



Mid-Atlantic Fishery Management Council

Ecosystem Approach to Fisheries Management

Overview of the Council's EAFM Structured Decision Framework

March 2021

The Mid-Atlantic Fishery Management Council's (Council) Ecosystem Approach to Fisheries Management (EAFM) Guidance Document, approved in 2016 and revised in 2019, established a structured framework process to incorporate ecosystem considerations into the evaluation of policy choices and trade-offs as they affect Council-managed species and the broader ecosystem (Figure 1).

More information on the Council's EAFM Guidance Document and all the steps addressed by the Council through the structured framework process can be found at:

<https://www.mafmc.org/eafm>.

Step 1: Prioritize (Risk Assessment) – The first step in this structured framework process includes identifying and prioritizing ecosystem interactions and risks through a comprehensive risk assessment. The Council completed a risk assessment in 2017 to help decide where to focus limited resources to address priority ecosystem considerations in its science and management programs. The risk assessment is a proactive planning tool that is updated annually to provide a snapshot of the current risks to meeting the Council's biological, ecological, socioeconomic, and management objectives across a variety of factors for all of its managed fisheries and sectors.

Step 2: Refine (Conceptual Model) – Developing conceptual models is the second step in the Council's EAFM structured framework process. The Council decided to focus resources on further evaluating summer flounder given the high amount of risk identified from the risk assessment. In 2019, the Council completed the development of a conceptual model that considered 16 different high-risk factors affecting summer flounder and its fisheries. The [conceptual model](#) and interactive visualization tool identified the key ecosystem elements and their associated linkages, documented available and missing data sources, and scoped out priority summer flounder management questions and objectives on which to focus limited resources.



Figure 1. The Mid-Atlantic Fishery Management Council's EAFM structured decision framework to incorporate ecosystem considerations into management (from Gaichas et al. 2016).

Step 3: Analyze (Management Strategy Evaluation) – Management strategy evaluation (MSE) is the next, and third, step in the EAFM structured framework process. An MSE uses a simulation model(s) to evaluate different management approaches within an ecosystem context to determine if the outcomes associated with the different approaches achieve management goals and objectives.

The Council used the conceptual model scoping process to consider a number of different summer flounder priority management questions and agreed to conduct an MSE that will evaluate the biological and management implications of alternative strategies to minimize recreational summer flounder discards. The MSE will include clearly identified and defined objectives, performance metrics, and management strategies specified by the Council with input and guidance from an extensive stakeholder process (see the MSE workshop overview document included as background material for more details).

Step 4: Implement and Monitor - If appropriate and when completed, the Council will use the results of the MSE to implement new management measures to minimize recreational summer flounder discards. Management measures developed through the MSE process are designed to address interaction between species, habitats, fleets, and climate forcing may require additional or different monitoring to determine if the goals and objectives are being met. Careful consideration of performance measures and monitoring systems to be used in real time needs to be part of this process.