



# CASE STUDIES AND LESSONS LEARNED FROM FISHERY ECOSYSTEM PLANNING

*Presented to:*

Ecosystem Technical Committee,  
Gulf of Mexico Fisheries Management Council

*Presented by:*

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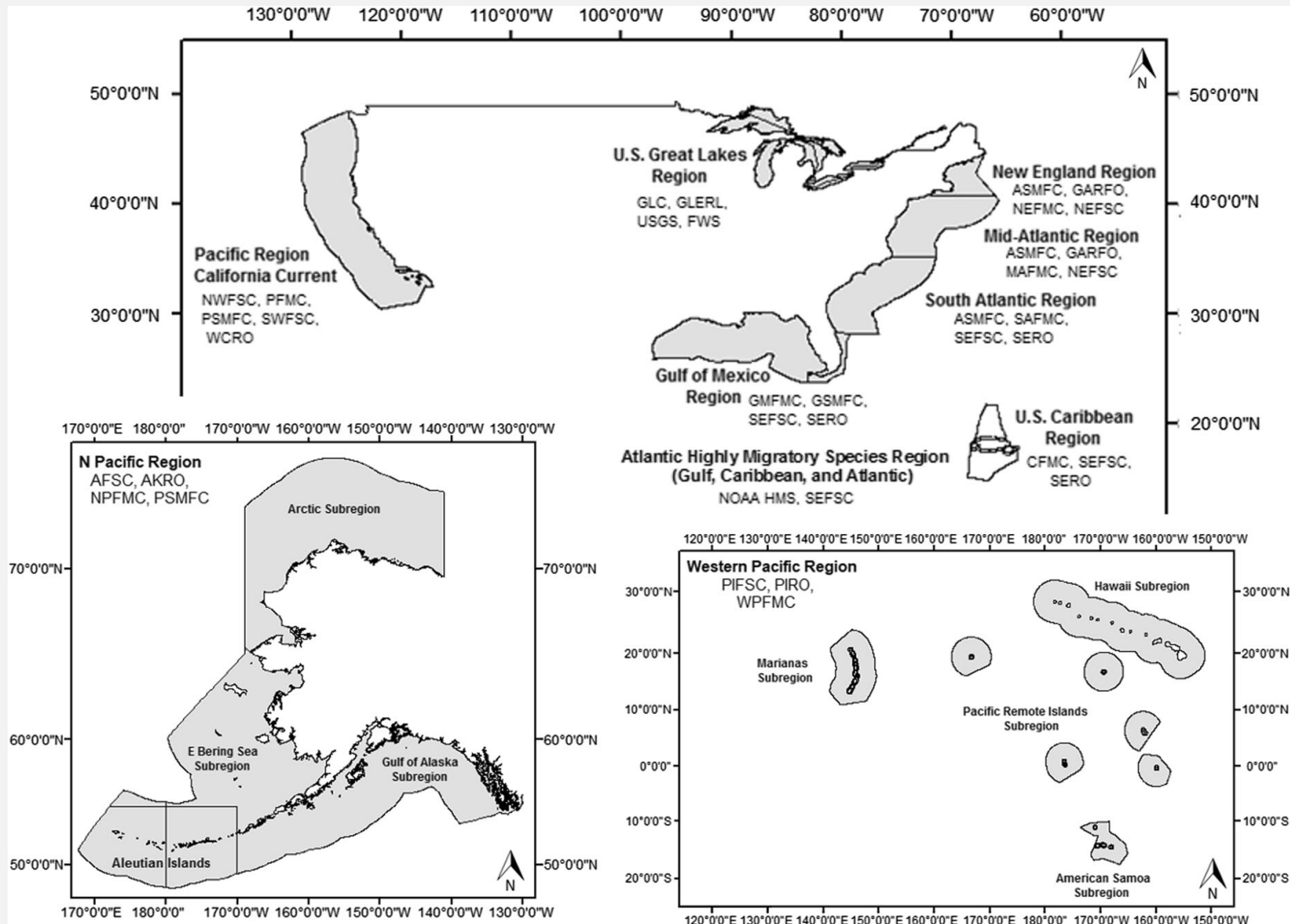
# CASE STUDIES AND LESSONS LEARNED FROM FISHERY ECOSYSTEM PLANNING

- Document is meant to provide guidance to the Gulf Council based on FEP experiences from other U.S. RFMCs.
- The document includes an introductory chapter which highlights some of the challenges to EBFM implementation followed by a brief history of the major steps the U.S. has taken to include ecosystem concerns in fisheries management.
- Chapter 2 offers brief case studies of the FEP development experiences from each of the nation's other RFMCs: North Pacific, Caribbean, South Atlantic, Pacific, New England, Mid-Atlantic, and Western Pacific.
- Chapter 3 provides a synthesis of lessons learned by theme and offers a set of recommendations for the Gulf Council. The overall intent of the document is help set the stage and guide development of an actionable FEP for the Gulf of Mexico

## CASE STUDIES AND LESSONS LEARNED FROM FISHERY ECOSYSTEM PLANNING

- The case studies are not exhaustive or comprehensive but are designed to capture lessons and actionable examples that could be adopted in the Gulf of Mexico Fishery Ecosystem Plan.
- We attempt to capture those lessons and tools that are most valuable and useful and could be adopted in the Gulf FEP.

# CASE STUDIES AND LESSONS LEARNED FROM FISHERY ECOSYSTEM PLANNING



# COMPARISON OF RFMCS' FEP METHODS

Issues/Methods Addressed by FEPs	Fishery Management Council						
	Western Pacific	North Pacific	Pacific	New England	Mid Atlantic	South Atlantic	Caribbean
Visioning	Green	Green	White	White	White	Green	White
Issue-Based Action Modules	White	Green	Green	White	White	White	White
Stakeholder Engagement	Green	Green	Green	Gray	White	Gray	White
Cooperative Research and Citizen Science	Gray	Gray	Green	Gray	Green	Green	Gray
Extra Jurisdictional Issues	Green	Gray	Gray	Green	Green	Gray	Gray
Regional Subdivisions	Green	Green	Gray	Gray	White	Gray	Green
Conceptual and Ecosystem Models	Gray	Green	Green	Gray	Green	Green	Gray
Annual IEAs	Gray	Green	Green	Gray	White	White	White
Climate Change Mitigation	Gray	Gray	Green	Gray	Gray	Gray	Gray
Marine Protected Areas	Green	Green	Gray	Gray	Gray	Green	Gray

Green: Good examples that could be adopted by the Gulf Council.  
 Gray: Approach initiated or used with some success  
 White: Limited or no use

# BEST PRACTICES AND LESSONS LEARNED

## Developing a Common Vision

Visioning can be an important aspect of stakeholder engagement. There will never be enough data or model accuracy to guide decision making completely, but with a common vision, Councils can use Management Strategy Evaluation to help select “no-regret” decisions and take bold action in the face of uncertainty.

## Issue-Based Actions

The nation’s best examples are “Action Modules” used by the North Pacific Council and “Ecosystem Initiatives” used by the Pacific Council. These Councils have developed frameworks for issue prioritization and selection, as well as organized processes to empanel task forces, develop conceptual models, formally engage stakeholders, define objectives, tasks, timelines for product delivery, and regular Council review.

# BEST PRACTICES AND LESSONS LEARNED

## Stakeholder Involvement

Bottom-up, stakeholder-driven approaches to Fishery Ecosystem Planning have been used effectively around the nation. The Western Pacific and North Pacific are exemplary in this aspect. Targeted education and outreach programs can help build stakeholder understanding of EBFM and thereby build their support. Stakeholders can also be engaged through Cooperative Research and Citizen Science.

## Cooperative Research and Citizen Science

The NEFSC's Fisheries Monitoring and Research Division has an entire branch dedicated to Cooperative Research, including a "Study Fleet" of over 50 commercial vessels. The South Atlantic has developed a Citizen Science Program which has begun to generate valuable results and engaged anglers in research. The benefits include: building stakeholder support, efficiently collecting data for stock assessments and environmental monitoring, and building fisher trust in the credibility of science for management. Truly cooperative research occurs when stakeholders are involved fully and throughout the scientific process, beginning at the issue identification stage and continuing through hypothesis generation, sampling design and data collection, analysis and interpretation of results, and incorporating resulting findings into the policy and management.

# BEST PRACTICES AND LESSONS LEARNED

## Extra-Jurisdictional Issues

Many of the impacts on fishery resources are generated outside of the geography and jurisdiction of single RFMCs (e.g., coastal development, upland sources of pollution, and climate change). There is a great need for broad collaboration with NGOs, academics, state and federal agencies, and others to address extra jurisdictional issues that negatively affect fisheries resources. The Western Pacific Council has addressed integrated watershed and coastal management. In some cases, Conservation NGOs or industry-based groups have helped build consortiums to address issues (e.g., Save the Bay Foundation and The Nature Conservancy in Chesapeake Bay; ROSA for offshore wind farms in the Atlantic). Upland water quality issues are sometimes addressed through interagency task forces (e.g., the Mississippi River/Gulf of Mexico Hypoxia Task Force), but we have not found examples in which RFMCs have effectively used such consortiums to address direct impacts on federal fisheries.



# BEST PRACTICES AND LESSONS LEARNED

## Managing at Appropriate Subregional Scales

In all cases, RFMCs have found that subregional planning focus has increased specificity in resulting management recommendations with increased stakeholder engagement. Subregional divisions have been used to regionalize analysis and management (e.g., the FEPs developed for the Bering Sea in the North Pacific and for Georges Bank in New England). When subregional boundaries are drawn to focus management, they are often flexible and issue-specific.

## Conceptual and Ecosystem Models

Complex ecosystem models have been developed for each RFMC but have rarely (if ever) had sufficient data to accurately predict future ecological conditions. This goal may eventually be achieved but has not done so to date. By contrast, conceptual models, developed from stakeholders' knowledge have often been used to guide research and management actions and build stakeholder engagement (e.g., Dolphin Wahoo in the South Atlantic and for subsistence and traditional fisheries in the North Pacific). In order to be most useful, conceptual models are presented in highly accessible formats.

# BEST PRACTICES AND LESSONS LEARNED

## Annual Integrated Ecosystem Assessments and Ecosystem Status Reports

The North Pacific has a well-funded, long-term research and monitoring program that is conducted collaboratively with many academic institutions, industry organizations, as well as state and federal agencies. The program offers management guidance that is incorporated in nearly all management decisions in the region. The Pacific Council's Annual Ecosystem Status Reports are streamlined and concise, i.e., less than 20 pages and supported by easily interpreted graphical summaries of indicator values and trends in relation to identified reference points. This style and frequency of ESRs would be ideal for the Gulf of Mexico but is unfeasible with present resources.

# BEST PRACTICES AND LESSONS LEARNED

## Climate Change Mitigation

Climate change has been identified as a major driver of ecosystem change by every RFMC in the nation particularly those with geographies that align with large latitudinal gradients. Achieving “climate ready fisheries” could only occur when resilience and sustainability are prioritized equally with maximizing catch, as codified in National Standards 1, 8, and 9 of MSA.

## Marine Protected Areas

MPAs have been used extensively as an EBFM implementation tool in all regions, often because of the holistic benefits to the ecosystem and/or to specific resources. We find that though MPAs can serve as holistic, multi-species management tools, their utility and acceptance by stakeholders is vastly increased when MPAs are designed to meet specific goals, articulated prior to designation. Most MPAs are designated individually. It would be valuable to reconsider and redesign managed areas to be part of MPA networks, designed for mutual replenishment and to build system resilience.

# RECOMMENDATIONS FOR THE GULF FEP

Based on the summary of best practices and lessons learned from this study, 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

## QUESTIONS FOR ETC DISCUSSION?

- Do you agree with the prioritization? Should any be moved up?
- Note that there are overlaps among selected priorities and among the additional 5 best practices.
- Did we miss something big?
- Would it be valuable to invite presentations from Councils with best practices to Gulf Council meetings?
- Would “Exchange Visits” be valuable to help Council understanding of best practices?
- Other questions