

<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)	
<b>Data Collection Title</b>	MDAT_WS_NEFSC_FISH_SYNTHETIC_PRODUCTS_V1.1_2016_08_29
<b>Data Collection URL</b>	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>	
<b>Data Set Title</b>	MDAT_WS_NEFSC_FISH_SYNTHETIC_PRODUCTS_V1.1_2016_08_29
<b>Principal Investigators</b>	<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; Brian Kinlan (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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<b>Collaborators</b>	<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 (Co-I, NOAA/NCCOS)  Charles Perretti (NOAA/NEFSC)  Jason Roberts (Duke University)  Emily Shumchenia (NROC)  Arliss Winship (NOAA/NCCOS)</p>
<b>Author List</b>	<p>MDAT Project:  Corrie Curtice<sup>1</sup>, Jesse Cleary<sup>2</sup>, Emily Schumchenia<sup>3</sup>, Patrick Halpin<sup>2</sup></p> <p><sup>1</sup> Marine Geospatial Ecology Laboratory, Nicholas School of the Environment, Duke University Marine Lab, Beaufort, NC, US  <sup>2</sup> Marine Geospatial Ecology Laboratory, Nicholas School of the Environment, Duke University, Durham, NC, US  <sup>3</sup> Northeast Regional Ocean Council, US</p> <p>NEFSC data:  Michael Fogarty<sup>1</sup>, Charles Perretti<sup>1</sup></p> <p><sup>1</sup> Northeast Fisheries Science Center, NOAA Fisheries, NOAA, Woods Hole, MA, US</p>
<b>Abstract</b>	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 Analysis Team (MDAT), to characterize and map marine life in the

	<p>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 29 marine mammal species or species guilds and 40 avian species, and three geospatial products for 82 fish species.</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 "synthetic", or 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. Species were grouped according to these three categories, resulting in approximately 27 avian groups, 12 fish groups, and nine mammal groups. 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 Planning Bodies to inform ocean planning. All summary products are also available to the public via map services.
<b>Methods</b>	See Curtice et al. (2016) Section 3.
<b>Citations</b>	<p>MDAT: Curtice, C., Cleary J., Shumchenia E., Halpin P.N. 2016. 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-v1.1.pdf">http://seamap.env.duke.edu/models/MDAT/MDAT-Technical-Report-v1.1.pdf</a>.</p> <p>NEFSC: Fogarty, M. &amp; 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></p>
<b>Data Start Date</b>	1970

<b>Data End Date</b>	2014
<b>Data Northern Boundary</b>	45.0 degrees N
<b>Data Southern Boundary</b>	34.1 degrees N
<b>Data Western Boundary</b>	-76.7 degrees E
<b>Data Eastern Boundary</b>	-65.6 degrees E
<b>Place Keywords</b>	North Atlantic Ocean
<b>Spatial Reference Information</b>	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]]
<b>Spatial Representation Type</b>	Grid
<b>Datasets</b>	NEFSC fisheries-independent bottom trawl surveys, fall 1970-2014
<b>Update Frequency</b>	Irregular
<b>Resource Provider</b>	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.
<b>Comment</b>	<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>
<b>Use Limitation</b>	<i>None. If you use this dataset in a scientific publication or other formal publication, we request that you cite the Curtice et al. (2016) publication and the Fogarty &amp; Perretti dataset (2016).</i>