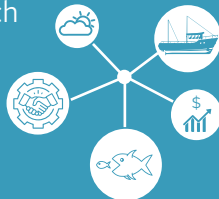




Ecosystem-Based Fishery Management (EBFM)

What is Ecosystem-Based Fishery Management (EBFM)?

EBFM is a holistic approach to fisheries management that considers the physical, biological, economic, and social interactions between the various parts of the ecosystem related to fisheries. The process considers the diverse needs and pressures on fish, fish habitat, and the food web within a geographically specific area, while also accounting for the needs of fishermen, our communities, and the economy.



Why EBFM?

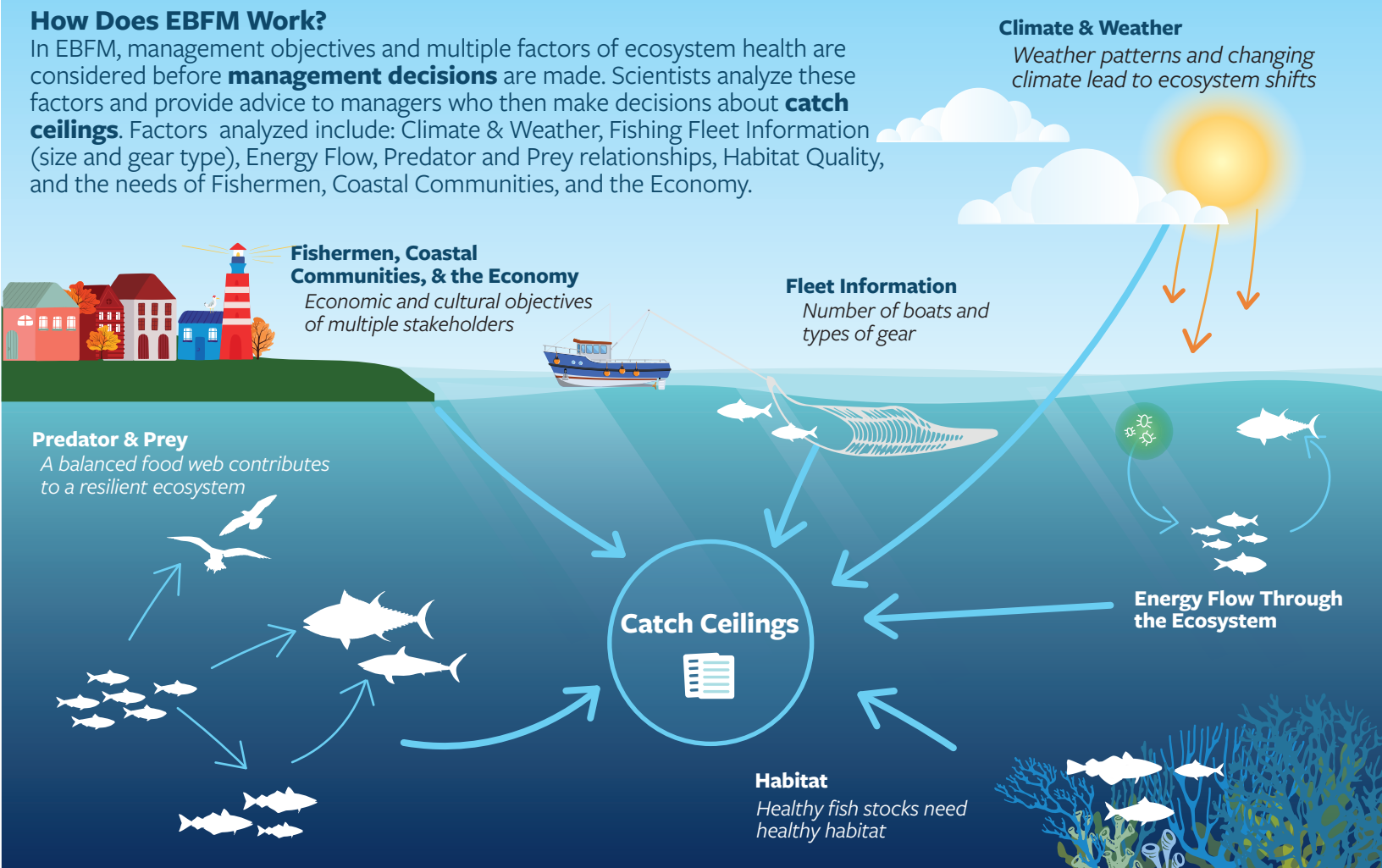
Fishery management has focused on one fished population at a time, usually with little consideration for how it functions as a predator or prey. The goal has been, identifying how many of these fish can we safely harvest and still leave enough so that we can fish in the future. This 'single species' approach does not consider how other fisheries and the larger ecosystem might be affected, and vice versa.



When ecosystems and fisheries decline, so do our fishing communities. The New England Fishery Management Council's (NEFMC) goal is to create a management system that will achieve sustainable and productive fisheries and balanced ecosystems, while also providing greater flexibility for fishermen to choose when to fish, what to fish for, and how to fish.

How Does EBFM Work?

In EBFM, management objectives and multiple factors of ecosystem health are considered before **management decisions** are made. Scientists analyze these factors and provide advice to managers who then make decisions about **catch ceilings**. Factors analyzed include: Climate & Weather, Fishing Fleet Information (size and gear type), Energy Flow, Predator and Prey relationships, Habitat Quality, and the needs of Fishermen, Coastal Communities, and the Economy.



Climate & Weather

Weather patterns and changing climate lead to ecosystem shifts

Fishermen, Coastal Communities, & the Economy

Economic and cultural objectives of multiple stakeholders

Fleet Information

Number of boats and types of gear

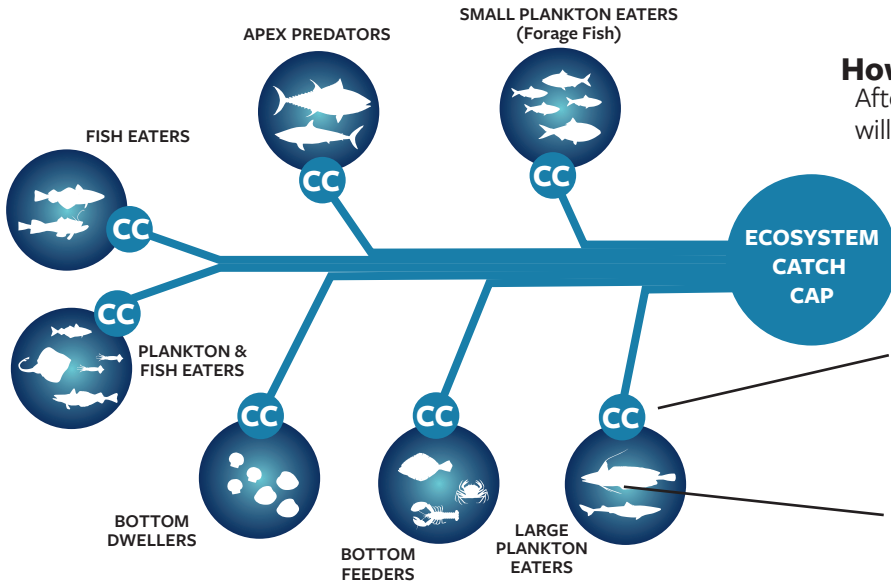
Predator & Prey

A balanced food web contributes to a resilient ecosystem

Energy Flow Through the Ecosystem

Habitat

Healthy fish stocks need healthy habitat



How are EBFM Catch Ceilings Determined?

After assessing factors of ecosystem health, managers will set three different types of catch ceilings:

1. The total ecosystem catch (including unmanaged species) cannot exceed a Cap related to annual ecosystem productivity.
2. Fish species are grouped into complexes based on similar ecosystem roles. Species complex catch ceilings are determined based on ecosystem health and cannot total more than the ecosystem cap.
3. Each fish species population cannot be fished below levels determined to be critical for survival, the species biomass floors.

Potential Benefits of EBFM

EBFM has the potential result in a more **productive** and **robust ecosystem** that **benefits** all stakeholders. This will be achieved by:

- Considering predator/prey relationships and management objectives to set catch limits consistent with ecosystem function and benefits.
- Allocate stock complexes to gear-based fisheries, allowing fishermen to retain more of what they catch.
- Providing more regulatory and management stability.
- Providing more flexibility to help fishermen adapt to changes in the ecosystem and their fisheries.

Potential Challenges

Adopting an EBFM approach on Georges Bank also includes **challenges** and **uncertainties**:

- Does the current availability of ecosystem data support the needs of an EBFM approach?
- EBFM will need to be consistent with complicated statutory and regulatory requirements.
- Changes to catch limits can be contentious which may impede adoption.
- Understanding and balancing stakeholder objectives.

What's the Process?

We started with an idea to manage fisheries in a way that is better for the ecosystem, and gives fishermen more flexibility.



NEXT STEPS

Need to develop an example that demonstrates the process.

We will conduct a Management Strategy Evaluation and refine the process.

We currently have a draft EBFM framework.

We will then get feedback and input at stakeholder workshops.

The end result could be:

A modification of current plans to include ecosystem considerations OR A Fisheries Ecosystem Plan for Georges Bank OR An EBFM strategy for NEFMC managed species

Have Questions or Want to Provide Input?

The NEFMC wants **your input** to help make sure that the EBFM framework considers the important perspectives of all stakeholders.

You can reach out to the NEFMC EBFM coordinator at: aapplegate@nefmc.org | 978-465-0492 Ext. 114

Where Can I Find More Information?

- The NEFMC website (www.nefmc.org) has a wealth of information about all things related to **New England fisheries**.
- For information about the NEFMC's EBFM process, visit their **EBFM Committee** page - https://bit.ly/EBFM_committee
- View a **presentation** about EBFM - link