

ANNOTATED STRUCTURE OF VOLUMES 1-5 OF THE DRAFT FISHERY ECOSYSTEM PLAN

February 2008

VOLUME I: INTRODUCTION AND OVERVIEW OF THE SOUTH ATLANTIC ECOSYSTEM

1.0 Historical overview of activities to support ecosystem management

1.1 Habitat protection and ecosystem management responsibilities as defined in the Magnuson-Stevens Fishery Conservation and Management Act

1.2 Fishery Ecosystem Plan and Comprehensive Fishery Ecosystem Plan Amendment development process

1.3 Ecosystem management goals

Maintaining/improving ecosystem structure and function

Maintaining/improving economic, social and cultural benefits from resources

Maintaining/improving biological, economic and cultural diversity

2.0 Overview of the South Atlantic Ecosystem

2.1 Geographic boundaries

2.2 Climate and weather

STATUS: Refers to Section 9 developed in cooperation with SECOORA partners.

2.3 Food web and habitat

2.4 Current approaches to management of fisheries in the South Atlantic

2.4.1 Traditional approaches

2.4.1.1 Area-based management

STATUS: Section on MPAs from Amendment 14 and Oculina Section on SMZs under development

2.4.1.2 Rights-based systems

STATUS: Current section from FAO document "Use of Property Rights in Fisheries Management" and SAFMC information on Wreckfish ITQ and LAPPs

VOLUME II: DESCRIPTION OF SOUTH ATLANTIC HABITATS AND SPECIES

3.0 Description and Distribution of Habitats Comprising the South Atlantic Ecosystem

3.1 Freshwater systems

3.1.1 Riverine and Freshwater Wetlands System - COMPLETE
Description and Distribution
Ecological Role and Function
Species composition and community structure
Riverine and Freshwater Wetlands as Essential Fish Habitat

3.1.2 Submersed Rooted Vascular (aquatic bed-oligohaline, tidal fresh and freshwater)
Description and Distribution
Ecological Role and Function
Species composition and community structure
Submersed Rooted Vascular as Essential Fish Habitat

STATUS: The writing team updated and expanded the Habitat Plan section. It is currently undergoing a second round of review.

3.2 Estuarine/inshore systems

3.2.1 Estuarine Emergent (salt marsh and brackish marsh) - COMPLETE
Description and Distribution
Ecological Role and Function
Species composition and community structure
Marshes as Essential Fish Habitat

3.2.2 Estuarine Shrub/Scrub (Mangroves) - COMPLETE
Description and Distribution
Ecological Role and Function
Species composition and community structure
Mangroves as Essential Fish Habitat

3.2.3 Seagrasses - COMPLETE
Description and Distribution
Ecological Role and Function
Species composition and community structure
Seagrass as Essential Fish Habitat

3.2.4 Oyster Reefs and Shell Banks - COMPLETE
Description and Distribution
Ecological Role and Function
Species composition and community structure
Oyster Reefs and Shell Banks as Essential Fish Habitat

3.2.5 Intertidal Flats

Description and Distribution

Ecological Role and Function

Species composition and community structure

Intertidal Flats as Essential Fish Habitat

STATUS: This section has not been reviewed. Some subsections need to be finalized.

3.2.6 Estuarine Water Column

Description and Distribution

Ecological Role and Function

Species composition and community structure

Estuarine Water Column as Essential Fish Habitat

STATUS: Current material from the NCCHPP. Has not been reviewed. Some subsections need to be finalized.

3.2.7 Soft Bottom/Subtidal

Description and Distribution

Ecological Role and Function

Species composition and community structure

Soft Bottom/Subtidal as Essential Fish Habitat

STATUS: Current material from the NCCHPP. Has not been reviewed. Some subsections need to be finalized.

3.3 Marine/offshore systems

3.3.1 Coral, Coral Reefs and Live/Hardbottom Habitat

3.3.1.1 Coral and Coral Reefs

3.3.1.2 Live/Hardbottom Habitat

3.3.1.3 Deepwater coral habitat

3.3.1.4 Artificial Reefs

STATUS: Section on Coral and Coral Reefs needs revision for area north of Cape Canaveral. Live/Hardbottom and Deepwater Coral sections complete. Artificial Reefs section needs revision.

3.3.2 Sargassum Habitat

Description and distribution

Ecological role and function

Species composition and community structure

Sargassum as Essential Fish Habitat

STATUS: Current material from the Sargassum and Dolphin Wahoo FMPs. Has not been reviewed or updated. Some subsections need to be finalized. NOTE: S. Ross (UNCW) will provide most recent characterization based on his research.

3.3.3 Marine Water Column - COMPLETE

Description and distribution

Ecological role and function

Species composition and community structure

Marine water column as Essential Fish Habitat

3.3.4 Marine Soft Bottom

Description and distribution

Ecological role and function

Species composition and community structure

Marine Soft Bottom as Essential Fish Habitat

STATUS: Current material from the NCCHPP. Some subsections need to be finalized.

4.0 Species' Biology, Distribution and Status

4.1 Species under Management by the South Atlantic Council

4.1.1 Penaeid and Deepwater Shrimp

4.1.1.1 Penaeid Shrimp - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

4.1.1.2 Deepwater Shrimp - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

4.1.2 Snapper Grouper Complex - COMPLETE

Species Descriptions

Habitat

Abundance and status of stocks

4.1.3 Coastal Migratory Pelagics

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships
Abundance and status of stocks

STATUS: Current material from draft CMP Amendment 18 and species pages on the Florida Museum of Natural History website. Needs revision.

4.1.4 Golden Crab - COMPLETE

Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.1.5 Spiny Lobster - COMPLETE

Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.1.6 Coral and Coral Communities

4.1.6.1 Shallow-water corals

Description and distribution
Reproduction
Development and growth
Ecological relationships
Abundance and status of stocks

STATUS: Needs revision for areas north of Cape Canaveral.

4.1.6.2 Live hard bottom species -COMPLETE

Description and distribution
Reproduction
Development and growth
Ecological relationships
Abundance and status of stocks

4.1.6.3 Deepwater corals - COMPLETE

Description and distribution
Reproduction
Development and growth
Ecological relationships
Abundance and status of stocks

4.1.7 Sargassum

Description and Distribution

Reproduction
Development and growth
Ecological relationships
Abundance and status of stocks

STATUS: Current material from the Sargassum FMP. Some sections need to be finalized.

4.1.8 Dolphin and Wahoo - COMPLETE
Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.1.9 Calico Scallops - COMPLETE
Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.2 Other Managed Species in the South Atlantic

4.2.1 Atlantic Menhaden - COMPLETE
Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.2.2 Striped Bass - COMPLETE
Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.2.3 Alewife
Description and Distribution
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

STATUS: From draft ASMFC document (J. Thomas will provide final version for incorporation when complete).

4.2.4 American Shad

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: From draft ASMFC document (J. Thomas will provide final version for incorporation when complete).

4.2.5 Atlantic Sturgeon - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

4.2.6 Blueback Herring

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: From draft ASMFC document (J. Thomas will provide final version for incorporation when complete).

4.2.7 Hickory Shad

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: From draft ASMFC document (J. Thomas will provide final version for incorporation when complete).

4.2.8 American eel

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: From draft ASMFC document (J. Thomas will provide final version for incorporation when complete).

4.2.9 Red Drum

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: Complete except for movement/migration information from Florida.

4.2.10 Weakfish - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

4.2.11 Atlantic Croaker

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: Complete except for Ecological Relationships section.

4.2.12 Spot

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

STATUS: Complete except for section on Reproduction.

4.2.13 Summer Flounder - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

4.2.14 Bluefish - COMPLETE

Description and Distribution

Reproduction

Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.2.15 Horseshoe Crab - COMPLETE

Description and Distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks

4.2.16 Highly Migratory Pelagics -COMPLETE

Tunas
Swordfish
Billfish
Atlantic Sharks

4.3 Protected Species

4.3.1 Marine Mammals

Marine Mammals Considered Rare in the South Atlantic Region
Marine Mammals Common to South Atlantic Region or with Additional
ESA Protection

*STATUS: Complete except for section on migration patterns of dolphins.
A. Herndon is reviewing.*

4.3.2 Sea Turtles

Description and distribution
Reproduction
Development, growth and movement patterns
Ecological relationships
Abundance and status of stocks
Listing designations
Critical Habitat Designations

STATUS: Complete except for section on Reproduction.

4.3.3 Birds - COMPLETE

Open Ocean Species
Coastal, Shelf, Beach and Dune Species
Shorebirds
Waterfowl
Estuarine and Coastal Wetland Species
Wading Birds
Abundance and status of stocks

4.3.4 Marine Fish

4.3.4.1 Smalltooth sawfish - COMPLETE

Description and distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

Listing designations

Critical Habitat Designations

4.3.4.2 Shortnose sturgeon - COMPLETE

Description and distribution

Reproduction

Development, growth and movement patterns

Ecological relationships

Abundance and status of stocks

Listing designations

Critical Habitat Designations

4.3.5 Marine Plants - COMPLETE

Description and distribution

Reproduction

Development and growth

Ecological relationships

Abundance and status

Critical Habitat

4.3.6 Marine Invertebrates - COMPLETE

Description

Distribution and Abundance

Reproduction

Development and growth

Population dynamics

Ecological relationships

4.4 State Comprehensive Wildlife Conservation Strategies - COMPLETE

North Carolina

South Carolina

Georgia

Florida

VOLUME III: SOUTH ATLANTIC HUMAN AND INSTITUTIONAL ENVIRONMENT

5.0 The Human Environment in the South Atlantic

5.1 Coastal Communities in the South Atlantic - COMPLETE

5.1.1 Methodology for Defining Fishing Communities

5.1.2 Census Demographic and Employment Data Caveats

5.1.3 North Carolina Communities with Substantial Fishing Activity

5.1.3.1 Varnamtown

5.1.3.2 Southport/ Bald Head Island (28461)

5.1.3.3 Carolina Beach (28428)

5.1.3.4 Wilmington (28401, 28403, 28405, 28411, 28412)

5.1.3.5 Wrightsville Beach (28480)

5.1.3.6 Surf City/Topsail Beach (28445) and Hampstead (28443)

5.1.3.7 Sneads Ferry (28460)

5.1.3.8 Swansboro (28584)

5.1.3.9 Atlantic Beach (28512)

5.1.3.10 Morehead City (28557)

5.1.3.11 Beaufort (28516)

5.1.3.12 Harker's Island (28531)

5.1.3.13 Hatteras (27959)

5.1.3.14 Oriental (28571)

5.1.3.15 Vandemere/Mesic (28587)

5.1.3.16 Bath (27808)

5.1.3.17 Belhaven (27810)

5.1.3.18 Wanchese (27981)

5.1.3.19 Manteo (27954)

5.1.3.20 Ocracoke (27960)

5.1.3.21 Elizabeth City (27909)

5.1.3.22 North Carolina Fishing Infrastructure and Community Characterization

5.1.4 South Carolina Communities with Substantial Fishing Activity

5.1.4.1 Hilton Head Island (29926, 29928)

5.1.4.2 Beaufort/Port Royal (29935)

5.1.4.3 Edisto Beach (29438)

5.1.4.4 Seabrook Island (29455)

5.1.4.5 Mt. Pleasant (29464)

5.1.4.6 Isle of Palms (29451)

5.1.4.7 McClellanville (29458)

5.1.4.8 Georgetown (29440)

5.1.4.9 Murrells Inlet (29576)164

5.1.4.10 Little River (29566)

5.1.4.11 South Carolina Fishing Infrastructure and Community Characterization

- 5.1.5 Georgia Communities with Substantial Fishing Activity
 - 5.1.5.1 Tybee Island (31328)
 - 5.1.5.2 Thunderbolt (31404, 31410)
 - 5.1.5.3 Darien (31305)
 - 5.1.5.4 Brunswick (31520, 31523, 31525)
 - 5.1.5.5 St. Simons Island (31522)
 - 5.1.5.6 St. Mary's (31558)
 - 5.1.5.7 Georgia Fishing Infrastructure and Community Characterization

- 5.1.6 Florida Communities with Substantial Fishing Activity
 - 5.1.6.1 Fernandina Beach (32034)
 - 5.1.6.2 Atlantic Beach (32233)
 - 5.1.6.3 St. Augustine (32084, 32085, 32086, 32092)
 - 5.1.6.4 Ponce Inlet (32127)
 - 5.1.6.5 Merritt Island (32952, 32953)
 - 5.1.6.6 Cape Canaveral (32920)
 - 5.1.6.7 Sebastian (32976, 32958)
 - 5.1.6.8 Fort Pierce (34950)
 - 5.1.6.9 Jupiter (33458, 33468, 33469, 33477, 33478)
 - 5.1.6.10 Palm Beach (33480)
 - 5.1.6.11 Boca Raton (33487, 33431, 33486, 33496, 33432, 33434)
 - 5.1.6.12 Key Largo (33037)
 - 5.1.6.13 Islamorada (33070, 33036)
 - 5.1.6.14 Marathon (33050)
 - 5.1.6.15 Big Pine Key (33042, 33043)
 - 5.1.6.16 Key West (33040, 33041, 33045)
 - 5.1.6.17 Florida Fishing Infrastructure and Community Characterization

*DESCRIPTION OF ECONOMIC AND SOCIO-CULTURAL ASPECTS OF
STAKEHOLDER GROUPS*

5.2 Fisheries Under SAFMC Management

5.2.1 The Penaeid Fishery - COMPLETE

- 5.2.1.1 Description of fishing practices, vessels and gear
- 5.2.1.2 Economic description of the fishery
- 5.2.1.3 Social and cultural environment
- 5.2.1.4 Bycatch

5.2.2 The Deepwater Shrimp Fishery

- 5.2.2.1 Description of fishing practices, vessels and gear
- 5.2.2.2 Economic description of the fishery
- 5.2.2.3 Social and cultural environment
- 5.2.2.4 Bycatch

STATUS: Complete except for description of royal red shrimp fishery currently under development.

5.2.3 The Snapper Grouper Fishery - COMPLETE

- 5.2.3.1 Description of fishing practices, vessels and gear
 - Commercial fishery
 - Private recreational fishery
 - For-hire recreational fishery
 - Allowable gear
- 5.2.3.2 Economic description of the fishery
 - Commercial fishery
 - Recreational fishery
- 5.2.3.3 Social and cultural environment
 - Community Profiles of Key Indicator Communities
- 5.2.3.4 Bycatch

5.2.4 The Golden Crab Fishery - COMPLETE

- 5.2.4.1 Description of fishing practices, vessels and gear
 - Allowable gear
- 5.2.4.2 Economic description of the fishery
- 5.2.4.3 Social and cultural environment
- 5.2.4.4 Bycatch

5.2.5 The Coastal Migratory Pelagics Fishery - COMPLETE

- 5.2.5.1 Description of fishing practices, vessels and gear
 - Commercial fishery
 - Recreational fishery
 - Allowable gear
- 5.2.5.2 Economic description of the fishery
 - Commercial fishery
 - Recreational fishery
- 5.2.5.3 Social and cultural environment
- 5.2.5.4 Bycatch

5.2.6 The Spiny Lobster Fishery

- 5.2.6.1 Description of fishing practices, vessels and gear
 - Commercial fishery
 - Private recreational fishery
 - Allowable gear
- 5.2.6.2 Economic description of the fishery
 - Commercial fishery
 - Private recreational fishery
- 5.2.6.3 Social and cultural environment
 - Commercial fishing
 - Recreational fishing
- 5.2.6.4 Bycatch

STATUS: Some material provided by writing team. Sections not finalized.

5.2.7 The Live Rock Aquaculture and Allowable Octocoral Fishery - COMPLETE

5.2.7.1 Octocoral Fishery

Description of fishing practices, vessels and gear

Allowable gear

Economic description of the fishery

Social and cultural environment

Bycatch

5.2.7.2 Live Rock Aquaculture

Description of fishing practices, vessels and gear

Allowable gear

Economic description of the fishery

Social and cultural environment

Bycatch

STATUS: Sections above provided by K. Nedimeyer and H. Feddern (Coral AP) in January 2008. They have not been reviewed.

5.2.8 The Sargassum Fishery

5.2.8.1 Description of fishing practices, vessels and gear

Allowable gear

5.2.8.2 Economic description of the fishery

5.2.8.3 Social and cultural environment

5.2.8.4 Bycatch

STATUS: From the Sargassum FMP. Sections need to be finalized.

5.2.9 The Dolphin and Wahoo Fishery

5.2.9.1 Description of fishing practices, vessels and gear

Commercial fishery

Recreational fishery

For-hire recreational fishery

Allowable gear

5.2.9.2 Economic description of the fishery

Commercial fishery

Recreational fishery

5.2.9.3 Social and cultural environment

5.2.9.4 Bycatch

STATUS: From the DW 2003 FMP. Has been reviewed by writing team and AP. No info on for-hire fisheries.

5.2.10 Calico Scallop Fishery - COMPLETE

5.2.10.1 Description of fishing practices, vessels and gear

Commercial Fishery

Allowable gear

5.2.10.2 Economic description of the fishery

5.2.10.3 Social and cultural environment

5.2.10.4 Bycatch

5.3 Other Managed Fisheries in the South Atlantic

5.3.1 Atlantic Menhaden Fishery - COMPLETE

5.3.1.1 Description of fishing practices, vessels and gear

5.3.1.2 Economic and social description

5.3.1.3 Bycatch

5.3.2 Striped Bass Fishery -

5.3.2.1 Description of fishing practices, vessels and gear

5.3.2.2 Economic and social description

5.3.2.3 Bycatch

STATUS: Complete except for Economic and social description.

5.3.3 Anadromous and Catadromous Species

5.13.3.1 Description of fishing practices, vessels and gear

5.13.3.2 Economic and social description

5.13.3.3 Bycatch

STATUS: Information on current status from 2006 FMP reviews. Other sections need to be finalized.

5.3.4 Red Drum

5.3.4.1 Description of fishing practices, vessels and gear

5.3.4.2 Economic and social description

5.3.4.3 Bycatch

STATUS: From 2002 Amendment to the ASMFC FMP. No information on for-hire fisheries or bycatch.

5.3.5 Weakfish and other Sciaenid Fisheries

5.3.5.1 Description of fishing practices, vessels and gear

5.3.5.2 Economic and social description

5.3.5.3 Bycatch

STATUS: Status of fisheries from 2006 FMP reviews. Economic and social info only available for weakfish. No info on bycatch.

5.3.6 Bluefish Fishery - COMPLETE

5.3.6.1 Description of fishing practices, vessels and gear

5.3.6.2 Economic and social description

5.3.6.3 Bycatch

5.3.7 Summer Flounder Fishery - COMPLETE

5.3.7.1 Description of fishing practices, vessels and gear

5.3.7.2 Economic and social description

5.3.7.3 Bycatch

5.3.8 Horseshoe Crab Fishery - COMPLETE

5.3.8.1 Description of fishing practices, vessels and gear

5.3.8.2 Economic and social description

5.3.8.3 Bycatch

5.3.9 Highly Migratory Pelagic Species Fishery - COMPLETE

5.3.9.1 Description of fishing practices, vessels and gear

5.3.9.2 Economic and social description

5.3.9.3 Bycatch

5.4 ACCSP Logbook Catches for South Atlantic Species 1990 – 2006

STATUS: Listing of all the species for which there is commercial catch information available via ACCSP. Complete.

5.4.1 Commercial Catches

STATUS: Spatial representations and tabular information for each species. Need to include figure captions.

5.4.2 Recreational catches

STATUS: Under development.

VOLUME IV: THREATS TO THE SOUTH ATLANTIC ECOSYSTEM AND RECOMMENDATIONS

6.0 Threats to the South Atlantic Ecosystem

6.1 Adverse impacts of non-fishing activities

6.1.1 Freshwater/estuarine/inshore processes

- 6.1.1.1 Agriculture
- 6.1.1.2 Aquaculture
- 6.1.1.3 Silviculture
- 6.1.1.4 Urban/Suburban Development
- 6.1.1.5 Transportation
- 6.1.1.6 Industrial/Commercial Activities
- 6.1.1.7 Navigation
- 6.1.1.8 Inshore Mining
- 6.1.1.9 Hydrologic Modifications
- 6.1.1.10 Dams, Impoundments, and Other Barriers to Fish Passage
- 6.1.1.11 Natural Events
- 6.1.1.12 Other sources of nonpoint-source pollution
- 6.1.1.13 Non-native or nuisance species

STATUS: Complete except for invasive species

6.1.2 Marine/offshore processes

- 6.1.2.1 Navigation
- 6.1.2.2 Dumping
- 6.1.2.3 Marine Debris
- 6.1.2.4 Offshore Sand and Mineral Mining and Beach Fill
- 6.1.2.5 Oil and Gas Exploration, Development, and Transportation
- 6.1.2.6 Commercial and Industrial Activities
- 6.1.2.7 Artificial Reefs
- 6.1.2.8 Alternative Energy Technologies
- 6.1.2.9 Non-native or nuisance species

STATUS: Complete except for invasive species (only lionfish included)

6.1.3 Natural Events and Climate Change

STATUS: Information from Habitat Plan and Intergovernmental Panel on Climate Change Report (2007). Has not been reviewed.

6.2 Adverse impacts of fishing activities under South Atlantic Council Fishery Management Plans

6.2.1 Fishing Gear Regulations under Council FMPs - COMPLETE

6.2.2 Gear Descriptions -COMPLETE

- 6.2.2.1 Mobile Gear

- Crab Scrape
- Frame Trawl
- Hydraulic Escalator Dredge
- Otter Trawl
- Oyster Dredge
- Scallop Dredge (Inshore)
- Scallop Dredge (Offshore)
- Skimmer Trawl

6.2.2.2 Static Gear

- Channel Net
- Gillnet and Trammel Net
- Hoop Net
- Longline
- Poundnet
- Trap and Pot

6.2.2.3 Other Gear

- Allowable Chemical
- Barrier Net
- Castnet
- Clam Kicking
- Clam Rake, Scallop Rake, Sponge Rake and Oyster Tong
- Dipnet and Bully Net
- Hand Harvest
- Harpoon
- Haul Seine and Beach Seine
- Hook and Line, Handline, Bandit Gear, Buoy Gear and Rod and Reel
- Patent Tong
- Purse Seine and Lampara Net
- Pushnet
- Slurp Gun
- Snare
- Spear and Powerhead

7.0 Essential Fish Habitat Evaluation and Recommendations

7.1 Conservation and restoration

- 7.1.1 Riverine System
- 7.1.2 Freshwater Wetlands
- 7.1.3 Submersed Aquatic Vegetation
- 7.1.4 Estuarine Marshes
- 7.1.5 Mangroves
- 7.1.6 Seagrass
- 7.1.7 Oyster reefs and shell banks
- 7.1.8 Intertidal flats
- 7.1.9 Estuarine water column

- 7.1.10 Estuarine soft bottom/subtidal
- 7.1.11 Coral, coral reefs and live/hard bottom habitat
Live/hard bottom
- 7.1.12 Deepwater corals
- 7.1.13 Artificial reefs
- 7.1.14 Sargassum
- 7.1.15 Marine water column
- 7.1.16 Marine soft bottom

STATUS: Available material from Habitat Plan and NCCHPP with some recent updates from writing teams. State sub-panels, in cooperation with NMFS, will develop state/local conservation recommendations. Will include SARP priority estuary recommendations.

- 7.2 Description and use of current and proposed EFH, EFH-HAPCs and Coral HAPCs - COMPLETE
 - 7.2.1 Penaeid and deepwater shrimp
 - 7.2.1.1 Essential Fish Habitat
 - 7.2.1.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.2 Snapper Grouper
 - 7.2.2.1 Essential Fish Habitat
 - 7.2.2.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.3 Coastal Migratory Pelagics
 - 7.2.3.1 Essential Fish Habitat
 - 7.2.3.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.4 Golden Crab
 - 7.2.4.1 Essential Fish Habitat
 - 7.2.4.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.5 Spiny Lobster
 - 7.2.5.1 Essential Fish Habitat
 - 7.2.5.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.6 Coral, Coral Reefs and Live/Hard Bottom Habitat
 - 7.2.6.1 Essential Fish Habitat
 - 7.2.6.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.7 Dolphin Wahoo
 - 7.2.7.1 Essential Fish Habitat
 - 7.2.7.2 Essential Fish Habitat-Habitat Areas of Particular Concern
 - 7.2.8 Other managed species in the South Atlantic
 - 7.2.8.1 Atlantic Menhaden
 - 7.2.8.2 Anadromous and Catadromous Species
 - 7.2.8.3 Red Drum
 - 7.2.8.4 Weakfish and other Sciaenid Species
 - 7.2.8.5 Bluefish
 - 7.2.8.6 Summer Flounder
 - 7.2.8.7 Horseshoe Crab
 - 7.2.8.8 HMS Species – Species in SA

- 7.3 Essential Fish Habitat and Environmental Protection Policy -COMPLETE
- 7.4 Essential Fish Habitat Policies and Policy Statements - COMPLETE
 - 7.4.1 Policy Statements of Essential Fish Habitat Types
 - 7.4.1.1 Policy for the Protection and Enhancement of Marine Submerged Aquatic Vegetation (SAV) Habitat
 - 7.4.2 Policy Statements on Non-fishing Activities Affecting Habitat
 - 7.4.2.1 Policies for the Protection and Restoration of EFH from Beach Dredging and Filling and Large-Scale Coastal Engineering
 - 7.4.2.2 Policy Statement Concerning Dredging and Dredge Material Disposal Activities
 - 7.4.2.3 Policies for the Protection and Restoration of EFH from Energy Exploration, Development, Transportation and Hydropower Re-Licensing
 - 7.4.2.4 Policies for the Protection and Restoration of EFH from Alterations to Riverine, Estuarine and Nearshore Flows
 - 7.4.2.5 Policies for the Protection and Restoration of EFH from Marine Aquaculture
 - 7.4.3 Activity-based policies
 - 7.4.3.1 Docks and Piers
 - 7.4.3.2 Boat Ramps
 - 7.4.3.3 Marinas
 - 7.4.3.4 Bulkheads and Seawalls
 - 7.4.3.5 Cables, Pipelines, and Transmission Lines
 - 7.4.3.6 Transportation
 - 7.4.3.7 Navigation Channels and Boat Access Canals
 - 7.4.3.8 Disposal of Dredged Material
 - 7.4.3.9 Impoundments and Other Water-Level Controls
 - 7.4.3.10 Drainage Canals and Ditches
 - 7.4.3.11 Oil and Gas Exploration and Production
 - 7.4.3.12 Other Mineral Mining/Extraction
 - 7.4.3.13 Sewage Treatment and Disposal
 - 7.4.3.14 Steam-Electric Plants and Other Facilities Requiring Water for Cooling or Heating
 - 7.4.3.15 Mariculture/Aquaculture
 - 7.4.3.16 Mitigation
- 7.5 Interagency and Interstate Policies - COMPLETE
 - 7.5.1 Joint Agency Habitat Statement
 - 7.5.2 Atlantic States Marine Fisheries' Commission Seagrass Policy and Implementation Plan
- 7.6 Federal Habitat Protection Laws, Programs and Policies- COMPLETE
- 7.7 State Habitat Protection Programs - COMPLETE
 - 7.7.1 North Carolina
 - 7.7.2 South Carolina
 - 7.7.3 Georgia

7.7.4 Florida

8.0 Fisheries Management Evaluation and Recommendations

8.1 Area Management in the South Atlantic Region

8.1.1 South Atlantic Fishery Management Council

8.1.1.1 SMZs

8.1.1.2 MPAs

8.1.1.3 EFH-HAPCs

8.1.1.4 Coral HAPCs

8.1.1.5 Area Gear Restrictions

8.1.1.6 Live Rock Aquaculture Leases

8.1.2 NOAA Fisheries (HMS)

8.2.2.1 Area Closures in the South Atlantic

8.1.3 National Marine Sanctuaries - COMPLETE

8.2.3.1 Gray's Reef

8.2.3.2 Florida Keys

8.2.3.3 Monitor

8.1.4 Minerals Management Service - COMPLETE

8.2.4.1 OCS Leasing

8.1.5 Environmental Protection Agency - COMPLETE

8.2.5.1 ODMDSs

8.2.5.2 National Estuary Program

8.1.6 National Estuarine Research Reserves

8.1.7 State Managed Areas

STATUS: Under development from various documents and websites.

VOLUME V: SOUTH ATLANTIC RESEARCH PROGRAMS AND DATA NEEDS

9.0 Data and Research Necessary to Support Ecosystem Management

9.1 Research Needs and Research and Monitoring Plans

9.1.1 South Atlantic Research and Monitoring Priorities

9.1.2 SAFMC Fishery Management Plans

STATUS: Research needs from various FMPs.

9.1.3 Interjurisdictional Prioritized Research Needs - COMPLETE

9.1.4 Recent and Ongoing Research on HMS Species - COMPLETE

9.1.5 The Clean Water Action Plan – Coastal Research and Monitoring Strategy
- COMPLETE

9.2 Research Programs

9.2.1 Fishery-Independent

MARMAP - COMPLETE

SEAMAP - COMPLETE

NOAA Fisheries SEFSC - COMPLETE

9.2.2 Fishery-Dependent

MARFIN - COMPLETE

Cooperative Research Program - COMPLETE

Saltonstall-Kennedy - COMPLETE

Wallop-Breaux - COMPLETE

NOAA Fisheries SEFSC - COMPLETE

9.2.3 Habitat and Ecosystem Research

General Coral Reef Conservation Grant Program - COMPLETE

Coral Reef Ecosystem Studies

NOAA Fisheries SEFSC

EFH Research

9.2.4 NMS Research Programs – ONLY FOR GRAY’S REEF

9.2.5 NOS NCCOS - COMPLETE

9.2.6 Ocean Exploration and Research - COMPLETE

9.3 Ocean Observing Systems and Fisheries Oceanography - COMPLETE

9.3.1 Fisheries Oceanography in the South Atlantic Region

9.3.2 Status of Coastal Ocean Observing Systems in the Southeast

9.3.3 Regional Observing System Information Management

9.3.4 Modeling Systems

STATUS: Section developed with SECOORA partners – Lead Cisco Werner UNC Chapel Hill

9.4 Ecosystem Modeling

STATUS: To be expanded with material from Recent FAO Publication and Written Guidance Document to be Developed at February Ecosystem Workshop

- 9.4.1 South Atlantic Ecopath Model
 - 9.5 Indicators of Ecosystem Health and Habitat Conservation Targets
 - 9.5.1 National Fish Habitat Action Plan
 - 9.5.2 National Fish Habitat Board
 - 9.5.3 Southeast Aquatic Resources Partnership Habitat/Ecosystem Targets
 - 9.5.4 Southeast Aquatic Habitat Plan
- STATUS: Draft SARP Habitat Plan highlighting regional Habitat/Ecosystem Targets added (Replace with final prior to Public Hearing)*

VOLUME VI: REFERENCES

STATUS: Reference Manager 11.0 is the bibliographic software being used to input all FEP references. So far, all the Habitat Plan references, all the NC Coastal Habitat Protection Plan references and assorted others have been entered into the database. Reference sections will be developed fro each volume. Interns are helping with data entry.

VOLUME VII: APPENDICES