

<b>Data Collection</b>	
Summary Products for the Distribution and biomass data for fish species along the U.S. east coast from about Cape Hatteras north to Canadian waters, created by the Northeast Fisheries Science Center for the Northeast Regional Ocean Council, prepared by the Marine-life Data and Analysis Team (MDAT)	
Data Collection Title	MDAT_WS_NEFSC_FISH_SUMMARY_PRODUCTS_V2.0_2018_03_01
Data Collection URL	Map services: <a href="http://mgelmaps.env.duke.edu/mdat/rest/services/MDAT">http://mgelmaps.env.duke.edu/mdat/rest/services/MDAT</a>

<b>Data Set</b>	
Data Set Title	MDAT_WS_NEFSC_FISH_SUMMARY_PRODUCTS_V2.0_2018_03_01
Principal Investigators	<p>MDAT Project:  Patrick N. Halpin (PI) - Marine Geospatial Ecology Lab at Duke University; Earvin Balderama (Co-I) - Loyola University Chicago; Michael Fogarty (Co-I) - NOAA/NEFSC; Arliss Winship (Co-I) - NOAA/NCCOS</p> <p>NEFSC Project:  Michael Fogarty, Charles Perretti - US DOC; NOAA; NOAA Northeast Fisheries Science Center (NEFSC)</p>
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Collaborators	<p>MDAT members:  Earvin Balderama (Co-I, Loyola University Chicago)  Jesse Cleary (Duke University)  Corrie Curtice (Duke University)  Michael Fogarty (Co-I, NOAA/NEFSC)  Patrick N. Halpin (PI, Duke University)  Brian Kinlan (NOAA/NCCOS)  Charles Perretti (NOAA/NEFSC)  Jason Roberts (Duke University)  Emily Shumchenia (NROC)  Arliss Winship (Co-I, NOAA/NCCOS)</p>
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Abstract	In 2014, the Marine Geospatial Ecology Lab (MGEL) of Duke University began work with the Northeast Regional Ocean Council (NROC), the NOAA National Centers for Coastal Ocean Science (NCCOS), the NOAA Northeast Fisheries Science Center (NEFSC) and Loyola University Chicago, as part of the Marine-life Data and

	<p>Analysis Team (MDAT), to characterize and map marine life in the Northeast region in support of the Regional Ocean Plan. In 2015, the Mid-Atlantic Regional Council on the Ocean (MARCO) contracted with MDAT to build upon and expand this effort into the Mid-Atlantic planning area, and in support of the Mid-Atlantic Regional Ocean Plan. These research groups collaborated to produce “base layer” predictive model products with associated uncertainty products for cetacean species or species guilds and avian species, and three geospatial products for fish species. Periodic updates to these base layer models and data are produced by the individual institutions in the MDAT team based on schedules set by the funders of each modeling effort.</p> <p>Because base layers total in the thousands, efforts to develop a general understanding of the overall richness or diversity in a particular area are not well served by the individual base products. To address this gap, and other potential management applications as identified by the NE RPB and others, MDAT has created several types of summary map products from these base layers. Summary products are comprised of data layers from multiple species, and were created to allow quick access to map summaries about potential biological, management, or sensitivity groups of interest. These summary products include total abundance or biomass, species richness, and diversity for all modeled/sampled groups of species and are useful tools for seeing broad patterns in the underlying data or model results.</p> <p>An additional map product was created to highlight the core areas of highest abundance or biomass by species groups, using a 50% population threshold. Group core area richness maps aid users in identifying the “hotspots” of where certain groups of species have the highest abundance or biomass. Core area richness maps were created for three spatial extents: 1) the full US east coast; 2) the Northeast planning area and 3) the Mid-Atlantic area of interest. Because these products are dependent on the total extent of the input data, core area abundance/biomass products will differ at each extent.</p>
<b>Purpose</b>	MDAT produced group summary products and delivered them to the Northeast and Mid-Atlantic (US) regional ocean portals and the national Marine Cadastre to inform ocean planning. All summary products are also available to the public via map services.
<b>Methods</b>	See Curtice et al. (2018) Section 3. 2018 V2.0 Update: V2.0 updates the species group diversity products. Prior to group diversity calculation, each individual species layer was pre-filtered to contain only the cells that are included in the area holding 95% of the total predicted biomass for the species.
<b>Citations</b>	<p>MDAT: Curtice, C., Cleary J., Shumchenia E., Halpin P.N. 2018. Marine-life Data and Analysis Team (MDAT) technical report on the methods and development of marine-life data to support regional ocean planning and management. Prepared on behalf of the Marine-life Data and Analysis Team (MDAT). Accessed at: <a href="http://seamap.env.duke.edu/models/MDAT/MDAT-Technical-Report.pdf">http://seamap.env.duke.edu/models/MDAT/MDAT-Technical-Report.pdf</a>.</p> <p>NEFSC:</p>

	Fogarty, M. & Perretti, C. 2016. Distribution and biomass data for fish species along the U.S. east coast from about Cape Hatteras north to Canadian waters, created by the Northeast Fisheries Science Center for the Northeast Regional Ocean Council. Online access: <a href="http://www.northeastoceandata.org/data-explorer/?fish">http://www.northeastoceandata.org/data-explorer/?fish</a>
Data Start Date	1970
Data End Date	2014
Data Northern Boundary	45.0 degrees N
Data Southern Boundary	34.1 degrees N
Data Western Boundary	76.7 degrees W
Data Eastern Boundary	65.6 degrees W
Place Keywords	North Atlantic Ocean
Spatial Reference Information	Type: Geographic Geographic Coordinate Reference: GCS_WGS_1984 Well-Known Text: GEOGCS["GCS_WGS_1984", DATUM["D_WGS_1984", SPHEROID["WGS_1984",6378137.0,298.257223563]], PRIMEM["Greenwich",0.0], UNIT["Degree",0.0174532925199433], AUTHORITY["EPSG",4326]]
Spatial Representation Type	Grid
Datasets	NEFSC fisheries-independent bottom trawl surveys, fall 1970-2014
Update Frequency	Irregular
Resource Provider	Marine Geospatial Ecology Lab (MGEL) at Duke University ( <a href="mailto:marinelife_data@duke.edu">marinelife_data@duke.edu</a> ), on behalf of MDAT and NEFSC.
Comment	<i>This data documentation describes numerous geospatial datasets archived together as a data collection, and is intended to provide dataset-level metadata for the purposes of discovery, use, and understanding.</i>
Use Limitation	<i>None. If you use this dataset in a scientific publication or other formal publication, we request that you cite the Curtice et al. (2018) publication and the Fogarty &amp; Perretti dataset (2016).</i>