

174th Caribbean Fishery Management Council Regular Meeting

July 21, 2021

Virtual Meeting

Sennai Habtes

EBFM TAP Chair

Bureau Chief, Fisheries

VI DPNR – Division of Fish & Wildlife

NOAA/NMFS EBFM POLICY STATEMENT

- NOAA's National Marine Fisheries Service (NOAA Fisheries) strongly supports implementation of Ecosystem-Based Fisheries Management (EBFM) to better inform and enable better decisions regarding trade-offs among and between fisheries (commercial, recreational, and subsistence), aquaculture, protected species, biodiversity, and habitats.
- Recognizing the interconnectedness of these ecosystem components will help maintain resilient and productive ecosystems (including the human communities on which they depend), even as they respond to climate, habitat, ecological, and other environmental changes.

Background:

- "NOAA strives to adopt an ecosystem-based approach throughout its broad ocean and coastal stewardship, science, and service programs."
- In 2018, NOAA published an Ecosystem Based Fisheries Management Policy that includes roadmaps for EBFM implementation around the country
- Development of Fishery Ecosystem Plans (FEP) at the council level

EBFM TAP History Background

October 23, 2019: CFMC establishes EBFM Technical Advisory Panel

December 10-11, 2019: EBFM TAP Members Appointed

The EBFM TAP Charter - Elements

- Council established the EBFM TAP to assist in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information relevant to the Council's development of the FEP and amendments.
- The EBFM TAP is composed of individuals engaged in ecosystem research or knowledgeable and interested in the conservation and management of the ecosystems of *managed* fisheries. The EBFM TAP shall reflect the expertise and interest from the standpoint of the scientific need for advice of the Council within the Council's geographical area of concern.
- The EBFM TAP provides expert scientific and technical advice to the Council on the development of, on the preparation of fishery ecosystem plan, and on the effectiveness of such plan once in operation. The TAP aids the Council in identifying scientific resources available for the development of plans, in establishing the objectives of plans, in establishing criteria for judging plan effectiveness and in the review of plans



The EBFM TAP Charter - Objectives

 The EBFM TAP shall provide the Council ongoing scientific advice on ecosystembased fishery management for fishery management decisions, including recommendations for habitat status, social and economic impacts of management measures, and ecosystem-based impacts (stressors) on sustainability of fishing practices

DRAFT FEP Outline - Components



- Goals & Objectives
- Data Available
 - Data gaps
- Conceptual models
- Ecosystem indicators
- Ecosystem status
- Ecosystem stressors
- Policy guidelines
- Description of ecosystem
 - Ecosystem transcends jurisdictional boundaries

Figure: The Lenfest FEP loop (Essington et al., 2016)

DRAFT FEP Outline - Potential Additions



- Risk assessment
- Suggested council considerations during management decision making process
- System of checks and balances

Figure: The Lenfest FEP loop (Essington et al., 2016)

DRAFT GOALS & OBJECTIVES

FEP goals and Objectives:

The overarching *goal* of the Fishery Ecosystem Plan (FEP) is to promote ecosystem based approaches to ensure healthy, resilient and productive marine ecosystems and the fisheries resources dependent upon those ecosystems, within the context of the unique biological, ecological, economic, social and cultural characteristics of those fishery resources and the communities dependent on them.

- A corollary goal is to provide the framework that promotes the following sub-goals:
 - Increase human community resilience within the context of changing ecosystems;
 - Promote ecosystem resilience within the context of changing ecosystems;
 - Define present ecosystem status/functionality;
 - Understand dynamics of fisheries and ecosystem services;
 - Describe key ecosystem linkages;
 - Identify research priorities;
 - Identify additional ecosystem-essential species in need of conservation and management;
 - Understand the risks to the fishery ecosystem and tradeoffs from different management strategies;
 - Improve the data and information needed to support marine ecosystem management;
 - Prevent overfishing and/or ecosystem overfishing;
 - Achieve optimum yield;
 - Incorporate ecosystem considerations into stock assessments;
 - Bring ecosystem considerations into the decision making process;
 - Promote adaptive management policies (Revising MSA, National SSC, CCC).

CONCEPTUAL MODEL DEVELOPMENT

- Strong need to incorporate stakeholders early and often
- Stakeholder input is the backbone of the first part of the FEP
- Conceptual models are used to inform the derivation of ecosystem indicators, risk assessment components, and potential management strategies
 - In addition to the individual models, a melded model will be created to highlight components that are emphasized by all stakeholders
- Completed Conceptual Models:
 - SSC, DAPs (CFMC/NOAA)
 - Coastal Businesses, eNGOs (Melivora Consulting)
- Underway:
 - Scientific Community & Fishermen (ISER Caribe)



\	Activity	Expected Date of Completion
	Revise and draft EBFM TAP goals and objectives	December 2020
	Draft FEP goals and objectives	April 2021
	Continue to collect and analyze existing data sets from Lenfest, SeaMap, ESR, etc • Expected products = a centralized repository of data (e.g., MBON, Caricoos, etc); summary analyses of pertinent datasets; potentially peer-reviewed publications	April - December 2021
	Complete all conceptual models	August 2021
	Meld conceptual models to create island-specific conceptual models	December 2021
	Use the conceptual models & additional products to create island-specific risk assessments for consideration by the SSC, that will be used to inform approaches that will be presented in the FEP.	April 2022
	Use the conceptual models and other products produced by the ESR, EBFM TAP, and by the Lenfest FEP project to identify ecosystem indicators that should be monitored. In addition to inclusion in the FEP, these indicators will be presented to the SSC and the CFMC for consideration to include in EBFM management practices.	August 2022



Activity	Expected Date of Completion
Develop strategic objectives, prioritize the objectives, and outline a vision for the use of the FEP for consideration in the CFMC processes.	December 2022
Develop operational objectives with concrete action items to be presented in the FEP, for consideration by the CFMC.	December 2022
Develop performance measures and draft a management strategy that can be used situationally during CFMC decision making, to be presented in the FEP, for consideration by the CFMC.	April 2023
Develop a feedback mechanism for adaptive management to be presented in the FEP, for consideration by the CFMC.	April 2023
Develop a draft FEP document	August 2023
Submit FEP for council approval	December 2023

DRAFT MOTION FOR THE COUNCIL

The Council approves the draft goals and objectives for the Fishery Ecosystem Plan as outlined by the EBFMTAP and directs the EBFMTAP to use these goals and objectives to further the development of the Fishery Ecosystem Plan.

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Outcome:		

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ADDITIONAL INFORMATION

PROJECTS - OUTSIDE CFMC

LENFEST JJ WILLIAMS SEARA PROPOSAL

GOALS

To guide the development of a Fishery Ecosystem Plan for the U.S. Caribbean by defining management objectives and developing models that describe these marine ecosystems and help identify threats and factors that influence change across the region.

OBJECTIVES

- I) To develop both a conceptual and quantitative model that describes the Caribbean ecosystem within a fisheries context based on stakeholder perceptions and data collected, respectively;
- 2) To select and estimate indicators of the performance of the model under different conditions (threats, impacts, human activities, etc.);
- 3) For a final product, we will work with stakeholders by integrating results from both models to identify the main indicators and threats potentially affecting the fisheries systems.

SEFSC KARNAUSKAS, Arnold PROPOSAL

GOAL

Identification of quantitative indicators, conduct additional indicator synthesis work (multivariate analyses, threshold detection analysis) to understand overall trends in the ecosystem, and begin to develop hypotheses and an understanding of relationships between ecosystem components.

OBJECTIVE

Identify, acquire, compile, and conduct spatial and temporal analyses of pertinent data needed for development of an ecosystem status report for the U.S. Caribbean region