



# NEWS AND INFORMATION

## International Association of Hydrogeologists

The international groundwater organisation

Since 1956 a world-wide forum on the management of groundwater for the benefit of mankind and the environment

## Karst Anniversary

In 1895 Johan Cvijic, Professor at the University of Belgrade, published his monograph "Karst" taking a new word into the language of science and establishing the fundamentals of hydrogeology and geomorphology of solution processes in karst areas. One hundred and ten years on, in September 2005, Karst specialists gathered in



Conference attendees visiting the statue of Johan Cvijic in Belgrade's University Square

Belgrade at the IAH Conference *Karst 2005* to celebrate the man "the father of modern karstic research" and discuss current issues in water resource and environmental problems in Karst. The meeting in Belgrade was followed by a field seminar centred on Kotor on the Montenegrin coast.

The organisation of this conference met a long held ambition of IAH members of the former Yugoslavia which they fulfilled with great success. Petar Milanovic, chairman of the Organising Committee said in his welcoming address:

"Water resources problems in karst are centuries old. The most frequently encountered problems of karst terrains are related to: water supply, flood control, irrigation, hydro-power utilisation and protection of the environment.

With increasing demands on water resources in karst regions, an important issue is how to keep the balance between the necessity for development and preservation of nature. This problem is much more complex in karst than in non-karst regions because each karst region is unique, the nature of environmental changes is unpredictable, often occurring very rapidly, and similar situations are seldom, if ever, repeated.

Due to this fact, an interdisciplinary cooperation of all those who have common interests in the exploration of karst is necessary. This Conference is one more step in the exchange of world-wide knowledge and experience gained through karst research."

### How to contact IAH

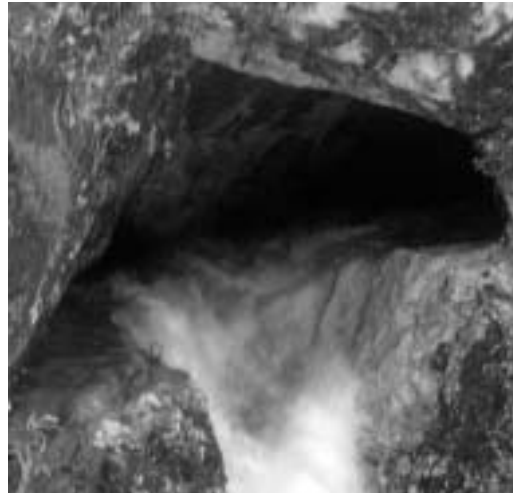
PO Box 9, Kenilworth, CV8 1JG, UK  
Tel: +44 (0)870 762 4462; Fax: +44 (0)870 762 8462  
E-mail: [iah@iah.org](mailto:iah@iah.org); Web: [www.iah.org](http://www.iah.org)

To join IAH please visit the web site and either join on-line or download the membership application form

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Over 300 authors from 32 countries, including a majority of the key figures working on karst from across the world, participated in the meeting which also included sessions of the IAH Karst Commission.

The University of Belgrade and the Serbian Academy for Science and Arts both supported the meeting with Prof Zoran Stevanovic as co-chairman and co-editor of the proceedings. There are two proceedings volumes *Water Resources and Environmental Problems in Karst* containing papers and abstracts and *Cvijic and Karst*, a special commemorative edition to mark the 110<sup>th</sup> anniversary. For details see <http://www.iah.org/News/2005/055.html>. The meeting in Belgrade was held in the delightful fin de siècle building of the Serbian Academy of Science and Arts. This is only a short distance from the central university building where the statue of Johan Cvijic stands and was visited by the whole conference on a walking tour of Belgrade after the opening ceremony. At the end of two days of formal conference, the participants moved on to a field seminar in Montenegro, firstly to the Geological Survey of Montenegro in Podgoriza and then to visit the exceptional karst and stunning Montenegrin coastal scenery. Very heavy overnight rain during the field seminar, not unexpected because this is an area with the highest rainfall in Europe, provided a spectacular display of surface and submarine karst spring discharges around the Bay of Kotor, which no-one who had the luck to see will forget.



(above) One of the many spectacular karst spring observed during the field seminar.

(below) Kotor and its bay from the surrounding mountains which rise 1000 metres directly from the sea.



(below left) Petar Milanovic, Conference Chairman  
(below right) Zoran Stevanovic, Conference Co-chair (centre) with the two tirelessly working organising secretaries, Igor Jemcov (left) and Sasa Milanovic.



## President's Column FROM THE WATER TABLE

### A GROUNDWATER POLICY FRAMEWORK FOR THE 21<sup>ST</sup> CENTURY

The **EC Water Framework Directive** (ratified in December 2000) and its **Groundwater 'Daughter' Directive** dealing with the detail on aquifer pollution protection (agreed by EU Environment Council in June 2005 for likely adoption early in 2006) constitute a far-sighted platform of groundwater legislation with the concept of integrated management at their heart. As such they should be of interest to all IAH members, and not just our large membership within the EU.

The Directives include a requirement to report periodically on all groundwater bodies (with consideration of dependent ecosystems) in both a water balance and quality sense (called 'quantitative' and 'chemical' status in 'Eurospeak'), together with assessment of associated risks and trends. Whilst buried in this avalanche of inventory-style work, the 'groundwater profession' would be wise not to lose sight of the underlying objective. Namely, that of maintaining or achieving **'good groundwater status'** through (a) controlling groundwater extraction so as not to damage key dependent ecosystems or cause aquifer saline intrusion and (b) protecting (and where economically feasible restoring) the quality of groundwater bodies, such that they should not require 'advanced treatment' for use as a source of potable water-supply or cause any 'dependent surface water systems' to fail ecological standards.

Without doubt attention will have to focus on reducing the widespread and diverse impacts of agriculture and urbanisation, given that most industrial point pollution sources are already identified and subject to 'regulatory control'. For Directive implementation to be taken further than the 'creation of a mega-catalogue of groundwater problems', it will be absolutely critical for the 'groundwater profession' to have a much greater voice in agricultural policy and land-use planning, and to become more proactive in defining more groundwater-friendly practices. The provision to strengthen **'groundwater protection areas'** should provide the vehicle and legitimacy for this case to be articulated.

At first sight the basis for **'good groundwater quality status'** is conceptually simple. But an important question arises in practical interpretation - should monitoring strive to be representative of the entire groundwater body storage or contemporary recharge replenishing the body or groundwater discharging from the body to 'key receptors' ? Moreover, defining **'threshold values'** for groundwater quality is of

interest but only if appropriate points (or planes) of compliance are also defined. In many European aquifers it takes decades from the onset of a land-use change for any negative impact on groundwater quality to be felt in deep aquifer systems and/or 'down-flowpath' receptors. Applied wrongly the threshold concept could prove a 'very blunt instrument' for groundwater quality protection.

It is thus also critical that the substantial investment required to strengthen **groundwater monitoring networks** is cost-effective in terms of the capability to detect early potentially-damaging risks to groundwater quality, which would incur much larger costs for drinking water-supply and ecosystem degradation in the longer term. To fail in this regard could seriously undermine the professional credibility of hydrogeologists. Such an approach would render the process of evaluating and reporting on groundwater quality status and trends more meaningful, since each monitoring station (or group of stations) could be designed to be representative of a given land-use category. In the longer term it will also be required to demonstrate the effectiveness of management measures.

Since the Directives will be statutory obligations on Environment Ministers in the 25 Member States (total population of over 450 million), they will **make groundwater much more 'politically visible'** and **put groundwater protection in the 'environmental spotlight'** - both of which are commensurate with its predominance in the provision of potable water-supply and significance in ecosystem sustainability. A common appreciation of objectives and guidelines on required procedures will be essential, but there will also be a need to exercise a sensible (but not counterproductive) level of subsidiarity as justified by the variation of hydrogeological settings and land-use pressures.

The conceptual ambitiousness and territorial breadth of the new legislation is remarkable. But equally so is the way it has been formulated and promoted, since it must represent the most sustained and detailed dialogue on groundwater in human history. The task has been coordinated by the EC-DGE-Groundwater Working Group (expertly steered by Philippe Quevauviller with support from the Austrian Government), involving some 80 national and stakeholder representatives (working via simultaneous translation in 5 languages), meeting regularly over a period of 4 years. Everyone involved has learnt enormously listening to the perspectives of others.

## Groundwater in Afghanistan - a NGO point-of-view

Afghanistan is an arid and semi-arid country. More or less half the country is flat plains and the other half high mountain ranges, the Hindu-Kush. Afghanistan presents a large display of different geological and hydrographical environments and is therefore particularly interesting for groundwater studies.

The republic of Afghanistan was founded in 1973 when the monarchy was replaced at a time of upheaval including a severe drought in 1971-1972. Other important dates in recent Afghan history are: the Russian occupation from 1979 to 1989; the Taliban regime in 1998 and its end after the 2001 terrorist attacks.

With \$US700 GDP per capita, Afghanistan is one of the poorest countries in the world. Industries are minor, such as small cement factories and mining-based industries, while agriculture is restricted to places with irrigation facilities.

Traditionally, water was abstracted through around 6500 karezes. Many karezes suffered during the ongoing conflicts; tube wells and deepened dug wells are now mostly used while canals are built or renovated for irrigation purposes. Irrigation wells are also appearing, generating fears for soil salinisation and overexploitation of the aquifer in specific areas.

Afghanistan faced serious droughts with strong sociological and economical consequences, such as population relocation, long-term draining of dug wells (in 2001 85 % of the Kabul wells dried out), and food shortage. Unfortunately Afghanistan is facing many other problems, such as brackish groundwaters affecting vast and arid areas, without any hydrogeological and hydrological alternatives - or only from January to March during the winter season. In some areas groundwaters are contaminated with metals because of outdated sewage systems, or by As, F, Fe, Cu near geological contacts, geothermal fields or former mining sites. Groundwater may be too deep to be reached by manual pumps.

Apart from finding solutions for those problematic areas, groundwater management will have to be strongly improved. National water strategies roughly exist for the future; nonetheless there is a significant lack of data regarding river flows, meteorology, abstraction and irrigation. ECHO (Humanitarian Aid of the European Commission), USAID (US Agency for International Development), bilateral cooperation, FAO (Food and Agriculture Organisation), UNICEF and other national and international organisations are helping to rebuild the most urgent survey plans, in close cooperation with Afghan Ministries and

international NGOs. Thanks to different donors and WSG (Water and Sanitation Group), the Danish NGO DACAAR is managing a national water-point database and GIS - this is one of the only water-point databases at national scale in a developing context and it can serve as an example elsewhere in the world. Those projects are facing many difficulties: local and national conflicts, difficult access to secluded villages, snow and floods, etc. Despite hindrance, some data has been collected and analysed recently and are already used for several different purposes (e.g. recharge calculations, drought survey, overexploitation studies, groundwater and watershed models).

Even though a National Committee for Water Management has just been founded, under the aegis of UNESCO and the WSG, which is coordinating the water supply projects, a national IAH chapter would be useful to share experiences, suggest guidelines and defend scientific opinions, independent of national politics.

Cooperation with bilateral and international organisations must be emphasised, for example cooperation with Germany (German Geological Survey) or USA (USGS). Their projects are very efficient ways to introduce Afghan hydrogeologists to modern techniques and knowledge, even with small projects. BGR, for example, organized the transfer of old German gauges that are now successfully used in Kabul and throughout Afghanistan, providing basic data and simultaneously solving safety problems during surveys - cooperation among hydrogeologists can save life!

DACAAR, Kabul, Afghanistan - Water and Sanitation Programme (WSP); Didier Vanden Berghe and Mohammed Hasan (Hydrogeologists); Leendert Vijselaar (Chief of programme) - Shah Wali (Deputy Manager); E-Mail: [d.vandenberghed@dacaar.org](mailto:d.vandenberghed@dacaar.org); Website: [www.dacaar.org](http://www.dacaar.org)

### BGR reports on the Kabul Basin

As mentioned above BGR, Germany has a long tradition of work in Afghanistan with almost continual work in the country from 1959 to 1978. Recognising the invaluable nature of the BGR archives now that most local data are lost, BGR have undertaken a project to collate and make available data on the Kabul basin. Details of the work and of web links can be found at:

[http://www.bgr.de/b1hydro/fachbeitraege/c200501/su/mmary\\_report.pdf](http://www.bgr.de/b1hydro/fachbeitraege/c200501/su/mmary_report.pdf)

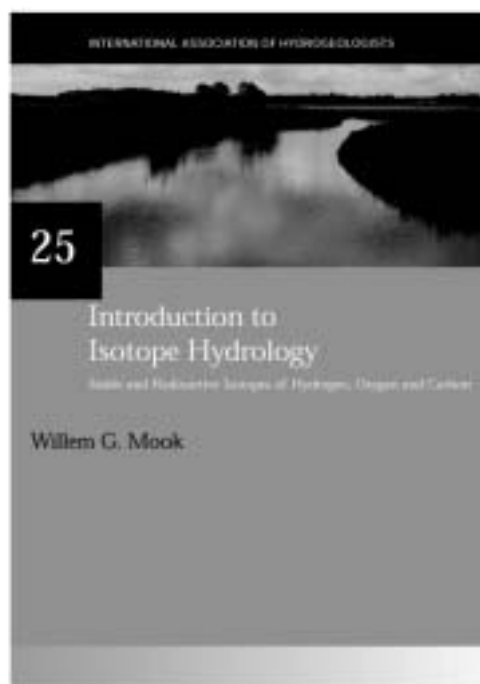
Contact Thomas Himmelsbach [himmelsback@bgr.de](mailto:himmelsback@bgr.de)

# New from IAH/Balkema

## Introduction to Isotope Hydrology

### Stable and Radioactive Isotopes of Hydrogen, Oxygen and Carbon

The concentration ratios of the stable isotopes in water ( $2\text{H}/1\text{H}$ ,  $18\text{O}/16\text{O}$ ) vary, depending on the source of the water and natural processes such as evaporation and condensation. The radioactive isotopes  $3\text{H}$  and  $14\text{C}$  may provide indications - depending on natural conditions - of the source of water and the age. This is a textbook, explaining in a simple, but mathematically, physically and chemically correct form, the consequences in natural processes for stable isotope concentrations and radioactivity levels. The book is intended for students in the Earth Sciences, especially in hydrology; trainees from developing countries; laboratory technicians and assistants; engineers involved in (geo)hydrological fieldwork and anyone who starts his work in natural abundances of stable or radioactive isotopes.



The author, Professor Willem Mook, is Emeritus Professor of Isotope Physics at the University of Groningen and Emeritus Professor of Isotopes in Earth Sciences at the University of Amsterdam. He is a member of the Royal Netherlands Academy of Earth Sciences.

W G Mook, 2005 288pp, ISBN 0 415 38197 5

Price IAH members: GBP 17.60/USD 31.60 (60% discount)

Full price: GBP 44.00/USD 79.00

Download a special IAH order form from [www.iah.org/order.htm](http://www.iah.org/order.htm)

### IAH Awards for 2005

The IAH award winners for 2005 were announced at the Belgrade Karst 2005 Conference.

The 2005 **President's Award** goes to **Dr Clifford Voss** of the United States Geological Survey both in recognition for his distinguished research career and for his contribution to the work of IAH as Executive Editor of Hydrogeology Journal since 1994.

The General Assembly of IAH meeting in Belgrade awarded by acclamation **Honorary Membership** of the Association to **Professor Michael Knight**, President of IAH (1996-2000) and **Professor Jan Dowgiallo**, Chairman of the IAH Commission on Mineral and Thermal Waters (1986-2002)

This year saw a new IAH award introduced. Called the **Distinguished Associates Award** it has been established to recognise persons who, while not being groundwater professionals, have made an outstanding contribution to the understanding, development, management and protection of groundwater resources internationally. The Award was instigated by the IAH Council in 2005 under President, Dr Stephen Foster and this year goes to **Dr András Szöllösi-Nagy**, UNESCO Deputy Assistant Director-General for Science and the Environment who, principally in his capacity as Secretary of the International Hydrogeological Programme, has made a major contribution to the synthesis, advancement and dissemination of hydrogeological science on a global scale.

### IAH Chapter Formed in Nepal

It is a pleasure to announce the formation of a new IAH Chapter in Nepal which has come about with the assistance of the Netherlands National Chapter and its President Albert Tuinhof. Recent activities organised by the Dutch Chapter, such as the seminar on "Recharge Enhancement and Sub-surface Water Storage" and publication of the proceedings of that meeting have given the Netherlands National Chapter surplus revenue to enable them to sponsor the memberships of six Nepalese hydrogeologists for the next four years. Each of the Committee members also sponsor the membership of one Nepalese hydrogeologist as well. This combined effort has ensured the sponsorship of nine Nepalese hydrogeologists for four years, sufficient, along with existing members in Nepal, for the formation of a new National Chapter.

On 29 July 14 IAH members from Nepal met in Kathmandu to formally inaugurate the Chapter. Dr Dibya R. Kansakar was elected President and Mr. Pratap Singh Tater was elected as the Secretary/Treasurer.

Besides sponsoring the Nepalese hydrogeologists, the Dutch group intend to give active support to the Committee and the Nepal National Chapter and stimulate the exchange of knowledge. The Dutch Committee have already invited the chairman of the Nepal Committee, Dr Dibya R. Kansakar, to attend the annual meeting of the Netherlands National Chapter in December this year to give a presentation on the hydrogeology of Nepal. Members of the Netherlands National Chapter hope to undertake a hydrogeological excursion to Nepal in 2006 or 2007.



Members of the newly formed Nepalese National Chapter at the inaugural meeting

### Grupo Ecuador AIH

The Ecuador Group of IAH held a general meeting on 8 July 2005 to elect a new board for the period 2005-2007. Those elected were:

President:	Ing. Oscar Larrea
Vice-President:	Ing. José Hidalgo
Secretary:	Ing. Teresa Muñoz
Treasurer:	Ing. Renán Cornejo.

### News on Transboundary aquifers

*Transboundary Aquifers: A Global Program to Assess, Evaluate, and Develop Policy*

Shammy Puri, Chairman of the IAH TARM programme and Alice Aureli, UNESCO Programme Specialist for aquifer systems and groundwater management, describe the ISARM/TARM programme

in Vol. 43, No. 5 of *Groundwater* (September-October 2005, pages 661-668).

*Members of the IAH TARM Commission participate in the Stockholm World Water Week*

Conventional wisdom dictates that governance is a key element of water management. This is true from the local community to the entire basin. Policy making and management of transboundary water resources is particularly challenging. Moving upstream to downstream, water passes many interest groups and political constituencies, rich and poor and real or potential users in various sectors. In some world basins, water even passes through different climatic zones and landscapes. Beyond surface water, there is increasing awareness that transboundary groundwater issues are complex and important, particularly for the poor. The close links between ground and surface waters must also be considered in transboundary water management. Water resource management thus has a cross-cutting web of relationships, including socio-economic, political and land-water interactions. Achieving stable and sustainable water resources management requires a better understanding of governance and what arrangements are necessary for transboundary waters.

*UN's International Law Commission*

The work of the IAH-TARM Commission with the UN's International Law Commission is progressing very well. During May to July 2005, the UN Law Commission again invited members of the TARM-ISARM programme to give evidence to the committee working on the drafting of the articles for a Convention on the Use of Transboundary Aquifers.

For details and web links go to:  
<http://www.iah.org/News/2005/056.html>

**Join the WHYMAP Network**

As previously reported in News and Information the World-wide Hydrogeological Mapping and Assessment Programme (WHYMAP) is the work of a consortium of international organisations with an ambitious plan to produce a world map and interlinked

products to better inform water planning and allocation at the regional and global scale.

The consortium, although relying greatly on the knowledge and experience of regional and international experts, would appreciate suggestions and scientific input for the continuous improvement of the WHYMAP GIS. Map makers and hydrogeologists experienced in national or regional hydrogeological mapping are invited to contribute to the WHYMAP programme and provide their regional hydrogeological knowledge for this common endeavour.

You can find out more by visiting the WHYMAP web site - follow the link through [www.iah.org/whymap](http://www.iah.org/whymap) or contact the coordinating team at BGR by e-mail [whymap@bgr.de](mailto:whymap@bgr.de). A visit to the web site will also give you the chance to try out the new WHYMAP WebMapping application now under development.

**Improvements to Hydrogeology Journal**

You may have noticed that although this is the final issue of IAH News and Information for 2005 it has been distributed with Hydrogeology Journal Volume 14:1-2. Volume 14 will continue throughout 2006 and is the first step in increasing the capacity of Hydrogeology Journal to over 1200 pages and 8 issues a year. Eventually HJ will be mailed to members eight times a year but initially we are increasing the throughput of papers by having double issues. The first double issue was volume 13:5-6 which you received in November and this is the second double issue starting off volume 14. The 2006 theme issue will be mailed in February and will be on the theme of *Social and Economic Aspects of Groundwater Governance*

**Alicante Conference**

For a briefing on the International Workshop "From Data Gathering and Groundwater Modelling to Integrated Management" organised by the IAH Spanish National Group in Alicante, Spain from 4-8 October 2005 please see:  
<http://www.iah.org/news/2005/057.html>

**4th World Water Forum  
Mexico City  
March 16th-22nd, 2006**

*The theme of the 2006 Forum is  
Local Actions for a Global Challenge*

*There are many opportunities for participation - these can be found on the forum web site:  
<http://www.worldwaterforum4.org.mx>*

## ANNIVERSARY COLLOQUIUM

Dijon - France  
29 May - 4 June 2006

### 29 May 2006 (1st day): Darcy Day

Darcy's personality, his work, development of permeability concept, modern applications of permeability measurements (e.g. disposal of dangerous substances)

### 30 May 2006 (2nd day): IAH Day

Development from 1956 to 2006, objectives, prospects, assessment for growth and further evolution, role of hydrogeology in the modern world (organised by IAH Executive and Council)

### 31 May & 1 June 2006 (3rd-4th days): Aquifer Days

Management of large aquifers (objectives - preservation of good groundwater quality and non-renewable resources), monitoring networks, numerical modelling

### 2 - 4 June 2006: Post-Congress Excursion (optional)

French-Swiss Jura (karst, thermalism), reception in Evian, famous Source of Vaucluse (World Hydrogeological Reference)

## COLLOQUE ANNIVERSAIRE

Dijon - France  
le 29 Mai - le 4 Juin 2006

### 29 mai: Journée Darcy

la personne, son oeuvre, applications modernes des mesures de perméabilités (stockages de déchets dangereux)

### 30 mai: Journée AIH

évolution de l'AIH de 1956 à 2006, perspectives d'avenir, objectifs, axes de réflexion pour une croissance basée sur une organisation évolutive, la place des hydrogéologues dans le monde moderne (AIH Council)

**31 mai et 1 juin: Gestion des Grands Aquifères**  
réseaux de contrôle, modélisations, objectifs (dont préservation des ressources de bonne qualité et des ressources non renouvelables.)

### 2 - 4 juin: Excursions

le Jura franco-suisse (le karst, le thermalisme), réception à Evian, la célèbre Source de Vaucluse (référence hydrogéologique mondiale)

**Registration details will be available shortly.  
Further information from [l.chery@brgm.fr](mailto:l.chery@brgm.fr)**

# ANNIVERSARY 2006

2006 is the 50<sup>th</sup> anniversary of the founding of IAH at the International Geological Congress in Mexico City in 1956. It is also the 150<sup>th</sup> anniversary of the publication of Darcy's Law. In recognition of these events IAH will be holding two celebrations, one in Europe and one in Asia.

## 34th ANNIVERSARY CONGRESS

Beijing China  
9 - 13 October 2006

The 34th Congress and 50th Anniversary congress of the International Association of Hydrogeologists will be celebrated in Beijing, China from 9-13 October 2006

### Groundwater - present status and future task

The sub-themes are:

- Water resources and sustainable development
- Exploitation and utilisation of groundwater - past and future
- Understanding regional groundwater systems
- Groundwater conservation and ecological implications
- Sustainable utilisation of groundwater in urban and rural areas
- Special groundwater themes.

The first circular and registration form were circulated with Hydrogeology Journal Issue 13:3; the second circular will be available shortly. Registration is also available on the Congress web site.

E-mail: [wmail2006@iah34bj.com](mailto:wmail2006@iah34bj.com)  
[iah34\\_cn@yahoo.com.cn](mailto:iah34_cn@yahoo.com.cn)

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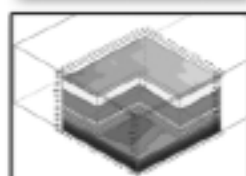
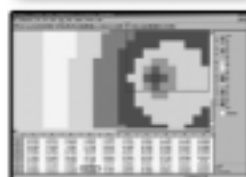
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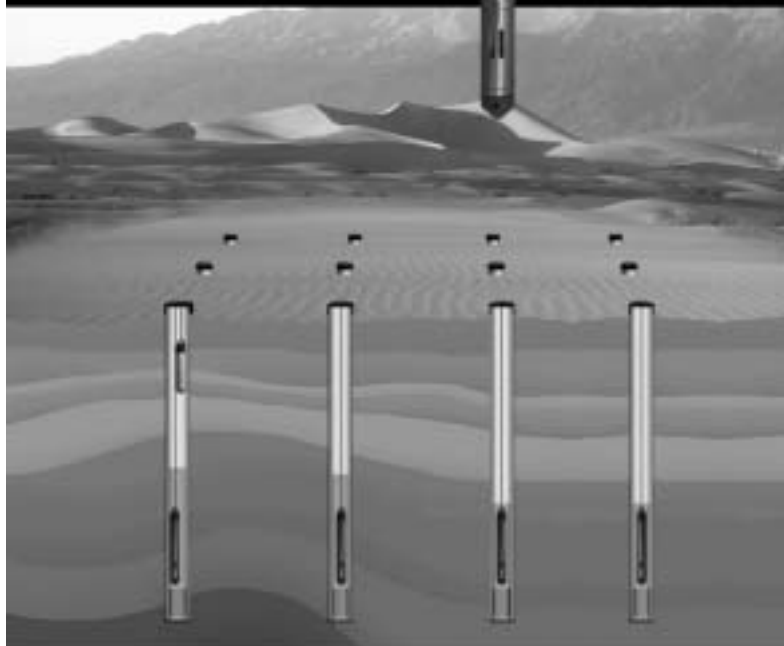
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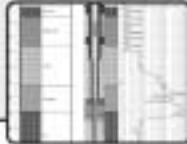
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For additional information please email us at [sws-info@slb.com](mailto:sws-info@slb.com)

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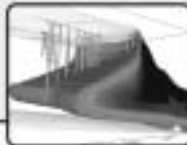
### HydroGeo Analyst

Groundwater & Borehole Data Management



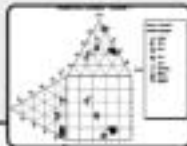
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3D Flow & Transport Modeling



### AquaChem

Water Quality Analysis



### WHI UnSat Suite & Visual HELP

Unsaturated Flow & Transport Modeling



### AquiferTest Pro

Pumping Test & Slug Test Analysis



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#### GIS Data Management for Groundwater Modelers:

Understanding Data Sources, Data Analysis and Visualization as Part of Model Development

#### Finite Element Groundwater Modeling:

Advanced Applications for Saturated/Unsaturated Flow & Transport, Density-Dependent Flow and Heat Transport

#### Regulatory Review of Hydrogeology Studies:

Approaches and Insights for Reviewing Groundwater Modeling Reports

#### Aquifer Test Analysis:

Principles of Pumping Test Design and Techniques for Aquifer Test Analysis

#### Water Quality Data Management & Interpretation:

Applications using AquaChem and USGS PHREEQC

### Course Locations:

Canada • USA • Chile • Dubai  
Brazil • Saudi Arabia • Turkey  
Australia • Hungary

**Register Today!**

# Conference Listing

Summary details of conferences with e-mail or web addresses are given below. For a fuller list of conferences and more details, including links to web sites visit [www.iah.org/confs/](http://www.iah.org/confs/)

## 2006

Jan 24 - Jan 27 Alicante, SPAIN. International Symposium on Groundwater Sustainability (ISGWAS). Organised by Spanish Royal Academy of Sciences. Web: <http://aguas.igme.es/igme/ISGWAS/circular1.pdf>

Jan 24 - Jan 24 London, UK Catchment Scale Hydrogeology. Web: <http://www.geolsoc.org.uk/>

Feb 1 - Feb 4 New Delhi, INDIA International Groundwater Conference on Groundwater (Perspectives, problems and challenges). Web: [http://www.lwr.kth.se/personal/personer/bhattacharya\\_prosurn/IGC-2006.htm](http://www.lwr.kth.se/personal/personer/bhattacharya_prosurn/IGC-2006.htm)

Feb 13 - Feb 16 ALGERIA 13th African Water Association Congress. Web: <http://www.caae2006.com>

Feb 15 - Feb 16 Chennai, INDIA International Conference on Environmental Geosciences. E-mail: [geosciencesecretary@yahoo.com](mailto:geosciencesecretary@yahoo.com)

Mar 16 - Mar 22 Mexico City, MEXICO 4th World Water Forum. Web: <http://www.worldwaterforum.org>

Apr 2 - Apr 6 Seattle, Washington, USA SAGEEP 2006 The 19th annual symposium on the Application of Geophysics to Engineering and Environmental Problems. Web: <http://www.eegs.org/sageep/index.html>

Apr 4 - Apr 6 Kyoto, JAPAN, Groundwater Resources Assessment under the Pressures of Humanity and Nature (GRAPHIC). Web: <http://www.chikyu.ac.jp/USE/GRAPHIC/graphic.htm>

Apr 24 - Apr 28 Malaga, SPAIN. AQUAinMED International Congress "Ground Water in Mediterranean Countries". Web: <http://www.igme.es>

May 23 - May 25 Marrakech, MOROCCO Integrated Water Resources Management and Challenges of the Sustainable Development. Web: <http://www.fstg-marrakech.ac.ma/gire3d>

May 26 - May 29 Baile Herculane, ROMANIA 4th International Conference "Climate Change: the Karst Record" (KR4). Web: <http://www.karst.ro>

May 28 - Jun 3 Dijon, FRANCE Colloque Anniversaire/Anniversary Conference on the occasion of the 50th anniversary of the foundation of IAH and the 150th anniversary of Darcy's Law. E-mail: [l.chery@brgm.fr](mailto:l.chery@brgm.fr)

May 30 - Jun 2 Moscow, RUSSIA ECWATECH-2006 7th International Trade Fair and Congress - Water: Ecology and Technology. Web: <http://www.ecwatech.com>

Jun 4 - Jun 7 Granada, SPAIN Interfaces Against Pollution Conference. Web: <http://www.ugr.es/local/iap2006>

Jun 12 - Jun 14 Toulouse, FRANCE International Groundwater Symposium on Groundwater Hydraulics in Complex Environments Organised by INP-Toulouse Sponsored by IAHR, IAHS and SHF. Web: <http://www.iahr-gw2006.cict.fr/>

Jun 20 - Jun 24 Mexico City, MEXICO As2006: Natural Arsenic in Groundwaters of Latin America - Occurrence Health Impact Remediation Management. Web: [http://www.lwr.kth.se/Personal/personer/bhattacharya\\_prosurn/As-2006.htm](http://www.lwr.kth.se/Personal/personer/bhattacharya_prosurn/As-2006.htm)

Jun 21 - Jun 23 Jugowice in Sowie Góry Mts, POLAND.

Fourth Workshop of the Regional Working Group of the Bohemian Massif IAH Commission on Hardrock Hydrogeology. E-mail: [hmar@ing.uni.wroc.pl](mailto:hmar@ing.uni.wroc.pl)

Jun 22 - Jun 23 Vienna, AUSTRIA The European Groundwater Conference held during the Austrian Presidency Organised by Umweltbundesamt (Federal Environment Agency) of Austria. Web: <http://www.umweltbundesamt.at/eu-groundwater2006/?&L=1>

Sep 1 - Sep 1 Asuncion, PARAGUAY VIII CONGRESO ALHSUD. Web: <http://www.alhsud2006.com.py>

Sep 4 - Sep 10 Yogyakarta, INDONESIA Indonesia. Volcano: life prosperity and harmony. Web: <http://vig2006.recent.or.id/>

Sep 10 - Sep 15 Berlin, GERMANY International FEFLOW User Conference. Web: <http://feflow2006.feflow.de>

Sep 14 - Sep 17 Nottingham, UK Engineering geology for tomorrow's cities. 10th Congress of the International Association of Engineering Geology. Web: <http://www.iaeg2006.com>

Sep 21 - Sep 23 Neuchâtel, SWITZERLAND 8th Conference on Limestone Hydrogeology. Web: <http://www.hydrokarst.org/?lang=en>

Sep 24 - Sep 29 Cagliari-Chia Laguna, ITALY 1st SWIM-SWICA. Web: <http://swimswica.ditunica.it>

Sep 26 - Sep 28 Bochum, GERMANY 3rd International Symposium on Integrated Water Resources Management. Web: <http://www.conventus.de/water>

Oct 1 - Oct 4 Vancouver, British Columbia, CANADA 59th Canadian Geotechnical Conference and 7th Joint CGS/IAH CNC Groundwater Speciality Conference. Web: <http://www.seatoskygeo.ca/>

Oct 9 - Oct 13 Beijing, CHINA Groundwater- present status and future task XXXIV Congress of IAH Organised by IAH and the Ministry of Land and Resources of China. Web: <http://www.iah34bj.com/English/index.html>

Oct 9 - Oct 11 Vienna, AUSTRIA International Conference "All About Karst and Water - Decision Making in a Sensitive Environment. Web: <http://www.kater2006.at>

Oct 16 - Oct 18 Bangkok, THAILAND Wise Water Resources Management Towards Sustainable Growth and Poverty Reduction 3rd Asia Pacific Association Hydrology and Water Resources (APHW) conference. Web: <http://www.thirdaphw.org>

Dec 5 - Dec 8 Hyderabad, INDIA International Conference on Hydrology and Watershed Management Focal Theme on Improving Water Productivity in Agriculture Organised by Centre for Water Resources, Jawaharlal Nehru Technological University, Hyderabad, India. E-mail: [cwr\\_jntu@yahoo.com](mailto:cwr_jntu@yahoo.com)

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March, Florida, USA 4th International Conference on Hydrogeology, Ecology, Monitoring and Management of Ground water in Karst Terranes Organised by National Ground Water Association. Web: <http://www.ngwa.org>

Sep 17 - Sep 21 Lisbon, PORTUGAL Groundwater and Ecosystems 35th Congress of IAH. Web: [http://www.geo.ua.pt/aih-gp/Ingles/eventos/eventos\\_2007.html](http://www.geo.ua.pt/aih-gp/Ingles/eventos/eventos_2007.html)