

**Amendment 7  
to the Fishery Management Plan for the  
Dolphin and Wahoo Fishery of the Atlantic  
and Amendment 33  
to the Fishery Management Plan for the  
Snapper Grouper Fishery of the South  
Atlantic Region**



**Provision to allow dolphin and wahoo fillets to be brought  
into the U.S. Exclusive Economic Zone from  
The Bahamas and related issues for dolphin wahoo and  
snapper grouper species**



Environmental Assessment   Regulatory Impact Review   Regulatory Flexibility Act Analysis

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## Definitions, Abbreviations, and Acronyms Used in the Document

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

**Amendment 7 to the Fishery Management Plan for the  
Dolphin and Wahoo Fishery of the Atlantic and  
Amendment 33 to the Fishery Management Plan for the  
Snapper Grouper Fishery of the South Atlantic Region  
Including an Environmental Assessment (EA), Regulatory Impact Review (RIR), and Fishery  
Impact Statement (FIS)**

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# SUMMARY

## **Amendment 7 to the Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic and Amendment 33 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region**

### **Why is the South Atlantic Council Taking Action?**

The South Atlantic Fishery Management Council (South Atlantic Council) was approached by recreational fishermen who requested a change in the regulations that currently make it illegal to bring filleted dolphin and wahoo into the U.S. exclusive economic zone (EEZ) from Bahamian waters. Fishermen contend that storing fish safely with head and fins intact is difficult and impractical due to the size of the fish. The purpose of Amendment 7 to the Fishery Management Plan (FMP) for the Dolphin and Wahoo Fishery of the Atlantic (Dolphin Wahoo Amendment 7) and Amendment 33 to the FMP for the Snapper Grouper Fishery of the South Atlantic Region (Snapper Grouper Amendment 33) is to allow recreational fishermen to bring dolphin and wahoo fillets from The Commonwealth of The Bahamas (The Bahamas) into the U.S. exclusive economic zone (EEZ), and update regulations allowing recreational fishermen to bring snapper grouper fillets from The Bahamas into the U.S. EEZ.

Regulations at 50 C.F.R. § 622.186 (b) currently allow fillets of snapper grouper species from The Bahamas to be brought into the U.S. EEZ but do not exempt those fish from other U.S. regulations. The need for this action is to increase the social and economic benefits to recreational fishermen by removing impediments to the possession of fish in the U.S. EEZ that were legally harvested in Bahamian waters.

# What would Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 do?

**Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 would allow fillets of dolphin and wahoo lawfully harvested by recreational fishermen from The Bahamas to be brought into the United States EEZ; and update regulations allowing recreational fishermen to bring snapper grouper fillets into the United States EEZ**

The current relevant regulations for dolphin and wahoo found at 50 C.F.R. § 622.276 (Landing fish intact) are:

- (a) Dolphin and wahoo in or from the Atlantic EEZ must be maintained with head and fins intact. Such fish may be eviscerated, gilled, and scaled, but must otherwise be maintained in a whole condition.
- (b) The operator of a vessel that fishes in the EEZ is responsible for ensuring that fish on that vessel in the EEZ are maintained intact and, if taken from the EEZ, are maintained intact through offloading ashore, as specified in this section.

Current relevant regulations for snapper grouper at 50 C.F.R. § 622.186 (landing fish intact) are:

- (a) South Atlantic snapper grouper in or from the South Atlantic EEZ must be maintained with head and fins intact, except as specified in paragraph (b) of this section. Such fish may be eviscerated, gilled, and scaled, but must otherwise be maintained in a whole condition. The operator of a vessel that fishes in the EEZ is responsible for ensuring that fish on that vessel in the EEZ are maintained intact and, if taken from the EEZ, are maintained intact through offloading ashore, as specified in this section.
- (b) In the South Atlantic EEZ, snapper grouper lawfully harvested in Bahamian waters are exempt from the requirement that they be maintained with head and fins intact, provided valid Bahamian fishing and cruising permits are on board the vessel and the vessel is in transit through the South Atlantic EEZ. For the purpose of this paragraph, a vessel is in transit through the South Atlantic EEZ when it is on a direct and continuous course through the South Atlantic EEZ and no one aboard the vessel fishes in the EEZ.

Note: References to the “Atlantic EEZ” and “South Atlantic EEZ” at 50 C.F.R. § 622.276 and 50 C.F.R. § 622.186 are the U.S. EEZ Atlantic waters.

**Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33** would allow dolphin and wahoo that are lawfully harvested in Bahamian waters to be exempt from the requirement that they be maintained with head and fins intact in the Atlantic EEZ, provided valid Bahamian fishing and cruising permits are on board the vessel, and the vessel is in transit through the Atlantic EEZ. A vessel is in transit through the Atlantic EEZ when it is on a direct and continuous course through the Atlantic EEZ and no one aboard the vessel fishes in the EEZ. All fishing gear must be appropriately stowed, i.e., terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and reel must be disconnected and stowed separately from such fishing gear. A rod and reel must be removed from the rod holder and stowed securely on or below deck. Sinkers must be disconnected from the down rigger and stowed separately. The vessel must also have stamped and dated passports to prove that the vessel passengers were in The Bahamas.

While in Bahamian waters, fishermen would be required to obtain the necessary Bahamian cruising and fishing permits and obey all Bahamian regulations. Unless specifically exempted, fishermen also would be required to obey all U.S. regulations for fish brought from The Bahamas into the U.S. EEZ, including but not limited to bag and possession limits, size limits, closures. So, for example, in addition to the specific exemption to maintain dolphin, wahoo, snapper and grouper with heads and fins intact, under the proposed actions, only wahoo would be specifically exempt from the U.S. bag and possession limits when returning to the U.S. through the U.S. EEZ, i.e., consistent with current Bahamian regulations, fishermen would be allowed a total of 18 tuna, king mackerel, dolphin and/or wahoo per vessel. U.S. bag and possession limits would still apply, however, to dolphin and snapper-grouper and, in order to ensure compliance with both Bahamian and U.S. bag limits, fishermen would need to limit their catch to the more restrictive bag and possession limit. So, for example, Bahamian regulations currently allow 60 pounds or 20 fish per vessel for snapper grouper species. The U.S. regulations, however, include species specific bag limits with which fishermen would need to comply, including zero bag limits. In order to count the number of fish to determine compliance, regardless of the size of an individual fillet, 2 fillets will be considered 1 fish so that a total of 40 fillets of snapper grouper species lawfully harvested in the Bahamas and that otherwise comply with U.S. regulations would be allowed into the U.S. EEZ. All the fillets would be required to have the skin intact on the entire fillet. Fillets of prohibited species such as Nassau grouper, speckled hind, warsaw grouper, etc., would not be allowed to be brought into the U.S. EEZ.

# Summary of Effects

**Action 1: Exempt dolphin and wahoo harvested lawfully in The Bahamas by recreational fishermen from U.S. regulations that require them to be landed with head and fins intact in the U.S. EEZ.**

## Biological Effects

Dolphin and wahoo move throughout Bahamian waters and the U.S. EEZ. As a result, indirect negative biological impacts on dolphin and wahoo in U.S. waters could result from this action if **Preferred Alternative 2** results in an increase in recreational fishing effort for these species in Bahamian waters. However, it is not possible to quantify the possible biological effects of **Preferred Alternative 2** because no data are collected on these species in The Bahamas. Furthermore, stocks of dolphin and wahoo are very productive and stocks are healthy. Thus, due to the life history characteristics of dolphin and wahoo, even large increases in landings could be sustainable and might not negatively impact the stock.

## Economic Effects

Allowing dolphin and wahoo to be brought into the U.S. EEZ from The Bahamas would not be expected to adversely affect U.S. stocks, or associated harvest and economic benefits, **Preferred Alternative 2** would not be expected to have any adverse economic effects on the U.S. Atlantic dolphin wahoo fishery. It is not known whether allowing dolphin and wahoo fillets into the U.S. EEZ would have an adverse impact on the number of fishing trips in the EEZ, although the expectation is that these trips, and associated economic benefits, would be unaffected. Instead, an increase in the number of private angler and for-hire trips to The Bahamas to fish for dolphin and wahoo may occur. This would result in an increase in direct economic benefits in the form the consumer surplus to recreational anglers and net operating revenue to for-hire vessels.

## Social Effects

The effects of the proposed action on the fishing fleets, and associated businesses and communities, are expected to be minimal. Allowing filets to be brought into the U.S. EEZ from The Bahamas could contribute to improved quality of dolphin and wahoo caught on these trips since whole fish would not have to be stored with head and fins intact. This management measure could be beneficial to South Atlantic fishermen harvesting dolphin and wahoo in The Bahamas, particularly for fishermen coming in and out of south Florida and the Florida Keys.

## Administrative Effects

The management measure in **Preferred Alternative 2** of this action would exempt dolphin and wahoo from regulations to maintain head and fins intact, if they were lawfully harvested in The Bahamas and transported to the U.S., thus making regulations consistent with current regulations for snapper grouper species and help reduce confusion among fishermen regarding species that could be brought into the U.S. EEZ from The Bahamas as fillets. To gain consistency in regulations, National

Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries (NMFS) Office for Law Enforcement (NOAA/OLE) recommended removing the current exemption of head and fins intact for snapper grouper species during the discussion of this amendment, and recommended the South Atlantic Council not go forward with exempting dolphin and wahoo from maintaining head and tail intact. Increased Administrative Effects for NOAA/OLE would include additional costs to conduct forensic species identification (DNA testing); additional time to conduct boardings to ensure passports are stamped, count fillets, and perform field species identification on fillets, ensure fish were lawfully harvested in the Bahamas; and additional time to prepare and complete case packages for prosecution.

**Action 2. Exempt dolphin and wahoo harvested lawfully from The Bahamas from the bag and possession limits in the U.S. EEZ. Vessels may possess onboard 2 wahoo per person and 10 dolphin per person with a maximum of 60 dolphin.**

### **Biological Effects**

The biological effects for dolphin under **Alternative 2** would be expected to be neutral because there would be no difference between **Alternative 2** and **Alternative 1 (No Action)**. **Preferred Alternative 3** could result in negative biological effects for the wahoo stock, since the number of wahoo allowed to be lawfully harvested in The Bahamas and brought into the U.S. EEZ would be increased from 2 per person per day to a maximum of 18 wahoo per vessel, assuming no king mackerel, tuna, or dolphin were retained. The biological effects of **Preferred Alternative 3** would depend on how many people are on board a vessel, the number of vessels that bring fish from The Bahamas in the U.S. EEZ, and which species fishermen choose to lawfully harvest in The Bahamas and transport into the U.S. EEZ.

### **Economic Effects**

**Alternative 2** would not be expected to have any positive or negative economic effects when compared to **Alternative 1 (No Action)** because there would be no change on the number of dolphin fishermen could bring into the U.S. EEZ from The Bahamas. This is not the case for wahoo (**Preferred Alternative 3**). For wahoo, the U.S. EEZ possession limit is 2 wahoo per person per day, whereas in The Bahamas, wahoo is again part of the 18-fish multispecies bag limit. If vessels entering the U.S. EEZ from The Bahamas were required to abide by the U.S. EEZ possession limits, then they would not be able to possess as many wahoo in the U.S. EEZ as they would be allowed to possess in Bahamian waters. Because there are expected to be times when fishermen go to The Bahamas specifically to fish for wahoo, fewer trips may occur if fishermen are not allowed to bring a Bahamian bag limit of wahoo into the U.S. EEZ. Therefore, compared to **Alternative 1 (No Action)**, **Preferred Alternative 3** would be expected to result in an increase in direct economic benefits associated with increased wahoo harvest and increased number of trips.

### **Social Effects**

The social effects of allowing recreational vessels to be exempt from possession limits for dolphin and wahoo caught in The Bahamas (**Alternative 2** and **Preferred Alternative 3**), would be expected

to be minimal compared to **Alternative 1 (No Action)**. Any negative social effects would be associated with potential negative biological effects on the stocks for exceeding the bag limit.

### **Administrative Effects**

**Preferred Alternative 3** would add to the administrative burden of law enforcement agencies. NMFS OLE has expressed concern over enforcing bag limits of snapper grouper species in the U.S. EEZ, as well as the Lacey Act as it applies to vessels returning from The Bahamas. Because fish fillets are difficult to identify to species, NOAA/OLE has difficulty enforcing species-specific regulations when encountering filleted fish.

**Action 3. Require fillets of dolphin, wahoo, and snapper grouper species brought into the U.S. EEZ from The Bahamas to have the skin intact.**

### **Biological Effects**

Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement in species identification and enforcing regulations. Not requiring skin on the fillets (**Alternative 1 No Action**) could result in inadequate protection for U.S. managed stocks, which in turn could result in illegal harvest of U.S. fish, adversely affect abundance of these species, and possibly have negative biological effects. Compared to **Alternative (No Action)**, **Preferred Alternatives 2 and 3** could have positive biological benefits if they result in a reduction of illegal harvest. The magnitude in biological effects would depend on the reduction in illegal harvest. If there is a small reduction in illegal harvest as result of **Preferred Alternatives 2 and 3**, the biological effects would not be expected to be significantly different from **Alternative 1 (No Action)**.

### **Economic Effects**

**Preferred Alternatives 2 and 3** could make it easier to identify dolphin, wahoo, and snapper grouper species. Not requiring skin on the fillets (**Alternative 1 – No Action**) could result in inadequate protection for U.S. managed stocks, which in turn could result in illegal harvest of U.S. fish and adversely affect abundance of these species and associated economic benefits. The economic consequences of not being able to correctly identify snapper grouper fillets that do not have skin would be associated with potentially bringing into the U.S. EEZ fillets of prohibited species whose stocks need protection to achieve or maintain viability. Nonetheless, even with skin intact, species identification for some snapper grouper species may be inadequate or not possible without scales and this action would only require skin, not scales, on the fillets. With respect to **Alternative 1 (No Action)**, the economic effects of **Preferred Alternatives 2 and 3** are expected to be positive, but perhaps not as positive as might be possible if scales were also required to remain on the fillets.

### **Social Effects**

**Preferred Alternatives 2 and 3** would not directly affect any U.S. coastal communities in terms of local businesses or social institutions. Requiring the skin to be intact on fillets of snapper grouper species (**Preferred Alternative 2**) and dolphin and wahoo (**Preferred Alternative 3**) would be

expected to enhance the ability of law enforcement officers to identify species and enforce regulations, which would be expected to result in long-term broad social benefits.

### **Administrative Effects**

Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement identify species and enforce regulations. However, NOAA/OLE stated that skin could fade with time making visual identification less reliable; officers may not have the skill level to identify a fish by skin alone; officer's experience or knowledge may not be adequate for court testimony for their expertise in identifying fish by skin alone; and mixed species of fish could add to the complexity in identification and counts. Other administrative burdens that could result from the management measure in this action would take the form of development and dissemination of outreach and education materials for fishery participants and all law enforcement agencies.

**Action 4. Require stamped and dated passports to prove that vessel passengers were in The Bahamas in addition to possessing valid Bahamian cruising and fishing permits, if the vessel is in possession of snapper grouper fillets in the U.S. EEZ.**

### **Biological Effects**

This action is administrative, and the biological effects of **Preferred Alternative 2** are expected to be negligible with respect to **Alternative 1 (No Action)** as long as fish are legally harvested in The Bahamas. Under **Alternative 1 (No Action)**, without proof of having been recently in The Bahamas, a vessel with valid Bahamian cruising and fishing permits could catch snapper grouper species within the U.S. EEZ, fillet them, and claim they were caught in The Bahamas. Such activity could have a negative effect on snapper grouper stocks. Without knowing the extent of such activity, it is not possible to estimate the potential biological effects of **Preferred Alternative 2**.

### **Economic Effects**

Requiring stamped and dated passports for all passengers onboard the vessel, as would be required by **Preferred Alternative 2**, would bring parity between U.S. and Bahamian requirements, and would not be expected to have any economic effect compared to **Alternative 1 (No Action)** for fishermen legally participating in the Bahamian snapper grouper fishery. If fishermen are not currently going into a port in The Bahamas where there are immigration officials to stamp their passports on each trip, there could be additional costs to fishermen associated with taking the time and using the additional fuel required to get their passports stamped if they want to bring snapper grouper fillets from fish legally harvested in The Bahamas into the U.S. EEZ. Additionally, **Preferred Alternative 2** could prevent adverse impacts to U.S. managed snapper grouper stocks by closing a potential loophole for illegal fishing or filleting of fish caught in the U.S. EEZ as is currently allowed under **Alternative 1 (No Action)**.

### **Social Effects**

**Preferred Alternative 2** would not be expected to result in positive or negative social effects on coastal communities or fishermen.



## Administrative Effects

NOAA/OLE stated that although the Bahamas may require stamped and dated passports, this requirement can only be performed in certain ports in The Bahamas. According to NOAA/OLE, currently, fishermen returning with snapper grouper fillets are most likely not having their passports stamped or contacting U.S. Customs on their return to the U.S. In addition to requiring stamped and dated passports as well as cruising permits, **Preferred Alternative 2** would require that [fishing gear must be appropriately stowed on vessels while in transit](#). Thus, under **Preferred Alternative 2**, the enhancement of the regulations would require a minor increase in the administrative effects when compared to **Alternative 1 (No Action)**.

**Action 5: Specify the number of snapper grouper fillets lawfully harvested in The Bahamas that may be brought into the U.S. EEZ.**

## Biological Effects

Under **Alternative 1 (No Action)**, there is no standardized method to count fillets. **Preferred Alternative 2** would establish the provision that two fillets would count as one fish. The biological effects of this action are not quantifiable for reasons already discussed in other actions of this amendment. **Preferred Alternative 2** would not be expected to have negative biological effects when compared to **Alternative 1 (No Action)** if fishermen abide by Bahamian and U.S. regulations because it would only specify a count on the number of fillets that correspond to 20 snapper grouper. If specifying a fillet count decreases the number of snapper grouper illegally harvested and brought into the U.S. EEZ, **Preferred Alternative 2** could have positive biological effects. **Preferred Alternative 2** could have negative biological effects compared to **Alternative 1 (No Action)**, if it increased the illegal harvest of snapper grouper species. Minimum size limits and other management measures such as harvest prohibitions and closures provide biological benefits to the fish stocks. **Preferred Alternative 2** could encourage fishers from abiding by minimum size limits and harvest prohibitions for snapper grouper species in the U.S. EEZ. Because a Bahamian recreational fishing permit can be valid for as long as a year, and there exists no reasonable mechanism for law enforcement to intercept every recreational vessel to ensure the fish were indeed harvested in Bahamian waters.

## Economic Effects

If fishermen abide by regulations in The Bahamas and U.S. EEZ, the economic effects would be considered to be minimal. Under **Preferred Alternative 2**, fishermen bringing lawfully harvested snapper grouper fillets from The Bahamas into the U.S. EEZ would still be limited by the upper bound of 60 pounds (lbs) allowed under Bahamian law. The limitation of 40 fillets (**Preferred Alternative 2**) could result in a smaller quantity of fish being brought into the U.S. EEZ from the Bahamas, which could have a negative economic effect to recreational anglers. Further, depending on the size of the snapper grouper fish caught in The Bahamas, fishermen could end up high grading to stay within the 40 fillets requirement (**Preferred Alternative 2**) to get as close as they can to the 60 lbs maximum. While this is not expected to have a significant economic effect on U.S. managed snapper grouper stocks, resulting potential high grading could have an impact on Bahamian stocks.

Lowered stock levels might discourage some U.S. fishermen from making future trips. Because it is unknown whether or not high grading would occur, or its potential impact on Bahamian stock levels, the potential economic effects of **Preferred Alternative 2** are unknown. However, it is reasonable to expect that compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would be more likely to have negative economic effects if high grading occurred with some frequency. However, overall, **Preferred Alternative 2** is expected to have more positive direct economic effects than **Alternative 1 (No Action)** because with two fillets counting as one fish, regardless of the size of the fillets, it is likely some fishermen would cut of the largest fillets into smaller pieces, thus reducing the number of fish that can be brought into the U.S. EEZ. Catching fewer fish in The Bahamas would make Bahamian stocks more viable and increase the likelihood that U.S. anglers would make trips to The Bahamas. Additionally, **Preferred Alternative 2** would have a positive economic effect for law enforcement. Counting fillets is easier than trying to weigh fish at sea. Catches that are suspected of being in excess of 60 lbs of fillets would have to be confiscated and taken to shore to be weighed. Being able to make determinations of overages at sea by counting fillets would be a positive economic benefit compared to having to weigh them.

### **Social Effects**

The limitation of 40 fillets (**Preferred Alternative 2**) could result in a smaller quantity of fish being brought into the U.S. EEZ from The Bahamas than allowing 60 lbs (**Alternative 1 (No Action)**), which could affect overall benefits to recreational anglers. In general, both **Alternative 1 (No Action)** and **Preferred Alternative 2** include a limit on the quantity of snapper grouper species, and would likely result in similar and minimal social effects.

### **Administrative Effects**

NOAA/OLE has expressed concerns about being able to enforce measures that allow fillets to be brought into the U.S. EEZ from The Bahamas. The year-long validity of The Bahamian recreational fishing permit would encourage fishing and transport of snapper grouper species for a longer period of time; thereby, adding to the administrative burden for law enforcement agencies. However, the ability to count fillets rather having to weigh fish at sea is expected to enhance the ability of NOAA/OLE to enforce the current regulations that pertain to bringing snapper grouper species from The Bahamas into the U.S. EEZ. NOAA/OLE recommends that regulations must clearly define the term “lawfully harvested in Bahamian waters.” Lack of clarity would put the burden on U.S. law enforcement to prove or disprove what is lawful under Bahamian law. This would also require U.S. Coast Guard or joint enforcement agreement partners’ patrol vessels to have the resources available (access to current Bahamian law) to make this determination while on patrol.

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# Chapter 1.

## Introduction

### 1.1 What Actions Are Being Proposed in Dolphin Wahoo Amendment 7/Snapper Grouper Amendment 33?

Dolphin Wahoo Amendment 7/Snapper Grouper Amendment 33 would:

- Allow fishermen to bring dolphin and wahoo fillets from The Bahamas into the U.S. exclusive economic zone (EEZ).
- Exempt fishermen from the U.S. bag and possession limits for dolphin and wahoo when returning to the U.S. from The Bahamas through the U.S. EEZ.
- Retain skin on the entire fillet for fillets of snapper grouper, dolphin, and wahoo from The Bahamas into the U.S. EEZ.
- Specify two fillets would be equivalent to one fish for dolphin, wahoo, and snapper grouper brought into the U.S. EEZ from The Bahamas.
- Allow up to 40 fillets of snapper grouper species and up to 36 fillets of dolphin/wahoo lawfully harvested in The Bahamas into the U.S. EEZ subject to both Bahamian and U.S. regulations, including bag and possession limits, size limits, and closures.

### 1.2 Who is Proposing the Management Measure?

The South Atlantic Fishery Management Council (South Atlantic Council) is proposing this management measure. The South Atlantic Council recommends management measures and submits them to the National Marine Fisheries Service (NMFS) 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. NMFS is an line office in the National Oceanic and Atmospheric Administration within the Department of Commerce.

### *South Atlantic Fishery Management Council*

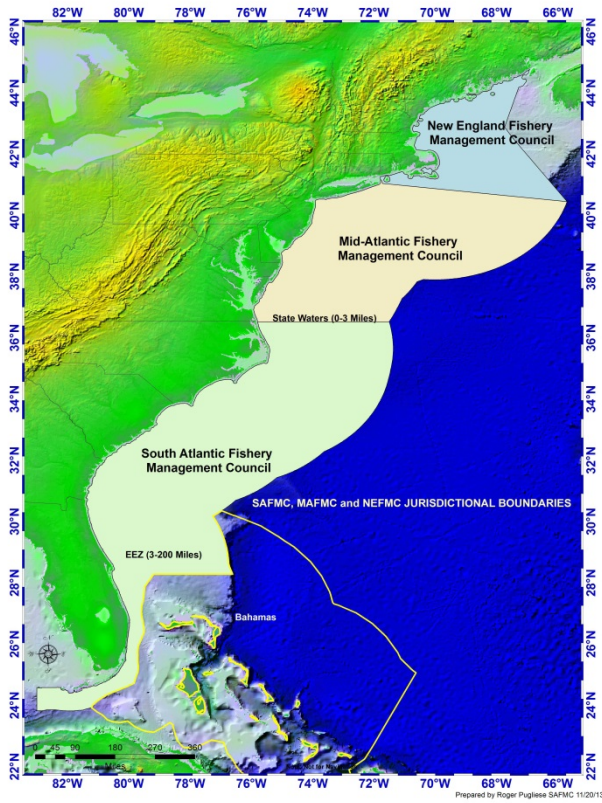
- Responsible for conservation and management of fish stocks in the South Atlantic Region
- Consists of 13 voting members: 8 appointed by the Secretary of Commerce, 1 representative from each of the 4 South Atlantic states, the Southeast Regional Director of NMFS and 4 non-voting members
- Responsible for developing fishery management plans and amendments under the Magnuson-Stevens Act; recommends actions to NMFS for implementation
- Management area is from 3 to 200 miles off the coasts of North Carolina, South Carolina, Georgia, and east Florida through Key West with the exception of Mackerel which is from New York to Florida, and Dolphin-Wahoo, which is from Maine to Florida

The South Atlantic Council made versions of the document available during scoping, and public hearings. A final draft will be made available during public comment period on the proposed rule. All versions of the document are or will be available on the South Atlantic Council's and NMFS's Web sites.

### 1.3 Where is the Project Located?

Management of the federal dolphin and wahoo fishery located off the eastern United States (Atlantic) in the 3-200 nautical miles U.S. EEZ

is conducted under the Dolphin Wahoo FMP (SAFMC 2003) (**Figure 1-1**).



**Figure 1-1.** The EEZ of The Bahamas and jurisdictional boundaries of the Dolphin and Wahoo Fishery Management Plan for the Atlantic as managed by the South Atlantic Fishery Management Council.

## 1.4 Why are the South Atlantic Council and NMFS Considering this Action?

In spring of 2013, the South Atlantic Council was approached by recreational fishermen who requested changes to regulations that currently make it illegal to bring filleted dolphin and wahoo into the EEZ from Bahamian waters. The fishermen contend that storing fish safely with head and fins intact is difficult and impractical. U.S. regulations currently allow fillets of snapper grouper species from The Bahamas to be brought into the U.S. EEZ. Inconsistent regulations for

snapper grouper and dolphin wahoo are confusing to fishermen and a law enforcement concern.

The South Atlantic Council and NMFS are considering the actions in Dolphin Wahoo Amendment 7/Snapper Grouper Amendment 33 to allow for consistent regulations for dolphin wahoo and snapper grouper fillets to be brought into the U.S. EEZ from The Bahamas. Allowing dolphin wahoo fillets to be brought into the U.S. EEZ from The Bahamas could benefit recreational fishermen by contributing to improved quality and quantity of dolphin and wahoo caught on these trips, because whole fish would not have to be stored with head and fins intact. The South Atlantic Council and NMFS are also considering actions that would enhance the ability enforce regulations associated with bringing fillets from The Bahamas into the U.S. EEZ. These actions include identification of dolphin and wahoo, and snapper grouper from fillets; ensuring vessel passengers with fillets can prove that they were in The Bahamas; and enhancing the ability to determine the number of snapper grouper fish that were caught based on the number of fillets.

The purpose of these management measures is to allow recreational fishermen to bring dolphin and wahoo fillets from The Bahamas into the U.S. EEZ and update regulations allowing recreational fishermen to bring snapper grouper fillets from The Bahamas into the U.S. EEZ. The management measures are needed to increase the social and economic benefits to recreational fishermen by removing impediments to the possession of fish in the U.S. EEZ that were legally harvested in Bahamian waters.

## Purpose for Action

The purpose of these management measures is to allow recreational fishermen to bring dolphin and wahoo fillets from The Bahamas into the U.S. EEZ and update regulations that currently allow recreational fishermen to bring snapper grouper fillets from The Bahamas into the U.S. EEZ.

## Need for Action

The management measures are needed to increase the social and economic benefits to recreational fishermen by allowing the possession of fish in the U.S. EEZ that were legally harvested in Bahamian waters.

### 1.5 What are the Regulations for Snapper Grouper Species Regarding Fillets Being Brought from The Bahamas?

Current regulations for snapper grouper at 50 C.F.R. § 622.186 (landing fish intact) are:

(a) South Atlantic snapper grouper in or from the South Atlantic EEZ must be maintained with head and fins intact, except as specified in paragraph (b) of this section. Such fish may be eviscerated, gilled, and scaled, but must otherwise be maintained in a whole condition. The operator of a vessel that fishes in the EEZ is responsible for ensuring that fish on that vessel in the EEZ are maintained intact and, if taken from the EEZ, are maintained intact through offloading ashore, as specified in this section.

(b) In the South Atlantic EEZ, snapper grouper lawfully harvested in Bahamian waters are exempt from the requirement that they be maintained with head and fins intact, provided

valid Bahamian fishing and cruising permits are on board the vessel and the vessel is in transit through the South Atlantic EEZ. For the purpose of this paragraph, a vessel is in transit through the South Atlantic EEZ when it is on a direct and continuous course through the South Atlantic EEZ and no one aboard the vessel fishes in the EEZ.

### 1.6 What are the Regulations in The Bahamas?

Current Bahamian regulations state that: “any migratory fishery resource (such as kingfish, dolphin, tuna, or wahoo) that is caught shall not in total exceed 18 fish aboard the vessel at any time.” Bahamian regulations do not prohibit filleting these species. Snapper grouper species are covered under demersal fish, and Bahamian regulations allow 60 pounds or 20 fish per vessel. For more information, see:

[http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations\\_1.pdf](http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf)

#### Inward Declaration and Application for Cruising Permit

Under customs regulation, captains sailing pleasure vessels not carrying cargo and operated for pleasure and recreation only, who are not sailing for reward or remuneration or for business purposes, must provide an inward declaration and apply for a cruising permit in order to sail from island to island within The Bahamas.

#### Eligibility

Captains sailing pleasure vessels operated for pleasure and recreation only.

#### Process

1. Complete the required forms.
2. Present forms to the Customs Officer at the point of arrival at the port of entry in The Bahamas.



3. Once the form is processed, a copy of the processed form is provided to the applicant, which serve as a Cruising Permit.

#### **Application Form(s)**

1. [Inward Declaration and Application for Cruising Permit](#) ( Form C2A)
2. [Maritime Declaration of Health Form](#)

#### **Supporting Documents**

- **Proof of citizenship/Identification for the captain (Passport) and other crew and passengers.**

#### **Turn-around time**

At the time of application once all documents are approved.

#### **Deadline**

**This process must be completed within 24 hours after arrival into Bahamian waters. No passengers or crew are to disembark until the process is completed.**

#### **Obtaining a Bahamian Recreational Fishing Permit**

A Sport Fishing Permit is a license granted to authorize foreign-owned vessels to be engaged in sport fishing exercises while in Bahamian waters. Current regulations state that both Customs and Immigration formalities must be completed before the license can be issued. Permits can be obtained from the Bahamian Customs Officer at the time of entry or from the Department of Marine Resources after entry. There are no eligibility criteria for this service.

#### **Process:**

At the time of entry into the Bahamas.

1. Complete the relevant application form.
2. Submit completed application form, along with the required supporting documents, to the Bahamian Customs Officer.
3. Pay the required fee.

4. Permit will then be issued to applicant. From the Department of Marine Resources
1. Complete the relevant application form.
2. Submit completed application form, along with the required supporting documents, to the Department of Marine Resources.
3. Pay the required fee.
4. Permit will then be issued to the applicant.

**Note: The duration of the permit is determined by the applicant. A permit can either be issued on a “per trip basis” or an “annual basis”**

**This service can be accessed at the following locations:**

**Ports of Entry throughout The Bahamas**

or:

Department of Marine Resources

East Bay Street

P.O. Box N-3028

Nassau, New Providence

The Bahamas

Tel. [\(242\) 393-1777](tel:2423931777)

Fax. [\(242\) 393-0238](tel:2423930238)

E-mail: [fisheries@bahamas.gov.bs](mailto:fisheries@bahamas.gov.bs)

For more information on cruising permits and fishing permits, see:

<http://www.bahamas.gov.bs/wps/portal/public/gov/>

### **1.7 What are the recreational regulations for dolphin, wahoo, and snapper grouper in Florida State Waters?**

In Florida, dolphin, wahoo, and snapper grouper species are required to be landed whole in State waters. Current regulations in the State of Florida (Atlantic side) for dolphin are a bag limit of 10 fish per person or 60 per vessel (whichever is less), a size limit of 20 inch fork length, and no seasonal closure. For more information, see:

<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=68B-41>

Wahoo has a 2 fish per person bag limit, no minimum size limit, and no seasonal closure. For more information, see:

<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=68B-57>

For Florida snapper grouper regulations, see:

<https://www.flrules.org/gateway/ChapterHome.asp?Chapter=68B-14>

## **1.8 What is the History of Management for Dolphin, Wahoo, and Snapper Grouper Species?**

Dolphin and wahoo were originally a part of the Fishery Management Plan for Coastal Pelagic Resources in the Gulf of Mexico and South Atlantic Region. Under that plan, a control date of May 21, 1999, for possible future limited entry was established for the commercial dolphin and wahoo fishery in the South Atlantic.

Dolphin and wahoo regulations were first implemented in 2003 through a separate Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic (SAFMC 2003). That plan established:

1. A separate management unit for dolphin and wahoo in the U.S. Atlantic.
2. A dealer permit.
3. For-hire and commercial vessel permits.
4. For-hire and commercial operator permits.
5. Reporting requirements.
6. Maximum Sustainable Yield (MSY) and Optimal Yield (OY).
7. Defined overfishing.
8. A management framework.
9. Prohibit recreational sale of dolphin or wahoo except by for-hire vessels with a commercial permit.
10. A 1.5 million lb or 13% of the total catch soft cap for the commercial sector.

11. A recreational bag limit of 10 dolphin per person, 60 dolphin per vessel maximum.
12. A minimum size limit of 20 inches fork length off Georgia and Florida.
13. A commercial trip limit of 500 lb of wahoo with no at-sea transfer.
14. A recreational bag limit of 2 wahoo per person, per day.
15. Allowable gear for dolphin and wahoo in the Atlantic EEZ as longline; hook and line gear including manual, electric, or hydraulic rod and reels; bandit gear; handline; and spearfishing gear (including powerheads).
16. A prohibition on the use of surface and pelagic longline gear for dolphin and wahoo within any “time or area closure” in the South Atlantic Council’s area of jurisdiction (Atlantic Coast) which is closed to the use of pelagic gear for highly migratory pelagic species.
17. The fishing year of January 1 to December 31 for the dolphin and wahoo fishery.
18. Essential Fish Habitat (EFH) for dolphin and wahoo as the Gulf Stream, Charleston Gyre, and Florida Current.
19. Essential Fish Habitat-Habitat Areas of Particular Concern (EFH-HAPC) for dolphin and wahoo in the Atlantic to include The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); the Charleston Bump and The Georgetown Hole (South Carolina); The Point off Jupiter Inlet Florida; The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; and The “Wall” off of the Florida Keys.

The Fishery Management Plan for Pelagic *Sargassum* Habitat in the South Atlantic Region (SAFMC 2002) and the Comprehensive Ecosystem-Based Amendment 1 (SAFMC 2009a) designated additional EFH and EFH-HAPCs for dolphin and wahoo.



The Comprehensive Annual Catch Limit (ACL) Amendment (SAFMC 2011) established the acceptable biological catch (ABC) control rule, ABC, annual catch limits, OY, and accountability measures in the dolphin and wahoo fishery. The Comprehensive ACL Amendment also set an annual catch target for the recreational sector dolphin and wahoo.

Snapper grouper regulations in the South Atlantic were first implemented in 1983. See **Appendix D** of this document for a detailed history of management for the snapper grouper fishery.

## Chapter 2. Proposed Actions

### 2.1 Action 1: Exempt dolphin and wahoo harvested lawfully in The Bahamas by recreational fishermen from U.S. regulations that require them to be landed with head and fins intact in the U.S. EEZ. -

**Alternative 1 (No Action):** Dolphin and wahoo in or from the Atlantic EEZ must be maintained with head and fins intact. Such fish may be eviscerated, gilled, and scaled, but must otherwise be maintained in a whole condition.

**Preferred Alternative 2:** Allow dolphin and wahoo lawfully harvested in The Bahamas and brought into the U.S. EEZ from The Bahamas as fillets. The vessel must have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and fishing permits onboard the vessel. The vessel must be in continuous transit in the U.S. EEZ when dolphin and/or wahoo fillets are onboard. A vessel is in transit through the South Atlantic EEZ when it is on a direct and continuous course through the South Atlantic EEZ and no one aboard the vessel fishes in the EEZ. All fishing gear must be appropriately stowed while in transit. Two fillets of dolphin or wahoo, regardless of the size of the fillet will count as 1 fish towards the possession limit.

Note: This action applies only to the recreational sector as there is no commercial harvest of dolphin and wahoo by U.S. vessels allowed in Bahamian waters. Fishing gear appropriately stowed means--  
Terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and

reel must be disconnected and stowed separately from such fishing gear. Sinkers must be disconnected from the down rigger and stowed separately.

#### 2.1.1 Comparison of Alternatives

No direct biological impact on dolphin and wahoo would be expected from alternatives in **Action 1**. However, dolphin and wahoo move throughout Bahamian and U.S. EEZ waters. As a result, indirect negative biological impacts on dolphin and wahoo in U.S. waters could result from this action if **Preferred Alternative 2** results in an increase in recreational fishing effort for these species in Bahamian waters. However, it is not possible to quantify the possible biological effects of **Preferred Alternative 2** versus **Alternative 1 (No Action)**, because recreational effort in Bahamian waters is unknown since landings data for dolphin and wahoo are not collected in The Bahamas. Additionally, landings data for dolphin and wahoo from Bahamian waters are not available in the fisheries database of the United Nations' Food and Agricultural Organization. However, dolphin and wahoo are extremely productive and healthy stocks. Therefore, a substantial increase in recreational fishing pressure would likely be needed to have negative biological impacts on these stocks.

Within the U.S. EEZ, **Preferred Alternative 2** would not increase change fishing methods for dolphin and wahoo fishery. Therefore, there is likely to be no additional effects, positive or negative, to protected species from the action alternative.

Because allowing dolphin and wahoo to be brought into the U.S. EEZ from The Bahamas would not be expected to adversely affect U.S. stocks, or associated harvest and economic

benefits, **Preferred Alternative 2** would not be expected to have any adverse economic effects on the U.S. Atlantic dolphin wahoo fishery. It is not known whether allowing dolphin and wahoo fillets into the U.S. EEZ would have an adverse impact on the number of fishing trips in the EEZ, although the expectation is that these trips, and associated economic benefits, would be unaffected. Instead, an increase in the number of trips to The Bahamas to fish for dolphin and wahoo may occur. This would result in an increase the consumer surplus to recreational anglers and net operating revenue to for-hire vessels.

Allowing recreational fishermen to bring dolphin and wahoo fillets into the U.S. EEZ from The Bahamas could potentially have a small effect on the number of fish that might otherwise be purchased by these fishermen in the U.S. However, the estimated impact of lost sales due to Bahamian dolphin and wahoo brought into the U.S. is expected to be minimal.

Overall, the effects of allowing dolphin and wahoo fillets to be brought into the U.S. EEZ from The Bahamas (**Preferred Alternative 2**) on fishing fleets, and associated businesses and communities, would be expected to be minimal compared to **Alternative 1 (No Action)**.

**Preferred Alternative 2** would make regulations consistent with current regulations for snapper grouper species and help reduce confusion among fishermen. However, there could be administrative difficulties with allowing dolphin and wahoo fillets to be brought from The Bahamas into the U.S. EEZ because there is no NOAA/OLE agreement with The Bahamas; species identification at sea is difficult, especially if the fish are frozen in a block of ice; NOAA/OLE does not have certified scales onboard their vessels to weigh the fish and weighing fish is problematic; it is easy to conceal fillets on a vessel; it is expensive to send fillets for DNA analysis to identify species; and it is

difficult to prove if fish were caught in Bahamian waters or in the U.S. EEZ (in order to enforce provisions of the Lacey Act). Therefore, National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries (NMFS) Office for Law Enforcement (NOAA/OLE) recommended against allowing fillets of any species to be brought into the U.S. EEZ from The Bahamas. In order to gain consistency in regulations, NOAA/OLE recommended removing the current exemption of head and fins intact for snapper grouper species during the discussion of this amendment, and recommended the South Atlantic Council not go forward with exempting dolphin and wahoo from maintaining head and tail intact.

**2.2 Action 2.** Exempt dolphin and wahoo harvested lawfully from The Bahamas from the bag and possession limits in the U.S. EEZ. In the U.S. EEZ vessels may possess onboard 2 wahoo per person and 10 dolphin per person with a maximum of 60 dolphin.

**Alternative 1 (No Action):** Current U.S. regulations state the bag limit for the possession of dolphin and wahoo is 10 dolphin (60 dolphin per boat)/2 wahoo per person per day, in the U.S. EEZ. These limits currently also apply to fish lawfully harvested from the Bahamas.

**Alternative 2:** Exempt dolphin lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ.

**Preferred Alternative 3:** Exempt wahoo lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ.

### 2.2.1 Comparison of Alternatives

**Alternative 2** would exempt dolphin from U.S. bag limits for dolphin, and allow them to retain Bahamian bag limits for dolphin. However, if

fishermen currently abide by Bahamian regulations, there is no difference between **Alternative 1 (No Action)** and **Alternative 2**. Thus, the biological effects for dolphin under **Alternative 2** would be expected to be neutral.

**Preferred Alternative 3** could result in negative biological effects for wahoo, since the number of wahoo allowed to be lawfully harvested in The Bahamas and brought into the U.S. EEZ would be increased from 2 per person per day to a maximum of 18 wahoo per vessel, assuming no king mackerel, tuna, or dolphin were retained. The biological effects of **Preferred Alternative 3** would depend on how many people are on board a vessel, how many vessels are bringing wahoo into the U.S. EEZ from The Bahamas, and which species fishermen choose to lawfully harvest in The Bahamas and transport them into the U.S. EEZ.

Within the U.S. EEZ, the proposed alternatives would not increase fishing or change fishing methods for species targeted within the dolphin and wahoo fishery. Therefore, no adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this action.

**Alternative 2** would not be expected to have any positive or negative economic effects compared to **Alternative 1 (No Action)**, because allowing fishermen to keep the Bahamian bag limit of dolphin would not affect the amount of dolphin retained. This is not the case for wahoo. For wahoo, the U.S. EEZ possession limit is 2 wahoo per person per day, whereas in The Bahamas, wahoo is again part of the 18-fish multispecies bag limit. If vessels entering the U.S. EEZ from The Bahamas are required to abide by the U.S. EEZ possession limits, then they would not be able to possess as many wahoo in the U.S. EEZ as they would be allowed to possess in Bahamian waters. Because there are expected to be times when fishermen go to The Bahamas specifically

to fish for wahoo, fewer trips may occur if fishermen are not allowed to bring a Bahamian bag limit into the U.S. EEZ. Therefore, compared to **Alternative 1 (No Action)**, **Preferred Alternative 3** would be expected to result in an increase in direct economic benefits associated with increased wahoo harvest and increased number of trips. It is noted that this conclusion is based on the assumption that any increase in trips and, specifically, wahoo harvest would not have an adverse effect on the wahoo stock. If adverse stock effects occur, any short-term increase in economic benefits may be offset, and exceeded, by the economic losses associated with a declining stock

Overall, the social effects of allowing recreational vessels to be exempt from possession limits for dolphin and wahoo caught in The Bahamas (**Alternative 2** and **Preferred Alternative 3**), would be expected to be minimal compared to **Alternative 1 (No Action)**. The bag limit for dolphin in The Bahamas currently constrains the number of dolphin brought into the U.S. EEZ from The Bahamas, which would be expected to not have negative effects on other resource users. The benefits to recreational fishermen to possess wahoo at the bag limit for The Bahamas (**Preferred Alternative 3**) would be expected to be beneficial to South Atlantic recreational fishermen harvesting in The Bahamas, particularly for fishermen coming in and out of south Florida and the Florida Keys.

Any negative social effects would be associated with potential negative biological effects on the stocks for exceeding the bag limit. Under **Alternative 2** this would not be expected to occur because of the current constraints of regulations in The Bahamas for dolphin. Under **Preferred Alternative 3**, however, the potential increased number of wahoo could contribute to future negative effects on the wahoo stock.

This action would add to the administrative burden of law enforcement agencies.

NOAA/OLE has expressed concern over enforcing bag limits of snapper grouper species in the U.S. EEZ, as well as the Lacey Act as it applies to vessels returning from The Bahamas. Because fish fillets are difficult to identify to species, NOAA/OLE has difficulty enforcing species-specific regulations when encountering filleted fish. Exempting wahoo (**Preferred Alternative 3**) lawfully harvested from Bahamian waters from bag and possession limits in the U.S. EEZ may increase the number of fillets of wahoo (depending on how many people are in the vessel, the number of vessels bringing wahoo into the U.S. EEZ from The Bahamas, and which species they harvest). Thus, **Preferred Alternative 3** could have negative direct and indirect administrative effects when compared with **Alternative 1 (No Action)**. If fishermen abide by Bahamian regulations, there is no difference between **Alternative 1 (No Action)** and **Alternative 2**.

### 2.3 Action 3. Require fillets of dolphin, wahoo, and snapper grouper species brought into the U.S. EEZ lawfully harvested from The Bahamas to have the skin intact.

**Alternative 1 (No Action):** Snapper grouper fillets possessed in the U.S. EEZ from The Bahamas are currently not required to have skin **or scales** intact.

**Preferred Alternative 2:** Snapper grouper fillets brought into the U.S. EEZ from The Bahamas must have the skin intact.

**Preferred Alternative 3:** Dolphin and wahoo fillets brought into the U.S. EEZ from The Bahamas must have the skin intact.

#### 2.3.1 Comparison of Alternatives

Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement in species identification and enforcing regulations that

prohibit some species from retention in the U.S. EEZ. However, the alternatives do not require the scales to be maintained. Not requiring skin on the fillets (**Alternative 1 No Action**) could result in inadequate protection for U.S. managed stocks, which in turn could result in illegal harvest of U.S. fish, adversely affect abundance of these species, and possibly have negative biological effects. Compared to **Alternative (No Action)**, **Preferred Alternatives 2 and 3** could have positive biological benefits if they result in a reduction of illegal harvest. The magnitude in biological effects would depend on the reduction in illegal harvest. If there is a small reduction in illegal harvest as result of **Preferred Alternatives 2 and 3**, the biological effects would not be expected to be significantly different from **Alternative 1 (No Action)**. No adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this action

Current regulations (**Alternative 1, No Action**) make it difficult for law enforcement to identify correctly snapper grouper species. **Preferred Alternatives 2 and 3** could make it easier to identify dolphin, wahoo, and snapper grouper species; however, the alternatives do not require the scales to be maintained. Not having skin on the fillets could result in inadequate protection for U.S. managed stocks, which in turn could affect abundance of these species. Negative economic effects could result from inadequate protection.

**Preferred Alternatives 2 and 3** would not directly affect any U.S. coastal communities in terms of local businesses or social institutions. The preferred alternatives could enhance the ability of law enforcement officers to identify fish that have been filleted and enforce regulations, which would be expected to result in long-term broad social benefits.

The administrative effects of **Preferred Alternatives 2 and 3** would be expected to be positive compared with **Alternative 1 (No Action)**. Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement identify species and enforce regulations that prohibit species from retention in the U.S. EEZ (such as Nassau grouper, speckled hind, warsaw grouper, etc.). Scales would not be required to be maintained. However, NOAA/OLE stated that skin could fade with time making visual identification less reliable; officers may not have the skill level to identify fish by skin alone; officer's experience or knowledge may not be adequate for court testimony for their expertise in identifying fish by skin alone; and mixed species of fish can add to the complexity in identification and counts. Other administrative burdens that could result from the management measure in this action would take the form of development and dissemination of outreach and education materials for fishery participants and all law enforcement agencies.

**2.4 Action 4.** In addition to possessing valid Bahamian cruising and fishing permits, require stamped and dated passports to prove that vessel passengers were in The Bahamas if the vessel is in possession of snapper grouper fillets in the U.S. EEZ.

**Alternative 1 (No Action):** Vessels bringing snapper grouper fillets into the U.S. EEZ from The Bahamas are required to have valid current Bahamian cruising and fishing permits onboard the vessel.

**Preferred Alternative 2:** Vessels bringing snapper grouper fillets into the U.S. EEZ from The Bahamas are required to have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and

fishing permits onboard the vessel. **All fishing gear must be appropriately stowed while in transit.**

Fishing gear appropriately stowed means-- Terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and reel must be disconnected and stowed separately from such fishing gear. Sinkers must be disconnected from the down rigger and stowed separately.

#### **2.4.1 Comparison of Alternatives**

This action is administrative and biological effects are expected to be negligible among the proposed alternatives. There is little difference between **Alternative 1 (No Action)** and **Preferred Alternative 2** because current Bahamian regulations already require passports to be stamped at the port of entry into The Bahamas, within 24 hours after arrival into Bahamian waters. The date is included in the stamp. No passengers or crew are allowed to disembark until the process is completed. The proposed alternatives would not increase fishing or change fishing methods for species targeted within the snapper grouper fishery. Therefore, no adverse effects to protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this action.

Requiring stamped and dated passports for all passengers onboard the vessel as specified by **Preferred Alternative 2** brings parity between U.S. and Bahamian requirements and poses no additional economic effect compared to **Alternative 1 (No Action)** for those legally participating in the Bahamian snapper grouper fishery. However, **Preferred Alternative 2** could prevent adverse impacts to U.S. managed snapper grouper stocks by further ensuring illegal fishing or filleting of fish caught in the U.S. EEZ does not occur.



**Alternative 1 (No Action)** and **Preferred Alternative 2** would not be expected to result in positive or negative social effects on coastal communities or fishermen. Because the requirements under **Preferred Alternative 2** are already in place under Bahamian law, it is assumed that all passengers aboard U.S. vessels would have stamped passport documentation when harvesting snapper grouper in the EEZ of The Bahamas under both **Alternatives 1 (No Action)** and **2 (Preferred)**.

NOAA/OLE indicates that although the Bahamas may require stamped and dated passports under **Alternative 1 (No Action)**, this requirement can only be performed in certain ports in The Bahamas. According to NOAA/OLE, fishermen currently returning with snapper grouper fillets are most likely not having their passports stamped or contacting U.S. Customs on their return to the U.S. In addition to requiring stamped and dated passports as well as cruise permits, **Preferred Alternative 2** would also require that [fishing gear on vessels be appropriately stowed while in transit](#). Thus, under **Preferred Alternative 2**, the enhancement of the regulations would require a minor increase in the administrative effects when compared to **Alternative 1 (No Action)**.

## 2.5 Action 5: Specify the number of snapper grouper fillets lawfully harvested in The Bahamas that may be brought into the U.S. EEZ.

**Alternative 1 (No Action):** [60 lbs, or 20 fish of snapper grouper species lawfully harvested in The Bahamas may be brought into the U.S. EEZ. Fishermen must abide by U.S. bag and possession limits for snapper grouper species, as well as Bahamian bag and possession limits for fillets brought into the U.S. EEZ.](#)

**Preferred Alternative 2:** Two fillets of snapper grouper species, regardless of the

size of the fillet will count as 1 fish towards the possession limit. [Fishermen must abide by U.S. bag and possession limits for snapper grouper species, as well as Bahamian bag and possession limits for fillets brought into the U.S. EEZ. Up to 40 fillets of snapper grouper species lawfully harvested in The Bahamas may be brought into the U.S. EEZ.](#)

### 2.5.1 Comparison of Alternatives

Under **Alternative 1 (No Action)**, there is no standardized method to count fillets. **Preferred Alternative 2** would specify the number of fillets that correspond to 20 snapper grouper would not be expected to have negative biological effects when compared to **Alternative 1 (No Action)** if fishermen abide by Bahamian and U.S. regulations. However, if specifying a fillet count decreases the number of snapper grouper illegally harvested and brought into the U.S. EEZ, **Preferred Alternative 2** could have positive biological effects. **Preferred Alternative 2** could have negative biological effects compared to **Alternative 1 (No Action)**, if it increases the illegal harvest of snapper grouper species.

**Preferred Alternative 2** is expected to enhance the ability of NOAA/OLE to count the number of fish being brought into the U.S. EEZ from the Bahamas. Fillets of prohibited species such as Nassau grouper, speckled hind, warsaw grouper, etc. cannot to be brought into the U.S. EEZ. Additionally, current minimum size limits and closures in the U.S. EEZ would continue to apply. Fishers bringing in fillets of fish from the Bahamas would need to abide by both Bahamian and U.S. laws, whichever is more restrictive.

If fishermen abide by regulations in The Bahamas and U.S. EEZ, the economic effects would be considered to be minimal. Under **Preferred Alternative 2**, fishermen bringing lawfully harvested snapper grouper fillets from The Bahamas into the U.S. EEZ would still be

limited by the upper bound of 60 lbs allowed under Bahamian law. The limitation of 40 fillets (**Preferred Alternative 2**) could result in a smaller quantity of fish being brought into the U.S. EEZ from the Bahamas, which could have a negative economic effect to recreational anglers. Therefore, depending on the size of the snapper grouper fish caught in The Bahamas, fishermen could end up high grading fish to stay within the 40 fillet requirement (**Preferred Alternative 2**) to get as close as they can to the 60 lbs maximum. While this is not expected to have a significant economic effect on U.S. managed snapper grouper stocks, resulting potential high grading could have an impact on Bahamian stocks. Lowered stock levels might discourage some U.S. fishermen from making future trips. Because it is unknown whether or not high grading would occur, or its potential impact on Bahamian stock levels, the potential economic effects of **Preferred Alternative 2** are unknown. However, it is reasonable to expect that compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would be more likely to have negative economic effects.

At the June 2014 Council meeting, U.S. Coast Guard stated that they would prefer having the ability to count fillets rather than having a limit on the number of pounds of fish or fillets that can be brought into the U.S. EEZ from The Bahamas since it is difficult to weigh fish at sea. Note that, without specific exemptions, fishermen must abide by both Bahamian and U.S. regulations, so U.S. size and bag and possession limits would still apply. In order to ensure compliance with both Bahamian and U.S. bag limits, fishermen would need to limit their catch to the more restrictive bag and possession limit. So, for example, Bahamian regulations currently allow 60 pounds or 20 fish per vessel for snapper grouper species. The U.S. regulations; however, include species-specific bag limits with which fishermen would need to comply, including zero bag limits. In order to count the number of fish to determine

compliance, regardless of the size of an individual fillet, 2 fillets would be considered 1 fish so that a total of 40 fillets of snapper grouper species lawfully harvested in the Bahamas and that otherwise comply with U.S. regulations would be allowed into the U.S. EEZ. All the fillets would be required to have the skin intact on the entire fillet. Fillets of prohibited species such as Nassau grouper, speckled hind, warsaw grouper, etc., would not be allowed to be brought into the U.S. EEZ.

As mentioned in **Section 4.5.1** and **Section 3.4.1.4**, NOAA/OLE has expressed concerns about being able to enforce the regulations that allow snapper grouper species to be brought into the U.S. EEZ from The Bahamas. The ability to count fillets rather than having to weigh fish at sea is expected to enhance the ability of NOAA/OLE to enforce the current regulations that pertain to bringing snapper grouper species from The Bahamas into the U.S. EEZ.



## Chapter 3 Affected Environment

Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 addresses fillets of dolphin, wahoo, and snapper grouper species lawfully harvested in Bahamian waters. The reader is referred to Dolphin Wahoo Amendment 5 (SAFMC 2013) and Regulatory Amendment 14 to the Snapper Grouper FMP (SAFMC 2014b) for details on the affected environment for these species in the Atlantic EEZ, and is summarized below.

### 3.1 Habitat Environment

Information on the habitat utilized by dolphin and wahoo in the Atlantic, and snapper grouper species in the South Atlantic Region is included in Volume II of the Fishery Ecosystem Plan (SAFMC 2009b) and incorporated here by reference. The Fishery Ecosystem Plan can be found at: <http://www.safmc.net/ecosystem-management/fishery-ecosystem-plan-1>. Dolphin and wahoo are migratory pelagic species occurring in tropical and subtropical waters worldwide. They are found near the surface around natural and artificial floating objects, including *Sargassum* (in the Atlantic).

Many snapper grouper species utilize both pelagic and benthic habitats during several stages of their life histories; larval stages of these species live in the water column and feed on plankton. Most juveniles and adults are demersal (bottom dwellers) and associate with hard structures on the continental shelf that have moderate to high relief (e.g., coral reef systems and artificial reef structures, rocky hard-bottom substrates, ledges and caves, sloping soft-bottom areas, and limestone outcroppings). Juvenile stages of some snapper grouper species also utilize inshore seagrass beds, mangrove estuaries, lagoons, oyster reefs, and embayment

systems. In many species, various combinations of these habitats may be utilized during daytime feeding migrations or seasonal shifts in cross-shelf distributions.

#### 3.1.1 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)). EFH for dolphin and wahoo is the Gulf Stream, Charleston Gyre, Florida Current, and pelagic *Sargassum*.

Note: This EFH definition for dolphin was approved by the Secretary of Commerce on June 3, 1999, as a part of the South Atlantic Fishery Management Council’s (South Atlantic Council) Comprehensive Habitat Amendment (SAFMC, 1998). Dolphin was included within the Fishery Management Plan for the Coastal Migratory Pelagic Resources in the Gulf of Mexico and Atlantic Region (Coastal Migratory Pelagics FMP). This definition does not apply to extra-jurisdictional areas.

For snapper grouper species, specific categories of EFH identified in the South Atlantic, which are utilized by federally managed fish and invertebrate species, include both estuarine/inshore and marine/offshore areas. Specifically, estuarine/inshore EFH includes: Estuarine emergent and mangrove wetlands, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested systems, aquatic beds, and estuarine water column. Additionally, marine/offshore EFH includes: live/hard

bottom habitats, coral and coral reefs, artificial and manmade reefs, *Sargassum* species, and marine water column.

EFH utilized by snapper grouper species in this region includes coral reefs, live/hard bottom, submerged aquatic vegetation, artificial reefs, and medium to high profile outcroppings on and around the shelf break zone from shore to at least 183 meters [600 ft (but to at least 2,000 ft for wreckfish)] where the annual water temperature range is sufficiently warm to maintain adult populations of members of this largely tropical fish complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for survival of larvae and growth up to and including settlement. In addition, the Gulf Stream is also EFH because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine-dependent and near shore snapper grouper species, EFH includes areas inshore of the 30 meter (100-ft) contour, such as attached macroalgae; submerged rooted vascular plants (seagrasses); estuarine emergent vegetated wetlands (saltmarshes, brackish marsh); tidal creeks; estuarine scrub/shrub (mangrove fringe); oyster reefs and shell banks; unconsolidated bottom (soft sediments); artificial reefs; and coral reefs and live/hard bottom habitats.

### 3.1.2 Habitat Areas of Particular Concern

EFH-habitat of particular concern (HAPCs) for dolphin and wahoo in the Atlantic include The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and The Georgetown Hole (South Carolina); The Point off Jupiter Inlet (Florida); The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The “Wall” off of the Florida Keys; and Pelagic *Sargassum*.

Note: This EFH-HAPC definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council’s Comprehensive Habitat Amendment (SAFMC 1998)(dolphin was included within the Coastal Migratory Pelagics FMP).

EFH-HAPC for species in the Snapper Grouper Fishery Management Unit (FMU) includes medium to high profile offshore hard bottoms where spawning normally occurs; localities of known or likely periodic spawning aggregations; near shore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the Oculina Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; South Atlantic Council-designated Artificial Reef Special Management Zones (SMZs); and deep-water MPAs.

Areas that meet the criteria for EFH-HAPCs include habitats required during each life stage (including egg, larval, postlarval, juvenile, and adult stages).

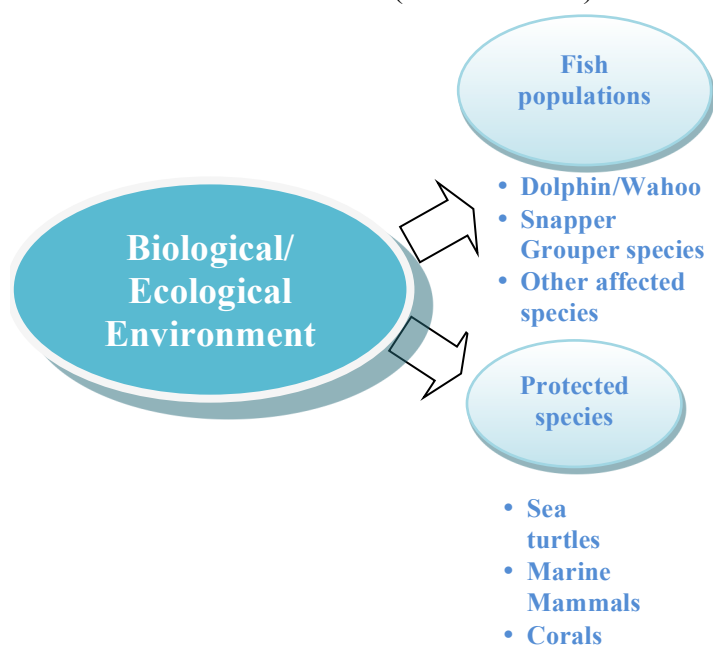
In addition to protecting habitat from fishing related degradation through fishery management plan regulations, the South Atlantic Council, in cooperation with National Marine Fisheries Service (NMFS), actively comments on non-fishing projects or policies that may impact essential fish habitat. With 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; and marine invasive species and estuarine invasive species.

See **Appendix I** for detailed information on EFH and EFH-HAPCs for all South Atlantic Council managed species.

## 3.2 Biological and Ecological Environment

The marine environment in the Atlantic management area affected by actions in this environmental assessment is defined by two components (**Figure 3-1**). Each component is described in detail in Chapter 3 of Dolphin Wahoo Amendment 5 (SAFMC 2013).



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

### 3.2.1 Fish Populations

Dolphin and wahoo are highly migratory pelagic species occurring in tropical and subtropical waters worldwide. In the western Atlantic, dolphin and wahoo are distributed from Nova Scotia to Brazil, including Bermuda and the greater Caribbean region, and the Gulf of Mexico. They are found near the surface around natural and artificial floating objects, including *Sargassum* (in the Atlantic).

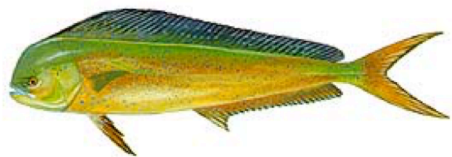
Dolphin eat a wide variety of species, including small pelagic fish, juvenile tuna, billfish, jacks, and pompano, and pelagic larvae of nearshore, bottom-living species. They also eat invertebrates such as cephalopods, mysids, and jellyfish. Large tuna, rough-toothed dolphin, marlin, sailfish, swordfish, and sharks feed on dolphin, particularly juveniles. Wahoo mainly feed on squid and fish, including frigate mackerel, butterfish, porcupine fish, and round herring. They generally compete with tuna for the same kind of food, but can feed on larger prey. A number of predators such as sharks and large tuna that share their habitat feed on young wahoo. Dolphin and Wahoo are likely to be caught when longline fishermen target other species such as billfish and tuna. Additional background information regarding the fish populations for dolphin and wahoo can be found in the Dolphin Wahoo FMP (SAFMC 2003) at: <http://www.safmc.net/Library/Dolphin/Wahoo/tafid/410/Default.aspx>

The waters off the South Atlantic coast are home to a diverse population of fish. The snapper grouper fishery management unit contains 59 species of fish, many of them neither “snappers” nor “groupers”. These species live in depths from a few feet (typically as juveniles) to hundreds of feet. As far as north/south distribution, the more temperate species tend to live in the upper reaches of the South Atlantic management area (e.g., black sea bass, red porgy) while the tropical variety’s core residence is in the waters off south Florida, Caribbean Islands, and northern South America (e.g., black grouper, mutton snapper). These are

reef-dwelling species that live amongst each other. These species rely on the reef environment for protection and food. There are several reef tracts that follow the southeastern coast. The fact that these fish populations congregate dictates the nature of the fishery (multi-species) and further forms the type of management regulations proposed in this document. Additional background information regarding the snapper grouper fish populations can be found in the Snapper Grouper FMP (SAFMC 1983) at:

<http://www.safmc.net/resource-library/snapper-grouper>

### Dolphin Life History *An Overview*



- Worldwide distribution; In the western Atlantic ocean, from Nova Scotia to Brazil (including Bermuda, The Bahamas, the Gulf of Mexico, and the Caribbean )
- Oceanic, adults in open water and juveniles with floating seagrass and marine debris
- Highly migratory
- Protracted multiple spawning behavior throughout the year, varying with region. Off North Carolina, peak spawning is during April through July
- Maximum age is 4 years (mean <2 years)

### 3.2.2 Dolphin, *Coryphaena hippurus*

In the western Atlantic ocean, dolphin are most common from North Carolina, throughout the Gulf of Mexico and Caribbean, to the northeast coast of Brazil (Oxenford 1999). Dolphin are highly migratory and pelagic with adults found in open water, and juveniles with floating seagrass and marine debris and occasionally found in estuaries and harbors (Palko et al. 1982; Johnson 1978).

In a study by Schwenke and Buckel (2008) off North Carolina, dolphin ranged from 3.5 in (89 mm) fork length (FL) to 57 in (1451 mm) FL. Mean dolphin weight ranged from 14.2 lbs (6.44 kg) for males to 7.6 lbs (3.44 kg) for females. Estimated average growth rate was 0.15 in (3.78 mm)/day during the first six months, and maximum reported age was 3 years. Size at 50% maturity was slightly smaller for female dolphin (18.1 in FL; 460 mm), when compared with males (18.7 in FL; 475 mm); and peak spawning occurred from April through July off North Carolina (Schwenke and Buckel 2008). Prager (2000) estimated natural mortality for dolphin to be between 0.68 and 0.80.

For a more comprehensive record of the literature on the biology and ecology of dolphin, see **Section 3.0** in the Dolphin Wahoo FMP (SAFMC 2003) found at:

<http://www.safmc.net/Library/Dolphin/Wahoo/tabid/410/Default.aspx>

### 3.2.3 Wahoo, *Acanthocybium solanderi*

In the western Atlantic, the highly migratory, pelagic wahoo are found from New York through Columbia including Bermuda, The Bahamas, the Gulf of Mexico, and the Caribbean (Theisen et al. 2008; Garber et al. 2005; Collette 2002). Wahoo typically occur far offshore, inhabit waters around pinnacles, reef edges, and walls, and may be attracted to oceanic frontal zones and temperature discontinuities (Garber et al. 2005).

### **Wahoo Life History** *An Overview*



- Worldwide distribution; In the western Atlantic wahoo are found from New York through Columbia (including Bermuda, The Bahamas, the Gulf of Mexico, and the Caribbean )
- Oceanic
- Highly migratory
- The spawning season extends from June through August, with peak spawning in June and July
- Maximum age is 9.3 years (mean 1.8 years)

In studies off Florida and the northern Bahamas, McBride et al. (2008) reported rapid growth to a large size, with sizes ranging from 24.7 in (628 mm) FL to 77 in (1956 mm) FL. Males were smaller than females, with the largest male at 72.3 lbs (32.8 kg) and the largest female was 101.4 lbs (46.0 kg). Maximum age was 9.3 years. Maki Jenkins and McBride (2009) reported size and age at 50% maturity for female wahoo at 36.4 in (925 mm) FL and 0.64 years, respectively, with peak spawning in the summer.

For a more comprehensive record of the literature on the biology and ecology of wahoo, see **Section 3.0** in the Dolphin Wahoo FMP (SAFMC 2003) found at: <http://www.safmc.net/Library/Dolphin/Wahoo/tabid/410/Default.aspx>

### **3.2.4 Snapper Grouper Species**

Snapper grouper species that may be affected by the proposed action include 59 species in the Snapper Grouper FMU. The life history, biological characteristics, and stock status of each species may be found in their respective Southeast Data, Assessment, and Review (SEDAR) reports listed on the SEDAR web site <http://www.sefsc.noaa.gov/sedar/>. Yellowtail snapper was assessed by the state of Florida in 2012 (O'Hop et al. 2012).

### **3.2.5 Stock Status of Dolphin and Wahoo**

The Report to Congress on the Status of U.S. Stocks indicates dolphin is not overfished, and is not undergoing overfishing (<http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>). The overfished/overfishing status of wahoo is unknown, but all indications are that it is a healthy stock. Prager (2000) conducted an exploratory assessment of dolphin, but the results were not conclusive. A Southeast Data, Assessment, and Review (SEDAR) stock assessment for dolphin and wahoo is expected within the next 5 years. The SEDAR process, initiated in 2002, is a cooperative Fishery Management Council process intended to improve the quality, timeliness, and reliability of fishery stock assessments in the South Atlantic, Gulf of Mexico, and U.S. Caribbean. SEDAR is managed by the Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils in



coordination with NMFS and the Atlantic and Gulf States Marine Fisheries Commissions. Oxenford and Hunte (1986) suggested that there were at least two separate unit stocks of dolphin in the northeast and southeast Caribbean Sea. Oxenford (1999) suggested that it was very likely that additional stocks of dolphin existed in the Gulf of Mexico and central/western Caribbean. Theisen et al. (2008) indicated that a worldwide stock for wahoo consisted of a single globally distributed population. However, Zischke et al. (2012) concluded that despite genetic homogeneity in wahoo, multiple discrete phenotypic stocks existed in the Pacific and eastern Indian oceans.

Life-history characteristics of dolphin and wahoo such as rapid growth rates, early maturity, batch spawning over an extended season, a short life span, and a varied diet could help sustain fishing pressures on these species (Schwenke and Buckel 2008; McBride et al. 2008; Prager 2000; and Oxenford 1999). Dolphin and wahoo are listed as species of “least concern” under the International Union for Conservation of Nature Red List, i.e., species that have a low risk of extinction. See **Section 1.5** for a history of recent management of dolphin and wahoo.

### 3.2.6 Stock Status of Snapper Grouper Species

Stock assessments are not available for all 59 species within the Snapper Grouper FMU. Available stock assessments for snapper grouper species may be found in their respective SEDAR reports listed on the SEDAR web site <http://www.sefsc.noaa.gov/sedar/>.

### 3.2.7 Protected Species

There are 40 listed species protected by federal law that may occur in the exclusive economic zone (EEZ) of the South Atlantic Region and are under the purview of NMFS. Thirty-one of

these species are marine mammals protected under the Marine Mammal Protection Act (MMPA). Six of these marine mammal species (sperm, sei, fin, blue, humpback, and North Atlantic right whales) are also listed as endangered under the Endangered Species Act (ESA). In addition to those six marine mammals, five species of sea turtles (green, hawksbill, Kemp’s ridley, leatherback, and loggerhead); the smalltooth sawfish; five distinct population segments (DPSs) of Atlantic sturgeon; and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]) are also protected under the ESA. Portions of designated critical habitat for North Atlantic right whales and *Acropora* corals occur within the South Atlantic Council’s jurisdiction. Additionally, on September 10, 2014, NMFS listed 20 new coral species under the ESA, five of those species occur in the Caribbean (including Florida) and all of these are listed as threatened. The 2 previously listed *Acropora* coral species remain protected as threatened. The potential impacts from the continued authorization of the Atlantic dolphin wahoo fishery and the South Atlantic Snapper Grouper Fishery on currently listed protected species have been considered in previous ESA Section 7 consultations or subsequent memoranda. Those consultations indicate that of the species listed above, sea turtles and smalltooth sawfish are the most likely to interact with these fisheries and are therefore discussed further below.

#### Turtles

Green, hawksbill, Kemp’s ridley, leatherback, and loggerhead sea turtles are all highly migratory and travel widely throughout the South Atlantic. The following sections are a brief overview of the general life history characteristics of the sea turtles found in the South Atlantic region. Several volumes exist that cover the biology and ecology of these species more thoroughly (i.e., Lutz and Musick (eds.) 1997, Lutz et al. (eds.) 2002).

**Green** sea turtle hatchlings are thought to occupy pelagic areas of the open ocean and are often associated with *Sargassum* rafts (Carr 1987, Walker 1994). Pelagic stage green sea turtles are thought to be carnivorous. Stomach samples of these animals found ctenophores and pelagic snails (Frick 1976, Hughes 1974). At approximately 20 to 25 cm carapace length, juveniles migrate from pelagic habitats to benthic foraging areas (Bjorndal 1997). As juveniles move into benthic foraging areas a diet shift towards herbivory occurs. They consume primarily seagrasses and algae, but are also known to consume jellyfish, salps, and sponges (Bjorndal 1980, 1997; Paredes 1969; Mortimer 1981, 1982). The diving abilities of all sea turtles species vary by their life stages. The maximum diving range of green sea turtles is estimated at 110 m (360 ft) (Frick 1976), but they are most frequently making dives of less than 20 m (65 ft.) (Walker 1994). The time of these dives also varies by life stage. The maximum dive length is estimated at 66 minutes with most dives lasting from 9 to 23 minutes (Walker 1994).

The **hawksbill's** pelagic stage lasts from the time they leave the nesting beach as hatchlings until they are approximately 22-25 cm in straight carapace length (Meylan 1988, Meylan and Donnelly 1999). The pelagic stage is followed by residency in developmental habitats (foraging areas where juveniles reside and grow) in coastal waters. Little is known about the diet of pelagic stage hawksbills. Adult foraging typically occurs over coral reefs, although other hard-bottom communities and mangrove-fringed areas are occupied occasionally. Hawksbills show fidelity to their foraging areas over several years (van Dam and Diéz 1998). The hawksbill's diet is highly specialized and consists primarily of sponges (Meylan 1988). Gravid females have been noted ingesting coralline substrate (Meylan 1984) and calcareous algae (Anderes Alvarez and Uchida 1994), which are believed to be possible sources of calcium to aid in eggshell

production. The maximum diving depths of these animals are not known, but the maximum length of dives is estimated at 73.5 minutes. More routinely, dives last about 56 minutes (Hughes 1974).

**Kemp's ridley** hatchlings are also pelagic during the early stages of life and feed in surface waters (Carr 1987, Ogren 1989). Once the juveniles reach approximately 20 cm carapace length they move to relatively shallow (less than 50m) benthic foraging habitat over unconsolidated substrates (Márquez-M. 1994). They have also been observed transiting long distances between foraging habitats (Ogren 1989). Kemp's ridleys feeding in these nearshore areas primarily prey on crabs, though they are also known to ingest mollusks, fish, marine vegetation, and shrimp (Shaver 1991). The fish and shrimp Kemp's ridleys ingest are not thought to be a primary prey item but instead may be scavenged opportunistically from bycatch discards or from discarded bait (Shaver 1991). Given their predilection for shallower water, Kemp's ridleys most routinely make dives of 50 m or less (Soma 1985, Byles 1988). Their maximum diving range is unknown. Depending on the life stage a Kemp's ridleys may be able to stay submerged anywhere from 167 minutes to 300 minutes, though dives of 12.7 minutes to 16.7 minutes are much more common (Soma 1985, Mendonca and Pritchard 1986, Byles 1988). Kemp's ridleys may also spend as much as 96% of their time underwater (Soma 1985, Byles 1988).

**Leatherbacks** are the most pelagic of all ESA-listed sea turtles and spend most of their time in the open ocean. Although they will enter coastal waters and are seen over the continental shelf on a seasonal basis to feed in areas where jellyfish are concentrated. Leatherbacks feed primarily on cnidarians (medusae, siphonophores) and tunicates. Unlike other sea turtles, leatherbacks' diets do not shift during their life cycles. Because leatherbacks' ability

to capture and eat jellyfish is not constrained by size or age, they continue to feed on these species regardless of life stage (Bjorndal 1997). Leatherbacks are the deepest diving of all sea turtles. It is estimated that these species can dive in excess of 1000 m (Eckert et al. 1989) but more frequently dive to depths of 50 m to 84 m (Eckert et al. 1986). Dive times range from a maximum of 37 minutes to more routine dives of 4 to 14.5 minutes (Standora et al. 1984, Eckert et al. 1986, Eckert et al. 1989, Keinath and Musick 1993). Leatherbacks may spend 74% to 91% of their time submerged (Standora et al. 1984).

**Loggerhead** hatchlings forage in the open ocean and are often associated with *Sargassum* rafts (Hughes 1974, Carr 1987, Walker 1994, Bolten and Balazs 1995). The pelagic stage of these sea turtles are known to eat a wide range of things including salps, jellyfish, amphipods, crabs, syngnathid fish, squid, and pelagic snails (Brongersma 1972). Stranding records indicate that when pelagic immature loggerheads reach 40-60 cm straight-line carapace length they begin to live in coastal inshore and nearshore waters of the continental shelf throughout the U.S. Atlantic (Witzell 2002). Here they forage over hard- and soft-bottom habitats (Carr 1986). Benthic foraging loggerheads eat a variety of invertebrates with crabs and mollusks being an important prey source (Burke et al. 1993). Estimates of the maximum diving depths of loggerheads range from 211 m to 233 m (692-764ft.) (Thayer et al. 1984, Limpus and Nichols 1988). The lengths of loggerhead dives are frequently between 17 and 30 minutes (Thayer et al. 1984, Limpus and Nichols 1988, Limpus and Nichols 1994, Lanyon et al. 1989) and they may spend anywhere from 80 to 94% of their time submerged (Limpus and Nichols 1994, Lanyon et al. 1989).

### **Fish**

Historically the **smalltooth sawfish** in the U.S. ranged from New York to the Mexico border. Their current range is poorly understood but

believed to have contracted from these historical areas. In the South Atlantic region, they are most commonly found in Florida, primarily off the Florida Keys (Simpfendorfer and Wiley 2004). Only two smalltooth sawfish have been recorded north of Florida since 1963 [the first was captured off North Carolina in 1963 and the other off Georgia in 2002 (National Smalltooth Sawfish Database, Florida Museum of Natural History)]. Historical accounts and recent encounter data suggest that immature individuals are most common in shallow coastal waters less than 25 meters (Bigelow and Schroeder 1953, Adams and Wilson 1995), while mature animals occur in waters in excess of 100 meters (Simpfendorfer pers. comm. 2006). Smalltooth sawfish feed primarily on fish. Mullet, jacks, and ladyfish are believed to be their primary food resources (Simpfendorfer 2001). Smalltooth sawfish also prey on crustaceans (mostly shrimp and crabs) by disturbing bottom sediment with their saw (Norman and Fraser 1938, Bigelow and Schroeder 1953).

## **3.3 Human Environment**

### **3.3.1 Economic Environment**

Regulations allowing fillets from The Bahamas in the U.S. EEZ would apply to any vessel regardless of its involvement in U.S. federally permitted fisheries. Those included in the economic description of the fishery are those persons and vessels who are in the U.S. EEZ with dolphin, wahoo, or snapper grouper species lawfully harvested in The Bahamas. However, the vessels most likely to go are those already fishing and information is only available for the federally permitted fleet.

The U.S. vessels most likely to recreationally harvest snapper, grouper, dolphin, and wahoo in Bahamian waters are expected to be the vessels that also participate in the dolphin wahoo,



snapper grouper, and coastal migratory pelagic fisheries in the south Atlantic region of the U.S.

The following amendments are referenced to provide economic environment information regarding the U.S. snapper grouper fishery. These amendments include Amendment 13C (SAFMC 2006), Amendment 15A (SAFMC 2008a), Amendment 15B (SAFMC 2008b), Amendment 16 (SAFMC 2009c), Amendment 27 (SAFMC 2014a), Regulatory Amendment 9 (SAFMC 2011b), and Comprehensive ACL Amendment for the South Atlantic Region (SAFMC 2011a) and are incorporated herein by reference.

A description of the dolphin wahoo fishery is contained in SAFMC (2011a) and is incorporated herein by reference.

According to the Internet website of the Bahamian Ministry of Tourism, in 2012, 148,578 individuals arrived in Bahamian ports by sea, but not on a cruise ship (<http://www.tourismtoday.com/home/statistics/visitor-arrivals/foreign-air-sea/>). Potentially, each of these persons could be affected by these actions. However, accurate data do not exist that characterize or enumerate the numbers of vessels or trips that harvest fish in The Bahamas and then transit through the U.S. EEZ. The best approximation of participation in the fishery would be those vessels that are currently or have historically participated in U.S. managed federal fisheries.

Only foreign vessels that fish recreationally in The Bahamas are allowed to obtain Bahamian fishing permits. Selling fish lawfully caught in The Bahamas in the U.S. would be a violation of the Lacey Act (6 CFR § 3372). Nonetheless, vessels permitted to fish commercially in the U.S. EEZ for dolphin, wahoo, or snapper grouper species could fish recreationally in The Bahamas. Commercial permit holders who participate in the coastal migratory pelagic fishery also participate in either the dolphin,

wahoo, or snapper grouper fisheries. While it is possible that commercial vessels that participate in non-fish fisheries such as shrimp could go to The Bahamas to fish recreationally for dolphin, wahoo or snapper grouper, it is not likely and no discussion of such fisheries are included here.

### **3.3.1.1 Snapper Grouper Fishery**

#### **3.3.1.1.1 Commercial Sector**

On average, there were 14,788 commercial fishing trips made by an average of 928 vessels where at least one pound of a snapper grouper species was landed. Average annual landings of snapper grouper were 7,239,350 lbs ww, with an average nominal annual value of \$18,026,966. On, April 28, 2014, there were 571 valid or renewable South Atlantic Snapper Grouper Unlimited Permits, and 113 225-lb Limited permits.

#### **3.3.1.1.2 Recreational Sector**

Average landings of snapper grouper species from the South Atlantic region from 2008 through 2012 were 8,113,668 lbs ww per year by the private/rental sector of the recreational fishery with the majority of the fish being harvested off the east coast of Florida. The average number of trips taken by private/rental vessels landing snapper grouper species from 2008 through 2012 were 1,935,729 trips per year. An average of 628,815 trips by private/rental vessels from 2008 through 2012 that specifically targeted snapper grouper species in the South Atlantic. The number of permitted private/rental vessels that participated in the snapper grouper fishery in the South Atlantic is unknown.

Average landings of snapper grouper species by the for-hire sector (both charter and headboats combined) for 2008-2012 was 3,281,092 lbs ww on an average of 115,481 trips. There were

1,430 valid snapper grouper for-hire permits As of April 28, 2014.

The estimated mean value of access per marine recreational fishing trip in the South Atlantic is \$109.31 [in 2000\$] (Haab *et al.* 2001).

Although this estimate is not specific to snapper grouper fishing trips, it may shed light on the magnitude of an angler's willingness to pay for this type of recreational experience.

The estimated willingness to pay for an incremental increase in catch and keep rates per trip for snapper grouper species is \$3.01 (in 2000 dollars) (Haab *et al.* 2001). Whitehead and Haab (2001) estimated the marginal willingness to pay to avoid a one fish red snapper bag limit decrease to be \$1.06 to \$2.20 (in 2000 dollars). Finally, Haab *et al.* (2001) provided a compensating variation (the amount of money a person would have to receive to be no worse off after a reduction of the bag limit) estimate of \$2.49 (in 2000 dollars) per fish when calculated across all private boat anglers that targeted snapper grouper species in the South Atlantic.

The NMFS Southeast Fisheries Science Center (NMFS 2009) developed estimates of consumer surplus per angler trip based on various studies and data in the last ten years. The values/ranges of consumer surplus estimates are (in 2009 dollars) \$112 to \$128 for red snapper, \$123 to \$128 for grouper, \$11 for other snappers, and \$80 for snapper grouper.

### **3.3.1.2 Dolphin Wahoo Fishery**

#### **3.3.1.2.1 Commercial Sector**

On average there were 2,271 commercial fishing trips were at least one pound of dolphin was landed. Average annual landings of dolphin were 158,974 lbs ww, with an average nominal annual value of \$335,243.

On average there were 406 commercial fishing trips were at least one pound of wahoo was landed. Average annual landings of wahoo were 24,383 lbs ww, with an average nominal annual value of \$72,203.

As of April 28, 2014, there were a total of 1,929 valid South Atlantic Dolphin Wahoo commercial permits.

#### **3.3.1.2.2 Recreational Sector**

Average landings of dolphin from the South Atlantic region from 2008 through 2012 averaged 4,518,455 lbs ww per year by the private/rental sector of the recreational fishery with the majority of the fish being harvested off the east coast of Florida. The average number of trips taken by private/rental vessels landing dolphin from 2008 through 2012 averaged 263,733 trips per year. There was an average of 708,015 trips by private/rental vessels from 2007 through 2011 that specifically targeted dolphin.

Average landings of wahoo from the South Atlantic region from 2008 through 2012 averaged 79,987 lbs ww per year by the private/rental sector of the recreational fishery with the majority of the fish being harvested off the east coast of Florida. The average number of trips taken by private/rental vessels landing wahoo from 2008 through 2012 averaged 18,265 trips per year. There was an average of 117,143 trips by private vessels from 2007 through 2011 that specifically targeted wahoo.

The actual number of permitted private vessels that participated in the dolphin wahoo fishery in the South Atlantic is unknown.

Average landings of dolphin and wahoo by the for-hire sector (both charter and headboats combined) for 2008-2012 was 2,582,842 lbs ww on an average of 32,854 trips. There were 1,047 active dolphin for-hire permits in 2012.

Using the NMFS Southeast Fisheries Science Center (NMFS 2009) estimates of consumer surplus per angler trip based on various studies and data in the last ten years, the range of consumer surplus estimates for dolphin (in 2009 dollars) is \$40 to \$412 (Haab, *et al.* 2009). Comparable estimates for wahoo are not available.

### 3.3.2 Social Environment

#### *Social Importance of Fishing*

Socio-cultural values are qualitative in nature making it difficult to measure social valuation of marine resources and fishing activity. The following description includes multiple approaches to examining fishing importance. These spatial approaches focus on the community level (based on the address of dealers or permit holders) and identify importance by “community”, defined according to geo-political boundaries (cities). A single county may thus have several communities identified as reliant on fishing and the boundaries of these communities are not discrete in terms of residence, vessel homeport, and dealer address. For example, a fisherman may reside in one community, homeport his vessel in another, and land his catch in yet another.

One approach to identify communities with the greatest engagement utilizes measures called the regional quotient (rq) to identify commercial reliance. The rq is a way to measure the relative importance of a given species across all communities in the region and represents the proportional distribution of commercial landings of a particular species. This proportional measure does not provide the number of pounds or the value of the catch, data which might be confidential at the community level for many places. The rq is calculated by dividing the total pounds (or value) of a species landed in a given community, by the total pounds (or value) for that species for all communities in the region.

These measures are an attempt to quantify the importance of the components of the included fisheries to communities around the Atlantic coast and suggest where impacts from management actions are more likely to be experienced. The descriptions of the dolphin wahoo fishery and snapper grouper fishery that follow include these quantitative measures in addition to qualitative information about the communities. It should be noted that these vessels may also participate in the coastal migratory pelagics (CMP) fishery as well, but because the actions in this amendment focus primarily on the dolphin wahoo and snapper grouper fisheries, a description of the social environment associated with the CMP fishery will not be included in this section. A detailed description of the CMP fishery can be found in CMP Amendment 20A (GMFMC/SAFMC 2013).

Because any vessel that could travel to The Bahamas and meet the Bahamian requirements to fish in EEZ off The Bahamas could be affected by the actions in this amendment, the social environment actually includes any and all individuals that could travel to The Bahamas and bring the fish back to the U.S. This includes individuals that may fish in The Bahamas on a shrimp vessel. However, this section focuses only on the social environment associated with the two primary fisheries that will be affected by the action in this amendment.

#### **Dolphin Wahoo Fishery**

A description of the social environment of the dolphin wahoo fishery is contained in Dolphin Wahoo Amendment 5 (SAFMC 2013) and is incorporated herein by reference where appropriate. The South Atlantic, Mid-Atlantic, and New England regions are included in the description of the social environment. The referenced description focuses on available geographic and demographic data to identify communities with strong relationships with dolphin or wahoo fishing (i.e., significant

landings and revenue), and positive or negative impacts from regulatory change are expected to occur in places with greater landings of wahoo or dolphin.

The descriptions of South Atlantic communities in Amendment 5 (SAFMC 2013) include information about the top communities based upon regional quotients of commercial landings and value for dolphin and wahoo. These top communities are referred to in this document as “dolphin communities” and “wahoo communities” because these are the areas that would be most likely to experience the effects of proposed actions that could change the dolphin or wahoo fisheries and impact the participants and associated businesses and communities within the region. Additionally, the descriptions in Amendment 5 (SAFMC 2013) for all Atlantic regions also include reliance and engagement indices to identify other areas in which dolphin and wahoo fishing is important, and provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species (see Amendment 5 for more details about the reliance and engagement indices). The identified communities in this section are referenced in the social effects analyses in Section 4 in order to provide information on how the alternatives could affect specific areas. Overall, the dolphin and wahoo fisheries are primarily recreational, and effort and landings predominantly occur in south Florida and the Florida Keys.

#### *Commercial Dolphin and Wahoo Communities in the South Atlantic*

Using the regional quotient to identify dolphin communities, Wadmalaw Island, South Carolina and Palm Beach Gardens, Florida make up about 1/3 of the total commercial dolphin landings and value. Most commercial dolphin communities are in Florida and include Mayport, St. Augustine, Cocoa, and Margate in addition to a few communities in the Florida

Keys (Key West, Key Largo, Marathon, and Islamorada). North Carolina communities with higher regional quotients include Wanchese, Wrightsville Beach, Hatteras, and Beaufort. In addition to Wadmalaw Island, the community of McClellanville, South Carolina also has a high regional quotient for dolphin. No Georgia communities are identified as dolphin communities.

Communities with high regional quotients for wahoo are similar to those for dolphin. Wadmalaw Island, South Carolina and Palm Beach Gardens, Florida make up the highest levels of commercial dolphin landings and value. Wahoo communities in Florida include Key West, Margate, St. Augustine, Ft. Lauderdale, Miami, Jupiter, New Smyrna Beach, and Hialeah. North Carolina communities with higher regional quotients include Wanchese, Wrightsville Beach, and Morehead City. In addition to Wadmalaw Island, the community of Yonges Island, South Carolina also has a high regional quotient for wahoo. No areas in Georgia are identified as wahoo communities.

*Reliance on and Engagement with Commercial and Recreational Fishing in the South Atlantic*

Reliance and engagement indices are used in Amendment 5 (SAFMC 2013) to identify several communities in the South Atlantic that are substantially engaged in commercial and recreational fishing. The communities of Islamorada, Key West, and Marathon, Florida; and Atlantic Beach, Beaufort, and Wanchese, North Carolina are both engaged and reliant on commercial fishing. The communities of Islamorada, Key West, Marathon, Florida, and St. Augustine, Florida; Atlantic Beach, Morehead City, Nags Head and Wanchese, North Carolina. Wrightsville Beach, North Carolina and Murrell’s Inlet, South Carolina are above the threshold for recreational engagement and reliance. These communities would most likely have local economies with some

dependence upon recreational fishing and its supporting businesses.

In terms of overall fishing dependence, the communities of Islamorada, Key West, and Marathon, Florida and Atlantic Beach, and Wanchese, North Carolina are engaged and reliant for both commercial and recreational fishing. These communities would have an especially strong dependence upon fishing throughout their overall economy with substantial support infrastructure.

#### Mid-Atlantic and New England Regions

The South Atlantic Council manages dolphin and wahoo through the Mid-Atlantic and New England regions. Overall, landings of these species in the Mid-Atlantic and New England regions are very low compared to landings in the South Atlantic, and management actions by the South Atlantic Council likely have minimal impacts on Mid-Atlantic and New England communities. More detailed information about these communities and how they were identified is described in Amendment 5 (SAFMC 2013).

#### *Commercial Dolphin and Wahoo Communities in the Mid-Atlantic and New England Regions*

Using the regional quotient to identify dolphin communities, New Bedford, Massachusetts is the leading port in terms of dolphin landings with Ocean City, Maryland a distant second. Several other communities follow with near comparable amounts of dolphin landed but far less than the leading community. Wahoo landings for 2011 were far less than dolphin with only three communities reporting landings: New Bedford, Massachusetts; Hatteras, North Carolina; and Cape May, New Jersey.

#### *Reliance on and Engagement with Commercial and Recreational Fishing in the Mid-Atlantic and New England Regions*

Ocean City, Maryland; Belmar, Barnegat Light, Cape May, and Point Pleasant, New Jersey; Montauk, New York; Virginia Beach, and Watchapreague, Virginia; Boston, and New

Bedford, Massachusetts; and Point Lookout, New York are all over either the engaged or reliant threshold for commercial fishing or both. In terms of recreational fishing engagement and reliance for Northeast communities with dolphin and wahoo landings, almost every community is over the threshold for either engagement or reliance for recreational fishing.

#### **Snapper Grouper Fishery**

The snapper grouper fishery is considered to be of substantial social and cultural importance in the South Atlantic region. The description of the snapper grouper fishery focuses on available geographic and demographic data to identify communities with strong relationships with snapper grouper harvest (i.e., significant landings and revenue), and positive or negative impacts from regulatory change are expected to occur in places with greater landings of snapper grouper species.

The descriptions of South Atlantic communities below include information about the top communities based upon regional quotients of commercial landings and value for all federally managed snapper grouper species. These top communities are referred to in this document as “snapper grouper communities” because these are the areas that would be most likely to experience the effects of proposed actions that could change the snapper grouper fishery and impact the participants and associated businesses and communities within the region. Additionally, the descriptions also include reliance and engagement indices to identify other areas in which snapper grouper species are important, and provide information of how a community overall is involved with commercial and recreational fishing and could experience effects from regulatory actions for any species. The identified communities in this section are referenced in the social effects analyses in Section 4 in order to provide information on how the alternatives could affect specific areas.

*Commercial Snapper Grouper Communities in the South Atlantic*

Using the regional quotient to identify snapper grouper communities, Figure 3.3.2.1 shows important snapper grouper communities in the South Atlantic. The regional quotients consider combined snapper grouper landings and no communities make up a particularly significant proportion of commercial landings and value. Important North Carolina communities include Winnabow, Wanchese, Morehead City, Beaufort, Sneads Ferry, Shallotte, Wilmington, and Hampstead. The South Carolina

communities of Murrells Inlet, Little River, Wadmalaw Island, and McClellanville have significant commercial pounds and value of snapper grouper species. In Florida, identified snapper grouper communities include Key West, Miami, Mayport, Marathon, Cocoa, Port Orange, Key Largo, Hialeah, Fort Lauderdale, St Augustine, Fort Pierce, Palm Beach Gardens, and Islamorada. No Georgia communities are identified in the analysis of regional quotients, but areas such as Savannah and Townsend have vessels that may depend on snapper grouper species.

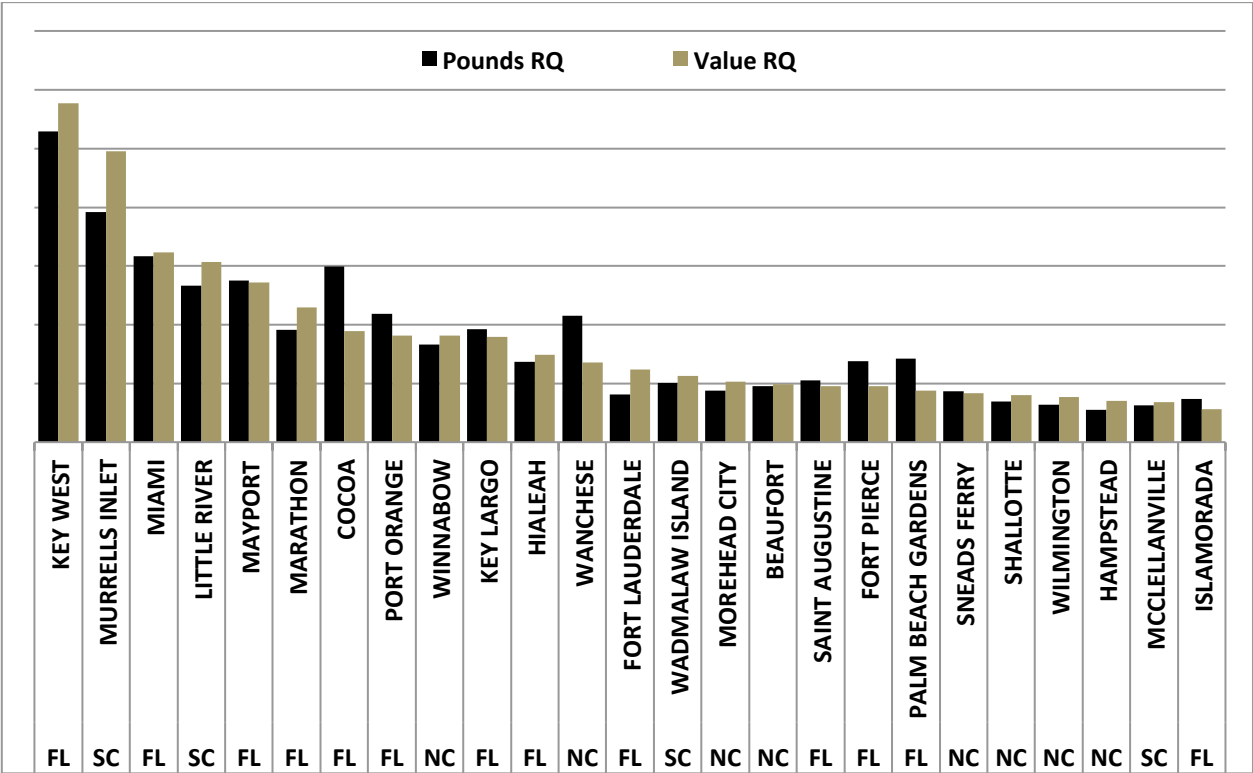


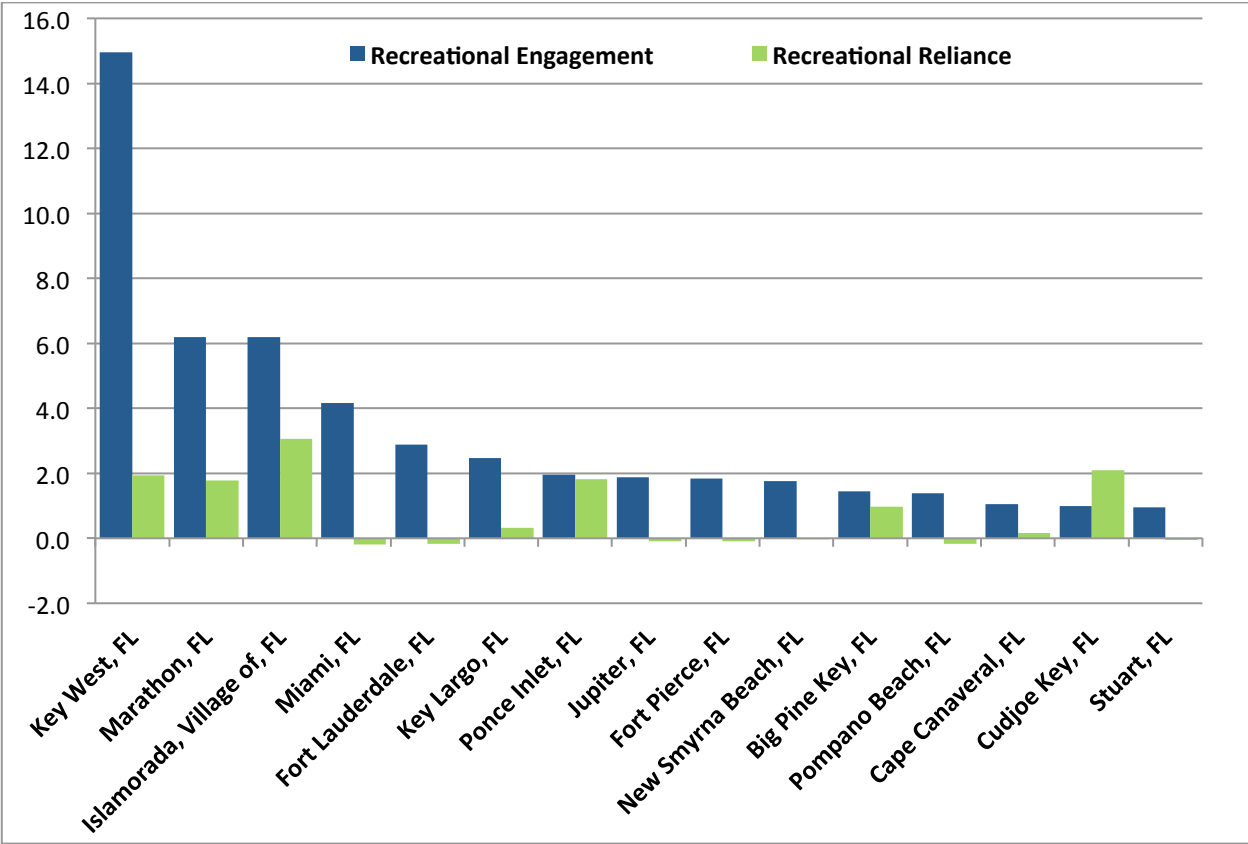
Figure 3.3.2.1. South Atlantic Fishing Communities Ranked by Total 2011 Snapper Grouper Landings RQ. Source: SERO 2014

*Reliance on and Engagement with Recreational Snapper Grouper Fishing in South Florida*

The reliance and engagement indices that were used in above sections to describe communities tied to recreational fishing of dolphin wahoo are also used in this section to describe snapper grouper recreational communities. Detailed information on the engagement and reliance indices and how they were developed is

available in Dolphin Wahoo Amendment 5 (SAFMC 2013). **Figure 3.3.2.2** shows the top communities with substantial reliance on and engagement with recreational snapper grouper fishing in South Florida, since these are most likely the communities that could be affected by the actions proposed in this amendment. These communities would most likely have local economies with some dependence upon

recreational fishing and its supporting businesses.



**Figure 3.3.2.2.** The top South Florida communities for engagement with and reliance on recreational snapper grouper fishing. Source: SERO 2014.

**3.3.3 Environmental Justice Considerations**

Executive Order 12898 requires federal agencies conduct their programs, policies, and activities in a manner to ensure individuals or populations are not excluded from participation in, or denied the benefits of, or subjected to discrimination because of their race, color, or national origin. In addition, and specifically with respect to subsistence consumption of fish and wildlife, federal agencies are required to collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. The main focus of Executive Order 12898 is to consider “the disproportionately

high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories...” This executive order is generally referred to as environmental justice (EJ).

Commercial fishermen, recreational fishermen, and coastal communities could be impacted by the proposed actions in the South Atlantic. However, information on the race and income status for these individuals is not available. Because the proposed action could be expected to impact fishermen and community members in numerous communities in the South Atlantic, census data have been assessed to examine whether any coastal counties have poverty or minority rates that exceed thresholds for raising EJ concerns.

The threshold for comparison used was 1.2 times the state average for the proportion of minorities and population living in poverty (EPA 1999). If the value for the county was greater than or equal to 1.2 times this average, then the county was considered an area of potential EJ concern. Census data for the year

2010 were used. Estimates of the state minority and poverty rates, associated thresholds, and county rates are provided in **Table 3.3.3.1** note that only counties that exceed the minority threshold and/or the poverty threshold are included in the table.

**Table 3.3.3.1.** 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*
<b>Florida</b>		<b>47.4</b>	<b>56.88</b>	<b>13.18</b>	<b>15.81</b>
	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
<b>Georgia</b>		<b>50.0</b>	<b>60.0</b>	<b>15.0</b>	<b>18.0</b>
	Liberty	53.2	-3.2	17.5	0.5
<b>South Carolina</b>		<b>41.9</b>	<b>50.28</b>	<b>15.82</b>	<b>18.98</b>
	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
<b>North Carolina</b>		<b>39.1</b>	<b>46.92</b>	<b>15.07</b>	<b>18.08</b>
	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.

While some counties 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. It is anticipated that the impacts from the proposed regulations may impact minorities or the poor, but not through discriminatory application of these regulations.



The actions in this amendment are expected to benefit recreational fishermen who harvest dolphin, wahoo and snapper grouper species in The Bahamas. Minimal or no negative impacts are expected for other recreational fishermen, commercial fishermen, and coastal communities. Any negative impacts are not expected to disproportionately affect minorities or the poor.

Finally, the general participatory process used in the development of fishery management measures (e.g., scoping meetings, public hearings, and open South Atlantic Council meetings) is expected to provide sufficient opportunity for meaningful involvement by potentially affected individuals to participate in the development process of this amendment 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.

### **3.4 Administrative Environment**

#### **3.4.1 The Fishery Management Process and Applicable Laws**

##### **3.4.1.1 Federal Fishery Management**

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

Responsibility for federal fishery management decision-making is divided between the U.S.

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

The South Atlantic Council, in cooperation with the Mid-Atlantic Fishery Management Council and the New England Fishery Management Council, is responsible for conservation and management of dolphin and wahoo in federal waters off the Atlantic states. These waters extend from 3 to 200 mi offshore from the seaward boundary of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and east Florida to Key West. The South Atlantic Council has thirteen voting members: one from NMFS; one each from the state fishery agencies of North Carolina, South Carolina, Georgia, and Florida; and eight public members appointed by the Secretary. On the 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 South Atlantic Council level. South Atlantic Council members serve three-year

terms and are recommended by state governors and appointed by the Secretary from lists of nominees submitted by state governors. Appointed members may serve a maximum of three consecutive terms.

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

#### **3.4.1.2 State Fishery Management**

The state governments of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, 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. The Department of Marine Fisheries is responsible for marine fisheries in Maine’s state waters. In New Hampshire, marine fisheries are managed by the Marine Fisheries Division of the New Hampshire Fish and Game Department. Massachusetts’s marine fisheries are managed by the Division of Marine Fisheries of the Massachusetts Department of Fish and Game. Rhode Island’s marine fisheries are managed by the Division of Fish and Wildlife of Rhode Island’s Department of Environmental Management. Connecticut manages its marine fisheries through the Department of Energy and Environmental Protection. New York’s marine fisheries are managed by the Division of Fish, Wildlife and Marine Resources of the Department of Environmental Conservation. New Jersey manages its marine fisheries

through the Division of Fish and Wildlife of the Department of Environmental Protection. Pennsylvania manages its fisheries through the Pennsylvania Fish and Boat Commission. Marine fisheries in Delaware are managed by the Fisheries Section of the Division of Fish and Wildlife. Maryland’s Department of Natural Resources manages its marine fisheries. Marine fisheries in Virginia are managed by the Virginia Marine Resources Commission. 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 South Atlantic 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 Atlantic States are also involved through the 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 at the South Atlantic Council level, but does not have voting authority at the South Atlantic Council level.

NMFS’ 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.

### **3.4.1.3 Management of Fisheries in The Bahamas**

Fisheries Resources (Jurisdiction and Conservation) Regulations in The Bahamas are covered under Chapter 244-Section 48 of the Subsidiary Legislation of The Bahamas. The Bahamas allow for a total of 18 fish in any aggregation of king mackerel, tunas, dolphin, or wahoo. Filletting of dolphin and wahoo is not prohibited under Bahamian law. There are no size limits for dolphin or wahoo in The Bahamas. Foreign (e.g., U.S. vessels) are required to have a cruising and fishing permit onboard, otherwise the vessel has a possession limit of six fish. Snapper grouper species are covered under the same section of Bahamian regulations, and fall under “other demersal fishery resources”. Sport fishers are allowed no more than 60 pounds or 20 fish per vessel. Filletting of snapper grouper species is not prohibited under Bahamian law. There are no size limits for snapper grouper species in The Bahamas. For more information, see: [http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations\\_1.pdf](http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf)

### **3.4.1.4 Enforcement**

Both the National Oceanic and Atmospheric Administration’s (NOAA) National Marine

Fisheries (NMFS) 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.

The NOAA Office of General Counsel Penalty Policy and Penalty Schedules can be found at [www.gc.noaa.gov/enforce-office3.html](http://www.gc.noaa.gov/enforce-office3.html).

NOAA/OLE had recommended against the current provision of allowing fillets of snapper grouper species during the development of Amendment 8 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (SAFMC 1997), since it is difficult to enforce.

NOAA/OLE recommended against fillets of any species, and has specific concerns with the actions in this amendment:

- No NOAA/OLE agreement exists with The Bahamas.
- Species identification at sea is difficult, especially if the fish are frozen in a block of ice.
- NOAA/OLE does not have certified scales onboard their vessels to weigh the fish, and counting the fillets would take additional time.
- It is easy to conceal fillets on a vessel.
- It is expensive to send fish out for DNA analysis (to determine if fillets belong to a prohibited species, or a species taken out of season).
- Difficult to prove fish were caught in Bahamian waters and not in the U.S. EEZ.
- Regulations must clearly define the term “lawfully harvested in Bahamian waters.” Lack of clarity will put the burden on U.S. law enforcement to prove or disprove what is lawful under Bahamian law. This would also require USCG or JEA partners’ patrol vessels to have the resources available (access to current Bahamian law) to make this determination while on patrol.
- Considering most enforcement activity occurs at the dock and in near shore waters, stowing gear for a free transit zone through the EEZ (up to State waters) would not make a real difference to enforcement.
- Enforcement will not know if a vessel stopped or fished in the EEZ without monitoring capabilities or visual sightings.
- Simple possession would no longer be enforceable in the EEZ.
- Skin could fade with time making visual identification less reliable.

NOAA/OLE had recommended removing the current exemption of head and fins intact for snapper-grouper species during the discussion of this amendment.

## Chapter 4. Environmental Consequences

**4.1 Action 1:** Exempt dolphin and wahoo harvested lawfully by recreational fishermen in The Bahamas from U.S. regulations that require them to be landed with head and fins intact in the U.S. EEZ. This action applies only to the recreational sector as there is no commercial harvest of dolphin and wahoo by U.S. vessels allowed in Bahamian waters.

### 4.1.1 Biological Effects

The biological effects of the proposed management measure to allow dolphin and wahoo fillets to be exempt from the requirement that they be maintained with head and fins intact in the South Atlantic EEZ cannot be quantified. Dolphin and wahoo subject to this proposed measure specified under **Preferred Alternative 2** must be lawfully harvested in Bahamian waters according to Bahamian regulations. In The Bahamas, fishermen can harvest a bag limit of up to 18 fish in any aggregation of king mackerel, tuna, dolphin, or wahoo per vessel as long as they possess the necessary permits issued by the government of The Bahamas. The management measure proposed **Preferred Alternative 2** in **Action 1** of Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 would allow lawfully harvested dolphin and wahoo from The Bahamas to be filleted and transported on vessels through the U.S. EEZ. Vessels with dolphin and wahoo fillets would not be allowed to stop and fish in the U.S. EEZ, and all fishing gear would be required to be stowed appropriately. Fishing gear appropriately stowed means--Terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and reel must be disconnected and stowed separately from such fishing gear. Sinkers must be disconnected from the down rigger and stowed separately.

No direct biological impact on the species included in the Dolphin Wahoo FMP would be expected under **Preferred Alternative 2** when compared with **Alternative 1 (No Action)**. However, dolphin and wahoo move throughout Bahamian waters and the U.S. EEZ. As a result, indirect negative biological impacts on dolphin and wahoo in U.S. waters could result from this action if **Preferred Alternative 2** results in an increase in recreational fishing effort for these species in Bahamian waters. However, it is not possible to quantify the possible biological effects of **Preferred Alternative 2** because recreational effort in Bahamian waters is unknown since landings data for dolphin and wahoo are not collected in The

### **Alternatives<sup>1</sup>**

(preferred alternatives in **bold**)

1. No Action. Dolphin and wahoo in or from the Atlantic EEZ must be maintained with head and fins intact. Such fish may be eviscerated, gilled, and scaled, but must otherwise be maintained in a whole condition.
2. **Allow dolphin and wahoo brought into the U.S. EEZ from The Bahamas as fillets. The vessel must have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and fishing permits onboard the vessel. The vessel must be in continuous transit in the U.S. EEZ when fillets are onboard. Two fillets of dolphin or wahoo, regardless of the size of the fillet will count as one fish towards the possession limit. All fishing gear must be appropriately stowed.**

<sup>1</sup>See Chapter 2 for a more detailed description of the alternatives.

Bahamas. Additionally, landings data for dolphin and wahoo from Bahamian waters are not available in the fisheries database of the United Nations' Food and Agricultural Organization. National data for The Bahamas (<http://www.tourismtoday.com/home/statistics/visitor-arrivals/foreign-air-sea/>) are available for 2013 and 2012 that indicate the number of individuals who arrived in The Bahamas by boat, but not on a cruise ship. Prior to 2012, data were not separated by cruise ship/non-cruise ship arrivals. In 2013 and 2012, 160,812 and 148,578 passengers, respectively, arrived to The Bahamas by boat.

The Report to Congress on the Status of U.S. Stocks lists dolphin as not overfished, and is not undergoing overfishing ([http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)). The overfished/overfishing status of wahoo is unknown ([http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)). Prager (2000) conducted an exploratory assessment of dolphin, but the results were not conclusive. A Southeast Data, Assessment, and Review (SEDAR) stock assessment for dolphin and wahoo is expected within the next 5 years. Life-history characteristics of dolphin and wahoo such as rapid growth rates, early maturity, batch spawning over an extended season, short life span, and varied diet help sustain fishing pressures on these species (Schwenke and Buckel 2008; McBride et al. 2008; Prager 2000; and Oxenford 1999). Furthermore, dolphin and wahoo are listed as species of "least concern" under the International Union for Conservation of Nature Red List, i.e., species that have a low risk of extinction. Schwenke and Buckel (2008) reported that increased harvest of dolphin off North Carolina in the 1980s and 1990s did not influence life history parameters for the species, and the authors concluded that due to fast growth rates and small size-at-maturity, dolphin are capable of withstanding high rates of fishing mortality.

If **Preferred Alternative 2** results in a large increase in landings of dolphin and wahoo from The Bahamas, the negative biological effects on the stocks in U.S. and Bahamian waters would be expected to be more substantial than if there were only a minimal change in landings. However, due to the life history characteristics of dolphin and wahoo, even large increases in landings are expected to be sustainable and would not negatively impact the stock. Furthermore, sales of filleted dolphin, wahoo, and snapper grouper species harvested recreationally in the Bahamas and landed in the U.S. are prohibited and actions proposed in this amendment would not change this prohibition. Thus, there would not be an incentive for U.S. commercial fishermen to harvest dolphin and wahoo from Bahamian waters.

**Alternatives 1 (No Action) and 2 (Preferred)** would not increase fishing or change fishing methods for dolphin and wahoo fishery in the U.S. EEZ, and therefore would perpetuate the existing level of risk for interactions between Endangered Species Act (ESA)-listed species and the fisheries. Thus, there is likely to be no additional effects, positive or negative, to protected species from the action alternative. Previous ESA consultations have assessed the impacts of potential interactions and determined the dolphin wahoo fishery was not likely to adversely affect marine mammals, Atlantic sturgeon, or *Acropora* species, and was not likely to jeopardize the continued existence or recovery of sea turtles or smalltooth sawfish.

Hook-and-line gear, the gear predominantly used by recreational fishers in The Bahamas, is sustainable seafood guides' recommended gear in the U.S. as a "best choice" or "good alternative" since this gear has minimal bycatch issues, and does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2010). Therefore, no adverse effects on essential fish habitat (EFH), EFH habitat areas of particular concern (HAPCs), or Coral HAPCs are anticipated.

#### 4.1.2 Economic Effects

The current prohibition on bringing dolphin and wahoo fillets lawfully harvested in The Bahamas into the U.S. EEZ, which would continue under **Alternative 1 (No Action)**, has several economic effects. Some fishermen have been confused about which species are exempt from the fillet prohibition. Because snapper and grouper species can be filleted and brought from The Bahamas into the U.S. EEZ, fishermen have received violations for mistakenly filleting and transporting dolphin and wahoo. This leads to seizures, fines, other costs associated with the legal process.

There is a lack of specific data regarding how many trips are taken to The Bahamas by U.S. vessels to fish for dolphin and wahoo. It is assumed that not allowing dolphin and wahoo to be brought into the U.S. EEZ from The Bahamas as fillets could impact whether or not fishermen would make trips. Many fishermen make trips to The Bahamas to keep the fish they catch to eat them later. Many dolphin and wahoo are too large to be stored whole and placed in a cooler. Some fishermen may be less likely to plan a trip to The Bahamas if they are not likely to be able to bring back fish they feel is safe enough to eat as a result of proper refrigeration. Fillets are generally easier to store and refrigerate than are fish with head and fins intact. Anecdotal information from the U.S. Coast Guard (USCG) indicates that vessels traveling from the U.S. to The Bahamas for fishing are generally 30-40 foot sport fishers with center consoles and twin 250-300 horsepower outboards. There are also some larger vessels (50 foot range vessels with higher horsepower). These vessels usually have coolers on deck, or have ice boxes built into the decks that hold probably 200-300 lbs of fish. The USCG estimates that there are at least 50 boats transiting back and forth each day.

Because allowing dolphin and wahoo to be brought into the U.S. EEZ from The Bahamas would not be expected to adversely affect U.S. stocks, or associated harvest and economic benefits, **Preferred Alternative 2** would not be expected to have any adverse economic effects on the U.S. Atlantic dolphin wahoo fishery. It is not known whether allowing dolphin and wahoo fillets into the U.S. EEZ would have an adverse impact on the number of fishing trips in the EEZ, although the expectation is that these trips, and associated economic benefits, would be unaffected. Instead, an increase in the number of private angler and for-hire trips to The Bahamas to fish for dolphin and wahoo may occur. This would result in an increase in direct economic benefits in the form the consumer surplus to recreational anglers and net operating revenue to for-hire vessels.

Allowing recreational fishermen to bring into the U.S. EEZ dolphin and wahoo fillets from fish caught in The Bahamas could potentially have a small indirect negative economic effect on the number of fish that might otherwise be purchased by these fishermen in the U.S. However, the estimated impact of lost sales due to Bahamian dolphin and wahoo brought into the U.S. is expected to be minimal.

#### 4.1.3 Social Effects

Overall, the effects of allowing dolphin and wahoo fillets to be brought into the U.S. EEZ from The Bahamas (**Preferred Alternative 2**) on fishing fleets, and associated businesses and communities, would be expected to be minimal compared to **Alternative 1 (No Action)**. Allowing fillets to be brought into the U.S. EEZ from The Bahamas (**Preferred Alternative 2**) could benefit recreational fishermen by contributing to improved quality and quantity of dolphin and wahoo caught on these trips, because whole fish would not have to be stored with head and fins intact. **Preferred Alternative 2** would be expected to be beneficial to Atlantic recreational fishermen harvesting dolphin and wahoo in The Bahamas, particularly for fishermen coming in and out of south Florida and the Florida Keys. It is not expected that

removal of the requirement for fish to be intact would result in negative impacts on fishermen or communities in Florida or across the Atlantic coast because there is little difference between whole and filleted fish in terms of effects on the stock that could affect fishermen's access to the resource (i.e., a dead fish is a dead fish). Additionally, allowing fillets to be brought into the U.S. EEZ from The Bahamas (**Preferred Alternative 2**) would make the Dolphin Wahoo FMP consistent with the regulations for snapper grouper species that allows fillets from legally harvested fish in The Bahamas to be brought into the U.S. EEZ. To gain consistency in regulations, National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries (NMFS) Office for Law Enforcement (NOAA/OLE) suggested removing fillet allowance for snapper grouper species due to problems with accurate species identification. Due to enforcement concerns, this amendment considers an additional action to aid in the identification of dolphin and wahoo fillets.

**Section 4.1.2** notes that **Preferred Alternative 2** could have some effect on the for-hire sector by increasing consumer surplus, which could affect profits of for-hire operations if the price for for-hire trips decrease. For potential clients on charter or headboat trips, obtaining a trip at a lower price would likely be beneficial. However, for the for-hire business owners, crew, and for businesses and communities associated with the for-hire sector, these changes could have some negative effects if trips and profits are reduced. Refer to Section 4.1.2 for more detailed analysis on the economic effects on for-hire fishermen that may be associated with the action.

#### 4.1.4 Administrative Effects

NOAA/OLE, in conjunction with state enforcement agencies inspects some vessels returning from The Bahamas for violations citations as appropriate. There could be increased administrative effects associated with **Preferred Alternative 2** because there is no NOAA/OLE agreement with The Bahamas; species identification at sea is difficult, especially if the fish are frozen in a block of ice; additional time would be spent to conduct boardings to ensure passports are stamped, count fillets, and perform field species identification on fillets; it is easy to conceal fillets on a vessel; it is expensive to send fillets out for DNA analysis to identify to species; and it is difficult to prove if fish were caught in Bahamian waters or in the U.S. EEZ (in order to enforce provisions of the Lacey Act). Considering most enforcement activity occurs at the dock and in near shore waters, stowing gear for a free transit zone through the U.S. EEZ (up to State waters) would be difficult to enforce. Therefore, NOAA/OLE recommended against allowing fillets of any species to be brought into the U.S. EEZ from The Bahamas. Due to the geographic proximity of Florida to The Bahamas, it is likely that most vessels interested in harvesting dolphin or wahoo in The Bahamas and returning with fillets originate in Florida. Furthermore, the state of Florida requires dolphin, wahoo, and snapper grouper species are required to be landed whole. Additional administrative effects would result from regulations being updated and enforced by the state of Florida and the U.S. Coast Guard (USCG). Other administrative burdens that could result from the management measures in this action would take the form of development and dissemination of outreach and education materials for fishery participants and all law enforcement agencies.

The management measure in **Preferred Alternative 2** of this action would exempt dolphin and wahoo from regulations to maintain head and fins intact, if they were lawfully harvested in The Bahamas and transported to the U.S., thus making regulations consistent with current regulations for snapper grouper species and help reduce confusion among fishermen. The increased administrative burden associated with **Preferred Alternative 2** would not be significant since NOAA/OLE currently checks vessels for the presence of snapper grouper fillets. In order to gain consistency in regulations, NOAA/OLE



recommended removing the current exemption of head and fins intact for snapper grouper species during the discussion of this amendment, and recommended the South Atlantic Fishery Management Council (South Atlantic Council) not go forward with exempting dolphin and wahoo from maintaining head and tail intact. The South Atlantic Council is considering additional actions in this amendment to aid law enforcement in the identification of fillets (**Action 3**), ensuring vessels that have fillets were in The Bahamas (**Action 4**), and enabling NOAA/OLE equate the number of fillets to number of fish (**Action 5**).

**4.2 Action 2:** Exempt dolphin and wahoo harvested lawfully from The Bahamas from the bag and possession limits in the U.S. EEZ. In the U.S. EEZ vessels may possess onboard 2 wahoo per person and 10 dolphin per person with a maximum of 60 dolphin.

#### 4.2.1 Biological Effects

Under **Alternative 1 (No Action)**, dolphin and wahoo must abide by U.S. bag limits when these species are brought into the U.S. EEZ from The Bahamas; this applies to dolphin and wahoo lawfully harvested from The Bahamas. The current bag limit for the possession of dolphin and wahoo lawfully harvested from The Bahamas, is 10 dolphin (60 dolphin per boat)/2 wahoo per person per day. For dolphin and wahoo to be lawfully harvested in The Bahamas, current Bahamian regulations state that: “any migratory fishery resource (such as kingfish, dolphin, tuna, or wahoo) that is caught shall not in total exceed 18 fish aboard the vessel at any time.” **Alternative 2** would exempt dolphin from U.S. bag limits for dolphin, and allow them to retain Bahamian bag limits for dolphin. However, if fishermen abide by Bahamian regulations, there is no difference between **Alternative 1 (No Action)** and **Alternative 2**. Thus, the biological effects for dolphin under **Alternative 2** would be expected to be neutral.

#### **Alternatives<sup>1</sup>**

(preferred alternatives in **bold**)

1. **No Action.** Current U.S. regulations state the bag limit for the possession of dolphin and wahoo, is 10 dolphin (60 dolphin per boat)/2 wahoo per person per day, in the U.S. EEZ. These limits currently also apply to fish lawfully harvested in The Bahamas.
2. Exempt dolphin lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ.
3. **Exempt wahoo lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ.**

<sup>1</sup>See Chapter 2 for a more detailed description of the alternatives.

**Preferred Alternative 3** could result in negative biological effects for wahoo, since the number of wahoo allowed to be lawfully harvested in The Bahamas and brought into the U.S. EEZ would be increased from 2 per person per day to a maximum of 18 wahoo per vessel, assuming no king mackerel, tuna, or dolphin were retained. The biological effects of **Preferred Alternative 3** would depend on how many people are on board the vessel, how many vessels are bringing wahoo from The Bahamas into the U.S. EEZ, and which species they choose to lawfully harvest in The Bahamas and transport them into the U.S. EEZ. As explained in **Section 4.1.1**, recreational landings of dolphin and wahoo are not recorded in Bahamian waters and data are not available to quantify direct or indirect biological effects of their harvest.

The South Atlantic Council does not intend to exempt any species that are prohibited from harvest in the U.S. EEZ, to be brought into the U.S. EEZ, regardless of their harvest in Bahamian waters. Additionally, current minimum size limits and closures in the U.S. EEZ would continue to apply. Fishers bringing in fillets of fish from the Bahamas would need to abide by both Bahamian and U.S. laws, whichever is more restrictive.

The proposed alternatives would not increase fishing or change fishing methods for species targeted within the dolphin and wahoo fishery and the snapper grouper fishery. Therefore, no adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this Action. The proposed alternatives under this action would not alter the way

the dolphin, wahoo, and snapper grouper fisheries are prosecuted, and a significant increase in effort is not expected from this action. Furthermore, hook-and-line gear, the gear predominantly used by recreational fishers in the Bahamas, is sustainable seafood guides' recommended gear in the U.S. as a "best choice" or "good alternative" since this gear has minimal bycatch issues, and does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2010). Therefore, no adverse effects on EFH, EFH HAPCs, or Coral HAPCs are anticipated.

#### 4.2.2 Economic Effects

Regardless of where dolphin and wahoo are harvested, current regulations require that the fish meet the U.S. bag and possession limits (**Alternative 1, No Action**) when they are possessed in the U.S. EEZ. The U.S. EEZ possession limit for dolphin is 10 fish per person with a maximum of 60 fish per vessel per day is currently higher than what is allowed in The Bahamas (a maximum of 18 fish as part of a multispecies bag limit). The only scenario where the Bahamian possession limit would be higher than the limit in the U.S. EEZ is if only one person is on board the vessel and the trip is limited to one day of fishing. As a result, **Alternative 2** would not be expected to have any positive or negative economic effects compared to **Alternative 1 (No Action)** because allowing fishermen to retain the Bahamian bag limit of dolphin would not affect the amount of dolphin retained.

This is not the case for wahoo. The U.S. EEZ possession limit is two wahoo per person per day, whereas in The Bahamas, wahoo is part of the 18-fish multispecies bag limit. If vessels entering the U.S. EEZ from The Bahamas were required to abide by the U.S. EEZ possession limits, then they would not be able to possess as many wahoo in the U.S. EEZ as they would be allowed to possess in Bahamian waters. Because there are expected to be times when fishermen go to The Bahamas specifically to fish for wahoo, fewer trips may occur if fishermen are not allowed to bring a Bahamian bag limit of wahoo into the U.S. EEZ. Therefore, compared to **Alternative 1 (No Action)**, **Preferred Alternative 3** would be expected to result in an increase in direct economic benefits associated with increased wahoo harvest and an increased number of trips. There are no reliable data for estimates of recreational harvest of wahoo from The Bahamas, particularly by vessels coming from the U.S. Therefore, it is noted that this conclusion is based on the assumption that any increase in trips and, specifically, wahoo harvest, would not have an adverse effect on the wahoo stock. If adverse stock effects occur, any short-term increase in economic benefits may be offset, and exceeded, by the economic losses associated with a declining stock.

**Preferred Alternative 3** may result in an increase in the number of trips traveling to The Bahamas and the harvest of more wahoo. This would result in an increase in consumer surplus to anglers and a possible increase in net operating revenue to for-hire vessels if the fishing platform is a for-hire vessel instead of a private boat. Estimates of this potential increased fishing activity and associated economic benefits are not available due to a lack of data. However, the total change in economic effects from this action are expected to be minimal because of the distance and associated costs required to travel to and fish in Bahamian waters.

#### 4.2.3 Social Effects

Overall, the social effects of allowing recreational vessels to be exempt from possession limits for dolphin and wahoo caught in The Bahamas (**Alternative 2** and **Preferred Alternative 3**), would be expected to be minimal compared to **Alternative 1 (No Action)**. The bag limit for The Bahamas currently constrains

the number of dolphin that can be brought into the U.S. EEZ from The Bahamas. If fishermen abide by regulations in The Bahamas, they can bring no more than 18 dolphin as part of a multispecies bag limit into the U.S. EEZ. **Preferred Alternative 2** would exempt dolphin lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ. Therefore, there is no difference between **Alternative 1 (No Action)** and **Preferred Alternative 2**. The benefits to recreational fishermen to possess wahoo at the bag limit for The Bahamas (**Preferred Alternative 3**) would be expected to be beneficial to South Atlantic recreational fishermen harvesting in The Bahamas, particularly for fishermen coming in and out of south Florida and the Florida Keys.

Any negative social effects would be associated with potential negative biological effects on the stocks (specifically Bahamian stocks) for exceeding the bag limit, which could affect recreational opportunities for U.S. fishermen targeting those stocks. Under **Preferred Alternative 2** this would not be expected to occur because of the current constraints of regulations in The Bahamas for dolphin but would be no different than **Alternative 1 (No Action)**. Under **Preferred Alternative 3**, however, the potential increased number of wahoo could contribute to future negative effects on the wahoo stock.

#### **4.2.4 Administrative Effects**

**Preferred Alternative 3** would add to the administrative burden of law enforcement agencies, but the effects would not be considered to be significant since regulations currently allow for snapper grouper fillets to be brought from The Bahamas into the U.S. EEZ. NOAA/OLE has expressed concern over enforcing bag limits of snapper grouper species in the U.S. EEZ, as well as the Lacey Act as it applies to vessels returning from The Bahamas. Because fish, which have been filleted, are difficult to identify to species, NOAA/OLE has difficulty enforcing species-specific regulations when encountering filleted fish. Exempting wahoo (**Preferred Alternative 3**) lawfully harvested from Bahamian waters from bag and possession limits in the U.S. EEZ may increase the number of fillets of wahoo brought into the U.S. EEZ (depending on how many people are in the vessel, how many vessels bring wahoo from The Bahamas into the U.S. EEZ, and which species they harvest). Thus, **Preferred Alternative 3** could have negative direct and indirect administrative effects when compared with **Alternative 1 (No Action)**. If fishermen abide by Bahamian regulations, there is no difference between **Alternative 1 (No Action)** and **Alternative 2**.

### 4.3 Action 3: Require fillets of dolphin, wahoo, and snapper grouper species brought into the U.S. EEZ lawfully harvested from The Bahamas to have the skin intact.

#### 4.3.1 Biological Effects

The alternatives of **Action 3** are designed to assist law enforcement in species identification. Fish with intact skin may be easier to identify to species, especially if they are filleted; however, this action would not require scales to be maintained, which may affect identification. Snapper grouper species are subject to different regulations in the U.S. EEZ and The Bahamas including species prohibitions and seasonal closures. For example, snapper grouper species such as Nassau grouper, speckled hind, and warsaw grouper are prohibited from harvest and retention in the U.S. EEZ, but are allowed to be harvested and retained in Bahamian waters. Dolphin and wahoo currently have different bag limit requirements in the U.S. EEZ and The Bahamas, with the bag limit requirements being more restrictive for dolphin in The Bahamas. As mentioned in **Section 4.2.1**, species that are prohibited from harvest in the U.S. EEZ, would not be allowed to be brought into the U.S. EEZ, regardless of their harvest in Bahamian waters. Additionally, current minimum size limits and closures in the U.S. EEZ would continue to apply. Fishers bringing in fillets of fish from the Bahamas would need to abide by both Bahamian and U.S. laws, whichever is more restrictive.

Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement in species identification and enforcing regulations. Not requiring skin on the fillets (**Alternative 1 No Action**) could result in inadequate protection for U.S. managed stocks, which in turn could result in illegal harvest of U.S. fish and adversely affect abundance of these species and possibly have negative biological effects. Compared to **Alternative (No Action)**, **Preferred Alternatives 2 and 3** could have positive biological benefits if they result in a reduction of illegal harvest. The magnitude in biological effects would depend on the reduction in illegal harvest. If there is a small reduction in illegal harvest as result of **Preferred Alternatives 2 and 3**, the biological effects would not be expected to be significantly different from **Alternative 1 (No Action)**.

**Preferred Alternatives 2 and 3** would not increase fishing or change fishing methods for species targeted within the dolphin and wahoo fishery, and the snapper grouper fishery. Therefore, no adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this Action. Furthermore, hook-and-line gear, the gear predominantly used by recreational fishers in the Bahamas, is sustainable seafood guides' recommended gear in the U.S. as a "best choice" or "good alternative" since this gear has minimal bycatch issues, and does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2010). Therefore, no adverse effects on EFH, EFH HAPCs, or Coral HAPCs are anticipated.

#### **Alternatives<sup>1</sup>**

*(preferred alternatives in bold)*

1. No Action. Snapper grouper fillets possessed in the U.S. EEZ from The Bahamas are currently not required to have skin **or scales** intact.
2. **Snapper grouper fillets brought into the U.S. EEZ from The Bahamas must have the skin intact on the entire fillet.**
3. **Dolphin and wahoo fillets brought into the U.S. EEZ from The Bahamas must have the skin intact on the entire fillet.**

<sup>1</sup>See Chapter 2 for a more detailed description of the alternatives.

### 4.3.2 Economic Effects

The alternatives of **Action 3** are designed to assist law enforcement in species identification. Current regulations (**Alternative 1, No Action**) make it difficult for law enforcement to correctly identify snapper grouper species; however, there are no specific data available on the frequency in which vessels are stopped that have fillets from The Bahamas onboard. Without skin present, some snapper grouper species cannot be determined without a genetic analysis. The cost of such analyses, if they were done, under **Alternative 1 (No Action)** compared to **Preferred Alternatives 2 and 3**, would have negative economic effects. **Preferred Alternatives 2 and 3** could make it easier to identify dolphin, wahoo, and snapper grouper species. Not requiring skin on the fillets (**Alternative 1 – No Action**) could result in inadequate protection for U.S. managed stocks, which in turn could result in illegal harvest of U.S. fish and adversely affect abundance of these species and associated economic benefits. The economic consequences of not being able to correctly identify snapper grouper fillets that do not have skin would be associated with potentially bringing into the U.S. EEZ fillets of prohibited species whose stocks need protection to achieve or maintain viability. Nonetheless, even with skin intact, species identification for some snapper grouper species may be inadequate or not possible without scales and this action would only require skin, not scales, on the fillets. With respect to **Alternative 1 (No Action)**, the economic effects of **Preferred Alternatives 2 and 3** are expected to be positive, but perhaps not as positive as might be possible if scales were also required to remain on the fillets.

### 4.3.3 Social Effects

**Alternative 1 (No Action)** is not expected to change the snapper grouper and dolphin wahoo fisheries or the coastal communities associated with these fisheries. However, under **Alternative 1 (No Action)**, fishery officers could continue to struggle with the identification of species based on the appearance of fillets. It is difficult to identify the take of illegal species from Bahamian waters due to the inability to identify a filleted species. For example, it would likely be difficult for law enforcement officers to determine if a grouper fillet is a Nassau grouper or a black grouper, as harvest of Nassau grouper is prohibited in the U.S. EEZ but allowed in the EEZ of The Bahamas. If misidentification of fillets results in incorrect information and data about a stock in the snapper grouper fishery, there could be long-term negative effects on future fishing opportunities if there are any resulting negative biological effects on a snapper grouper stock or stocks.

**Preferred Alternative 2 and 3** would not directly affect any U.S. coastal communities in terms of local businesses or social institutions. Requiring the skin to be intact on snapper grouper species (**Preferred Alternative 2**) and dolphin and wahoo (**Preferred Alternative 3**) is expected to enhance the ability of law enforcement officers to identify fish that have been filleted and enforce regulations, which would be expected to result in long-term broad social benefits.

### 4.3.4 Administrative Effects

The administrative effects of **Preferred Alternatives 2 and 3** would be expected to reduce the administrative burden experienced under **Alternative 1 (No Action)**. Regulations requiring the skin to be left on the entire fillet under **Preferred Alternatives 2 and 3** could help law enforcement identify species and enforce regulations that prohibit species from retention in the U.S. EEZ (such as Nassau grouper, speckled hind, warsaw grouper, etc.). Additionally, current minimum size limits and closures in the U.S. EEZ would continue to apply. Fishers bringing in fillets of fish from the Bahamas would need to abide

by both Bahamian and U.S. laws, whichever is more restrictive. However, NOAA/OLE stated that skin could fade with time making visual identification less reliable, officers may not have the skill level to identify fish by skin alone, officer's experience or knowledge may not be adequate for court testimony for their expertise in identifying fish by skin alone, and mixed species of fish can add to the complexity in identification and counts. Other administrative burdens that could result from the management measure in this action would take the form of development and dissemination of outreach and education materials for fishery participants and all law enforcement agencies.



**4.4 Action 4:** In addition to possessing valid Bahamian cruising and fishing permits, require stamped and dated passports to prove that vessel passengers were in The Bahamas if the vessel is in possession of snapper grouper fillets in the U.S. EEZ.

#### 4.4.1 Biological Effects

This action is administrative, and the biological effects of **Preferred Alternative 2** are expected to be negligible with respect to **Alternative 1 (No Action)** as long as fish are legally harvested in The Bahamas. Under **Alternative 1 (No Action)**, without proof of having been recently in The Bahamas, a vessel with valid Bahamian cruising and fishing permits could catch snapper grouper species within the U.S. EEZ, fillet them, and claim they were caught in The Bahamas. Such activity could have a negative effect on snapper grouper stocks. Without knowing the extent of such activity, it is not possible to estimate the potential biological effects of **Preferred Alternative 2**. Current Bahamian regulations already require passports to be stamped at the port of entry into The Bahamas, within 24 hours after arrival into Bahamian waters. The date is included in the stamp. No passengers or crew are allowed to disembark until the process is completed. See **Section 1.6** and <http://www.bahamas.gov.bs/wps/portal/public/gov/> for more details. U.S. regulations have allowed fillets of snapper grouper species lawfully harvested in The Bahamas have to be brought into the U.S. EEZ since 1998 (**Alternative 1 (No Action)**), with the implementation of Amendment 8 to the Snapper Grouper FMP (Amendment 8, SAFMC 1997).

Under **Preferred Alternative 2**, vessels bringing snapper grouper fillets into the U.S. EEZ from The Bahamas would be required to have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and fishing permits onboard the vessel. In addition, all fishing gear would be required to be appropriately stowed while in transit. Fishing gear appropriately stowed means -- Terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and reel must be disconnected and stowed separately from such fishing gear. Sinkers must be disconnected from the down rigger and stowed separately. **Preferred Alternative 2** would not increase fishing or change fishing methods for species targeted within the snapper grouper fishery compared to **Alternative 1 (No Action)**. Therefore, no adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this Action. Furthermore, hook-and-line gear, the gear predominantly used by recreational fishers in the Bahamas, is sustainable seafood guides' recommended gear in the U.S. as a "best choice" or "good alternative" since this gear has minimal bycatch issues, and

#### **Alternatives<sup>1</sup>**

*(preferred alternatives in bold)*

1. No Action. Vessels bringing snapper grouper fillets into the U.S. EEZ from The Bahamas are required to have valid current Bahamian cruising and fishing permits onboard the vessel.
2. **Vessels bringing snapper grouper fillets into the U.S. EEZ from The Bahamas are required to have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and fishing permits onboard the vessel. All fishing gear must be appropriately stowed while in transit.**

<sup>1</sup>See Chapter 2 for a more detailed description of the alternatives.

does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2010). Therefore, no adverse effects on EFH, EFH HAPCs, or Coral HAPCs are anticipated.

#### 4.4.2 Economic Effects

Having a valid passport is required for entry into The Bahamas under **Alternative 1 (No Action)**. Passports are dated and stamped as part of the immigration process. There are no data available from The Bahamas that indicate how many passengers from U.S.-based vessels come to The Bahamas to fish, nor how many trips are made using a single set of Bahamian vessel cruising and fishing permits. **Preferred Alternative 2 in Action 1** would require stamped and dated passports indicating the passengers had just been in The Bahamas in addition to valid Bahamian cruising and fishing permits in order to possess in the U.S. EEZ dolphin or wahoo fillets legally harvested in Bahamian waters. **Preferred Alternative 2 in Action 4** would require passengers aboard vessels returning from The Bahamas also to have stamped and dated passports indicating the passengers had just been in The Bahamas if in possession of snapper grouper fillets in the U.S. EEZ and required the same stowage of gear requirements as described in the effects analyses for **Action 1, Preferred Alternative 2**. Stowage of fishing gear is not expected to have economic consequences as long as anglers follow the guidelines and remove terminal tackle from the rods as required.

Requiring stamped and dated passports for all passengers onboard the vessel, as would be required by **Preferred Alternative 2**, would bring parity between U.S. and Bahamian requirements, and would not be expected to have any economic effect compared to **Alternative 1 (No Action)** for fishermen legally participating in the Bahamian snapper grouper fishery. If fishermen are not currently going into a port in The Bahamas where there are immigration officials to stamp their passports on each trip, there could be additional costs to fishermen associated with taking the time and using the additional fuel required to get their passports stamped if they want to bring snapper grouper fillets from fish legally harvested in The Bahamas into the U.S. EEZ. Additionally, **Preferred Alternative 2** could prevent adverse impacts to U.S. managed snapper grouper stocks by closing a potential loophole for illegal fishing or filleting of fish caught in the U.S. EEZ as is currently allowed under **Alternative 1 (No Action)**. The expected positive economic effects from requiring stamped and dated passports for possessing fillets because of less pressure placed on U.S. snapper grouper stocks is expected to be minimal assuming such activity is currently relatively low.

Bahamian cruising and fishing permits are time limited up to a full year, as requested by the applicant, and valid for more than a single trip. Requiring passengers to have stamped passports aboard their vessel returning from The Bahamas with snapper grouper fillets onboard could help prevent vessels that had not been fishing in The Bahamas, but have Bahamian cruising or fishing permits onboard, from illegally filleting fish harvested in U.S. waters and attributing these fish to Bahamian harvest if boarded and inspected. Depending on the frequency of such activity, U.S. managed stocks could be adversely affected, which in turn could have a potential negative economic effect for U.S. fishermen. However, the magnitude of fish caught in U.S. EEZ being misattributed to The Bahamas would be expected to be small, as would any potential economic effects.

#### 4.4.3 Social Effects

**Alternative 1 (No Action)** and **Preferred Alternative 2** would be expected to have minimal effects on coastal communities, although there may be some benefits under **Preferred Alternative 2** because the loophole referenced in **Section 4.2.3** would be removed. Because the requirements under **Preferred Alternative 2** are already in place under Bahamian law, it is assumed that all passengers aboard U.S. vessels would have stamped passport documentation when harvesting snapper grouper in the EEZ of The Bahamas under both **Alternatives 1 and 2 (Preferred)**, and the alternatives would have the same level of burden on fishermen fishing in The Bahamas because they already have to provide this documentation to authorities during their fishing trip.

#### 4.4.4 Administrative Effects

Current regulations implemented through Amendment 8 to the Snapper Grouper FMP (SAFMC 1997), and Bahamian requirements to lawfully harvest snapper grouper species in Bahamian waters already encompass requirements specified in **Preferred Alternative 2** to have to have stamped and dated passports to prove that the vessel passengers were in The Bahamas, as well as valid current Bahamian cruising and fishing permits onboard the vessel. However, **Preferred Alternative 2** would also require that fishing gear must be appropriately stowed while in transit. NOAA/OLE stated that although the Bahamas may require stamped and dated passports under **Alternative 1 (No Action)**, this requirement can only be performed in certain ports in The Bahamas. According to NOAA/OLE, fishermen currently returning with snapper grouper fillets are most likely not having their passports stamped or contacting U.S. Customs on their return to the U.S. Thus, under **Preferred Alternative 2**, the enhancement of the regulations would require a minor increase in the administrative effects when compared to **Alternative 1 (No Action)**.

## 4.5 Action 5: Specify the number of snapper grouper fillets lawfully harvested in The Bahamas that may be brought into the U.S. EEZ.

### 4.5.1 Biological Effects

In The Bahamas, snapper grouper species are included under regulations for demersal fish, which allow 60 pounds or 20 fish per vessel to be landed by recreational fishermen. For more information, see:

[http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-](http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf)

[0010/FisheriesResourcesJurisdictionandConservationRegulations\\_1.pdf](http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf). Current regulations at 50 C.F.R. § 622.186 exempt snapper grouper species harvested in The Bahamas and brought into the U.S. EEZ from having head and fins intact (**Alternative 1 (No Action)**). **Preferred**

**Alternative 2** would retain these regulations. However, under **Alternative 1 (No Action)**, there is no standardized method to count fillets. **Preferred Alternative 2** would specify that a maximum of 40 fillets of snapper grouper (two fillets per fish, no more than 20 fish) to be brought into the U.S. EEZ as long as they are lawfully harvested in The Bahamas. However, as specified in **Alternative 1 (No Action)**, fillets of prohibited species such as Nassau grouper, speckled hind, warsaw grouper, etc. would not be allowed to be brought into the U.S. EEZ under **Preferred Alternative 2**. Additionally, current minimum size limits and closures in the U.S. EEZ would continue to apply.

#### **Alternatives<sup>1</sup>**

(preferred alternatives in **bold**)

1. No Action. 60 lbs, or 20 fish of snapper grouper species lawfully harvested in The Bahamas may be brought into the U.S. EEZ. Fishermen must abide by U.S. bag and possession limits as well as Bahamian bag and possession limits.
2. **Two fillets of snapper grouper species, regardless of the size of the fillet will count as 1 fish towards the possession limit. Up to 40 fillets of snapper grouper species lawfully harvested in The Bahamas may be brought into the U.S. EEZ.**

<sup>1</sup>See Chapter 2 for a more detailed description of the alternatives.

Fishers bringing fillets of fish from the Bahamas into the U.S. EEZ would need to abide by both Bahamian and U.S. laws, whichever is more restrictive. U.S. size and bag and possession limits would still apply. In order to ensure compliance with both Bahamian and U.S. bag limits, fishermen would need to limit their catch to the more restrictive bag and possession limit. So, for example, Bahamian regulations currently allow 60 pounds or 20 fish per vessel for snapper grouper species. The U.S. regulations; however, include species-specific bag limits with which fishermen would need to comply, including zero bag limits. In order to count the number of fish to determine compliance, regardless of the size of an individual fillet, 2 fillets would be considered 1 fish so that a total of 40 fillets of snapper grouper species lawfully harvested in the Bahamas and that otherwise comply with U.S. regulations would be allowed into the U.S. EEZ. All the fillets would be required to have the skin intact on the entire fillet. Fillets of prohibited species such as Nassau grouper, speckled hind, warsaw grouper, etc., would not be allowed to be brought into the U.S. EEZ.

As mentioned in **Section 4.4.1**, U.S. regulations have allowed fillets from lawfully harvested snapper grouper in The Bahamas to be brought into the U.S. EEZ since 1998 (SAFMC 1997). **Preferred Alternative 2** reinforces the provision that two fillets would count as one fish. Biological effects are not quantifiable for reasons already discussed in the other actions of this amendment. However, if fishermen are abiding by regulations, the biological effects of **Preferred Alternative 2** would be expected to be

neutral because it would only specify a count on the number of fillets that correspond to 20 snapper grouper. If specifying a fillet count decreases the number of snapper grouper illegally harvested and brought into the U.S. EEZ, **Preferred Alternative 2** could have positive biological effects. **Preferred Alternative 2** could have negative biological effects compared to **Alternative 1 (No Action)**, if it increases the illegal harvest of snapper grouper species where fillets from undersized snapper grouper species are retained, or species are retained during a U.S. harvest prohibition and brought into the U.S. EEZ from The Bahamas. Minimum size limits and other management measures such as harvest prohibitions and closures provide biological benefits to the fish stocks. Because the Bahamian recreational fishing permit can be valid for as long as a year, and law enforcement cannot intercept every recreational vessel to ensure the fish were harvested in Bahamian waters, negative biological effects could occur under **Preferred Alternative 2** if fishermen do not abide by Bahamian and U.S. regulations.

The proposed alternatives would not increase fishing or change fishing methods for species targeted within the snapper grouper fishery. Therefore, no adverse effects to the protected species most likely to interact with these fisheries (e.g., sea turtles and smalltooth sawfish) are likely to result under this Action.

Hook-and-line gear, the gear predominantly used by recreational fishers in the Bahamas, is sustainable seafood guides' recommended gear in the U.S. as a "best choice" or "good alternative" since this gear has minimal bycatch issues, and does little damage to physical or biogenic habitats (Blue Ocean 2010; Seafood Watch 2010). Therefore, no adverse effects on EFH, EFH HAPCs, or Coral HAPCs are anticipated.

#### 4.5.2 Economic Effects

There is a lack of data that specifically address the amount of snapper grouper species caught by U.S.-based vessels, filleted, and then brought into the U.S. EEZ. However, assuming fishermen abide by regulations in The Bahamas and U.S. EEZ, the economic effects would be considered to be minimal. It is possible that 40 fillets from 20 snapper grouper species (**Preferred Alternative 2**) from The Bahamas could weigh significantly less than 60 lbs (**Alternative 1 – No Action**). The limitation of 40 fillets (**Preferred Alternative 2**) could result in a smaller quantity of fish being brought into the U.S. EEZ from the Bahamas, could have a positive economic effect for recreational anglers as harvesting fewer fish could reduce pressure on Bahamian stocks.

Under **Preferred Alternative 2**, fishermen bringing lawfully harvested snapper grouper fillets from The Bahamas into the U.S. EEZ would still be limited by the upper bound of 60 lbs allowed under Bahamian law. Therefore, depending on the size of the snapper grouper fish caught in The Bahamas, fishermen could end up high grading fish to stay within the 40 fillets requirement (**Preferred Alternative 2**) to get as close as they can to the 60 lbs maximum. While this is not expected to have a significant economic effect on U.S. managed snapper grouper stocks, resulting potential high grading could have an impact on Bahamian stocks. Lowered stock levels might discourage some U.S. fishermen from making future trips. Because it is unknown whether or not high grading would occur, or its potential impact on Bahamian stock levels, the potential economic effects of **Preferred Alternative 2** are unknown. However, it is reasonable to expect that compared to **Alternative 1 (No Action)**, **Preferred Alternative 2** would be more likely to have negative economic effects if high grading occurred with some frequency.

Overall, **Preferred Alternative 2** is expected to have more positive direct economic effects than **Alternative 1 (No Action)** because with two fillets counting as one fish, regardless of the size of the fillets, it is likely some fishermen would cut the largest fillets into smaller pieces, thus reducing the number of fish that would be harvested in The Bahamas, fileted, and brought into the U.S. EEZ. Catching fewer fish in The Bahamas would make Bahamian stocks more viable and increase the likelihood that U.S. anglers would make trips to The Bahamas. Additionally, **Preferred Alternative 2** would have a positive economic effect for law enforcement. Counting fillets is easier than trying to weigh fish at sea. Catches that are suspected of being in excess of 60 lbs of fillets would have to be confiscated and taken to shore to be weighed. Being able to make determinations of overages at sea by counting fillets would be a positive economic benefit compared to having to weigh them.

### 4.5.3 Social Effects

Overall, the means by which the quantity of snapper and grouper brought into the U.S. EEZ from The Bahamas is limited and regulated would be expected to have minimal effects on recreational anglers, fishing fleets, and associated businesses and communities. As discussed in Section 4.5.2, the limitation of 40 fillets (**Preferred Alternative 2**) could result in a smaller quantity of fish harvested than allowing 60 lbs (**Alternative 1 (No Action)**), which could reduce overall benefits to recreational anglers bringing snapper and grouper into the U.S. EEZ from fishing trips in The Bahamas by reducing the number of fish brought back. Although a potential larger quantity of fish could be possible under **Alternative 1 (No Action)** than under **Preferred Alternative 2**, the difference would likely be so small that there would be little or no impact on recreational fishing opportunities and satisfaction for individuals fishing in The Bahamas and bring fish back to the U.S.

### 4.5.4 Administrative Effects

Current procedures already exist to enforce transport of snapper grouper fillets lawfully harvested in The Bahamas into the U.S. EEZ. **Preferred Alternative 2**, which would specify the number of fillets that equate to a fish, would be expected to aid NOAA/OLE with enforcement of regulations, and reduce the administrative burden in place under **Alternative 1 (No Action)**. At the June 2014 Council meeting, the USCG indicated it was easier to enforce regulations that specify the number of fillets rather than pounds of fish since it is difficult to weigh fish at sea. However, as mentioned in **Section 4.5.1** and **Section 3.4.1.4**, NOAA/OLE has expressed concerns about being able to enforce measures that allow for fish fillets to be brought into the U.S. EEZ from The Bahamas. The year-long validity of the Bahamian recreational fishing permit adds to the administrative burden for law enforcement agencies. However, the ability to count fillets rather than having to weigh fish at sea is expected to enhance the ability of NOAA/OLE to enforce the current regulations that pertain to bringing snapper grouper species from The Bahamas into the U.S. EEZ. NOAA/OLE recommends that regulations must clearly define the term “lawfully harvested in Bahamian waters.” Lack of clarity would put the burden on U.S. law enforcement to prove or disprove what is lawful under Bahamian law. This would also require USCG or joint enforcement agreement partners’ patrol vessels to have the resources available (access to current Bahamian law) to make this determination while on patrol.

## Chapter 5. Council's Choice for the Preferred Alternative



## 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 South Atlantic Fishery Management Council (South Atlantic Council), in cooperation with the Mid-Atlantic Fishery Management Council, and the New England Fishery Management Council, is responsible for conservation and management of dolphin and wahoo in federal waters off the Atlantic states. The immediate impact area for dolphin and wahoo is the federal 200-mile limit of the Atlantic off the coasts of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and east Florida to Key West. For snapper grouper species, the immediate impact area is the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West. In light of the available information, the extent of the boundaries would depend upon the degree of fish immigration/emigration and larval transport, whichever has the greatest geographical range. The ranges of affected species are described in **Section 3.2.1**. **Section 3.1.1** describes the essential fish habitat designation and requirements for dolphin, wahoo, and snapper grouper species; additional details are included in **Appendix J**. The most measurable and substantial effects would be limited to the Atlantic region.

#### 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. The timeframe for analyses in Dolphin Wahoo 7/Snapper Grouper Amendment 33 includes 2008-2012. Dolphin, wahoo, and snapper grouper species are harvested by recreational fishers in The Bahamas, and recreational landings data for these species are not available for The Bahamas. See Chapters 3 and 4 for more details on the affected environment and environmental consequences, respectively.

**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 dolphin, wahoo, and snapper grouper species.**

**A. Past**

The reader is referred to **Section 1.8** and **Appendix D** (History of Management) of this document for past regulatory activity for dolphin, wahoo, and snapper grouper species. These include bag and size limits, commercial quotas, and gear prohibitions and limitations.

The Comprehensive Annual Catch Limit (ACL) Amendment and its integrated Final Environmental Impact Statement (FEIS) (SAFMC 2011a) fulfilled the 2011 mandate of the Magnuson-Stevens Fishery Conservation and Management Act to establish ACLs and accountability measures (AMs) for species managed by the South Atlantic Council that are not undergoing overfishing. The amendment addressed dolphin and wahoo, a number of species in the snapper grouper fishery management unit, as well as golden crab and *Sargassum*. The Comprehensive ACL Amendment (SAFMC 2011a) established the acceptable biological catch (ABC) control rule, ABC, ACL, optimal yield, and AMs in the dolphin and wahoo fishery for both the commercial and recreational sectors. The amendment also set an annual catch target for the recreational sector for dolphin and wahoo. The Comprehensive ACL Amendment was implemented on April 16, 2012.

**B. Present**

The South Atlantic Council has recently completed and is developing amendments for snapper grouper, coastal migratory pelagic species, and corals/live-hard bottom. See the South Atlantic Council's Web site at <http://www.safmc.net> for further information on South Atlantic Council managed species.

The South Atlantic Headboat Reporting Amendment was implemented on January 27, 2014, and requires that all federally-permitted headboats on the South Atlantic report their landings information electronically, and on a weekly basis in order to improve the timeliness and accuracy of harvest data.

**C. Reasonably Foreseeable Future**

The final rule for Amendment 5 to Dolphin Wahoo FMP published on June 9, 2014 (79 FR 32878), and regulations were effective on July 9, 2014. Amendment 5 revised the ABC estimates, ACLs, and recreational ACTs for dolphin and wahoo as per the new Marine Recreational Information Program. Additionally, Dolphin Wahoo Amendment 5 revised the AMs and update the framework procedure for dolphin and wahoo.

The Joint Generic Dealer Reporting Amendment was approved by the Secretary of Commerce and will require that all dealers report landings information electronically on a weekly basis to improve the timeliness and accuracy of landings data. This amendment will apply to fishery management plans for dolphin wahoo, snapper grouper, and coastal migratory pelagics. The final rule published on April 9, 2014, and regulations will be effective on August 7, 2014.

The Joint Commercial Logbook Reporting Amendment would require electronic reporting of landings information by federally-permitted commercial vessels, which would increase the timeliness and accuracy of landings data.

The Joint Charter Boat Reporting Amendment would require charter vessels to regularly report their landings information electronically. Including charter boats in the recreational harvest reporting system would further improve the agency's ability to monitor recreational catch rates in-season.

The Comprehensive AM and Dolphin Allocation Amendment would consider modifications to the AMs for snapper grouper species and golden crab to bring consistency across species managed by the South Atlantic Council. This amendment would also consider alternatives to modify existing commercial and recreational sector allocations for dolphin.

## **II. Non-Council and other non-fishery related actions, including natural events affecting the species in this amendment.**

- A. Past**
- B. Present**
- C. Reasonably foreseeable future**

In terms of natural disturbances, it is difficult to determine the effect of non-Council and non-fishery related actions on stocks of dolphin wahoo and 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 that 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 dolphin, wahoo, and 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 dolphin, wahoo, and snapper grouper species, is problematic and limited, especially, since data are not available from The Bahamas. Dolphin and wahoo are highly migratory pelagic species occurring in tropical and subtropical waters worldwide. Other natural events such as spawning seasons and aggregations of fish in spawning condition can make some snapper grouper species such as Nassau grouper especially vulnerable to targeted fishing pressure.

The Report to Congress on the Status of U.S. Stocks indicates dolphin is not overfished, and is not undergoing overfishing ([http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)). The overfished/overfishing status of wahoo is unknown, but all indications are that it is a healthy stock. A Southeast Data, Assessment, and Review (SEDAR) stock assessment for dolphin and wahoo is scheduled within the next 5 years. Life-history characteristics of dolphin and wahoo such as rapid growth rates, early maturity, batch spawning over an extended season, a short life span, and a varied diet could help sustain fishing pressures on these species (Schwenke and Buckel 2008; McBride et al. 2008; Prager 2000; and Oxenford 1999). Dolphin and wahoo are listed as species of “least concern” under the International Union for Conservation of Nature Red List, i.e. species that have a low risk of extinction. See **Section 3.2** and the references cited therein for more information. The overfishing and overfished status of snapper grouper species can be found in The Report to Congress on the Status of U.S. Stocks at [http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/).

How global climate changes will affect the dolphin wahoo, and snapper grouper fisheries 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<sub>2</sub> 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 in the Atlantic. Oil from the spill site has not been detected in the Atlantic region, and did not likely to pose a threat to the species addressed in this amendment.

#### **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 alternatives considered in this amendment are dolphin, wahoo, and snapper grouper species. Trends in the condition of dolphin, wahoo, and snapper grouper species are determined through the SEDAR process. More information on the SEDAR process and specific information on these species are included in **Section 3.2**, and is hereby incorporated by reference.

#### **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 dolphin, wahoo, and 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.

### *Fish populations*

This document relates to dolphin, wahoo, and snapper grouper species harvested in Bahamian waters. See **Section 3.2** for more information on fish populations. The overfishing and overfished status of species affected by this amendment can be found in the U.S. Report to Congress on the Status of U.S. Stocks ([http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)).

### *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 (IPCC 2007; Kennedy et al. 2002).

It is unclear how climate change would affect dolphin, wahoo, and snapper grouper species in the 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 dolphin, wahoo, and 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. Oxenford and Hunte (1986) suggested that there were at least two separate unit stocks of dolphin in the northeast and southeast Caribbean Sea. Oxenford (1999) suggested that it was very likely that additional stocks of dolphin existed in the Gulf of Mexico and central/western Caribbean. Prager (2000) conducted an exploratory assessment of dolphin, but the results were not conclusive. Theisen et al. (2008) indicated that a worldwide stock for wahoo consisted of a single globally distributed population. However, Zischke et al. (2012)

concluded that despite genetic homogeneity in wahoo, multiple discrete phenotypic stocks existed in the Pacific and eastern Indian oceans. The Report to Congress on the Status of U.S. Stocks indicates dolphin is not overfished, and is not undergoing overfishing ([http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)). The overfished/overfishing status of wahoo is unknown, but all indications are that it is a healthy stock. A SEDAR stock assessment for dolphin and wahoo is scheduled within the next 5 years. Status determination criteria for dolphin and wahoo are outlined in the Dolphin Wahoo Fishery Management Plan (2003) and the Comprehensive ACL Amendment (2011a).

The SEDAR assessments for snapper grouper species (<http://www.sefsc.noaa.gov/sedar/>) show trends in biomass, fishing mortality, fish weight, and fish length going back to the earliest periods of data collection. For more details on the baseline conditions of dolphin, wahoo, and snapper grouper species, the reader is referred to additional sources referenced in **Section 3** of the document.

#### **8. Identify the important cause-and-effect relationships between human activities and resources, ecosystems, and human communities.**

The dolphin wahoo fishery is not as highly regulated as the snapper grouper fishery. Regulations that have affected the dolphin wahoo and snapper grouper resource, ecosystem, and human communities are shown in **Appendix D (History of Management)**.

#### **9. Determine the magnitude and significance of cumulative effects.**

Dolphin was assessed by Prager (2000), and SEDAR stock assessments for dolphin and wahoo are scheduled within the next 5 years. SEDAR stock assessments for snapper grouper species are ongoing. When the SEDAR stock assessments are completed, changes to regulations may be required. 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 would need to be restructured. **Chapters 2 and 4** of this document describe in detail the magnitude and significance of effects of the alternatives considered which would exempt dolphin and wahoo lawfully harvested in The Bahamas, from regulations that require head and tail intact, bag and possession limits in the U.S. EEZ, and require that all fillets of fish being brought into the U.S. EEZ from The Bahamas have the skin intact. None of the impacts have been determined to be significant.

The cumulative effects of the actions proposed in Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33, combined with effects of other past, present, and future actions, are not expected to affect the magnitude of bycatch, diversity, and ecosystem structure of fish communities, or safety at sea of fishermen targeting dolphin, wahoo, and snapper grouper species managed by the South Atlantic Council, especially since the fish would not be harvested in the U.S. EEZ.

This action is not likely to result in direct, indirect, or cumulative effects to unique areas, such as significant scientific cultural or historical resources, park land, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas as the proposed action is not expected to substantially increase fishing effort or the spatial and/or temporal distribution of current fishing effort within the South Atlantic region. The Stellwagen Bank off the Northeastern U.S.; USS Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries are within the boundaries of the Atlantic EEZ. The proposed actions are not likely to cause loss or destruction of these national marine sanctuaries.

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

The cumulative effects on the biophysical environment are unknown, but would be expected to be negligible, since the harvest of fish species would occur in Bahamian waters. Avoidance, minimization, and mitigation are not applicable.

#### **11. Monitor the cumulative effects of the selected alternative and adapt management.**

The effects of the proposed actions are, and will continue to be, monitored through collection of data by NMFS, 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 the snapper grouper fishery and the dolphin wahoo fishery as well as associated key fishing communities is contained in **Section 3.3.2** and a description of the history of management of snapper grouper and dolphin wahoo are contained in **Appendix D**. A detailed description of the expected social and economic impacts of the action in this document is contained in **Section 4**.

Participation in and the economic performance of the dolphin wahoo and snapper grouper fisheries has been affected by a combination of regulatory, biological, social, and external economic factors. Commercial fishermen, for-hire vessel owners and crew, and private recreational anglers commonly participate in multiple fisheries throughout the year. Even within the snapper grouper fishery, effort can shift from one species to another due to environmental, economic, or regulatory changes. Overall, changes in management of one species can impact effort and harvest of another species (in the snapper grouper fishery, dolphin wahoo fishery, or in another fishery) because of multi-fishery participation that is characteristic in the South Atlantic region.

The cumulative social and economic effects of past, present, and future amendments may be described as limiting fishing opportunities in the short-term, with some exceptions of actions that alleviate some negative social and economic impacts, such as the proposed actions in this amendment. The intent of these amendments is to improve prospects for sustained participation in the respective fisheries over time and the proposed actions in this amendment are expected to result in some important long-term benefits to the commercial and for-hire fishing fleets, fishing communities and associated businesses, and private recreational anglers. The proposed changes



in this amendment are expected to provide benefits to recreational fishermen who harvest snapper, grouper, dolphin and wahoo in The Bahamas and improve consistency of regulations, while having no expected negative effects on other resource users.

## Chapter 7. List of Preparers

**Table 7-1.** List of preparers of the document.

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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 7-2.** List of interdisciplinary plan team members for the document.

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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 8. Agencies and Persons Consulted

### Responsible Agency for CE

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

### List of Agencies, Organizations, and Persons Consulted

Bahamas Department of Marine Resources  
Bahamas Agricultural and Industrial Corporation  
SAFMC Law Enforcement Advisory Panel  
SAFMC Dolphin Wahoo Advisory Panel  
SAFMC Scientific and Statistical Committee  
SAFMC Information and Education Advisory Panel  
Florida Fish and Wildlife Conservation Commission  
Georgia Department of Natural Resources  
South Carolina Department of Natural Resources  
North Carolina Division of Marine Fisheries  
Atlantic States Marine Fisheries Commission  
Gulf of Mexico Fishery Management Council  
Mid Atlantic Fishery Management Council  
New England Fishery Management Council  
National Marine Fisheries Service

- Washington Office
- Office of Ecology and Conservation
- Southeast Regional Office
- Southeast Fisheries Science Center

## Chapter 9. References

- Adams, W.F., and C. Wilson. 1995. The status of the smalltooth sawfish, *Pristis pectinata* Latham 1794 (Pristiformes: Pristidae) in the United States. *Chondros* 6(4):1-5.
- Anderes Alvarez, B. L., and I. Uchida. 1994. Study of hawksbill turtle (*Eretmochelys imbricata*) stomach content in Cuban waters. Pages 27-40 *in* Study of the Hawksbill Turtle in Cuba (I). Ministry of Fishing Industry, CUBA. Ministry of Fishing Industry, Cuba.
- Bigelow, H.B., and W.C. Schroeder. 1953. Sawfishes, guitarfishes, skates and rays, pp. 1-514. *In*: Tee-Van, J., C.M Breder, A.E. Parr, W.C. Schroeder and L.P. Schultz (eds). Fishes of the Western North Atlantic, Part Two. Mem. Sears Found. Mar. Res. I.
- Bjorndal, K. A. 1997. Foraging ecology and nutrition of sea turtles. P. L. Lutz, and J. A. Musick, editors. The Biology of Sea Turtles. CRC Press, Boca Raton.
- Bjorndal, K. A. 1980. Nutrition and grazing behavior of the green turtle, *Chelonia mydas*. *Marine Biology* 56:147-154.
- Bolten, A. B., and G. H. Balazs. 1995. Biology of the early pelagic stage - the 'lost year'. Pages 579-581 *in* K. A. Bjorndal, editor. Biology and Conservation of Sea Turtles. Smithsonian Institution Press, Washington, DC.
- Brongersma, L. D. 1972. European Atlantic turtles. *Zoologische Verhandelingen* (121):1-318.
- Burke, V. J., S. J. Morreale, and A. G. J. Rhodin. 1993. *Lepidochelys kempii* (Kemp's ridley sea turtle) and *Caretta caretta* (loggerhead sea turtle): diet. *Herpetological Review* 24(1):31-32.
- Byles, R. 1988. Satellite Telemetry of Kemp's Ridley Sea Turtle, *Lepidochelys kempii*, in the Gulf of Mexico. Report to the National Fish and Wildlife Foundation:40 pp.
- Carr, A. F. 1986. RIPS, FADS, and little loggerheads. *BioScience* 36(2):92-100.
- Carr, A. 1987. New perspectives on the pelagic stage of sea turtle development. *Conservation Biology* 1(2):103-121.
- Collette, B. B. 2002. Scombridae. *In*: 'The Living Marine Resources of the Western Central Atlantic. Volume 2: Bony Fishes Part 2 (Opistognathidae to Molidae), Sea Turtles and Marine Mammals. FAO Species Identification Guide for Fishery Purposes and American Society of Ichthyologists and Herpetologists, Special Publication No. 5'. (Ed. K. E. Carpenter.) pp. 1701-1722. Food Agricultural Organization, Rome.
- Eckert, S. A., K. L. Eckert, P. Ponganis, and G. L. Kooyman. 1989. Diving and foraging behavior of leatherback sea turtles (*Dermochelys coriacea*). *Canadian Journal of Zoology* 67(11):2834-2840.

- Eckert, S. A., D. W. Nellis, K. L. Eckert, and G. L. Kooyman. 1986. Diving patterns of two leatherback sea turtles (*Dermochelys coriacea*) during interesting intervals at Sandy Point, St. Croix, U.S. Virgin Islands. *Herpetologica* 42(3):381-388.
- EPA. 1999. EPA Region 4: Interim Policy to Identify and Address Potential Environmental Justice Areas. EPA-904-R-99-004.
- Frick, J. 1976. Orientation and behavior of hatchling green turtles *Chelonia mydas* in the sea. *Animal Behavior* 24(4):849-857.
- Garber, A. F., M. D. Tringali, and J. S. Franks. 2005. Population genetic and phylogeographic structure of wahoo, *Acanthocybium solandri*, from the western Atlantic and central Pacific Oceans. *Marine Biology* (Berlin) 147: 205–214. doi:10.1007/S00227-004-1533-1
- GMFMC (Gulf of Mexico Fishery Management Council)/SAFMC (South Atlantic Fishery Management Council). 2013. Amendment 20A to the fishery management plan for coastal migratory pelagic resources in the Gulf of Mexico and Atlantic regions including environmental assessment, regulatory impact review, and regulatory flexibility act analysis. Gulf of Mexico Fishery Management Council, Tampa, Florida, and South Atlantic Fishery Management Council, North Charleston, South Carolina. Available at: <http://www.gulfcouncil.org/docs/amendments/CMP%20Amendment%2020A.pdf>
- Haab, T. C., J. C. Whitehead, and T. McConnell. 2001. The Economic Value of Marine Recreational Fishing in the Southeast United States. NOAA Technical Memorandum NMFS-SEFSC-466.
- Haab, T.C., R. Hicks, K. Schnier, and J.C. Whitehead. 2009. Angler Heterogeneity and the Species-Specific Demand for Recreational Fishing in the Southeastern United States. Draft Final Report Submitted for MARFIN Grant #NA06NMF4330055.
- Hughes, G. R. 1974. Is a sea turtle no more than an armored stomach? *Bulletin of the South African Association for Marine Biological Research* 11:12-14.
- IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland, 104 pp.
- Johnson, G. D. 1978. Development of fishes of the Mid-Atlantic Bight. An atlas of egg, larval, and juvenile stages. Vol. IV Carangidae through Epruppidae. U.S. Dep. Inter., Fish Wildl. Serv., Biol. Serv. Prog. *FWS/OBS-78/12*, Jan. 1978: 123-128.
- Keinath, J. A., and J. A. Musick. 1993. Movements and diving behavior of leatherback turtle. *Copeia* 1993(4):1010-1017.
- Kennedy, V. S., R. R. Twilley, J. A. Kleypas, J. H. Cowan, Jr., S. R. Hare. 2002. Coastal and Marine Ecosystems & Global Climate Change: Potential Effects on U.S. Resources. Pew Center on Global Climate Change. 52 p.

- Lanyon, J.M., C.J. Limpus, and H., Marsh. 1989. Dugongs and turtles: grazers in the seagrass system. *In*: Larkum, A.W.D, A.J., McComb and S.A., Shepard (eds.) *Biology of Seagrasses*. Elsevier, Amsterdam, 610.
- Limpus, C.J., and N., Nichols. 1988. The southern oscillation regulates the annual numbers of green turtles (*Chelonia mydas*) breeding around northern Australia. *Australian Journal of Wildlife Research* 15:157.
- Limpus, C.J., and N., Nichols. 1994. Progress report on the study of the interaction of El Niño Southern Oscillation on annual *Chelonia mydas* numbers at the southern Great Barrier Reef rookeries. *In*: *Proceedings of the Australian Marine Turtle Conservation Workshop*, Queensland Australia.
- Lutz, P. L., and J. A. Musick, editors. 1997. *The biology of sea turtles*. CRC Press, Boca Raton, Florida.
- Lutz, P. L., J. A. Musick, and J. Wyneken. 2003. *The Biology of Sea Turtles*. Volume II. CRC Press, Inc., Washington, D.C.
- Maki Jenkins, K.L. and R.S. McBride. 2009. Reproductive biology of wahoo, *Acanthocybium solandri*, from the Atlantic coast of Florida and the Bahamas. *Marine and Freshwater Research*. 60:893-897.
- Márquez M, R. 1994. Synopsis of biological data on the Kemp's ridley turtle, *Lepidochelys kempii* (Garman 1880). U. S. Dept. of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Southeast Fisheries Science Center, Miami, Florida.
- McBride, R. S., A. K. Richardson, and K. L.Maki. 2008. Age, growth, and mortality of wahoo, *Acanthocybium solandri*, from the Atlantic coast of Florida and the Bahamas. *Marine and Freshwater Research* 59, 799–807. doi:10.1071/MF08021
- Mendonca, M. T., and P. C. H. Pritchard. 1986. Offshore movements of post-nesting Kemp's ridley sea turtles (*Lepidochelys kempii*). *Herpetologica* 42:373-380.
- Meylan, A. 1984. Feeding ecology of the hawksbill turtle (*Eretmochelys imbricata*) spongivory as a feeding niche in the coral reef community. University of Florida.
- Meylan, A. 1988. Spongivory in hawksbill turtles: a diet of glass. *Science* 239:393-395.
- Meylan, A. B., and M. Donnelly. 1999. Status justification for listing the hawksbill turtle (*Eretmochelys imbricata*) as critically endangered on the 1996 IUCN Red List of Threatened Animals. *Chelonian Conservation and Biology* 3(2):200-204.
- Mortimer, J. A. 1981. The feeding ecology of the west Caribbean green turtle (*Chelonia mydas*) in Nicaragua. *Biotropica* 13(1):49-58.
- Mortimer, J. A. 1982. Feeding ecology of sea turtles. Pages 103-109 *in* K. A. Bjorndal, editor. *Biology and Conservation of Sea Turtles*. Smithsonian Institution Press, Washington D.C.



- NMFS (National Marine Fisheries Service). 2009c. "Economic Value of Angler Catch and Keep in the Southeast United States: Evidence from a Choice Experiment." NOAA SEFSC SSRG.
- Norman, J. R., and F. C. Fraser. 1938. Giant Fishes, Whales and Dolphins. W. W. Norton and Company, Inc, New York, NY. 361 pp.
- Ogren, L. H. 1989. Distribution of juvenile and subadult Kemp's ridley sea turtles: preliminary results from 1984-1987 surveys. Pages 116-123 in C. W. Caillouet Jr., and J. A.M. Landry, editors. Proceedings of the First International Symposium on Kemp's Ridley Sea Turtle Biology, Conservation, and Management. Texas A&M University Sea Grant College, Galveston, Texas.
- O'Hop, J., M. Murphy, and Chagaris, D. 2012. The 2012 Stock Assessment Report for Yellowtail Snapper in the South Atlantic and Gulf of Mexico. Fish and Wildlife Conservation Commission Fish and Wildlife Research Institute 100 Eighth Ave Southeast St. Petersburg, Florida 33701-5020.
- Oxenford, H. A. 1999. Biology of the dolphinfish (*Coryphaena hippurus*) in the western central Atlantic: a review. Scientia Marina 63 (3-4): 277-301.
- Oxenford, H. A. and W. Hunte. 1986. A preliminary investigation of the stock structure of the dolphin, *Coryphaena hippurus*, in the western central Atlantic. U.S. Fishery Bulletin 84: 451-460.
- Palko, B. J., G. L. Beardsley, and W. J. Richards. 1982. Synopsis of the biological data on dolphin fishes, *Coryphaena hippurus* Linnaeus and *Coryphaena equiselis* Linnaeus. U.S. Dept. Commer., NOAA Tech. Rept. NMFS Circ. 443, 28 p.
- Paredes, R.P. 1969. Introduccion al Estudio Biologico de *Chelonia mydas agassizi* en el Perfil de Pisco, Master's thesis, Universidad Nacional Federico Villareal, Lima, Peru.
- Prager, M. H. 2000. Exploratory Assessment of Dolphinfish, *Coryphaena hippurus*, based on U.S. landings from the Atlantic Ocean and Gulf of Mexico. NMFS, SEFSC 18pp.
- Rothschild, B.J. 1986. Dynamics of Marine Fish Populations. Harvard University Press. Cambridge, Massachusetts. 277pp.
- SAFMC (South Atlantic Fishery Management Council). 1983. Fishery Management Plan, Regulatory Impact Review and Final Environmental Impact Statement for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699.
- SAFMC (South Atlantic Fishery Management Council). 1988. Amendment 1 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment and Regulatory Impact Review. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 63 pp. with appendices.

- SAFMC (South Atlantic Fishery Management Council). 1991. Amendment 4 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, and Regulatory Impact Review. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 243 pp. with appendices.
- SAFMC (South Atlantic Fishery Management Council). 1993. Amendment 6 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, and Regulatory Impact Review. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 161 pp. with appendices.
- SAFMC (South Atlantic Fishery Management Council). 1998. Final Habitat Plan for the South Atlantic Region: Essential Fish Habitat Requirements for Fishery Management Plans of the South Atlantic Fishery Management Council. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699.
- SAFMC (South Atlantic Fishery Management Council). 2002. Fishery Management Plan for Pelagic Sargassum Habitat of the South Atlantic Region Including a Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, & Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699.
- SAFMC (South Atlantic Fishery Management Council). 2003. Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic, Including a Final Environmental Impact Statement, Regulatory Impact Review, Initial Flexibility Analysis, & Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699.
- SAFMC (South Atlantic Fishery Management Council). 2006. Amendment 13C to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Biological Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 631 pp. with appendices.
- SAFMC (South Atlantic Fishery Management Council). 2007. Amendment 14 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Biological Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 601 pp. with appendices.

- SAFMC (South Atlantic Fishery Management Council). 2008a. Amendment 15A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Biological Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 325 pp. with appendices.
- SAFMC (South Atlantic Fishery Management Council). 2008b. Amendment 15B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Biological Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 324 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2009c. Amendment 16 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 608 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2009a. Comprehensive Ecosystem-Based Amendment 1 for the South Atlantic Region (Including a FEIS, IRFA, FRIR & FSIA/FIS). South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2009b. Fishery Ecosystem Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2010a. Amendment 17A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 385 pp. with appendices.
- SAFMC (South Atlantic Fishery Management Council). 2010b. Amendment 17B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 406 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2010c. Regulatory Amendment 10 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 101 pp. with appendices.

- SAFMC (South Atlantic Fishery Management Council). 2011a. Comprehensive Annual Catch Limit Amendment for the South Atlantic Region with Final Environmental Impact Statement, Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 755 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2011b. Regulatory Amendment 9 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2011b. Regulatory Amendment 11 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 86 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2011d. Amendment 24 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 256 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2012a. Amendment 18A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 292 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2012b. Amendment 20A to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Regulatory Flexibility Analysis, Regulatory Impact Review, and Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 128 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2012c. Regulatory Amendment 12 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Assessment, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405. 106 pp. plus appendices.
- SAFMC (South Atlantic Fishery Management Council). 2013a. Amendment 18B to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region with Final Environmental Impact Statement, Initial Regulatory Flexibility Analysis, Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.

- SAFMC (South Atlantic Fishery Management Council). 2013b. Regulatory Amendment 13 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2013c. Regulatory Amendment 15 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2013d. Amendment 28 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2013e. Regulatory Amendment 18 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2013f. Regulatory Amendment 19 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2013. Amendment 5 to the Fishery Management Plan for the Dolphin and Wahoo Fishery for the Atlantic with Final Environmental Assessment, Regulatory Flexibility Analysis, Regulatory Impact Review, and Fishery Impact Statement. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2014a. Amendment 27 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- SAFMC (South Atlantic Fishery Management Council). 2014b. Regulatory Amendment 14 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region . South Atlantic Fishery Management Council, 4055 Faber Place Drive, Ste 201, Charleston, S.C. 29405.
- Schwenke, K. L. and J.A. Buckel, 2008. Age, growth, and reproduction of dolphinfish (*Coryphaena hippurus*) caught off the coast of North Carolina. Fishery Bulletin 106: 82–92.
- Shaver, D. J. 1991. Feeding Ecology of Wild and Head-Started Kemp's Ridley Sea Turtles in South Texas Waters. Journal of Herpetology 25(3):327-334.
- Simpfendorfer, CA. 2001. Essential habitat of the smalltooth sawfish, *Pristis pectinata*. Report to the National Fisheries Service's Protected Resources Division. Mote Marine Laboratory, Technical Report (786) 21pp.
- Simpfendorfer, C.A., and T.R., Wiley. 2004. Determination of the distribution of Florida's remnant sawfish population, and identification of areas critical to their conservation. Mote Marine Laboratory, Technical Report July 2, 2004, 37 pp.

- Soma, M. 1985. Radio biotelemetry system applied to migratory study of turtle. Journal of the Faculty of Marine Science and Technology, Tokai University, Japan, 21:47.
- Standora, E. A., J. R. Spotila, J. A. Keinath, and C. R. Shoop. 1984. Body temperatures, diving cycles, and movement of a subadult leatherback turtle, *Dermochelys coriacea*. *Herpetologica* 40:169-176.
- Thayer, G.W., K.A., Bjorndal, J.C., Ogden, S.L., Williams, and J.C., Zieman. 1984. Role of large herbivores in seagrass communities. *Estuaries* 7:351.
- Theisen, T. C., B.W. Bowen, W. Lanier, and J.D. Baldwin. (2008). High connectivity on a global scale in the pelagic wahoo, *Acanthocybium solandri* (tuna family Scombridae). *Molecular Ecology* 17, 4233–4247.
- van Dam, R. P., and C. E. Díez. 1998. Home range of immature hawksbill turtles (*Eretmochelys imbricata* (Linnaeus)) at two Caribbean islands. *Journal of Experimental Marine Biology and Ecology* 220(1):15-24.
- Walker, T. 1994. Post-hatchling dispersal of sea turtles. Proceedings of the Australian Marine Turtle Conservation Workshop 1994:79-94.
- Whitehead, J.C. and T. C. Haab. 2001. Analysis of Contingent Valuation data from the 1997-98 Southeast Economic Add-on Survey Data. NOAA Technical Memorandum NMFS SEFSC-465.
- Witzell, W. N. 2002. Immature Atlantic loggerhead turtles (*Caretta caretta*): suggested changes to the life history model. *Herpetological Review* 33(4):266-269.

# Appendix A. Alternatives Considered, but Eliminated from Detailed Analysis

This section describes actions and alternatives that the South Atlantic Fishery Management Council (South Atlantic Council) considered in developing Amendment 7 to the Fishery Management Plan for the Dolphin and Wahoo Fishery of Atlantic (Amendment 7) and Amendment 33 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region (Amendment 33), but decided not to pursue. The description of each alternative is followed by a summary statement of why it was eliminated from Amendment 7 and Amendment 33.

## **Allow dolphin and wahoo fillets from The Bahamas Action**

### ***Action 1***

#### Alternative 2

***Subalternative 2b:*** Regardless of the number of dolphin/wahoo fillets, 10 lbs of fillets will be counted as one fish.

***Subalternative 2c:*** Regardless of the number of dolphin/wahoo fillets, 20 lbs of fillets will be counted as one fish.

***Subalternative 2d:*** Regardless of the number of dolphin/wahoo fillets, 30 lbs of fillets will be counted as one fish.

***Subalternative 2e:*** Regardless of the number of dolphin/wahoo fillets, 40 lbs of fillets will be counted as one fish.

Bahamian regulations state limits in terms up numbers of fish, unlike the Bahamian regulations for snapper grouper species, which states limits in terms of numbers of fish or in pounds. There currently are no empirical estimates of the average weight of fillets from either dolphin or wahoo.

## **Reporting Requirements Action**

***Action 3:*** Establish reporting requirements for vessels bringing fillets of dolphin, wahoo, and snapper grouper species into the U.S. EEZ from The Bahamas.

***Alternative 1 (No Action):*** There are no reporting requirements.

***Alternative 2:*** Vessels lawfully bringing fillets of dolphin, wahoo, and snapper grouper species into the U.S. EEZ from The Bahamas must call law enforcement identifying themselves as having fish harvested in The Bahamas onboard.

***Alternative 3:*** Vessels lawfully bringing fillets of dolphin, wahoo, and snapper grouper species into the U.S. EEZ from The Bahamas must have an operating, NMFS-approved VMS unit onboard.

No law enforcement organization, Federal or State of Florida, has the ability to monitor these types of reporting system for such a large number of participants.

## **Remove Exemption for Snapper Grouper Fillets Action**

***Action 5:*** Remove the exemption that allows fillets of snapper grouper species harvested lawfully in The Bahamas to be landed in the U.S. EEZ.

***Alternative 1 (No Action):*** In the South Atlantic EEZ, snapper grouper lawfully harvested in Bahamian waters are exempt from the requirement that they be maintained with head and fins intact,

*provided valid Bahamian fishing and cruising permits are on board the vessel and the vessel is in transit through the South Atlantic EEZ.*

***Alternative 2:*** *Require snapper grouper lawfully harvested in Bahamian waters to be maintained with head and fins intact.*

The South Atlantic Council did not want to create or reinstitute a problem that existed prior to the current regulation. It was decided that considering this action would alienate the public. Landing snapper grouper fillets from The Bahamas has not been a source of significant problems since this regulation was in effect.

#### **Exempt Snapper Grouper from Bag and Possession Limits Action**

***Action 6.*** *Exempt snapper grouper species harvested lawfully from The Bahamas from the bag and possession limits in the U.S. EEZ.*

***Alternative 1 (No Action):*** *Snapper grouper species lawfully harvested from The Bahamas are subject to the bag and possession limits in the U.S. EEZ.*

***Alternative 2:*** *Exempt snapper grouper lawfully harvested in The Bahamas from regulations for bag limits in the U.S. EEZ.*

The South Atlantic Council decided that there are not any significant issues with requiring fishermen bringing snapper grouper fillets from The Bahamas in terms of bag and possession limits. It was also decided that fillets brought from The Bahamas into the U.S. EEZ must not be from species prohibited from possession in the U.S. EEZ.



## Appendix B. Glossary

**Acceptable Biological Catch (ABC):** Maximum amount of fish stock than can be harvested without adversely affecting recruitment of other components of the stock. The ABC level is typically higher than the total allowable catch, leaving a buffer between the two.

**Accountability measure (AM):** AMs are fishery management rules that prevent annual catch limits from being exceeded (i.e. prevent overfishing) and make corrections when fishing goes over the annual catch limit.

**ALS:** Accumulative Landings System. NMFS database which contains commercial landings reported by dealers.

**Annual Catch Limit (ACL):** The amount of a particular fish species, stock or stock complex that can be caught in a given year.

**Annual Catch Target (ACT):** An annual catch target is an amount of annual catch that serves as the management target, set below the annual catch limit to account for management uncertainty.

**Biomass:** Amount or mass of some organism, such as fish.

**B<sub>MSY</sub>:** Biomass of population achieved in long-term by fishing at F<sub>MSY</sub>.

**Bycatch:** Fish harvested in a fishery, but not sold or kept for personal use. Bycatch includes economic discards and regulatory discards, but not fish released alive under a recreational catch and release fishery management program.

**Caribbean Fishery Management Council (CFMC):** One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The CFMC develops fishery management plans for fisheries off the coast of the U.S. Virgin Islands and the Commonwealth of Puerto Rico.

**Catch Per Unit Effort (CPUE):** The amount of fish captured with an amount of effort. CPUE can be expressed as weight of fish captured per fishing trip, per hour spent at sea, or through other standardized measures.

**Charter Boat:** A fishing boat available for hire by recreational anglers, normally by a group of anglers for a short time period.

**Cohort:** Fish born in a given year. (See year class.)

**Control Date:** Date established for defining the pool of potential participants in a given management program. Control dates can establish a range of years during which a potential participant must have been active in a fishery to qualify for a quota share.

**Constant Catch Rebuilding Strategy:** A rebuilding strategy where the allowable biological catch of an overfished species is held constant until stock biomass reaches  $B_{MSY}$  at the end of the rebuilding period.

**Constant F Rebuilding Strategy:** A rebuilding strategy where the fishing mortality of an overfished species is held constant until stock biomass reached  $B_{MSY}$  at the end of the rebuilding period.

**Directed Fishery:** Fishing directed at a certain species or species group.

**Discards:** Fish captured, but released at sea.

**Discard Mortality Rate:** The percent of total fish discarded that do not survive being captured and released at sea.

**Derby:** Fishery in which the TAC is fixed and participants in the fishery do not have individual quotas. The fishery is closed once the TAC is reached, and participants attempt to maximize their harvests as quickly as possible. Derby fisheries can result in capital stuffing and a race for fish.

**Effort:** The amount of time and fishing power (i.e., gear size, boat size, horsepower) used to harvest fish.

**Exclusive Economic Zone (EEZ):** Zone extending from the shoreline out to 200 nautical miles in which the country owning the shoreline has the exclusive right to conduct certain activities such as fishing. In the United States, the EEZ is split into state waters (typically from the shoreline out to 3 nautical miles) and federal waters (typically from 3 to 200 nautical miles).

**Exploitation Rate:** Amount of fish harvested from a stock relative to the size of the stock, often expressed as a percentage.

**F:** Fishing mortality.

**Fecundity:** A measurement of the egg-producing ability of fish at certain sizes and ages.

**Fishery Dependent Data:** Fishery data collected and reported by fishermen and dealers.

**Fishery Independent Data:** Fishery data collected and reported by scientists who catch the fish themselves.

**Fishery Management Plan:** Management plan for fisheries operating in federal waters. Produced by regional fishery management councils and submitted to the Secretary of Commerce for approval.

**Fishing Effort:** Usually refers to the amount of fishing. May refer to the number of fishing vessels, amount of fishing gear (nets, traps, hooks), or total amount of time vessels and gear are actively engaged in fishing.

**Fishing Mortality:** A measurement of the rate at which fish are removed from a population by fishing. Fishing mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

**Fishing Power:** Measure of the relative ability of a fishing vessel, its gear, and its crew to catch fishes, in reference to some standard vessel, given both vessels are under identical conditions.

**F<sub>30%SPR</sub>:** Fishing mortality that will produce a static SPR = 30%.

**F<sub>45%SPR</sub>:** Fishing mortality that will produce a static SPR = 45%.

**F<sub>OY</sub>:** Fishing mortality that will produce OY under equilibrium conditions and a corresponding biomass of B<sub>OY</sub>. Usually expressed as the yield at 85% of F<sub>MSY</sub>, yield at 75% of F<sub>MSY</sub>, or yield at 65% of F<sub>MSY</sub>.

**F<sub>MSY</sub>:** Fishing mortality that if applied constantly, would achieve MSY under equilibrium conditions and a corresponding biomass of B<sub>MSY</sub>.

**Fork Length (FL):** The length of a fish as measured from the tip of its snout to the fork in its tail.

**Gear restrictions:** Limits placed on the type, amount, number, or techniques allowed for a given type of fishing gear.

**Growth Overfishing:** When fishing pressure on small fish prevents the fishery from producing the maximum poundage. Condition in which the total weight of the harvest from a fishery is improved when fishing effort is reduced, due to an increase in the average weight of fishes.

**Gulf of Mexico Fishery Management Council (GPMC):** One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The GPMC develops fishery management plans for fisheries off the coast of Texas, Louisiana, Mississippi, Alabama, and the west coast of Florida.

**Head Boat:** A fishing boat that charges individual fees per recreational angler onboard.

**Highgrading:** Form of selective sorting of fishes in which higher value, more marketable fishes are retained, and less marketable fishes, which could legally be retained are discarded.

**Individual Fishing Quota (IFQ):** Fishery management tool that allocates a certain portion of the TAC to individual vessels, fishermen, or other eligible recipients.

**Longline:** Fishing method using a horizontal mainline to which weights and baited hooks are attached at regular intervals. Gear is either fished on the bottom or in the water column.

**Magnuson-Stevens Fishery Conservation and Management Act:** Federal legislation responsible for establishing the fishery management councils and the mandatory and discretionary guidelines for federal fishery management plans.

**Marine Recreational Fisheries Statistics Survey (MRFSS):** Survey operated by NMFS in cooperation with states that collects marine recreational fisheries data.

**Marine Recreational Information Program (MRIP):** Survey operated by NMFS in cooperation with states that collects marine recreational fisheries data.

**Maximum Fishing Mortality Threshold (MFMT):** The rate of fishing mortality above which a stock's capacity to produce MSY would be jeopardized.

**Maximum Sustainable Yield (MSY):** The largest long-term average catch that can be taken continuously (sustained) from a stock or stock complex under average environmental conditions.

**Minimum Stock Size Threshold (MSST):** The biomass level below which a stock would be considered overfished.

**Modified F Rebuilding Strategy:** A rebuilding strategy where fishing mortality is changed as stock biomass increases during the rebuilding period.

**Multispecies fishery:** Fishery in which more than one species is caught at the same time and location with a particular gear type.

**National Marine Fisheries Service (NMFS):** Federal agency within NOAA responsible for overseeing fisheries science and regulation.

**National Oceanic and Atmospheric Administration:** Agency within the Department of Commerce responsible for ocean and coastal management.

**Natural Mortality (M):** A measurement of the rate at which fish are removed from a population by natural causes. Natural mortality can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous is that percentage of fish dying at any one time.

**Optimum Yield (OY):** The amount of catch that will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems.

**Overfished:** A stock or stock complex is considered overfished when stock biomass falls below the minimum stock size threshold (MSST) (e.g., current biomass < MSST = overfished).

**Overfishing:** Overfishing occurs when a stock or stock complex is subjected to a rate of fishing mortality that exceeds the maximum fishing mortality threshold (e.g., current fishing mortality rate > MFMT = overfishing).

**Quota:** Percent or annual amount of fish that can be harvested.

**Recruitment (R):** Number or percentage of fish that survives from hatching to a specific size or age.

**Recruitment Overfishing:** The rate of fishing above which the recruitment to the exploitable stock becomes significantly reduced. This is characterized by a greatly reduced spawning stock, a decreasing proportion of older fish in the catch, and generally very low recruitment year after year.

**Scientific and Statistical Committee (SSC):** Fishery management advisory body composed of federal, state, and academic scientists, which provides scientific advice to a fishery management council.

**Selectivity:** The ability of a type of gear to catch a certain size or species of fish.

**South Atlantic Fisheries Management Council (SAFMC):** One of eight regional councils mandated in the Magnuson-Stevens Fishery Conservation and Management Act to develop management plans for fisheries in federal waters. The SAFMC develops fishery management plans for fisheries off North Carolina, South Carolina, Georgia, and the east coast of Florida.

**Spawning Potential Ratio (Transitional SPR):** Formerly used in overfished definition. The number of eggs that could be produced by an average recruit in a fished stock divided by the number of eggs that could be produced by an average recruit in an unfished stock. SPR can also be expressed as the spawning stock biomass per recruit (SSBR) of a fished stock divided by the SSBR of the stock before it was fished.

**% Spawning Per Recruit (Static SPR):** Formerly used in overfishing determination. The maximum spawning per recruit produced in a fished stock divided by the maximum spawning per recruit, which occurs under the conditions of no fishing. Commonly abbreviated as %SPR.

**Spawning Stock Biomass (SSB):** The total weight of those fish in a stock which are old enough to spawn.

**Spawning Stock Biomass Per Recruit (SSBR):** The spawning stock biomass divided by the number of recruits to the stock or how much spawning biomass an average recruit would be expected to produce.

**Total Allowable Catch (TAC):** The total amount of fish to be taken annually from a stock or stock complex. This may be a portion of the Allowable Biological Catch (ABC) that takes into consideration factors such as bycatch.

**Total Length (TL):** The length of a fish as measured from the tip of the snout to the tip of the tail.

## Appendix C. Other Applicable Law

### 1.1 Administrative Procedure Act (APA)

All federal rulemaking is governed under the provisions of the APA (5 U.S.C. Subchapter II), which establishes a “notice and comment” procedure to enable public participation in the rulemaking process. Under the APA, the National Marine Fisheries Service (NMFS) is required to publish notification of proposed rules in the *Federal Register* and to solicit, consider, and respond to public comment on those rules before they are finalized. The APA also establishes a 30-day wait period from the time a final rule is published until it takes effect, with some exceptions. Amendment 7 to the Fishery Management Plan for the Dolphin Wahoo Fishery of the Atlantic (Dolphin Wahoo Amendment 7) and Amendment 33 to the FMP for the Snapper Grouper Fishery of the South Atlantic (Snapper Grouper Amendment 33) 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, including those conducted by the Mid-Atlantic and New England Fishery Management Councils. The proposed rule associated with this amendment will have a request for public comments which complies with the APA, and upon publication of the final rule, there will be a 30-day wait period before the regulations are effective.

### 1.2 Information Quality Act (IQA)

The IQA (Section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Public Law 106-443)) which took effect October 1, 2002, directed the Office of Management and Budget (OMB) to issue government-wide guidelines that “provide policy and procedural guidelines to federal agencies for ensuring and maximizing the quality, objectivity, utility, and integrity of information disseminated by federal agencies.” OMB directed each federal agency to issue its own guidelines, establish administrative mechanisms allowing affected persons to seek and obtain correction of information that does not comply with OMB guidelines, and report periodically to OMB on the number and nature of complaints. The NOAA Section 515 Information Quality Guidelines require a series of actions for each new information product subject to the IQA. Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 has used the best available information and made a broad presentation thereof. The information contained in this document was developed using best available scientific information. Therefore, this document is in compliance with the IQA.

### 1.3 Coastal Zone Management Act (CZMA)

Section 307(c)(1) of the federal CZMA of 1972 requires that all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. The South Atlantic Council, in cooperation with the Mid-Atlantic Fishery Management Council and the New England Fishery Management Council, is responsible for conservation and management of dolphin and wahoo in federal waters off the Atlantic states. 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**, the South Atlantic Council believes this document is consistent to the maximum extent practicable with the Coastal Zone Management Plans of Maine, New Hampshire, Massachusetts, Rhode Island,

Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and east Florida to Key West. 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 mentioned above.

#### **1.4 Endangered Species Act (ESA)**

The 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 NMFS 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 conclude 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.

NMFS completed biological opinions, evaluating the impacts of the Atlantic dolphin and wahoo fishery and the South Atlantic snapper and grouper fishery on ESA-listed species on August 27, 2003, and June 7, 2006, respectively (NMFS 2003, NMFS 2006). The opinion for the dolphin and wahoo fishery concluded the fishery would not affect ESA-listed marine mammals or smalltooth sawfish, and is not likely to jeopardize the continued existence of any listed sea turtle species (see NMFS 2003 for discussion on these species). However, the opinion did state that the dolphin and wahoo fishery would adversely affect sea turtles. The opinion for the snapper and grouper fishery determined that the fishery would not affect ESA-listed marine mammals, and is not likely to jeopardize the continued existence of any listed sea turtle species or smalltooth sawfish. In each opinion, NMFS issued Incidental Take Statements for species that were likely to be adversely affected by actions associated with the fisheries (i.e., sea turtles and smalltooth sawfish). Reasonable and Prudent Measures to minimize the impact of these incidental takes were specified, along with Terms and Conditions to implement them.

Subsequent to the biological opinions, NMFS made several modifications to the list of protected species for which they are responsible. These changes included: (1) the listing of two species of *Acropora* coral, (2) the designation of *Acropora* critical habitat, (3) the determination that the loggerhead sea turtle population consists of nine distinct population segments (DPSs; 76 FR 58868) and, (4) the listing of five DPSs of Atlantic sturgeon.

NMFS addressed how these ESA changes could impact the determinations of the 2003 biological opinion in a series of consultation memoranda. In separate memoranda, NMFS concluded the continued authorization of the Atlantic dolphin wahoo fishery, is not likely to adversely affect *Acropora* or *Acropora* critical habitat (May 18, 2010), and Atlantic sturgeon (February 15, 2012). The February 15, 2012, memorandum also stated that because the 2003 biological opinion had evaluated the impacts of the fishery on the loggerhead subpopulations now wholly contained within the Northwest Atlantic DPS, the opinion’s conclusion that the fishery is not likely to jeopardize the continued existence of loggerhead sea turtles remains valid. In a memorandum dated February 13, 2013, NMFS concluded new information provided in the proposed reclassification (uplisting) of *Acropora* did not change the previous effects

determination that the fishery was not likely to adversely affect *Acropora*. On September 10, 2014, NMFS listed 20 new coral species under the ESA, five of those species occur in the Caribbean (including Florida) and all of these are listed as threatened. The 2 previously listed *Acropora* coral species remain protected as threatened. In a memorandum dated September 11, 2014, NMFS indicated that the previous determination remains valid and the South Atlantic snapper grouper and dolphin wahoo fisheries are still not likely to adversely affect *Acropora* corals.

On July 10, 2014, National Marine Fisheries Service published a final rule designating critical habitat for the Northwest Atlantic Ocean (NWA) Loggerhead Sea Turtle DPS in the *Federal Register* (79 FR 39856). The final rule, effective August 11, 2014, designates 38 marine areas within the Atlantic Ocean and Gulf of Mexico, which contain the physical or biological features essential for the conservation of the loggerhead sea turtle. A memorandum dated September 16, 2014, evaluated the effects of continued authorization of federal fisheries, including snapper grouper and dolphin wahoo, on the newly-designated critical habitat. The memo concluded that activities associated with the snapper grouper and dolphin wahoo fisheries would not adversely affect any of the NWA loggerhead DPS critical habitat units. These fisheries will have insignificant effects that will not adversely affect the habitat's ability to perform its function.

Therefore, the actions of proposed Dolphin Wahoo Amendment 7 and the proposed Snapper Grouper Amendment 33 would fall within the level of effort and scope of the action analyzed in the above mentioned opinions and subsequent memoranda.

### **1.5 Executive Order 13132: Federalism**

E.O. 13132 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 action proposed in this document and associated regulations. Dolphin, wahoo, and snapper grouper species would be harvested in Bahamian waters and vessels with fillets these fish would not be allowed to stop and fish in the U.S. exclusive economic zone (EEZ). Therefore, preparation of a Federalism assessment under E.O. 13132 is not necessary.

### **1.6 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 fishery management plan (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 Regulatory Flexibility Act (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 taken 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.

This amendment includes the RIR as **Appendix G**.

### **1.7 Executive Order 12898: Environmental Justice**

E.O. 12898 requires that “to the greatest extent practicable and permitted by law...each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations in the United States and its territories and possessions...”

The actions considered in this document are not expected to result in any disproportionate adverse human health or environmental effects to minority populations or low-income populations of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, and east Florida to Key West. A description of the communities impacted by the actions contained in this document and potential socioeconomic impacts of those actions are contained in **Sections 3.0** and **4.0** of this document.

### **1.8 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 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 National Recreational Fisheries Coordination Council also is responsible for developing, in cooperation with federal agencies, states and tribes, a Recreational Fishery Resource Conservation Plan - to include a five-year agenda. Finally, the Order requires NMFS and the U.S. Fish and Wildlife Service to develop a joint agency policy for administering the ESA.

The action considered in this amendment is consistent with the directives of E.O. 12962.

## **1.9 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 actions considered in this amendment are consistent with the directives of E.O. 13089.

## **1.10 Executive Order 13158: Marine Protected Areas (MPAs)**

E.O. 13158 was signed on May 26, 2000, to strengthen the protection of U.S. ocean and coastal resources through the use of MPAs. The E.O. defined MPAs as "any area of the marine environment that has been reserved by federal, state, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein". It directs federal agencies to work closely with state, local, and non-governmental partners to create a comprehensive network of MPAs "representing diverse U.S. marine ecosystems, and the Nation's natural and cultural resources".

The actions considered in this amendment are consistent with the directives of E.O. 13158.

## **1.11 Marine Mammal Protection Act (MMPA)**

The 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 NMFS) 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 NMFS 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; and 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 automatically registered for the Marine Mammal Authorization Program and are required by law to carry a current Authorization Certificate on board their vessel or person when participating in the listed fishery. Fishermen are also required to accommodate an observer if requested (50 CFR 229.7(c)) and must comply with any applicable take reduction plans. Furthermore, all fishermen (regardless of fishery category) must report any incidental mortality or injury to a marine mammal during commercial fishing activities within 48 hours of the fishing trip.

The dolphin wahoo fishery of the Atlantic is part of the Southeastern U.S. Atlantic, Gulf of Mexico, and Caribbean pelagic hook-and-line/harpoon fishery and the commercial hook-and-line components of the South Atlantic snapper grouper fishery (i.e., bottom longline, bandit gear, and handline) are both designated as Category III fisheries (79 FR 14418, March 14, 2014) because there have been no known documented interactions between these gear and marine mammals. The black sea bass pot component of the South Atlantic snapper grouper fishery is part of the Atlantic mixed species trap/pot fishery, a Category II fishery (79 FR 14418, March 14, 2014). The Atlantic mixed species trap/pot fishery designation was created in 2003 (68 FR 41725, July 15, 2003), by combining several separately listed trap/pot fisheries into a single group. This group was designated Category II as a precaution because of known interactions between marine mammals and gear similar to those included in this group. Prior to this consolidation, the black sea bass pot fishery in the South Atlantic was a part of the “U.S. Mid-Atlantic and Southeast U.S. Atlantic Black Sea Bass Trap/Pot” fishery (Category III). There has never been a documented interaction between marine mammals and black sea bass trap/pot gear in the South Atlantic. The actions in this EA are not expected to negatively impact the provisions of the MMPA.

## **1.12 Migratory Bird Treaty Act (MBTA) and Executive Order 13186**

The 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 Socialist 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 bilateral treaties, 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, NMFS 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 addresses the incidental take of migratory birds in commercial fisheries under the jurisdiction of NMFS. NMFS 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 action considered in this amendment is consistent with the directives of E.O. 13186.

### **1.13 National Environmental Policy Act (NEPA)**

This document has been written and organized in a manner that meets NEPA requirements, and includes an Environmental Assessment, as described in NOAA Administrative Order (NAO) 216- 6, Section 6.03.a.2.

#### Proposed Actions

The proposed actions are described in **Chapter 2**.

#### Affected Environment

The affected environment is described in **Chapter 3**.

#### Impacts of the Action

The impacts of the actions on the environment are described in **Chapter 4**.

### **1.14 National Marine Sanctuaries Act (NMSA)**

Under the NMSA (also known as Title III of the Marine Protection, Research and Sanctuaries Act of 1972), as amended, the U.S. Secretary of Commerce is authorized to designate National Marine Sanctuaries to protect distinctive natural and cultural resources whose protection and beneficial use requires comprehensive planning and management. The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division of NOAA. The NMSA provides authority for comprehensive and coordinated conservation and management of these marine areas. The National Marine Sanctuary Program currently comprises 13 sanctuaries around the country, including sites in American Samoa and Hawaii. These sites include significant coral reef and kelp forest habitats, and breeding and feeding grounds of whales, sea lions, sharks, and sea turtles. The sanctuaries in the Atlantic exclusive economic zone are the Stellwagen Bank, USS Monitor, Gray's Reef, and Florida Keys National Marine Sanctuaries.

The action considered in this amendment is not expected to have any adverse impacts on the resources managed by the National Marine Sanctuaries.

### **1.15 Paperwork Reduction Act (PRA)**

The purpose of the PRA is to minimize the burden on the public. The PRA is intended to ensure that the information collected under the proposed action is needed and is collected in an efficient manner (44 U.S.C. 3501 (1)). The authority to manage information collection and record keeping requirements is vested with the Director of the Office of Management and Budget (OMB). This authority encompasses establishment of guidelines and policies, approval of information collection requests, and reduction of

paperwork burdens and duplications. The PRA requires NMFS to obtain approval from the OMB before requesting most types of fishery information from the public.

The actions considered in this amendment are not expected to affect PRA since no data collection program is included.

### **1.16 Regulatory Flexibility Act (RFA)**

The 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, NMFS 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 RFA 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 RFA's provisions.

As NMFS has determined whether a proposed fishery regulation would have a significant economic impact on a substantial number of small entities, a certification to this effect will be prepared and submitted to the Chief Counsel for Advocacy of the Small Business Administration.

This amendment includes the RFA as **Appendix H**.

### **1.17 Small Business Act (SBA)**

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

### **1.18 Public Law 99-659: Vessel Safety**

Public Law 99-659 amended the MSFCMA to require that a FMP or FMP amendment must consider, and may provide for, temporary adjustments (after consultation with the U.S. Coast Guard and persons

utilizing the fishery) regarding access to a fishery for vessels that would be otherwise prevented from participating in the fishery because of safety concerns related to weather or to other ocean conditions.

No vessel would be forced to participate in 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 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. In fact, fishermen contend that storing dolphin and wahoo safely with head and fins intact is difficult and impractical due to the size of the fish, and therefore requested that the South Atlantic Council allow the fish to be filleted. Fillets of snapper grouper species lawfully harvested in the Bahamas have been authorized to be brought into the U.S. EEZ since 1998 (SAFMC 1998).

#### **References:**

NMFS (National Marine Fisheries Service). 2003. Endangered Species Act – Section 7 Consultation on the Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic Ocean. Biological Opinion, August 27, 2003.

SAFMC (South Atlantic Fishery Management Council). 1998. Amendment 8 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region, Including a Final Supplemental Environmental Impact Statement, Regulatory Impact Review, Initial Flexibility Analysis, & Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699. p.126 plus appendices.

## Appendix D. History of Management

### History of Management of the Atlantic Dolphin and Wahoo Fisheries

The dolphin and wahoo fisheries are highly regulated and have been regulated since 2004. The following table summarizes actions in each of the amendments to the original FMP.

Time period/dates	Cause	Observed and/or Expected Effects
Effective June 28, 2004	Fishery Management Plan for the Dolphin Wahoo Fishery off the Atlantic states (Dolphin Wahoo FMP).	1) A 20-inch fork length minimum size limit for dolphin off the coasts of Georgia and Florida with no size restrictions elsewhere; (2) prohibition of longline fishing for dolphin and wahoo in areas closed to the use of such gear for highly migratory pelagic species; and (3) allowable gear to be used in the fishery (hook-and-line gear including manual, electric, and hydraulic rods and reels; bandit gear; handlines; longlines; and spearfishing (including powerheads) gear. In addition, other approved portions of the FMP were also effective on this date, including (1) the management unit and designations of stock status criteria for the unit; (2) a fishing year of January 1 through December 31; (3) a 1.5 million pound (or 13% of the total harvest) cap on commercial landings; (4) establishment of a framework procedure by which the SAFMC may modify its management measures; and (5) designations of Essential Fish Habitat (EFH) and EFH-Habitat Areas of Particular Concern (HAPC).
Effective September 24, 2004	Dolphin Wahoo FMP	1) owners of commercial vessels and/or charter vessels/headboats must have vessel permits and, if selected, submit reports; (2) dealers must have permits and, if selected, submit reports; (3) longline vessels must comply with sea turtle protection measures; (4) a recreational bag limit of 10 dolphin and 2 wahoo per person per day, with a limit of 60 dolphin per boat per day (headboats are excluded from the boat limit); (5) prohibition on recreational sale of dolphin and wahoo caught under a bag limit unless the seller holds the necessary commercial permits; and (6) a commercial trip limit of 500 pounds for wahoo.
Effective November 23,	Dolphin Wahoo FMP	Operators of commercial vessels,

Time period/dates	Cause	Observed and/or Expected Effects
2004		charter vessels and headboats that are required to have a federal vessel permit for dolphin and wahoo must display operator permits.
Effective Date July 22, 2010	Amendment 1 to the Dolphin Wahoo FMP (Comprehensive Ecosystem Based Amendment (CE-BA) 1)	Updated spatial information of Council-designated EFH and EFH-HAPCS.
Effective Date April 16, 2012	Amendment 2 to the Dolphin Wahoo FMP (Comprehensive ACL Amendment SAFMC 2011C)	Set ABC, ACL, ACT and AMs
Target 2014	Amendment 5 to the Dolphin Wahoo FMP	Revisions to acceptable biological catch estimates (ABCs), annual catch limits (ACLs) (including sector ACLs), recreational annual catch targets (ACTs), and accountability measures (AMs) implemented through the Comprehensive ACL Amendment; modifications to the sector allocations for dolphin; and revisions to the framework procedure in the Dolphin Wahoo FMP.

### History of Management of the South Atlantic Snapper Grouper Fishery

The snapper grouper fishery is highly regulated; some of the species included in this amendment have been regulated since 1983. The following table summarizes actions in each of the amendments to the original fishery management plan (FMP), as well as some events not covered in amendment actions.

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
FMP (1983)	08/31/83	PR: 48 FR 26843 FR: 48 FR 39463	-12" total length (TL) limit – red snapper, yellowtail snapper, red grouper, Nassau grouper -8" limit – black sea bass -4" trawl mesh size -Gear limitations – poisons, explosives, fish traps, trawls -Designated modified habitats or artificial reefs as Special Management Zones (SMZs)
Regulatory Amendment #1 (1987)	03/27/87	PR: 51 FR 43937 FR: 52 FR 9864	-Prohibited fishing in SMZs except with hand-held hook-and-line and spearfishing gear. -Prohibited harvest of goliath grouper in SMZs.
Amendment #1 (1988a)	01/12/89	PR: 53 FR 42985 FR: 54 FR 1720	-Prohibited trawl gear to harvest fish south of Cape Hatteras, NC and north of Cape Canaveral, FL. -Directed fishery defined as vessel with trawl gear and $\geq 200$ lb s-g on board. -Established rebuttable assumption that vessel with s-g on board had harvested such fish in the exclusive economic zone (EEZ).



<b>Document</b>	<b>All Actions Effective By:</b>	<b>Proposed Rule Final Rule</b>	<b>Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.</b>
Regulatory Amendment #2 (1988b)	03/30/89	PR: 53 FR 32412 FR: 54 FR 8342	-Established 2 artificial reefs off Ft. Pierce, FL as SMZs.
Notice of Control Date	09/24/90	55 FR 39039	-Anyone entering federal wreckfish fishery in the EEZ off S. Atlantic states after 09/24/90 was not assured of future access if limited entry program developed.
Regulatory Amendment #3 (1989)	11/02/90	PR: 55 FR 28066 FR: 55 FR 40394	-Established artificial reef at Key Biscayne, FL as SMZ. Fish trapping, bottom longlining, spear fishing, and harvesting of Goliath grouper prohibited in SMZ.
Amendment #2 (1990a)	10/30/90	PR: 55 FR 31406 FR: 55 FR 46213	-Prohibited harvest/possession of goliath grouper in or from the EEZ -Defined overfishing for goliath grouper and other species
Emergency Rule	8/3/90	55 FR 32257	-Added wreckfish to the fishery management unit (FMU) -Fishing year beginning 4/16/90 -Commercial quota of 2 million pounds -Commercial trip limit of 10,000 pounds per trip
Fishery Closure Notice	8/8/90	55 FR 32635	- Fishery closed because the commercial quota of 2 million pounds was reached
Emergency Rule Extension	11/1/90	55 FR 40181	-extended the measures implemented via emergency rule on 8/3/90
Amendment #3 (1990b)	01/31/91	PR: 55 FR 39023 FR: 56 FR 2443	-Added wreckfish to the FMU -Defined optimum yield and overfishing -Required permit to fish for, land or sell wreckfish -Required catch and effort reports from selected, permitted vessel; -Established control date of 03/28/90 -Established a fishing year for wreckfish starting April 16 -Established a process to set annual quota, with initial quota of 2 million pounds; provisions for closure -Established 10,000 pound trip limit -Established a spawning season closure for wreckfish from January 15 to April 15 -Provided for annual adjustments of wreckfish management measures
Notice of Control Date	07/30/91	56 FR 36052	-Anyone entering federal snapper grouper fishery (other than for wreckfish) in the EEZ off S. Atlantic states after 07/30/91 was not assured of future access if limited entry program developed.

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Amendment #4 (1991)	01/01/92	PR: 56 FR 29922 FR: 56 FR 56016	<ul style="list-style-type: none"> <li>-Prohibited gear: fish traps except black sea bass traps north of Cape Canaveral, FL; entanglement nets; longline gear inside 50 fathoms; bottom longlines to harvest wreckfish; powerheads and bangsticks in designated SMZs off S. Carolina</li> <li>-defined overfishing/overfished and established rebuilding timeframe: red snapper and groupers <math>\leq 15</math> years (year 1 = 1991); other snappers, greater amberjack, black sea bass, red porgy <math>\leq 10</math> years (year 1 = 1991)</li> <li>-Required permits (commercial &amp; for-hire) and specified data collection regulations</li> <li>-Established an assessment group and annual adjustment procedure (framework)</li> <li>-Permit, gear, and vessel id requirements specified for black sea bass traps</li> <li>-No retention of snapper grouper spp. caught in other fisheries with gear prohibited in snapper grouper fishery if captured snapper grouper had no bag limit or harvest was prohibited. If had a bag limit, could retain only the bag limit</li> <li>-8" TL limit – lane snapper</li> <li>-10" TL limit – vermilion snapper (recreational only)</li> <li>-12" TL limit – red porgy, vermilion snapper (commercial only), gray, yellowtail, mutton, schoolmaster, queen, blackfin, cubera, dog, mahogany, and silk snappers</li> <li>-20" TL limit – red snapper, gag, and red, black, scamp, yellowfin, and yellowmouth groupers.</li> <li>-28" fork length (FL) limit – greater amberjack (recreational only)</li> <li>-36" FL or 28" core length – greater amberjack (commercial only)</li> <li>-bag limits – 10 vermilion snapper, 3 greater amberjack</li> <li>-aggregate snapper bag limit – 10/person/day, excluding vermilion snapper and allowing no more than 2 red snappers</li> <li>-aggregate grouper bag limit – 5/person/day, excluding Nassau and goliath grouper, for which no retention (recreational &amp; commercial) is allowed</li> <li>-spawning season closure – commercial harvest greater amberjack &gt; 3 fish bag prohibited in April south of Cape Canaveral, FL</li> <li>-spawning season closure – commercial harvest mutton snapper &gt; snapper aggregate prohibited during May and June</li> <li>-charter/headboats and excursion boat possession limits extended</li> </ul>

Document	All Actions Effective By:	Proposed Rule Final Rule	Major Actions. Note that not all details are provided here. Please refer to Proposed and Final Rules for all impacts of listed documents.
Amendment #5 (1992a)	04/06/92	PR: 56 FR 57302 FR: 57 FR 7886	-Wreckfish: established limited entry system with individual transferable quotas (ITQs); required dealer to have permit; rescinded 10,000 lb. trip limit; required off-loading between 8 am and 5 pm; reduced occasions when 24-hour advance notice of offloading required for off-loading; established procedure for initial distribution of percentage shares of total allowable catch (TAC)
Emergency Rule	8/31/92	57 FR 39365	-Black Sea Bass (bsb): modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Emergency Rule Extension	11/30/92	57 FR 56522	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #4 (1992b)	07/06/93	FR: 58 FR 36155	-Black Sea Bass: modified definition of bsb pot; allowed multi-gear trips for bsb; allowed retention of incidentally-caught fish on bsb trips
Regulatory Amendment #5 (1992c)	07/31/93	PR: 58 FR 13732 FR: 58 FR 35895	-Established 8 SMZs off S. Carolina, where only hand-held, hook-and-line gear and spearfishing (excluding powerheads) was allowed
Amendment #6 (1993)	07/27/94	PR: 59 FR 9721 FR: 59 FR 27242	-Set up separate commercial TAC levels for golden tilefish and snowy grouper -Established commercial trip limits for snowy grouper, golden tilefish, speckled hind, and warsaw grouper -Included golden tilefish in grouper recreational aggregate bag limits -Prohibited sale of warsaw grouper and speckled hind -100% logbook coverage upon renewal of permit -Creation of the <i>Oculina</i> Experimental Closed Area -Data collection needs specified for evaluation of possible future individual fishing quota system
Amendment #7 (1994a)	01/23/95	PR: 59 FR 47833 FR: 59 FR 66270	-12" FL – hogfish -16" TL – mutton snapper -Required dealer, charter and headboat federal permits -Allowed sale under specified conditions -Specified allowable gear and made allowance for experimental gear -Allowed multi-gear trips in NC -Added localized overfishing to list of problems and objectives -Adjusted bag limit and crew specs. for charter and head boats -Modified management unit for scup to apply south of Cape Hatteras, NC -Modified framework procedure
Regulatory Amendment #6 (1994b)	05/22/95	PR: 60 FR 8620 FR: 60 FR 19683	-Established actions which applied only to EEZ off Atlantic coast of FL: Bag limits – 5 hogfish/person/day (recreational only), 2 cubera snapper/person/day > 30" TL; 12" TL – gray triggerfish
Notice of Control Date	04/23/97	62 FR 22995	-Anyone entering federal bsb pot fishery off S. Atlantic states after 04/23/97 was not assured of future access if limited entry program developed

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Amendment #8 (1997)	12/14/98	PR: 63 FR 1813 FR: 63 FR 38298	<ul style="list-style-type: none"> <li>-Established program to limit initial eligibility for snapper grouper fishery: Must demonstrate landings of any species in the snapper grouper (SG) FMU in 1993, 1994, 1995 or 1996; and have held valid SG permit between 02/11/96 and 02/11/97</li> <li>-Granted transferable permit with unlimited landings if vessel landed <math>\geq</math> 1,000 pounds (lb) of snapper grouper species in any of the years</li> <li>-Granted non-transferable permit with 225 lb trip limit to all other vessels</li> <li>-Modified problems, objectives, optimum yield (OY), and overfishing definitions</li> <li>-Expanded Council's habitat responsibility</li> <li>-Allowed retention of snapper grouper species in excess of bag limit on permitted vessel with a single bait net or cast nets on board</li> <li>-Allowed permitted vessels to possess filleted fish harvested in the Bahamas under certain conditions.</li> </ul>
Regulatory Amendment #7 (1998a)	01/29/99	PR: 63 FR 43656 FR: 63 FR 71793	-Established 10 SMZs at artificial reefs off South Carolina.
Interim Rule Request	1/16/98		-Council requested all Amendment 9 measures except black sea bass pot construction changes be implemented as an interim request under the Magnuson-Stevens Act
Action Suspended	5/14/98		-NMFS informed the Council that action on the interim rule request was suspended
Emergency Rule Request	9/24/98		-Council requested Amendment 9 be implemented via emergency rule
Request not Implemented	1/22/99		-NMFS informed the Council that the final rule for Amendment 9 would be effective 2/24/99; therefore they did not implement the emergency rule

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Amendment #9 (1998b)	2/24/99	PR: 63 FR 63276 FR: 64 FR 3624	<p>-Red porgy: 14" TL (recreational and commercial); 5 fish rec. bag limit; no harvest or possession &gt; bag limit, and no purchase or sale, in March and April</p> <p>-Black sea bass: 10" TL (recreational and commercial); 20 fish rec. bag limit; required escape vents and escape panels with degradable fasteners in bsb pots</p> <p>-Greater amberjack: 1 fish rec. bag limit; no harvest or possession &gt; bag limit, and no purchase or sale, during April; quota = 1,169,931 lb; began fishing year May 1; prohibited coring</p> <p>-Specified size limits for several snapper grouper species (indicated in parentheses in inches TL): including yellowtail snapper (12), mutton snapper (16), red snapper (20); red grouper, yellowfin grouper, yellowmouth grouper, and scamp (20)</p> <p>-Vermilion snapper: 11" TL (recreational), 12" TL commercial</p> <p>-Gag: 24" TL (recreational); no commercial harvest or possession &gt; bag limit, and no purchase or sale, during March and April</p> <p>-Black grouper: 24" TL (recreational and commercial); no harvest or possession &gt; bag limit, and no purchase or sale, during March and April</p> <p>-Gag and Black grouper: within 5 fish aggregate grouper bag limit, no more than 2 fish may be gag or black grouper (individually or in combination)</p> <p>-All snapper grouper without a bag limit: aggregate recreational bag limit 20 fish/person/day, excluding tomtate and blue runner</p> <p>-Vessels with longline gear aboard may only possess snowy, warsaw, yellowedge, and misty grouper, and golden, blueline and sand tilefish</p>
Amendment #9 (1998b) resubmitted	10/13/00	PR: 63 FR 63276 FR: 65 FR 55203	-Commercial trip limit for greater amberjack
Emergency Interim Rule	09/08/99, expired 08/28/00	64 FR 48324 and 65 FR 10040	-Prohibited harvest or possession of red porgy
Emergency Action	9/3/99	64 FR 48326	-Reopened the Amendment 8 permit application process
Amendment #10 (1998c)	07/14/00	PR: 64 FR 37082 and 64 FR 59152 FR: 65 FR 37292	-Identified essential fish habitat (EFH) and established habitat areas of particular concern (HAPC) for species in the snapper grouper FMU

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Amendment #11 (1998d)	12/02/99	PR: 64 FR 27952 FR: 64 FR 59126	<p>-Maximum sustainable yield (MSY) proxy: goliath and Nassau grouper = 40% static spawning potential ratio (SPR); all other species = 30% static SPR</p> <p>-OY: hermaphroditic groupers = 45% static SPR; goliath and Nassau grouper = 50% static SPR; all other species = 40% static SPR</p> <p>-Overfished/overfishing evaluations:  BSB: overfished (minimum stock size threshold (MSST)=3.72 mp, 1995 biomass=1.33 mp); undergoing overfishing (maximum fishing mortality threshold (MFMT)=0.72, F1991-1995=0.95)  Vermilion snapper: overfished (static SPR = 21-27%).  Red porgy: overfished (static SPR = 14-19%).  Red snapper: overfished (static SPR = 24-32%)  Gag: overfished (static SPR = 27%)  Scamp: no longer overfished (static SPR = 35%)  Speckled hind: overfished (static SPR = 8-13%)  Warsaw grouper: overfished (static SPR = 6-14%)  Snowy grouper: overfished (static SPR = 5-15%)  White grunt: no longer overfished (static SPR = 29-39%)  Golden tilefish: overfished (couldn't estimate static SPR)  Nassau grouper: overfished (couldn't estimate static SPR)  Goliath grouper: overfished (couldn't estimate static SPR)</p> <p>-overfishing level: goliath and Nassau grouper = <math>F &gt; F_{40\%}</math> static SPR; all other species: = <math>F &gt; F_{30\%}</math> static SPR  Approved definitions for overfished and overfishing.  <math>MSST = [(1-M) \text{ or } 0.5 \text{ whichever is greater}] * B_{MSY}</math>.  <math>MFMT = F_{MSY}</math></p>
Regulatory Amendment #8 (2000a)	11/15/00	PR: 65 FR 41041 FR: 65 FR 61114	-Established 12 SMZs at artificial reefs off Georgia; revised boundaries of 7 existing SMZs off Georgia to meet CG permit specs; restricted fishing in new and revised SMZs
Amendment #12 (2000b)	09/22/00	PR: 65 FR 35877 FR: 65 FR 51248	-Red porgy: MSY=4.38 mp; OY=45% static SPR; MFMT=0.43; MSST=7.34 mp; rebuilding timeframe=18 years (1999=year 1); no sale of red porgy during Jan-April; 1 fish bag limit; 50 lb. bycatch comm. trip limit May-December; modified management options and list of possible framework actions
Amendment #13A (2003)	04/26/04	PR: 68 FR 66069 FR: 69 FR 15731	-Extended for an indefinite period the regulation prohibiting fishing for and possessing snapper grouper spp. within the <i>Oculina</i> Experimental Closed Area
Notice of Control Date	10/14/05	70 FR 60058	-The Council is considering management measures to further limit participation or effort in the commercial fishery for snapper grouper species (excluding wreckfish)
Amendment #13C (2006)	10/23/06	PR: 71 FR 28841 FR: 71 FR 55096	<p>- End overfishing of snowy grouper, vermilion snapper, black sea bass, and golden tilefish. Increase allowable catch of red porgy. Year 1 = 2006.</p> <p>1. Snowy Grouper Commercial: Quota = 151,000 lb gutted</p>

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			<p>weight (gw) in year 1, 118,000 lb gw in year 2, and 84,000 lb gw in year 3 onwards. Trip limit = 275 lb gw in year 1, 175 lb gw in year 2, and 100 lb gw in year 3 onwards</p> <p>Recreational: Limit possession to one snowy grouper in 5 grouper per person/day aggregate bag limit.</p> <p>2. Golden Tilefish Commercial: Quota of 295,000 lb gw, 4,000 lb gw trip limit until 75% of the quota is taken when the trip limit is reduced to 300 lb gw. Do not adjust the trip limit downwards unless 75% is captured on or before September 1.</p> <p>Recreational: Limit possession to 1 golden tilefish in 5 grouper per person/day aggregate bag limit.</p> <p>3. Vermilion Snapper Commercial: Quota of 1,100,000 lb gw.</p> <p>Recreational: 12" TL size limit.</p> <p>4. Black Sea Bass Commercial: Commercial quota of 477,000 lb gw in year 1, 423,000 lb gw in year 2, and 309,000 lb gw in year 3 onwards. Require use of at least 2" mesh for the entire back panel of black sea bass pots effective 6 months after publication of the final rule. Require black sea bass pots be removed from the water when the quota is met. Change fishing year from calendar year to June 1 – May 31.</p> <p>Recreational: Recreational allocation of 633,000 lb gw in year 1, 560,000 lb gw in year 2, and 409,000 lb gw in year 3 onwards. Increase minimum size limit from 10" to 11" in year 1 and to 12" in year 2. Reduce recreational bag limit from 20 to 15 per person per day. Change fishing year from the calendar year to June 1 through May 31.</p> <p>5. Red Porgy Commercial and recreational:</p> <p>1. Retain 14" TL size limit and seasonal closure (retention limited to the bag limit);</p> <p>2. Specify a commercial quota of 127,000 lb gw and prohibit sale/purchase and prohibit harvest and/or possession beyond the bag limit when quota is taken and/or during January through April;</p> <p>3. Increase commercial trip limit from 50 lb ww to 120 red porgy (210 lb gw) during May through December;</p> <p>4. Increase recreational bag limit from one to three red porgy per person per day.</p>
Notice of Control Date	3/8/07	72 FR 60794	-The Council may consider measures to limit participation in the snapper grouper for-hire sector
Amendment #14 (2007)	2/12/09	PR: 73 FR 32281 FR: 74 FR 1621	-Establish eight deepwater Type II marine protected areas (MPAs) to protect a portion of the population and habitat of long-lived deepwater snapper grouper species
Amendment #15A (2008a)	3/14/08	73 FR 14942	- Establish rebuilding plans and status determination criteria for snowy grouper, black sea bass, and red porgy
Amendment #15B (2008b)	2/15/10	PR: 74 FR 30569 FR: 74 FR 58902	<p>-Prohibit the sale of bag-limit caught snapper grouper species</p> <p>-Reduce the effects of incidental hooking on sea turtles and smalltooth sawfish</p> <p>-Adjust commercial renewal periods and transferability</p>

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			requirements -Implement plan to monitor and assess bycatch -Establish reference points for golden tilefish -Establish allocations for snowy grouper (95% com & 5% rec) and red porgy (50% com & 50% rec)
Amendment #16 (SAFMC 2009a)	7/29/09	PR: 74 FR 6297 FR: 74 FR 30964	-Specify status determination criteria for gag and vermilion snapper -For gag: Specify interim allocations 51% com & 49% rec; rec & com shallow water grouper spawning closure January through April; directed com quota= 352,940 lb gw; -reduce 5-fish aggregate grouper bag limit, including tilefish species, to a 3-fish aggregate -Captain and crew on for-hire trips cannot retain the bag limit of vermilion snapper and species within the 3-fish grouper aggregate -For vermilion snapper: Specify interim allocations 68% com & 32% rec; directed com quota split Jan-June=315,523 lb gw and 302,523 lb gw July-Dec; reduce bag limit from 10 to 5 and a rec closed season November through March -Require dehooking tools
Amendment #19 (Comprehensive Ecosystem-Based Amendment 1; SAFMC 2009b)	7/22/10	PR: 75 FR 14548 FR: 75 FR 35330	-Provide presentation of spatial information for EFH and EFH-HAPC designations under the Snapper Grouper FMP - Designation of deepwater coral HAPCs
Amendment #17A (SAFMC 2010a)	12/3/10 red snapper closure; circle hooks March 3, 2011	PR: 75 FR 49447 FR: 75 FR 76874	-Required use of non-stainless steel circle hooks when fishing for snapper grouper species with hook-and-line gear north of 28 deg. N latitude in the South Atlantic EEZ -Specify an ACL and an AM for red snapper with management measures to reduce the probability that catches will exceed the stocks' ACL -Specify a rebuilding plan for red snapper -Specify status determination criteria for red snapper -Specify a monitoring program for red snapper
Emergency Rule	12/3/10	75 FR 76890	- Delay the effective date of the area closure for snapper grouper species implemented through Amendment 17A
Amendment #17B (SAFMC 2010b)	January 31, 2011	PR: 75 FR 62488 FR: 75 FR 82280	-Specify ACLs, ACTs, and AMs, where necessary, for 9 species undergoing overfishing -Modify management measures as needed to limit harvest to the ACL or ACT -Update the framework procedure for specification of total allowable catch -Prohibited harvest of 6 deepwater species seaward of 240 feet to curb bycatch of speckled hind and warsaw grouper
Notice of Control Date	12/4/08	74 FR 7849	-Establishes a control date for the golden tilefish portion of the snapper grouper fishery in the South Atlantic



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Notice of Control Date	12/4/08	74 FR 7849	-Establishes control date for black sea bass pot sector in the South Atlantic
Regulatory Amendment #10 (SAFMC 2010c)	5/31/11	PR: 76 FR 9530 FR: 76 FR 23728	-Eliminate closed area for snapper grouper species approved in Amendment 17A
Regulatory Amendment #9 (SAFMC 2011a)	Bag limit: 6/22/11 Trip limits: 7/15/11	PR: 76 FR 23930 FR: 76 FR 34892	- Establish trip limits for vermilion snapper and gag, increase trip limit for greater amberjack, and reduce bag limit for black sea bass
Regulatory Amendment #11 (2011b)	5/10/12	PR: 76 FR 78879 FR: 77 FR 27374	- Eliminate 240 ft harvest prohibition for six deepwater species
Amendment # 25 (Comprehensive ACL Amendment) (SAFMC 2011c)	4/16/12	PR: 76 FR 74757 Amended PR: 76 FR 82264 FR: 77 FR 15916	-Establish acceptable biological catch (ABC) control rules, establish ABCs, annual catch limits (ACLs), and accountability measures (AMs) for species not undergoing overfishing -Remove some species from South Atlantic FMU and designate others as ecosystem component species -Specify allocations between the commercial and, recreational sectors for species not undergoing overfishing -Limit the total mortality for federally managed species in the South Atlantic to the ACLs
Amendment #24 (SAFMC 2011d)	7/11/12	PR: 77 FR 19169 FR: 77 FR 34254	-Specify MSY, rebuilding plan (including ACLs, AMs, and OY), and allocations for red grouper
Amendment #23 (Comprehensive Ecosystem-based Amendment 2; SAFMC 2011e)	1/30/12	PR: 76 FR 69230 FR: 76 FR 82183	- Designate the Deepwater MPAs as EFH-HAPCs - Limit harvest of snapper grouper species in SC SMZs to the bag limit - Modify sea turtle release gear
Amendment #20B	TBD	TBD	-Update wreckfish ITQ according to reauthorized Magnuson-Stevens Act
Amendment #18A (SAFMC 2012a)	7/1/12	PR: 77 FR 16991 FR: 77FR3 2408	- Limit participation and effort in the black sea bass sector - Modifications to management of the black sea bass pot sector - Improve the accuracy, timing, and quantity of fisheries statistics
Amendment #20A (SAFMC 2012b)	10/26/12	PR: 77 FR 19165 FR: 77 FR 59129	-Redistribute latent shares for the wreckfish ITQ program.

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Regulatory Amendment #12 (SAFMC 2012c)	10/9/12	FR: 77 FR 61295	-Adjust the ACL and OY for golden tilefish -Consider specifying a commercial Annual Catch Target (ACT) -Revise recreational AMs for golden tilefish
Amendment #18B (SAFMC 2013a)	5/23/13	PR: 77 FR 75093 FR: 77 FR 23858	-Limit participation and effort in the golden tilefish commercial sector through establishment of a longline endorsement -Modify trip limits -Specify allocations for gear groups (longline and hook and line)
Amendment # 26 (Comprehensive Ecosystem-Based Amendment 3)	TBD	TBD	-Modify bycatch and discard reporting for commercial and for-hire vessels
Regulatory Amendment #13 (SAFMC 2013b)	7/17/13	PR: 78 FR 17336 FR: 78 FR 36113	-Revise the ABCs, ACLs (including sector ACLs), and ACTs implemented by the Comprehensive ACL Amendment (SAFMC 2011c). The revisions may prevent a disjunction between the established ACLs and the landings used to determine if AMs are triggered.
Regulatory Amendment #14	TBD	PR: 79 FR 22936	-Modify the fishing year for greater amberjack -Modify the fishing year for black sea bass -Revise the AMs for vermilion snapper and black sea bass -Modify the trip limit for gag
Regulatory Amendment #15 (SAFMC 2013c)	9/12/13	PR: 78 FR 31511 FR: 78 FR 49183	-Modify the existing specification of OY and ACL for yellowtail snapper in the South Atlantic -Modify the existing gag commercial ACL and AM for gag that requires a closure of all other shallow water groupers (black grouper, red grouper, scamp, red hind, rock hind, graysby, coney, yellowmouth grouper, and yellowfin grouper) in the South Atlantic when the gag commercial ACL is met or projected to be met
Regulatory Amendment #16	TBD	TBD	-Consider removal of the November-April prohibition on the use of black sea bass pots
Amendment #27	1/27/14	PR: 78 FR 78770 FR: 78 FR 57337	-Establish the South Atlantic Council as the responsible entity for managing Nassau grouper throughout its range including federal waters of the Gulf of Mexico -Modify the crew member limit on dual-permitted snapper grouper vessels -Modify the restriction on retention of bag limit quantities of some snapper grouper species by captain and crew of for-hire vessels -Minimize regulatory delay when adjustments to snapper grouper species' ABC, ACLs, and ACTs are needed as a

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			result of new stock assessments -Address harvest of blue runner by commercial fishermen who do not possess a South Atlantic Snapper Grouper Permit
Amendment #28 (SAFMC 2013d)	8/23/13	PR: 78 FR 25047 FR: 78 FR 44461	-Establish regulations to allow harvest of red snapper in the South Atlantic
Regulatory Amendment #18 (SAFMC 2013e)	9/5/13	PR: 78 FR 26740 FR: 78 FR 47574	-Adjust ACLs for vermilion snapper and red porgy, and remove the 4-month recreational closure for vermilion snapper
Regulatory Amendment #19 (SAFMC 2013f)	ACL: 9/23/13 Pot closure: 10/23/13	PR: 78 FR 39700 FR: 78 FR 58249	-Adjust the ACL for black sea bass and implement an annual closure on the use of black sea bass pots from November 1 to April 30
Emergency Rule	4/17/14	79 FR 21636	-Remove the blueline tilefish portion from the deep-water complex -Establish separate commercial and recreational ACLs and AMs for blueline tilefish.
Amendment #32	TBD	TBD	-Modify composition of the deep-water complex -MSY, ACLs, OY, recreational ACT, AMs, for blueline tilefish -Commercial management measures for blueline tilefish -Recreational management measures -Rebuilding plan for blueline tilefish
Amendment #29	TBD	TBD	-Update the ABC Control Rule -Establish ACLs for select un-assessed snapper-grouper species -Modify the minimum size limit for gray triggerfish -Establish a commercial split season for gray triggerfish -Establish a commercial trip limit for gray triggerfish
Regulatory Amendment #17	TBD	TBD	-Adjust or establish new MPAs to enhance protection of speckled hind and warsaw grouper
Amendment #22	TBD	TBD	-Establish a recreational tagging program for snapper grouper species with small ACLs

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Amendment #35	TBD	TBD	-Remove black snapper, dog snapper, mahogany snapper, & school master from the Snapper Grouper FMU
Amendment #36	TBD	TBD	-Spawning SMZs off NC, SC, GA, and FL
Regulatory Amendment 22	TBD	TBD	-Revise ACL and OY for gag -Revise ACL and OY for wreckfish
Amendment #33	TBD	TBD	-Require all snapper-grouper fillets being brought into the U.S. EEZ from the Bahamas to have skin on the entire fillets -Two fillets of snapper-grouper count as one fish, and a maximum of 40 fillets are allowed to be brought into the U.S. EEZ from the Bahamas

## Appendix F. Bycatch Practicability Analysis

Bycatch is defined as fish harvested in a fishery, but not sold or retained for personal use. This definition includes both economic and regulatory discards and excludes fish released alive under a recreational catch-and-release fishery management program. Economic discards are generally undesirable from a market perspective because of their species, size, sex, and/or other characteristics. Regulatory discards are fish required by regulation to be discarded, but also include fish that may be retained but not sold.

Agency guidance provided at 50 CFR 600.350(d)(3) identifies ten factors to consider in determining whether a management measure minimizes bycatch or bycatch mortality to the extent practicable. These are:

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

The Councils are encouraged to adhere to the precautionary approach outlined in Article 6.5 of the Food and Agriculture Organization of the United Nations Code of Conduct for Responsible Fisheries when uncertain about these factors.

If implemented, Amendment 7 to the Fishery Management Plan (FMP) for the Dolphin and Wahoo Fishery of the Atlantic (Dolphin Wahoo Amendment 7) and Amendment 33 to the FMP for the Snapper Grouper Fishery of the South Atlantic (Snapper Grouper Amendment 33) would allow recreational fishermen to bring dolphin and wahoo fillets and update regulations that currently allow recreational fishermen to bring snapper grouper fillets from the Commonwealth of The Bahamas (Bahamas) into the U.S. exclusive economic zone (EEZ). While in Bahamian waters, fishermen would be required to obtain the necessary Bahamian cruising and fishing permits and obey all Bahamian regulations. Wahoo would be exempt from the bag and possession limits in the U.S. EEZ if they were lawfully harvested in the Bahamas. Furthermore, the vessel possessing fillets of dolphin, wahoo, and snapper grouper species may not engage in any fishing, and must remain in a continuous transit until reaching a U.S. port. All fishing gear must be appropriately stowed, i.e., terminal gear (i.e., hook, leader, sinker, flasher, or bait) used with an automatic reel, bandit gear, buoy gear, handline, or rod and reel must be disconnected and stowed separately from such fishing gear. The vessel must also have stamped and dated passports to prove that the vessel passengers were in The Bahamas. Additionally, all fish harvested and filleted in Bahamian waters must have the skin intact on the entire fillet.

Since the actions in this amendment do not directly affect dolphin, wahoo, and snapper grouper species managed by the South Atlantic Fishery Management Council (South Atlantic Council), the reader is

referred to **Appendices E**, the BPAs for Amendment 5 to the Dolphin Wahoo FMP (SAFMC 2013a) and Regulatory Amendment 14 to the Snapper Grouper FMP (SAFMC 2013b), for details on the bycatch and bycatch mortality issues related to the dolphin, wahoo, and snapper grouper fisheries in the U.S. EEZ. A brief summary regarding the ten factors considered in this BPA is presented below.

Most dolphin and wahoo in the U.S. EEZ are taken with hook-and-line gear, with some harvest using pelagic longlines (SAFMC 2003). Landings for dolphin outnumber wahoo. Release mortality rates are unknown for most managed species, including dolphin and wahoo. It is likely that most mortality is a function of hooking and handling of the fish when the hook is being removed. However, sustainable seafood guides recommend dolphin harvested by hook-and-line gear in the U.S. as a “best choice” or “good alternative” since this gear has minimal bycatch issues (Blue Ocean 2010; Seafood Watch 2010). A small portion of dolphin is harvested using pelagic longlines, with sea turtles, sharks, and rays commonly caught as bycatch, but survival rates of hooked sea turtles was over 94% (Whoriskey et al. 2011). The dolphin and wahoo harvested in Bahamian waters would most likely be caught using hook-and-line gear. Fisheries resources (jurisdiction and conservation) regulations in The Bahamas are covered under Chapter 244-Section 19 of the Subsidiary Legislation of the Bahamas. The Bahamas allow for a total of 18 fish in any aggregation of king mackerel, tunas, dolphin, or wahoo. Filleting of dolphin and wahoo is not prohibited under Bahamian law. There are no size limits for dolphin or wahoo in the Bahamas. Foreign (e.g., U.S.) vessels are required to have a cruising and fishing permit onboard, otherwise the vessel has a possession limit of six fish. Additional information can be obtained from: [http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations\\_1.pdf](http://laws.bahamas.gov.bs/cms/images/LEGISLATION/SUBORDINATE/1986/1986-0010/FisheriesResourcesJurisdictionandConservationRegulations_1.pdf)

Prager (2000) conducted an assessment of dolphin and indicated the species can withstand a high level of exploitation. Prager (2000) stated the biomass of the U.S. stock of dolphin appeared to be higher than needed to produce the maximum sustainable yield, but the results were not conclusive. The 2013 Report to Congress (NMFS 2013) indicates dolphin are neither overfished nor undergoing overfishing. The overfished/overfishing status of wahoo is unknown; however, like dolphin they are not considered to be vulnerable to overfishing due to life history characteristics including rapid growth rates, early maturity, and batch spawning over an extended season (Oxenford 1999, Prager 2000, McBride et al. 2008, and Schwenke and Buckel 2008). Furthermore, dolphin and wahoo are listed as species of “least concern” under the International Union for Conservation of Nature Red List, i.e. species that have a low risk of extinction (IUCN 2013). A Southeast Data, Assessment, and Review stock assessment for dolphin and wahoo is scheduled within the next 5 years.

Dolphin and wahoo are pelagic and migratory, interacting with various combinations of species groups at different levels on a seasonal basis. Blue Ocean (2010) reported that the fishing method used to harvest dolphin in the Atlantic (hook-and-line gear) does little damage to physical or biogenic habitats, and that the habitat for this species remains robust and viable. Recreational fishers harvesting snapper grouper species in Bahamian waters would likely be species found in southeast Florida, including the Florida Keys, and are expected to be harvested using hook-and-line gear. Therefore, ecological effects due to changes in bycatch in this fishery are likely to remain very low if Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 is implemented.

Most of the 59 species in the snapper grouper fishery management unit, are taken with hook-and-line gear by both the commercial and recreational sectors. Bottom longline and hook-and-line gear are used for golden tilefish and black sea bass are predominantly taken with pots in the commercial sector; whereas,

hook and line gear is the predominant gear type used to capture black sea bass by the recreational sector. Release mortality rates are generally lower for snappers when compared with groupers. Recent assessments for snapper grouper species by the Southeast Fisheries Science Center's Southeast Data, Assessment, and Review (SEDAR) process include estimates of release mortality rates based on published studies. Stock assessment reports can be found at <http://www.sefsc.noaa.gov/sedar/>.

The dolphin wahoo fishery of the Atlantic is part of the Southeastern U.S. Atlantic, Gulf of Mexico, and Caribbean pelagic hook-and-line/harpoon fishery and the commercial hook-and-line components of the South Atlantic snapper grouper fishery (i.e., bottom longline, bandit gear, and handline) are both designated as Category III fisheries (79 FR 14418, March 14, 2014), because there have been no known documented interactions between these gear and marine mammals. The black sea bass pot component of the South Atlantic snapper grouper fishery is part of the Atlantic mixed species trap/pot fishery, a Category II fishery (79 FR 14418, March 14, 2014). The Atlantic mixed species trap/pot fishery designation was created in 2003 (68 FR 41725, July 15, 2003), by combining several separately listed trap/pot fisheries into a single group. This group was designated Category II as a precaution because of known interactions between marine mammals and gear similar to those included in this group. Prior to this consolidation, the black sea bass pot fishery in the South Atlantic was a part of the "U.S. Mid-Atlantic and Southeast U.S. Atlantic Black Sea Bass Trap/Pot" fishery (Category III). There has never been a documented interaction between marine mammals and black sea bass trap/pot gear in the South Atlantic. The actions in this EA are not expected to negatively impact the provisions of the MMPA.

The National Marine Fisheries Service (NMFS) completed a biological opinion on August 27, 2003, evaluating the impacts of the Atlantic dolphin wahoo fishery on Endangered Species Act (ESA)-listed species. NMFS evaluated the impacts of the snapper grouper fishery on Endangered Species Act (ESA)-listed species on June 7, 2006. Both opinions concluded the fishery would not affect ESA-listed marine mammals. The 2006 biological opinion also concluded that the snapper grouper fishery in the South Atlantic Region was not likely to jeopardize the continued existence of any ESA-listed sea turtles or the smalltooth sawfish. The roseate tern occurs within the action area. Roseate terns occur widely along the Atlantic coast during the summer but in the southeast region, they are found mainly off the Florida Keys (unpublished USFWS data). Interaction with dolphin, wahoo, and snapper grouper fisheries has not been reported as a concern for either of these species.

Therefore, regarding factors 1-4, as noted above, and in **Chapter 3** of Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33, the effects on bycatch and bycatch mortality on dolphin, wahoo, and snapper grouper species from this amendment are likely to be minimal.

The actions in Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33 are mostly administrative in nature and its implementation is not expected to significantly implicate factors 5-10 (see **Chapters 3** and **4** for details). Allowing fillets of dolphin and wahoo into the Atlantic EEZ from the Bahamas is not expected to have significant economic effects for the U.S. Atlantic dolphin wahoo fishery. Fillets of snapper grouper species have been authorized since 1998 (SAFMC 1998). Social effects are expected to be positive since this management measure could be beneficial to South Atlantic fishermen lawfully harvesting dolphin and wahoo in Bahamian waters, particularly for fishermen traveling between South Florida (and the Florida Keys) and the Bahamas.

References:

Blue Ocean Seafood Guide. 2010. Blue Ocean Institute. <<http://www.blueocean.org/seafood/seafood-guide>>

Chuenpagdee, R., L. E. Morgan, S. M. Maxwell, E. S. Norse, and D. Pauly. 2003. Shifting gears: assessing collateral impacts of fishing methods in US waters. *Front Ecol Environ* 1(10): 517-524.

IUCN, 2013. IUCN Red List of Threatened Species. <[www.iucnredlist.org](http://www.iucnredlist.org)>

McBride, R. S., A. K., Richardson, and K. L. Maki. (2008). Age, growth, and mortality of wahoo, *Acanthocybium solandri*, from the Atlantic coast of Florida and the Bahamas. *Marine and Freshwater Research* 59, 799–807. doi:10.1071/MF08021.

NMFS. 2013. Status of Stocks 2013 Annual Report to Congress on the Status of U.S. Fisheries. [http://www.nmfs.noaa.gov/sfa/fisheries\\_eco/status\\_of\\_fisheries/](http://www.nmfs.noaa.gov/sfa/fisheries_eco/status_of_fisheries/)

Oxenford, H. A. 1999. Biology of the dolphinfish (*Coryphaena hippurus*) in the western central Atlantic: a review. *Scientia Marina*. 63 (3-4): 277-301.

Prager, M. H. 2000. Exploratory Assessment of Dolphinfish, *Coryphaena hippurus*, based on U.S. landings from the Atlantic Ocean and Gulf of Mexico. NMFS, SEFSC 18pp.

SAFMC (South Atlantic Fishery Management Council). 1998. Amendment 8 to the Fishery Management Plan for the Snapper Grouper Fishery of the South Atlantic Region, Including a Final Supplemental Environmental Impact Statement, Regulatory Impact Review, Initial Flexibility Analysis, & Social Impact Assessment/Fishery Impact Statement. South Atlantic Fishery Management Council, 1 Southpark Circle, Suite 306, Charleston, South Carolina, 29407-4699. 126 pp plus appendices.

SAFMC (South Atlantic Fishery Management Council). 2003. Final Environmental Assessment, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for the Dolphin and Wahoo Fishery of the Atlantic. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699. 386 pp.

SAFMC (South Atlantic Fishery Management Council). 2013a. Final Environmental Assessment, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for Amendment 5 to the Dolphin and Wahoo Fishery of the Atlantic. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC (South Atlantic Fishery Management Council). 2013b. Final Environmental Assessment, Initial Regulatory Flexibility Analysis/Regulatory Impact Review, and Social Impact Assessment/Fishery Impact Statement for the Fishery Management Plan for Regulatory Amendment 14 to the Snapper Grouper Fishery of the South Atlantic. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

Schwenke, K. L., and J. A. Buckel. (2008). Age, growth, and reproduction of dolphinfish (*Coryphaena hippurus*) caught off the coast of North Carolina. *Fishery Bulletin* 106, 82–92.



Seafood Watch Program. 2010. Monterey Bay Aquarium. <[http://www.montereybayaquarium.org/cr/cr\\_seafoodwatch/sfw\\_recommendations.aspx](http://www.montereybayaquarium.org/cr/cr_seafoodwatch/sfw_recommendations.aspx)>

Whoriskey, S., R. Arauz, and J. K. Baum. 2011. Potential impacts of emerging mahi-mahi fisheries on sea turtle and elasmobranch bycatch species. *Biological Conservation* 144: 1841-1849

# Appendix J. Essential Fish Habitat and Move to Ecosystem Based Management

## South Atlantic Fishery Management Council Habitat Conservation, Ecosystem Coordination and Collaboration

The Council, using the Essential Fish Habitat Plan as the cornerstone, adopted a strategy to facilitate the move to an ecosystem-based approach to fisheries management in the region. This approach required a greater understanding of the South Atlantic ecosystem and the complex relationships among humans, marine life, and the environment including essential fish habitat. To accomplish this, a process was undertaken to facilitate the evolution of the Habitat Plan into a Fishery Ecosystem Plan (FEP), thereby providing a more comprehensive understanding of the biological, social, and economic impacts of management necessary to initiate the transition from single species management to ecosystem-based management in the region.

### Moving to Ecosystem-Based Management

The Council adopted broad goals for Ecosystem-Based Management to include maintaining or improving ecosystem structure and function; maintaining or improving economic, social, and cultural benefits from resources; and maintaining or improving biological, economic, and cultural diversity. Development of a regional FEP (SAFMC 2009a) provided an opportunity to expand the scope of the original Council Habitat Plan and compile and review available habitat, biological, social, and economic fishery and resource information for fisheries in the South Atlantic ecosystem. The South Atlantic Council views habitat conservation as the core of the move to EBM in the region. Therefore, development of the FEP was a natural next step in the evolution and expands and significantly updates the SAFMC Habitat Plan (SAFMC 1998a) incorporating comprehensive details of all managed species (SAFMC, South Atlantic States, ASMFC, and NOAA Fisheries Highly Migratory Species and Protected Species) including their biology, food web dynamics, and economic and social characteristics of the fisheries and habitats essential to their survival. The FEP therefore serves as a source document and presents more complete and detailed information describing the South Atlantic ecosystem and the impact of fisheries on the environment. This FEP updated information on designated Essential Fish Habitat (EFH) and EFH-Habitat Areas of Particular Concern; expanded descriptions of biology and status of managed species; presented information that will support ecosystem considerations for managed species; and described the social and economic characteristics of the fisheries in the region. In addition, it expanded the discussion and description of existing research programs and needs to identify biological, social, and economic research needed to fully address ecosystem-based management in the region. It is anticipated that the FEP will provide a greater degree of guidance by fishery, habitat, or major ecosystem consideration of bycatch reduction, prey-predator interactions, maintaining biodiversity, and spatial management needs. This FEP serves as a living source document of biological, economic, and social information for all Fishery Management Plans (FMP). Future Environmental Assessments and Environmental Impact Statements associated with subsequent amendments to Council FMPs will draw from or cite by reference the FEP.

The Fishery Ecosystem Plan for the South Atlantic Region encompasses the following volume structure:

FEP Volume I - Introduction and Overview of FEP for the South Atlantic Region

FEP Volume II - South Atlantic Habitats and Species

FEP Volume III - South Atlantic Human and Institutional Environment  
FEP Volume IV - Threats to South Atlantic Ecosystem and Recommendations  
FEP Volume V - South Atlantic Research Programs and Data Needs  
FEP Volume VI - References and Appendices

Comprehensive Ecosystem-Based Amendment (CE-BA) 1 (SAFMC 2009b) is supported by this FEP and updated EFH and EFH-HAPC information and addressed the Final EFH Rule (e.g., GIS presented for all EFH and EFH-HAPCs). Management actions implemented in CE-BA 1 established deepwater Coral HAPCs to protect what is thought to be the largest continuous distribution (>23,000 square miles) of pristine, deepwater coral ecosystems in the world.

The Fishery Ecosystem Plan, slated to be revised every 5 years, will again be the vehicle to update and refine information supporting designation and future review of EFH and EFH-HAPCs for managed species. Planning for the update is being conducted in cooperation with the Habitat Advisory Panel during the fall and winter of 2013 with initiation during 2014.

### **Ecosystem Approach to Deepwater Ecosystem Management**

The South Atlantic Council manages coral, coral reefs and live/hard bottom habitat, including deepwater corals, through the Fishery Management Plan for Coral, Coral Reefs and Live/Hard Bottom Habitat of the South Atlantic Region (Coral FMP). Mechanisms exist in the FMP, as amended, to further protect deepwater coral and live/hard bottom habitats. The SAFMC's Habitat and Environmental Protection Advisory Panel and Coral Advisory Panel have supported proactive efforts to identify and protect deepwater coral ecosystems in the South Atlantic region. Management actions in Comprehensive Ecosystem-Based Amendment (CE-BA 1) (SAFMC 2009b) established deepwater coral HAPCs (C-HAPCs) to protect what is thought to be the largest continuous distribution (>23,000 square miles) of pristine deepwater coral ecosystems in the world. In addition, CE-BA 1 established areas within the CHAPC, which provide for traditional fishing in limited areas, which do not impact deepwater coral habitat. CE-BA 1, supported by the FEP, also addressed non-regulatory updates for existing EFH and EFH-HAPC information and addressed the spatial requirements of the Final EFH Rule (i.e., GIS presented for all EFH and EFH-HAPCs). Actions in this amendment included modifications in the management of the following: octocorals; special management zones (SMZs) off the coast of South Carolina; and sea turtle release gear requirements for snapper grouper fishermen. The amendment also designated essential fish habitat (EFH) and EFH-Habitat Areas of Particular Concern (EFH-HAPCs).

CE-BA 2 established annual catch limits (ACL) for octocorals in the South Atlantic as well as modifying the Fishery Management Unit (FMU) for octocorals to remove octocorals off the coast of Florida from the FMU (SAFMC 2011). The amendment also limited the possession of managed species in the SMZs off South Carolina to the recreational bag limit for snapper grouper and coastal migratory pelagic species; modified sea turtle release gear requirements for the snapper grouper fishery based upon freeboard height of vessels; amends Council fishery management plans (FMPs) to designate or modify EFH and EFH-HAPCs, including the FMP for Pelagic Sargassum Habitat; amended the Coral FMP to designate EFH for deepwater Coral HAPCs designated under CE-BA 1; and amended the Snapper Grouper FMP to designate EFH-HAPCs for golden and blueline tilefish and the deepwater Marine Protected Areas. The final rule was published in the federal register on December 30, 2011, and regulations became effective on January 30, 2012.

## **Building from a Habitat to an Ecosystem Network to Support the Evolution**

Starting with our Habitat and Environmental Protection Advisory Panel, the Council expanded and fostered a comprehensive Habitat network in our region to develop the Habitat Plan of the South Atlantic Region completed in 1998 to support the EFH rule. Building on the core regional collaborations, the Council facilitated an expansion to a Habitat and Ecosystem network to support development of the FEP and CE-BA as well as coordinate with partners on other regional efforts.

### *Integrated Ocean Observing System (IOOS) and Southeast Coastal and Ocean Observing Regional Association (SECOORA)*

The Integrated Ocean Observing System (IOOS®) is a partnership among federal, regional, academic, and private sector parties that works to provide new tools and forecasts to improve safety, enhance the economy, and protect our environment. IOOS supplies critical information about our Nation's oceans, coasts, and Great Lakes. Scientists working to understand climate change, governments adapting to changes in the Arctic, municipalities monitoring local water quality, and industries affected by coastal and marine spatial planning all have the same need: reliable, timely, and sustained access to data and information that inform decision making. Improving access to key marine data and information supports several purposes. IOOS data sustain national defense, marine commerce, and navigation safety. Scientists use these data to issue weather, climate, and marine forecasts. IOOS data are also used to make decisions for energy siting and production, economic development, and ecosystem-based resource management. Emergency managers and health officials need IOOS information to make decisions about public safety. Teachers and government officials rely on IOOS data for public outreach, training, and education.

SECOORA is one of 11 Regional Associations established nationwide through the US Integrated Ocean Observing System (IOOS) whose primary source of funding is via US IOOS through a 5-year cooperative agreement titled Coordinated Monitoring, Prediction, and Assessment to Support Decision-Makers Needs for Coastal and Ocean Data and Tools, but was recently awarded funding via a NOAA Regional Ocean Partnership grant through the Governors' South Atlantic Alliance. SECOORA is the regional solution to integrating coastal and ocean observing data in the Southeast United States to inform decision makers and the general public. The SECOORA region encompasses 4 states, over 42 million people, and spans the coastal ocean from North Carolina to the west Coast of Florida and is creating customized products to address these thematic areas: Marine Operations; Coastal Hazards; Ecosystems, Water Quality, and Living Marine Resources; and Climate Change. The Council is a voting member and Council staff was recently re-elected to serve on the Board of Directors for the Southeast Coastal Regional Ocean Observing Association (SECOORA) to guide and direct priority needs for observation and modeling to support fisheries oceanography and integration into stock assessments through SEDAR. Cooperation through SECOORA is envisioned to facilitate the following:

- Refining current or water column designations of EFH and EFH-HAPCs (e.g., Gulf Stream and Florida Current).
- Providing oceanographic models linking benthic, pelagic habitats, and food webs.
- Providing oceanographic input parameters for ecosystem models.
- Integration of OOS information into Fish Stock Assessment process in the SA region.
- Facilitating OOS system collection of fish and fishery data and other research necessary to support the Council's use of area-based management tools in the SA Region including but not limited to EFH, EFH-HAPCs, Marine Protected Areas, Deepwater Coral Habitat Areas of Particular Concern, Special Management Zones, and Allowable Gear Areas.

- Integration of OOS program capabilities and research Needs into the South Atlantic Fishery Ecosystem Plan.
- Collaboration with SECOORA to integrate OOS products with information included in the Council's Habitat and Ecosystem Web Services and Atlas to facilitate model and tool development.
- Expanding Map Services and the Regional Habitat and Ecosystem Atlas in cooperation with SECOORAs Web Services that will provide researchers access to data or products including those collected/developed by SA OOS partners.

SECOORA researchers are developing a comprehensive data portal to provide discovery of, access to, and metadata about coastal ocean observations in the southeast US. Below are various ways to access the currently available data.

One project recently funded by SECOORA initiated development of species specific habitat models that integrate remotely sensed and in situ data to enhance stock assessments for species managed by the Council. The project during 2013/2014 was initiated to address red porgy, gray triggerfish, black seabass, and vermilion snapper. Gray triggerfish and red porgy are slated for assessment through SEDAR in 2014/15 and 2015/16 respectively.

#### *National Fish Habitat Plan and Southeast Aquatic Resource Partnership (SARP)*

In addition, the Council serves on the National Habitat Board and, as a member of the Southeast Aquatic Resource Partnership (SARP), has highlighted this collaboration by including the Southeast Aquatic Habitat Plan (SAHP) and associated watershed conservation restoration targets into the FEP. Many of the habitat, water quality, and water quantity conservation needs identified in the threats and recommendations Volume of the FEP are directly addressed by on-the-ground projects supported by SARP. This cooperation results in funding fish habitat restoration and conservation intended to increase the viability of fish populations and fishing opportunity, which also meets the needs to conserve and manage

Essential Fish Habitat for Council managed species or habitat important to their prey. To date, SARP has funded 53 projects in the region through this program. This work supports conservation objectives identified in the SAHP to improve, establish, or maintain riparian zones, water quality, watershed connectivity, sediment flows, bottoms and shorelines, and fish passage, and addresses other key factors associated with the loss and degradation of fish habitats. SARP also developed the Southern Instream Flow Network (SIFN) to address the impacts of flow alterations in the Southeastern US aquatic ecosystems which leverages policy, technical experience, and scientific resources among partners based in 15 states. Maintaining appropriate flow into South Atlantic estuarine systems to support healthy inshore habitats essential to Council managed species is a major regional concern and efforts of SARP through SIFN are envisioned to enhance state and local partners ability to maintain appropriate flow rates.

#### *Governor's South Atlantic Alliance (GSAA)*

Initially discussed as a South Atlantic Eco-regional Compact, the Council has also cooperated with South Atlantic States in the formation of a Governor's South Atlantic Alliance (GSAA). This will also provide regional guidance and resources that will address State and Council broader habitat and ecosystem conservation goals. The GSAA was initiated in 2006. An Executive Planning Team (EPT), by the end of 2007, had created a framework for the Governors South Atlantic Alliance. The formal agreement between the four states (NC, SC, GA, and FL) was executed in May 2009. The Agreement specifies that the Alliance will prepare a "Governors South Atlantic Alliance Action Plan" which will be reviewed

annually for progress and updated every five years for relevance of content. The Alliance's mission and purpose is to promote collaboration among the four states, and with the support and interaction of federal agencies, academe, regional organizations, non-governmental organizations, and the private sector, to sustain and enhance the region's coastal and marine resources. The Alliance proposes to regionally implement science-based actions and policies that balance coastal and marine ecosystems capacities to support both human and natural systems. The GSAA Action Plan was released in December 2010 and describes the four Priority Issue Areas that were identified by the Governors to be of mutual importance to the sustainability of the region's resources: Healthy Ecosystems; Working Waterfronts; Clean Coastal and Ocean Waters; and Disaster-Resilient Communities. The goals, objectives, actions, and implementation steps for each of these priorities were further described in the GSAA Implementation Plan released in July 2011. The final Action Plan was released on December 1, 2010 and marked the beginning of intensive work by the Alliance Issue Area Technical Teams (IATTs) to develop implementation steps for the actions and objectives. The GSAA Implementation Plan was published July 6, 2011, and the Alliance has been working to implement the Plan through the IATTs and two NOAA-funded Projects. The Alliance also partners with other federal agencies, academia, non-profits, private industry, regional organizations, and others. The Alliance supports both national and state-level ocean and coastal policy by coordinating federal, state, and local entities to ensure the sustainability of the region's economic, cultural, and natural resources. The Alliance has organized itself around the founding principles outlined in the GSAA Terms of Reference and detailed in the GSAA Business Plan. A team of natural resource managers, scientists, and information management system experts have partnered to develop a Regional Information Management System (RIMS) and recommend decision support tools that will support regional collaboration and decision-making. In addition to regional-level stakeholders, state and local coastal managers and decision makers will also be served by this project, which will enable ready access to new and existing data and information. The collection and synthesis of spatial data into a suite of visualization tools is a critical step for long-term collaborative planning in the South Atlantic region for a wide range of coastal uses. The Council's Atlas presents the spatial representations of Essential Fish Habitat, managed areas, regional fish and fish habitat distribution, and fishery operation information and it can be linked to or drawn on as a critical part of the collaboration with the RIMS.

#### *South Atlantic Landscape Conservation Cooperative*

One of the more recent collaborations is the Council's participation as Steering Committee member for the newly establish South Atlantic Landscape Conservation Cooperative (SALCC). Landscape Conservation Cooperatives (LCCs) are applied conservation science partnerships focused on a defined geographic area that informs on-the-ground strategic conservation efforts at landscape scales. LCC partners include DOI agencies, other federal agencies, states, tribes, non-governmental organizations, universities, and others. The newly formed Department of Interior Southeast Climate Services Center (CSC) has the LCCs in the region as their primary clients. One of the initial charges of the CSCs is to downscale climate models for use at finer scales.

The SALCC developed a Strategic Plan through an iterative process that began in December 2011. The plan provides a simple strategy for moving forward over the next few years. An operations plan was developed under direction from the SALCC Steering Committee to redouble efforts to develop version 1.0 of a shared conservation blueprint by spring-summer of 2014. The SALCC is developing the regional blueprint to address the rapid changes in the South Atlantic including but not limited to climate change, urban growth, and increasing human demands on resources which are reshaping the landscape. While these forces cut across political and jurisdictional boundaries, the conservation

community does not have a consistent cross-boundary, cross-organization plan for how to respond. The South Atlantic Conservation Blueprint will be that plan. The blueprint is envisioned to be a spatially-explicit map depicting the places and actions need to sustain South Atlantic LCC objectives in the face of future change. The steps to creating the blueprint include development of: indicators and targets (shared metrics of success); the State of the South Atlantic (past, present, and future condition of indicators); and a Conservation Blueprint. Potential ways the blueprint could be used include: finding the best places for people and organizations to work together; raising new money to implement conservation actions; guiding infrastructure development (highways, wind, urban growth, etc.); creating incentives as an alternative to regulation; bringing a landscape perspective to local adaptation efforts; and locating places and actions to build resilience after major disasters (hurricanes, oil spills, etc.). Integration of connectivity, function, and threats to river, estuarine and marine systems supporting Council managed species is supported by the SALCC and enhanced by the Council being a voting member of its Steering Committee.

In addition, the Council's Regional Atlas presents spatial representations of Essential Fish Habitat, managed areas, regional fish and fish habitat distribution, and fishery operation information and it be linked to or drawn on as a critical part of the collaboration with the recently developed SALCC Conservation Planning Atlas.

### **Building Tools to support EBM in the South Atlantic Region**

The Council has developed a Habitat and Ecosystem Section of the website <http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx> and, in cooperation with the Florida Wildlife Research Institute (FWRI), developed a Habitat and Ecosystem Internet Map Server (IMS). The IMS was developed to support Council and regional partners' efforts in the transition to EBM. Other regional partners include NMFS Habitat Conservation, South Atlantic States, local management authorities, other Federal partners, universities, conservation organizations, and recreational and commercial fishermen. As technology and spatial information needs evolved, the distribution and use of GIS demands greater capabilities. The Council has continued its collaboration with FWRI in the now evolution to Web Services provided through the regional SAFMC Habitat and Ecosystem Atlas ([http://ocean.floridamarine.org/safmc\\_atlas/](http://ocean.floridamarine.org/safmc_atlas/)) and the SAFMC Digital Dashboard ([http://ocean.floridamarine.org/safmc\\_dashboard/](http://ocean.floridamarine.org/safmc_dashboard/)). The Atlas integrates services for the following:

Species distribution and spatial presentation of regional fishery independent data from the SEAMAP-SA, MARMAP, and NOAA SEFIS systems; SAFMC Fisheries: ([http://ocean.floridamarine.org/SA\\_Fisheries/](http://ocean.floridamarine.org/SA_Fisheries/))

Essential Fish Habitat and Essential Fish Habitat Areas of Particular Concern; SAFMC EFH: ([http://ocean.floridamarine.org/sa\\_efh/](http://ocean.floridamarine.org/sa_efh/))

Spatial presentation of managed areas in the region; SAFMC Managed Areas: ([http://ocean.floridamarine.org/safmc\\_managedareas/](http://ocean.floridamarine.org/safmc_managedareas/))

An online life history and habitat information system supporting Council managed, State managed, and other regional species was developed in cooperation with FWRI. The Ecospecies system is considered dynamic and presents, as developed, detailed individual species life history reports and provides an interactive online query capability for all species included in the system: <http://atoll.floridamarine.org/EcoSpecies>

#### Web Services System Updates:

- Essential Fish Habitat (EFH) – displays EFH and EFH-HAPCS for SAFMC managed species and NOAA Fisheries Highly Migratory Species.
- Fisheries - displays Marine Resources Monitoring, Assessment, and Prediction (MARMAP) and Southeast Area Monitoring and Assessment Program South Atlantic (SEAMAP-SA) data.
- Managed Areas - displays a variety of regulatory boundaries (SAFMC and Federal) or management boundaries within the SAFMC’s jurisdiction.
- Habitat – displays habitat data collected by SEADESC, Harbor Branch Oceanographic Institute (HBOI), and Ocean Exploration dives, as well as the SEAMAP shallow and ESDIM deepwater bottom mapping projects, multibeam imagery, and scientific cruise data.
- Multibeam Bathymetry - displays a variety of multibeam data sources and scanned bathymetry charts.
- Nautical Charts – displays coastal, general, and overview nautical charts for the SAFMC’s jurisdictional area.

#### **Ecosystem Based Action, Future Challenges and Needs**

The Council has implemented ecosystem-based principles through several existing fishery management actions including establishment of deepwater Marine Protected Areas for the Snapper Grouper fishery, proactive harvest control rules on species (e.g., dolphin and wahoo) which are not overfished, implementing extensive gear area closures which in most cases eliminate the impact of fishing gear on Essential Fish Habitat, and use of other spatial management tools including Special Management Zones. Pursuant to development of the Comprehensive Ecosystem-Based Amendment, the Council has taken an ecosystem approach to protect deepwater ecosystems while providing for traditional fisheries for the Golden Crab and Royal Red shrimp in areas where they do not impact deepwater coral habitat. The stakeholder based process taps in on an extensive regional Habitat and Ecosystem network. Support tools facilitate Council deliberations and with the help of regional partners, are being refined to address long-term ecosystem management needs.

One of the greatest challenges to the long-term move to EBM in the region is funding high priority research, including but not limited to, comprehensive benthic mapping and ecosystem model and management tool development. In addition, collecting detailed information on fishing fleet dynamics including defining fishing operation areas by species, species complex, and season, as well as catch relative to habitat is critical for assessment of fishery, community, and habitat impacts and for Council use in place based management measures. Additional resources need to be dedicated to expand regional coordination of modeling, mapping, characterization of species use of habitats, and full funding of regional fishery independent surveys (e.g., MARMAP, SEAMAP, and SEFIS) which are linking directly to addressing high priority management needs. Development of ecosystem information systems to support Council management should build on existing tools (e.g., Regional Habitat and Ecosystem GIS and Arc Services) and provide resources to regional cooperating partners for expansion to address long-term Council needs.

The FEP and CE-BA 1 complement, but do not replace, existing FMPs. In addition, the FEP serves as a source document to the CE-BAs. NOAA should support and build on the regional coordination efforts of the Council as it transitions to a broader management approach. Resources need to be provided to collect information necessary to update and refine our FEP and support future fishery actions including but not limited to completing one of the highest priority needs to support EBM, the completion of mapping of near-shore, mid-shelf, shelf edge, and deepwater habitats in the South Atlantic region. In developing



future FEPs, the Council will draw on SAFEs (Stock Assessment and Fishery Evaluation reports) which NMFS is required to provide the Council for all FMPs implemented under the Magnuson-Stevens Act. The FEP, which has served as the source document for CE-BAs, could also meet some of the NMFS SAFE requirements if information is provided to the Council to update necessary sections.

## **EFH and EFH-HAPC Designations Translated to Cooperative Habitat Policy Development and Protection**

The Council actively comments on non-fishing projects or policies that may impact fish habitat.

**Appendix A** of the Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region (SAFMC 1998b) outlines the Council's comment and policy development process and the establishment of a four-state Habitat Advisory Panel. Members of the Habitat Advisory Panel serve as the Council's habitat contacts and professionals in the field. AP members bring projects to the Council's attention, draft comment letters, and attend public meetings. With guidance from the Advisory Panel, the Council has developed and approved policies on:

1. Energy exploration, development, transportation, and hydropower re-licensing;
2. Beach dredging and filling and large-scale coastal engineering;
3. Protection and enhancement of submerged aquatic vegetation;
4. Alterations to riverine, estuarine, and nearshore flows;
5. Marine aquaculture;
6. Marine Ecosystems and Non-Native and Invasive Species; and
7. Estuarine Ecosystems and Non-Native and Invasive Species.

NOAA Fisheries, State and other Federal agencies apply EFH and EFH-HAPC designations and protection policies in the day-to-day permit review process. The revision and updating of existing habitat policies and the development of new policies is being coordinated with core agency representatives on the Habitat and Coral Advisory Panels. Existing policies are included at the end of this Appendix.

The Habitat and Environmental Protection Advisory Panel, as part of their role in providing continued policy guidance to the Council, is during 2013/14, reviewing and proposing revisions and updates to the existing policy statements and developing new ones for Council consideration. The effort is intended to enhance the value of the statements and support cooperation and collaboration with NOAA Fisheries Habitat Conservation Division and State and Federal partners in better addressing the Congressional mandates to the Council associated with designation and conservation of EFH in the region.

## **South Atlantic Bight Ecopath Model**

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

The latest collaboration builds on the previous Ecopath model developed through the Sea Around Us project for the South Atlantic Bight with a focus on beginning a dialogue on the implications of potential changes in forage fish populations in the region that could be associated with environmental or climate change or changes in direct exploitation of those populations.

### **Essential Fish Habitat and Essential Fish Habitat Areas of Particular Concern**

Following is a summary of the current South Atlantic Council's EFH and EFH-HAPCs. Information supporting their designation was updated (pursuant to the EFH Final Rule) in the Council's Fishery Ecosystem Plan and Comprehensive Ecosystem Amendment:

#### **Snapper Grouper FMP**

Essential fish habitat for snapper grouper species 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 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 complex. EFH includes the spawning area in the water column above the adult habitat and the additional pelagic environment, including *Sargassum*, required for larval survival and growth up to and including settlement. In addition the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse snapper grouper larvae.

For specific life stages of estuarine dependent and nearshore snapper grouper species, essential fish habitat includes areas inshore of the 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.

Areas which meet the criteria for 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; nearshore hard bottom areas; The Point, The Ten Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump (South Carolina); mangrove habitat; seagrass habitat; oyster/shell habitat; all coastal inlets; all state-designated nursery habitats of particular importance to snapper grouper (e.g., Primary and Secondary Nursery Areas designated in North Carolina); pelagic and benthic *Sargassum*; Hoyt Hills for wreckfish; the *Oculina* Bank Habitat Area of Particular Concern; all hermatypic coral habitats and reefs; manganese outcroppings on the Blake Plateau; and Council-designated Artificial Reef Special Management Zones (SMZs). In addition, the Council through CEBA 2 (SAFMC 2011) designated the deepwater snapper grouper MPAs and golden tilefish and blueline tilefish habitat as EFH-HAPCs under the Snapper Grouper FMP as follows:

EFH-HAPCs for golden tilefish to include irregular bottom comprised of troughs and terraces intermingled with sand, mud, or shell hash bottom. Mud-clay bottoms in depths of 150-300 meters are HAPC. Golden tilefish are generally found in 80-540 meters, but most commonly found in 200-meter depths.

EFH-HAPC for blueline tilefish to include irregular bottom habitats along the shelf edge in 45-65 meters depth; shelf break or upper slope along the 100-fathom contour (150-225 meters); hardbottom habitats characterized as rock overhangs, rock outcrops, manganese-phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston

Lumps) off Georgetown, SC.

EFH-HAPCs for the snapper grouper complex to include the following deepwater Marine Protected Areas (MPAs) as designated in Snapper Grouper Amendment 14: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

Deepwater Coral HAPCs designated in Comprehensive Ecosystem-Based Amendment 1 are designated as Snapper Grouper EFH-HAPCs: Cape Lookout Coral HAPC, Cape Fear Coral HAPC, Blake Ridge Diapir Coral HAPC, Stetson-Miami Terrace Coral HAPC, and Pourtalés Terrace Coral HAPC.

### **Shrimp FMP**

For penaeid shrimp, Essential Fish Habitat includes inshore estuarine nursery areas, offshore marine habitats used for spawning and growth to maturity, and all interconnecting water bodies as described in the Habitat Plan. Inshore nursery areas include tidal freshwater (palustrine), estuarine, and marine emergent wetlands (e.g., intertidal marshes); tidal palustrine forested areas; mangroves; tidal freshwater, estuarine, and marine submerged aquatic vegetation (e.g., seagrass); and subtidal and intertidal non-vegetated flats. This applies from North Carolina through the Florida Keys.

For rock shrimp, essential fish habitat consists of offshore terrigenous and biogenic sand bottom habitats from 18 to 182 meters in depth with highest concentrations occurring between 34 and 55 meters. This applies for all areas from North Carolina through the Florida Keys. Essential fish habitat includes the shelf current systems near Cape Canaveral, Florida, which provide major transport mechanisms affecting planktonic larval rock shrimp. These currents keep larvae on the Florida Shelf and may transport them inshore in spring. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse rock shrimp larvae.

Essential fish habitat for royal red shrimp include the upper regions of the continental slope from 180 meters (590 feet) to about 730 meters (2,395 feet), with concentrations found at depths of between 250 meters (820 feet) and 475 meters (1,558 feet) over blue/black mud, sand, muddy sand, or white calcareous mud. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse royal red shrimp larvae.

Areas which meet the criteria for EFH-HAPCs for penaeid shrimp include all coastal inlets, all state-designated nursery habitats of particular importance to shrimp (for example, in North Carolina this would include all Primary Nursery Areas and all Secondary Nursery Areas), and state-identified overwintering areas.

### **Coastal Migratory Pelagics FMP**

Essential fish habitat for coastal migratory pelagic species includes sandy shoals of capes and offshore bars, high profile rocky bottom, and barrier island ocean-side waters, from the surf to the shelf break zone, but from the Gulf Stream shoreward, including *Sargassum*. In addition, all coastal inlets and all state-designated nursery habitats of particular importance to coastal migratory pelagics (for example, in North Carolina this would include all Primary Nursery Areas and all Secondary Nursery Areas).

For Cobia essential fish habitat also includes high salinity bays, estuaries, and seagrass habitat. In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse coastal migratory pelagic larvae.

For king and Spanish mackerel and cobia essential fish habitat occurs in the South Atlantic and Mid-Atlantic Bights.

Areas which meet the criteria for EFH-HAPCs include sandy shoals of Capes Lookout, Cape Fear, and Cape Hatteras from shore to the ends of the respective shoals, but shoreward of the Gulf stream; The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and Hurl Rocks (South Carolina); The Point off Jupiter Inlet (Florida); *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; nearshore hard bottom south of Cape Canaveral; The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The “Wall” off of the Florida Keys; Pelagic *Sargassum*; and Atlantic coast estuaries with high numbers of Spanish mackerel and cobia based on abundance data from the ELMR Program. Estuaries meeting this criteria for Spanish mackerel include Bogue Sound and New River, North Carolina; Bogue Sound, North Carolina (Adults May-September salinity >30 ppt); and New River, North Carolina (Adults May-October salinity >30 ppt). For Cobia they include Broad River, South Carolina; and Broad River, South Carolina (Adults & juveniles May-July salinity >25ppt).

### **Golden Crab FMP**

Essential fish habitat for golden crab includes the U.S. Continental Shelf from Chesapeake Bay south through the Florida Straits (and into the Gulf of Mexico). In addition, the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse golden crab larvae. The detailed description of seven essential fish habitat types (a flat foraminiferan ooze habitat; distinct mounds, primarily of dead coral; ripple habitat; dunes; black pebble habitat; low outcrop; and soft-bioturbated habitat) for golden crab is provided in Wenner et al. (1987). There is insufficient knowledge of the biology of golden crabs to identify spawning and nursery areas and to identify HAPCs at this time. As information becomes available, the Council will evaluate such data and identify HAPCs as appropriate through the framework.

### **Spiny Lobster FMP**

Essential fish habitat for spiny lobster includes nearshore shelf/oceanic waters; shallow subtidal bottom; seagrass habitat; unconsolidated bottom (soft sediments); coral and live/hard bottom habitat; sponges; algal communities (*Laurencia*); and mangrove habitat (prop roots). In addition the Gulf Stream is an essential fish habitat because it provides a mechanism to disperse spiny lobster larvae.

Areas which meet the criteria for EFH-HAPCs for spiny lobster include Florida Bay, Biscayne Bay, Card Sound, and coral/hard bottom habitat from Jupiter Inlet, Florida through the Dry Tortugas, Florida.

### **Coral, Coral Reefs, and Live/Hard Bottom Habitats FMP**

Essential fish habitat for corals (stony corals, octocorals, and black corals) incorporate habitat for over 200 species. EFH for corals include the following:

- A. Essential fish habitat for hermatypic stony corals includes rough, hard, exposed, stable substrate from Palm Beach County south through the Florida reef tract in subtidal waters to 30 m depth;

subtropical (15°-35° C), oligotrophic waters with high (30-35‰) salinity and turbidity levels sufficiently low enough to provide algal symbionts adequate sunlight penetration for photosynthesis. Ahermatypic stony corals are not light restricted and their essential fish habitat includes defined hard substrate in subtidal to outer shelf depths throughout the management area.

- B. Essential fish habitat for *Antipatharia* (black corals) includes rough, hard, exposed, stable substrate, offshore in high (30-35‰) salinity waters in depths exceeding 18 meters (54 feet), not restricted by light penetration on the outer shelf throughout the management area.
- C. Essential fish habitat for octocorals excepting the order Pennatulacea (sea pens and sea pansies) includes rough, hard, exposed, stable substrate in subtidal to outer shelf depths within a wide range of salinity and light penetration throughout the management area.
- D. Essential fish habitat for Pennatulacea (sea pens and sea pansies) includes muddy, silty bottoms in subtidal to outer shelf depths within a wide range of salinity and light penetration.

Areas which meet the criteria for EFH-HAPCs for coral, coral reefs, and live/hard bottom include: The 10-Fathom Ledge, Big Rock, and The Point (North Carolina); Hurl Rocks and The Charleston Bump (South Carolina); Gray's Reef National Marine Sanctuary (Georgia); The *Phragmatopoma* (worm reefs) reefs off the central east coast of Florida; Oculina Banks off the east coast of Florida from Ft. Pierce to Cape Canaveral; nearshore (0-4 meters; 0-12 feet) hard bottom off the east coast of Florida from Cape Canaveral to Broward County); offshore (5-30 meter; 15-90 feet) hard bottom off the east coast of Florida from Palm Beach County to Fowey Rocks; Biscayne Bay, Florida; Biscayne National Park, Florida; and the Florida Keys National Marine Sanctuary. In addition, the Council through CEBA 2 (SAFMC 2011) designated the Deepwater Coral HAPCs as EFH-HAPCs under the Coral FMP as follows:

Deepwater Coral HAPCs designated in Comprehensive Ecosystem-Based Amendment 1 as Snapper Grouper EFH-HAPCs: Cape Lookout Coral HAPC, Cape Fear Coral HAPC, Blake Ridge Diapir Coral HAPC, Stetson-Miami Terrace Coral HAPC, and Pourtalés Terrace Coral HAPC.

### **Dolphin and Wahoo FMP**

EFH for dolphin and wahoo is the Gulf Stream, Charleston Gyre, Florida Current, and pelagic *Sargassum*. This EFH definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council's Comprehensive Habitat Amendment (SAFMC 1998b) (dolphin was included within the Coastal Migratory Pelagics FMP at that time).

Areas which meet the criteria for EFH-HAPCs for dolphin and wahoo in the Atlantic include The Point, The Ten-Fathom Ledge, and Big Rock (North Carolina); The Charleston Bump and The Georgetown Hole (South Carolina); The Point off Jupiter Inlet (Florida); The Hump off Islamorada, Florida; The Marathon Hump off Marathon, Florida; The "Wall" off of the Florida Keys; and Pelagic *Sargassum*. This EFH-HAPC definition for dolphin was approved by the Secretary of Commerce on June 3, 1999 as a part of the South Atlantic Council's Comprehensive Habitat Amendment (dolphin was included within the Coastal Migratory Pelagics FMP at that time).

### **Pelagic *Sargassum* Habitat FMP**

The Council through CEBA 2 (SAFMC 2011) designated the top 10 meters of the water column in the South Atlantic EEZ bounded by the Gulfstream, as EFH for pelagic *Sargassum*.

### **Actions Implemented That Protect EFH and EFH-HAPCs**

#### **Snapper Grouper FMP**

- Prohibited the use of the following gears to protect habitat: bottom longlines in the EEZ inside of 50 fathoms or anywhere south of St. Lucie Inlet, Florida; bottom longlines in the wreckfish fishery; fish traps; bottom tending (roller- rig) trawls on live bottom habitat; and entanglement gear.
- Established the *Oculina* Experimental Closed Area where the harvest or possession of all species in the snapper grouper complex is prohibited.
- Established deepwater Marine Protected Areas (MPAs) as designated in Snapper Grouper Amendment 14: Snowy Grouper Wreck MPA, Northern South Carolina MPA, Edisto MPA, Charleston Deep Artificial Reef MPA, Georgia MPA, North Florida MPA, St. Lucie Hump MPA, and East Hump MPA.

#### **Shrimp FMP**

- Prohibition of rock shrimp trawling in a designated area around the *Oculina* Bank,
- Mandatory use of bycatch reduction devices in the penaeid shrimp fishery,
- Mandatory Vessel Monitoring System (VMS) in the Rock Shrimp Fishery.
- A mechanism that provides for the concurrent closure of the EEZ to penaeid shrimping if environmental conditions in state waters are such that the overwintering spawning stock is severely depleted.

### **Pelagic *Sargassum* Habitat FMP**

- Prohibited all harvest and possession of *Sargassum* from the South Atlantic EEZ south of the latitude line representing the North Carolina/South Carolina border (34° North Latitude).
- Prohibited all harvest of *Sargassum* from the South Atlantic EEZ within 100 miles of shore between the 34° North Latitude line and the Latitude line representing the North Carolina/Virginia border.
- Harvest of *Sargassum* from the South Atlantic EEZ is limited to the months of November through June.
- Established an annual Total Allowable Catch (TAC) of 5,000 pounds landed wet weight.
- Required that an official observer be present on each *Sargassum* harvesting trip. Require that nets used to harvest *Sargassum* be constructed of four inch stretch mesh or larger fitted to a frame no larger than 4 feet by 6 feet.

### **Coastal Migratory Pelagics FMP**

- Prohibited of the use of drift gillnets in the coastal migratory pelagic fishery.

### **Golden Crab FMP**

- In the northern zone, golden crab traps can only be deployed in waters deeper than 900 feet; in the

middle and southern zones traps can only be deployed in waters deeper than 700 feet.

Northern zone - north of the 28°N. latitude to the North Carolina/Virginia border;

Middle zone - 28°N. latitude to 25° N. latitude; and

Southern zone - south of 25°N. latitude to the border between the South Atlantic and Gulf of Mexico Fishery Management Councils.

### **Coral, Coral Reefs and Live/Hard Bottom FMP**

- Established an optimum yield of zero and prohibiting all harvest or possession of these resources which serve as essential fish habitat to many managed species.
- Designated the *Oculina* Bank Habitat Area of Particular Concern.
- Expanded the *Oculina* Bank Habitat Area of Particular Concern (HAPC) to an area bounded to the west by 80°W. longitude, to the north by 28°30' N. latitude, to the south by 27°30' N. latitude, and to the east by the 100 fathom (600 feet) depth contour.
- Established the following two Satellite *Oculina* HAPCs: (1) Satellite *Oculina* HAPC #1 is bounded on the north by 28°30'N. latitude, on the south by 28°29'N. latitude, on the east by 80°W. longitude, and on the west by 80°3'W. longitude; and (2) Satellite *Oculina* HAPC #2 is bounded on the north by 28°17'N. latitude, on the south by 28°16'N. latitude, on the east by 80°W. longitude, and on the west by 80°3'W. longitude.
- Prohibited the use of all bottom tending fishing gear and fishing vessels from anchoring or using grapples in the *Oculina* Bank HAPC.
- Established a framework procedure to modify or establish Coral HAPCs.
- Established the following five deepwater CHAPCs:
  - Cape Lookout Lophelia Banks CHAPC;
  - Cape Fear Lophelia Banks CHAPC;
  - Stetson Reefs, Savannah and East Florida Lithoherms, and Miami Terrace (Stetson-Miami Terrace) CHAPC;
  - Pourtales Terrace CHAPC; and
  - Blake Ridge Diapir Methane Seep CHAPC.
- Within the deepwater CHAPCs, the possession of coral species and the use of all bottom damaging gear are prohibited including bottom longline, trawl (bottom and mid-water), dredge, pot or trap, or the use of an anchor, anchor and chain, or grapple and chain by all fishing vessels.

## **South Atlantic Council Policies for Protection and Restoration of Essential Fish Habitat**

### **SAFMC Habitat and Environmental Protection Policy**

In recognizing that species are dependent on the quantity and quality of their essential habitats, it is the policy of the SAFMC to protect, restore, and develop habitats upon which fisheries species depend; to increase the extent of their distribution and abundance; and to improve their productive capacity for the benefit of present and future generations. For purposes of this policy, “habitat” is defined as the physical, chemical, and biological parameters that are necessary for continued productivity of the species that is being managed. The objectives of the SAFMC policy will be accomplished through the recommendation of no net loss or significant environmental degradation of existing habitat. A long-term objective is to support and promote a net-gain of fisheries habitat through the restoration and rehabilitation of the productive capacity of habitats that have been degraded, and the creation and development of productive habitats where increased fishery production is probable. The SAFMC will pursue these goals at state, Federal, and local levels. The Council shall assume an aggressive role in the protection and enhancement of habitats important to fishery species, and shall actively enter Federal, decision making processes where proposed actions may otherwise compromise the productivity of fishery resources of concern to the Council.

### **SAFMC EFH Policy Statements**

In addition to implementing regulations to protect habitat from fishing related degradation, the Council in cooperation with NOAA Fisheries, actively comments on non-fishing projects or policies that may impact fish habitat. The Council adopted a habitat policy and procedure document that established a four-state Habitat Advisory Panel and adopted a comment and policy development process. Members of the Habitat Advisory Panel serve as the Council’s habitat contacts and professionals in the field. With guidance from the Advisory Panel, the Council has developed and approved a number of habitat policy statements which are available on the Habitat and Ecosystem section of the Council website (<http://www.safmc.net/ecosystem/Home/EcosystemHome/tabid/435/Default.aspx> ).

### **References:**

SAFMC (South Atlantic Fishery Management Council). 1998a. Habitat Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Ste 306, Charleston, S.C. 29407-4699.

SAFMC (South Atlantic Fishery Management Council). 1998b. Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans of the South Atlantic Region. South Atlantic Fishery Management Council, 1 Southpark Cir., Suite 306, Charleston, S.C. 29407-4699.

SAFMC (South Atlantic Fishery Management Council). 2009a. Fishery Ecosystem Plan for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place, Ste 201, North Charleston, S.C. 29405.

SAFMC (South Atlantic Fishery Management Council). 2009b. Comprehensive Ecosystem-Based Amendment 1 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.



SAFMC (South Atlantic Fishery Management Council). 2011. Comprehensive Ecosystem-Based Amendment 2 for the South Atlantic Region. South Atlantic Fishery Management Council, 4055 Faber Place Drive, Suite 201; North Charleston, SC 29405.

Wenner, E. L., G. F. Ulrich, and J. B. Wise. 1987. Exploration for golden crab, *Geryon fenneri*, in the south Atlantic Bight: distribution, population structure, and gear assessment. *Fishery Bulletin* 85:547-560.