

Announcement (3 February 2006)

Hydro Eco '2006

International Multidisciplinary Conference on Hydrology and Ecology *The Groundwater/Ecology Connection*

Karlovy Vary (Carlsbad), Czech Republic, 11-14 September 2006

Organizers (convenors):

- # Institute of Hydrogeology, Engineering Geology and Applied Geophysics, Faculty of Science, Charles University (Universita Karlova), Prague, Czech Republic
- # International Commission on Groundwater (ICGW), of the International Association of Hydrological Sciences (IAHS)
- # T. G. Masaryk Water Research Institute (VÚV), Prague, Czech Republic
- # US Geological Survey (USGS), USA



Sponsored by UNESCO/IHP

This conference is a contribution to the implementation of the Groundwater Component within UNESCO's International Hydrological Programme (IHP-VI, 2002-2007), Water Interactions: Systems at Risk and Social Challenges".

Sponsoring Organizations

- UNESCO, Division of Water Sciences (IHP-VI; 2002-2007)
- INTECOL, International Association for Ecology
- GfÖ, Gesellschaft für Ökologie (Ecological Society of Germany, Austria and Switzerland)
- S.It.E., Società Italiana di Ecologia (Italian Society of Ecology)
- ASLO, American Society of Limnology and Oceanography
- NABS, North American Benthological Society
- ISSM, International Society for Subsurface Microbiology
- Nederlandse Hydrologische Vereniging (Netherlands Hydrological Society, NHV)
- Česká asociace hydrogeologů (Czech Association of Hydrogeologists, ČAH)

Scope and objectives

Many ecological systems owe their existence to groundwater and its temperature and chemistry, and can be damaged if groundwater flow or its properties are changed by anthropogenic or natural processes. The ecological systems may be the terrestrial ecological systems we see every day, the sea-floor ecological systems upon which the health of the oceans depends, or the subsurface ecological systems that maintain the groundwater that sustains so many people. To address the resulting issues, this conference brings together scientists from groundwater and ecological disciplines. The disciplines include, but are not limited to, hydrology, ecology, eco-technology, biology, chemistry, geochemistry, environmental biogeochemistry, and subsurface microbiology. The unifying theme is the importance of groundwater and(or) groundwater/surface water and hyporheic zone interaction to the ecological systems and processes of concern. The goals of the conference are (1) for interactions between groundwater and ecology to be better understood, measured, simulated, and managed, and (2) to improve the technological basis for policy decisions for issues such as reconstruction of ecologically valuable environments and the use of water resources in these environments. Appropriate topics include the following:

- Ecology-information requirements for groundwater/surface-water related systems and problems. What do ecologists wish/expect from hydrologists? Can hydrologists use ecological information? Do hydrologists and ecologists understand each other properly?
- Measurements and descriptors of the groundwater system important to ecologists.

- Monitoring of groundwater (saturated, unsaturated, shallow, deep) and its application for ecological purposes.
- Integrated approaches for design and management.
- Legal/regulatory setting/framework (e.g. EU's Water Framework Directive ecological requirements).
- Interaction of ecology and groundwater recharge, chemistry, and biology.
- Relationships between environmental conditions (soil moisture, pH, etc.) and occurrence of groundwater-dependent species (plants etc.) , and groundwater modelling for these abiotic factors.
- Integrated modelling of saturated-unsaturated and surface-water systems, with applications for ecology-related studies (wetlands, riverine systems, etc.).
- Modelling of groundwater seepage (quantity, chemistry, dynamics, etc.) to surficial ecosystems, with applications for ecology-related studies.
- Role of subsurface organisms in purifying groundwater, including relation to groundwater flow and the simulation of groundwater flow.
- Ecosystem disturbances such as wildfires and permafrost melting and resulting changes in groundwater recharge, flow, and chemistry.
- Wetland ecology and the role of groundwater –mapping, vegetation, processes, restoration, etc.
- Riverine (riparian) ecology and the role of groundwater –mapping, vegetation, processes, restoration, etc.
- Estuary ecology and the role of groundwater –mapping, vegetation, processes, restoration, etc.
- Biogeochemical cycles such as carbon and nitrogen as affected by the interaction of groundwater and ecology.
- Nitrogen removal from groundwater or water by ecological processes.
- Groundwater contamination effects on ecological systems and processes.
- Marine ecology as affected by groundwater discharge.
- Interactions and feedbacks between groundwater, vegetation and precipitation.
- Restoration of groundwater-dependent ecosystems, as a joint effort of ecologists and hydrologists.

Venue

The conference will be held in the splendid Grandhotel Pupp (<http://www.pupp.cz/>), in the city of Karlovy Vary (Carlsbad in English), the most famous Czech spa town, about 130 km west of Prague. The conference will include plenary oral and poster presentations (no parallel sessions).



Conference Secretariat HydroEco2006

c/o ITC Travel & Conference s.r.o.

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CONFERENCE WEB SITE

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