

Supplementary Material

A marine and salt marsh sediment organic carbon database for European regional seas (EURO-CARBON) (*manuscript under review*)

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This dataset *EURO-CARBON_Dataset_v1.0* is a compilation of sediment organic carbon (blue carbon, hereafter) data in European marine habitats in response to a [data call with a common template](#) launched under the framework of the Horizon Europe project [MPA Europe](#) (Grant Agreement no. 101059988). The file represents the first “[EURO-CARBON](#)” dataset on blue carbon in marine sediments of the European seas, which is described in detailed in the manuscript **A marine and salt marsh sediment organic carbon database for European regional seas (EURO-CARBON)** (*under review*) .

The dataset contains excel sheets, one with explanation of data; one with a dataset on blue carbon of sediments; and one with a dataset on the vegetated habitat biomass. Contents are summarized below:

1) “*Explanation*”: descriptions of column headings and content

2) “*Data entry-Sediment data*”:

Location information: Country, Marine region, Habitat, Key species, Location name, Station ID, Core ID, Year, Month, Day, Latitude, Longitude.

Field measurements: Water depth (m), Temperature (Celsius), Salinity.

Core samples: Start depth (compacted), end depth (compacted), start depth (decompacted), end depth (decompacted).

Sediment measurements: Porosity (%), water content (%), Dry bulk density (g cm^{-3}), Dry bulk density_flag, Organic matter (OM) (%), Organic Carbon (OC) (%), Carbon-density (g C cm^{-3}), $\delta^{13}\text{C}$ (‰), Nitrogen (N) (%), N-density (g N cm^{-3}), $\delta^{15}\text{N}$ (‰), Phosphorus (P) (%), P-density (g cm^{-3}), Carbon reactivity index (CRI-index).

Core dating: Sediment accumulation rate (SAR) (mm yr^{-1}), SAR_se, Mass accumulation rate (MAR) ($\text{g cm}^{-2} \text{yr}^{-1}$), MAR_se, Carbon accumulation rate (CAR) ($\text{g C m}^{-2} \text{yr}^{-1}$), CAR_se, Total ^{210}Pb _activity (Bq kg^{-1}), Total ^{210}Pb _activity_sd, Excess ^{210}Pb _activity (Bq kg^{-1}), Excess ^{210}Pb _activity_sd, Supported ^{210}Pb _activity (Bq kg^{-1}), Supported ^{210}Pb _activity_sd, ^{14}C _age, ^{14}C _age_sd, ^{14}C _material.

Sediment fractions: Mud (<0.063 mm), Fine sands (0.063 - 0.25 mm), Medium sands (0.25 - 0.5 mm), Coarse sands (0.5 - 1 mm), Very coarse sands (>1 mm).

Methods used: Sampling type, OM (%), OC (%) and N (%), $\delta^{13}\text{C}$ (‰) and $\delta^{15}\text{N}$ (‰), P(%), CRI-index.

Information on data input: Data originator, Originator institution, Originator contact, Publications, Comments.

3) “*Data entry- Biomass data*”:

Location information: As above.

Field measurements: Water depth (m), Temperature (Celsius), Salinity, Frame replicate no., Frame area (m^2), Dominating plant species, Type of biomass.

Biomass measurements: Wet weight (g), Dry weight (g), Biomass (g m^{-2}), OC (%), C (%) and N (%), $\delta^{13}\text{C}$ (‰), $\delta^{15}\text{N}$ (‰).

Methods used: Biomass collection, C (%) and N (%), $\delta^{13}\text{C}$ (‰) and $\delta^{15}\text{N}$ (‰).

Information on data input: Data originator, Originator institution, Originator contact, Publications, Comments.