

BALTEX and beyond - towards a Baltic Sea region climate science community

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The Baltic Sea region is multifaceted, international, diverse in culture and history, but unified by the joint dependence on the water body in its centre – the Baltic Sea. The weather in this region is variable and challenging, and thus it is not surprising that it was a weather topic which early on brought scientists from the various countries together – in the program BALTEX.

After an initial 10-year phase of BALTEX, with exploring issues related to the energy and water cycle in the Baltic Sea region, the climate issue came into the focus in the second phase. A highlight was the initiation of a process, which led to the assessment of available scientific knowledge about climate, climate change and climate impact for the region. Following the spirit of the global assessment process IPCC, this so-called BACC process (BALTEX Assessment of Climate Change in the Baltic Sea region) aimed at identifying agreement and disagreement of such knowledge, while trying to keep out political implications as far as possible. The first review came out in 2008, and was accepted by the international HELCOM organization for the management of the Baltic Sea as a basis for its own framing the regional climate problem, and sketching possible response policies. The second report was finalized in early 2014 and is now in the final editorial process; again HELCOM has used this material for its own work.

As a byproduct of these processes, the number of involved scientists grew, and a broader participation from all countries emerged – thus the process went along with the building and consolidation of a Baltic Sea climate science community.

In 2013, the BALTEX process came formally to an end, but only for being revitalized with new and younger actors as “Baltic Earth” and a much broader scope of interest, namely related to all aspects of the regional Earth System, so that not only climate-related issues and the physical side of the regional Earth system, but also biogeochemical feedbacks and the impact of humans shall be examined. BACC-type assessments shall be an important tool to provide an overview over the current knowledge in various fields, and to identify knowledge gaps.

In the talk, both, the history of BALTEX/Baltic Earth as well as the main results of BACC are described in some detail.