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The Virtual Institute of Integrated Climate and Landscape Evolution Analyses - ICLEA

Markus Schwab (1), Achim Brauer (1), Mirosław Błaszkiewicz (2), Thomas Raab (3), Martin Wilmking (4), Theresa Blume (5), and Iclea Team (*)

(1) GFZ German Research Centre for Geosciences, Sect. 5.2 Climate Dynamics and Landscape Evolution, Potsdam, Germany (mschwab@gfz-potsdam.de), (2) Polish Academy of Sciences, Institute of Geography and Spatial Organization, Department of Lowland Hydrology and Geomorphology, ul. Kopernika 19, 87 – 100 Toruń, Poland, (3) Brandenburgische Technische Universität (BTU) Cottbus-Senftenberg, Chair of Geopedology and Landscape Development, Konrad-Wachsmann-Allee 6, 03046 Cottbus, Germany, (4) Greifswald University, Chair of Botany and Landscape Ecology, Institute of Landscape Ecology and Ecosystem Dynamics, Grimmer Straße 88, 17487 Greifswald, Germany, (5) GFZ German Research Centre for Geosciences, Sect. 5.4 Hydrology, Potsdam, Germany, (*) The complete list of scientists and partners involved in ICLEA can be found at http://www.iclea.de.

The GFZ, Greifswald University and the Brandenburg University of Technology together with their partner the Polish Academy of Sciences strive for focusing their research capacities and expertise in a Helmholtz Virtual Institute for Integrated Climate and Landscape Evolution Analyses (ICLEA). The Coordination Team is based at the GFZ in Potsdam and consists of a permanent scientific manager and administrative personnel. ICLEA offers young researchers an interdisciplinary and structured education and promote their early independence through coaching and mentoring. Postdoctoral rotation positions at the ICLEA partner institutions ensure mobility of young researchers and promote dissemination of information and expertise between disciplines. Training, Research and Analytical workshops between research partners of the ICLEA virtual institute are another important measure to qualify young researchers.

The long-term mission of the Virtual Institute is to provide a substantiated data basis for sustained environmental maintenance based on a profound process understanding at all relevant time scales. Aim is to explore processes of climate and landscape evolution in an historical cultural landscape extending from northeastern Germany into northwestern Poland. The northern-central European lowlands will be facilitated as a natural laboratory providing an ideal case for utilizing a systematic and holistic approach.

In ICLEA five complementary work packages (WP) are established according to the key research aspects. WP 1 focus on monitoring mainly hydrology and soil moisture as well as meteorological parameters. WP 2 is linking present day and future monitoring data with the most recent past through analysing satellite images. This WP will further provide larger spatial scales. WP 3-5 focus on different natural archives to obtain a broad variety of high quality proxy data. Tree rings provide sub-seasonal data for the last centuries up to few millennia, varved lake sediments cover the entire research time interval at seasonal to decadal resolution and palaeosoils and geomorphological features also cover the entire period but not continuously and with lower resolution. Complementary information, like climate, tree ecophysiological and limnological data etc., are provided by cooperation with associated partners.

Further information about ICLEA: www.iclea.de