

PROJECT NAME	Sinking Coasts, Geosphere, Ecosphere and Anthroposphere of the Holocene Southern Baltic Sea
ACRONYM	SINCOS
STUDY REGION	Southern Baltic Sea
PRINCIPAL INVESTIGATOR	Prof Dr Jan Harff
DURATION	January 1, 2002 - May 31, 2009
PROJECT WEBSITE	Link to project website
LOICZ PROJECT DATABASE	Click here for more project information



PROJECT DESCRIPTION

The general target of SINCOS is a model of the relation between geo-system, eco-system, climate and socio-economic system for sinking coast of tideless seas to be developed as an example for the southern Baltic Sea since the Atlantikum.

Geoscientist (geologists, geomorphologists, geodesists), biologists (palaeobotanists, palaeozoologists), climate researchers and archaeologists will collaborate in order to investigate the cause and effect relation between driving forces (climatic and geological processes) and the response of the natural and social environment in the coastal areas of a transgressive sea.

The central role plays the reconstruction of the litorina transgression west and east of the Darss sill structure. Seven projects under the roof of SINCOS will deal with the acquisition and interpretation of proxy-data in order to reconstruct the history of the southwestern Baltic Sea since 8.000 y BP. In the frame of two projects data will be integrated and models will be developed that mirror the processes of interrelation of different spheres to be investigated. Depending on the varying degree of quantification between measurable variables and qualitative observations models will differ between statistical data exploration and deterministic differential equations. A 4D GIS plays the central role in modelling and data integration.

Results will be presented as time-dependent regionalizations of geo-, eco-, and socio-economical. Collaborating Countries / Institutions: Denmark: Geological Survey of Denmark and Greenland, Copenhagen; National Museum of Denmark, Copenhagen; Langelands Museum, Rudkøbing; Zoological Museum, Copenhagen Estonia: University of Tartu; Institute for History, Tallinn Finland: Saima Centre for Environmental Sciences, Savonlinna Latvia: Institute of History of Latvia, Riga Lithuania: Lithuanian Geological Survey, Vilnius; University of Kaunas Poland: Szczecin University; Geological Survey of Poland, Gdansk; University of Gdansk; Academy of Fine Arts, Conservation Faculty, Warszawa; Institute for Archaeology and Ethnology, Polish Academy of Sciences, Pozna Sweden: Space Observatory / CHALMERS, Göteborg; University of Lund; University of Stockholm UK: Permanent Service for Mean Sea Level, Bidston USA: University of Kansas, Lawrence; Western Geco, Houston, Texas

THE PROJECT RELATES TO THE FOLLOWING PRIORITY TOPICS AND SCIENTIFIC THEMES

Priority Topics:

2 - Assess and predict impact of environmental change on coastal ecosystems

Scientific Themes:

2 - Implications of Global Change for Coastal Ecosystems and Sustainable Development

3 - Human Influences on River Basin-Coastal Zone Interactions