



## **CLIMLINK: Climate forcing factors for marine environmental change during the mid- and late Holocene – a link between the NE Atlantic and the Baltic Sea.**

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Climate change has a strong amplifying effect on the environment of marginal seas such as the Baltic Sea. Owing to the connection of the Baltic Sea with the Atlantic (and the resultant pathway of water exchange via the narrow Danish Straits), changes in the Baltic region are suggested to be driven by external oceanic and atmospheric forcing originating in the Atlantic, particularly in the eastern Nordic seas, the Skagerrak, and the Kattegat. CLIMLINK aims to reconstruct mid- to late Holocene ecosystem changes in these regions and identify linkages, common forcing factors and effects for the Baltic Sea on a millennial to decadal time scale. High-resolution sediment records from selected key sites in the Norwegian Trench, and central Baltic Sea are studied by using a multi-proxy approach. Micropalaeontological studies of diatoms and foraminifera are combined with geochemical proxies, such as stable isotopes, Mg/Ca, TOC, TIC, C/N, XRF and magnetic susceptibility in order to achieve a more comprehensive view on environmental changes during the last 6000 to 8000 years. The chronology of the sediment cores is secured by using multiple dating tools: Hg-pollution records,  $^{137}\text{Cs}$ ,  $^{210}\text{Pb}$ ,  $^{14}\text{C}$  and tephra layers. Herein we present the initial results of the project.