

NEWS & information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

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

AUGUST 2020

Also in this issue:

President & Secretary
General Messages
Hydrogeoethics
Online resources
Member news and initiatives
Competitions and calls
Chapter updates
Commissions & Networks
Congress updates
Events listing

and the regular IAH
announcements and news



Although the constraints of lockdown have eased for some of us, the Covid-19 pandemic continues to threaten communities across the world. We hope that you, your families, friends and colleagues are coping during these difficult times. Even where 'normal' activities are possible once again, caution is still needed, including in planning for future activities.

As for so many, we have had to make changes to our plans, and adapt as needed, but our efforts continue. In this newsletter you'll still find our regular mix of news, announcements and resources.

We applaud those who are innovatively rising to the latest challenges to continue to bring and share knowledge about groundwater. And we especially thank those striving to bring safe water to communities in need during this critical time. Stay safe, stay well.



**INTERNATIONAL
ASSOCIATION OF
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AUGUST 2020

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We must accept finite disappointment, but never lose infinite hope (Martin Luther King Jr)

Although the constraints of lockdown have eased for some of us, the Covid-19 pandemic continues to threaten communities across the world. We hope that you, your families, friends and colleagues are coping during these difficult times. Even where ‘normal’ activities are possible once again, caution is still needed, including in planning for future activities.

This is certainly the case for conferences, where the virtual world has become the current normal. We had hoped that things would have been a little more settled by September this year so that we could meet up with friends and colleagues in Sao Paulo at the IAH Congress. Sadly, this will now not be the case, as this year’s Congress has also fallen victim to the virus. Instead the momentous decision has been taken to hold two congresses in 2021 – with the Sao Paulo Congress postponed till August and our Brussels Congress confirmed for September. And why not – it’s IAH’s 65th anniversary year! It also gives us twice the opportunities to see our friends again.

The pandemic is also having an effect on subscriptions to IAH as, understandably, some members have been forced to consider more closely the cost of membership. Most members have renewed and, despite the challenges resulting from the coronavirus, our finances also remain satisfactory. So, if you aren’t able to continue this year, we’ll be here to welcome you back next year.

Those of you who have renewed your memberships will by now have received an invitation to vote in the 2020 IAH Council elections. This has been sent by ‘Mi-Voice’, the company that is managing the election process on our behalf. If you haven’t had the opportunity to look through the candidates’ details and make your selections don’t worry, the deadline for voting is midday (BST) on 18 September, so there’s still time to make your vote count.

Another change to this year’s programme concerns our annual general meeting. This year’s AGM will take place online and we’ll be contacting all members shortly to find out if you would like to be involved in this video conference. Our two Council meetings – one for the outgoing Council and one for the new one – will also be online. An important topic on the agenda will be the aim to ensure equality and fairness to all our members.

IN THIS ISSUE

Media Focus.....	4
IAH News	6
From Our President & Secretary General.....	10
A Question of Ethics	13
Geoethics and Groundwater Congress Report....	14
IAH Elections	16
Ask a Member.....	18
Member competitions etc.....	20
New Members and updates.....	22
Mentoring Scheme Opens.....	24
Watch and Listen - new videos	25
Chapter News	26
Commissions & Networks.....	28
Congress 2021 information	30
Diary Dates & Events.....	32
Copy and advertising information	32

Governments are being urged by NGOs, individuals and businesses too, to set out a green economic recovery as a response to the pandemic. SIWI (Stockholm International Water Institute) assert that by investing in water management, we can “build back better after Covid-19 and accelerate progress towards a sustainable and inclusive economy that leaves no one behind.” They state too that, “resilient water management and governance go hand in hand with transforming our economies to be more resilient, sustainable, and inclusive.” Sustainable groundwater management must assuredly be part of this.

Finally, we say goodbye and a big thank you to the current Council and the Executive, who have had a very busy time this year handling the effects of Covid-19. It’s unlikely that they expected this to be part of the brief for the roles they were elected to. So the final words are to the new Council: good luck!

IAH SECRETARIAT



MEDIA FOCUS

A selection of groundwater features from around the world

CLIMATE CHANGE: US MEGADROUGHT 'ALREADY UNDER WAY'

A drought, equal to the worst to have hit the western US in recorded history, is already under way, say scientists. Researchers say the megadrought is a naturally occurring event that started in the year 2000 and is still ongoing. Climate change, though, is having a major impact with rising temperatures making the drought more severe.

<https://www.bbc.co.uk/news/science-environment-52312260>

MODELLING THE RIVER-GROUNDWATER INTERFACE AND HOT SPOTS FOR ARSENIC RELEASE

Research over the last decades has led to better understanding of the sources of arsenic-polluted groundwater. Reactive transport modelling has now integrated this knowledge into computer simulations that mimic the complex interactions between groundwater flow, solute transport and geochemical reaction mechanisms.

<https://www.eawag.ch/en/news-agenda/news-portal/news-detail/computer-modelling-deciphers-the-important-role-of-the-river-groundwater-interface-as-a-hot-spot-for/>

NIGERIA: CONCERN OVER GROUNDWATER POLLUTION IN LAGOS

A recent explosion that rocked Abule-Ado, a suburb of Lagos, Nigeria, has rekindled concerns over pollution of groundwater in some communities in the state. There is mounting apprehension that the water sources of the affected communities are polluted, without redress, especially with the focus now being on COVID-19.

<https://guardian.ng/opinion/concern-over-groundwater-pollution-in-lagos/>

SOUTH AFRICA PREPARES TO PROTECT GROUNDWATER FROM CORONAVIRUS MASS GRAVES

With researchers noting that little is known about how long the novel coronavirus survives in water, South Africa wants to avoid sudden, poorly planned burials that could result in the virus or other pathogens passing into water supplies. If burial sites are chosen that have potential to impact the environment, with no mitigation plans, there is high risk for groundwater contamination.

<https://www.reuters.com/article/us-health-coronavirus-safrica-water-feat/south-africa-prepares-to-protect-groundwater-from-coronavirus-mass-graves-idUSKBN22R1CD>

HOW THE TASTE OF GROUNDWATER COULD HELP FOCUS MINING EXPLORATION EFFORTS

Haloes of altered water chemistry in groundwater could help geologists identify areas where ore deposits lie hidden below the surface. A new report shows that by sampling groundwaters, prospectors can make their exploration instruments 'taste' the geology they have come into contact with and determine what kind of minerals are buried in a specific area.

<https://www.mining.com/how-the-taste-of-groundwater-could-help-focus-exploration-efforts/>

WHY DROUGHT PROGRAMMES IN ETHIOPIA SHOULD SUPPORT COMMUNAL ACCESS TO GROUNDWATER

Like many countries in east Africa, Ethiopia is highly vulnerable to drought. Since 1965, Ethiopia has experienced 15 severe droughts affecting more than 65 million people and causing serious economic damage. A new study looks at what the most reliable and accessible water source types were for communities during drought.

<https://theconversation.com/why-drought-programmes-in-ethiopia-should-support-communal-access-to-groundwater-136315>

HOW STORMS MAY CONTRIBUTE TO GROUNDWATER CONTAMINATION IN KARST SYSTEMS

Karst aquifers are some of the most important sources of drinking water in the world. During storms, water can flow rapidly through the large underground channels in these aquifers and easily pick up small particles, metals, and other contaminants. Researchers found that sediments washed through karst aquifers during storms come in two waves.
<https://sciworthy.com/how-storms-may-contribute-to-groundwater-contamination/>

COULD THE ANSWER TO GROUNDWATER RESOURCES COME FROM HIGH IN THE SKY?

A new computational approach offers a high-tech yet simple method to estimate available groundwater. It pairs high-resolution images derived by satellite with advanced computer modeling to estimate aquifer volume change from observed ground deformation.
<https://newscenter.lbl.gov/2020/06/11/could-the-answer-to-groundwater-resources-come-from-high-in-the-sky/>

BRIDGING THE GENDER GAP THROUGH GROUNDWATER MONITORING IN A RAJASTHAN VILLAGE

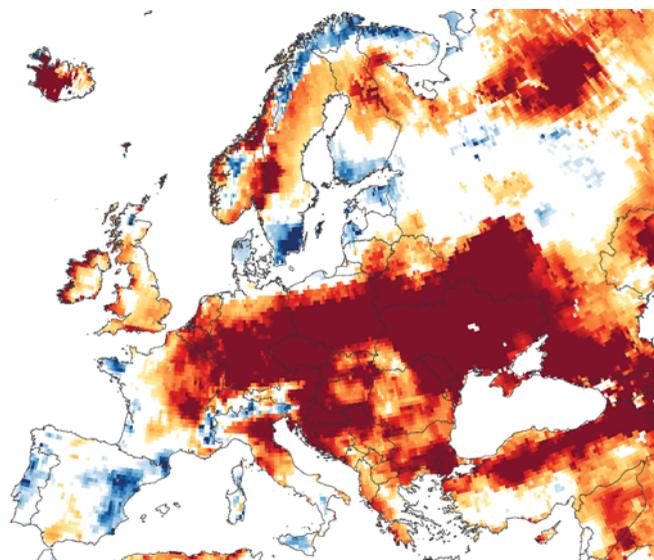
A group of trained farmer-researchers, 'Bhujal Jaankars' in two Rajasthan and Gujarat watersheds monitor groundwater levels under a village-level project for groundwater sustainability..Most of the farmer-researchers are men but the project seeks to include more women, as it expands to other parts of the country.
<https://india.mongabay.com/2020/06/bridging-the-gender-gap-through-groundwater-monitoring-in-a-rajasthan-village/>

PARTS OF ENGLAND COULD RUN OUT OF WATER WITHIN 20 YEARS, WARN MPS

There is a serious risk that parts of England will run out of water within 20 years. The public accounts committee said the bodies responsible for water in the UK had “taken their eye off the ball” and the scale of leakage – more than 3bn litres a day – was “wholly unacceptable”. The committee’s report is damning of the water companies, which were privatised in 1989, accusing them of being “ponderous” and having made no progress in reducing leaks for two decades.
<https://www.theguardian.com/environment/2020/jul/10/parts-of-england-could-run-out-of-water-within-20-years-warn-mps>

SIGNS OF DROUGHT IN EUROPEAN GROUNDWATER

Latest maps and reports from NASA’s Earth Observatory.
Picture credit: NASA Earth Observatory
<https://earthobservatory.nasa.gov/images/146888/signs-of-drought-in-european-groundwater>



2021 – A SPECIAL YEAR FOR CONGRESSES!

The Covid-19 pandemic has challenged us all in many ways and not least in how conferences are managed. Although we hoped that the IAH congress scheduled for Sao Paulo in September 2020 would be the ‘light at the end of the tunnel’ this has proved to be optimistic. Instead a historic decision has been made to run two congresses in 2021, in Sao Paulo and in Brussels. And why not – it’s IAH’s 65th birthday! Preparations for both congresses were already far advanced when it became clear that we would have to do things a little differently. The countries and the cities are very different and of course each conference will be different – but we look forward to a unique IAH experience in this collaboration between Brazil and Belgium, and, we hope, the opportunity for many more people to participate.

IAN DAVEY, SECRETARIAT

EXECUTIVE MEETS ON SCREENS

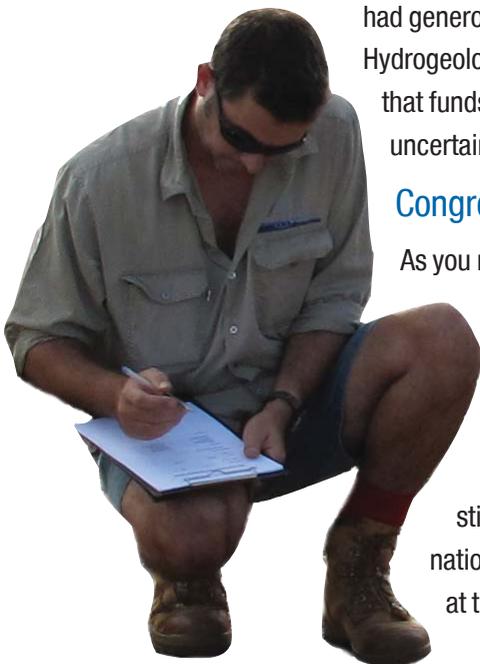
The IAH Executive met in June to review activities from the first half of 2020 and to make plans for the full IAH Council meeting in September and the Annual General Meeting. This took place online, using well-known platforms that performed adequately for most of the time, but not all...!

Update on finances

There was some concern about how the Covid-19 pandemic might affect IAH’s finances in 2020. At the time of the meeting, income from subscriptions was around 80% of that compared with this time in previous years, though information about renewals was still awaited from a number of members, including the bigger chapters, Australia and Canada. On the other hand, it was acknowledged that expenditure would be lower than anticipated, with the part-funding of travel costs for the Council meeting not being needed this year. In addition, our publisher, Springer, had generously agreed to increase the amount of financial support we receive for managing Hydrogeology Journal. Keeping this year’s budget under review was paramount, to ensure that funds could be used to the best advantage both for remainder of the year and to help any uncertainties that could continue into 2021.

Congresses

As you might guess, the main topic was the disappointment for all concerned that this year’s congress in Sao Paulo has had to be cancelled. The good news, though, was that, after discussions with the organising committees in Brazil and Belgium, there had been agreement to run both congresses in 2021. It was acknowledged that this would present some challenges but there would also be opportunities for a positive outcome, after such a difficult year globally. It was also noted that a close watch was still needed on the progress of the pandemic. It was also expected that a number of other national chapters would provide new or updated proposals for future congresses to Council at their meeting in September.



International engagement

The 'Friends of Groundwater Group' has representatives from IAH (including the Groundwater Quality Commission), BGR (Germany), Eawag (Switzerland) and Umvoto Africa. It is part of the World Water Quality Alliance and is preparing a perspectives paper on groundwater quality issues for WWQA. Dan Lapworth and the IAH are inputting to the paper. Further work on the groundwater aspects of the World Water Quality Assessment will depend on funding being made available.



Discussions were held with Callum Clench, the Executive Director of the International Water Resources Association to consider opportunities for collaboration. Initial ideas include webinars, conferences and congresses.

Preparations continue for World Water Day 2022: "Groundwater: Making the invisible visible". A draft storyline report is being prepared by UNESCO with support from IGRAC and IAH. This will set out the plan for the full World Water Development Report, which will be published in March 2022.

Forward Look

The existing 2011-2020 Forward Look Action Plan period finishes this September, which will also see the election of a new IAH Council. In preparation for this, the current Council members have been reviewing how well the objectives identified ten years ago have been achieved and considering what support they might be able to provide to the new Council in charting future directions for IAH in the next plan. The Executive Committee reflected on some of the highlights achieved during the last year.

One of the most positive trends was that membership in 2019 increased to 4,458, although it was still well short of the original target of 5,000 by 2020. This number seems likely to fall in 2020, as a consequence of the Covid-19 pandemic. Progress on other Forward Look actions has also been restricted.

As the current Council's responsibility for strategic planning draws to an end, the Executive Committee was pleased that a strong foundation had been established for future activities.

Science and Education

Spanish and Portuguese translations of papers in our Strategic overview Series had been prepared by teams in Argentina and Brazil, with the aim of publishing these before the end of the year.

There had been a discussion with Craig Simmons of NCGRT (National Centre for Groundwater Research and Training) about possible educational initiatives that IAH could be involved in. The initial thinking was to develop two international online programs: (i) "International Groundwater School" and (ii) "International Groundwater Lecture Series". Education, training, and raising awareness about groundwater would be the goals. NCGRT would draft proposals for consideration.

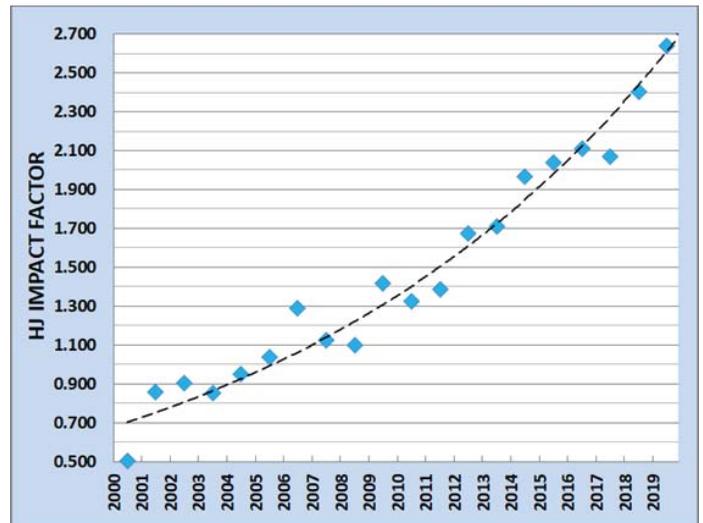
The Working Group on the 'Future and Frontiers of Hydrogeology' had made progress, with several publications anticipated in various journals, including the topics of groundwater monitoring, groundwater quality, socio-hydrogeology and the political future of groundwater. A book chapter reviewing the overall scope of this work was also in preparation. More details will be provided in the future as work advances.

IAN DAVEY

ANOTHER RISE FOR HJ IMPACT FACTOR!

We have been informed by Springer Nature of the latest Impact Factor (for 2019) for our Hydrogeology Journal. It rose to the highest level ever for HJ, 2.641. Well done to all those involved in contributing to this ongoing success story – the editors, authors, readers – and of course IAH's and Springer Nature's HJ team working hard in the background!

CLIFF VOSS (HJ MANAGING EDITOR) AND IAN DAVEY, SECRETARIAT



2020 IAH ANNUAL GENERAL MEETING (AGM) - ONLINE

Notice is given that the 2020 Annual General Meeting of the International Association of Hydrogeologists will be held online at 1400 BST on 23rd September 2020. All members of the Association who have fully paid their subscriptions for the current year are entitled to attend the proceedings.

- The AGM agenda will include receiving the report and accounts for the period ended 31st December 2019. The full financial statement will be made available beforehand on the annual reports pages of the IAH web site <https://iah.org/about/reports/management>.
- Minutes of the 18th Annual General Meeting held on 24th September 2019 are available at: <https://iah.org/members/iah-meetings>.

If you would like to attend this year's online AGM, please register your interest via <https://www.surveymonkey.co.uk/r/IAH2020AGM> (where we ask for basic contact information and your membership number). We will then send you the joining details, including a password, nearer the date. To help us with the arrangements please respond by Monday 14th September, 11.59PM GMT+1. Depending on level of interest, we are hoping to arrange enough online capacity for everyone who like to join the meeting.

 Register interest: <https://www.surveymonkey.co.uk/r/IAH2020AGM>



IN THE IAH BOOK SERIES



International Contributions to Hydrogeology (IAH-ICH)

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

Investigating Groundwater

Ian Acworth

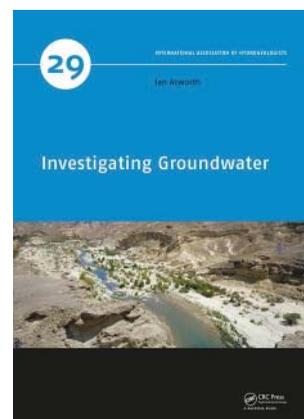
Investigating Groundwater provides an integrated approach to the challenges associated with locating groundwater. It provides a review of the wide range of techniques that can be deployed to investigate this important resource. Many of the practical examples given are based upon Australian experience but the methods have worldwide applicability. The book is published in colour and includes many original diagrams and photographs. Particular effort has been made to provide consistent terminology and SI units are used throughout the text.

Written for a worldwide audience of degree level geology/engineering practitioners, academics and students involved in groundwater resource investigation methods, Investigating Groundwater is essential reading for those working in groundwater research.

586 pp; ISBN 9781138542495 Published price £148.99

(30% discount for IAH members)

Information about the book can be found on the CRC/T&F website <https://www.crcpress.com/Investigating-Groundwater/Acworth/p/book/9781138542495>; and for the member discount code on the IAH website https://iah.org/members/discount_perks



Selected Papers on Hydrogeology (IAH-SP)

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

Groundwater Vulnerability Assessment and Mapping

Andrzej J. Witkowski, Andrzej Kowalczyk, Jaroslav Vrba

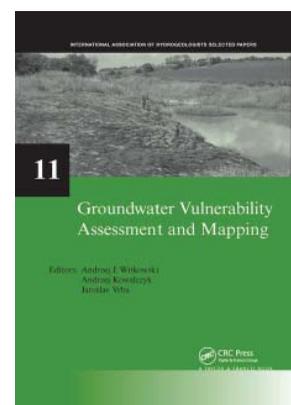
This volume presents the contemporary issues surrounding groundwater pollution risk assessment and the application of vulnerability and risk assessment maps for the effective protection and management of aquifers. Numerous new and improved approaches to intrinsic and specific vulnerability assessment (modified DRASTIC, GOD, VULK, VURAAS) are described, some coupled with geophysical and hydrological surveys and hydrodynamic and transport modelling. Widespread use is made of GIS format.

586 pp; ISBN 9780367388690 - CAT# K448274

Published price £54.99 (PB); £120 (HB); £37.79 (ebook); from £21.00 (ebook rental)

(30% discount for IAH members)

Information about the book can be found on the CRC/T&F website <https://www.crcpress.com/Groundwater-Vulnerability-Assessment-and-Mapping-IAH-Selected-Papers-volume/Witkowski-Kowalczyk-Vrba/p/book/9780367388690>; and for the member discount code on the IAH website https://iah.org/members/discount_perks





Dear members, dear colleagues...

Four years have passed since the current Executive was elected and we are in the final phase of our commitment as part of this Executive. Four years of commitment to all our members to defend our profession and our professionals, and to increase the knowledge of hydrogeological issues at all levels of society, from governments to stakeholders, including users.

10 years have also passed since IAH has had its Forward Look, where the main activities and achievements for the period 2010-2020 were defined and this year was time for balance. In these 10 years several Strategic Overview Papers covering some of the most important and topical issues linked to groundwater were published and translations into other languages are on the way. IAH has also diversified the sources of income, education became a priority, the mentoring scheme was evaluated, and the intention is to expand this valuable scheme in the future. IAH has continued to highlight the role of groundwater in meeting Sustainable Development Goals (SDGs), especially SDG6, being involved in many international meetings related to the issue and has targetted specific international organisations for raising awareness of groundwater issues. We have also established partnerships and Memorandums of Understanding with several institutions, like UN-Water, IGRAC, GRIPP, African GW Network, IAPG, etc. while continuing the partnerships with UNESCO, IUGS, etc. Recently, a panel to review science frontiers in hydrogeology was created and the evaluation of the strategy for book publication in the future has been a constant in the last years. The implications of open access for Hydrogeology Journal have been analysed and it's a challenge for the near future. The congress strategy is under review, including whether we should hold more targeted thematic scientific meetings in some years rather than broad multi-theme congresses every year. For the moment and reflecting the opinion of many of our members, we will continue in the next years to organise congresses with broader topics.

Other important evolution of IAH was the increment of membership during the last 10 years, reaching almost 4500 members in 2019.

The performance of Hydrogeology Journal has been increasing each year thanks to the work of editors and staff. Our Executive Editor Cliff Voss and the HJ staff deserve our congratulations by the great work done.

This current period has been marked by a pandemic that has changed the world. We hope all our members and families continue to be well in the during this crisis and our desire is that this crisis can be solved in the shortest time possible, to regain our confidence in the future.

The pandemic has also changed the work habits of all of us, with part of us working from home, and many more online meetings to the detriment of personal meetings. For the IAH, and since international institutions in the area of water also started to hold their meetings online, it allowed a greater international participation of the Association in the most important meetings in the field of water (UN Water, for example), as they avoid all the costs involved in travel and accommodation for face-to-face meetings, and the consumption of fossil fuels and the carbon footprint of the respective participants. This will allow, in the future, an increasing intervention by the IAH in international organizations, at very low costs.

Also due to the pandemic, our Congress this year was postponed to 2021. So, due to the Coronavirus, in 2021 IAH will celebrate its 65th Anniversary with two congresses, one in August in Brazil and the 2021 Congress in Belgium in September.

More personally in my last year as Executive member, I, as IAH President, want to thank directly the work of my colleagues in the 2016-2020 Executive Committee Bruce Misstear, Dave Kreamer and Teodóra Szócs, but

also to the other colleagues members of the previous Executives 2012-2016 and 2008-2012, Ken Howard, Shammy Puri and Willi Struckmeier. Also, to the IAH Secretariat, I need to express my high appreciation to the current Executive Manager Ian Davey and the previous one John Chilton for the excellent work done during my presence in the Executive. Both made the Executive's tasks much more efficient, and both revealed a great professionalism in the position and a great sensitivity as human beings to deal with the members of the Executive and to help to deal many times with very hard decisions. Thank you too to the other members of the Secretariat, Kellie Nicholson, Sharon Warden and Sue Duncan, supported by Susanne Schemann, Sandra Larkins and Ellie Duncan, for their dedication to IAH and the excellent work done. Many suggestions that were important for IAH came from members of our Secretariat, who acted always with a great sense of professionalism. Also, my thanks to Cliff Voss for his role in HJ and to Nick Robins for his role with our books: they both proved that our scientific contribution to hydrogeology can be recognised in all the corners of the world.

Finally, my thanks to all our members, many of them now friends all around the world. It was a pleasure to work with all of you these last 12 years as member of the Executive. And please, support with your presence our very special year in 2021, presenting your work in our two congresses in Brazil and Belgium. Let's make 2021 a very special year.

See you around.

ANTÓNIO CHAMBEL



... and some reflections from the outgoing Secretary General

I will be standing down this September after eight years as a member of the IAH Executive, initially as Vice President for Finance & Membership and latterly as Secretary General. This is therefore a good opportunity to share with readers a few reflections about my experiences and some thoughts about the future of the Association.

Firstly, I would like to say that despite the large amount of work involved (including too many emails!) I have enjoyed the experience, and especially the opportunities to meet, work alongside and develop friendships with many colleagues in the Association. Admittedly some of the work has been humdrum – many hours spent in updating the Rules (a necessary but dull task, but made more enjoyable by working on this with our former Executive Manager, John Chilton) – whilst other activities have been more interesting. For example, I valued leading a working group on education that has resulted in many worthwhile initiatives such as the addition of education web pages to our website (aimed at both the general public and professionals), introduction of a mentoring scheme,



development of the successful strategic overview series (led by Stephen Foster) and making congress keynotes available on our website. Nevertheless, I acknowledge that there is still much more that we can do (e.g. increasing our involvement in webinars, training courses and preparing educational materials).

As Secretary General I took over responsibility for the Forward Look Action Plan from my predecessor, Shammy Puri. It is great that we achieved a record membership of 4,458 last year, up 18% from the beginning of the FL Plan in 2011. As well as educational activities, other notable successes have been the increasing size and

[...continued over]

...SOME REFLECTIONS FROM THE OUTGOING SECRETARY GENERAL

[...continued from previous]

impact of Hydrogeology Journal (under the wise leadership of Cliff Voss, Editor in Chief), and the creation and thriving of several new Networks and Commissions (I want to especially mention the Early Careers Hydrogeologists Network as they have made an enormous positive impact on the Association). One of the roles of the Secretary General is international liaison, and I have found it immensely rewarding working with colleagues from IAH and other organisations across the globe on activities such as the World Water Quality Alliance and preparations for World Water Day in 2022, on the theme “Groundwater: Making the invisible visible”.

Congresses are an important part of what we do, and I greatly appreciated my role as the link person between the Executive and the congress organisers in 2015, 2017 and 2019. I was overwhelmed by the extraordinary commitment and huge work inputs of the organisers, including (among many others) Marco Petitta (Rome congress), Tamara Markovic (Dubrovnik) and Bartolomé Andreo (Malaga).

What of the future? The Covid-19 pandemic has impacted on IAH activities this year, as it has on the lives of all our members. Whilst this has meant the cancellation of face to face meetings, it has also given us an opportunity to reflect on how we do things. Even before the pandemic, there were discussions at Council about the need for more online meetings, to reduce our carbon footprints. This trend will likely continue, although I do feel that the social aspects and networking opportunities provided by our conferences and congresses are extremely important.

On the financial side of things, the Association is in pretty good shape, and we should be able to withstand any negative impacts from the Covid-19 pandemic on our membership numbers this year. Nevertheless, there is still a need to diversify our income sources – a topic close to the heart of Shammy Puri – to reduce our dependency on membership income. Some progress has made on this during the Forward Look period, but more needs to be done.

One concern I have about the future is that our world is becoming more fragmented politically, with strong nationalist influences in many regions. I feel it is important that our Association avoids becoming involved in political disputes, and that we work together as hydrogeologists to help relieve poverty globally and to protect our environment, by acting as good advocates for groundwater in all regions and to stakeholders at all levels.

I would like to end by thanking my colleagues on the Council and Executive for their help over the past 8 years, and especially Ken Howard and Antonio Chambel for their leadership as Presidents of IAH in this period (these are very onerous roles). I would also like to acknowledge the hard work and support of the Secretariat, without which the Council and Executive could not perform their duties – and I certainly could not have done my job. So thank you John Chilton, Ian Davey, Kellie Nicholson and the other members of the IAH Secretariat.

Finally, I would like to wish the new members of Council and Executive well during the next four years. I am sure they will be up to facing the many challenges ahead, and I hope they enjoy their experiences as much as I have done.

BRUCE MISSTEAR

Ed: We couldn't let Bruce go without re-releasing one of the photos from our archives that he passed to us for IAH's 60th Anniversary...(taken working in Nigeria)



Share knowledge and memories... @iahgroundwater #iahgroundwater

A QUESTION OF ETHICS

Following the successful transfer of the IAPG (International Association for Promoting Geoethics) 'Geoethics and Groundwater Management' conference online (see next page for the report from the organising committee), it is worth drawing attention to the IAH's own statement relating to geoethics.

IAH's ethics statement was drafted with a particular aim of helping us to be clear about our relationship with corporate sponsorship. Sponsors should be able to show that their activities are compatible with and will not compromise our values or obligations for managing groundwater.

We expect sponsors to be able to commit to this, for example as part of a memorandum of agreement. Sponsors should be able to show compatibility through their own written policies, or statements about their activities and behaviours, in regard to corporate social responsibility and sustainable environmental management.

We also refer to the IAPG "Cape Town Statement on Geoethics" which notes that geoscientists investigate, seek to manage and intervene in various components of the Earth system to support human life and well-being, to defend people against geohazards and to ensure natural resources are managed and used sustainably. In doing so, geoscientists must embrace ethical values in order to best to serve the public good. (For further information, see <http://www.geoethics.org/ctsg>).

You can find the full statement at <https://iah.org/wp-content/uploads/2019/07/IAH-and-ethical-sponsoring.pdf>.

SECRETARIAT

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United Kingdom



IAH: Ethical sponsoring and partnership

1. The IAH is registered as a charity in England and Wales. Our regulator, the Charity Commission, expects charities that fundraise to do so in a way which protects the charity's reputation and encourages public trust and confidence. This includes following the law and recognised standards, protecting charities from undue risk, and showing respect for donors, supporters and the public. (see <https://www.gov.uk/government/publications/charities-and-fundraising-c-20/charities-and-fundraising>.)
2. Our values are focussed on the sustainable global management of groundwater, as can be understood from our mission statement and aims:
 - Our mission is to further the understanding, wise use and protection of groundwater resources throughout the world.
 - We aim to be a leading international society for the science and practice of hydrogeology and to be a globally recognised information source and facilitator for the transfer of groundwater knowledge.
 - We endeavour to raise awareness of groundwater issues and work with national and international agencies to promote the use of groundwater to ensure ready access to safe drinking water. We promote the protection of aquifers against pollution, the improvement of aquifer storage and management of groundwater resources to assure the sustainability of groundwater-dependent ecosystems.
3. Sponsors should be able to show that their activities are compatible with and will not compromise our values or obligations. We expect sponsors to be able to commit to this, for example as part of a memorandum of agreement. Sponsors should be able to show compatibility through their own written policies, or statements about their activities and behaviours, in regard to corporate social responsibility and sustainable environmental management
4. This may be complemented by reference to the IAPG (International Association for Promoting Geoethics) "Cape Town Statement on Geoethics" (see <http://www.geoethics.org/ctsg> and Appendix 1). This notes that geoscientists investigate, seek to manage and intervene in various components of the Earth system to support human life and well-being, to defend people against geohazards and to ensure natural resources are managed and used sustainably. In doing so, geoscientists must embrace ethical values in order best to serve the public good. We should ensure prospective partners are aware of the terms of the statement and that their activities and our association with them would not be prejudicial to our continued compliance with the statement.
5. Similarly, sponsors should take account of the terms of the UN Global Compact concerning human rights, labour, environment and anti-corruption(see <https://www.unglobalcompact.org/what-is-gc/mission/principles> and Appendix 2)

Ian Davey, Executive Manager, on behalf of the IAH Council, 03 07 2019

Email: info@iah.org
Web: www.iah.org
Tel: +44 118 380 5251
Fax: +44 118 380 5225

IAH is an incorporated charitable organisation
Company Registration Number: 3065233
Charity Registration Number: 1083019



<https://iah.org/wp-content/uploads/2019/07/IAH-and-ethical-sponsoring.pdf>

<http://www.geoethics.org/ctsg>

INTERNATIONAL ASSOCIATION for PROMOTING GEOETHICS

Who we are | Organisation | Ethical on Geoethics | People | Publications | Tools | Events | Resources | Home

"Cape Town Statement on Geoethics"

IAPG considered the 35th IGC - International Geological Congress, held in Cape Town (South Africa) in 2016, the event that opened a new phase for Geoethics and for the Association. In order to celebrate this passage, the IAPG Working Committee, formed by Giuseppe Di Capua, Peter Bobocovsky and Silvia Peppoloni, put together the "Cape Town Statement on Geoethics" (CTSG), a document to be considered as the product of an international effort to focus the attention of geoscientists on the development of shared policies, guidelines, strategies and tools, with the long range goal of fostering the adoption of ethical practices in the geoscience community. The final document aims at all the values, concepts, contents developed in the first 4-year activity of IAPG, giving a perspective for the future development of geoethics. The CTSG was announced during the opening keynote speech by Silvia Peppoloni (IAPG Secretary General) in the first IAPG session on geoethics at the 35th IGC. After the congress, the draft version was sent for comments and suggestions to all the IAPG officers (members of the Executive Council, Coordinators of the National Sections, Corresponding Citizen Scientists) and to the 35th IGC Champions of the Theme "Geoscience Professionalism and Geoethics". Once improved (thanks in particular to Mr. Bibiana, Martin Banks, Emilio Hernandez Lopez Reyes, David Mogk), the final version was ratified by the Executive Council of the IAPG and finally published in the IAPG website.

The Cape Town Statement on Geoethics can be cited as follows:

Di Capua G., Peppoloni S. and Bobocovsky P.L. (2017). The Cape Town Statement on Geoethics. *Annals of Geophysics*, Vol. 60, Part Track 7, doi: 10.4401/ag-7555

The Cape Town Statement on Geoethics is available in 35 languages:
Afrikaans, Albanian, Arabic, Armenian, Indonesian, Bengali, Czech, Danish, Dutch, English, French, Georgian, German, Greek, Hindi, Hungarian, Italian, Japanese, Korean, Mandarin Chinese, Nepali, Norwegian, Persian, Portuguese, Romanian, Russian, Serbian, Serbian-Croatian, Spanish, Swedish, Tamil, Turkish, Ukrainian, Urdu.

Download the Cape Town Statement on Geoethics (English version in pdf version)

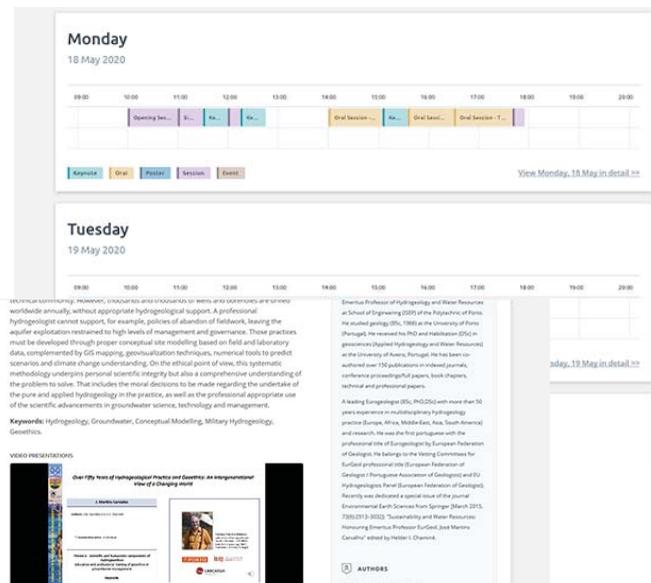
IAH & IAPG Geoethics & Groundwater Management Congress

This joint congress was devised to invite discussion about the concept of Hydrogeoethics, a novel transdisciplinary geoscience bringing together the theory, practice and values of both hydrogeology and geoethics.

Hosted by the IAH's Portuguese Chapter and IAPG (International Association for Promoting Geoethics) the congress aimed to appeal to all those working in the many fields relating to groundwater, but contributions were welcomed from a mix of disciplines besides science - humanities, law, education, religion, citizenship and the arts. As IAH members will recall, the congress was originally scheduled to run in mid-May 2020 as a conventional face-to-face event. In the planned week long conference, three days were reserved to sessions, some running in parallel, that would be composed of presentations based on previously submitted peer reviewed 4-6 pages extended abstracts, followed by two-day post-conference field trips in continental Portugal, Madeira and the Azores. An artistic symbolic logo was produced and a dedicated website built.

Arrangements were on track until late March 2020. Then came the declaration by the World Health Organisation (WHO) regarding the COVID-19 pandemic, soon followed by the state of emergency in Portugal and the likely threat of a more global lockdown. The local organising committee considered the risks and uncertainties for the congress, just as we groundwater people in science and engineering are used to dealing with day to day in our work. Knowing that groundwater flow and the plethora of associated questions that motivated the congress were continuing, a guiding motto emerged: "The science must go on". Thus the somewhat daring decision was taken to maintain the fast approaching date and do whatever possible to convert the congress to a fully online five-day event. The organising committee felt this was important not only to maintain the standing of IAH and IAPG, but also in recognition of the many authors, reviewers and the prospective attendants that had up to that moment demonstrated a strong will to contribute.

Effort was made to widen further the participation and to create from scratch a digital solution for a 100% online conference, with pre-recorded video content and accompanying textual information. It was felt that it should emulate as closely as possible the initial concept and the expected face-to-face rich experience with minimum loss, despite just one and a half months in which to organise it. This was certainly ambitious for the team of five people that couldn't meet in person, but was possible thanks to the commitment and competence of Ex Ordo, the digital solutions company, which as well as continuing to manage the administration, abstracts, etc. built the customised online platform to support the congress on the go, responding to some pretty demanding specifications. The organising committee was also able to count upon the extraordinary help of the many reviewers and the hundreds of authors that contributed. In a short time, late submissions were reviewed and all of the presenters positively responded to the request to submit early their presentations, with narration included. Not only that, but to adhere to a strict template for conversion in



video format for the congress platform. Doing this without flaw in so short a time and during difficult times for all truly deserves the highest praise.

And so it came that just a few hours ahead of opening, the full structure and contents were ready to be put online, without sufficient time for testing. During the congress week, contents were being released on a day-to-day basis supported by the fully functional and coherent online solution. The system was programmed to put the contents online in a sequence following a schedule beginning at 9:00 Universal Time. This resulted in the sessions being activated to the comfort of the first expected attendants of each day, in Oceania and East Asia. This daily opening was synchronous worldwide and thereafter all inaugurated contents remained active any time. The congress ran smoothly in the inaugural week with an attendance that reached 178 registrants, with the plan that the content remain online until mid August. Those registered have been able to appreciate the content in comfort, anytime, anywhere!

The organising committee was pleased to see that following this congress, and inspired by its efforts, the Hydrogeology Group of the Geological Society of London organised a webinar on hydrogeoethics on 18 June which engaged wide participation. Looking ahead, we hope that the concept of hydrogeoethics will continue to be developed in the near future via research and action. It is clear that we all need to recognise the importance and positive impact this fresh approach can have on sustainable development, with groundwater as a focal point to integrated water resources management.

MANUEL ABRUNHOSA

 Questions or comments? Email aih.portugal@gmail.com

Ed: We add our congratulations to the organisers of the 'Geoethics and Groundwater Management' conference for highlighting this subject - and thank them for all the hard work involved in making the successful move online!

In numbers...

- 138 individuals in the Scientific Committee;
- 14 national and international supporting organisations
- 6 sponsors
- 227 authors
- 47 countries (with mention) represented in authorship, of which 17 from Europe; 11 from Africa; 10 from the Americas; 8 countries from Asia; 1 country from Oceania
- 14 keynotes (30 minute videos with narration)
- 81 oral presentations (10 minute videos with narration)
- 17 poster presentations (3 minute videos with narration)
- 12 addresses/ speeches
- 132 videos (narrated presentations, addresses/speeches, cultural moments, and movies)
- 178 registrations, plus invited guests
- 1 book of abstracts with 118 pages (ISBN: 978-989-96523-2-3) edited during the inaugural week and free to download from the Congress website
- 1 Book of Proceedings to be published by Springer around the end of 2020 (in preparation)
- 3 editorial projects lead by the organising committee with intent to assemble invited full papers on specific areas in hydrogeoethics (in preparation)



IAH Council Election 2020

Voting is now open for the IAH Council Election and all IAH members who have paid their subscriptions are entitled to vote.

IAH is run by a Council of 13 members who are directors of IAH, a charitable company registered in the UK. Council is elected every four years. The term of the present Council ends with the General Meeting of the Association in September 2020 and IAH is now undertaking the election process for its future Council, for the next term of office (2020-2024).

Elections are required for 12 positions on Council. António Chambel will succeed Ken Howard on Council as Past President and is automatically elected to that position.

The Role of Council Members

IAH's Council members make important contributions to IAH and the international groundwater community. Council members have a vital role in developing IAH's policies and plans, and in overseeing their implementation on behalf of all our members. Much has been achieved under our current Forward Look strategic plan, which was introduced in 2010 and runs till 2020. It will be for the next Council members to lead on a new plan that builds on the previous achievements and ensures IAH's success during the next decade.

As Trustees of the Association, Council members have considerable responsibilities and must act with a duty of care. Those standing for election have signed a statement confirming they accept the duty and conduct required. As we come to the balloting stage we ask that you consider the responsibilities that the Council members must accept when reviewing the candidates and casting your votes.

The Candidates

- **Dave Kreamer (USA) is standing for President**, who represents IAH with other organisations and chairs the Board of Directors of the Charity, the General Meeting of the Association and the Executive Committee
- **Jane Dottridge (UK) is standing for Secretary General**, who has responsibilities particularly for external relationships and also for some internal groups
- **Teodóra Szöcs (Hungary) is standing for Vice President, Finance and Membership**, with responsibility for corporate finances (income stream, planned budget and actual expenditure) and developing membership
- **Ralf Klingbeil (Germany) is standing for Vice President, Programme and Science Coordination**, with responsibilities for commissions, networks and promotion of science, internally and externally
- **The Regional Vice Presidents provide stewardship of IAH interests and coordination of national chapters in a particular region.** The candidates are:
 - For Asia: **Dr Devinder Kumar Chadha (India) and Professor Han Zaisheng (China)**
 - For Australasia and the Pacific: **Sarah Bourke (Australia) and Theo Sarris (New Zealand)**
 - For Eastern Europe and Central Asia: **Natalia Vinograd (Russia)**

For Europe (West and Central): Marco Petitta (Italy)

For Latin America and the Caribbean: Carlos Molano (Colombia)

For Middle East and North Africa: Joanna Doummar (Lebanon) and Ahmed Fekri (Morocco)

For North America: Grant Ferguson (Canada), Gary Robbins (USA) and Mike Wireman (USA)

For Sub Saharan Africa: Seifu Kebede Gurmessa (Ethiopia), Ahmad Abubakar Kana (Nigeria) and Kevin Pietersen (South Africa)

You can find biographies and personal statements of all of the candidates on the Members' Area of our website <https://iah.org/members> (this information is also issued in the voting communications). We strongly encourage you to read the information about the candidates before you make your vote.

The voting process

The Association has contracted Mi-Voice, a reputable and well-established UK-based company, to help the IAH Secretariat to conduct the voting process. The Secretariat has provided Mi-Voice with details of the current membership, in secure formats, and will provide regular updates so that those who renew or join during the voting period will be able to vote. All members with current email addresses will receive instructions for on-line electronic voting, including access to the candidates' biographies and personal statements. Members without email addresses will receive printed manual ballot papers, a brochure with the information about each candidate and instructions for returning their voting papers.

Voting commenced at the beginning of July and will close on Friday 18th September at 12.00 noon BST. The results will be declared at the IAH Annual General Meeting, which this year will take place online on Wednesday 23 September. All IAH members may vote for all the posts; this means that you are not restricted to voting only for the vice president of the region in which you live.

Voting online is a simple process. To cast your votes, you just click the button indicated on the website, which will automatically authenticate you with the voting site. There is additional information and also a Mi-Voice contact address on the website in case you need help with the voting process.

Members are strongly encouraged to use this opportunity to exercise their democratic right to vote for the Council that will serve the Association from 2020 to 2024.

If you have any queries about the Council Election then please contact me, Ian Davey, Returning Officer for the Election: idavey@iah.org or write to the IAH Secretariat, PO Box 4130, Goring, Reading, RG8 6BJ, UK.

Please vote now to help make a difference.

IAN DAVEY, SECRETARIAT



IAH – COUNCIL ELECTION 2020 Candidate and Voting Information

Introduction
IAH is run by a Council of 12 members who are directors of IAH, a charitable company registered in the UK. Council is elected every three years. The term of the present Council ends with the General Meeting of the Association in September 2020 and IAH is now undertaking the election process for the future Council for the next term of office (2020-2024).

All of the posts on the present Council are up for election. In line with the Articles and Rules of the Association, the following are not eligible for re-election in their current posts. Antonio Chaves has served the one year term and will be eligible for re-election in 2021. The next Council members to stand on a new slate that builds on the previous achievements and grows the IAH's success during the next decade.

All members of the Association Council members also have considerable responsibilities and must act with a duty of care. Information regarding the in scope of the next of the document. When making the decision have been asked to sign a statement confirming they accept the duty and conduct required. All we come to the final stage we ask that you consider the responsibilities that the Council members must undertake when reviewing the candidates and casting your vote.



Ask a Member...

A feature for IAH members to share thoughts, experiences and suggestions...

We are grateful to Steve Barnett, who has kindly agreed to give his thoughts this issue. Steve is a Principal Hydrogeologist with the Department for Environment and Water based in Adelaide and long serving “champion” of IAH in Australia. Thank you Steve...



Tell us about yourself....

I am a Principal Hydrogeologist with the Department for Environment and Water based in Adelaide in the semi-arid state of South Australia (SA) whose area is bigger than France and Germany combined. Basically, I have been involved in the investigation, assessment, monitoring and management of SA's groundwater resources for the past 45 years, apart from a short stint exploring for groundwater in the Andes Mountains in Chile.

Why did you join IAH?

It seemed like a good idea at the time (and still is!). A meeting of about 40 hydrogeologists at a national groundwater conference held in Sydney in 1983 decided to form a national chapter of the IAH. There was a great feeling of camaraderie and shared sense of purpose and belonging. I did not anticipate that I would become President of the chapter 20 years later.

What would you say have been your career highlights, successes?

I have found my career fulfilling on many levels. Because groundwater underpins many aspects of human existence, I have enjoyed interactions with many different professions including isotope chemists, lawyers, drillers, ecologists, farmers and policy makers to name a few. I found creating relationships with groundwater users not only rewarding, but essential for good resource management outcomes (especially when reductions in water entitlements are being considered). The greatest achievement was being able to enjoy going to work every day (mostly). This was largely because I decided to maintain a technical focus rather than meandering up the managerial path.

What have been the biggest changes you've seen over your career?

When I started my career with a government agency back in the Neolithic Period, we had a mainframe computer with punch cards, the bore database consisted of cards with information on each bore (water levels, salinity and logs) added manually, and we drew hydrographs by hand. Improvements in computing and the development of specific packages (contouring, pump test analysis, GIS etc) has improved individual productivity enormously over the years. However in larger organisations, there has also been a significant increase in bureaucracy, process and procedures that decrease the functional efficiency of those groups.

Over the years, there has been increasing use of the internet and social media etc for the dissemination of ideas and information which has resulted in professional relationships becoming more digital and less personal. Globally, most of us have experienced how the response to the pandemic has accelerated this process to detriment of human and social interactions which enrich professional life.

What are your concerns now or for the future, relating to hydrogeology?

In Australia in the 1980s, there was considerable government investment in the investigation and assessment of the nation's groundwater resources which enabled hydrogeologists of my era to do extensive field work and gain broad experience in most aspects of the discipline. Because of decreased funding and the



“Variety is the spice of life and the making of a good hydrogeologist. They should try to gain experience in as many different aspects of hydrogeology as possible. It will make their careers interesting and their CVs appealing.”

fact that most resources are now well understood, there is little opportunity for younger hydrogeologists to carry out extensive field work and gain the same broad experience. While they may be able to access facts and information online, it is difficult to download wisdom and understanding.

What piece of equipment or software have you found the most useful throughout your career?

I use GIS virtually every day and find it essential for the spatial analysis of groundwater data, preparation of maps and presentations, and assistance in the formulation of management policies. Recently, I have enjoyed creating 3D visualisations of sedimentary aquifer layers in our major groundwater basins (see example, below).

What three tips might you give to someone just starting out on their career?

1. Most organisations have some policies or procedures that are based on “accepted wisdom” or in other words “because we have always done it this way”. These ‘wisdoms’ should be challenged (nicely) if you have ideas and evidence for ways of doing them better.
2. When addressing non-hydrogeologist audiences, always assume they have no understanding of groundwater. Keep it simple with clear diagrams, explanations and analogies whilst avoiding jargon and equations.

3. Being human, we are all capable of occasionally making a “dumb” decision. Twenty five years of experience as a private pilot has taught me that the *next* decision is crucial – it could either salvage the situation, or make it a hell of lot worse.

What do you think those starting out should do to gain good experience?

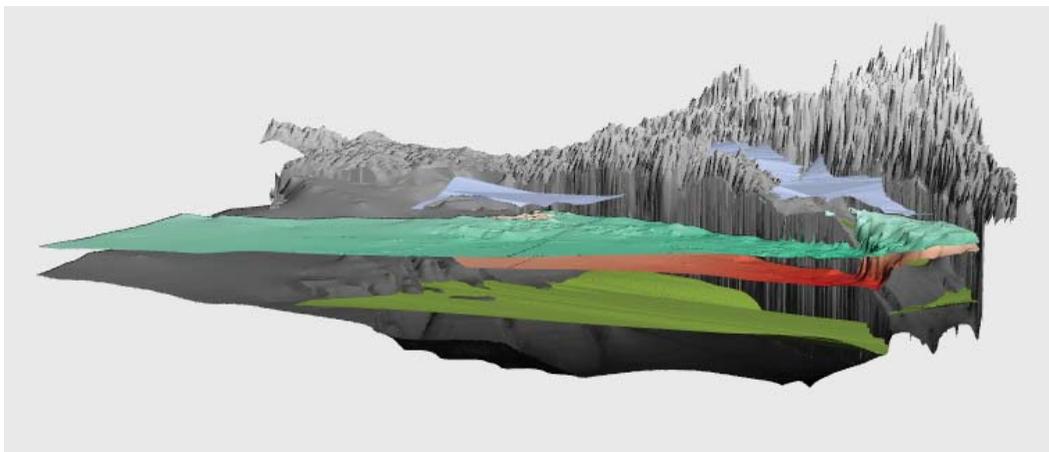
Variety is the spice of life and the making of a good hydrogeologist. They should try to gain experience in as many different aspects of hydrogeology as possible. It will make their careers interesting and their CVs appealing.

Your future plans? Aspirations?

In South Australia, wine is produced by groundwater filtering through grapes. Although I am in the twilight on my career, I will continue my research into the relationship between the quality of wine and groundwater condition on an almost daily basis.

STEVE BARNETT

Steve’s interview will feature alongside earlier contributors on our website as “Sources of Experience”. You can read them all here: <https://iah.org/education/professionals/sources-of-experience>. Our aim is to include a broad range of backgrounds and experiences, from all around the globe. Suggestions via email info@iah.org.



Picture Our IAH

It's back! Win 100€ – and we'll also pay your 2021 subscription fee!

We continually need to add to our library of photos. Over the years we have found that the best way of picturing our Association at work is by asking our members. Our Association reaches out world-wide across different languages and, as Frederick R. Barnard of the USA said in 1927, 'A picture paints a thousand words'.*

This year the competition takes on a special significance, as so many of you will be working away from your natural habitats in the field, the research lab, the lecture theatre or office. We would like to know, in pictures, how you are 'doing hydrogeology' while exiled from your normal workplace. An IAH review panel will be appointed to select 5 winners. They will be particularly interested to see how you have used your resourcefulness to create solutions for continuing your work – especially where these are sustainable and are ones that you will want to maintain in the future, even when you can get back to the workplace!

ENTRY INFORMATION

Winners will receive 100€ (or dollar/sterling equivalent) and we will also pay your next subscription fee in 2021. This competition is open to all IAH subscribed members (2020 dues paid), with the exception of the current IAH Council and the IAH Secretariat. Entrants may submit up to 5 images.

High (print) quality images, in colour, should be zipped and sent to info@iah.org. Please give your full contact details and membership number and provide a brief explanation about your photo(s).

The winning photographs will be used for IAH-related publications and its website. IAH will therefore take it in good faith that entrants have considered copyright and privacy issues prior to submitting photographs.

The closing date for entries is Monday 31st August 2020. Winners will be notified by the end of October and will be announced on the IAH website and in the December edition of News and Information Magazine.

IAH SECRETARIAT

Entries or questions? Email aih.portugal@gmail.com



* Barnard was apparently referring to the Chinese proverb, attributed to Confucius, 'Seeing for oneself is a hundred times better than hearing from others': 百闻不如一见, though some consider this to be conjecture. Others who made similar observations include Leonardo da Vinci, Napoleon Bonaparte and Ivan Turgenev.

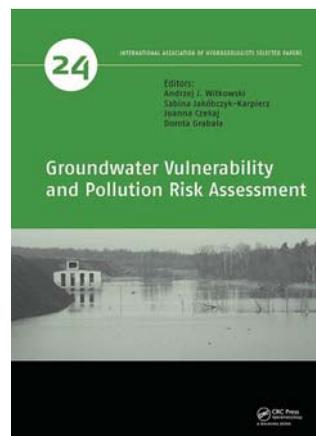


Members' Book Draw

Win a copy of Groundwater Vulnerability and Pollution Risk Assessment

Thanks to our book publisher CRC Press/Taylor and Francis, we've two copies of "Groundwater Vulnerability and Pollution Risk Assessment" edited by Andrzej J. Witkowski, Sabina Jakóbczyk-Karpierz, Joanna Czekaj and Dorota Grabala to give away to IAH members in a prize draw.

The book is valuable for those interested in groundwater vulnerability, in risk assessment, and in environmental issues. It is aimed at land use planners, water managers, the environmental industry, regional and local environmental protection councils and students studying hydrogeology and environmental sciences. It offers detailed comparisons and validations of different methods of assessing groundwater vulnerability (DRASTIC, GOD, PI, RTt, AVI, SINTACS, COP). The volume contains new aspects of vulnerability assessment for the evaluation of coastal aquifer vulnerability and aquifer vulnerability to methane gas leakage from shale gas wells. It also contains the results of studies on intrinsic and specific vulnerability assessment (migration of antibiotics and nitrate, groundwater surface water interaction), with examples of the different national approaches to groundwater vulnerability mapping in Poland, Ireland, Italy and elsewhere. There are 15 chapters derived from two IAH conferences held in Ustron', Poland in 2015 and 2018.



Available in hardback (IAH members receive a 30% discount); ebook and ebook rental

Information about the book can be found on the CRC/T&F website <https://www.routledge.com/Groundwater-Vulnerability-and-Pollution-Risk-Assessment/Witkowski-Jakobczyk-Karpierz-Czekaj-Grabala/p/book/9780367422370>; and for the member discount code on the IAH website https://iah.org/members/discount_perks

To enter to win, complete your details including membership number here:

https://www.surveymonkey.co.uk/r/IAH_SP24

Terms and conditions:

Prize draw closes 11.45am GMT+1 on Monday 31 August 2020. Entries are open to current IAH members only (2019 dues paid). One entry per individual (additional entries will be discarded). Two copies of the book are on offer for this draw. The winners will be picked by random draw and will be contacted by email soon after the closing date. The winner will be also be announced in the December 2020 edition of "News and Information".

SECRETARIAT

 https://www.surveymonkey.co.uk/r/IAH_SP24



New Members

A warm welcome to the following new members, who joined our Association in the period 9 March - 10 June 2020

AUSTRALIA

Mohsen AZADI
Kerry BARDOT
Nina BAULCH
Katharine BOND
Detlef BRINGEMEIER
Taryn COLLATON
Jade DARVELL
Carl DEEGAN
Jacob EGAN
Montana FIDGE
Peter HALL
Robyn HILL
Dan IRWIN
Julie JAMES
Peter KHOR
Louis LINARD
Andrew MACDONALD
Bryce MCKAY
Alita MCPHEE
Leonie MYNOTT
Amelia O'NEILL
Brian RASK
Paul RYALL
*AUSTRALIAN DRILLING
INDUSTRY ASSOCIATION (C)*
Vanessa TEDESCO
Julie TREMBLEAU
Stacey UNDERWOOD
Tim WESTCOTT
Amy WHITE
Degan WYE

BANGLADESH

Md Shah Wali Musud Phah LOVI
Al-Amin MOHAMMAD

BELGIUM

VIVAQUA (C)
Stefaan MEEUS

BRAZIL

Sandra GARCIA GABAS
Sasha HART
Mauro C CALVAO MONNERAT PRADO
Samiramisthais SOUZA LINHARES

CANADA

Francisco CASTRILLON
Matt COHEN
Cecile COULON
Bianca LEMOS ROCHA
SRK CONSULTING (C)
Raphael MATHIS
Paul MENKVELD
Jerrold RENTZ
David TRATCH

CHILE

Paulina Graciela ABARCA CORTÉS
Marcelo ALIAGA
Alfonso Ramon ANABALN ALAMOS
Isidora P ARRIAGADA GONZÁLEZ
Daniel Stiven BALZAN ALZATE
Fernando CAMINO
Damián F CÓRDOBA MELGAREJO
Denisse DUHALDE
Gabriel FERNANDEZ
Pedro HERVE
Yalitz MALDONADO
Sebastián MENGUAL
Hugo Alejandro MORALES VALLEJOS
Daniela Fernanda REALES NÚÑEZ
Joaquín RIQUELME FENNER
Diego SANZ
Alexander WASMUS
Oscar ZAPATA

CHINA, PEOPLE'S REPUBLIC

Yadong JI
Chong SHENG

COLOMBIA

Angielly BLANCO
Carolina OTALORA
Liz VALBUENA

CZECH REPUBLIC

Hana TŮMOVÁ

ETHIOPIA

Getnet Taye BAWOKE
Gebretsadik MENGSTU

FRANCE

Luc ARNAUD
Pierre-Marie BASTIEN
Lucien BOURGUET
Julien BRETON
Guillaume CINKUS
Dorothee CLERGEAUD
Nathalie COURTOIS
Adrien DE HEAULME
Cédric DUCOS
Marc DUMONT
Youssef FAIZIDINE
Louis FALCONETTI
Victor GOUY
James GRANDVOINET
Laeticia MADONTIO CHEUGU
Adrien MANLAY
Mickael MOREAU
Olivier MOREAU
Quentin NIFAUT
Florence PERAULT
Mégane PEREZ
Hervé PLANEILLES
Mathieu PORENTRU
Cécile SERBOURCE
Rokhyatou TOURE
Assiata TRAORE
Cristina VALHONDO

GERMANY

Stefan BRODA
Cinthya CIPRIAN
Julian GATH

HUNGARY

Rita MIKLÓS

INDIA

Radha mohan DAS
Suresh KARTHA
N B KAVALENEKAR
Gopal KRISHAN
Antony MOHAN
Padam Jee OMAR
Edward PETERS
Keisham RADHAPYARI
Shivendra Nath RAI
Ajin RAJENDRAN SOBHA
N.H. REDDY
Mukesh Kumar SHARMA
Shiv Pratap UNYA
Subroto VYAS

INDONESIA

Gumilar UTAMAS NUGRAHA
Paul WHINCUP

IRAN

Mohammad KARAMOUZ

IRELAND

Denise BOOTHMAN
Declan MORRISSEY
James SYMONS

ITALY

*ISPRA - GEOLOGICAL
SURVEY OF ITALY (C)*
Dimitra RAPTI



KAZAKHSTAN

Shynar GABDULINA

MALAYSIA

Alvyn Clancey MICKEY

Mei Yin SOH

MEXICO

Cesar CANUL-MACARIO

Paulo SALLES

MOROCCO

AHMED BIKARNAF

AMINA RMIKI

NEPAL

JEEBAN PANTHI

NIR SHAKYA

NETHERLANDS

Gilian SCHOUT

Anne VAN LOON

NEW ZEALAND

Charlene JOUBERT

Samuel KELSEY

Logan MCLEAN

Sduduzo NDOKWENI

NIGERIA

Elijah AYOLABI

Emmanuel Timilehin OLASHORE

Umar SHAMSUDDEEN BELLO

PAKISTAN

Fazal ALEEM

PERU

Fluquer PEÑA

Carola ROJAS VEGA

Laurent SAX

PORTUGAL

Isabel PAIVA

ROMANIA

Calin BACIU

SINGAPORE

Fernando LARA

SOUTH AFRICA

Aqeelah BENJAMIN

Marcja WELGUŚ

SWITZERLAND

Rouven KUNZE

Andreas STOLL

TUNISIA

Manel ENNAHEDH

UGANDA

Charles ONYUTHA

UNITED KINGDOM

Adrian GREEN

Akintunde KUJE

UNITED STATES OF AMERICA

Arthur ALCANTARA

Rory COWIE

Thomas LACHMAR

Abner PATTON

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

Reminder: Check your records

Are you receiving your regular IAH messages and alerts with HJ link, latest news digests, competitions and initiatives? Ensuring that our members receive their IAH entitlements such as the Hydrogeology Journal is important to us. Do you work for a large government/commercial/educational organisation? Many such employers have firewalls in place. You may have to provide an alternative email address to receive your member mailings, or speak to your IT department. IAH emails are always sent from an @iah.org address. Please check your details and IAH settings regularly - we'd hate you to miss out.

SECRETARIAT

MENTORING SCHEME NOW OPEN

Registration to IAH's mentoring scheme is now open! Our aim is the scheme should bring support to its members in three important areas:

- the scientific – providing advice and technical knowledge on various topics within the many strands of hydrogeological science;
- career options and pathways – providing guidance on job types and locations, CVs, interviews, networking, courses and training openings;
- practical experience – mutually sharing case studies, local hydrogeological knowledge of specific regions or aquifer types.



As from 1 August we are accepting new applications from mentees (receivers of advice) and mentors (givers of advice). Registration will be open for two months.

If you are an IAH member and the scheme is of interest to you, please complete the relevant form from the links below. It is important that you provide as much detail as possible on the form – we are unable to consider applications that contain scant information and/or vague requests. In 2019, around a quarter of the applications received provided insufficient information. Detailed applications help us in our responses. They also help inform IAH more generally about members' interests and needs from IAH and beyond.

Demand for mentors continues to outstrip supply. Please, if you could give a little time to help support mentees, we know it would be appreciated. Volunteering as a mentor does not take up as much time as you might think.

The scheme is only open to IAH members – but if you are not yet a member you are welcome to join us now!

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 <https://www.surveymonkey.co.uk/r/IAHmentor2020> (giver of advice)

<https://www.surveymonkey.co.uk/r/IAHmentee2020> (receiver of advice)

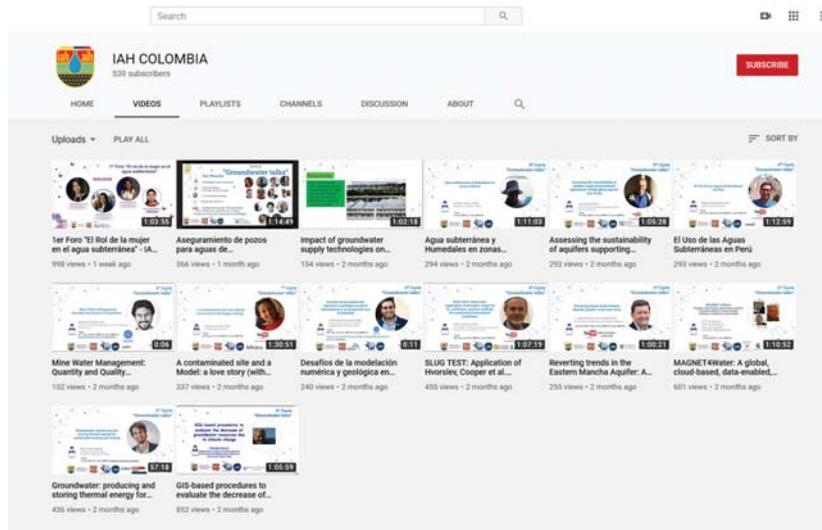
<https://iah.org/education/professionals/mentoring> (general information about the scheme)





WATCH AND LISTEN: GROUNDWATER VIDEOS

We are delighted to announce that our Colombia national chapter has been coordinating a series of online groundwater talks this year. Our huge thanks go to Luis Camilo and the team of coordinators and contributors for organising this initiative. You can view many of the talks on their YouTube channel on the link below.



 [IAH Colombia YouTube:
https://www.youtube.com/channel/UCZloCc1JFWo8TzwqTwx8lxw/videos](https://www.youtube.com/channel/UCZloCc1JFWo8TzwqTwx8lxw/videos)

We have also uploaded another video taken at last year's congress in Malaga, namely Helen Fallas delivering her keynote lecture entitled "Developing a prescient awareness of groundwater in city planning policy". Helen is director of IAH's Urban Groundwater Network.

More videos will be following. In the meantime we'd like to thank Helen Fallas, British Geological Survey (BGS) and the associated contributors for granting permission. Also the Malaga congress organising committee and our Early Career Hydrogeologists' Network for making this possible.



 [Helen Fallas Keynote: https://vimeo.com/435012887](https://vimeo.com/435012887)

 For those unable to access Vimeo, we also have a YouTube channel
- see <https://www.youtube.com/channel/UCmyk3-fJF1eYa4y9ORJgXvA> for all the congress videos

Mutual opportunities...

We currently have 46 national chapters, which account for around 85% of our members. We often have enquiries about establishing new chapters and also student and ECHN groups, even where no IAH chapter currently exists. We would welcome more chapters and are very happy to help with the process of creating one. National chapters perform a valuable service in bringing scientific, professional and social benefits to members and the wider hydrogeological community. They also enable the Association to promote sound and sustainable groundwater use at a country and regional level.

We also have 58 corporate supporters distributed across our national chapters. Several of these have taken advantage of both the individual memberships that are part of the corporate membership and support package, but also discounts for further individual memberships, keeping subscription costs down for those involved.

We can see from chapters' annual reports – we have received updates from many of our chapters for 2019 – that mostly they are very active. We recognise the hard work that those who run chapters put in on a voluntary basis and the challenges in encouraging more volunteers to help. Chapters can form the focus of the groundwater community in a country and provide great opportunities for meetings and networking. And although in some cases they may face competition from other societies, IAH, being the international society for hydrogeologists, can offer wider opportunities.

IAH Council and the Secretariat are actively looking at ways that chapters can be further supported, to help in recruiting new members, with plans continuing to develop mentoring, further development of educational materials and additional conference and congress presentations on the IAH website. Many national chapters' websites are hosted for free on IAH's main website. Council members and Commissions and Networks continue to raise the profile of groundwater, hydrogeology and, importantly, hydrogeologists, with governmental organisations, NGOs and businesses. We look forward to the incoming Council in September having a fresh set of ideas for benefits for all our members.

For further information on corporate support opportunities packages, see <https://iah.org/join-us/corporate-membership-and-opportunities>

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<https://iah.org/groups/national-chapters>
info@iah.org



Norway

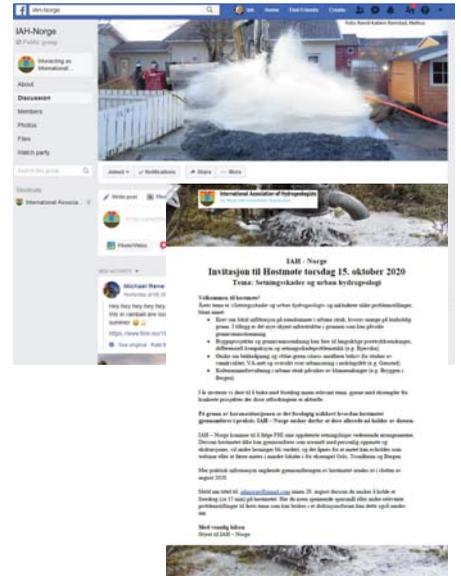
Autumn meeting planned and Facebook page

Did you know that our Norwegian national chapter has a Facebook group? Group members post up news, resources, job announcements and general groundwater related items of interest. Presently the chapter is planning ahead for Autumn, organising a COVID-19 safe meeting on the topic of Urban Groundwater. See the group page for further information.

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<https://www.facebook.com/groups/199521066821640/>



USA

Student sponsorship scheme

Our US national chapter continues to sponsor one-year, graduate-student memberships annually through general funds and through generous individual contributions of their national members. This year they are sponsoring ten students, nominated by their faculty advisors and/or IAH-USNC members. This year's sponsored students represent a diverse, ambitious and accomplished group of graduate students who are conducting research with significant relevance to international hydrogeology. We congratulate those nominated and wish them well in their endeavours.

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<https://iah-usa.org/>



**YOUR FLAG
HERE!**

More Chapters Wanted

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. Recent discussions have been undertaken with individuals from Democratic Republic of Congo, Finland and Uganda. 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.

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info@iah.org

COMMISSIONS & NETWORKS

The activities of IAH's commissions and networks include contributing to the science of groundwater and undertaking outreach, education and training. They run sessions at IAH congresses, co-convene technical meetings and field excursions with other societies, host workshops and training courses and prepare educational and outreach publications. We welcome suggestions for new topics or activities – email ideas and comments to info@iah.org.

You do not have to be an IAH member to participate. In fact we encourage wide involvement from the groundwater community, as this will help the groups to thrive and give greater authority to their work.

Here is a snapshot of updates from some of our commissions and networks:

- Our **Karst Commission** continues to be very active and has issued a number of updates during the first half of 2020. The Karst 2020 conference “CONSERVATION OF FRAGILE KARST RESOURCES” will now be a virtual event, taking place between August 18-20. The schedule of the sessions and virtual field trips are available at: <https://karst2020.com/>. **Commission website:** <https://karst.iah.org/>
- Our **Commission for Regional Groundwater Flow** has been running an international problem solver competition - teams of universities competed on 14 February in the first, online test, round. Undergraduate, graduate and PhD students from China, Egypt, India, Iran, the Netherlands, Nepal, Nigeria, South Korea, Uganda and the USA answered the multiple-choice and essay-type questions focusing mostly on the groundwater side of the processes. In due course the qualifying teams will also deliver a practical problem related to groundwater in the form of a short video - once it is safe for them to get back out in the field to record them. The commission would also like to invite you to the “International Symposium on Geofluids”, to be held in Budapest, Hungary, on 7-9 July 2021 (postponed from 2020 owing to COVID-19). **Commission website:** <https://regionalgwflow.iah.org/>
- The Commission for **Managing Aquifer Recharge (MAR)** also continues to bring new material, work alongside a number of collaborators, and contribute to conferences and events. Find out more on their website at <https://recharge.iah.org/>
- The **Socio-Hydrogeology Network** has launched its website! On the site will find information about the committee, the background and goals of the network, as well as a number of resources. Over time more will of course feature. You can also find the network on twitter – see https://twitter.com/iah_shg. Network website: <https://sociohydrogeo.iah.org/>
- Along with a number of IAH “champions” Tibor Stigter and IAH’s **Commission on Groundwater and Climate Change** are partners in IWRA’s online conference “Addressing Groundwater Resilience under Climate Change” (see next page). **Commission website:** <https://gwclimate.iah.org/>



You can find out much more about all of IAH's commissions and networks on their individual websites. For more information go to <https://iah.org/groups/commissions-networks>. We also welcome suggestions for new topics or activities – email ideas and comments to info@iah.org.

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<https://iah.org/groups/commissions-networks>

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





SAVE THE DATE
08/29
OCTOBER 2020



IWRA ONLINE CONFERENCE 2020

Addressing Groundwater Resilience under Climate Change

www.iwra.org



groundwater[®]
FOCUS 2020 *week*
Las Vegas, Nevada • December 8-10

Attend the best week of the year in-person in Las Vegas or virtually!

Early registration ends November 6

Register today at GroundwaterWeek.com!





AUGUST 22nd – 27th, 2021

ESPAÇO ARCA - SÃO PAULO - BRAZIL

BE PART OF THE LARGEST GROUNDWATER
COMMUNITY IN THE WORLD!



TAKE PART IN THE LARGEST GLOBAL GROUNDWATER COMMUNITY IN THE WORLD!

THE 47TH IAH CONGRESS 2021 BRAZIL WILL BE HELD TOGETHER WITH:

- XV Latin American Hydrogeology Congress
- XXI Brazilian Groundwater Congress
- XXII Brazilian Meeting of Well Drillers
- FENÁGUA – National Water Trade Show

The technical discussions have already begun on the WhatsApp groups for the Congress Themes. Check how to participate at: <https://abas.iah2020.org/en/find-out-more/>

Management Aquifer Recharge

GW Climate change

GW Flow, Water Cycle and Ecosystem

Karst & Fractured Aquifer

GW & Gender

Geochemistry

GW Pollution and Remediation

Transboundary aquifers

Emerging Tools and Tech for GW Investigation

Numerical Modeling

Share the joy and participate in the 2020 Groundwater Congress in Brazil!

JOIN OUR EXHIBITORS AT FENÁGUA 2021:

AGB PEIXE VIVO, ALS, ALTRI, ARAGON SONDAGENS, BODEGA DO POÇO (SIDRASUL, PROMINAS, DRILL CENTER, TRIONIC, BRA-IN, CHICAGO PNEUMATIC, CLEAN ENVIRONMENT, CRI, EBARA, ELGI, FRANKLIN ELETRIC, GHIDRO, GLP LABORATÓRIOS, GRUPO EP, HEXIS, HOBECO, MAXIÁGUA, MXNS, PASE, PERFURATRIZ DTH, PRD RIGS, THE GROUNDWATER PROJECT, TRIONIC, VAPOR SOLUTION, WATER SERVICES & TECHNOLOGIES

Key Dates

28/02/2021 : Abstract submission deadline

30/04/2021 : Abstract acceptance

31/05/2021 : Registration: Early bird deadline

The call for abstract submission is open! Please, send your contribution!

 **Brazil Congress website - <https://abas.iah2020.org>**



INSPIRING GROUNDWATER

The history of the world shows us that water and groundwater have constantly inspired mankind to develop techniques for the production of drinking water, to transport water to people, to control and manage watercourses, to the search for new sources and to combat scarcity. Access to safe water in sufficient quantities is essential to mankind, for prosperity and economic development.

- Let the past inspire us to prepare a better future
- Let our failures inspire us to constantly improve our techniques.
- Let research inspire us to turn challenges into opportunities, and to make groundwater part of the solution towards a society without fossil energy sources.
- Let our children inspire us to give our grandchildren a better planet

In 2021, we'll also celebrate together the 65th anniversary of the IAH ... and the 20th anniversary of our Belgian chapter. Did you know that the first president of IAH was Belgian?

Belgium is a small country, but we have a lot to give... to the organization of the congress, and we'll also do our best to make you discover some aspects of our culture, our history, our architecture, and our gastronomy.

You are all welcome to join us and to learn from others, to exchange and to transfer knowledge, to learn to know people, to build solutions.

Brussels, September 6th : we'll be there. Will you?

Key Dates

October 2020: call for abstracts opens

January 2021: registration opens

Stay tuned for information on : <https://iah2021belgium.org/> or on linkedin <https://www.linkedin.com/company/18626784/>

 [Belgium Congress website - https://iah2021belgium.org/](https://iah2021belgium.org/)

2020 - SELECTION

21-23 September – ONLINE EVENT

GeoConvention 2020

Canadian GeoConvention is an annual convention and exhibit produced by the Canadian Society of Petroleum Geologists (CSPG), Canadian Society of Exploration Geophysicists (CSEG) and the Canadian Well Logging Society (CWLS). Held in Calgary, this convention offers delegates and attendees the opportunity to network and learn with fellow industry professionals. For 2020, GeoConvention is incorporating content from GAC, MAC and IAH-CNC and will host over 4,500+ attendees and 100+ exhibitors. For our 2020 program, we are excited to bring our attendees a virtual platform that can be accessed world-wide.

<https://geoconvention.com/>



19-20 October – ONLINE EVENT

Ireland National Chapter Annual Conference

Characterisation and Management of Groundwater in Limestones. The IAH (Irish Group) are delighted to announce that this years Annual Conference (initially scheduled for 21st and 22nd April 2020) has been rescheduled for October 2020 and will take place online. The title of the conference remains as “Characterisation and Management of Groundwater in Limestones”. The conference will run over two half-days on Monday 19th and Tuesday 20th October 2020. More information and an updated programme will follow closer to the time.

Organised by IAH Ireland National Chapter.

<http://www.iah-ireland.org/annual-conference/>



22-24 October – Nicosia (Lefkosia), Cyprus

12th International Hydrogeological Conference

Groundwater resources, protection and management, in our ever-changing environment. The Association of Geologists and Mining Engineers of Cyprus in collaboration with the Hellenic Committee of Hydrogeology member of the Geological Society of Greece organize the 12th International Hydrogeological Conference, which will take place on October 22nd to October 24th 2020, in Nicosia (Lefkosia), Cyprus at Cleopatra Hotel.

<https://hydrogeologyconference2020.com.cy/>



<http://iah.org/events>

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

ADVERTISING 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 supporters of the International Association of Hydrogeologists – around 8000 people – and can also be freely downloaded by individuals worldwide for personal/not for profit use.

We accept commercial advertisements. 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 members, supporters and sponsors are offered special rates. Contact us for more details.

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

Email knicholson@iah.org for further details.