



# FISHERY ECOSYSTEM PLAN OUTLINE AND STRUCTURE

*Presented to:*

Ecosystem Technical Committee,  
Gulf of Mexico Fisheries Management Council

*Presented by:*

LGL Ecological Research Associates, Inc.

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# GULF OF MEXICO FISHERY ECOSYSTEM PLAN PROPOSED MISSION STATEMENT

*“To provide a framework for integrating ecosystem science into the Council's decision making for long term ecological and socioeconomic sustainability of Gulf of Mexico resources”.*

Proposed by the Ecosystem Technical  
Committee (ETC), March 2020

**FEP guidance must be actionable**

# QUESTIONS FOR ETC

- Does the FEP Mission Statement need revision?
- What time frame (future) are we managing towards presently?
- What time should we be managing for?
- Do the methods for gaining common vision seem reasonable given Council history and culture?
- Does the proposed FEI structure need modification?
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- Do you support development of a citizen science and cooperative research program under the Gulf Council?

# GUIDING PRINCIPLES FOR FEP

- Concise and Actionable
- Guided by policies, experiences, and recent analyses
  - Gulf FEP development history
  - Case Studies and Lessons Learned
  - Indicator development and dashboard
  - Stakeholder Analysis
  - Next Gen FEPs
  - EBFM Roadmap
  - Ecosystem Status Reports
  - All Magnuson National Standards



# RECOMMENDATIONS FOR THE GULF FEP BASED ON CASE STUDIES AND LESSONS LEARNED

Based on **Best Practices and Lessons Learned from Fishery Ecosystem Planning** LGL recommends that the Gulf FEP should be implemented through five priority actions:

1. Develop a **common vision** of EBFM in the Gulf
2. Use **Fishery Ecosystem Issues** to address specific priorities
3. **Engage stakeholders** fully and effectively
4. Build a **Citizen Science and Cooperative Research** Program
5. Address **extra jurisdictional** issues

# FISHERY ECOSYSTEM PLAN OUTLINE

Chapter 1: Developing a Joint Vision

Chapter 2: Institutionalizing Fishery Ecosystem Issues

Chapter 3: Maximizing Meaningful Stakeholder Engagement

Chapter 4: Developing a Cooperative Research and Citizen  
Science Program

Chapter 5: Addressing Extra-Jurisdictional Issues

Appendices

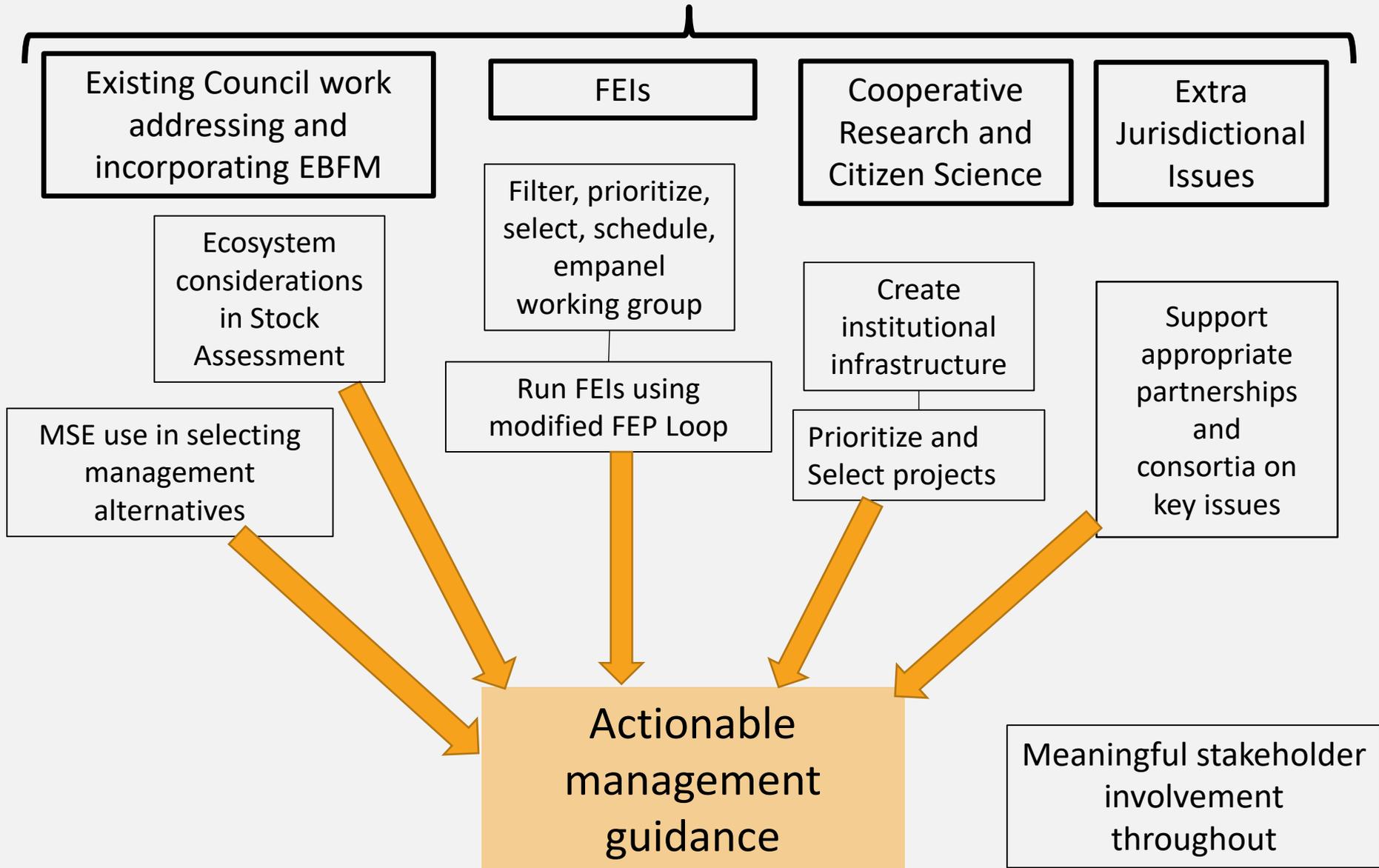
Decision support tools

Engagement methods

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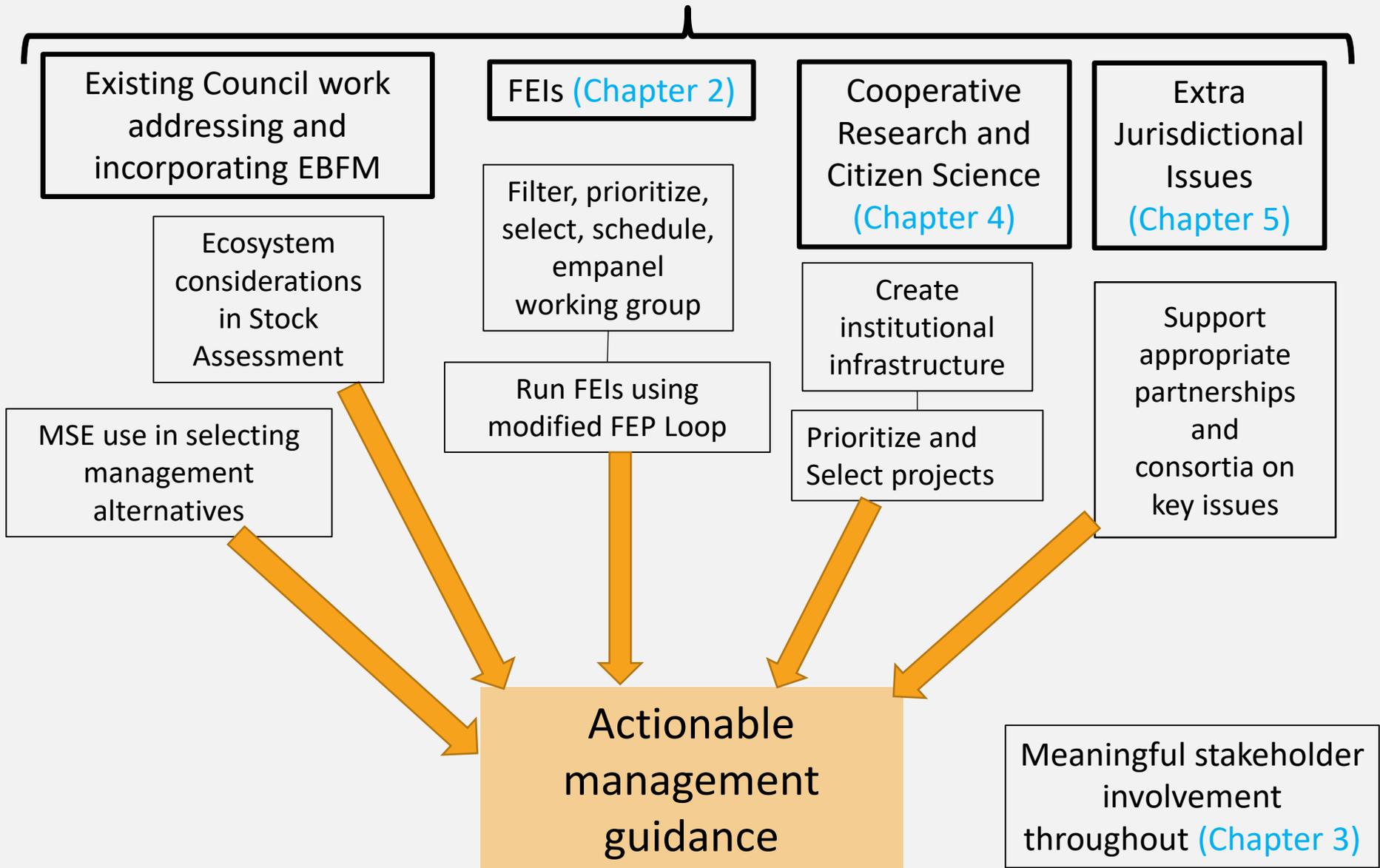
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# Joint Vision of Future Gulf Fishery Ecosystem



# Joint Vision of Future Gulf Fishery Ecosystem

(Chapter 1)



# CHAPTER 1: JOINT VISION

## **Challenge:**

Develop a shared, long-term vision for sustainable and resilient fishery ecosystems in the Gulf of Mexico.

## **Recognizing:**

- Diversity in stakeholders backgrounds and needs
- Cultural adversity to visioning processes
- Limited time and resources

# CHAPTER 1: JOINT VISIONING APPROACH

## Proposed Four Step Approach

1. Develop a technical report status, trends, opportunities and vision recommendations for Gulf Fishery Ecosystem Management
2. Create and implement education and outreach campaign
  - Based on holistic status and trends report
  - Share widely via campaign
3. Further detail stakeholder visions for the future
  - Broad public stakeholder opinion surveys
  - Survey Council members, Council subgroups/committees (ETC, Advisory Panels, Technical working groups, etc.)
  - Use participatory workshops and mental modelling
4. Synthesize a joint vision, post for public comment, adopt.

# CHAPTER 1: JOINT VISION REPORT CONTENTS (WHERE ARE WE NOW?)

## a) Human Dimensions and Socio Economics

- Rising coastal populations
- No cap on recreational access
- high cost of entry
- commercial and recreational value and economic dependence

## b) Biophysical

- Rising temperature and sea level
- Coastal Inundation and wetland loss
- Wetland loss
- Coastal and upland pollution, hypoxia, HABs
- Subregional differences

## c) Institutional

- Present approach, single species management is not sufficient to capture complexity
- Major issues affecting fisheries are outside Council jurisdiction
- Subregional management focus is needed
- Limited Council capacity and resources

## d) Opportunities

- Willing potential partners, e.g., Conservation NGO's, Private Foundations, EPA, water management districts, state and local governments, private business, etc.
- BP funding (RESTORE, NAS Gulf Research Program, etc.)
- Market based solutions and incentives for changing practices
- Blue carbon credits, nutrient credits
- 30 X 30 funding

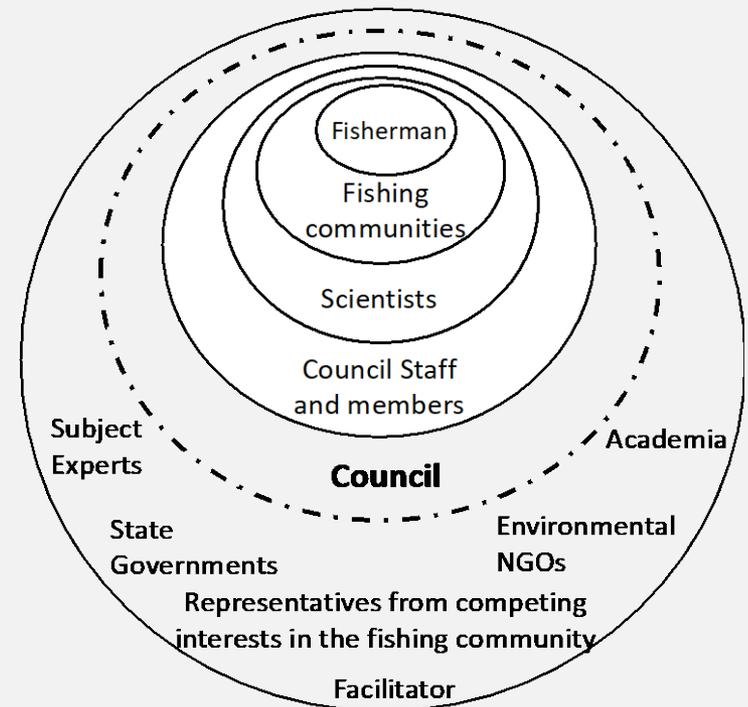
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# CHAPTER 2: INSTITUTIONALIZE FEIS

## FISHERY ECOSYSTEM ISSUES (FEI)

1. Serve as the operational unit or focal scale for Fishery Ecosystem Planning
2. Are bounded in space and time with a conceptual model of a fishery ecosystem.
3. Are often conceived of by experienced and active fishermen based on their own observations but evolve into a conceptual model with increasing input from scientists, managers and other stakeholders.
4. Designed to address, mitigate or resolve issues by generating actionable management guidance.



# CHAPTER 2: INSTITUTIONALIZE FEIS

**Many Existing Council Committees and Advisory Panels  
Including:**

## Administrative Committees

- Administrative / Budget
- Personnel
- Retirement Plan/Trustees
- Gulf SEDAR
- Data Collection
- Habitat Protection & Restoration
- Law Enforcement
- Outreach & Education

## Management Committees

- Coral
- Ecosystem
- Mackerel
- Migratory Species
- Red Drum
- Shrimp
- Spiny Lobster
- Sustainable Fisheries
- Reef Fish

FEIs could emerge from stakeholders externally or from internal deliberations of other committees

FEIs could be filtered, vetted, altered by the ETC and then placed into a “FEI hopper”

Council could prioritize, and select FEIs for action, appoint working groups.

FEI working groups articulate needed science support and use cooperative research program to address needs.

FEI working groups return to Council with suggested management actions and monitoring program.

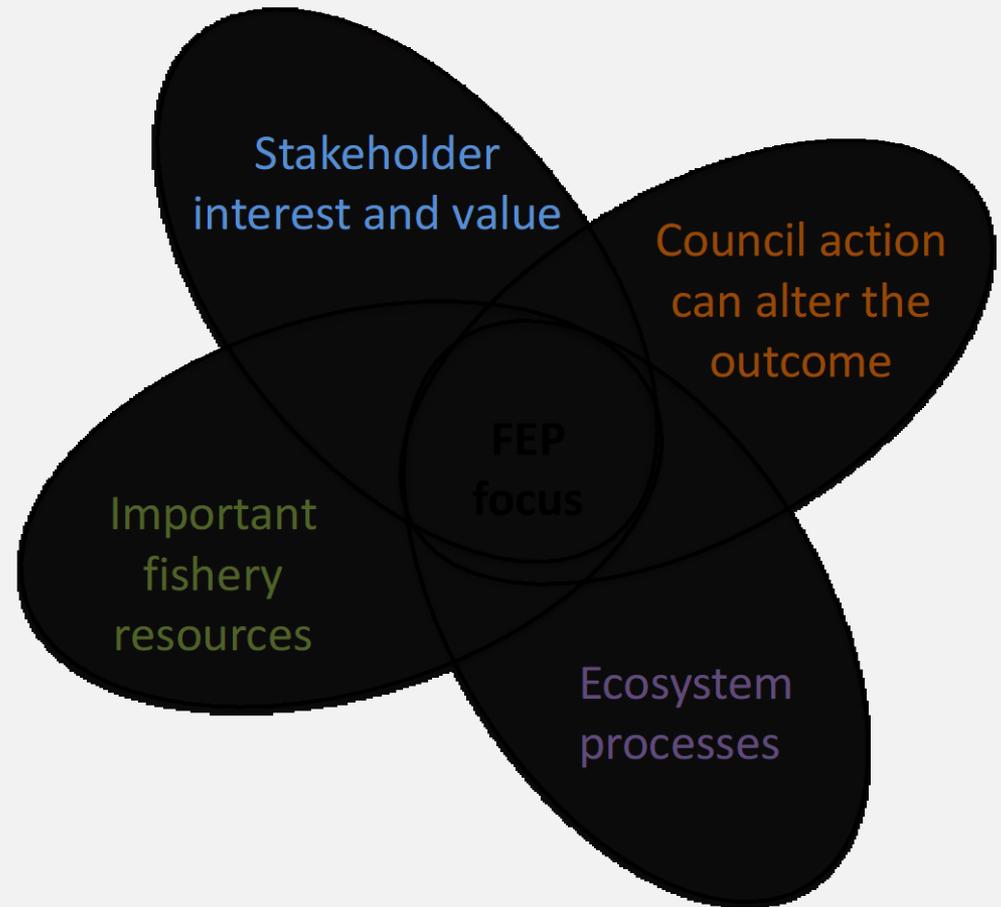
## CHAPTER 2: FEI FILTERING, PRIORITIZATION AND SELECTION

Council will be faced with various potential FEIs and limited resources to address them.

ETC provides the first filter and recommends priorities to Council

Council selects FEIs to run.

Decision support tools are under development and can be used to help Council prioritize, select and “run” focal FEIs.



# CHAPTER 2: OPERATIONALIZING FEIS



Council FEI Hopper

Council filters, prioritizes, refines and selects FEIs. Assigns working groups and allocates needed resources. Multiple FEIs can be run simultaneously if resources allow

ETC provides the first filter, possible refinement, and vetting prior to selection for upload to the hopper

Run FEI

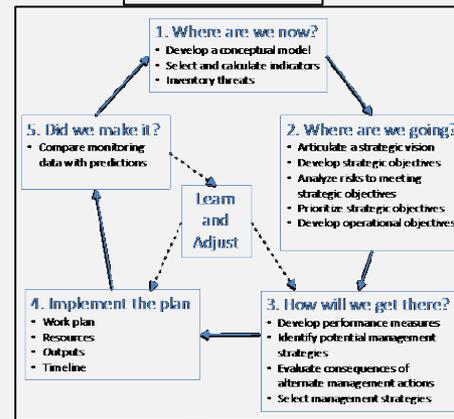
Workgroup runs the FEI through the FEP Loop.

Defines objectives, workplan, budget, timeline, deliverables.

Accountable to the Council and reports regularly.

Results in actionable management solutions

FEIs bubble up from stakeholder concerns and are submitted to ETC



Actionable management guidance

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# CHAPTER 3: METHODS AND ONRAMPS TO INCREASE MEANINGFUL STAKEHOLDER ENGAGEMENT

## Challenges

- ✓ Cost for stakeholders to attend meetings can be prohibitive
- ✓ Management decisions often benefit engaged participants and lobby interests
- ✓ “Public comment” at Council meetings is ineffective
  
- ✓ Limited stakeholder involvement in the “management science” process, but could expand through:
  - Defining and scoping management relevant questions, and FEIs
  - Articulating possible solutions
  - Participating in defining RFP contents and priorities
  - Participating in evaluating proposals
  - Participating in writing proposals
  - Participation in Cooperative Research
  - Participation in scientific discussions – focus on precision not relevance
  - Best available science does not adequately include stakeholder knowledge

# CHAPTER 3: INCREASING STAKEHOLDER ENGAGEMENT

## EXISTING PROCESS

### **Public Meetings**

Comments submitted during public meetings are recorded and written comments are displayed in full on the Council website. All comments are also summarized and presented to the Council before fishery management decisions are made.

### **Scoping:**

During the scoping process, the Council gathers suggestions and ideas from stakeholders and others about how to solve a fishery problem or address a need. The goal of scoping is to identify issues, potential impacts, and reasonable alternatives associated with the issues at hand so that reasonable management actions can be developed.

### **Public Hearing:**

The Council holds public hearings after identifying management options that can potentially solve a fishery issue. The purpose of public hearings is to gather feedback on potential impacts of the proposed alternatives and to suggest other possible alternatives as appropriate.

### **Final Action:**

After the public has had an opportunity to comment on proposed management actions, the Council takes final action by choosing an appropriate management strategy. Final action occurs publicly, during a Council meeting, after one last opportunity for public input. The Council then votes to forward the fishery management plan or amendment to the Secretary of Commerce for final approval and implementation.

### **Rule Making:**

When the Council takes final action on a fishery management plan or amendment, it sends it to the Secretary of Commerce. The secretary opens a 15 - 60 day public comment period before deciding whether to approve, partially approve, or disapprove the proposed measure.

### **Implementation:**

After a fishery management plan or amendment is approved by the Secretary of Commerce, a final rule is published in the Federal Register implementing the management actions.

## POSSIBLE ADDITIONS

### **Contribute to Joint Vision**

Interviews, mental mapping, surveys, etc. can be used to maximize stakeholder opinion in visioning.

### **FEIs**

Council can create space/time for stakeholders to develop and formalize FEIs with scientists and managers during public meetings, hearings and scoping. Stakeholders can participate in FEI working groups.

### **Cooperative Research and Citizen Science Program**

# CHAPTER 4: BUILD A CITIZEN SCIENCE AND COOPERATIVE RESEARCH PROGRAM

- [Emulate South Atlantic Citizen Science Program](#)
- [Emulate New England Cooperative Research Program](#)

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# CHAPTER 5: ADDRESS EXTRA JURISDICTIONAL ISSUES

## Extra-Jurisdictional Liaison

Council could appoint ~1 FTE to develop partnerships and synergies to address issues affecting Gulf Fishery Ecosystems that are outside Council jurisdictional e.g., upland sources of pollution and nutrients, Hypoxia, Red Tide, HABs, climate change

## Potential partners include:

- Mississippi River Hypoxia Task Force <https://www.epa.gov/ms-htf>
- Water management districts
- USDA
- EPA
- BOEM
- Conservation NGOs

## Strategies could include:

Market-based solutions, incentives, consortium action, blue carbon credits, nitrogen credits, etc.

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## RELATIVE RESOURCE NEEDS FOR IMPLEMENTATION

Objective	Cost	Council Personnel	Consultants
Visioning Process	\$\$	L	M
Institutionalizing FEIs	\$	M	L
Address Extra Jurisdictional Issues	\$	L	L
Stakeholder Engagement	\$	L	L
Citizen Science and Cooperative Research	\$\$\$	H	M