

NEWS

&information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

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

DECEMBER 2013

Also in this issue:

Efforts to raise the profile of groundwater

New website

Book releases

Chapter, commission and network news

Conference listings

and the usual IAH announcements and updates



**INTERNATIONAL
ASSOCIATION OF
HYDROGEOLOGISTS**

SEPTEMBER IN PERTH



From the opening ceremony with its traditional Indigenous Australian smoke ritual to 'cleanse' the convention centre to the farewells and good wishes at the closing ceremony, the 40th IAH Congress in Perth was an all round success. Delegates enjoyed a full programme of invited lectures, parallel sessions and poster displays and social events. *Reports throughout*

HYDRAULIC FRACTURING PICTURE THE IAH

Survey results and considerations for our Association.

See page 3

Thanks for all the wonderful entries... winners have been chosen. *See page 20*

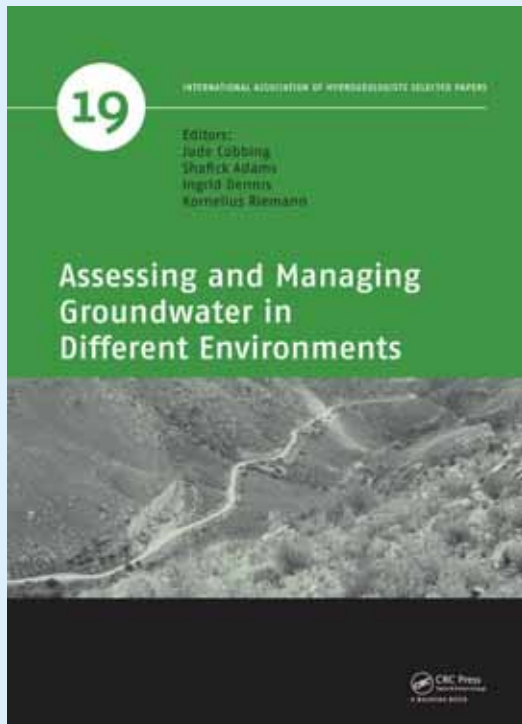
Keep up to date: visit our website for the latest news
<http://iah.org>

Contact us: email info@iah.org with your news, views or questions

New in the IAH Book Series

International Contributions to Hydrogeology (IAH-ICH)

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



Assessing and Managing Groundwater in Different Environments

Edited by **Jude Cobbing**, *SLR Consulting and Nelson Mandela Metropolitan University, South Africa*, **Shafick Adams**, *Water Research Commission, Pretoria, South Africa*, **Ingrid Dennis**, *North West University, Potchestroom, South Africa* & **Kornelius Riemann**, *Umvoto Consulting, Cape Town, South Africa*

This book ranges from discussion and debate on the hot topic of hydraulic fracturing of wells or 'fracking' for shale gas and its potential to disrupt groundwater systems, to the application of highly technical modelling procedures to help solve complex, real world problems. It is a window on the preoccupations of modern hydrogeologists and an insight into the way in which hydrogeological techniques and methods are being holistically adapted to address problems in the real world. This book is targeted at professional hydrogeologists, sociologists, experts in governance, law and

policy as well as ecologists and other professionals that nowadays all sit alongside groundwater understanding. The book will also appeal to politicians, resource managers, regulators and others interested in sustainable water supply.

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

To order: www.crcpress.com/9781138001008

Just released in the IAH Book Series



History of Hydrogeology

Edited by Nicholas Howden & John Mather

November 2012: Hb: 424 pp
ISBN 978-0-415-63062-7
£76.99 / \$119.95

To order: www.crcpress.com/9780415630627



Groundwater and Ecosystems

Edited by Luis Ribeiro, Tibor Y. Stigter, Antonio Chambel, M. Teresa Condoso de Melo, Jose Paulo Monteiro & Albino Medeiros

June 2013: Hb: 358 pp
ISBN 978-1-138-00033-9
£99.00 / \$159.95

To order: www.crcpress.com/9781138000339

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: orderform at www.iah.org/publications

CRC Press/Balkema, Taylor & Francis Group, Leiden, The Netherlands
pub.nl@taylorandfrancis.com, Ph: +31 71 524 3080
www.crcpress.com



Another “bumper” edition...

We again have a greater than usual number of pages for the winter edition of the newsletter. This partly reflects the reports of the congress itself and all of the associated meetings and activities that go with it. In particular, you will see from page 24 that, following from discussions before and during the Perth congress, we have an exciting congress schedule lined up for the next few years. This is a good position both for IAH centrally and for the local organising committees as it provides ample time to support them and for us to become better at passing on good ideas and experiences from one congress to the next. Following a lot of hard work, the new IAH website is now live, and we are grateful for the positive feedback and comments we have received so far. This is your website and to help us build up the services it provides, we would be grateful for continuing comments, opinions and feedback as you start to use the site.

JOHN CHILTON



...and an end of year message...

As we come towards the end of another busy year, John, Kellie, Sharon and Sue would like to wish you all a happy Christmas and a peaceful and successful year to come.

IN THIS ISSUE

From your President.....	4
Hydraulic Fracturing.....	5
IAH News.....	6
IAH 40th Congress.....	8
Commissions & Networks.....	11
IAH in the Global Arena.....	14
Chapter News.....	16
New Members.....	18
Picture the IAH.....	20
Congress Updates.....	22
Conference Listings.....	24

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

For many of us, year's end is a time to reflect on our successes and disappointments, take stock, and refine our plans for the year ahead. For me, the last 12 months have been extremely rewarding with successful conferences in India, Korea, Hungary and Australia, and productive business meetings in Portugal, UK and Singapore. It has also been exhausting! I will provide a more detailed report of my IAH activities in the early months of

2014 when you should also look out for annual reports from my colleagues on Council, as well as from Network Directors, Commission Chairs and Presidents or Chairs of National Chapters. Annual reports from all of these on activities during 2013 will be due very soon, so why not get ahead of the game and write it while it is fresh in the mind.

As a quick preview, I can report that the highlights of my past year included the IGWC conference in Aurangabad, India where passionate but very constructive exchanges between members subsequently led to the election of a new and enthusiastic IAH National Chapter Committee for India. At the Karstflow meeting in Budapest the energy of our very talented Early Career Hydrogeologists (including Young Karst researchers) was matched only by that of József Tóth, the seemingly tireless honoured birthday guest, 80-years young. Last, but by no means least, the IAH Congress in Perth fully lived up to its billing and met all hopes and expectations as widely reported in this newsletter. IAH is indebted to Ryan Vogwill and his team for delivering such an excellent meeting.

2014 will inevitably bring a few surprises but with your new Council now in full flight and the Congress in Marrakech nicely taking shape, it promises to be another banner year with much to anticipate. The IAH Executive will meet in Dorchester, UK during late February and in Dublin, Ireland in the summer. The next meeting of Council will be in Marrakech, immediately prior to our Annual General Meeting. I hope to see you there! In the meantime, please accept my best wishes for a happy, healthy and prosperous New Year.

As always, please never hesitate to contact me or any of us on Council or on the Secretariat with your concerns, ideas, or suggestions (or simply to say, "Hi!").

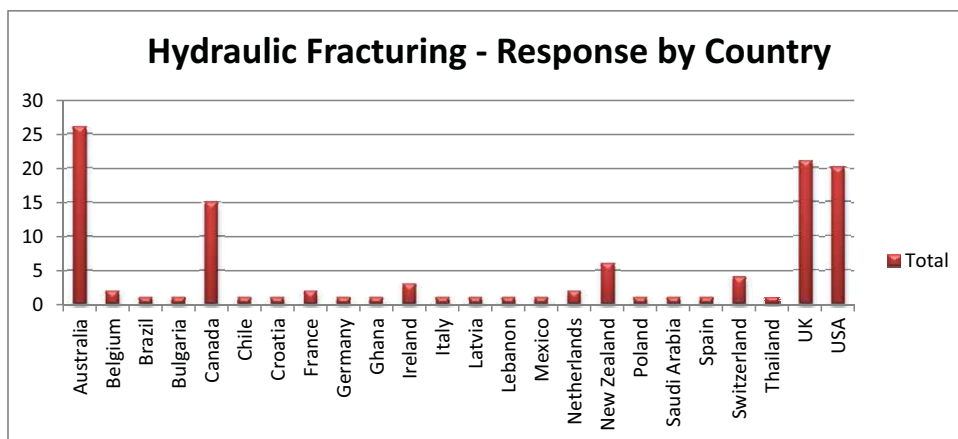
KEN HOWARD, IAH PRESIDENT



Ken talking to Jim Lamoreaux (USA), Chair of the IAH Commission on Mineral and Thermal Waters, picture courtesy of IAH Australia/thesceneteam.com.au

HYDRAULIC FRACTURING

Results of IAH Survey



IAH members will know of the growing interest amongst governments and the big energy companies in using the technique of hydraulic fracturing (fracking) to improve the recovery of shale gas for energy generation. Naturally, with this growing commercial development also come concerns about the possible environmental impacts and the ability of regulatory agencies and planning processes to balance potentially conflicting pressures. The result has been intense media interest in many countries.

One consequence is that IAH as a professional association is sometimes asked for a view on hydraulic fracturing and it has been suggested by some that we should have a “position” on fracking. Many of you may have been asked as well by your friends and neighbours. As with many contentious issues in the geological sphere, a large professional association such as ours has members working on the commercial development side, for regulatory agencies and undergoing research, and providing a simple “view” is not appropriate. Professional associations such as ours do, however,

have a responsibility to educate and to help ensure that the various participants in the debate have sound technical information at their disposal.

To gauge the views of our members, a simple online survey has been carried out. Of the 100 or so respondents, most were pleased to see more debate in the media, but worried about how fracking was being treated and that negative aspects were being given more prominence. Respondents felt that environmental pressure groups were not always well informed, and that more independent research is needed.

In response to a question about what IAH itself should be doing, few felt that the association should stay completely out of the debate about an activity with potential impacts on groundwater. Some suggested we should prepare a paper setting out the scientific aspects and also provide educational materials, others that we should encourage independent research and monitoring, and promote scientific debate through workshops and conference sessions. We are considering whether and how IAH might take up some of these suggestions.

 [See IAH website for survey results](http://iah.org/news)
<http://iah.org/news>

COUNCIL MEETS AGAIN, IN PERTH

Having already met this year in June, it might have been expected that we would have an “easy” day when Council met in Perth on the day before the congress. However, it was not to be, and we still managed a long agenda and full day of discussions.

FEES HELD UNCHANGED FOR 2014

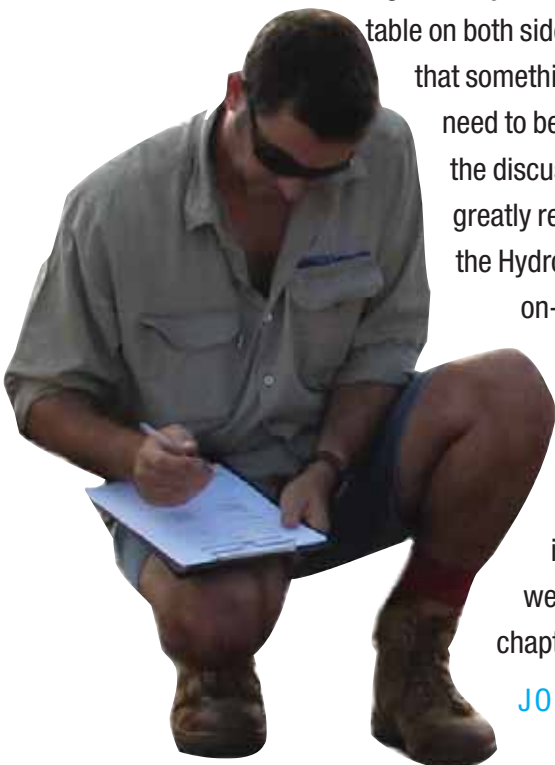
Council provides an important opportunity to assess the Association’s financial standing. The formal reporting and accounts and for the previous year (in this case 2012) have been completed, and a review of the financial status in 2013 from the half-yearly statement undertaken. These, plus the 2013 budget and current membership numbers, provide the essential information from which our membership fees can be reviewed. To this can be added the results of the survey on the benefits, values for money and membership fees reported in the December 2012 newsletter. Taking account of the balance between the desire to keep improving our membership benefits on the one hand and keeping a prudent eye on the financial pressures on the Association on the other, we have decided to maintain our 2014 fees at the 2013 rates. I’m sure that members will be happy with this, and we urge you to continue supporting IAH by renewing your membership for 2014 when the time comes soon.

STUDENT MEMBERSHIP - TO FREE OR NOT TO FREE?

There was a lively discussion in Council on the question of student fees. Although we have for some time had a reduced fee rate for students, the rapid development of the ECHN brings into focus a discussion that we have touched upon from time to time before. The debate is over whether students should have completely free membership or pay a very small fee, significantly smaller than they do at present. It is fair to say there were opinions round the table on both sides, some feeling that students should have free membership, others felt that something which is completely free is not properly valued. Clearly there would need to be some time limitation on student membership (as there is at present), and the discussion also raises the question of which benefits would come with free or greatly reduced membership fees. For example, many students could get access to the Hydrogeology Journal through their university library and might not even need on-line access from their IAH membership.

Council agreed to take this further by asking the Executive and Secretariat to investigate the implications of free or very low-cost student membership, including by comparison with similar societies. Bruce Misstear and Executive Manager John Chilton will present a paper on this issue to the February 2014 meeting of the IAH Executive. In the meantime, we would be very happy to hear the views and opinions from the national chapters and from individual IAH members on this issue. Email jchilton@iah.org.

JOHN CHILTON, SECRETARIAT



LAUNCH OF NEW WEBSITE

After what must have seemed to be a very long period of consultation, planning, design, preparation and testing, IAH's new website is with us at last. This is a big step, but just the first step. A flexible design that we can build and adapt and the appropriate technology behind the site are now set in place. Plans and lists are under discussion for building up the content of the site so that it comes to serve both IAH members and the broader groundwater community well.

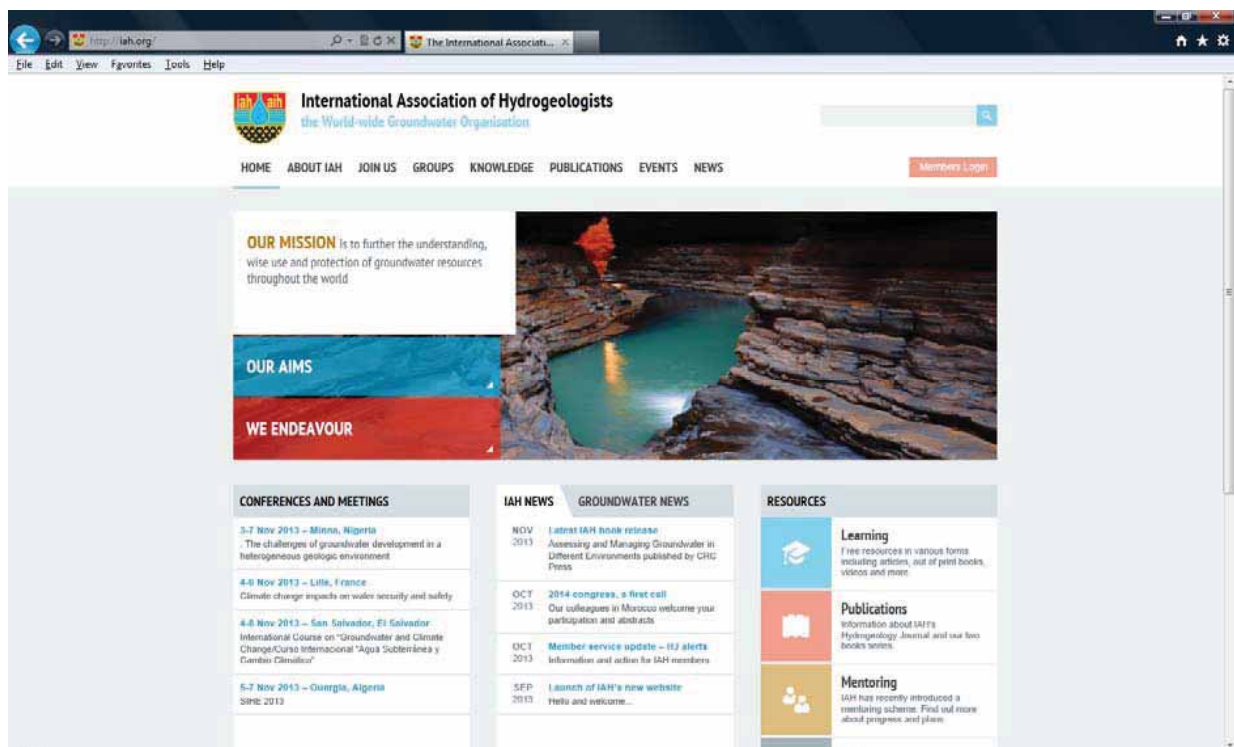
We are grateful for the positive feedback and comments we have received so far. As part of the process of defining "next steps", we would be grateful for continuing opinions and feedback. questions, comments and glitches. . . . as you start to use the site. Email info@iah.org. Essential tasks which are already identified include pages or sub sites for those of our national chapters and commissions and networks who would like them and developing the

content of the knowledge and educational parts of the site.

Other developments under discussion include extending the provision for and use of languages other than English, the level and type of career advice, training and job listings and links the Association ought to provide, and provision for the on-line management of conference abstract submission and registrations. We welcome your comments on which of these you consider the most important and the highest priorities.

Finally, I am sure you will join with me in thanking Kellie and Sharon for their hard work over the last eighteen months, and in thanking those IAH members who have provided us with support and feedback during this time.

JOHN CHILTON, SECRETARIAT



 <http://iah.org>

Report by John Chilton

IAH 40TH CONGRESS



The 40th Congress of IAH took place in mid September in the international convention centre in downtown Perth overlooking the Swan River. Many delegates (myself included) arrived in Perth to unseasonal high winds and rain. Several colleagues who took time off to see some of the sights around the city before the congress said they had a wet and blustery experience, especially if they took a boat trip. Our good friends in Perth have since told us that it was the wettest September there in the last 40 years.

Nevertheless, all present in the huge and well-appointed convention centre enjoyed a full week of plenary presentations, parallel technical sessions and poster presentations. Strong invited plenary presentations from Sue Murphy, CEO of the Water Corporation of the city, who gave us an excellent background to the evolution of Perth's water supply, and Craig Simmons from NCGRT followed the opening ceremony. These were followed during the week by invited plenary talks by Wolfgang Kinzelbach of ETH Zurich, Stephen Foster, Past President of IAH, Peter Cook of NCGRT, the Darcy Lecture and a plenary by Dave Rudolph of University of Waterloo, Geoff Beale from Schlumberger, Peter Dillon of CSIRO, Chunmiao Zheng of Beijing University and finally in the closing session John Doherty of the University of Queensland. The clever ploy of having the main invited plenary lectures spread through the week and starting each day ensured we were all up and about early to fill the main Riverside Theatre!



Despite the continuing rain and wind, the mid week field trips were able to build on the picture provided by Sue Murphy of the conjunctive management of the surface water and groundwater resources of the greater Perth region. The citizens of Perth and the surrounding suburbs are fortunate to have the Swan River and the various shallow lakes to provide them with havens of nature and recreational opportunities.



The local organisers provided time for the Association's Council to meet immediately before the congress and opportunities within the congress programme for the AGM, the ECHN, the national chapters and our commissions and networks. Some of these are reported separately in this newsletter. While the strong economy of Australia ensured it was an expensive congress for many of the visitors, participants enjoyed their time in Perth and our hosts on the local organising committee and in arinex the congress company can be congratulated on a job very well done.

Numbers at a glance

717 participants from 45 countries

More than 400 from Australia but sizeable groups from China, India and Japan

538 full registrations from members and non-members and 85 student registrations. The remainder were day registrations, exhibitors and complimentaries.

462 oral presentations and 141 posters



[View official Perth photos](#)

Thanks to the Australian committee and the wonder of our website developer we have been able to upload some great photos from congress, including many of the participants, in the Members' Area.

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

IAH AWARD PRESENTED IN PERTH

Only one IAH award recipient had been selected for 2013 and the presentation was made at the Annual General Meeting of the Association in Perth. The Presidents' Award was made by IAH President Ken Howard to Professor Ian Acworth, a hydrogeologist who has made outstanding contributions to the application of groundwater science and to furthering IAH's mission to promote understanding and management of groundwater resources.

Ian grew up in England and obtained a degree in Earth Sciences from Leeds University in 1973 and started his first job with Halcrows. Quickly realising he needed a further qualification in groundwater to be taken seriously by the engineers around him, he took the M.Sc in Hydrogeology at Birmingham University. He then worked in Nigeria until John Lloyd persuaded him to go back to Birmingham in 1979 to do a Ph.D on geophysical exploration for groundwater in the fractured rock aquifers he had become familiar with in Nigeria.

After returning to the consulting world at Wimpey Laboratories, but with a young family, Ian decided against further overseas work in difficult locations and in 1988



set off to Australia and the University of New South Wales. He has been there ever since, building up the teaching and research programme, establishing and developing the Connected Waters Initiative and is now the Gary Johnston Professor of Water Management. Through this distinguished academic career, Ian has maintained research interests in the investigation of

groundwater resources, geophysics, dryland salinity processes, coastal zones and contaminated groundwater, publishing widely in all of these.

Ian has been a member and active supporter of IAH for many years, as a member of the Australian National Committee and from 2004 to 2012 as IAH Vice President for Australasia and the Pacific. During this time his wise words in Council were always greatly appreciated.

[..by me especially: ed..]

JOHN CHILTON



Find out more about IAH awards

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

GROUNDWATER IN AFRICAN RIVER BASINS

ANBO Strategy paper released

Past President Stephen Foster writes to let us know about a short strategic document on groundwater management for the African Network of Basin Organisations (ANBO). He was responsible for coordinating their production on behalf of the Global Water Partnership (GWP) & ANBO with EU funds in close collaboration with a number of Sub-Saharan African river basin organisations, the GWP-African Networks, AMCOW, IGRAC and BGR in Germany. BGR with UNDP-CAPNET and the African Groundwater Network are promoting a training course on groundwater for African RBOs, the first of which was presented to ORASECOM in September. The paper is available in English and French.



<http://www.gwp.org/toolbox>

COMMISSIONS & NETWORKS



Burdon Network: latest collaboration with the African Groundwater Network

Following from the support of a previous African Groundwater Network (AGW-NET) training course in Lusaka, Zambia, IAH through its Burdon Network and Fund has again been able to support such training. A regional course on “Groundwater Management within IWRM in the Basin River Context” was held in Bamako, Mali from September 23-27 2013. The course was also supported by Cap-Net and the hosts and organisers CRUBN (the Regional Coordination of Niger Basin Water Users). IAH’s contribution of \$5000 (18% of the total cost) was used to cover part of the travel and accommodation costs for the course participants.

This course delivered in French was specifically aimed at river basin managers and professionals in the Francophone countries of West and Central Africa and was attended by 23 participants from: Benin Republic (2), Burkina Faso (1), Cameroun (1), Cote d’Ivoire (1), Madagascar (1), Senegal (1) and Mali (16), who are shown with the course facilitators in the accompanying photo. The objectives of the workshop were to:

- provide a basic understanding of groundwater processes and their interaction in a river basin context;
- promote sustainable groundwater resources management within the framework of IWRM;
- raise awareness of the importance of groundwater resources in Africa and the need for improved management;
- build capacity for improved groundwater management;
- enhance the sharing of information.

The course was facilitated by Dr Moustapha Diene from the University of Dakar, IAH member and an AGW-Net steering committee member, Professor Amadou Zanga Traoré from the National Engineering School in Bamako and Mrs Lala Camara Diarra from the Mali Ministry of Planning. Moustapha reports that the course programme included the following modules; introduction – the need for groundwater management, groundwater and surface water interaction, characterization of aquifer systems from a management perspective, monitoring of groundwater level and quality, stakeholder participation in groundwater management, groundwater rights and the right to water, groundwater protection and agricultural activities, groundwater and climate change, groundwater in IWRM: best practices and information management and communication. We are currently in discussion with our colleagues in the African Groundwater Network about how IAH might continue to support their training programme.

IAH SECRETARIAT

ECHN is growing... Perth update

The Early Career Hydrogeologists' Network (ECHN) has just completed its third IAH congress and is already proving to be very a positive addition to the IAH family. The development of ECHN has been rapid, starting with discussions Krakow in 2010. A LinkedIn platform acts as a membership forum and more than 220 members are already contributing. The ECHN website is presently being prepared and will go live shortly.

Perth saw the most involvement by the ECHN yet. Judith Flügge (retiring director) and Viviana Re (new director) addressed congress participants at the opening and closing ceremonies respectively and an ECH representative helped take care of the IAH booth. The ECHN steering committee also met the Moroccan delegation and planning for the 2014 Marrakech congress has commenced.

The two main events were, however, the pub quiz night and the Hydrogeology Journal session. The pub quiz night, held at Carnegie's, followed the Belgian Beer Café event and attracted more than 100 attendees. Hosted by Matt Currell, it included a range of questions, including About Australia, Beers of the World, a Geoduko (Sudoku adapted to a geological term) and Hydrogeological Definitions.

The Journal session saw 80 delegates attending the talk presented by HJ Editor, Cliff Voss. Subsequent discussions were chaired by Judith Flügge and John Chilton and included contributions from Vincent Post, Luk Peeters and Jin Menggui. Based on the success of this first meeting, we hope to make this side session a permanent fixture during future IAH conferences.



in

Additional news includes the invited involvement of the ECHN in IAH's website redesign, presence at the Budapest Karst congress in September, the development of a very active Western Australia branch of the network and increasing involvement in IAH commissions.

We thank the IAH Executive and all its members for support and interest, and we very specifically wish to thank the past network director Judith Flügge for her hard work in the past three years. With Viviana accepting the position of network director, Gillian Hurding (Scotland) is welcomed as new co-director.

MATTHYS DIPPENAAR AND VIVIANA RE

Commission on Managing Aquifer Recharge

The 8th International Symposium on Managed Aquifer Recharge (ISMAR8) was held in October at the China National Convention Centre in Beijing. Congress participant Gerd Cachandt from the UK reports that the hugely impressive conference centre next to the Olympic Park gives a good introduction to the dramatic scale of economic development and urbanization in China. It was the first time ISMAR has been held in eastern Asia. Despite the huge investment in surface water infrastructure, there is considerable interest in MAR in China for augmenting water resources, improving water quality and mitigating impacts on groundwater resources and it was the perfect host for ISMAR8.

A total of 85 oral and 37 poster presentations addressed the conference theme of "Managed aquifer recharge: meeting the water resource challenge". These showed that MAR is continuing to mature as a technology,



with an increasing diversity of applications and operational examples around the world. In the USA, schemes have increased from one in 1965 to more than 134 in 23 states by 2013. It was also encouraging to see detailed technical, operational and economic reviews of some of the more established projects. Although MAR seems to be a relatively new technique, some schemes have been operating for many years: for example, the Amsterdam dune filtration schemes developed in the 1950's to recharge water from the River Rhine; the California Orange County Water District which introduced surface water spreading along the Santa Ana River in the 1960's; and a trans-boundary artificial recharge system which has been operating in Geneva since the 1980's.

It is clear that MAR is now widely considered an economical way to increase resilience to a changing climate in a world with growing urban populations. MAR tools form a key part of adaptation strategies in the face of climate change in many continents. One of the reasons for the increased confidence in MAR schemes is that environmental and health risk assessment methods have now become well established; with good examples being presented from Australia. MAR techniques are being used creatively in a wide range of applications for mitigating problems such as land subsidence and seawater intrusion and for storm-water and reclaimed water reuse.

However several technical issues remain and generated significant discussion. These include:

- water quality issues, including disinfection by-products, fate of pathogens, nutrient removal and inorganic solutes, during storage and recovery;
- several papers specifically looked at the fate and removal of organic micro pollutants;
- a major issue continues to be the management and control of clogging;
- new developments of alternative recharge methods such as directional wells and stacking of ASR storage zones.

During the plenary meeting of the IAH MAR commission, a new report edited by Russell Martin entitled "Clogging issues associated with managed aquifer recharge methods" was launched. This commission monograph documents advances in understanding of geochemistry, microbiology and aquifer hydraulics that impact managed aquifer recharge and cause clogging of recharge installations. Although the generic causes of clogging are well known, the reduction in hydraulic conductivity beneath infiltration facilities and around recharge wells is still a frequent reason for abandonment of MAR projects. The publication contains contributions by many authors and examples from around the world and is available from www.iah.org/recharge/clogging.htm

IAH Certificates of Appreciation were presented to Enrique Fernandez Escalante, Russell Martin and Professor Xuan Zhao of Tsinghua University, the chair of ISMAR8 and also awarded to Devinder K Chadha and Ricky Murray who were not able to be in Beijing. ISMAR9, entitled "Solutions to sustainable water management subject to scarcity and climate change" will be held at the Engineering Institute of The Universidad Nacional Autónoma de México (UNAM) in Mexico City in the spring of 2016. Look out for further details in due course.

GERD CACHANDT

THE GLOBAL ARENA

News from Shammy Puri, IAH's Secretary General



An important component of IAH's Forward Look strategy and our overall mission is to raise the profile of groundwater within the international water policy arena. Secretary General Shammy Puri has been at the forefront of these efforts, as summarised below.

PLACING GROUNDWATER IN THE FORTHCOMING SUSTAINABLE DEVELOPMENT GOALS (SDGS)

Debate is going on in many water sector circles to try to have explicit references to water included in the Sustainable Development Goals (SDGs). These are the 'offspring' of the MDGs that will close in 2015. Representatives of IAH have been part of this debate, trying to ensure that groundwater resources are not forgotten and emerge more strongly into the view of decision makers. We have made good headway by being present at the Dushanbe High Level Conference (<http://www.hlicwc.org/>) and at the Budapest Water Summit and in particular its Science Forum (<http://www.budapestwatersummit.hu/budapest-water-summit/science-forum/>). Both these conferences produced final documents recognising the role of groundwater. At both events, IAH partnered with UNESCO-IHP among others to host sessions and side events at which groundwater resources management was highlighted.

INTERNATIONAL YEAR OF WATER COOPERATION

2013 is dedicated to promoting water cooperation and a series of events have taken place since its launch in January (<http://www.un.org/en/events/worldwateryear/>). As reported in the May newsletter, World Water Day on 22nd March strongly featured water cooperation as its theme and IAH members who had been at the GEF Groundwater Governance Project regional consultation

also participated in the meetings and discussions. The theme of water cooperation across economic sectors and across jurisdictions has been much discussed and there is growing recognition that cooperation is essential if water resources are to be well managed. The example of an agreement on transboundary aquifers has been quoted to illustrate cooperation in groundwater (see <http://www.globalwaterforum.org/2013/09/02/the-agreement-on-the-guarani-aquifer-cooperation-without-conflict/>).

COOPERATING ON TRANSBOUNDARY AQUIFERS

In October the University of Strathclyde convened a three day conference devoted to transboundary aquifers, with the participation of IAH. Among issues discussed, there was concern that the legal instruments relating to transboundary waters need to be consolidated to provide consistent guidance to help countries negotiate cooperation over shared water resources. A series of discussions and commentaries were given both by international law specialists and hydrogeologists. Following from these discussions, IAH is proposing to establish a Commission or Network to consider the next steps in transboundary aquifer cooperation. A proposal will be prepared for submission to the IAH Executive and any IAH interested IAH members should contact Shammy Puri at ShammyPuri@aol.com.

IAH OUTREACH

As an Association dedicated to promoting the science and wise use of groundwater and aquifers, we are always looking for opportunities to describe the science, promote the skills and explain the role of professional hydrogeologists. One such opportunity was to deliver lectures at Durham University's June 2013 training course on Boundaries and Water (<https://www.dur.ac.uk/ibru/>) which took place this year in Washington DC in cooperation with the law firm of Foaley Hoag. The course is intended for diplomats, boundary agencies, land surveyors and officials from ministries of foreign affairs. A series of lectures was given on transboundary aquifers and the need for their recognition at the diplomatic level as well as the scientific one.

Taking advantage of the Washington visit, Shammy also gave a presentation to the Organisation of American States (OAS). OAS has recently declared water to be its priority issue for the Member States of Latin America. The IAH presentation highlighted the significance of groundwater resources in the region and the need for their full recognition in water management. Offers of scientific support from the membership of IAH in the region were made to the OAS Secretariat. (see http://www.oas.org/en/sedi/dsd/IWRM/Ongoing_Projects/ISARM_Americas/project_default.asp)

THE GLOBAL ENVIRONMENT FACILITY (GEF) AND IAH

Regular readers of this newsletter will be familiar with the Groundwater Governance Project and the participation of the IAH in its work programme. The project is now at the stage of converting the base line knowledge and information collected from around the globe (primarily

from five regional consultations and twelve thematic papers) into a vision of groundwater governance and then a Framework for Action. These are challenging tasks and a core group of experts with strong IAH representation has been established to prepare these documents. There is also a Permanent Consultation Mechanism (see <http://www.groundwatergovernance.org/permanent-consultation-mechanism/en/> which shows the list of consultees). If your name does not appear on this list and you have an interest in groundwater governance, please visit the site and register your involvement. The project steering committee is keen to have IAH practitioners fully involved in the process and outcome, which may well shape the work of hydrogeologists in the years to come!

IAH continues its involvement with GEF financed projects. The most recent project is the Transboundary Waters Assessment Programme (TWAP) which has a component on aquifers – visit <http://www.isarm.org/publications/450> for more information. Another GEF project in which IAH has an interest is the DIKTAS Project in the karst region of the Balkans (see <http://diktas.iwlearn.org/>).

Finally, it is worth mentioning that under the new phase of GEF funding there is an explicit budget allocated for developing projects that refer to the conjunctive use of water resources. Members of IAH should seek opportunities to participate in these types of projects when they are formulated and submitted for funding. More information is available from Shammy by contacting ShammyPuri@aol.com.

Perth Meeting

Eight chapters share thoughts and ideas during congress

Following an established routine, representatives of IAH's National Chapters were invited to meet in Perth. Colleagues from the Irish, Portuguese, US, Serbian, Italian, Hungarian, Croatian and Slovenian chapters met with members of the IAH Executive. After a warm welcome from IAH President Ken Howard, Bruce Misstear explained the background to the current review of national chapter rules and guidelines, and outlined some of the responses received so far. Of the 40 or so chapters, responses had been received from only seven, but these included many useful comments and suggestions.

In response to comments from Irish and US colleagues, there was a good discussion about the prospects for extending twinning arrangements between chapters. The presently generalised guidelines referring to twinning could be improved to embrace a broader range of possible links, taking account of the differing needs and aspirations of both partners. It was agreed that the regional Vice Presidents of IAH should be more involved and could make more efforts to promote twinning, as could the Secretariat. Both the US and Irish chapters were interested in further developing twinning links.

In June, IAH Council in its discussions about the rules and guidelines and the broader issue of strengthening IAH National Chapters had suggested there should be a standing committee of chapter representatives. This suggestion was put to the meeting, and generally endorsed. Given the global spread of the IAH membership and chapters, this could present some logistical difficulties in its operation. Most exchanges would need to be electronic, with meetings at IAH congresses each year. It was suggested that it could be operated via social media, perhaps with a Facebook site or LinkedIn group, and the Croatian representative agreed to take the lead in setting this up, with the support of the Secretariat.

The views of the chapter participants were sought with regard to student fees; opinion was divided between those in favour of completely free student membership and those favouring a small fee. Finally, short reports of chapter status and activities were provided. At the Central European Conference in Hungary, five chapters presented their activities and there will be a second meeting of Central European chapters at the June 2014 Karst meeting in Trebinje. Other points of note included a proposed joint field trip between the Slovenian and Croatian chapters in the spring of 2014, the second Flowpath conference in Italy in 2014, planning for the second Central European Groundwater conference and regular use of video links by the Irish chapter to enable members in Cork, Galway and Belfast to take part in the monthly meetings held in Dublin.

Overall, those present agreed that the meeting had been useful and wanted to continue to build up communication between chapters. Watch the IAH website for news of the standing committee and future meetings. Secretariat and Executive are working on the national chapter rules and guidelines, and we are still keen to hear more views from our chapters to help us in this task.

SECRETARIAT

Committee Changes

We have received the following details of committee changes for several of our national chapters. We warmly welcome all of the new teams, wish them well in their work and offer them the full support of the IAH Secretariat.



Croatia

In Croatia, Tamara Marković tmarkovic@hgi-cgs.hr has taken over as president of the chapter from Ozren Larva and her colleague at the Croatian Geological Survey Staša Borović sborovic@hgi-cgs.hr replaces Tamara as the new secretary. We thank Ozren for all his hard work in recent years, including being one of the main enthusiasts for bringing an IAH congress to Croatia (see page 23).



Ireland

The Irish national chapter of IAH held its AGM and elections at the beginning of October. As a result, David Drew remains as president of the chapter and Katie Tedd becomes secretary and Dominica Baird becomes treasurer. We would like to thank the outgoing secretary Jenny Deakin and treasurer Catherine Buckley who have completed their terms for all their help over the last three years, and wish the new committee well.



Slovenia

Timotej Verbovšek, outgoing secretary and treasurer of the IAH National Chapter of Slovenia reports that their annual meeting in October included the election of a new committee, which happens every five years. The new president of the chapter is Zlatko Mikulič, zlatko.mikulic@gov.si and the new secretary/treasurer is Martin Tancar, martin.HGEM@siol.net. It has been a pleasure working with Timotej over the last five years, and we are very grateful for his efforts in maintaining our membership in Slovenia and for making the work of our membership secretary Sharon Warden so much easier by being so helpful and efficient.



Poland

Meanwhile, the Polish Chapter has a new secretary Slawomir Sitek (slawomir.s.sitek@us.edu.pl) to work alongside chapter president Andrzej Witkowski.



Find further information about our chapters

<http://iah.org/groups/national-chapters>



NEW MEMBERS

A warm welcome to the following new members who joined our Association in the period 1 July - 31 October 2013:

AUSTRALIA

Loren BARGIEV
Juan BERRIO
Gemma BLOOMFIELD
Tristan CAMPBELL
Steve CHITTY
CDM SMITH
Michael CYROCKI
Duncan DAWSON
DHI GROUP
John DOHERTY
Lesly EGUSQUIZA HUACHEZ
Ines EPARI
Michael GILLEN
Martyn GRAY
Katy GREEN
Sarah GRESSER
Alyx GUARIN
Ander GUINEA
Megan HANCOCK
Chris HARRIS-PASCAL
Robyn HILL
Peter HYDE
Robert KAMAU
Jonathon KNIGHT
Sean KONINGS
Zoe KOSMADOPOULOS
Kele MAHER
Ben MOORE
Andrew OGDEN
Alexander PATTERSON
Henning PROMMER
Anne PYE
Bhasker RATHI
Gyanendra REGMI
Alexander RENZ
Becky ROLLINS
Hamid ROSHAN
Matthew RYAN
Peta SEVERN
Rodney SHORT

Louise SPOONER
Ludovic SPRAUER
Todd STOKES
Duncan STOREY
Megan SURRETTE
Stefan SZYLKARSKI
Yong Ping TANG
Gregory VAN BLOMESTEIN
WESTERN IRRIGATION
Nicholas WRIGHT

BELGIUM

David GAULE
Delphine RENSONNET

BRAZIL

Marcelo GOFFERMANN

CANADA

Annie L'ARRIVÉE
Andrew INESON
Kimberly MARKVOORT
Michael TAKEDA

CHILE

Daniel BENITEZ

COLOMBIA

Sergio Eduardo LÓPEZ RAMÍREZ

COTE D'IVOIRE

Isimemen OSEMWEGIE

EGYPT

Dr Rani FOUAD MOHAMED

FRANCE

Sébastien BART
Marie BOUDET
Pierre Yann DAVID
Emilie DAVY
Emmanuel HAUCHARD
Timothee JAOUEN
Jean-Renaud VUATHIER

GERMANY

Dr Reiner STOLLBERG

HUNGARY

Adam TOTH

INDIA

Dr Tanvi ARORA
Dr. Sk. Md. EQUENUDDIN
SLS JAGESHWAR
Arunachalam KALIMUTHU
Sudarshan SAHU
Dr Lagudu SURINAIDU

IRELAND

Richard FITZPATRICK
Martin HOFER
Áine MC ELHINNEY-BIESSMANN
Micheal O FLATHARTA
Alice RIORDAN
Maeve ROCHFORD

ITALY

Marinella FISICARO
Dr Marco GIACOPETTI
Dr MONICA PASINI
Michele SAROLI

KAZAKHSTAN

Ms TKACHEVA

NEPAL

Lelin R DHUNGEL

NEW ZEALAND

Andrej L DRUZYNSKI

NIGERIA

Dr Arabi Suleimani ABDULLAHI
Ayobami Oseni AKANBI
Mr Ayamezimi EHINLAIYE
Iniemem J INIM
Awoibi JOE-UKAIRO

NORWAY

Erik AAVATSMARK

POLAND

Aleksandra KIECAK

PORTUGAL

Rui HUGMAN

RUSSIA

Rim LISTIKOV

SOUTH AFRICA

Mr Brian MATENGU
Mr Kudakwashe SHAMUYARIRA

SPAIN

Maria Teresa TEIXIDO ULLOD

SWITZERLAND

Alexandre VOGEL

TURKEY

Ömer KAHRAMAN
Jale SAKIYAN ATES

UGANDA

Edward Martin RWARINDA

UNITED KINGDOM

Murtala Abubakar GADA
Holly CLARK
Chris COLLINSON
Sally HOMONCIC
Adam JAMES
Aodhán MCBRIDE
Sam PERKINS
Mrs Mital PINDORIA
Kirsty SHORTER
SIMIAO SUN

UNITES STATES OF AMERICA

Alfredo HIJAR
Daniel KELLEHER
Liz SCREATON
Dr. Jeff STARN

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

MEMBERS' AREA...

Check and update your details and settings on IAH's website

International Association of Hydrogeologists
the World-wide Groundwater Organisation

HOME ABOUT IAH JOIN US GROUPS KNOWLEDGE PUBLICATIONS EVENTS NEWS

Members Area

Dr Judith FLÜGGE
Groundwater modeller, project manager at GRS mbH
Edit Your Details Change Password

Welcome Your Membership Membership Directory **HJ Online** Book Discount IAH Meetings

Personal Details

Title <input type="text" value="Dr"/> e.g. Dr, Prof, Mr, Mrs, Ms, Snr	Forename/Given Name <input type="text" value="Judith"/>
Surname/Family Name * <input type="text" value="FLÜGGE"/>	Email * <input type="text" value="Judith.Fluegge@grs.de"/>
Telephone (inc. Country code) <input type="text"/>	Fax (inc. Country code) <input type="text"/>

Judith Flügge (Germany, former ECHN Chair) kindly agreed that we could use a screen shot of her own IAH member page to illustrate to everyone the brand new members' area on IAH's website.

Please take a moment to check your details. Have we got your email address and contact details right? Perhaps you might wish to upload a photo, so that fellow members can see who you are (and find you at congresses and meetings). Are you happy with your communication and privacy settings? If you are an elected IAH representative for a chapter, commission, network, etc. you can indicate this.

As well as sending the regular IAH HJ/alerts and eNews, IAH will be using the members' area to pass on news, messages and reminders. We also plan to make future improvements to its functionality. Questions, comments, glitches? Email info@iah.org.

IAH SECRETARIAT



FURTHER INFORMATION

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

<http://iah.org/privacy-and-cookies-policy>

PICTURE THE IAH

IAH constantly needs to add to its stock of photos to help to reach out to its diverse world-wide audience and to illustrate the importance of groundwater as a resource. Earlier this year we decided to organise our second photo competition, calling for entries via our newsletters, website and eNews alerts. Once again we were very impressed with the quality and range of submissions by our members. Thank you! The winning photos are below.

THE WONDER OF GROUNDWATER

Many of us have become familiar with Lee Evans' 2011 impactful winning photo of groundwater discharges into the gorges of Karijini National Park, Western Australia - it features on IAH's homepage and throughout our publicity material and reports. Perhaps encouraged by this, for our latest competition we received many interesting entries and it proved quite a challenge for the judges to choose a winner.

Winner: Oluwole Oyedeji (Nigeria)

Spring emanating at a source in the Midwestern part of Nigeria where sandstone is underlain by plastic shale.



IAH HISTORY

Unfortunately the judges were unable to make an award for a photo in this category. Given that IAH will be celebrating a big anniversary in a few years time, efforts will be made to try to capture some images from its past... If you are able to help, please email info@iah.org.

Look out for the winning images being used and for future competition announcements...

WORKING ONSITE

Clearly our members are extremely busy because this was the most hotly contested category. Again, the judges had a task on their hands choosing the winning photo.



Winner: Karthik Rajagopal (Australia)

Conducting field work in Esperance, Western Australia.

SHARING KNOWLEDGE

We received fewer entries for this category. Even so one entry leapt out to the judges as being winning material- not because of who the person is in the photo (many will instantly recognise the eminent hydrogeologist Peter Dillon) - but because of what he is doing, and against such a dramatic setting...

Winner: Enrique Fernandez Escalante (Spain)

Peter Dillon feeding the press hints about who we are and what we do during ISMAR7 conference. Liwa, Abu Dhabi.



...we need images showing our female hydrogeologists at work...

IAH CONGRESS UPDATES

Morocco, 2014 host

The Moroccan Committee of the International Association of Hydrogeologists encourages you to participate in the 41st International Congress of IAH, entitled “Groundwater: Challenges and Strategies”.

Themes

The main themes of the congress will be:

- Climate change and groundwater resources
- Interaction between groundwater and surface water
- Vulnerability, pollution and remediation of groundwater resources
- Aquifers in fractured and karstic environments
- Coastal aquifers
- Management and governance of groundwater resources
- Tools and techniques for the investigation of groundwater resources
- Unconventional groundwater resources
- Hydrogeology of arid zones



Background

Around the world, pressure on groundwater resources is increasing due to growing demand and water quality degradation. The demand for increased access to safe drinking water, irrigation, urban expansion, industrial development and tourism are among factors that increase these pressures. Exploration for and development of additional groundwater resources have become high priorities in many countries. In general, groundwater resources are finite and subject to temporal variability in the context of severe climate, to which climate changes add more uncertainties. This situation is further aggravated by the overexploitation of groundwater, the use of inefficient irrigation techniques and the proliferation of pollution sources.

It is therefore important to rethink groundwater policies and management in a more holistic and integrated way, taking into account supply and demand, groundwater vulnerability and protection, mobilization of non conventional water resources and groundwater recharge. From this perspective, groundwater governance is a central issue. Setting up frameworks for good governance will not only enable access to groundwater in a more equitable and sustainable way, but set conditions for better cooperation (rather than conflict) at the local, national and international levels.

Location

Marrakech, Morocco. This is the first time the IAH congress will be held in the Middle East and North Africa (MENA) Region, one of the regions of the world that suffers severe water scarcity.

Abstract submission

Submission of abstracts is invited, with a deadline of 15 March 2014.

2014 CONGRESS ORGANISING COMMITTEE



FURTHER INFORMATION

See congress website - <http://www.iah2014.org>

Future congresses

The Perth congress also provided an opportunity to decide on future IAH congresses. Previous exploratory discussions with several potential hosts were continued in Perth and we are now in the fortunate position of having an exciting programme in place for the next few years...

Rome 2015

After hearing a detailed presentation from Marco Petitta, chair of the Italian National Chapter, Council confirmed that the 42nd Congress will be held in Rome. At its June meeting, Council had requested the Italian chapter to consider whether their original suggestion of hosting the congress in Rome was the best option in terms of travel, accommodation, venues and costs. They had done this, and Council has now formally accepted their proposal. By the time you read this, IAH Executive member Bruce Misstear will have made a preparatory liaison visit to Rome.

Colombia 2016

Sandra Robles from Colombia also made a presentation to Council. The Colombian National Chapter had informed us in Niagara Falls that they were keen to host an IAH congress, and in the period between Niagara Falls and Perth have developed their ideas further. They have settled on the beautiful historical city of Cartagena on the Caribbean coast with its walled city which was declared a UNESCO World Heritage Site in 1984. It is proposed to organise the congress in collaboration with AHLSD. Council has accepted this in principle and the National Chapter is hard at work on a more detailed proposal and business plan. We are looking forward to returning to Latin America.

Croatia 2017

As reported in the last newsletter, two very strong proposals from Croatia and Italy were received for 2015. The June meeting of IAH Council commended the Croatian National Committee for the quality of their proposal and invited the Committee to consider whether they could offer to host the 2017 congress. They have met and responded very positively, and Tamara Marković brought to Perth details of what the National Chapter are proposing. It is the intention to hold the congress in Dubrovnik, jewel of the Dalmatian coast and who's Old Town, like Cartagena, is a famous UNESCO World Heritage Site. The IAH Executive welcomed this proposal and, subject to Council's approval in due course of their business plan, will be working with our Croatian colleagues to develop a first class event for 2017.

Asia Pacific Regional Conference in Korea

In addition, discussions were held in Perth between the IAH Executive and representatives of the Korean Chapter about the possibility of an IAH conference in Korea. This follows the visit of President Ken Howard to Korea in July of this year. The outcome of these discussions is that the Koreans will host an IAH Asian-Pacific regional conference on Jeju Island in the spring of 2015, and discussions are continuing between the Korean Chapter and the IAH Executive to refine the proposal.

...All in all, we can be happy to have such a full line up. This is a good position for the Executive and Secretariat to be in; it gives us plenty of time to support the local organisers and to become better at passing on the experience of one congress to the next. The fact that we are able to develop such a good programme comprising both full congresses and more focussed regional meetings such as the successful Central European Conference in Hungary and the proposal for Korea is, I believe, an indication that our efforts to provide better support and encouragement to IAH National Chapters is beginning to pay off. We are always open to receive further ideas for conferences.

JOHN CHILTON

2014

19-21 Feb 2014 – East London, South Africa

Gender, Water and Development – the untapped connection.

<http://global-water-conference.com>

5-7 Mar 2014 – Prague, Czech Republic

Integrated Management of Groundwater Resources and Dependent Ecosystems, organised by The GENESIS project.

http://www.bioforsk.no/genesisfinal_conference.genesis@bioforsk.no

18-20 Mar 2014 – Lille, France

Polluants organiques persistants (POP) et émergents & Risques associés/Emerging and persistent organic pollutants (POPs) & associated risks.

<http://www.intersol.fr/>

4-7 May 2014 – Denver, USA

NGWA Groundwater Summit

<http://groundwatersummit.org/>

3-10 Jun 2014 – Trebinje, Bosnia and Herzegovina

International Course and Field Seminar: Characterization and Engineering of Karst Aquifers

Organised by The Centre for Karst Hydrogeology of the University of Belgrade.

zstev_2000@yahoo.co.uk

11-15 Jun 2014 – Trebinje, Bosnia & Herzegovina and Dubrovnik, Croatia

Karst Without Boundaries

International conference and field seminar, organised under the framework of the DIKTAS project.

<http://www.karstwithoutboundaries2014.org>

18-20 Jun 2014 – Viterbo (Italy)

Flowpath 2014, National Meeting on Hydrogeology. Organised by IAH Italian Chapter.

http://www.flowpath_2014.unitus.it flowpath_2014@unitus.it

8-11 Sep 2014 – Karlovy Vary, Czech Republic

MinWat2014 – International Multidisciplinary Conference on MINERAL WATERS: Genesis, Exploitation, Protection and Valorisation. Organised by IAH Commission on Mineral and Thermal Waters; IAH National Chapter of Czech Republic; Faculty of Science, Charles University (Univerzita Karlova); and T.G. Masaryk Water Research Institute (VÚV).

<http://minwat2014.vuv.cz/>

14-20 Sep 2014 – Gwangju, Korea

22nd International Committee on Irrigation and Drainage (ICID) Congress

<http://www.icid2014.org>

15-19 Sep 2014 – Marrakech, Morocco

IAH 41st Congress: Groundwater: Challenges and Strategies

<http://www.iah2014.org/>



<http://iah.org/events>

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