

NEWS

& information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

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

DECEMBER 2014

ENHANCING EDUCATION AND ACADEMIC DEVELOPMENT

Also in this issue:

From the President
Commissions & networks
Media focus
Karst symposium report
New members
Conference listings

and the usual IAH
announcements and
updates



Bruce Misstear reports on IAH's ambitious plans for education and training resources and activities. These cannot be realised without the support and participation of our members. *See page 7*

OPEN CHOICE INITIATED



As reported in our May newsletter, the Open Choice option for IAH's Hydrogeology Journal (HJ) was made available from 1 September. *Page 15*

41ST CONGRESS, MOROCCO



For the first time our Congress came to the Middle East and North Africa Region, courtesy of our hosts the Moroccan National Committee of IAH. *Congress reports pages 8-13; IAH Awards page 21*





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Groundwater Vistas

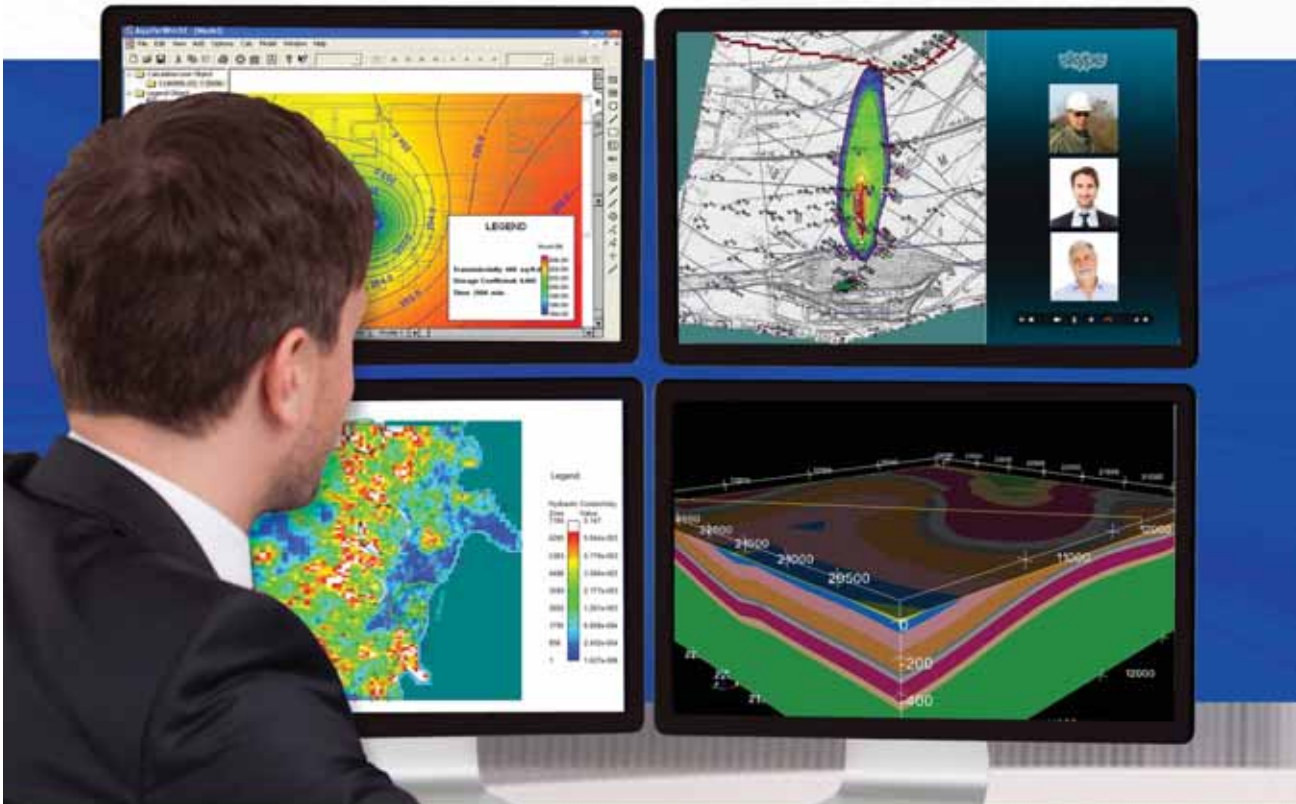


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A moment of reflection...

As 2014 draws to a close, we can reflect on another good year of activities for the Association, some of which are reported here. We should, for example, be grateful to our editorial team and our publishers Springer for working together to ensure that the Open Choice option is now available for the Hydrogeology Journal. At the Congress in Marrakech, excellent attendances at and participation in the ECHN events, the AGM, the chapters meeting and the commission and network meetings all reported in this newsletter testify the growing interest of our members in IAH activities. We need to be able to respond by strengthening our support for all of the Association's component parts. Some activities and tasks need time and thought and are still underway, as reported in the newsletter. The Education Working Group has made an excellent start but we will need your help to enable their recommendations to be taken up and implemented. IAH's Council and Secretariat are working to review our Articles and Rules. Although we hope not to have to touch the Articles, some changes to the Rules are needed, and you will hear more about this in 2015. The new IAH website is working well, but further developments are always needed, and you will continue to see and to benefit from these as they come to fruition.

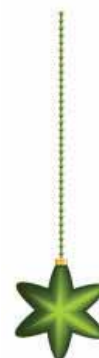
JOHN CHILTON

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Season's greetings

The IAH Secretariat - John, Kellie, Sharon and Sue - thank you for all your support and encouragement through 2014 and wish you a happy festive holiday season over Christmas and a peaceful and successful New Year.



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 info@iah.org



End of year message

It's hard to believe that 2014 is already coming to a close. It's been a very busy year with much accomplished, yet still much to do! Where does the time go? I am grateful to my colleagues on IAH Council and the IAH Executive who consistently contribute at the highest level on behalf of our association. Special thanks are also due to the IAH Secretariat who work tirelessly behind the scenes and to Cliff Voss and his HJ editorial team who continue to keep our journal at the global cutting edge.

But it's not only the top of the tree that is bearing the fruit. Many of our Commissions, Networks and National Chapters have been very busy during 2014 developing on-line social- and technical-networking sites and organising a wide range of meetings, workshops and seminars. This year, my personal highlights included the Geological Society of America annual meeting in Vancouver where the US and Canadian National Chapters of IAH sponsored a series of well attended technical sessions, and the "V Congreso Colombiano de Hidrogeología" that was organized flawlessly in Medellin by the Colombian National Chapter of IAH. I also enjoyed other conferences, some excellent, in Singapore, China, Azerbaijan and Morocco (the IAH Congress), re-uniting with long-time IAH colleagues and engaging with new members. I continue to be immensely impressed by the infectious enthusiasm and energy expressed by the many early career hydrogeologists I meet on my travels, and strongly support Council's initiatives aimed at encouraging our younger IAH members to become more actively involved in our association.

2015 promises to be a "banner year" for IAH with numerous meetings at the local, regional and global scale. You will be spoilt for choice! The Italian Chapter of IAH is doing an outstanding job in its planning of mid-September's Congress in Rome and this promises to be an event that qualifies as "not-to-be-missed". Abstracts are now being accepted! The Korean National Chapter is also busy preparing for a springtime conference, this time a "regional" south-east Asia conference to be held in April on the spectacular volcanic island of Jeju, while the Canadian National Chapter, aided by its US colleagues, is similarly mounting a regional North America conference to be held in Waterloo, Ontario during late October. In addition, various more specialised meetings are being planned or co-sponsored by IAH and its National Chapters and Commissions. These include a late-May conference on groundwater vulnerability co-organised by the Polish National Chapter, a Karst conference to be held in UK during June co-sponsored by our Karst Commission, and a late-September conference on land use and water quality in relation to agricultural activities to be held in Vienna, Austria.

With such an exhaustive array of events lined up, it's easy to predict that 2015 will be a busy and highly productive year for many of you. May I take this opportunity to wish that 2015 also brings you good health, happiness and prosperity. Finally, to those fortunate enough to take some well-earned rest during this end of year "holiday season", please enjoy! I intend to do exactly that!

KEN HOWARD, IAH PRESIDENT



MEDIA FOCUS

A selection of groundwater features from around the world

Iceland: Changes in groundwater may signal large earthquakes

The results of a new study on two large earthquakes in the northern part of Iceland in 2012 and 2013 indicate that changes in the chemical composition of groundwater in areas prone to earthquakes may be used to predict large earthquakes and to improve knowledge of processes in the earth's crust that take place before such earthquakes. "The results of the study show that two to six months prior to the quakes changes in the groundwater emerged, such that the proportion of local precipitation water in the geothermal water increased. The proportion was back to its previous state around three months after the quakes. Simultaneously there were change in dissolved chemicals such as sodium, calcium and silicon, a change prevalent for four months," explained Árný Erla Sveinbjörnsdóttir of the Institute of Earth Sciences at the University of Iceland and one of the contributors to the study. Árný pointed out that the changes in groundwater proved to be statistically significant and are in all likelihood linked to the earthquakes but she stressed the researchers are not saying that this proves the geochemistry of groundwater can predict large earthquakes – more research is needed. The results were recently published in the journal Nature Geoscience.

<http://icelandreview.com/news/2014/10/19/changes-groundwater-may-signal-large-earthquake>

http://english.hi.is/frettir/changes_chemical_composition_groundwater_may_be_precursors_large_earthquakes

<http://www.nature.com/ngeo/journal/v7/n10/abs/ngeo2250.html>

Japan: Radioactivity levels up sharply in Fukushima groundwater

Levels of radioactivity in groundwater at Fukushima have risen steeply in recent monitoring, probably affected by the heavy rain resulting from Typhoon Phanfone as it passed over Japan, reports the Tokyo Electric Power Company (Tepco). The tritium concentration in one groundwater sample increased more than tenfold, a record for the well and the Strontium-90 concentration also reached a record level at the same well, the utility said. Further very heavy rain can be anticipated during the typhoon season.

<http://www.japantimes.co.jp/news/2014/10/12/national/tritium-surges-10-fold-in-groundwater-at-fukushima-nuclear-plant-typhoon-effect-suspected/#.VEoVYk1waUk>

<http://www.tepco.co.jp/en/press/corp-com/release/index-e.html>

California: Satellite images reveal groundwater loss

Scientists working on the GRACE mission have released a series of images reflecting the drastic loss of groundwater over the last dozen years. NASA's two Gravity Recovery and Climate Experiment or GRACE satellites have been in orbit since 2002, making highly sensitive measurements of the Earth's gravity field. Variations in the gravity field can be caused by a number of factors, including the amount of water stored underground in soil and rocks. Worst hit, according to NASA, are the Sacramento River and San Joaquin River basins, where water has been pumped out to support agriculture in the Central Valley and elsewhere. "Most climate models indicate that by the end of this century, the dry regions of the world will become drier," researchers James Famiglietti of UC Irvine and Matthew Rodell of NASA's Goddard Space Flight Center, wrote in a perspective essay published in the journal Science.

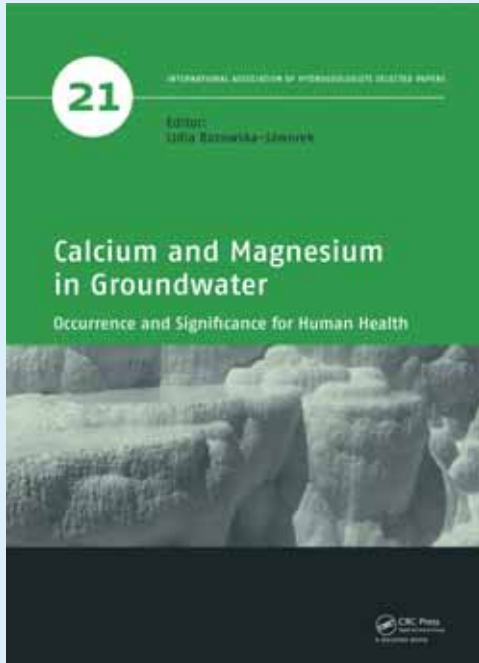
[http://www.latimes.com \(images\)](http://www.latimes.com (images))

[http://www.sciencemag.org \(article\)](http://www.sciencemag.org (article))

New in the IAH Book Series

Selected Papers on Hydrogeology (IAH-SP)

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



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/

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Fractured Rock Hydrogeology

Edited by John M. Sharp

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

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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>.

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ENHANCING EDUCATION AND ACADEMIC DEVELOPMENT



Bruce Misstear, IAH Vice President for Finance and Membership

Many of the core activities of a professional association are directed towards the education and academic development of its members, the broader groundwater community and the general public. For IAH, this has historically included our congresses, books and journal publications and the work of our commissions, together with events and activities of our national chapters. The Forward Look in 2010 provided an opportunity to review IAH's educational activities, and the new website gives us a platform to develop some of these in new ways.

As part of this review process, a working group was set up in May 2013 to undertake a feasibility study of the options for provision of training courses and materials.

The group (in alphabetical order) consisted of:

Bruce Misstear, Ireland (Chair; IAH Executive)

Daniel Nkhuwa, Zambia (African Groundwater Network)

Suzanne Pierce (US National Chapter)

Viviana Re, Italy (Early Career Hydrogeologists' Network)

Andrew Stone, USA (Commission on Groundwater Outreach)

Andrzej Witkowski (Polish Chapter)

The group's activities included a survey of on-line training resources and web-based educational materials, and seeking member's views via the newsletter and an on-line survey (in April 2014). A report on the group's work was presented to Council in Marrakech, with recommendations which included the following:

- creating a separate "Education and Training" banner on the IAH website home page;
- preparing a list of hydrogeology degree courses available around the world, with links to course information from the IAH website;

- listing short courses, field courses and webinars organised by national chapters;
- developing an IAH YouTube channel;
- linking with existing webinar providers to produce IAH-branded talks;
- compiling an international panel of experts willing to give their time to contribute to short courses organised by national chapters;
- preparing IAH-branded educational materials;
- developing a series of short thematic papers on key strategic topics to increase awareness of groundwater issues.

Council warmly thanked the working group for its productive work and comprehensive report, and accepted the recommendations. The findings of the working group were also outlined to members at the Annual General Meeting in Marrakech.

For each of the proposed products or resources, one of the first tasks will be to define the target audience. Under the overall Forward Look Action Plan, a small budget of €4000 was established for this activity and this will be used over the next three years to take up and implement these recommendations. Even with an active working group, these ambitions cannot be realised without the support and participation of our members and you are invited to contact myself or Executive Manager John Chilton if you are particularly interested to be involved in one or more of these activities.

BRUCE MISSTEAR AND JOHN CHILTON



Questions or comments? Email info@iah.org

DECEMBER 2014

Report by John Chilton

IAH 41ST CONGRESS



This year for the first time the IAH Congress came to the Middle East and North Africa Region, courtesy of our hosts the Moroccan National Committee of IAH. Some 400-450 participants gathered in the impressive conference centre of the Ryad Mogador Hotel in Marrakech. Following some dramatic traditional Berber music and dancing, the opening session highlighted a welcome from Madame Charafat Afilal, State Secretary for the Water Department, Ministry of Energy, Mines, Water and Environment. Coming from a hydrogeological background herself, Madame la Ministre reminded us of the importance of groundwater to Morocco and of our responsibility to take care of such a precious resource. The first two invited keynote speakers built on this introduction by providing us firstly with very informative background on the national groundwater situation in Morocco and then more locally in the Tensift Basin which contains Marrakech.

The week's busy schedule continued with the usual mix of invited keynotes, parallel sessions and poster displays. The congress programme made space for meetings of IAH's Council, the Annual General Meeting, the ECHN and meetings of other commissions and networks, all of which are reported elsewhere in this newsletter. The congress dinner at a large tourist complex on the other side of the city featured a spectacular display of Berber horse riding and dancing.

A new development for this congress was the first book exchange held as a joint initiative between the IAH Secretariat and ECHN. We are really grateful to the delegates who brought with them to Marrakech their surplus hydrogeology-related books and made the book exchange possible. In particular we would like to thank Richard Carter, Bridget Scanlon, and colleagues from the British Geological Survey for bringing whole boxes of books to Marrakech. Delegates were invited to select books at the IAH booth on the Thursday morning and by lunchtime all of the books had been taken, leaving many satisfied and a few disappointed congress participants. We certainly intend to replicate this initiative at

future IAH congresses, and will be putting out a call for books in due course.

A definite attraction of the advertised 41st congress programme was the series of post-congress field visits, and these did not disappoint. Although the walking trip in the Atlas Mountains had to be cancelled with too few takers, the three remaining field trips were very successful and probably the best attended of recent congresses. Those who were lucky enough to cross the High Atlas to the southern oases experienced heavy early season rain. It was in fact slightly surreal to be walking over the sand dunes of Merzouga in pouring rain! We were told that it was the first two successive rain days there since 2006. On the way back from Merzouga, one route was closed due to flood damage and on the alternative route the group was obliged to wait a couple of hours for a river crossing to subside enough for the minibuses to cross, as shown below.

What of the overall reflections on the congress? Certainly there were some bumps along the way, which we will address to avoid recurrence at future congresses, but most participants will have left Marrakech with good memories of the congress and the old friends met and new friends made. The strong attendances at the ECHN events, the IAH General Assembly and the chapters meeting and the active commission and network meetings during the week testify to the growing interest of our members in the Association's activities. We are very grateful to Mohamed Aboufirass and our colleagues of the Moroccan National Chapter of IAH for their hard work over the last two years and during the congress week. It is no small achievement to organize an international conference of this size, so well done.

Post-congress field trips...



COMMISSIONS & NETWORKS

Managed Aquifer Recharge

At the IAH MAR Commission Plenary in Marrakech there were 20 attendees and 8 apologies. After a welcome by co-chair, Peter Dillon, Andrew Ross gave an overview of groundwater in IHP 8 (2014-2021) with a focus on water security. Theme 2 is 'Groundwater in a changing environment' and Focal Area 2.2 addresses strategies for management of aquifer recharge. Some of the specific IHP objectives are reflected in the MAR Commission's working groups:

- Integrating MAR into IWRM to address the effects of locally changing climate, population and food production (with the Climate Change Commission led by Bridget Scanlon). A special Issue of Environmental Research Letters is in preparation – more papers are sought;
- Develop and apply methods to assess the impacts of recharge structures on water availability and quality, social and economic resilience and local ecosystems (the economics working group is looking for a new leader to replace Andrew Ross)– anyone interested contact a Co-chair). Also Yan Zheng leads the working group on MAR and Development and will be running a workshop at ISMAR9 in Mexico City 2016;
- Evaluate the risks and benefits of recycling of appropriately treated urban waste and storm water for aquifer recharge (a MAR-SAT group is being formed);
- Enhance governance capacities and institutional and legal frameworks to aid effective MAR implementation (Policy and Governance Working Group led by Sharon Megdal – has produced a special issue of Water on MAR Policy and Economics);
- Develop a scientific basis for the prevention and management of clogging (Clogging and its management working group led by Russell Martin is seeking more papers on management).

Ralph Klingbeil then led a discussion of MAR in the MENA region, leading to a proposal for a MAR workshop at the

IAH Congress in Rome. From ISMAR8 in Beijing in October 2013, 31 papers have been accepted for special issues of three journals: Environmental Earth Sciences, Water, and ASCE J Hydrologic Engineering, thanks to Jim Lamoreaux, Sharon Megdal (Policy and Economics of MAR) and Zhuping Sheng and Xuan Zhao respectively. PDFs of powerpoint presentations, posters and non-journal paper presentations from consenting authors have been mounted on the IAH MAR web site. A new working group is being formed to write a book chapter on 40 years R&D in MAR (contact Peter Dillon by email pdillon500@gmail.com).

PETER DILLON



Find out more

<http://recharge.iah.org>

<http://link.springer.com/journal/12665>

http://www.mdpi.com/journal/water/special_issues/MAR

<http://ascelibrary.org/journal/jhyeff>

Coastal Aquifer Dynamics and Coastal Zone Management (CAD-CZM)

The IAH Network on Coastal Aquifer Dynamics and Coastal Zone Management aims to promote a better understanding of the specific hydrological process dynamics in coastal areas, and improve the management of water resources endangered by saltwater intrusion. During the congress the network presented its new website, explaining how it is intended to collect and organize data on coastal aquifer characteristics from all over the world. This information will be available to researchers, professionals, and stakeholders and responds to various recommendations by UNESCO and IAEA to improve integrated coastal zone management in the frame of joint programs, working in cooperation with other international agencies. A network meeting was also held. Participation in the network is invited; to find out more and to complete the network's questionnaire visit the website.

GIOVANNI BARROCU, CHAIR



<http://www.iah-cad-czm.net/>



Early Career Hydrogeologists' Network (ECHN)

ECHN has just completed its fourth congress and is proving to be a continued positive addition to IAH events. Every year the network grows a little more and we can see the fruits of our collaborative work with young members, with new ideas, energy and enthusiasm, becoming more and more involved in the association and contributing to the success of IAH initiatives. This is also evident from the ECHN-National Branches that have been created and are under creation or consideration in different countries (see page 19).

Marrakech saw the participation of about 100 delegates registered as Early Career Hydrogeologist who contributed with their posters and oral presentation to the lively discussions during the conference. As it is now becoming a tradition, the main event was the ECHN Annual General Meeting followed by the Social Function, both held in the congress hotel.

During the General Meeting we had an opportunity to award the winner of the first ever 'Coolest Paper of the Year' Award, promoted with the objective of energizing the early career hydrogeologist community and encourage the discussion of newly published papers. The definition of 'cool' has been deliberately left open to

interpretation to inspire a wide range of nominations and voting. The competition was divided into two phases. A nomination period in which we asked ECH to nominate any hydrogeology paper published (online or in volume) during 2013 in any peer-reviewed journal that inspired with its originality, creativity, thoroughness or any other criteria. In the second phase we asked ECH to vote for the nominated papers. The winner was Dr Sebnem Arslan from the Middle East Technical University, Ankara, Turkey, with the paper Arslan, S., Yazicigil, H., Stute, M., & Schlosser, P. (2013).

Environmental isotopes and noble gases in the deep aquifer system of Kazan Trona Ore Field, Ankara, central Turkey and links to paleoclimate.

Quaternary Research, 79(2), 292-303. Sebnem received free IAH

membership for a year, a book from the IAH book series and was invited to present the winning paper during the congress.

During the Social Function, the ECHN in collaboration with Hydrogeologists without Borders-UK (HWB) encouraged early career hydrogeologists to become Hydro Heroes by proposing a solution for a real hydrogeological issue in Myanmar.

This proved to be an interesting and fun exercise, well appreciated by the 100 participants, and we hope this initiative could be the first step in a closer collaboration with HWB. We are really grateful

to Teodora Szocs (Vice President - Europe West and Central), Luiz Amore (Vice President - Latin America and the Caribbean), David Kreamer (Vice President - North America), Shammy Puri (Secretary General), Ahmed Fekri (IAH Morocco) and Ken Howard (IAH President) for being a wonderful jury for the ECHN Hydro Heroes.

ECHN also organized a lunch side session to provide early career delegates with useful tips for their career development. More than 40 delegates listened to Bruce Misstear (IAH Vice President – Finance and Membership) on “Being effectively

[continued over...]



COMMISSIONS & NETWORKS

[...continued from previous]

succinct: Tips on presenting your research in 15 minutes or less” (as pictured). Subsequent discussions were chaired by Gillian Hurding (ECHN-IAH Co-Director) and Karen Villholth (IAH Outreach Commission).



Finally, during the congress closing ceremony Kelley Swana of Stellenbosch University, South Africa and Abdelaziz Khomsi of Université Ibn Toufail, Kénitra, Morocco were awarded the Early Career Poster Prizes.

We would like to thank the IAH Executive and Council, the congress organizing committee and all the participants for the continued support and interest shown in promoting the involvement of early career hydrogeologists at IAH events.

As we look to a new year that we are sure will be full of many interesting initiatives and discussions, we encourage IAH members to have a look at our recently developed website to find out more about our activities and how to join ECHN. Additionally, we welcome any ideas and suggestions new activities targeted at early career members of IAH.

VIVIANA RE



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



http://www.linkedin.com/groups?viewMember_s=&gid=3717583&sik=1319444267870

Groundwater and Climate Change

The Commission on Groundwater and Climate Change held a productive joint meeting with UNESCO-IHP GRAPHIC. The latter is based at UNESCO-IHP and, as well as climate change, takes a broader view of the other pressures from humanity that are resulting in major global changes, although the two have worked closely together in recent years.



Much of the discussion focused on improving access to information. A key request from many of the meeting participants was for the two to facilitate improved networking to enable colleagues to know what research is going on and where. In addition to holding meetings and organizing conference sessions, it was agreed that both the Commission and the GRAPHIC websites could facilitate networking by listing members and their institutions and research interests. The websites could also be used to better effect to disseminate knowledge by hosting downloadable pdfs, particularly of review articles. Participants also suggested that tools and information including, for example, links to the latest climate scenarios and data and other related information be made available on the GRAPHIC and IAH Commission websites. It was also recommended that, as the GRAPHIC Network grows, it may need to organize activities according to themes; deforestation, climate change, irrigation, urbanization and to develop the website in the same way.

An extensively debated issue was how GRAPHIC and the IAH Commission could serve to better facilitate interactions with policy makers and help members better inform groundwater policy and governance. Specifically, members discussed how to better engage with IPCC processes such as the preparation of the regular Assessment Reports. It was suggested that a key attribute of the work of GRAPHIC and the IAH Commission was its global scope so that demonstration projects and studies could be employed for experience sharing. It was recognised that insufficient attention had been made to translate these case studies into short, clear and simple stories for education and policy purposes. It was also suggested that the IAH Commission and GRAPHIC could seek



to engage directly with the IPCC process by supporting the nomination of hydrogeologists among its membership as authors, editors and reviewers. Perhaps IAH national chapters could advise their respective governments in the IPCC nomination process?

RICHARD TAYLOR



<http://www.gwclim.org>

<http://www.graphicnetwork.org>

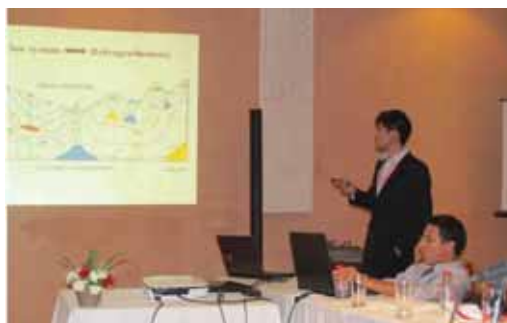
Regional Groundwater Flow Commission

The IAH Regional Groundwater Flow Commission (RGFC) held its annual meeting in Marrakech. Chair Judit Mádl-Szőnyi and Co-chairs Joel Carrillo and Xiao-Wei Jiang summarized the achievements of the past year and discussed tasks for the coming year. The participants decided to initiate more active discussion regarding regional groundwater flow via LinkedIn and prepare for the upcoming IAH Congress in Rome. The Commission displayed its new logo which had been approved by the IAH Executive.

The Commission organized a congress session in Theme 7: “Regional Groundwater Flow as a Geologic Agent and a Management Tool”. In addition to 7 oral presentations in the session, about 20 other delegates, including students from more than 10 countries contributed with their oral and poster presentations to the topic of regional groundwater flow elsewhere in the congress. Many of these provided recent results regarding the theoretical progress, research methods and future development of regional groundwater flow.

In addition, Carlos Molano’s short course on groundwater spreadsheets highlighted the importance of regional groundwater flow. A questionnaire investigation was conducted during the congress and 34 completed questionnaires were received, 27 of them indicating the researcher was familiar with the theory of regional groundwater flow, but only 15 knew the RGFC Committee.

It is still a challenge to the RGFC Board to involve more hydrogeologists in the activities of the Commission.



Since the congress, the Commission had set up a LinkedIn group which is open to both members and non-members of IAH. The RGFC encourages new research in regional flow and aims to show the relevance of basin-scale gravitational groundwater systems to other hydrogeological disciplines. Feel free to join and/or pass the message on to colleagues. The RGFC thanks IAH Council as well as the IAH2014 organizing committee and all the participants for their support and interest in RGFC.

**JUDIT MÁDL-SZŐNYI, CHAIR OF RGFC
AND JUNZHI WANG, PHD STUDENT**



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



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

New Commission on Transboundary Aquifers

A proposal for a new IAH Commission on Transboundary Aquifers was presented to the IAH Council in Marrakech and approved in principle subject to further clarifications and provision of additional information. The new commission proposers had a start-up meeting in Marrakech. At the meeting those present completed short questionnaires setting out how they would contribute and participate in the planned work, which will include group meetings, specialist meetings, education and providing expert advice to UN and Governments.

SHAMMY PURI

COUNCIL MEETS IN MARRAKECH

Fees discussions top the agenda

IAH Council met on the Sunday before the congress in Marrakech with 11 of the 13 members present and several colleagues joining for all or part of the meeting, as Council meetings are open to all IAH members to attend and participate but not vote. Amongst the many agenda items were two reports with recommendations for changes in IAH's membership fees.

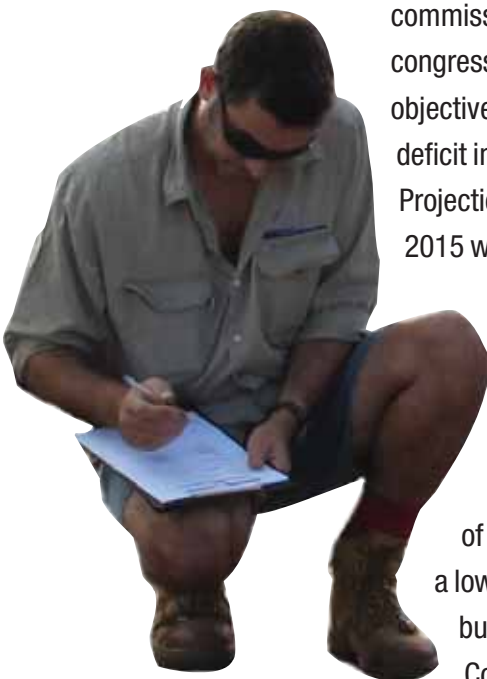
The Association has generally maintained a policy of regular review and modest increases in membership fees, with rates increasing in small increments from €60 in 2001 to €78 for 2013 and 2014. Changes to the country fee banding were last made in 2010 and they were not reviewed this time.

Reviewing the fee rates is always a balance between wishing to maintain them at a reasonable and affordable level and at the same time taking account of the financial pressures on the Association and the desire to improve our benefits and services to members. While the Secretariat maintains its efforts to improve operational efficiency to hold down costs, these will always be subject to inflation. In the UK where most of our routine costs are incurred, inflation has remained at 2-3% in the last two years, having been around 5% in 2010 and 2011 immediately after the global financial crisis, and is currently falling to well below 2%.

We are continually striving to improve our member benefits, but this sometimes means that we spend more of our funds. In 2012 and 2013 we have completely re-designed and re-developed the IAH website and associated membership database as a necessary basis for providing better services to members. More support is being provided to the IAH commissions and networks and for IAH members in lower income countries to attend our congresses. As a result of making more efforts to meet our educational and charitable objectives, we incurred a substantial operating deficit in 2013. We will arrive at a smaller deficit in 2014, but nevertheless will have drawn down our reserves over the two years. Projections of costs, income and reserves pointed to a modest increase in fees of €2 for 2015 which will be held for 2016. Council approved this proposal and agreed that the general approach of gradual fee increases is sound and should be continued.

Over the last year we have also been discussing the possibility of reducing student fee rates, and a proposal was presented to Council in Marrakech.

Overall, we have about 300 student members out of a total membership of 3900. Comparison with other similar societies does not suggest that we are out of step in terms of our student fee rates, especially our on-line rates. Nevertheless, a lowering of our rates would probably lead to recruitment of more student members, but should we aim to eliminate student fees altogether, as some have suggested? Council accepted the view that people tend not to value what they do not have to





Left to right: John Chilton (IAH Executive Manager, UK); Ken Howard (IAH President, Canada); Luiz Amore (Vice President - Latin America and the Caribbean, Brazil); Antonio Chambel (Vice President - Programme and Science Coordination, Portugal); Shammy Puri (IAH Secretary General, UK); Willi Struckmeier (IAH Past President, Germany); Roland Bartel (German National Chapter); Carlos Molano (Colombia); Jun Shimada (Vice President - Asia, Japan); Dave Kreamer (Vice President - North America, USA); Teodora Szocs (Vice President - Europe - West and Central, Hungary); Bruce Misstear (Vice President - Finance and Membership, Ireland).

pay anything for. By reducing fee rates we hope to attract more students, students who are prepared to show some commitment to the Association through the payment of a small fee, and hence are more likely to continue with their membership once their studies are completed. Council approved a reduction in student fee rates by €10 from 2015. Council also received reports on the review of the commissions and networks, and the working group on education (see page 7), progress with our books and journal and on the preliminary work towards a strategy for income diversification.

JOHN CHILTON, SECRETARIAT

[PS - IAH members can access key meeting minutes online. Go to <http://iah.org/members/iah-meetings>]

OPEN CHOICE INITIATED FOR HYDROGEOLOGY JOURNAL

Further to the report in the May newsletter, the Open Choice option for IAH's Hydrogeology Journal (HJ) was made available from 1 September. This means that authors whose research has been funded by agencies which require the results to be made freely available will be able to submit their articles to HJ. Editor in Chief Cliff Voss and the editorial team have been working closely with Springer to set up the details of the process, including the 45% reduction in publishing fees for IAH members. The Association is very grateful to Springer for their agreement to support the process in this way, and both publisher and editorial team will be monitoring the uptake. We have already seen the first author join IAH to take advantage of this offer.



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

JOHN CHILTON, SECRETARIAT

IAH REPORTS FROM...

Shammy Puri, IAH Secretary General, on his recent trip to India

WORKSHOP ON GROUNDWATER GOVERNANCE

The issue of governance of aquifer resources in a country that is heavily dependent on groundwater has been highlighted in India. Partly prompted by IAH's participation in the GEF groundwater governance project, and appreciating the need to take national actions, the IAH National Chapter of India arranged a one day workshop in August and held its AGM on the same day.

The Workshop was attended by over 100 scientists, practitioners and policy makers, as well as NGO's engaged in community development. Three sessions addressed the challenges, the issue of governance and the development of regulations. Twenty presenters set out their views on the issues and there was a lively discussion. IAH Secretary General Shammy Puri attended the workshop and AGM as the chief guest. An interesting outcome of the workshop was the discussion and adoption of Workshop Recommendations set out in eleven key points addressed to three parties, firstly the Minister of Water, secondly the IAH national committee itself and thirdly practitioners in groundwater management.

Among these eleven points is a recommendation that Government should adopt and formalise the "Model Bill for the Conservation, Protection and Regulation of Groundwater". This was drafted by a Steering Committee of the Planning Commission which has developed the legal articles. While the Bill has been drafted to meet 'national' needs, there are some very interesting Articles reminiscent of the UN Draft Articles on the Law of Transboundary Aquifers - since in India the States have full jurisdiction over

'their' groundwater, even though it may flow into or out of a neighbouring State. The Bill also takes the fundamental step of making groundwater a common pool resource - a huge step away from the current ownership of water beneath an owner's land.

The Indian NC, while promoting this Bill will also work towards building capacity to work with the law, once adopted by Parliament, especially among the major water users including industry. The workshop volume of 48 abstracts and the recommendations are being posted on the National Chapter's web site.

INDIAN NATIONAL CHAPTER AGM

The National Committee has also taken steps to make the Association relevant to its members by offering a Savitri Chadha Memorial Award and a Young Scientist award. The former award, for groundwater excellence and the young scientist award were given to Dr Dipankar Saha of the Central Groundwater Board and Dr Anirban Dhar of IIT, Kharagpur respectively. Both these awards will firstly recognise excellence in the work that IAH members do and secondly will encourage new members. The aim of the chapter is to increase membership, which stands at 96, to 150 by the middle of the coming year – a great achievement from the 16 members in 2012! The aim of attracting more members was discussed at the AGM, as well as fees for life membership and the forthcoming elections of the committee, to be held every two years.

FIELD VISIT TO THE PUNJAB

The national chapter, and in particular Secretary Dr Chadha, arranged a pre-workshop reconnaissance visit (18th – 22nd August) to include the Universities of Chandigarh and Amritsar, the Central Groundwater Board Laboratories, the Irrigation Department, and the Principal Secretary of the Department of Water Supply and Sanitation. The field visit part of the reconnaissance included discussions



with groundwater users in Simbli and Barwa (where concern over selenium in groundwater was discussed), Ramiana, Talwandi Sabo, Jaito Mandi, Rumiana, Karirwali, Garhi Sangat and Jajjal, all of which are affected by widespread cancer in the population, which is said to be associated with agrochemical contamination in the environment, including the groundwater. The discussions with community representatives, academics and the regulators were very fruitful though agonising, because health impacts of the population are very serious. The

use of agrochemicals has not abated despite their health impacts, though several NGO's are promoting eco-farming and some communities are adopting it, but not enough. The outcome of the reconnaissance visit was that there remains an urgent need to continue to raise the issue of groundwater and its management, including land use and application of agrochemicals, for the attention of decision makers.



<http://www.iahindia.org>

...and António Chambel, Vice-President for Programme and Science Coordination, who attended the 5th International Symposium on Karst, Spain



KARST SCIENTISTS GATHER IN MALAGA

The 5th International Symposium on Karst was held from 14 to 16 October 2014 in Malaga, organized by researchers from the Centre of Hydrogeology of the University of Malaga (CEHIUMA) and the Spanish Geological Survey (IGME) and supported by IAH. António Chambel, Vice-President for Programme and Science Coordination represented the Association.

The Symposium enabled the scientific community to share recent advances in karst hydrogeology and to increase the level of understanding about processes in and impacts on karst aquifers. Researchers from 25 countries attended and more than 100 oral and posters presentations were made, which were collected together in a book published by Springer and distributed during the symposium: "Hydrogeological and Environmental Investigations in Karst Systems". The presentations covered topics such as karst groundwater flow, hydrochemical studies and hydrogeological parameter estimation, protection of karst aquifers, pollution and vulnerability in karst, thermal anomalies in carbonate aquifers, dye tracing, stable isotope applications and numerical modelling among others, and all these in different climatic environments, from tropical to temperate humid regions, with a significant representation of mountain areas.

Understanding karst processes requires knowledge of catchments in natural areas, detailed information on average residence time and more studies about the potential for natural attenuation of contaminants to enhance our knowledge on intrinsic and specific vulnerability assessment. The results and discussions demonstrated that more research, not only on groundwater resources assessment but also on characterization of the hydrogeological functioning of the aquifers, is necessary to manage karst aquifers in a sustainable way and solve the remaining uncertainties. Karst science must evolve and knowledge must be updated regularly to fulfil the needs of society and preserve karst water resources.

The symposium was a forum for exchange of ideas not only within the venue but also on the pre-symposium field trip to Grazalema and intra-symposium field trips to Nerja Cave, Fuente de Piedra wetland and karst and gypsum. The next karst symposium (Eurokarst-2016) will be held in Neuchâtel, Switzerland.



DECEMBER 2014



NEW MEMBERS

A welcome to the following new members who joined our Association in the period 1 July - 31 October 2014:

ARGENTINA

Mr Gabriel Raul MECONI

AUSTRALIA

Lanre ABIODUN

Mr Erik BARTROP

Dawit BEKELE

Mr Robert CANNON

Mr Moshe R CARO

Lisa FOUBERT

Miss Joanne HEDLEY

Mr Paul HEDLEY

Paul HOWE

Mrs Liliosa MAGOMBEDZE

Erin MCINTOSH

Mr Craig NOBLE

Mrs Avegae OSIA

Mrs Jane PUTHIAPARAMPIL

Ekaterina PYATIN

Mr Allan RENWICK

Mr Jorge F RODRIGUEZ-CASANOVA

Mr Bertrand F SALMI

Elizabeth SARTO

Shelly SLATER

Rob SWIFT

Tara ZIRAKBASH

AUSTRIA

Ms Andrea BICHLER

CANADA

Mr Lionel BEAULIEU

Dr John KOZUSKANICH

Dr Rene THERRIEN

CHILE

Christian CINTOLESI

Mr Andreas DECKELMANN

CHINA, PEOPLE'S REPUBLIC OF

Shuning DONG

Weiyue HU

Dewu JIN

Qisheng LIU

Shenghui NAN

Hao WANG

Xi'an Research Institute of CCTEG (c)

COLOMBIA

Mr Johny Ricardo CHAVES

Mr John Paul RAMIREZ-SANTA

Mrs Maira Alejandra ROMERO GUZMAN

FRANCE

Guillaume BOISSET

Fabien BUGIAT

Thomas CAVALERA

Thomas DE SLOOVER

Marina GILLON

Ms Véronique LAVASTRE

Guy VASSEUR

GERMANY

Ms Michelle BESTER

Florian BRÜCKNER

Dr Sebastian SCHMIDT

HUNGARY

Mr Marton PAPP

INDIA

Mr Ravi APPANA

Mr Sanat Kumar BISWAS

Prof Philippe CULLET

Ms Shilpi GUPTA

Dr Ashok KUMAR

Mr Syed Khaja MOHIDDIN

Dr Sushil MUDGAL

IRELAND

Mr Mark ADAMS

Mr Richard CHURCH

Mr Hugh CUSHNAN

Mr Sean HEFFERNAN

Ms Sara RAYMOND

Ms Sara VERO

ITALY

Mr Isidoro BONFÀ

Ms Arianna BUCCI

Ms Patrizia BURDINO

Ms Elisa FRANCHINO

Ms Simona MARTELLI

JAPAN

Dr. Fumi SUGITA

JORDAN

Eng Omar ALORJANY

LATVIA

Mrs Kristine DUDINA

LEBANON

Mr Ramez KAYAL

Miss Amani MATAR

NAMIBIA

Mr Floran WINKER

NETHERLANDS, THE

Kirstin CONTI

NIGERIA

Mr Adeola ADEGBUYIRO

NORWAY

Mr Alejandro BELLO

Vibeke BRANDVOLD

PERU

Mr. Marko Eduardo Castañeda ZVALETA

Simon MANSELL

Mr Viller Montalico TARQUI

Engineer Carlos Alberto Zapata TORRES

POLAND

Dr Tomasz NAŁĘCZ

RUSSIA

Prof Vladimir KHAUSTOV

SLOVENIA

Lidija GLOBEVNIK

SOUTH AFRICA

Mr Alexander DUNFORD

Ms Danita HOHNE

Mr Raymond MINNAAR

Miss Kelley SWANA

SPAIN

Mr Enrique Ramón Crespo MARTÍN-MORO

Patricia Dolores DOMINGUEZ PRATS

María Elena RODRIGO CLAVERO

Dr Javier RODRIGO-ILARRI

UNITED KINGDOM

Mr Ross EWART

Mr Sebastian FISHER

Miss Victoria GILL

Mrs Laura HINZ

Ms Ashley REINHARDT

Miss Lydia RYCROFT

Mr James WILKINSON

Dr Joanna WRIGHT

UNITED STATES OF AMERICA

Dr Antonino CILONA

Mr Michael GOYDAS

Mr Brandon HOUSE

Mr Edward KWICKLIS

Dr Bwalya MALAMA

Mr Philip WEBSTER

Joost REIDEL

J. Will RYAN

Dr. Nathaniel WARNER

Mr Walter WEINIG

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



ECHN LAUNCHES UK BRANCH



Early career hydrogeologists enjoyed a variety of presentations at the recent launch of the ECHN-UK branch. The event was held at the end of September at the University of Strathclyde in Glasgow in partnership with Hydrogeologists Without Borders UK (HWB-UK) under the theme of Hydro Heroes – Using Your Powers for Good. Delegates, including the new Hydrogeology Masters students from the University, heard talks from Paul Morrison of SEPA and Brigid Ó Dochartaigh of BGS as well as Professor Bob Kalin who spoke about his on-going Malawi-based water provision projects. Guests were also treated to a thought-provoking workshop from Charles Ruxton on How to Deal with Ethical Issues at Your Workplace and were happy to hear further WASH-related insights from Alison Parker of Cranfield University.

In keeping with the social component of ECHN activities, the day was completed with a trip to a traditional Scottish pub followed by a few hours of ceilidh dancing. Those who didn't feel too 'under-the-weather' the following day were also invited to attend the BGS Family Open Day in Edinburgh.

The ECHN would especially like to thank Bob Kalin of Strathclyde University and Geraint Burrows of HWB-UK for their time and assistance in setting up and supporting the event and the IAH GB Chapter for their important financial contribution to the logistical and venue costs, without which the meeting probably could not have gone ahead.

The ECHN UK branch hopes to benefit from a continuing stream of members from its initial base at Strathclyde University but very much welcomes the involvement of early-career IAH members from all around the British Isles, including Ireland. If you would like to be involved with the new UK branch, perhaps to ensure the next ECHN-UK event happens somewhere near you! – please feel free to get in contact.

GILLIAN HURDING, ECHN CO-CHAIR

[... we are very keen to see ECHN groups established in other countries and to see existing IAH National Chapters support such initiatives as the British Chapter has done... ed]



Find out more: Email echn.uk@gmail.com



Brigid Ó Dochartaigh presents on a variety of methods and skills for successful knowledge exchange.

Prof. Bob Kalin explains the importance of informed borehole construction for fresh-water provision in rural and peri-urban in Malawi.



DECEMBER 2014

National Chapters Meet in Marrakech

A meeting of IAH national chapter representatives has now become a regular congress feature and in Marrakech, IAH President Ken Howard welcomed the representatives of twenty of IAH's chapters. Members of the IAH Executive and Secretariat took the opportunity to provide updates on the review of IAH's Rules and guidelines as they relate to national chapters. Progress had been reported to Council in Marrakech, and work will continue over the coming months, including consultation with national chapters on the changes that will be needed.

Chapters were reminded of three options open to accommodate them on the new website:

- continuing to use an already established website, linked from the main website;
- having a "landing page" of simple information and contacts on the main website;
- building a fully-developed sub site as part of the main site, which the chapter would have access to work on and keep updated.

Those present were requested to think about the options, consult their committees and advise the IAH Secretariat in the next few months.

No progress had been made since the Perth congress on establishing a standing committee of national chapter chairs or representatives. Those chapters who had been most enthusiastic about this in Perth were not represented this time, but there were several comments that it would be a good thing to do, and we will make efforts to get this established.

Recent initiatives of chapter twinning arrangements were reported, and chapters were urged to consider further developing these. This could take the form of sponsoring members or support for the activities of the chapter. The IAH Secretariat would be able to provide support for twinning arrangements.

Finding out why members don't renew and improving member retention could be done more effectively by chapters than by the Secretariat. The British National Chapter is currently conducting an on-line survey of members who have not renewed in the last three years to try to find out more about the reasons for non-renewal. Once evaluated, the results will be shared with other chapters, and the survey itself might be adapted by other chapters.

There was a discussion about differing practices between chapters with regard to accepting or encouraging membership of the Association by those who may not have a formal academic qualification in hydrogeology. President Ken Howard said that IAH was already moving towards broadening its membership to include those working in groundwater but not from a strictly hydrogeological background. Membership was one of the issues that would need to be covered in the updating of the Rules as current practice has moved on from what is stated in the Rules.

JOHN CHILTON



IAH National Chapter Information: <http://iah.org/groups/national-chapters>

IAH AWARDS ANNOUNCED IN MARRAKECH

The annual IAH awards were announced at the General Assembly of the Association in Marrakech. The President's Award of the Association is given to a hydrogeologist who has made outstanding contributions to the development or application of groundwater science and furthering IAH's mission to promote understanding of groundwater resources. This year's award goes to Jac van der Gun.

Jac spent most of his professional career at TNO, the National Geological Survey of The Netherlands in Utrecht, where he worked on a variety of national and international projects until his retirement in 2008. He will be best known in the groundwater community as the first Director of IGRAC, the International Groundwater Assessment Centre from 2003 to 2006. His leadership established the Centre and its role as a guardian of groundwater information. Since retiring, Jac has continued to work as an independent consultant, contributing in particular to World Water Assessment Reports, GEF projects and IGRAC. His scientific interest in global groundwater resources culminated in the publication in 2013 of "Groundwater around the World", strengthening the existing work of Jean Margat.

Jac, a worthy recipient of the 2014 President's Award, had travelled to Marrakech with his wife specifically to receive the award. In his response, Jac expressed his appreciation and surprise that he should have been considered alongside so many previous recipients of the award, and also warmly thanked his many colleagues with whom he had worked and who had made his groundwater career so enjoyable and rewarding.

IAH accords the title of Honorary Member to those who have given exceptional services to the Association over a long period. On behalf of IAH Council, President Ken Howard proposed that the 2014 award be made to Professor Emilio Custodio, and this was approved by the General Assembly.

As Past President of the Association from 2000 to 2004, Emilio needs little introduction to IAH members and will probably be best known and appreciated for the International Groundwater Hydrology Course at UPC which he co-founded, and the book on groundwater hydrology jointly authored with Ramón Llamas. Students fondly recall their time at UPC, and the sound start that the course and book gave them in their careers, and many former students throughout the world have remained as friends and research partners.

During his Presidency Emilio made particular efforts to strengthen IAH's presence in Latin America and collaboration with our sister organisation ALHSUD, and has continued to visit the region frequently and to promote IAH there ever since. Emilio was not able to be in Marrakech but, as the photo shows, Ken was able to present the award the following week when both were invited speakers at the Fifth Colombian Hydrogeological Congress in Medellin.

JOHN CHILTON



Find out more about IAH awards

<http://iah.org/about/awards>

IAH CONGRESS, 2015



Italy, congress host

The Italian National Chapter of IAH, in scientific partnership with FAO and the International Hydrological Programme of UNESCO, is honoured to host the 42nd IAH Annual Congress in Rome. The conference will offer an opportunity to build synergies between the worlds of research, international and local business, government institutions and international agencies involved in groundwater. The congress will be held in the historical centre of Rome at the Angelicum Congress Centre, a historic complex dating back to the 16th century and a few minutes walk from the Colosseum, the Imperial Forum, Piazza Navona, Trevi Fountain, Trajan's Column, the Quirinale Presidential Palace and the main railway station.



Rome is a spectacular city, full of historical monuments, churches, museums and other sights from the many different periods of its 2500-year history. Most of these are located in the historic centre and the IAH Congress will offer a wonderful opportunity to visit them. Moreover, there are many contemporary art galleries, public and private libraries, theatres, cinemas, restaurants, pizzerias and typical "trattorie". The centre of Rome is also known worldwide as a fantastic shopping area.

Theme and Topics

The spirit of the congress is summarised in the AQUA2015 theme of "Hydrogeology: back to the future", combining previous experience with future tools and needs, with a special focus on the global need to balance groundwater demand for food production with sustainable development. Under this overall theme, eight topics and issues have been established:

- groundwater, food and health
- sustainable use of groundwater
- groundwater flow system behaviour
- urban and contaminant hydrogeology
- groundwater/surface water: an integrated view
- groundwater governance and policy
- groundwater management in coastal areas
- new tools and new frontiers.

Programme

The organising committee already have a preliminary outline of the week's programme to include plenary and parallel sessions, pre-congress short courses, mid- and post-congress field visits combining scientific and cultural features, social events and a partner programme and the customary IAH meetings and events.

An exciting innovation will be the introduction of E-poster sessions, which will be hosted in a room with big screens. During the poster sessions posters will be shown continuously in rotation. Electronic posters can include more than one slide or movie, or multimedia inserts, allowing the authors to show more information than on traditional posters. E-Posters will also be shown during the coffee and lunch breaks.

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

Further Information and Key Dates

The second circular for the congress is available from the congress website together with further details of topics, programme, key dates, registration fees and much additional information. Abstract submission is now open and will close in March 2015. Registration will open in December 2014.

You should put 13th to 18th September 2015 in your diaries now. If you pre-register via the congress website, you will receive regular email updates and newsletters. The organising committee very much looks forward to welcoming you to Rome!

JOHN CHILTON AND THE 2015 CONGRESS
ORGANISING COMMITTEE

IAH ANNUAL REPORT

Those who receive paper copies of the journal may have noticed that there has been no printed summary report enclosed with the journal. Like last year, we decided to prepare a digital-only version of the report, and in this case have no print run at all and at the same time look at ways of making our reporting more readable and information more clearly accessible. At the time of writing, we are still working on the report for 2013, but it will be available from the IAH website by the time you receive this copy of News and Information. The full 2013 IAH accounts and trustees report can also be seen on the IAH website.

JOHN CHILTON, SECRETARIAT



<http://iah.org/about/reports/management>



2015

21-23 January: Las Palmas de Gran Canaria (Spain)

II Workshop: Estudio, aprovechamiento y gestión del agua en terrenos e islas volcánicas (Water - Volcanic terrains and islands)

Note: the workshop language will be Spanish

Website: http://www.gi.ulpgc.es/geovol/index.php?pagina=workshop_2015&ver=workshop_2015

18-21 March: Hong Kong, China

PACRIM 2015

PACRIM is a quadrennial congress and will focus on research, exploration and development of mineral deposits around the Pacific Rim. Organised by The AusIMM.

Website: <http://www.pacrim2015.ausimm.com.au/>

9-11 April: Jeju City, Korea



Asian Regional Meeting on Beneficial Uses of Groundwater Resources in Island and Coastal Regions. Organised by The IAH Korean National Chapter and the Jeju Self-Governing Province Development Corporation.

Website: <http://www.iah2015jeju.com>

12-15 April: Daegu and Gyeongbuk, Korea

7th World Water Forum

The 7th World Water Forum will focus on the implementation of solutions identified during the 6th edition in Marseille, France in 2012.

Website: <http://eng.worldwaterforum7.org/en>

12-15 April: Vancouver, Canada

Mine Water Solutions 2015 - Extreme environments. Organised by ConferenceMine - A division of InfoMine.

Website: <http://www.minewatersolutions.com/>

13-16 April: Vienna, Austria

HydroEco2015 – 5th International Multidisciplinary Conference on HYDROLOGY and ECOLOGY: Advances in Monitoring, Predicting and Managing Hydroecological Processes. Organised by Universität für Bodenkultur Wien (BOKU), University of Natural Resources and Life Sciences, Vienna; International Association of Hydrological Sciences (IAHS); Faculty of Science, Charles University (Univerzita Karlova), Prague, Czech Republic.

Website: <http://web.natur.cuni.cz/hydroeco2015/>

25-29 May: Ustron, Poland



International conference on groundwater vulnerability

Organised by University of Silesia and the Polish Chapter of the International Association of Hydrogeologists.

Website: <http://khgi.wnoz.us.edu.pl/vulnerability.html>

20-26 June: Birmingham, United Kingdom



International Conference on Groundwater in Karst

Organised by University of Birmingham, the IAH Karst Commission and the UIS Commission of Karst Hydrogeology.

Website: <http://www.birmingham.ac.uk/generic/kgatb/index.aspx>

22-26 June: Yakutsk, Russia

XXI Conference on Groundwater in Siberia and Far East

The Conference on Groundwater in Siberia and Far East has a long-standing history and is held every three years. This conference will be held as part of the Federal Target Program 2010-2015: Clean Water to present the advances in fundamental hydrogeology since the XX Conference in 2012 (Irkutsk) and to discuss a wide range of issues of importance for hydrogeology in Russia and worldwide.

Website: <http://mpi.ysn.ru/index.php/en/xxi-gw-2015.html>

22 June - 2 July: Prague, Czech Republic

26th IUGG General Assembly - Earth and Environmental Science for Future Generations.

Organised by International Union of Geodesy and Geophysics (iugg) and partners.

Website: <http://www.iugg2015prague.com/>



<http://iah.org/events>

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