

HEX 2014 - Hydrological EXtreme events in historic and prehistoric times

9.-15.6.2014, Dept. of Geography, University of Bonn / Germany

International conference with field presentations

At the current status of knowledge, hydrological consequences of the ongoing climatic change can only be estimated based on assumptions of future changes. Magnitudes and frequencies of hydrological extreme events will change from recent values. Consequently, forecasts on future development based on recent observations and measurements and their statistical analysis are hindered due to the non-steady conditions.

On this background a view back in time offers a significant range of observations of hydrological extreme events based on climatic changes in different directions. From an European perspective, the Medieval Climate Optimum and the Little Ice Age illustrate ranges of climatic changes in historic times. From those days, reports, documents and traces of hydrological extreme events like floods and droughts are handed down to nowadays. These reports and traces have an untapped potential for further analysis of magnitudes, frequencies and process mechanisms for an improved understanding of the relationships of climate change and hydrological consequences. Due to the different duration of written historic times in different cultures of the world – one or two centuries in North America and several millennia considering the ancient cultures e.g. in Egypt or China – the time range of previous extreme hydrological events of further consideration leads back into pre-historic times, consequently back into the Pleistocene.

Based on this background, the following keywords span the range of topics for scientific session during the conference:

- Past hydrological events and periods related to global change
- Development of refined global and regional chronologies on hydrological events and periods
- Historical perspectives of current hazards
- Relevance of Pleistocene hydrological events for the present and future
- Drought analysis - an underestimated problem and future challenge
- Implications of long term research in relation to forecasts and prognoses for the future
- Interpreting human impact
- Estimation of previous and future damage and losses
- Extreme wave events in the past and future
- Extraterrestrial flows and floods
- New techniques and methods of investigation (dating techniques, historical source analysis, hydraulic interpretation of geomorphological and sedimentological structures, ...)

Key note speakers:

Victor Baker	Extraterrestrial flow - why should we care?
Rudolf Brazdil	500-year floods and droughts in Central Europe based on documentary evidence and instrumental records
Paul Carling	Sedimentology of mega-flood deposits
Rüdiger Glaser	Historic climate changes represented by hydrological extremes (<i>to be confirmed</i>)
Ken Gregory	The development of palaeohydrological research - the first sixty years
Dieter Kellert	Extreme wave events in the past

Structure / schedule of the meeting:

9.6.	arrival in Bonn, first key note talk and ice-breaker in the evening
10.-12.6.	oral and poster presentations in Bonn
13.-15.6.	field presentations: Historical River Rhine floods in Cologne – outburst floods by WW II dam bombing along River Ruhr valley – July 1342 millennium flood (Weser and Main River) – historic floods along River Main – extreme droughts and floods in the Middle Rhine valley

Participating organisations:

GLOCOPH	Global Continental Palaeohydrology
FLAG	Fluvial Archives Group
LUCIFS	Land Use and Climate Impacts on Fluvial Systems during the period of agriculture
IWHA	International Water History Association
FgHW	Fachgemeinschaft Hydrologische Wissenschaften
DHG	Deutsche Hydrologische Gesellschaft
DWhG	Deutsche Wasserhistorische Gesellschaft
AK Hydrologie	Deutscher Arbeitskreis für Hydrologie
AK Geomorphologie	Deutscher Arbeitskreis für Geomorphologie
DeuQua	Deutsche Quartärvereinigung

Further details like important dates, registration, abstract submission are available from the homepage of the conference at

<http://web.giub.uni-bonn.de/hex2014/>

If you want to contact the local organiser directly, please send an email to

hex-2014-contact@giub.uni-bonn.de