



NEWSLETTER



International Association of Hydrogeologists
IAH TRANSBOUNDARY AQUIFERS COMMISSION

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EDITOR'S MESSAGE

March 2020 was the official beginning of the newly restructured TBA Commission of the International Association of Hydrogeologists. The previous Commission, successfully led by Shammy Puri, Gabriel Eckstein, Karen Villholth and Neno Kukuric, was run from September 2014 to February 2020. An international workshop was held during the IAH World Congress in Malaga, Spain in September 22, 2019. During that workshop the commission explored strategic discussions on "the way ahead" – for the future work and role of the TBA Commission, as well as the future outlook on the issue of transboundary aquifers. During that same workshop, the Commission Chair (Shammy Puri) proposed to stand down and requested that a new Chair be identified. Later in January 2020, Alfonso Rivera was chosen as the new Commission's Chair and thirteen other individuals formed the new structure of the Transboundary Aquifers Commission (TBA Commission): see new structure in this issue.

Two very important items in this new commission are communication and outreach. Today, we commit ourselves to inform you on the TBA Commission's activities on a regular base. We will establish a line of communication and

dialogue with you. We will brief you on the latest news, developments and diverse activities of the Commission and anything related with transboundary aquifers, from identification, to assessments, to agreements, to shared management, and more.

It is my hope that this Newsletter becomes a train of communication with all those interested in the precious resource of groundwater hidden within and under transboundary aquifers. Any comment and/or suggestions are welcome. I encourage you to submit your ideas to Marie-Amélie Pétré and Christina Fraser, coordinators of this Newsletter. I hope to have at least one issue of the Newsletter published every three to four months.

Good reading!

Alfonso Rivera,
Chair TBA Commission

VISION

The **vision** of the IAH-TBA Commission has three specific objectives: **(A)** Support the management of transboundary aquifers aimed at improving shared sustainable use of groundwater resources that cross two or more jurisdictional borders. **(B)** Provide advanced scientific, social, policy and legal recommendations to UN Agencies, international and national organizations and governments worldwide. **(C)** Increase the generation and exchange of knowledge regarding transboundary aquifers, creating channels of communication and cooperation.

MISSION

The **mission** of this renewed IAH-TBA Commission is to build on the work of the previous IAH Commission on Transboundary Aquifers to further promote the complete scientific assessments of transboundary aquifers, and develop shared governance and science-based management of aquifers that traverse political boundaries. In addition to addressing international transboundary aquifers, the IAH-TBA Commission will expand its focus to consider governance and management mechanisms for intra-national transboundary aquifers.

WELCOME

Welcome to the first edition of the IAH Transboundary Aquifers Commission (TBA Commission) Newsletter!

NEWS FROM TBA NETWORKS



CeReGAS

The Montevideo Office of the UNESCO IHP has revived the ISARM-Americas network for transboundary aquifers composed of 24 countries from Chile/Argentina to Canada. The Regional Centre for Groundwater Management (Centro Regional para la Gestión de Aguas Subterráneas, or CeReGAS) is a Category 2 Centre under the auspices of UNESCO based in Montevideo, Uruguay. CeReGAS has recently decided to undertake and to follow up on the activities of the former group of 24 countries within the ISARM-Americas Network. <http://isarm-americas.org/>. They initiated with a questionnaire and a request for new data to update the 74 transboundary aquifers inventoried by the previous ISARM-Americas Network from 2003 to 2012.



UNESCO-IHP

A committee involving staff from UNESCO-International Hydrology Program, the TBA Commission, and others, will prepare a policy brief on Transboundary Aquifers. This will be a UNESCO and TBA Commission joint effort to develop a Strategic Overview on transboundary aquifers and supporting Policy Briefs. The later is a very valuable legacy of the past officers of the IAH Commission.

MEET THE NEW IAH-TBA COMMISSION



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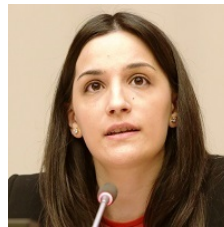
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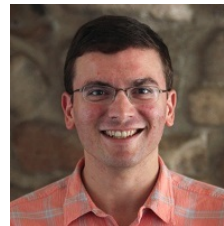
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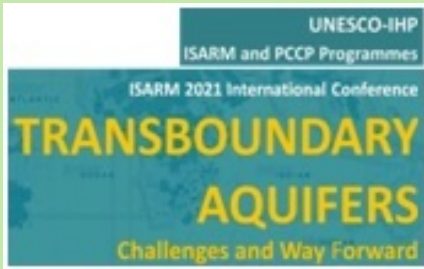
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NEWS FROM TBA NETWORKS



ISARM-II

UNESCO-IHP and the TBA Commission have now begun preparations for the second ISARM World Conference to be held in Paris on the first week of December 2021. Some of you might recall the very successful first ISARM World Congress also held in Paris in December 2010 (see [here](#)). A joint committee met late March through videoconference to initiate the discussions. More information on this conference will be posted in the next issue of the Newsletter.



The Pan-African Groundwater Program (APAGroP)

After the launch of the AMCOW Pan-African Groundwater Program (APAGroP) in Nairobi, Kenya 1-2nd October 2019, follow-up Working Group meetings took place during 22-23rd February 2020 in Kampala, Uganda. This was followed by groundwater sessions at the African Water Association Congress and Exhibition (AfWA, 2020). The aim of the meeting was to develop activities for the various working groups identified in Nairobi and to have a policy dialogue with Technical Advisory Committee to the African Water Ministers ([more info here](#)).



Permanent Forum of Binational Waters

A community of around one hundred experts on transboundary water issues between Mexico and the United States joined a new initiative of collaboration, communication and community engagement. This effort will form a virtual forum where experts, scientists, non-governmental organizations and institutions will integrate their efforts to promote a more holistic collaboration to improve knowledge and understanding of water issues along the border. This forum is on developing stage expected to be launched in May 30, and will be hosted at: binationalwaters.tamu.edu.

UNECE

The United Nations Economic Commission for Europe (UNECE) has undertaken great efforts to prepare a Handbook on water allocation under the context of transboundary waters. A second workshop was scheduled for late March through videoconference.



GGRETA Project

The GGRETA Project (Governance of Groundwater Resources in Transboundary Aquifers) Phase 3 for the Africa region has officially started. Funded by the SDC (Swiss Agency for Development and Cooperation), the project will be coordinated by UNESCO-IHP. It will be implemented from 2020 to 2022 through four inter-linked components:

- 1- Establishment of Institutional and technical capacity on groundwater governance in River Basin Organizations, Regional Communities, and selected aquifer systems in Africa.
- 2- Consolidation of regional cooperation through investments on aquifer commissions, partnerships and networks aiming at setting the base for transboundary aquifers regional strategies (special focus in Africa).
- 3- Development of evidence-based and decision-making capacity on transboundary groundwater resources quality protection and monitoring.
- 4- Improvement of transboundary aquifers and shared groundwater resources diplomacy.

COOPERATION AND COLLABORATION

The TBA Commission is considering a website where it could regularly post updates on all of the transboundary aquifer agreements (informal and formal) that are known and update the list as new ones develop. A few members of the TBA Commission will act as liaisons with key members involved in each agreement, and will input information as developments happen. If you are a point of contact for any one of the transboundary agreements that could provide updates, then please get in touch with the Commission. The next issue of the newsletter will provide an initial list of cases.

NEWS FROM TBA NETWORKS

International Training Course on Monitoring for Regional and Transboundary Groundwater Management in Baku, Azerbaijan

This training was held on 30-31 October 2019. It was organized by IGRAC and United Nations Development Programme (UNDP), with a kind support of the Governments of Azerbaijan and Georgia and within the framework of the UNDP-GEF Kura Project. It was part of the overarching UNDP-GEF Kura Project "Advancing Integrated Water Resource Management (IWRM) across the Kura river basin through implementation of the transboundary agreed actions and national plans", which aims to guide national groundwater experts from Azerbaijan and Georgia to conduct an agreed assessment of shared resources, and to provide a harmonized online data management system for groundwater monitoring to support the improvement of capacities of relevant responsible bodies in both countries, with the objective of facilitating the management of the Alazani-lori transboundary aquifer ([more info here](#)).

PEOPLE IN THE NEWS

This section highlights the work of individuals working in areas related with transboundary aquifers across the world. The work of professionals and emerging stars from developing countries will be emphasized, not only in hydrogeology but in any science or activity dealing with transboundary water issues, social, political, and economic.

We begin this first edition with three young women, all working in TBA-related professions and all members of the newly formed IAH-TBA Commission; we are very happy having them on board!

So let's celebrate: Rosario Sanchez, Marie-Amélie Pétré and Christina Fraser, Congratulations to all three!



Rosario Sanchez was chosen by the magazine *Circulo de Oro* as one of the 50 most influential women on the state of Coahuila, Mexico for 2019. Rosario is a Senior Research Scientist and Associate faculty at the Texas Institute of Water Resources at the University of Texas A&M. She is Co-Chair of the TBA Commission. Recently, Rosario lead the effort to develop the Permanent Forum of Binational Waters, a community of around one hundred experts on transboundary water issues between Mexico and the United States, designed for collaboration, communication and community engagement.



Marie-Amélie Pétré obtained her PhD in 2016 from two universities and a Canadian Research center: MINES ParisTech, France, INRS-ETE, Canada, and the Geological Survey of Canada. Her research works have become a standard against which other transboundary aquifers in the world are being assessed. She developed a framework for characterizing transboundary aquifers using three different innovative models. Marie-Amélie's dynamism helped bring together several stakeholders who agreed to sit on the same table and helped put together a unified vision of the TBA that she studied. Marie-Amélie has published a series of three papers on the research subject with high impact on the scientific community.



Christina Fraser is a PhD candidate from the University of Strathclyde, UK. During her PhD research, Christina developed methodologies to establish and prioritize transboundary aquifers along bordering countries in Africa. At a time when the international community is still debating on the nature of transboundary aquifers, Christina's approach to the assessment of TBAs has added value and can be used elsewhere. She has published her results in high-level journal. A promising career indeed!

NEWS FROM TBA NETWORKS

Project of conjunctive management of surface and groundwater in the Tuli Karoo System

The SADC (Southern African Development Community) Groundwater Management Institute (SADC-GMI) in collaboration with the International Water Management Institute (IWMI), Limpopo Watercourse Commission (LIMCOM) and the US Agency for International Development (USAID) are implementing a 3 year USAID-funded project aimed at strengthening cooperation on the conjunctive management of surface and groundwater in the Tuli Karoo System to improve food security and resilience. The Tulikaroo aquifer is shared among Botswana, South Africa and Zimbabwe and the project focuses on achieving a solid understanding of the system and explore the scope for conjunctive management to improve water security in the three countries ([more info here](#)).

UPCOMING MEETINGS AND CONFERENCES

The list of this section has been severally shortened following the international measures to fight the world pandemic. We only kept those planed for after the summer of 2020.

- **IAH 48thCongress**, Sao Paulo. The TBA Commission will hold a Side Event during the IAH 47thWorld Congress in Sao Paulo, Brazil, September 19-25 <https://abas.iah2020.org/>
- **Transboundary Groundwater Conference**, "The Perspectives and the New Vision" McAllen, TX. October 14-15. This in-person or otherwise online event will highlight innovative topics related to transboundary groundwater issues between Mexico and the United States such as private industry and their impact on transboundary groundwater resources, climate risk and resilience, fracking and emerging technologies, among others. [Registration link](#)
- **SADC Groundwater Conference**, Namibia, November 9-11, 2020. This conference will address regional transboundary groundwater management issues. It will be organized by SADC-GMI, back-to-back with the Africa Water Week (more info to come).
- **NGWA Summit Groundwater Week**, keynote on Transboundary aquifers, Las Vegas, USA. NGWA invited Alfonso Rivera to deliver the keynote talk during the Groundwater Summit Week on December 8-10, 2020, in Las Vegas, Nevada. He will speak about "Issues, challenges and international perspectives on the state of knowledge and shared management of transboundary aquifers at the global scale." <https://groundwaterweek.com/summit-opening-session/>

RECENT PUBLICATIONS

Abdulrazzak, M.J., Oikonomou, P.D., Grigg, N.S. 2020. Transboundary Groundwater Cooperation among Countries of the Arabian Peninsula. Journal of Water Resources Planning and Management. Vol. 146, Issue 1. [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001140](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001140)

Blagojević, M., Stevanović, Z., Radulović, M. et al. 2020. Transboundary groundwater resource management: needs for monitoring the Cijevna River Basin (Montenegro-Albania). Environ Earth Sci 79, 74. <https://doi.org/10.1007/s12665-020-8809-8>

Fraser, C.M., Brickell, J., Kalin, R.M. 2020. Post-Brexit implications for transboundary groundwater management along the Northern Ireland and the Republic of Ireland border. Environmental Research Letters. Accepted manuscript available online: <https://doi.org/10.1088/1748-9326/ab7392>

Sanchez, R., Eckstein, G. 2020. Groundwater management in the borderlands of Mexico and Texas: The beauty of the unknown, the negligence of the present, and the way forward - Water Resources Research - Wiley Online Library. <https://doi.org/10.1029/2019WR026068>

RECENT PUBLICATIONS

Sanchez, R., Eckstein, G. 2020. The path towards groundwater management in the borderlands of Mexico and Texas. Rosario Sanchez Gabriel Eckstein. *Wire's Water*. Vol 7, <https://doi.org/10.1029/2019WR026068>

Sanchez , R., Rodriguez , L., and Tortajada, C., 2020. Effective Transboundary Aquifer Areas: An Approach for Transboundary Groundwater Management. First published: 16 March 2020. <https://doi.org/10.1111/1752-1688.12836>

Marguerite de Chaisemartin. 2020. Measuring transboundary water cooperation within the framework of Agenda 2030: a proposal for a revision of SDG Indicator 6.5.2. *Water International*. Volume 45, Issue 1. <https://doi.org/10.1080/02508060.2019.1708659>.

Milanés Murcia M.E. 2020. Transboundary Groundwater Management and Regulation: Treaty Practices in Africa. In: Vieira E., Sandoval-Solis S., Pedrosa V., Ortiz-Partida J. (eds) *Integrated Water Resource Management*. Springer, Cham

Movilla Pateiro, L., Sindico, F., 2020. El valor jurídico y práctico del proyecto de artículos de la CDI sobre el derecho de los acuíferos transfronterizos, *ACDI - Anuario Colombiano de Derecho Internacional*, v. 13, 2020. ISSN 2145-4493., pre-print: <https://revistas.urosario.edu.co/index.php/acdi/article/view/7610>, doi: <http://dx.doi.org/10.12804/revistas.urosario.edu.co/acdi/a.7610>.

A reminder of the special issue on 'International Shared Aquifer Resources Assessment and Management' produced last year - <https://www.sciencedirect.com/journal/journal-of-hydrology-regional-studies/vol/20/suppl/C>



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