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NOSCCA: A Climate Change Assessment report for the North Sea Region



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A well received assessment report about climate change in the Baltic Sea drainage basin was published in 2008 (known as BACC-report; BACC Author Team, 2008). Based on the positive experience with BACC and the importance of the area for north-western Europe, a similar assessment report was started for the North Sea region. The initiative is called North Sea Region Climate Change Assessment, or in short NOSCCA.

The North Sea and its adjacent areas host unique and rich ecosystems, provide numerous services to human society and mediate important matter fluxes, which have impacts on regional water quality as well as on the regional climate. The North Sea is surrounded by densely populated, highly industrialized countries. Approximately 184 million people live within the North Sea catchment area. The North Sea is heavily exploited both by fisheries and gas and oil exploitation, and is among the busiest seas in the world. It holds the largest oil and gas reserves in Europe. The North Sea and



bordering terrestrial landmasses currently experience transformations in response to anthropogenic activities and global change. Managing authorities, policy makers, industry, scientists and the public ask for reliable scenarios of those changes. NOSCCA will document the legitimate scientific knowledge on past and possible future climate change in the North Sea and adjacent areas as well as related impacts on ecosystems and socio-economic sectors. It will be a complete climate change assessment from published scientific work with a regional IPCC-like evaluation and review process. The initiative was initiated by the Institute of Coastal Research of the Helmholtz-Zentrum Geesthacht in Germany, and is led by a scientific steering committee (SSC), consisting of international independent scientists from climate related disciplines such as oceanography, atmospheric science, climatology, marine and terrestrial ecology.

A broad range of topics is considered in order to build up a comprehensive view on all aspects of and related to changing climate. Themes to be incorporated are past and current climate change, projection of future anthropogenic climate change, climate related changes in marine, terrestrial and freshwater ecosystems. Additionally, climate change impacts on the socio-economic areas of fisheries, coastal zone management, coastal defense, urban climate, recreation/tourism, and air pollution will be reviewed. The different topics will be structured into individual chapters to be compiled by an international author team chaired by one or two lead authors. An integrated summary for policy makers will be prepared by the group of lead authors.

The region of interest is the North Sea bordering the North Atlantic and the Baltic Sea (Skagerrak, Kattegat), as well as the riparian countries. The North Sea area follows the OSPAR Greater North Sea definition (OSPAR region

II), and the land areas considered are those dominated by maritime influence which to a certain extent represent catchment areas of major discharging rivers. The project is set up to assemble, integrate and assess available knowledge of past (mainly post glacial), current, and expected future (100-300 years) climate change and its impacts.

Participating scientists will be from universities, public research institutions, and international science programmes. A close co-operation with relevant international organisations such as LOICZ (NOSCCA is an affiliated project) and ICES is of great importance for the initiative. Exchange of information with OSPAR is intended. The Institute of Coastal Research of the Helmholtz-Zentrum Geesthacht is coordinating the project, supported by the LOICZ International Project Office and the “Norddeutsches Klimabüro”, both also located at Helmholtz-Zentrum Geesthacht. The international scientific steering committee has approved the NOSCCA plan during its first meeting in October 2010, and all chapter lead authors have now been identified. A combined SSC/lead author meeting will take place at the beginning of October 2011 in Amsterdam, The Netherlands.

It should be stated that NOSCCA is meant to be an assessment of knowledge on climate change and not an assessment of climate change as such. The final product will be a book planned to be released by a scientific publisher in 2014.

Reference

BACC Author Team (2008) Assessment of Climate Change for the Baltic Sea. Regional Climate Studies, Springer-Verlag Berlin Heidelberg. 473 pp.

www.noscca.org

BACC II well on its way

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The update to the BACC book has now entered the writing phase. After the kick-off meeting in Helsinki in 2009, an Science Steering Committee meeting in Lund, and two lead author team meetings in Gothenburg 2010 and Hamburg 2011, the preparatory phase is now successfully completed and the actual work on the chapters is now bound to start. Issues which had to be settled were the recruitment of lead and contributing authors, and the establishment of the final book chapter

structure. This new structure differs from the first BACC book: New chapters include past climate variability in the pre- and early historical time frame (10.000 yrs and 1.000 yrs back, respectively), a more extensive analysis of sea level changes in the Baltic Sea, and an in-depth reflection of socio-economic impacts, like on agriculture and forestry, fisheries and aquaculture, coastline changes and urban complexes. The question of attribution, i.e. which factors can be pinpointed to contribute to regional climate change, will be treated in a separate chapter. Here, aerosols (natural and pollutants) and land cover changes will be investigated as alternative drivers. Currently, 3 annexes are planned for the BACC II book: 1. A new survey on Baltic Sea region climate scientists on consensus and dissensus in the scientific community on important regional climate change issues; 2. An interdisciplinary overview of the Baltic Sea drainage basin (the geographical limits of BACC), and 3. A description of the concept of detection and attribution. A comprehensible summary will make the essential information available to non-scientists.

The BACC II chapter structure can be viewed at :

www.baltex-research.eu/BACC2

The overall success of this project depends on the commitment of all participating authors. In that respect, it is hoped that this endeavour will be rewarding not only for the scientific community in the Baltic Sea region at large, but also for the authors themselves.

The BACC Blog

The BACC Blog is a platform to exchange views and comments about the BACC project (BALTEX Assessment of Climate Change for the Baltic Sea Basin), and on climate change related issues in the Baltic Sea region in general.

thebaccblog.blogspot.com