Data Collection Habitat-based Sea Turtle Density Models for the U.S. Atlantic, prepared by the Marine-life Data and Analysis Team (MDAT)	
Data Collection Title	MDAT_WS_SEA_TURTLE_MODEL_DATA August 2023
Data Collection URL	Map services: https://mgelmaps.env.duke.edu/mdat/rest/services/MDAT

Data Set	
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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) and the NOAA Northeast Fisheries Science Center (NEFSC), as part of the Marine-life Data and 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. Additionally, MDAT receives and hosts data from other sources, including in 2023 sea turtle density models and NRHA fish abundance models. The Coefficient of Variation is provided as a supporting statistical measure of model uncertainty.
Purpose	This work was funded by the U.S. Navy to assist with complying with U.S. laws such as the ESA, which require the Navy to assess the potential impacts to protected marine species resulting from military readiness activities. MDAT incorporated the model and uncertainty products into the products delivered to the Northeast and Mid-Atlantic (US) regional ocean portals and other data portals to inform ocean planning.
Methods	See Sparks and DiMatteo (2023).
Citations	NUWC publications: Sparks, Laura M. and Andrew DiMatteo (2023) Sea Turtle Distribution and Abundance on the East Coast of the United States. Technical Report prepared for Naval Undersea Warfare Center Division Newport. DiMatteo Andrew, Roberts JJ, Jones D, Garrison L, Hart KM, Kenney RD, McLellan WA, Lomac-MacNair K, Palka D, Rickard ME, Roberts K, Zoidis AM, and Sparks L. (2023). Sea turtle density surface models along the United States Atlantic coast. Manuscript in review. MDAT: Curtice, C., Cleary J., Shumchenia E., Halpin P.N. 2019. 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 Analysis Team (MDAT). Accessed at: http://seamap.env.duke.edu/models/MDAT/MDAT-Technical-Report.pdf.
Data Start Date	2003
Data End Date	2019
Data Northern Boundary	47.7 degrees N
Data Southern Boundary	24.3 degrees N
Data Western Boundary	81.5 degrees W
Data Eastern Boundary	65.1 degrees W

Place Keywords	North Atlantic Ocean
Spatial Reference Information	Type: Projected Geographic Coordinate Reference: GCS_WGS_1984 Projection: WGS_1984_Albers Well-Known Text: PROJCS["WGS_1984_Albers", GEOGCS["GCS_WGS_1984", DATUM["D_WGS_1984", SPHEROID["WGS_1984",6378137.0,298.257223563]], PRIMEM["Greenwich",0.0], UNIT["Degree",0.0174532925199433]], PROJECTION["Albers"], PARAMETER["false_easting",0.0], PARAMETER["false_northing",0.0], PARAMETER["central_meridian",-78.0], PARAMETER["standard_parallel_1",40.66666666666666], PARAMETER["standard_parallel_2",27.33333333333333], PARAMETER["latitude_of_origin",34.0], UNIT["Meter",1.0]]
Spatial Representation Type	Grid
Datasets	Listed in Table 1 of Sparks and DiMatteo (2023)
Update Frequency	Irregular
Resource Provider	*Marine Geospatial Ecology Lab (MGEL) at Duke University (marinelife_data@duke.edu), on behalf of MDAT.*
Comment	*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.*
Use Limitation	*This data has been approved for public release and distribution is unlimited. If you use this dataset in a scientific publication or other formal publication, we request that you cite the Sparks and DiMatteo (2023) and Curtice et al. (2019) publications.*