

Dear Ladies and Gentlemen, dear MAR family, good morning!

Please, have a look on these MAR news for 2022 December and the end of the year!

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11st International Symposium on Managed Aquifer Recharge. ISMAR 11's materials

The 11st International Symposium on Managed Aquifer Recharge (ISMAR 11), entitled “*Managed aquifer recharge: A key to sustainability*” has provided plenty of results.

Videos and slides of the presentations (GRAC Website):

<https://www.grac.org/ismar-speaker-presentations/>

The section “ISMAR” of our website, <https://recharge.iah.org/ismar/ismar11>, include some materials produced by the organizers, and by IAH-MAR co-chairs:

ISMAR 11 draft program <https://recharge.iah.org/files/2022/08/ISMAR-Draft-Program.pdf>

ISMAR-11-onsite-guide https://recharge.iah.org/files/2022/08/ISMAR-11-onsite-guide_c.pdf

ISMAR 11 abstract book (160 pg) <https://recharge.iah.org/files/2022/09/ISMAR11-abstracts-book.pdf>

ISMAR 11 presentations and videos (external link) <https://www.grac.org/ismar-speaker-presentations/>

P-ISMAR 11 book (external link to DINAMAR, IAH-MAR's sister site)

<https://dinamar.tragsa.es/file.axd?file=/PDFS/P-ISMAR-11.pdf>

ISMAR-11 field trips <https://recharge.iah.org/files/2022/08/ISMAR-11-Field-Trips2.pdf>

Once again, we thank ISMAR 11 organizers their effort for the MAR community.

NEW MAR PUBLICATIONS

Managed Aquifer Recharge. A key to sustainability. Journal Water special issue. Deadline almost here!

Selected papers on MAR, specially presented at ISMAR 11, are published in this Special Issue of the open-access Journal WATER.

EVERYONE IS INVITED TO SUBMIT! Deadline 2023 January 14th.

Another new paper has been submitted during December, there are already five on line, and some others are coming...

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

Guest editors:

Enrique Fernandez Escalante (Spain)

Catalin Stefan (Germany)

Christopher J. Brown (USA)

June Mirecki (USA)



Publishing cost: 50% of APCs, as exposed in the website.

NGWA has a call for papers for a MAR conference.

Managed Aquifer Recharge: Unleashing Resiliency, Protecting Groundwater Quality (conference #5029)

Date: April 24-25, 2023

Location: San Antonio, Texas



Abstracts are welcomed for 20-minute oral platform presentations and poster presentations. They are due by Monday, January 16, 2023 at 11:59 p.m. ET.

More info:

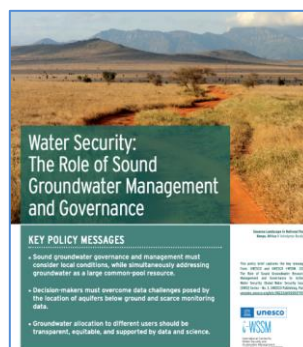
<https://www.ngwa.org/detail/event/2023/04/24/default-calendar/23apr5029>

Thank you Adam Hutchinson for reporting

NEW MAR-RELATED PUBLICATIONS

IWRA's Policy Brief on Water Security

IWRA has just published a Policy Brief on Water Security: The Sound of Groundwater Management and Governance.



Book Access:

<https://www.iwra.org/iwra-policy-brief-no-23/>

MAR CONFERENCES

Report on Australasian Groundwater Conference, Perth, 21-23 Nov 2022

The next quick summary of MAR papers presented at this conference has been reported by Dr. Peter Dillon:

AGC2022 had 490 delegates, 6 keynotes, 259 speakers, 39 posters, 24 exhibitors, and significantly, produced an Indigenous Groundwater Declaration. There were two sessions and a total of ten oral papers dedicated to MAR, two poster papers, and several other papers on scientific methods that could

be applied in MAR. This summary note is intended to inform on relevant papers, rather than to summarise their papers.

Karen Johnston developed risk-based MAR GLs for aquifer reinjection on mine dewatering water in the Pilbara, WA

Shannon Sloan described her Flinders Uni PhD project for assessing use of MAR in mining to accelerate recovery following pit closure

Kerstin Brauns described a metal mine in Victoria that relies on 76ML/y MAR for mine water management that is the most environmentally acceptable alternative and preferred by the local community.

Giovanni Firmani described and demonstrated use of an optimization algorithm for planning multiple MAR locations subject to aquifer head constraints

Claudio Vergara described results of reactive dynamic hydrogeochemical modelling coupled with PEST to predict breakthrough concentrations and times of metals mobilized by MAR at Perth Groundwater replenishment scheme in the Yarragadee deep aquifer. This was calibrated with field data and effects of turning off processes such as sorption and pH buffering were evaluated and alternative candidate treatments of injectant to eliminate the problem were evaluated.

Michael Gogoll described an experiment with **Russell Martin** to use MAR to improve vegetation health on a floodplain of the River Murray. Significant groundwater freshening was achieved without salt water being pushed back into the river.

Stephen Parsons described preliminary investigations to test viability of a 9GL/y recycled water MAR project in SE Melbourne for subsequent irrigation use.

Bryony Osbourn and Adele Lor reviewed anti-microbial resistance considerations for treated wastewater reuse. They found a case (not MAR) where 70% legume crop losses occurred due to anti-fungal resistant genes in irrigation water.

Peter Dillon presented a summary of the MAR policies and institutions to encourage MAR, which is one component of the recent special publication of IAH, "MAR: overview and governance".

Matt Goode spoke of early steps to develop a strategic plan to use pit voids to increase recharge of water from other mines. About 700GL storage will be needed.

A poster paper on monitoring of domestic-scale rainwater recharge via a well and a pit was presented by **Peter Dillon**. He also presented a poster paper by **Yogita Dashora** and team on the optimal capacity of check dams in the catchment of an ephemeral stream in Rajasthan.

Grant Hose spoke on optimizing sampling methods for groundwater ecosystems, including eDNA, as tools for understanding aquifer ecology.

Richard Cresswell described a decision support tool for assessing impacts on groundwater dependent ecosystems (including in-aquifer).

Peter Dillon 23/11/22

Thank you Peter ;)

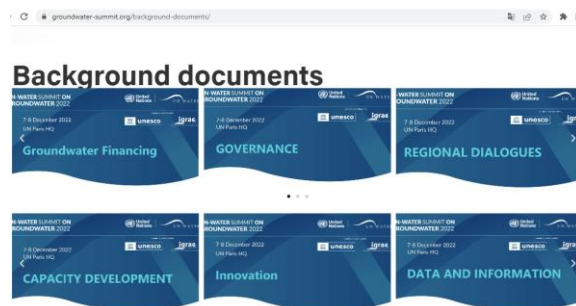
MAR-RELATED CONFERENCES AND SEMINARS

UN-Water Summit on groundwater. Paris, 7th and 8th December 2022

The conference has been a success and plenty of materials have been released by organizers.



IAH participated in three sessions. IAH-MAR has only been present in the innovation section, despite our effort and former application to host a session.



If you missed any sessions, you could replay them here: <https://groundwater-summit.org/recordings/>

You can check all the photos of the Summit and use them including the credit @UNESCO/Lucille Desciaux:

Photos 6 December: <https://flic.kr/s/aHBqjAiQrj>

Photos 7 December: <https://flic.kr/s/aHBqjAiVTZ>

Photos 8 December: <https://flic.kr/s/aHBqjAiWAF>

Watch the highlights video here: <https://youtu.be/VBj03ttuqyY>

More information: www.groundwater-summit.org

UNESCO-IWRA conference: Emerging Pollutants: Protecting Water Quality for the Health of People and the Environment. 2023 January 17th – 19th

The International Water Resources Association (IWRA), in partnership with UNESCO-IHP, organize the [UNESCO-IWRA Online Conference](#) on “Emerging Pollutants: Protecting Water Quality for the Health of People and the Environment”.

The Online Conference will highlight the ways the world can advance knowledge, research, and solutions for managing emerging pollutants to improve and protect water quality in a changing world.



More info and booking: <https://iwraonlineconference.org/>

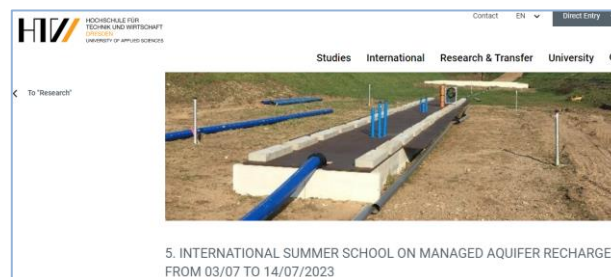
5 International Summer School on Managed Aquifer Recharge, MARISS, from 3 July to 14 July 2023

The next and last free-of-charge summer school, MARISS 2023, will take place from 3 July to 14 July 2023. The deadline for registration is 28 February 2023.

Organizers would appreciate it if you could inform your colleagues, friends, and co-workers about this.

More info:

<https://www.htw-dresden.de/en/university/faculties/civil-engineering/studies/subject-areas/water-sciences/research/planned-research-topics>



UN 2023 water Conference. 22 to 24 March 2023

Conference on the Midterm Comprehensive Review of the Implementation of the Objectives of the International Decade for Action, “Water for Sustainable Development”, 2018–2028 from **22 to 24 March 2023** at the United Nations Headquarters in New York.

IAH-MAR are already proposing any participation in the UN 2023 conference, that will take place in 2023 October.

More info:

<https://indico.un.org/event/1001019/> and <https://sdgs.un.org/conferences/water2023>



SEMINARS

EFG Webinar 'Tackling the 21st Century Water Quality Challenges for Managed Aquifer Recharge!' Recording of the webinar

The European Federation of Geologists' Webinar '*Tackling the 21st Century Water Quality Challenges for Managed Aquifer Recharge*' recording is now available on the EFG YouTube Channel: <http://bit.ly/3gqWyzH>

In addition, you can find the presentation slides of the session by presenter Dr Yan Zheng at the following link: <http://bit.ly/3Ou15hn>



NEW MAR OR MAR-RELATED ACTIVITIES

AgreeMAR project's questionnaire

Within the scope of the AgreeMAR project (<https://agreemar.inowas.com/>), of the PRIMA program, on aquifer management recharge, LNEC team asked us to forward a questionnaire to potential users and those interested in this methodology.

You are kindly requested to answer and disseminate this questionnaire using one of the following links (about 8 minutes necessary):

Portuguese: <https://forms.gle/DK2v4odD7zscWVSv9>

English: <https://forms.gle/LK4c2Yieh2a2QAiT6>

French questionnaire: <https://forms.gle/BnUzekFnZ2VfQxky8>

Spanish version: <https://forms.gle/89h116HY4MgYqfAv9>



Resolução da Assembleia da República n.º 86/2022 - Recomenda ao Governo que incentive a recarga artificial de aquíferos para reforço da eficiência hídrica

A MAR regulation's advance in Portugal. In the reporter's words:

*After many years of investment in MAR, we can finally see a very good sign through this recommendation from the PT Parliament which "Recommends that the Government encourage the artificial recharge of aquifers to reinforce water efficiency".
Good way to start 2023.*

Resolution of the Assembly of the Republic No. 86/2022, of December 26

Publication: Diário da República n.º 247/2022, Series I of 2022-12-26, pages 3 - 3
Issuer: Assembly of the Republic

SUMMARY

Recommends that the Government encourage the artificial recharge of aquifers to reinforce water efficiency

Pdf Access (in Portuguese):

[Resolução da Assembleia da República n.º 86/2022 - Recomenda ao Governo que incentive a recarga artificial de aquíferos para reforço da eficiência hídrica.](#)

[Resolução da Assembleia da República n.º 87/2022 - Recomenda ao Governo que aumente a reutilização de águas residuais tratadas.](#)

Thank you Teresa Leitao and J.P. Lobo for reporting.

MORE ACTIONS

Whatsapp group on Aquifer Recharge Management

This is the link to join the group, with about 150 participants:

<https://chat.whatsapp.com/CGANGEdciw4V4zqc1I09r>

Previous IAH-MAR Newsletters

Please, remember that you can access the previous newsletters in our website:

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

That's all by now... **please, keep reporting (dinamar@tragsa.es)**. Special interest about MAR news from India, we are receiving very scarce. Thank you in advance...

...and thank you very much for your kind attention
All the very best...

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

2022 November 10th

IAH-MAR Commission on Twitter



@IAHMARCom

<https://twitter.com/IAHMARCom>

IAH-MAR Commission's sister Web sites

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



濟南大學

University of Jinan



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



@4dina_mar

Linked-in groups on MAR

Managed Aquifer Recharge, DINA-MAR

<https://www.linkedin.com/groups/4690290/>

Aquifer Storage and Recovery (ASR)

<https://www.linkedin.com/groups/2183513/>

MARSoluT - MAR Solutions Training Network

<https://www.linkedin.com/groups/7453856/>

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>
