

VOLUME:6
ISSUE:1

NEWSLETTER

DECEMBER 19TH 2025



Editor: Alfonso
Rivera |

Coordination:
Marie-Amélie Pétré
& Christina Fraser |

Design: Rosario
Sanchez |



International Association of Hydrogeologists

IAH TRANSBOUNDARY AQUIFERS COMMISSION

WHAT'S INSIDE THIS ISSUE:

Main story:

The newly updated 2025
edition of the TBA world
map p.2

Status of the ISARM
networks p.6

News from the ISARM
Networks (Africa,
Americas, Asia, Europe,
Mena) p.7

Cooperation &
Collaboration p.17

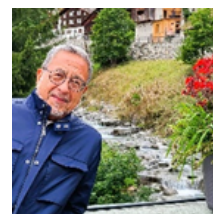
Events p.19

People in the news p.20

Other short news ... p.21

Recent TBA-related
publications p.22

EDITOR'S MESSAGE ALFONSO RIVERA CHAIR, TBA COMMISSION



Dear friends of the Transboundary Aquifers Commission, I am happy to announce that our Commission has a new mandate! The IAH Executive and Council recently renewed our mandate for the period of 2025-2028. The Executive and Council acknowledged particularly valuable contributions of our commission to the work of IAH.

Our main story this time is based on the Newly updated 2025 edition of the transboundary aquifers of the world by IGRAC, with a key role of the TBA Commission engaged in an advisory role.

As usual, we complete our information round with news from the ISARM networks in four continents, cooperation and collaboration, events, people in the news, other short news, and recent TBA-related publications.

Your comments and/or suggestions are welcome.

Good reading!

OUR TBA COMMISSION PROUDLY
SUPPORTED THE NEW TBA MAP

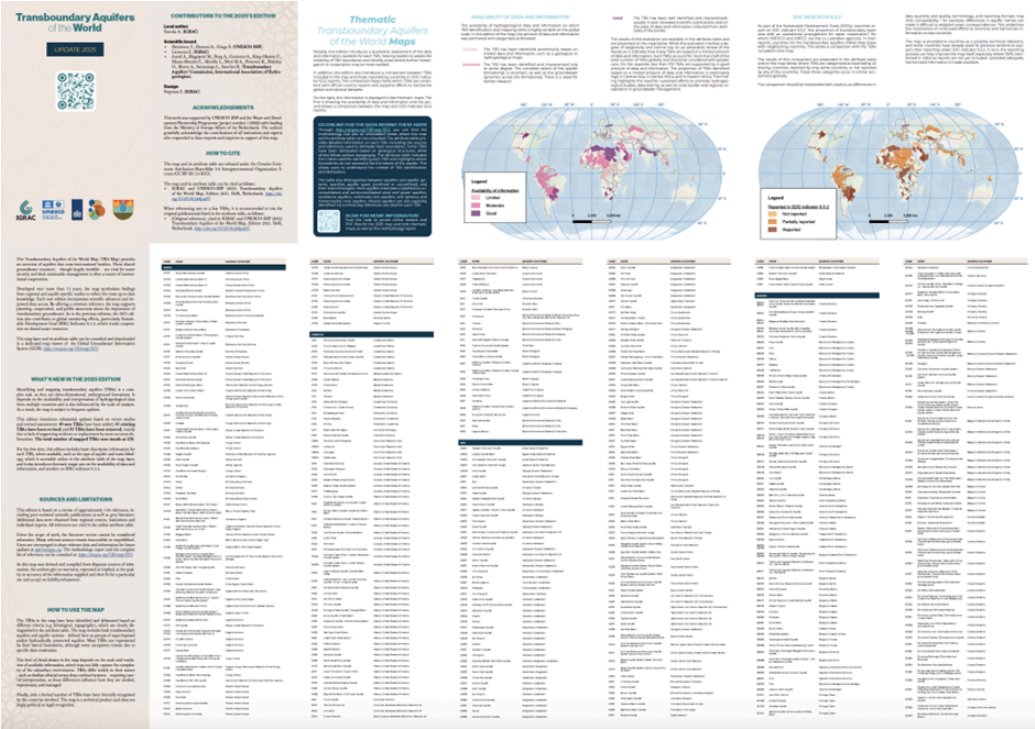
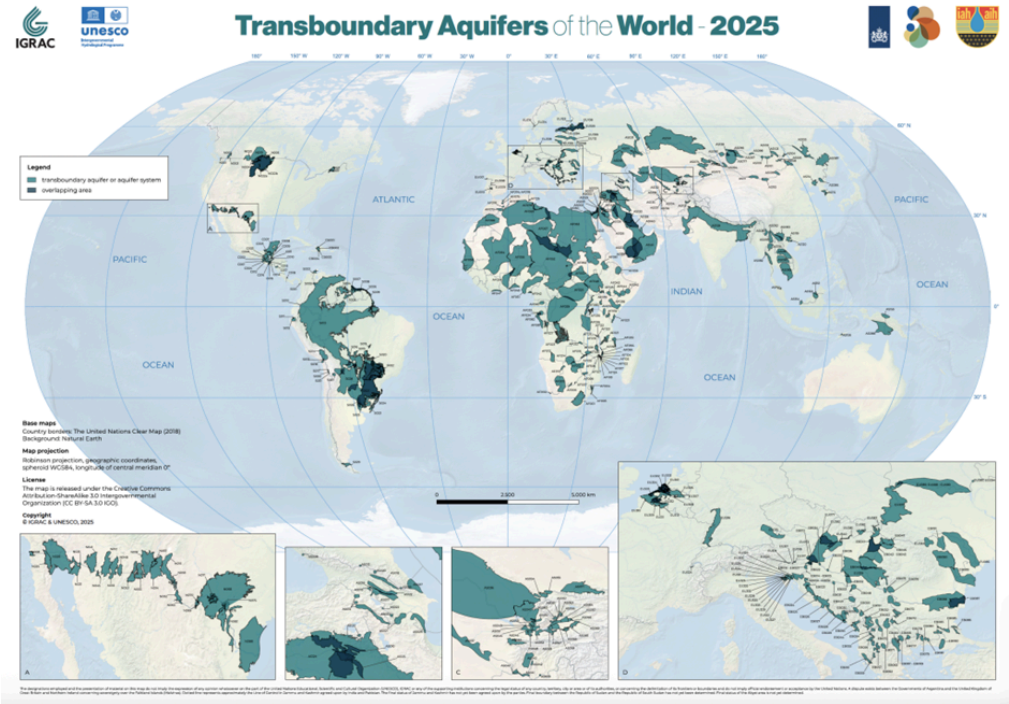


FIGURE 1 FRONT AND BACK SIDES OF THE NEW TBA MAP.

BY ARNAUD STERCKX

A new edition of the Transboundary Aquifers of the World Map (TBA map) has been released in September 2025, including several updates in comparison with the previous edition dating back to 2021: many TBA boundaries have been modified, the methodology was improved, new thematic maps dedicated to SDG 6.5.2 and data availability were created, and the design was entirely revised (figure above). The map layer and its attribute table can be consulted and downloaded in a dedicated map viewer of the Global Groundwater Information System (GGIS): <https://un-igrac.org/TBA-map-2025>.

Background
The TBA map provides an overview of aquifers that cross international borders. Although these shared groundwater resources are largely invisible, they are vital for water security and their sustainable management is often of matter international cooperation. Developed by UNESCO-IHP and IGRAC over more than 15 years (Figure 2), the map synthesises findings from regional and aquifer-specific studies, reflecting the most up-to-date knowledge. Each new edition incorporates scientific advances and improved data access. By offering a common reference, the map supports planning, cooperation, and public awareness about the importance of transboundary groundwater.

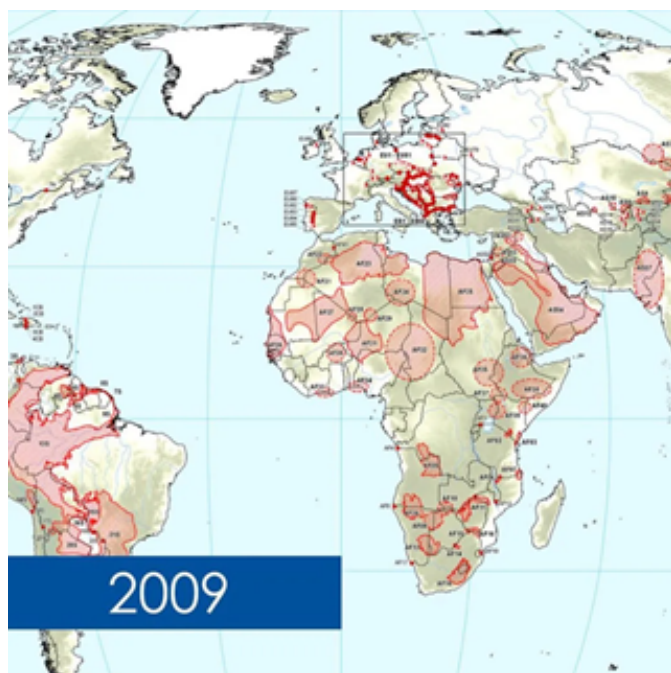


FIGURE 2 PAST EDITIONS OF THE TBA MAP ([IGRAC WEBSITE](https://www.igrac.org/)).

WHAT'S NEW IN THE 2025 EDITION

Updated TBA boundaries (By Arnaud Sterckx)

Identifying and mapping transboundary aquifers (TBAs) is a complex task, as they are three-dimensional, underground formations. It depends on the availability and interpretation of hydrogeological data from multiple countries and is also influenced by the scale of analysis. As a result, the map is subject to frequent updates.

This edition introduces substantial updates based on recent studies and revised assessments: 49 new TBAs have been added; 41 existing TBAs have been revised; and 91 TBAs have been removed, mainly due to lack of supporting evidence or replacement by more accurate delineations. The total number of mapped TBAs now stands at 426.

Additional descriptive information on TBAs

For the first time, this edition includes basic descriptive information for each TBA, where available, such as the type of aquifer and main lithology, which is accessible online in the attribute table of the map layer. This supplementary information helps the readers to appreciate the diversity of TBAs in the map. For example, many TBAs are not single aquifers but aquifer systems, that is, groups of superimposed and/or hydraulically connected aquifers. TBAs have been identified and delineated based on different criteria (e.g. lithological, topographic). Most TBAs are represented by their lateral boundaries, although some exceptions remain due to specific data constraints. Last but not least, TBAs differ widely in their nature - such as shallow alluvial versus deep confined systems - requiring careful interpretation, as these differences influence how they are studied, represented, and managed.

THEMATIC MAPS

In addition, two thematic maps have been introduced. The first provides a qualitative assessment of data and information available for each TBA (Figure 3), helping readers to assess the reliability of TBA boundaries and identify areas where further investigation or cooperation may be most needed. For each TBA, the availability of information was qualified as “limited”, “moderate” or “good”. The results of this evaluation - also available in the online attribute table - indicate that more than half of the TBAs are only supported by limited data and information, many of them in Central Asia, Central Africa and Eastern Africa.

The second thematic map shows a comparison between TBAs in the map and those reported by countries in SDG Indicator 6.5.2 reports (Figure 4) - also available in the attribute table. This comparison helps clarify which TBAs are consistent with official country reports and supports efforts to harmonize global and national datasets. This comparison is limited because SDG Indicator 6.5.2 reports often do not contain the boundaries of the TBAs, and TBAs often have different names. Moreover, several countries have not reported on that indicator. Nevertheless, the comparison identifies discrepancies between the map and what countries have reported, underlining the importance of continued efforts to reconcile and harmonize information across countries.

WHAT'S NEW IN THE 2025 EDITION...

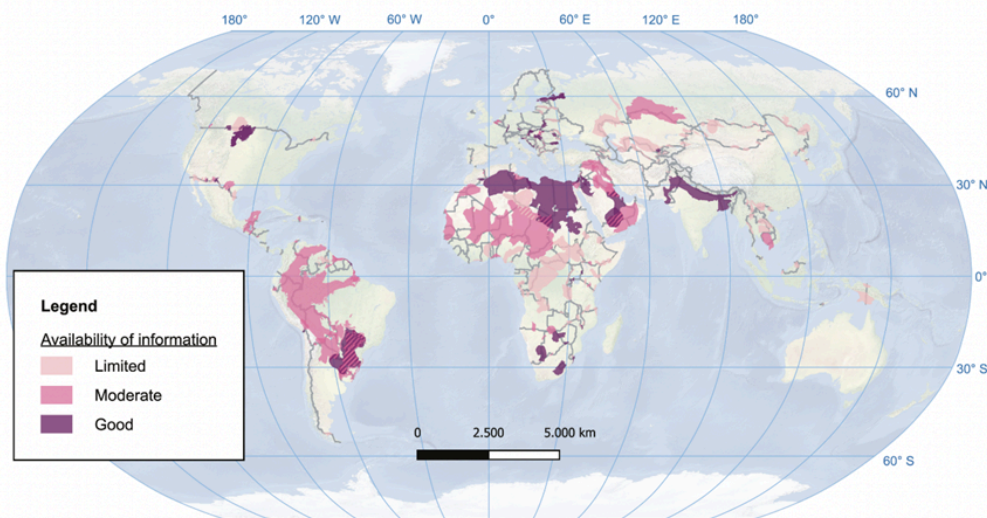


Figure 3 Thematic map on the availability of data and information.

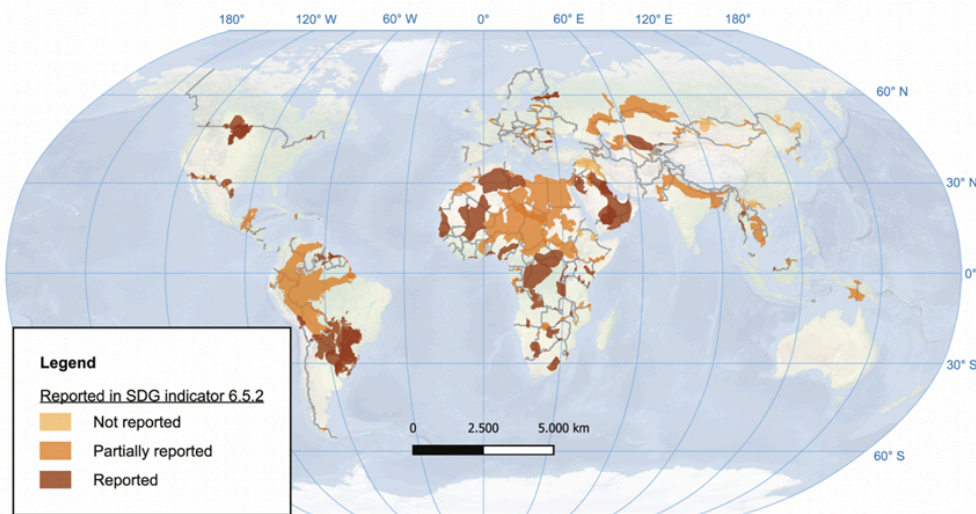


Figure 4 Thematic map on SDG Indicator 6.5.2 reporting.

THE KEY ROLE OF THE TBA COMMISSION

Our TBA Commission was engaged in an advisory role, with the active participation of Alice Aureli, Momčilo Blagojević, Avi Burg, Alexis Gutierrez, Caroline King-Okumu, Constanza Maass-Morales, Laura Movilla, Marie-Amélie Pétré, Kevin Pietersen, Oleg Podolny, Alfonso Rivera, Lucia Samaniego and Rosario Sanchez. Representing different regions of the world and with different backgrounds, our experts contributed to the development of the methodology, helped collecting literature and insights, and revised the final dataset. The co-chair of our TBA Commission, Arnaud Sterckx was lead author of the revision of the map.

SOURCES AND LIMITATIONS

This edition is based on a review of approximately 150 references, including peer-reviewed scientific publications as well as grey literature. This literature review took place between 2024 and 2025. Additional data were obtained from regional centres, institutions and individual experts. All references are cited in the online attribute table.

Given the scope of work, the literature review cannot be considered exhaustive. Many relevant sources remain inaccessible or unpublished. Users are encouraged to share relevant data and information for future updates. The methodology report and the complete list of references can be consulted at: <https://un-igrac.org/TBA-map-2025>.

NEXT STEPS

Despite significant advances in TBA identification and characterization, the information for many TBAs in the map remains insufficient. In many cases, it is unclear how their lateral boundaries are defined, how they are structured, and how they function as groundwater flow systems. The revision of SDG Indicator 6.5.2 reports suggests that much information on groundwater and TBAs is available, however at the national level. Similarly, transboundary groundwater bodies in Europe are typically reported unilaterally, with limited instances of cross-border harmonization—usually within bilateral agreements or international river basin organizations. Comparable situations exist in other regions, and many scientific studies on TBAs rely on data from only one country. These challenges highlight the need for sustained efforts to promote data sharing and enhance cross-border and regional cooperation in groundwater management.

2025 STATUS of THE ISARM REGIONAL NETWORKS

The Internationally Shared Aquifer Resources Management (ISARM) Programme was launched in June 2000 at the 14th Session of the Intergovernmental Council of the UNESCO International Hydrological Programme (IHP).

The first decade of the ISARM Programme culminated in a major international Conference in 2010. Eleven years after that significant Conference, a second decadal Conference was held in 2021, marking the end of the second Phase of the ISARM Programme (2010-2020).

The ISARM Programme originally generated four regional networks: ISARM-Americas, ISARM-Africa, ISARM-Asia and ISARM-Europe. During 20+ years since ISARM was created, a large number of countries engaged in the program and numerous transboundary aquifers were identified and/or characterized. This set of activities generated investments, studies, maps, UN-backed articles of the Law of TBA, cooperation, collaboration, hydro-diplomacy, guidelines, books, and many scientific publications.

In brief, the history and achievements of ISARM are immense and remarkable.

The IAH-TBA Commission has been following – and reporting, on the activities of the ISARM regional networks for long. However, we feel – and fear, that the ISARM networks are slowly disappearing. Related transboundary aquifers activities continue everywhere, but the ISARM networks have somehow stalled.

The only regional network fully operational with a structured program, regional studies, network meetings, and so on, is the ISARM-Americas network.

At the TBA-Commission we have created a “new” (not official) ISARM network for the MENA region. The table below summarizes the status and contacts of each network; in a few cases, we include names of our commission’s members as temporary contacts.

ISARM-Americas	Main leader is the CeReGas, Uruguay	Contact: Agostina Pedro and Alberto Magallanes isarm@isarm-americas.org
ISARM-Africa	Currently unknown...	TBA-Commission contact: Kevin Pietersen kpietersen@mweb.co.za
ISARM-Asia	Currently unknown...	TBA-Commission contact Han Zaisheng hanzsh@hotmail.com
ISARM-Europe	It seems to be extinct, no activities since 2021	TBA-Commission contact Marie-Amélie Pétré, Alexis Gutierrez, Momčilo Blagojević marieamelie.petre@gmail.com a.gutierrez@brgm.fr moblagojevic@gmail.com
ISARM-MENA	Newly created (not official) network by the IAH-TBA-Commission	TBA-Commission contact Avi Burg burg@gsi.gov.il

As usual, we report below the most recent news of each ISARM region; in some cases, contributed by members of our TBA Commission.

ISARM Africa
TBA News
By Kevin Pietersen



The Development of Groundwater Monitoring Systems in Strategic Aquifers in Southern Africa: The Southern African Development Community (SADC) hosts as many as 32 transboundary aquifers (TBAs) across its member states. These aquifers are strategic regional and national resources crucial to groundwater supply and to improving livelihoods across member countries.

There are numerous challenges to sustainable resource management and the utilisation of these aquifers, including a limited understanding of the aquifers due to inadequate groundwater monitoring and the lack of groundwater data in the respective Member States. To increase knowledge of aquifer sustainability and promote effective resource management and utilisation, it was critical to develop strategic groundwater monitoring systems for selected aquifer typologies.

This was done for, amongst others, the Stampriet Transboundary Aquifer System (STAS). The revised groundwater network is designed to (i) evaluate the impacts of abstraction on groundwater levels and resources from the Kalahari, Auob (Namibia)/Otshe (Botswana), and Nossob aquifers; (ii) monitor and quantify groundwater recharge; and (iii) monitor groundwater quality. Based on the initial sampling results, the plan is to extend the monitoring network southward.

To provide basin-wide baseline monitoring data, four production boreholes and one production borehole will be monitored for radionuclides in Botswana and South Africa. The total number of sites to be monitored for the proposed transboundary monitoring objectives is 81.

Comprehensive Groundwater Quality and Availability Assessment for the Cuvelai and Kunene River Basins: SADC-GMI is supporting the Cuvelai River Basin Commission (CUVECOM) with studies on the Cuvelai and Etosha Basin / Ohangwena Aquifer System. The Ohangwena Groundwater System is hosted within the Cubango Megafan. Three aquifers—designated KOH-0, KOH-1, and KOH-2 are present within this geological feature. The aquifer system is developed within a stacked paleo-megafan, deposited by former courses of the Cubango River and its tributaries. The sustainable management of groundwater resources in the Cuvelai Basin is a priority for Angola and Namibia, given the basin's importance for public water supply and climate resilience, driven by its demographic and climatic characteristics.

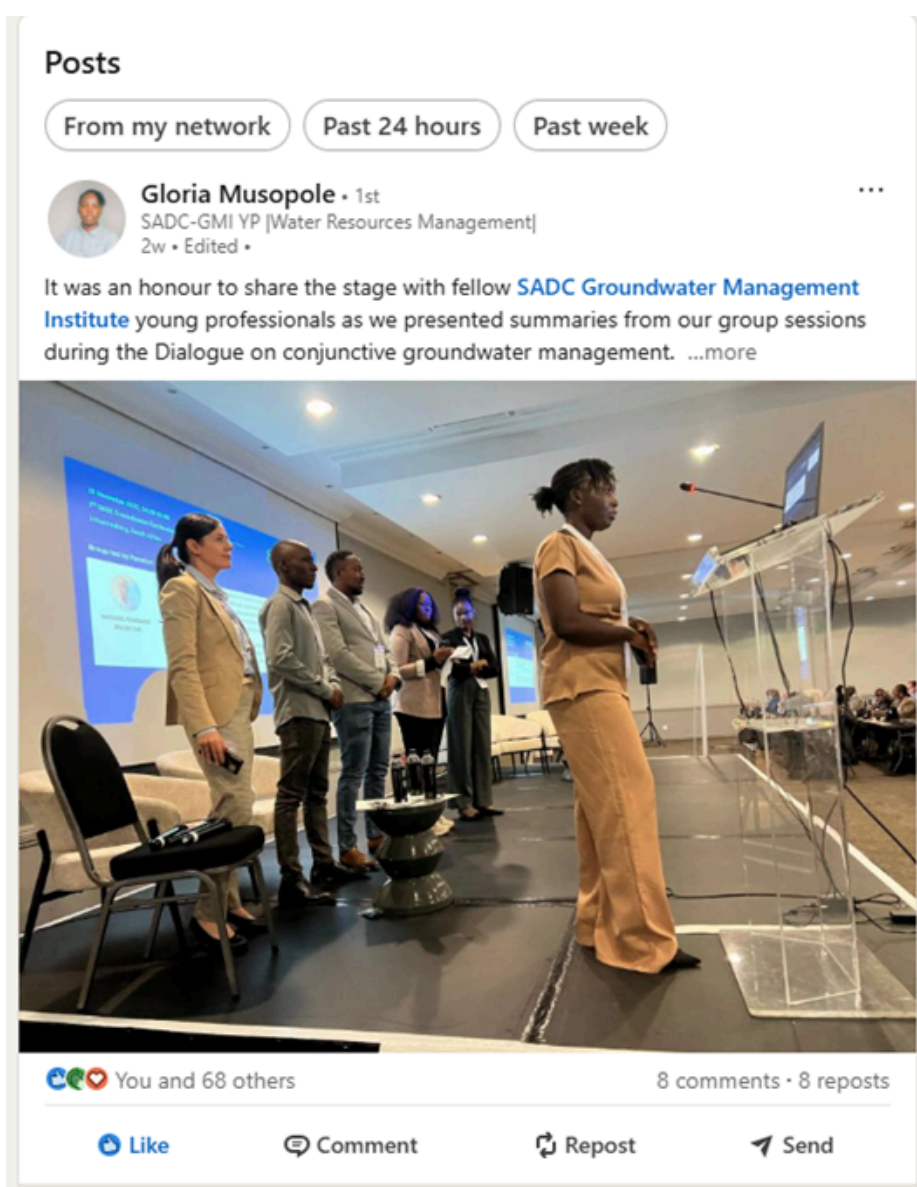
Member of the core mission team, from left to right - Falco Kiowa, Octavio da Conceição Pepé, Josephine Nangongo, and Kevin Pietersen.

A mission was undertaken in September to obtain relevant information and data on the basin's aquifers, including geophysical, hydrogeological, lithostratigraphic, and monitoring data, as well as information on ongoing plans, projects, and policies; engage stakeholders (government institutions, water utilities, research centers) to strengthen collaboration and ensure the project's actions are aligned with national initiatives; and identify ongoing actions and operational challenges to create synergies and avoid duplication of efforts. The activities took place in Windhoek, Ondangwa, Ohangwena and Oshikoto (Namibia), as well as in Ondjiva, Lubango, and Luanda (Angola). The delegation consisted of Falco Kiowa (Project Management Unit - CUVKUN), Kevin Pietersen (SADC-GMI), Octavio da Conceição Pepé, and Josephine Namgongo (Cuvelai Groundwater Task Team), with other members occasionally joining for specific visits.



The seventh SADC Groundwater Conference, with the theme “Investing in Groundwater for Climate Action,” was held on 19-21 November 2025. The conference also hosted the second Conjunctive Water Management Dialogue. The dialogue focused on opportunities for conjunctive management in transboundary contexts.

Deliberations included STAS, Cuvelai, and Etosha Basin / Ohangwena Aquifer System, Tuli Karoo Sub-Basin, and Taoudeni-Tanezrouft Aquifer System / Système Aquifère de Taoudéni-Tanezrouft, Mono Basin, and also the Shire Alluvial Aquifer.



Social media post on the second conjunctive management dialogue.

ISARM Americas

TBA News

By Lucia Samaniego



ISARM Americas Meeting – Belo Horizonte, Brazil, 2025

Within the framework of the International Seminar “Águas para o Futuro”, held from 3 to 5 June 2025 in Belo Horizonte, Brazil, the ISARM Americas group convened to advance regional cooperation on the management of transboundary aquifers.

The meeting, coordinated by CeReGAS, brought together representatives from 17 countries to continue work on the upcoming ISARM Americas Book 5, which will update and consolidate the technical and scientific knowledge on shared aquifer systems across the region.

Participants reviewed and discussed the updated national technical sheets, agreeing on a submission deadline by late November 2025. CeReGAS will continue coordinating the process and will provide virtual spaces for follow-up technical meetings.

The session also featured presentations by UNESCO representatives, who shared international experiences and initiatives related to sustainable groundwater management and transboundary cooperation.



ISARM Asia

TBA News

y Han Zaisheng



According to the Tajikistan-based Avesta news agency, Central Asian countries have reached four new bilateral agreements on transboundary river management in the past three years. In 2022, Kyrgyzstan and Uzbekistan signed two agreements. From 2021 to 2022, Turkmenistan and Uzbekistan signed two new agreements on the protection of the Amu Darya River.

A Central Asian countries lag behind in cooperation on the 45 transboundary aquifers in the region compared to transboundary river management, although there has been some progress. In 2022, Kazakhstan and Uzbekistan formulated a roadmap for the protection and sustainable utilization of the Pretashkent Tashkent transboundary aquifer in the Syr Darya River Basin. Meanwhile, Central Asian countries are actively exploring the possibility of using existing cooperation mechanisms such as the Chu-Talas River Water Commission and the Interstate Water Coordination Commission of Central Asian Countries to manage groundwater.

ISARM Europe

TBA News

By Alfonso Rivera



The ISARM Network from Europe seems to be dormant ... but activities on transboundary aquifers in Europe abound.

To the West

Researchers from the BRGM in France and the University of Mons, Belgium, have recently published an interesting article on the French /Belgian transboundary

aquifer of a jointly developed model of the TBA.

Covering 1420 km² across France, Flanders (North Belgium), and Wallonia (South Belgium), the French-Belgian Carboniferous limestone Transboundary Aquifer has been heavily exploited since the 19th century for drinking water, agriculture, industry, and quarry dewatering, abstractions peaked at 100 million m³ /year in 1990, causing water level declines of up to 90 m. Researchers officially exchanged data from both sides of the border and integrated the data to develop a collaborative regional 3D groundwater model.



It is expected that this shared decision-support tool will support shared management of the transboundary aquifer and contribute to progress toward an agreement among involved entities to regulate pumping rates – a critical and rarely achieved step toward coordinated groundwater governance.

To the East

Stakeholders from Albania and Montenegro held two regional dialogues on conjunctive surface water and groundwater management involving the transboundary Buna/Bojana Coastal Aquifer as a pilot study under UNESCO's component on "Management of coastal aquifers and related ecosystems" within CP 2.1 of the UNEP/GEF MedProgramme. Through close multi collaborations, the characterization and assessment of the aquifer was carried out

strengthening policy and management frameworks. These efforts led to a Coastal Aquifer Management Plan, as described in the Cooperation and collaboration section below.

To the North

Scientists across the Estonia and Latvia border have been very active over the last years with studies to better understand – and manage – transboundary aquifers located along their border.

The studies have provided significant results. For instance, water balance calculations for the Estonia-Latvia transboundary aquifers, assessed cross-border flow, revealing net movement (e.g., net flow from Estonia to Latvia in one study) and impacts of abstraction. Key findings show significant baseflow to rivers, limited significant cross-border flow changes even with max abstraction, and the need for integrated management of shared resources, in focalized areas.

These types of studies provide essential data for sustainable management, helping to anticipate the impacts of climate change and abstraction on shared resources and ecosystems, crucial for preventing future disputes. See the latest publication of these studies on the TBA-related publications list.

ISARM MENA

TBA News

By Avi Burg



Overview:

In the 2024 TBA Report, we noted that on March 22, 2024, the United Nations released its World Water Development Report 2024, where it was stated that the Middle East and North Africa (MENA) is the region facing the “greatest water stress”. This persistent and worsening water scarcity, driven not only by climate change (manifested as prolonged drought) but also by human-made factors, has intensified further into 2025. In addition to being the world's most water-scarce region, the MENA region is also the most dependent on transboundary water resources.

Water conflicts in the MENA region occur at both the interstate and intrastate levels, reflecting complex interconnections between hydrology, politics, and socioeconomic instability.

Beyond surface water from rivers and lakes, the MENA region has historically also relied on aquifers to meet water demand for growing populations and irrigated agriculture, especially across the arid zones of North Africa. There are approximately 43 transboundary aquifers shared by countries across MENA, divided roughly equally between Southwest Asia and North Africa. Yet, groundwater remains a limited and fragile resource due to arid and semi-arid climates of many countries and periodic droughts. Approximately 50% of the MENA aquifer systems are non-renewable, and their overexploitation has resulted in steep declines in water potential and deterioration of water quality. The current extreme water crisis in Iran, widely recognized internationally, is not solely a story of climate-induced but also a product of overuse, inefficiency, and poor governance.

Update on Transboundary Water Resources in the MENA Region:

1. The Nile Conflict

The Nile River is indispensable for the functioning of Egypt, Sudan, and Ethiopia. The ongoing conflict is primarily over Ethiopia's Grand Ethiopian Renaissance Dam (GERD), located on the Blue Nile. For Ethiopia, the dam represents a cornerstone of national development and energy independence. This project was completed in July 2025, with Egypt and Sudan perceiving the project as a significant threat because it reduced downstream water availability, impairing agriculture and jeopardizing reliable water supply for their population. Despite prolonged negotiations under the auspices of the African Union and international mediators, no comprehensive agreement has yet been reached between the three countries regarding dam operation protocols, water release schedules, and dispute-resolution mechanisms.

2. The Tigris and Euphrates River Systems

The sources of the Euphrates and Tigris rivers, serving as the major water source for Syria and Iraq downstream, originate in Turkish territory. However, Turkey exerts substantial control over their flow through an extensive dam network, including the massive Southeastern Anatolia Project.

In July 2025, following severe drought conditions affecting the al-Hammar marshes and irrigated lands in southern Iraq, as well as humanitarian concerns in Iraq, Turkey agreed to temporarily increase water flows to Iraq. Nevertheless, Iraq remains highly vulnerable to unilateral upstream regulation. Syria's fragile security situation further complicates collaborative water management. Damming by Iran on tributaries feeding into the Tigris also exacerbates downstream water stress.

3. Aquifers in North Africa

All three major transboundary aquifer systems of North Africa - the Nubian Sandstone Aquifer System, the North Western Sahara Aquifer System, and the Murzuk Aquifer System are all experiencing a decline in groundwater storage due to reduced precipitation, rising temperatures, increased evapotranspiration, and increased dependence on groundwater by human activities. These water systems serve multiple North African countries, highlighting the necessity for joint management along with climate change adaptation. Tunisia, Algeria, and Libya have initiated cooperation on the North Western Sahara Transboundary Aquifer System - a pioneering example of cross-border cooperation to improve sustainable water resource management. So far, the cooperation has been at the technical level (defining the aquifer

boundaries, identifying zones of highest stress on groundwater resources, and developing a shared database). Current discussions aim to elevate cooperation towards a higher level of discussion - establishing joint legal and institutional frameworks.

4. Al-Saq/Al-Disi Transboundary Aquifer

An example of progress towards optimal utilization of a transboundary aquifer that should improve the sustainable management of water resources is the agreement between Jordan and Saudi Arabia for the management and utilization of the Al-Saq/Al-Disi transboundary aquifer. Despite signing the bilateral agreement to limit production, both states continue to exceed the permitted abstraction limits for this aquifer.

It should be noted that Jordan also has a long-standing dispute with Syria over the use of the Yarmouk River water, a major tributary of the Jordan River.

REFERENCES AND RECOMMENDED READING

- Abu Hawash, M. & Ghafar, A.A., 2025.

Water Diplomacy: How to Prevent Water Wars in the MENA Region. Middle East Council on Global Affairs, Issue Brief. January 2025.

- Awad, W.R., 2014.

The problem of utilization the water resources of the Republic of Iraq under progressive desertification conditions. Geography and Natural Resources, 35(4), 373-379.

- Dawoud, M.A., 2025.

Groundwater Management and Governance in MENA Region. In Groundwater in Developing Countries: Case Studies from MENA, Asia and West Africa (pp. 67-95). Cham: Springer Nature Switzerland.

- Gleick, P.H., 2014.

Water, drought, climate change, and conflict in Syria. Weather, climate, and society, 6(3), 331-340.

- Håkan Tropp.

Groundwater Challenges in the MENA Region. Economy and Territory | Sustainable Development.

<https://water.fanack.com/water-conflicts-to-watch-in-the-mena-region/>

- Kitoh, A., Yatagai, A. & Alpert, P., 2008.

First super-high-resolution model projection that the ancient "Fertile Crescent" will disappear in this century. Hydrological Research Letters, 2, 1-4.

- Mohasseb, H.A., Negm, A.M., Yi, S. & Shen, W., 2025.

Groundwater Storage Variations in the MENA Transboundary Aquifer Systems Using GRACE: Response to Global Climate Change. In Groundwater in Developing Countries: Case Studies from MENA, Asia and West Africa (pp. 49-65). Cham: Springer Nature Switzerland.

COOPERATION & COLLABORATION

Towards integrated management of the transboundary Buna/Bojana Coastal Aquifer (Albania & Montenegro): characterization, assessment and cooperation

By: UNESCO-IHP team: Jose Luis Martin, Simone Grego, Rita Marteleira

The transboundary Buna/Bojana coastal aquifer, shared between Albania and Montenegro, is a vital groundwater system underpinning the environmental integrity and socio-economic development of the lower Buna/Bojana River basin and the adjacent Adriatic coastline. Extending across national borders and hydrological boundaries, the aquifer supplies freshwater for domestic use, agriculture, tourism, and ecosystems, including wetlands of international importance such as those associated with Lake Shkodra/Skadar. Characterized by complex karstic geology and dynamic interactions between surface water, groundwater, and seawater, the aquifer is particularly vulnerable to overexploitation and saline intrusion.

As pressures from climate variability, urbanization, and coastal development intensify,

coordinated cross-border management has become essential to safeguarding water security and preserving the ecological balance of this sensitive coastal zone.

Within this broader transboundary system, the Šaško Lake (Montenegro) and the adjacent Pentari Plain (Albania) represent one of the most sensitive and ecologically significant zones, forming a single groundwater-dependent ecosystem (GWDE) shared by both countries and divided only by the flow of the Buna/Bojana River. Located north of Ulcinj, Šaško Lake is a crypto-depression largely lying below sea level and closely linked to regional groundwater dynamics, which makes it highly sensitive to hydrological fluctuations. While Montenegro has retained this wetland as a natural lake, the Albanian side has reclaimed the former Pentari wetland for agriculture; however, it remains prone to frequent flooding and continues to exhibit similar ecological characteristics. The unified geomorphology and strong surface-groundwater interactions underscore its function as an interconnected cross-border system of shared environmental importance.

Recognizing the strategic importance and vulnerability of this transboundary aquifer and its dependent ecosystems, the Buna/Bojana system was selected as a pilot under UNESCO's component on "Management of coastal aquifers and related ecosystems" within CP 2.1 of the UNEP/GEF MedProgramme. Through close collaboration with national experts and institutions, UNESCO supported the characterization and assessment of the aquifer and its associated GWDE, while also strengthening policy and management frameworks. This effort was reinforced by two regional dialogues on conjunctive surface water and groundwater management involving stakeholders from both countries. As a key outcome, a Coastal Aquifer Management Plan was jointly developed and validated through a participatory process engaging line ministries, water agencies, geological services, municipalities, water users, academia, and other stakeholders, contributing to broader bilateral cooperation under the 2011 Drin Memorandum of Understanding and the 2018 Framework Agreement between Albania and Montenegro on transboundary water resources management.



Cooperation in CENTRAL ASIA

On 11 September 2025, the UNESCO Regional Office in Almaty organized a regional roundtable “Groundwater for Sustainable Development: Strengthening Cooperation and Governance in Central Asia” in Almaty (Kazakhstan).

TBA' Commission member Oleg Podolny participated in this roundtable as a keynote speaker and gave a presentation on “Groundwater in Central Asia: Current Status, Key Challenges, and Examples of Cooperation.”

UNESCO reaffirmed its commitment to support Central Asian countries in advancing groundwater governance as part of broader efforts to achieve Sustainable Development Goals and strengthen resilience to climate change.



EVENTS



**Convention on the Protection and Use of Transboundary
Watercourses and International Lakes**

Conjunctive Water Management in Transboundary Basins – a Policy Guidance

The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention) programme of work for 2025–2027 (UNECE Water Convention) includes promoting conjunctive management of transboundary surface waters and groundwater, the foreseen development of a policy guidance publication to provide advice on the conjunctive management of surface water and groundwater, with a focus on transboundary basins.

This activity is under the co-leadership of the lead Parties Estonia and The Gambia and under the auspices of the Working Group on Monitoring and Assessment. To support the preparation of the policy guidance, a dedicated Expert Group was created, leveraging best practices in the application of conjunctive water management at the transboundary and domestic levels and existing guidance documents.

The Expert Group includes TBA-Commission members contributing to the Policy Guidance: Marie-Amélie Prété, Alice Aureli Kevin Pietersen, and Alfonso Rivera. A technical note on the theme has been published (see list of publications below) and a first outline of the guidance is ready. The full policy document shall be ready by October 2026.

IAH contribution to the UNESCO-Cambridge book:

The Challenge for the Millenium: Water Security in a Changing World.

PEOPLE IN THE NEWS ***by A. Rivera***

A major hydrogeological investigation that took 60 years in the making has been recently published in New Mexico.

This multi-institutional/multidisciplinary transboundary aquifer investigation began in 1964 with John W. Hawley as its principal investigator. John's perseverance and determination allowed to dig deep into the Mesilla Basin region of New Mexico, Texas, and Chihuahua (Mexico) to advance in conceptual and digital-model development with a full hydrogeologic framework. The framework is characterized by a very detailed hydrogeologic characterization, which is rare these days.

-> Well done, John!

The publication can be accessed online at: <https://nmwrri.nmsu.edu/publications/technical-reports/tr-reports/tr-363.html>; full authorship and complete citation are given in the publication section.



OTHER SHORT NEWS



Water special issue

Guest editors Prof. Sharon B. Megdal and our TBA Commission's co-chair Dr. Rosario Sanchez are inviting authors to contribute to a special issue of Water on the topic "Working Across Borders to Address Water Scarcity". Deadline for manuscript submissions: 31 January 2026

https://www.mdpi.com/journal/water/special_issues/516012V0Q6



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Foreign Affairs FDFA
Swiss Agency for Development and Cooperation SDC
Education Network



Regional project on groundwater governance in Central Asia

The Swiss Cooperation for Development (SDC) is funding a project to support the countries of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan) in the protection and sustainable use of groundwater resources, by enhancing the scientific understanding, management, cooperation and governance of transboundary aquifers. The project will be implemented by a consortium led by CoWater.

IAH Liaison with UN Activities



International
Association of
Hydrogeologists

A new IAH Commission: LUNA Network

Chaired by Alice Aureli

The IAH LUNA Network aims to keep IAH members informed about UN programmes, as well as water related events, reports and documents. The network also aims to raise the profile of groundwater in the international water agenda. The network meets regularly online and in person at congresses to advance its goals.

Previous TBA-Commission's Newsletters can be accessed [HERE](#)

RECENT TBA-related PUBLICATIONS

TECHNICAL REPORT

John W. Hawley, Baird H. Swanson, J. Steven Walker, S. Heather Glaze, Catherine T. Ortega Klett, oct 2025. Hydrogeologic Framework of the Mesilla Basin Region of New Mexico, Texas, and Chihuahua (Mexico)—Advances in Conceptual and Digital-Model Development. <https://nmwrri.nmsu.edu/publications/technical-reports/tr-reports/tr-363.html>

TECHNICAL NOTE

Shammy Puri, Karen Villholth, Alice Aureli, Alfonso Rivera, Aurélien Dumont
Conjunctive Management of Water Resources, 2025. Global Workshop on Conjunctive Management of Surface Water and Groundwater: National to Transboundary Level. 16–17 October 2023, Geneva and online. August 2025
DOI:
[10.13140/RG.2.2.30529.06245](https://doi.org/10.13140/RG.2.2.30529.06245)

CHAPTERS IN BOOKS

Alice Aureli and Karen G. Villholth, 2025. Groundwater Diplomacy Addressing unseen but essential water resources. In: The Routledge Handbook of Water Diplomacy.

PAPERS

Giulia I. Rubin, Nidhi Nagabhatla, Carolina Londono-Escudero and Raffaele Vignola, 2024. Transboundary Aquifer Management Across the Americas: Hydro-Diplomacy as an Accelerator of Adaptive Groundwater Governance Amid Climate Change Challenges – **WATER 2024**.

Belinda Flem, Ieva Bukovska, Jekaterina Demidko, Pål Gundersen, Volodymyr Klos, Hanna Kolos, Andres Marandi, Valle Raidla, Lars Stalsberg, and Michał Wyszomierski, 2023. Bridging gaps in groundwater management in International River Basin Districts (IRBDs) – through harmonized monitoring and data sharing– **JoH:RS 2023**

Christina May Fraser, Neno Kukurića, Tatiana Dmitrievab and Aurélien Dumont, 2023. Transboundary water cooperation under SDG indicator 6.5.2: disaggregating data to provide additional insights at the aquifer level – **Water Policy** Vol 00 No 0, 1 doi: 10.2166/wp.2023.026 2023.

Marlen Hunt, Andres Marandi and Inga Retike, 2023. Water Balance Calculation for a Transboundary Aquifer System between Estonia and Latvia – **WATER 2023**.