

# Proposed Outline for a Gulf of Mexico Fishery Ecosystem Plan



# Developing a Fishery Ecosystem Plan for the Gulf of Mexico

A **Fishery Ecosystem Plan** (FEP) is a non-regulatory document that serves as a guide and provides a framework to incorporate ecosystem-aspects into fishery management decisions.

## An FEP can:

- Outline specific goals and categorize by priority
- Provide background information (physical environment, biology, social and economic considerations, etc.)
- Identify steps to reach the specific goals and help inform management actions



# Recap

**October 2018**

**Council Motion:** to direct staff to develop a Fishery Ecosystem Plan using the outline presented, which shall include recommendations for how to integrate ecosystem factors into the council decision-making process.

**Council Motion:** to establish an Ecosystem Technical Committee to consist of no more than thirteen ecosystem scientists from the Science Center, SSCs, academia and other stakeholders to assist the Council on the development and implementation of a Fishery Ecosystem Plan



# Ecosystem Technical Committee Meeting

Met on March 2<sup>nd</sup>, 2020

- Building a Fishery Ecosystem Plan for the Gulf of Mexico (Dr. Karnauskas, SEFSC)
- Ecosystem Approach to Fisheries Management: The Mid-Atlantic Fishery Management Council Perspective (Mr. Muffley, MAFMC)
- Discussion on the Regulatory Authority of the Gulf Council in the Context of Ecosystem Management (Dr. Farmer, SERO)
- Proposed Fishery Ecosystem Plan Outline (Council Staff)



# Ecosystem Technical Committee (ETC) Summary

## **Building a Fishery Ecosystem Plan for the Gulf of Mexico (Dr. Karnauskas, SEFSC)**

- The ETC agreed that the FEP should have a strong focus on underlining cumulative effects.
- The FEP could be a platform for the Council to provide recommendations to other management agencies outside of the scope of fisheries.
  - For example: nutrient input from inland sources and its effects on water quality, habitat, and fisheries.



# Ecosystem Technical Committee (ETC) Summary (cont.)

## **Ecosystem Approach to Fisheries Management: The Mid-Atlantic Fishery Management Council Perspective (Mr. Muffley, MAFMC)**

- The MAFMC went through a visioning project to gather information from stakeholders.
- The guidance document was divided into four major themes: forage species, habitat, climate change, and ecosystem-level interactions.



# Ecosystem Technical Committee (ETC) Summary (cont.)

## **Discussion on the Regulatory Authority of the Gulf Council in the Context of Ecosystem Management** (Dr. Farmer, SERO)

- Discussion about actionable items.
- Ecosystem considerations require interagency cooperation.
- Stakeholder input is important when considering ecosystem science for fisheries management.
- Developing an FEP is a complex endeavor and a vision statement can help focus this guiding document.



# Draft Outline Presented to the Ecosystem Technical Committee

Chapter 1	Definition, goals and objectives
Chapter 2	Background on ecosystem policy and science
Chapter 3	Description of Gulf of Mexico environment (physical, biological, socio-economic)
Chapter 4	Interactions of ecosystem components
Chapter 5	Cumulative effects of complex interactions
Chapter 6	Recommendations for ecosystem-informed policy decisions
Appendix	Supporting materials, special research studies



# Recommendations from the Ecosystem Technical Committee – Mission Statement

**Motion:** To approve the following mission statement:

“To provide a framework for integrating ecosystem science into the Council’s decision making for long term ecological and socio-economic sustainability of Gulf of Mexico resources.”

*Motion carried unanimously*

## Council feedback

What should be the vision or mission of the Gulf FEP?

# Ecosystem Management Goals

- Improve management decisions based on interactions among physical, biological, and socio-economic factors and reducing management uncertainty
- Document sources which affect (e.g., increase and decrease) fisheries productivity
- Inform the development of new and existing management measures – synthetic indicators of policy success
- Coordinate and consider ecosystem interactions information across FMPs
- Identify and prioritize research needs
- Real-time data into management process
- Identify benchmarks/indicators of FEP success



# Biological Section

**Goal:** To maintain or enhance biological diversity and fisheries productivity in the Gulf of Mexico over the long term.

## Objectives:

- Reduce waste in the form of incidental dead discards
- Minimize protected species interactions
- Maintain or enhance the forage base for trust resources
- Consider the functional role of species
- Quantify and mitigate impacts of harmful invasive species
- Effectively include environmental factors in the fishery management process
- Attempt to obtain system-wide optimum yield that accounts for species and fleet interactions and prevent ecosystem overfishing
- Document sources which affect (e.g., increase and decrease) fisheries productivity
- Maintain adequate habitat that will support healthy fish, water quality, benthic substrate
- Maintain and improve ecosystem health



# Socioeconomic Section

**Goal:** To maintain or enhance the blue economy for the Gulf of Mexico stakeholders

## Objectives:

- Help define policy success based on other marine use sectors
- Help define policy success in non-monetary terms
- Maintain or enhance economic growth and business stability with respect to the supply chain and new-entrant fishery
- Understand preferences and informing trade-offs
- Consider human health impacts
- Promote safety of human life at sea
- Reduce conflict between fishing user groups
- Increase consumer confidence in the sustainability of Gulf fisheries



# Examples of Potential On-Ramps

- Invasive species
  - Assessing the distribution of invasive species and it's interaction with economically important fishes
    - Example of Council action: Recommendation to NMFS for exempted fishing permits for lionfish
- Climate change
  - Vulnerability of species or fisheries, and migratory patterns to changing climate and ocean conditions. \*Acknowledgment of issues stemming from areas outside the Council's management jurisdiction
    - Example of Council actions: Adjust ACLs as landings fluctuate in response to environmental conditions.  
Spatial management based on habitat use and species migration.



# Examples of Potential On-Ramps

- Episodic events
  - Oil spills, red tide, hypoxia
    - Example of Council action: Integrate mortality events into stock assessments (e.g., red grouper)
- Habitat
  - Improve understanding of habitat use (benthic and pelagic)
    - Example of Council action: Fishing restrictions on sensitive habitat



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## Status and Draft Timeline

2020 – 2022	Ecosystem Technical Committee meetings
2020 – 2022	IPT meetings
2021	Clear goals & objectives; document outline
2022	Present draft FEP to Council

