

Editoriale

The second edition of Flowpath, National Meeting on Hydrogeology, Viterbo, June 18-20, 2014

Dear Readers,

I'm honoured to introduce this special issue of *Acque Sotterranee – Italian Journal of Groundwater*. Three of the research papers of the present issue are from speeches given at the second edition of Flowpath, National Meeting on Hydrogeology organised by the Department of Biological and Ecological Sciences of the Tuscia University and the Italian Chapter of International Association of Hydrogeologists (IAH) in the framework of biennial meetings of the Italian hydrogeologists (the first one organised in Bologna in 2012).

The event highlighted important aspects of hydrogeology through 81 scientific papers presented by researchers from Italy as well as from Algeria, Austria, Belgium, Canada, China, Egypt, France, Germany, Great Britain, Hungary, Poland, Portugal, Russia, Serbia, Slovenia, Spain, Switzerland, Tunisia and the USA, and covering the following topics:

Session 1: groundwater contamination;

Session 2: aquifer protection;

Session 3: thermal and mineral waters;

Session 4: impacts of climate change on the water resources.

The first session, dedicated to the problem of groundwater contamination, deepened the research on groundwater contaminants and remediation technologies illustrating case studies from Central and Northern Europe. Research for prevention of seawater intrusion into the coastal aquifers was also presented, as well as contaminant transport modelling.

The second session covered the issue of the aquifer quality protection, underlining the multidisciplinary nature of the water resources management. The presented case studies concerned different areas in Italy and international examples from Guatemala, Syria, China, France and Britain.

The third session about the research and management of thermal and mineral waters discussed topics as the origin, protection and chemistry, as well as the use of groundwater as an energy source, emphasizing the fundamental contribution of hydrogeology to better understand how to rationally use the considerable geothermal potential of Italy.

The fourth session was dedicated to the impacts of climate change on water resources. The discussed topics were related to such quantitative aspects of water resources management as evaluation and monitoring with application of numerical modelling. The issue of sustainability of water withdrawals from the aquifer was extensively discussed.

The papers presented herein include the state-of-art of the remediation methods for contaminated sites in Italy (Prof. G.P. Beretta, key note lecturer of Session 1), a discussion on the value of isotopes as environmental tracers for assessing the vulnerability of groundwater (Prof. P. Wachiew, key note lecturer of Session 2) and an application of a thermodynamic modelling which investigates the origin of thermal waters in the tectonically active region of Baikal (Russia) (Dr. E.A. Kuz'mina et al., speaker in Session 3).

During the Conference, participants were invited to join the upcoming International Conference AQUA 2015 (42nd Conference of the IAH) which will be held in Rome next September 2015. I take this opportunity to extend the invitation to all the readers, in order to continue the fervent debate on hydrogeology in an even more challenging context.

The organization of the Conference and the preparation of this special issue were only possible thanks to the contribution and determination of Antonella Baiocchi and Francesca Lotti.

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