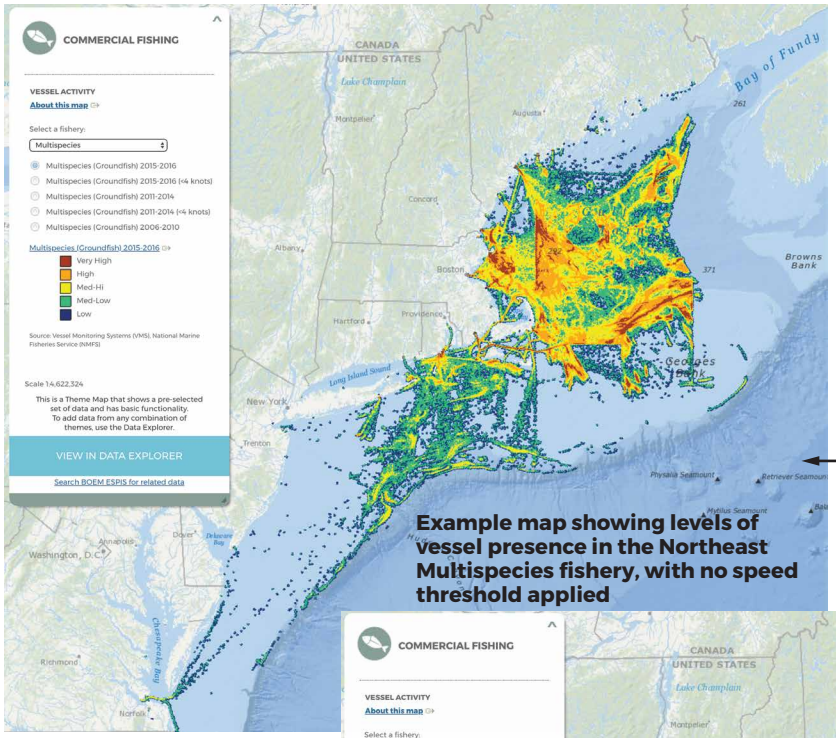
NORTHEAST **OCEAN DATA**
Maps and Data for Ocean Planning in the Northeastern United States

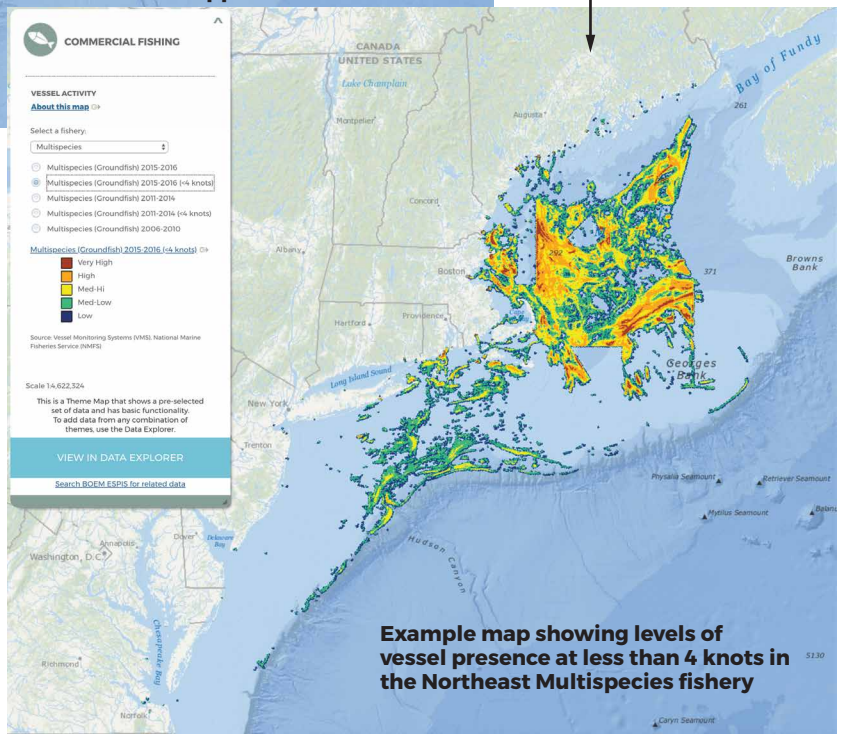
www.northeastoceandata.org/theme-maps/commercial-fishing

MARCO Mid-Atlantic Ocean Data Portal

https://portal.midatlanticocean.org/visualize



Example map showing levels of vessel presence in the Northeast Multispecies fishery, with no speed threshold applied



Example map showing levels of vessel presence at less than 4 knots in the Northeast Multispecies fishery

DATASET NAME: VMS-based fishing and transit

INPUT DATA: Vessel Monitoring System (VMS)

METRIC: Relative density of vessels carrying VMS, for 7 fisheries or groups of fisheries

YEAR RANGE: 2006-2016, depending on fishery

PRODUCTS: Two types of products:

1. Layers that do not necessarily distinguish between fishing activity, vessel transit, and other vessel activities
2. Layers that show vessel activity at less than 4 or 5 knots—speed thresholds that were determined with industry input to attempt to better highlight fishing areas

With separate maps for:

- Northeast multispecies
- Monkfish
- Scallops
- Surfclam/Ocean quahog
- Pelagics (herring, mackerel, squid)
- Herring
- Squid

DATA CONSIDERATIONS:

(developed with industry and agency input)

- An absence of data does not indicate an absence of fishing activity.
- Speed thresholded maps still likely show some non-fishing activities that occur at low speeds, such as processing catch, sorting, drifting, or idling in port.
- Lack of historical data and relatively short timeframe of this dataset preclude consideration of historical fishing areas. They also do not illustrate more recent or future changes in fishing activity resulting from changing environmental and economic conditions, fisheries management, and other important factors.
- These data include all trips using a particular VMS code by vessels with these permits, and as such, may include trips that target other fisheries but use a different VMS declaration for another fishery as a management and reporting mechanism.
- There are many fisheries not described through any VMS-derived maps.

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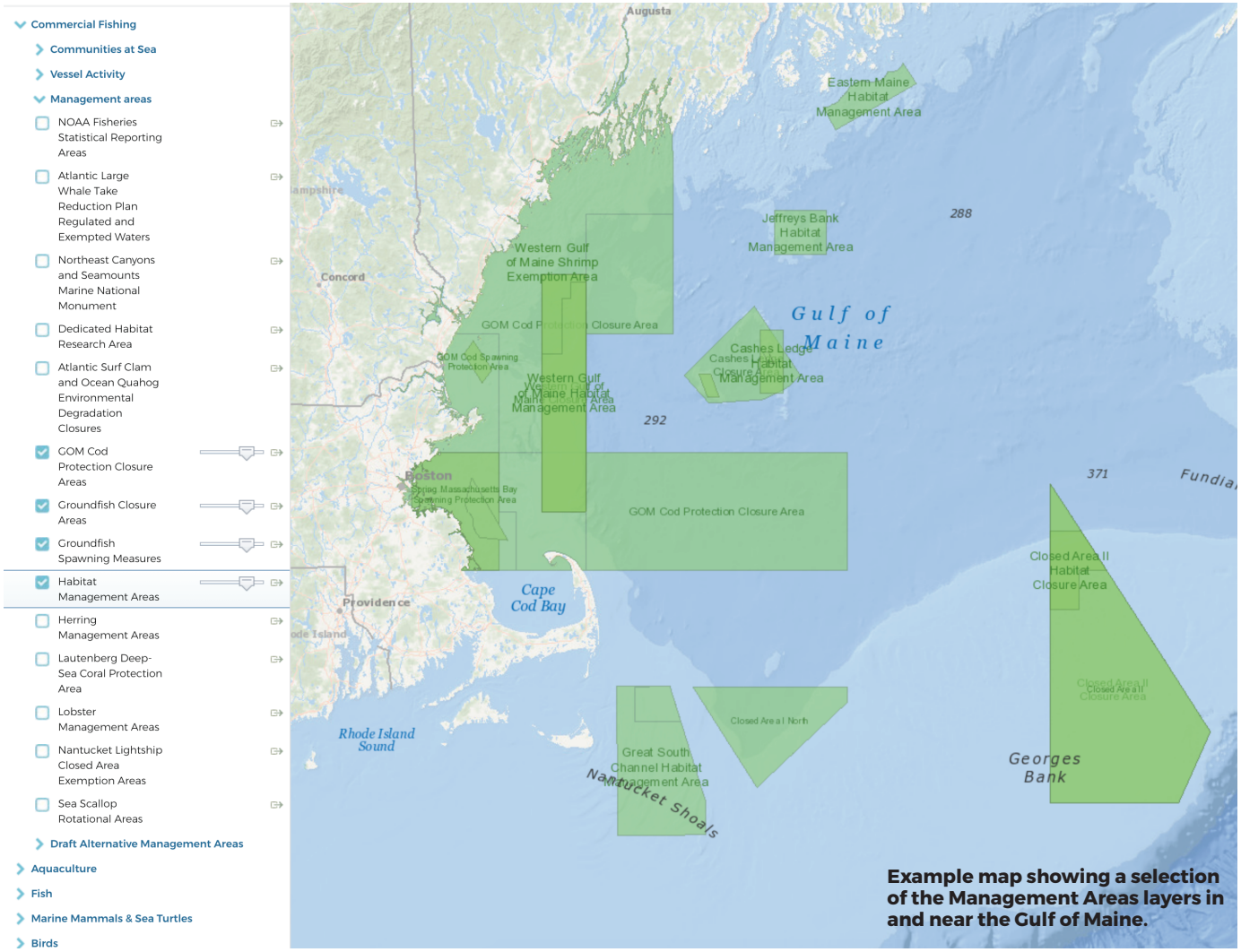

Example map showing a selection of the Management Areas layers in and near the Gulf of Maine.

DATASET NAME: Fisheries Management Areas

INPUT DATA: Current statistical reporting areas, closures, rotational areas, and habitat management areas

From and updated by NMFS

METRIC: Outline or boundary of area

DATA CONSIDERATIONS:

(developed with industry and agency input)

- These GIS files are considered to be approximate representations and are not an official record for the exact regulated area boundaries.
- Regulated Area boundary definitions are subject to change or modification. Published datasets may represent historic, current, or future Regulated Areas. When changes to fishing regulations affect this dataset, it will be archived and replaced by an updated version as soon as feasible. Approved Regulated Area boundaries may also be published prior to their effective date. It is the user's responsibility to ensure the applicable Regulated Area boundaries are being used.

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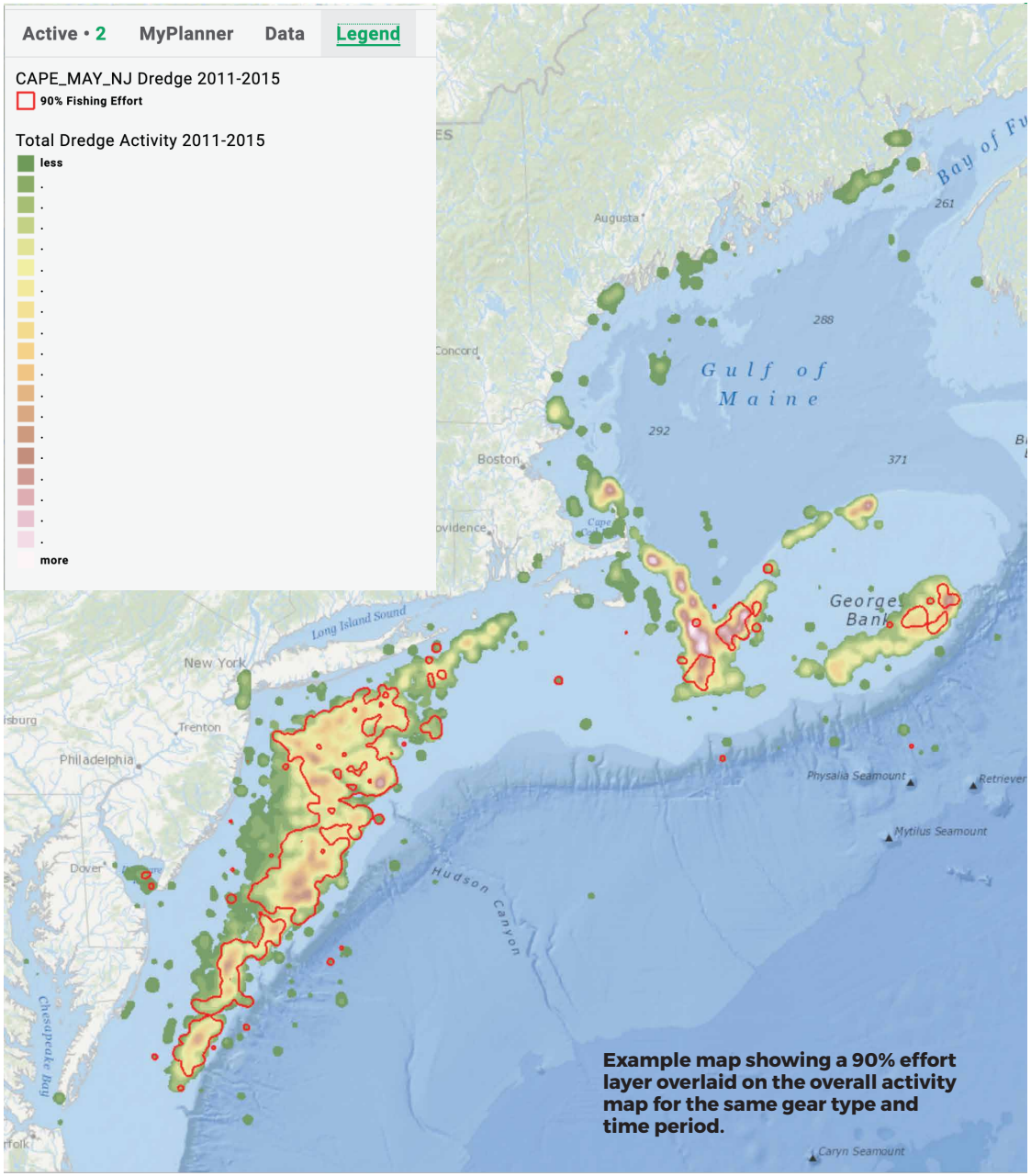

Example map showing a 90% effort layer overlaid on the overall activity map for the same gear type and time period.

DATASET NAME: Communities at Sea

INPUT DATA: Federal Vessel Trip Reports (VTRs) and Vessel Permits

METRIC: Effort (fisher days - # crew x days at sea); by gear type

- ▸ Bottom trawl (< and > 65')
- ▸ Dredge
- ▸ Gillnet
- ▸ Longline
- ▸ Pots and traps
- ▸ Lobster*
- ▸ Shrimp*

* maps were developed but not published

YEAR RANGE: 1996 - 2015, in 5-year aggregations

PRODUCTS:

Two types of products:

1. Overall density map for 5-year time period (green to red "heat map")
2. Areas where 90% of effort occurs by port/gear type (red outline)

DATA CONSIDERATIONS: *(developed with industry and agency input)*

- ◆ These maps only show fishing conducted by vessels holding federal fishing permits.
- ◆ Fishermen are only required to report one geographic position (point location) per trip on VTRs unless switching to a new gear type or moving into a new statistical area.
  - ◇ Each single self-reported point could represent a fishing trip that occurs in different size geographies.
  - ◇ Maps showing areas for fishing with fixed gear (pots, traps, gillnets) will tend to be more accurate than maps showing fishing using mobile gear (trawls, dredges).
  - ◇ Maps showing single-day trips will tend to be more accurate than maps showing multi-day trips.
- ◆ The maps may occasionally depict a limited amount of fishing effort in areas that are not fished. This is due to the creation of density polygons from VTR point data.
- ◆ Confidentiality rules may result in smaller port/gear combinations being underrepresented.
- ◆ For some types of decision making, much finer scale information and consultation with the fishing industry will almost always be necessary.

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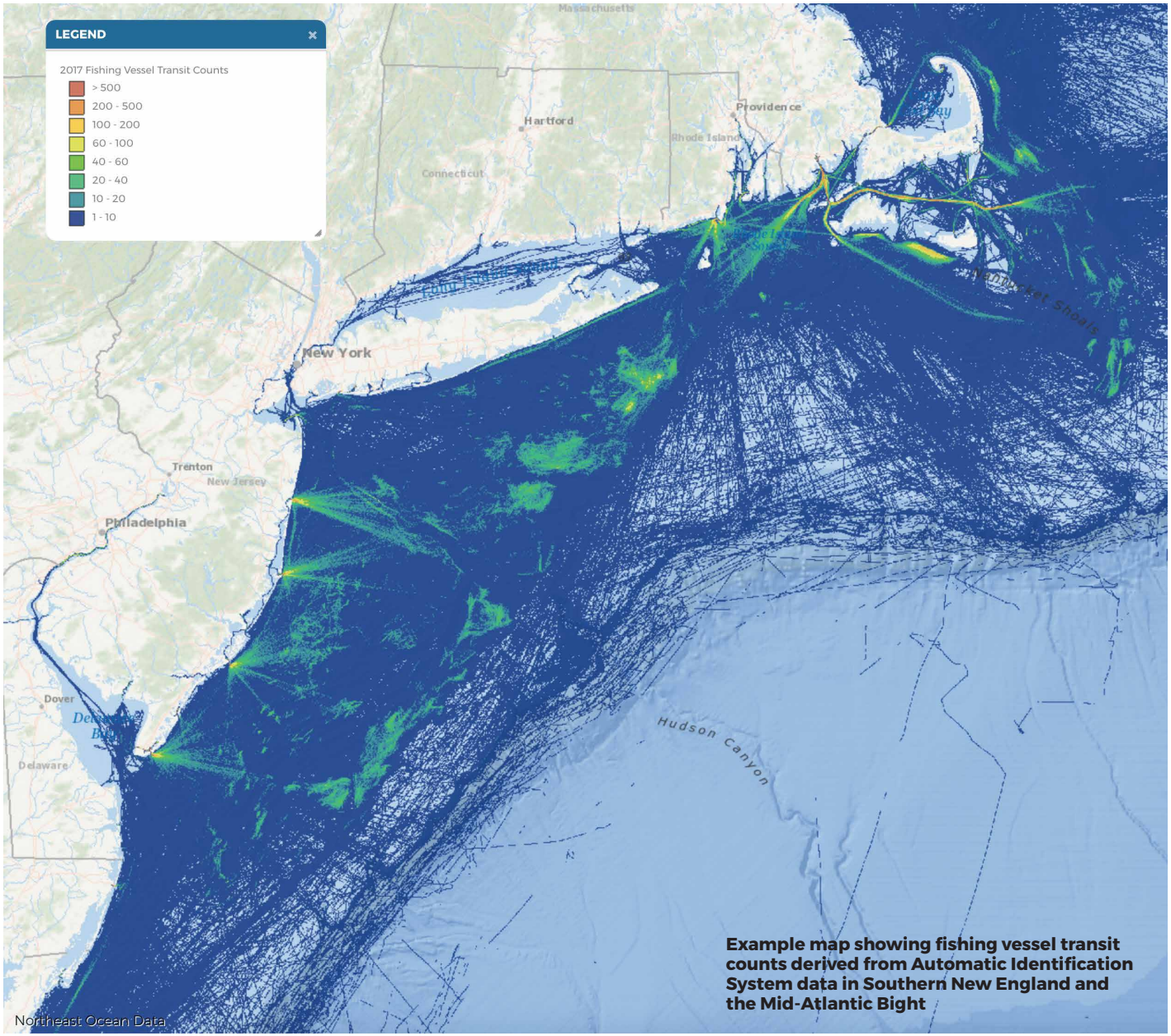

Example map showing fishing vessel transit counts derived from Automatic Identification System data in Southern New England and the Mid-Atlantic Bight

DATASET NAME: AIS-based transit

INPUT DATA: Automatic Identification System (AIS)

METRIC: Vessel transit counts for vessels identified as "fishing vessels"

YEAR RANGE: 2015 - 2017

PRODUCTS: Monthly and annual availble via time slider

DATA CONSIDERATIONS:

(developed with industry and agency input)

- This dataset represents a subset of AIS records for fishing vessels.
- Not fishery or gear specific.
- Only vessels over 65' are required to carry AIS transponders, and there is variability in the use of AIS over time and at different distances from shore.
- This dataset could contain errors in vessel categorization due to operators mistakenly reporting in the wrong category or if a vessel is being used for multiple purposes.