

NEWS

& information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

Furthering the understanding, wise use and protection of groundwater resources throughout the world

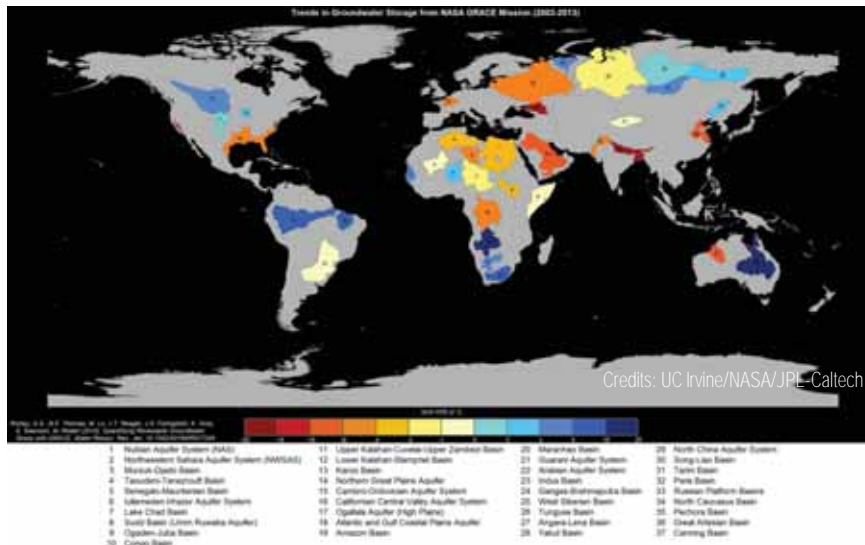
AUGUST 2015

Also in this issue:

- IAH'S 60th anniversary
- Meeting reports
- New members
- Chapter news
- Congress update
- Conference listing

and the usual IAH announcements and news

CHALLENGES...



Sometimes prominent media reports of events such as tsunamis, droughts and floods or of recent research provide challenges to IAH and its mission which require responses. *Pages 3, 4 and 6*

COMMISSIONS & NETWORKS YOUR OPINION COUNTS



This issue features recent and planned activities of some of our Commissions and Networks. Many will be convening sessions and other meetings in Rome and you are encouraged to participate. *Page 10*



Ever seeking to improve its services to members, supporters etc, IAH currently has two surveys open. The first is for individual members and supporters (*page 17*), the second is for IAH's chapters (*page 21*).



INTERNATIONAL
ASSOCIATION OF
HYDROGEOLOGISTS

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AUGUST 2015



ONLINE TRAINING | 5 HOUR SESSION

The GROUNDWATER FLOW, CONTAMINANT TRANSPORT & HEAT MODELING Course



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3D GeoModeller



Groundwater Vistas

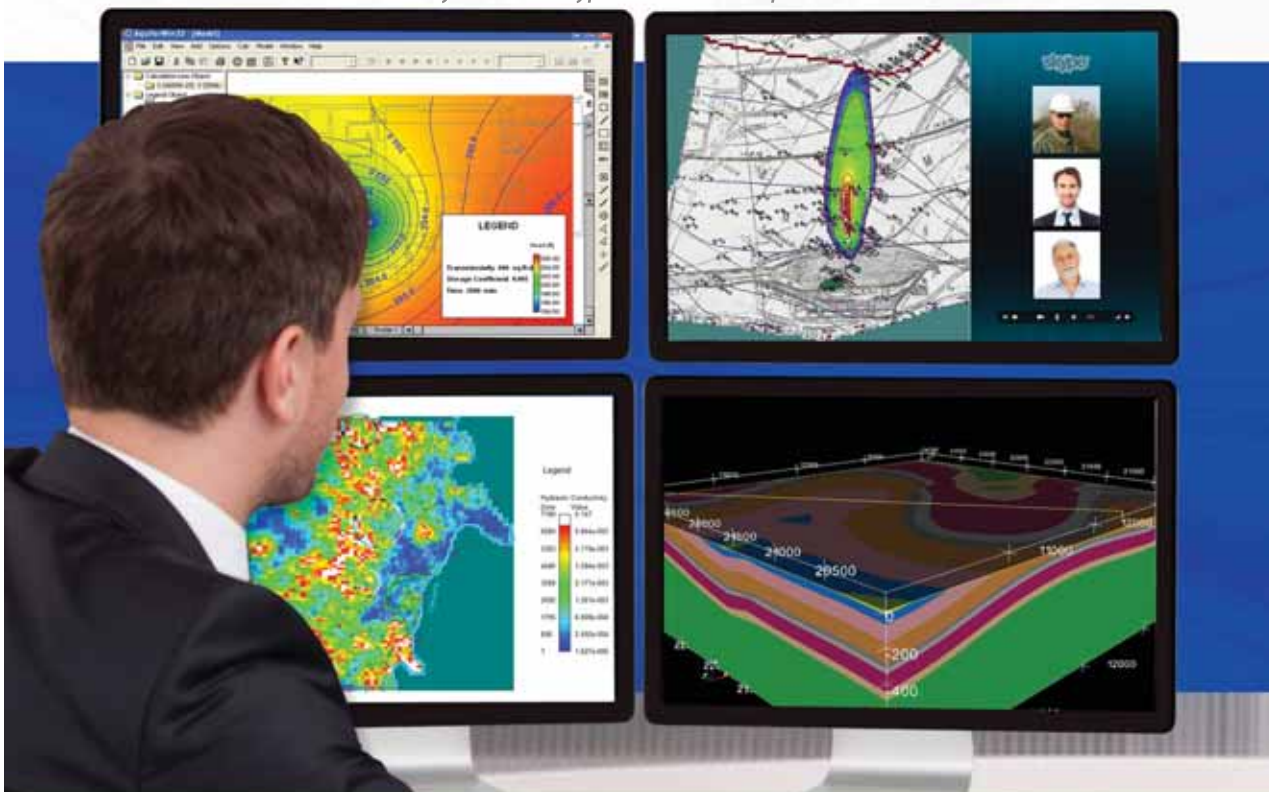


PEST

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Another bumper issue...

IAH's Commissions and Networks are an essential means for achieving the Association's scientific objectives, and this issue of News and Information has a strong focus on their work. The Burdon Network has always been a key focus for our charitable and international development activities; its current work on the African Groundwater Atlas highlighted on page 10 will produce new and valuable information which will help form the basis for developing and managing groundwater in Africa. We look forward to seeing the outcomes in the coming months. On pages 11-14 other commissions and networks report on their initiatives to convene or co-convene meetings such as the regular ISMAR and karst conferences. There are also opportunities for the commissions to work together, as the Regional Groundwater Flow and Climate Change Commissions will begin to do at their joint session at the Rome Congress. All are keen to welcome potential new members to their congress sessions and annual meetings in Rome, and we will be reporting these in the December newsletter. In Europe especially, late spring and early summer is often the season for conferences as university staff and students come to the end of their teaching schedules. Several are featured in this newsletter. They provide excellent opportunities for specific communities of researchers to get together. IAH is always keen to promote and support a wide range of conferences, from our large congresses with 600 to 900 participants and broad technical scope to national or regional meetings with a much narrower scientific focus. Both should have a valued place in our annual meetings schedule.

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But we still need your contributions...

If your commission or network is not featured here, please bring us up to date with your activities and plans so that we can inform our members. We also welcome news on national or regional meetings.

JOHN CHILTON



ADVERTISING AND COPY INFORMATION

IAH News and Information is published 3 times a year. It is distributed as an insert in Hydrogeology Journal and is also published via IAH's website and email alerts.

It reaches all members and associated members of the International Association of Hydrogeologists, reaching more than 4000 people and can also be freely downloaded by individuals worldwide.

Advertising rates are €300 per full-page advert and €200 per half page. These rates apply for one issue. If you take an advert in two successive issues then the third is offered free of charge. Corporate sponsors and corporate members of IAH are entitled to 50% off the above rates. Why not contact us now?

All copy must be provided electronically - please contact knicholson@iah.org for acceptable formats.

Copy dates are 1 March, 1 June and 1 October.

Email knicholson@iah.org

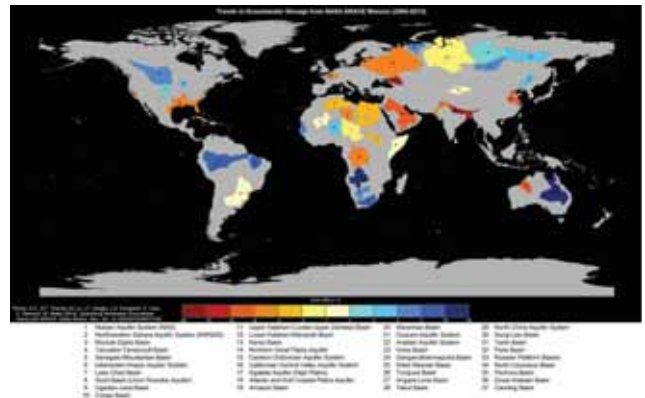


MEDIA FOCUS

A selection of groundwater features from around the world

GLOBAL: ONE THIRD OF WORLD'S LARGEST AQUIFERS IN DISTRESS

About a third of the Earth's largest groundwater basins are being rapidly depleted by abstraction for human usage, according to two new studies led by the University of California, Irvine (UCI), using data from NASA's Gravity Recovery and Climate Experiment (GRACE) satellites. The studies characterize global groundwater losses by measuring small variations in the Earth's gravity, which are affected by the mass of water contained in the ground. In the first paper, researchers found that 13 of the planet's 37 largest aquifers were being depleted while receiving little or no recharge. In a companion paper published this week in *Water Resources Research*, the team concludes that the total remaining volume of the world's usable groundwater is poorly known. Estimates vary widely and the total groundwater volume is likely to be far less than rudimentary estimates made decades ago. Comparing satellite-derived groundwater loss rates with existing data on groundwater availability, the researchers found major discrepancies in projected "time to depletion" for many of our major aquifer systems.



Credits: UC Irvine/NASA/JPL-Caltech

In a related interview with the *Toronto Star* newspaper, IAH President Professor Ken Howard said that the research's findings serve as "a wakeup call" that additional data are needed to protect this underground resource, including more reliable and authoritative estimates of the volumes of groundwater resources in storage in our largest aquifers. However, "Ultimately it comes down not to how much is there, but how we manage and protect it properly," Howard said, adding that there must be political will to invest in the monitoring required. "Without having good information on how these reserves are changing with time and how the water quality is changing with time, that is the sticking point when it comes to properly managing and protecting the resource," he said.

<http://www.nasa.gov/jpl/grace/study-third-of-big-groundwater-basins-in-distress>

<http://www.thestar.com/news/world/2015/06/19/depletion-of-worlds-underground-aquifers-raises-alarms.html>

CALIFORNIA: GROUNDWATER DATA BILL PASSES STATE SENATE

As California struggles to respond to its heightening drought emergency, state lawmakers are promoting legislation that would potentially increase scientific knowledge about the state's shrinking groundwater reserves. On June 1, the California Senate passed SB20 by a vote of 21 to 15. The bill requires public access to the groundwater information that well drillers file with the Department of Water Resources after completing a well. These documents, to the chagrin of researchers, are not at present public; only government agencies and well owners can view the logs. However, after several failed legislative attempts to make this information public, the depth of California's drought emergency has helped pave the way for this change of heart.

<http://www.circleofblue.org/waternews/2015/world/groundwater-data-bill-passes-california-senate/>

INDIA: SOLAR ELECTRICITY BUYBACKS MAY REDUCE GROUNDWATER DEPLETION

It's hard to find solutions which confront water depletion, climate change and rural poverty all at once, but an innovative scheme being piloted in the Indian state of Gujarat may just do that. The idea is to enable farmers using solar-powered irrigation pumps to sell excess electricity back to the grid. This gives them an incentive to pump only the water they really need for their crops, slowing the depletion of groundwater. It also diversifies and boosts their incomes and by pumping with solar energy rather than diesel, they reduce climate-altering carbon emissions.

Last week, the International Water Management Institute (IWMI), based in Colombo, Sri Lanka, the mastermind of the new buy-back scheme, announced the first farmer would receive payment for his "solar crop." "Solar crops are a very exciting example of a triple-win," said senior IWMI fellow Tushaar Shah, "Farmers, the state, and precious water reserves all benefit from a single intervention." As part of the pilot study, IWMI is monitoring on-farm electricity generation, income, water efficiency and crop production. While only a small pilot scheme at the moment, this initiative is clearly one to watch.

<http://voices.nationalgeographic.com/2015/06/19/solar-electricity-buybacks-may-reduce-groundwater-depletion-in-india/>

ANTARCTICA: SALTY GROUNDWATER SUPPORTS LIFE

It's easy to forget that Antarctica is really a desert, given almost the entire continent is covered by a thick sheet of ice. However, snowfall is very slow to add to its white mantle, as the cold air and ocean around Antarctica do not produce much atmospheric moisture. One of the driest areas is the McMurdo Dry Valleys near the coast which is the biggest part of Antarctica not covered by ice. At the end of Taylor Glacier, which spills into one of the Dry Valleys, a red trickle of salty, iron-rich water known as the Blood Falls periodically stains the ice as it spills out. In 2012, biologists discovered that the Blood



Source: https://en.wikipedia.org/wiki/Blood_Falls#/media/File:Taylorglacier_pho_2013_studinger.jpg

Falls water contained an impressive community of microbial life. More recently, a team led by Jill Mikucki from the University of Kentucky has found highly saline groundwater beneath the Valleys which is likely to be connected to the lakes in the Valleys and present beneath the glaciers. These discoveries are of great interest in understanding the paleo-hydrology of the McMurdo Dry Valleys, but the researchers also point out that studying this area may have considerable additional value as a possible analogy for Mars.

<http://arstechnica.com/science/2015/04/30/salty-groundwater-supports-life-in-antarcticas-extreme-dry-valleys/>
<http://www.nature.com/nature/journal/v520/n7549/full/520588d.html>

CHALLENGING IAH'S MISSION...

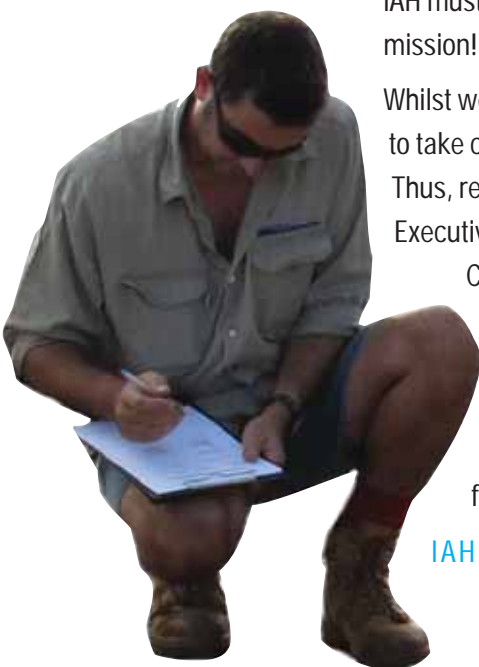
From time to time real challenges to IAH's mission "to further the understanding of groundwater resources" are highlighted by media reports of events such as tsunamis, droughts and floods or of recent research. One such appears on page 4, concluding that estimates of global groundwater depletion are compromised by the absence of reliable information about the volume of groundwater stored in many of the world's largest aquifers. IAH has been aware of the need for better information about groundwater storage for some time, and it was discussed by the IAH Executive at its recent meeting in Dublin. We are currently exploring ways of filling this important information gap. It is clearly a topic for which IAH could contribute knowledge and wisdom and, with its global network of commissions, chapters and individual members is well placed to do so.

The media report from India on page 5 highlighting the often complicated relationships between water, energy and food in the very productive irrigated agriculture of Asia also resonates with IAH's aims and objectives. Taking up one of last year's recommendations of our Education Working Group, IAH has embarked on a series of strategic overview papers, the first two of which deal with the complex interdependencies of groundwater and food security and groundwater and energy respectively. These should be ready in draft form by the time of the Rome Congress.

IAH also meets its objectives by taking opportunities to promote the wise use and protection of groundwater at major international events. Three of these are featured on pages 22 and 24, with Secretary General Shammy Puri strongly advocating for greater appreciation of groundwater resources in Edinburgh and Dushanbe and Executive member António Chambel representing IAH and promoting our activities in the GEF groundwater governance project and the WHYMAP consortium at the World Water Forum in Korea. IAH must continue to be active and visible in many ways and places to help achieve our mission!

Whilst we need to be constantly looking outwards for such opportunities, we also need to take care of our evolving internal management requirements and member needs. Thus, revised IAH Rules have now been prepared and were reviewed again at the recent Executive meeting, held in Dublin. It is intended that they will be ready for approval by Council in Rome, and will be accessible to members from the IAH website before this. Revised and improved guidance on setting up national chapters will accompany the new rules. As reported in this newsletter, we are currently conducting a survey of views and opinions of the benefits and services provided to members and a detailed survey of our national chapters. We also have a call for new mentors open. We welcome your responses to all of these.

IAH EXECUTIVE





Left to right: Ken Howard (IAH President, Canada); Bruce Misstear (Vice President - Finance and Membership, Ireland); John Chilton (IAH Executive Manager, UK); Shamy Puri (IAH Secretary General, UK); Antonio Chambel (Vice President - Programme and Science Coordination, Portugal); Willi Struckmeier (IAH Past President, Germany).

The photo shows the IAH Executive on the ornate staircase of the Geological Sciences building at Trinity College Dublin. Past President Willi Struckmeier joined the meeting to report on his work so far on the history of the Association (see page 8) and to provide his support and wisdom to the discussion about the scope of next year's anniversary celebrations.

HYDROGEOLOGY JOURNAL IMPACT FACTOR INCREASES

We are delighted to report the continuing rise in impact for our Hydrogeology Journal. For 2014, the Impact Factor is 1.966 (Thomson Reuters Journal Citation Reports® 2015) and for the last 3 years Hydrogeology Journal has seen the following Impact Factor trend:

Year	Impact Factor	Citations*
2014	1.966	3895
2013	1.712	3388
2012	1.675	2737

* total journal article citations for 2014

Of course, the impact factor is just one measure of the health of a journal; should you be interested in more information on alternative metrics that IAH's publisher, Springer, has developed over the past years, you can find

an overview at http://www.springer.com/gp/authors-editors/journal-author/journal-author-helpdesk/before-you-start?wt_mc=email.newsletter.1.AUT.ImpactFactor2014EditorExisting#c18684.

We would like to express our thanks to IAH members and supporters and to contributing authors and the HJ Editorial Team. The success of our journal is down to you!

JOHN CHILTON, SECRETARIAT

 <http://www.springer.com/earth+sciences+and+geography/hydrogeology/journal/10040>

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IAH NEWS

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IAH 60TH ANNIVERSARY

IAH History

Our Association will reach its 60th birthday in 2016 and we will obviously wish to acknowledge and celebrate this in a number of ways. Important anniversaries are not only a time to reflect, but also an opportunity to look forward as well. As an important contribution to the reflection over the past 60 years, Past President Willi Struckmeier is compiling a detailed history of the Association from its origins in 1956. Much of the factual information for this comes from our extensive archives of newsletters and annual reports from which he has been able to construct the overall time sequence and the major events during this period. However, for the history of what in essence has been an expanding group of colleagues and friends to come to life we need the personal stories as well. Willi has been able to talk to a number of our very senior members, but we would also appreciate contributions in the form of anecdotes, tales from field trips or visits to faraway places in the early days and also photographs taken on any of these trips. If you are able to dig something out of your own personal archive, then please contact us at the anniversary email address 60years@iah.org. This will be completed for the anniversary, and we are discussing in what format it should be produced.

FRANCE 2016 – CELEBRATING 60 YEARS OF IAH

We are pleased to announce that IAH will meet in Montpellier, France from 26 to 28 September 2016. This will not be a full IAH congress, but will enable us to organise a programme of invited presentations to reflect on the achievements of the last 60 years and to look forward to the further development of IAH and hydrogeological science in the future. This will be combined with the submission of abstracts for a conventional technical programme of parallel sessions, post-congress field visits to some very attractive locations in the surrounding French countryside and the normal IAH meetings. We are grateful to the French National Chapter of IAH for stepping in to host us. In fact, it is highly appropriate that our French colleagues, who were so instrumental in establishing the Association should host our anniversary meeting just as they did in 2006 in Dijon. Moreover, at their invitation, the German National Chapter, who also played an essential role in setting IAH on its way, will join our French colleagues in organising the meeting. We look forward to working with both chapters over the coming months in preparing an excellent scientific and social programme through which we can celebrate our 60th birthday. Further details will follow soon.

SECRETARIAT

Marking the Anniversary

While the main international focus of the celebrations is likely to be the 2016 IAH conference in France (see below), we would like to encourage IAH's Commissions, Networks and National Chapters to celebrate the anniversary in their own way by a meeting, field visit or social event. Please consider this, and let us know what you are planning so we can highlight activities in our news coverage during 2016.

SECRETARIAT

Your stories and photos wanted

IAH's past, present and future is thanks to the amazing activities and support of its members. Please pass on your stories, memories and photos - however old and more recent. All contributions will be gratefully received.



email: 60years@iah.org



ROMANIA TO HOST 2ND IAH CENTRAL EUROPEAN GROUNDWATER CONFERENCE

The Romanian National Chapter of IAH, in scientific partnership with the UNIVERSITY of BUCHAREST - Faculty of GEOLOGY and GEOPHYSICS, is honoured to host the 2nd IAH Central European Groundwater Conference - Groundwater Risk Assessment in Urban Areas (GRAUA) in Constanta on the Black Sea from 14 to 16 October 2015. Government bodies such as the Romanian Water Authority and some key private companies, including RAJA Constanta, will support this conference.

GRAUA's main objective is to review the major stresses and associated risks to groundwater resources in urban areas as well as to promote appropriate solutions for their protection and conservation. Urban areas are the zones most sensitive to the impact of anthropogenic activities which stress the groundwater below. The main topics of the conference are:

- Anthropogenic pressures on urban groundwater supply systems;
- Hydrogeological risks due to urban infrastructure;
- Hydrogeological risks generated by geothermal/geothermic HVAC systems;
- Groundwater and waste disposal (landfills) in urban areas;
- Urban groundwater and the exploitation of mineral resources;
- Groundwater vulnerability and risk mapping.

The complex risks triggered by inducing groundwater stress in urban areas can be minimized by the contributions of hydrogeologists and other professionals in designing the city infrastructure and utilities interacting with groundwater resources.



The organizers of the GRAUA conference warmly invite all those interested in these topics to join them in our scientific discussions while enjoying the Black Sea coast in the colourful Romanian autumn.



<http://www.ahgr.ro/en/events.aspx>

[Ed- reflecting the balance between large congresses and smaller focussed meetings mentioned on page 3, we would also remind you of the IAH national meetings taking place later in the year in The Netherlands, Australia and Canada. Details of all of these can be found on the events listing on the IAH website.]



Your IAH in action...

COMMISSIONS & NETWORKS

Activities of IAH's commissions and networks include contributing to the science of groundwater and undertaking outreach, education and training. They run sessions at IAH congresses, co-convene technical meetings and field excursions with other societies, host workshops and training courses and prepare educational and outreach publications.

This article reports news and updates from many of our commissions and networks. We encourage you to find out more and to make direct contact with them. You do not have to be an IAH member to participate. In fact we encourage wide involvement from the groundwater community, as this will help the groups to thrive and give greater authority to their work. We also welcome suggestions for new topics or activities.

JOHN CHILTON



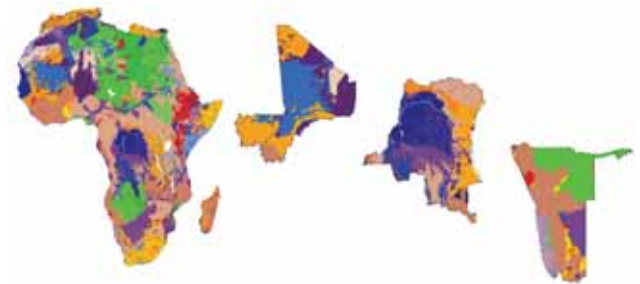
Questions, ideas or comments? email info@iah.org

BURDON GROUNDWATER NETWORK

Much of the work of the Burdon Groundwater Network during the last 18 months has been focused on developing a Groundwater Atlas for Africa. This online atlas will be a gateway to finding information on the hydrogeology for each country, with summary information for interested stakeholders as well as links to more detailed information for those who want a more thorough understanding. The Atlas helps to meet one of the Burdon Network's main aims of facilitating the sustainable development of groundwater for poverty reduction by making groundwater information and knowledge more accessible.

The framework for the Wikipedia style atlas has been developed, and global datasets used to give information on geology, hydrology, soils, climate and land use. Over 50 IAH members from across Africa have been involved in writing the web pages, and 18 countries are now complete, so we are nearly half way there! The Beta version of the Atlas will go live in the autumn of 2015, and will be available for editing and updating, and plans are in hand to produce an IAH Special Publication to enable those with unreliable internet connections to benefit.

At the IAH Congress in Rome, the Burdon Network and the



"African Groundwater"
Source: British Geological Society, thanks to Brighid Ó Dochartaigh for image supply

ECHN will jointly host a session on developing groundwater for poverty reduction, and the different roles that science, civil society and government can play - so come along and join the debate!

ALAN MACDONALD

[...this is a long established and active network but there is always space for new people. The network is currently preparing an IAH sub website and for this and other planned activities would welcome an injection of fresh ideas and youthful enthusiasm...Ed]



Email Alan MacDonald- amm@bgs.ac.uk



Discover more about IAH's groups on our website



REGIONAL GROUNDWATER FLOW

IAH's Regional Groundwater Flow Commission (RGFC) gladly announces that its first three year period of activity has been very well evaluated and intends to keep up the good work and further develop its programme of activities. As a first step, the Commission will organize a session in Rome entitled: "Discharge area: a fingerprint of groundwater flow conditions." Papers were invited emphasizing the quantitative understanding of flow systems and concentrating on the shift of focus from recharge to discharge. Moreover, the RGFC is initiating cooperation and communication with other IAH Commissions. Therefore, Richard Taylor, chair of the Commission on Groundwater and Climate Change will be the invited speaker at the above-mentioned session.

In addition, an award process will be initiated jointly with the ECHN in Rome. The prize will honour the best paper presentation (oral or poster) of an early career participant at the congress on the topic of regional groundwater flow. Presentations can be included from all related sessions of the congress and anyone who would like to be considered should fill in an application form on the RGFC homepage and send it to regionalgwflow.iah@gmail.com not later than 31 August 2015.

The RGFC Commission will meet in Rome. Commission Chair Judit Mádl-Szönyi encourages all supporters to attend the Rome Congress and take part in the RGFC Session, in the best regional groundwater flow paper competition and to discuss future plans and renew the activity of the board.

JUDIT MÁDL SZÖNYI



<http://regionalgwflow.iah.org/>



https://www.linkedin.com/groups?home=&gid=8191261&trk=anet_ug_hm

MANAGING AQUIFER RECHARGE

At the Rome Congress the Commission on Managing Aquifer Recharge will be involved in two sessions: S3.3 Aquifer recharge assessment and storage management: quantity and quality issues; and S3.4 Combating over-extraction: artificial recharge and aquifer engineering regulation. Congress will also include an IAH-MAR Commission Plenary Session, open to all who are interested or just curious. It will include reporting on current working group activities, and discussions on actions to which the Commission could add value. Look out for this in the final Congress programme!

More immediately, the Commission will be running a workshop on MAR in Water Resources Management in Beijing on 7 Sept 2015, orchestrated by Yan Zheng – leader of the working group on MAR for Development, and Weiping Wang - Co-Chair of the Commission.

Last but not least - preparations are underway for ISMAR9. This triennial international symposium on managed aquifer recharge which will be in Mexico City 20-24 June 2016, is being held in conjunction with Biennial Symposium on Managed Aquifer Recharge (BSMAR15). It is led by Dr Adriana Palma Nava of UNAM National Autonomous University of Mexico in partnership with CONAGUA, UNESCO, ASCE, Arizona Hydrological Society, Groundwater Resources Association of California and IAH. This event brings together the Spanish and English speaking worlds to accelerate exchange of MAR knowledge in a field where research, practice, governance and investment are developing at a frenetic pace. Full details, including abstract deadlines, are available on the website.

PETER DILLON



<http://recharge.iah.org/recharge/>

<http://www.ismar9.org>

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AUGUST 2015

COMMISSIONS & NETWORKS

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GROUNDWATER OUTREACH FOR DECISION MAKERS

IAH's Groundwater Outreach Commission will also hold a meeting during the Rome Congress to report on its activities and with the added objective of recruiting new members to the Commission. The Commission is looking for people willing to assist with the task of providing tools, refining methods and lending support to events that will help groundwater professionals communicate "our" science to policy makers and end-users.

The Commission is pleased to be one of the sponsoring organizations for the Second National Colloquium - Groundwater in Mexico scheduled for 11-13 November in Mexico City. Communication of the basics of groundwater science to decision-makers and other non-specialists in groundwater is seen as an essential basis for water management policy in Mexico. The objective of the colloquium is to identify the key elements of knowledge that are required to build the scientific, academic, legal and administrative capacity needed to implement water policy to achieve sustainable groundwater development. Indeed, the first stated objective of the colloquium organizers is – "Identify what and how should be changed in the public and legal sectors, educational curriculum, academic institutions, to achieve an updating of professional education of groundwater in the environment".

Commission co-sponsored events held in the United States have included:

~ December 2014 - A groundwater conference programme in Denver, Colorado which included seven elected state legislators in expert panels discussing water management strategies for Colorado. There is no better way to educate decision-makers than to have them directly involved.

~ February 2015 - A two-day event in Ontario, California, "Everything aquifers and groundwater management" that featured senior state regulatory officials along with groundwater managers in presentations and panel discussions of the state's groundwater overdraft dilemmas.

~ May 2015 – A conference in San Francisco dealing with drought-management issues that focused on legal aspects. Over 50% of the attendees were water attorneys. In times of groundwater stress and overdraft, legal issues rather than hydrologic conditions are likely to be dominant in groundwater management decisions.

~ June 2015 – Austin, Texas was the venue for a one-day conference that focused on aquifer storage and recovery (ASR) potential in Texas. The "science" of the groundwater presentations was pitched at a level so that the audience mix including attorneys, water district board members and end-users were not overwhelmed by technical detail.

~ July 2015 – A conference in Albuquerque, New Mexico has a focus on the potential for developing the state's brackish aquifers. With the Rio Grande River and freshwater aquifers over-allocated and with no sign of drought relief, brackish aquifers could be an important future supply source. The conference programme includes aspects of brackish aquifer exploration, development, treatment technology, and ownership issues.

IAH members interested in helping the work of the Commission should send an e-mail to the Commission Chair astone@agwt.org. We are in particular need of assistance with preparing existing information to be "web-site ready." Those with social media communication skills are also needed.

ANDREW STONE



Email Andrew Stone astone@agwt.org



EARLY CAREER HYDROGEOLOGISTS

ECHN at XVth IWRA World Water Congress

The ECHN was invited to participate in a young professionals workshop on "Future water challenges and the Sustainable Development Goals" held on May 27th 2015 during the XVth IWRA World Water Congress in Edinburgh, Scotland. During the special session ECHN director Viviana Re contributed to the panel discussion and subsequent debate. This session represented a good occasion to present the IAH Network and all the association's activities targeted at the professional development of young hydrogeologists. In addition the panel provided a good opportunity to discuss future collaboration with other associations to strengthen the status of early career professionals in the water sector.

The IAH ECHN 'Coolest Paper of 2014' Competition

The second annual competition to find the coolest hydrogeology paper has moved into its second phase in which early career hydrogeologists vote to decide the winner. This year, eight papers have been nominated for the award, all published in international peer-reviewed journals and each with its own reason for being nominated as a 'coolest paper of the year'. Voting will be open until July 31st and is done using the online poll: <http://form.jotformeu.com/form/51544005050339>

The author of the paper receiving the most votes will be awarded the prize of a year's IAH membership, to be presented at the Rome Congress. A prize will also be awarded to one voter participating in the online poll, randomly selected. We are also pleased to announce that UNESCO-IHP have agreed to sponsor the competition by assisting with the winner's travel costs to attend the IAH 2015 Congress and receive the award. For full details of the competition and to cast your vote, visit: <https://echn.iah.org/2014-coolest-paper>.

As in recent congresses, ECHN will be holding its annual meeting and social event in Rome, and will also join with the Hydrogeology Journal team in hosting a lunchtime session to encourage and support young professionals in publishing the results of their research.

VIVIANA RE AND MATTHEW CURRELL



<http://echn.iah.org/>



<http://www.linkedin.com/groups?viewMembers=&gid=3717583&sik=1319444267870>

GROUNDWATER AND CLIMATE CHANGE

The IAH Commission on Groundwater & Climate Change (IAH-CGCC) will be very active at the Rome Congress. In collaboration with the UNESCO-IHP GRAPHIC programme, the commission is hosting Session 3.2 Climate Change and Groundwater Availability: a call for adaptation. This session is global in remit but will feature several contributions from The Chronicles Consortium - an initiative started at last year's IAH Congress in Marrakech involving the analysis of long-term groundwater level records (chronicles) in Africa. In addition, UNESCO-IHP GRAPHIC and the IAH-CGCC will host a pre-congress workshop on Sunday September 12th which is open to all congress participants interested in understanding the impacts of climate change and human development on groundwater resources.

RICHARD TAYLOR



<http://www.gwclim.org>

<http://www.graphicnetwork.net>

<http://www.un-igrac.org/publications/544>

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AUGUST 2015

COMMISSIONS & NETWORKS

[...continued from previous]

KARST RESEARCHERS MEET IN BIRMINGHAM

The KG@B (Karst Groundwater at Birmingham) conference, organized and hosted by Professors John Gunn and Ian Fairchild of Birmingham University from 20 to 26 June, attracted 120 delegates from 22 countries seeking to improve their understanding of the flow of water through soluble rocks such as limestones and the associated environmental impacts. The conference was designated as the 2015 meeting of IAH's Karst Commission and was notable for a multidisciplinary approach, including many papers on groundwater ecology, as well as physical and chemical hydrogeology and approaches to modelling karst aquifers.

John Gunn gave an introductory talk in which he overviewed British karst environments and explained the distribution of karstic hydrogeological features in our principal carbonate aquifers of the Cretaceous, Jurassic and Carboniferous. This led naturally on to the first themed session in which recent research on the lithological, structural and stratigraphical influences on karst groundwater was described from a wide range of geological and climatic environments around the world. This was followed by themed sessions on modelling of karst groundwater systems, the ecology of karst groundwaters, human impacts on karst environments and the use of isotopes and water tracing to investigate karst systems. Some of the case studies illustrated how the definition of source protection zones in settings where conduits exist remains problematic and it was good to see this knowledge beginning to be used in Local Development Plans.

The conference included a number of associated events including a workshop for professionals on 20 June, a field trip to the Chalk of Wiltshire on 21 June, and field trips to the Jurassic of Lincolnshire on 25 and Carboniferous of Derbyshire on 26 June. On the afternoon of 23 June there were several simultaneous events: a fluorescence workshop led by Chris Bradley, a karst water geochemical modelling water workshop led by Ian Fairchild, a

groundwater ecology workshop led by Paul Wood and a field trip to Dudley. The photo below shows some of the KG@B group during their visit to underground canals and limestone mines in Dudley.



Photo courtesy of Andy Kendall, <http://www.carreg.org.uk/>

Overall, this was an excellent meeting from a scientific point of view and very encouraging to see so many young karst researchers presenting their work.

IAH's Karst Commission held its annual meeting during the conference and presented its young researcher awards at the end of the conference, as seen in the photo below.

The Commission welcomes new members and its 2016 meeting will be held at the University of Neuchâtel, Switzerland.

JOHN CHILTON



Young karst research award winners Amael Poulain, Sandra Oehmann and Caroline Dubois. Photo courtesy of Andy Kendall, <http://www.carreg.org.uk/>



<http://www.eurokarst.org>

<http://karst.iah.org/>



<http://www.linkedin.com/groups?gid=4957376>



GROUNDWATER VULNERABILITY REVIEWED IN POLAND



Background

The Polish National Chapter of IAH and the University of Silesia hosted a conference on “Groundwater vulnerability: from scientific concept to practical application” at Ustron, a spa resort in the Carpathian Mountains close to the Czech border. The Polish National Chapter of IAH has organised previous conferences at this location, including an earlier meeting on groundwater vulnerability in 2004 which was co-convened by the IAH Commission on Groundwater Protection. Papers from the 2004 conference were contained in IAH Special Publication 11. The conference was held in one of a series of rather strikingly designed pyramid-shaped hotels in the hills on the edge of the town.

Small can be beautiful

The conference comprised three and a half days of oral presentations, a short poster session and a whole day field trip. There were 65 participants, about half from within Poland and the others from a wide range of countries, including France, Denmark, Italy, Spain, Canada, Nigeria, Australia, Japan, USA, RSA, Slovakia, Serbia, Ireland, Germany, Hungary, Finland, Sweden, Switzerland, Albania and Belgium. A topic-focused meeting such as this brings together like-minded groundwater colleagues and some excellent material was presented. The advantage of 20 or 30 minute time slots allows time for well-crafted presentations with plenty of content and knowledgeable questions and discussion, and there was not a single “no show” from the printed programme. There is clearly a place for smaller, technically focused meetings in the mix of scientific meetings which IAH seeks to provide.

Whither vulnerability?

Scientifically, the focus in 2004 was mostly on mapping vulnerability to pollution downwards from the ground surface by various methods and to comparisons between methods. Although there were still a number of papers comparing vulnerability mapping indices and methods, by 2015 the presentations suggest that “vulnerability” has become much more broadly used with respect to aquifers threatened sideways from saline intrusion and upwards from fracking and other deep drilling. It was also applied in some presentations to over-exploitation and to climate change ie quantity aspects of groundwater. There was discussion during the meeting about the usage; personally I would prefer vulnerability to be retained in the groundwater profession in its more restricted original quality sense, and “susceptibility” or “sensitivity” used for quantity.

Thanks to our hosts

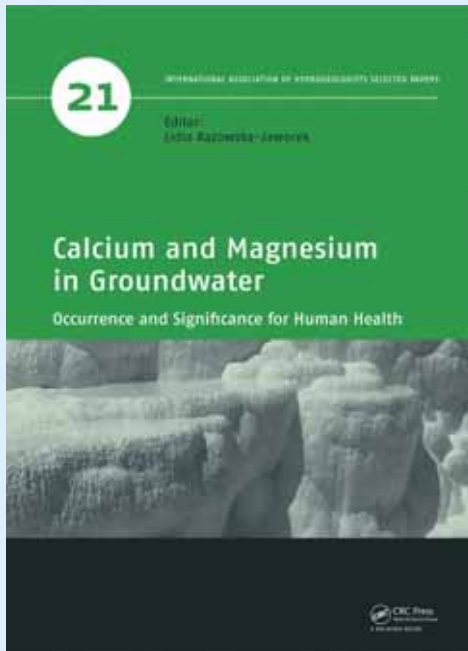
A high proportion of the participants were IAH members. A short IAH meeting was held one evening which was well attended and feedback was generally very positive with lots of people intending to come to Rome. Overall, it was an excellent meeting with substantial contributions from young professionals to both poster and oral sessions. Our Polish colleagues can always be relied upon to organise a good meeting and to be generous and welcoming hosts, and our thanks go to Jacek Rózkowski, Sabina Jakóbczyk-Karpierz, Andrzej Witkowski and all the members of the organising committee.

New in the IAH Book Series

Selected Papers on Hydrogeology (IAH-SP)

Series editor Nick S. Robins, *British Geological Survey, Wallingford, UK*

 **CRC Press / Balkema**
Taylor & Francis Group



Calcium and Magnesium in Groundwater: Occurrence and Significance for Human Health

Edited by Lidia Razowska-Jaworek, *Polish Geological Institute-NR, Sosnowiec, Poland*

Calcium and magnesium are abundant in groundwater, but the role of groundwater as the essential source of these important nutrients is very often neglected. Hydrogeochemical studies have focused mainly on the distribution and behaviour of constituents that cause deterioration of water quality, such as: nitrate, nitrite or iron and manganese. Therefore, most recent books and papers concentrate mainly on these constituents and only a small number of papers describe the results of groundwater studies on other important water components such as calcium or magnesium. Calcium and magnesium are of great importance to human wellbeing and inadequate intake of either nutrient can impair health. The main objective of this book is to present a selection of studies on calcium and magnesium in groundwater and to highlight their importance for human health.

The chapters in this book are written by hydrogeologists and hydrochemists as well as medical doctors and include: methods of investigation of calcium and magnesium in groundwaters, distribution and behaviour of calcium and magnesium in different aquifers, calcium and magnesium in bottled mineral and spring waters, and the significance of calcium and magnesium in waters for human health.

June 2014: Hb: 236 pp: ISBN 978-1-138-00032-2: £82.00 / \$129.95

To order: www.taylorandfrancis.com/books/details/9781138000322/

Also new in the IAH Book Series



Fractured Rock Hydrogeology

Edited by John M. Sharp

May 2014: Hb: 400 pp
ISBN 978-1-138-00159-6
£76.99 / \$119.95

To order:

www.taylorandfrancis.com/books/details/9781138001596



Assessing and Managing Groundwater in Different Environments

Edited by Jude Cobbing, Shafick Adams, Ingrid Dennis and Kornelius Riemann

October 2013: Hb: 304 pp
ISBN 978-1-138-00100-8
£76.99 / \$119.95

To order:

www.taylorandfrancis.com/books/details/9781138001008/

About the IAH Book Series

The **International Association of Hydrogeologists** serves scientists, engineers and other professionals working in the fields of groundwater resource planning, management and protection. Books published for IAH by CRC Press/Balkema – Taylor and Francis Group currently lie within two series titles: International Contributions to Hydrogeology (blue books), and Selected Papers on Hydrogeology (green books).

IAH members receive a 60% discount: find out more at <http://iah.org/members/book-discount>.

CRC Press/Balkema, Taylor & Francis Group, Leiden, The Netherlands
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www.crcpress.com

 **CRC Press / Balkema**
Taylor & Francis Group



YOUR OPINION COUNTS



IAH SURVEY 2015

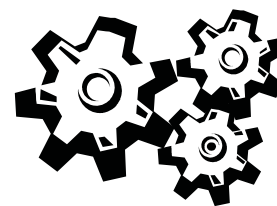
We are currently undertaking a survey to seek opinions, feedback and ideas for new benefits and services IAH might provide to its members and supporters.

The survey will be open until the end of August 2015. We are seeking representation from far and wide, so please do pass the message on. The results will be published later in the year and will be considered carefully by IAH's Executive and Council. Look out for reports and next steps on our website and in newsletters.

SECRETARIAT

 <https://www.surveymonkey.com/r/IAH2015survey>

IAH MENTORING SCHEME



As reported in our Spring newsletter (<https://iah.org/wp-content/uploads/2015/04/IAHspring15newsletterweb.pdf>), IAH began a fresh call for mentors via Survey Monkey earlier this year. Responses will be reviewed over the forthcoming weeks with the intention that a call for mentees be made during the Autumn of 2015. We would like to thank those who have continued to support our mentoring scheme - both mentors and mentees.

NEW MENTORS

Should you wish to act as a mentor and have not already registered, please do so as soon as possible. We have decided to keep registration open for a further few weeks; details are given at the end of this article. The sign up allows potential mentors to give their preference for which approaches to the provision of support they are most able or most interested in. Some simple guidance notes, including terms and conditions, have been prepared in collaboration with a mentoring professional and are available on the IAH website. These cover such issues as the personal rather than institutional nature of the advice, care with regard to endorsement of specific products or courses, maintaining confidentiality and not abusing trust.

LOOKING FOR ADVICE AS A MENTEE?

Rest assured - we still plan to put a call out later this year to IAH members hoping to receive advice. Look out for our announcements, which will feature in our next newsletter and online via our website and other communications.

OUR SCHEME IS YOUR SCHEME

We hope you will feel able to support this venture in the forthcoming years. Perhaps still in doubt? We have some feedback from a successful mentoring partnership, namely Mike Jones and Geraint Burrows; both have kindly agreed that their comments can be passed on. Read their story here: <https://iah.org/wp-content/uploads/2012/11/mentoringfeedback.pdf>.

SECRETARIAT

 <http://iah.org/knowledge/mentoring>

 <https://www.surveymonkey.com/r/IAHmentor2015>



NEW MEMBERS

A welcome to the following new members who joined our Association in the period
9 March - 22 June 2015:

ARGENTINA

Sr Hugo BISCEGLIA

AUSTRALIA

Cate BARRETT

Agi BURRA

Mr Nick CLAYDON

Dale COBBAN

Casa DALTON

Mr Shaun DAVIDGE

Christopher DORAN

Mrs Jeanne DROUET

Mr Andrew FARINA

Katherine FONTAINE

Lindsay FURNESS

John GROUNDS

Ms Hannah GROVES

Ben HALES

Mrs Danni HAWORTH

Dr Harold HOFMANN

Dr Cameron HOLLEY

Allison HORTLE

Mr Matt HUDSON

Adrian KONG

Calvin LI

Kashif MAHMUD

Miss N'Gom MARINE

Mr Mathew MATHESON

Ms Krystle NICHOLS

Melissa NYGA

Rebecca O'DONNELL

Matthew PANTON

Amy ROACH

Kathryn ROZLAPA

Dr Helen RUTLIDGE

Dirk SANDERSON

Bronislaw SMOLSKI

Lauren STEPHENS

Ruby STOVIN-BRADFORD

Baskaran SUNDARAM

Mr Neil SYMINGTON

Mr Radan TARIK

Sarah TAYLOR

Erin TELFER

Mr Michael THOM

Nur Syahiza ZAINUDDIN

BARBADOS

Kevin SEALE

BELGIUM

Dr Jef DAMS

Dr Estanislao PUJADES

Benedicta RONCHI

BOTSWANA

Mr Gaoetelwe GAGOOMANG

BRAZIL

Prof Reginaldo BERTOLO

Dr Eduardo HINDI

Gustavo LACERDA

CANADA

Ms Polina ABDRAKHIMOVA

Mr Nelson BERNAL-CORTES

Thomas BRADLEY

Mr Rob BYERS

Mr Stephen DUECK

Doug GELLER

Mr Nick GORSKI

Ms Sophie GUILLON

Mr Muhammad HASSAN

Jennifer HEIBERT

Mr Jiangyue JU

David KENT

Michael MCBRIDE

Colin MCCARTER

Travis MIKEL

Mr. Amir NIAZI

Grant NIELSEN

Mr. Igor PAVLOVSKII

Ms Marie-Amelie PETRE

Jasmin RAYMOND

Firoozeh SHEKARI

Vahid SOHRABI

Dr Colby STEELMAN

Ms Natalie SZPONAR

Rachel VAILLANCOURT

Michelle VOKATY

CHINA, PEOPLE'S REPUBLIC OF

Mr Yalei LIU

Mr Jiale WANG

Dr Wenjing ZHANG

COLOMBIA

Ms Maria Eugenia Perez LIZARAZO

Prof Roberto SERNA

COTE D'IVOIRE

Dr Koffi Theodore YAO

CROATIA

Mr Ivica PAVIČIĆ

CUBA

Prof Leslie MOLERIO-LEON

FRANCE

Mr Matthieu BAÏSSET

Agnes BERNARD

Ms Séverine CHARRIERE

Mr Aurélien DUMONT

Mrs Marie GENEVIER

Dr Solenne GRELLIER

Dr Elise GRISEY

Ms Emilie GUERET

Jean-François TAPOUL

GERMANY

Ms Sonja BEUEL

Prof Petra SCHNEIDER

Ms Alexa TERRELL

HUNGARY

Mr Tamas KEREGYARTO

Ferenc KORPAI

INDIA

Prof Ishtiyag AHMAD

Dr Sivakumar CHINNRAJ

Dr G KANAGARAJ

Anadi GAYEN

Ms Nidhi JHA

Dr Joseph SABU

Ms Nivedita PANDE

Aditya SHEKHAR

Dr S SOMARENDRO SINGH

Ranjan SINHA

Dr S.P. Sinha RAY

IRAN

Ms Masoumeh ALSADAT

Hashemi TAME

Mr Ehsan Malek ABBASLOU

IRELAND

Miss Lara BELTON

Dr Ciara FITZPATRICK

Ms Emma GILMARTIN

Dr David O'CONNELL

Dr John WEATHERILL

Mr Graham WEBB

ITALY

Mr Marino Domenico BARBERIO

Dr Angelo DOGLIONI

Manuela LASAGNA

Dr Marco Saulo NANNUCCI

Mr Simone Maria PIACENTINI

Dr Enzo RIZZO

Dr Francesca SANTALOIA

Dr Luca SIENA

Mrs Gennaro Alberto STEFANIA

Dr Livia Emanuela ZUFFIANÒ

JAPAN

Prof Hiroyuki LI

MEXICO

Dr Julian GONZALEZ

Dr José Iván Morales ARREDONDO



MOROCCO

Dr Abdelhakim JILALI

NEW ZEALAND

Mr Sean Joseph BERRY

Michael THORLEY

Mr Eric VAN NIEUWKERK

NIGERIA

Mr Olufemi ABIMBOLA

Mr Iliyasy GARBA

Dr Mohammed Yerima KWAYA

NORWAY

Gro EGGEN

Anna SEITHER

Mr Jonas The OLSEN

Ms Silje Marie VASSTEIN

Joyce WAKKER

PAKISTAN

Mr Zahoor Ahmed ABBASI

Ejaz AKHTAR

Aamir MUGHAL

NEW WORLD HOPE ORGANIZATION
(NWHO), (c)

Ismail SHAHZAD

PERU

Dr Dimas Apaza IDME

MR William LUDWICK

Mr Juan Fernando Rivera
VELASQUEZ

POLAND

Mr Marek SOLTYSIAK

RUSSIA

Ms Anna CHETVERIKOVA

Dr Olga KARIMOVA

Mr Yuriy KULIKOV

Mr Gennady TOROPOV

SERBIA

Mr Veljko MARINOVIC

SINGAPORE

Dr Alex COBB

SLOVENIA

Petra Zvab ROZIC

SOUTH AFRICA

Mr Eelco LUKAS

Ms Enez NICKALL

Mr Tinyiko NKUNA

Dr Saheed Adeyinka OKE

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SPAIN

Anna JURADO ELICES

SRI LANKA

Jayarathne HERATH

SWEDEN

Mr Fredrik ALDERMAN

Lars DAVIDSSON

Mrs Helen EKLUND

Mr Ezra HAAF

Mr Joachim ONKENHOUT

SWITZERLAND

Dr Boris MATTI

TUNISIA

Mr Mohamed Haythem
MSADDEK

TURKEY

Hakki Adnan CEYHAN

Mrs Gamze Gul MUNGAN

UNITED KINGDOM

Mr Michael ELLIS

Miss Karen HENWOOD

Philip HUBBARD

Dr Vera LANGER

Mr Nicholas MANNIX

Mr Martin John MCDONAGH

Dr Geoff PARKIN

Mr Tom READ

Mr Anton ZHYZHYN

UNITED STATES OF AMERICA

Prof Amvrossios BAGTZOGLU

Mr Brett WYCKOFF

Dr Andrea BROOKFIELD

Mr Stuart DYKSTRA

Nicholas GREEN

Mr Nathan KRANES

Mr David ELOPER

Mr John MOHR

Mr Daniel O'ROURKE

Mr Craig SAUNDERS

Tao WEN

NB: Those marked (c) are new IAH corporate members.

CHECK YOUR IAH DETAILS

Ensuring that our members receive their IAH entitlements such as the Hydrogeology Journal is important to us; communication is key. Are you receiving your regular IAH messages and alerts with HJ link and latest news digests? Do you work for a large government/commercial/educational organisation? Many such employers have firewalls in place. You may have to provide an alternative email address to receive your member mailings, or speak to your IT department. IAH emails are always sent from an @iah.org address. Our online mail campaigns are handled by a highly reputable Australian company called Campaign Monitor (also used by many well-known global entities).

Please check/edit your details regularly - we'd hate you to miss out.

SECRETARIAT



<http://iah.org/members/edit-details>



HARD ROCK HYDROGEOLOGISTS MEET IN FRANCE

The 20th Conference of the French Chapter of IAH, dedicated to the topic “Hard rock Aquifers: up to date concepts and practical applications”, took place in La Roche-sur-Yon, Vendée, France, between 11 and 14 June 2015. 180 participants were present for the two days of the conference, 90 went on the field trip on the first day, and 32 were present on the geological and touristic excursion on the last day on which they were able to observe spectacular outcrops of the stratiform fissured layer in granites and also some thermal springs and wells.

Participants came from 20 countries (France, UK, Switzerland, USA, Canada, Portugal, Benin, Burkina Faso, Algeria, Ivory Coast, Australia, Germany, Italy, Cameroun, Morocco, Nigeria, Ireland, Netherlands, Uganda, Belgium), with a total of 39 oral presentations and 42 posters, and were a well balanced mix of researchers, hydrogeologists from geological surveys, water agencies, local and government administrations and from consultancy companies and the industry. Simultaneous translation was provided throughout the technical sessions. The oral and posters presentations and the roundtables and debates were organized under three main topics:

[Conceptual models of hard rock aquifers](#)

Much of the research emphasis focussed on the processes determining their hydraulic conductivity. It was acknowledged that the hydrodynamic properties (hydraulic conductivity, storativity) of most hard rock aquifers depend on the depth and nature of the weathered layers. In regions where a saprolite layer measured in tens of metres is preserved from erosion, it can ensure the storage in the aquifer, whereas the underlying stratiform transmissive fissured layer may provide the hydraulic conductivity and thus the productivity of the aquifer. This layer is also often tens of metres thick, and the fracturing decreases with depth. It was also shown that most discontinuities in hard rocks such as lithological contacts, veins, dykes, faults, can be weathered to provide more permeable fractures. Where the saprolite and the fissured layer has been eroded away or is unsaturated, deeper discontinuities may be the target for drilling, but the storativity is likely to be strongly reduced. In some cases, such deep fractures can be connected to the surface with local groundwater-surface water relationships.

[Methods for mapping hard rock aquifer potential and for water well siting](#)

Several examples were presented from around the world, from the local scale (field geophysics) to mapping at the scale of a region or a whole country, such as Britany, Benin and Burkina Faso. Even if geophysical methods often cannot differentiate a permeable fissured horizon (with several permeable fractures) from a non-permeable or clogged one (this issue should continue to be a research topic for the coming years), it was clearly demonstrated that 2-D methods must be encouraged. In fact, 1-D electrical profile interpretation may be ambiguous: a surface heterogeneity can induce a similar signal to a deep structure.

Functioning of hard rock aquifers

Presentations and discussions under this theme focused on water resources management and protection and on modelling. Participants suggested that groundwater resources in hard rock aquifers can be managed and modelled similarly to those of others, such as porous aquifers. Processes such as denitrification, and the duration of non-point source pollution in hard rock aquifers were also explained and discussed, as well as methodologies for defining groundwater protection zones. Our French colleagues are to be congratulated for the high technical standard and excellent organisation of the conference and associated field trips.

ANTONIO CHAMBEL



Sweden

Our young national chapter in Sweden held its annual meeting on June 1st at Gothenburg University. It was by all accounts a success, with Hydrogeology Journal Editor Cliff Voss giving an outstanding presentation and upwards of 80 people present. Outgoing chair Jeff Lewis reports that the chapter is especially grateful to the University for providing the facilities for the day's events and for co-sponsoring Cliff's visit. The seminar following Cliff's talk focused on groundwater modelling in Sweden, including presentations providing the point of view of consultants, clients and academics.

During the formal annual meeting Roland Barthel, a professor at Gothenburg University was voted as chairman as Jeff's three year term as first chairman of the new chapter had elapsed. Malva Ahlkrona was voted in as the new treasurer and the temporarily vacant secretary position is being filled on an ad hoc basis by Niklas Blomquist until a suitable replacement can be found.

JOHN CHILTON



IAH Sweden: <http://iahsverige.se/>



Survey of National Chapters

We are currently conducting an online survey to update our information about IAH's national chapters. We know there are successful activities taking place at national level that could be transferred to or adapted by other chapters but presently we don't get to hear enough about them. Also, we don't really know what challenges you face that we centrally or other chapters could help with. We are very grateful for the comprehensive and very useful replies received so far, and would urge all chapters to complete the survey in the coming weeks.

JOHN CHILTON

AUGUST 2015

IAH REPORTS FROM...

Shammy Puri, IAH Secretary General, on three contrasting visits

IWRA Congress, Edinburgh

The IAH Commission on Transboundary Aquifers, jointly with the University of Strathclyde, the University of Dundee, AIDA, IWMI and UNESCO-IHP held a Mock Parliamentary Debate as a Special Session of the Congress. The background to the debate was stated in the title of the Session “Transboundary Groundwater Resources of Africa: the engine to stimulate human development and environmental sustainability”.

Taking part in the debate were the moderator: Richard Owen of the African Groundwater Network and the University of Zimbabwe, Alice Aureli, Chief of the Section for Groundwater Systems, UNESCO, Guy Howard, WASH Policy Team Leader, UK Department for International Development, Bob Kalin, Professor of Environmental Engineering for Sustainability, University of Strathclyde, our own Secretary General Shammy Puri, Kate Harawa, Malawi Country Director, Water For People, Karen Villholth, from IWMI in South Africa, Stefano Burchi, Consultant on water law, policy and administration and chairman of AIDA and Marcella Nanni, a consultant on water law, policy and administration and vice chair of AIDA.

Two motions were debated. Firstly “This house believes that the Eureka moment for groundwater as a stimulus for development has not yet arrived in Africa.” The vote at the end of this debate rejected the motion. The second motion, which was adopted in the vote, was “This house believes that agencies across Africa are missing the point on sound groundwater governance” (pictured below).



While the debating and point scoring were light hearted, there were many important and relevant points made both by the debaters and the audience, the latter being much stimulated by the structure of the discussion.



[the ECHN were also active at IWRA, see page 13]

Dushanbe “Water for Life Decade”

IAH Secretary General Shammy Puri represented the Association at a High Level Round Table co-convened with UNESCO-IHP at the Dushanbe Conference which brought to a close the UN Decade on Water for Life 2005 – 2015. The conference was attended by over 900 delegates from across the world, as well as a number of Ministers and senior officials from Ministries of Water. Much of the discussion and presentations were devoted to the achievements of the Decade, in particular the delivery of WASH programmes under the MDGs. It was noted that while significant progress has been made, there is still room for improvement, in particular in the operation and maintenance of water and sanitation facilities. A strong case was made by Ministers in the final Declaration that water related goals should be included in the new SDGs that will be adopted by the UN in September this year. The Round Table, co-hosted by IAH, focussed on ‘Water Cooperation as a catalyst to achieve water related goals’. In particular, the role of science diplomacy as a stimulus to cooperation was stressed.



SHAMMY PURI

Institute for Groundwater Studies Bloemfontein, South Africa

The Institute for Groundwater Studies (IGS) is a groundwater research group in Africa focussing on aspects related to fractured rock aquifers, groundwater resources and governance, contamination at industrial and mining sites, and lately shale gas and hydraulic fracturing (fracking). Founded in 1974, IGS is currently under the directorship of Danie Vermeulen. The IGS is in the process of establishing a SADC Groundwater Management Institute, sponsored by the World Bank. To coincide with this process, Shammy visited IGS. The aim of the visit was to further cooperation between IAH, its Transboundary Commission, and IGS regarding research and education on transboundary aquifers in the SADC region. During

the visit, Shammy presented lectures on transboundary aquifers to postgraduate students at the IGS. He will be returning later in 2015.

SHAMMY PURI



From left: Prof Neil Heideman, Dean of the Faculty of Natural and Agricultural Sciences, Mr Shammy Puri, IAH Secretary General and Prof Danie Vermeulen, Director of the Institute for Groundwater Studies. Photo courtesy of IGS.

...and António Chambel, Vice-President for Programme and Science Coordination, after his visit to Korea

Asia-Pacific Regional Meeting, Jeju Island

The Korean National Chapter of IAH hosted a regional conference on groundwater in islands and coastal zones in the splendid surroundings of the volcanic island of Jeju in April. About 150 participants representing academia, public institutions and industry from Korea, Japan, Australia, USA, Germany, China and Taiwan attended the meeting. There were also Indian and Ethiopian participants who are currently working or studying in Korea. There were five invited speakers, Stephen Gingerich (USGS Pacific Islands Water Science Centre, USA); Frank Schwartz (Ohio State University, USA); Robert Duncan (Oregon State University, USA); Chunmiao Zheng (Peking University, China) and Makoto Taniguchi (Research Institute for Humanity and Nature, Japan). A total of 29 oral and 55 poster presentations were made.

The meeting concluded with a field trip to a drilling site on Jeju Island which was around 600 m deep, a tuff volcanic

cone and a lava tube, both of which are designated World Heritage Sites by UNESCO. Vice-President for Asia, Jun Shimada, and Vice President for Science and Programme Coordination represented IAH at the conference, the latter on his way to the World Water Forum.



Field trip to drilling site, Jeju Island. Picture courtesy of Antonio Chambel.

[continued over...]

AUGUST 2015

IAH REPORTS FROM...

[...continued from previous]

World Water Forum Daegu, Korea

António also represented the Association at the World Water Forum to participate in two side meetings dedicated to launching i) the outputs from the GEF groundwater governance project and ii) the “Global groundwater vulnerability to floods and droughts” map prepared by UNESCO-IHP and BGR. António was a round table panelist in the first and talked about the role of IAH in WHYMAP in the second



This launch event sees the formal end of the GEF project in which IAH has been a partner during the last three years. Presentations on the project focused on the three main products of the work, the global diagnostic, the vision and the framework for action. Panellists from the partner organisation then answered questions and contributed to a wide ranging discussion amongst the 65 participants, who raised a wide range of issues. These included the positive and negative roles of incentives, ownership of groundwater, links between governance of groundwater and land, differences in governance between aquifers having different levels of exploitation, the poor usage of science-based information for groundwater management and how this might be addressed, policy on non-renewable groundwater, to cite but a few.

All of these issues had been mentioned in the project documents which attests to the project’s comprehensive coverage of groundwater governance. Feedback since the WWF confirms the success of the side event, the excellent collaboration between the project partners and the quality of the project outputs.

We now need to turn our attention to making the recommendations from the project into the reality of improved governance and management of groundwater. The upcoming Rome Congress presents the first opportunity to take the next steps, with a technical session on groundwater governance and a side event showcasing the results of the GEF project.

SECRETARIAT



Project outputs available

The comprehensive technical documentation produced by the GEF/Groundwater Governance project which is available from the website includes the versions of the three main outputs prepared for the World Water Forum, together with the case studies and thematic papers and reports from the regional consultations.



For more information, including free resources:
<http://www.groundwatergovernance.org>



IGRAC ANNOUNCES NEW GROUNDWATER MAP

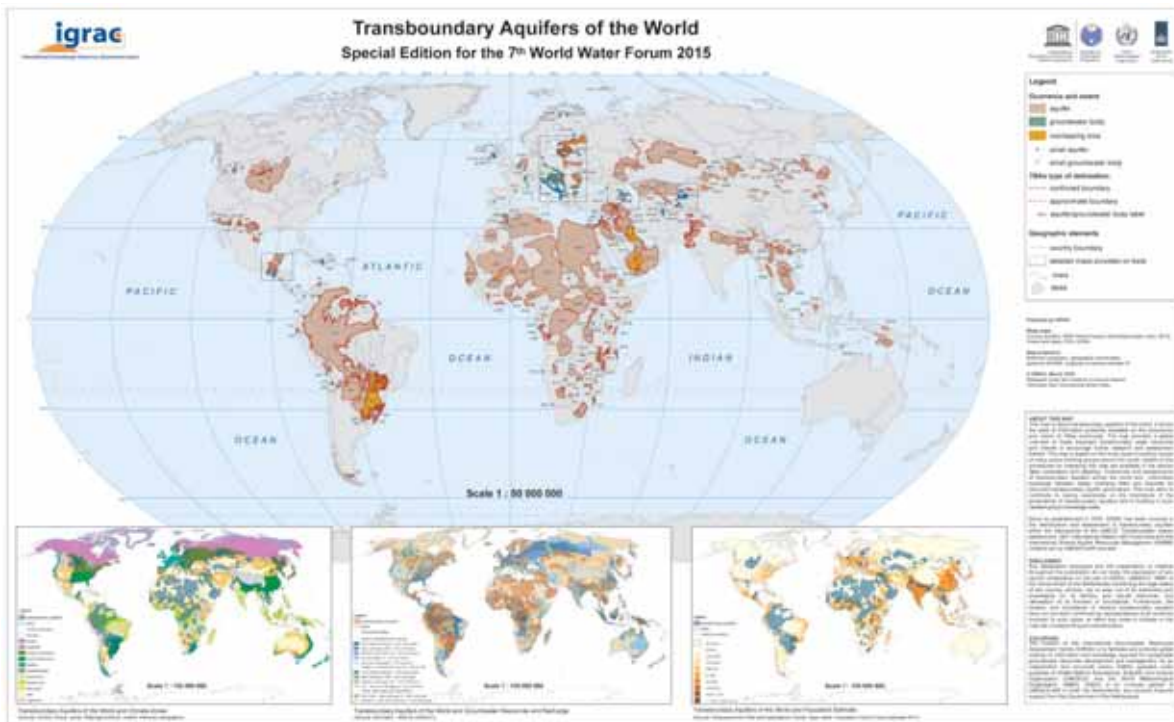


Image source: <http://www.un-igrac.org/publications/589>

Following its official launch at the World Water Forum in Korea, the 2015 edition of the Transboundary Aquifers of the World Map is now available online. This special edition, which includes a series of three thematic maps which overlay the Transboundary Aquifers of the World, is available as PDF and JPEG from the IGRAC website. Hard copies of the map can also be obtained from IGRAC.

The 2015 Map of Transboundary Aquifers of the World (TBA Map 2015) shows the information presently available on the occurrence and extent of Transboundary Aquifers worldwide. There are now 592 identified transboundary aquifers, including 226 transboundary 'groundwater bodies' as defined by the European Union Water Framework Directive.

 <http://www.un-igrac.org/publications/589>

STEPHEN FOSTER - WEBSITE AND ARCHIVE

IAH's Past President 2004-08, Stephen Foster, informs members that he has prepared and launched a personal website (Groundwater–Hidden Resource & Concealed Hazard) with the specific aim of providing ready access to his earlier published work (1970s-1980s), in view of regular requests that he receives for copies of some of these papers. The website



archives and classifies the publications under six topics: Fractured Aquifer Dynamics, Groundwater Pollution Protection, Strategic Role of Groundwater, Groundwater Governance and Management, Urban Groundwater and Agriculture and Groundwater. It includes early papers on diffuse agricultural pollution, pollutant transport in porous fractured media, aquifer pollution vulnerability and urban groundwater systems.

[STEPHEN FOSTER](#)

 www.drstephenfoster.com

IAH CONGRESS, 2015



Rome fast approaching...

As was reported in some detail in the last newsletter, the Rome congress was planned for the Angelicum, a theological university in the city centre dating back to the 16th century. However, because of continuing substantial roof renovation work it was decided to transfer the congress to the main campus of La Sapienza, Rome's largest university. Preparations have continued apace to take advantage of the excellent facilities provided by the university.



LATEST NEWS

Following the successful pattern established at recent congresses, there will be several keynote speakers spread throughout the week, covering the main topics. These are: Ramon Aravena (University of Waterloo), Alice Aureli (UNESCO-IHP), Ghislain de Marsily (University of Paris), Nico Goldscheider (Karlsruhe Institute of Technology), Rainer Helmig (University of Stuttgart; Henry Darcy Distinguished Lecture), Beth Parker (University of Guelph), Cliff Voss (USGS; GSA Birdsall Dreiss Distinguished Lecture) and Chunmiao Zheng (Peking University).

At the time of writing, a draft detailed technical programme has been prepared and will be available on the congress website by the time you receive this newsletter. There will be about 400-420 oral presentations and almost 500 posters. The organisers have informed us that at the end of June nearly 650 participants had registered, and more than 500 have signed up for the mid-week field trips, of which four are now full. As reported elsewhere in this newsletter, many of IAH's commissions and networks will be meeting in Rome, and you are warmly invited to attend and to join in their activities. We will also be holding our Annual General Meeting a meeting of national chapter representatives, and the ECHN will have its annual meeting and social event. The Hydrogeology Journal editorial team will also be in Rome and will hold its meeting on the weekend after the congress. A full and busy week is scheduled and we certainly look forward to seeing you there!



Congress website - <http://www.iah2015.org>



BOOK EXCHANGE TO BE REPEATED IN ROME

Following the success of last year's free book exchange at the congress in Marrakech, the IAH Secretariat and the ECHN are planning to repeat this in Rome. At a specific time to be decided during the congress, delegates will be invited to select a free book from those displayed at the IAH stand. Last year we had many satisfied (and a few disappointed) congress participants, so we would urge members coming to Rome to look out groundwater-related books which they (or their colleagues along the corridor) no longer require and bring them to donate for the exchange. Everything was taken by grateful recipients last year, so please do bring along something! We look forward to your support.

SECRETARIAT



Please find space to bring along groundwater-related books you no longer need for our free book exchange!

2015 IAH ANNUAL GENERAL MEETING

Notice is given that the 2015 Annual General Meeting of the International Association of Hydrogeologists will be held in the Auditorium at the Sapienza University of Rome at 17.30 on Tuesday 15th September. All members of the Association who have fully paid their subscriptions for the current year are entitled to attend and participate in the proceedings. Guests are welcome.



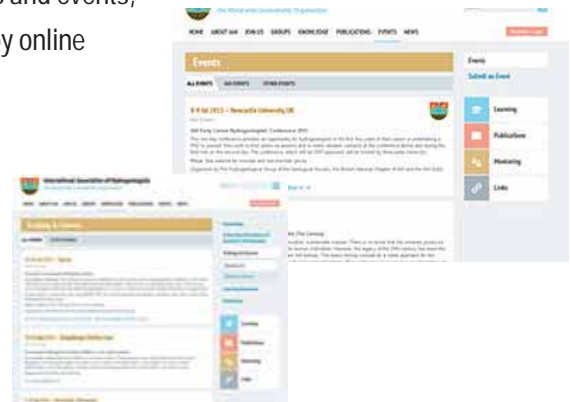
ORGANISING A MEETING OR COURSE?

IAH's website holds two essential listings - one for upcoming meetings and events, the other for course and training information. Submitting information by online form is easy for organisers. Follow the links below.

SECRETARIAT



- <http://iah.org/knowledge/training>
- <http://iah.org/knowledge/submit-a-course>
- <https://iah.org/events>
- <https://iah.org/submit-an-event>



AUGUST 2015

2015



13-18 September – Rome, Italy
42nd IAH International Congress

Under the title “Back to the future” seven main topics have been listed; many scientific sessions will be developed under these general themes, in scientific partnership with FAO and UNESCO IHP. Organised by IAH Italian Chapter.

<http://www.iah2015.org>

20-25 September – Zadar, Croatia
ESIR Isotope Workshop XIII

Organised by European Society for Isotope Research, the Ruder Boskovic Institute and the University of Zadar.

<http://esir2015.irb.hr>

21-23 September – Lyon, France
EcoHydrology'2015

Measuring, Modeling and Managing of the Natural Processes related to Water flows, Social Values of the linked Ecosystem Services. Organised by IRSTEA, ENS de Lyon, ISA Université de Lyon, Université Claude Bernard Lyon1.

<http://ecohydrologie.sciencesconf.org>



21-24 September – Vienna, Austria

LuWQ2015 – International Conference on LAND USE and WATER QUALITY: Agricultural Production and the Environment

An interdisciplinary conference on the cutting edge of science, management and policy to minimise effects of agriculture and land use changes on the quality of groundwater and surface waters. Organised by Universität für Bodenkultur Wien (BOKU), University of Natural Resources and Life Sciences, Vienna, Austria (principle organizer) and other institutions. Co-sponsored by IAH.

<http://web.natur.cuni.cz/luwq2015/>

21-25 September – Berlin, Germany

FEFLOW 2015 - MODELLING THE WORLD OF GROUNDWATER WITH MIKE BY DHI.

Building on the huge success of the previous FEFLOW conferences, FEFLOW 2015 will feature numerous opportunities for business networking, exchanging ideas and further improving your modelling skills. Organised by DHI-WASY GmbH.

<http://www.feflow.com/feflow2015>



23 September – Nieuwegein, The Netherlands

The Value of Groundwater

The benefits that groundwater provides can be monetised to compare different benefits and to compare them with the costs of pollution or of enhancing the resource. Particular knowledge gaps are related to carbon sequestration, regulation of flood flow, prevention of subsidence, ecological impacts. Organised by The IAH Netherlands National Chapter and the Netherlands Hydrological Society.

<http://www.hydrology.nl/iahevents/478-the-value-of-groundwater-23-september-2015.html>

28 September - 1 October – König-Karls-Bad, Bad Wildbad, Germany

Conference on Modeling Natural Barriers.

Workshops on “Modeling Storage in Deep Layers” and “Modeling the Barrier Function of Human Skin”. Organised by G-CSC (Frankfurt University), GRS gGmbH, Institute for Geosciences (Jena University).

<http://gcsc.uni-frankfurt.de/mnb2015>

5-6 October – Sao Paulo, Brazil

CIMAS: The 4th International Congress on the Subsurface Environment

A top-level technical and scientific event focused on future trends in the technical, legal and academic fields involving underground environments. The event will run simultaneously with FENÁGUA – the National Waters Fair, where visitors will have the opportunity to find out about new products and services from the water and underground environment industries. Organised by ABAS, The Brazilian Groundwater Association.

<http://abas.org/cimas/>



<http://iah.org/events>

For a fuller list of conferences, events and meetings and to submit an event

CONFERENCE LISTING

