

Example Fishery Ecosystem Plan Purpose and Overview (eFEP)

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NEFMC Approach

- To prepare:
 1. A policy describing goals and objectives, and approaches, for taking account of ecosystem processes in fishery management, and
 2. An example of a fishery ecosystem plan that is based on fundamental properties of ecosystem (e.g., energy flow and predator/prey interactions) as well as being realistic enough and with enough specification such that it could be implemented. The example should not be unduly constrained by current perceptions about legal restrictions or policies.



NEFMC Process

3. With respect to number 2, it is understood that the example might not be implemented, but it should make clear what a fishery ecosystem plan would actually entail and it should focus debate.



NEFMC Approach

- The Council is pursuing a fundamentally different EBFM approach relative to other Fishery Management Councils and management authorities.
- Unlike other EBFM approaches, the NEFMC is focused on place-based management and trophic guilds (i.e., energy production units) as management units rather than managing fish stocks using independent harvest control rules.
- The new approach addresses the implications of both biological interactions (i.e., predator/prey) and fishery interactions (bycatch and mix species fisheries).



Purpose of Document

- **Explain how a different type of management system could work**
- **Structure and focus discussion on the possibilities**
- **Starting point for further evaluation**
- **Purpose of MSE is to identify viable management approaches to achieve a broad range goals and objectives that will become an approved Fishery Ecosystem Plan**

eFEP

- **Describes a high-level framework that we believe is a possible way forward**
- **End result may be somewhat different than the one described**
- **Framework to manage fisheries in a way that is**
 - **More adaptive to changes in the ecosystem production,**
 - **More flexible for fishermen to make better choices about where and how to fish, and**
 - **Sets limits on catch that are more consistent with achieving a broad range of objectives and improved ecosystem services.**
- **Georges Bank was chosen because ecological science and modelling has focused here**

- For purposes of further analysis and discussion, this document lays out a description of an operational framework for a Fishery Ecosystem Plan for the Georges Bank Ecosystem Production Unit as a proof of concept. It is intended to lay out the analytical underpinnings of a Fishery Ecosystem Plan for this region. The approach is centered on developing management strategies for providing multispecies catch advice and explicitly testing those strategies on a simulated Georges Bank Ecosystem through a process of Management Strategy Evaluation (MSE).

- MSE comprises one or more operating models, candidate assessment methods, and potential management procedures for the system. Given a set of objectives defined by the NEFMC and interested parties and/or advisors, MSE can be used to compare the probable success of alternative management procedures. This document provides details about the systems, models, management process, and context/rationale for the development of an ecosystem plan. The document is intended to be a starting point for further discussion and performance analysis. It is intended to set the stage for the process to be followed in the development of the FEP based on the principles noted above.

- To prepare for the start of this process, the PDT has assembled existing information on the Georges-Bank Fishery Ecosystem and has worked with one candidate operating model to conduct exploratory analyses. Changes and adjustments to the operating model and how catch advice under the FEP are generated is to be expected based on stakeholder engagement meetings that will start this process.

What is different about a Fishery Ecosystem Plan (FEP)

- Considers a broader range of goals, objectives, and improvements of ecosystem services.
- Sets a limit on total ecosystem catches based on system-wide primary productivity.
- Harvest control rules take into account interactions amongst predators and prey, given their stock size. Harvest control rules may be more stable and robust

What is different about a Fishery Ecosystem Plan (FEP)

- More adaptive and flexible, allowing vessels to catch and land a suite of species in a stock complex.
- The productivity of an individual stock is understood to vary with changes in relative abundance of both predators and prey.

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