



AGU HYDROLOGY

AGU HYDROLOGY SECTION NEWSLETTER

Members of AGU's Hydrology Section are concerned with the cycling of continental water at all scales, and with physical, chemical and biological processes driven by that cycling.

JULY–AUGUST 2026

The Emergence of Groundwater in International Climate Dialogues

From the President Elect Jay Famiglietti



Many years ago—40 to be precise—I found myself meeting Prof. George Pinder for the first time as I began my Ph.D. studies with Prof. Eric Wood at Princeton. I introduced myself as a surface water hydrologist, working for Eric. George’s response was quick and to the point: “Surface water?” he asked. “Groundwater, man,” he said emphatically. “It’s groundwater!”

Not that George meant it in this way – he was the godfather of groundwater flow and transport modeling – but today, in many parts of the world, especially in the drylands, it really is all about groundwater. It underpins everything – water for people, for the environment, for food and energy production, and for economic growth. And in many parts of the world, groundwater is poorly protected, and consequently, groundwater storage is in decline.

Across our section, many students, faculty, and researchers responded to this challenge by moving beyond a narrow focus on contaminant transport in the 1980s and 1990s toward much fuller studies of groundwater as a critical, yet threatened, element of local-to-global water supplies. Not only is there a richness to the research that spans its interconnected social, physical, and biological aspects, but it is also essential that we address these challenges to help preserve critical groundwater resources for future generations.

Understanding how much groundwater we have (a question that is undoubtedly nuanced), how much we need, and how these quantities are changing over time are fundamental elements of a secure and sustainable groundwater future. Our section membership is doing top-flight research on these topics, while connecting with stakeholders and advocates to fuel them with the necessary science required to justify much-needed policy change.

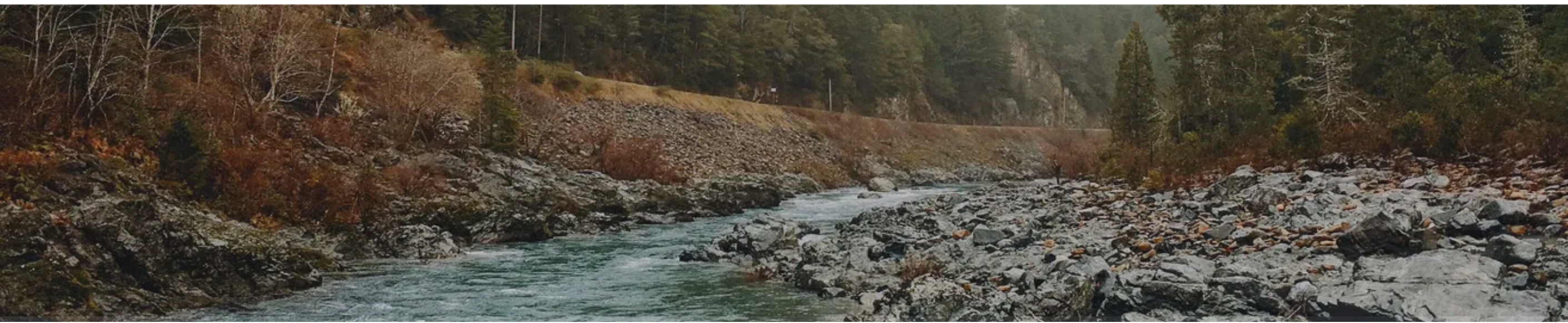
At the global scale, colleagues and I in AGU and other societies such as EGU, the International Association of Hydrogeologists (IAH), and several non-profits have been working to elevate awareness of the importance of groundwater in climate change dialogues under the UN Framework Convention for Climate Change (UNFCCC), for example, in the Conference of the Parties (COPs) for climate, biodiversity, and desertification. I am pleased to report that the international groundwater community is making excellent progress in bringing groundwater protection into the frame. This will become more apparent in meetings like the upcoming COP17 for Desertification in Mongolia, the IAH World Groundwater Congress in Budapest, and the UN Water meeting in the UAE in December.

To fully capitalize on these upcoming and future opportunities, I urge you to continue your excellent research on these questions, and to publish it in AGU and other journals. As always, please take the extra steps to communicate the work -- by presenting at our conferences, by posting on social media and by being responsive to interview requests. We are making great progress, but your continued efforts to provide a firm science foundation that can underpin science-based groundwater management targets and support national-scale reporting are essential. We can do this if you keep up your great work!

This issue:

Page

From the President Elect: Jay Famiglietti.....	1
Announcements.....	2–4
Early Career Spotlight: Kshitij Dahal.....	5–6
Hydrology Horizons: Uncovering the Hydrology of Ephemerally Flooded Playas through Long-Term Monitoring.....	7
Hydrology Horizons: Modernizing probable maximum precipitation for infrastructure safety.....	8–9
Technical Committee: Ecohydrology.....	10
Technical Committee: Water & Society.....	11
Sister Organization: IAHS.....	12–13
Community Resources.....	14–15
Community Links.....	16



Announcements

AGU26 Timeline: Save the Dates

Abstract submissions are now open for [AGU26](#), taking place **7–11 December 2026** in San Francisco, California. This year's meeting, *Where Science Connects*, marks a return to AGU's longtime host city and will bring together Earth and space scientists from around the world to share discoveries, build collaborations, and advance science.

To help identify the best session for your work, AGU's [Session Finder](#) allows you to paste your abstract and receive session recommendations before completing your submission.

Click [here](#) to learn more and submit your abstract by 5 August 2026

The Outstanding Student Presentation Awards (OSPA) Program has evolved into the new Outstanding Emerging Presenters (OEP) Program!

income countries as defined by the World Bank, [the OEP Program](#) is designed to provide feedback and support for presenters in advance of AGU26, giving them the opportunity to refine their work and deliver a stronger presentation at the Annual Meeting.

In addition to feedback, participants can connect with peers before the meeting for networking and support. Participants are also eligible to receive an award designated by their AGU section.

[Applications](#) will be accepted from 2 July. Space is limited to the first 800 applicants. As capacity is limited, we strongly recommend submitting your abstract and application as early as possible to secure a spot.

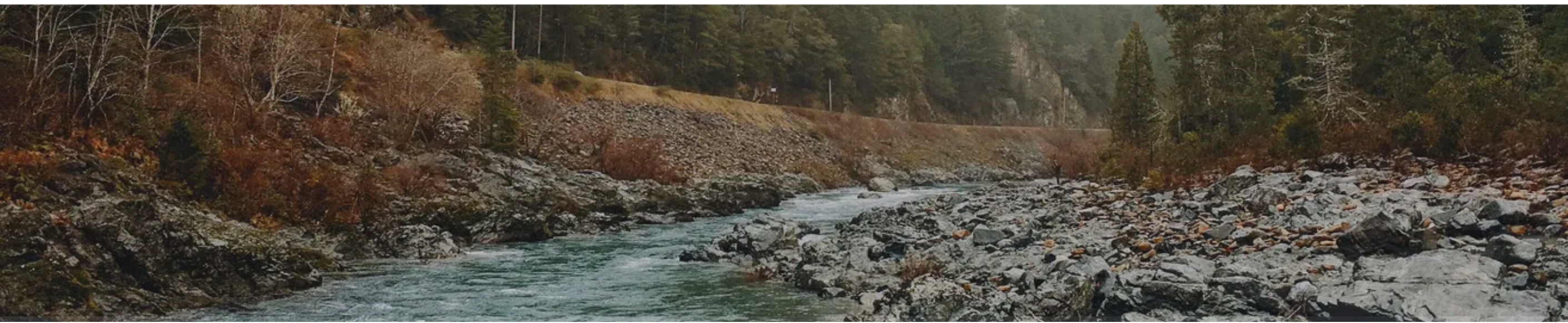
Learn more about eligibility requirements, key dates, and the application process on [the AGU26 website](#).

OpenHydroNet Now Available as Open Source

Google has released an open-source version of **OpenHydroNet**, its machine learning river forecasting framework. Built on the widely used **NeuralHydrology** package, OpenHydroNet adds real forecasting capabilities driven by weather forecast data and includes near-exact versions of the model architectures used in [Google FloodHub](#).

The release aims to support researchers and forecasting agencies by providing an accessible Python framework that can be trained and adapted using local hydrologic data. The developers hope that making these tools openly available will help strengthen flood forecasting efforts through local expertise and customization.

Learn more: [Google Research Blog](#), [documentation and tutorials](#), and the [GitHub repository](#) are available online.



Announcements

Bridges to Future Student Grants Program

Celebrating the past and future of hydrology, the [AGU Hydrology Bridges to the Future Program](#) is intergenerational. Bridges connects foundational work in our field with the expanding range and diversity of students interested in water, and honors those who’ve made an impact in our field. The program provides \$2,000 grants to support undergraduate, master’s, and doctoral students facing financial barriers in pursuing careers in hydrology. Funding can be used for activities like attending scientific meetings, visiting research groups, or engaging in career development.

Who Can Apply

Students enrolled full- or part-time at two-year colleges, four-year universities, or graduate programs, with a demonstrated interest in hydrological sciences. Preference is given to undergraduate students, but all career stages are eligible.

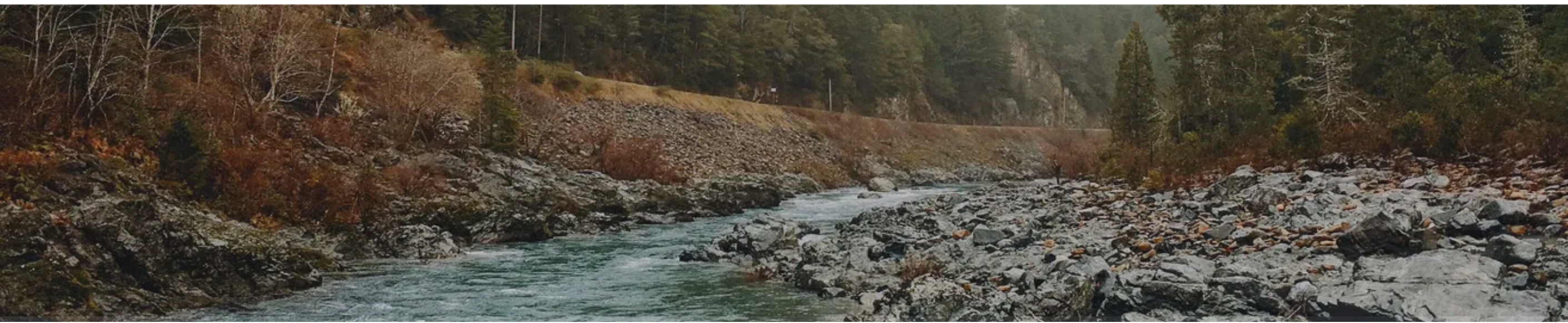
Application Materials Include

A current CV, two-page essay describing your hydrology interests and proposed activity, budget explaining how the grant makes the activity feasible, and one letter of reference confirming your qualifications and potential impact

How to Apply

Submit your application to Venkataraman Lakshmi, Hydrology Section President (vlakshmi@virginia.edu), who can also be contacted for additional information.

Applications are due by October 15. Award announcements will be made in November.



Announcements

InterPore Journal: Vol. 3, Issue 2 (May 2026) Now Online

InterPore Journal, the peer-reviewed, open-access journal of the International Society for Porous Media, welcomes AGU Hydrology Section readers to explore its latest issue: [Volume 3, Issue 2 \(May 2026\)](#). The journal provides a home for multidisciplinary research on porous media systems, spanning flow and transport, imaging and characterization, physical and numerical modeling, data-driven methods, material design, and applications across environmental, geological, biological, and industrial systems.

This newly released version contains many aspects of today’s porous surfaces research, including papers relating to: (1) the precipitation, of salt as a result of the geological storage of CO₂; (2) the mobilization of copper from low-grade ores; (3) remediation of dense non-aqueous phase liquid (DNAPL) through horizontal extraction wells, (4) dispersive mixing in porous media during gravity flow of liquids; (5) medical dual-energy X-ray computed tomographics's (CT) relevance to the petrophysical characterization of porous materials and (6); considering the property change (permeability) created by heat activated epoxy foams used in the alteration of fractured geothermal systems. Overall, the 2026 articles provide AGU Hydrology Section readers with a useful look at emerging directions in porous media science. [learn more about InterPore Journal](#).

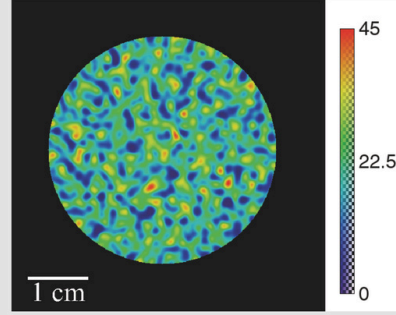
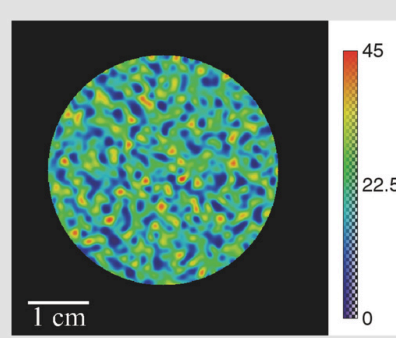
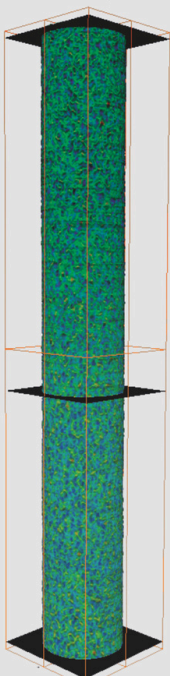


InterPore
JOURNAL

OPEN ACCESS

Issue 2
Volume 3
May 2026

Editor-in-Chief: Nima Shokri



Editors:

Ryan T. Armstrong • Branko Bijeljic • Rainer Helmig
Patrick Huber • Joaquin Jimenez-Martinez • Lin Ma • Dani Or
Tannaz Pak • Sorin Pop • Chaozhong Qin • Noushine Shahidzadeh

The Official Journal for the International Society for Porous Media

Prediction for the Places We Measure Least

Kshitij Dahal, PhD; Postdoctoral Researcher, University of Kansas
(PhD 2026, Arizona State University)

I became a hydrologist because I grew up watching water cause disasters. In Nepal, where I am from, a single monsoon storm can set off floods, landslides, and debris flows above villages with little warning. The hardest part was the unfairness of it: the places that needed prediction most were often the places we measured least. Closing that gap has been my work ever since.

The faculty at Khwopa College of Engineering in Nepal inspired me to turn that problem into research. My first answer was to go and measure. I trained as a civil engineer, mapped hazards across the Himalaya, and built one of the largest landslide inventories in the region by hand, digitizing more than 100,000 events. Measuring snow and gauging streams taught me a lesson I still keep: data does not exist in a vacuum, and the physics behind a number matters as much as the number itself.

At Arizona State University, where I did my PhD with Dr. Saurav Kumar, I learned to combine that physics with AI and scale it to places fieldwork can never reach. Arizona’s arid basins are as data-sparse as Nepal’s mountains, just in the opposite way: rivers that flow only after storms, with few gauges to catch them. I brought deep learning together with satellite Earth observation, because satellites see the parts of a watershed that gauges cannot. The AI model I built learns how landscapes behave, trained the way large language models like ChatGPT are, but on satellite views of precipitation, snow, vegetation, and terrain from nearly 100,000 watersheds.

Here is the point: once trained, the model works in a new basin with very little local data. It helps most in the hardest data-sparse basins—those with short records or unusual seasons, and because it learns physical behavior instead of memorizing one region, it carries that skill to new basins anywhere. Prediction stops being a luxury of well-gauged, well-funded places.

“The places that needed prediction most were often the places we measured least. Closing that gap has been my work ever since.”



Measuring snow density with a density cutter in the Sierra Nevada in January 2024—the kind of physical measurement my AI model now scales across thousands of watersheds.

CONTINUED ON PAGE 06

Prediction for the Places We Measure Least

Kshitij Dahal, PhD; Postdoctoral Researcher, University of Kansas
(PhD 2026, Arizona State University)

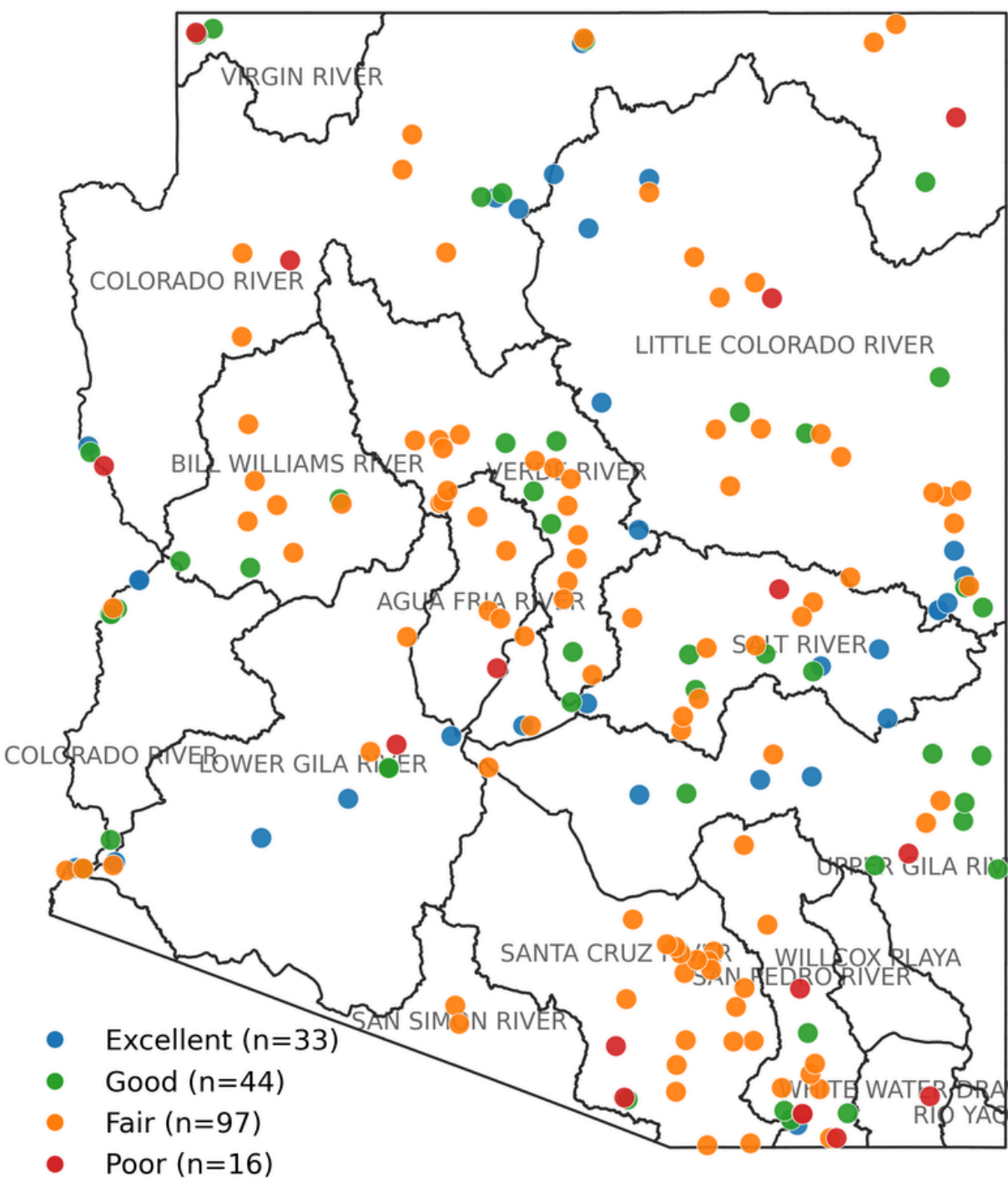
CONTINUED FROM PAGE 05

That mission continues at the University of Kansas, where I am a postdoctoral researcher working on the resilience of water infrastructure to natural hazards. On an NSF-funded project, our team rebuilds the country’s aging and often unmapped water distribution networks from openly available data, then stress-tests them under different hazards to identify low-cost solutions that utilities can implement. It is the same idea in a different form: fill the gaps where we measure least, and keep the solution affordable.

I try to keep the science open and shared. Through the AGU Thriving Earth Exchange, I helped a community in Lumberton, North Carolina, build its own flood model. Native American, Black, and Latino residents there face some of the region’s highest flood risk. I also teach hydrology with real satellite data and free tools like Python and Google Earth Engine through HydroLearn. My work has resulted in sixteen papers, an editorial role at a journal, and recognition as an AGU Outstanding Reviewer, but what I value most is simpler: the most useful science is the kind communities can run themselves.

From the field, to the models, to the pipes under our cities, my goal has not changed: to use physics and AI together to bring good prediction to the places that have always gone without it.

I thank Prof. Enrique R. Vivoni for nominating me for this spotlight.



Forecast skill for 190 stream basins across Arizona at a one-day lead. Each point is a basin, colored by operational tier from Excellent to Poor; about 40% fall in the Excellent or Good tiers.

“The most useful science is the kind communities can run themselves.”

Connect or collaborate: [geokshitij.github.io](https://github.com/geokshitij) · [Google Scholar](#) · [LinkedIn](#)

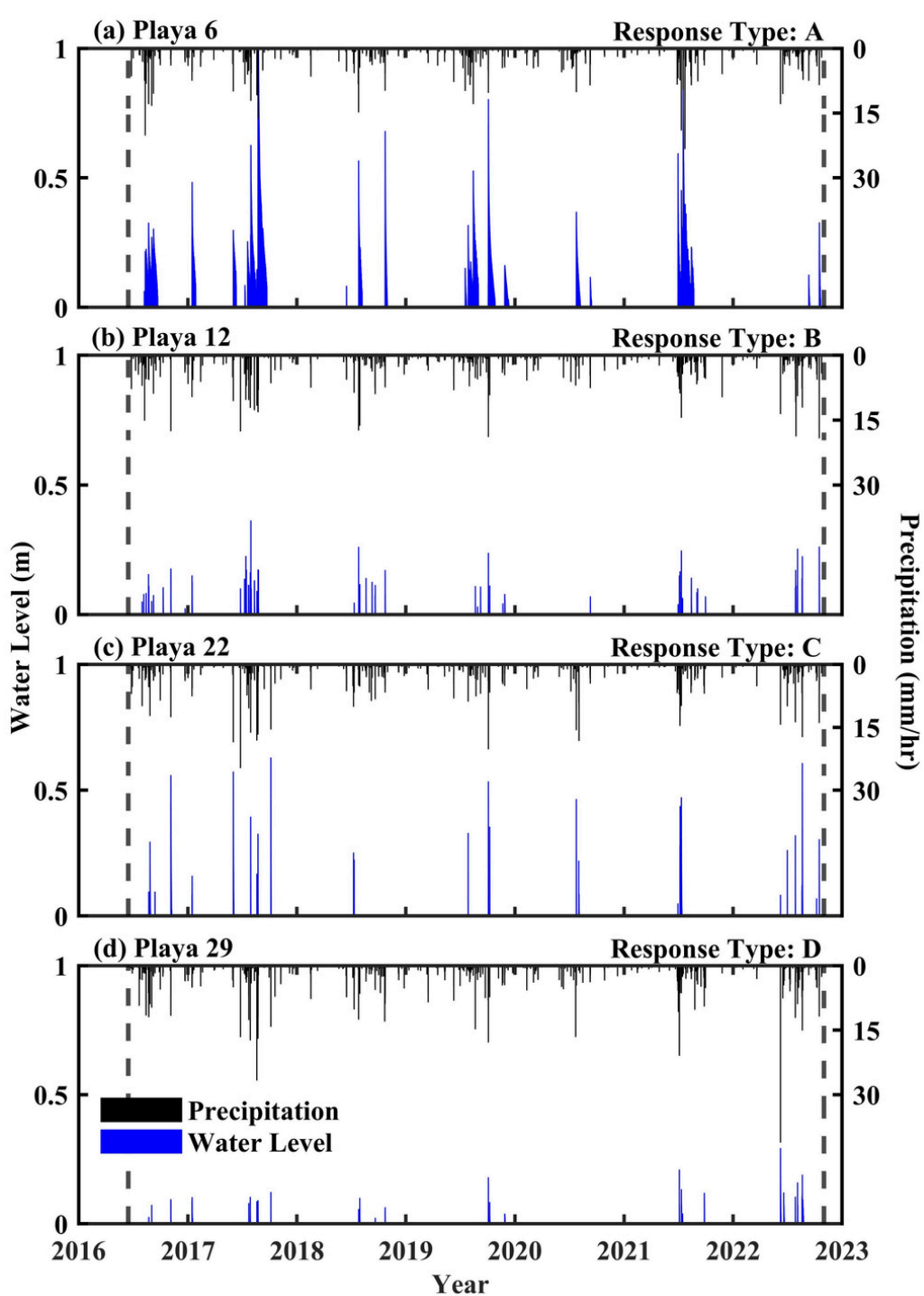
Uncovering the Hydrology of Ephemeraally Flooded Playas through Long-Term Monitoring

Charles Kimsal (U.S. Geological Survey, Lower Mississippi-Gulf Water Science Center)

Ephemeraally flooded playas are critical water sources in dryland ecosystems worldwide. They typically form in topographic low points within closed basins, where they serve as endpoints of basin-scale hydrologic connectivity. Due to their often-remote locations and ephemeral nature, observations of playa inundation have historically been sparse. In this study, we combined rain gauge-corrected Multi-Radar Multi-Sensor (MRMS) hourly precipitation data with over 6 years of water level data from 18 playas in the Jornada Basin of the Chihuahuan Desert. We also used a high-resolution LiDAR DEM and geospatial datasets of sand fraction and bare ground cover to examine how catchment characteristics influence inundation.

The high temporal resolution of the water level data provided a detailed view of playa inundation responses from individual events to seasonal and annual patterns. We identified four response types based on average inundation frequency, depth, and flood duration, with Type A being the most hydrologically active and Type D the least active. Most inundation events (69.8%) occurred during the North American Monsoon (NAM) from July through September, though winter precipitation also generated some flooding. Playa catchment mean annual runoff ratios ranged from 0.01% to 15.01% (median 0.99%). We also derived precipitation thresholds for inundation, which ranged from 8.4 mm to 42.6 mm for event precipitation magnitude (median 17.2 mm) and 5.3 mm/hr to 20.6 mm/hr for maximum hourly intensity (median 9.7 mm/hr).

Although all formed within the same basin, the playas represent diverse geomorphic origins. We identified six distinct geologic groupings associated with landscape features, including faults, remnant Pleistocene pluvial lakebeds, and localized sediment and vegetation patterns. This heterogeneity translates into differences in catchment properties and hydrologic behavior. Simple linear, multilinear, and multiple logistic regressions showed that catchment area is the dominant control on inundation thresholds, occurrence, and flood volume, while soil texture and terrain characteristics exert secondary influences. These results demonstrate that playa hydrology cannot be explained by rainfall alone and highlight the importance of landscape structure in shaping hydrologic connectivity and ephemeral flooding in dryland environments.



Hourly precipitation and water-level measurements from representative playas spanning the four hydrologic response types identified in the Jornada Basin study. Despite experiencing similar regional precipitation patterns, the playas exhibit different inundation frequencies, depths, and durations, highlighting the influence of landscape characteristics on hydrologic connectivity and flooding.

Reference: Kimsal, C. R., Vivoni, E. R., Sala, O. E., Monger, H. C., & McKenna, O. P. (2026). Hydrologic dynamics of ephemeraally flooded playas in a dryland environment. *Water Resources Research*, 62, e2024WR038848.
<https://doi.org/10.1029/2024WR038848>

Modernizing Probable Maximum Precipitation for Infrastructure Safety

[Yuan “Larry” Liu](#), [Daniel B. Wright](#), [John F. England](#), and [James A. Smith](#)

Probable maximum precipitation (PMP) is defined as the greatest possible depth of precipitation for a given duration and area at a specific location ([WMO, 2009](#)). This “worst-case scenario” is a critical design benchmark for high-hazard infrastructure, including large dams and nuclear power plants, where failure could result in catastrophic loss of life and property. Recommendations for major changes to PMP estimation methods were presented in the [2024 consensus study report](#) “Modernizing Probable Maximum Precipitation Estimation” from the National Academies of Science, Engineering, and Medicine.

Since its introduction in the 1940s for the design of large dams, flood control projects, and water-supply infrastructure across the U.S., PMP has been widely used by U.S. federal and state dam safety programs. However, estimation procedures have [gone decades](#) without major updates. Today, there are more than [16,000 high-hazard dams](#) and over [50 nuclear power plants](#) in the U.S., many of which are approaching or [beyond their original design lifespans](#). The potential for structural failure, coupled with intensifying flood hazards in a changing climate, highlights the urgent need to re-evaluate both existing design standards and PMP estimation methods.

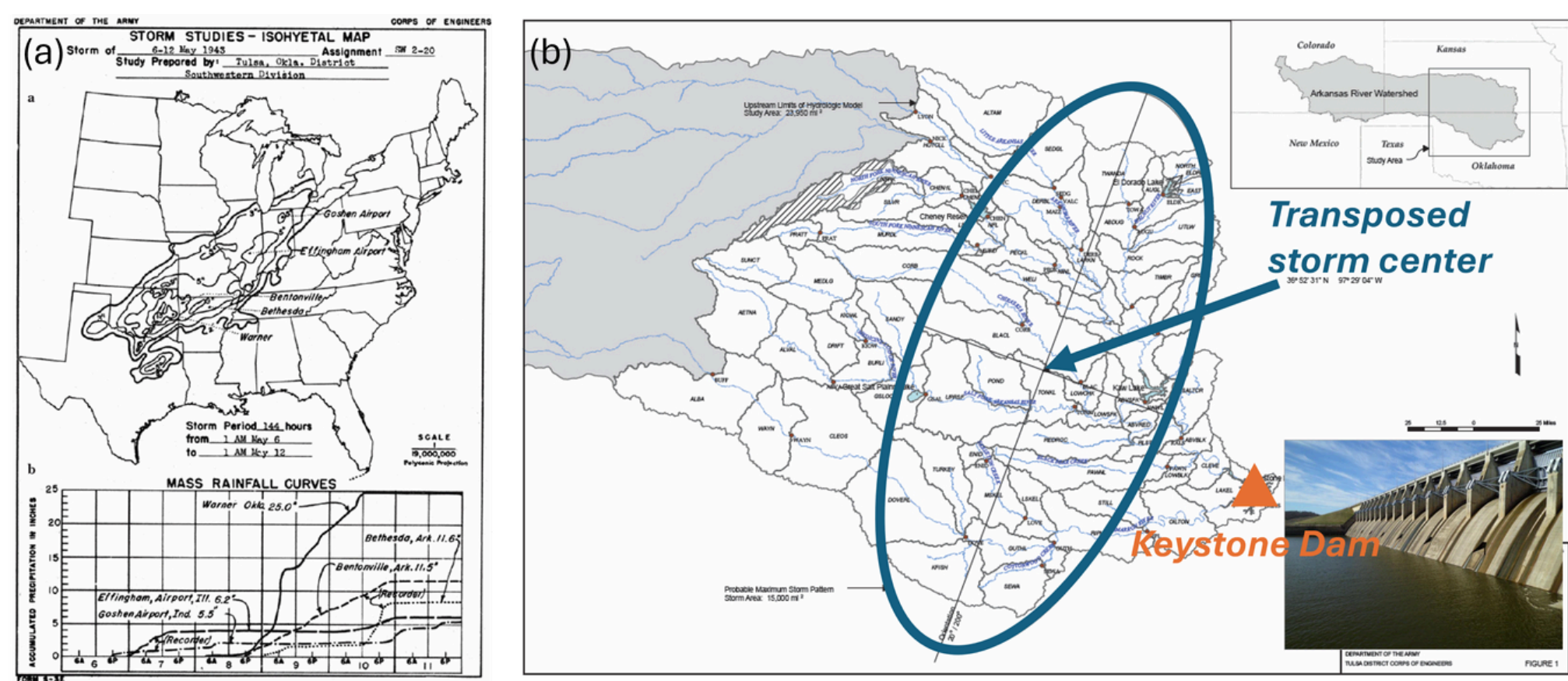


Figure 1. (a) Rainfall map and mass curves of the 6-12 May 1943 storm and (b) the storm transposed and rotated to the critical location for the PMP of Keystone Dam on the Arkansas River near Tulsa, Oklahoma. Sources: [NASEM \(2024\)](#) and [USACE \(2026\)](#).

Traditional PMP procedures and their limitations

Standard PMP estimation begins with a “storm catalog” of historical rainfall events across a broad region. Using a method called “storm transposition,” these events are moved from their original location to a target watershed and sometimes adjusted for local topography. These observed rainfall depths are then scaled to estimate an “upper bound” precipitation depth based on the maximum amount of water vapor the atmosphere could hold during the event—a technique called moisture maximization.

Despite their long-standing use, these traditional practices face critical weaknesses. Current PMP estimates provide a single value—as opposed to a probability distribution, which is useful for modern, risk-based design. Furthermore, the procedure assumes a stationary climate, failing to account for how a warming climate influences extreme precipitation. Much of the process also relies on the subjective judgment of individual practitioners—such as deciding which storms are “transposable” and how—meaning that two different analysts could, using the same data, reach different PMP estimates.

CONTINUED ON PAGE 09

Modernizing Probable Maximum Precipitation for Infrastructure Safety

[Yuan “Larry” Liu](#), [Daniel B. Wright](#), [John F. England](#), and [James A. Smith](#)

CONTINUED FROM PAGE 08

The vision for modernization

The 2024 National Academies report calls for a wholesale rethinking of PMP. A key recommendation is to redefine PMP as precipitation depth with an extremely low Annual Exceedance Probability (AEP), such as a 1-in-100,000-year event, tailored to specific climate periods. This shifts PMP estimation from a static “upper bound” approach to a risk-based framework. It also calls for federal and state agencies to develop national guidance to specify AEP targets (e.g., 1-in-10,000 or 1-in-100,000 chance) used for different types of infrastructure. To accomplish this, the report recommends estimating PMP using extreme value statistics applied to simulations using high-resolution convection-permitting climate models.

In the near term, efforts should focus on digitizing and enhancing historical storm catalogs, incorporating high-resolution NEXRAD radar data, and applying model-derived climate-change adjustment factors to historical rainfall observations. The long-term goal is to move from storm transposition toward estimation based on long simulations, which can support robust statistical analysis of extreme AEPs and facilitate high-resolution hydrologic-hydraulic modeling of rare flood conditions. In the transition from near-term enhancements to model-based estimation, emerging tools based on large ensemble data sets derived from model-based reanalyses and AI-driven downscaling procedures (e.g., [CESM2 Large Ensemble dataset](#) and [NVIDIA CorrDiff](#)) offer promising ways to generate high-resolution event sets that account for non-stationary climate conditions, ensuring infrastructure safety in an era of intensifying extremes. However, many challenges remain, such as uncertainty in observations, accurate modeling of extreme rainfall using both numerical and data-driven methods, and understanding climate change’s impacts on rainfall extremes

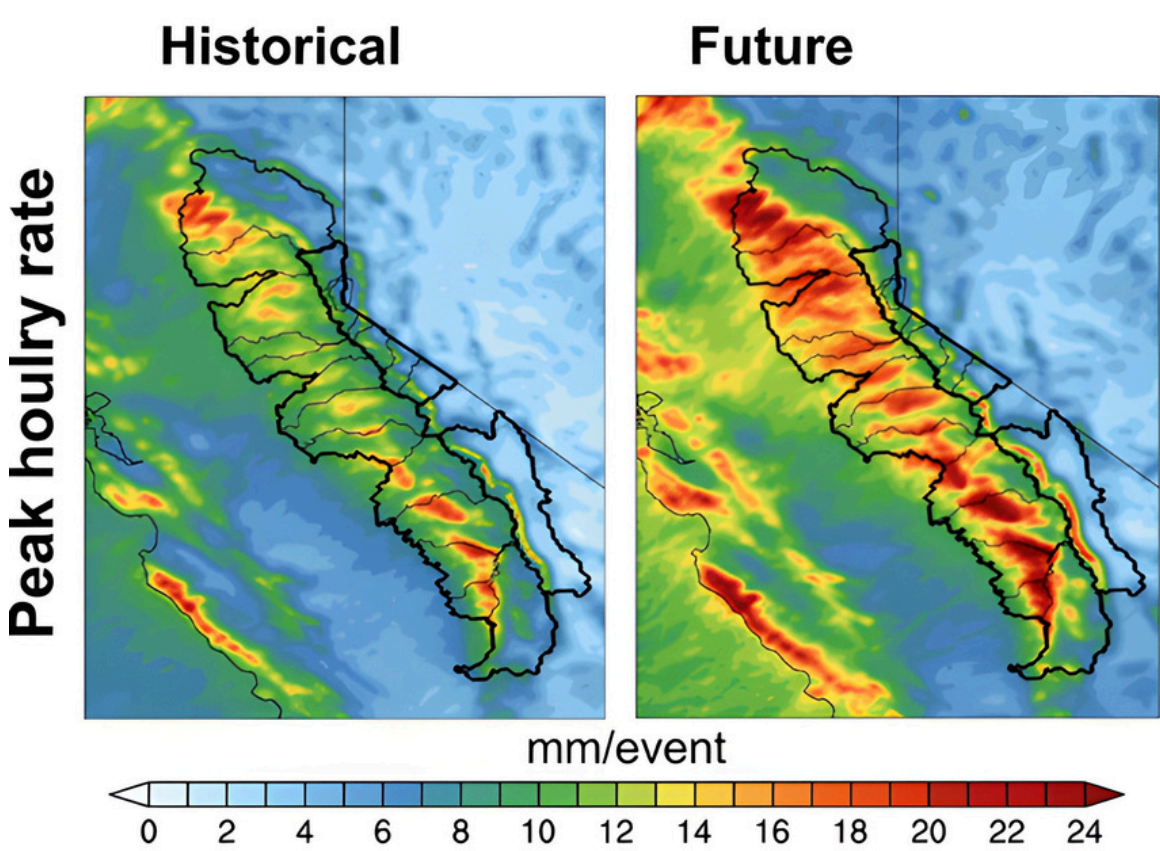


Figure 2. Example of 3-km WRF precipitation simulation for PMP estimation. (Source: [Huang et al., 2020, Science Advances](#))

“The long-term goal is to move from storm transposition toward estimation based on long simulations.”

Ecohydrology

Sam Zipper (Kansas Geological Survey, University of Kansas),
Kyle Blount (University of Illinois, Springfield)



Ecohydrology Technical Committee gathering at AGU25.

Happy summer from the Ecohydrology Technical Committee! We have three updates to highlight:

1. Ecohydrology sessions for any abstract!

This newsletter should arrive right around AGU abstract submission season, which is always one of the most exciting times of the year. As the last-minute abstract emails bounce around your inboxes, don't miss our flagship 'Frontiers in Ecohydrology' session, which is meant to highlight advances across the ecohydrology community. We also have many other topical ecohydrology sessions spanning urban, dryland, forest, and coastal landscapes, as well as methodologically oriented sessions focused on topics such as monitoring and modeling. If you are doing ecohydrology research, we have a session for you!

2. Stay in the ecohydrology loop.

We're revitalizing our digital presence in a few ways, including getting [our website](#) up to date; relaunching our dormant 'Meet a Leaf' blog, where we put the spotlight on different ecohydrologists; and invigorating our ecohydrology listserv as the place to learn about ecohydrology news and opportunities. The listserv is run through Google Groups, and [you can sign up here](#).

3. Urban Ecohydrology Chapman.

We have a subcommittee that is actively developing an AGU Chapman Conference focused on urban ecohydrology. We are currently targeting summer 2028 and are preparing a Phase II proposal for AGU. If you are interested in helping shape this conference as we move past the phase 2 proposal, please get in touch with the Ecohydrology Technical Committee Vice Chair, Kyle Blount (wblou2@uis.edu).

That's not all!

The Ecohydrology TC has a lot of other activities behind the scenes, and we are always enthusiastic about new members. In particular, we would welcome greater participation from ecohydrologists outside North America. If you would like to join, please send an email to the Ecohydrology TC Chair, Sam Zipper (samzipper@ku.edu). It is a great way to grow your professional network and connect with a fun and friendly group!

Water and Society Technical Committee Update: W&S Leadership, Fellows, and a New Transatlantic Collaboration

Christine Kirchhoff (Penn State), Hassaan Khan (Tufts University)

The AGU Hydrology Section's [Water and Society \(W&S\) Technical Committee \(TS\)](#) is a global community of scholars focused on the intersection of human behavior and water resources and systems. The committee is chaired by [Christine Kirchhoff](#) (Penn State), with [Hassaan Khan](#) (Tufts) as Deputy Chair, [Chung Yi Lin](#) (Clemson) as Social Media lead, and [Lu Liu](#) (Iowa State) as Secretary and Finance lead. Interested? Join our [Google Group](#) or connect with us on [LinkedIn](#).

Water and Society Early Career Fellows

Each year, the W&S TC selects 2–3 fellows for the W&S Science Fellowship, which supports early-career researchers from the Global South. Fellows write accessible blog posts highlighting regionally grounded water and society research for broad audiences and gain experience in science communication through feedback from the TC. The inaugural 2025 cohort included [Azmal Hossan](#), who wrote about water justice and climate resilience in the Bengal Delta, and [José Gescilam](#), who covered droughts, floods, and wetland loss across Brazil. Read and engage with their posts on our [LinkedIn](#) page.

This year, we received over 40 applications from researchers across Sub-Saharan Africa, the Middle East and North Africa, South Asia, Latin America and the Caribbean, Southeast and East Asia, and Central Asia. Nearly half were PhD students, with the remaining pool split roughly evenly between postdoctoral researchers and early-career professionals.

The 2026 fellows are [Athmane Khettouch](#) (International Water Research Institute at Mohammed VI Polytechnic University, Morocco), a postdoctoral researcher studying indigenous groundwater management through Morocco's ancient khattara system; [Simran Singh](#) (MIT-WPU, India), a PhD student focused on freshwater fisheries, aquaculture, and river stewardship across South Asia; and [Ousman Bajinka](#) (University of the Gambia), whose work connects water microbiology with community-level drinking water safety in West Africa (Figure 1). Their five-post blog series will be published on the W&S LinkedIn page over the coming months.



Figure 1. Left to right. 2026 Water and Society Fellows Dr. Athmane Khettouch, Simran Singh, and Dr. Ousman Bajinka.

New AGU - EGU Collaboration

Christian Klassert, Chair of the EGU Hydrological Sciences Division subdivision [Water Policy, Management and Control](#) and Christine Kirchhoff recently connected to explore potential AGU-EGU collaborations and shared interests. The EGU subdivision recently voted to rename itself Water and Society, both to modernize its identity and to reflect our shared interests. We also agreed to launch a joint webinar series to foster a semi-regular transatlantic venue for research and collaboration at the water-society interface. Look for more details this fall.

HELPING: Bringing Hydrological Science and Society Together for Water Solutions



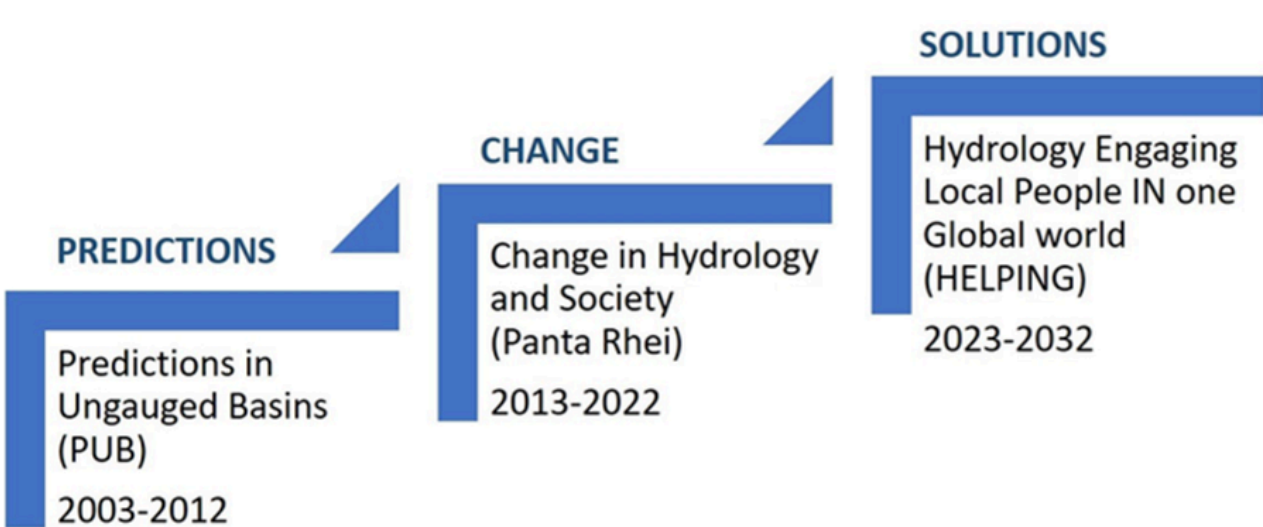
International Association of Hydrological Sciences (IAHS)
Thom Bogaard (Chair of the IAHS HELPING decade)

It is a pleasure to introduce the International Association of Hydrological Sciences (IAHS) and its current Scientific Decade, HELPING—Hydrology Engaging Local People IN one Global world (2023–2032), to the AGU Hydrology community. This article provides an overview of IAHS and HELPING, and invites researchers, practitioners, and stakeholders to participate in ongoing activities or propose new initiatives through the HELPING Working Groups.

The International Association of Hydrological Sciences (IAHS) is one of the world’s longest-standing international scientific organizations dedicated to water science. Established in 1922, IAHS promotes the advancement of hydrology through international collaboration, scientific exchange, and knowledge sharing. Today, the association connects more than 13,000 members across over 170 countries, providing a global platform for hydrologists, water scientists, and practitioners. IAHS operates under the umbrella of the International Union of Geodesy and Geophysics (IUGG) and the International Science Council (ISC), linking hydrology with the wider international scientific community.

A defining feature of IAHS has been its Scientific Decades: long-term initiatives that bring the global hydrological community together around shared challenges. These programmes have helped shape the direction of hydrological research and fostered international collaboration.

The first Scientific Decade, Predictions in Ungauged Basins (PUB, 2003–2012), focused on one of hydrology’s most fundamental challenges: improving predictions where observations are limited or unavailable. PUB stimulated major advances in hydrological modelling, uncertainty analysis, and prediction methods.



This was followed by Panta Rhei – Everything Flows (2013–2022), which explored how water systems and societies influence each other and change over time. The decade advanced approaches such as socio-hydrology and encouraged closer integration between hydrological, environmental, and social sciences.

Building on these foundations, IAHS launched its third Scientific Decade, HELPING: Science for Water Solutions, with a new ambition: moving from understanding and prediction towards the development and implementation of solutions.

HELPING recognises that many of today’s water challenges, including water scarcity, flooding, pollution, and increasing pressure on water resources, cannot be addressed by science alone. Solutions require collaboration between researchers, local communities, decision-makers, practitioners, and other stakeholders. By combining global scientific knowledge with local experience, HELPING aims to co-create practical approaches that support climate adaptation, disaster risk reduction, and sustainable water management, contributing to the United Nations Sustainable Development Goals.



CONTINUED ON PAGE 13

HELPING: Bringing Hydrological Science and Society Together for Water Solutions

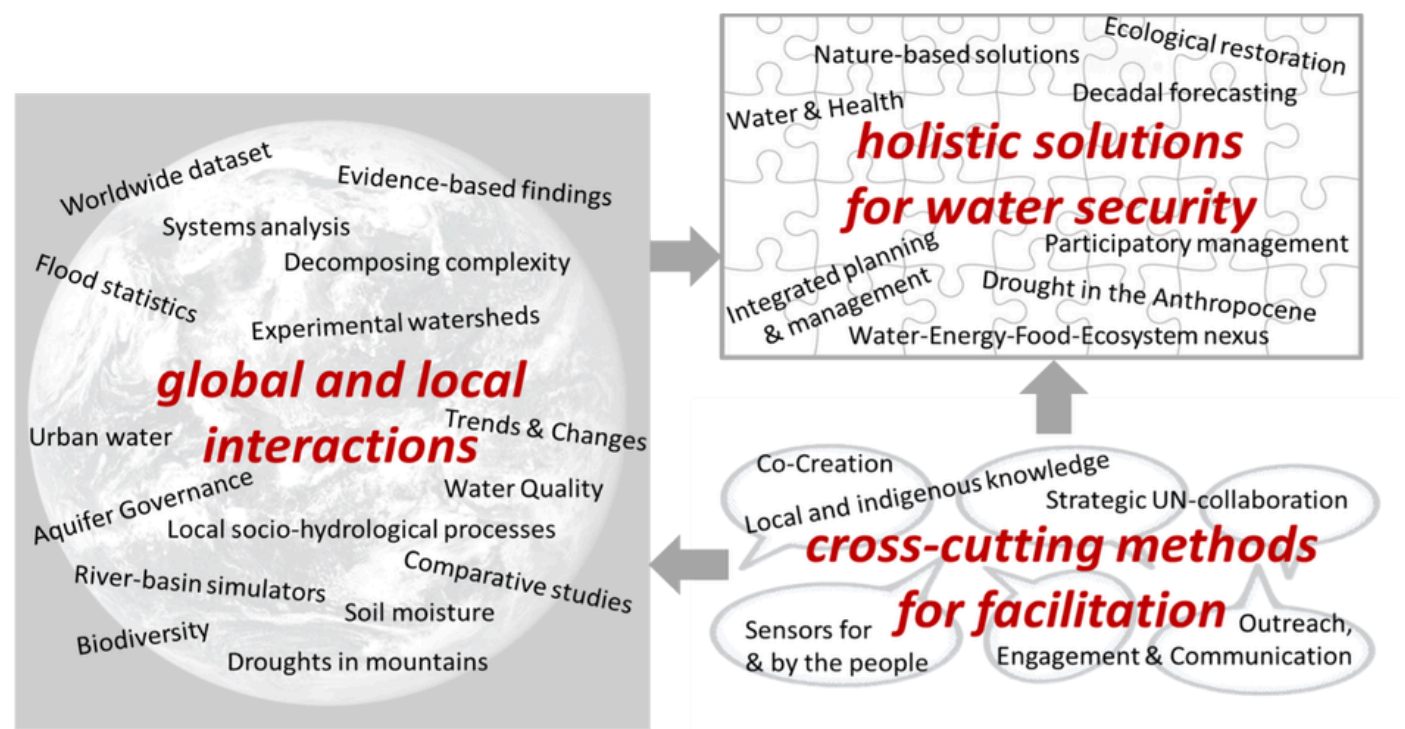


International Association of Hydrological Sciences (IAHS)
Thom Bogaard (Chair of the IAHS HELPING decade)

CONTINUED FROM PAGE 12

HELPING is structured around three interconnected themes:

- 1. Global and local interactions – led by Justin Sheffield
- 2. Holistic solutions for water security – led by Ana Mijic
- 3. Cross-cutting methods for facilitation – led by Adeyemi Olusola



Together, [these themes are delivered through 31 Working Groups](#), bringing together more than 2,500 participants worldwide. The Working Groups represent the heart of HELPING, creating spaces for collaboration, knowledge exchange, and new ideas.

Activities include online and in-person lectures, conference sessions, workshops, training events, and collaborative writing efforts. Many Working Groups work towards position papers developed collectively by their members, helping to identify emerging research priorities and guide future interdisciplinary initiatives. A key feature of HELPING is that its Working Groups are bottom-up and community-driven. This provides opportunities for researchers and practitioners to develop new collaborations, explore innovative approaches, and contribute ideas that respond to real-world water challenges.

What distinguishes HELPING from previous IAHS Scientific Decades is its emphasis on co-creation and implementation. PUB focused on improving our ability to predict hydrological behaviour, while Panta Rhei strengthened our understanding of changing human–water systems. HELPING asks a broader question: how can hydrological science actively support society in making better water decisions?

Through collaboration across disciplines, regions, and communities, HELPING aims to ensure that hydrological knowledge contributes directly to a more water-secure and sustainable future.

We welcome researchers, practitioners, and stakeholders worldwide to join the HELPING community, contribute to existing Working Groups, or propose new activities. Together, we can strengthen the connection between hydrological science and the solutions needed for a changing world.

- Explore HELPING Working Groups: <https://iahs.info/Initiatives/Scientific-Decades/helping-working-groups/>
- Propose a New HELPING Working Group: <https://docs.google.com/forms/d/e/1FAIpQLSctc5lF0eLL-VdFMrqnl2XlrOLmFF2cmWYBWYwHAZPV48OinA/viewform>
- Learn About IAHS Membership: <https://iahs.info/Members-Area/>

Community Resources



Unlock powerful resources to help you grow in your career

- Take full advantage of tools and opportunities designed specifically to support your professional growth—don't miss out!
- [Learn and Develop | AGU](#): Grow your skills and career with learning tailored for Earth and space scientists
 - Resource Guides:
 - [Careers in Geosciences Resource Guide](#)
 - [Graduate School Resource Guide](#)
 - [AGU Weekly](#) eNewsletter: delivered to your inbox every Thursday!



Impacted AGU Member Support Community

AGU has set up [a community](#) on AGU Connect for members impacted by job and funding losses. Participants can use this forum to share information and resources with one another. If you have any questions, please contact AGU's Section Support Team (agu-SectionHelp@agu.org).



Interviews with Interesting Hydrologists

The AGU Hydrology Section offers a [video series featuring interviews with eminent hydrologists](#) reflecting on key achievements in the field during the 20th century. These videos highlight the progression of hydrological science and offer valuable insights for scientists and educators alike.

Community Resources

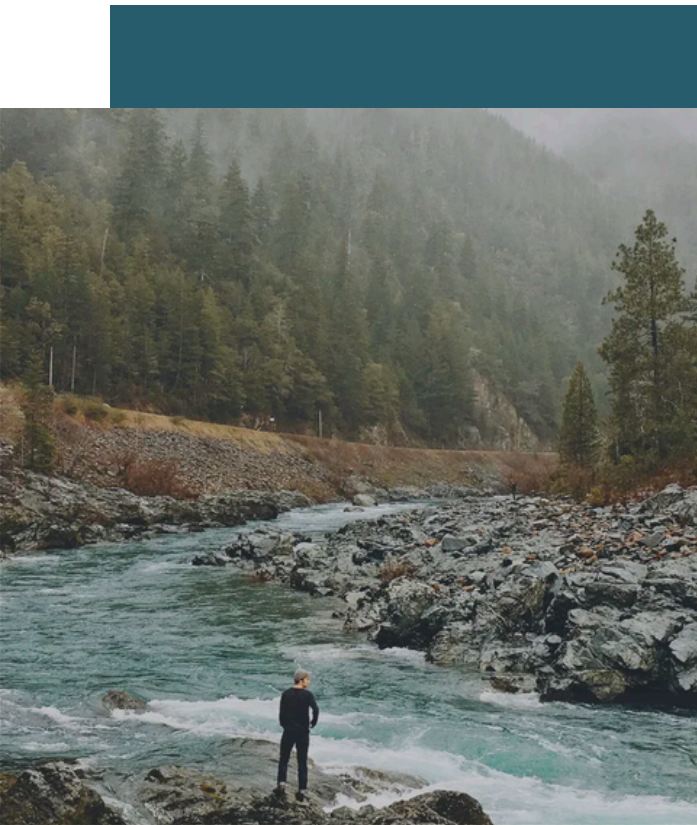
HydroShare Data Repository

[HydroShare](#) is CUAHSI's free, open-source water data repository, built to support open data sharing and collaboration in alignment with FAIR (Findable, Accessible, Interoperable, and Reproducible) data principles. It enables users to store, manage, share, and publish a wide variety of data and model formats in a citable and discoverable manner, including the option to permanently publish research products with a citable Digital Object Identifier (DOI) to meet funder and journal requirements.

CUAHSI Job Board

The CUAHSI [job board](#) is a shared resource for both job recruiters and job seekers looking for opportunities relevant to the broader water science community. Please fill out [this form](#) to post open opportunities.

Community Links



AGU Hydrology Section

Website: connect.agu.org/hydrology
BlueSky: [@hydrology-agu.bsky.social](https://bsky.social/profile/at/hydrology-agu.bsky.social)
X: [@Hydrology_AGU](https://twitter.com/Hydrology_AGU)

Technical Committee Links

Catchment Hydrology

Website: hydrocatch.weebly.com
BlueSky: [@agucatchhydro](https://bsky.social/profile/at/agucatchhydro)
LinkedIn: [AGU Catchment Hydrology](https://www.linkedin.com/company/AGU-Catchment-Hydrology)
X: [@AGUCatchHydro](https://twitter.com/AGUCatchHydro)

Distributed Sensing

Website: connect.agu.org/hydrology/about/tc-committees/sensing
BlueSky: [@agu-sensing.bsky.social](https://bsky.social/profile/at/agu-sensing.bsky.social)

Ecohydrology

Website: connect.agu.org/hydrology/about/tc-committees/ecohydrologymain
X: [@AGUecohydro](https://twitter.com/AGUecohydro)

Groundwater

Website: connect.agu.org/hydrology/about/tc-committees/groundwater
X: [@AGU_GWHydro](https://twitter.com/AGU_GWHydro)
LinkedIn: [AGU Groundwater Hydrology](https://www.linkedin.com/company/AGU-Groundwater-Hydrology)

Hydrologic Uncertainty

Website: connect.agu.org/hydrology/about/tc-committees/hydro-uncertainty
X: [@AGU_HU](https://twitter.com/AGU_HU)

Hydrology Section Student Subcommittee (H3S)

Website: agu-h3s.org
X: [@AGU_H3S](https://twitter.com/AGU_H3S)
LinkedIn: [American Geophysical Union Hydrology Section Student Subcommittee \(H3S\)](https://www.linkedin.com/company/American-Geophysical-Union-Hydrology-Section-Student-Subcommittee-(H3S))

Hydrogeophysics

Website: connect.agu.org/hydrology/about/tc-committees/hydrogeophysics
X: [@AGUhydrogeophy](https://twitter.com/AGUhydrogeophy)
Instagram: [@aguhydrogeophysics](https://www.instagram.com/aguhydrogeophysics)

Justice, Equity, Diversity, and Inclusion (JEDI)

Website: connect.agu.org/hydrology/about/tc-committees/hydrojedi

Precipitation

Website: connect.agu.org/hydrology/about/tc-committees/pretech
Facebook: [AGU Precipitation](https://www.facebook.com/AGU-Precipitation)
BlueSky: [@aguprecip.bsky.social](https://bsky.social/profile/at/aguprecip.bsky.social)
Instagram: [@AGU_precipitation](https://www.instagram.com/AGU_precipitation)
LinkedIn: [AGU Precipitation](https://www.linkedin.com/company/AGU-Precipitation)

Remote Sensing

Website: connect.agu.org/hydrology/about/tc-committees/remote-sensing
LinkedIn: [AGU Hydrology Section's Remote Sensing Technical Committee group](https://www.linkedin.com/company/AGU-Hydrology-Section's-Remote-Sensing-Technical-Committee-group)

Soil Processes and Critical Zone

Website: connect.agu.org/biogeosciences/tc-committees/soils-spcztc

Unsaturated Zone

Website: connect.agu.org/hydrology/about/tc-committees/unsat
X: [@UnsatHydro](https://twitter.com/UnsatHydro)

Water and Society

Website: connect.agu.org/hydrology/about/tc-committees/water-and-society
X: [@AGU_WS](https://twitter.com/AGU_WS)
Google: groups.google.com/agu-water-and-society

Water Quality

Website: aguwaterquality.org/
X: [@AGU_WQ](https://twitter.com/AGU_WQ)