

IAH MAR Commission Newsletter. Issue nº 47. 2024 December – 2025 January

Dear MAR scientists, practitioners, students... dear MAR family, please find attached some information about Managed Aquifer Recharge.

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-

ISMAR 12. Less than 14 weeks left... tic, tac...

“From Theory to Implementation and Operation”

28 April – 2 May 2025 – Stellenbosch, South Africa

Three months to go... our main conference and meeting point is almost now...

ISMAR12 is pleased to announce that the Scientific Committee is finalizing an engaging and dynamic symposium programme. The full programme will be available on the website <https://ismar12.org.za/> from the beginning of February.

The symposium will feature four pre-symposium workshops, as well as three workshops integrated into the main three-day event, offering attendees a comprehensive and enriching experience.

Delegates will also have the opportunity to participate in field excursions, showcasing fascinating sites and practical insights that complement the symposium themes. These excursions are designed to enhance the overall learning experience and provide an engaging exploration of relevant topics.

We extend our sincere gratitude to the sponsors and exhibitors of ISMAR12 for their invaluable support

Register for the Symposium to secure your attendance at the workshops, presentations, networking, and tours. To register to attend the symposium please visit <https://ismar12.org.za/registration/> More info: <https://ismar12.org.za/>

Thank you sponsors:

Sponsors



Exhibitors



PRE SYMPOSIUM WORKSHOPS

ISMAR12 is offering an impressive pre-symposium workshop programme. Space is limited, so please register promptly to secure your spot in the workshops:

- Achieving Successful Groundwater Recharge and Recovery Through Wells
- Technical solutions for IWRM by means of MAR schemes.
- MAR Scheme Design Considerations for Bore Recharge (Science meets Engineering)
- Hydrogeochemistry and Managed Aquifer Recharge (MAR) – Speciation Modelling of Mixing Waters
- Operational Stage of the Well

FIELD EXCURSIONS

Join us for an unforgettable day of discovery and networking against the stunning backdrop of the Western Cape!

Included in the symposium programme are the field excursions on the Friday, 2 May 2025. Delegates can select which tour they wish to join when registering:

Field Excursion 1: Atlantis MAR scheme

Field Excursion 2: Cape Flats Aquifer MAR scheme

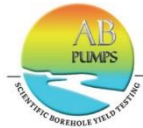
Field Excursion 3: The Elandsfontein Phosphate Mine and Langebaan Road Aquifer MAR schemes

Sponsorship and Exhibition Opportunities

The ISMAR12 Symposium provides a unique platform for companies and institutions to connect directly with industry professionals. Showcase your

products and services to network with the delegates and enhance your brand's visibility within the field.

We thank our sponsors and exhibitors



WGA

SPONSORS



EXHIBITORS

IMPORTANT DATES | IMPORTANT DATES | IMPORTANT DATES | IMPORTANT DATES

| | | | |
|-------------|--|----------------|--------------------------------|
| 20 Nov 2024 | Early bird registration deadline | March 2025 | Registration closes |
| 30 Nov 2024 | Presenting authors to register | March 2025 | Final programme made available |
| 05 Dec 2024 | Presenting authors to pay the registration fee | April/May 2025 | ISMAR 12 |

Website: <https://ismar12.org.za/> + Contact: confetal2@iafrica.com

Thank you Fanus Fourie and team, for this all...

Dewatering Institute post

Please see the article and advert in The Dewatering Institute Magazine, GEM below promoting ISMAR12. The full magazine can be viewed using this link. <https://dewateringinst.com/the-gem-magazine3-2/>

From the Dewatering Institute: *'The Dewatering Institute is thrilled to announce the launch of the third edition of The GEM, a magazine focused on the worldwide dewatering and groundwater industry. This publication is dedicated to empowering young professionals in dewatering and honouring achievements, sharing expertise, and highlighting best practices. Packed with insightful articles, exclusive interviews, and news features.'*

TDI Supports ISMAR12 in Cape Town:

A Global Platform for Innovation in Managed Aquifer Recharge

The 12th International Symposium on Managed Aquifer Recharge (ISMAR12) will take place from 28 April to 2 May 2025 in Cape Town, South Africa. As a leading event in the global water industry, ISMAR12 provides a unique platform for industry leaders, researchers, and practitioners to share insights and advance the future of Managed Aquifer Recharge (MAR). TDI is proud to sponsor this year's event, offering a remarkable opportunity to connect with key players in the field.

An Exciting Programme Awaits

ISMAR12 has received an impressive 150 abstracts, resulting in a dynamic programme featuring oral and poster presentations, interactive workshops, panel discussions, and networking events. The five-day event will kick off with workshops on Monday, 28 April, followed by plenary sessions, parallel technical sessions, and poster presentations throughout the week. Delegates will also have the chance to attend two focused panel discussions, covering critical topics such as "The Microbiome and MAR" and "MAR in Africa".

The symposium will conclude with three exciting field trip options, exploring Atlantis, Cape Flats, and Elandsfontein-Langebaan Road—offering hands-on learning opportunities in these diverse hydrogeological environments.

Interactive Learning Opportunities

A key highlight of ISMAR12 is the array of workshops and in-programme discussions aimed at tackling real-world challenges in MAR. Topics include:

- MAR Scheme Design and Operations
- Technical Solutions for Integrated Water Resource Management (IWRM)
- Advancements in MAR Feasibility NMapping
- American Society of Engineers (ASCE) Standard Guidelines for MAR Design and Operation

Each workshop brings together experts to share insights on the latest developments in MAR science, technology, and engineering, ensuring that attendees leave with practical knowledge they can implement in their own projects.

Networking and Social Events

Beyond technical sessions, ISMAR12 is packed with opportunities to connect and collaborate. Social events include a **Welcome Function on Monday evening**, a **Water Tasting Session on Tuesday**, and the highlight **Gala Dinner on Wednesday night**. Between these events, tea and coffee breaks, lunch hours, and poster sessions provide ample time for attendees to network and foster professional relationships.

Looking Ahead

As a sponsor, TDI is committed to supporting advancements in MAR and engaging with this vibrant global community. With the ISMAR12 programme offering unparalleled learning and networking opportunities, we're excited to play an integral role in shaping the future of MAR. Join us in Stellenbosch for what promises to be an inspiring and impactful event! **Registration Link - <https://dewateringinst.com/international-symposium-on-managed-aquifer-recharge/>**



28 APRIL - 2 MAY 2025 | STELLENBOSCH | SOUTH AFRICA

IAH
 12th International Symposium on Managed Aquifer Recharge

ASCE
 AMERICAN SOCIETY OF CIVIL ENGINEERS

Stellenbosch
 SOUTH AFRICA
 28 APRIL - 2 MAY 2025

CLICK HERE TO REGISTER TODAY

Join us for the International Symposium on Managed Aquifer Recharge (ISMAR12) Symposium to be held from 28 April to 2 May 2025 in Stellenbosch, South Africa. This is a premier international event on MAR research and practice, held every 3 or 4 years under the auspices of the International Association of Hydrogeologists (IAH), the American Society of Civil Engineers (ASCE), and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Sponsorship and Exhibition Opportunities

The ISMAR12 Symposium provides a unique platform for companies and institutions to connect directly with industry professionals. Showcase your products and services to network with the delegates and enhance your brand's visibility within the field.

We thank our sponsors

WGA, TDI, IAH, ASCE, KWR, GROSS

Website: <https://ismar12.org.za/> + Contact: confab12@iafrica.com

Thank you Deidre Cloete for reporting.

ISMAR 12's IAH-MAR Commission plenary

The next IAH-MAR Commission plenary will take place during ISMAR 12, April 30th, 16:30 to 17:30 (announced as AGM in the [ISMAR program](#)).

The Plenary program draft will be included in the next newsletter.

In the meantime, and in order to prepare an effective meeting, we kindly ask from the MAR family your contributions. Working group and communities of practice leaders, please, get ready and prepare a couple of slides to expose your advances. It is time to propose new WGs or COPs. Please, consider proposing new actions. Fresh blood, welcome 😊

Five [certificates of appreciation](#) will be granted, as a motivation exercise.

ISMAR 12. Call for IAH-MAR co-chair elections

Elections for IAH-MAR co-chairs will take place during the plenary. This is a gentle request for MARers to become an IAH-MAR co-chair. Please, prepare your candidacy and submit it to IAH-MAR co-chairs.

Some member from the IAH Executive will conduct the process.

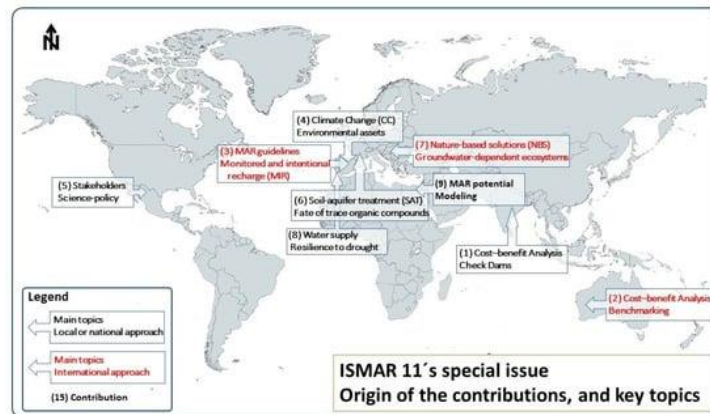
Please, send your proposal before March 31th.

Information about candidates and their proposals will be shared to all attendants before the plenary, for you to decide your vote.

Future ISMAR 12 special issue. Looking for a Journal

After each ISMAR, a special issue gathering the best contributions of the symposium has been published since ISMAR 8.

IAH-MAR co-chairs and local organizers are (since months ago) looking for a journal to edit this ISMAR 12 special issue with advantageous terms. Please, if you have any idea or proposal, let us know via email to [Catalin Stefan](#). Some Journals are already in consideration.



The link to all previous issues can be found in the last wrap-up paper from ISMAR 11 official special issue: <https://www.mdpi.com/2073-4441/15/23/4183>

or:

ISMAR 8. Special Issue. 14 papers:

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

ISMAR 9. Special Issue. 19 papers:

https://www.mdpi.com/journal/water/special_issues/ARS

ISMAR 10. Special Issue. 23 papers:

https://www.mdpi.com/journal/water/special_issues/ISMAR10_2019

ISMAR 11. Special Issue. 10 papers:

https://www.mdpi.com/journal/water/special_issues/Aquifer_Recharge

PUBLICATIONS ABOUT MAR

Call for action. IAH-MAR Commission 2024 memory of activities

As every year, IAH Executive request a memory of activities from Commissions ([annual reports](#)). We are drafting ours now.



Please, if you kindly have any contribution, let us know via [Enrique F. Escalante](#).

European Guidelines document on MAR from the Common implementation Strategy (CIS), working group on groundwater

In Sep 25th the Common implementation Strategy (CIS) Groundwater group have published the European Guidelines document INCLUDING ALMOST ALL OUR IAH-MAR COMMISSION INPUTS (the document moved around from 2023 July, submitting participants inputs by 2023 November). Our IAH-MAR contributions have been listened and heeded, and also, from MARSOL/UT project partners.

The document, final version, should be posted this week - as the Commission were making the final edits (like front page, document number etc.). In the meantime, please, check this link: <https://circabc.europa.eu/ui/group/9ab5926d-bed4-4322-9aa7-9964bbe8312d/library/009c6b9f-3773-4592-ad79-3503dbf6d07f/details>

Written by Manuel Sapiano. Congratulation to Manuel and the CIS GW group for this release.

**COMMON IMPLEMENTATION STRATEGY FOR
THE WATER FRAMEWORK DIRECTIVE AND
THE FLOODS DIRECTIVE**



Technical Document No. XX
**Managed Aquifer Recharge (MAR) under the Water
Framework Directive**
Date 25.09.2024

Foreword

This document is a deliverable of the CIS working group GROUNDWATER. It was developed and drafted by a core-group of experts, members of the same working group.

It outlines the regulatory framework for Managed Aquifer Recharge (MAR) established through the EU Water Framework and Groundwater Directives, with the aim of ensuring the adoption of safe MAR techniques in the EU. It builds on the input and feedback from a wide range of experts and stakeholders that have been involved through meetings, workshops, and written consultation, without binding them in any way to this content. The document has also been discussed with the MAR Commission of the International Association of Hydrogeologists who have provided important support from a technical perspective.

The document is therefore intended to inform stakeholders in EU Member States such as policy makers, regulators, operators in the water sector, academia and environmental organisations on how the regulatory provisions of these two Directives can be applied to ensure the safe application of MAR techniques. The document can also facilitate a continued discussion on the future development of regulatory frameworks, including exchanges with stakeholders beyond the European Union, to ensure that MAR is increasingly considered as a safe technique used for groundwater management worldwide. The outcomes of the document should therefore not be considered as introducing mandatory provisions for the regulation of MAR (the document does not introduce any legislative or regulatory provisions) but more as presenting recommendations on the development of effective regulatory frameworks for ensuring the safe application of MAR techniques.

IAH Technical insight Series. Co-MAR yellow sheet

The IAH Executive have just published the Yellow Sheet for the TIS series entitled: Co-Managed Aquifer Recharge (Co-MAR), developed by some IAH-MAR Commission members (15 pg).

Technical Insight Series

Co-Managed Aquifer Recharge (CO-MAR)

JANUARY 2025 | ISSUE 2





**International Association
of Hydrogeologists**
the World-wide Groundwater Organisation

Figure 1: Information board about El Carracillo MAR system (Los Arenales Aquifer, Cyl, Spain), specifying the regulation framework and investment. Notice the cost is still expressed in pesetas, indicating that it has become an "adult" Managed Aquifer Recharge (MAR) system.

This series is designed both to inform professionals in other sectors of key interactions with groundwater resources and hydrogeological science, and to guide IAH members in their outreach to related sectors.

Key Messages

- Managed Aquifer Recharge (MAR) is a promising set of techniques to improve integrated water resources management (IWRM), and cope with a variety of water management-related issues.
- International multi-level governance is evolving, from a top-down to a mixed top-down and bottom-up approach.
- The participation of "irrigation communities" or groundwater user's associations can help improve IWRM planning and organization, reinforcing aspects of modern governance through co-design and co-management, i.e. a social inclusion approach.
- The obligation in some countries to formally involve irrigation communities is increasing, offering a valuable representative to discuss and negotiate with water authorities, and helping to create "spaces of trust". These modify the classical decision-making organization, leading to more socially inclusive water management, which can help change social perceptions on roles and responsibilities.
- The participation of stakeholders in decision-making can improve governance, rural development, water security, and therefore IWRM, opening the possibility of a new management approach: the co-managed aquifer recharge (Co-MAR) concept.
- Co-MAR is based on the co-management of end-users in the management of the resources that they use and benefit from, within a multilevel structure and a teamwork approach.

Co-Managed Aquifer Recharge | Technical Insight Series | 1

IAH TIS access: https://iah.org/education/professionals/technical_insight_series

Thank you Marco Petitta, Jane Dotridge..., for your work developing yellow sheets for the community, and Marco, Jane, Catalin, Yan, for your contribution in this release.

NEW MAR-RELATED PUBLICATIONS

MAR AND MAR-RELATED CONFERENCES AND WORKSHOPS

IAH Online Member Alert – December 2024

View more hydrogeology and groundwater community events at <https://iah.org/events> and submit your own at <https://iah.org/submit-an-event>

Hydrogeoday 2025



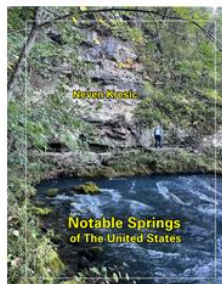
The Hydrogeoday is a day of awareness raising of hydrogeology, held on a weekend close to World Water Day (March 22), and promoted by the Spanish Group of IAH (AIH-GE) since 2017. The initiative consists of free activities, guided by hydrogeologists, and is open to the general public.

AIH-GE and the IAH Council would like to promote and expand Hydrogeoday in other countries. IAH and AIH-GE have produced a fact sheet with more details and advice for organising your own Hydrogeoday event.

You can download this from the IAH website at <https://iah.org/education/professionals/hydrogeoday>.

For more information and to submit an activity, email AIH-GE at aih-ge@aih-ge.org.

New, open-access book on springs of the US available by former Co-Chair of the Karst Commission, Neven Kresic



This book explores large and thermal springs in the United States: their origin, characteristics, historical and current uses, and significance. The book is freely available from the IAH website. Click [here](#) to find out more and download the pdf.

Pieces of news on MAR have been included.

Access the latest IAH-MAR Enews: <https://iah.org/groundwater-eneews>

Symposium on Managed Aquifer Recharge in Middle East, Amman, Jordan, 19.11.2024

The Middle East and North Africa (MENA) region is one of the most water-stressed worldwide and consequently sustainable management of its scarce water resources is essential. To contribute to this goal, the Division of Water Sciences at the University of Applied Sciences Dresden (HTW Dresden/HTWD) and other German and MENA partners are collaborating on research and implementation aspects related to managing groundwater recharge (managed aquifer recharge / MAR), including its various techniques such as the application of the natural treatment process of riverbank filtration (RBF), and to train higher education, research and non-higher education stakeholders involved in the water sector in the MENA region. Coordinated by HTWD, the activities have taken place since 2021 within the framework of two projects, namely FEMAR (www.htw-dresden.de/femar) funded within the German Federal Ministry of Education and Research's "Middle East Regional Water Research Cooperation Program" (2021–2024) and MENAWAT (www.htw-dresden.de/menawat) funded within the "Ta'ziz Science Cooperations" (2023–2025) by the German Academic Exchange Service (DAAD) with funds from the German Federal Foreign Office.

The FEMAR results were presented to representatives from academia, international NGOs/development agencies, authorities and farmers at the "Symposium on MAR in Middle East" in Amman on 19 November 2024. In Lebanon's Upper Litani river basin, investigations by the American University of Beirut (AUB, Groundwater Hydrology group) have shown the technical feasibility to store excess water from springs in winter in the underlying aquifer for subsequent use in the dry season. Near Aleppo in Syria, prior treatment of the Quaik river water for irrigation is recommended by the University of Aleppo (UAS, Field Crops Department) to enhance crop yield, improve fodder quality and to mitigate soil pollution. Numerical groundwater flow modelling studies by the Institute of Groundwater Management at the TU Dresden (TUD) in collaboration with Lebanese and Syrian partners improved the hydrogeological understanding of their study areas. TUD developed an automated, generalizable and scalable multi-model framework based on open-source tools to model complex hydrogeological conditions such as karst systems. Collaborative research by the Royal Scientific Society (RSS, Emerging Pollutants Research Group), HTWD and the German SME Umweltbüro GmbH Vogtland (UBV) at a RBF monitoring well cross-section constructed in the FEMAR project at a site by the highly polluted Zarqa River in Jordan showed that the application of RBF in shallow fluvial sediments has the potential to reduce risks to crops and the food chain from waterborne pathogens and organic trace pollutants. More details can be found here.

www.fona.de/medien/pdf/Proceedings_MEWAC_Final_ModuleB.pdf?m=1733301177



Prof. Thomas Grischek exemplifies the application of MAR for drinking water production in Dresden at the “Symposium on MAR in Middle East” in Amman on 19.11.2024 (source HTWD).

Managed Aquifer Recharge Autumn School, Madaba (Amman, Jordan), 20.-21.11.2024

27 persons, including 16 under and post-graduate students and PhD researchers from Jordan, Tunisia and Germany participated in the “Managed Aquifer Recharge Autumn School” jointly organised by the Division of Water Sciences at the University of Applied Sciences Dresden (HTWD) and the School of Natural Resources Engineering and Management (SNREM) at the German Jordanian University (GJU) in Madaba (near Amman, Jordan) on 20-21 November 2024 as a skill and capacity enhancement activity of the MENAWAT project (<https://www.gju.edu.jo/news/gju-hosts-autumn-school-managed-aquifer-recharge-part-menawat-project-19506>).

Resource persons from TUD and SME UBV (Germany), Yarmouk University (Jordan), the Tunisian Ecole Nationale D’Ingenieurs in Sfax, and HTWD shared their expertise on topics ranging from hydraulics, water quality and numerical groundwater modelling to well drilling and construction and site investigation, monitoring and assessment techniques including the application of remote sensing methods. The autumn school was opened with a guest-presentation by the Ta’ziz Program Officer of the DAAD’s regional office in Amman focusing on regionally relevant higher education funding programs. The autumn school culminated with field work for monitoring water levels and water quality parameters and collecting water and soil samples from a RBF case study site for producing safe water for irrigation by the Zarqa River on 22 November.



Dr. Kalwa (TU Dresden) explains the effect of subsurface heterogeneities on MAR to participants of the “Managed Aquifer Recharge Autumn School” in GJU, Amman, 11/2024 (source HTWD).



Water sampling from a monitoring well and measurement of water quality parameters at a RBF site by the Zarqa River, 22 November 2024 (source HTWD)

Written by C. Sandhu and T. Grischek, Division of Water Sciences, HTW Dresden, 23.01.2025. Thank you, both, for reporting.

UPCOMING EVENTS

Seminar on Earth Science Perspective on Groundwater Sustainability - Recent Advances. IAH India

1-2 March 2025 at Jaipur, Rajasthan, India. (Hybrid Mode for Outside of India Researchers). MAR in session 2.



**Indian National Chapter of the International
Association of Hydrogeologists**

**Seminar
on
Earth Science Perspective on Groundwater
Sustainability - Recent Advances**

**1 -2 March 2025 at Jaipur, Rajasthan, India
(Hybrid Mode for Outside of India Researchers)**

In an era of climate change, rapid urbanisation and ecosystem degradation, groundwater sustainability has emerged as one of the most pressing challenges facing the Earth System. With approximately 2 billion people relying on groundwater resources for their daily needs, understanding its sustainability is crucial for ecosystems, economies, and communities alike.

Join us for a comprehensive seminar that brings experts in Earth Science, hydrology, and sustainability management to the fore. Delving into the critical issues surrounding groundwater resource management, the Seminar provides an opportunity to learn about the latest scientific research and explore innovative strategies for ensuring the long-term viability of this vital resource.

Major Themes of the Conference:

- Integrated Hydrogeological Modelling
- Water Quality and Emerging Contaminants
- Coastal, Island and Inland Aquifer System and Aquifer Recharge- Natural & Managed
- Climate Change Impact on Groundwater Resources and Adaptation Strategies
- Innovative techniques, Practices and Policies for Sustainable Groundwater Resource Management
- Rock-Groundwater-Surface Water Interactions
- Geological and Geophysical Methods for Deeper Aquifers
- Land use, Groundwater Depletion and Recovery
- Community Engagement, Stakeholder Involvement and Education

Special Announcement for Young Researchers:

- ✓ A Special Session for Young Researchers below 40 Years.
- ✓ Assistance to a limited number of young researchers depending upon the availability of funds.

Abstract and Registration information:

We are inviting the original/review research from prospective students, researchers, academicians/scientists and professionals relevant to the conference's themes.

| | |
|-------------------|--|
| Call for abstract | up to 31 January 2025 |
| Abstract format | Max. 250 words with max. five keywords in MS format mentioning the title, affiliations, authors and presenter name, email and mobile |
| Submission to | secretaryinciah@gmail.com |
| Registration | Open |
| Registration fee | Researchers Academician/ Scientist outside of India: 100 US dollar |
| Account Name | INC of IAH |
| Bank | Bank of Baroda |
| A/C No | 26430200000544 |
| IFSC Code | BARB0CGOFAR |

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For more information, please contact us

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Prof. B. S. Chaudhary [Secretary, INC-IAH, E: secretaryinciah@gmail.com, M. 7027666480]

Thank you, professor Sinha, for the information.

EUTOPIA Groundwater Workshop and Conference 2025. 12-14 March 2025 at TU Dresden, Germany

EUTOPIA is an Alliance of ten European universities and six global partners committed to developing a new model for integrated higher education institutions through transnational cooperation (<https://eutopia-university.eu/>). As part of the initiative Integrated Connected Community “Digitisation for Hydro-Climatic Risk Reduction”, TU Dresden, in collaboration with VUB organises the second EUTOPIA Groundwater Workshop and Conference 2025. After the first successful event held in Brussels in 2024, this year’s conference will be dedicated to the promotion of managed aquifer

recharge (MAR). The agenda includes a two-day workshop on planning and optimisation of MAR schemes using the web-based modelling platform inowas.com and a roundtable discussion for the identification of research gaps and initiation of future collaborative actions on MAR.



IAH Colombia. VIII Congreso Colombiano de Hidrogeología

19-23 mayo 2025 se tendrá en Bogotá, Colombia, el VIII Congreso Colombiano de Hidrogeología: Aguas subterráneas para una sociedad resiliente. MAR en el tema 4.



TEMA 04 Recarga de acuíferos

La recarga de acuíferos es crucial para la sostenibilidad de los recursos hídricos subterráneos. Esta sesión subrayará metodologías para estimar la recarga natural, identificar áreas potenciales y elaborar esquemas de recarga artificial, poniendo énfasis en la optimización de recursos y el uso de tecnologías innovadoras.

More info: <https://www.asociacioncolombianadehidrogeologos.org/>



IAH-MAR will have a specific session in IAH 2025 congress

Call for abstracts closed February 28th.
The detailed program is not published yet.



More info: <https://iah2025congress.com/>

6th International Summer School on MAR in Dresden

The one-week “6th International Summer School on Managed Aquifer Recharge” (MARISS) will be organised by the Division of Water Sciences at the University of Applied Sciences in Dresden, Germany, in collaboration with the TU Dresden and partners of the MENAWAT project either in the calendar week 34 or 36. It will be the next summer school in the MARISS series of summer schools organised in Dresden after 2023.



MARISS will again be organised by HTWD and partner TUD in Dresden in August/September 2025 (for 1 week either in calendar week 34 or 36, eventually later). More information will be updated on www.htw-dresden.de/mariss

Thank you Dr. Cornelius Sandhu for reporting.

IWRA. XIX World Water Congress on "Water in a Changing World: Innovation and Adaptation". Call for abstracts open

Marrakech, Morocco, 1-5 December 2025. Call for papers and special sessions is now open.

Abstracts submission deadline March 1st.
MAR is included in the thematic area 5.



XIX WORLD WATER CONGRESS
International Water Resources Association (IWRA)
Marrakech, Morocco | 1-5 December 2025

| THEMATIC AREAS: | |
|---|---|
| 1. WATER GOVERNANCE, FINANCING, AND PLANNING DURING UNCERTAINTY | + |
| 2. WATER-ENERGY-FOOD-ECOSYSTEMS NEXUS (WEFE NEXUS) | + |
| 3. WATER SECURITY AND WATER-RELATED RISKS | + |
| 4. TOWARDS INNOVATION AND A SMART WATER FUTURE | + |
| 5. GROUNDWATER CHALLENGES AND OPPORTUNITIES | - |
| <ul style="list-style-type: none"> - Groundwater Assessment: Innovate groundwater data collection methods, improve monitoring technologies, and develop policies to sustain groundwater as a key and strategic resource in water-scarce regions. - Groundwater Data: Explore mechanisms for encouraging and facilitating open sharing of data on groundwater resources, including available storage, flow rates and directions, chemistry, aquifer characteristics, recharge and discharge values, uses and allocations, and other traits. - Participatory Groundwater Management: Foster community and stakeholder involvement and inclusive governance in groundwater management, including in transboundary aquifer basins, to ensure equitable access and long-term sustainability. - Integrated Surface Water and Groundwater Management: Explore the interconnectedness of surface water and groundwater systems and identify mechanisms for implementing integrated management approaches that optimize the use and sustainability of both resources within basins and across borders. - Managed Aquifer Recharge (MAR): Accelerate the adoption of MAR techniques to replenish overdrawn aquifers, develop water banking opportunities, and promote sustainable water resource management. - Impacts of Climate Change on Groundwater Resilience: Examine the influence of climate change on groundwater recharge rates, storage capacity, and availability; identify strategies for enhancing the resilience of groundwater systems to climate variability and extreme weather events. | |
| 6. WATER FOR SUSTAINABLE DEVELOPMENT | + |
| 7. WATER QUALITY AND ONE HEALTH OPPORTUNITIES | + |

More info: <https://worldwatercongress.com/about-us/congress-theme/#1736332941814-6a357f08-d37d>

SEMINARS AND WEBINARS

Nature-based solutions in the WEF NEXUS world. Pisa, Italy, 2024 Oct 23th

The workshop was held on 23rd October 2024 at Scuola Superiore Sant'Anna Pisa within the framework of the EU PRIMA NEXUS-NESS project (<https://prima-nexus-ness.org/>).

The workshop on nature-based solutions in the Water, Energy, Food (WEF) Nexus framework addresses the urgent need for low-energy and low-impact solutions to adapt to climate change. As traditional water management faces challenges from increasing populations and demands for food and energy, coordinated resource management becomes crucial.

The workshop, an outcome of the EU PRIMA NEXUS-NESS project (<https://prima-nexus-ness.org/>), and organised within the WAT-CHANGE Seasonal School (<https://www.santannapisa.it/it/seasonalschool/wat-change-water-ecosystem-climate->

change), aims at introducing the participants to the new growing area of nature-based solutions providing water-related ecosystem services with low-energy demand. In particular, speakers introduce nature-based solutions for water supply, water treatment, and flood risk mitigation such as river restoration, constructed wetlands, and sustainable drainage systems for urban and rural environments. The workshop presentations offer the possibility, beside showcasing technical solutions, to discuss ethical and gender issues, the innovation and market perspective, and to discuss the state of the application of nature-based solutions in the WEF Nexus world.

Presentations given at the workshop can be downloaded by signing up at:
<https://www.nexushare.org/en/signup>



Presentations´ link:
<https://www.nexushare.org/en/global/articles/77>

We hope to have you next year at our 4th workshop on NbS in the framework of the WAT-CHANGE Seasonal School:
<https://www.santannapisa.it/en/seasonalschool/wat-change-water-ecosystem-climate-change>

Thank you, Rudy Rossetto, for reporting.

IMMINENT. New IAH-MAR webinar series. Ground zero: February 11st, 16 h CET

As committed in 2024´s October newsletter... we announce the upcoming... IAH-MAR webinar series.

First webinar: Tuesday February 11st. 16 – 17:30 h CET:



The banner features a dark blue background with white wavy lines. At the top left is the IAH-AIH logo and text. In the center, the title 'Online MAR Seminars' is in large white font, followed by '#1. Introduction to managed aquifer recharge' in orange. Below this, the date and time 'Tuesday, 11 Feb 2025, 4:00 – 5:30 pm CET' are shown in a blue box, and the URL 'https://recharge.iah.org/online-mar-seminars' is in white. Three circular portraits of speakers are arranged horizontally. Below each portrait is their name, affiliation, and a quote. A QR code is in the top right corner.

 International Association
of Hydrogeologists
the World-wide Groundwater Organisation
IAH Commission on
Managing Aquifer Recharge

Online MAR Seminars

#1. Introduction to managed aquifer recharge

Tuesday, 11 Feb 2025, 4:00 – 5:30 pm CET

<https://recharge.iah.org/online-mar-seminars>



CATALIN STEFAN
Technische Universität Dresden
Germany

"Implementation of managed aquifer recharge (MAR) worldwide – the MAR portal"



ENRIQUE FERNÁNDEZ ESCALANTE
TRAGSA Group
Spain

"Managed aquifer recharge (MAR): Classification and inventory of typologies at the international level"



YAN ZHENG
Southern University of Science
and Technology
China

"The 21st century water quality challenges for managed aquifer recharge: towards a risk-based regulatory approach"

PROGRAM OF THE IAH-MAR WEBINAR ZERO (INTRODUCTION TO MANAGED AQUIFER RECHARGE).

- 1- Dr. Catalin Stefan:
Implementation of managed aquifer recharge (MAR) worldwide – the MAR portal. 20 min + 5 Q&A
- 2- Dr. Enrique Fernández Escalante:
Managed aquifer recharge (MAR). Classification and inventory of typologies at the international level. 20 min + 5 Q&A.
- 3- Dr. Yan Zheng:
The 21st century water quality challenges for managed aquifer recharge: towards a risk-based regulatory approach. 20 min + 5 Q&A.
- 4- Debate: Open micro. 15 min.

Please, share with interested “MARers”.

We intend having at least six of 90 minutes during 2025. IAH-MAR members are invited to participate. Please, consider proposing a title for a future slot and send your suggestion to Catalin Stefan.

A new section has been prepared in our MAR-site: <https://recharge.iah.org/online-mar-seminars>

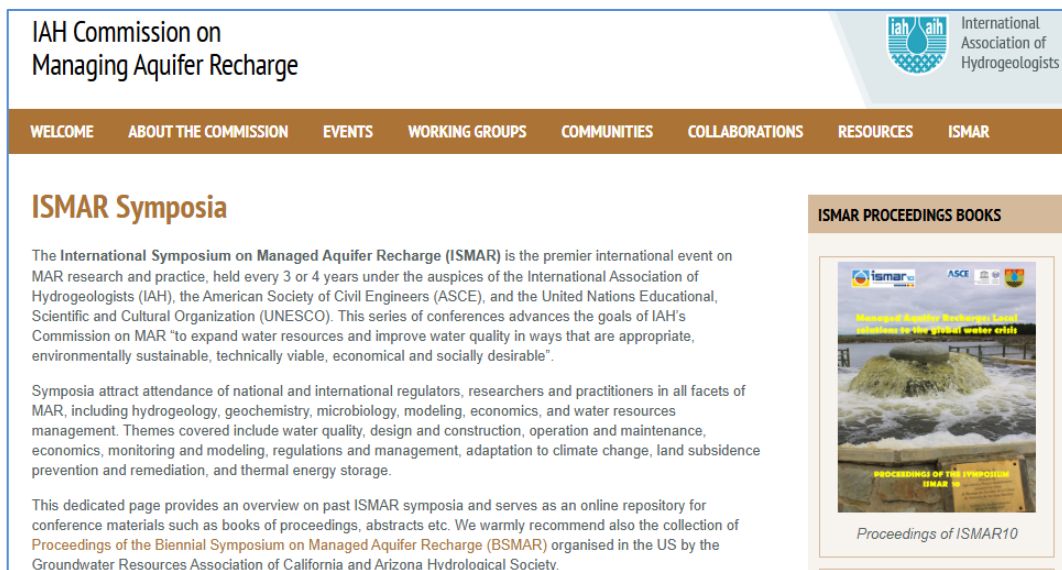
NEW MAR OR MAR-RELATED ACTIVITIES

Gathering photos from ISAR 1, ISAR 2, TISAR 98, to post a gallery in our website, PLEASE...

The IAH MAR commission website includes an ISMAR-related section in which all information gathered from our eminent conferences. IAH-MAR co-chairs, and thanks to the suggestion of ISMAR 12 organizers, are about to post a photo album (attending carefully IPRs) with shots from all previous ISMARs. A disclaimer will be posted too.

So, **we kindly request contributions from those of you**, probably with grey hair, who attended “ISMAR” 1-2-3, to provide some contributions for the community. We STILL do not have anyone...

<https://recharge.iah.org/ismar>



The screenshot shows the website header with the IAH/AIH logo and the text "International Association of Hydrogeologists". Below the header is a navigation menu with items: WELCOME, ABOUT THE COMMISSION, EVENTS, WORKING GROUPS, COMMUNITIES, COLLABORATIONS, RESOURCES, and ISMAR. The main content area is titled "ISMAR Symposia" and contains the following text:

The International Symposium on Managed Aquifer Recharge (ISMAR) is the premier international event on MAR research and practice, held every 3 or 4 years under the auspices of the International Association of Hydrogeologists (IAH), the American Society of Civil Engineers (ASCE), and the United Nations Educational, Scientific and Cultural Organization (UNESCO). This series of conferences advances the goals of IAH's Commission on MAR "to expand water resources and improve water quality in ways that are appropriate, environmentally sustainable, technically viable, economical and socially desirable".

Symposia attract attendance of national and international regulators, researchers and practitioners in all facets of MAR, including hydrogeology, geochemistry, microbiology, modeling, economics, and water resources management. Themes covered include water quality, design and construction, operation and maintenance, economics, monitoring and modeling, regulations and management, adaptation to climate change, land subsidence prevention and remediation, and thermal energy storage.

This dedicated page provides an overview on past ISMAR symposia and serves as an online repository for conference materials such as books of proceedings, abstracts etc. We warmly recommend also the collection of Proceedings of the Biennial Symposium on Managed Aquifer Recharge (BSMAR) organised in the US by the Groundwater Resources Association of California and Arizona Hydrological Society.

On the right side of the screenshot, there is a section titled "ISMAR PROCEEDINGS BOOKS" featuring a book cover for "Proceedings of ISMAR10" with the subtitle "Managed Aquifer Recharge: Current Solutions to our global water crisis".

Please, contact a co-chair or email [dinamar \(a\) tragsa.es](mailto:dinamar@tragsa.es) including these old captures. Thank you in advance...

MORE ACTION

News on MAR in South Africa

Aquifer Recharge Plant / SALT Architects

<https://www.archdaily.com/1025978/aquifer-recharge-plant-salt-architects>

News on MAR in Mexican press

MAR in the Mexican Media (in Spanish).

More news on MAR in the Mexican press. More intentions than implementations (like here)

<https://suracapulco.mx/impreso/8/el-presupuesto-indica-que-el-abasto-de-agua-en-la-cdmx-seguira-sin-sustentabilidad-advierte-especialista/>

MAR for springs maintenance...

<https://www.e-consulta.com/opinion/2024-12-09/plan-nacional-hidrico-la-nueva-esperanza-del-agua-ii>

Some MAYors against MAR in Mexico

<https://www.reforma.com/dificultan-4-alcaldias-la-recarga-de-acuifero/ar2931863>

Conferencia D^{ra} Blanca Jimenez "Manejo de recursos hídricos"

Jueves, 28 de noviembre · 10:00 – 11:00am

<https://youtu.be/zaWsAdxh3-o?si=8LOGziJL48x4LZwd>

Thank you, Miguel Ángel González, for reporting.

MAR-related news in Chile press (in Spanish)

Combatiendo la crisis hídrica: Descubre las 5 líneas de desarrollo de la mano del Consorcio Quitai Anko (in Spanish).

<https://www.mediabanco.com/combatiendo-la-crisis-hidrica-descubre-las-5-lineas-de-desarrollo-de-la-mano-del-consorcio-quitai-anko/>

Some more on-going projects on MAR in Europe

- [MARCLAIMED](#) -is another project that I learned about, one case study is Comporta WWTP in Portugal of LNEC.



<https://marclaimed.eu/marclaimed-comporta-demo-site-to-be-showcased-at-the-14th-seminar-on-groundwater/>

- CRossWATER: a new EU-funded project on groundwater-surface water management and climate change adaptation.

https://tu-dresden.de/bu/umwelt/hydro/igw/forschung/projekte/crosswater-transboundary-groundwater-management-for-a-climate-resilient-water-supply-in-the-european-city-of-goerlitz-zgorzelec?set_language=en



For more info, visit their websites, please.

Coordinators or communication partners are invited to report us their main activities.

Tucson using goats to keep aquifer recharge basins clear

Some audio-articles from Tucson (USA) on line, e.g., Tucson Using Goats to Keep Aquifer Recharge Basins Clear ☺

<https://www.signalsaz.com/audio-articles/player/audio-article-135271>

New MAR pilot plant in Germany

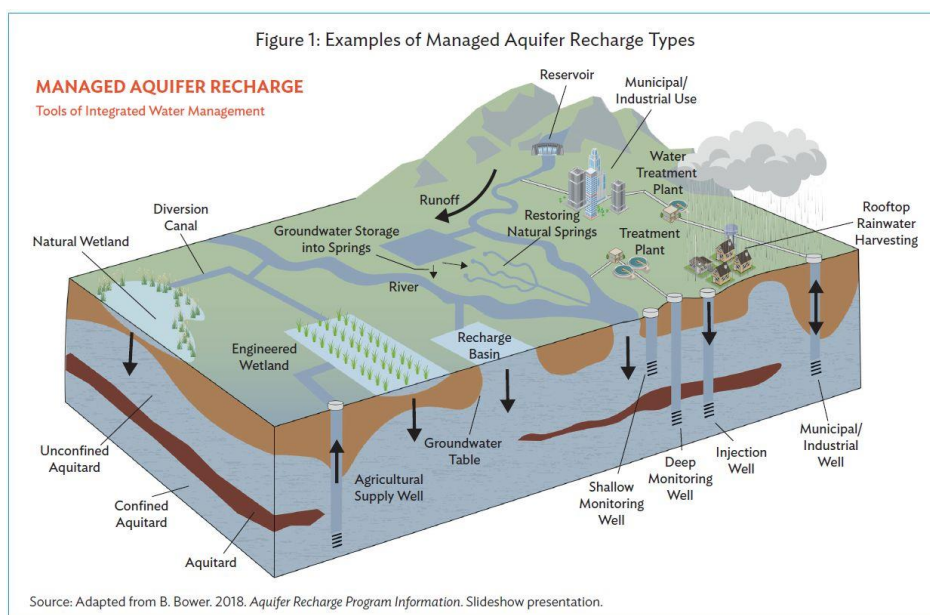
In Bavaria, Germany, the largest suppliers of hops to breweries are located in an area called Hallertau. Due to the high irrigation demand for these hop gardens, the shallow aquifers have been put under stress. While the groundwater levels have fallen over the past ten years, there have been several serious floods which have shown inadequate protection.



The new pilot plant was built at this location as part of the Smart-SWS project funded by the German Federal Ministry of Education and Research. The aim of the project is to combine protection against floods and droughts by infiltrating excess water into an aquifer and storing it underground. The pilot plant consists of an extraction system from an existing water retention basin, treatment units, an infiltration well, and a downstream monitoring well. The entire system is continuously monitored, and an automatic control system is currently being developed. More information about the project is available at <https://www.smart-sws.de/>.

Thank you, M. Sc. Lea Augustin, for reporting

Examples of managed aquifer recharge types



Whatsapp group on Aquifer Recharge Management

The group congregates 191 participants today. Ask the invitation link by email, pls, as it changes eventually.



Previous IAH-MAR Newsletters

Previous newsletters access: <https://recharge.iah.org/newsletters>

IAH-MAR Commission on Twitter (X)



@IAHMARCom

<https://twitter.com/IAHMARCom>

IAH-MAR Commission's sister Web sites

<http://china-mar.ujn.edu.cn/>



<https://dinamar.tragsa.es/>





@4dina_mar

<https://www.linkedin.com/groups/4690290/> (552 members)

IAH MAR Commission Forum

Please, remember you can book freely in the IAH MAR Commission Forum:
<https://lists.flinders.edu.au/mailman/listinfo/iah-mar.listcgs>

The IAH MAR list has 356 members today... you are invited to join!

That's all by now... **please, keep reporting** (dinamar@tragsa.es).

Dr. Enrique Fernández Escalante, on behalf of the IAH MAR Commission co-chairs,
Catalin Stefan and Yan Zheng.

2025 January 24th
