Ten years of implementing regional climate service

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Regional climate service is an effort to build a dialogue between regional stakeholders and regional scientific institutions, to allow the usage of scientific knowledge in societal and economic decision processes, and to ensure that stakeholder needs for knowledge and information are taken up by scientific programs. Thus, regional climate service is mostly on the exchange of knowledge (the capacity to act) and less so on provision of information (mostly numbers).

Regional climate servicing is pursued at the Institute of Coastal Research at HZG since the early 2000s; apart of some theoretical work on the limitations and conditions of such an exchange, three efforts have been implemented for building such a dialogue:

a) An office specifically dedicated to build contacts and to exchange knowledge, views, needs, limitations with regional stakeholders. This “Norddeutsches Klimabüro” acts like a “farm shop” of the Institute of Coastal Research and addresses regional stakeholders, from the general public to agencies responsible for coastal defense and companies dealing with the construction of off-shore activities.
b) Knowledge assessment reports aka IPCC but for limited regions, done by the regional climate science community, to determine the state of scientific knowledge, including the agreement and disagreement on issues like sea level rise. Such reports have been completed for the Baltic Sea Region (BACC) and the Metropolitan area of Hamburg. These assessment reports may form a model for further diversification and regionalization the future IPCC process. The usefulness of BACC has been recognized by HELCOM by using it as a basis for its political deliberations, and by the Östersjöfonden awarding its Östersjöprisen.
c) Detailed date sets about present climate, ongoing change and scenarios of possible future change (CoastDat). Such data sets, prepared with limited area atmospheric models and, in particular, hydrodynamics models of marginal seas and ocean waves, allow an assessment whether ongoing change is consistent with the expectation of future change (scenarios). It turns out this is mostly so for temperature change, but not so for precipitation change.