



## **Ecosystem Management and the Development of a South Atlantic Fishery Ecosystem Plan**

Ecosystem  
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Roger Pugliese, SAFMC



### **The South Atlantic Council's move towards an Ecosystem Approach to Management (EAM)**

- Sustainable Fisheries Act (1996) and EFH Final Rule (2002) provide legal framework for EAM
- No guidelines but following recommendations in the EPAP 1999 Report to Congress, OC Report and Pew Report
- Participating in NOAA's Ecosystem Pilots

## An ecosystem approach to fisheries management:



1. recognizes the impacts of fishing on the entire system
2. considers the dynamics among target species and other ecosystem components (human, biological and physical elements)

## Overview

- Habitat Plan as foundation for FEP
- FEP and Comprehensive Amendment
- Council activities addressing OC and Pew recommendations
- Information needs to support EAM in the region
- Regional partnerships to support EAM in the South Atlantic
- Vision for the future

## The Council's Habitat Plan and Comprehensive EFH Amendment

### Scope:

- In 1998, the Council developed its Habitat Plan and Comprehensive Amendment Addressing Essential Fish Habitat in Fishery Management Plans for the South Atlantic Region.
- The Habitat Plan serves as a source document, consolidating the best available information on habitat essential to species managed in the South Atlantic.
- The Habitat Plan and Comprehensive Amendment were the first in the nation to be approved by the Secretary of Commerce and not challenged in court and overturned.

## The Council's Habitat Plan and Comprehensive EFH Amendment

### Development Process:

The Habitat Plan was prepared through a cooperative effort of State, Federal and regional habitat partners on the Council's Habitat and Coral Advisory Panels and other regional experts.





## Goals of Ecosystem Management

- Maintaining/improving ecosystem structure and function
- Maintaining/improving economic, social and cultural benefits from resources
- Maintaining/improving biological, economic and cultural diversity

SAFMC Fishery Ecosystem Plan outline, 2005

## The Council's Fishery Ecosystem Plan (FEP)

Habitat Plan and Comprehensive EFH Amendment



FEP and Comprehensive Ecosystem Amendment

- The FEP will evolve from the Habitat Plan and is based on recommendations in the EPAP 1999 Report to Congress
- FEP will constitute source document to the Comprehensive Ecosystem Amendment
- FEP will be updated every 5 years



## The Draft Fishery Ecosystem Plan:

- Provides available detailed information to support Council consideration of proposed management actions for the developing Comprehensive Ecosystem Amendment including but not limited to catch limits, gear regulations and area management
- Recommend research and monitoring activities

## FEP Development Process

1. 2003 – 2006 technical workshops:
  - Over 20 workshops were held to integrate and update information and support development of the FEP.
  - These workshops brought together Habitat and Coral AP members and a core group of resource experts from federal, state and academic institutions as well as conservation organizations that participated directly in development of the Habitat Plan.

## FEP Development Process

2. A regional workshop to identify research and monitoring needs to support ecosystem-based management in the South Atlantic was held in November 2005.

Nationally and internationally recognized experts participated and provided guidance to determine the most significant needs to be addressed in development of ecosystem-based management. Additional follow-up serves as the basis for the developing Section of the FEP.

## FEP Development Process

3. Writing teams:

- Writing Teams are composed of AP members, experts from state and federal agencies, universities and Council staff.
- Teams are currently reviewing, updating and expanding existing chapters of the Habitat Plan and incorporating this material into the FEP, including sections on protected resources and socio-economics.

## FEP Development Process

### 4. Support tools – website and IMS:

- The South Atlantic Council and the Florida Fish and Wildlife Research Institute (FWRI) have developed an Ecosystem web site that is accessible from the South Atlantic Council's web site: <http://map.mapwise.com/safmc/>
- FWRI developed and currently hosts the Council's Internet Map Server (IMS) application:  
[http://ocean.floridamarine.org/efh\\_coral/ims/viewer.htm](http://ocean.floridamarine.org/efh_coral/ims/viewer.htm)

## FEP Development Process

### 5. Timeline:

- Draft compiled and appropriate sections reviewed by Habitat and Coral APs – [June 2006](#)
- Council briefed on status – [June 2006](#)
- EBM Committee and Council review FEP Volume development status and approve Deepwater Coral Research Plan– [December 2006](#)
- EBM Committee and Council review FEP and CA and approve for Public Hearings – [June/September 2007](#)

## The Comprehensive Ecosystem Amendment

### 1. Identify all users:

Require a permit to fish for, harvest, or possess any EEZ resource for all commercial vessels and private recreational anglers

## The Comprehensive Ecosystem Amendment


### 2. Calculate and characterize removals:

Continue to implement ACCSP

### 3. Compliance with the Essential Fish Habitat (EFH) final rule:

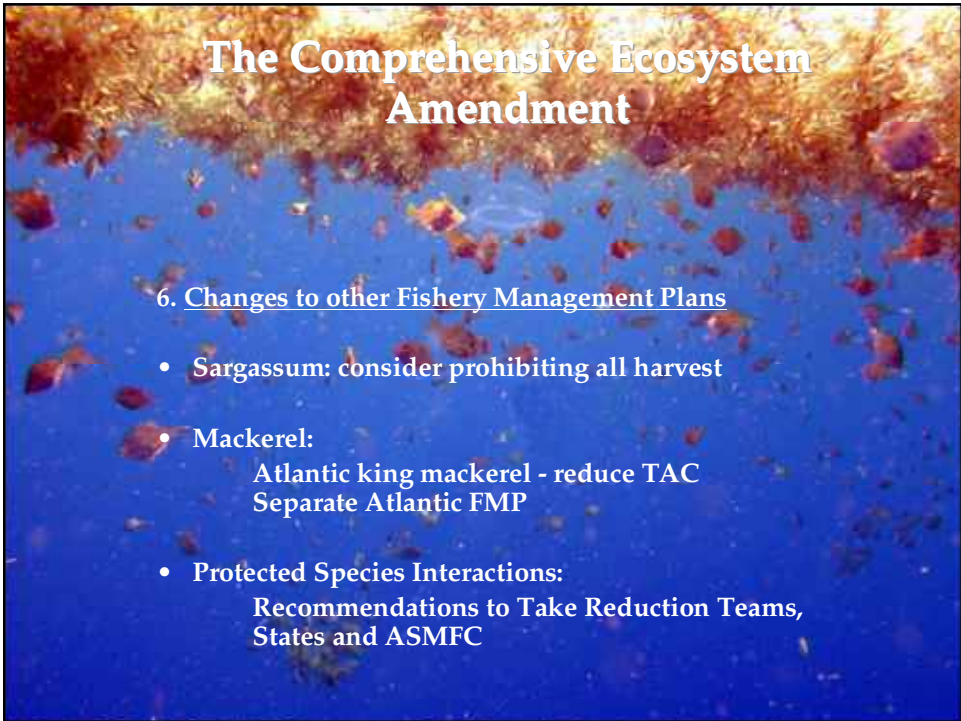
Refine designations; identify new EFH and EFH-HAPCs; reduce fishing and non-fishing impacts; establish "Allowable Trawling Areas."





## The Comprehensive Ecosystem Amendment

- Coral, Coral Reef and Live/Hardbottom Habitat Fishery Management Plan:  
Establish new C-HAPCs; consider prohibiting harvest of soft corals
- Enforcement/Data Collection/Safety at Sea:  
Require VMS



## The Comprehensive Ecosystem Amendment

- Changes to other Fishery Management Plans
  - Sargassum: consider prohibiting all harvest
  - Mackerel:  
Atlantic king mackerel - reduce TAC  
Separate Atlantic FMP
  - Protected Species Interactions:  
Recommendations to Take Reduction Teams, States and ASMFC

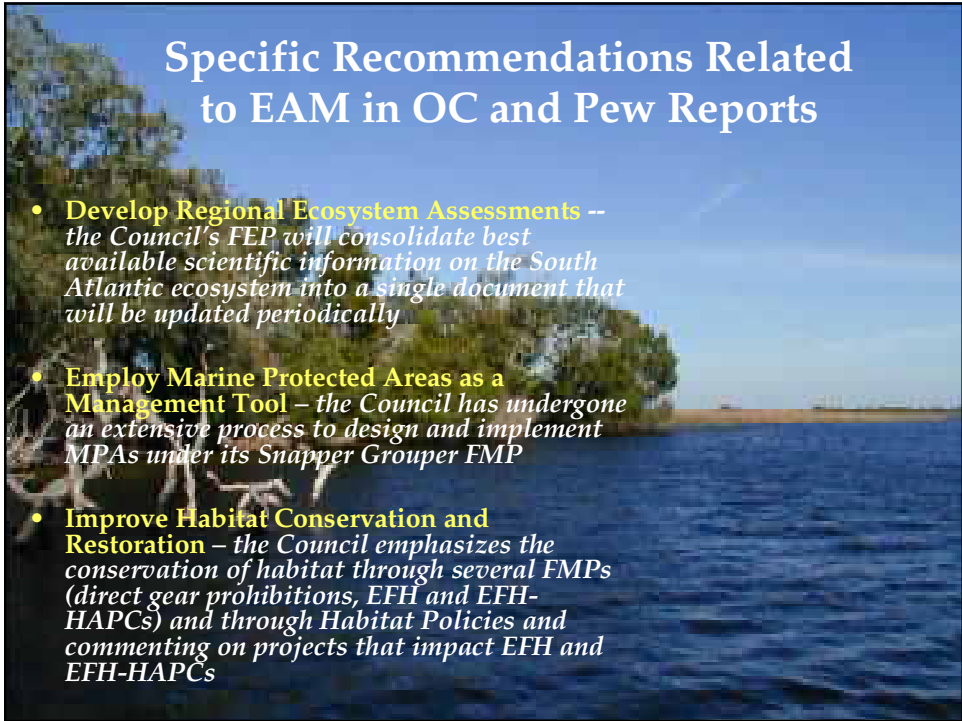
## Council Activities Addressing OC and Pew Guiding Principles and Recommendations

### Guiding Principles in OC Report:

- **Sustainability** – *the Council’s goal is to conserve and manage South Atlantic fishery resources*
- **Stewardship** – *the Council strives to balance different uses of fishery resources in the South Atlantic EEZ*
- **Ocean-Land-Atmosphere Connections** – *the Council is actively engaged in partnerships that aim to characterize these connections (Ocean Observing Systems) in order to integrate them into management*
- **Ecosystem-based Management** – *the Council has been working with partners since 2003 to develop the Fishery Ecosystem Plan and Comprehensive Amendment*

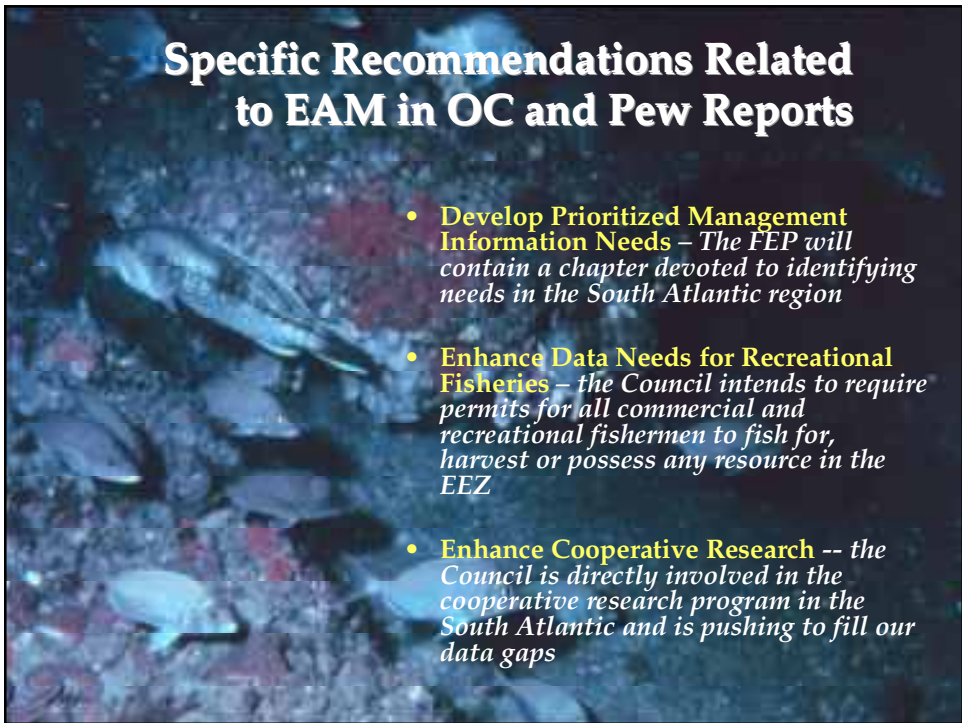
## Council Activities Addressing OC and Pew Guiding Principles and Recommendations

- **Multiple Use Management** – *the Council uses diverse management strategies to ensure sustainability of regional resources*
- **Preservation of Marine Biodiversity**— *EFH, EFH-HAPCs, Oculina Bank HAPC and Oculina Experimental Closed Area, proposed deepwater Coral HAPCs, MPAs*
- **Best Available Science and Information** —*SEDAR and SSC*
- **Participatory Governance**— *the Council relies on its many Advisory Panels whose members represent all stakeholders*



## Specific Recommendations Related to EAM in OC and Pew Reports

- **Develop Regional Ecosystem Assessments** -- *the Council's FEP will consolidate best available scientific information on the South Atlantic ecosystem into a single document that will be updated periodically*
- **Employ Marine Protected Areas as a Management Tool** -- *the Council has undergone an extensive process to design and implement MPAs under its Snapper Grouper FMP*
- **Improve Habitat Conservation and Restoration** -- *the Council emphasizes the conservation of habitat through several FMPs (direct gear prohibitions, EFH and EFH-HAPCs) and through Habitat Policies and commenting on projects that impact EFH and EFH-HAPCs*



## Specific Recommendations Related to EAM in OC and Pew Reports

- **Develop Prioritized Management Information Needs** -- *The FEP will contain a chapter devoted to identifying needs in the South Atlantic region*
- **Enhance Data Needs for Recreational Fisheries** -- *the Council intends to require permits for all commercial and recreational fishermen to fish for, harvest or possess any resource in the EEZ*
- **Enhance Cooperative Research** -- *the Council is directly involved in the cooperative research program in the South Atlantic and is pushing to fill our data gaps*

## Specific Recommendations Related to EAM in OC and Pew Reports

- **Establish Dedicated Access Privileges** – *the Council employs this approach to manage wreckfish in the EEZ and is considering expanding its use to other fishery resources*
- **Maximize the Use of VMS for Fishery-Related Activities** – *the Council will consider requiring VMS on commercial, for-hire and private recreational vessel (already required on rock shrimp vessels)*
- **Expand EFH designations** – *the Council is exploring available analytical methods to refine and expand EFH designations*



## Specific Recommendations Related to EAM in OC and Pew Reports

- **Address Environmental Impacts of Aquaculture** – *the Council is developing a policy on aquaculture with advice from its Habitat AP*
- **Address Environmental Impacts of Offshore Oil and Gas Production** – *the Council recently updated its policy on energy development and transportation (and offshore renewable energy development) with advice from its Habitat and Coral APs*

## Specific Recommendations Related to EAM in OC and Pew Reports

- **Regulate Destructive Fishing Gear** – the Council already has regulations in place to protect habitat from destructive fishing gear
  - prohibition on use of fish traps, trawls and entanglement nets in SG fishery,
  - prohibition on use of longlines shallower than 50 fathoms
- **Reduce Bycatch** – the Council strongly supports the continued implementation of ACCSP to have better access to bycatch data to inform management decisions
  - BRDs required in penaeid and rock shrimp fisheries
  - prohibition on use of fish traps, trawls and entanglement nets in SG fishery



## Specific Recommendations Related to EAM in OC and Pew Reports

- **Improve the Management of U.S. Coral Resources** – the Council protects coral, coral reefs and livehard bottom resources in the South Atlantic EEZ via harvest and gear restrictions in the Coral and Snapper Grouper FMPs and Amendments

*All harvest is prohibited except allowable octocorals and aquacultured live rock*

*The Council is now proposing designation of deepwater Coral HAPCs to protect vulnerable deepwater coral communities*





## Specific Recommendations Related to EAM in OC and Pew Reports

- **Commit to Creation of the IOOS** – *the Council is a partner in SECOORA and is exploring the role of the OOS in supporting an ecosystem approach to the management of fishery resources in the South Atlantic*
- **Enhance Data and Information Management** – *the Council has developed, in cooperation with FWRI, an Internet Mapping System to support the move to an EAM and disseminate data and information to a broad user body*



## Information Needs to Support EAM

- Expand interagency collaboration at the decision-making levels
- Adequately fund basic fishery research
- Establish new and expand existing long-term monitoring programs
- Fund completion of mapping and characterization of all essential habitats

## Information Needs to Support EAM



- Apply innovative technologies to characterize fishing patterns relative to habitat
- Resources to adequately define fishing communities
- Fund completion of food web model for the South Atlantic region and explore use of other ecosystem models

## Regional Partnerships to Support EAM in the South Atlantic Region

- [NOAA Fisheries Southeast Regional Office](#) FMP development, Non-fishing impacts on EFH, AP, Protected Resources...
- [NOAA Southeast Fisheries Science Center](#)  
AP, SEDAR, SSC, research
- [NOAA Undersea Research Center/UNCW](#) Habitat mapping and characterization, research in Oculina HAPC and OECA, AP
- [NOAA Ocean Explorer](#) Habitat mapping and characterization for proposed C-HAPCs, Charleston Bump exploration, Oculina HAPC



## Regional Partnerships to Support EAM in the South Atlantic Region

- [UNCW's Center for Marine Science](#) research, habitat mapping and characterization for proposed C-HAPCs
- [Skidaway Institute of Oceanography](#) research/geology, AP
- [Duke University, Nicholas School of the Environment](#) geospatial analysis, AP
- [NOVA Southeastern University](#) research, AP, FEP development
- [University of South Carolina](#) research, AP



## Regional Partnerships to Support EAM in the South Atlantic Region

- [US Coast Guard](#) AP
- [US Geological Survey](#) AP
- [US Fish and Wildlife Service](#) AP, FEP development
- [Environmental Protection Agency](#) AP, FEP development
- [National Marine Sanctuaries](#) research, FEP development



## Regional Partnerships to Support EAM in the South Atlantic Region



- [State Natural Resource agencies \(NCDENR, SCDNR, GDNR, FFWC\)](#) AP, FEP development, research; IMS, website and GIS (FWRI)
- [State Coastal Zone agencies](#) AP
- [ASMFC](#) AP, FEP development
- [Miami Dade County DERM](#) chair Coral AP, FEP development

## Regional Partnerships to Support EAM in the South Atlantic Region

- [Harbor Branch Oceanographic Institution](#) habitat mapping and characterization for proposed C-HAPCs, research and outreach on Oculina HAPC and ECA, AP
- [Environmental Defense](#) chair Habitat AP, FEP development
- [The Nature Conservancy](#) Ecoregional Assessments GIS
- [National Coalition for Marine Conservation](#) AP



## Vision for the Future

1. The FEP will updated every 5 years and Comprehensive Ecosystem Amendments prepared annually
2. Work with existing agencies to have them consider the ecosystem implications of their decisions (e.g. local government, state agencies and Federal agencies)
3. Seek funding for an annual meeting to share information
4. Fill data gaps in single-species assessments and management
5. Move from single-species assessments/management to multi-species assessments/management and, ultimately, to true ecosystem assessment/management
6. Engage in partnerships to develop regional management tools necessary to enhance the Councils ability to evaluate the ecosystem impacts of fishing (biological, economic and social) and better understand and address bycatch, predator-prey removal implications, fleet mobility/dynamics and habitat impacts . In addition, these tools will provide the ability to develop and evaluate all aspects of comprehensive place-based management in the region.

