

NEWS

& information

IAH - THE WORLD-WIDE GROUNDWATER ORGANISATION

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

AUGUST 2022

Also in this issue:

Media focus

IAH & other resources

A year for groundwater

Meeting & event reports

Member updates & opportunities

and the regular IAH announcements and news



MINWAT2020 - in 2022. After a number of postponements due to the pandemic, we were delighted to see this conference taking place in Caserta, Italy, in June. You can read about this, and a number of other meeting and event reports, throughout.

MAR OVERVIEW BOOK: FREE TO DOWNLOAD

Prepared jointly by IAH, UNESCO and NGWA with encouragement of the Ground Water Project this has now been published as a Special Publication of IAH. *Page 7*



RIVER-BASIN AGENCIES AND GROUNDWATER

Latest release from the IAH Strategic Overview Series - also free to download.

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INTERNATIONAL
ASSOCIATION OF
HYDROGEOLOGISTS

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AUGUST 2022

IAH'S 2022 CONGRESS WILL BE FULLY ONLINE!



**49th IAH Congress on
Groundwater Sustainability and Poverty Reduction
18-23 SEPTEMBER 2022, WUHAN, CHINA**



Welcome

The theme of the 49th IAH Congress in September 2022 is "Groundwater Sustainability and Poverty Reduction". Poverty reduction is a top priority for most countries in the world. Unfortunately, most of the poor countries and regions have been faced with serious problems of water scarcity and contamination. It is the mission and ultimate responsibility of the international community of hydrogeologists to help the people get access to sustainable safe supply of fresh groundwater.

Key Topics

- * Groundwater Sustainability and Poverty Reduction
- * Groundwater Quality and Human Health
- * Sustainable Water Futures for Cold Regions
- * Advances in Karst Hydrogeology
- * Surface water-Groundwater Interactions
- * Groundwater Governance
- * Groundwater Modelling and Mathematical Tools in Hydrogeology
- * Regional Groundwater Systems and Transboundary Aquifers
- * Managed Aquifer Recharge-co-organized by the IAH MAR Commission
- * Groundwater Dependent Ecosystems
- * Global Change and Groundwater Cycles
- * Groundwater and Subsurface Energy Development
- * Geomicrobiology of Aquifer Systems
- * Groundwater Prospecting
- * Urban Groundwater

CHINA ORGANISING COMMITTEE



Register now! - <http://www.iah2022.com>

We are more than half-way through the year. With all the events related to World Water Day it has been a busy time – but with so much more to do it seems like we've only just got going!

IAH-supported conferences have been taking place in Long Beach, Malaga and Caserta – great destinations in themselves, never mind the attraction of outstanding conferences. And there are more to come, where IAH is running the event or is joining forces with others.

Not the least of these is China, where once again Covid has forced us to have our IAH 'World Groundwater Congress' online. Many members have been urging IAH to have more conference content online – and with the content and line-up of speakers we can see a positive outcome. We send our best wishes to the Organising Committee in Wuhan as they negotiate the twists of running conferences in the 2020s.

IAH will be organising and supporting conferences in, amongst others, Argentina, Australia, Copenhagen, Maastricht, Perth, Spain, South Africa, Denver, Slovenia, has a big presence at World Water Week in Stockholm, with the year culminating in the Groundwater Summit in Paris in December. The Summit promises to be a major event as the lessons from this 'year for groundwater' are distilled into the key messages to take to the UN 2023 Water Conference.

Our AGM will be online and we have two important questions to put to members about student fees and future realignment of our fee categories with World Bank categories. Rest assured that the intention is not to see fees raised for 2023!

IAH is heavily involved in contributing to and influencing international policy development, promoting sound groundwater management to benefit of those who rely on groundwater and support those who work in this field. We want more members to be involved in this crucial effort. Contact us to tell us if this is something you could help with.

Finally – and hot off the press – the latest Hydrogeology impact factor is 3.151, once again an impressive achievement. See also our latest publications – an IAH special publication on "Managed Aquifer Recharge: Overview and Governance"; and a further paper in our Strategic Overview Series on "River-Basin Agencies and Groundwater". Find out more, within.

Ian, Kellie, Sue, Sharon

IAH SECRETARIAT

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ADVERTISING & 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 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.

We are also happy to consider groundwater related articles from our members and supporters.

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

Email knicholson@iah.org for further details.



MEDIA FOCUS

A selection of groundwater related features from around the world

DUNNING-KRUGER, GROUNDWATER QUALITY, AND AVOIDING A COLLECTIVE MORAL FAILING

The Dunning-Kruger effect is a cognitive bias whereby people vastly overestimate their competence in a given domain, by being unaware of just how little they know. Could this be the case with our perceived ability to continue relying on groundwater as a primary resource of clean water, when there is so much we don't know?

<https://blogs.worldbank.org/water/dunning-kruger-groundwater-quality-and-avoiding-collective-moral-failing>

VAST, SALTY GROUNDWATER SYSTEM UNDER THE ANTARCTIC ICE SHEET FOUND

A new discovery deep beneath one of Antarctica's rivers of ice could change scientists' understanding of how the ice flows, with important implications for estimating future sea level rise.

<https://theconversation.com/scientists-in-antarctica-discover-a-vast-salty-groundwater-system-under-the-ice-sheet-with-implications-for-sea-level-rise-182506>

SPAIN'S DOÑANA NATIONAL PARK UNDER THREAT AS GROUNDWATER PUMPING CONTINUES

Doñana National Park, in southern Spain, is home to one of Europe's largest wetlands and is being threatened by intensive farming. Scientists say water supplies to the park are have declined dramatically due to climate change and the over-extraction of water by neighbouring strawberry farms, often through illegal wells.

<https://www.euronews.com/2022/05/27/spain-s-donana-national-park-under-threat-as-groundwater-pumping-continues>

EUROPEAN COALITION OF DRINKING WATER SUPPLIERS SHOWS HOW THE DRINKING WATER SUPPLY CAN BE SECURED

The ERM Coalition has adopted the European Groundwater Memorandum to secure the quality and quantity of drinking water for future generations. The ERM Coalition comprises the associations of drinking water suppliers in the river basins of the Danube, Elbe, Meuse, Scheldt, Ruhr and Rhine, an area where 188 million people live. The drinking water suppliers recognise that groundwater is an essential resource that requires increased appreciation and protection of its quantity and quality to secure future drinking water supplies.

<https://www.waternewseurope.com/european-coalition-of-drinking-water-suppliers-shows-how-the-drinking-water-supply-can-be-secured/>

WILDLIFE NEEDS GROUNDWATER TOO

In an arid region of Oregon, groundwater pumping imperils the "Everglades of the West". Incentivized groundwater pumping has ignored the geology of the basin, where in the past gushing rivers sprang fully-formed out of the earth and slow seeps flooded thousands of acres. Rather than seeing the water underground as an extension of the region's lakes and wetlands, groundwater has been treated as separate from the surface. As aquifer levels drop, marshes and wetlands are drying up.

<https://www.sierraclub.org/sierra/wildlife-needs-groundwater-too>



INDIA RAINWATER HARVESTING ENSURES SUSTAINABLE GROUNDWATER AVAILABILITY

Adopting rainwater harvesting measures near and away from cultivable land is a very practical approach to mitigate drought and improve the groundwater level. It can facilitate crop intensification and agricultural production, leading to higher farm income. A recent report indicates a huge untapped potential for sustainable crop intensification in drylands and semi-arid tropics.

<https://researchmatters.in/news/rainwater-harvesting-ensures-sustainable-groundwater-availability>

EAU NO! FRANCE TURNS TO DOWSING AS WATER SHORTAGE LOOMS

With most of the country facing drought, a record number of would-be water diviners have begun training in the Burgundy village of Pouilloux..

<https://www.theguardian.com/world/2022/jun/28/eau-no-france-turns-to-dowsing-as-water-shortage-looms>

HIDDEN SOURCE OF GREENHOUSE GASES – ORGANIC MATTER IN GROUNDWATER

New research has found when groundwater – especially from deep down – is pumped to the surface, it brings with it dissolved organic matter preserved from long ago. Once sunlight and oxygen hit this matter, it can turn into carbon dioxide. Groundwater could be another source of planet-heating greenhouse gases, and one which is not included in our carbon budgets.

<https://theconversation.com/we-found-a-hidden-source-of-greenhouse-gases-organic-matter-in-groundwater-179957>

BETTER DEEP-BORE WELLS AIM TO STOP INDONESIA'S GROUNDWATER WASTE

Farming and other water-based industries thrive in Pasuruan, a fertile rice-growing district in Indonesia's East Java province that's home to active volcanoes and rich aquifers. Thanks to a proliferation of unregulated artesian wells, however, Pasuruan risks losing that bounty. Hundreds of artesian wells, often reaching dozens of metres below the surface, aren't equipped with valves for controlling the discharge, leading to millions of litres of water being wasted.

<https://news.mongabay.com/2022/04/better-deep-bore-wells-aim-to-stop-indonesias-groundwater-waste/>

MADHYA PRADESH: VIRAL VIDEO SHOWS INDIANS RISKING LIFE FOR WATER

A viral video showing two women scaling the wall of a well to access water has highlighted the acute shortage in several areas of the central Indian state of Madhya Pradesh. The video shows the women on the wall of the well without a rope or harness to access water. People in Ghushiya village have been forced to take such extreme measures after wells and ponds have dried.

<https://www.bbc.co.uk/news/world-asia-india-61679615>



AUGUST 2022

From our Secretary General

Dear members, dear colleagues...

While the IAH President, David Kreamer, is recovering from Covid*, the 'From our President' piece has become 'From our Secretary General' and I welcome the chance to wish you all well and thank you for your continuing commitment to IAH. I'd also like to share a few thoughts on diversity in IAH, and groundwater more generally, following on from IAH's statement on Equity, Diversity and Inclusion published in 2021.

The publicity for International Women in Engineering Day on 23 June 2022, with the theme of Inventors and Innovators, and a future Women in Hydrogeology conference being organised by the UK Hydrogeological community made me wonder why this type of event is still needed in 2022. It may be less pressing in the professional context, although the positive publicity certainly helps to encourage girls into our profession. What is clear however are the broader statements from UNECE and others that 'There can be no sustainable future without gender equality' and 'Without gender equality, there can be no climate justice', which underline the importance of equity and equality in wider society. IAH actively supports these goals. The recent international conference in Paris, organised by the French national chapter, on Groundwater, Key to the Sustainable Development Goals (SDGs) showed the important contribution of groundwater to sustainability and climate resilience. In December this year, IAH is leading a session on innovation at the UN Groundwater Summit which focusses on the accelerators to enhance progress towards the SDGs.

IAH's intention is to encourage a much wider definition of inclusion, building a truly diverse, global organisation of groundwater professionals, while maintaining a strong focus on encouraging students to join and supporting the members' early career and subsequent professional development.

While searching for more information on diversity and groundwater, I was surprised to find that anti-racism training in the US uses groundwater as an analogy, on the lines of this year's World Water Day slogan 'Making the invisible visible'. The Racial Equity Institute runs 'Groundwater Presentations' giving an introduction to proactively understand and address racism. It's important work, although giving a very different definition of a groundwater presentation to the more usual technical or educational presentation given by IAH members.

JANE DOTTRIDGE

**[editors' note - we're happy to say David Kreamer's recovery continues as we'd all hope]*



<https://iah.org/about/statement-on-equity-diversity-and-inclusion>
<https://racialequityinstitute.org/groundwater/>



www.facebook.com/iah.org

LATEST FREE RESOURCES

MANAGED AQUIFER RECHARGE: OVERVIEW AND GOVERNANCE. IAH SPECIAL PUBLICATION.

Dillon, P., W. Alley, Y. Zheng, and J. Vanderzalm (editors), 2022, Managed Aquifer Recharge: Overview and Governance. IAH Special Publication (90p, 2.4 MB)

This book has been prepared jointly by IAH, UNESCO and NGWA with encouragement of the Ground Water Project. It has now been published as a Special Publication of IAH.

Section 1: Basic Concepts of Managed Aquifer Recharge, gives an overview of purposes, types, source waters, advantages, challenges, and essential requirements of MAR.

Section 2: Considerations for Water Resources Planning and Management is an international synthesis of policy innovations to harness and encourage MAR in water resources management for sustainability in both developing and advanced jurisdictions

Section 3: Considerations for Water Quality Management, gives an overview of water quality management strategies for health and environmental protection in MAR from a variety of starting positions and capabilities.



 [Click here to download book for free](#)

RIVER-BASIN AGENCIES AND GROUNDWATER

Groundwater bodies are of critical importance to the management of many river-basin systems. River-basin agencies need to be aware of the economic and ecological services being provided by the principal groundwater systems in their operational area, and their relevance to water-supply climate-change adaptation.

Read more, in the latest title in the IAH Strategic Overview Series (IAH-SOS).

 [River-basin Agencies and Groundwater – PDF](#)
[All titles in IAH Strategic Overview Series, including some translations](#)



IAH EXECUTIVE UPDATE

The IAH Executive Committee met in Paris, immediately after the Sustainable Development Goals conference in May, organised by IAH France National Chapter. The conference underlined how groundwater relates in so many ways to achieving the SDGs, but highlighted the limited understanding of many in 'the wider world'. The need to raise awareness about groundwater remains imperative. Members of the IAH Executive and Council have taken this year's World Water Day theme, 'Groundwater: making the invisible visible' to heart by making themselves increasingly visible, contributing to policy debates and development, and presenting keynote addresses at conferences.

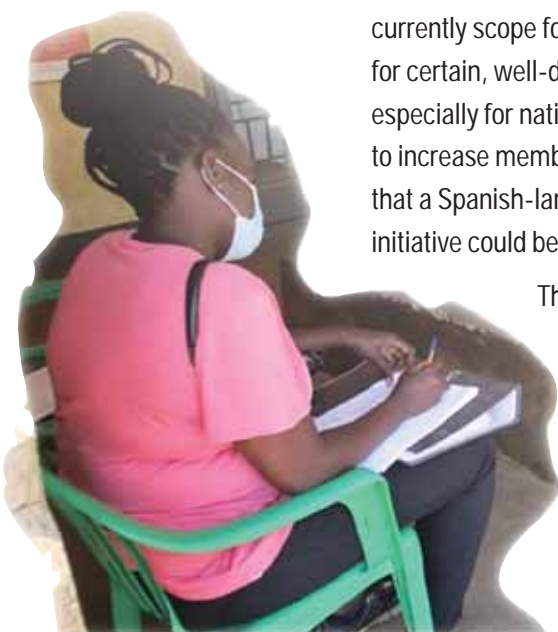
There are many opportunities for more members to 'fly the groundwater flag' for IAH. The Executive proposed that a 'call tree' approach should be established to engage more members and harness this widespread expertise. Where IAH centrally is informed of a need or opportunity to participate and influence, a request to members can be put out via a 'call tree'. It is envisaged that this could be organised in line with IAH's Regions, national chapters, and commissions and networks, to utilise the collective wisdom from our thousands of members.

In discussions with our Early Career Hydrogeologists' Network, the Executive reaffirmed that members of ECHN should play a greater role in directly raising awareness and in supporting IAH's management and structures. The Executive's aim to recruit many more student members potentially paves the way for increasing the strength and drive of IAH's groups at all levels.

The Executive also hope that this will help reinforce IAH's internal communications. Other suggestions for improving internal communications were periodic joint meetings (online where appropriate) of IAH's groups (NCs, C&Ns) to encourage sharing of success stories and to provide mutual support.

The Executive acknowledged that some assistance may be needed, for example by recruiting ECHN members and students to provide support across Regions. They noted that there was currently scope for some financial support to help encourage such participation. Small grants for certain, well-defined initiatives in line with IAH's mission and aims can also be considered, especially for national chapters, for example to help sponsored memberships and other incentives to increase membership, and educational initiatives. Members in Latin America have suggested that a Spanish-language bulletin would be valuable and the Executive agreed that this sort of initiative could be supported, if interested members were prepared to oversee this.

The Executive proposed that there should be a recommendation to Council and the AGM that membership fees should, once again, be maintained at current levels for the next year. Membership has fallen a little during the Covid-19 pandemic and the Executive is keen to help members renew their subscriptions. They noted, though, that our fee categories, which were established in line with the World Bank's economic classification for countries and territories, no longer align with these. They proposed that the categories should be reviewed and that members will be given the opportunity



to present their opinions during the AGM before any approval and implementation.

There has been a particular effort to publish translations of our SOS papers, especially for the official languages of the United Nations, as part of our promotion of UN World Water Day. The Executive endorsed this policy and proposed the programme of translations should be continued, to include Arabic in the next phase.

If you have any questions or comments about the above, let us know at info@iah.org.

IAN DAVEY, SECRETARIAT

2022 IAH ANNUAL GENERAL MEETING

Notice is given that the 2022 Annual General Meeting of the International Association of Hydrogeologists will be held at 1400 BST on Tuesday 20th September online using Zoom (during the 49th IAH congress).

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 2021. The full financial statement will be made available on the annual reports pages of the IAH web site <https://iah.org/about/reports/management> just ahead of the meeting.
- The agenda will also include discussion on proposed membership rate changes. Details are given on pages 10-11 of this newsletter and we encourage you to read this ahead of the meeting.
- Minutes of the Annual General Meeting held on 7th September 2021 are available at: <https://iah.org/members/iah-meetings>.

If you would like to attend online please register your interest here: https://www.surveymonkey.co.uk/r/IAH_AGM2022. We will then send you the joining details, including a password, nearer the date. We would be grateful if you could register interest by the end of August 2022, so that we can be certain to arrange for enough online capacity for everyone who like to join the meeting.

IAH SECRETARIAT

YOUR VOTES COUNT: DISCUSSION POINTS AT THIS YEAR'S ANNUAL GENERAL MEETING

The AGM this year will include two important questions for members about (a) student fees and (b) bringing our fee categories back into line with the original principles we used when setting these. We would like to encourage more students to join IAH, which we believe will help them as they prepare for careers related to groundwater. A period of free membership for students is proposed, as detailed below. We would also like to review our fee categories. These were aligned with World Bank data for countries and territories but they have since diverged. In both cases votes are proposed at the AGM.

STUDENT MEMBERSHIP

Students make up around 8% of IAH's membership. They enjoy a significant discount for IAH membership following IAH Council's decision in 2014. Although it might be reasonable to believe that students who wish to establish a career in hydrogeology or any groundwater related subject would also want to be members of IAH, many are not. This may be for a number of reasons.

IAH Council would like to encourage all students who are currently studying hydrogeology or any groundwater related subject to become members of IAH, by offering three years' free membership. The aim for IAH is to attract all those who hope that groundwater will be a part of their career and to introduce them at an early stage to the benefits of belonging to the world's largest international membership association dedicated to hydrogeology and groundwater.

Free membership would entitle students to discounts offered by IAH, to newsletters and email Alerts, voting in elections, as well as opportunities for participation in our national chapters and commissions and networks. It would also bring the well-regarded benefit of international networking opportunities. Free membership would not, though, include Hydrogeology Journal though a paid subscription for student membership would continue to include this as a benefit.

It is of course hoped that many would wish to continue their membership of IAH following this period of three years' free student membership. This could be paid student membership, if they continue in their studies, or alternatively that they transfer to full membership of IAH. In either case they would benefit for two years from the 25% discount on the full membership fee that we offer.

This is an important matter and although it is for Council to make a decision it is also important to understand how current members view this. A vote will take place at the AGM.

If you have any questions or comments about the above, let us know at info@iah.org.

IAN DAVEY, SECRETARIAT

COUNTRY FEE BANDS

IAH has had different fee bands for many years, offering lower fee rates to individuals and organisations who live or are based in non “high income” countries and territories (note that students have a different discount). Our policy is based on World Bank economic data and is reviewed by IAH Council periodically.

The World Bank has four income groupings: low, lower-middle, upper-middle, and high. IAH currently uses four categories for countries and territories: low, transitional, middle, and high.*

It is many years since IAH reviewed its fee categories. During this time the alignment between IAH’s categories and the World Bank’s income groups has diverged significantly. It is therefore proposed that IAH’s fee categories should be realigned with the World Bank’s income groupings, to re-establish a more realistic and fairer scheme. The fees would be adjusted accordingly, with fee categories set as low, lower-middle, upper-middle, and high.

As we compile this newsletter details are currently being finalised - but will be available to see here <https://iah.org/members/iah-meetings> ahead of the AGM . The proposed changes would be phased in, for example over 3 years, to help mitigate the impacts for those affected. Overall the revised fees as proposed would have a neutral effect on IAH’s membership income.

An advisory vote is proposed at this time, to help the IAH Council to consider how such changes to the scheme of fees might be introduced in the future, following detailed consideration during 2023.

If you have any questions or comments about the above, let us know at info@iah.org.

IAN DAVEY, SECRETARIAT

 [Register for AGM attendance: https://www.surveymonkey.co.uk/r/IAH_AGM2022](https://www.surveymonkey.co.uk/r/IAH_AGM2022)

* NB: As stated by the World Bank, the term country, used interchangeably with economy, does not imply political independence but refers to any territory for which authorities report separate social or economic statistics. Information about how the World Bank classifies countries and territories can be found at <https://datahelpdesk.worldbank.org/knowledgebase/articles/378834-how-does-the-world-bank-classify-countries>. IAH does not accept responsibility for the classification of the countries or territories defined by the World Bank or other parties.



GROUNDWATER: MAKING THE INVISIBLE, VISIBLE

SIWI WORLD WATER WEEK



IAH will be active once again at this year's World Water Week conference on global water issues. The conference takes place from 23 August to 1 September 2022 and features both online and in-person events.

Find out more below about the events that IAH is involved in.

[Water as a driver for peace and cooperation \(1/3\)](#)

This session will focus on different tools for managing, mitigating, and resolving water-related conflicts

Online - Wednesday 24 August 17:00-18:20

<https://worldwaterweek.org/event/10643-siwi-seminar-water-as-a-driver-for-peace-and-cooperation13>

[Groundwater: bridging science and policy](#)

The complexity of groundwater science calls for innovative approaches in the way scientists and practitioners communicate their findings to policy-makers

Online - Thursday 25 August 17:00-18:20

<https://worldwaterweek.org/event/10322-groundwater-bridging-science-and-policy>

[Clean Groundwater – Our Hidden Treasure](#)

A new groundwater source can be transformative, but what if this is polluted, unusable? Let's work together towards keeping groundwater clean now and for future generations.

On-site session in Room 307 on Sunday 28 August 14:00-15:30

<https://worldwaterweek.org/event/10338-clean-groundwater---our-hidden-treasure>

[SIWI Seminar: Water as a driver for peace and cooperation\(2/3\)](#)

This session provides background on transboundary aquifers (TBAs) and describes implications for water security and peace.

On-site session in the Music Hall, on Tuesday 30 August 14:00-15:30

<https://worldwaterweek.org/event/10645-siwi-seminar-water-as-a-driver-for-peace-and-cooperation23>

[SIWI Seminar: Water as a driver for peace and cooperation\(3/3\)](#)

A high-level dialogue on the interlinkages between water and conflict and expert panel discussion on "Drivers of Peace for Urban Water Resilience" at the local level.

<https://worldwaterweek.org/event/10644-siwi-seminar-water-as-a-driver-for-peace-and-cooperation33>



GROUNDWATER SUMMIT



The Groundwater Summit in December will be the culmination of the “Groundwater: making the invisible visible” campaign that is taking place throughout 2022. It will provide a unique opportunity to present groundwater to high level policy- and decision makers globally. Only by making groundwater more visible outside of our professional community can we increase interest, investment and involvement in groundwater-related global issues, leading eventually to better understanding and management of groundwater resources.

The Summit will use the UN World Water Development Report 2022 as a baseline and the SDG 6 Global Acceleration Framework as a guideline to define actions towards more responsible and sustainable use and protection of this vital natural resource. Statements from all major water-related events in 2021-2022 will be summarised in one comprehensive groundwater message for the UN 2023 Water Conference.

Sessions

For the Summit, IAH is preparing an overview of innovative groundwater-related practices.

Tell us about current innovations that you think we should include!

Other sessions include Capacity development, Finance, Governance, Data and information, Regional dialogues, Transboundary aquifers, Focus on Africa, Strengthening interface science-policy practice, Youth forum. There will also be several side events ahead of the Summit.

Find out more

- [Summit website](#)
- [Innovations in Groundwater Management](#)
- [UN 2023 Water Conference](#)

IAN DAVEY

	Tuesday 6 December	Wednesday 7 December	Thursday 8 December
09:00-09:30	Side Events	Opening Ceremony	Regional Dialogues
09:30-10:00			Coffee Break
10:00-10:30		Groundwater and Acceleration Instruments for SDG6 Data and Information	
10:30-11:00			Groundwater and Acceleration Instruments for SDG6 Capacity development
11:00-11:30		Lunch	
11:30-12:00			Groundwater and Acceleration Instruments for SDG6 Finance
12:00-12:30		Groundwater and Acceleration Instruments for SDG6 Innovation	
12:30-13:00			Tea Break
13:00-13:30		Groundwater and Acceleration Instruments for SDG6 Governance	
13:30-14:00			
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17:30-18:00			

GROUNDWATER: MAKING THE INVISIBLE, VISIBLE



WORLD TOILET DAY 2022

World Toilet Day is celebrated annually on 19 November to inspire action to tackle the global sanitation crisis and help achieve Sustainable Development Goal 6 (SDG 6), which promises sanitation for all by 2030. This year the theme for World Toilet Day is about sanitation and groundwater protection.

More than 3 billion people live without access to safely managed sanitation. When some people in a community do not have safe toilets, everyone's health is threatened. Poor sanitation can contaminate groundwater and drinking-water sources, rivers, beaches and food crops, spreading deadly diseases among the wider population.

What we do on the surface matters underground - but the problems are out of sight and out of mind. Sustainable sanitation systems that collect, treat and dispose of human waste help to keep groundwater safe. It is vital that policy makers see the hidden connection between proper sanitation and protecting groundwater.

 <https://www.un.org/en/observances/toilet-day>

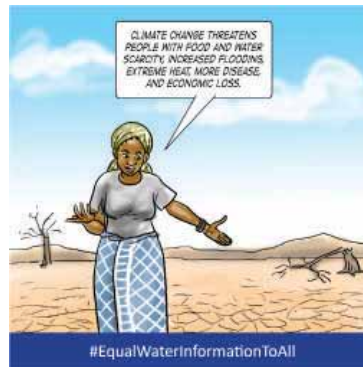
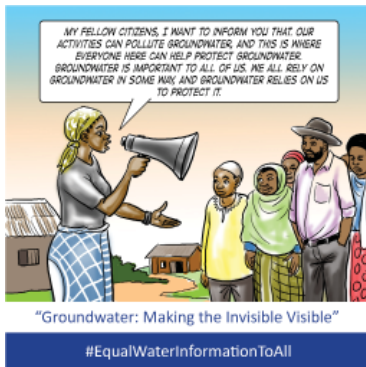
IAH WORLD EVENTS & OUTREACH MAP

See the IAH events and outreach efforts near you – and across the globe – on our new IAH Events Map. Trace the activities that IAH colleagues have been involved in during this 'year of groundwater'.

Planning an event or groundwater outreach effort within your community - professional or otherwise? Email info@iah.org and we'll get your message on the map!

 <https://iah-activities.org/events-map/>





‘NIJUZE’ ‘INFORM ME’ INITIATIVE

‘Nijuze!’ or ‘Inform Me’ is an initiative that aims to promote local awareness and advocacy around water in Tanzania. The focus is Groundwater, Climate Change and Human Rights to Water.

The project is led by Mohammed Hammie, a journalist who IAH, as part of this ‘year for groundwater’, has been working with on a community radio broadcasting project, bringing groundwater information to rural communities in Tanzania (see earlier report in the May 2022 newsletter). We are looking at how IAH can use its groundwater expertise to support this new project and there are hopes that other international organisations will also help.

One of the goals of SDG 6 is to support and strengthen the participation of local communities in improving water and sanitation management. When communities are informed about groundwater, climate change, and human rights to water it means we give them knowledge and skills to address their water challenges.

There have been many efforts made by water organisations around the world to address water challenges in an effort to achieve the sustainable development goals by 2030, but many rural communities do not have access to basic information about water. Limited internet access makes this challenging.

‘Nijuze!’ aims to reach local communities through cartoons - pictures can reach audiences more directly than text alone. The drawings will be posted in primary and secondary schools, village chairperson offices, village executive officer offices, community markets, community health centres, community radio stations, and community water centres. The project will also use social media to share information (hashtag #EqualWaterInformationToAll). The contribution of partner organisations will also be highlighted, for example on pictures, T-shirts, articles, and social media posts.

If you – or your organisation – would like to provide support, let us know at info@iah.org or contact Mohammed directly at watervoice2030@gmail.com.

As Mohammed says, “It’s time to join hands and leave no one behind”.

MEETING & EVENT REPORTS

11th International Symposium on Managed Aquifer Recharge (ISMAR11)



With the theme “MAR, a Key to Sustainability” and three years after being confirmed as ISMAR 11 hosts, Groundwater Resources Association of California (GRA) were able to hold the 11th International Symposium on Managed Aquifer Recharge from April 11 to 15 in Long Beach, CA. Co-hosts included by the Arizona Hydrological Society (AHS) and the Orange County Water District (OCWD).

Who knew what would happen in the intervening three years! For many this was the first in-person event they had been to since the start of COVID, and you could feel the excitement and energy of being together, face to face. Zoom can't touch this! The aim in organizing ISMAR11 was to share knowledge, deepen connections, and have fun! The response to ISMAR11 was tremendous. We had a truly international conference with 360 representatives registered from 27 countries

Pre-conference workshops included two keynote addresses, the first by Bruce Babbitt, former governor of Arizona (1978-87) and Secretary of the Interior (1993-2001) on “Leadership: A Key Ingredient for Addressing Water Management Challenges”. The second was given by David Kreamer, IAH President, on “Protecting the Invisible, Underground Pulse of the Planet: The challenges and what needs to be done”. Two panel discussions were moderated by Felicia Marcus, William C. Landreth Visiting Fellow, Stanford University; Former Chair, California State Water Resources Control Board, on “MAR in California”; and by Sharon Megdal, Director, University of Arizona Water Resources Research Center, on “MAR in Action” on projects outside of California.

The 2022 Herman Bouwer Award was presented to Dr. Peter Dillon. The late Dr. Herman Bouwer was one of the world’s leading researchers in water resources management, particularly on managed aquifer recharge. Peter epitomizes the spirit of the Herman Bouwer Award, with his lifelong work and voluntary efforts making major advancements to science of MAR, through his world class research, mentoring, widely cited publications, and community outreach.



The next two days of the conference consisted of four parallel tracks with a total of 23 sessions. For those not able to attend, you can visit the GRAC.com website to purchase access to recordings of these sessions. The last day of ISMAR11 included two field trips: 1) Orange County Water District to see their recharge facilities and the Groundwater Replenishment System (GWRS) and 2) Water Replenishment District of Southern California’s Albert Robles Center for Water Recycling and Environmental Learning and recharge facilities used to recharge the Central groundwater basin.

The next Biennial Symposium on Managed Aquifer Recharge (BSMAR) will be hosted by the Arizona Hydrological Society (AHS) in 2024. ISMAR12 is in 2025 in Cape Town, South Africa.

 <https://ismar11.net/>

 www.facebook.com/iah.org



This multi-stakeholder conference attracted not only groundwater specialists, but also managers of public and private water utilities, decision-makers, banks and donors, industrialists, NGOs and civil society representatives. It was organized by the French Chapter of IAH (CFH) and held at the Sorbonne University, Paris, supported by several partners, as you can see from the image above.

The 520 participants (40% women), with 20% online, were from 58 countries across the continents:

- Europe 63% (including France 44%)
- Africa 25% (4% from Burkina-Faso)
- Asia and Oceania 7%
- Americas 5%

Nine invited speakers (including 4 women) introduced 63 sessions, with 380 oral presentations and posters, 20 round tables, 6 workshops, and 4 training sessions. UNESCO and IRD (Institut de recherche pour le développement) funded 40 speakers and 17 further organisations supported the Conference - see the conference website for more information.

Conference outputs

Although “invisible”, groundwater plays a key cross-cutting role in achieving many of the 169 SDG targets by 2030, notably as regards:

Sanitation and hygiene (SDG6): Groundwater is frequently available (wells, boreholes) in large quantities, in the immediate vicinity of consumption areas, generally of better quality than surface water, or requiring lower treatment costs. This also has positive impacts on gender issues (SDG5), women’s education (SDG4), participation in the economy and development (economic development, SDG8), poverty reduction (SDG1), inequality (SDG10), peace (SDG16), Public health (SDG3), etc. In the crystalline arid and semi-arid areas, widespread in Africa, groundwater can contribute significantly to SDG6 (rural and peri-urban areas), though the quest for “high discharge” wells is illusory.

Food production (SDG2): Groundwater already contributes to almost 50% of irrigated agriculture and is also widely used for livestock. A greater contribution of groundwater is possible for the increase of agricultural production necessary to meet the world’s food needs, but it must be done while respecting the renewable resource and ecosystems, implementing techniques that save groundwater and relying on innovative agricultural practices. There is a need for information and education on the observed over-exploitation of groundwater due to agricultural uses. Agriculture is also an important factor in the degradation of groundwater quality which must be remediated.

Clean energy resources (SDG7) with the use of Earth’s heat through groundwater (geothermal energy). There is also a link to **energy transition and the circular economy (SDG12)**. **The biosphere: ecosystems and biodiversity - Aquatic life (SDG14) and ecosystems (SDG15)** are largely dependent on groundwater (groundwater/river interaction and wetlands), especially during the dry season(s) or during meteorological droughts.

MEETING & EVENT REPORTS

[...GROUNDWATER, KEY TO THE SUSTAINABLE DEVELOPMENT GOALS]

The cross-cutting nature of groundwater allows for a holistic approach to the SDGs, for instance as regards SDG11 (Sustainable Cities) or SDG 12 (Sustainable Consumption and Production).

Knowledge about groundwater has led to the development of new understanding and innovations:

- Basic concepts/laws on the water cycle, fluid transfer, large cycles as for carbon.
- Innovations in exploitation techniques, monitoring of resources in terms of quantity and quality under more or less extreme conditions, numerical models in order to be able to predict future changes in volumes and quality of groundwater by including multiple forcings of anthropic and climatic origin, but also the impacts on all the SDG targets (e.g. the “[Water4AllSDGs](#)” tool).
- The principles of shared governance, at the basin level, for a better consideration of the global water cycle, groundwater - surface water connections, transboundary water resources, coastal aquifers. But also considering knowledge and understanding of the issues, stakeholders, including the local level, taking into account vernacular knowledge and common sense.
- The development of basic rights and rules, but also participatory sciences in the monitoring of the environment - awareness raising and water policing - taking into account the socio-anthropological dimension and the communities in the definition of the problems to be solved.

The conference program is available online and CFH will also upload the abstracts, posters, slides and videos of the most prominent sessions of the Conference including the keynotes from the Nobel Prize winner Jean Jouzel, directors of UNESCO, OEDC, the French Development Agency, European Commission, Southern African Development Community Groundwater Management Institute, NASA. Videos include the most interesting debates from the roundtables and workshops.

Feedback from the working groups and reactions during the sessions will be presented at other conferences, such as the UN-Water Summit on Groundwater in December 2022 in Paris and the 22-24 March 2023 New York UN Water Conference.

During the conference CFH were pleased to award the CFH Jean Castany Prize to Alice Aureli, from UNESCO.

PATRICK LACHASSAGNE, PRESIDENT, IAH FRENCH NATIONAL CHAPTER

CATHERINE THOUIN, DEPUTY PRESIDENT, IAH FRENCH NATIONAL CHAPTER



<https://www.gw-sdg2022.fr/index.php/en/>



Abou Amani, Secretary of the IHP of UNESCO: picture courtesy of UNESCO



UN ESCWA Arab Regional Preparatory Meeting for the Midterm Comprehensive Review of the Water Action Decade

Joanna Doummar, IAH's VP for MENA region, attended a two day event in May, organized by UNESCWA among water actors in the MENA and NENA countries. The purpose was to discuss challenges related to advancing water issues in the region, opportunities and the ways to accelerate achievement on that front. The meeting provided a platform for presenting national and regional initiatives as well as key actions that highlight the commitment of the Arab countries to the international water goals. The take-home messages should help in regional decision- and policy- making on water-related topics.

Joanna represented IAH in all of the brainstorming sessions.



Eurokarst

The International Conference on the Hydrogeology of Karst and Carbonate Reservoirs (Eurokarst 2022) was held in Málaga (Spain), between 22nd and 25th June, organized by the Centre of Hydrogeology of the University of Málaga (CEHIUMA) and the Spanish Geological Survey (IGME-CSIC), with the collaboration of the universities of Neuchâtel (Switzerland) and Franche-Comté (Besançon, France). These last two were respectively the main organizers of the two previous Eurokarst editions.

150 Researchers from 30 countries on 4 continents came to Málaga to share with colleagues their best research. 131 contributions (84 selected for oral presentations, 42 posters and 5 key lectures) were presented. A selection of these contributions will be published in a Springer book, and extended versions of around 20-25 will be peer reviewed for publication in a special issue of Environmental Earth Sciences journal. These works, presented in the sessions, covered a range of topics: karst caves and geomorphology, methods to study karst aquifers, and karst hydrogeology, among others.

The congress provided a forum for exchange through different activities: technical sessions, round table, and field trips. A pre-congress training course on Karst Hydrogeology (HYDROKARST) was held on 20th-21st June with 21 participants (PhD students, technicians, etc).

During the conference the IAH-Karst Commission held its annual meeting, commemorating its 50th Anniversary. Yuan Daoxian, Petar Milanovic and Derek Ford were recognised as distinguished honorary members and received lifetime achievement awards. Petar was delighted to be able to receive his award in person. Yuan and Derek were not able to attend Eurokarst but will receive their awards shortly. This year's Young Karst Researcher Prize was awarded to Leïla Serène from France, Max Gustav Rudolph from Germany and Alexis Neven from Switzerland.



The next Eurokarst (2024) will be held in Rome (Italy), organized by Prof. Marco Petitta (University of Sapienza).

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

MinWat2020 - in 2022

The 3rd International Multidisciplinary Conference on Mineral and Thermal Waters, MinWat2020 was held in Caserta, Italy, from June 26th to 30th, 2022. It follows successful meetings in 2014 in Karlovy Vary (Czech Republic) and in 2017 in Luso (Portugal).

This international event was organized by the IAH Commission on Mineral and Thermal Waters (IAH CMTW), the IAH Italian Chapter, the Italian universities of Campania "Luigi Vanvitelli", Napoli "Federico II", Padova and Tuscia, with substantial support from the Ferrarelle benefit corporation.

The conference was also honored to host the IAH President, David Kreamer, the Vice-President of Programme and Science of IAH, Marco Petitta, and the President of IAH Italian Chapter, Sergio Rusi. The Conference provided the opportunity to stimulate ideas and discussions on topics related to mineral and thermal waters, involving scientists, academics, professionals, policy makers and the business world.

The history of MinWat2020 has been very complex. The original congress date of March 2020 was put back four times as the pandemic continued. Despite ongoing concerns we decided that the conference should be held in person, because it was time to send out a strong signal to our community and because science must be discussed face to face and not through a screen.

The organizing committee used the enforced two years' delay to work hard and to publish a thematic special issue in Environmental Geochemistry and Health, a Springer journal, collecting 20 selected presentations, which were then discussed during the Conference.

In the world today it seems that weapons, despite past lessons, can make the law and decide who's right and who's wrong. But we strongly believe that science (and science meetings) should be an example of how different opinions should be peacefully discussed and compared, without boundaries of state, race or religion. MinWat2020 and its participants are one of these examples.

Despite the difficulties there were almost 100 participants, mostly attending in person, from 26 countries across Europe, the Americas and Asia, coming from industry, universities and research centres. Summaries of the scientific contributions to the Conference were collected in the Abstract Book published by IAH Italian Chapter.

There were 4 keynote lectures, from research and industry (National Institute of Geophysics and Volcanology - INGV, Danone, Natural Mineral Waters Europe - NMWE, World Federation of Hydrotherapy and Climatotherapy-FEMTEC), 30 oral presentations and 34 posters – accompanied by active, stimulating and profitable discussions between all participants. Exciting field trips focused on the thermal area of Telese, and the Ferrarelle factory and production wells, with the chance to taste waters directly from the spring and see the Ferrarelle (gas and water) geyser.

Presentations covered four research areas: Hydrogeology and Geochemistry of Mineral and



Thermal Waters; Protection and Management of Mineral and Thermal Waters; Bottled Mineral Waters; Health Issues, Balneology and Balneotherapy.

The IAH CMTW, coordinated by President, Jim Lamoreaux, and Secretary, Adam Porowski, held its meeting, discussing future activities, above all choices for the next MinWat Conference. Members agreed that this should be held in Davos, Switzerland in 2024.

MinWat2020 was a platform where researchers and professionals came together sharing knowledge and technology, while openly debating policies that work best for individual operators and the community at large.

The final speech noted the absence of scientists from developing countries, where in most cases, the water resources are most in danger. A special effort is needed to share information and education in countries in the southern part of the world, and to be more active in creating collaborations in those areas of the planet.

Finally, the Organizing Committee express a sincere appreciation to the sponsors for their great support in making this event possible – the Ferrarelle benefit corporation, Paparelli, Samminiatese Pozzi, Sartorius, Terme di Boario, Panelli e ISO4.

ORGANISING COMMITTEE OF MINWAT2020

Groundwater United!

Continuing with our celebration of the 'year of groundwater', two football (soccer) teams from Ellis Robbins School in Harare, Zimbabwe faced up to each other, proudly wearing IAH-badged World Water Day T-shirts. In a closely fought game, the Red Team came out with the honours, with a 3-2 win over the Blue team. The teams will be wearing their shirts in further games throughout the season, taking the message of "Groundwater – making the invisible visible" to all their opponents and spectators.

Our thanks go to IAH member Brian Murove in Harare for organising the event and to the teachers and students at Ellis Robbins School for participating and getting this critical message more widely seen.

We've still a few months to go for this "year of groundwater" - if you are interested in holding an outreach event and would like some teeshirts or other suitable IAH/groundwater related merchandise, do get in touch!

Questions or comments? Email info@iah.org



Free Congress Registrations

We are offering free online registrations for members for our online congress in China. Two registrations via a prize draw for all members and also a call for supported applications for registration, to be paid from IAH's 'Solidarity Fund'.

China congress prize draw

We have 2 registrations for an open draw to all members for the Wuhan Congress in September. To enter to win, complete your details including membership number here:

https://www.surveymonkey.co.uk/r/49th_draw

Terms and conditions: Prize draw closes 11.00pm BST on Monday 15th August 2022. Entry is open to current IAH members only (2022 dues paid). One entry per individual (additional entries will be discarded). Winner will be picked by random draw and will be contacted by email soon after the closing date. Winner will be also be announced in the December 2022 edition of "News and Information".

Application for IAH funding: China congress registration

IAH is able to provide registrations to existing IAH members who may otherwise have difficulty in securing funding to participate in the Wuhan Congress. Traditionally such support has been for those from lower income countries and we would also like to extend this opportunity to younger members on lower incomes who would otherwise be unable to attend. To apply, use the following link where you will be asked to respond to a few questions and provide a short personal statement:

https://www.surveymonkey.co.uk/r/49th_cs

A panel including members of the Organising Committee will assess the applications. They may set other criteria and will contact you in this case.

Terms and conditions: Applications close 11.00pm BST on Monday 15th August 2022. Eligibility is limited to current IAH members only (2022 dues paid, or on sponsorship programme). Winners will also be announced in the December 2022 edition of "News and Information".

SECRETARIAT

NEW FROM THE IAH BOOK SERIES

Groundwater for Sustainable Livelihoods and Equitable Growth

edited by Viviana Re, Rodrigo Lilla Manzione, Tamiru A. Abiye, Aditi Mukherji, Alan MacDonald

This book presents a collection of nineteen situation reports from diverse human and physical settings within the overall theme of groundwater and sustainable livelihoods. It forms part of the mission of the IAH-Burdon Groundwater Network for International Development to create a groundwater knowledge base that will contribute to sustainable groundwater management and development in low-income countries. The book is the very last book in the IAH Blue Book Series, International Contributions to Hydrogeology, and it forms number 30 of that series.

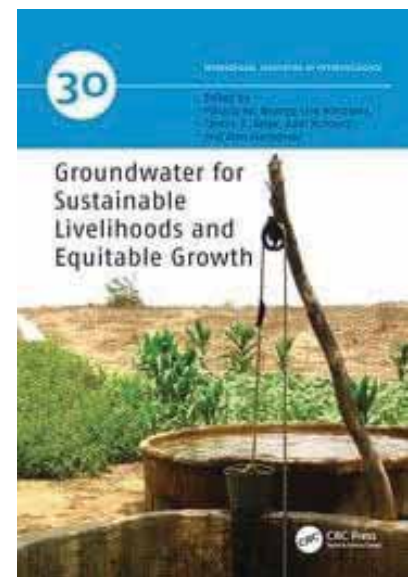
The situation reports examine how groundwater can ensure long-term and equitable benefits to improve both rural and urban livelihoods. The studies underpin the importance of strengthening the interactions between science, policy and practice to develop groundwater systems, promote good groundwater governance and encourage transdisciplinary approaches. These strengths need to integrate both the social and physical dimensions of any development project.

There are two key ingredients to success: engagement between water users and managers, and openly sharing all available information and data. This book is an important contribution to this philosophy and provides examples in which groundwater has helped to reduce poverty, increase resilience to climate and environmental change, and contribute towards equitable growth. The studies reported here are all important because each of them demonstrates the impact that sustainable groundwater development can have on households, communities, and consequently on whole regions. The examples are taken from a variety of regions within Africa, and also from Brazil, India, Pakistan, Laos, Myanmar and Indonesia and provide a broad spectrum of groundwater-based issues and prospective solutions that have benefitted communities and society as a whole.

The book is presented to a high standard and is supported by graphics and photographs which are in full colour. Groundwater for Sustainable Livelihoods and Equitable Growth has been written both for practitioners and managers working within government and NGOs as well as for teachers and their students.

ISBN 9780367903862

HARDBACK £140.00 (30% OFF HARDBACK PRICE FOR IAH MEMBERS)



<https://www.routledge.com/Groundwater-for-Sustainable-Livelihoods-and-Equitable-Growth/Re-Manzione-Abiye-Mukherji-MacDonald/p/book/9780367903862>

View other titles available: <https://iah.org/iah-book-series>

MEMBER MATTERS



New Members

A warm welcome to the following new members, who joined our Association in the period 10 March - 30 June 2022

AUSTRALIA

Vinay AGRAWAL
Emily AITKEN
Celine ANDERSON
Albert BAI
Daniel BARCLAY
Kim BAUBLYS
Amy BECKE
Sarah BUCKERFIELD
Claire CARTER
Leon CHO
Gary CLARK
Tasman COCKS
Liam COFFEY
Frances DEAN
Amanda DENDYS
Alec DESLANDES
Matthew DIGIOVINE
Jon FAWCETT
Laura GOMEZ
Andrew HARBOUR
Daan HERCKENRATH
Mick HOBAN
Phillip HORTON
Matt HUDSON
David IFE
Michelle IRVINE
Aditya JHA
Haili JIA
Congrui LI
Lixiang LIN
Duncan LOWE
Nigar LUTFULLINA
Elinor MACMANUS
Katrina MATTINGLEY
Mikaela MORETTI
Michael MOZINA
Gabrielle MUELLER

Cassady O'NEILL
Linus OPAT
Amy PERRIN
Ruth PRICE
Juliana REIS
Mohammad SEDAGHAT
Sukesh SHANMUGAM
Matthew SHARKEY
Ben SLATER
Saqib SOHERWERDY
Sharna TRUE
Chris TURNADGE
Marija TUTULIC
Cornelia WILSKE
Olivia WILSON
Lucas WOOD
Juliette WOODS
HYDROGEOLOGIST.COM.AU (C)

AUSTRIA

Diego BEDOYA GONZALEZ
Eva KAMINSKY

BELGIUM

Victoria COLLIGNON
Tinneke DE ROUCK
Alejandra ELIZONDO AMARILLAS
Johan LE MAIRE
Hughes LEGRAIN
Benedicta RONCHI
Ilse VAN EYLEN
Thomas VANHERTERYCK
Wendy VERLÉ
VLAAMSE MILIEUMAATSCHAPPIJ (C)

BOLIVIA

Gabriela Patricia FLORES AVILES

BOTSWANA

Mpho KEJELENG
Malebogo MAJAULE
Thebe TLHAODI
Tshephang TSHEKISO
LUCARA BOTSWANA (PTY) LTD (C)

CANADA

Brielle ANDERSEN
Paultwo CICCONETWO
Isabelle DE GRANDPRÉ
Daralyn FOX
Allie OLIVER
Carlos PENA
Maria Eloisa SIA
Aaron TANGEDAL
Meghan VISSERS
Julien WALTER

CHILE

Luciano ACHURRA
Igor AGUIRRE
Nicolas AMENGUAL MONDACA
Alvaro CONTRERAS RIQUELME
Paula DIAZ
Rene DIAZ DEL RIO
Juan Cristóbal FERNÁNDEZ
Veronica GARCIA
Tiaren GARCIA-PEREZ
Cristobal GIRARDI LAVÍN
Sergio IRIARTE
Gustavo LAGOS
Cristobal MACHUCA
Cesar MILLAR GONZÁLEZ
Jose PRADERAS
Alicia ZUÑIGA

CHINA, PEOPLE'S REPUBLIC

Jinli CUI
Dongmei HAN
Xingxing KUANG
Qiang LI
Pan WU
Panpan XU

CONGO, DEMOCRATIC REPUBLIC

Luke ADAMS

CZECH REPUBLIC

Jaroslav REIF

EGYPT

Ghada AMIN

ETHIOPIA

Zena TESSEMA

FRANCE

Rémi ARASSUS
Christian ARCHAMBAULT
Yoann BAUNY
Stephane BINET
Marion DARDARE
Nicolas DEFAY
Abel HENRIOT
Sébastien MORILHAT
Louis SCARAFAGIO
Thomas SERRES
Alix TOULIER

GERMANY

Augustine M GBONDO

GHANA

Alexander Kwaku BANSON



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GREECE

Christopher PAPADOPOULOS

INDIA

Tapas BISWAS

Amit Kumar CHAHAR

Amulya CHANDRA DEBNATH

Diyali CHATTARAJ

Malendra CHAUHAN

RAKESH KUMAR GURJAR

Dalchand JHARIYA

Suyog KHOSE

Dip Jyoti KHOUND

Murali KOCHUKRISHNAN

Rupak KUMAR PAUL

Mahendra KUMAR SABAL

Vikas KUMAR SHARMA

NATVARLAL LIMBACHIA

MANISH KUMAR MEENA

Balram MEENA

Ramakant MISHRA

Mukesh RATHOR

Kailash C SHARMA

Kukana SHIVRATAN

Anoop Kumar THAREJA

INDONESIA

Berry CASANOVA

IRELAND

Stephen AKIEN

Elizabeth ANDRES

Patrick BREHENY

Cathal FAHERTY

Keith HARLIN

Eoin HURST

Michael KEHOE

Eimear PRENDERGAST

Conor SMITH

Robert WATSON

Seán WHEELER

ITALY

Roberta BONI

Tommaso CASATI

Francesco Maria DE FILIPPI

Nima ESMAEILZADEH

Marco SABATTINI

KOREA, REPUBLIC OF

Hang-Tak JEON

Sanghyun KIM

LEBANON

Rony BOU CHEBL

Ranime FOUANY

MALAYSIA

KHAIRULANWAR Abd Karim

MUHAMMAD RUSYDII Che Lah

HANIF Mohamad

WAN NUR SYAHIRAH W Abd Muhaimi

GEO MAG ENGINEERING (C)

MOROCCO

Youssef BROUZIYNE

Achraf CHAKRI

Mohammed CHTIOUI

Morad KARROUM

Badr NACHCHACH

Anouar TAIBOU

Ahmed ZIAN

NETHERLANDS

Deborah Oluwafunmilayo AYODELE

BJM GOES

Elisabeth LICTEVOUT

Valentina URIBE JARAMILLO

Harmen VAN DEN BERG

NEW ZEALAND

James BOTTING

Christiaan Frederick DELPORT

Allanah KENNY

Parviz NAMJOU

Andrew PEARSON

Hangjian ZHAO

NIGER

Salifou BACHIR

NORWAY

Sondre GJENGEDAL

Mari VESTLAND

Norwegian Geotechnical Institute (NGI) (C)

PAKISTAN

Sheila BANO

PHILIPPINES

Emie B CAPISAN

POLAND

Marzena SZOSTAKIEWICZ-HOŁOWNIA

Sebastian ZABŁOCKI

SLOVENIA

Klara NAGODE

SOUTH AFRICA

Paschal Ogechukwu AMAECHI

Olatunde DUROWOJU

Paula FININI

Naziha MOKADEM

Thapelo MONGALA

Khahuliswe RAMUDZULI

Ockert SCHOLTZ

Pepijn VAN RAVESTEYN

SanMari WOITHE

NB: those marked (C) are new corporate members

MEMBER MATTERS



A warm welcome to more new members

who joined our Association in the period 10 March - 30 June 2022

SPAIN

Victor GALVE SANTACRUZ
Sheyla JIMÉNEZ LÓPEZ
María PUENTE NIETO
Sandra PUJOL CARRILLO
Javier RICO IBABE
Paula RODRIGUEZ ESCALES

SRI LANKA

Abdul Wahed NAB

TANZANIA

Gift MARANDU

UNITED KINGDOM

Conor LYDON
Andrew MOAG

Conor MOAG
John MOAG
John O'CONNOR
David SECCOMBE
Joseph SHIPPERBOTTOM
Stephen David THOMAS
VAN WALT IRELAND LTD. (C)

UNITED STATES OF AMERICA

Rebekah AHRENS
Said AL KINDI
Dayana ARRUE
Patience BOSOMPEMAA
Will BREWER
Dwight Zedric CAPUS
Collin DAVIDSON
Joanna ELLIS

Emelia FURLONG
John KARR
Bwalya MALAMA
Taylor MATTIOLI
Samuel (Tyson) MCKINNEY
Jacob PETERSEN-PERLMAN
Matthew ROSEBOOM
Salini SASIDHARAN
Erik WALEGA

ZIMBABWE

Never MUJERE

NB: those marked (C) are new corporate members

Check your records!

Are you receiving your regular IAH messages and alerts with HJ link and latest news digests and initiatives?



Ensuring that our members receive their IAH benefits such as Hydrogeology Journal, event and other discounts and offers is important to us. Do you work for a large government/commercial/educational organisation? Many such employers have firewalls in place - particularly, we have noticed, in Australia.

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. Thank you.

SECRETARIAT



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

?! Beware of scam emails !?

We've received more reports of attempts to defraud members of IAH by scam email. Attempts can include apparent requests from an IAH colleague for financial assistance based on a supposed emergency situation. Such take advantage of the global goodwill of IAH in making contact information publicly available on the website and on chapter, commission and network sites. Often it is clear that these emails have come from fake addresses, but sometimes the emails can look very convincing. Please be careful when dealing with any emails that might be suspicious. Ask yourselves, 'Would this person contact me in this way about this matter?' If you receive any suspicious emails of this sort please reject them as spam. Often the generating email address is via gmail, which you can report to Google here: <https://support.google.com/mail/contact/abuse?hl=en>. We also encourage you to report suspicious emails to the authorities in your country to help fight international cyber crime.



SECRETARIAT

Mentoring Scheme Update



Thank you to all those who submitted forms for our mentoring scheme in the latter part of 2021. We have undertaken reviews of all applications received and, as this newsletter was being compiled, are in the midst of contacting everyone regarding next steps. We are grateful for everyone's patience and support for the programme.

Look out for further announcement later in the year, when we will reopen the scheme for new applications. We also love to receive updates/progress from former and existing participants on the scheme - do get in touch with your feedback and comments - email info@iah.org.

SECRETARIAT

 <https://iah.org/education/professionals/mentoring>

São Paulo-Brussels Groundwater Declaration

It's not too late to add your name to the São Paulo-Brussels Groundwater Declaration if you haven't already done so. With your help, the International Association of Hydrogeologists and all its partners will use the Declaration to inspire the actions needed to further the understanding, wise use and protection of groundwater resources throughout the world.

Let's make the invisible visible! And like those who've already done so, share this - and your photos on social media - and ensure the messages contained reach those those who need to see it.



Groundwater is critical to Earth's survival: Aquifers, our planet's natural water reservoirs, hold 97% of the fresh and liquid water

Everyone must face these issues: Sustainable groundwater management needs monitoring, regulation, and communication

It is imperative to protect groundwater through the following urgent actions:

Strengthen the institutions responsible for the governance of groundwater so that they promote efficient, inclusive, ethical, democratic, and socio-ecologically conscientious policies

Let's make the invisible visible: There must be an effort by governments, hydrogeologists, NGOs, and all of society to make perceptible this crucial resource for planetary well-being and dignified human life.



 **Read/sign here:** <https://iah.org/gwdeclaration>

IWA PUBLISH PRACTICAL GUIDEBOOK

GROUNDWATER ASSESSMENT AND MANAGEMENT FOR WATER UTILITIES AND MUNICIPAL GOVERNMENT

Groundwater beneath cities is important. Water utilities and private abstractors use it as a secure source of water-supply and municipal authorities have to cope with it when using underground space for buildings, facilities and transportation infrastructure. However, these agencies often pay little attention to groundwater once their wells are installed or subsurface construction is completed. This new Guidebook aims to highlight what water utilities and municipal governments can do to improve groundwater assessment, management and monitoring so as to avoid the many 'nasty surprises' that can arise.



Groundwater, especially from deeper aquifers, is a critical resource for enhancing urban water-supply security under climate change stress. However, to achieve its use sustainably requires effective promotion of an appropriate level of adaptive resource management and protection, according to local circumstances. Moreover, groundwater conditions at shallower depths are an essential issue when it comes to sound sanitation planning. In recent times, municipal governments have made much more use of urban subsurface space (especially down to 15-metres depth) for construction - notably of deep basements, vehicle parking spaces and transportation routes. Traditionally the drainage and stability of such structures was achieved through individual site investigation and design, but today a more coordinated approach is needed to manage shallow groundwater conditions. And these conditions are often complicated by a rising shallow water-table due to the urbanisation process itself and as a result of the impact of climate change.

This Guidebook is divided into three complementary parts:

- Part A is intended primarily for the guidance of managers, engineers and scientists in water utilities, water-resource and municipal sanitation agencies, working to improve urban water-supply resilience and its inevitable requirement to get more involved in groundwater management. It is divided into two sections, which deal respectively with undertaking essential diagnostic procedures and with formulating strategic actions.
- Part B is intended primarily for guidance of engineers, planners and managers in municipal government authorities working to improve the design and execution of subsurface urban infrastructures to avoid potentially-costly subsurface drainage issues, structural instability and groundwater flooding problems, which can arise from shallow and/or rising water tables. It is divided into two sections which deal respectively with the characterisation of problems and with essential steps in taking more integrated action.
- Part C presents a series of 6 city case histories of groundwater management actions, which identify the key issues needing attention in each case and the institutional arrangements that facilitated action being taken.

Join us in Niagara Falls this September for the Canadian Geotechnical Society's 76th Annual Conference and the 19th Joint CGSMAH-CMC Groundwater Conference!

KEYNOTE SPEAKERS

2022
2022

Geoniagara 2022 will be held at the **Scotiabank Convention Centre** in Niagara Falls, Ontario.

Visit the conference website www.geoniagara2022.com for details on conference information and to complete your registration!

www.geoniagara2022.com

AUSTRALASIAN GROUNDWATER CONFERENCE

21 - 23 November 2022
Perth Convention and Exhibition Centre

www.agc2022.com.au #AGC2022

VIRTUAL CONFERENCE

Current and recent groundwater research in Southern Africa

13 to 15 September 2022

SAVE THE DATE

IAH SOUTH AFRICA GROUND WATER DIVISION

IAH-SA is the main organiser of the event with support from the GWD

Type of event Virtual Conference

Time Six x 90-minute sessions - 09:00-10:40 & 11:10-12:40

When 13 - 15 September 2022

What The IAH-SA is pleased to announce a 3 day Virtual Conference where all current and very recently completed research in the field of hydrogeology is going to be presented. All the academic institutions across Southern Africa, who are involved with groundwater research, will be represented. The objective is really to ensure there is communication across all those involved in Groundwater research and to ensure there is cross-pollination of ideas and sharing of challenges and advances. It's also a critical opportunity for those in consulting, the groundwater industry and local and national government to learn from what is being researched and to give critical input into research direction, ensuring we are at the global forefront of groundwater research. This event also enables international participation both to learn from what is currently being accomplished and to assist Southern Africa in ensuring our research is leading edge. We keenly look forward to your support and participation.

Note This conference will be SACNASP and ECSA - CPD accredited.

Registration fees:		
Member IAH / GWD Registration fee - early bird		R 3 000,00
Non Member IAH / GWD Registration fee - early bird		R 4 000,00
Student Member IAH / GWD Registration fee - early bird		R 2 000,00
Student Non Member IAH / GWD Registration fee - early bird		R 2 750,00

Early bird registration ends 29 July 2022

<https://iah.org.za/iah-sa-virtual-conference-13-to-15-september-2022/>

Organisers: Conferences et al - deidre@iafrica.com

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Join us at the Science & Engineering Forum
at Groundwater Week!

Las Vegas, Nevada • December 6-8, 2022

Groundwater Week is the one event where thousands of professionals from all sectors of the groundwater industry come together to discover solutions to current and future challenges.

Hear the latest in groundwater research during the Science & Engineering Forum at Groundwater Week covering everything from emerging contaminants to managed aquifer recharge to groundwater remediation and sustainability.

Co-located with the Irrigation Association. 

Register today!
groundwaterweek.com



2022 - SELECTION

23 August - 2 September – Stockholm, Sweden

World Water Week - Seeing the unseen: The value of water

he week will cover topics ranging from food security and health to agriculture, technology, biodiversity, and the climate crisis. Organised by SIWI. IAH will have presence. <https://www.worldwaterweek.org/>

12-15 September – Maastricht, the Netherlands

LuWQ2022 – 5th International Conference on LAND USE and WATER QUALITY: Agriculture and the Environment

LuWQ2022 is an interdisciplinary conference on the cutting edge of science, management and policy to minimise effects of agriculture and land use changes on the quality of groundwater and surface waters. Organised by RIVM National Institute for Public Health and the Environment, the Netherlands (principle organiser); Aarhus University (DCE and Department of Bioscience), Denmark; Geological Survey of Denmark and Greenland (GEUS); and Umweltbundesamt (UBA), German Environment Agency, Germany. IAH is Scientific Sponsor of the conference. <https://www.luwig2022.nl/>

13-15 September – South Africa/Online

IAH South Africa Virtual Conference

IAH-SA is pleased to announce a 3 day Virtual Conference where all current and very recently completed research in the field of hydrogeology is going to be presented. All the academic institutions across Southern Africa will be represented, enabling communication across all those involved in groundwater research, cross pollination of ideas, sharing of challenges as well as advances. It's also a critical opportunity for those in consulting, industry and national government, to learn from what is being researched and to give critical input into research direction, ensuring we are at the global forefront of groundwater research. This event also enables international participation both to learn from what is currently being accomplished and to assist Southern Africa in ensuring our research is cutting edge. <https://iah.org.za/iah-sa-virtual-conference-13-to-15-september-2022/>

18-23 September – Wuhan (online conference) China

49th IAH Congress - Groundwater Sustainability and Poverty Reduction

Poverty reduction is a top priority for most countries in the world. Unfortunately, most of the poor countries and regions have been faced with serious problems of water scarcity and contamination. It is the mission and ultimate responsibility of the international community of hydrogeologists to help the people get access to sustainable safe supply of fresh groundwater. With your active participation to share your ideas, experiences and knowledge, we believe this congress in China will be a great success, and look forward to meeting you in in Wuhan! <http://www.iah2022.com>

5-7 October – Slovenia

5th Conference of Central European Group of IAH

Making Groundwater in the Danube Basin Visible. <https://www.geo-zs.si/IAHCEG2022>

21-23 November - Australia

Australasian Groundwater Conference 2021

Groundwater is increasingly recognised as a vital global resource, supporting healthy people, economies and environments. AGC2021 will be hosted by the International Association of Hydrogeologists at the Perth Convention and Exhibition Centre, Monday 21 to Wednesday 23 November 2022. The Conference promises to attract a large number of delegates and organisations representing industry, consulting, government and academia, making it the premier groundwater industry conference in the Australasian region. This years' conference theme is Science, Resilience and Adaptation, topics that have been well and truly at the fore over the past 12 to 18 months.

<https://agc2021.com.au/>



<https://iah.org/events>

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



Share knowledge and memories... @iahgroundwater #iahgroundwater