Baltic Earth

Earth System Science for the Baltic Sea Region

An open research network to achieve an improved Earth system understanding of the Baltic Sea region

Baltic Earth succeeds BALTEX

Extending the knowledge of the regional Earth system in the Baltic Sea region

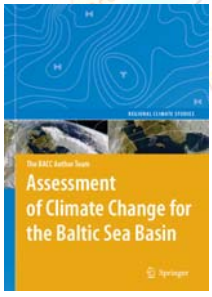
The goal of Baltic Earth is to achieve an improved Earth system understanding of the Baltic Sea region. Baltic Earth is the successor to BALTEX that was terminated in June 2013 after 20 years and two successful phases. The research components of BALTEX continue to be relevant, but now have a more **holistic** focus encompassing processes in the **atmosphere**, on **land** and in the **sea**, as well as processes and impacts related to the **anthroposphere**. Specific **interdisciplinary** research challenges have been formulated by the Baltic Earth Interim Science Steering Group to be approached by the new programme in the coming years. The continuity in basic research fields, structure (secretariat, conferences, publications) and the **international** network (people and institutions) is symbolized by the logo, which is similar but still distinctly different from the BALTEX logo.

A major means of achieving the goals of Baltic Earth will be **scientific assessments** of particular research topics to be prepared by expert groups. Similar to the BACC approach, the assessments shall help to identify gaps and inconsistencies in the current knowledge. A Baltic Earth **Science Plan** will be established by the end of 2014, with a definition of core research questions, so-called "**Grand Challenges**". They are currently:

1. Salinity dynamics in the Baltic Sea
2. Land-Sea biogeochemical feedbacks in the Baltic Sea region
3. Natural hazards and extreme events in the Baltic Sea region
4. Understanding sea level dynamics in the Baltic Sea
5. Understanding regional variability of water and energy exchanges

The Grand Challenges are intended as **flexible**, regularly updated research topics and will be dealt with by specific **working groups**. In addition, the BALTEX Working Groups on the "Utility of Regional Climate Models", and "Assessment of Scenario Simulations for the Baltic Sea 1960-2100 " will continue in Baltic Earth. Dedicated working groups have also been established on "Outreach and Communication" and "Education".

The **human impact** shall be assessed at all levels, wherever possible and reasonable. New Grand Challenges and modifications of existing ones can be implemented by the steering committee and the working groups, by using the assessments of existing research and knowledge, and the open discussions at **conferences** and **workshops**. The Grand Challenges are foreseen as research foci for periods of about 3-4 years (then terminated or updated). It is envisaged that Baltic Earth will be internationally embedded in a similar manner as was BALTEX.



Assessment projects similar to BACC will be concrete outcomes of Baltic Earth

Baltic Earth intends to provide a "service to society" in the respect that the assessments may provide an overview of knowledge gaps, and the communication with different **stakeholders** may help to identify open scientific questions relevant for society, which could be approached by funded **research projects**.

Baltic Earth will also be committed to educational activities with the establishment of regular **Baltic Earth Summer Schools**, the first of which is intended to take place in 2015. The first dedicated **Baltic Earth Conference** is planned for 2016.

"Products" of Baltic Earth will include:

- → **Conferences**
- → **Workshops**
- → **Assessment Projects**
- → **Research Projects**
- → **Summer Schools**

The International Baltic Earth Secretariat (IBES) is located at Helmholtz-Zentrum Geesthacht (Germany) as a focal support point for Baltic Earth.
More information on Baltic Earth and BALTEX is available at
www.baltic-earth.eu