

IAH MAR Commission Newsletter. 2025 July & August. Issue nº 52

Dear IAH-MAR colleagues, please, find some recent information on Managing Aquifer Recharge.

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- IAH-MAR web inar series. #7th. Construction criteria. Thursday, 14 August 2025, 22:30 CET
- Flood-Managed Aquifer Recharge (MAR) network on Wednesday, June 4 from 12:30 to 1:30 pm
- MAR suitability mapping work group. Online workshop to be announced soon.
- IAH-MAR web inar series. Seminar #8th. September 16 or 17th, 15:00 h CEST. Social aspects of MAR
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ISMAR 12, still alive

"From Theory to Implementation and Operation"

170 delegates from more than 30 countries, all bringing valuable insights and expertise that enriched the symposium programme.

Field trip photos.



Atlantis tour



Cap Flats



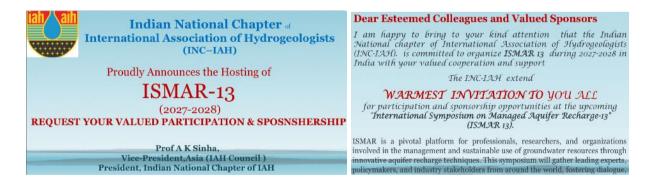


Elandsfontein phosphate mine

Photo gallery: https://photos.app.goo.gl/ifdbHpv77NSA1trW8

The ISMAR 12 section includes links to download the field-trip guides and a photo-gallery. Have a look: https://recharge.iah.org/ismar/ismar12

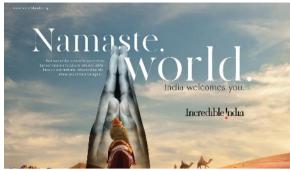
ISMAR 13 hosting country will be India











Special thanks to Professor Sinha for readiness and slides, and to Salini Sashidaran for this upcoming event's invitation.



*13. Pendant to confirm 2028 spring, or 2027 October as organizers suggested initially.



PUBLICATIONS ABOUT MAR

ISMAR 12's Special issue on Journal Groundwater for Sustainable Development

Managed Aquifer Recharge (MAR): From Theory to Implementation and Operation Submission deadline:05 March 2026

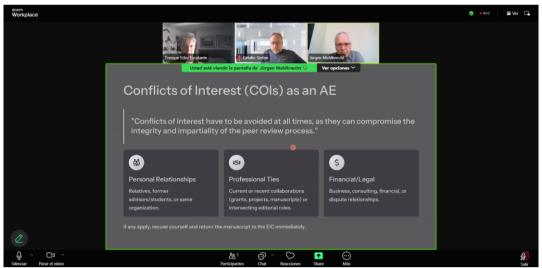
Managed Aquifer Recharge (MAR) has become a key strategy for sustainable groundwater management. By intentionally storing excess water in aquifers, MAR helps augment domestic water supplies, enhance water availability for irrigation, and support groundwater-dependent ecosystems. It mitigates groundwater overexploitation and provides a buffer against variability in surface water resources, thereby increasing communities' resilience to droughts and climate change. This special issue aims to bridge the knowledge gap between MAR theory, implementation, and operation by presenting innovative research, real-world case studies, and practical insights for scientists, practitioners, and policymakers dedicated to building resilient and sustainable water systems.



More info and call for papers: https://www.sciencedirect.com/special-issue/324709/managed-aquifer-recharge-mar-from-theory-to-implementation-and-operation



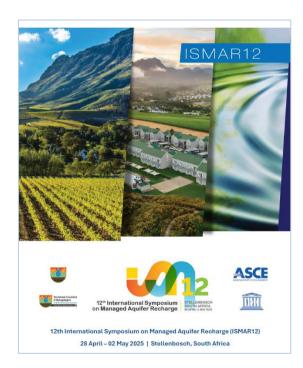
There is already one paper in this special Issue: https://www.sciencedirect.com/special-issue/10QD9WZ8B7Z



Screenshot from the kick-off meeting between Editor-in-Chief and Guest Editors of the Special Issue, 2025-08-19th.

ISMAR 12 Executive Summary (6 pg.)

ISMAR 12 was held in Stellenbosch, South Africa from 28 April to 2 May 2025. This was an opportunity for the rest of the world's MAR experts and academics to come to South Africa, showcase their specialities, and form the African connections that can provide their companies and institutions with their next international MAR partnership to facilitate new projects and studies, this time in Africa...



Read more and download: https://recharge.iah.org/files/2025/06/ISMAR12-for-IAH.pdf



P-ISMAR 12 mini-book

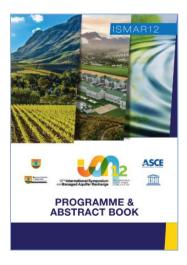
Posters were specifically requested by the organizers, including a disclaimer for the exhibition and publication. All of them have been gathered in this collection called P-ISMAR 12 (mini-book). Both, the classification and the editing tasks were carried out by IAH-MAR Commission co-chairs with the assistance of ISMAR 12's chairmen and scientific coordinator. You can hereby enjoy the publication resulting from this cooperation, which consists of 15 posters, which allows us to share some information that, otherwise, could have got lost.



https://dinamar.tragsa.es/file.axd?file=/PDFS/P-ISMAR-12p.pdf

ISMAR 12 Programme & abstract book

The main theme "From Theory to Implementation and Operation" places the focus on the latest research, implementation of MAR sites and the practicality of operating MAR schemes.

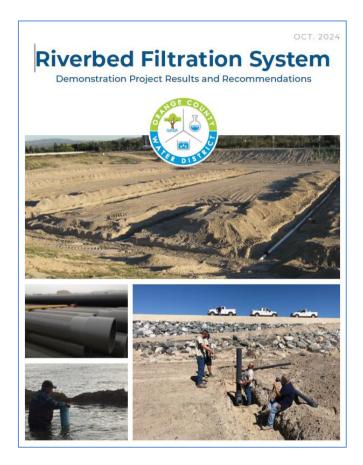


Download: https://recharge.iah.org/files/2025/05/ISMAR12 Programme-and-Abstract-Booklet.pdf



Orange County Water District. Riverbed Filtration System. Demonstration Project Results and Recommendations. Already on line...

Clogging due to the accumulation of suspended solids is a constraint that limits the capacity of the Orange County Water District's (OCWD) surface water recharge system...



Download:

https://www.ocwd.com/wp-content/uploads/Riverbed-Filtration-System-Proj-Results_Recommendations_October-2024-w-Cover.pdf

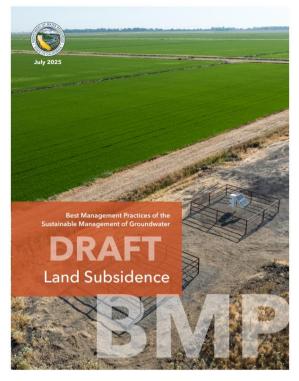
BMP Land subsidence publication

New publication including a chapter on MAR (draft version).

The Subsidence Best Management Practices document (Subsidence BMP) provides a guide on the fundamentals of land surface subsidence (also called "land subsidence" or "subsidence"), technical assistance related to subsidence, and best practices for managing subsidence. The Subsidence BMP also provides specific information about subsidence in California and how it must be considered within the structure of the Sustainable Groundwater Management Act (SGMA). Subsidence is one of the six sustainability indicators required to be managed under SGMA. The Subsidence BMP



does not supersede or replace any existing local, state, or federal regulations. Rather, it is meant to help groundwater managers, especially Groundwater Sustainability Agencies and the public, better understand land subsidence and how it can be managed.

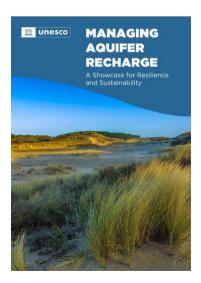


More info:

https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Subsidence/Files/Subsidence_BMP_Public_Draft.pdf

New analysis of costs and benefits of MAR (call for action)

Andrew Ross has begun the call for contributions to new analysis of costs and benefits of MAR projects.





This would build on information provided in the UNESCO IAH 2021 publication "Managing Aquifer Recharge: a Showcase for Resilience and Sustainability". You could add further information about the case study included in the UNESCO publication or analysis of a different MAR scheme. Results from this new analysis would be presented in special session on the economics of MAR at ISMAR 13 in India and in a subsequent publication.

Rationale and objective

MAR and water banking are now well-established in policy and practice as important instruments for improving water security and resilience to droughts and floods. However, uncertainty about the economics of MAR continues to be a barrier to adoption. There are significant gaps in the analysis of costs and benefits of MAR

Scope and methodology

Subject to further discussion with you about priorities and feasibility the new analysis could include;

- separation of costs of project establishment and approvals, and project implementation including monitoring and compliance. This would provide additional information on regulatory and administrative barriers to MAR:
- · improved estimation of benefits, including calculation of net present value of annual benefits and costs over actual project life; standardised analysis of net benefits of MAR and the best alternative option; sensitivity analysis including a range of discount rates.

Subject to data availability additional estimates or indicators might be included about

- · indicators of environmental benefits including impacts of MAR on aquifer levels, water quality, environmental water and flood control;
- off-site costs and benefits including downstream impacts.

Please, contact Andrew for this topic: a.ross@anu.edu.au



MAR AND MAR-RELATED CONFERENCES AND WORKSHOPS

6th International Summer School on MAR in Dresden

The "6th International Summer School on Managed Aquifer Recharge – MARISS" will be organised in Dresden (Germany) from 01 to 06 September 2025.



More info: https://www.htw-dresden.de/mariss

Thank you Dr. Cornelius Sandhu for reporting.

MAR specific session in the IAH 2025 congress

Groundwater now and for the future

Join us for an extraordinary gathering of groundwater expertise at the Melbourne Convention and Exhibition Centre, from September 15-19, 2025. This event, held in conjunction with the 2025 Australasian Groundwater Conference, marks a significant return of the World Groundwater Congress to Australia after 12 years.





Full Congress Program Now Live!



More info: https://iah2025congress.com/

Recharge - Managed Aquifer Recharge Special Session Dr Joanne Vanderzalm

591, Designing water banking polic for water security in a changing climate

687, Groundwater flow and naturebased Managed Aquifer Recharge (NaBa-MAR): providing an innovative approach to the public through experimental and numerica studies Stilvia Simon

679, A stormwater managed aquife recharge journey in Frankston, Melbourne: from concept to construction Craig Flavel

670, Nature-based managed aquifer recharge solutions for effective water retention in the Danube-Tisza Interfluve, Hungary Szilvia Simon

690, Integrated Managed Aquifer Recharge: Assessing the Efficienc of Riverbank Filtration and Infiltration Ditches for Sustainable Groundwater Management in Industrial Areas Sławomir Sitek

82, HYDROGEOLOGICAL EVALUATION TO INFORM ENGINEERING DESIGN FOR MANAGED AQUIFER RECHARGE SYSTEMS – BRIDGING THE GAP Russell Martin

33, Managed Aquifer Recharge (MAR) by Geo-Engineering Methods in the Semi-Arid Regions of India Janardhana Raju Nandimandalam

324, Upper King River Manager Aquifer Recharge Investigation

Joanne Vanderzalm is Chairing a special session on MAR on 18 Sept containing 8 papers: https://iah2025congress.com/program/

NGWA MAR Symposium. Denver, Colorado, USA. September 23-24, 2025

Managed Aquifer Recharge (MAR) Conference Program available - all you water supply resilience proponents out there, the September 23-24, 2025 NGWA MAR Symposium Program is posted - there are also Sept 22 workshops and Sept 25 MAR field trips planned.





More info: https://ngwa.confex.com/ngwa/mar25/meetingapp.cgi/Home/0

The Eighth Annual Western Groundwater Congress (WGC). October 6-9, 2025. San Diego Town and Country, San Diego, CA

Our Vision
Sustainable Groundwater for All

Our Mission

The Groundwater Resources Association of California is dedicated to resource management that protects and improves groundwater supply and quality through education and technical leadership



The Eighth Annual Western Groundwater Congress (WGC)

Workshop 3: Scaling Recharge Together: A Hands-On Workshop to Shape the Future of FloodMAR

More info: https://www.grac.org/page/2025wgc



IWRA. XIX World Water Congress on "Water in a Changing World: Innovation and Adaptation"

Marrakech, Morocco, 1-5 December 2025. MAR is included in the thematic area 5.





More info:

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

UN 2026 Conference on Water

The co-coordinator of the IAH LUNA Network has announced the UN 2026 Conference on Water: 18 March, an online meeting is being organized by the UN Secretariat in NY, to provide up-to-date information on the third UN Water Conference that will be organized in December 2026.

Details in further newsletters.



SEMINARS AND WEBINARS

Extending your knowledge on managed aquifer recharge?

IAH-MAR webinar series. #6th. Advanced MAR modeling. Tuesday, 15 July 2025, 14:00 – 15:30 CET

Flow and Transport Dynamics in Engineered and Natural Systems: Advanced Modeling and Experimental Insights for Sustainable Water Resources Management.



Invited speakers:

Chistophe Darnauls. SCEEES, Clemson University. USA **Mahsa Ghorbani**. SCEEES, Clemson University. USA

Flow and Transport Dynamics in Engineered and Natural Systems: Advanced Modeling and Experimental Insights for Sustainable Water Resources Management. Part 1 - Part 2.

IAH-MAR webinar series. #7th. Construction criteria. Thursday, 14 August 2025, 22:30 CET

Invited speaker:

Russell Martin (Principal hydrogeologist Wallbridge Gilbert Aztec, Australia). MAR Scheme Design Considerations for Bore Recharge (Science meets Engineering).

This online seminar is organised by the Latin American MAR Community of Practice (LatinMAR). We are grateful to Adriana Palma Nava for organising and chairing the session. Read more about LatinMAR.

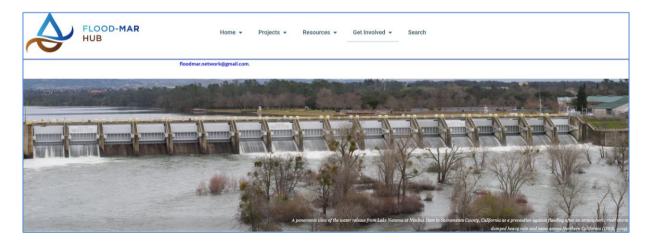




More info: https://recharge.iah.org/online-mar-seminars

Flood-Managed Aquifer Recharge (MAR) network on Wednesday, June 4 from 12:30 to 1:30 pm

Organized by <u>California Department of Water Resources</u> on an innovative project to remove suspended solids from river water prior to recharge.



Results:

https://web.cvent.com/event/b7bcab3e-6c57-492e-b832-45d5fa69bb0f/summary https://web.cvent.com/event/b7bcab3e-6c57-492e-b832-45d5fa69bb0f/regProcessStep1

Publication

https://cfpub.epa.gov/si/si_public_record_report.cfm?dirEntryId=352238&Lab=CPHE A&simplesearch=0&showcriteria=2&sortby=pubDate&searchall=enhanced+aquifer+r echarge&timstype=&datebeginpublishedpresented=08/19/2019



webinar

https://www.epa.gov/water-research/introduction-epas-enhanced-aquifer-recharge-research-webinar

More info:

https://floodmar.org/get-

involved/?utm_medium=email&utm_source=govdelivery#events

Thank you, Adam Hutchinson, for reporting.

UPCOMING

MAR suitability mapping work group. Online workshop to be announced soon.

This working group organised a workshop during ISMAR12 and proposed a set of guiding principles for harmonizing the methodologies for MAR suitability mapping. A publication is currently in preparation, preceded by a set of online consultations. Difference activities are planned, such as development of a general Wiki page, extending the review of MAR suitability studies, scooping the integration of more advanced methods based on machine learning, collection of best practices, compilation of an extended database with suitability criteria, etc.

More info about the group activities: https://recharge.iah.org/working-groups/mar-feasibility-mapping

(the page will be updated soon with more details about upcoming activities and invitation to online sessions).

IAH-MAR webinar series. Seminar #8th. September 16 or 17th, 15:00 h CEST. Social aspects of MAR

Invited speakers to be confirmed shortly, final date to be confirmed too through our traditional channels*.

IAH-MAR members are invited to participate in future webinars. Please, consider proposing a title and sending your suggestion to <u>Catalin Stefan</u>.

Previous booking is required. More info and (most of the) presentations: *https://recharge.iah.org/online-mar-seminars



Flood-MAR Forum 2025



More info: https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_flood-mar-forum-agenda-2025-activity-7355751356739018752-qG5Q?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBniGYw-D82SCFUMAchFrpT-xO20k



NEW MAR OR MAR-RELATED ACTIVITIES

WGA and OCWD posts on the Internet (Linked-In and YouTube)

https://www.linkedin.com/posts/california-department-of-water-resources_groundwater-spring-report-activity-7343313239914553344-H4Vs?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBniGYw-D82SCFUMAchFrpT-xO20k

https://www.linkedin.com/posts/jennifer-pierre-32163950_how-much-water-is-available-for-groundwater-activity-7344065964625313793-Abtt?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBniGYw-D82SCFUMAchFrpT-xO20k

https://www.linkedin.com/posts/wga-ausnz_makingadifference-water-southaustralia-ugcPost-7344173197858152448-

<u>4u92?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBni</u>GYw-D82SCFUMAchFrpT-xO20k

https://www.linkedin.com/posts/gracalifornia_hydrovisions-groundwater-californiawater-activity-7343053115308285953-nmLv?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBniGYw-D82SCFUMAchFrpT-xO20k

https://www.linkedin.com/posts/adam-hutchinson-pg-chg-6891b89_removal-of-suspended-solids-water-quality-activity-7338277858450075648-l-f3?utm_source=share&utm_medium=member_desktop&rcm=ACoAAATbUsYBniGYw-D82SCFUMAchFrpT-xO20k

https://www.youtube.com/watch?v=UywYNKeKhic



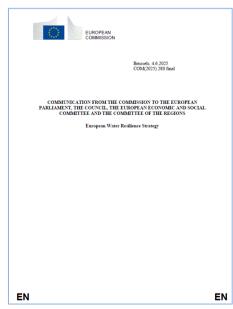




New document recently released: European Water Resilience Strategy

Water resilience is a matter of security and crisis preparedness for the EU. Water is a basic need and a critical resource. As outlined in the Preparedness Union Strategy, security of clean and affordable freshwater supply must be "a guiding priority" for the Union...





Download the document: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025DC0280&gid=1750857768458



New thesis on MAR successfully defended at Darmstadt University, Germany

We are pleased to announce that the PhD student of the ITN MARSoluT project, Edinsson Muñoz Vega, has successfully completed his dissertation at the @Institut für Angewandte Geowissenschaften, @Technische Universität Darmstadt: Congratulations on the excellent result, Edinsson!!!





Attached also a small MARSolut "family photo" with Karl Ernst Roehl, @Christoph Schüth, Edinsson Muñoz Vega, Marcel Horovitz and Rodrigo Pérez Illanes.

More info: https://www.marsolut-itn.eu/

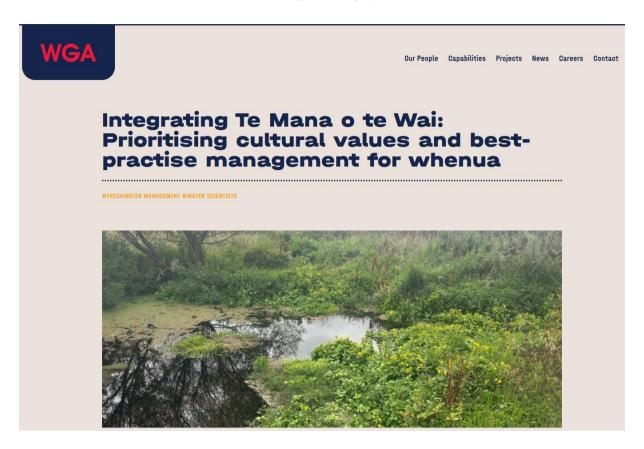
WGA celebration on the Te Ao Māori and value, people and communities

At WGA, we celebrate Te Ao Māori and value its importance in our work, people and communities. As maritime and water specialists, we are well equipped to make a meaningful impact through our work with wai tai (saltwater) and wai māori (freshwater). We embed the principles of the National Policy Statement for Freshwater Management into our practice, recognising the intrinsic mauri (life force) of water, prioritising the health of water bodies, and upholding the relationship between tangata whenua and wai. The policy's principles help guide our broader approach to marine environments, environmental design, community collaboration, and long-term sustainability.

In a collaborative project based in the wetland area adjacent the Arowhenua Marae wetland area, WGA's water scientists and engineers worked with Te Rūnanga and Boffa Miskell Limited to implement best practices in freshwater management during the conceptual design phase to uphold kaitiakitanga, ensuring environmental



stewardship. The project aims to enhance the stream and wetland system through integrated approaches including pest control, native planting, channel improvements, and specialised civil and stormwater engineering practices.



The conceptual design of the site is being progressed in collaboration with Boffa Miskell Limited's landscape architects and ecologists to consider the needs of the rūnanga, the local school, residents, wider community, and existing fauna.

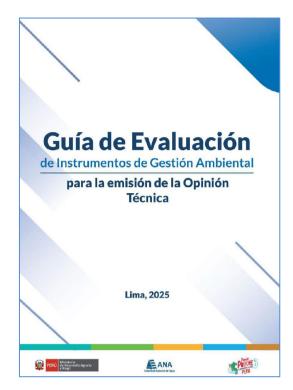
Read more about how WGA puts the principles of freshwater management into practice in this project here: https://wganz.co.nz/news/2025/07/24/integrating-te-mana-o-te-wai-prioritising-cultural-values-and-best-practise-management-for-whenua/

Thank you, Bob Bower, for your post.

Guía de evaluación de instrumentos de gestión ambiental para la emisión de opinión técnica. ANA, Perú, 2025 (in Spanish)

Establece criterios técnicos para la evaluación y generación de la opinión técnica vinculante en materia de recursos hídricos en los IGA remitidos por la Autoridad Competente...





Download: https://repositorio.ana.gob.pe/handle/20.500.12543/5721

Transformando el ciclo del agua. El reúso es responsabilidad de todos (in Spanish)

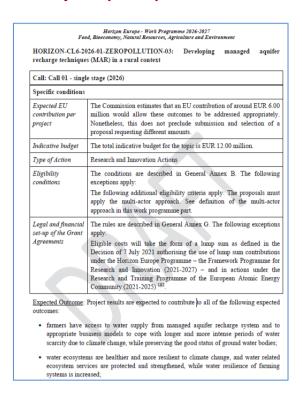


Download: https://comisionciudadanadelagua.org/wp-content/uploads/2025/04/Transformando-el-ciclo_final-10042025-1.pdf

Thank you, Carmen Navarro, for reporting.



HORIZON-CL6-2026-01-ZEROPOLLUTION-03: Developing managed aquifer recharge techniques (MAR) in a rural context. Call.



Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/Isdecision_he_en.pdf

MORE ACTION

MAR in the Media

Chile:

https://www.rcnradio.com/bogota/secretaria-de-ambiente-le-puso-la-lupa-a-los-acuiferos-de-la-ciudad

https://g5noticias.cl/2025/08/12/desde-este-miercoles-las-llamadas-comerciales-y-masivas-deberan-llevar-los-prefijos-600-y-809-para-su-identificacion-2/

https://g5noticias.cl/2025/08/12/ultimo-balance-realizado-por-esval-lluvias-y-recarga-artificial-de-los-aromos-respaldan-el-suministro-de-agua-potable-para-todo-2026/

Mexico:

https://intoleranciadiario.com/blog/2025/07/07/1040072-maquinaria-e-innovaciones-hidricas-para-puebla.html



https://alinstantechihuahua.com/2025/07/03/reconoce-jcas-falta-de-infraestructura-para-recarga-de-acuiferos-en-chihuahua-alertan-sobre-riesgo-de-sobreexplotacion/

https://www.tuopinas.cl/2025/07/03/destacan-balance-hidrico-favorable-del-primer-semestre-y-avance-en-seguridad-del-suministro-para-la-region/

https://www.elmartutino.cl/noticia/sociedad/proyectan-verano-con-agua-asegurada-gracias-embalses-casi-llenos-y-recarga-artifici

https://reportelaguna.com/es-tiempo-de-unir-esfuerzos-para-proteger-y-conservar-elagua-de-las-futuras-generaciones-alejandro-mata/

https://www.primeraplanadigital.com.mx/antonio-astiazaran-impulsa-proyectos-dereutilizacion-de-agua-junto-a-conagua/

https://www.primeraplanadigital.com.mx/antonio-astiazaran-impulsa-proyectos-dereutilizacion-de-agua-junto-a-conagua/

Whatsapp group on Aquifer Recharge Management

The group has 200 participants today. Ask the invitation link by <u>email</u>, pls, as it changes eventually. It is now:

https://chat.whatsapp.com/CvxFw98N9xtHqdrzwWBEzF



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/









https://www.linkedin.com/groups/4690290/ (563 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 367 members today... and you are invited to join!

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

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

2025 August 22hd