



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

Ready for the 2004 Congress in Mexico

The preparations for the joint XXXIIIrd IAH and 7th ALHSUD Congress to be held in Zacatecas, Mexico (11-15 October 2004) are now in their final stage. The Organising Committee, led by Mexico National Chapter President, Joel Carrillo, invites IAH members and the wider hydrogeological community to join the meeting. Please visit the Congress web page <http://www.igeograf.unam.mx/aih>, which is regularly updated and provides all the necessary information.



A meeting of the IAH Council will be held on 10 October and on 12 October there will be a General Meeting where the Council to serve until 2008 will be elected. The election process commenced on 28 July

and will close on the day of the General Meeting. This year, for the first time, IAH is providing the option of voting electronically. Members can choose either to vote on-line or take part in a conventional postal ballot. If IAH holds an e-mail address for you then you will have received a notice of the election by e-mail. For members for whom we do not hold an e-mail address, ballot papers were mailed in the usual way.

If you are a paid up IAH member and have not received voting papers by either route then please contact the IAH office (dwilcock@iah.org). The guidance sent to members provides the option to vote either way. The voting is controlled by unique registration codes allocated to each member which may only be used once so two methods of voting does not mean two chances to vote!

The main benefit of the on-line voting is the saving of time and cost, both for individual members and for the Association. We also hope that it will increase the total number of votes cast.

The electronic voting system has been put in place by Christine Watson and Di Wilcock from the IAH office (pictured left) using software supplied by Campus-vote.com

How to contact IAH

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

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Conference reports

SWIM 18 - Salt Water Intrusion Meeting

The 18th Salt Water Intrusion Meeting (18th SWIM) took place from 31 May to 3 June 2004 in Cartagena (Spain). It was organised by the Technical University of Cartagena (UPCT) and the Geological Survey of Spain (IGME), with the support of IAH, UNESCO-IHP, IAEA and other organisations.

This regular meeting, whose first gathering took place 36 years ago, has been celebrated in different European countries on a biennial basis. The 18th edition was very successful in convening specialists in saline groundwater; around 120 scientists from more than twenty countries attended the meeting and contributed one hundred submissions. The growing interest among scientists and water managers denotes the increasing relevance of managing saline groundwaters all around the world, especially in densely populated coastal areas. Beyond the characteristic shortage and inadequacy of water resources specific to arid and semi-arid areas, problems related with uneven temporal and spatial distribution of the available surface water resources, with water quality deterioration, modern development, population growth and, in most cases, with insufficient knowledge of the aquifer as to design sound management programmes, are becoming common to many places whatever the location. A selection of papers will be published by IGME in agreement with IAH.

Besides the regular scientific sessions and the field excursion, the 18th SWIM was preceded by the pre-

conference course "Practical Modelling of Saltwater Intrusion". The course was taught by Dr. Clifford I. Voss (USGS) at the Civil Engineering School of the Technical University of Cartagena. Twenty-five persons from seven European and American countries attended. The SWIM also hosted a meeting of the IAH Commission on Coastal Aquifer Dynamics.

The next SWIM will be in 2006 in Cagliari (Sardinia, Italy) convened by Dr. Giovanni Barrocu (barrocu@unica.it).

International Conference on Groundwater Vulnerability Assessment and Mapping



From 15 to 18 June 2004 the IAH Commission on Groundwater Protection, the Polish National Chapter of IAH, UNESCO and University of Silesia organised the International Conference on "Groundwater vulnerability assessment and mapping". The conference was held in the charming spa of Ustrón (southern Poland). The idea of organising an international conference in Poland in 2004, dedicated to the problems of groundwater vulnerability, was raised at the XXXth International Association of Hydrogeologists Congress in Johannesburg in 2000. It seemed then that such a highly thematically-defined conference would only attract a relatively limited group of experts. However, the actual interest in such a meeting went far beyond those expectations. The organisers received 96 abstracts from 40 countries, and around 120 persons expressed a wish to participate in the



Conference. Finally the conference attracted 102 participants from 27 countries and 5 continents. 81 selected abstracts were reviewed and accepted by the Scientific Committee of the conference and have been published in a special conference volume (158 pages) edited by A.Witkowski et al and distributed to the conference participants.

The scientific programme of the conference focused on five topics:

- Factors affecting the selection of vulnerability assessment methods;
- Uncertainty in vulnerability assessment methods;
- Design of general (intrinsic) and specific vulnerability maps;
- Uses and limitations of vulnerability maps;
- Data needs, processing and presentation regarding GIS.

Since many articles referred to karstic areas, a special conference session focussing on groundwater vulnerability assessment and mapping of karst aquifers was organised. Also, one session focused on the national approach to groundwater vulnerability assessment and mapping.

Keynote papers were given by:

- S. Foster (UK): The aquifer pollution vulnerability concept - applications, benefits & constraints;
- D. Daly (Ireland): Vulnerability Mapping and the EU Water Framework Directive (WFD);
- B. Adams (UK): Uncertainty in Vulnerability Assessment Methods';
- F. Zwahlen (Switzerland): Vulnerability, Hazard

and Risk Mapping for the Protection of Carbonate (Karst) Aquifers - Results of the European COST ACTION 620 (Authors: F. Zwahlen and N. Goldscheider);

- S. L. Witczak (Poland): Polish experience on groundwater vulnerability assessment and mapping.

The conference participants expressed their thanks for the friendly conference atmosphere and hospitality provided by the organisers. A fuller report can be found at: www.iah.org/News/2004/041.html

Workshop of the Fennoscandian Working Group on Hardrock Hydrogeology

Another of the series of regional workshops of the IAH Commission on Hardrock Hydrogeology was convened in Helsinki, Finland, between 7-9 June 2004. The programme was prepared by the local organising committee lead by Esa Rönkä from the Finnish Environmental Institute. The organising committee included specialists from this Institute, the Geological Survey of Finland, the University of Helsinki, the Technical University of Helsinki and Posiva Ltd. 51 experts attended, mostly coming from Finland and neighbouring countries such as Sweden, Norway, Estonia and Russia but also from Canada, Czech Republic and Portugal. Key themes were:

- Assessment and exploration of hardrock groundwater resources;
- Flow and transport study methodology;
- Studies on groundwater quality: health risks assessment, problems solutions and feasible water treatment techniques;



Group photograph on the last day of the successful conference in Poland

- Hardrock hydrogeology in underground construction and rock engineering;
- Geochemical studies for determination of long-term behaviour of deep groundwaters.

A fuller report of the meeting can be found at www.iah.org/News/2004/042.html Extended abstracts of presentations can be found at: www.ymparisto.fi/default.asp?contentid=82899&lan=EN

In the general opinion of the participants, the workshop demonstrated important results in hardrock hydrogeology and practical applications which Finnish specialists have achieved during recent years. At the conclusion the future important issues of hardrock hydrogeology were discussed, among them the management of hardrock groundwater in archipelagos and coastal areas including sustainable extraction, groundwater protection and risk assessment, long-term stability of deep repositories and crystalline groundwater and hydrogeological impacts of underground construction in hard rock areas.

The IAH Commission on Hardrock Hydrogeology plans to continue its active programme of regional workshops, the next ones being in:

- Évora, Portugal - 2nd Workshop of the Iberian Regional Working Group, May 18 and 21, 2005 (Information: Antonio Chambel: achambel@uevora.pt)
- Athens, Hellas - 2nd Workshop of the Regional Working Group of the Middle and East Mediterranean, October 5-6, 2005 (Information George Stournaras: stournaras@geol.uoa.gr).

Further meetings are planned in Poland and Russia in subsequent years.



(from the left) Esa Rönkä (Finland), Bo Olofsson (Sweden), Erik Rohr-Torp (Norway), Antonio Chambel (Portugal) and Jiri Krásný (Czech Republic) during the technical excursion to Olkiluoto.

New publications

Climate Change - Environment and Civilization in the Middle East

IAH members, in particular those who heard presentations by Arie Issar at last year's conferences in Prague and Bled, will be interested to know of his new book, prepared jointly with Mattanyah Zohar. A survey of the ancient levels of lakes, rivers and the sea, as well as changes in the compositions of stalagmites and sediments showed an astonishing correlation of climate changes with the emergence and collapse of civilizations in the Middle East. Each warm period was characterized by acidification, economic crisis and mass migration. Whereas cold periods brought abundant rain, prosperity and settlement in the arid lands. The authors thus conclude, that climate change was the decisive factor in the history surrounding the origins of the "cradle of civilization". The book is published by Springer and IAH members can obtain the book at a 20% discount on the regular price of EUR 100. To view the book details go to <http://springeronline.com> and search on ISBN 3-540-21086-5. To obtain the IAH discount, log in to the IAH members-only page on the IAH web site.

El agua y la ciudad sostenible: Hidrogeología urbana

In October 2003 the IAH Spanish Group held a meeting in Barcelona on Urban Groundwater. A large selection of papers, mostly in Spanish but with some in English, have been compiled from the symposium dealing with examples and problems worldwide. The volume is published by IGME, Madrid www.igme.es; ISBN84-7840-539-9

IAH book series

The IAH book series "International Contributions to Hydrogeology and Hydrogeology; Selected papers" is published for IAH by Balkema. The Balkema company has recently been acquired by the international Taylor and Francis group and the transition of ownership has led to a number of problems in ordering books because the full IAH catalogue is not yet accessible on-line. Books can be ordered on line <http://www.tandf.co.uk/books/> In case of difficulty the IAH office will endeavour to help.

News From The International Groundwater Resources Assessment Centre (IGRAC)

The International Groundwater Resources Assessment Centre (IGRAC) aims to improve assessment, development and management of groundwater resources through worldwide acquisition and exchange of groundwater knowledge. One of the major goals of IGRAC is to "stimulate on a worldwide basis sufficient, uniform and consistent data collection and monitoring in the field of groundwater".

IGRAC has started an inventory of tools for groundwater data processing and presentation. The focus is on low cost, user friendly software. This initiative will contribute to better and more uniform processing of groundwater data worldwide.

We invite all colleagues to inform us about their experience with development and use of such tools. If you have any suggestions, please contact us on: info@igrac.nl. The results of the inventory will be publicly accessible via the IGRAC web site. For more information on the inventory, its constraints and outputs visit http://igrac.nitg.tno.nl/gpm_tools.html

Those who are interested in the International Working Groups for the Development of New Guidelines and Protocols will find detailed information on http://igrac.nitg.tno.nl/gpm_groups.html

European Union Water Framework and Groundwater Daughter Directives

Report of Groundwater Working Group Workshop on Monitoring: 25 June 2004

Groundwater Daughter Directive

The EC Coordinator reported that consideration of this draft Directive had been carried over to the Dutch Presidency and the newly elected EU Parliament from November 2004. The draft has, however, been looked at in some detail by the EU Council-Environment Group during June 2004, being for the most part favourably received but some technical adjustments and further explanation have been requested.

This situation makes it difficult to finalise the agenda for future working group activities, because all such activity was closely related to Directive implementation. The need for supplementary guidance on Groundwater Monitoring will be determined on consideration of the outcome of the workshop.

Presentations on Groundwater Monitoring

The workshop comprised the following groups of presentations:

- Five in-depth talks on systematic, scientifically-based, approaches to groundwater monitoring from Dutch, German and Austrian specialists;
- Four information items on networks/projects related to groundwater monitoring: IGRAC (UNESCO/WMO/TNO-NITG International Groundwater Assessment Centre), SWIFT (EC-Screening Methods for Water Information),

BRIDGE (EC-Basic Rules for Identification of Groundwater Thresholds) and SNOWMAN (EC-Sustainable Management of Soil & Groundwater under Contamination Pressure Regulatory Network);

- Ten reports on national status of groundwater monitoring (Germany, France, Austria, United Kingdom, the Nordic Group (Finland, Sweden & Norway), Lithuania, Malta, Italy, Denmark and The Netherlands).

A full report of the presentations and discussion will appear in due course on the EC-Environment Division-CIRCA website.

The presentations set monitoring in context of the groundwater regime. They also distinguished:

- 'Early warning' or offensive monitoring (focussed on shallowest groundwater) indicating average quality of more recent recharge - a necessary input to risk assessment and trend interpretation;
- Strategic or surveillance monitoring which more closely reflects the average quality of storage in the groundwater body and that discharging to the receptors of interest;
- That knowledge of the groundwater flow regime implies that the chemical monitoring data can be used to provide estimates of chemical fluxes towards sensitive ecosystem receptors.

A fuller report can found at: <http://www.iah.org/News/2004/043.html>

IAH News

The **NATIONAL CHAPTER OF IAH FOR SERBIA AND MONTENEGRO** organised, in conjunction with the IAH Education and Training Commission, "Education Days in Hydrogeology" from 31 May to 4 June. Led by John Moore and David Hyndman (U.S.A.) the Education Days were held at the headquarters of NIS-Naftagas in Novi-Sad, Serbia and Montenegro with generous company support. Sanja Dragasevic and Snezana Komatina from Geophysical Institute were responsible for all aspects of the organization. There were 62 participants - 30 from Naftagas and 32 from 18 institutions from Serbia and Montenegro (private and State Companies, Ministries and Universities). All of them obtained a CD with all material related to the lectures.



John Moore and Snezana Komatina at the Education Days in Novi-Sad



(Left to right) Amos Bein, Ofelia Tujchneider, Igor Zektser and Willi Struckmeier

Usually the projects accepted are funded for five years, at a maximum annual revenue of US\$10,000. It is generally assumed that IGCP approved projects have a better chance of getting research funds at both national and international levels.

The new IGCP arrangements now provide opportunities for the hydrogeological community to submit project proposals which meet the above goals. Further information on technical details can be found at: <http://www.unesco.org/science/earthsciences/igcp/index.htm>.

The **IAH PORTUGUESE NATIONAL CHAPTER** have recently launched their own web site which can be found at <http://www.geo.ua.pt/aih-gp>

2003 ANNUAL REPORT

Included with this issue of News and Information is a copy of the summary annual report of the Association for 2003 which will be formally presented to the Annual Meeting of IAH in Zacatecas, Mexico. A full report, including the complete statement of accounts can be downloaded from the IAH web site.

NEW IGCP HYDROGEOLOGY WORKING GROUP

UNESCO have announced that the International Geological Correlation Programme is now to be renamed "International Geosciences Programme (IGCP)" and its Scientific Board has been extended to include a new Working Group 5 on Hydrogeology. The new members are IAH members Ofelia Tujchneider (Argentina/Chair), Amos Bein (Israel), Wilhelm Struckmeier (Germany) and Igor Zektser (Russia).

IGCP is not a research fund, but rather a facilitating framework which provides contributions to meetings of experts, exchange of information and publications.

WORLD HYDROGEOLOGICAL MAP

The initiative by UNESCO, IAH and the Committee for the Geological Map of the World (CGMW) to create a World Hydrogeological Map (WHYMAP) is coming to fruition. A meeting of the International Expert Workshop was held in Paris from 8 to 10 March (see report at: <http://www.iah.org/News/2004/040.html>) and the current version of the map was launched at the International Geological Congress in Florence in August. Details of the project can be found at http://www.bgr.de/b1hydro/index.html?/b1hydro/fachbeitraege/a200401/e_whymap.htm

SUBMARINE GROUNDWATER DISCHARGE

"It would not be surprising that, as a coastal planner, manager or decision maker, you may not be aware of the importance of submarine groundwater discharge". This is the opening sentence of a new report to address that problem by UNESCO/IHP and the International Oceanographic Commission on the management implications, measurement and effects of submarine groundwater discharges. It can be obtained from UNESCO as report number 5 in their IHP-VI series on groundwater.

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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/

2004

September 20-22, Spokane, Washington, USA.
Environmental and Subsurface Science Symposium 2004.
Web: www.b-there.com/breg/esss04

September 20-24, Newcastle upon Tyne, United Kingdom.
International conference on "MINE WATER 2004 - Process, Policy and Progress"; Web: www.IMWA2004.ncl.ac.uk

September 23-24, Sonoma County, California, USA.
Groundwater Resources Association of California, 13th Annual meeting and conference "Aquifer Protection, Restoration, Replenishment and Treated Water Reuse".
Web: <http://www.grac.org>

September 27-29, Amsterdam RAI, The Netherlands.
Climate Change: a challenge or a threat for water management? Web: <http://www.nva.net/agenda/26September2004.htm>

September 27 - October 1, Berchtesgaden, Federal Republic of Germany. International Conference on Hydrology of Mountain Environments. Web: www.tu-braunschweig.de/geoekologie/abteilungen/hydrolo/forsch/icon

September 30-October 2, Cape Breton, Nova Scotia, Canada. IMAGINE 1010 - "From Hazardous Sites to Beautiful Landscapes". Web: <http://www.nseia.ns.ca>

October 4-5, Amman, Jordan. Water Resources and Environmental Protection in the Middle East and North Africa. E-mail: zereini@dag-umwelt.de or zereini@kristall.uni-frankfurt.de

October 11-15, Zacatecas, Mexico. XXXIII Congress of IAH - Conference on Groundwater Flow Understanding: From Local to Regional Scale. Joint conference IAH/ALHSUD; Web: www.igeograf.unam.mx/aih

October 13-15, Neuchatel, Switzerland. Fifth European Conference on Geostatistics for Environmental Applications. Web: <http://www.unine.ch/chyn/geoenv>

October 24-26, Quebec, Canada. 57th Canadian Geotechnical Conference - 5th Joint IAH-CNC-CGS Conference. Web: <http://www.geoquebec2004.org/en/index.php?page=communication.html>

November 7-10, Denver, USA. Geoscience in a Changing World - 2004 Annual Meeting and Exposition of the Geological Society of America. Web: <http://www.geosociety.org/meetings/2004/>

November 9-12, Perth, Western Australia. National Salinity Engineering Conference 2004. Web: <http://www.congresswest.com.au/salinity2004>

November 21-25, Adelaide, South Australia. International Conference on Water Sensitive Urban Design: Cities as Catchments. Web: <http://www.plevin.com.au/wsud2004/>

November 21-26, Warsaw, Poland. International Conference on Hydrogeological Transboundary Problems; West and East European Bridge. Web: http://www.pgi.gov.pl/pgi_en/index.php?option=news&task=viewarticle&sid=84&Itemid=2

2005

March 7-11, Nicaragua. Conferencia Internacional - Hidrogeología y Manejo de Recursos Hídricos en Centroamérica: "Caminando Juntos Hacia el Futuro". E-mail: grotela@ucalgary.ca or bethuned@ucalgary.ca

March 14-15, Tours, France. Clays in Natural and Engineered Barriers for Radioactive Waste Confinement. France. Web: www.andra.fr/meeting2005/

March 22, London, UK. Water for Life - the UK Input. Royal Geographical Society with IBG. e-mail: events@rgs.org

May 10-13 Mendoza, Argentina. CONAGUA 2005. XX National Water Congress and III Symposium on Water Resources of the Southern Cone. Web: www.congresosdelagua.org

May 18-21, Evora, Portugal. Second Workshop of the Iberian Regional Working Group of the IAH Commission on Hardrock Hydrogeology. E-mail: achambel@uevora.pt

May 23-25, Lyon, France. Geoline 2005. International Symposium on Geology and linear infrastructures. E-mail: coralie.hossenlopp@mci-group.com

June 6-9, The Hague, The Netherlands. ModelCARE'2005, International Conference on Calibration and Reliability in Groundwater Modelling: From Uncertainty to Decision Making. e-mail: j.gehrels@nitg.tno.nl

June 12-17, Berlin, Germany. ISAR5 - 5th International Symposium on Management of Aquifer Recharge. Web: <http://kompetenz-wasser.de/>

June 20-23, Bergen, Norway. HeadWater 2005: "Hydrology, Ecology and Water Resources in Headwaters". Web: <http://www.nve.no/headwater05/>

August 28-September 2, Lake Bled Slovenia. 10th International Symposium on the Interactions between Sediments and Water. Web: <http://www.iasws.com>

September 7-11, Zaragoza, Spain. 6th International conference on geomorphology with special session on evaporite karst processes and problems. Web: <http://wzar.unizar.es/actos/SEG/index.html>

September 11-19, Beijing, China. Use of Water and Land for Food and Environmental Sustainability. 19th Congress of ICID. Web: www.icid.org

September 14-19, Belgrade, Yugoslavia. International Conference on Environmental (Geoecological) Problems in Karst. Organised by the Serbia and Montenegro Committee of IAH. E-mail jemcov@ptt.yu

September 21-23, Parma, Italy. Aquifer Vulnerability and Risk 05. 2nd International Workshop - AVR 05. E-mail: intercontact@libero.it

October 4-8, Alicante, Spain. International Workshop "From data gathering and groundwater modelling to integrated management". Web: <http://www.fcis.org/PUB/INFO/AIH-GE.HTM>

October 5-6, Athens, Greece. 7th Hellenic Hydrogeological Conference and 2nd MEM Workshop on Fissured Rocks Hydrogeology. Web: www.iah-hellas.geol.uoa.gr

2006

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

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