

Management of effort through an endorsement system would be expected to result in social benefits if all appropriate fishermen, i.e., those fishermen who qualify for an endorsement would best achieve the objectives of the program, receive an endorsement. The exclusion of any appropriate fishermen would be expected to result in decreased social benefits. The absence of an appeals process under **Alternative 1 (No Action)** would be expected to increase the likelihood that one or more appropriate qualifiers would not receive an endorsement, resulting in less social benefits than would occur if an appeals process is established under **Alternative 2 (Preferred)** and **Alternative 3**. There would likely be minimal difference in the social effects between **Alternative 2 (Preferred)** and **Alternative 3**.

4.3.4 Administrative Effects

Alternative 1 (No Action) could cause administrative difficulties by failing to provide a formal process to use in resolving the complaints of those who challenge eligibility or initial allocation decisions. The appeals processes, described in **Preferred Alternative 2** would be developed by NOAA Fisheries Service and would be similar to appeals processes developed for other limited access privilege programs. It is expected that any appeals process would be somewhat burdensome to administer. Directions on how potential appellants should pursue requesting an appeal consideration by the RA would need to be disclosed to fishery participants via a fishery bulletin or in a letter issued to those fishery participants who had previously landed golden tilefish but did not qualify for an endorsement, which would be distributed by NOAA Fisheries Service. When an application for an appeal is received by the agency, a certain amount of staff time, dependent upon the nature of the appeal, would be required to review logbook records and verify the eligibility of the applicant. Additional time would be required by the RA for making the final determination as to whether or not each appeal applicant should or should not be issued a golden tilefish endorsement. Overall, a moderate short-term impact may be expected as a result of this action depending upon the number of appeals received by NOAA Fisheries Service. Because the appeals process is limited to 90-days, any administrative burden associated with the review of appeals applications would be limited to a finite amount of time that is not likely to extend far beyond the 90-day time period.

4.4 Action 4. Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

Alternative 1 (No Action). Do no allocate the commercial golden tilefish ACL among gear groups (*commercial ACL = 541,295 pounds gw).

Alternative 2 (Preferred). Allocate the golden tilefish commercial ACL as follows: 75% to the longline sector and 25% to the hook-and-line sector (currently would be 405,971 pounds gw to longlines and 135,324 pounds gw to hook-and-line).

Alternative 3. Allocate the golden tilefish commercial ACL as follows: 85% to the longline sector and 15% to hook-and-line sector (currently would be 460,101 pounds gw to longlines and 81,194 pounds gw to hook-and-line).

Alternative 4. Allocate the golden tilefish commercial ACL as follows: 90% to the longline sector and 10% to hook-and-line sector (currently would be 487,165 pounds gw to longlines and 54,130 pounds gw to hook-and-line).

NOTE: Existing commercial accountability measures would apply separately to the longline and hook-and-line sector ACLs.

*ACL values reflect South Atlantic Council's preferred ACL alternative in Regulatory Amendment 12 to the Fishery Management Plan for the South Atlantic Region (SAFMC 12), which is under review by the Secretary of Commerce (Secretary).

4.4.1 Biological Effects

Alternative 1 (No Action) would not allocate portions of the commercial quota (commercial ACL) to a specific gear type. From 2004 through 2011, on average, 92% of the golden tilefish are taken with longline gear and the remaining 8% are caught with hook-and-line gear (**Table 4-3**). However, longline gear is extremely efficient at harvesting golden tilefish and it is possible that the permits, which qualify for a longline endorsement under **Action 2**, could continue to harvest a large portion of the quota before the hook-and-line sector has a chance to become engaged in the golden tilefish portion of the snapper grouper fishery.

Longline vessels typically fish for golden tilefish at the start of the year when the trip limit is 4,000 pounds gw. Amendment 13C to the Snapper Grouper FMP (Amendment 13C: SAFMC 2006) implemented a reduced trip limit of 300 pounds gw that is effective when 75% of the quota is met. The intent of the 300-pound gw trip limit was to reduce discards and reserve a portion of the golden tilefish quota for the hook-and-line sector. In the absence of a derby, reducing the trip limit to 300 pounds when 75% of the commercial ACL is met could have effectively allocated 25% of the golden tilefish quota to the hook-and-line sector since such a small trip limit is not profitable for longline fishermen. However, in recent years, effort for golden tilefish has increased with longline gear due to restrictions in the shark longline fishery. As a result, the golden tilefish derby has resulted in a shortened fishing season for the

last six years (**Table 4-1**). In the last two years, golden tilefish have been caught too quickly to implement the 300-pound gw trip limit when 75% of the commercial ACL has been met with the existing NMFS/NOAA quota monitoring system. The fishing season has been shortened to such a degree that Carolina fishermen, who are typically unable to fish until April or May due to weather conditions, and hook-and-line fishermen from Florida who typically fish in the fall are increasingly unable to participate in the golden tilefish segment of the snapper grouper fishery.

Action 6 includes alternatives that would change the golden tilefish fishing year from January-December to a fishing year that would start later in the year, which would enable hook-and-line fishermen to catch golden tilefish later in the year. The South Atlantic Council has decided to take no action on changing the start of the fishing year since golden tilefish is open when other species such as shallow water grouper are closed. **Alternatives 2 (Preferred)-4** of **Action 4** would allocate a portion of the golden tilefish commercial ACL to the hook-and-line and longline sectors to ensure some portion of the golden tilefish harvest could be taken by each sector.

Landings data from NOAA Fisheries Service logbooks collected during 2004-2008 indicates an average of 90% of the golden tilefish commercial landings were taken with longline gear and 10% were taken with hook-and-line gear; the averages were 92% longline and 8% hook-and-line from 2004 through 2011 (**Table 4-3**). Using Accumulative Landings System (ALS) data, longline gear harvested greater than 92% of the golden tilefish from 1999-2009. Examination of ALS data indicates that prior to 1977, nearly all golden tilefish landings were reported using hook-and-line gear (**Table 4-9**). Low et al. (1983) confirm that hook-and-line gear was the predominant gear used to capture golden tilefish prior to 1981.

Beginning in 1977 through 1995, ALS data show a large increase in landings with unclassified gear types; however, Low et al. (1983) reported that prior to August 1981, almost all golden tilefish landings in the South Atlantic were by snapper reel boats (using hook-and-line gear). Therefore, a large portion of these unclassified gear types is likely to be longline gear. A sudden spike in golden tilefish landings was observed in the early 1980s (**Figure 4-1**) suggesting increased effort and/or ability of longline gear to capture golden tilefish. After 2004, longline landings represented 80-90% of the annual harvest.

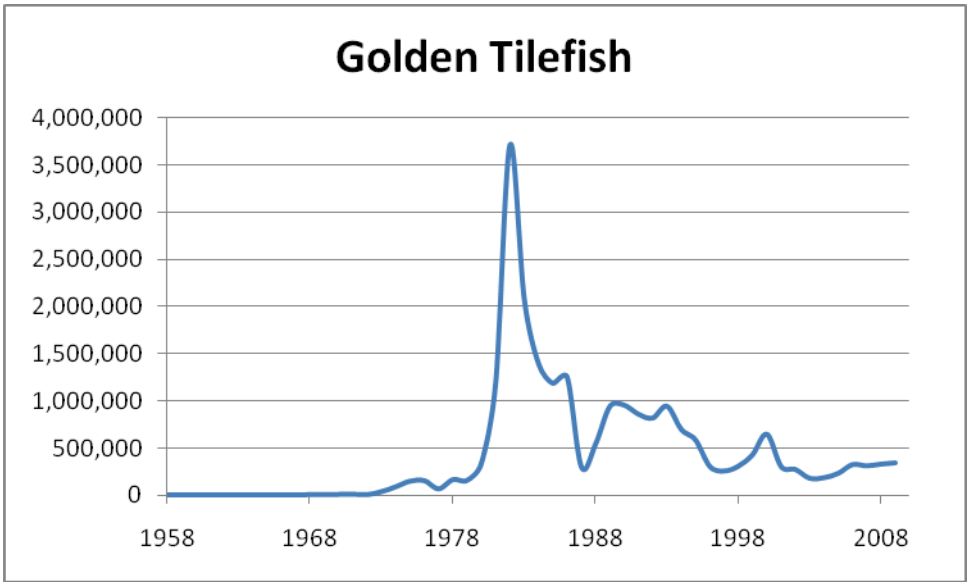

Figure 4-1. Commercial landings of golden tilefish (pounds whole weight) for the South Atlantic. Source: NOAA Fisheries Service Web site.

Alternative 2 (Preferred) would allocate 75% of the commercial ACL to longline gear and 25% of the commercial ACL to hook-and-line gear, which would be a departure from the percentage of tilefish harvested by the two sectors in recent years. Regulatory Amendment 12 (SAFMC 2012) (under review by the Secretary), if approved, is expected to increase the commercial ACL for golden tilefish from 282,819 pounds gw to 541,295 pounds gw and could ease the derby conditions. However, even with a preferred alternative in **Action 2** to restrict longline endorsements to 23 individuals, it is expected that the commercial ACL would be met very quickly since these permits harvested 92% of the available golden tilefish quota during 2004-2011.

Alternative 3 would allocate 85% of the commercial ACL to longline gear and 15% of the commercial ACL to hook-and-line gear. Therefore, **Alternatives 2 (Preferred)** and **3** would allocate a greater portion of the commercial ACL to hook-and-line gear than has been taken since the early 1980s. **Alternative 4**, which would allocate 90% of the commercial ACL to longline gear and 10% to hook-and-line gear, would match what has been taken with the gear types in recent years.

The biological effect of **Alternatives 1 (No Action)-4** for golden tilefish would be similar since it is likely that the quota would be met regardless of which alternative is selected. However, alternatives that allocate a greater percentage of the golden tilefish commercial ACL to the hook-and-line sector could be expected to have a greater biological effect if it eases the rate at which the overall commercial ACL of 541,295 pounds gw is met. It is difficult to monitor landings in a derby fishery with the current NMFS/NOAA quota monitoring system and overruns of the quota can have negative effects on the stock. Furthermore, alternatives that allocate a greater portion of the harvest to longline gear could have a greater negative impact on habitat since longline gear is considered to do greater damage to hard bottom habitat than vertical hook-and-line gear (SAFMC 2007). However, damage to bottom habitat with longline gear has not been well documented.

Alternative 1 (No Action) would likely perpetuate the existing level of risk for interactions between ESA-listed species and the fishery. None of the alternatives are likely to have adverse effects on listed *Acropora* species. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect these species. Alternatives in this amendment are unlikely to alter fishing behavior in a way that would cause new adverse effects to any known protected species in the action area. Through Action 1, participation would be limited in the golden tilefish sector of the snapper grouper fishery and by reducing effort and participation, it is expected that the impacts on protected species would be reduced. Action 4 would allocate a percentage of the golden tilefish commercial ACL to the hook-and-line and longline sectors separately and would not have an impact on protected species as neither gear type has been known to interact with protected species in the action area.

Table 4-9. Percentage of golden tilefish landings taken with various gear types based on NMFS Accumulative Landings System. H & L = hook-and-line; LL = longline; UNC = unclassified.

YEAR	% H&L	%LL	% OTHER	% UNC
1972	100%	0%	0%	0%
1973	100%	0%	0%	0%
1974	100%	0%	0%	0%
1975	100%	0%	0%	0%
1976	99%	1%	0%	0%
1977	51%	0%	0%	48%
1978	56%	0%	10%	33%
1979	25%	0%	2%	73%
1980	38%	0%	0%	61%
1981	19%	3%	1%	76%
1982	6%	7%	0%	87%
1983	4%	26%	0%	69%
1984	7%	38%	0%	55%
1985	1%	19%	0%	80%
1986	1%	26%	0%	72%
1987	1%	31%	0%	69%
1988	0%	25%	0%	75%
1989	1%	21%	0%	79%
1990	0%	27%	0%	72%
1991	3%	32%	0%	65%
1992	1%	44%	0%	55%
1993	0%	31%	0%	69%
1994	11%	27%	0%	62%
1995	10%	25%	0%	66%
1996	7%	27%	0%	66%
1997	14%	86%	0%	0%
1998	6%	94%	0%	0%
1999	7%	93%	0%	0%
2000	7%	93%	0%	0%
2001	30%	70%	0%	0%
2002	36%	64%	0%	0%
2003	29%	70%	0%	0%
2004	12%	88%	0%	0%
2005	17%	83%	0%	0%
2006	8%	92%	0%	0%
2007	17%	83%	0%	0%
2008	12%	88%	0%	0%
2009	9%	91%	0%	0%

4.4.2 Economic Effects

In general, an allocation provision that would change the "current" harvest distribution of golden tilefish between the longline and hook-and-line gear groups would tend to benefit one group at the expense of the other. The economic issue in this case is whether an altered harvest distribution would result in overall net benefits after summing up the benefits and costs to both groups. Since both gear groups have existed in the snapper grouper fishery for some time now, both gear groups would likely be profitable. If there is a difference in the profitability of the two gear groups, a redistribution of harvests from the less to the more profitable group would likely result in overall increase in economic benefits. One rationale for this is that losses to the less profitable gear group would be more than offset by gains in the more profitable gear group. However, it is also possible that at some point of the redistribution, the relative profitability of each group would be reversed so that further redistribution would result in net overall losses. Considering that the relative profitability of the two groups is unknown, it would not be possible to determine that particular point of the redistribution when the relative profitability of the two groups is reversed. A quantitative estimate of such overall net benefits cannot be made given available information. On this account, only some general remarks may be made about the economic implications of the various allocation alternatives. It is assumed in the succeeding discussions that, under any of the allocation alternatives except the no action alternative, separate quota closures for the longline and hook-and-line segments would be implemented.

Hook-and-line harvests of golden tilefish have diminished over the years, particularly since the commercial quota was substantially reduced in 2006. From 1994-2005, the share of hook-and-line harvests of golden tilefish averaged at about 18% and decreased to around 10% thereafter. Partly responsible for this are the increasing participation of the longline segment and early quota closures that have not allowed hook-and-line fishermen, particularly in Florida, to fish for the species in the latter part of the year. This trend may be expected to continue under **Alternative 1 (No Action)** even with the quota increase proposed by the South Atlantic Council in Regulatory Amendment 12 (under review by the Secretary). It is likely that even under the preferred alternative in **Action 2**, the share of the hook-and-line segment would continue to decrease. The remaining participants (those receiving the endorsement) in the longline segment would have enough capacity to harvest the entire current commercial quota. A quota increase may be expected to mainly slow the declining trend in the share of the hook-and-line sector. If the longline segment were more profitable than the hook-and-line group, then **Alternative 1 (No Action)** may be expected to increase overall profits in the commercial sector. However, as noted above, there is likely to be a harvest distribution that would make the hook-and-line group more profitable than the longline gear group, and further increases in the longline share would result in net losses to the commercial sector.

The revenue implications of the various allocation alternatives are presented in **Table 4-10**. The assumed baseline allocation scenario is the 2005-2011 distribution of average hook-and-line and longline landings of golden tilefish. During this period, hook-and-line vessels landed an average of 24,734 pounds gw and longline vessels landed an average of 306,560 pounds gw. These landings imply a baseline allocation of 7% for hook-and-line vessels and 93% for longline vessels. Revenues are derived using the 2005-2011 average price per pound of $2.73 expressed in 2010 dollars. There is no price differential between hook-and-line and longline landings. Under each alternative, a total commercial quota of 541,295 pounds gw is allocated between the hook-and-line and longline sectors. Unless otherwise noted, the current analysis assumes that each sector would harvest all its allocation under each alternative without any overages.

Table 4-10. Pounds and revenue implications of each allocation alternative, assuming a commercial golden tilefish quota of 541,295 pounds gw.

Alts.	Percent Allocation		Allocated Quota		Quota Changes (pounds gw)			Revenue Changes (2010 dollars)		
	HL	LL	HL	LL	HL	LL	TOTAL	HL	LL	TOTAL
Baseline										
Landings: hook-and-line landings = 24,734 pound gw; longline landings =306,560 pound gw										
Distribution: hook-and-line = 7%; longline = 93%										
A-2	**25**	**75**	**135,324**	**405,971**	**110,590**	**99,411**	**210,001**	**$301,911**	**$271,392**	**$573,303**
A-3	15	85	81,194	460,101	56,460	153,541	210,001	$154,136	$419,167	$573,303
A-4	10	90	54,130	487,165	29,396	180,605	210,001	$80,251	$493,052	$573,303

Source: NMFS logbook data as of April 2012 and Accumulative Landings System.

Relative to the baseline, each allocation alternative would redistribute the harvest from the longline sector to the hook-and-line sector. This, in theory, would result in negative effects on the longline sector and positive effects on the hook-and-line sector. However, because the commercial quota is increased well above the baseline landings of both sectors, each allocation alternative would yield positive revenue effects to both sectors. The revenue effects to each sector would directly correlate with the size of its allocation—the higher a sector's allocation the larger would be its revenue effects. Revenue gains of about $80,000 (**Alternative 4**) to $302,000 (**Preferred Alternative 2**) would accrue to the hook-and-line sector. The corresponding revenue gains to the longline sector would range from about $271,000 (**Preferred Alternative 2**) to $493,000 (**Alternative 4**). The net (total) revenue effects would be about $573,000, which would the same for each alternative because revenues were derived using the same price for both sectors.

Several issues are worth recognizing regarding the foregoing analysis. First and as already noted, it is not possible to evaluate the allocation that would provide the highest benefits to society because of the absence of key information, particularly the level of profits, which might vary across the two sectors. Thus, each alternative is a potential candidate for being the best with respect to generating overall net economic benefits.

Second and closely related to the first, the dominance of the longline sector could indicate the possibility that this sector might be more profitable than the hook-and-line sector. It should be noted, however, that part of the effort increase in the longline harvest of golden tilefish was possibly due to restrictions imposed on the longline harvest of sharks. If the longline sector were more profitable, then any allocation away from it may bring about an overall reduction in industry profits. However, a 100% allocation to the longline sector may also bring about a reduction in industry profits because the continued presence of the hook-and-line sector could be an indication that this sector is also profitable. Third, the relatively large increase in commercial quota from the baseline landings of 331,294 pounds gw to 541,295 pounds gw, as proposed by the South Atlantic Council in Regulatory Amendment 12 (under review by the Secretary) tends to mask some of the implications of the various allocation alternatives. Both sectors would come out as gainers with each alternative solely due to the quota increase. One or the other sector may have to forgo varying levels of profits across the various alternatives, with the resulting net profits being negative under one or more allocation alternatives.

Fourth, it was assumed that both sectors would fully take their respective allocations under each allocation alternative. This is probably a reasonable assumption for the longline sector. The preferred alternative for a longline endorsement in **Action 2** would disallow 19 vessels (15 permits) from

continuing to harvest golden tilefish using longline gear. These vessels landed an annual average of about 18,000 pounds gw of golden tilefish. Even if added to the longline sector's increased allocation ranging from about 99,000 pounds gw (**Alternative 2**) to 181,000 pounds gw (**Alternative 4**), the longline sector would likely fully harvest its allocation. The dwindling fishing season in the last few years, with the longline sector accounting for a significant portion of total commercial landings, is a strong indication of the presence of sufficient capacity in this sector to harvest larger allocations. The case with the hook-and-line sector harvesting its allocation is not as clear as with the longline sector. During 2005-2011, this sector landed an annual average of about 25,000 pounds gw, with the highest landings of about 39,000 pounds gw in 2007. The hook-and-line sector would receive allocations ranging from about 54,000 pounds gw (**Alternative 4**) to 135,000 pounds gw (**Preferred Alternative 2**). The lowest allocation would still be higher than the sector's highest landings in recent years. However, this sector did record large landings in the early 1980s. In 1982, for example, the hook-and-line sector landed about 199,000 pounds gw of golden tilefish[7]. Whether this amount of landings can be replicated in the future is not totally certain. There are possible conditions that may currently exist or develop in the future for the hook-and-line sector to fully harvest its allocation, especially under **Preferred Alternative 2**. Any of the allocation alternatives would serve to guarantee the continued presence of the hook-and-line sector in the commercial harvest of golden tilefish. Those currently in this sector may expand their operation; those who were in the sector a few years back may re-enter this sector; and, those longline vessels excluded from the endorsement may switch to hook-and-line fishing. It is also possible that those who were harvesting other snapper grouper species may start harvesting golden tilefish as more restrictive regulations are imposed on those other species. A large hook-and-line allocation, as in **Preferred Alternative 2**, would tend to raise the profitability of this sector, thus attracting more effort into this sector. In addition, some fishermen may perceive the longline endorsement as an initial stage to adopting some form of catch share program in the commercial golden tilefish sector. All these would tend to increase the capacity in the hook-and-line sector, possibly enabling the sector to fully harvest its allocation, even under **Alternative 2 (Preferred)**.

4.4.3 Social Effects

Alternative 1 (No Action) would not establish any gear allocations for the golden tilefish commercial ACL. As a result, all current fishing practices would be allowed to continue and no changes in status quo social benefits would be expected.

The negative social effects of the gear allocations specified in **Alternatives 2 (Preferred)-4** would be expected to be greatest for those alternatives with the greatest difference from recent harvest patterns. The most recent historical harvest distribution rates for golden tilefish best represent the values for determining allocations because these rates have not been artificially or externally determined. Absent an additional specific social or economic management goal that can be best achieved by deviation from the historic distribution of harvests, it is assumed that the further an imposed allocation deviates from the historic distribution, the greater the reduction in social and economic benefits. With respect to golden tilefish, a specific social and economic goal has been advanced. The goal is to preserve access to the resource by vertical line hook-and-line fishermen when they have historically harvested golden tilefish

[7] South Atlantic total commercial landings of golden tilefish in 1982 are reported as round weight in the NMFS website, http://www.st.nmfs.noaa.gov/st1/commercial/landings/annual_landings.html; hook-and-line apportionment of total landings is based on **Table 4-11**; a conversion rate 1.12 is used to convert round weight to gutted weight.

(late summer to early fall) and avoid the quota being taken by longline fishermen before vertical line fishermen traditionally switch over to this species.

Based on the NMFS Accumulated Landings System (ALS) information in **Table 4-9**, the longline sector has historically (2004-2009) harvested, on average, 89% of the golden tilefish quota and the hook-and-line sector 12%. Thus, the allocation specified in **Alternative 2 (Preferred)** would not be consistent with the historical performance of this component of the snapper grouper fishery and could impact the longline golden tilefish sector by limiting the longline quota about 10-15% below what the longline sector has been harvesting in recent years. However, the longline ACL is expected to be higher than the quota available to the longline vessels in recent years, which could minimize expected impacts on the longline fleet. **Alternatives 3** or **4** would be more consistent with the recent history of the commercial golden tilefish portion of the snapper grouper fishery than **Alternative 2 (Preferred)**, and would benefit the longline component of the commercial sector. However, **Alternative 2 (Preferred)** would allow the hook-and-line sector to increase harvest by establishing a commercial hook-and-line ACL that is about two times larger than hook-and-line harvest in recent years. **Alternative 2 (Preferred)** and **Alternatives 3** and **4** would also benefit the hook-and-line sector more than **Alternative 1 (No Action)** by preserving access to the resource through gear allocations. Although this analysis is based on historic landings by gear, in general the longline landings are from Florida vessels and allocations that are beneficial to the longline fleet will benefit Florida, and allocations that are beneficial to the hook-and-line fleet will benefit North Carolina, South Carolina, and Georgia as well.

In general, most trips where golden tilefish are the top source of trip revenue have been longline trips (golden tilefish were likely the target species on these trips and average annual landings for these trips). This suggests that golden tilefish revenues are more important to trips where golden tilefish are the top revenue species and associated vessels, which are assumed to be longline vessels. Therefore, significant deviation from historic harvest patterns (**Table 4-9**) as would occur under **Alternatives 2 (Preferred)** and **3**, may be expected to result in greater reductions in social benefits to these longline vessels than the gains to the hook-and-line sector. As a result, preserved access, which would occur under each of **Alternatives 2 (Preferred)**, **3** and **4**, or increased access, which would occur under **Alternative 2 (Preferred)**, by the lesser revenue group (assumed to be hook-and-line vessels) could result in greater relative social benefits.

4.4.4 Administrative Effects

Alternative 1 (No Action) would result in no new administrative burden. **Alternatives 2 (Preferred)-4** would allocate the commercial golden tilefish ACL between the longline and hook-and-line sectors. Establishing any of the allocation scenarios through **Alternatives 2 (Preferred)-4** would involve minor administrative impacts in the form of rulemaking, monitoring quota, and developing education and outreach materials. However, the administrative impacts between the alternatives are minimal.

4.5 Action 5. Allow for Transferability of Golden Tilefish Endorsements

Alternative 1 (No Action). Golden tilefish longline endorsements cannot be transferred.

Alternative 2 (Preferred). A valid (not expired) golden tilefish endorsement or a renewable (expired but renewable) golden tilefish endorsement can be transferred between any two individuals or entities that hold, or simultaneously obtain a South Atlantic Unlimited Snapper Grouper Permit. Endorsements would be transferable, independently from the South Atlantic Unlimited Snapper Grouper Permit. Landings of golden tilefish using the golden tilefish longline endorsement would be associated with the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked at the time the landings take place.

Sub-alternative 2a (Preferred). Transferability allowed upon program implementation.

Sub-alternative 2b. Transferability not allowed during the first 2 years of the program.

4.5.1 Biological Effects

Alternative 1 (No Action) would not allow for transferability of golden tilefish endorsements and could result in decreased participation in the commercial golden tilefish longline portion of the snapper grouper fishery over time as fishermen with endorsements exit the fishery permanently. Decreased participation could result in a corresponding decrease in effort and landings of golden tilefish, and could extend fishing opportunities further into the fishing season. It is also possible that effort would not decrease with decreased participation and the same amount of golden tilefish would be caught, albeit with fewer participants. Among **Alternatives 1 (No Action)-2**, **Alternative 1 (No Action)** could have the greatest biological benefit for the golden tilefish stock if it results in decreased landings of golden tilefish. However, a recent stock assessment indicates golden tilefish is no longer experiencing overfishing and stock biomass is well above B_{MSY}. Therefore, there is no biological need to decrease landings of golden tilefish. Rather, the need is to decrease the rate at which golden tilefish are caught and ease derby conditions.

Preferred Alternative 2, which would allow transferability of golden tilefish longline endorsements, would not be expected to negatively impact the golden tilefish stock. The biological effects of **Alternative 1 (No Action)** and **Preferred Alternative 2** would be very similar as landings would be constrained by the commercial longline ACL. Therefore, the effects of **Preferred Alternative 2** may be more economic and administrative than biological.

Preferred Alternative 2 would allow transfer of valid or renewable golden tilefish longline endorsements among individuals who hold South Atlantic Unlimited Snapper Grouper Permits independent of each other. For example, the endorsement could be transferred to another person holding a valid (not expired) South Atlantic Unlimited Snapper Grouper Permit without also transferring the permit, and vice versa.

It is the South Atlantic Council's intent that all landings of golden tilefish be associated with the federal commercial South Atlantic Unlimited Snapper Grouper Permit, rather than the endorsement. Any landings of golden tilefish by individuals who hold an endorsement would be added to the landings of the federal commercial South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is

linked. If the endorsement is transferred the landings of golden tilefish that were made using the endorsement would not transfer with the endorsement. The endorsement would have no associated landings value. Endorsements would not be automatically renewed when the associated South Atlantic Unlimited Snapper Grouper Permit is renewed. Endorsement holders would need to check a box on the application to renew their golden tilefish longline endorsement.

Sub-alternatives 2a (Preferred)-2b would place a time constraint on when transfer of endorsements could begin. **Sub-alternative 2a (Preferred)** would allow for transferability of permits to take place immediately upon implementation of the endorsement program and this is expected to maximize economic benefits but have the least amount of biological benefit for golden tilefish since endorsements would most likely be transferred to entities planning to fish them as opposed to the endorsement possibly not being fished for two or more years after implementation. **Sub-alternative 2b** could have positive biological effect because they would involve a longer time period before an endorsement could be transferred, and may result in several endorsements not being used until the transfer time limit has been reached. The rationale behind delaying transferability is to allow people time to develop an understanding of the value of the endorsements before selling them. The South Atlantic Council had previously considered alternatives with longer time periods but moved those alternatives to the considered but rejected **Appendix A** as two years was determined to be a sufficient amount of time for participants to understand the value of an endorsement. It is possible that an individual might not be able to go fishing in a particular year and since fishermen would not be able to transfer an endorsement, there could be a resulting benefit to the resource. However, as stated under **Alternative 1 (No Action)**, effort might not show a corresponding decrease with the number of participants in the golden tilefish segment of the snapper grouper fishery. Allowing golden tilefish endorsements to be transferred under conditions outlined for each of the action alternatives would not be expected to increase or decrease interactions with protected species.

4.5.2 Economic Effects

Alternative 1 (No Action) would not allow for transferability of golden tilefish endorsements and would therefore result in decreased participation in the golden tilefish portion of the snapper grouper fishery over time as fishermen with endorsements exit the fishery permanently. While they would be able to sell their federal commercial South Atlantic Unlimited Snapper Grouper Permit, they would not be able to sell their golden tilefish longline endorsement, which could result in difficultly selling their permit, vessel, and gear since permits are often sold with the vessel and gear. Since longline gear is restricted in many of the South Atlantic fisheries, sale of the gear and a larger vessel suitable for deploying longline gear to target golden tilefish would be difficult without sale of the golden tilefish longline endorsement. If participation remains steady over the years of the program during which transferability is not allowed, aggregate profitability of the fishery could remain steady. If, however, landings drop due to people leaving the golden tilefish component of the snapper grouper fishery and not transferring the endorsement due to restrictions, aggregate profitability would decline. However, at the same time, individual average profitability could increase because there would be less people sharing the same amount of landings as under **Alternative 1 (No Action)**.

Preferred Alternative 2 would provide the opportunity for new entrants without an increase in the overall number of participants. Conceptually, the degree of transfer flexibility influences the aggregate profitability of the fishery and the average individual profitability. The greater the degree of transferability allowed, the greater the value of the permit is expected as a broad group of individuals

would be allowed to bid for the endorsement. It is likely the highest bidder would also be the more efficient fishing operator because of the additional cost to enter the fishery. Also, the greater the degree of transferability allowed, the greater the profitability of the individual who owns the permit because they have the ability to sell their permit when they need to switch to more profitable fisheries or when they are unable to fish. As more efficient operators enter the golden tilefish sector, industry efficiency could increase, thus enhancing the aggregate profitability of the sector. However, **Sub-alternatives a** and **b** would likely influence the degree of enhancement to possible profitability. **Sub-alternative 2a (Preferred)** would allow for transferability of permits to take place immediately upon implementation. **Sub-alternative 2b** would allow for the longest delay in transferability allowances. The rationale behind delaying transferability of catch privilege assets, like IFQ shares, or of entry restricting assets, like endorsements, is to allow people time to develop an understanding of the value of the assets before selling them. In general, the value of an asset under a catch share program increases over time as people come to understand the possibilities for improved management of the fishery and the impact that might have on the asset. That is, if catch shares appear to be resulting in better stock management, greater dockside prices, or lower fishing costs, quota share values tend to increase. However, an endorsement program does not have the same characteristics as a catch share program, and therefore a two-year delay (**Sub-alternative 2b**) in transferability allowances might not be necessary. While **Sub-alternative 2b** might allow for people to best assess the value of gear endorsements and make more accurate market transactions, it would delay transfers that could benefit fishermen and the industry.

4.5.3 Social Effects

In general, the social benefits of allowing endorsements to be transferred are associated with the economic benefits of allowing the market to define the value of the endorsement, and that less constraints and restrictions in the transfer market will be expected to generate maximized efficiency and value in the fishery. Additionally, allowing transferability would provide an avenue for new entrants to enter the golden tilefish segment of the snapper grouper fishery and could provide compensation to exiting endorsement holders.

However, there may be some negative social impacts in the future due to endorsements being transferred over time. Economically it would be beneficial to the golden tilefish component of the snapper grouper fishery and to the public for endorsements to be transferred to fishermen who place the highest value on the endorsement, but the required capital to purchase an endorsement (in addition to the South Atlantic Unlimited Snapper Grouper Permit) may be more or less available to different individuals. Because money is required in most cases of endorsement transfers, the characteristic may result in fewer than expected social benefits from the transfer market. Transferability provisions may also negatively impact communities and fishery-associated businesses that may depend on local golden tilefish harvest. When endorsements (of a limited and finite number) move, so do fishermen and effort (Copes and Charles 2004, Tietenberg 2002).

Although it would take time for such to occur, an inability to transfer the endorsements as would be the case under **Alternative 1 (No Action),** would likely result in the number of entities harvesting golden tilefish by longline decreasing over time as fishermen retire or exit the snapper grouper fishery for other reasons, eventually ending in no participants or legal commercial harvest. As a result, **Alternative 1 (No Action)** would be expected to result in reduced social benefits relative to **Alternative 2 (Preferred)**.

The requirement of the recipient to hold a valid commercial South Atlantic Unlimited Snapper Grouper Permit under **Alternative 2 (Preferred)** would be expected to reduce social benefits relative to placing no restrictions on transfer by not allowing anyone to purchase an endorsement. The social benefits of allowing transferability of the endorsements would be expected to be equal to or greater than the benefits of continuing to harvest golden tilefish under the endorsement, otherwise the endorsement would be sold/transferred to someone who expected to harvest golden tilefish.

Allowing endorsement transfers upon program implementation under **Sub-alternative 2a (Preferred)** would be expected to result in more social benefits than **Sub-alternative 2b**. Immediate transferability would simply allow the endorsements to flow to the fishermen who value them the most, which is expected to maximize the efficiency and value of the golden tilefish portion of the snapper grouper fishery. Additionally, under **Sub-alternative 2a (Preferred)**, a fisherman who chooses to sell an endorsement would not have to delay gaining benefits of selling an endorsement (and conversely, the buyer would not have to wait to gain the benefits of buying the privilege to harvest golden tilefish).

Any ability to transfer endorsements may result in equity criticisms, similar to complaints associated with transferable catch share programs. Although the golden tilefish endorsement would not contain an entitlement to a specific harvest quantity, it would bestow asset rights to the recipient because endorsement possession would enable harvest, and the recipient would possess a new marketable asset. The value of this asset (the endorsement) would represent a windfall profit for the endorsement recipient, in addition to any benefits from actual harvests, a circumstance that may seem inequitable to entities denied an endorsement upon their initial issuance. While transferability would allow those denied an endorsement, or others in the snapper grouper fishery who previously did not harvest golden tilefish, an opportunity to acquire an endorsement and harvest this species, they could do so only if they purchased the endorsement. The market price would be expected to increase with fewer available endorsements to purchase, and endorsement price should increase as the total value of harvest increases.

4.5.4 Administrative Effects

It is the intent of the South Atlantic Council that the golden tilefish longline endorsements simply allow the individual or entity to land golden tilefish that were caught using longline gear.

All landings history for golden tilefish landed with longlines is to remain with the South Atlantic Unlimited Snapper Grouper Permit associated with the endorsement. Landings history cannot be transferred unless the South Atlantic Unlimited Snapper Grouper Permit that has the history is being transferred at the same time and to the same individual or entity as the golden tilefish longline endorsement.

Under **Preferred Alternative 2** and **Preferred Sub-Alternative 2a**, golden tilefish longline endorsements could be transferred under the following conditions:

- Valid or renewable golden tilefish longline endorsements would be transferable upon the effective date of the final rule implementing this action.
- Valid, expired but renewable, and renewable endorsements could only be transferred to any individual or entity holding or simultaneously obtaining a South Atlantic Unlimited Snapper Grouper Permit.
- Valid, expired but renewable, or renewable endorsements would be transferable, independently from the South Atlantic Unlimited Snapper Grouper Permit.

- All landings of golden tilefish using the golden tilefish longline endorsement would be associated with the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked at the time the landings take place.
- Landings of golden tilefish using the golden tilefish longline endorsement would not be transferred with the endorsement.
- Endorsements would not be automatically renewed when the associated South Atlantic Unlimited Snapper Grouper Permit is renewed. Endorsement holders would need to check a box on the application to renew their golden tilefish longline endorsement.

For example: a golden tilefish longline endorsement could be transferred to one individual and the South Atlantic Unlimited Snapper Grouper Permit it was associated with could be transferred to another individual. However, the endorsement can only be used to harvest golden tilefish with longline gear if it is associated with a valid or renewable South Atlantic Unlimited Snapper Grouper Permit.

Renewal of the golden tilefish longline endorsement will not occur automatically when the individual or entity renews the South Atlantic Unlimited Snapper Grouper Permit. The individual or entity will be required to indicate specifically on the application that they wish to renew their golden tilefish longline endorsement.

Establishing an endorsement program (**Action 1**) would have some level of administrative burden on the agency related to developing and administering the program as well as providing information to the fishing community on the program. Adding transferability (**Action 5**) to the endorsement program would increase the administrative burden, requiring the tracking of endorsements, once transferred. The least administratively burdensome alternative would be **Alternative 1 (No Action),** which would not allow endorsement transferability. **Preferred Alternative 2** would allow some form of transferability between users. These alternatives are expected to have similar administrative impacts. **Preferred Sub-alternative 2a** would allow for endorsement transferability immediately and would have a moderate increase in administrative burden due to tracking endorsements. The addition of the waiting periods as described in **Sub-alternative 2b** would not increase or decrease the administrative burden in the long term. **Sub-alternative 2b** allows for a period of time in which transferability is not allowed, which may alleviate some of the administrative burden in the short term. However, once the waiting period is over, the administrative burden related to endorsement transfers would resume. An administrative burden would also be felt by fishermen through all of the alternatives, through the process of transferring the endorsements.

4.6 Action 6. Adjust Golden Tilefish Fishing Year

Alternative 1 (No Action) (Preferred). Retain the existing calendar year as the golden tilefish fishing year (January 1 through December 31).

Alternative 2. Specify the golden tilefish fishing year as September 1 through August 31.

Alternative 3. Specify the golden tilefish fishing year as August 1 through July 31.

Alternative 4. Specify the golden tilefish fishing year as May 1 through April 30.

4.6.1 Biological Effects

Preferred Alternative 1 (No Action) would retain regulations for golden tilefish implemented through Amendments 13C (SAFMC 2006), 15A (SAFMC 2008a), and 17B (SAFMC 2010b) to the Snapper Grouper FMP. Golden tilefish is not experiencing overfishing and is not overfished. Regulations for golden tilefish implemented through Amendment 13C established a commercial quota of 295,000 pounds gw with a 4,000-pound gw trip limit, which is reduced to 300 pounds gw if 75% of the quota is met on or before September 1. In addition, regulations limited recreational catch to 1 fish per person per day. The commercial catch was based on historic landings during 1999-2003, when commercial fishermen captured 97% of the total catch. The commercial portion (97%) was applied to the yield at F_{MSY} to determine the commercial quota. Amendment 17B to the Snapper Grouper FMP changed the commercial quota for golden tilefish to 282,819 pounds gw. The South Atlantic Council has approved Regulatory Amendment 12 (SAFMC 2012) for review by the Secretary, which would adjust the ABC and ACLs for golden tilefish based on the results of a recent stock assessment.

Alternatives 2-4 would change the fishing year for golden tilefish. Public testimony on Amendment 13C indicated some Florida based commercial hook-and-line fishermen are concerned an early closure could prevent them from harvesting golden tilefish from September through November, which is the time they have historically targeted golden tilefish. As the golden tilefish commercial quota was met in the summer months of 2007, 2008, 2009, and spring 2010 and 2011 this concern has been realized. Consequently, the South Atlantic Council considered modifying the start date of the fishing year and the stepped trip limit strategy, as appropriate, to ensure the golden tilefish regulations imposed in October 2006 through Amendment 13C do not unnecessarily and disproportionately impact select fishermen. However, regulations implemented through Amendment 16 to the Snapper Grouper FMP (SAFMC 2009a) have resulted in a seasonal closure for shallow water grouper species during January-April and early closures for vermilion snapper and black sea bass. As a result, one of the only species available for harvest during the early part of the year is golden tilefish. Thus, commercial fishermen are able to target golden tilefish and generate some income when other species are closed.

Preferred Alternative 1 (No Action) would retain the January 1 fishing year start date. Although the commercial hook-and-line catch of golden tilefish is minor (~6% during 1999-2004 and ~10% during 2004-2008; **Table 3-6**), 35% of the catch occurred during September and October 1999-2004. After implementation of Amendment 13C in 2006, the commercial quota has been met before September and

the golden tilefish commercial sector closed before the period of time when the greatest commercial hook-and-line catches of golden tilefish have historically occurred. The expected biological effects of retaining or modifying the fishing year are minimal because hook-and-line landings are small and total mortality is constrained by the commercial ACL. A change in the fishing year would affect how and when fishing effort (longline versus hook-and-line) is applied to the stock throughout the year.

Alternative 2 would begin the fishing year for golden tilefish in September, the period of time when the greatest commercial hook-and-line catches of golden tilefish have historically occurred. **Alternative 3** would begin the fishing year in August and also allow hook-and-line fishermen to fish during the period of time when their catches have been greatest. **Alternative 4** would start the fishing year in May but would still allow hook-and-line fishermen to fish for golden tilefish in the fall but there is a greater chance the commercial ACL would met sometime during September through November.

The biological effects in terms of level of harvest of **Preferred Alternative 1 (No Action)** and **Alternatives 2-4** would be very similar. The commercial hook-and-line catch of golden tilefish is small (~6-10%). Therefore, changing the fishing year is not likely to substantially increase the commercial hook-and-line catch. Furthermore, a change in the fishing year probably would not alter the number of months the commercial longline sector operates as the percentage of golden tilefish landed was evenly distributed among all months before more restrictive regulations were implemented. Although commercial harvest for golden tilefish has closed before the end of the year from 2007 to 2011, it is unlikely that golden tilefish would be taken incidentally as bycatch since the majority of the catch is targeted with longline gear. In addition, golden tilefish do not occupy the same habitat of other deepwater species (e.g., snowy grouper, blueline tilefish, blackbelly rosefish, etc.). Golden tilefish prefer a mud habitat whereas the other deepwater species occur in a rocky habitat. While there is little biological benefit to changing the fishing year, a shift in the fishing year would allow hook-and-line fishermen to target golden tilefish in the fall; however, a change in the fishing year would also result in multiple species being open at the same time. Therefore, there could be economic benefit to some fishermen of retaining the January start date (**Preferred Alternative 1 (No Action)**) for golden tilefish. It is noted that **Action 4**, which includes alternatives that would allocate portions of the commercial ACL to the longline and hook-and-line sectors, would have a similar effect in ensuring fishermen would be able catch golden tilefish with hook-and-line gear.

Golden tilefish spawn off the southeast coast of the U.S. from March through late July, with a peak in April (Harris et al. 2001). Grimes et al. (1988) indicate peak spawning occurs from May through September in waters north of Cape Canaveral, Florida. However, golden tilefish do not appear to have increased vulnerability to fishing pressure, such as many grouper and snapper species that form spawning aggregations. **Preferred Alternative 1 (No Action)** would continue to open the season before the start of the spawning season. **Alternative 2** would move the opening the fishing year to the end of the spawning season. **Alternative 3** would move the opening of the fishing year to near the end of the spawning season. **Alternative 4** would move the opening of the fishing year to the peak of the spawning season. **Alternative 2** would provide the most biological protection, followed by **Alternative 3**, **Alternative 4**, and **Preferred Alternative 1 (No Action)**.

Preferred Alternative 1 (No Action) would perpetuate the existing level of risk for interactions between ESA-listed species and the fishery. **Preferred Alternative 1 (No Action)** and **Alternatives 2-4** are unlikely to have adverse effects on ESA-listed *Acropora* species. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect these species. These

alternatives are unlikely to alter fishing behavior in a way that would cause new adverse effects to *Acropora*. The impacts from **Preferred Alternative 1 (No Action)** and **Alternatives 2-4** on sea turtles and smalltooth sawfish are unclear. Sea turtle abundance in the South Atlantic changes seasonally. Even if **Preferred Alternative 1 (No Action)** and **Alternatives 2-4** perpetuate the existing amount of fishing effort, but cause a temporal or spatial effort redistribution, any potential effort shift is unlikely to change the level of interaction between sea turtles and smalltooth sawfish and the fishery as a whole. If these alternatives reduce the overall amount of fishing effort for golden tilefish, the risk of interaction between sea turtles and smalltooth sawfish would likely decrease.

4.6.2 Economic Effects

Alternatives 2-4 address a possible change in the fishing year for the golden tilefish portion of the snapper grouper fishery. Under current regulations, the golden tilefish fishing year begins on January 1 with a 4,000-pound gw trip limit. Once 75% of the quota is taken, a 300-pound gw trip limit goes in to place. Currently, a derby fishery exists for golden tilefish with a small number of longline participants, who take the majority of the catch (92%), and a larger number of hook-and-line participants. Prior to the quota closures of golden tilefish that have occurred in recent years, longline participants from Florida would begin fishing in January. By April or May when the weather improves, fishermen from the Carolinas who use longline gear would begin fishing. In September and October, hook-and-line fishermen from Florida would begin to fish for golden tilefish. This is the time of year when they are not participating in other fisheries.

Alternatives 2-4 would all benefit hook-and-line golden tilefish fishermen in Florida in the fall months when they are not participating in other fisheries. In recent years, hook-and-line fishermen have not been able to fish for golden tilefish during September and October, as they have in the past, due to earlier closures. Likewise, Carolina fishermen may be able to fish for more months of the year under these alternatives because they will be able to fish at the beginning of the season when weather is amenable to fishing. In past years when the season began in January, Carolina fishermen were not able to begin fishing until April or May. A May start date (**Alternative 4**) would benefit Carolina longline fishermen more than **Alternative 2** and **Alternative 3**. A September 1 start date (**Alternative 2**) would perhaps benefit them the least. A September 1 start date (**Alternative 2**) may not even provide four months of fishable weather.

One significant drawback to a later start date (**Alternatives 2-4**), however, is that under **Preferred Alternative 1 (No Action)**, very little landings are available to dealers as a result of the red snapper closure, shallow water grouper January-April seasonal closure, red porgy January-April seasonal closure, and quota closures for black sea bass and vermilion snapper imposed through Amendments 16 (SAFMC 2009a), 17A (SAFMC 2010a), and 17B (SAFMC 2010b) to the Snapper Grouper FMP. Having golden tilefish available during January to May when other species are closed could increase the dockside price paid to fishermen for golden tilefish. Even if dockside prices do not increase in the early part of the year, retaining a January 1 start date could help dealers maintain supply and therefore retain customers. **Action 4**, which includes alternatives that would allocate portions of the commercial ACL to the longline and hook-and-line sectors separately, would ensure fishermen would be able to catch golden tilefish with hook-and-line gear.

4.6.3 Social Effects

This action attempts to respond to the disruption, and presumed adverse social and economic consequences, of historic participation and harvest patterns as a result of recent management measures, specifically the 4,000-pound gw trip limit that is reduced to 300 pounds gw once 75% of the ACL is taken on or before September 1. As discussed in the previous sections, the golden tilefish component of the snapper grouper fishery has been reduced to less than a full-year harvest activity. Further, in recent years, the trip limits and subsequent early closure have resulted in North Carolina and South Carolina fishermen, who are not able to fish for golden tilefish until spring due to weather conditions, having access to a shorter season, and Florida hook-and-line fishermen not being able to fish for golden tilefish at all because of quota closure. As discussed in **Section 4.2.3**, deviation from these historic patterns is assumed to have resulted in declines in social and economic benefits to the fishery, associated businesses, and communities.

Because **Alternative 1 (No Action, Preferred)** would not make any regulatory change in the fishing year, no changes in the manner in which the golden tilefish component of the snapper grouper fishery is prosecuted would be expected and, as a result, no changes in the current social benefits of the snapper grouper fishery would be expected to occur. Any decline in social benefits resulting from shifting harvest patterns away from historic/traditional harvest pattern, as discussed in the previous paragraph, would be expected to continue. Increased deviation from historic patterns, and associated social and economic benefits, could occur if fishing effort and patterns shift in response to increasingly restrictive management on other snapper grouper species. Seasonal closures for other species in recent years have resulted in golden tilefish being one of the few species that could be harvested during the winter months. While such a shift may compensate for social and economic losses, this shift would increase the losses in social and economic benefits to historic golden tilefish commercial harvesters, and associated businesses and communities.

Alternatives 2-4 attempt to recover these reduced benefits, and prevent further losses, by adjusting the start of the fishing year. While adjusting the start of the fishing year, in conjunction with the ACL and AMs, would not affect the total available ACL, commencement of the fishing year in September (**Alternative 2**), August (**Alternative 3**), or May (**Alternative 4**) would be expected to allow increased participation and recovery of historic harvests. The earlier the start (May), the greater the opportunity for participation by North Carolina and South Carolina fishermen, with continued potential jeopardy for Florida hook-and-line vessels (quota management could still close the fishery in the fall). The later the start (September) the reverse would occur; Florida hook-and-line fishermen should be able to fish the entire fall whereas North Carolina and South Carolina fishermen could face abbreviated fishing opportunities depending on fall and winter weather conditions and the pace at which the commercial ACL is harvested. Both **Alternative 2** and **Alternative 3** would be expected to result in similar fishing opportunities for Florida fishermen, and improved opportunities relative to **Alternative 4**, whereas Carolina fishermen should face better opportunities under **Alternative 3** relative to **Alternative 2**, but reduced opportunities relative to **Alternative 4**.

4.6.4 Administrative Effects

Preferred Alternative 1 (No Action), would result in no new administrative burden. **Alternatives 2-4** would adjust golden tilefish management measures to change the start date of the fishing year. Implementing a change in the fishing year would incur minor adverse administrative impacts in the form of developing outreach materials such as fishery bulletins.

4.7 Action 7. Modify the Golden Tilefish Trip Limit

Alternative 1 (No Action). The commercial trip limit is 4,000 pounds gw; if 75% is harvested before September 1, the trip limit is reduced to 300 pounds gw.

Alternative 2 (Preferred). Remove the 300-pound gw trip limit when 75% of the ACL is taken.

Alternative 3. Prohibit longline fishing after 75% of the ACL is taken.

4.7.1 Biological Effects

Alternative 1 (No Action) would retain regulations for golden tilefish implemented through Amendments 13C (SAFMC 2006), 15A (SAFMC 2008a), and 17B (SAFMC 2010b) to the Snapper Grouper FMP. Golden tilefish is not experiencing overfishing and is not overfished. Regulations for golden tilefish through Amendment 13C established a commercial ACL of 295,000 pounds gw with a 4,000-pound gw trip limit that is reduced to 300 pounds gw if 75% of the ACL is met on or before September 1. In addition, regulations limited recreational catch to 1 fish per person per day. The commercial catch was based on historic landings during 1999-2003, when commercial fishermen captured 97% of the total catch. The commercial portion (97%) was applied to the yield at F_{MSY} to determine the commercial ACL. Amendment 17B changed the commercial ACL for golden tilefish to 282,819 pounds gw. The South Atlantic Council has approved Regulatory Amendment 12 to the Snapper Grouper FMP (SAFMC 2012) for review by the Secretary, which would adjust the ABC and ACLs for golden tilefish based on the results of a recent stock assessment.

Commercial longline fishermen are concerned a 300-pound gw trip will not be profitable given the size of their operations. Furthermore, hook-and-line fishermen are concerned the commercial ACL is being met quickly and before they can fish for golden tilefish in the fall. It is also noted that the preferred alternative in **Action 8** would establish a 500 pounds gw golden tilefish trip limit for commercial fishermen with federal Snapper Grouper Unlimited Permits who do not receive a longline endorsement. Vessels with longline endorsements would not be eligible to fish for this trip limit. Consequently, the South Atlantic Council is considering modifying the stepped trip limit strategy, as appropriate, to ensure the golden tilefish regulations imposed in October 2006 through Amendment 13C do not unnecessarily disproportionately impact select fishermen.

Alternative 1 (No Action) would retain the trip limit reduction from 4,000 pounds gw to 300 pounds gw if 75% of the commercial ACL was met on or before September 1. Although the commercial hook-and-line catch of golden tilefish is minor (~6% during 1999-2004 and ~10% during 2004-2008; **Table 3-6**), 35% of the hook-and-line catch occurred during September and October 1999-2004. In recent years, the golden tilefish ACL has been met before September and October when many hook-and-line fishermen have historically fished for golden tilefish.

Preferred Alternative 2 would remove the 300-pound gw trip limit when 75% of the commercial ACL is met. Reducing the 4,000 pounds gw trip limit to 300 pounds gw when 75% of the commercial ACL is met was originally intended to allow golden tilefish to remain open all year, and allow for

commercial hook-and-line Florida fishermen to target golden tilefish in the fall. Furthermore, the action was intended to allow fishermen from the Carolinas to harvest golden tilefish when weather conditions were most favorable. Based on data from 2007 to 2011, golden tilefish did not remain open all year even when the trip limit was reduced 300 pounds gw. As a derby fishery has developed for golden tilefish and the commercial ACL has been met very rapidly in recent years, the 300-pound gw trip limit has not had the intended effect of providing the hook-and-line access to golden tilefish. However, the current advantage of retaining the 300-pound gw trip limit when 75% of the commercial ACL is met is that it can slow the rate at which the commercial ACL is filled and increase the chance the commercial ACL would not be exceeded. However, during 2011 and 2012, golden tilefish were being harvested very quickly and landings could not be tracked accurately given the NMFS/NOAA quota monitoring system currently in place (see **Table 4-1**). As a result, an overage of the commercial ACL occurred and the 300-pound gw trip limit was not triggered.

The expected biological effect of removing the trip limit reduction when 75% of the commercial ACL is met is expected to be minimal. In the commercial sector, most golden tilefish (90% during 2004-2010) are taken with longline gear deployed by large vessels, which make long trips and depend on large catches (> 3,000 pounds gw) to make a trip economically feasible. Therefore, a 300-pound gw trip limit when 75% of the commercial ACL is met should shut down the commercial longline sector, and might reduce their potential annual catch.

Alternative 3 would close the longline sector when 75% of the commercial ACL is met. Therefore, this alternative would further slow the rate at which the commercial ACL is met and reduce the chance that there would be regulatory discards. As longline fishermen deploy a large amount of gear, there is a chance they could exceed the 300-pound gw trip limit and would have to discard golden tilefish. However, it is unlikely that many fishermen are using longline gear to target golden tilefish once the trip limit is reduced because it is not profitable. Therefore, the expected biological effects of closing the longline sector when 75% of the commercial ACL is met are expected to be minimal. The intent of this alternative is to slow down the rate of fishing to allow hook-and-line fishermen to have access to golden tilefish in the fall. The South Atlantic Council has selected preferred alternatives in **Action 4**, which would allocate a portion of the commercial ACL to the hook-and-line sector, and **Action 8**, which would establish a golden tilefish trip limit for commercial fishermen with federal Snapper Grouper Unlimited Permits who do not qualify for an endorsement. The South Atlantic Council selected the no-action alternative in **Action 6** to change the golden tilefish fishing year to potentially enable longline fishermen from northern areas and hook-and-line fishermen to participate in the golden tilefish component of the snapper grouper fishery more easily.

Alternative 1 (No Action) would perpetuate the existing level of risk for interactions between ESA-listed species and the fishery. **Preferred Alternative 2** and **Alternative 3** are unlikely to have adverse effects on ESA-listed *Acropora* species. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect these species. These alternatives are unlikely to alter fishing behavior in a way that would cause new adverse effects to *Acropora*. The impacts from **Preferred Alternative 2** and **Alternative 3** on sea turtles and smalltooth sawfish are unclear. Sea turtle abundance in the South Atlantic changes seasonally. Even if **Preferred Alternative 2** or **Alternative 3** perpetuate the existing amount of fishing effort, but cause a temporal or spatial effort redistribution, any potential effort shift is unlikely to change the level of interaction between sea turtles and smalltooth sawfish and the fishery as a whole. If these alternatives reduce the overall amount of fishing effort in the fishery, the risk of interaction between sea turtles and smalltooth sawfish would likely decrease.

4.7.2 Economic Effects

Under **Alternative 1 (No Action)**, the 300-pound gw trip limit that is implemented if 75% of the commercial ACL is taken before September 1 under a 4,000-pound gw trip limit, would be maintained. This alternative, which attempts to preserve a portion of the commercial ACL for hook-and-line fishermen, was established by the South Atlantic Council to benefit hook-and-line fishermen who often start fishing later in the year. **Alternative 2 (Preferred)** removes the 300-pound gw trip limit, thereby removing preservation of a portion of the commercial ACL for hook-and-line fishermen. This makes it more likely that longline fishermen would continue to fish after 75% of the commercial ACL has been met since the 4,000-pound gw trip limit would be maintained. **Alternative 3** ensures that fishermen using longline gear do not fish once the 300-pound gw trip limit goes into place each year.

In recent years, the commercial fishing season for golden tilefish has become shorter causing fishermen who normally fish for the species later in the year to be unable to continue participating in the golden tilefish portion of the snapper grouper fishery. To this extent, the trip limit structure under **Alternative 1 (No Action)** has not been successful in meeting its original intent. It can be expected that **Alternative 2 (Preferred)** would only worsen the condition for hook-and-line fishermen who normally fished later in the year. If longline fishermen could increase their share in the presence of the 300-pound gw trip limit, they do better without it. **Alternative 3** has a better chance of allowing hook-and-line fishermen to continue their normal fishing activities in the later part of the year. However, under the current experience of a progressively shortening fishing season, hook-and-line fishermen able to fish early in the year would be motivated to intensify their effort. This would eventually eliminate the advantage **Alternative 3** would provide to some hook-and-line fishermen.

Some actions in this amendment would appear to be more effective in allowing the hook-and-line segment to continue to participate in the golden tilefish commercial sector. Some alternatives, including the preferred alternative for allocation (**Action 4**), would help ensure the continued presence of the hook-and-line segment in the fishery. In the presence of an allocation provision (**Action 4**), **Alternatives 1 (No Action)** and **3** would not be needed to ensure the presence of the hook-and-line segment. These alternatives would mainly adversely affect the profitability of the longline segment without benefiting the hook-and-line segment. Given the allocation actions, **Alternative 2 (Preferred)** would tend to benefit the longline segment without directly affecting the hook-and-line segment so that it would appear to be economically better than the other alternatives.

Action 6 also includes alternatives that change the golden tilefish fishing year to potentially enable longline fishermen from northern areas and hook-and-line fishermen to participate in the golden tilefish component of the snapper grouper fishery more easily. If a change in the fishing year occurred under **Action 6**, there would be less need for the existing 300-pound gw trip limit. Under **Preferred Alternative 1 (No Action)** for **Action 6** and **Alternative 2 (Preferred)** under this action, economic benefits would increase for longline fishermen since the 4,000-pound gw trip limit would be extended. Hook-and-line fishermen would doubly benefit from a change in the start of the fishing year (**Action 6**) and **Alternative 3** under this action.

A major economic issue in preserving the presence of the hook-and-line segment in the golden tilefish commercial sector is whether profits to the entire commercial sector would be higher with the presence of the hook-and-line segment. Given the continued participation of the hook-and-line segment in the golden tilefish commercial sector, it appears that this segment of the commercial sector is profitable. The shrinking share of this segment in the golden tilefish commercial sector could be partly due to the regulations imposed on golden tilefish and other sectors of the snapper grouper fishery. If it were so, implementing regulations to protect the hook-and-line segment could not be totally considered as artificially inflating the profitability of this segment of the commercial sector. It appears, though, that some other actions in this amendment, such as **Action 4** would provide a better chance of preserving the presence of the hook-and-line segment of the golden tilefish commercial sector.

4.7.3 Social Effects

Alternative 1 (No Action) would result in the continuation of the current step-down trip limit and no change in customary fishing performance, as affected by this management measure, would be expected to occur. In the absence of other management change on golden tilefish harvests, all current fishing behaviors, harvests, and associated social and economic benefits could continue. However, continuation of the step-down trip limit may be unnecessarily restricting the golden tilefish harvests by longline vessels, particularly if other proposed management changes are effective in returning harvests to historic patterns. If so, **Alternative 1 (No Action)** would be expected to result in reduced social and economic benefits relative to corrective action.

If social benefits are being reduced under the status quo, this would be expected to be corrected under **Alternative 2 (Preferred)**, particularly if considered in combination with other proposed actions for golden tilefish. **Alternative 2 (Preferred)** would eliminate the step-down and should allow longline vessels to continue to harvest profitable quantities of golden tilefish. Regardless of the decision on the proposed change in the fishing year, elimination of the step-down would be expected to accelerate quota closure of the fishery by not reducing the pace of harvest. The magnitude of impact of accelerated quota closure on vertical line fishermen would depend on how harvests are affected by the proposed endorsement requirement and change in the fishing year. Nevertheless, in tandem with the other proposed golden tilefish management changes, it is expected that the elimination of the 300-pound gw step-down limit would result in increased social benefits relative to **Alternative 1 (No Action)**.

While **Alternative 3** would attempt to help recover the historic golden tilefish harvest patterns of Florida hook-and-line vessels by closing the longline sector if the 300-pound gw trip limit is triggered, **Alternative 3** may not have any substantive effect on either the longline or hook-and-line sectors because it is generally assumed that using longline gear to target golden tilefish would no longer be profitable at the lower trip limit. As a result, the harvest of golden tilefish with longline gear may already currently effectively end under the status quo. If this is true, regulatory closure of this gear sector would neither increase benefits for hook-and-line fishermen nor impose any adverse effects on longline fishermen.

4.7.4 Administrative Effects

Under **Alternative 1 (No Action)**, the 300-pound gw trip limit when 75% of the commercial ACL is reached, would remain. Of the alternatives, **Alternative 1 (No Action)** is the most administratively burdensome. **Alternative 1 (No Action)** requires the monitoring of the commercial ACL, rulemaking when 75% of the commercial ACL is reached, and rulemaking when the fishery is closed. Associated with the rulemaking is the development of fishery bulletins and other outreach materials to fishermen. **Preferred Alternative 2**, which would remove the 300-pound gw trip limit once 75% of the commercial ACL is reached, would be less administratively burdensome. Under **Preferred Alternative 2**, the commercial golden tilefish sector would be closed when the commercial ACL is reached thus requiring one rulemaking and fishery bulletin. In order to make sure that the commercial ACL is not exceeded, **Preferred Alternative 2** may require increased frequency of monitoring, which may be more administratively burdensome. **Alternative 3** would be expected to have similar impacts on law enforcement as **Preferred Alternative 2**.

4.8 Action 8. Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

Alternative 1 (No Action). Currently there is a commercial trip limit of 4,000 pounds gw until 75% of the quota is taken. The trip limit is then reduced to 300 pounds gw.

Alternative 2. Establish a trip limit of 300 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 3. Establish a trip limit of 400 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 4 (Preferred). Establish a trip limit of 500 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 5. Establish a trip limit of 100 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

Alternative 6. Establish a trip limit of 200 pounds gw for the golden tilefish component of the snapper grouper fishery for commercial fishermen who do not receive a longline endorsement. Vessels with golden tilefish longline endorsements are not eligible to fish under this trip limit with other gear (i.e., hook-and-line).

4.8.1 Biological Effects

Under **Alternative 1 (No Action)**, there would be no change in the trip limit for hook-and-line vessels that do not have a longline endorsement. For **Alternatives 2-6**, trip limits ranging from 100 pounds gw to 500 pounds gw would be specified for fishermen who do not qualify for a longline endorsement under **Action 2**. Under **Action 2**, **Preferred Alternative 2h**, 23 individuals would qualify for longline endorsements. Nineteen of the endorsements would be for fishermen from Florida and 4 would be for South Carolina fishermen. The South Atlantic Council's intent for **Action 8** is to allow fishermen with federal South Atlantic Unlimited Snapper Grouper Permits who do not qualify for a longline endorsements to have the opportunity to catch golden tilefish, particularly fishermen outside of Florida.

The preferred alternative under **Action 4** would allocate 25% (135,324 pounds gw) of the proposed 541,295 pounds gw commercial ACL to the hook-and-line sector. This value is greater than what the

hook-and-line sector has caught in recent years. As a result, a 500-pound gw trip limit (**Preferred Alternative 4**) in combination with a proposed commercial hook-and-line ACL of 135,324 pounds gw would be expected to provide year-round access to golden tilefish to individuals from all states who do not qualify for a longline endorsement.

Alternatives with more restrictive trip limits would be expected to have greater biological effects for golden tilefish as they would likely constrain the overall harvest. However, golden tilefish are not overfished and are not experiencing overfishing. Furthermore, ACL and AMs are in place to prevent overfishing from occurring. Thus, there is no biological need for a more restrictive trip limit.

Alternative 1 (No Action) would likely perpetuate the existing level of risk for interactions between ESA-listed species and the fishery. None of the alternatives are likely to have adverse effects on listed species in the action area. Previous ESA consultations determined the snapper grouper fishery was not likely to adversely affect protected species. Alternatives in this amendment are unlikely to alter fishing behavior in a way that would cause new adverse effects to any known protected species in the action area. Through **Action 1**, participation would be limited in the golden tilefish sector of the snapper grouper fishery and, by reducing effort and participation, it is expected that the impacts on protected species will be reduced. The alternatives proposed in **Action 8** would specify trip limits for vessels that do not receive an endorsement and none of these alternatives are expected to have an impact on protected species.

4.8.2 Economic Effects

Information about the number of permits that qualify for each longline endorsement alternative under **Action 2**, the number of permits that do not qualify for longline endorsement and their 2005-2011 average landings, and the number of hook-and-line vessels and their 2005-2011 average landings is shown in **Table 4-11**. This information includes only permits/vessels that landed at least one pound of golden tilefish during 2005-2011. It is assumed that these are the permits/vessels that would pursue a golden tilefish trip limit in the future. However, people who have never caught golden tilefish before and have a federal South Atlantic Unlimited Snapper Grouper Permit would also be allowed to catch the trip limit for golden tilefish. The landings caught by those without endorsements would count towards the hook-and-line portion of the golden tilefish commercial ACL.

Table 4-11. Number of permits that qualify for a longline endorsement, number of permits that do not qualify for a longline endorsement, number of vessels using hook-and-line, and the average number of pounds gw landed by longline vessels not qualifying for the endorsement and of hook-and-line vessels. Only those permits/vessels with landings of at least one pound of golden tilefish during 2005-2011 are included.

Longline (LL) Sub-alternatives for Action 3	Eligibility Requirement	Number of Endorsements (Number of Permits That Qualify)	Number of Permits Using LL That Do Not Qualify	2005-11 Average Landings of Those Not Qualifying for LL Endorsement (pounds gw)	Number of Vessels Using Hook-and-line	2005-11 Average Landings of Hook-and-line Vessels (pounds gw)
Sub-alternative 2a	At least 2,000 pounds gw golden tilefish when landings from 2006-08 are aggregated	17	21	59,504	142	24,734
Sub-alternative 2b	At least 5,000 pounds gw golden tilefish when landings from 2006-08 are aggregated	12	26	76,247	142	24,734
Sub-alternative 2c	Average of 5,000 pounds gw golden tilefish when landings from 2006-08 are averaged	11	27	88,554	142	24,734
Sub-alternative 2d	Average of 5,000 pounds gw golden tilefish caught from 2007-09	12	26	72,984	142	24,734
Sub-alternative 2e	Average of 10,000 pounds gw golden tilefish caught from 2007-09	8	30	106,220	142	24,734
Sub-alternative 2f	Average of 10,000 pounds gw golden tilefish caught for the best 3 years within the period 2006-10	14	24	49,591	142	24,734
Sub-alternative 2g	Average of 5,000 pounds gw golden tilefish caught for the best 3 years within the period 2006-10	18	20	30,925	142	24,734
Sub-alternative 2h (Preferred)	**Average of 5,000 pounds gw golden tilefish caught for the best 3 years from 2006-11**	**23**	**15**	**18,451**	**142**	**24,734**
Sub-alternative 2i	Average of 10,000 pounds gw golden tilefish caught for the best 3 years from 2006-11	16	22	37,439	142	24,734

Source: NOAA/NMFS logbooks, accumulative landings system, and permits as provided by SEFSC.

In principle, **Alternative 1 (No Action)** would not have any economic effects on commercial sector participants. The relatively high trip limit was mainly intended to limit the harvest per trip of longline vessels. With the division of the commercial ACL for golden tilefish between the longline and hook-and-line sectors in **Action 4**, and the longline endorsement in **Action 2**, **Alternative 1 (No Action)** under the current action would only apply to the hook-and-line sector. The relatively high trip limit is unlikely to limit the harvest per trip of hook-and-line vessels. Longline vessels excluded from the endorsement system in **Action 2** would have to switch to using hook-and-line to continue commercially fishing for golden tilefish. It is not precisely known what their level of harvest per trip would be using a different gear type, but it is likely they would not be harvesting as much as when they used longlines.

The effects of the various trip limit alternatives in terms of forgone landings and revenues are presented in **Table 4-12**. Included in the analysis are all trips by hook-and-line vessels and longline vessels excluded from the endorsement system that landed at least one pound of golden tilefish during 2005-2011. The revenue reductions would range from about $69,000 with **Alternative 4 (Preferred)** to -$76,000 with **Alternative 5**. It is expected that the preferred alternative would have the least revenue reductions because it provides for the highest trip limit.

The revenue reductions from the various trip limit alternatives appear to be relatively high because of the inclusion of those longline trips that would not be taken by vessels excluded from the endorsement system. If these trips were excluded, the revenue reductions would most likely be very low especially for a 500-pound trip limit (**Preferred Alternative 4**). However, these trips are included in the present analysis because they would now be subject to the trip limits.

A trip limit may be considered to have relatively short-term effects. A vessel incurring revenue reductions due to a trip limit may recoup its losses by taking more trips as long as those trips are still profitable. A relatively high trip limit, such as in **Alternative 4 (Preferred)**, would likely remain profitable for hook-and-line vessels. As shown in **Table 4-12**, this trip limit would affect only 14 trips out of the 2005-2011 average of 249 trips. It is then likely that a trip limit, as in **Alternative 4 (Preferred)**, would not be too constraining as to leave unharvested a good portion of the hook-and-line sector's quota.

Table 4-12. Effects of trip limit alternatives on the harvest and revenues of vessels not qualifying for the longline endorsement, assuming the preferred alternative in **Action 2** and using average 2005-2011 landings, revenues, and trips.

Trip Limit Alternative	Reductions in Pounds (gw)	Reductions in Revenue (2010 dollars)	Affected Trips
A-2: 300 pound	25,625	$71,931	17
A-3: 400 pound	24,921	$70,067	15
A-4: 500 pound	**24,403**	**$68,687**	**14**
A-5: 100 pound	27,019	$75,733	25
A-6: 200 pound	26,142	$73,364	19

Source: NOAA/NMFS logbooks, accumulative landings system, and permits as provided by SEFSC.

4.8.3 Social Effects

In general, establishing a trip limit for vessels without a golden tilefish longline endorsement should be beneficial for the fishermen by restricting non-longline harvest, but is also expected to maintain some allowable harvest for other commercial fishermen who do not receive a longline endorsement. Under all alternatives in this action, the trip limit for vessels with the longline endorsement will be 4,000 pounds gw and there will be little or no difference in the direct effects on the endorsed longline fleet for each alternative. However, the trip limits for non-endorsed fishermen under **Alternatives 2-6** will create even more of a demarcation between the privileges of the endorsed and non-endorsed, which may generate long-term benefits to the endorsement holders by increasing the value of the endorsement.

In general, trip limits may be effective in slowing harvest and lengthening a season, which would be somewhat beneficial to crew, dealers, and communities because golden tilefish may be available for a longer period and market gluts could be avoided. However, trip limits also have the potential to restrict efficiency of fishing trips. The negative social impacts of trip limits are associated with the economic costs if a vessel has the capacity to harvest more than the proposed trip limits. However, the 127 vessels that have South Atlantic 225 Pound Trip Limit Snapper Grouper Permits (of which 113 are Florida vessels, **Table 3-30**) will not experience any additional impacts from a proposed trip limit higher than 225 pounds gw (**Alternatives 2-4 (Preferred)**).

Alternative 1 (No Action) would be expected to generate little or no social impacts (positive or negative) because the only trip limit for vessels harvesting golden tilefish using gear other than longline would be the existing South Atlantic 225 Pound Trip Limit Snapper Grouper Permits, as long as the step-down approach was removed in **Action 7**. The highest proposed trip limit under **Alternative 4 (Preferred)** would be the most beneficial to vessels with South Atlantic Unlimited Snapper Grouper Permits, and **Alternative 5** would be the most restrictive to those vessels. Although lower trip limits may contribute to a longer fishing season, the more restrictive limits may cause some vessels to target other species to increase the economic efficiency of fishing trips.

4.8.4 Administrative Effects

There would be no administrative impacts incurred under **Alternative 1 (No Action)**. **Alternative 2-6** would establish trip limits for fishermen who do not qualify for a longline endorsement under **Action 2**. The establishment of the trip limits would require some administrative impacts associated with rule making, enforcement, and outreach and education. However, these administrative impacts would not differ between **Alternatives 2-6.**

Chapter 5. Council's Choice for the Preferred Alternative

5.1 Limit Participation in the Golden Tilefish Component of the Snapper Grouper Fishery

With the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) in 2006, new requirements to establish annual catch limits (ACLs) and accountability measures (AMs) went into effect. Further, strict timelines were put in place to end overfishing. Amendment 17B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 17B; SAFMC 2010b) ultimately addressed the new Magnuson-Stevens Act requirements for species undergoing overfishing, including golden tilefish. Implementation of Amendment 17B reduced the golden tilefish commercial ACL from 295,000 pounds gutted weight (gw) to 282,819 pounds gw based on the preferred allocation alternative selected (97% commercial, 3% recreational) by the South Atlantic Fishery Management Council (South Atlantic Council). Amendment 13C to the Snapper Grouper FMP (Amendment 13C; SAFMC 2006) reduced the commercial quota from 1,001,663 pounds gw to 295,000 pounds gw. The reduction in the commercial quota precipitated development of a derby fishery prompting the South Atlantic Council to solicit input from the industry on methods to address resulting concerns, such as safety at sea and economic disadvantage from market flooding.

The South Atlantic Council began exploring the concept of endorsements for the commercial golden tilefish sector in 2008. To this end, a Golden Tilefish Limited Access Privilege (LAP) Workgroup (Workgroup) was convened to provide input on ways to address some of the issues mentioned above (see **Appendix D**). The Workgroup developed detailed draft management programs under different scenarios. Workgroup members recommended a gear specific golden tilefish endorsement program that would limit participation and exclude those without historical landings. Endorsements for the longline and hook-and-line sectors were recommended and various eligibility criteria based on landed pounds were included.

Based on recommendations from the Workgroup, the South Atlantic Council initially considered establishment of endorsements for both the longline and hook-and-line sectors in Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 18B; SAFMC 2010b). However, the 2011 assessment of the golden tilefish stock in the South Atlantic (SEDAR 25 2011) and acceptable biological catch (ABC) recommendation from the South Atlantic Council's Scientific and Statistical Committee (SSC) allow for an increase in the ACL if Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Regulatory Amendment 12; SAFMC 2012) is approved by the Secretary of Commerce (Secretary). The increase in the ACL would be significantly above recent landings and take into account recent overages. In addition, the South Atlantic Council's preferred commercial ACL allocation is 75% and 25% for longline and hook-and-line sectors, respectively (**Action 4**). The South Atlantic Council reasoned that with the upcoming increase in the ACL (if approved by the Secretary) and the specification of an allocation for the hook-and-line sector, establishment of a hook-and-line endorsement would limit the use of the golden tilefish resource unnecessarily during a time when regulations on other snapper

grouper species are very restrictive. Hence, the South Atlantic Council chose instead to focus on establishment of longline endorsements only.

In March 2012, the South Atlantic Council received a proposal for a voluntary Individual Fishing Quota (IFQ) program from a fishermen's organization. South Atlantic Council staff were also asked to prepare analyses to discuss the possibility of a catch-share program for the golden tilefish segment of the snapper grouper fishery. After lengthy discussion and input from the public, the South Atlantic Council chose not to consider a catch-share program. However, the South Atlantic Council requested that an analysis be conducted on the voluntary IFQ proposal brought to them by fishermen.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's preferred alternative to establish a longline endorsement.

The Scientific and Statistical Committee (SSC) commented that limiting access might be favorable because the golden tilefish has been closing earlier each year. However, the SSC cautioned that by concentrating catch to specialists (i.e., fishermen who only target a specific species or species complex), the fishermen would be more susceptible to fluctuations in harvest due to biological and regulatory factors affecting the availability of fish. The SSC recommended the South Atlantic Council consider that fishermen are generally in favor of limiting entry in their own fishery due to increases in personal revenue and spreading the catch among fewer participants. Additionally, the SSC stated that establishment of an endorsement program may not achieve the management goal of balancing regional in-season differences in the ability to harvest golden tilefish.

The Law Enforcement Advisory Panel (LEAP) did not provide a recommendation for this action in particular. However, the LEAP recommended the South Atlantic Council consider requiring vessel monitoring systems (VMS) for the golden tilefish commercial sector, and all highly regulated fisheries (for both enforcement and safety reasons).

The South Atlantic Council concluded **Preferred Alternative 2** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery because currently 763 permits could choose to fish longline gear whereas the measures proposed to limit participation reduce that number to 23 permits. The Council recognizes that the 23 permits includes 24 longline vessels which is greater than the number of longline vessels landing golden tilefish from 2004 through 2011, however, the preferred alternative does propose a cap on participation. The Council will monitor performance of the longline sector and if further reductions in number of permits/vessels is necessary to reduce overcapacity, the Council will amend the snapper grouper fishery management plan. The Council concluded this cap was sufficient at this time given the proposed increase in the ACL and their desire to provide as much fishing opportunity for species not overfished or undergoing overfishing to replace the fishing opportunities lost due to restrictions on other species. The preferred alternative also best meets the objectives of the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.2 Establish Initial Eligibility Requirements for a Golden Tilefish Longline Endorsement

The Workgroup's initial preferred eligibility criterion for the longline endorsement was a harvest level of at least 2,000 pounds gutted weight (gw) of golden tilefish during 2005 and 2007 (see **Appendix D**). The alternative was later revised to include 2006 through 2008 (**Sub-alternative 2a**). Throughout development of Amendment 18B, the South Atlantic Council included additional alternatives for analysis to better balance historic and recent participation in the golden tilefish portion of the snapper grouper fishery, as mandated in the Magnuson-Stevens Act. Due to increasing restrictions in the snapper grouper fishery in recent years, some snapper grouper fishermen began targeting golden tilefish more heavily. Some of the new entrants made large investments in vessels and equipment to participate in the golden tilefish longline sector. After receiving input from the affected fishermen and the general public, the South Atlantic Council ultimately settled on the alternative that would result in the greatest number of longline endorsements to maximize socio-economic benefits.

The Snapper Grouper Advisory Panel (AP) supported **Sub-alternative 2a**. As previously mentioned, this was the original alternative recommended by the Workgroup.

The Scientific and Statistical Committee (SSC) recommended that the South Atlantic Council consider collecting some quantitative data before making any decisions on endorsements and consider the cost of these programs.

The Law Enforcement Advisory Panel (LEAP) did not provide a recommendation for this action. However, the LEAP recommended the South Atlantic Council consider a golden tilefish bycatch allowance if substantial effort with longline gear develops in the future for snowy grouper or other deepwater species.

The South Atlantic Council concluded that **Preferred Sub-Alternative 2h** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery because currently 763 permits could choose to fish longline gear whereas the measures proposed to limit participation reduce that number to 23 permits. The Council's preferred alternative going into the June 2012 meeting was Sub-Alternative 2f that would have resulted in 14 permits/18 vessels qualifying. The Snapper Grouper Committee change to Sub-Alternative 2g with 18 permits/23 vessels to address concerns about socioeconomic impacts on those not qualifying. After hearing considerable public comments during the June 2012 meeting about newer entrants making large investments and some entrants working their way up from crew to purchasing a vessel, the Council chose **Preferred Sub-Alternative 2h** that resulted in 23 permits/24 vessels qualified for the longline endorsement. The Council recognizes that the 23 permits includes 24 longline vessels which is greater than the number of longline vessels landing golden tilefish from 2004 through 2011, however, the preferred alternative does propose a cap on participation that will prevent further increases in overcapacity. The Council will monitor performance of the longline sector and if a further reduction in number of permits/vessels is necessary to reduce overcapacity, the Council will amend the snapper grouper fishery management plan. The Council concluded this cap was sufficient at this time given the proposed increase in the ACL and their desire to provide as much fishing opportunity for species not overfished or undergoing overfishing to replace the fishing opportunities lost due to restrictions on other species. The preferred alternative addresses the socioeconomic impacts of reducing the number of permits/vessels more at this time in the face of all the other regulations limiting capacity in other South Atlantic Council managed fisheries. The preferred alternative also best meets the objectives of the

Snapper Grouper Fishery Management Plan, as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.3 Establish an Appeals Process

The South Atlantic Council chose **Preferred Alternative 2** for establishing an appeals process for fishermen who might have been incorrectly excluded from receiving a golden tilefish longline endorsement to track how appeals have been specified in other South Atlantic Council managed fisheries. The chosen alternative represents an administrative action that is consistent with other appeals processes currently administered by the Southeast Regional Office of NOAA Fisheries Service.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's **Preferred Alternative 2** for establishing an appeals process for appeals. The Scientific and Statistical Committee (SSC) and Law Enforcement Advisory Panel (LEAP) chose not to comment on this action as they saw it as primarily administrative in nature.

The South Atlantic Council concluded that **Preferred Alternative 2** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law

5.4 Allocate Commercial Golden Tilefish Annual Catch Limit (ACL) Among Gear Groups

Amendment 13C (SAFMC 2006)sought to control fishing mortality in the golden tilefish component of the snapper grouper fishery with a quota, and allow commercial sector participants to retain 300 pounds gw of golden tilefish per trip after the quota was achieved to better account for and limit the extent of regulatory discards. At the same time, it was expected that stepping down the trip limit from 4,000 pounds gw to 300 pounds gw would also reduce the rate of golden tilefish harvest and extend the fishing season. In addition, the South Atlantic Council reasoned that a 300-pound gw trip limit would not be profitable for the longline fleet and would thus ensure participation of hook-and-line fishermen during the fall of each year. However, after regulations were implemented in October 2006, some longline fishermen off south-central Florida continued fishing under the 300-pound trip limit and dominated production. Productivity of the hook-and-line segment of the commercial golden tilefish portion of the snapper grouper fishery suffered from the progressive shortening of the fishing season. In 2007, the 300-pound gw trip limit was in place for five months; whereas, in 2010 it was only in place for one month. In 2011 and 2012, the 300-pound trip limit step down never went into effect because the quota was met quickly as a result of derby conditions and the inability of the current NMFS/NOAA quota monitoring system to provide timely catch status.

The longline sector currently dominates commercial landings of golden tilefish. In recent years, about 92% of golden tilefish landings were caught with longline gear, and the ACL has been met earlier each subsequent year. As a result, hook-and-line fishermen from Florida have not been able to target golden tilefish in the fall when they historically landed the species. The 300-pound trip limit is no longer effective in extending the season.

Examination of Accumulative Landings System data indicates nearly all golden tilefish landings were caught using hook-and-line gear prior to 1977 (**Table 4-9**). Low et al. (1983) confirm that hook-and-line gear was the predominant gear used to capture golden tilefish prior to 1981. In establishing separate ACLs for the longline and hook-and-line sectors, the South Atlantic Council seeks to balance participation by both gear groups and allow fishing for golden tilefish from all states. Heavy participation by the longline fleet has resulted in disproportionate resource allocation among the South Atlantic states, where Florida vessels have almost exclusively benefitted. By establishing a commercial hook-and-line ACL, vessels in the Carolinas will also be able to participate in the golden tilefish portion of the snapper grouper fishery, thus rendering fairness and equitability to the distribution of the golden tilefish resource in the South Atlantic region. As such, a 75%/25% allocation for longline and hook-and-line gear types, respectively, is the South Atlantic Council's preferred choice.

The Snapper Grouper Advisory Panel (AP) supports the South Atlantic Council's preferred to allocate the ACL between gear groups.

The Scientific and Statistical Committee (SSC) recommended that the South Atlantic Council consider developing a decision tree to specify methodology for making sector allocation decisions. The South Atlantic Council should consider how they might want to adjust these allocations over time.

The Law Enforcement Advisory Panel (LEAP) did not provide a recommendation for this action.

The South Atlantic Council concluded that **Preferred Alternative 2** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. By establishing a commercial hook-and-line ACL, vessels in the Carolinas will also be able to participate in the golden tilefish portion of the snapper grouper fishery, thus rendering fairness and equitability to the distribution of the golden tilefish resource in the South Atlantic region. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.5 Allow for Transferability of Golden Tilefish Endorsements

The South Atlantic Council's choice of **Preferred Alternative 2, Sub-Alternative 2a** would allow transfer of valid golden tilefish longline endorsements among individuals who hold South Atlantic Unlimited Snapper Grouper Permits independent of each other. It is the South Atlantic Council's intent that all landings of golden tilefish with longline gear be associated with the South Atlantic Unlimited Snapper Grouper Permit, rather than the endorsement. The subject endorsement would simply entitle its holder to harvest golden tilefish using longline gear. Those without the endorsement would not be allowed to do so. Any landings of golden tilefish by individuals who hold a longline endorsement would be added to the landings of the South Atlantic Unlimited Snapper Grouper Permit to which the endorsement is linked. If the endorsement were transferred, the landings of golden tilefish that were made using the endorsement would not transfer with the endorsement. The endorsement would have no associated landings value.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's preferred endorsement transferability alternative.

The Scientific and Statistical Committee (SSC) recognized that the transferability of endorsements would increase the economic efficiency of the amendment.

The South Atlantic Council concluded that **Preferred Alternative 2, Sub-Alternative 2a** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. This alternative provides the greatest socioeconomic benefits to those individual who receive a longline endorsement by allowing them to sell/transfer the endorsement upon implementation of Amendment 18B. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.6 Adjust Golden Tilefish Fishing Year

During the Workshop meeting in October 2008 (see **Appendix D**), participants discussed recommending a change in the golden tilefish fishing year to allow South Carolina fishermen to begin fishing at the same time as Florida fishermen who target golden tilefish with hook-and-line gear. A start date of January 1 was not advantageous for fishermen in the Carolinas since weather conditions during that time of year made it difficult for them to target golden tilefish. In addition, a change in the start date would be advantageous for hook-and-line fishermen from Florida since it would ensure their participation in the golden tilefish portion of the snapper grouper fishery during the fall. With a start date of January 1 the ACL has been harvested before the fall months in recent years. The recommendation to change the fishing year; however, was discussed at a time when the South Atlantic Council was not considering separate ACLs for each gear group (longline and hook-and-line). It is expected that separate commercial ACLs for each of the gear groups as proposed under **Action 4** would alleviate the above concerns. Hence, the South Atlantic Council reasoned that, in light of other actions included in this amendment, a change in the fishing year was not necessary at this time.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's preferred alternative to retain the existing fishing year.

The Scientific and Statistical Committee (SSC) stated that, with regard to the market for golden tilefish and keeping harvest for the species open during a time when other snapper grouper species are unavailable, the retention of the January 1 start date is preferable. However, the SSC acknowledged that the current fishing year January 1 start date impacts the ability of people to fish in the northern portion of the South Atlantic.

The Law Enforcement Advisory Panel (LEAP) did not provide a recommendation for this action.

The South Atlantic Council concluded that **Preferred Alternative 1 (No Action)** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.7 Modify the Golden Tilefish Trip Limit

As mentioned previously, Amendment 13C (SAFMC 2006) sought to control fishing mortality in the golden tilefish component of the snapper grouper fishery with a quota, and allow commercial sector participants to retain the 300 pound gw trip limit after 75% of the quota was achieved to better account for and limit the extent of regulatory discards. In addition, it was expected that stepping down the trip limit from 4,000 pounds gw to 300 pounds gw would extend the commercial fishing season for golden tilefish. In recent years; however, the golden tilefish commercial quota/ACL has been met earlier each year. Therefore, the 300-pound trip limit is not having the expected effect of extending the fishing season. Moreover, having separate allocations and ACLs for longline and hook-and-line gear, which is the South Atlantic Council preferred alternative in **Action 4**, makes the 300-pound gw trip limit unnecessary. Therefore, the South Atlantic Council chose to remove the 300-pound gw step down in the trip limit.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's preferred to remove the 300-pound gw trip limit.

The Scientific and Statistical Committee (SSC) recommended a holistic look at the amendment to integrate all available tools. They stated that different catch level reference points (overfishing limit, acceptable biological catch (ABC), ACL, and annual catch target (ACT) should be considered part of an integrated, interdependent system. For example, setting ACL=ABC could work if there is an ACT, which accounts for management uncertainty, that triggers management actions before overages occur. The SSC indicated that without an ACT with management triggers, the ACL should be less than the ABC. According to the SSC, management, monitoring, and data collection needs better integration. The SSC recommended the South Atlantic Council consider reexamining their current ACTs to ensure they are properly accounting for management uncertainty, using real time data to monitor landings and adjust regulations. Electronic reporting has been used successfully to track individual quotas within catch share programs. The SSC also recommended an evaluation of the golden tilefish quota monitoring system to identify potential problems and prevent overages.

The Law Enforcement Advisory Panel (LEAP) provided no recommendation for this action.

The South Atlantic Council concluded that **Preferred Alternative 2** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

5.8 Establish Trip Limits for Fishermen Who Do Not Receive a Golden Tilefish Longline Endorsement

According to proposed actions in this amendment, a fishermen who possesses a South Atlantic Unlimited Snapper Grouper Permit or a South Atlantic 225 Pound Trip Limit Snapper Grouper Permit but does not possess a longline endorsement could use of hook-and-line gear and under a commercial hook-and-line ACL of 135,324 pounds gw (pending approval of Regulatory Amendment 12 by the Secretary) to harvest golden tilefish. Thus, a trip limit was considered an effective way to control the harvest and lengthen the season for fishermen who possesses a South Atlantic Unlimited Snapper Grouper Permit but do not have a longline endorsement. The South Atlantic Council considered several possible trip limits and chose a trip limit of 500 pounds gw to ensure economic profitability. Fishermen with a South Atlantic 225 Pound Trip Limit Snapper Grouper Permit cannot harvest more than 225 pounds gw of snapper grouper species on a trip.

The Snapper Grouper Advisory Panel (AP) supported the South Atlantic Council's preferred alternative to establish a 500-pound gw trip limit for fishermen who do not receive a longline endorsement.

The Scientific and Statistical Committee (SSC) recommended inclusion of the management goal of each action to properly evaluate the efficacy of the action. The SSC stated the South Atlantic Council should consider that 100% discard mortality exists for golden tilefish when reviewing new restrictive regulations that could increase discards of golden tilefish. The SSC cautioned that the price of fuel and the market price for the fish might not remain constant, thus causing a trip limit to become unprofitable. In addition, the SSC stated that fishermen may increase the number of trips to catch what they need.

The South Atlantic Council concluded that **Preferred Alternative 4** best meets the purpose and need to limit participation and reduce overcapacity in the golden tilefish component of the snapper grouper fishery. The preferred alternative also best meets the objectives of the Snapper Grouper Fishery Management Plan (FMP), as amended, while complying with the requirements of the Magnuson-Stevens Act and other applicable law.

Chapter 6. Cumulative Effects

6.1 Biological

1. Identify the significant cumulative effects issues associated with the proposed action and define the assessment goals.

The Council on Environmental Quality (CEQ) cumulative effects guidance states that this step is done through three activities. The three activities and the location in the document are as follows:

I. The direct and indirect effects of the proposed actions **(Chapter 4)**;
II. Which resources, ecosystems, and human communities are affected **(Chapter 3)**; and
III. Which effects are important from a cumulative effects perspective **(information revealed in this Cumulative Effects Analysis (CEA)**?

2. Establish the geographic scope of the analysis.

The immediate impact area would be the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West, which is also the South Atlantic Fishery Management Council's (South Atlantic Council) area of jurisdiction. The extent of boundaries also would depend upon the degree of fish immigration/emigration and larval transport; whichever has the greatest geographical range. The ranges of affected species are described in **Section 3.2.1.1. Section 3.1.3** describes the essential fish habitat designation and requirements for species affected by this amendment.

3. Establish the timeframe for the analysis.

Establishing a timeframe for the CEA is important when the past, present, and reasonably foreseeable future actions are discussed. It would be advantageous to go back to a time when there was a natural, or some modified (but ecologically sustainable) condition. However, data collection for many fisheries began when species were already fully exploited. Therefore, the timeframe for analyses should be initiated when data collection began for the various fisheries. In determining how far into the future to analyze cumulative effects, the length of the effects will depend on the species and the alternatives chosen.

4. Identify the other actions affecting the resources, ecosystems, and human communities of concern (the cumulative effects to the human communities are discussed in Section 4).

Listed are other past, present, and reasonably foreseeable actions occurring in the South Atlantic region. These actions, when added to the proposed management measures, may result in cumulative effects on the biophysical environment.

I. Fishery-related actions affecting golden tilefish.

A. Past

The reader is referred to **Table 6-1** and **Appendix F** (History of Management) of this document for past regulatory activity for snapper grouper species, including golden tilefish. These include bag and size limits, spawning season closures, commercial quotas, gear prohibitions and limitations, area closures, and a commercial limited access system.

Amendment 13C to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) addressed overfishing of golden tilefish and implemented several management measures to limit harvest of the species in commercial and recreational sectors. Amendment 13C to the Snapper Grouper FMP (Amendment 13C; SAFMC 2006) reduced the annual commercial golden tilefish quota from 1,001,663 pounds gutted weight (gw) (1,121,863 pounds whole weight (ww)) to 295,000 pounds gw (331,000 pounds ww). After the commercial quota is met, all purchase and sale is prohibited and harvest and/or possession is limited to the bag limit. Amendment 13C also specified a commercial trip limit of 4,000 pounds gw (4,480 pounds whole weight) until 75% of the quota is taken when the trip limit is reduced to 300 pounds (335 pounds gw). No adjustment would be made to the trip limit if 75% of the quota is attained after September 1. Amendment 13C also limited the possession of golden tilefish to one per person per day within the 5-grouper per person per day aggregate recreational bag limit.

Amendment 14 to the Snapper Grouper FMP (Amendment 14; SAFMC 2007) SAFMC became effective on February 12, 2009. Amendment 14 established eight Type II marine protected areas (MPAs) where fishing for and retention of snapper-grouper species would be prohibited (as would the use of shark bottom longlines) but trolling for pelagic species such as tuna, dolphin, and billfish would be allowed. The intent is to achieve a more natural sex ratio, age, and size structure of all species within the MPAs, while minimizing adverse social and economic effects. Particular emphasis was placed on the protection of deepwater species, which includes golden tilefish.

Amendment 15B to the Snapper Grouper FMP (Amendment 15B; SAFMC 2008b) became effective on December 16, 2009. Management measures in Amendment 15B include prohibition of the sale of bag limit caught snapper grouper species for fishermen not holding a federal commercial permit for South Atlantic snapper grouper, an action to adopt, when implemented, the Atlantic Coastal Cooperative Statistics Program release, discard and protected species module to assess and monitor bycatch, allocations for snowy grouper, and management reference points for golden tilefish. Biological benefits from Amendment 15B are not expected to result in a significant cumulative biological effect when added to anticipated biological impacts under this amendment.

Amendment 17B to the Snapper Grouper FMP (Amendment 17B; SAFMC 2010b), which was implemented on January 31, 2011 established annual catch limits (ACL), annual catch targets, and accountability measures (AMs) for 8 species experiencing overfishing

including golden tilefish; modified management measures to limit total mortality to the ACL; and updated the framework procedure for specification of total allowable catch. Amendment 17B established a commercial ACL for golden tilefish of 282,819 pounds gw, and a recreational ACL of 1,578 fish. Amendment 17B also prohibited the harvest and possession of deepwater snapper grouper species (snowy grouper, blueline tilefish, yellowedge grouper, misty grouper, queen snapper, and silk snapper) at depths greater than 240 feet. The intent of this measure was to reduce bycatch of speckled hind and warsaw grouper.

Regulatory Amendment 11 to the Snapper Grouper FMP (Regulatory Amendment 11; SAFMC 2011b) was approved by the South Atlantic Council at their August 9, 2011, meeting. Regulatory Amendment 11 was approved and became effective on May 10, 2012. The amendment implemented regulations to remove the deepwater closure beyond 240 ft for six deepwater snapper grouper species that was approved in Amendment 17B.

The Comprehensive ACL Amendment (SAFMC 2011c) includes ACLs and AMs for federally managed species not undergoing overfishing in four FMPs (Snapper Grouper, Dolphin Wahoo, Golden Crab, and *Sargassum*). Actions contained within the Comprehensive ACL Amendment include: (1) Removal of species from the snapper grouper fishery management unit; (2) designation of ecosystem component species; (3) allocations; (4) management measures to limit recreational and commercial sectors to their ACLs; (5) AMs; and (6) any necessary modifications to the range of regulations. The South Atlantic Council approved the Comprehensive ACL Amendment in September 2011. Regulations for the Comprehensive ACL Amendment were implemented on April 16, 2012.

Amendment 18A to the Snapper Grouper FMP (Amendment 18A; SAFMC 2011f) contains measures to limit participation and effort for black sea bass, and does not directly affect golden tilefish. However, similar to Amendment 18B, which proposes to establish a longline endorsement program for golden tilefish, Amendment 18A established an endorsement program than enables snapper grouper fishermen with a certain catch history to harvest black sea bass with pots. In addition Amendment 18A includes measures to reduce bycatch in the black sea bass pot fishery, modify the rebuilding strategy, and other necessary changes to management of black sea bass as a result of a 2011 stock assessment. The South Atlantic Council approved Amendment 18A in December 2011. The final rule published on June 1, 2012, and became effective on July 1, 2012.

B. Present

In addition to snapper grouper fishery management issues being addressed in this amendment, several other snapper grouper amendments have been developed concurrently and are in the process of approval and implementation. Not all of these amendment directly affect golden tilefish.

Amendment 20A to the Snapper Grouper FMP (Amendment 20A; SAFMC 2011e) would distribute shares from inactive participants in the wreckfish individual transferable quota (ITQ) to active shareholders. The South Atlantic Council approved Amendment 20A in December 2011. The proposed rule for Amendment 20A published on March 20, 2012, and the comment period ended on April 30, 2012.

Amendment 24 to the Snapper Grouper FMP (Amendment 24; SAFMC 2011d) considers a rebuilding plan for red grouper, which is overfished and undergoing overfishing. The South Atlantic Council approved Amendment 24 in December 2011. The final rule published in the *Federal Register* on June 11, 2012, and became effective on July 11, 2012

Regulatory Amendment 12 to the Snapper Grouper FMP (Regulatory Amendment 12; SAFMC 2012) includes alternatives to adjust the golden tilefish ACL based on the results of a new assessment, which indicates golden tilefish are no longer experiencing overfishing and are not overfished. Regulatory Amendment 12 also includes an action to adjust the recreational AM. Regulatory Amendment 12 was approved for submission to the Secretary of Commerce by the South Atlantic Council at their March 2012 meeting and sent for formal review on May 2, 2012.

In a letter dated June 19, 2012, the South Atlantic Council requested NOAA Fisheries Service to allow harvest and possession of red snapper in 2012 through emergency regulations. At their June 11-15, 2012, meeting, the South Atlantic Council reviewed new information in the form of red snapper rebuilding projections, 2012 acceptable biological catch levels, and 2012 discard mortality levels. After accounting for the 2012 discard mortalities, the South Atlantic Council determined that directed harvest could be allowed without compromising the rebuilding of the stock to target levels.

The South Atlantic Council has recently completed and is developing amendments for coastal migratory pelagic species, spiny lobster, golden crab, dolphin-wahoo, shrimp, and octocorals. See the South Atlantic Council's Web site at http://www.safmc.net/ for further information on South Atlantic Council managed species.

C. Reasonably Foreseeable Future

Amendment 20B to the Snapper Grouper FMP is currently under development. The amendment will include a formal review of the current wreckfish individual transferable quota (ITQ) program, and will update/modify that program according to recommendations gleaned from the review. The amendments will also update the wreckfish ITQ program to comply with Reauthorized Magnuson-Stevens Fishery Conservation and Management Act requirements.

At their June 2012 meeting the South Atlantic Council began development of Amendment 22 to the Snapper Grouper FMP to consider measures such as a tagging program to allow harvest of red snapper as the stock rebuilds. Scoping of Amendment 22 was conducted during January and February 2011.

At their March 2012 meeting, the South Atlantic Council requested the development of a new regulatory amendment to allow for adjustment of allocations and ACLs based on the new landings information from the Marine Recreational Information Program.

At their June 2012 meeting the South Atlantic Council requested development of a regulatory amendment to adjust management measures for greater amberjack, vermilion snapper, black sea bass, gray triggerfish, and vermilion snapper.

II. Non-Council and other non-fishery related actions, including natural events affecting golden tilefish.

In terms of natural disturbances, it is difficult to determine the effect of non-Council and non-fishery related actions on stocks of snapper grouper species. Annual variability in natural conditions such as water temperature, currents, food availability, predator abundance, etc. can affect the abundance of young fish, which survive the egg and larval stages each year to become juveniles (i.e., recruitment). This natural variability in year class strength is difficult to predict, as it is a function of many interactive and synergistic factors that cannot all be measured (Rothschild 1986). Furthermore, natural factors such as storms, red tide, cold-water upwelling, etc. can affect the survival of juvenile and adult fishes; however, it is very difficult to quantify the magnitude of mortality these factors may have on a stock. Alteration of preferred habitats for snapper grouper species could affect survival of fish at any stage in their life cycles. However, estimates of the abundance of fish, which utilize any number of preferred habitats, as well as, determining the impact habitat alteration may have on snapper grouper species, is problematic.

The snapper grouper ecosystem includes many species, which occupy the same habitat at the same time. For example, black sea bass co-occur with vermilion snapper, tomtate, scup, red porgy, white grunt, red snapper, red grouper, scamp, gag, and others. Therefore, many snapper grouper species are likely to be caught and suffer some mortality when regulated since they will be incidentally caught when fishermen target other co-occurring species. In contrast, golden tilefish prefer a mud habitat and can be targeted without significant bycatch of other snapper grouper species. Other natural events such as spawning seasons and aggregations of fish in spawning condition can make some species especially vulnerable to targeted fishing pressure. Such natural behaviors are discussed in further detail in **Section 3.2** of this document.

How global climate changes will affect the golden tilefish component of the snapper grouper fishery is unclear. Climate change can impact marine ecosystems through ocean warming by increased thermal stratification, reduced upwelling, sea level rise, increases in wave height and frequency, loss of sea ice, and increased risk of diseases in marine biota. Decreases in surface ocean pH due to absorption of anthropogenic CO_2 emissions may impact a wide range of organisms and ecosystems, particularly organism that absorb calcium from surface waters, such as corals and crustaceans (IPCC 2007, and references therein).

The BP/Deepwater Horizon oil spill event, which occurred in the Gulf of Mexico on April 20, 2010, did not impact fisheries operating the South Atlantic. Oil from the spill site was not

detected in the South Atlantic region, and did not likely pose a threat to the South Atlantic golden tilefish.

5. Characterize the resources, ecosystems, and human communities identified in scoping in terms of their response to change and capacity to withstand stress.

In terms of the biophysical environment, the resources/ecosystems identified in earlier steps of the CEA are the fish populations directly or indirectly affected by the regulations. This step should identify the trends, existing conditions, and the ability to withstand stresses of the environmental components.

The species most likely to be impacted by actions in Amendment 18B to the Snapper Grouper FMP (Amendment 18B) is golden tilefish, *Lopholatilus chamaeleonticeps*. Trends in the condition of golden tilefish are determined through the Southeast Data, Assessment and Review (SEDAR) process. In 2004, golden tilefish was assessed as part of SEDAR 4 (SEDAR 4 2004), using landings, age, length, and abundance index data through 2002. The model estimates suggested the golden tilefish stock was undergoing overfishing and that it was very close to being overfished.

The latest stock assessment for golden tilefish (SEDAR 25 2011) indicated that the South Atlantic population is not overfished nor undergoing overfishing. The current level of spawning stock biomass (SSB_{2010}) is estimated to be well above the minimum stock size threshold (MSST) -- SSB_{2010}/MSST = 2.43. The current level of fishing is slightly higher than one-third of F_{MSY} ($F_{2008\text{-}2010}/F_{MSY} = 0.36$). More information on the SEDAR Assessments for golden tilefish can be found in **Section 3.2.1.2**.

6. Characterize the stresses affecting these resources, ecosystems, and human communities and their relation to regulatory thresholds.

This step is important in outlining the current and probable stress factors on snapper grouper species identified in the previous steps. The goal is to determine whether these species are approaching conditions where additional stresses could have an important cumulative effect beyond any current plan, regulatory, or sustainability threshold (CEQ 1997). Sustainability thresholds can be identified for some resources, which are levels of impact beyond which the resources cannot be sustained in a stable state. Other thresholds are established through numerical standards, qualitative standards, or management goals. The CEA should address whether thresholds could be exceeded because of the contribution of the proposed action to other cumulative activities affecting resources.

<u>Fish populations</u>

Quantitative definitions of overfishing and overfished for golden tilefish are identified in Amendments 11 and 12 to the Snapper Grouper FMP (SAFMC 1998b, 2000). Numeric values of thresholds overfishing and overfished for golden tilefish were updated/modified in Amendment 15B to the Snapper Grouper FMP (Amendment 15B; SAFMC 2008b). These values include maximum sustainable yield (MSY), the fishing mortality rate that produces MSY (F_{MSY}), the biomass or biomass proxy that supports MSY (B_{MSY}), the minimum stock size threshold below which a stock is considered to be overfished (MSST), the maximum fishing mortality threshold above which a stock is considered to be undergoing overfishing (maximum fishing mortality threshold), and optimum yield (OY). Amendment 15B also provided new definitions of MSST for golden tilefish. Amendment 15B became effective in December 2009.

Climate change

Global climate changes could have significant effects on South Atlantic fisheries. However, the extent of these effects is not known at this time. Possible impacts include temperature changes in coastal and marine ecosystems that can influence organism metabolism and alter ecological processes such as productivity and species interactions; changes in precipitation patterns and a rise in sea level which could change the water balance of coastal ecosystems; altering patterns of wind and water circulation in the ocean environment; and influencing the productivity of critical coastal ecosystems such as wetlands, estuaries, and coral reefs (Kennedy et al. 2002).

It is unclear how climate change would affect snapper grouper species in the South Atlantic. Climate change can affect factors such as migration, range, larval and juvenile survival, prey availability, and susceptibility to predators. In addition, the distribution of native and exotic species may change with increased water temperature, as may the prevalence of disease in keystone animals such as corals and the occurrence and intensity of toxic algae blooms. Climate change may significantly impact snapper grouper species in the future, but the level of impacts cannot be quantified at this time, nor is the time frame known in which these impacts will occur.

7. Define a baseline condition for the resources, ecosystems, and human communities.

The purpose of defining a baseline condition for the resource and ecosystems in the area of the proposed action is to establish a point of reference for evaluating the extent and significance of expected cumulative effects. The SEDAR assessments show trends in biomass, fishing mortality, fish weight, and fish length going back to the earliest periods of data collection. For some species such as snowy grouper, assessments reflect initial periods when the stock was above B_{MSY} and fishing mortality was fairly low. However, some species such were heavily exploited or possibly overfished when data were first collected. As a result, the assessment must make an assumption of the biomass at the start of the assessment period thus modeling the baseline reference points for the species.

For a detailed discussion of the baseline conditions of each of the species addressed in this amendment the reader is referred to those stock assessment and stock information sources referenced in **Item Number 6** of this CEA.

8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities (Table 6-1).

Table 6-1. The cause and effect relationship of fishing and regulatory actions within the time period of the Cumulative Effects Analysis (CEA).

Time period/dates	Cause	Observed and/or Expected Effects
Pre-January 12, 1989	Habitat destruction, growth overfishing of vermilion snapper.	Damage to snapper grouper habitat, decreased yield per recruit of vermilion snapper.
January 1989	Trawl prohibition to harvest fish (SAFMC 1988a & b).	Increase yield per recruit of vermilion snapper; eliminate trawl damage to live bottom habitat.
Pre-January 1, 1992	Overfishing of many snapper grouper species.	Spawning stock ratio of these species is estimated to be less than 30% indicating that they are overfished.

Time period/dates	Cause	Observed and/or Expected Effects
January 1992	Prohibited gear: fish traps south of Cape Canaveral, FL; entanglement nets; longline gear inside of 50 fathoms; powerheads and bangsticks in designated SMZs off SC. Size/Bag limits: 10" TL vermilion snapper (recreational only); 12" TL vermilion snapper (commercial only); 10 vermilion snapper/person/day; aggregate grouper bag limit of 5/person/day; and 20" TL gag, red, black, scamp, yellowfin, and yellowmouth grouper size limit (SAFMC 1991).	Reduce mortality of snapper grouper species.
Pre-June 27, 1994	Damage to *Oculina* habitat.	Noticeable decrease in numbers and species diversity in areas of *Oculina* off FL
July 1994	Prohibition of fishing for and retention of snapper grouper species (HAPC renamed OECA; SAFMC 1993)	Initiated the recovery of snapper grouper species in OECA.
1992-1999	Declining trends in biomass and overfishing continue for a number of snapper grouper species including golden tilefish.	Spawning potential ratio for golden tilefish is less than 30% indicating that they are overfished.
July 1994	Commercial quota for golden tilefish; commercial trip limits for golden tilefish; include golden tilefish in grouper recreational aggregate bag limits.	
February 24, 1999	All S-G without a bag limit: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runners. Vessels with longline gear aboard may only possess snowy, Warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish.	
October 23, 2006	Snapper grouper FMP Amendment 13C (SAFMC 2006)	Commercial vermilion snapper quota set at 1.1 million pounds gw; recreational vermilion snapper size limit increased to 12" TL to prevent vermilion snapper overfishing.
Effective February 12, 2009	Snapper grouper FMP Amendment 14 (SAFMC 2007)	Use marine protected areas (MPAs) as a management tool to promote the optimum size, age, and genetic structure of slow growing, long-lived deepwater snapper grouper species (e.g., speckled hind, snowy grouper, warsaw grouper, yellowedge grouper, misty grouper, golden tilefish, blueline tilefish, and sand tilefish). Gag and vermilion snapper occur in some of these areas.

Time period/dates	Cause	Observed and/or Expected Effects
Effective March 20, 2008	Snapper grouper FMP Amendment 15A (SAFMC 2008a)	Establish rebuilding plans and SFA parameters for snowy grouper, black sea bass, and red porgy.
Effective Dates Dec 16, 2009, to Feb 16, 2010.	Snapper grouper FMP Amendment 15B (SAFMC 2008b)	End double counting in the commercial and recreational reporting systems by prohibiting the sale of bag-limit caught snapper grouper, and minimize impacts on sea turtles and smalltooth sawfish.
Effective Date July 29, 2009	Snapper grouper FMP Amendment 16 (SAFMC 2009a)	Protect spawning aggregations and snapper grouper in spawning condition by increasing the length of the spawning season closure, decrease discard mortality by requiring the use of dehooking tools, reduce overall harvest of gag and vermilion snapper to end overfishing.
Effective Date January 4, 2010	Red Snapper Interim Rule	Prohibit commercial and recreational harvest of red snapper from January 4, 2010, to June 2, 2010 with a possible 186-day extension. Reduce overfishing of red snapper while long-term measures to end overfishing are addressed in Amendment 17A.
Effective Date December 4, 2010	Snapper Grouper FMP Amendment 17A (SAFMC 2010a)	SFA parameters for red snapper; ACLs and ACTs; management measures to limit recreational and commercial sectors to their ACTs; accountability measures. Establish rebuilding plan for red snapper.
Effective Date January 31, 2011	Snapper Grouper Amendment 17B (SAFMC 2010b)	ACLs and ACTs; management measures to limit recreational and commercial sectors to their ACTs; AMs, for species undergoing overfishing.
Effective Date July 1, 2012	Snapper Grouper FMP Amendment 18A (SAFMC 2011f)	Prevent overexploitation in the black sea bass fishery.
Effective Date April 16, 2012	Comprehensive ACL Amendment (SAFMC 2011c)	ACLs ACTs, and AMs for species not experiencing overfishing; accountability measures; an action to remove species from the fishery management unit as appropriate; and management measures to limit recreational and commercial sectors to their ACTs.
Effective Date May 10, 2012	Regulatory Amendment 11 (SAFMC 2011b)	Re-addresses the deepwater area closure implemented in Amendment 17B
Effective Date July 15, 2011	Regulatory Amendment 9 (SAFMC 2011a)	Harvest management measures for black sea bass; commercial trip limits for gag, vermilion and greater amberjack

Time period/dates	Cause	Observed and/or Expected Effects
Target 2012	Amendment 20A (Wreckfish) (SAFMC 2011e)	Redistribute inactive wreckfish shares.
July 11, 2012	Amendment 24 (Red Grouper) (SAFMC 2011d)	Establishes a rebuilding plan for red grouper, specifies ABC, and establishes ACL, ACT and revises AMs for the commercial and recreational sectors.
Target 2012	Regulatory Amendment 12 (SAFMC 2012)	Adjusts the golden tilefish ACL based on the results of a new stock assessment and modifies the recreational golden tilefish AM.
Target 2013	Snapper Grouper Amendment 22 (under dev)	Develop a long-term management program for red snapper in the South Atlantic.

9. Determine the magnitude and significance of cumulative effects.

Proposed management actions, as summarized in **Section 2** of this document, would limit participation and change the fishing year for the golden tilefish portion of the snapper grouper fishery. These management actions in Amendment 18B are intended to address issues that have remained after the implementation of previous amendments. Species in the snapper grouper fishery management unit (FMU) are assessed on a routine basis and stock status may change as new information becomes available. In addition, changes in management regulations, fishing techniques, social/economic structure, etc. can result in shifts in the percentage of harvest between user groups over time. As such, the South Atlantic Council has determined that certain aspects of the current management system remain inappropriate and should be restructured. Detailed discussions of the magnitude and significance of the preferred alternatives appear in **Section 4** of this consolidated document. Below is a short summary of the biological significance and magnitude of each of the preferred alternatives chosen, and a brief discussion of their combined effect on the snapper grouper FMU and the ecosystem.

When viewed in totality, the actions in this amendment would benefit golden tilefish as participation is reduced through the establishment of an endorsement programs.

10. Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.

The cumulative effects on the biophysical environment are expected to be negligible. Avoidance, minimization, and mitigation are not applicable.

11. Monitor the cumulative effects of the selected alternative and adopt management.

The effects of the proposed action are, and will continue to be, monitored through collection of data by NOAA Fisheries Service, states, stock assessments and stock assessment updates, life history studies, and other scientific observations.

6.2 Socioeconomic

A description of the human environment, including a description of commercial and recreational snapper grouper fisheries and associated key fishing communities is contained in **Chapter 3**. A description of the history of management of the snapper grouper fishery is contained in **Appendix F**.

Participation in and the economic performance of the snapper grouper fishery have been affected by a combination of regulatory, biological, social, and external economic factors. Regulatory measures have obviously affected the quantity and composition of harvests, through the various size limits, seasonal restrictions, trip or bag limits, and quotas. Gear restrictions, notably fish trap and longline restrictions, have also affected harvests and economic performance. The limited access program implemented in 1998/1999 substantially affected the number of participants in the fishery. Biological forces that either motivate certain regulations or simply influence the natural variability in fish stocks have played a role in determining the changing composition of the fishery. Additional factors, such as changing career or lifestyle preferences, stagnant to declining ex-vessel fish prices due to imports, increased operating costs (e.g., gas, ice, insurance, dockage fees, etc.), and increased waterfront/coastal value leading to development pressure for non-fishery uses have impacted both the commercial and recreational fishing sectors.

Given the variety of factors that affect fisheries, persistent data issues, and the complexity of trying to identify cause-and-effect relationships, it is not possible to differentiate actual or cumulative regulatory effects from external cause-induced effects. In general, it can be stated, however, that the regulatory environment for all fisheries has become progressively more complex and burdensome, increasing, in tandem with other adverse influences, the likelihood of economic losses, business failure, occupational changes, and associated adverse pressures on associated families, communities, and industries. Some reverse of this trend is possible and expected. The establishment of ACLs and AMs for species undergoing overfishing is expected to help protect and sustain harvest at the OY level. However, certain pressures would remain, such as total effort and total harvest considerations, increasing input costs, import induced price pressure, and competition for coastal access.

A detailed description of the expected social and economic impacts of the actions in this amendment is contained in **Chapter 4** and **Appendices H, I,** and **J**. Current and future amendments are expected to add to this cumulative effect. Amendment 15B prohibited the sale of bag-limit caught snapper grouper species for those who do not hold a federal commercial permit for snapper grouper. This eliminates the ability of the recreational angler to subsidize the cost of a fishing trip through the sales of snapper grouper and may, therefore, decrease recreational demand. This action has a more pronounced effect on the for-hire sector, which often uses the sale of bag-limit caught fish to pay crewmembers.

Amendment 16 to the Snapper Grouper FMP (Amendment 16; SAFMC 2009a) addressed overfishing of gag and vermilion snapper. The corrective action in response to overfishing always requires harvest reductions and more restrictive regulation. Thus, additional short-term adverse social and economic effects would be expected. These restrictions will hopefully prevent the stocks from becoming overfished, which would require recovery plans, further harvest restrictions, and additional social and economic losses.

Amendment 17A addressed the overfishing and overfished status of red snapper. Red snapper is, in general and compared to other snapper grouper species, not a significant commercial species, it has

greater importance as a target species to the recreational sector, especially the for-hire sector in certain areas of the South Atlantic.

Amendment 17B specified harvest controls (ACLs and/or ACTs) and AMs for several snapper grouper species, as well as a allocations for golden tilefish, and modify the framework to allow more efficient modification of these measures in the future, where necessary. While some final specifications of these measures may result in additional short-term reductions in social and economic benefits to participants in the fisheries, these measures would be expected to support more stable management and sustainable social and economic benefits from enhanced resource protection, larger and/or more consistent harvests, and long-term stable stocks.

The cumulative impact of Amendments 16, 17A, and 17B are expected to be significant for commercial and recreational fisheries participants and those indirectly impacted by the actions contained in those amendments. The cumulative impact of Amendments 17A and 17B have been estimated and are contained in Amendment 17A. The impacts from the three amendments will likely result in commercial and for-hire vessel exit and loss of fishery infrastructure as a result.

Finally, the space industry in Florida centered on Cape Canaveral is experiencing severe difficulties due to the ramping down and cancellation of the Space Shuttle Program. This program's loss coupled with additional fishery closures will negatively impact this region. However, declining economic conditions due to decline in the space industry may lessen the pace of waterfront development and associated adverse social and economic pressures on fishery infrastructure.

Other amendments are expected to or have been implemented during 2012, which could further affect harvest of snapper grouper species. The Comprehensive ACL Amendment, implemented on April 16, 2012, specified ACLs for snapper grouper species not undergoing overfishing. Amendment 18A, which was implemented on July 1, 2012, contains measures to limit participation and effort in the black sea bass fishery, reduce bycatch in the black sea bass pot sector, changes to the rebuilding strategy and other necessary changes to the management of black sea bass as a result of the 2011 stock assessment. Regulatory Amendment 11 to the Snapper Grouper FMP became effective on May 10, 2012 and removed the deepwater closure beyond 240 ft for six deepwater snapper grouper species. Amendment 20A to the Snapper Grouper FMP would distribute shares from inactive participants in the wreckfish individual transferable quota system to active shareholders. Amendment 24 to the Snapper Grouper FMP, which became effective on July 11, 2012, implemented a rebuilding plan for red grouper, which is overfished and undergoing overfishing. Regulatory Amendment 12 to the Snapper Grouper FMP (Regulatory Amendment 12) includes alternatives to increase the ACL for golden tilefish based on the results of a new stock assessment. The South Atlantic Council approved Regulatory Amendment 12 at their March 2012 meeting for review by the Secretary of Commerce and sent for formal review on May 2, 2012.

Chapter 7. Other Things to Consider

7.1 Unavoidable Adverse Effects

The unavoidable adverse effects of the actions in this Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 18B) are fully described in Chapter 4, including impacts on the socioeconomic environment. There are several unavoidable adverse effects on the socioeconomic environment that may result from the implementation of Amendment 18B as the implementation of an endorsement program will inevitably exclude some fishermen from targeting golden tilefish with longline gear because their historical participation does not meet the criteria described in Action 1.

7.2 Effects of the Fishery on Essential Fish Habitat

The biological impacts of the proposed actions are described in **Chapter 4**, including impacts on habitat. No actions proposed in this amendment are anticipated to have any adverse impact on essential fish habitat (EFH) or EFH-Habitat of Particular Concern (EFH-HAPC) for managed species including species in the snapper grouper complex. Any additional impacts of fishing on EFH identified during the public hearing process will be considered, therefore the South Atlantic Fishery Management Council (South Atlantic Council) has determined no new measures to address impacts on EFH are necessary at this time. The South Atlantic Council's adopted habitat policies, which may directly affect the area of concern, are available for download through the Habitat/Ecosystem section of the South Atlantic Council's website: http://www.safmc.net/ecosystem/EcosystemManagement/HabitatProtection/HabitatPolicies/tabid/245/Default.aspx.

NOTE: The Final EFH Rule, published on January 17, 2002, (67 FR 2343) replaced the interim Final Rule of December 19, 1997 on which the original EFH and EFH-HAPC designations were made. The Final Rule directs the Councils to periodically update EFH and EFH-HAPC information and designations within fishery management plans. As was done with the original Habitat Plan (SAFMC 1998c), a series of technical workshops were conducted by South Atlantic Council staff and a draft plan that includes new information has been completed pursuant to the Final EFH Rule. For more detailed information, see **Appendix C**.

7.3 Damage to Ocean and Coastal Habitats

The actions proposed in Amendment 18B would not result in any adverse impacts to ocean and coastal habitats.

Management measures implemented in the original Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper FMP) through Amendment 7 to the Snapper Grouper FMP (SAFMC 1994a) combined have significantly reduced the impact of the snapper grouper fishery on essential fish habitat (EFH). The South Atlantic Council has reduced the impact of the fishery and protected EFH by prohibiting the use of poisons and explosives; prohibiting use of fish traps and entanglement nets in the EEZ; banning use of bottom trawls on live/hard bottom habitat north of Cape Canaveral, Florida; restricting use of bottom longline to depths greater than 50 fathoms north of St. Lucie Inlet; and prohibiting use of black sea bass pots south of Cape Canaveral, Florida. These gear restrictions have significantly reduced the impact of the fishery on coral and live/hard bottom habitat in the South Atlantic Region.

Additional management measures in Amendment 8 to the Snapper Grouper FMP (SAFMC 1997), including specifying allowable bait nets and capping effort, have protected habitat by making existing regulations more enforceable. Establishing a controlled effort program limited overall fishing effort and to the extent there is damage to the habitat from the fishery (e.g., black sea bass pots, anchors from fishing vessels, impacts of weights used on fishing lines and bottom longlines), limited such impacts.

In addition, measures in Amendment 9 to the Snapper Grouper FMP (SAFMC 1998a), that include further restricting longlines to retention of only deepwater species and requiring that black sea bass pots have escape panels with degradable fasteners, reduce the catch of undersized fish and bycatch and ensure that the pot, if lost, will not continues to "ghost" fish. Amendment 13C to the Snapper Grouper FMP (SAFMC 2006) increased mesh size in the back panel of pots, which has reduced bycatch and retention of undersized fish.

Amendment 15B to the Snapper Grouper FMP (SAFMC 2008b) includes an action that would implement sea turtle bycatch release equipment requirements and sea turtle and smalltooth sawfish handling protocols and/or guidelines in the permitted commercial and for-hire snapper grouper fishery effective February 15, 2010.

Amendment 16 to the Snapper Grouper FMP (SAFMC 2009a) included an action, which is intended to reduce bycatch by requiring fishermen use dehooking devices effective July 29, 2009. Limiting the overall fishing mortality reduces the likelihood of over-harvesting of species with the resulting loss in genetic diversity, ecosystem diversity, and sustainability.

Measures adopted in the Coral and Shrimp FMPs have further restricted access by fishermen that had potential adverse impacts on essential snapper grouper habitat. These measures include the designation of the Oculina Bank HAPC and the Rock Shrimp closed area (see the Shrimp and Coral FMP/Amendment documents for additional information).

The South Atlantic Council's Comprehensive Habitat Amendment (SAFMC 1998d) contains measures that expanded the Oculina Bank HAPC and added two additional satellite HAPCs. Amendment 14 to the Snapper Grouper (SAFMC 2007), established marine protected areas where fishing for or retention of snapper grouper species is prohibited.

7.4 Relationship of Short-Term Uses and Long-Term Productivity

The relationship between short-term uses and long-term productivity will not be affected by this amendment. The proposed actions limit participation and effort in the golden tilefish portion of the snapper grouper fishery but do not constrain catch. An annual catch limit (ACL) has been established for golden tilefish through Amendment 17B to the Snapper Grouper FMP and adjustments proposed in Regulatory Amendment 12 (under review by the Secretary of Commerce) would increase the golden tilefish ACL. The actions being proposed in this amendment would not have an impact on the short-term uses and long-term productivity.

7.5 Irreversible and Irretrievable Commitments of Resources

Irreversible commitments are defined as commitments that cannot be reversed, except perhaps in the extreme long-term, whereas irretrievable commitments are lost for a period of time. None of the actions proposed by this amendment would result in irreversible or irretrievable commitments of resources.

7.6 Unavailable or Incomplete Information

The Council on Environmental Quality, in its implementing regulations for the National Environmental Policy Act, addressed incomplete or unavailable information at 40 CFR 1502.22 (a) and (b). That regulation has been considered. There are two tests to be applied: 1) Does the incomplete or unavailable information involve "reasonable foreseeable adverse effects…;" and 2) is the information about these effects "essential to a reasoned choice among alternatives…".

A stock assessment has been conducted on golden tilefish using the best available data, which indicate the stock is not overfished and is not undergoing overfishing. Status determinations for the species were derived from the Southeast Data, Assessment, and Review (SEDAR) process, which involves a series of three workshops designed to ensure each stock assessment reflects the best available scientific information. The findings and conclusions of each SEDAR workshop are documented in a series of reports, which are ultimately reviewed and discussed by the South Atlantic Council and their Scientific and Statistical Committee (SSC). SEDAR participants, the South Atlantic Council's Advisory Panels, the South Atlantic Council, and NOAA Fisheries Service staff reviewed and considered any concerns about the adequacy of the data. The South Atlantic Council's SSC determined that the assessments (SEDAR 4 2004; SEDAR 25 2011) were based on the best available data.

Chapter 8. Other Applicable Law

8.1 Administrative Procedures Act

All federal rulemaking is governed under the provisions of the Administrative Procedures Act (APA) (5 U.S.C. Subchapter II), which establishes a "notice and comment" procedure to enable public participation in the rulemaking process. Under the APA, 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. This amendment complies with the provisions of the APA through the South Atlantic Fishery Management Council's (South Atlantic Council) extensive use of public meetings, requests for comments and consideration of comments. The proposed rule associated with this amendment will have request for public comments, which complies with the APA.

8.2 Information Quality Act

The Information Quality Act (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 Information Quality Act (IQA). This document has used the best available information and made a broad presentation thereof. The process of public review of this document provides an opportunity for comment and challenge to this information, as well as for the provision of additional information.

The information contained in this document was developed using best available scientific information. Therefore, Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 18B) and Environmental Assessment are in compliance with the IQA.

8.3 Coastal Zone Management Act

Section 307(c)(1) of the federal Coastal Zone Management Act (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 South Atlantic 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. Based on the analysis of the environmental consequences of the proposed actions in **Section 4.0**, the South Atlantic Council has concluded this amendment would improve federal management of the golden tilefish sector of the snapper grouper fishery and is consistent to the maximum extent practicable with the Coastal Zone Management Plans of Florida, Georgia, South Carolina, and North Carolina. This determination will be submitted to the responsible state agencies under Section 307 of the CZMA administering approved Coastal Zone Management Programs in the States of Florida, South Carolina, Georgia, and North Carolina.

8.4 Endangered Species Act

The Endangered Species Act (ESA) of 1973 (16 U.S.C. Section 1531 et seq.) requires that federal agencies must ensure actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or the habitat designated as critical to their survival and recovery. The ESA requires NOAA Fisheries Service to consult with the appropriate administrative agency (itself for most marine species, and the U.S. Fish and Wildlife Service for all remaining species) when proposing an action that may affect threatened or endangered species or adversely modify critical habitat. Consultations are necessary to determine the potential impacts of the proposed action. They are concluded informally when proposed actions may affect but are "not likely to adversely affect" threatened or endangered species or designated critical habitat. Formal consultations, resulting in a biological opinion, are required when proposed actions may affect and are "likely to adversely affect" threatened or endangered species or adversely modify designated critical habitat.

8.5 Executive Order 12612: Federalism

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 amendment and associated regulations. Therefore, preparation of a Federalism assessment under E.O. 13132 is not necessary.

8.6 Executive Order 12866: Regulatory Planning and Review

E.O. 12866, signed in 1993, requires federal agencies to assess the costs and benefits of their proposed regulations, including distributional impacts, and to select alternatives that maximize net benefits to society. To comply with E.O. 12866, NMFS prepares a Regulatory Impact Review (RIR) for all fishery regulatory actions that implement a new FMP or that significantly amend an existing plan. RIRs provide a comprehensive analysis of the costs and benefits to society associated with proposed regulatory actions, the problems and policy objectives prompting the regulatory proposals, and the major alternatives that could be used to solve the problems. The reviews also serve as the basis for the agency's determinations as to whether proposed regulations are a "significant regulatory action" under the criteria provided in E.O.

12866 and whether proposed regulations will have a significant economic impact on a substantial number of small entities in compliance with the RFA. A regulation is significant if it is likely to result in an annual effect on the economy of at least $100,000,000 or if it has other major economic effects.

In accordance with E.O. 12866, the following is set forth by the South Atlantic Council: (1) this rule is not likely to have an annual effect on the economy of more than $100 million or to adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or state, local, or tribal governments or communities; (2) this rule is not likely to create any serious inconsistencies or otherwise interfere with any action take or planned by another agency; (3) this rule is not likely to materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights or obligations of recipients thereof; (4) this rule is not likely to raise novel or policy issues arising out of legal mandates, or the principles set forth in the Executive Order; and (5) this rule is not controversial.

8.7 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 including, but not limited to, developing joint partnerships; promoting the restoration of recreational fishing areas that are limited by water quality and habitat degradation; fostering sound aquatic conservation and restoration endeavors; and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and evaluating the effects of federally-funded, permitted, or authorized actions on aquatic systems and recreational fisheries, and documenting those effects. 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 South Atlantic 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 NOAA Fisheries Service and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

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

8.8 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 amendment are consistent with the directives of E.O. 13089.

8.9 Executive Order 13158: Marine Protected Areas

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. ocean and coastal resources through the use of Marine Protected Areas (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 amendment are consistent with the directives of E.O. 13158.

8.10 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) established a moratorium, with certain exceptions, on the taking of marine mammals in U.S. waters and by U.S. citizens on the high seas. It also prohibits the importing of marine mammals and marine mammal products into the United States. Under the MMPA, the Secretary of Commerce (authority delegated to NOAA Fisheries Service) is responsible for the conservation and management of cetaceans and pinnipeds (other than walruses). The Secretary of the Interior is responsible for walruses, sea otters, polar bears, manatees, and dugongs.

Part of the responsibility that NOAA Fisheries Service has under the MMPA involves monitoring populations of marine mammals to make sure that they stay at optimum levels. If a population falls below its optimum level, it is designated as "depleted." A conservation plan is then developed to guide research and management actions to restore the population to healthy levels.

In 1994, Congress amended the MMPA, to govern the taking of marine mammals incidental to commercial fishing operations. This amendment required the preparation of stock assessments for all marine mammal stocks in waters under U.S. jurisdiction; development and implementation of take-reduction plans for stocks that may be reduced or are being maintained below their optimum sustainable population levels due to interactions with commercial fisheries; and studies of pinniped-fishery interactions. The MMPA requires a commercial fishery to be placed in one of three categories, based on the relative frequency of incidental serious injuries and mortalities of marine mammals. Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing; Category II designates fisheries with occasional serious injuries and mortalities; Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities.

Under the MMPA, to legally fish in a Category I and/or II fishery, a fisherman must take certain steps. For example, owners of vessels or gear engaging in a Category I or II fishery, are required to obtain a marine mammal authorization by registering with the Marine Mammal Authorization Program (50 CFR 229.4). They are also required to accommodate an observer if requested (50 CFR 229.7(c)) and they must comply with any applicable take reduction plans.

The golden tilefish component of the snapper grouper fishery in the South Atlantic is listed as a Category III fishery in the 2012 List of Fisheries (LOF)(76 FR 73912; November 29, 2011). No incidentally killed or injured marine mammal species has been documented in this fishery.

8.11 Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (MBTA) implemented several bilateral treaties for bird conservation between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and the former Union of Soviet Socialists Republics. Under the MBTA, it is unlawful to pursue, hunt, take, capture, kill, possess, trade, or transport any migratory bird, or any part, nest, or egg of a migratory bird, included in treaties between the, except as permitted by regulations issued by the Department of the Interior (16 U.S.C. 703-712). Violations of the MBTA carry criminal penalties. Any equipment and means of transportation used in activities in violation of the MBTA may be seized by the United States government and, upon conviction, must be forfeited to it.

Executive Order 13186 directs each federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement a memorandum of understanding (MOU) with the U.S. Fish and Wildlife Service (USFWS) to conserve those bird populations. In the instance of unintentional take of migratory birds, NOAA Fisheries Service would develop and use principles, standards, and practices that will lessen the amount of unintentional take in cooperation with the USFWS. Additionally, the MOU would ensure that NEPA analyses evaluate the effects of actions and agency plans on migratory birds, with emphasis on species of concern.

An MOU was signed on August 15, 2012, which will address the incidental take of migratory birds in commercial fisheries under the jurisdiction of NOAA Fisheries Service. NOAA Fisheries Service must monitor, report, and take steps to reduce the incidental take of seabirds that occurs in fishing operations. The United States has already developed the U.S. National Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries. Under that plan many potential MOU components are already being implemented.

The alternatives considered in this amendment are consistent with the directives of E.O. 13186.

8.12 National Environmental Policy Act

Amendment 18B has been written and organized in a manner that meets National Environmental Policy Act (NEPA) requirements, and thus is a consolidated NEPA document, including a draft Environmental Assessment as described in NOAA Administrative Order (NAO) 216-6, Section 6.03.a.2.

Purpose and Need for Action
The purpose and need for this action are described in **Section 1.4.**

Alternatives
The alternatives for this action are described in **Chapter 2.**

Affected Environment
The affected environment is described in **Chapter 3.**

Impacts of the Alternatives
The impacts of the alternatives on the environment are described in **Chapter 4.**

8.13 National Marine Sanctuaries Act

Under the National Marine Sanctuaries Act (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 the 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 two main sanctuaries in the South Atlantic exclusive economic zone are Gray's Reef and Florida Keys National Marine Sanctuaries.

The alternatives considered by this document are not expected to have any adverse impacts on the resources managed by the Gray's Reef and Florida Keys National Marine Sanctuaries.

8.14 Paperwork Reduction Act

The purpose of the Paperwork Reduction Act (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 OMB. This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of paperwork burdens and duplications. PRA

requires NOAA Fisheries Service to obtain approval from the OMB before requesting most types of fishery information from the public.

8.15 Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) of 1980 (5 U.S.C. 601 et seq.) requires federal agencies to assess the impacts of regulatory actions implemented through notice and comment rulemaking procedures on small businesses, small organizations, and small governmental entities, with the goal of minimizing adverse impacts of burdensome regulations and record-keeping requirements on those entities. Under the RFA, NOAA Fisheries Service must determine whether a proposed fishery regulation would have a significant economic impact on a substantial number of small entities. If not, a certification to this effect must be prepared and submitted to the Chief Counsel for Advocacy of the Small Business Administration. Alternatively, if a regulation is determined to significantly impact a substantial number of small entities, the Act requires the agency to prepare an initial and final Regulatory Flexibility Analysis to accompany the proposed and final rule, respectively. These analyses, which describe the type and number of small businesses, affected, the nature and size of the impacts, and alternatives that minimize these impacts while accomplishing stated objectives, must be published in the *Federal Register* in full or in summary for public comment and submitted to the chief counsel for advocacy of the Small Business Administration. Changes to the RFA in June 1996 enable small entities to seek court review of an agency's compliance with the Act's provisions.

8.16 Small Business Act

Enacted in 1953, the Small Business Act requires that agencies assist and protect small-business interests to the extent possible to preserve free competitive enterprise The objectives of the act 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, NOAA Fisheries Service, in implementing regulations, must make an assessment of how those regulations will affect small businesses.

8.17 Public Law 99-659: Vessel Safety

Public Law 99-659 amended the Magnuson-Stevens Fishery Conservation and Management Act to require that a fishery management plan (FMP) or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions.

No vessel would be forced to participate in South Atlantic fisheries under adverse weather or ocean conditions as a result of the imposition of management regulations proposed in this amendment.

No concerns have been raised by South Atlantic fishermen or by the U.S. Coast Guard that the proposed management measures directly or indirectly pose a hazard to crew or vessel safety under adverse weather or ocean conditions. Therefore, this amendment proposes neither procedures for making management adjustments due to vessel safety problems nor procedures to monitor, evaluate, or report on the effects of management measures on vessel or crew safety under adverse weather or ocean conditions.

Chapter 9. List of Preparers

Table 9-1. List of Amendment 18B preparers.

Name	Agency/Division	Area of Amendment Responsibility
Karla Gore	NMFS/SF	IPT Lead/Fishery Biologist
Myra Brouwer	SAFMC	IPT Lead/Fishery Biologist
Rick DeVictor	NMFS/SF	Fishery Biologist
David Dale	NMFS/HC	EFH Specialist
Amanda Frick	NMFS/PR	Geographer
Andy Herndon	NMFS/PR	Biologist
Stephen Holiman	NMFS/SF	Economist
Tony Lamberte	NMFS/SF	Economist
Jack McGovern	NMFS/SF	Fishery Scientist
Kate Michie	NMFS/SF	Fishery Management Plan Coordinator
Monica Smit-Brunello	NOAA/GC	Attorney Advisor
Brian Cheuvront	SAFMC	Fishery Economist
Kari MacLauchlin	SAFMC	Social Scientist

NMFS = National Marine Fisheries Service, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel, Eco=Economics

Table 9-2. List of Amendment 18B interdisciplinary plan team members.

Name	SAFMC	Title
Karla Gore	NMFS/SF	IPT Lead/Fishery Biologist
Myra Brouwer	SAFMC	IPT Lead/Fishery Biologist
John Carmichael	SAFMC	SAFMC Data Program Managers
Brian Cheuvront	SAFMC	Economist
Anik Clemens	NMFS/SF	Technical Writer Editor
David Dale	NMFS/HC	EFH Specialist
Rick DeVictor	NMFS/SF	IPT Lead/Fishery Biologist
Otha Easley	NMFS/LE	Supervisory Criminal Investigator
Nick Farmer	NMFS/SF	Data Analyst
Amanda Frick	NMFS/PR	Geographer
Andy Herndon	NMFS/PR	Fishery Biologist (Protected Resources)
Stephen Holiman	NMFS/SF	Economist
David Keys	NMFS	Regional NEPA Coordinator
Tony Lamberte	NMFS/SF	Economist
Jennifer Lee	NMFS/PR	Fishery Biologist (Protected Resources)
Kari MacLauchlin	SAFMC	Social Scientist
Anna Martin	SAFMC	Coral Biologist
Jack McGovern	NMFS/SF	Fishery Biologist
Kate Michie	NMFS/SF	Fishery Biologist
Janet Miller	NMFS/SF	Program Specialist (Permits)
Larry Perruso	NMFS/EC	Economist
Roger Pugliese	SAFMC	Sr. Fishery Biologist
Noah Silverman	NMFS/SF	NEPA Specialist
Monica Smit-Brunello	NOAA/GC	Attorney
Andy Strelcheck	NMFS/SF	Fishery Biologist
Gregg Waugh	SAFMC	Deputy Executive Director

NMFS = National Marine Fisheries Service, SAFMC = South Atlantic Fishery Management Council, SF = Sustainable Fisheries Division, PR = Protected Resources Division, SERO = Southeast Regional Office, HC = Habitat Conservation Division, GC = General Counsel, Eco=Economics

Chapter 10. List of Agencies, Organizations, and Persons Consulted

Responsible Agency

Amendment 18B:
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Environmental Assessment:
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263 13th Avenue South
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List of Agencies, Organizations, and Persons Consulted

SAFMC Law Enforcement Advisory Panel
SAFMC Snapper Grouper Advisory Panel
SAFMC Scientific and Statistical Committee
SAFMC Information and Education Advisory Panel
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
Gulf and South Atlantic Fisheries Development Foundation
Gulf of Mexico Fishery Management Council
National Marine Fisheries Service
- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

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