

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

Attached some MAR-related news for 2022 January.



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Previous IAH-MAR Newsletters

11st International Symposium on Managed Aquifer Recharge, ISMAR 11. REGISTRATION AND DRAFT AGENDA

On behalf of GRA, ISMAR 11 organizers and the IAH-MAR Commission, we cordially invite you to attend the 11th International Symposium on Managed Aquifer Recharge (ISMAR11), April 2022 in Long Beach, CA.

Provisional program: <https://ismar11.net/registration/>



Preliminary Agenda | April 11-15, 2022

April 11	April 12	April 13	April 14	April 15
<p>Subsurface Injection and Recovery Recharge Workshop <i>David Pyne</i> <i>Russell Martin</i></p> <p>Surface Spreading Recharge Workshop <i>Mike Milczarek</i> <i>Adam Hutchinson</i></p> <p>Meeting Water Management Objectives with Managed Aquifer Recharge: The Role of MAR Governance and Policy <i>Sharon B. Megdal</i></p> <p>Workshop Details - Click Here</p>	<p>General Sessions</p> <p>Keynote 1 <i>Bruce Babbitt, Former AZ Governor, and Sec. of Interior</i></p> <p>Keynote 2 <i>David Kreamer, UNLV, President of IAH</i></p> <p>Panel 1: MAR in California <i>Moderator: Felicia Marcus</i></p> <p>Panel 2 MAR in Action <i>Moderator: Sharon B. Megdal</i></p> <p>Herman Bouwer Awards Luncheon</p> <p>IAH Plenary Session</p> <p>ISMARx Workshop A series of short presentations by graduates and young professionals to showcase their research.</p>	<p>4 Concurrent Tracks</p> <p>Session Topics Include:</p> <ul style="list-style-type: none"> • ASR • MAR-Geophysics • MAR-Emerging Contaminants • FLOOD-MAR • International MAR • MAR-Integrated Water Management • MAR-Environment • MAR Engineering & Design • MAR-Water Markets <p>Reception</p> <p>Networking</p> <p>Gala - Sergio Vellatti Big Band Los Angeles</p>	<p>4 Concurrent Tracks</p> <p>Session Topics Include:</p> <ul style="list-style-type: none"> • ASR • MAR-Geophysics • MAR-Emerging Contaminants • FLOOD-MAR • International MAR • MAR-Integrated Water Management • MAR-Environment • MAR Engineering & Design • MAR-Water Markets <p>Reception</p> <p>Poster Session</p> <p>Networking</p>	<p>Water Replenishment District of Southern California Albert Robles Learning Center</p> <p>Orange County Water District Surface Recharge System and Groundwater Replenishment System</p> <p>Field Trips Details - Click Here</p> <p>Post-Conference - Geophysics Workshop <i>Ahmad-Ali Behroozmand</i> <i>Max Halkjaer</i> <i>John Jansen</i> <i>Timothy K. Parker</i></p> <p>Workshop Details - Click Here</p>

ISMAR 11 website: <https://www.ismar11.net/>

GRA event page: <https://lnkd.in/gXn6YNz>

Register as a Sponsor or Exhibitor: <https://lnkd.in/g6Sb6ur>

View the Sponsorship Opportunities booklet: <https://lnkd.in/gKqA4nh>

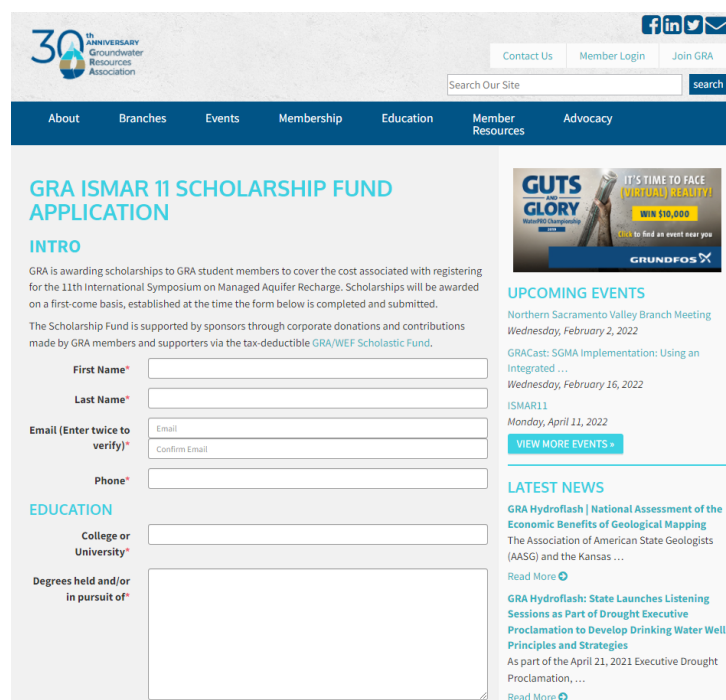
Along with the email - Facebook, LinkedIn, Instagram and Twitter all have posts about ISMAR11 on GRAC: www.grac.org

Preliminary agenda: <https://www.grac.org/media/files/files/4407fbbd/ismar-2022-preliminary-agenda-flyer.pdf>

ISMAR 11. GRA Student Member Scholarships

GRA is awarding scholarships to GRA student members to cover the cost associated with registering for the 11th International Symposium on Managed Aquifer Recharge. Scholarships will be awarded on a first-come basis, established at the time the form below is completed and submitted.

The Scholarship Fund is supported by sponsors through corporate donations and contributions made by GRA members and supporters via the tax-deductible GRA/WEF Scholastic Fund.



The screenshot shows the 'GRA ISMAR 11 SCHOLARSHIP FUND APPLICATION' page. The header includes the 30th Anniversary logo, navigation links (About, Branches, Events, Membership, Education, Member Resources, Advocacy), and social media icons. The main content area contains an 'INTRO' section with text about the scholarship and a form with fields for First Name, Last Name, Email (with a confirm field), Phone, College or University, and Degrees held. A right sidebar features a 'GUTS GLORY' contest advertisement, 'UPCOMING EVENTS' (Northern Sacramento Valley Branch Meeting, GRACast: SGMA Implementation), and 'LATEST NEWS' (GRA Hydroflash | National Assessment of the Economic Benefits of Geological Mapping).

More info and submission: <https://www.grac.org/forms/gra-ismar-scholarship-fund-application/>

IAH MAR commission. Mandate renewal 2021-26. Submission to IAH and preliminary response

During 2022 January, we have submitted the application to keep our activity within the IAH framework. This is the encouraging response from Marco Petitta, Vice President, Programme and Science Coordination:

Dear Enrique



I checked the documents you sent me and I confirm they are correct and complete for providing a decision on the next mandate.

The activity performed by the MAR Commission is impressive, both in terms of numbers of meetings, conferences, reports, papers and of course in terms of quality of contributions.

I apologize another time for not providing a renewal mandate during 2021, as expected, and I thank you and the co-chairs for keeping the Commission alive during last year.

An official decision will be done during the Executive Council meeting scheduled in late February, but my opinion on your request is surely positive.

Let us expect final February to receive the final response whilst we keep working.

IAH COMMISSIONS AND NETWORKS REVIEW FORM

Background:

The reform of the IAH Commissions and Networks (C+N)s was completed in 2011, which set up a procedure for initiating and reviewing the progress of these groups in IAH. This procedure allows both renewal of existing C+Ns, midterm review of progress, and the creation of new Commissions and Networks. In setting up the new Commissions and Networks, it was established that a review would be undertaken in the middle and end of each period of license, with the intention of informing the IAH Executive and Council about the progress with the work of the Commissions and Networks. This would be compared with the initial work plans and commitments set out by the commissions and networks in their proposals.

Now, we are at the end of the current license period for the Commission on Managed Aquifer Recharge which has had a license period of 6 years, last renewed in 2015 and with a submitted midterm report in 2018. As part of the renewal process, the Commission on Managing Aquifer Recharge is invited to submit a final report on their activities by answering the questions below.

Review Questions:

1	Name of your Commission or Network	Commission on Managing Aquifer Recharge (IAH-MAR)
1.1	Name and email contact(s) of the responsible(s) person for this Commission of Network	Enrique Fernández Escalante efernan6@tragsa.es Catalin Stefan catalin.stefan@tu-dresden.de Yan Zheng yan.zheng@sustech.edu.cn
2	Provide the address of your website	http://www.iah.org/recharge/ English Sister sites: http://www.dinamar.tragsa.es/ Spanish (with English MAR literature repository) http://china-mar.ujn.edu.cn/ Chinese
2.1	Is the website regularly	English - YES

NEW MAR OR MAR-RELATED PUBLICATIONS

IAH MAR Commission. Memory of activities 2021

During 2022 January we have redacted our annual memory of activities, which is already posted on the Internet: <https://recharge.iah.org/recent-annual-reports>


The IAH Executive have enhanced our effort, encouraging us to keep and improve our current activity. This is the response from IAH President, Dr. David Kreamer to the submission:

Dear Colleagues.

This is absolutely fantastic. The work you are doing is an inspiration to all of IAH, and is a shining example of our efforts to advance the science, inform the public, and make the world a better place. Deepest gratitude from all your colleagues on this impressive summary. Kudos!!!

Appreciatively,

International Association of Hydrogeologists
Commission on Managing Aquifer Recharge



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

**IAH-MAR
MEMORY OF ACTIVITIES IN 2021**

CO-CHAIRS

Enrique Fernández Escalante (Spain)
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Catalin Stefan (Germany)
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Yan Zheng (China)
Email: yan.zheng@sustech.edu.cn

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

Sister Websites:
Spanish: www.dinamar.tragsa.es/
Chinese: <http://china-mar.ujn.edu.cn/>

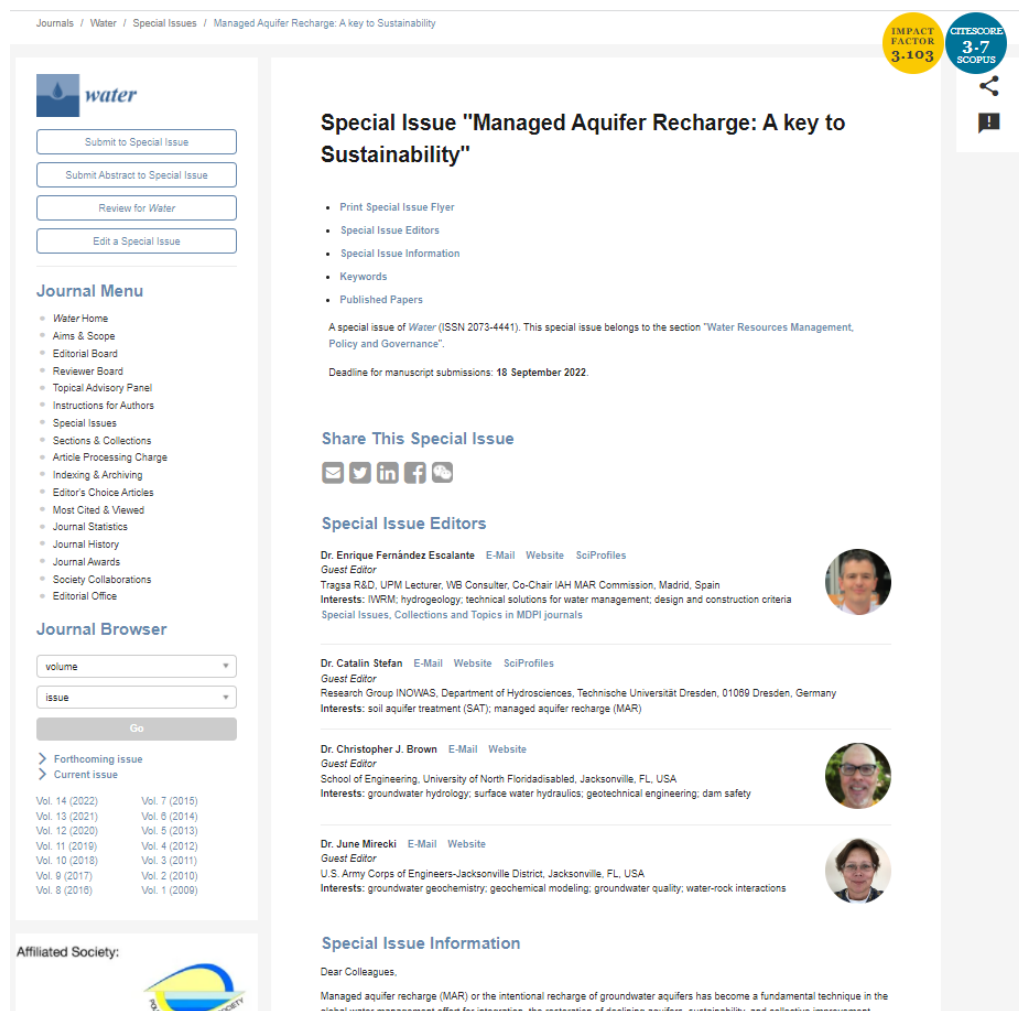
Managed Aquifer Recharge. A key to sustainability. Journal Water special issue

MDPI Journal Water and IAH-MAR Commission + ISMAR 11 organizers commit a future Journal to include the main articles, outcomes. Authors not ISMAR 11 attendants are invited to participate.

As per the previous ISMAR, a special issue will be published gathering the most remarkable advances in Mar willing to participate in this publication.

The call for invited papers is already on line. After ISMAR 11, remarkable papers will be invited to contribute in this important selection.

More info will be released in the coming weeks.



The screenshot shows the MDPI website interface for a special issue. On the left is a navigation menu with options like 'Submit to Special Issue', 'Journal Menu', and 'Journal Browser'. The main content area features the title 'Special Issue "Managed Aquifer Recharge: A key to Sustainability"', a list of links (Print Special Issue Flyer, Special Issue Editors, etc.), a deadline for manuscript submissions (18 September 2022), and a list of guest editors with their profiles and interests. The right sidebar includes impact factor and CiteScore information.

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

Future book. Invitation to contribute. Artificial recharge to groundwater and rainwater harvesting: issues and learning from the developing countries

ARTIFICIAL RECHARGE TO GROUNDWATER AND RAIN WATER HARVESTING: ISSUES AND LEARNING FROM THE DEVELOPING COUNTRIES

Call for Contributions

ABOUT THE MONOGRAPH

Globally, groundwater is one of the most critical natural resources. With its contributions to agriculture, potable water supply, industries and its immense economic and ecological importance, this resource plays a great role in meeting the Sustainable Development Goals (SDGs). Supporting billions of small and marginal farmers around the world, it acts as a hedge against water insecurity, drought, food vagaries, and water borne diseases. The relatively higher resilience of groundwater against the onslaught of climate change is widely accepted. Rainwater Harvesting and Artificial Recharge is considered as the key supply-side intervention to sustain the resilience of water and food security of communities around the world. The rationale is to recharge and store more water underground for enhanced and sustained water access by plants, ecosystems, and

people. Storing water in soil and aquifer protects the resource from accelerated evaporation due to temperature rise under climate change. It is relatively cheap to implement, and obviates relocation of people from the flooding areas in case of major dams. Many practices linked to these two techniques (artificial groundwater recharge and rain water harvesting) are on trial around the world. The knowledge accumulated and the innovations adopted are reported to produce better outcomes. The impact of these interventions on sustaining, and in many cases, rejuvenating the groundwater resource are encouraging. However, success depends on wide ranging factors like biophysical, technical, agricultural, ecological, socio-economic, institutional and legal issues. Having strong ownership and engagement with local communities and stakeholders

is the key issue. The interventions need to be integrated into broader water, land and ecosystem management policies and practices. The Proposed monograph presents success stories and challenges encountered, science and technology being adopted, and the socio-economic impact created by rainwater harvesting and artificial recharge in developing countries of the world. Government supported initiatives through policymaking, regulation and ongoing large projects from different countries are showcased in this monograph along with community driven approaches. The Roadmap for enhancing benefits from such interventions, particularly in water-stressed regions of emerging economies, located in different climatic, geographical and geologic regions, will also be discussed.

ABOUT THE NAM S&T CENTRE

The Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre), New Delhi is an Inter-governmental Organization with a Membership of 47 countries spread over Asia, Africa, Middle East and Latin America. The Centre was set up in 1989 in New Delhi, India in pursuance of the decisions of various NAM Summits with the objective of promoting mutually beneficial cooperation among the NAM and other developing countries for collective self-reliance.

The Centre undertakes a variety of programmes, including organization of International Workshops, Conferences and Training Courses, and implementation of Collaborative S&T Projects. It also offers short term Research Fellowships to Scientists and Technologists from developing countries in association with the Centres of Excellence in various countries. The Centre also brings out books, monographs and other scientific publications in different subjects that are of interest to developing countries. The Centre's activities provide opportunity

for scientist-to-scientist contact and interactions, familiarizing participants on the latest developments and techniques in the subject areas, identification of the requirements of training and expert assistance, locating technologies for transfer between the Members and other developing countries, and dissemination of STI information etc. In addition, the Centre encourages Academic-R&D-Industry interactions in the developing countries through its NAM S&T Industry Network.



Centre for Science and Technology of the Non-Aligned and Other Developing Countries (NAM S&T Centre)

Core-6A, 2nd Floor, India Habitat Centre, Lodhi Road, New Delhi-110003, India. Tel: +91-11-24645134, 24644974 Fax: +91-11-24644973
E-mail: namstcentre@gmail.com Website: <http://www.namstc.org>

New Monograph Series

IN ASSOCIATION WITH



MANAV RACHNA INTERNATIONAL
INSTITUTE OF RESEARCH AND STUDIES
MAAC ACCREDITED & GRADE INSTITUTION



GRIPP
GROUNDWATER SOLUTIONS
RESEARCH FOR
POLICY AND PRACTICE
LED BY
IWM
INTERNATIONAL WATER
MANAGEMENT INSTITUTE

Thank you Drs. Dipankar and Vilholth for reporting.

MAR-related CONFERENCES

Groundwater, key to the sustainable development goals conference will have a MAR session (4j).



Managed aquifer recharge (MAR) is a low-cost, low-energy technique to increase groundwater resources, reduce the impacts of groundwater overexploitation, improve recharged aquifers' water quality, and protect groundwater dependent ecosystems. Therefore, MAR must be considered as a strategic technique to reach the 2030 United Nations Agenda for Sustainable Development Goals and its objective of improving water quality and increasing recycling and safe reuse... Read more: <http://www.gw-sdg2022.fr/index.php/en/topics>

- 4.j - **Managed aquifer recharge** as a tool to protect aquifers and help sustainable groundwater management
La **recharge artificielle des aquifères** comme outil de protection des aquifères et de gestion durable des eaux souterraines

Topic animator(s): Jesús Carrera^{1,2}, M. Silvia Diaz-Cruz³, Cristina Valhondo^{1,2,4}

1. Geosciences Department, Institute of Environmental Assessment and Water Research (IDAEA), Severo Ochoa Excellence Center, Spanish Council for Scientific Research (CSIC), Barcelona, Spain
2. Associated Unit: Hydrogeology Group (UPC-CSIC)
3. Environmental Chemistry Department, Institute of Environmental Assessment and Water Research (IDAEA), Severo Ochoa Excellence Center, Spanish Council for Scientific Research (CSIC), Jordi Girona 18-26, 08034 Barcelona, Spain
4. Géosciences Montpellier, Université de Montpellier, CNRS, Montpellier, France

Description: Managed aquifer recharge (MAR) is a low-cost, low-energy technique to increase groundwater resources, reduce the impacts of groundwater overexploitation, improve recharged aquifers' water quality, and protect groundwater dependent ecosystems. Therefore, MAR must be considered as a strategic technique to reach the 2030 United Nations Agenda for Sustainable Development Goals and its objective of improving water quality and increasing recycling and safe reuse. This session aims to share experiences and methods to advance the broad adoption of MAR methods. Topics in this session include, but are not limited to:

- Water quality improvement through MAR;
- MAR as a tool to deal with climate change effects;
- MAR applications to improve groundwater dependent ecosystems;
- MAR systems for water recycle and reuse.

La recharge artificielle des aquifères (MAR) est une technique peu coûteuse et peu énergivore qui permet d'augmenter les ressources en eau souterraine, de réduire les impacts de la surexploitation des eaux souterraines, d'améliorer la qualité de l'eau des aquifères rechargés et de protéger les écosystèmes dépendant des eaux souterraines. Par conséquent, la MAR doit être considérée comme une technique stratégique pour atteindre l'Agenda 2030 des Nations Unies pour les objectifs de développement durable et son objectif d'améliorer la qualité de l'eau et d'augmenter le recyclage et la réutilisation sûre. Cette session vise à partager des expériences et des méthodes pour faire progresser l'adoption à grande échelle des méthodes MAR. Les sujets de cette session incluent, mais ne sont pas limités à :

- l'amélioration de la qualité de l'eau grâce à la MAR ;
- la MAR comme outil pour faire face aux effets du changement climatique ;
- les applications MAR pour améliorer les écosystèmes dépendant des eaux souterraines ;
- les systèmes MAR pour le recyclage et la réutilisation de l'eau.

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

MAR-related COP26 Events on Groundwater

COP26 Events on Groundwater have components of MAR included.



<https://gripp.iwmi.org/2021/11/02/gripp-at-cop26-groundwater-the-missing-piece-in-the-adaptation-puzzle-2/>

8th African Water and Sanitation Week. 22 - 26 November 2021. Results: video

The African Water and Sanitation Week for 2021 included a session titled Managed Aquifer Recharge and its role to climate change in Africa, and features speakers from Acacia Water, Department of Water and Sanitation, International Water Management Institute (IWMI), Minia University, Cranfield University and GEOSS South Africa (Pty) Ltd.

<https://africawatersanitationweek.pathable.eu/meetings/virtual/5QRY6C9bDANxMw3mK>

8TH AFRICA WATER WEEK: SUBTHEME 3 8ÈME SEMAINE AFRICAINE DE L'EAU : SOUS-T...

Managed Aquifer Recharge and its role to climate change resilience in Africa

<p>Karen Villholth International Water Management Institute (IWMI) Principal Researcher</p> <p>Mohamed Shamrukh Mahmoud Minia University Emeritus Professor</p> <p>Stefan De Wildt Acacia Water B.V. Hydrologist, MSc</p> <p>Paul Pavelic International Water Management Institute (IWMI)</p> <p>Daniela Benedicto Acacia Water MSc.</p>	<p>Girma Yimer Ebrahim International Water Management Institute (IWMI) Regional Researcher: Hydrogeology and Water Resources</p> <p>Kes Murray GEOSS South Africa Mr</p> <p>Alison Parker Cranfield University Senior Lecturer in International Water and Sanitation</p> <p>Fanus Fourie Department of Water and Sanitation Scientific Manager</p> <p>Patience Mukuyu International Water Management Institute (IWMI) Researcher</p>
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Requires sign-in. Thank you Kess Murray and Karen G. Villholth for reporting

MORE ACTIONS

Whatsapp group on Aquifer Recharge Management

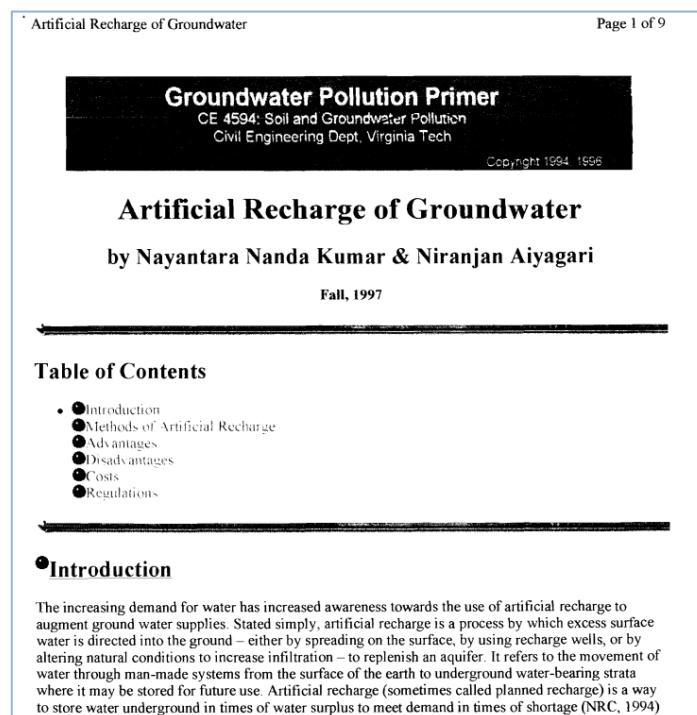
The previous QR code to join the group has been reset due to the intromission of trolls.



This is the new one: <https://chat.whatsapp.com/BxYZq7wERpc7nDeTRIYN63>

Please do not share it with outsiders.

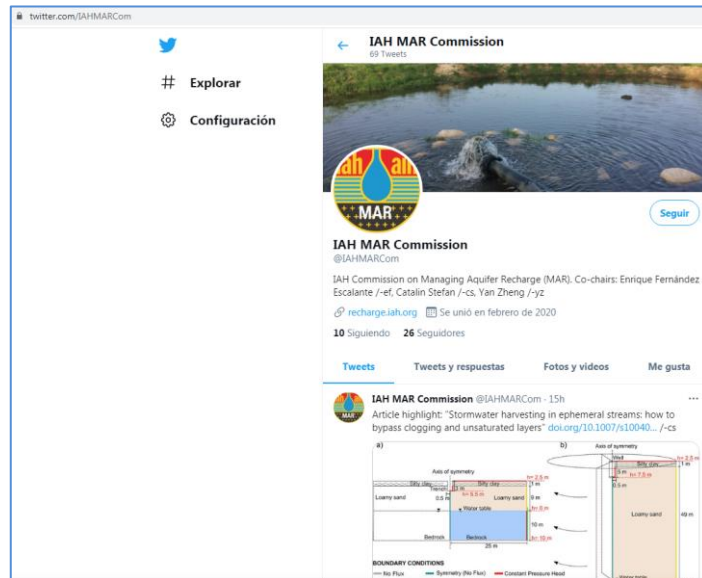
Old publications on MAR (another drop of nostalgia...) Artificial Recharge of Groundwater, 1994



https://leg.mt.gov/content/Committees/Interim/2005_2006/environmental_quality_council/meetings/minutes/eqc09112006_ex20.pdf

IAH Commission on Managing Aquifer Recharge. Twitter account

Please, follow the Twitter account of the IAH Commission on Managing Aquifer Recharge at <https://twitter.com/IAHMARCom>



Previous IAH-MAR Newsletters

Please, remember that you can access the previous newsletters in our website: <https://recharge.iah.org/newsletters>

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

Thank you very much for your kind attention
Best regards

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

2022 January 31th



@IAHMARCom

Please, remember you can book freely in the IAH MAR Commission Forum:
<https://lists.flinders.edu.au/mailman/listinfo/iah-mar.listcqs> to stay informed on
MAR issues and to share your info.

Sister sites:

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



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



@4dina_mar