

IAH MAR Commission Newsletter. Issue nº 46. 2024 October-November

Dear MARers, attached some information about Managed Aquifer Recharge.

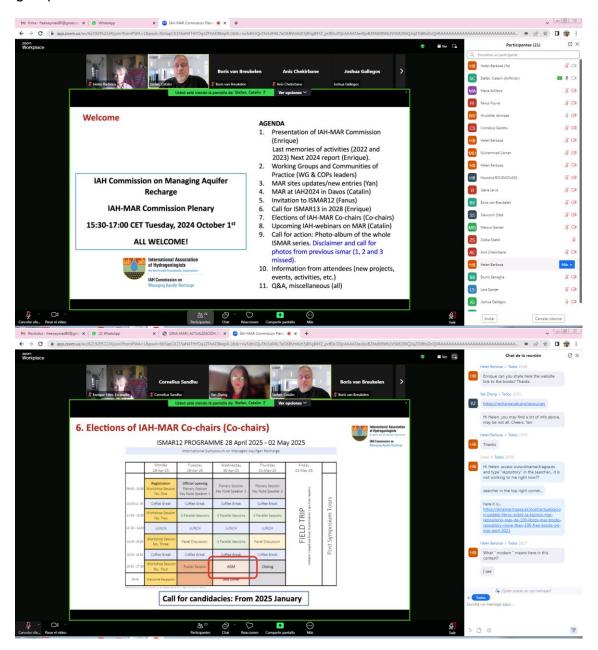
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- IAH-MAR Commission's sister Web sites
- IAH MAR Commission Forum



The 2024 IAH-MAR Commission plenary (online). Has taken place in October 1st

Our annual plenary has taken place last October. At least 32 members or the MAR family participated actively, providing suggestions and studying the direction of the group.



Please, access the plenary presentation in our website: https://recharge.iah.org/files/2024/10/2024-10-01-IAH-MAR-Commission-plenary.pdf

Previous plenaries notes at: https://recharge.iah.org/recent-iah-mar-plenaries



ISMAR 12 novelties

"From Theory to Implementation and Operation"

28 April - 2 May 2025 - Stellenbosch, South Africa

Five months to go... our main conference and meeting point is approaching.

The main Theme of ISMAR 12 is "From Theory to Implementation and Operation", with eight Sub-themes that address various MAR methodologies, applications, and developments:

The organizers have just released their third newsletter: https://ismar12.org.za/wp-content/uploads/2024/11/ISMAR12 Newsletter3.pdf









Please register and complete payment by

20 November to secure the early bird registration
rate. For confirmed presenting authors, it is essentia

to register by 20 November and the registration fee must be paid by 5 December 2024 to ensure your presentation is included in the official program.

Symposium Programme

We received an outstanding response to our call for abstracts, with over 140 submissions. The Scientific Committee, led by Nicolette Vermaak, has completed the review process, and confirmation emails have been sent to all presenting authors. We are looking forward to a dynamic programme that includes oral and poster sessions, workshops, and panel discussions.

Included in the main 3 day symposium programme are the following sessions:

- Integrated strategies in design of new MAR schemes to minimise clogging
- Analysis of implemented MAR scheme failure: selected global case studies
- Part 1: Overview of American Society of Engineers (ASCE) Standard Guidelines for Managed Aquifer Recharge Surface Spreading Facilities (ASCE/EWRI 69-19): Managed Aquifer Recharge Concepts and Planning.
- Part 2: American Society of Engineers (ASCE) Standard Guidelines for Managed Aquifer Recharge Surface Spreading Facilities (ASCE/EWRI 69-19): Design, O&M, Data Collection and Site Characterization Methods
- Recent advancements in MAR feasibility mapping

Panel discussions:

- The microbiome and MAR
- MAR in Africa





Register for the Symposium (check the web site for "early bird" registration deadline) to secure your attendance at the workshops, presentations, networking, and tours. The Sponsorship/Exhibition Prospectus are available in the website. Three exciting excursions are planned for Day 5, and much more...

More info: https://ismar12.org.za/

Thank you Fanus Fourie, ISMAR 12 chairman, and team, for the organizing effort.

ISMAR12: Herman Bouwer Award, call for nominations

AHS and GRA created this award in honor of Dr. Herman Bouwer's significant role in advancing our understanding of MAR. It is presented at two recharge symposia: BSMAR and ISMAR (the International Symposium on MAR). The winner is selected by a committee that includes prior awardees.





The criteria for nomination is broad and includes any person or agency that has significantly advanced the understanding or utilization of MAR.

Early on the selection committee was a combination of GRA and AHS members, but now that there are five award winners, they are the committee that determines the award recipient.

To know more about the award: https://ahssymposium.org/bsmar/program/herman-bouwer-award/

Nomination form: https://azhydrosoc.org/about-ahs/nomination-form/

Prior winners include:

2014: Bob Rice BSMAR14

2016: Mario Lluria ISMAR9/BSMAR15

2018: David Pyne BSMAR162022: Peter Dillon ISMAR112024: Mark Cross BSMAR18

2025: TBD, ISMAR12

PUBLICATIONS ABOUT MAR

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

In Sep 25th the CIS 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 November). Our contributions have been listened and heeded, and also, from MARSOL/UT projects.



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 regulatory 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.

The expected Directive on MAR for agricultural uses at European level would have been the best solution to move forward, as two countries vetoed it last year when trying to approve the text. That is why the European guidelines for MAR have been published instead.

The previous link to download did not work whilst writing this Bulletin, but we'll stand up to share it ASAP:

https://circabc.europa.eu/ui/group/9ab5926d-bed4-4322-9aa7-9964bbe8312d/library/1be725d4-4715-40d1-aaad-41033da14141/details

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

MAR books repository updated 2024 October 2nd (DINAMAR)

We keep gathering those books of hydrogeology, specially dedicated to MAR technique which are available on the Internet for free. It's a repository for technicians and practitioners where they could meet a library to attend their inquiries.





Access the updated collection and access more than 120 free books on MAR: https://dinamar.tragsa.es/post/actualizacion-update-libros-sobre-la-tecnica-mar-repositorio-mas-de-120-libros

To report broken links, please: dinamar (a) tragsa.es

IAH Technical insight Series. Co-MAR yellow sheet

The IAH Executive has recently approved the publication of the Yellow Sheet for the TIS series entitled: Co-Managed Aquifer Recharge (Co-MAR), proposed by the IAH-MAR Commission. We hope it will be available in the next Newsletter.

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

Thank you Marco Petitta, Jane Dotridge..., for such important action developing yellow sheets for the benefit of the community.

IWMI water policy brief. Issue 44. Managed aquifer recharge applications for climate adaptation in developing countries: Mounting evidence, abundant potential

Managed aquifer recharge (MAR) is a well-established technique that enhances groundwater storage during wet periods, thereby making water available during dry periods. Four case studies from Africa and Asia reviewed in this brief demonstrate the concrete and sustained benefits derived from MAR...





Access the Bulletin: https://hdl.handle.net/10568/158162
Download the full publication:

https://cgspace.cgiar.org/server/api/core/bitstreams/2dd445f3-fbe2-43f1-b186-854dd26911e9/content

Thank you, Paul Pavelic, for reporting.

Managed Aquifer Recharge in Mongolia: Policy Recommendations and Lessons Learned from Pilot Applications

ADB Policy Brief on MAR in Mongolia. This brief shares lessons from pilot projects to replenish Mongolia's aquifers to help offset rising demand for water as climate change threatens to worsen shortages.



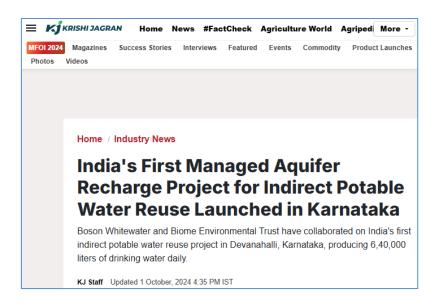
NO. 263 **ADB BRIEFS OCTOBER** 2023 **KEY POINTS** Managed Aquifer Recharge in · Deliberately replenishing Mongolia: Policy Recommendations aquifers using managed aquifer recharge (MAR) has and Lessons Learned from Pilot the potential to mitigate the effects of Mongolia's heavy **Applications** reliance on groundwater because of growing water demands that exceed natural recharge. Mingyuan Fan · Pilots supported by the Principal Water Resources Specialist Asian Development Bank, particularly the Baganuur Agriculture, Food, Nature, and project, have demonstrated Rural Development Sector Office the potential of MAR to Sectors Group enhance groundwater Asian Development Bank resources in Mongolia.

Dated Sep 2023, we didn't know until now... We usually depend on reporting authors.

Download: https://www.adb.org/sites/default/files/publication/917341/adb-brief-263-managed-aquifer-recharge-mongolia.pdf

Thank you, Catalin Stefan, for your finding surfing the Web (Wild World of Weirdos, as you say smiling ③).

India's First Managed Aquifer Recharge Project for Indirect Potable Water Reuse Launched in Karnataka (press article)



Access the publication:

https://krishijagran.com/industry-news/indias-first-managed-aquifer-recharge-project-for-indirect-potable-water-reuse-launched-in-karnataka/



Two articles on MAR in Italy press (in Italian)



https://www.lecronachelucane.it/2024/11/26/mar-managed-aquifer-recharge-poco-utilizzato-in-italia/

https://www.rigeneriamoterritorio.it/contro-la-siccita-ecco-come-funziona-la-ricarica-controllata-della-falda/

NEW MAR-RELATED PUBLICATIONS

Groundwater Recharge Potential Zonation and Quality Status Assessment Using Smart Sensors and Soft Computation Techniques. IWA Call of papers

This Special Issue desires to publish application of smart and novel techniques in the management of groundwater basins all over the world. Identification or prediction of the Ground Water Recharge (GWR) zones with the help of innovative arrangement or development of smart-sensors and by the application of soft computation techniques (AI, ML, MCDM, NBO etc.) will be the main focus of the Special Issue.

More info:

https://iwaponline.com/ws/pages/si hydroinformatics in groundwater management

Thank you, Peter Dillon, for reporting.



MAR AND MAR-RELATED CONFERENCES AND WORKSHOPS

IAH Online Member Alert – October and November 2024

Highlighted below is IAH's hugely successful World Groundwater Congress, which took place in Davos, Switzerland this year.

After Davos, our annual congress will take place in Melbourne, Australia next year, and then in Budapest, Hungary in 2026. Could your national chapter be the host for IAH's 2027 Congress? Let us know - or find out more - at info@iah.org. .../...



Also, pieces of news on MAR have been included.

Access the latest IAH-MAR Enews: https://iah.org/groundwater-enews

MEWAC - FEMAR Symposium. Amman, Jordan, 19 Nov 2024

As announced in previous newsletters, the Project MEWAC-FEMAR members have organized their first conference, which has finished successfully.





We expect organizers will share the materials and we'll inform it.

Thank you Dr. Othman Almashagbeh for reporting.

Call for proposals to organize ISMAR 13 still open

Have you thought about hosting an ISMAR? Please, consider hosting ISMAR 13 and contact an IAH-MAR co-chair...





By the moment, we have received news from two potential hosting countries, and another one is considering it.

In the next newsletter we'll inform about the procedure to select the country that will welcome us in 2028 for ISMAR 13! You may present your expression of interest until mid 2024 December.

Upcoming session on MAR at AGU24 (13 December)

H51C - Advances in Managed Aguifer Recharge for Groundwater Sustainability.

Promissing session led by Helen Dahlke, with six oral presentations.

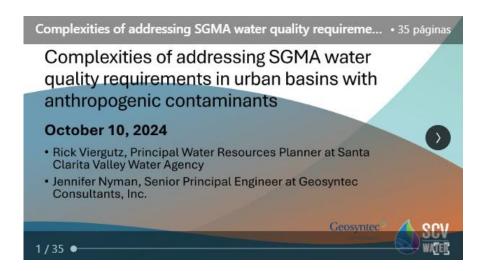


Read more: https://agu.confex.com/agu/agu24/meetingapp.cgi/Session/234900

SEMINARS AND WEBINARS

Santa Clarita Valley Water District, CA, USA. Complexity of adressing SGMA water Quality requirements

Navigating the groundwater quality provisions of the Sustainable Groundwater Management Act (SGMA) presents significant challenges. Achieving compliance will require time and consistent application of SGMA regulations in the Groundwater Sustainability Plans (GSPs)...



Presentation accessible at:

https://www.linkedin.com/feed/update/urn:li:ugcPost:7265831315332034561/

Thank you, Adam Hutchinson, for reporting.



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

Webinar hosted by Santa Anna Scuola in relation with the NEXUS-NESS project (PRIMA call).

While climate change is posing at risk traditional water resources management, there is the urgent need to devise low-energy and low-impact solutions to adapt the environment, societies and economies to this threat



More info: https://www.santannapisa.it/it/evento/nature-based-solutions-wef-nexus-world-application-case-studies-and-market-perspectives

Project website: https://prima-nexus-ness.org/

Results summary: https://www.linkedin.com/posts/rudy-rossetto-45a0922 primanexusness-italynel-activity-7247942605735350272CA7c/?utm source=share&utm medium=member desktop





Thank you Rudy Rossetto for reporting.

INMINENT!!! GEOSS webinar about "The Effectiveness of the MAR Scheme at a Mine along the West Coast of South Africa"

This talk will examine the effectiveness of the managed aquifer recharge (MAR) scheme and its impact on the aquifer. Given the deposit's sandy nature, with a low percentage of thin, hard rock lenses, mining is conducted using conventional open-pit methods.



For those interested, the Elandsfontein Mine MAR Scheme is included in one of the Friday field trips for ISMAR 12, in April.

The webinar through TDI that is linked here is free to attend live, but the recording is only available to TDI members after that.



Webinar info and access:

https://www.linkedin.com/posts/thedewateringinstitute_dewateringinst-dewatering-groundwater-activity-7265319123033673729-esdO?utm_source=share&utm_medium=member_desktop

Thank you, Kess Murray, for reporting.

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

After contacting organizers to ask for a MAR session in IAH 2025 Melbourne, we have received this kind response:

Fantastic Catalin,

Yes, we definitely hope to see MAR as a key topic at the congress – there are a few good examples of MAR schemes in the Melbourne region and plenty of interest within the local industry and research community. Your support in helping generate interest in the congress and encouraging a good number of abstracts, and then finding willing abstract reviewers and session chairs will be much appreciated.



Our gratitude to the Australian organizers, and best wishes for this preliminary stage...

NEW MAR OR MAR-RELATED ACTIVITIES

San Bernardino Valley activity. CA, USA

New recharge facilities that are designed to mimic natural flow and enhance endangered species habitat.





More Info: https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_what-a-tour-thanks-to-san-bernardino-valley-activity-7257851349973762048-
https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_what-a-tour-thanks-to-san-bernardino-valley-activity-7257851349973762048-
https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_what-a-tour-thanks-to-san-bernardino-valley-activity-7257851349973762048-">https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_what-a-tour-thanks-to-san-bernardino-valley-activity-7257851349973762048-
https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_what-a-tour-thanks-to-san-bernardino-valley-activity-7257851349973762048-

Thank you, Adam Hutchinson, for the post.

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

The IAH MAR commission website includes an ISMAR-related section in which all information gathered from our eminent conferences.

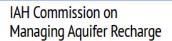
IAH-MAR co-chairs, and thanks to the suggestion of ISMAR 12 organizers, are about to post a photo album (attending carefully IPRs) with shots from all previous ISMARs. A disclaimer will be posted too.

So, we kindly request contributions from those of you, probably with grey hear, who attended "ISMAR" 1-2-3, to provide some contributions for the community. By the moment we do not have anyone...

Please, contact a co-chair or email dinamar (a) tragsa.es including these old captures. Thank you in advance...

https://recharge.iah.org/ismar







WELCOME ABOUT THE COMMISSION EVENTS WORKING GROUPS COMMUNITIES COLLABORATIONS RESOURCES ISMAR

ISMAR Symposia

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.



MORE ACTION

Podcast, Groundwater talks, MAR in southern Africa



Listen to our Groundwater Talks interview with Sumaya Israel and Eberhard Braune, authors of the Book Managed Aquifer Recharge: Southern Africa: https://open.spotify.com/show/3670QwaYJqjCYRIxRAPocV



Download the book now and share this post with your colleagues. Let's spread groundwater knowledge! https://lnkd.in/du4QSYm7

More takeaways from "The Groundwater Project": https://gw-project.org/groundwater-talks-takeaways/

Some on-going projects on MAR in Europe

- LIFE REMAR spotted a new MAR project in Barcelona.
- <u>MARCLAIMED</u> -is another project that I learned about, one case study is Comporta WWTP in Portugal of LNEC
- CLIMEX-PE -is a project of our Hungarian folks (Judit Mádl-Szőnyi).

For more info, visit their websites, please. Coordinators are invited to report their activities.

GEUS, DEPA and the Danish Embassy in India have shared their expertise on managed aquifer recharge (MAR) with an Indian delegation

Representatives from the CGWB delegation also gave a presentation on some of the ambitious initiatives on groundwater management in India which they are in charge of.



Read more: <a href="https://www.linkedin.com/posts/bj%C3%B8rn-kaare-jensen-2802828_monday-we-had-the-pleasure-to-host-a-delegation-activity-7247224857883533312-sDgS/?utm_source=share&utm_medium=member_desktop

Thank you Bjørn Kaare Jensen for reporting.



TDS in Flood MAR conference in Middle East

The speaker Mohammed Gad reported that WST/TDS will play crucial role in ASR and Flood MAR in the region.



Read more:

https://www.linkedin.com/posts/mohammed-gad-176679175_arabwaterforum-asr-floodmar-activity-7242206914812493826-

fE5O/?utm_source=share&utm_medium=member_desktop

Important reply from Mr. Hussein Saeed: Flood-MAR techniques converting flood risks into opportunities for groundwater recharge and managing excess floodwater as well as controlling infiltration, and monitoring the quality of recharged water.

Thank you Mohammed Gad for reporting.

Job opportunity. Assistant Professor in Hydrogeology in Oman

The Applied Geosciences Department at the German University of Technology in Oman is seeking a dedicated and innovative Assistant Professor in Hydrogeology to join our dynamic academic community. This position offers a unique opportunity for a motivated researcher and educator to contribute to our growing focus on water resources, geochemistry, and environmental sustainability.



Assistant Professor in Hydrogeology ageo-081024

Read more: https://oes-careers.com/job/assistant-professor-in-hydrogeology/



Whatsapp group on Aquifer Recharge Management

This is the link to join the group, with 192 participants today, and changed monthly. Please, access the last IAH-MAR newsletter.



Ask the invitation link by email, pls.

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/ (536 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

That's all by now... please, keep reporting (dinamar@tragsa.es). We receive scarce pieces of news from Asia!

Dr. Enrique Fernández Escalante, on behalf of the IAH MAR Commission co-chairs, Catalin Stefan and Yan Zheng. 2024 November 27th