

# Density Model Predictions and Supplementary Report for Sperm whale in the AFTT area - 2015 Version - Final Results

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## Overview

This zip file contains the final model predictions and supplementary report from the “2015 version” of the density model for Sperm whale in the U.S. Navy Atlantic Fleet Training and Testing (AFTT) Area, produced by the Duke Marine Geospatial Ecology Lab. These results accompany the Mannocci et al. (2016) publication, which documents their production. We highly recommend you read that paper and the Supplementary Information document available with it before using these results. This zip file and results for other taxa are available for download at <http://seamap.env.duke.edu/models/Duke-AFTT-2015/>

## Citation

If you use these results in a scientific publication or report, please cite:

Mannocci L, Roberts JJ, Miller DL, Halpin PN. Extrapolating cetacean densities beyond surveyed regions to qualitatively assess human impacts on populations in the high seas. Conservation Biology In Press. ([Download] (add URL))

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## Contents of this Zip File

\*\_abundance.img - Raster giving the estimated mean year-round abundance (number of individuals) per grid cell. The cells are 100 square km. Therefore, to convert to density (individuals per 1 square km), divide the cell values by 100.

\*\_cv.img - Raster giving the estimated coefficient of variation (from the spatial part of the model) associated with the estimated mean year-round abundance. These values are unitless.

\*\_extrapolation.dbf, extrapolation.prj, extrapolation.sbn, extrapolation.sbx, extrapolation.shp, extrapolation.shp.xml, extrapolation.shx - Shapefile feature class (geometry type: polygon) describing the occurrence of extrapolation in environmental space within the prediction area. If GRIDCODE is 2, values of all covariates are within the range of values sampled in surveyed regions. If GRIDCODE is 3, values of at least one covariate are beyond the range of values sampled in surveyed regions; consequently, predicted abundances should be considered with due caution. This shapefile can be overlaid on the abundance and coefficient of variation rasters using transparency or a special symbology.

\*\_extrapolation.img - Raster describing the occurrence of extrapolation in environmental space within the prediction area. If GRIDCODE is 2, values of all covariates are within the range of values sampled in surveyed regions. If GRIDCODE is 3, values of at least one covariate are beyond the range of values sampled in surveyed regions; consequently, predicted abundances should be considered with due caution. This raster can be overlaid on the abundance and coefficient of variation rasters using transparency.

\*.pdf - A taxon-specific supplementary report that describes modeling decisions for this taxon, provides diagnostic maps, plots, and statistical output, and discusses confidence in the results.

\*.png - Maps of abundance and coefficient of variation.

All rasters are in ERDAS IMAGINE (IMG) format and use an Albers equal area projection with a 10km cell size.

## **For More Information**

Mannocci et al. (2016) describe the modeling methodology. The taxon-specific supplementary report included in this zip file describes modeling decisions, provides diagnostic maps, plots, statistical output, and discusses confidence in the results.

If you have questions please contact Laura Mannocci ([laura.mannocci@duke.edu](mailto:laura.mannocci@duke.edu)).