Geophysical Research Abstracts
Vol. 14, EGU2012-2146-4, 2012
EGU General Assembly 2012

Post-glacial coast development and human settling of the North European Ice Marginal Landscape (IML)

E.P.H. Bregman, I.Kant Baltic Federal State University, Kaliningrad, Russia; Utrecht University, the Netherlands, O.A. Druzhinina, I.Kant Baltic Federal State University, Kaliningrad, and Russia
(bregkema@home.nl)

In North Europe, in the Ice Marginal Landscapes (IML) from the Netherlands to Estonia, human settling is in the Late-Pleistocene - Holocene strongly influenced by post-glacial relative coast development(MESO, 2010; SINCOS, 2002-2009; Machu, 2006-2009, IGCP project 346, CoPaF, 2009-2012) and glacio-isostasy. Geological processes like updoming and tectonic block displacements not only influenced sedimentation of river systems in delta's (e.g. Cohen, 2003), but influenced coastal development and human settling too in the North Sea area (e.g. Peeters, 2009; Hijma e.a., 2011) the Wadden areas (e.g. de Langen, 2011) and lagoons (e.g. Druzhinina, 2010). An overview of shoreline development at the distal side of the Late Glacial forbulge related to glaciological and geophysical processes however does not exist and coastal development models are also not correlated with human settling.
Our project(2012 - 2018) has the aim to describe the influence of shifting coast on the way of settling and living of ancient man in the IML. The main questions to be answered are as follow:

(i) Is coast development influenced by glaciations a result of interaction between endo- and exogenic (glaciological-, geological-, and geophysical) forces in general and at the local scale of morphological elements?

(ii) Did ancient man adept to changes in natural circumstances and what did that mean for his social behavior and economy?

(iii) Were forms of human society and economy in the IML primarily dependent on the natural environment with regard to geophysical and geological differences and related to post-glacial response of the earth crust?

Detailed integrated studying of "key-areas", with attention to deep geology, will allow to get new insight of the impact of post-glacial shoreline changes and history of man on the coast in the IML with focus on his past (history of relations) and future (impact of climate change. The project is an international project, with participation of institutes all over the IML.

References

Cohen, K.M., 2003. Differential subsidence within the\ a coastal prism.
Late- Glacial – Holocene tectonics in the Rhine-Meuse delta,
the Netherlands. Netherlands Geographical Studies 216. 172pag.
KNAG/Faculteit Ruimtelijke Wetenschappen Universiteit Utrecht.
Hijma, M.P.; Cohen, K.M.;Roebroeks, W; Westerhoff, W.; Busschers, F.S.,
2011. Pleisocene Rhine-Thames landscapes: geological background
for hominin occupation of the southern North Sea region. Journal
of Quaternary Science, 23 pag.
Druzhinina, O.A.; Skodnov, I., 2010. Investigations of the evolution of
the Baltic Sea and early human settlement in the eastern Baltic
Area (based on materials from Kaliningrad Region).Archeaeologica
Baltica 14. pag. 219-225.
Langen, G.J. de, 2011. De gang naar een ander landschap. In Gevormd en
omgevormd landschap. Pag. 70-98. DPV. Nienkus, M.J.L.Th., red.
Peeters, H., 2009. North Sea Prehistory Research and Management
Framework (NSPRMF).Amersfoort,the Netherlands.