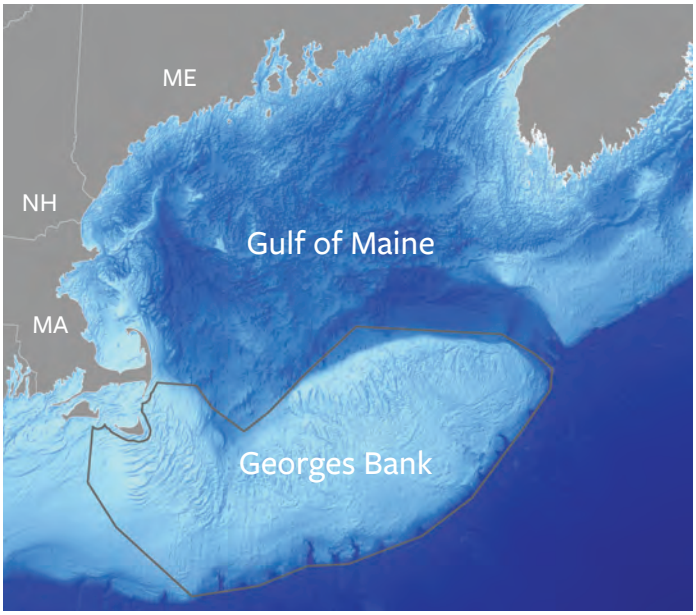
New England Fishery Management Council

The Georges Bank Ecological Production Unit (EPU)

Why Georges Bank?

Ecological Production Units are areas on the continental shelf that have unique characteristics of: **bathymetry, bottom sediments, temperature, salinity, and primary production from phytoplankton**. The boundaries of the Georges Bank EPU are defined by these unique characteristics and extend to the continental shelf on its east and south edges, to Nantucket Shoals on the west, and to the southern edge Gulf of Maine on the North.

Georges Bank was chosen for the example Fishery Ecosystem Plan (eFEP) because a **large amount of data** has been collected and research conducted about the physical environment and fish and other animals that live there. In addition, computer models of the ecosystem have been researched and developed. Because managers and scientists are familiar with the ecosystem, it will be easier for them to predict how it will respond to a FEP.



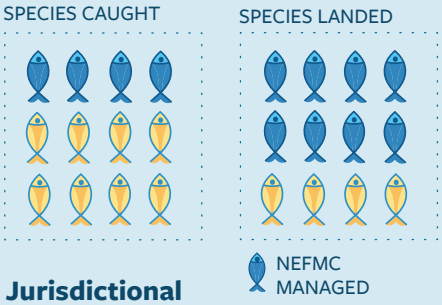
The Georges Bank EPU is indicated by the grey outline on the map.

Management Considerations

Fisheries management on Georges Bank is complex due to vulnerable habitats, variety of fishing gear types used, and the fact the fish species caught there are managed by a multitude of agencies.

Spatial

While the goal is to manage stock complexes at the EPU level, there may be a need to subdivide the EPU into smaller management sub-units based on vulnerable habitats and/or fishing methods



Jurisdictional

Only **1/3** of species commonly caught on Georges Bank are managed by NEFMC. However, this accounts for **2/3** of the total finfish landings from Georges Bank.

Management Options

1. Only set catch ceilings for species managed exclusively or jointly by NEFMC.
2. Develop a cooperative and collaborative approach with other management agencies and set ceilings for the portion caught on Georges Bank.
3. Petition for sole management of all stocks on Georges Bank.

! Working with existing limited access programs for commercial vessels, stock complex catch limits would be allocated to vessels that have existing fishing permits and a history of fishing in the Georges Bank EPU.

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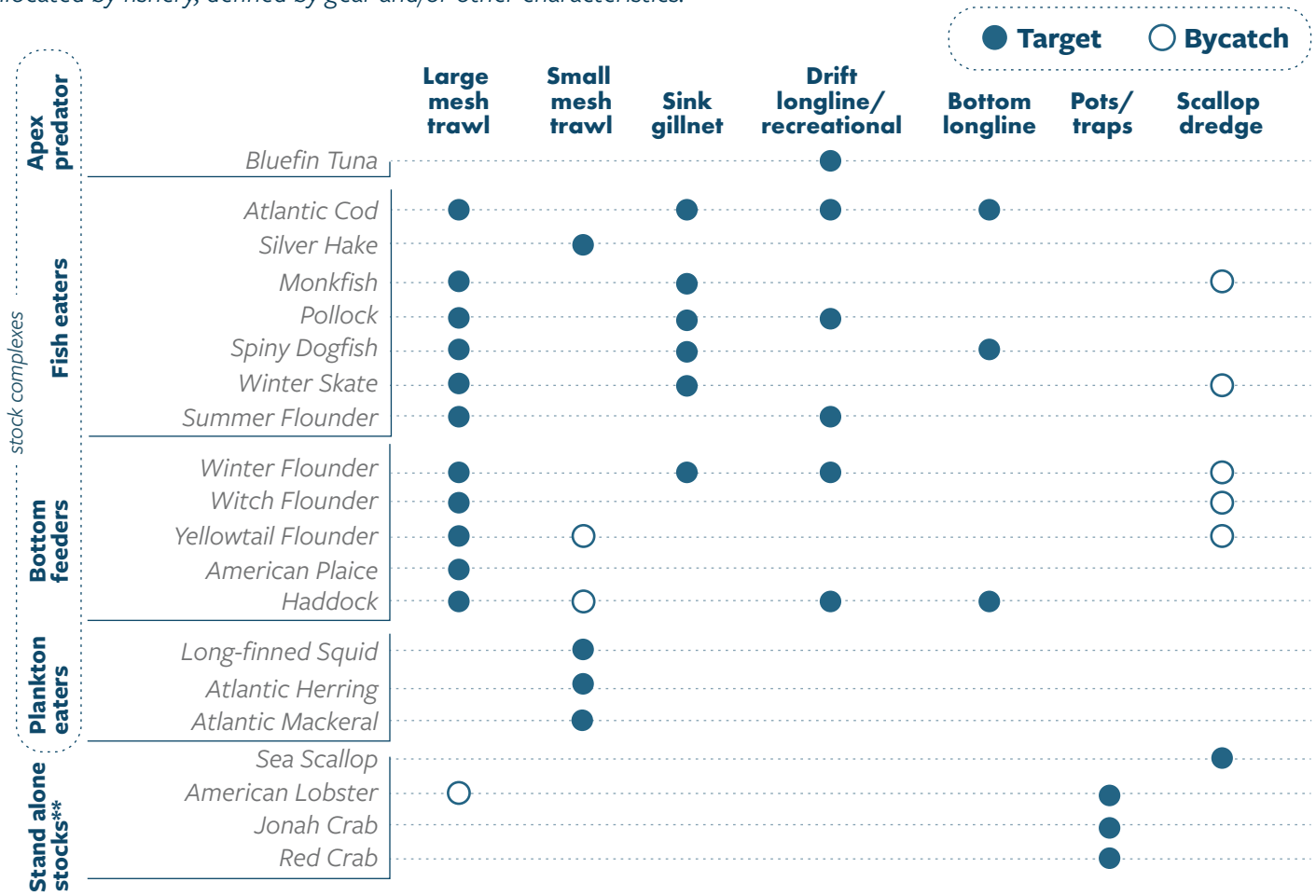
Stock complexes and gear types*

WHAT? *The table below shows some commonly caught species of fish on Georges Bank, sorted by stock complex, and the type of gear used to catch them. Target and bycatch (and non-target) species are indicated.*

WHY IS THIS IMPORTANT? *In an EBFM framework, acceptable Biological Catch limits would be set by stock complex and allocated by fishery, defined by gear and/or other characteristics.*

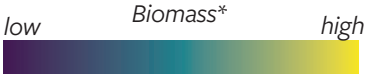


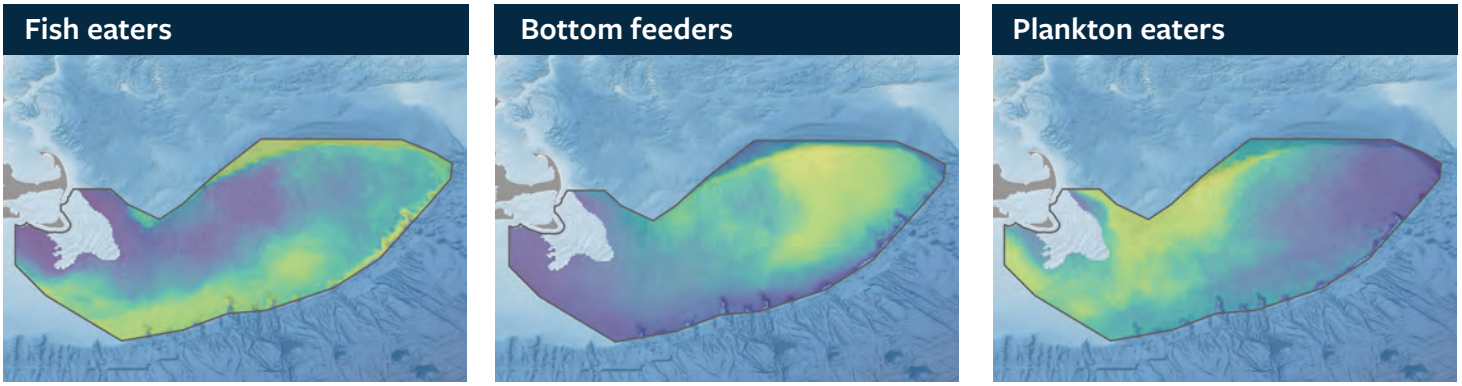
* For a complete list of the 78 species caught on Georges Bank, please see table 15 of the Draft Example Fishery Ecosystem Plan for Georges Bank.

** Stand alone stocks are those that have minimal predation by or on other fish stocks in an EPU. Although their catch ceilings may be set independently of stock complexes, fisheries that target stand alone stocks may have stock complex catch allocations to account for bycatch and incidental landings.

Where are the stock complexes found?

The maps below show where the **fish eater**, **bottom feeder**, *and* **plankton eater** *stock comlexes (see table above) are found during* **spring** *on Georges Bank. These distributions change seasonally.*





*Total mean interpolated weight per tow in the 2010-2017 NMFS spring trawl survey derived from the Northeast Ocean Data Portal (https://www.northeastoceandata.org/); the range of values for each complex is: fish eaters - 1.9 - 15.9 kg/tow, bottom feeders - 1.0 - 10.2 kg/tow, plankton eaters - 0.6 - 7.3 kg/tow; for each of the species complexes mapped, a more complete range of species was mapped than is shown for each species complex in the table above; Note - the Nantucket Shoals area is not sampled by the NMFS bottom trawl survey due to depth constraints.

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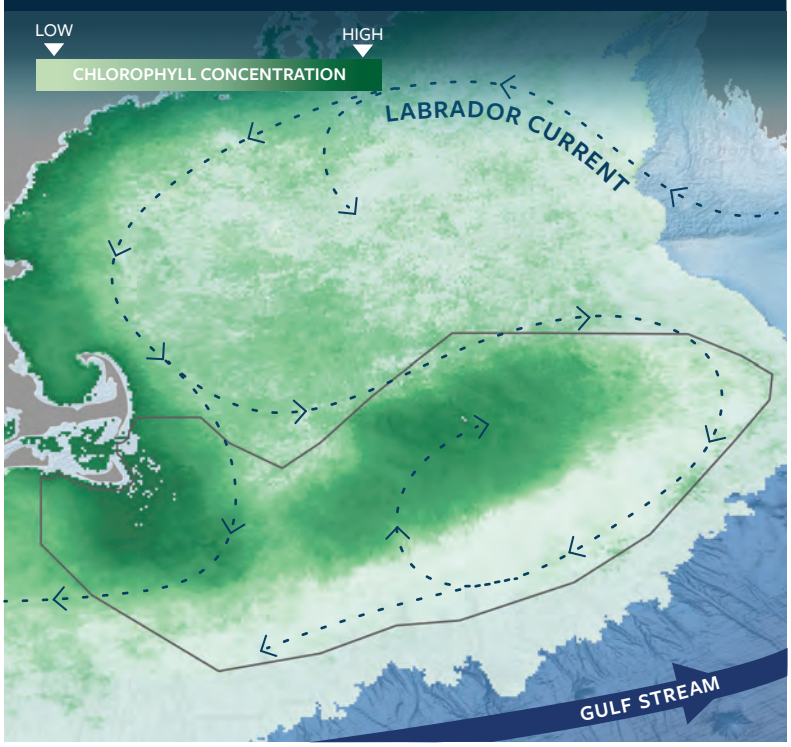
The Georges Bank Ecosystem

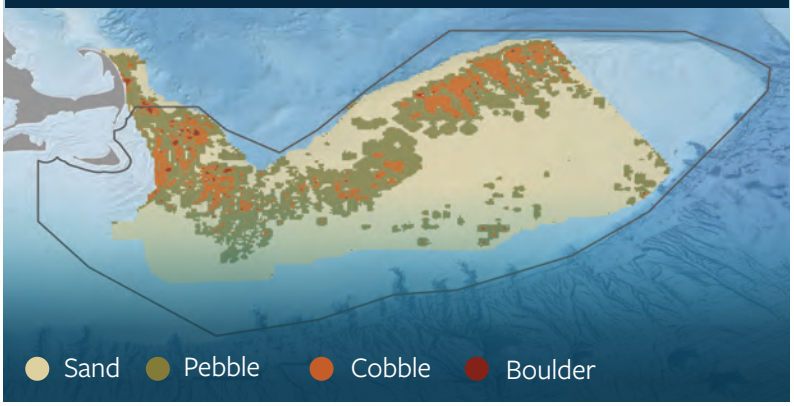
Currents



What?
Georges Bank is strongly influenced by two major ocean currents - the Labrador Current from the north and the Gulf Stream from the south. These currents combined tidal currents create a clockwise circulation pattern on Georges Bank which helps retain water and fish larvae on the Bank.

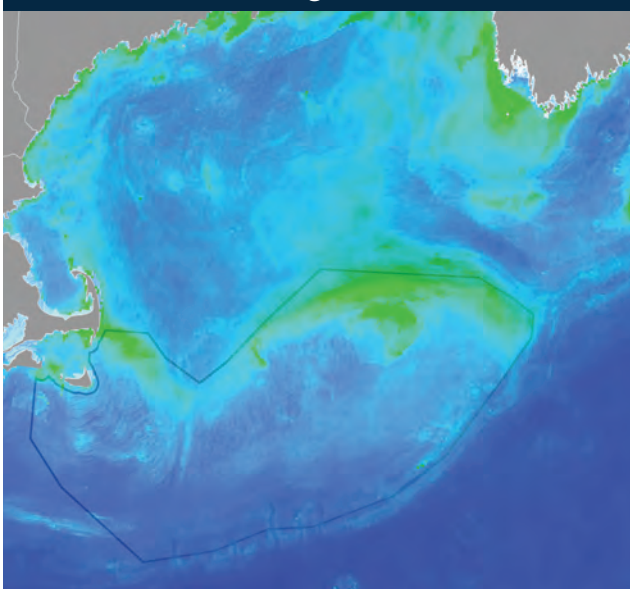
Why is this important?
Water, and the nutrients and plankton in it, tends to stay on the Bank for two to five months depending on season. This combined with shallow water depths contribute to the area being very productive.

Dominant Sediment Type



What? The bottom of Georges Bank is made up of areas of gravel, sand, and boulders.
Why is this important? The gravel areas are important habitat for young cod and haddock. Both gravel and boulders provide important habitat structure for bottom dwelling fish.

Fish-Eating Sea-Birds



Abundance
low *high*

What? Fish eating sea-birds are found in high abundance in the north-eastern portion of Georges Bank and on Nantucket Shoals to the west.

Why is this important? The productivity of Georges Bank make it an imprtant feeding area for not only birds but also marine mammals and large fish species.

What does this all mean?

The physical environment of Georges Bank contributes to it being ecologically different from the surrounding areas. This manifests itself in a diverse and complex fishery that can be both productive and difficult to manage. EBFM offers the potential to handle this complexity while maintaining productivity.

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

Fish, bird, and bathymetric map data courtesy of the North East Ocean Data Portal - https://www.northeastoceandata.org