

## **Regional climate services: A case study**

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Regional and local stakeholders have often to include climate knowledge in their planning of the future. In particular they need knowledge chiefly about options and needs for adaptation, but also about options of regional and local geo-engineering such as urban planning for reducing urban heat island effects. In both cases, a regional and local dialog between science and stakeholders, including the public and policymakers, is needed. In this presentation, an example on how to establish such a regional/local dialogue is presented and discussed in some detail. The case is based on a transdisciplinary blending of natural and cultural science concepts.

The example deals with knowledge brokering between regional climate science and regional and local stakeholders in the metropolitan area of Hamburg (Germany), and the wider Northern German coastal region. The task of this "North German Climate Office" is to provide scientific knowledge for stakeholders and to link the scientific questioning to problems encountered by stakeholders. Special attention is paid to extremes (here: storm surges, waves) and the societal vulnerability.

The office maintains various regular personal exchanges and public presentations. Based on a consistent and homogeneous data set about ongoing and possible future regional climate, climate change and climate impact (hazards), a web-portal provides perspectives for future regional climate developments. The presently available scientifically legitimate knowledge (including assessments of agreement and disagreement and lacking knowledge) about climate change in the region is mimicking a kind of "regional IPCC"-process. So far, two such reports have been concluded, namely for the metropolitan region on Hamburg (2010), and –within BALTEX- for the Baltic Sea Catchment (2007). Both reports have received a very positive response by political bodies, such as the senate of the City of Hamburg or the UN-Commission for the Baltic Sea (HELCOM).

An important element of any climate service is the recognition that scientific knowledge is not per se accepted as superior in the public arena. Instead, culturally constructed knowledge claims compete with scientifically constructed knowledge claims. Even if it may appear plausible that science is a better advisor of political and economic decisions, it is often culturally constructed understanding of complex phenomena, which dominates the decision processes. To help making scientific arguments to "win" this competition, science must understand the competing knowledge claims, and must examine the utility of scientific knowledge in dealing with problems related to climate policy. An important concept to this end is "postnormal science", which applies for climate research in general. Successful regional and local climate service needs the engagement of both natural and cultural sciences.

Reference: von Storch, H., I. Meinke, N. Stehr, B. Ratter, W. Krauss, R.A. Pielke jr., R. Grundmann, M. Reckermann and R. Weisse, 2011: Regional Climate Services illustrated with experiences from Northern Europe. *Zeitschrift für Umweltpolitik & Umweltrecht* 1/2011, 1-15