The international North Sea Region Climate Change Assessment (NOSCCA) – an analysis of the scientific legitimate knowledge for science and decision making.

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The entire North Sea region is currently being affected by a changing climate and will be affected according to all available projections in the upcoming decades. For example since about 1980 the sea surface temperature in the Southern North Sea rose by more than 1.5°C and over the last 100 years a sea level rise of approximately 20 cm has been observed. Related changes in the marine and coastal ecosystems have already been observed or are to be expected. Science and decision making i.e. focusing on adaptation measures for this ecologically important and economically very active region needs a sound and spatially well resolved analysis of observed and projected changes.

The Institute of Coastal Research of the Helmholtz-Zentrum Geesthacht has initiated a comprehensive climate change assessment for the Greater North Sea region and adjacent land areas. NOSCCA has developed into an independent international initiative involving scientists from all countries in the region. Writing teams guided by lead authors compiled the chapters of the NOSCCA-report, which were subject of an independent scientific review.

The assessments comprises past and current climate change and climate change projections for the North Sea, the atmosphere and river flows as well as impacts of climate change on marine, coastal, and terrestrial ecosystems, and on socio-economic sectors, as fisheries, agriculture, urban climate, recreation, coastal defense, offshore activities, air quality and coastal zone management. A book published by Springer is expected for early 2016.

Target audience of the review is the science community as well as the different stakeholders and decision makers in the region. Here we will introduce the initiative and present selected findings.