

README

Sources of the analyzed and displayed data (txt or csv format).

Fig. 1 Baltic Sea bathymetry.

<https://www.io-warnemuende.de/topography-of-the-baltic-sea.html>

Fig. 2 Atlantic Multidecadal Variability (AMV) index, North Atlantic Oscillation (NAO) index, precipitation averaged over the Baltic Sea catchment area and total river discharge.

Figure_2_AMO.txt

Figure_2_NAO.txt

Figure_2_precipitation.txt

Figure_2_riverdat_1850-2016_observed.l

Fig. 3 Spectrum of the winter North Atlantic Oscillation (NAO) index 1900-2010.

Figure_3_data_NAO_ERA20C_1900_DJF.txt

Fig. 4 Mean salinity of the Baltic Sea.

Figure_4_average_salt_rco2-scobi-540_REF+.txt

Figure_4_average_salt_rco2-scobi-540_REF.txt

Figure_4_average_salt_rco2-scobi-540_RUNOFF+.txt

Figure_4_average_salt_rco2-scobi-540_RUNOFF.txt

Figure_4_average_salt_rco2-scobi-540_WIND.txt

Fig. 5 Saltwater inflow volume changes caused by low-frequency freshwater input.

Figure_5_average_salt_rco2-scobi-540_2015c_with_trend.txt

Figure_5_average_salt_rco2-scobi-540_2015c_runoff_pme_with_trend.txt

Fig. 6 Differences in sea surface and bottom salinities (in g kg⁻¹) caused by river discharge and west wind anomalies.

Figure_6a_sss_SONDJF_NAO_5-7-scobi-540_2015c_diff.txt

Figure_6b_salinity_bottom_SONDJF_NAO_5-7-scobi-540_2015c_diff.txt

Figure_6c_sss_SONDJF_NAO_8-9-scobi-540_2015c_diff.txt

Figure_6d_salinity_bottom_SONDJF_NAO_8-9-scobi-540_2015c_diff.txt

Figure_6e_sss_DJF_NAO_2-3_mean_rco2-scobi-540_2015c_runoff_pme_with_trend.txt

Figure_6f_salinity_bottom_DJF_NAO_2-3_mean_rco2-scobi-540_2015c_runoff_pme_with_trend.txt

Supplementary Fig. 1 Reconstructed total river discharge to the Baltic Sea 1850-2008.

See Fig. 2

Supplementary Fig. 2 Simulated and observed sea surface and bottom salinities at various monitoring stations. (in csv format)

Supplementary_Figure_2_salinity_on_stations_top_all_stations_obs.csv (Observations)

Supplementary_Figure_2_salinity_on_stations_bottom_all_stations_obs.csv (Observations)

Supplementary_Figure_2_salinity_on_stations_top_mod.csv (Model data)

Supplementary_Figure_2_salinity_on_stations_bottom_mod.csv (Model data)

Supplementary Fig. 3 Spectrum of annual mean salinity averaged over the Baltic Sea 1850-2008.

See Fig. 4

Supplementary Fig. 4 Spectrum of the annual river discharge to the Baltic Sea 1850-2008.

See Fig. 2

Supplementary Fig. 5 Spectrum of the annual mean salt import from reconstructed Major Baltic Inflows (so-called DS5 events) 1887-2021.

<https://www.io-warnemuende.de/major-baltic-inflow-statistics-7274.html> (<http://doi.io-warnemuende.de/10.12754/data-2018-0004>)

Supplementary Fig. 6 Wavelet coherence between the annual mean river discharge and the annual mean salt import from DS5 inflow events 1887-2008.

See Fig. 2 and Supplementary Fig. 5

Supplementary Fig. 7 Stratification in the central Baltic Sea.

Supplementary_Figure_7_isoline_salt_by15_540_REFp.txt

Supplementary_Figure_7_isoline_salt_by15_540_REF.txt

Supplementary_Figure_7_isoline_salt_by15_540_RUNOFFp.txt

Supplementary_Figure_7_isoline_salt_by15_540_RUNOFF.txt

Supplementary Fig. 8 Spectrum of annual mean stratification in the central Baltic Sea 1850-2008.

See Supplementary Fig. 7