

# NEWS

# & information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

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

## MAY 2016

### Also in this issue:

- New IAH Award
- IAH Council Elections
- Commissions & Networks
- IAH'S 60th anniversary
- Meeting and project reports
- Chapter news
- New members
- Conference listing

and the usual IAH announcements and news

## RECORDING HISTORY



With help from Willi Struckmeier, the Early Career Hydrogeologists Network, the Time Capsule Project, chapters, networks and commissions, as well as individual members, we are setting down a historical record of our association's first 60 years. Can you contribute? *Read about the latest plans and events for IAH's anniversary on pages 8 and 9.*

### STRATEGIC OVERVIEW SERIES - NEW RELEASES



Two more available, bringing the total to five, with one more in progress. *Page 12*

### IAH'S GLOBAL FAMILY GROWING





New chapters in Iraq, Turkey, New Zealand and Kazakhstan, with more under discussion. *Pages 20-24*

### FIND OUT MORE

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INTERNATIONAL  
ASSOCIATION OF  
HYDROGEOLOGISTS

MAY 2016

# NEW IN THE IAH BOOK SERIES

## Selected Papers on Hydrogeology (IAH-SP)

Series editor Nick Robins, formerly of British Geological Survey, Wallingford, UK



## Solving the Groundwater Challenges of the 21st Century

Edited by Ryan Vogwill, University of Western Australia

Groundwater is integral to many human and environmental systems but there are significant challenges in dealing with the impact of anthropogenic activities on groundwater systems. These challenges need innovative solutions.

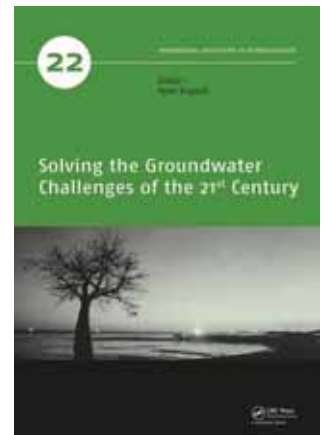
This book contains a wide range of content, from a discussion of the Australian regulatory framework for unconventional hydrocarbons, the extraction of which has the potential to significantly impact groundwater systems, to the best way to apply numerical models to help solve complex, real world problems. The impact of urbanisation on groundwater systems in the developing world is also discussed, at both a local scale in Nigeria and at a world scale. The use of innovative tools such as managed aquifer recharge, a critical tool in solving the groundwater challenges of the 21st century, is also discussed. The framework used to manage the legacy of agricultural contamination in Denmark, covering investigation to regulation and remediation, is also presented, focussing on how the many challenges in implantation were solved.

This book is targeted at professional hydrogeologists, experts in governance, law and policy as well as other professionals who need to incorporate an understanding of groundwater. The book will also appeal to politicians, resource managers, regulators and others interested in sustainable water supply.

April 2016: 128 pp; ISBN 9781138027473

Published price £63.99 (60% discount for IAH members)

<https://www.crcpress.com/Solving-the-Groundwater-Challenges-of-the-21st-Century/Vogwill/9781138027473>



## Karst without Boundaries

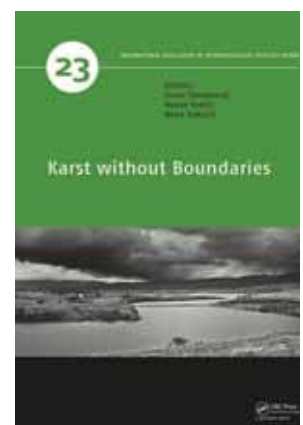
Edited by Zoran Stevanović, Neven Krešić, Neno Kukurić

Karstified rocks of different lithologies cover more than 10% of the continental surface of our planet. Some 20% or even a few percent more of the global population depends on karstic groundwater but in many karst areas all over the world there are limited natural resources including absence of drinking waters. The problems of water shortage, equitable water use or water protection from pollution become more acute in transboundary regions. The Dinaric region is a classical karst area in which the borders of the countries newly established in the 1990s resulted in an urgent need to create an ambience for sustainable water management. The DIKTAS Project is one of the first attempts to establish sustainable integrated management principles in a transboundary karst aquifer of the magnitude of the Dinaric Karst System. This volume presents selected papers from the conference held in June 2014 in Trebinje, Bosnia & Herzegovina, including presentations of some of the project's achievements but also the results of a number of other research activities conducted in karst environments worldwide.

April 2016: 376 pp; ISBN 9781138029682

Published price £108.00 (60% discount for IAH members)

<https://www.crcpress.com/Karst-without-Boundaries/Stevanovi-Krei-Kukuri/9781138029682>



## About the IAH book series

Books published by the CRC Press/Ballema - 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.



<https://www.crcpress.com/IAH---International-Contributions-to-Hydrogeology/book-series/TFIAHICH>

<https://www.crcpress.com/IAH---Selected-Papers-on-Hydrogeology/book-series/TFIAHSEPAHY>

<https://iah.org/members/book-discount>



## 60th anniversary off to a good start...

At the time of writing, three months into the year, we can be pleased that IAH's 60th anniversary is off to a good start. We have an Editors' Message on the anniversary in the first issue of Hydrogeology Journal in 2016, and a more comprehensive historical summary article on the way. The full documentation of IAH's history since 1956 under the guidance of Willi Struckmeier is receiving support from many directions. Preparations are well underway to celebrate our birthday in Montpellier. Early indications for this year are that membership numbers are doing well, and we are very pleased to report the setting up of four new IAH chapters; the "chapter news" section on pages 20 to 24 of this newsletter is probably the largest we have ever had. We are grateful for the dedication and hard work of national colleagues and the support of our regional vice presidents to get these established.

## But still more to do...

To support the effort going into our historical documentation, we would still like to receive more old photos from congresses, field trips and other activities. We would like to hear much more about your own celebrations of IAH at sixty. Discussions to establish chapters continue in several other countries and we hope to report successful outcomes from these later in the year.

## IN THIS ISSUE

New in IAH Book Series.....	2
Media Focus.....	4
Sustainable Development Goals.....	7
IAH News: Executive meets.....	6
New IAH Applied Hydrogeology Award.....	7
IAH Anniversary update.....	8
IAH Council Elections.....	10
Strategic Overview Series.....	12
KINDRA Project.....	13
Hydrogeology Journal News.....	14
Commissions and Networks.....	16
New Members.....	18
Chapter News.....	20
Tips and Reminders.....	25
Congress Updates.....	26
Conference Listing.....	28

## Boost our membership

We urge you to renew your IAH membership if you have not already done so, and to encourage as many people as possible to join. Let's make 2016 a bumper year in every way!

JOHN CHILTON

## ADVERTISING AND COPY INFORMATION

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

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

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

All copy must be provided electronically - please contact [knicholson@iah.org](mailto:knicholson@iah.org) for acceptable formats.

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

Email [knicholson@iah.org](mailto:knicholson@iah.org)



# MEDIA FOCUS

A selection of groundwater features from around the world

## USA: FRACKING LINKED TO GROUNDWATER CONTAMINATION

A new study by scientists from Stanford University in California, published in *Environmental Science & Technology*, has found that fracking operations near Pavillion, Wyoming “have had clear impact to underground sources of drinking water.” The operations near Pavillion have long been contentious. In 2008, the town made headlines when local residents started complaining of a foul taste and odour in their drinking water, leading to an investigation by the US Environmental Protection Agency (EPA).

In 2011, the EPA issued a preliminary report which linked shallow fracking to toxic compounds in aquifers but no action was taken by the agency. The new Stanford study goes beyond the 2011 EPA report to document not only the occurrence of fracking chemicals in underground sources of drinking water but also their impact on that water that is making it unsafe for use.

<https://ecowatch.com/2016/04/01/groundwater-contamination-pavillion/>

## USA: DESIGN AND TESTING OF A NEW GROUNDWATER VULNERABILITY ASSESSMENT SYSTEM

Efforts to assess the likelihood of groundwater contamination from surface-derived compounds have spanned more than three decades. Relatively few of these assessments have involved the use of process-based simulations of contaminant transport and fate in the subsurface, or compared the predictions from such models with measured data — especially at regional to national scales. To address this need, a process-based groundwater vulnerability assessment (P-GWAVA) system was constructed using transport-and-fate simulations to predict the concentration of any surface-derived compound at a specified depth in the vadose zone anywhere in the conterminous United States.

The system was used to simulate the concentrations of selected agrichemicals in the vadose zone beneath agricultural areas in multiple locations in the United States. The simulated concentrations were compared with observed concentrations of the compounds detected in shallow groundwater (that is, groundwater drawn from a depth of  $6.3 \pm 0.5$  metres below the water table) at more than 1,400 locations across the United States. The results from these comparisons were used to select the simulation approaches leading to the closest agreement between simulated and measured concentrations.

<https://pubs.er.usgs.gov/publication/sir20145189>

## AFRICA: DROUGHT AND RISING TEMPERATURES ‘LEAVE 36 M PEOPLE FACING HUNGER’

An unusually strong El Niño, coupled with record-high temperatures, has had a catastrophic effect on crops and rainfall across southern and eastern Africa. More than 36 million people face hunger across southern and eastern Africa, the United Nations has warned, as large areas of the continent grapple with the worst drought in decades at a time of record high temperatures. The immediate cause of the drought which has crippled countries from Ethiopia to Zimbabwe is one of the strongest El Niño events ever recorded. It has turned normal weather patterns around the globe upside down, climate scientists say.

With the world still reeling from record high temperatures in February, there are fears that the long-term impacts of climate change are also undermining the region’s ability to endure extremes in weather, leaving huge numbers of people vulnerable to hunger and disease.

<http://www.theguardian.com/environment/2016/mar/16/drought-high-temperatures-el-nino-36m-people-africa-hunger>



### NEW STUDY OF SUBMARINE GROUNDWATER DISCHARGE PUBLISHED

If you've ever floated through a cold patch of water while swimming in the ocean, you may have experienced a phenomenon called submarine groundwater discharge (SGD). SGD occurs when groundwater seeps out of the seabed into the coastal ocean. It is often brackish as a result of fresh groundwater discharging from the land mixing with salty ocean water. The mixing of fresh and salty groundwater often occurs where the waves are breaking.

Researchers James Heiss and supervisor Holly Michael of the University of Delaware are curious about the time scales and the factors which affect the size of the mixing zone, the rate at which groundwater flows through this zone, and the chemical reactions that take place there. Heiss and Michael recently reported their findings in *Water Resources Research* and the paper was selected for the journal's Editor's Choice award.

<http://www.udel.edu/udaily/2016/feb/fresh-salt-water-021116.html>

<http://onlinelibrary.wiley.com/doi/10.1002/2014WR015574/full>

### ABU DHABI: GROUNDWATER RESERVES SET TO "RUN OUT" IN 50 YEARS

Irrigating Abu Dhabi's gardens and farms will exhaust groundwater reservoirs within the next 50 years, according to a study conducted by the Environment Agency Abu Dhabi (EAD). The findings have prompted urgent action such that anyone wishing to install a water well will now have to apply to the agency for permission. A plan to use treated sewage water for farms is also being put in place.

For well tenders, each case will be looked at individually and assessed for its impact on the dwindling water supply. If areas are marked as depleted or in what the EAD has labelled as "red zones," where it is illegal to draw any water from underground sources, then the well tender will be refused. According to Dr Mohamed Dawoud, EAD adviser for water resources, the UAE consumes 2.1 billion cubic metres of water a year and using treated sewage could be one way to alleviate the stress on natural reserves.

<http://www.thenational.ae/uae/abu-dhabis-groundwater-reserves-set-to-run-out-in-50-years>

### REPORT: WATER RATED AS TOP LONG-TERM GLOBAL RISK

From the environment to international security and the coming Fourth Industrial Revolution, the World Economic Forum's Global Risks Report 2016 rates water as top risk in the coming 10 years. The 11th edition of the Global Risks Report, viewed as a distillation of the concerns of the world's most influential businesses and governments, is a warning signal for turbulent times. Last year, water crises earned the top spot as the most damaging short-term risk. Along with water's rise in the Paris climate talks, the rankings indicate that water, long the purview of engineers and lawyers, is now an urgent political matter and is deeply intertwined with climate change, economic stability, and human migration.

<http://reports.weforum.org/global-risks-2016/>



View latest at: <https://iah.org/news>

We welcome suggestions - email [info@iah.org](mailto:info@iah.org)

## EXECUTIVE MEETS IN UK

The IAH Executive Committee met in February in Dorchester-on-Thames in the UK. Amongst the many agenda items, review of the previous year's financial performance provides a basis for the discussion of future plans. The provisional end of year statement for 2015 shows a likely deficit of some €18,000 on a turnover of €332,000. Income was much as anticipated, with total IAH membership at the end of the year at 4103 and the highest ever. Repayment of the loan for the Marrakech Congress was received from the Moroccan national chapter early in 2015, for which we are very grateful. With a full attendance at Council in Rome and the meeting of the journal editorial team, and a number of important external representation visits, travel costs were slightly over budget and up from the previous year. Overall, this represents a sound financial performance, full details of which will be provided in due course in the 2015 accounts and annual report.

With improvements to member benefits always in mind, an association with our educational and charitable objectives should be using its resources fully, although this does not mean that operating deficits can be sustained continuously. The preliminary budget for 2016 tabled in Dorchester indicated that, even with existing commitments, it would not be easy to balance the books. This has been made more difficult because, as a result of Springer cutting costs following their recent merger (see page 9), from the beginning of 2016 Susanne Schemann, HJ's Editorial Office Manager (EO), is working under direct contract to IAH. There is now a cost-sharing arrangement between IAH and Springer to cover the costs of her contract.

At the same time, Executive Editor Cliff Voss has reached a point at which his employer, USGS, is finding it increasingly difficult to cover the proportion of his time spent on journal activity. IAH is fortunate that we have been able to depend on Cliff for many years without direct cost for the substantial amount of time he devotes to the journal. However, this arrangement was bound to come to an end at some time and this has been budgeted for in 2016.

It is unfortunate that these two changes in journal costs have come together and they could represent an increase of up to 8% in overall costs to IAH in one year. The IAH Executive and Secretariat will be keeping a close eye on routine operating costs and on and travel expenditure and continuing efforts to increase and diversify income. You can do your part by encouraging colleagues to join or renew so that 2016, our anniversary year, sees another healthy increase in membership.

Other important agenda items included the preparation of the IAH history report and papers, and plans for celebrating the anniversary during the year, including



at Montpellier (see pages 8-9 and 26). Past President Willi Struckmeier was invited to enable him to join these discussions. The Executive reflected on the successful congress in Rome and reviewed preparations for 2017 in Croatia (page 27) and for 2018 in Korea. Stephen Foster also attended part of the meeting to present progress on the IAH Strategic Overview Papers (page 12) and discuss further development of the series.

JOHN CHILTON

## CALL FOR NOMINATIONS FOR NEW “APPLIED HYDROGEOLOGY” AWARD



We are pleased to announce that Council has approved a proposal from the German National Chapter to establish a new “Applied Hydrogeology Award of IAH”. This will be presented to a groundwater professional who has made an outstanding contribution to the application of hydrogeology, preferentially in developing countries or in support of international development efforts.

Hydrogeological problems are often discussed from an academic point of view but hydrogeological solutions and applications in the field often require pragmatic thinking and sometimes unconventional approaches. Particular emphasis will be given to work which has contributed to an increase in living standards in developing countries.


It is the intention that the first award will be made in 2016, our sixtieth anniversary year and presented at the Association’s General Assembly in Montpellier. Any IAH member may nominate a candidate, but self-nominations will not be accepted. Proposals should reach the IAH Secretariat by e-mail ([info@iah.org](mailto:info@iah.org)) as one single pdf-file before July 1st, and should include:

- An explanatory statement by the person submitting the proposal;
- A letter of recommendation by any other supporter;
- A brief curriculum vitae of the candidate;

- A list of projects the candidate has carried out, including aims, region and period of time;
- A list of projects (planned or accepted), patents, publications or equivalent information.

The total submission should not exceed 4 pages of text in one coherent pdf-file. A panel of three appointed by Council will evaluate the proposals. One of the panel members will be a member of IAH Council. Other members may be from IAH national chapters or from IAH’s Commissions or Networks. At least one panel member will be an applied hydrogeology professional with no current official position in IAH. The names of the panel members will be published on the IAH website. We look forward to receiving your nominations and to making this new initiative a success.

### SECRETARIAT

 [Submissions and queries to info@iah.org](mailto:info@iah.org)

*[continued over...]*



## IAH ANNIVERSARY - UPDATE

### DOCUMENTING OUR HISTORY

We are taking the opportunity of our 60th anniversary to draw from the IAH archives and from personal memories to set down a definitive historical record of the association's first 60 years. Past President Willi Struckmeier is leading this initiative, supported by the Executive, Council and Secretariat and by the Time Capsule Project, our Early Career Hydrogeologists and our national chapters. Tables of councils, congresses, commissions, chapters and publications have been prepared and at the time of writing are being checked before placing them on a revised history section on the IAH website. A comprehensive report which will include these tables is being prepared. To bring this initiative to a wider audience, an Editors' Message announcing the 60th anniversary was published in Hydrogeology Journal as the first article of 2016 and a longer journal article drawing on the assembled historical material is currently in review.

We have received some interesting photographic contributions showing past IAH activities. The first, for which we are grateful to Petar Milanovic for annotating and sending, shows colleagues above Herceg Novi in Montenegro on an IAH Karst Commission field trip to the Dinaric Karst in 1973. An extensive set of pictures of past congresses has been sent by Paul Loehnert, one of which shows participants at the 1997 Congress in Nottingham learning about the local historical legend of Robin Hood by being challenged to an archery competition which ran throughout the congress week.

As a contribution to the documentation of IAH and to celebrating the anniversary, our Early Career Hydrogeologists (ECHN) are inviting IAH members to send pictures from the beginnings of their careers. This is how we come to have the very youthful picture of IAH President

Ken Howard on the front cover of this newsletter. Send pictures by email with a short description, location and the photo author's name. Pictures from various times and places help a great deal to strengthen the personal dimensions of the evolution of the IAH family and we would be very happy to receive further contributions, either to the IAH Secretariat or via the ECHN.



### Your stories and photos wanted

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



email: [60years@iah.org](mailto:60years@iah.org)  
[echn.iah@gmail.com](mailto:echn.iah@gmail.com)





## CELEBRATING OUR BIRTHDAY

The main focus of IAH's 60th anniversary celebrations will come at the 43rd Congress in Montpellier in September (see page 26). During the first day of the Congress on Monday 25th September, a morning plenary session (to follow the formal opening) is being planned in which invited presentations, panel discussions, videos and entertainments will combine to celebrate our 60th birthday, providing an opportunity to reflect on the past and to look forward.

IAH Commissions and Networks will be contributing to the celebrations in Montpellier and in their own events elsewhere, such as the Eurokarst conference in Neuchatel in September, as will our national chapters. The Netherlands National Chapter together with the Netherlands Hydrological Society (NHV) is organising a one day conference in May on the "Export of hydrological knowledge" to highlight the work of Dutch colleagues globally. The Irish National Chapter's annual conference in April celebrated the 60th anniversary of IAH and the 40th anniversary of the Irish Chapter. In September, the British National Chapter is co-convening with the Hydrogeological Group of the Geological Society of London a two day meeting on "Groundwater: our hidden asset" at the University of Birmingham which will celebrate the IAH 60th anniversary and the Geological Society Year of Water.

Please check our events listing or details of these and others, and do let us know about your own activities to celebrate the anniversary so that we can promote and report them during the year.

### SECRETARIAT

 <https://iah.org/submit-an-event>

## HELP IAH'S CONTINUING SUCCESS...

Early indications from the first three months of 2016 are that the recruitment of new members is going well - as highlighted on pages 18 and 19. We are gaining members in a wide range of countries and the efforts of our Canadian colleagues and new chapters have been particularly effective. Thank you!

Of course, work to build our membership and further expand our activities never stops. We are therefore asking, once again, that all chapters and individual members sustain our membership by encouraging the colleagues whom they work with to join or renew. If you are a non-member reading this newsletter, then please join us now!

If you are in the academic sector and in regular contact with students, please take the time to explain to them the benefits of IAH membership and the very much reduced cost of enrolling as a student member.

We would so much like to achieve a bumper increase in membership as a feature of our 60th anniversary celebrations - think of it as a gift towards the next 60 years...

 <https://iah.org/join-us>

*[continued over...]*





# IAH COUNCIL ELECTIONS

## Nominations close and candidates named

Nominations for election to the IAH Council closed at the end of March. We are pleased to report that we have nominations for all twelve eligible posts on Council. The candidates are listed below. Past President Ken Howard will be the thirteenth member of Council.

Position	Name of Candidate
President	António Chambel, Portugal
Secretary General	Bruce Misstear, Ireland
Vice President, Science and Programme	Dave Kreamer, US
Vice President, Finance and Membership	Teodóra Szócs, Hungary
Vice President, Sub Saharan Africa	Callist Tindimugaya, Uganda
Vice President, Middle East and North Africa	Ralf Klingbeil, Lebanon Ahmed Fekri, Morocco
Vice President, Western Europe	Marco Petitta, Italy
Vice President, Eastern Europe	Natalia Vinograd, Russia
Vice President, Asia	Makoto Taniguchi, Japan DK Chadha, India Yongje Kim, Korea
Vice President, Latin America and the Caribbean	Carlos Molano, Colombia
Vice President, Australasia and the Pacific	Wendy Timms, Australia
Vice President, North America	Joanne Thompson, Canada

The next steps are for the Secretariat to work with the candidates to produce an election document containing brief CVs and personal statements, as was done in 2012. This will be available to members before voting begins on 1 July. Postal voting will close on 1 September and electronic voting by the same system as that used in 2012 will be open until just before the Annual General Meeting of the association which will take place in Montpellier on Monday 26th September. The election results will be announced at the Annual General Meeting, and the new council is expected to meet in Montpellier.

The association continues to grow. Many of the improvements in member benefits and services envisaged in the Forward Look have been completed or initiated. Our new website is up and running, with innovations and new developments continuing. The new commission and network structure is well established and our Early Career Network flourishing. Membership is rising and congresses are well attended. However, there is always more to be done and Council has a key role to play in taking these initiatives forward and developing further innovations. Our Articles and Rules provide that all IAH members can vote for all candidates, and we urge you to exercise your democratic right by doing so when the opportunity comes later in the year.

JOHN CHILTON ELECTION RETURNING OFFICER

Questions? email [jchilton@iah.org](mailto:jchilton@iah.org)

# IAH BROADCASTS KEY ROLE OF GROUNDWATER

## Session convened at UNESCO-ARCEAU COP-21 Conference on Megacities, Water and Climate

At the request of UNESCO, an IAH team of President Ken Howard, Past President Stephen Foster and Ricardo Hirata from Brazil convened a two hour session on “Urban Groundwater – Ignore at Your Peril” at this major conference held in Paris on 1-4 December. The conference was attended by 550-600 participants, with urban planners and socio-economists predominating over water-service utility representatives and water resource scientists. The IAH session, attended by about 50 participants, stressed the opportunity that groundwater storage provides for improving water supply security under climate change adaptation, and the risks that unmanaged and unstable urban groundwater can pose for urban infrastructure – both of these in the context of the new Sustainable Development Goals.

Following a global overview presentation, supported by two detailed case histories on Sao Paulo, Brazil & Tucson/Phoenix, USA, a panel of senior urban water specialists comprising:

- Blanca Jimenez-Cisneros (UNESCO-DWS Director & IHP Secretary)
- Stephane Dahan (World Bank-Global Water Practice-Senior WASH Specialist)
- Hugues Haeffner (Suez Environment-Eau, France Project Director)

were invited to discuss the following questions :

- How can groundwater storage resources best be conserved and utilised by urban water-service utilities to increase supply security?
- As regards private in-situ use of groundwater in urban areas, how can the benefits be maximised and the risks be minimised?
- How can groundwater considerations best be incorporated into the planning of urban sanitation?
- How can the ‘vacuum of responsibility’ for groundwater in urban areas best be filled as a basis for integrated management?

There was general consensus that raising awareness was needed to promote the political will to fill the frequent vacuum of responsibility for groundwater management and protection that exists in many countries, provinces and cities. Improved understanding of the economic cost of groundwater degradation and the political economy of the current ‘status quo’ on groundwater would help facilitate more favourable socio-political conditions in which to advance sustainable management interventions. These should make the fullest use of the progress made in groundwater science over the past 30 years, including amongst many others, major developments in numerical modelling, isotopic analyses, remote sensing, databasing, monitoring and communication technology.

The third IAH Strategic Overview Series publication entitled “Resilient cities and groundwater – opportunities and threats” was prepared for this conference and, taking account of the discussions during the session, is now available from the IAH website (see overleaf for more information).

*[continued over...]*

STEPHEN FOSTER

# IAH STRATEGIC OVERVIEW SERIES

One of the initiatives arising from the 2014 Working Group on Education report is the preparation of a series of Strategic Overview papers. The aim of this series is to inform professionals in other sectors of key interactions with groundwater resources and hydrogeological science, and also to guide IAH members in their outreach activities. Completion of the first two of these Strategic Overview papers was reported in the December News and information, and three more have now been prepared on cities, ecosystems and human health:

- Food Security & Groundwater
- The Energy Sector & Groundwater
- Resilient Cities & Groundwater
- Ecosystem Conservation & Groundwater
- Human Health & Groundwater

A sixth paper on Groundwater & Global Change is currently being written. These papers are available on the IAH website. We would like to thank Stephen Foster and Gill Tyson especially for all their work and skill in coordinating the production of these papers, and also thank the many contributing authors.

BRUCE MISSTEAR

 <https://iah.org/knowledge/learning-resources> (via IAH's Learning Resources page)

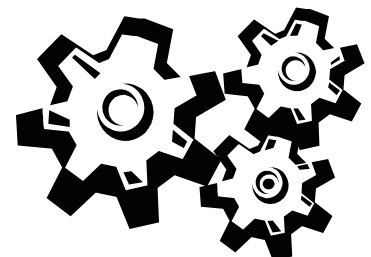


# IAH MENTORING SCHEME

The current round of invitations to potential new mentors and mentees has closed. We have some promising offers of mentoring and the Secretariat will shortly be reviewing and assessing the submissions with a view to establishing new mentoring partnerships. Those who have participated in this round will be hearing from us in the next few weeks.

SECRETARIAT

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



# THE KINDRA PROJECT:

## A KNOWLEDGE INVENTORY FOR HYDROGEOLOGY RESEARCH

Following the report of this new activity in the May 2015 News and Information, coordinator Marco Petitta brings us up to date. Preparing an accurate assessment of the state of the art in hydrogeology research and knowledge is the main aim of the KINDRA Project (Knowledge Inventory for Hydrogeology Research). This is the only project financed under the EC H2020 programme entirely dedicated to groundwater.

In the first year of the project, a terminology and classification methodology for groundwater research and knowledge based on a keyword list has been established. The Hydrogeological Research Classification System (HRC-SYS) was developed by separating groundwater research into three main categories: 1) Societal Challenges, 2) Operational Actions and 3) Research Topics. Each of these three main categories includes five overarching sub-categories for an easy overview of the main research areas. The complete merged list of keywords, selected from the Water Framework and Groundwater directives and from high impact scientific journals has been organized in a tree-format hierarchy.

Now, the European Inventory of Groundwater Research (EIGR) is ready to be populated by groundwater people and stakeholders by inserting the results of their research activities, projects and programmes realized at national and international scale across Europe. You can register as a user of the EIGR and insert metadata and information about your research: have a look at the project website.

MARCO PETITTA (ITALY)



<http://www.kindraproject.eu/>

## HELP WANTED: TECHNICAL SOFTWARE REVIEWS

We are always looking for ways to improve the value to members of IAHR News and Information, and you may be able to assist. We are looking for someone suitably skilled to provide us with short reviews of freely available technical software that might be useful to IAHR members. We are not expecting long contributions every issue, but short pieces now and again. If you could help, please contact [jchilton@iah.org](mailto:jchilton@iah.org).

JOHN CHILTON



email [jchilton@iah.org](mailto:jchilton@iah.org)



We are pleased to report that HJ continues to do well in all respects - submittals, reviews, publication, staff, citations, and in relations with Springer, our publisher. Springer has recently merged with the Nature Publishing Group, Palgrave Macmillan and Macmillan Education to form Springer Nature which will thus become one of the world's largest global research, educational and professional publishers.

## SUBMISSIONS INCREASE

The number of articles submitted to HJ in 2015 increased to 467 from 438 in 2014 and 389 in 2013 and has more than doubled in the past 10 years. This is good news for the journal but implies a steady increasing workload for the editorial team. The total rejection rate in 2015 was 63%, down from 73% in 2014, and 130 articles attained final acceptance in 2015. Authors are encouraged to check the acceptance criteria for publication in HJ.

## JOURNAL IMPACT GROWING

The Impact Factor continues a 5-year rise to 1.966 and the number of downloads of HJ articles is high. Springer considers the latter an important indicator of the value of the journal. HJ has a very high usage factor; the median number of downloads per HJ article published in 2013/2014 was 210, indicating that although HJ is not seen to be as highly impactful according to its academic Impact Factor as other top journals (e.g. Nature Geoscience has an Impact Factor of 11.74), HJ is much read and used. This fits perfectly well with IAH's intentions for the journal – that it is not only scientifically innovative in hydrogeology, but also that it is practically useful for water resource management worldwide. We expect that many downloads are by practitioners who use the published information for their practical work, but would not have an opportunity to cite HJ in their work as would academics.

## PUBLISHER'S EMPHASIS ON ARTICLE NUMBERS

At the last HJ editorial meeting with Springer, we were shown how their HJ-based income depends on the number of articles published rather than the number of printed pages. We are therefore being encouraged to publish as many articles as possible, and preferably shorter on average. Responding to this, the HJ team aims to slightly increase the number of published articles if the available material allows. Reducing article size is not presently a primary objective, as it runs counter to the open and free publishing environment we have encouraged among our authors since the inception of HJ. Many of our articles simply require enough pages to present necessary and valuable information that appears nowhere else internationally. However, the Instructions for Authors do now provide some guidance on appropriate article length.

## TAKE UP OF OPEN CHOICE

As previously reported in this newsletter, the open access option was offered to HJ authors from September 2014. For the first partial year of open access, three such articles were published online in HJ. In 2015, 18 open access articles were published. The majority of the 2015 open access authors (70%) were from institutes that already have an open access arrangement with Springer. It seems that perhaps two authors paid the full Springer price for open access; some received it free and some (25%) at the reduced IAH-member price. To be eligible for the IAH open-access discount, both the first author and contact author must be IAH members.

## EDITORS' CHOICE

Springer offers a selection of HJ articles freely available to view and download for a limited period, which for 2016 has been reduced to eight weeks. Each year, five articles from among the annual crop of about 130 published are designated as "Editors' Choice". These articles are ones that the HJ Editors believe readers will find particularly interesting or useful. The choices can be found from the link below.

## 2016 THEME ISSUE AND TOPICAL GROUPS

This year's HJ theme issue ("Land Subsidence Processes", 24:03, May 2016) addresses processes that create critical land subsidence problems, particularly those associated with the combination of human use of natural resources and climate variability: oxidation and consolidation of organic soils, dissolution and collapse of carbonate and evaporate rocks, thawing permafrost and aquifer system compaction. Each process is related to the interaction between groundwater flow, material deformation and/or mass wasting of the groundwater flow system matrix. Related geohazards include coastal and riverine flooding, damage to civil structures, ecosystem degradation and increased risk of groundwater contamination.

The 13 papers and an essay draw on examples from seven countries as well as global studies.

The recently published topical group "Groundwater for emergency situations and human security" (24:02, March 2016) has been given free access by Springer to the end of May. The next topical group "Dryland groundwater systems in the Roswell and Salt basins, New Mexico, USA" will be released in 24:04 (June 2016).

## PUBLICITY AND SOCIAL MEDIA

The annual meeting between the HJ team and their counterparts at Springer provides an excellent opportunity to review our respective marketing efforts for IAH and its journal. As well as a presence on Facebook and LinkedIn, we have started tweeting a selection of HJ articles via @SpringerGeo, which currently has over 1,300 followers. Tweets usually start with #Hydrogeology Journal. This helps circulate the article and increases the Altmetric score.

Altmetrics lend insight into an article's impact through social media, mainstream media coverage, blogs and bookmarks on reference managers like Mendeley, effectively giving a measure of how much the article is being discussed. All Springer journals can be scored, giving interesting information about article readers and users. To view and interrogate an HJ article's Altmetric score, you can download the Altmetric bookmarklet – see link below.

## SUE DUNCAN AND JOHN CHILTON



<http://link.springer.com/journal/10040>  
<https://iah.org/hydrogeology-journal/hj-editors-choice-articles>  
<http://www.springer.com/about+springer/media/pressreleases?SGWID=0-11002-6-1453458-0>  
<https://www.altmetric.com/products/free-tools/bookmarklet/>

# COMMISSIONS & NETWORKS

## MANAGING AQUIFER RECHARGE

ISMAR9, the 9th International Symposium on Managed Aquifer Recharge, is fast approaching in Mexico City on 20-24 June. ISMAR is the premier event of the MAR Commission. Registration is open now on the symposium web site. 140 abstracts were received and there is a strong scientific programme. Six half day workshops and short courses will be held on Monday 20 June. Two of these will be run by Commission working groups in association with UNESCO and IGRAC. A keynote address will be given by William Alley (multi-award winning communicator and former Chief of the USGS Office of Groundwater) on "Climatic variations and uncertainties in groundwater management and the role of MAR". The symposium incorporates the BSMAR15 Symposium organised biennially by the Arizona Hydrological Society and Californian Groundwater Resources Association, and their Herman Bouwer Award will be a feature of the symposium. The Commission will also be holding a plenary to which all are invited.



In the European context, two MARSOL workshops promoted by projects closely related to the IAH MAR Commission have been held recently:

- "Boosting Managed Aquifer Recharge in Europe", Leeuwarden, The Netherlands in February; information and presentations available at: <http://goo.gl/EHYzBX>
- "Investigation and monitoring techniques in MAR", Lavrion, Greece in March; information and presentations at: <http://goo.gl/5g0KRJ>

Further training workshops are planned for Venice in June and Barcelona in October and both will be announced through the IAH MAR Commission's email list. This large EU project is in its last stretch and abundant outcomes are arising. The benefits are open to everyone upon request from the project website.

The Commission is assisting with two sessions in topic 6 at the Montpellier Congress on "managed aquifer recharge" and "treated wastewater reuse for groundwater recharge: addressing the challenge" and preparing a multi-author paper on 60 of years progress with MAR. A Commission plenary open to all will also be held.

**PETER DILLON, ENRIQUE FERNANDEZ ESCALANTE AND WEIPING WANG**



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

<http://www.ismar9.org>

<http://www.marsol.eu>

## REGIONAL GROUNDWATER FLOW

The Regional Groundwater Flow Commission co-organized the second National Colloquium on Groundwater in Mexico in November 2015, addressing the importance of having scientific understanding of regional groundwater flow concepts as a basis for groundwater management. The meeting provided a great opportunity to increase legislator awareness of the vulnerability of Mexico's aquifers to overpumping. The event was attended by approximately 100 politicians, political advisors, municipal officials, water and groundwater agencies and academics. The invited international speakers were: Andrew Stone, Udo Weyer, Judit Mádl-Szőnyi, Xiao-Wei Jiang, Alfonso Rivera and Juan María Fornés.

A successful Groundwater Workshop for the Middle East and North Africa was organised in partnership with the Institute of Geography of UNAM (Mexico), the National School of Engineers of Tunis (ENIT), the Faculty of Sciences of Tunis (FST), the World Academy of Sciences (TWAS), the Research Institute for Development (IRD), RGFC and the Groundwater Outreach Commission (GOC). The principal aim of the Workshop was to introduce modern hydrogeological concepts to define, manage and control groundwater and its related environmental issues, with







Participants and coaching staff at the entrance of the venue of the Tunisia Workshop

special emphasis on sharing expertise and perspectives related to groundwater flow systems.

Each year five articles from among the annual crop of about 130 published in *Hydrogeology Journal* are designated as “Editors’ Choice” (see page 15). These articles are ones that the Editors believe readers will find particularly interesting or useful. One of the 2015 selections was a paper by RGFC Co-Chair Brian Smerdon.

The Regional Groundwater Flow Commission co-organized a session at the EGU General Assembly in April entitled “Groundwater vulnerability and circulation”. Groundwater vulnerability assessment is a tool for identifying areas where groundwater is more susceptible to contamination.

The RGFC is organizing a session in Montpellier entitled “Verification of conceptual patterns and expected natural effects of regional groundwater flow by interpretation of relevant field observations”. The commission has also initiated a ‘Student Competition on Regional Groundwater Flow’ to celebrate IAH’s 60th anniversary and to be held in Montpellier. University teams can enter the two-round event testing their knowledge of regional groundwater flow. Entries have been received from around the world, including Canada, Colombia, Tunisia, China and Indonesia.

**JUDIT MÁDL-SZÖNYI AND ADÁM TÓTH**



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



<https://www.linkedin.com/groups/8191261>

## EARLY CAREER HYDROGEOLOGISTS

ECHN is really happy to announce that the voting phase for the “Coolest Paper of 2015” is now open! We are really grateful to all early career hydrogeologists (ECHs) worldwide who nominated their favourite paper of 2015. Now it is time for the second phase and we call on all ECHs to vote for one of the following papers, as the “coolest of 2015”:

- Arslan S, Yazicigil H, Stute M, et al. (2014) Analysis of groundwater dynamics in the complex aquifer system of Kazan Trona, Turkey, using environmental tracers and noble gases. *Hydrogeol J* 23:175–194. doi: 10.1007/s10040-014-1188-z
- Best, A., Arnaud, E., Parker, B., Aravena, R. and Dunfield, K. (2015), Effects of Glacial Sediment Type and Land Use on Nitrate Patterns in Groundwater. *Groundwater Monitoring & Remediation*, 35: 68–81. doi: 10.1111/gwmr.12100
- Gleeson, T., Befus, K.M., Jasechko, S., Luijendijk, E., Cardenas, M.B. (2015), The global volume and distribution of modern groundwater. *Nature Geoscience* 9, 161–167 (2016) doi:10.1038/ngeo2590
- Ogden, F. L., W. Lai, R. C. Steinke, J. Zhu, C. A. Talbot, and J. L. Wilson (2015), A new general 1-D vadose zone flow solution method, *Water Resour. Res.*, 51, 4282–4300, doi:10.1002/2015WR017126.
- Re V (2015) Incorporating the social dimension into hydrogeochemical investigations for rural development: the Bir Al-Nas approach for socio-hydrogeology. *Hydrogeol J* 23:1293–1304. doi: 10.1007/s10040-015-1284-8
- Xanke J, Goeppert N, Sawarieh A, et al. (2015) Impact of managed aquifer recharge on the chemical and isotopic composition of a karst aquifer, Wala reservoir, Jordan. *Hydrogeol J* 1027–1040. doi: 10.1007/s10040-015-1233-6

The voting phase will be open until 31 May 2016 and all voters will have the chance to win a book of their choice from the IAH book series. More information, including the voting form, can be found on the ECHN website. We look forward to receiving your votes!

**VIVIANA RE**



<https://echn.iah.org/coolest-paper-of-2015-award>



# NEW MEMBERS

A warm welcome to the following new members who joined our Association in the period 20 October 2015 - 29 March 2016:

## ARGENTINA

Michelle QUINCOCES

## AUSTRALIA

Dr Stuart GRAHAM

Olivia CAMPBELL

Irena KRUSIC-HRUSTANPSIC

Pacian NETHERWAY

Damian SKINNER

Mr Nikhil GULATI

Mr Kristopher STEWART

Mr Stefan CHATERIS

Mr Paul DAVEY

Dr Alec DESLANDES

Mr Scott VUJCICH

Dr Andrew FEITZ

Mr Simon HIGGINSON

Mr Simon JANKOWSKI

Ann KOLLMORGEN

Mr Peter MADDEN

Mr Cassady O'NEILL

Mr Anjan PARAJULI

Mr Nicholas QUIGLEY

Sian SMITH

Mr Alan THILO

## AUSTRIA

Mag Helene BAUER

Theresa SCHROECKENFUCHS

## BANGLADESH

Dr Anwar ZAHID

## BELGIUM

Dr John DECEUSTER

Ms Sarah BODEUX

David SIMPSON

## BRAZIL

Nicolas FEIJÓO

## BULGARIA

Mr Dimitar STOYCHEV

Vladimir HRISTOV

Iroslav KRASTANOV

## CANADA

Ms Véronique FAU

Mr Guillaume COMEAU

Mr Jonathan KENNEL

Ms Logan KOETH

Mr Joshua WISEN

Mr Bill BROWN

Mr Donovan CAPES

Patricia CARMICHAEL

Kevin SLAINE

Saeed KIAALHOSSEINI

Mr Jason ASSAM

Mrs Anne van WARMERDAM

Mr Andrew TRAPP

Serguei CHMAKOV

Leslie HOUSTON

Mr Lamine BOUMAIZA

Mr Leon HALWA

Prof Jianwen YANG

Ms Linda Wenqi JI

Angela MASON

Ahmad SARWAR

Dr Ferdinando MANNA

Dr Desire Raoul GNANSOUNOU

Mr Andrew HOLMES

Annie MICHAUD

Jason FRIESEN

Donald MUSTARD

Timothy PACKULAK

Bradley SUTHERLAND

Inga Van VLIET

Dr Jianliang HUANG

Mr Renaud MURRAY

Ramon ARAVENA

Azita ASSADI

Andy BAJC

Kathryn BAKER

John BALFOUR

Scott BEEMER

Brigid BURKE

Juliana CAMILLO

Brad CAREW

Paulo CASADO

Brewster CONANT

Don CORBETT

Evan COX

Heather CROW

Andrew DAY

Amy DOMARATZKI

Richard DYER

Sara ESMAEILI

Greg FAAREN

Hongze GAO

Robert GILLHAM

Zhentong GUO

Steven HARRIS

Michael HOWLETT

Hyoun-Tae HWANG

Oleg IVANOV

Yefang JIANG

Margaret KLEBEK

Jaroslav KUCZYNSKI

Yannick LABRECQUE

David LARSEN

Mason MARCHILDON

John MCINTOSH

Carl MENDOZA

Bhavesh MORKER

Geoff MOROZ

Christopher NIELSEN

Saskia NOORDUIJN

Sasha NOVAKOVIC

Kerry O'SHEA

Cory OSTROWKA

Dawn PASZKOWSKI

Boyd PENDLETON

Jeremy PIPER

Mark PONTO

Elizabeth PRIEBE

Abdul QUYUM

Ted RANNIE

Klaus RATHFELDER

Peter RIDER

Sridhar SANGARAJU

David SHARPE

Felipe SOLANO

Katie THOMPSON

Charles WAKEFIELD

Shusen WANG

Mike WEI

Jin Long ZANG

Bernie ZEBARTH

## CHILE

Gemma SENDRA

Ms Thea MCINTYRE

## CHINA, PEOPLE'S REPUBLIC OF

Mr Yasong LI

Dr Yan DOU

## COLOMBIA

Miss Maria Fernanda CALDERON GRANDE

Jaime CARMONA

Carolina ORTIZ PIMIENTO

Maria Isabel RAMIREZ ROJAS

SERVICIOS HIDROGEOLOGICOS

INTEGRALES SAS

Maria VELEZ

## EGYPT

Prof Hossam Hamdy ELEWA

## FRANCE

Dr Myriam DEDEWANOU

Gary LEPINAY

Justine LICHTER

Mrs Karine BERTHIER

Rémi ARSAC

Arnaud BALESTRO

Alexandra BEL

Julie BOURDOISEAU

Romain BRUGGER

Vincent COUGNENC

Alexandre DALLEAU

Nicolas DUGAST

Soulaimana FADHULA

Alain GRILLAT

Matthias GRONDIN

Elisée GROS

James HARRIS

Pierre HEBINGER

Antoine HITSCH



Wilfried JAFFUEL  
Frédéric LAPUYADE  
Alexandra LEQUIEN  
Olivier NASSIBOU  
Camille REMY  
Sylvain RESSIER  
Théo VIALE  
Jimmy VIGNALI

#### GERMANY

Lysander BRESINSKY  
Jose Pablo BONILLA VALURDE  
Dr Nadine GOEPPERT  
Mr Philipp JOSWIG  
Theresa FROMMEN  
Mr Konstantin SCHEIHING  
Moritz SANNE  
Helena PFUNT

#### GHANA

Mr Jamel Seidu

#### INDIA

Ms Gaia LASSAUBE  
Dr Chandrashekar BHUIYAN  
Dr Jegathambal PALANICHAMY  
Mr Thirumurugan MARIMUTHU  
Mr Chandrakant JANGAM  
Dr Vetrimurugan ELUMALAI  
G GOWRISANKAR  
J K MOITRA  
Indu S NAIR  
Mr Gokulpraveen NATARAJAN  
Mrs Gayatri RAJU  
Mr Dhanamadhavan SARAVANAN  
Mr Manoj SUBRAMANIAN  
Dr Paulami SAHU

#### INDONESIA

Dr Budhi SETIAWAN

#### IRAN

Mr Hosein MOGHADDASI

#### IRAQ

Prof AQEEL AL-ADILI  
Prof Salih Muhammad AWADH  
Prof Jaafar MAATOQ  
Dr Ibtisam RAHEEM

#### IRELAND

Mr Colm DRIVER  
Ms Rebecca BRADFORD

Ms Eavan COLLINS  
Mr Eoin FITZPATRICK  
Mr Barry SEXTON  
Ms Nuria MANZANAS  
Dr Janka NITSCHÉ  
Miss Aodhnait Ni CHATHASAIGH  
Prof Frank MCDERMOTT  
Mr Alex RUSSELL  
Mr Robert FITZMAURICE

#### ITALY

Mrs Giorgia LUCIANETTI  
Mr Riccardo TORRI  
Dr Nico DALLAS LIBERA  
Dr Gabriele PEROTTI  
Mr Saverio ROMEO

#### KENYA

Mr Samson Omondi OIRO

#### MONGOLIA

Mrs Altantungalag DANZAN  
Mr Basbaatar BORCHULUUN  
Mr Enkhbayar BYAMBADORJ  
Mr Gan-Erdene DORJGOTOV

#### MOROCCO

Mina AMHARREF

#### NETHERLANDS

Maarten WATERLOO  
Mr Pepijn RAVESTEYN

#### NEW ZEALAND

Maureen WHALEN  
Mr Carl HANSON  
Mr Bryan TODD  
Eva SUTTER  
Mrs Clare HOULBROOKE  
Ms Dusk MAINS

#### NIGERIA

Mr Innocent K ANOSIKE  
Mr Ifeanyi Ignatius DILOHA  
Zugwai Bruno BAGU  
MR Ekene Godfrey OKOYE

#### NORWAY

Ms Ingvild Haneset NYGÅRD  
Dr Ola Magne SAETHER  
Mr Eirik Magnus Bache STOKMO

#### OMAN

DR Mingjie CHEN

#### PERU

Mr Lachlan GIBBINS  
Mr Herminio NIETO  
Mr Jorge TOVAR  
Sr Johnnie Harrison RAMOS AYALA

#### PHILIPPINES

Mr Christopher Rey MEDIDAS

#### POLAND

Dr Krzysztof DRAGON

#### PORTUGAL

Prof Teresa ALBUQUERQUE

#### SAUDI ARABIA

Mr Samuel CODY

#### SINGAPORE

Teuku FIRMAN

#### SLOVENIA

Nina RMAN

#### SOUTH AFRICA

Mr Khuliiso MASINDI

#### SPAIN

Dr Damián Sánchez GARCÍA  
Carlos Enrique CARNICER RODRIGO  
Beatriz de la Torre MARTÍNEZ  
Antonio GONZÁLEZ RAMÓN  
Marta HERNÁNDEZ GARCÍA  
Juan Antonio LUQUE ESPINAR  
Dr Estanislao PUJADES GARNES  
José Manuel GIL MÁRQUEZ  
Matias MUDARRA MARTÍNEZ  
Jorge PRIETO MERA  
Juan Antonio BARBERÁ FORNELL  
Manuel OLÍAS ÁLVAREZ  
David PULIDO VELÁZQUEZ  
Javier VALDÉS ABELLAN  
Javier MARTÍN ARIAS

#### SWEDEN

Dr Dmytro SIERGIEIEV  
Dr Charlotte SPARRENBOM  
Mr Alireza NICKMAN

#### SWITZERLAND

Andrea POPP

#### THAILAND

Miss Somkid BUAPENG  
Miss Kanya DUENNUAN  
Mr Supot JERMSAWATDIPONG

#### TURKEY

Dr Melis SOMAY  
PROF Mehmet EKMEKCI  
Dr Türker KURTTAŞ  
Dr Mufit Sefik DOGDU  
Dr Koray YILMAZ  
Mr Hasan KIRMIZITAS

#### UNITED KINGDOM

Mr Bartosz KACZYNSKI  
Mr Andrew FOX  
Mr Jatinder CHAGER  
Mr Giacomo MEDICI  
Mr Daniel WELCH  
Mr Thomas KELLY  
Ms Jennifer BASSFORD  
Mr Ben HARVEY  
Ms Leire EGIA  
Miss Christina FRASER  
Mr Tony PFAFF  
Mr David WALKER  
Ms Sanni PULKKI  
Mr Chris MILLWARD  
Miss Jessica Helen PUGSLEY  
Mr David WALKER  
Chris MCDERMOTT

#### UNITED STATES OF AMERICA

Mr Tae Gyeong HAMM  
Mrs Lois GEORGE  
Mr Eric COLLINS  
Mr Mahawa-Essa Mabossani AKARA  
Heidi BABOS  
Matthew COLE  
Patrick DEAN  
Chloe FANDEL  
Michael GRZYBOWSKI  
Madison LARKIN  
Charles J PARADIS  
Melissa THAW  
Dr Kyle MURRAY  
Dr Michael SUKOP  
Ms Golnoosh ASADIANFEALY  
Mr Louis FLEISCHHAUER  
Larry MURDOCH  
Brad GOOCH

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

# CHAPTER NEWS

We have a bumper edition of Chapter News for this newsletter with the establishment of four new chapters to report, events being held around the world and elections of new committees.

## SECRETARIAT



### Iraq

Firstly, we are especially happy to report that the IAH “family” of national groups has a new member. Following earlier discussion with the IAH Secretariat, our colleagues in Iraq advise us that the first meeting to establish an IAH Iraqi Chapter was held in February at the University of Technology in Baghdad. New chapter president Aqeel Al-Adili reports that 28 participants from the Iraqi Ministry of Water Resources and from several Iraqi universities met in the presence of the President, Co-president and Dean of the University. The mission, aims and activities of IAH were explained, together with the benefits of membership and participants were encouraged to join the association.

The participants then elected Professor Aqeel Al-Adili of the University of Technology as President of the chapter, Professor Abdul Hameed Alobaidy, Head of the Environmental Research Centre, University of Technology as Vice President and Professor Ramadhan Hamza Mohamed of the University of Dohuk as Secretary. The picture shows the group of participants at the meeting. We very much welcome our new chapter and will be doing everything we can to support them. IAH had eight members in Iraq at the time of the meeting, and this has already increased to 11.



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ramadhan56\_2000@yahoo.com



### Kazakhstan

IAH vice president Igor Zektser has been working hard to promote the establishment of IAH chapters in his region. This has come to fruition for Kazakhstan, where a small chapter is led by President Oleg Podolny and Secretary Gabdolgani Satpayev. Their activities in 2015 were aimed primarily at promoting the goals and objectives of IAH, informing hydrogeologists in Kazakhstan about the activities of IAH, and attracting new members of IAH. However, they report that the prevailing economic problems make this difficult. A conference planned for October 2015 had to be cancelled due to the economic constraints, but the chapter is involved in the planning of an international conference “Water Resources of Central Asia and Their Use” to be held in Almaty at the beginning of September 2016. Oleg Podolny and Valentina Salybekova are working on the Pretashkent transboundary aquifer within the UNESCO-IHP project “Groundwater Resources Governance in Transboundary Aquifers”.



### Slovakia

After several years of chairing the Slovak National Chapter of IAH, Miriam Fendekova stepped down at the assembly of the Slovak Association of Hydrogeologists in October and Peter Malik was elected as the new president. We would like to thank Miriam for all her hard work on behalf of IAH members in Slovakia, offer a warm welcome to Peter and we look forward to continuing to support the chapter.



peter.malik@geology.sk



## Portugal

In March 2016 a new National Committee of the Portuguese IAH National Chapter was elected. Bringing young and early career members together with experienced ones, this national committee will join wisdom with irreverence and has a long list of activities planned for the coming years in Portugal and abroad.

New President Raquel Sousa reports that in 2016 the chapter will support the organization of the 15th Water Rock Interaction (WRI) conference which will be held in Évora, Portugal, co-organise the Iberian Conference on Groundwater in Water Planning, to be held in Spain in partnership with the IAH Spanish Chapter, and will convene a meeting in Portugal to commemorate the 60th anniversary of IAH. In 2017 the aim is to co-organize a seminar on hard rock hydrogeology in cooperation with the IAH Network of Fractured Rock Hydrogeology and the co-organization of MinWat2017 in cooperation with the IAH Commission on Mineral and Thermal Waters.

Other important objectives of the new committee are to create a national branch of the Early Career Hydrogeologists Network and to cooperate and interact with other IAH National Chapters, IAH Commissions, Networks and Working Groups. The national branch of the ECHN aims to organize a "Hydrogeology Summer School" in Portugal, and to organize events dedicated to young professionals to promote hydrogeology and groundwater among specialists and non-specialists. It is one of the main objectives of the AIH-GP to have a strong interaction between early and senior hydrogeologists in Portugal.

The new Executive comprises Raquel Sousa (President), Rui Hugman (Vice-President), António Chambel (Secretary), Manuel Abrunhosa (Treasurer), and José Manuel Marques (Member). We wish the new committee well and look forward to working with them and supporting their efforts, and reporting on their activities in future newsletters.



[raquelsousa@posteo.net](mailto:raquelsousa@posteo.net)



## New Zealand

We are pleased to report on the formation of an IAH National Chapter in New Zealand (IAH NZ). Following an informal start-up meeting in October 2015, a first steering committee meeting was held in November with those who expressed their interest in a committee role. At this meeting, Theo Sarris was elected as chair, Eric van Nieuwkerk as secretary and Anthony Kirk as treasurer. A second general meeting of the chapter was held in early December in Auckland. The meeting was a great success and turnout very good. Phillip Kelsey gave an interesting presentation on the application and results of a contaminant transport model for a proposed municipal landfill.

At the February meeting the chapter welcomed Wendy Timms, the IAH Vice President for Australasia and the Pacific, who supported the establishment of the chapter from the very early stages. Wendy delivered a very interesting technical presentation on barriers to groundwater flow related to energy and mineral resource projects and gave an exciting overview of IAH activities and worldwide contributions. In March the Chapter held its first Christchurch meeting, which was a great success and turnout was excellent. Bob Bower and Patrick Durney gave a very interesting presentation on the application and results of a Managed Aquifer Recharge pilot project. The next meetings are scheduled for Auckland in April and May in Christchurch.

We are very encouraged by the steady progress being achieved by the New Zealand National Chapter. The IAH presence in NZ is increasing steadily and this is reflected in the growing membership since the chapter was formally set up.



[theo.sarris@beca.com](mailto:theo.sarris@beca.com)



*[continued over...]*

## CHAPTER NEWS

[...continued from previous]



### Spain

At the end of 2015 the Spanish IAH Chapter also renewed its council or managing board. New President Bartolomé Andreo reports that the main aims are to increase the membership of the Spanish Chapter and to promote activities connected with hydrogeology, both in cooperation with water authorities and decision makers and on reporting technical and scientific advances. According to their objectives, the new council plans to organize congresses, workshops, meetings and training courses, not only in Spain but also in connection with the South American community.

Thus, they are planning a short Iberian Conference on Hydrogeology by the end of 2016, involving the Spanish and Portuguese Chapters. Also, a training course on groundwater modelling and the Hidrokarst training course. The chapter have been invited by Miguel Rangel of the Mexican Chapter to organize Hidrokarst 2016 in Yucatán, within the framework of the ALHSUD congress in August 2016 and hopes that IAH can support this event. Emilio Custodio will represent the Spanish Chapter at the annual congress of the Argentine Chapter

of IAH. In 2017 or 2018 the chapter expects to organize an Iberian-American Congress on Hydrogeology involving the Spanish speaking groundwater community.

The new council comprises President: Bartolomé Andreo Navarro (Centre of Hydrogeology, University of Malaga); Vice-President: Juan José Durán Valsero (Spanish Geological Survey IGME); Secretary: Teresa Carceller Layel (Ebro Hydrographic Confederation); Treasurer: Margarida Valverde Ferreiro (Foundation Center of Groundwater Hydrology, Polytechnic University of Cataluña). The other members are José Benavente Herrera (Water Research Institute, University of Granada); Carolina Guardiola Albert (Spanish Geological Survey IGME); Luis Martínez Cortina (Ministry of Agriculture and Environment); Jorge Molinero Huguet (Amphos XXI) and Past President: Jaime Gómez Hernández (Institute of Water Engineering and Environment, Polytechnic University of Valencia). We look forward to working with the new committee and thank Bartolomé for this update.

 <http://www.aih-ge.org/>



### Japan

We have also been informed of changes in the Japanese IAH Chapter from the beginning of January 2016. The new President is Professor Masaya Yasuhara of Riisho University, and the new Secretary is Dr. Akinobu Miyakoshi of the Geological Survey of Japan, AIST. We welcome the new officers of the chapter and assure them of our continuing support.

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**YOUR FLAG  
HERE!**

### No chapter for your country or region?

IAH is always keen to establish more chapters and it may be that we have other interested individuals in your country or region hoping to establish one. IAH provides full information and support to help guide you in the process. Chapters retain 10% of the IAH membership fee to help support their own activities, which include technical meetings, field visits and social events, and many even collect fees in local currency for the convenience of their members. National chapter committees are run on a voluntary basis by members and we are very grateful for their efforts.

**SECRETARIAT**



**Questions or comments?** Email [info@iah.org](mailto:info@iah.org)





## Turkey

We are very pleased to announce that the Turkish National Chapter of IAH has been re-activated within the body of the Turkish Association of Hydrogeological Engineers and Water Resources Research (TAHWRR). This Association has been formed with the aim of supporting and promoting studies related to the advancement of methods and techniques for the exploration, development, management and protection of water resources in general and groundwater in particular; to spread advances in hydrogeology; to benefit from scientific and applied studies at international level in related topics by establishing links with IAH; and to disseminate hydrogeological and water resources research performed in Turkey both nationally and internationally. The Executive Committee Members are Hasan Yazicigil (Chair), Mehmet Ekmekci (Secretary), M. Sefik Dogdu (Treasurer) and Hasan Kirmizitas, Koray Yilmaz, Levent Tezcan and Turker Kurttas. The Association has currently 86 active members.

Having been established with aims that align with those of the IAH, the Turkish Chapter has plans for the following activities to take place in the near future. The first biannual symposium "HIDRO'2017 - National Symposium on Hydrogeology and Water Resources" will be held at Hacettepe University in Ankara in June 2017. The 2nd

General Assembly of TAHWRR will be held as a post-symposium event. Professor Hasan Yazicigil, chair of the chapter has been invited to give a keynote speech at the "2nd IWA Regional Symposium on Water, Wastewater and Environment: The past, present and future of the World's Water Resources", organized by the International Water Association and the Izmir Institute of High Technology to be held in March 2017.

TAHWRR and the National Chapter have already established working groups to assist in the definition and solution of groundwater-related problems in Turkey and to support the Working Groups and Commissions of IAH. TAHWRR will also cooperate with the Turkish Chamber of Geological Engineers in organizing conferences, courses and seminars to promote the understanding, sustainable management and protection of groundwater resources. Four such conferences will be delivered in 2016.

After strenuous efforts by a number of people over quite some time, IAH is very happy to see a revived chapter established in Turkey and will do everything it can to support the new group in its efforts to promote hydrogeological science and groundwater management.

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### NATIONAL CHAPTER REPRESENTATIVES GROUP

At the meeting of national chapter representatives in Rome, Judith Flügge offered to set up a LinkedIn group to facilitate communications between chapters. This has now been done. The intention is that it will provide a "bottom up" rather than "top down" forum for chapters to exchange and adapt ideas for activities and would itself organise chapter meetings at congresses and set the agenda, rather than this being done by the IAH Secretariat. You are strongly encouraged to assign someone in your chapter to take part in this and to support Judith in her efforts.

 <https://www.linkedin.com/groups/8420620>

*[continued over...]*

## CHAPTER NEWS

[...continued from previous]



A one day national workshop on “Water Conservation and Pollution” was jointly organized by the Indian National Committee of IAH (INC-IAH) and the Manav Rachna International University (MRIU) in December 2015 at the MRIU campus, Faridabad. Sh K B Biswas, Chairman of the Central Ground Water Board (CGWB) inaugurated the workshop as chief guest and also released the workshop volume containing 41 papers. More than 30 papers were presented in four technical sessions, followed by a closing valedictory session. Dr Shekhar, Treasurer of INC-IAH, reports that more than 200 participants from Central and State Government institutions, NGOs and industries attended the function.


For the second year, the INC-IAH took the opportunity to announce the Smt Savitri Chadha Memorial awards. For 2015 three awards were presented, for which nominations had been invited from IAH members in India. These awards are sponsored by Dr D K Chadha, President of the chapter and former Chairman of the CGWB. The awardees, pictured, were:

1. Award of Excellence in Groundwater Investigation and Management: Dr Arunangshu Mukherjee, Scientist D, Central Ground Water Board, Faridabad.
2. Award of Excellence in Groundwater Science: Dr Pradeep Kumar Sikdar, Professor, Department of Environment Management, Indian Institute of Social Welfare and Business Management, Kolkata.
3. Young Scientist Award in Groundwater Studies: Dr Abhijit Mukherjee, Associate Professor, IIT Kharagapur.

The awards were presented by Smt Bala Chadha, Executive Director, Global Hydrological Solutions, New Delhi.

The Annual General Meeting of INC-IAH was held just after the workshop. The committee has decided to pursue a membership drive in 2016 to strengthen the chapter. The high subscription fees, especially for life membership were discussed and those present were of the unanimous opinion that life membership should not be more than 10 years subscription and the annual subscription should be reduced. It was decided to bring these matters to the attention of IAH centrally. The chapter has decided to register the INC-IAH under the Society Act for which draft bylaws had been prepared and circulated. The INC-IAH plans to organize an international conference on groundwater, which will be discussed again at the next meeting of the committee. The committee thanked Professor Sarita Sachdeva of MRIU, Faridabad for her great support in organizing the joint one day workshop.



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# TIPS AND REMINDERS...



## Stay up to date with news and announcements

Knowing that different people like different things, we offer a variety of ways for our supporters to easily stay informed of IAH's news, plans and resources.

As well as our Members' Alerts and eNews digests which are sent to inboxes, you can stay even more "current" with IAH matters through:

- Facebook
- LinkedIn
- Twitter
- and, in response to requests, RSS feeds.

We also welcome groundwater/hydrogeology news from the IAH "family" and beyond. Keep in touch!

 <https://www.linkedin.com/groups/3213735>

 <https://www.facebook.com/iah.org/>

 **Follow** @IAHgroundwater

 **Follow on feedly** Explore / iah.org

 <https://iah.org/news>; <https://iah.org/events>;  
<https://iah.org/knowledge/training>;  
<https://iah.org/knowledge/learning-resources>  
<https://iah.org/about/stories>

## Check your profile and settings on our website



We've received quite a number of emails recently advising new addresses/contact details and this has led us to wonder how many other people might have forgotten to get in touch...

You can check your member details easily on our website via the members' area. This just takes a moment and we'd hate you to miss out on your member benefits...


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

## Sponsorship scheme - call for support and nominations

IAH operates a scheme whereby members in higher income countries can sponsor IAH membership for a professional colleague in a developing country.



At present just over 250 hydrogeologists around the world are being sponsored by individual IAH members, by National Committees or from IAH central funds. We would like to see this number increase. You can help IAH reach its goal by financially supporting our Sponsored Membership Scheme, and by nominating individuals you believe might benefit from sponsorship.

 <https://iah.org/join-us/sponsorship-scheme>

# FUTURE CONGRESSES



## Groundwater and Society - 60 years of IAH Montpellier, France

The French and German National Chapters of IAH are proud to host our 43rd Congress in Montpellier from 25 to 29 September 2016 and at the same time celebrate 60 years of IAH. It is completely appropriate that our French colleagues, who were so instrumental in establishing the association should host our anniversary meeting just as they did in in 2006 in Dijon. Moreover, at their invitation, the German National Chapter, who also played an essential role in setting IAH on its way will join them in organising the congress.

### PROGRAMME

To recognise our 60th anniversary, the Congress will include a programme of invited presentations to reflect and celebrate the achievements of IAH and to look forward to the further development of IAH and hydrogeological science in the future. This is being combined with the submission of abstracts for a conventional technical programme of parallel sessions and poster presentations, and mid- and post-congress field visits to some very attractive locations in the surrounding French countryside, and the normal IAH meetings.

Abstract submission under the following eight themes closed at the beginning of April, with around 850 submissions received. Authors will receive notifications of acceptance in the middle of May.

- What part can hydrogeologists play in civil society?
- Hydrogeologists and economic development
- Hydrogeologists for the future: education and training
- Economics in groundwater and groundwater management
- Groundwater, global and climate change
- Active management of groundwater in the water cycle
- Groundwater uses and managing groundwater use conflicts
- Progress in conceptual models, tools and methods

Within these themes, sessions are being established, some in collaboration with the IAH commissions and networks, conveners and chairs invited and keynote speakers are being confirmed. Further details will become available on the congress website.

### FIELD VISITS

An exciting programme of ten congress field visits included within the registration fee has been prepared for 29 September. These include the Lez karstic spring and its geological context, the Thau lagoon and Balaruc thermal and karstic springs, the Larzac Plateau and the famous Millau viaduct, the Fontaine de Vaucluse spring, the Avène-les-bains thermal springs, the Pont du Gard water supply to Roman Nîmes, the Vistrenque sedimentary aquifer, the gorges of the "Foux de la Viz" karst, the Pic Saint Loup-Hortus mountains, and the Cèze gorges.

The Post Congress Tours will take place from Friday 30 September to Sunday 2 October and are not included in the registration fees. One will take participants along the Mediterranean Lion Gulf, another will traverse the Grand Causses limestone plateaux, a third will be devoted to hard rock aquifers and the fourth is being organised by the IAH Commission on Mineral and Thermal Waters.



## FURTHER INFORMATION AND KEY DATES

The congress website now has a considerable amount of information about the technical programme, the field visits, accommodation arrangements and other local information. Congress registration is open and early bird registration closes on 15 June. To assist with the planning of the post-congress tours, pre-registration with a 50% deposit will be required by 15 May. A second circular with a provisional programme will be made available in the middle of June and a third circular in August. The local organising committee are working hard to provide an excellent scientific programme and memorable social experience for IAH members and we look forward to seeing you in Montpellier to help us celebrate our 60th birthday.

## CONGRESS ORGANISING COMMITTEE AND SECRETARIAT

 Congress website - <http://www.60iah2016.org>

## Croatia, 2017 host

The Croatian National Chapter of IAH is honoured to host the 44th Annual Congress “Groundwater Heritage and Sustainability” at the Dubrovnik Palace Hotel, Dubrovnik, from 25 to 29 September 2017. The city of Dubrovnik is the jewel of Croatian tourism, occupying a spectacular location on the eastern Adriatic coast and was declared a World Heritage Site by UNESCO in 1979.

The presence of fresh water has been a key influence on the location of settlements throughout the history of mankind. The utilization of groundwater sources is as old as human settlement and has become part of our cultural heritage - a natural heritage which must be preserved. As a result of industrial, agricultural, urban and mining activities over the last century, together with the effects of climate change, the sustainability of groundwater use is now in the spotlight. Both the quality and quantity of groundwater are at risk of deterioration, and it is our task to reconcile meeting the water demands of contemporary settlements and economies with the need for conservation of this natural and cultural heritage in different environments around the globe.

To meet help meet these objectives, the organising committee has established eight congress topics under this theme: 1) Groundwater heritage - passing benefits to current and future generations; 2) Groundwater modelling; 3) Groundwater monitoring - new approaches; 4) Groundwater in karst systems; 5) Groundwater and

dependent ecosystems; 6) Hydropower and geothermal energy; 7) Sustainable management of groundwater resources; 8) Mineral waters and human health.








Mid-congress excursions are being planned to several hydrogeologically-diverse and interesting localities, including the Dubrovnik hinterland, the beautiful islands of the Elafiti archipelago and the Mljet National Park. Post-congress excursions will offer a chance to visit to some of the most famous localities in the Dinaric karst including the Jadro spring which is used to supply Split, the Plitvice Lakes National Park (tufa barrier lakes), the Blue and Red Lakes (famous sinkholes) and the Buna Spring (the largest karst spring in the Dinarides) and other localities.

The community of Croatian hydrogeologists invites colleagues to attend the congress and share their ideas, experiences and knowledge. The newly-established congress website has plenty of information about the congress, the venue and region, and the first circular can be downloaded.

TAMARA MARKOVIĆ AND THE 2017 CONGRESS ORGANISING COMMITTEE

Congress website - <http://iah2017.org/>

## 2016 - SELECTION

-  10 June – Belfast, Northern Ireland  
 Groundwater in Fractured Bedrock Environments.  
 Organised by Queen’s University, Belfast and The Geological Society, supported by IAH.  
 Website: <http://www.geolsoc.org.uk/fracturedbedrocks>
-  13-15 June – Sosnowiec, Poland  
 7th International field workshop for young hydrogeologists  
 Organised by University of Silesia, IAH Polish National Chapter, IAH Early Career Hydrogeologists’ Network, Association of Polish Hydrogeologists, Scientific Students Organisation AQUA.  
 Website: <http://www.hydroworkshop.us.edu.pl/index.html>
-  20-24 June, Mexico  
 9th International Symposium on Managed Aquifer Recharge (ISMAR9) in conjunction with the Biennial Symposium on Managed Aquifer Recharge (BSMAR15). Organised by convened by the IAH MAR Commission, the Arizona Hydrological Society and the Groundwater Resources Association of California  
 Website: <http://www.ismar9.org/>
-  27 August - 4 September – Capetown, South Africa  
 35th International Geological Congress  
 Organised by IUGS and the South African Council for Geoscience, together with the Geological Society of South Africa and other collaborators from academia and industry.  
 Website: <http://www.35igc.org>
-  5-7 September, Switzerland  
 Eurokarst 2016  
 The European Karst Conference. The conference covers all topics related to Karst Hydrogeology and Carbonate Reservoirs. Organised by the Universities of Neuchatel, Franche-Comte and Malaga, The Swiss Institute of Speleology and Karstology and the IAH Karst Commission.  
 Website: <http://www.eurokarst.org/>
-  13-14 September – Birmingham, UK  
 Groundwater: managing our hidden asset  
 A two-day conference to celebrate the International Association of Hydrogeologists 60th anniversary and the Geological Society Year of Water, hosted by the University of Birmingham. The conference will incorporate the Ineson Lecture and re-launch of “Groundwater our Hidden Asset”, supported by the Groundwater Forum. Organised by British Chapter of the International Association of Hydrogeologists, The Hydrogeology Group of the Geological Society of London and the University of Birmingham.  
 Website: <http://www.geolsoc.org.uk/Groundwater-Managing-our-Hidden-Asset>
-  25-29 September, Montpellier, France  
 43rd IAH Congress  
 Groundwater and Society - IAH's 60th anniversary  
 Organised by The French and German National Chapters of IAH.  
 Website: <http://www.60iah2016.org>



<http://iah.org/events>

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



Follow IAH groups on LinkedIn