

ECOSYSTEM BASED TECHNICAL ADVISORY
PANEL
(EBFM TAP)

Caribbean Fishery Management
Council (CFMC) Ecosystem Based
Fishery Management (EBFM)

Technical Advisory Panel (TAP)

Hybrid Meeting

March 16-17, 2022

Sennai Habtes

EBFM TAP Chair

Bureau Chief, Fisheries

VI DPNR – Division of Fish &
Wildlife

ATTENDANCE – 3/16/22

EBFM TAP Members		Guests	
First Name	Last Name	First Name	Last Name
JJ	Cruz Motta		
Stacey	Williams		
Tarsila	Seara		
Orian	Tzadik		
Alida	Ortiz		
Sennai	Habtes		
Kelly	Montenero		
Seann	Reagan		
Graciela	García-Moliner		
Liajay	Rivera Garcia		

APPROVAL OF AGENDA

March 16, 2022

9:00 a.m. – 9:30 a.m.

-Roll Call

-Adoption of Agenda

-Approval of Minutes

-TAP Chair Introduction – Sennai Habtes

9:30 a.m. -12:15 p.m.

-Ecosystem Components On-Going Work

9:30 a.m.-10:30 a.m.

-Smithsonian Mangrove Project US Caribbean– Susan Kotikot, Steven Canty

10:30 a.m.–10:40 a.m.

-Break

10:40 a.m.-11:15 a.m.

-Mellivora Consulting Conceptual Models – Michelle Duval

11:15 a.m.-11:45 a.m.

-Southeast Fishery Science Center (SEFSC) Inventory Update -Kevin McCarthy and Rachel Eckley

Introduction of NOAA-Fisheries SEFSC Caribbean Branch Staff (Strategic Plan)

11:45 a.m.-12:15 p.m.

-SEDAR-Stock Assessment Matrix – Kevin McCarthy, SEFSC

12:15 p.m.-1:15 p.m.

-Lunch Break

1:15 p.m.-1:45 p.m.

-Net Gain Alliance – Improve Data for Fisheries Data Needs: Digital Modernization Project

-(<https://www.netgainsalliance.org/>)

1:45 p.m.-2:05 p.m.

-EBFM Workshop Summary – Tauna Rankin (EBFM Working Group’s Workshop on Ecosystem Status Report Applications)

2:05 p.m.-2:20 p.m.

-CFMC’s Outreach and Education Advisory Panel Update: Public Engagement – Alida Ortiz

2:20 p.m.-2:30 p.m.

-Break

2:30 p.m. 5:00 p.m.

Fishery Ecosystem Plan (FEP) Product Development

2:30 p.m.-3:15 p.m.

-Integrative analyses and visualization of SEAMAP-Caribbean data in Puerto Rico and the US Virgin Islands (aka The Gold Copy) –JJ Cruz Motta, University of Puerto Rico, Mayaguez

3:15 p.m.-4:00 p.m.

-Ecosystem Status Report: Ecosystem Indicators SEFSC -Kelly Montenero – Mandy Karanauskas

4:00 p.m.- 5:00 p.m.

-Sargasso: Mapping - William Hernández/Roy Armstrong);

- Sargasso Plankton Surveys - Aury Rodríguez

-CARICOOS Science: Oceanography and Biology - Julio Morell

APPROVAL OF PREVIOUS MINUTES

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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

A large light blue circle with a white border, containing the text "EBFM TAP History Background" in white. The circle is positioned on the left side of the slide, overlapping a dark grey vertical bar.

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



EBFM TAP History Background

The EBFM TAP Charter - Objectives

- The EBFM TAP shall provide the Council ongoing scientific advice on ecosystem-based 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

**COMPLIMENTARY
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

- 1) 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



EBFM TAP MEETING ACTION ITEMS

- Update all participants on current efforts underway
- Identify incomplete products and plan how to complete them (e.g., conceptual models, risk assessment)
- Agree on a plan to complete outstanding work in the “where are we now” stage of the Lenfest loop towards FEP development Initiate a discussion on the development of strategic objectives
- Create a plan to develop strategic objectives by the next EBFM TAP meeting
- Initiate a discussion on how to develop operational objectives to propose to the council

LENFEST LOOP TOWARDS FEP DEVELOPMENT

Figure 1

THE STRUCTURE AND PROCESS OF FISHERY ECOSYSTEM PLANS



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

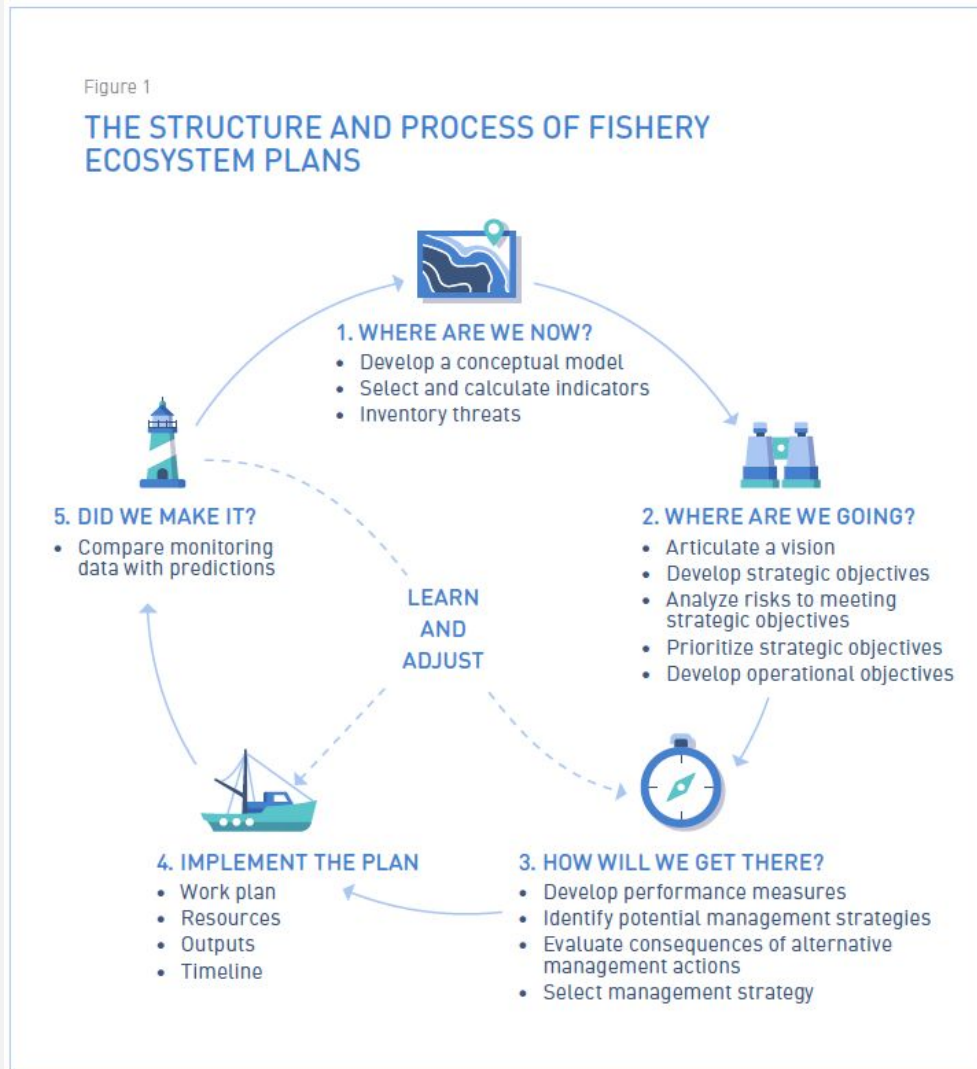
WHERE ARE WE NOW?

Conceptual Models (SSC, DAPs, eNGOs, Coastal businesses, academics, managers, other fishers)

Indicators (from the conceptual models and quantitative data)

Inventory

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

Figure 1

THE STRUCTURE AND PROCESS OF FISHERY ECOSYSTEM PLANS



- 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).

WHERE ARE WE GOING?

Articulate a vision – Discussion & previous efforts

Strategic Objectives – How to develop

Assessment of Risk – Tauna presentation

Prioritize strategic objectives – Develop strategy

Operational objectives – Develop a plan to present options to council

NEXT STEPS

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

NEXT STEPS

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

STRATEGIC AND OPERATIONAL OBJECTIVES

- Next steps towards FEP development
- Identify vision & strategy
- Create actions to address strategy

Figure 1

THE STRUCTURE AND PROCESS OF FISHERY ECOSYSTEM PLANS



**STRATEGIC AND
OPERATIONAL
OBJECTIVES –
INITIAL
CHALLENGE**

- The islands of the U.S. Caribbean are small. Non fishery related actions occurring on land and water affect the marine environment disproportionately to other regions. Stakeholders that are concerned about these actions, and their repercussions on the marine environment, often lack (or are unaware of) a formal avenue to voice their concerns. For example, how land-based actions affect their fishery and other coastal marine resources. And how fishers may effectively inform the pertinent agencies and start a positive action of change.

STRATEGIC AND OPERATIONAL OBJECTIVES – INITIAL CHALLENGE



Background – Stakeholders voice concerns over anthropogenic stressors to the CFMC instead of the governing federal or territorial agencies



Articulate Vision – The CFMC could create a pathway for stakeholders to voice their concerns to the appropriate agencies and formally inform them



Strategy – To maximize and address stakeholder input to promote EBFM success under an annual informative letter to governing agencies, compiled by CFMC staff and approved by the Council



Risk – Stakeholders may rely on the CFMC to speak for them instead of utilizing the open platforms supplied by the governing agencies

Note: The EBFM implementation plan must include/create outreach materials to prevent/address the RISK expressed above. For example, making available a list of governing agencies and their responsibilities, and how/where individuals or groups can voice concerns

**STRATEGIC AND
OPERATIONAL
OBJECTIVES –
INITIAL
CHALLENGE**

- Operational Objective – Allocate time at the CFMC meeting, every August, to document stakeholder concerns about the ecosystem.
- Follow up with an informative letter from the CFMC that outlines stakeholder concerns to each state agency as relevant

EBFM TAP MEETING ACTION ITEMS

