

GLOBAL CONTINENTAL PALAEOHYDROLOGY MEETING

GLOCOPH-ISRAEL 2009,

Haifa-Jerusalem-Dead Sea-Negev, Israel, 25th October-3rd November, 2009

The 7th International Meeting on Global Continental Paleohydrology, promoted by the focus area on "Hydrology and Global Change" of the Terrestrial Processes (TERPRO) Commission of the International Quaternary Association (INQUA), was held in Israel between 25th October-3rd November 2009. The aim of the meeting was to bring together scientists working on a diversity of research themes which relate to different aspects of the hydrological cycle, including rivers, lakes, and groundwater systems, at all temporal and spatial scales, but giving special emphasis to late Quaternary change at terrestrial sites, to analyse both rapid changes (decades to centuries) and long-term (centuries to millennia) changes. The conveners of the workshop were Yehouda Enzel (Hebrew University, Jerusalem), Noam Greenbaum (University of Haifa) and Tamir Grodek (Hebrew University, Jerusalem), and it was attended by 60 researchers and professionals, representing some 12 countries. The Meeting comprised (a) two days of oral presentations held at the Haifa University's Geography Department and at the Institute of Earth Sciences of the Hebrew University of Jerusalem; (b) seven-day intensive field trip, with two days in northern Israel and five days along the western Dead Sea and in the northeastern Negev Desert, and (c) key note lectures by top Israeli geoscientists at the evening of the field trip journeys. In the meeting were presented 42 scientific works, 32 oral presentations, including 17 key notes (30-40 minutes oral presentations), and 10 posters. The seven days field trip included visits to research sites in diverse environments presenting various aspects of fluvial and lacustrine paleohydrology, paleoclimatology, geomorphology, and related research fields at the eastern Galilee, the Sea of Galilee, the Dead Sea, and the northeastern Negev regions. The field trip participants visited 40 sites (stops), on which 27 scientists from six Israeli universities and institutions contributed with on-site explanations on the bases of scientific publications in top scientific publications. The meeting was very intensive in terms of scientific contents and schedule undertaken by a perfect organisation from the Israeli conveners. The high quality scientific presentations on palaeohydrological cross-cutting issues (fluvial, lakes, groundwater, etc.) and related techniques (isotopic composition, mineralogical analysis, geochronology) were positively viewed by the meeting participants as the way to understand long-term climate and environmental changes. The field trip presentations provided a unique opportunity for on-site discussions of probably one of the World's best palaeohydrological records based on a combination of paleolimnological, fluvial and groundwater research, as well as showed the top quality of Israeli research in these fields.

The GLOCOPH group identified some key future research themes to be addressed on the basis of on sedimentary records and related techniques

- 1) Extending knowledge of how past hydrological changes/global change in the past can illuminate future scenarios, employing databases as appropriate;
- 2) Using results of global change modeling at a variety of temporal and spatial scales to investigate how anthropogenic climate change will affect fluvial catchments;
- 3) Investigating how specific land use changes are affecting fluvial and lake catchments in different climatic contexts.
- 4) To further develop new proxies and methods for the quantitative estimation of past hydrological change that can be input to and tested against Global and Regional Climate models.
- 5) To foster links among climate, hydrological and environmental changes by means of establishing close relationships among continuous terrestrial records on proxy climate (U series on speleothems and travertines etc), high resolution marine-core and ice-core records, and closely age-spaced data from other terrestrial material (rivers, lakes glacial detritus, soils). This requires a close interaction of terrestrial groups with the up-dated technologies for finely resolving chronology and the associated environmental changes.

Further information on GLOCOPH group aims and activities can be obtained from the web page: <http://www.giub.uni-bonn.de/herget/terpro-hydrochange/>

Participants at the Israel meeting

