1 **SUPPLEMENTARY MATERIAL**

2 **Quantifying Abundance and Mapping Distribution of Loggerhead Turtles in the Mediterranean Sea using Aerial**
3 **Surveys: Implications for Conservation**

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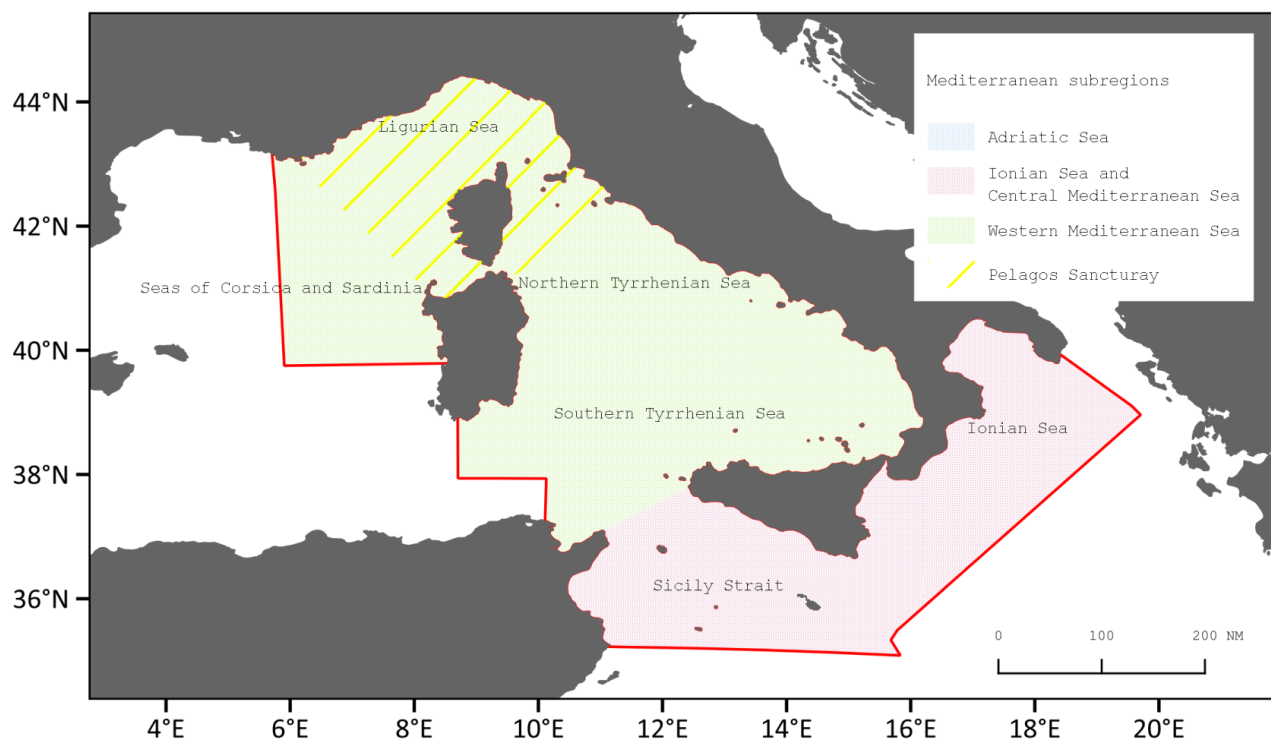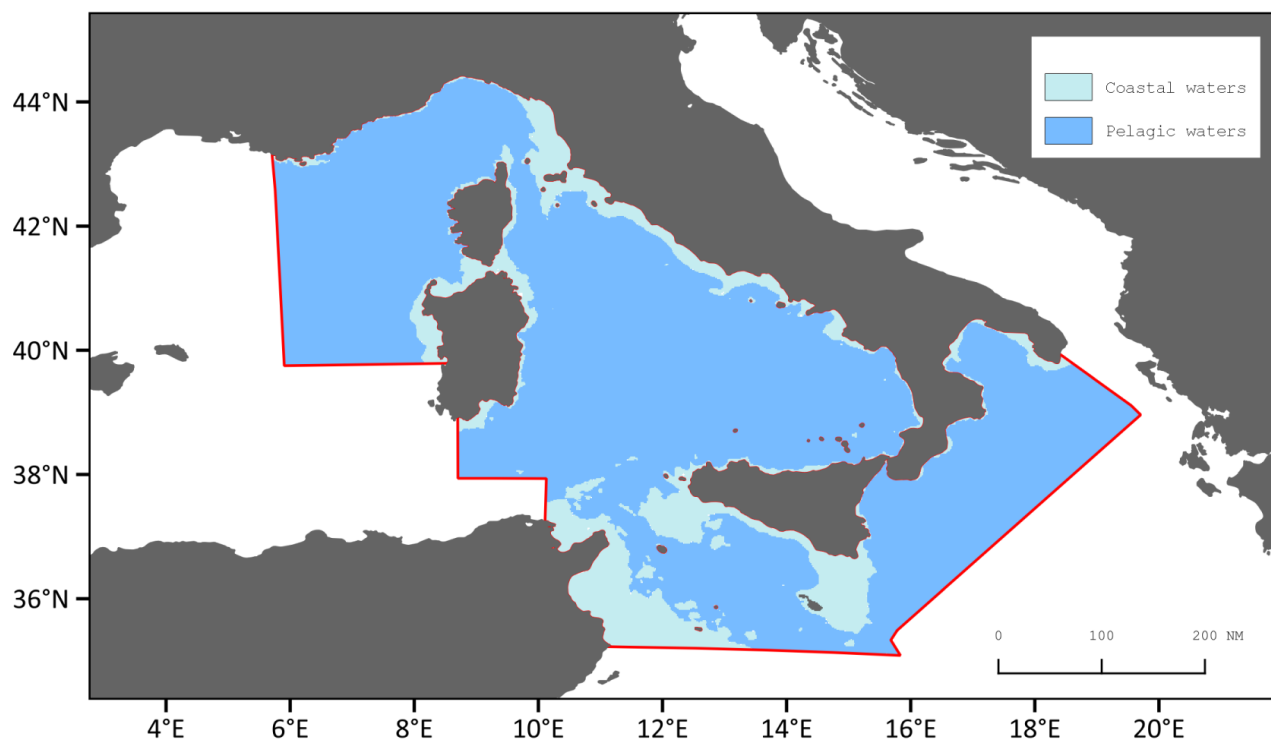18

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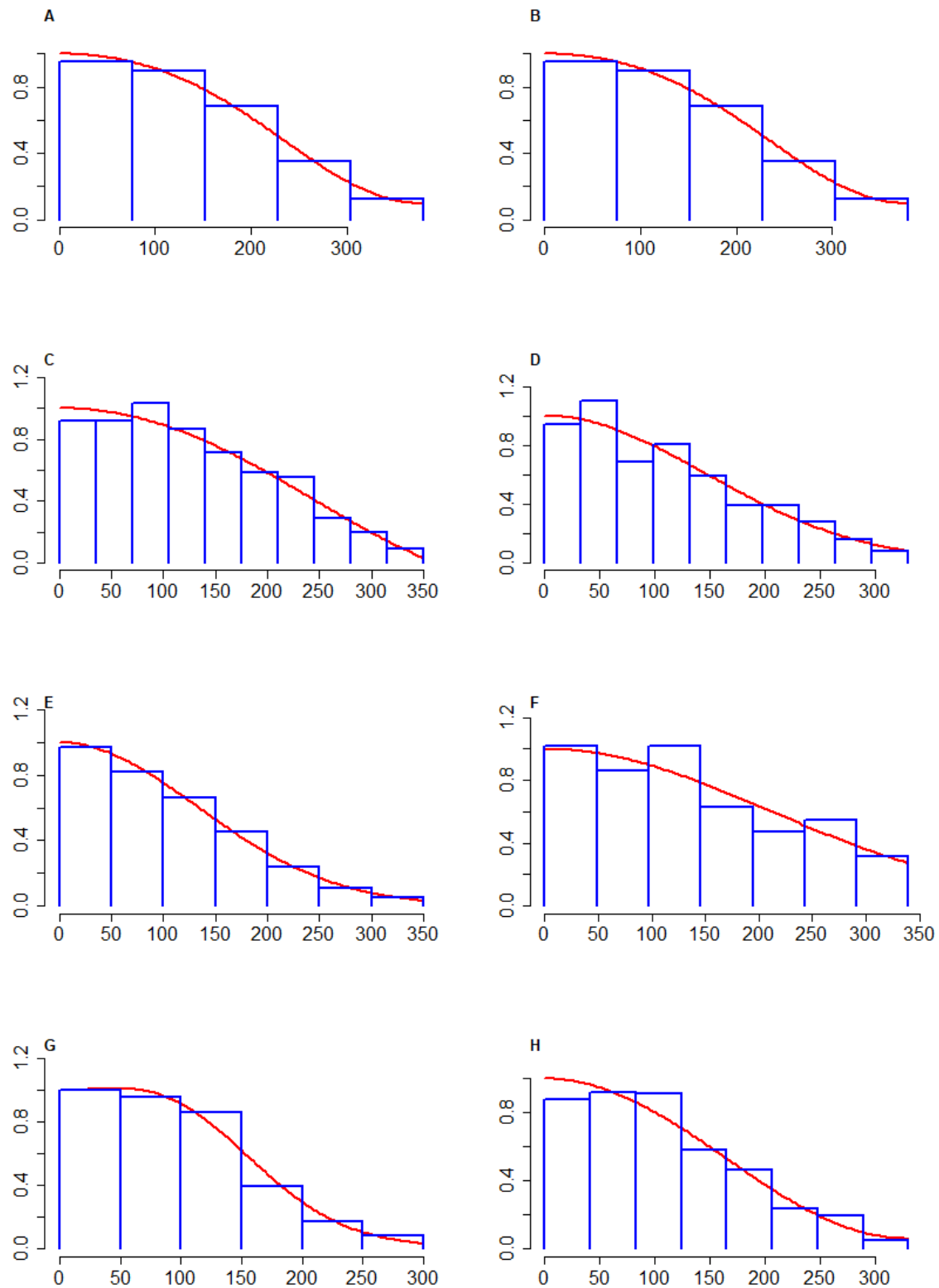24

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Figure S1 – Overall monitored area between 2009 and 2916 with highlighted overlapping portion of Marine
Subregions as delineated under the Marine Strategy Framework Directive. Geodatabases used to produce the
map available at https://www.eea.europa.eu/data-and-maps/data/europe-seas-1

Figure S2 – Depth of the overall surveyed area classified in coastal (depth between 0 and 200 meters) and deep waters (depth greater than 200 meters). Depth reclassification was based on the ETOPO1 Global Relief Model (Amante and Eakins, 2009)

41 **Figure S3** – Detection functions for Conventional Distance Sampling (CDS) analysis for each survey and area.
42 Details on selected models are provided in Table 3. A= Extended Pelagos Area (2010); B= Sicily Channel (2016);
43 C= Central Tyrrhenian Sea (2010); D= Central Tyrrhenian Sea (2013); E= Ionian sea (2010); F= Pelagos Sanctuary
44 (2010); G= Southern Tyrrhenian Sea (2010-2011); H= Southern Tyrrhenian Sea (2014). For the detection functions
45 and related information for the 2009 winter and summer surveys refer to Lauriano et al., (2011)

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47 **References**

48 Amante C, Eakins BW (2009) ETOPO1 Global Relief Model converted to PanMap layer format. NOAA-National
49 Geophysical Data Center

50 Lauriano G, Panigada S, Casale P, et al (2011) Aerial survey abundance estimates of the loggerhead sea turtle
51 Caretta caretta in the Pelagos Sanctuary, northwestern Mediterranean Sea. Marine Ecology Progress Series
52 437:291–302. https://doi.org/10.3354/meps09261

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