

# Fishery Management Council Perspective: Spatial Aspects of Fishery Management Plans

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## Atlantic Wind Energy Workshop

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Environmental Breakout Session: Broad scale Habitat,  
Abundance & Distribution – Baseline Data

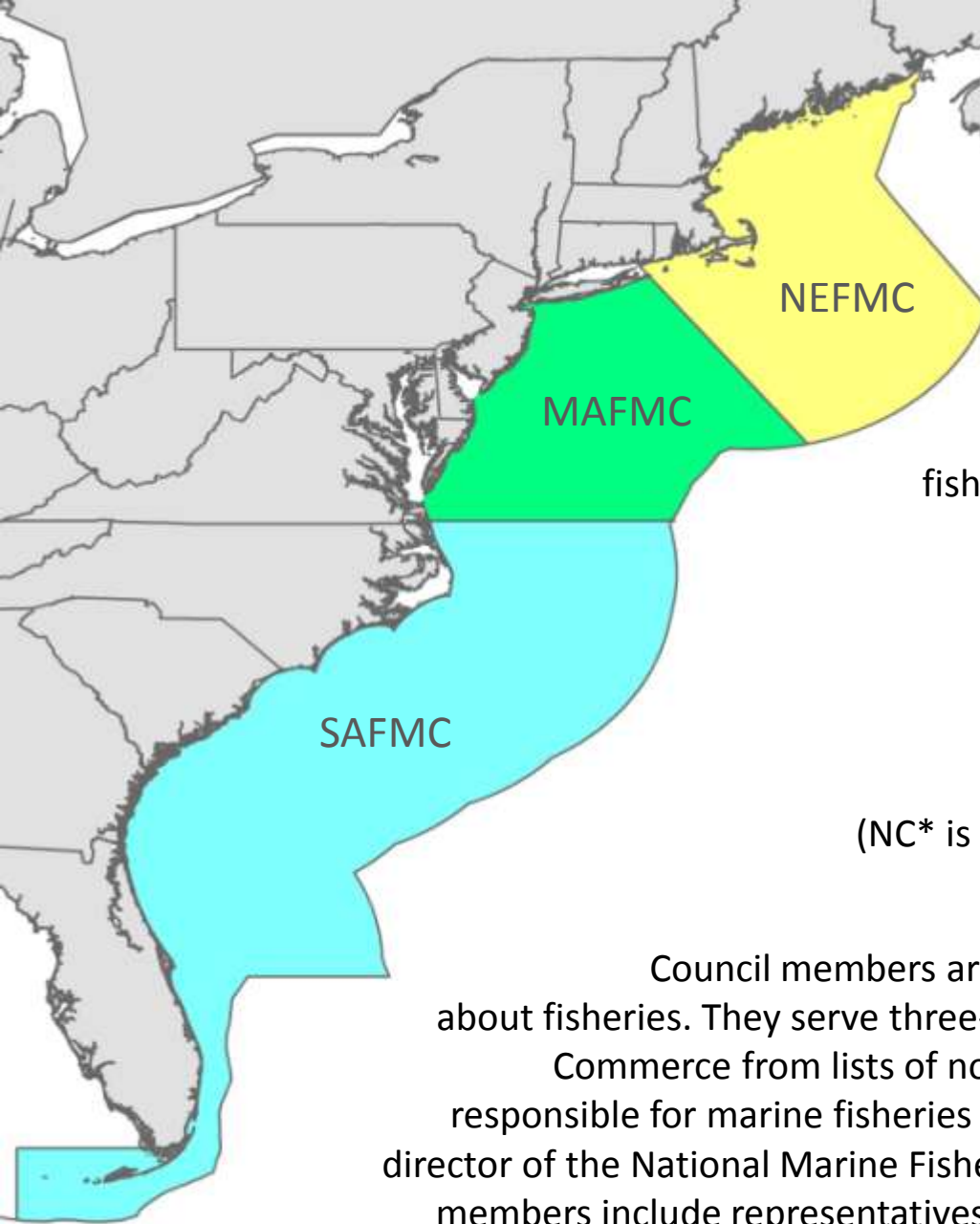
# Outline

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- Intro to fishery management Councils
- General information of interest:
  - Fishery independent data
  - Fishery dependent data
  - EFH designations
- Management programs, analytical tools, and data products related to specific fisheries or regions



# Management authority and structure



The Magnuson Stevens Fishery Conservation and Management Act (reauthorized 2007), delegates authority to each FMC to “Conserve and Manage” fisheries and fish habitat in the US Exclusive Economic Zone (3-200 miles) seaward of their states:

NEFMC – ME, NH, MA, RI, CT

MAFMC – NY, NJ, DE, PA, MD, VA, NC\*

SAFMC – NC, SC, GA, east FL to Key West

(NC\* is in the SAFMC area but also serves on the MAFMC)

Council members are citizens from each state who are knowledgeable about fisheries. They serve three-year terms and are appointed by the Secretary of Commerce from lists of nominees submitted by state governors. The official responsible for marine fisheries management in each state, as well as the regional director of the National Marine Fisheries Service are also voting members. Non-voting members include representatives of USFWS, USCG, State Department, and ASMFC.

# Collaboration

- FMCs collaborate with NMFS to develop FMPs, and NMFS implements regulations associated with FMPs
- Some FMPs jointly developed/approved by two FMCs, or, other FMC members participate on plan development committees
- Councils also collaborate with ASMFC on management of some species (e.g. Atlantic herring, Spanish mackerel)
- Stakeholders (industry members, recreational fishermen, NGOs) provide input via advisory panels and public meetings
- Technical work is a collaborative effort between council staffs, NMFS science centers, state resource management agencies, other federal agencies, and academic partners
- Emerging opportunities for collaboration with Ocean Observing Systems, regional habitat partnerships, landscape conservation partnerships, regional alliances (Governor's Alliances, MARCO, NROC, etc.)

*From a regional FMC perspective, what types of general information should be considered during wind energy siting and development?*

- Habitat Closed Areas, Mortality Closed Areas, Gear Restricted Areas, Coral HAPCs, Marine Protected Areas and Special Management Zones in the South Atlantic
- Distribution of fishery resources
- Distribution of fishing activities and revenues
- Essential Fish Habitat Designations and Habitat Areas of Particular Concern

# Fishery Independent Data

## Fish abundance, distribution, environmental data

- Fishery resource surveys are conducted by NMFS Science Centers, via collaborative research partnerships with states and through cooperative research with industry
  - SEAMAP, NEMAP
- These data, used primarily for resource/stock assessment, could be used to identify better areas for wind development
- These data are also used to support EFH designations

Management Plans are written for species, groups of species, or ecosystem components. Some plans are joint between two councils\*.

NEFMC – Northeast multispecies (groundfish), scallops, skates, monkfish\*, herring, deep-sea red crab

MAFMC – Squid/mackerel/butterfish, bluefish, spiny dogfish\*, summer flounder/scup/black sea bass, surfclam/ocean quahog, tilefish

SAFMC – coastal migratory pelagics\*, coral, coral reef and live/hard bottom habitat, dolphin/wahoo, golden crab, shrimp, snapper grouper, spiny lobster, pelagic sargassum habitat, comprehensive ecosystem amendments supported by the fishery ecosystem plan

# Fishery Dependent Data

## Catch, Effort and Revenue

- Fishing effort data is collected as a requirement of various FMPs:
  - Fish landings through NMFS surveys or state trip reports — required for all council managed fisheries
  - Vessel Monitoring System data – high spatial/temporal resolution position data – required for most fisheries in NE and MA, only HMS and Rock Shrimp in SA
  - At sea observer data – detailed trip/catch information for a subset of trips
  - Dealer data – prices paid at the dock for the catch
  - Both recreational and commercial data are collected

# Essential Fish Habitat

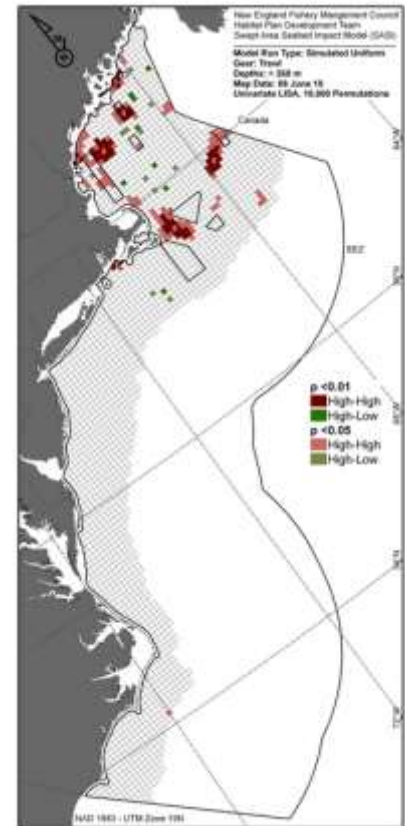
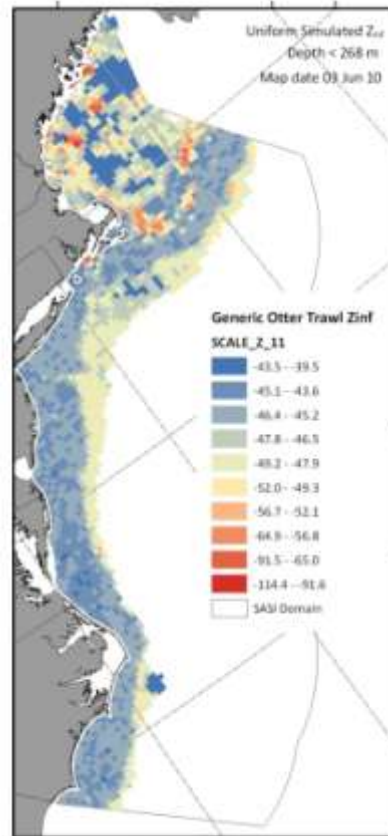
- “Those waters and substrate necessary for spawning, breeding, feeding, and growth to maturity” (MSA)
- Requirements (in brief; see EFH Final Rule issued by NMFS):
  - Describe/identify and designate EFH for all managed species
  - Minimize, to extent practicable, adverse effects of fishing
  - Identify other actions to encourage the conservation and enhancement
  - Identify non-fishing impacts to EFH
- Habitat Areas of Particular Concern (HAPC)
  - A FMC may also designate HAPCs as subsets of EFH based on: Importance of the ecological function, extent to which the habitat is sensitive to human-induced degradation; to what extent development activities are, or will be, stressing the habitat type, and rarity of the habitat type.



# Which specific FMC programs, areas, or activities would be of interest to BOEMRE and related parties?

## NEFMC – The Swept Area Seabed Impact Approach

- The SASI approach was developed to estimate the magnitude, location, and duration of adverse effects of fishing on EFH across gears types and FMPs, and to evaluate the cumulative impacts of alternatives to minimize those effects
- The SASI model itself is a geo-referenced analytical tool that estimates the adverse effects (Z) of fishing on geological and biological seabed structures
- Other components include a vulnerability assessment, vulnerability clustering analysis, cost-efficiency analysis, area closure analysis

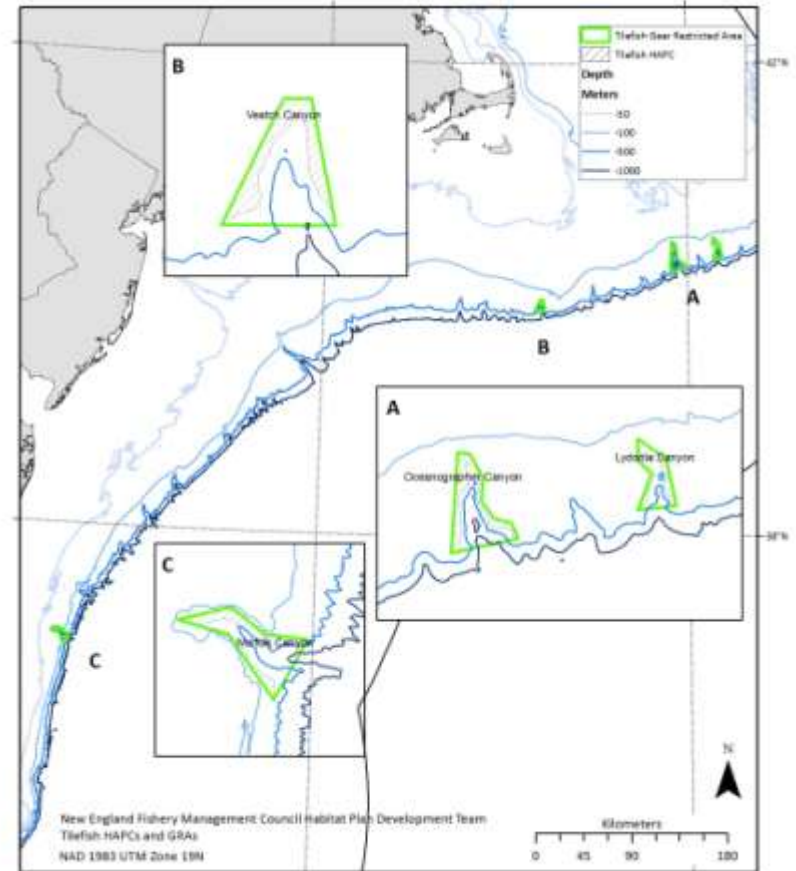
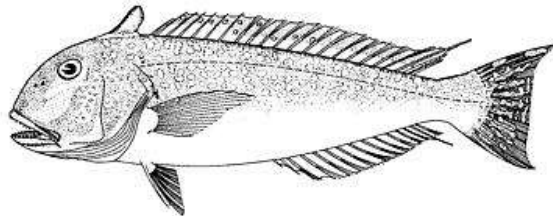


<http://www.nefmc.org/habitat/index.html>

# MAFMC – Tilefish FMP – GRAs and HAPCs

Amendment 1 to the tilefish FMP designated four Habitat Areas of Particular Concern and associated gear restricted areas in four submarine canyons: Veatch, Lydonia, Oceanographer, and Norfolk.

The HAPCs are intended to protect clay outcrop habitats in which tilefish construct burrows. The GRAs apply to all trawl gears.



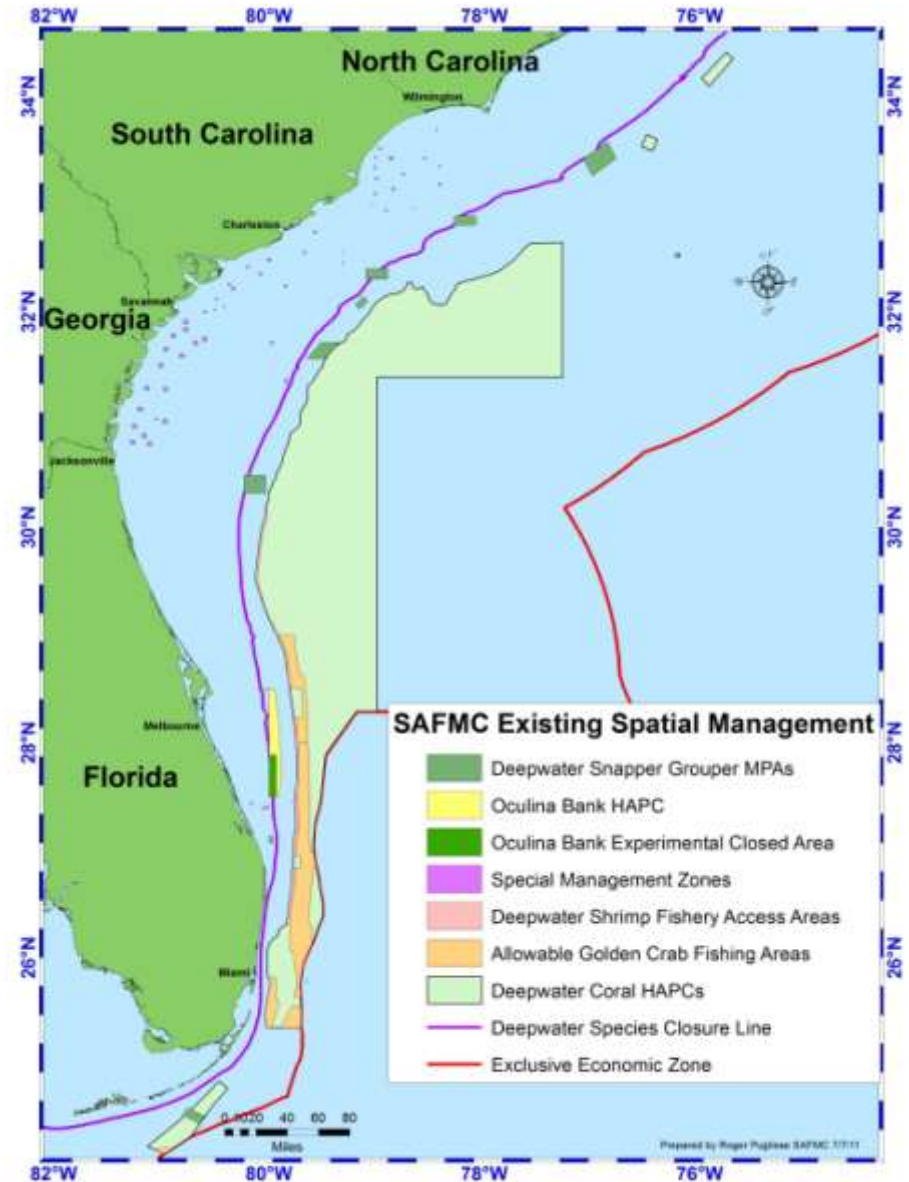
# SAFMC: Spatial management beyond EFH

## Snapper Grouper FMP:

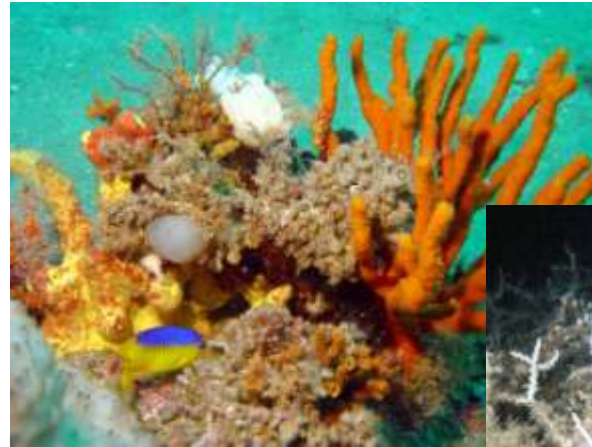
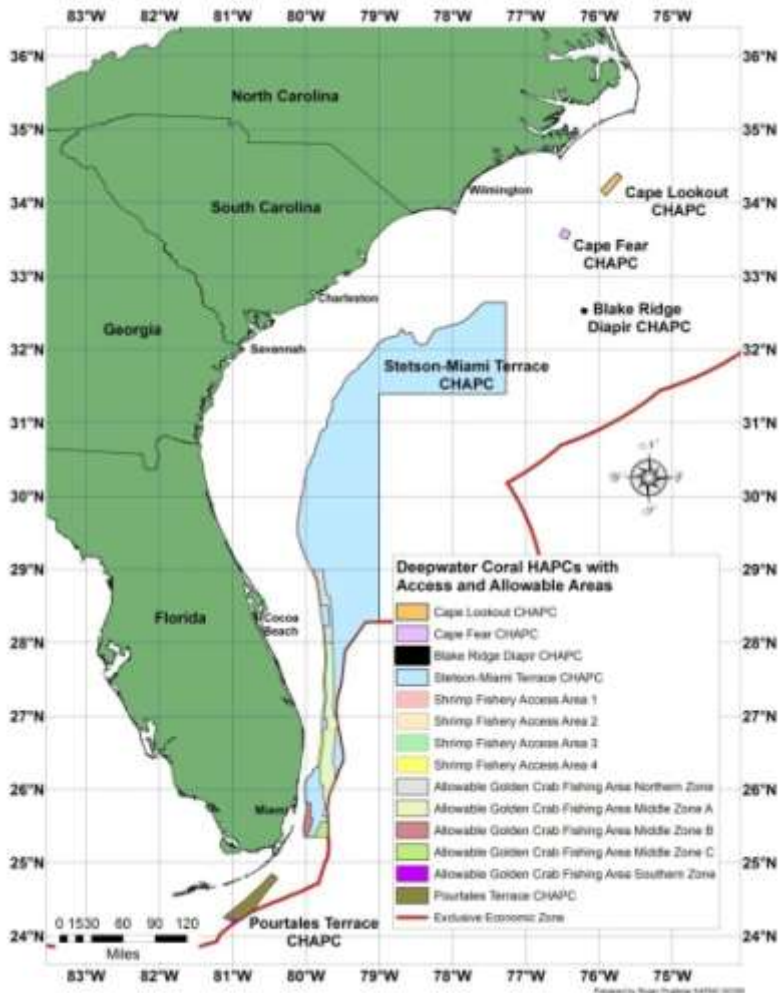
- Deepwater Marine Protected Areas (MPAs)
- Special Management Zones (SMZs)
- Deepwater Species Closure

## Coral, Coral Reef and Live/Hard Bottom Habitat FMP:

- Coral HAPCs (Oculina and Deepwater Coral)



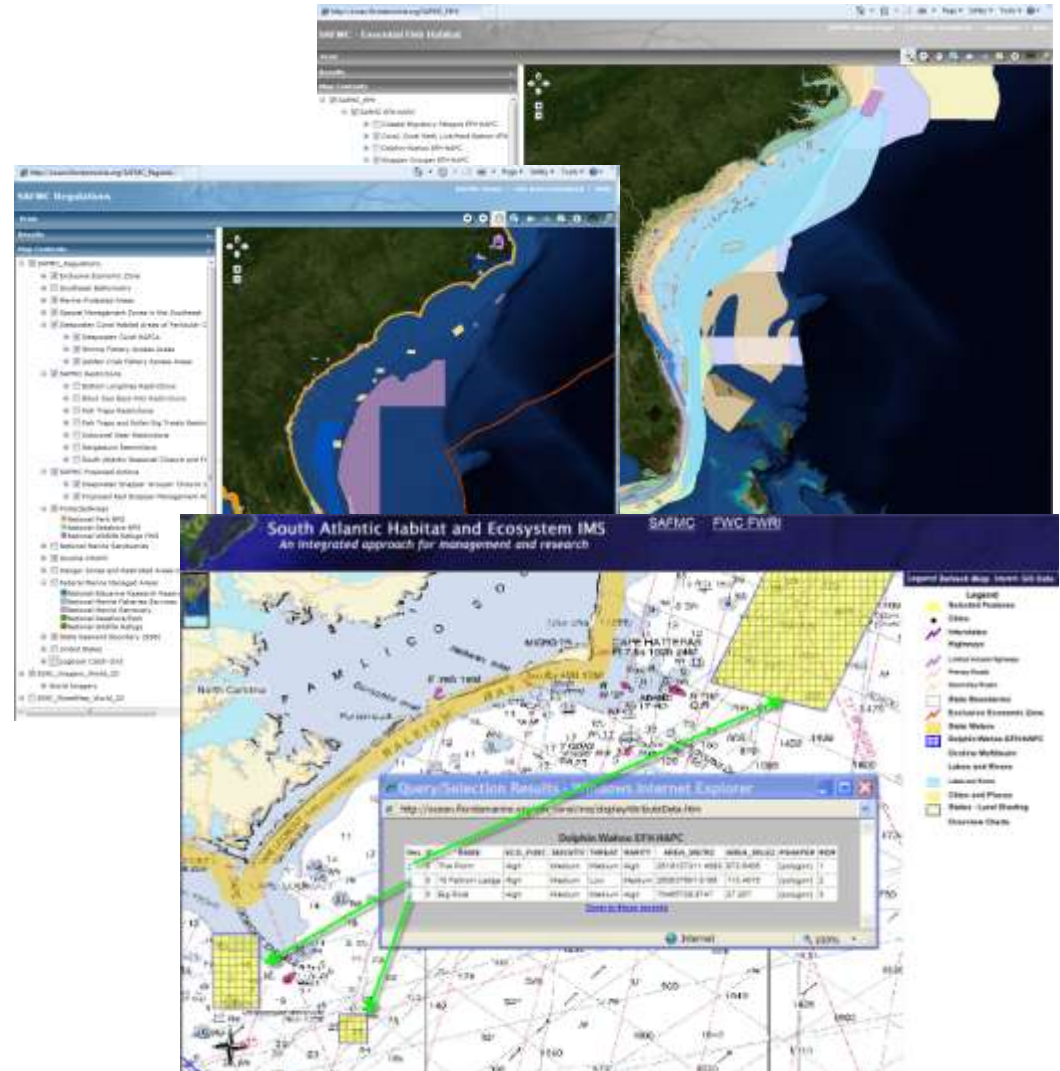
# SAFMC – Coral Habitat Areas of Particular Concern



- Implemented by CEBA1
- Five HAPCs
- Access areas for specific fisheries/gears

# SAFMC – Online Habitat and Ecosystem Support Tools

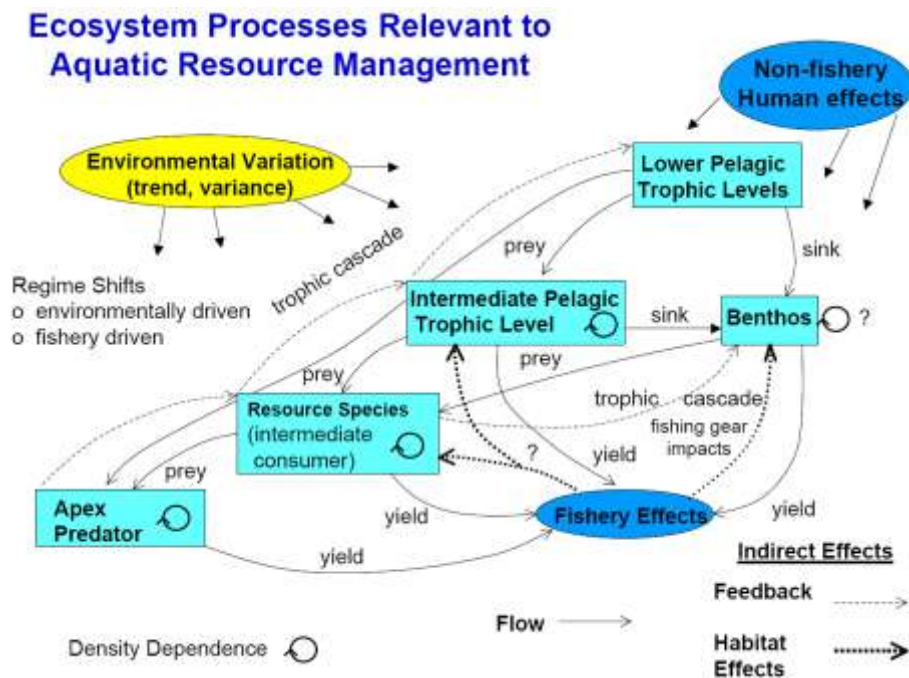
- South Atlantic Habitat and Ecosystem Webpage
- South Atlantic Habitat and Ecosystem Internet Map Server (IMS) and ArcGIS Services
- Developed in cooperation with Florida Fish and Wildlife Research Institute to support ecosystem-based resource management, habitat, species and ecosystem research, and regional collaboration



*Specific Council Initiatives of Interest*

# Throughout the Northeast and Southeast regions: Ecosystem Modeling

- Ecosystem Models will improve understanding of the complexity of the system and methods to evaluate the impacts of fishing and non-fishing activities
- They integrate data on fish, habitat (pelagic and benthic), and fishery operations
- Models require substantial data inputs:
- These types of models will be used increasingly as Councils move away from single species/stock management and towards ecosystem-based approaches



Need to be measuring, mapping and monitoring for variables that will be useful for ecosystem models

# Council vision for the future

- Move from single-species assessments/management to multi-species assessments/management to true ecosystem-based assessment/management
  - Develop ecosystem-based FMP amendments to address regulations needed for individual fisheries or regulations across fisheries
- Encourage and facilitate development of regional tools to understand ecosystem impacts of fishing, bycatch, predator-prey interactions, fleet mobility/dynamics and habitat impacts.
  - These tools will provide the ability to evaluate non-fishing activities and aspects of comprehensive place-based management in the region.
- Continue to engage with regional marine spatial planning organizations
  - Governor's Alliances, MARCO, NROC
- Coordinate with agencies and regional organizations to establish research priorities
  - e.g. BOEMRE

# Fishery Management Councils and Offshore Wind

- Support evaluation of renewable energy as a potential important use of offshore resources
- Evaluation should be integrated into existing state and regional and possible future (NOC) marine spatial planning frameworks
- Fisheries needs to be explicitly integrated
  - EFH provisions of MSA provide commenting and consultation authority
  - Spatial management actions developed pursuant to FMCs FMPs
- Councils provide a forum for stakeholders to provide comments
- Supportive of data-collection efforts and research that may/can be associated with wind projects



# Acronyms

- ASMFC – Atlantic States Marine Fisheries Commission
- CEBA – Comprehensive Ecosystem-Based Amendment
- CHAPC – coral habitat area of particular concern (SA)
- EEZ – exclusive economic zone
- EFH – essential fish habitat
- FMC –fishery management council
- FMP – fishery management plan
- HAPC – habitat area of particular concern
- MARCO – Mid-Atlantic Regional Council on the Ocean
- NMFS – National Marine Fisheries Service
- NOC – National Ocean Council
- NROC – Northeast Regional Ocean Council
- OOS – Ocean observing system
- SASI – Swept Area Seabed Impact (model or approach)