Full-coverage map layers for the major descriptors of benthic macrofauna community species richness, total abundance and biomass (ash free dry weight, in g per square kilometer) were created as part of the SECOS I (2013–2016) project within the WP 1.2 by Dr. Mayya Gogina based on the data from the IOW Benthos Database (WG Ecology of benthic Organisms, Leibniz-Institute for Baltic Sea Research).

These data sets are based on approx. 1400 stations sampled in the German Baltic Sea by the Leibniz Institute for Baltic Sea Research (IOW) during the 15 years period (as part of the regular monitoring or within different research programs from 2000 to 2014). Benthic samples were taken with a 0.1 m² van Veen grab. Depending on sediment composition, grabs of different weights were used. As a standart three replicates of grab samples were taken at each station. Additionally a dredge haul (net mesh size 5 mm) was taken in order to obtain mobile or rare species. All samples were sieved through a 1 mm screen and animals were preserved in the field with 4% formaldehyde. For sorting in the laboratory, a stereomicroscope with 10–40 magnification was used, species were counted and weighted.

Macrobenthic species richness was derived from stations based data by ordinary kriging of centered-point-data acquired via fishnet of 5 km x 5 km cell size. Abundance was derived by ordinary kriging interpolation of median total abundance within a fishnet cell (ArcGIS 10.2). Total ash free dry weight biomass was derived using random forests statistical analysis (Breiman, 2001) in R environment (Version 3.0.2, The R Foundation for Statistical Computing, 2013) and the package 'randomForest' (RF, Version 4.6–7, Liaw and Wiener, 2002). Environmental data used as predictors: Substrate (Tauber 2012), Depth (FEMA project), Salinity mean, temperature mean JJA, bottom velocity max (GETM, Klingbeil et al. 2013) Light penetration depth (mean over growth period), oxygen deficit zones (number of days / year < 2 ml / l) and detritus rate (mm / year) (ERGOM, Friedland et al. 2012).

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