

Baltic-C Meta-data-set:

Model forcing: Acid deposition to the CSIM model

1.) General description of the data set:

Monthly data including deposition of oxidized sulphur and nitrogen, reduced nitrogen, chlorine and base cations. The data are derived as input to the catchment nutrient model CSIM.

2.) Created:

September, 2009.

3.) Last update:

Updates available in spring, 2010.

4.) Keywords:

Baltic Sea catchment, acid deposition, sulphur, nitrogen, chloride, base cations, sodium, magnesium, potassium, calcium, CSIM, EMEP, EDGAR, HYDE.

5.) Area:

Baltic Sea catchment area.

6.) Spatial extension:

I rectangular box including the Baltic Sea catchment area.

7.) Spatial resolution:

Gridded: 50 x 50 km for sulphur and nitrogen and 1° x 1° for other compounds.

8.) Time window:

1960–2006.

9.) Temporal resolution:

Monthly.

10.) Data and arrays:

ASCII files of wet and dry deposition of oxidized sulphur and nitrogen, reduced nitrogen, and wet deposition of base cations and chloride. Coordinates are defined in specific files.

11.) Reference to other data sets:

Data for the period 1990–2006 are modelled (acid deposition) by the EMEP transport model (<http://www.emep.int/OpenSource/index.html>) or interpolated measurements (chloride, base cations, precipitation and pH) within the EMEP co-operative programme (<http://tarantula.nilu.no/projects/ccc/emepdata.html>).

For the period 1960–1989 acid deposition data are constructed from emissions reported by EDGAR-HYDE (<http://www.mnp.nl/edgar/model/>). Precipitation for this period is given by the average monthly fields for the 1990–2006 period. Chloride and base cations are assumed constant with the average monthly fields from the 1990–2006 period.

12.) Data quality (degree of validation):

The construction of the data set is presented and evaluated in Carlsson et al. (2010).

13.) Where to find the data?

Due to data volume, data available from contact persons.

14.) Contact persons:

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References:

Carlsson, B. et al., 2010. Depositions of acidifying and neutralising compounds over the Baltic Sea drainage basin between 1960 and 2006. *In manuscript*.