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# IWRA Update

Newsletter of the International Water Resources Association

Volume 33 • Issue 3

September 2020



## Editorial Gabriel Eckstein, IWRA President



As the world continues to try to manage the COVID-19 pandemic, I sincerely hope that all of our members and partners are keeping well and not suffering too much in these uncertain times. 2020 has certainly been an unexpected year. Like all communities, our IWRA community has also been impacted by COVID-19. But as an international community, we have all been impacted in quite different ways.

The biggest obvious impact for IWRA has been the postponement of our [XVII World Water Congress](#) this year to September 12-16, 2021, in Daegu, South Korea. The theme remains “**Foundations for Global Water Security and Resilience: Knowledge, Technology and Policy**” but we have introduced a new subtheme on “Responding to a crisis: lessons learned from the COVID-19 pandemic”.

This pandemic has not, however, stopped us from continuing our collaborative work, including addressing the impacts of this

## ONLINE CONFERENCE IWRA 2020

Registration Now Open!

**IWRA Online Conference**  
*Addressing Groundwater  
Resilience under Climate  
Change*

28-30 October 2020

The International Water Resources Association (IWRA), jointly with UNESCO Intergovernmental Hydrological Programme (IHP), and supported by the International Association of Hydrogeologists (IAH), are excited to launch from the 14<sup>th</sup> of September 2020 [the registration for IWRA's Online Conference](#) on “*Addressing Groundwater Resilience under Climate Change*” to take place from Wednesday, October 28<sup>th</sup> to Friday, October 30<sup>th</sup> 2020.

Thanks to the generous support of UNESCO-IHP to this online water event, we are able to grant **free access** for all

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produced a number of new outputs in recent months that we hope will be useful to all of our members, and to the wider water resource management world. These include a recent [webinar on “Water and COVID-19”](#). The recording of this is published on our website. On the back of the webinar we have also produced [COVID-19 policy brief entitled “COVID-19 challenges the water sector”](#).

In our journal ***Water International***, we are also starting to see an increase in COVID-19 articles, including a recent COVID-19 Commentary Series (please log on to your membership account and access [Volume 45, Issue 5](#)), with contributions from some well known names in the sector.

In the meantime, the first [IWRA Online Conference](#) on **“Addressing Groundwater Resilience under Climate Change”** is proceeding as planned from Oct. 28-30, 2020, now supported by UNESCO. This is something that has been in the planning since 2019, to offer a more accessible conference experience for people who can't easily travel to conferences. Little did we imagine that this would apply to everyone in 2020. Registration is already filling up quickly, and is free thanks to the generous support of UNESCO. So please register now if you wish to attend.

Of course, COVID-19 is far from the only crisis going on. You will have seen the large number of current water-related disasters around the world, and sadly they are being under-reported in the international press. So it is important, now more than ever, that we continue to develop and share our knowledge and expertise. COVID-19 will eventually pass, but the water issues we are fighting will persist.

Africa, low income countries, women and youth. This support will also ensure open access to all conference related materials. You are, therefore, cordially **invited to register for free** to attend this online conference! Only a limited number of places are available on a first come, first served basis.

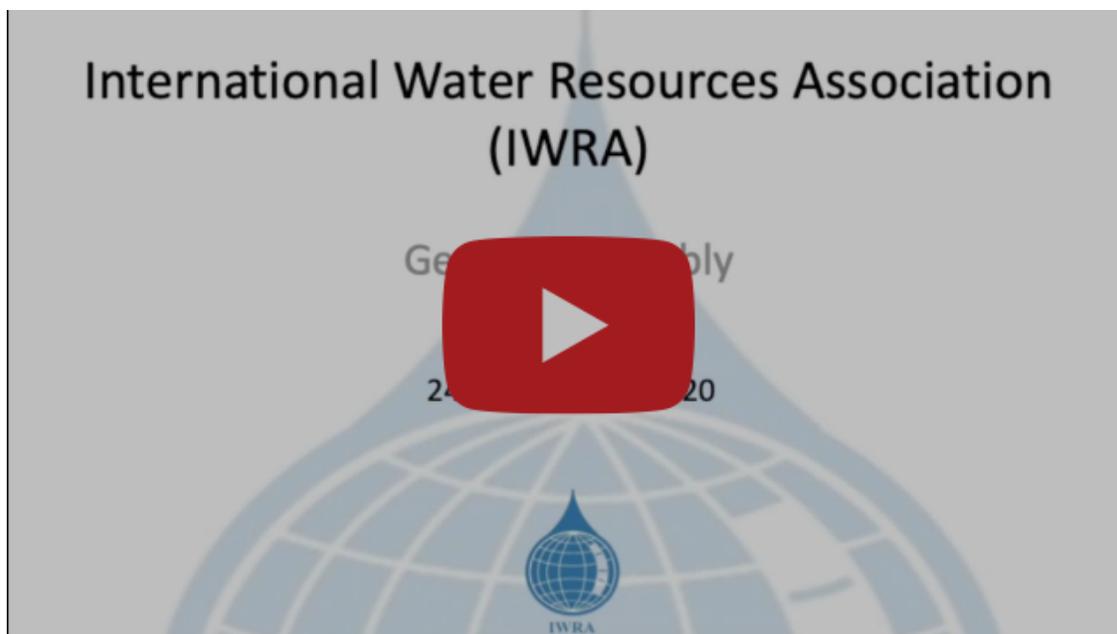
If you [register](#) for this event, your registration includes all of the following:

- Access to all sessions, including **Opening and Closing Ceremonies, High-Level Panel and thematic sessions**.
- A **welcome kit**, including the digital copy of the Programme Book, **logistical and etiquette instructions**, and other useful materials.
- The entire list of **recordings, presentations**, the online conference **final report**, and dedicated **IWRA policy briefs**.
- [Once registered](#), you will also have the chance to **learn from, meet and network with other colleagues from the international water community!**

**Register now** at [IWRA's Online Conference website](#), where you can also find out the latest information about the line-up of speakers, and the detailed programme as it becomes available.

**We look forward to your participation and a fruitful event in October!**





Watch Now!

IWRA held its General Assembly via Zoom on **September 24<sup>th</sup>**. More than 110 registered members participated of this important meeting.

Welcoming remarks were given by the IWRA's Secretary General, Guy Fradin, followed by an address from the IWRA President, Gabriel Eckstein. The Executive Director, Callum Clench, gave a report on some of the Executive Office's current activities, and IWRA's Treasurer, Renée Martin-Nagle provided a financial update.

A large proportion of the General Assembly was given over to the Chair of the Membership Committee Tom Soo, who introduced the membership to plans to update our current membership structure, explaining what this means for members.

Gabriel Eckstein closed this assembly with a call to action, by reminding the membership on the many, multiples ways to get more involved and more engagement.

In case you missed it, or if you want to watch the recording of the [General Assembly](#), please visit IWRA's website where you can watch to the presentations and learn more about the Association's activities and work. You can also access other documents that were mentioned or discussed during the assembly.

If you have any questions about the General Assembly, your membership or anything else, please contact us at [office@iwra.org](mailto:office@iwra.org).

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**Call for Nominations IWRA Honorary & Fellow Members**

IWRA is calling for nominations for the following award membership, to be announced by early 2021. Nominations should be sent by e-mail to [awards@iwra.org](mailto:awards@iwra.org) by **November 15<sup>th</sup> 2020**. The winners will be notified **by 15<sup>th</sup> of December 2020**.

## Honorary Members

An Honorary Member is the highest honour IWRA can bestow and is awarded to those who have made significant contributions to the field of water resources and/ or attained acknowledged eminence in some field of water resources, as determined by the Executive Board upon recommendation of the Membership and Awards Committees. IWRA Honorary Membership provides free membership for life to an individual. Honorary Membership is awarded to:

1. An external water professional or policymaker who has had a profound and distinguished career in the field of water resources;

or

2. An IWRA member who has made an outstanding and sustainable contribution to the water resources world.

You can find the nomination guidelines for Honorary Members [here](#).

## Fellow Members

The IWRA Fellow is granted to an existing IWRA member who has been with IWRA for at least ten years and has made major contributions to IWRA, been involved in the field of water resources management, held a position of high responsibility, and attained a high level of academic qualification, or carried high responsibilities in the field of water resources management. IWRA Fellows receive discounted membership for life.

You can find the nomination guidelines for Fellow Members [here](#).

In case of any questions, please send an email to [awards@iwra.org](mailto:awards@iwra.org).

**We are looking forward to receiving your nominations!**

IWRA is pleased to announce the list of selected **early-career scholars and water professionals** to develop a mentored **Water International Special Issue** with papers written by them that are either co-authored with or supervised by senior water professionals.

At the beginning of 2020, early-career scholars and water professionals were invited to submit abstracts to apply for an **exceptional publication** opportunity with [Water International](#). The special issue, to appear in 2021, will endeavour to promote **inter-disciplinarity and trans-disciplinarity**. It will encourage integrated-systems approaches in water research, avoiding very specific and narrow topics. Of particular interest are innovations on policies, management, development, and technological development that look to the present as well as the future. The special issue resulting from the mentoring effort will have as a theme, *“Fresh perspectives and approaches by new water professionals to meeting challenges in the water sector”*.

**More than 60 prospective papers were submitted**, 43 females and 17 males, **from 32 countries**, including developed and developing nations. The review committee selected 9 submissions, two of which had 2 co-authors, resulting in **11 early career applicants (8 women) being selected**. Through this mentorship programme, **they will benefit from a valuable chance** to work and network with established senior water professionals and experts. Each selected participant has been paired with a senior mentor who is helping guide the paper as an advisor or, possibly, as a co-author.

The **selected early-career scholars and water professionals** are:

[Subscribe](#)[Past Issues](#)[Translate](#) ▼[▶ Asma Bachikh](#)[▶ Mary Belle Cruz-Ayala](#)[▶ Hannah Hilbert-Wolf](#)[▶ Hussam Hussein](#)[▶ Imad Antoine Ibrahim](#)[▶ Semina Kafle](#)[▶ Aristarick Mkenda](#)[▶ Irene Pasqua](#)[▶ Manita Raut](#)[▶ Nathalie Richards](#)[▶ Pia Weber](#)

IWRA would like to congratulate all the early-career scholars and water professionals selected, and provide a special thanks to the mentors that will be working with them! We look forward to updating you on this initiative over the coming months.

## IWRA's Latest Activities

**IWRA Webinar:**  
***“Environmental Flows: Harmony between Humans and Nature”***

**22<sup>nd</sup> July**

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This webinar, focusing on environmental flows and the harmony between humans and nature featured high-level **panellists** who brought their decades of experience and knowledge to our audience.

Invited panellists discussed ways to move **beyond research and into implementation**, as a way to address the many complex trade-offs during the COVID-19 pandemic. It was discussed, these adaptations can be carried forward with better understanding of the water planning processes, knowledge of desired decision makers' outcomes, learning of key environmental triggers or people that can help these water planning processes change, and keeping the processes as simple as possible. One panellist focused on the relation of environmental flows to social processes and the need to bring this perspective for stakeholders and management. Not an easy task when certain uses, such a religious needs, are not well understood by other stakeholders. Another panellist looked at ways environmental flows could impact pollution and Integrated Water Resources Management (IWRM). Emphasis was put on how this can occur at different stages and times depending on the type of infrastructure. For example, when environmental flows may differ depending on the age of a dam.

Two of our panellists focused on one of the hottest areas for environmental flows – **China**. One presentation highlighted on the flow of rivers and the environmental flows around dams. While many rivers have significant dams, species, health and public stakeholder groups have been weighed to better understand the impacts of predetermined flows. Knock-on effects, such as sediment, are important to understand and in particularly their impact on species like clams and fish. Understanding these impacts can help researchers design better environmental flow programs. The other panellist brought up the mismatches between water's capacity and use. For example, some agricultural areas are arid. This results in a number of issues and challenges, focusing on how to balance water with challenges such as fast population growth. In China, policy focuses on the difference between basic and optimal flows to find levels which best support the environment and people. Importantly, as panellists stressed, there are no one size fits all solutions, but environmental flows need to be adapted in different times and locations.

With **over 330 registered attendees**, the water reuse and the circular economy webinar was extremely popular. IWRA again thanks its panellists for their participation and

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**Tickner**, Chief Freshwater Adviser, WWF; **Xiaodong Qu**, Professor of Engineering, China Institute of Water Resources and Hydropower Research; **Zhongnan Zhao**, Deputy Division Chief, General Institute of Hydropower and Water Resources Planning and Design, Ministry of Water Resources of the People's Republic of China. This webinar was presented by **Scott McKenzie**, PhD Candidate, University of British Columbia.

Access the recording and all presentations [here](#).

## IWRA Webinar : “Power and Water Diplomacy” 26<sup>th</sup> August



This webinar, focusing on Water and Power Diplomacy, was based on [Water International's Special Issue on “Power in Water Diplomacy”](#).

**Invited panellists focused** mainly on the role of decision making or non-decision making in river basin conflict and management. They highlighted, for instance, how in cycles of conflict and cooperation actors use different strategies and tactics, such as their geographical position to control the decision making process. In this manner, the ‘art of diplomacy’ can be understood as a means to maintain the status quo. Other presentations explored ways that language and communication become a means by which power is produced and control exerted. This might include reframing and understanding diplomacy in a broader process of persuasion. Some panellists highlighted also the challenges for basin level cooperation in relation to the structure and requirements of formal dialogues and negotiations, which may turn to be more complex and be influenced by other issues,

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**Other interesting discussions** addressed ways that formal water cooperation, for example in Central America, can include formal agreements and instruments, as well as government and non-governmental actors. Finally, the pushes for diplomacy and how they may be locking in conflict and the status quo, rather than transcending and looking for more equitable and sustainable solutions, were analyzed. Seeking and addressing factors, such as destructive cooperation, were pointed as means to help break out this conflict and status quo.

**With over 220 registered attendees**, the Power and Water Diplomacy webinar was a very successful event. IWRA again thanks its panellists for their participation and engagement: **Anamika Barua**, Department of Humanities and Social Sciences, IIT Guwahati, India; **Carmen Maganda Ramírez**, Instituto de Ecología – INECOL, Mexico; **Sumit Vij**, Public Administration and Policy Group, Wageningen University, The Netherlands; **Jeroen Warner**, Sociology of Development and Change Group, Wageningen University, The Netherlands; **Mark Zeitoun**, School of International Development, University of East Anglia, UK. This webinar was presented by **Scott McKenzie**, PhD Candidate, University of British Columbia.

If you missed this online event, access all presentations and the recording that will be available shortly [here](#).

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**IWRA Webinar:**  
***“Sustainability of Engineered Rivers in Arid Lands:  
Challenge and Response”***  
**23<sup>rd</sup> September**



The theme of this webinar was that of a multiyear project, Sustainability of Engineered Rivers in Arid Lands (SERIDAS), introduced in Water International by Aysegül Kibaroglu, Jurgen Schmandt and George Ward in the article entitled [“Engineered Rivers in Arid Lands: Searching for Sustainability in Theory and Practice”](#).

During this webinar the invited panellists discussed on the work and importance of the SERIDAS project. This project looks mainly at the physical and social drivers behind change in river basins including environmental flows and various human needs. Other panellists focused on the impact of climate change on global preparation patterns and the ways that these changes will affect flows. Participants also learned about the relationship between surface water in rivers and groundwater systems. In Texas, for example, drought has impacted numerous groundwater resources, which can even have transboundary impacts on shared aquifers between the United States and Mexico.

Other presentations dived into detail with certain river basins such as the Nile River. This well-known and studied river basin is an iconic case of a river who has a long history of use and human alteration. As there are greater demands placed on the Nile's water, including for agricultural and energy needs, there are increased demands on the water resources. Finally, panellists shared insights on the Tigris-Euphrates river system. In this area, like the Nile, the construction of dams has become a flash point for these transboundary resources. However, unlike the Nile, more active institutions have been created, which more efficiently manage these waters.

**With over 250 registered attendees**, IWRA's webinar on “Sustainability of Engineered Rivers in Arid Lands: Challenge and Response” webinar was a very successful event. The Association would like to thank again its moderator **James E. Nickum**, Editor-in-Chief,

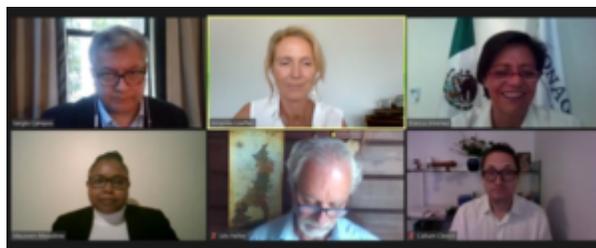
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of Political Science and International Relations, MEF University; **Gerald R. North**, University Distinguished Professor, Emeritus, Atmospheric Sciences, Texas A&M; **Lars Ribbe**, Professor, TH Köln – University of Applied Sciences; and, **Jurgen Schmandt**, Professor Emeritus, University of Texas. This webinar was presented by **Scott McKenzie**, PhD Candidate, University of British Columbia.

Access the recording and all presentations [here](#).

## Human Right 2 Water Webinar: “Celebration of 10 Years of Human Rights to Water and Sanitation”

1<sup>st</sup> July



As of July 2020, ten years have passed since human rights to water and sanitation were recognised by the United Nations General Assembly. Whilst notable progress has been made in this time, for example, at least 10 countries have altered their legislation to include these rights into their constitution, there is still much more to be done. A large proportion of countries around the globe continue to struggle to ensure full access of safe and sustainable drinking water and sanitation, especially for their marginalised members of society.

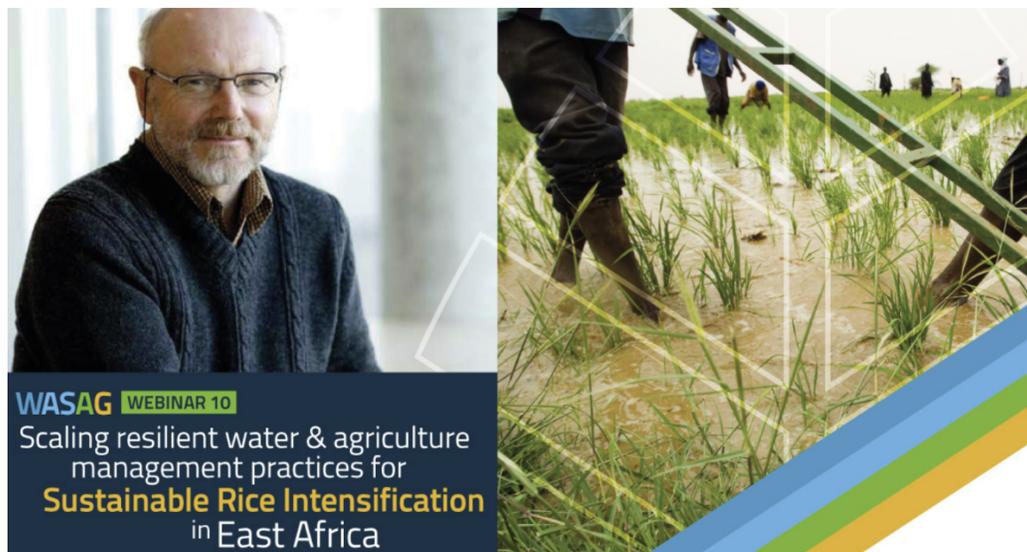
In celebration of this significant milestone, in coordination with the UN Special Rapporteur on the human rights to safe drinking water and sanitation, [Human Right 2 Water](#) hosted a dedicated webinar, bringing together perspectives from a range of water and sanitation experts from Mexico (CONAGUA), Kenya (the Kenya National Commission on Human Rights), the Inter-American Development Bank, and IWRA.

IWRA is represented on the Board of **Human Right 2 Water** by IWRA's Executive Director, Callum Clench, in the capacity of Secretary General. He participated in this webinar providing an initial intervention and shedding light on subsequent questions on global water and sanitation challenges and priorities around the world.

As he pointed out, **“One of the clear messages that has come out of the COVID crisis is that it has exacerbated the pre-existing need to realise the human right to water and sanitation for minimum hygiene, such as washing hands.”** Millions of people globally still are left without the basic facilities to allow them the simple act of washing hands to be able to protect themselves against infections such as COVID. It is crises like these that pinpoint the imperative need to make change.

[website.](#)

**FAO-WASAG Webinar:**  
***"Scaling resilient water & agriculture management practices for Sustainable Rice Intensification in East Africa Webinar"***  
**15<sup>th</sup> September**



The Global Framework on Water Scarcity in Agriculture (WASAG) hosted by the FAO Land and Water Division hosted a new webinar on **"Scaling resilient water & agriculture management practices for Sustainable Rice Intensification in East Africa"**.

This online event focused on Achieving food security remains a major challenge in the East Africa region. With increasing demand for food due to population growth and improvements in disposable income, the situation is expected to remain critical as the impact of climate change and unsustainable land and water management practices become more profound. The discourse on sustainable intensification practices to meet growing food demand has become increasingly relevant to balance increasing food production and sustainable agriculture, land, and water management practices.

The webinar was organized in the framework of the research project, **scaleWAYS (Scaling out Resilient Water and Agricultural Systems)**, which is jointly being implemented by the **International Institute for Applied System Analysis (IIASA)**, the **Lake Victoria Basin Commission (LVBC)** and the **International Crops Research Institute for Semi-Arid Tropics (ICRISAT)** with financial support from the **Austrian Development Agency (ADA)**. Additional inputs will be provided by the FAO Regional Office for East Africa.

IWAR was represented on the panel by Executive Board member and Chair of the Scientific, Technical & Publications Committee, Henning Bjornlund, bringing his research experience from East Africa to the discussion.

## Upcoming IWRA Webinars in 2020

[Policy to Support Water Reuse Technologies](#)  
**21 October**

[World Toilet Day 2020](#)  
**19 November**

[Solutions for Sustainability of Engineered Rivers in Arid Lands](#)  
**9 December**

[Agricultural Water Reuse: Challenges and Opportunities](#)  
**16 December**

**Propose your own ideas and speakers for  
upcoming IWRA webinars in 2021!**



IWRA continues to solicit to all members, partners and supporters' ideas and speakers for its upcoming webinars in 2021! Should you know of an exciting and relevant topic or would like to volunteer to present, please send an email to IWRA at [webinars@iwra.org](mailto:webinars@iwra.org).

Each webinar is free and live streamed on the internet for 90 minutes. [IWRA webinars](#) feature, typically, four to five speakers presenting 10-minute Power Points, and includes a space for audience questions and answers.

The audience is composed of a mix of water related professionals, academics, students, organisations and institutions from all regions of the world (Africa, Asia, Europe and the Americas). Each webinar will be recorded and posted on our website together with the presentations.

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## IWRA Publications

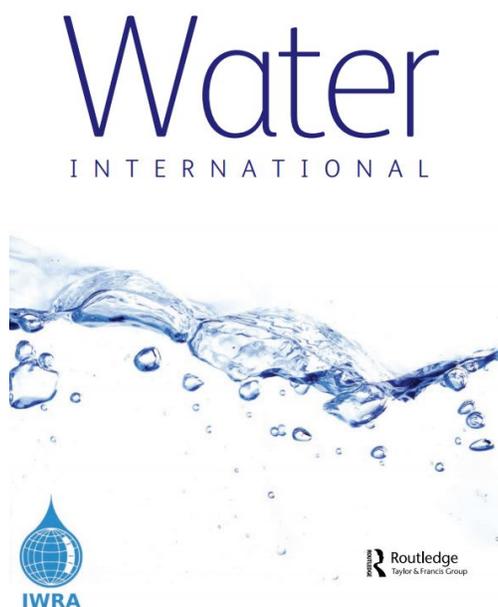
### *Water International*

**Volume 45, Issue 5, 2020**

**Pages 385 – 514**

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#### **Editorial**

- [Editors' introduction](#). Raya Marina Stephan & James E. Nickum. Pages: 385-387

#### **Research Article**

- [Knowledge, context and problemsheds: a critical realist method for interdisciplinary water studies](#). Peter P. Mollinga. Pages: 388-415

#### **COVID-19 Commentaries**

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Miller, J. Budds, J. Geere, K. Meehan, K. Charles, E. G. J. Stevenson, J. Vonk & J. Mizniak. Pages: 416-422

- [The potential impact of water quality on the spread and control of COVID-19 in Syrian refugee camps in Lebanon](#). Issmat I. Kassem & Hadi Jaafar. Pages: 423-429
- [The impact of COVID-19 on water and food systems: flattening the much bigger curve ahead](#). Martin Keulertz, Mark Mulligan & John Anthony Allan. Pages: 430-434
- [COVID-19 and water resources management: reframing our priorities as a water sector](#). Marian J. Neal. Pages: 435-440
- [COVID-19 heightens water problems around the world](#) | Cecilia Tortajada & Asit K. Biswas. Pages: 441-442

### Water Coping in African Communities

- [Informal water vendors and the urban poor: evidence from a Nairobi slum](#). Anindita Sarkar. Pages: 443-457

### Water Governance: Transboundary

- [Reconceptualization of the Transboundary Water Interaction Nexus \(TWINS\): approaches, opportunities and challenges](#). Richard Grünwald, Yan Feng & Wenling Wang. Pages: 458-478
- [Does state capacity matter for foreign aid effectiveness? Panel data evidence on water from 87 countries](#). Masood Ahmed. Pages: 479-496

### Water Governance: Groundwater

- [Exploring the future impacts of urbanization and climate change on groundwater in Arusha, Tanzania](#) | Tunde Olarinoye, Jan Willem Foppen, William Veerbeek, Tlhoriso Morienyane & Hans Komakech. Pages: 497-511
- [Governance of offshore freshwater resources](#) by Renée Martin-Nagle, Leiden, Netherlands, Brill | Nijhoff, 2020, 295 pp., €132.00 (hardback), ISBN: 978-90-04-

## Policy Briefs

IWRA's Policy Briefs editor [Claire Miller](#) has now been joined by two new members of the Policy Brief team, [Kara DiFrancesco](#) and [Kris Hartley](#), supported as ever by our amazing Editor-in-Chief, James Nickum. With this great team we can expect to see an even higher turn out of Policy Briefs in the coming months.

We are also pleased to announce the release of the latest IWRA Policy Brief in the so-called "Green Series", which are not based on special issues of our journal. This one was based on a recent IWRA [webinar](#) on "Women and Resilience in the Water Sector" and is called "[Want Progress in Water? Let Women Lead](#)".



**International Water Resources Association**

**POLICY BRIEF**  
Number 6  
July 2020

**Want progress in water?  
Let women lead**

**KEY POLICY MESSAGES**

- Women are the often "unseen" agents of change at the grassroots.
- Their experience and leadership need to be scaled up to the national level.
- Water resilience requires real, not token, participation and leadership by women.
- Women are on the frontline of the fight against COVID-19, but need more support.

Women are on the frontline trying new farming practices and crops to adapt to a changing climate. Women planting rice in Khorram District, West Azarbaijan, Iran. © Karen Corlett

IWRA Policy Briefs are published by IWRA in association with IFOR partners. They aim to provide high quality analysis and practical recommendations for policy makers on important development issues.

IWRA Policy Briefs are for the purpose of stimulating discussion and awareness. IWRA, as a neutral forum, does not necessarily endorse the views expressed.

An IWRA webinar on Women and Resilience in the Water Sector on 27 May 2020 examined the central role women play on the frontline of water crises, and how decision-makers should learn from their experience.

**POLICY BRIEF / Want progress in water? Let women lead / [www.iwra.org](http://www.iwra.org)**

Learn more about this and other policy briefs at [www.iwra.org/policybriefs](http://www.iwra.org/policybriefs).

## IWRA Task Force News

### Smart Water Management Task Force



#### Call for Case Study Proposals

#### Smart Water Cities Project

**Deadline: Monday, November 2nd, 2020**

The International Water Resources Association (IWRA), together with the Korea Water Resources Corporation (K-water) and the Asian Water Council (AWC), are pleased to invite researchers from international organisations, government agencies, research institutions, non-profit institutions, and the private sector to submit case study proposals for **the report entitled “Smart Water Cities: Case Studies Report” that will be published in July 2021!**

The report aims to contribute to knowledge sharing of smart water technologies in urban environments around the world and to promote their implementation. For this, the report will identify and examine examples of smart water technologies employed in cities around the world, identify indicators and standards to measure smart water technology performance, and recommend technical and non-technical solutions for the implementation of smart water technologies in urban developments.

**Interested authors** that would like to participate in this call for case studies need to complete a short [abstract proposal template](#) indicating the background and context of the case study, providing details of the smart water technologies employed and the factors facilitating their use.

**Case study proposals are due by Monday, November 2nd, 2020.** Successful authors will be notified by November 23rd, 2020. The first full draft papers will be due by January 25th, 2021. Authors will be requested to respond to editorial review comments and peer review comments by April 2021. Final papers will be due by May 23rd, 2021.

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In case of any questions, kindly contact Monica Garcia Quesada at [m.garcia.quesada@iwra.org](mailto:m.garcia.quesada@iwra.org).

**We look forward to receiving your proposals soon!**

## **IWRA is now accepting general applications to join its Water & Climate Change Task Force**



IWRA is pleased to announce the general call for IWRA members to join its [Water and Climate Change Task Force](#), and to join one or more of its **Working Groups**!

While applications to join this Task Force will remain open for all IWRA members, we ask all interested members to contact the Task Force before Monday, **November 16<sup>th</sup> 2020**, to ensure that you can be part of the development of the following six Working Group topics directly related to water and climate change:

1. **Afforestation**
2. **Carbon Dioxide Removal Strategies**
3. **Climate Change, Energy and Water**
4. **Flood Risk Management**
5. **Mountains and Plains**
6. **Water Pollution**

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The working Groups will decide the **outputs** of their joint work, including policy briefs, academic papers, webinars, and conference sessions. The work products of each Working Group will also be used as a basis for presentations at IWRA's [XVII World Water Congress](#) in South Korea in September 2021.

**We are seeking applications by all interested IWRA members to join the Task Force** if you just want to find out more on this important topic, or to join one or more of the Working Groups to help produce specific outputs directly related to water and climate change as set out below.

IWRA members are encouraged to **get in touch with the Task Force** to let us know your areas of interest, or key messages that IWRA should pursue with regards to climate change and water.

Members will be put in contact with working group leads in order to contribute to the development of activities relating to these sub-themes. More topics will be introduced in future, depending on member interest. However, for now, the following **Working Groups have been proposed**:

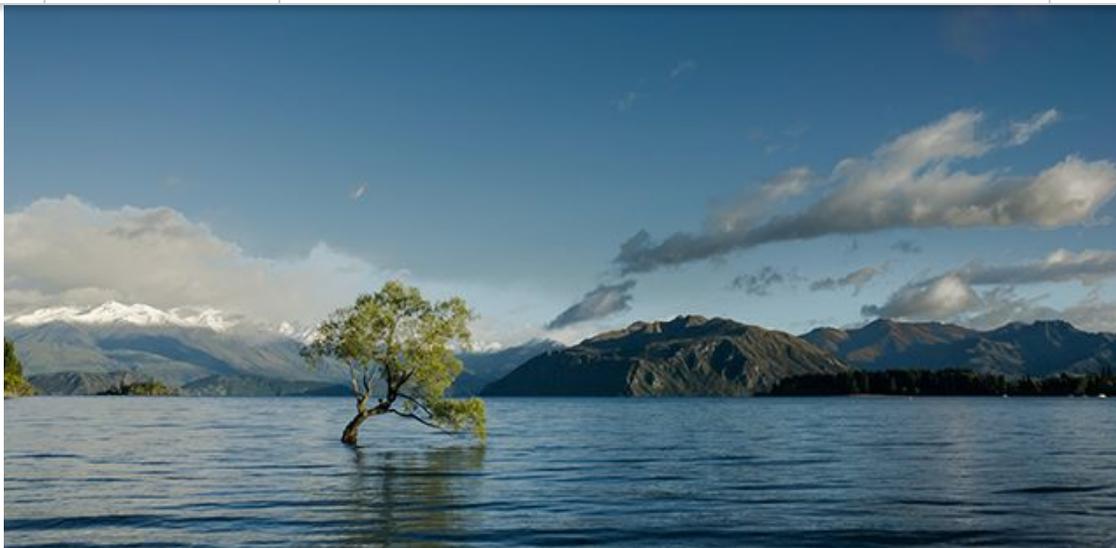
### How Can You Join this Task Force and its Working Groups?

1. Ensure that you have a current up-to-date IWRA membership
2. Send an email to [office@iwra.org](mailto:office@iwra.org) with "Water and Climate Change Task Force" in the subject line, and in the body of the email please state your **name**, **location** and **IWRA membership number** (you can find this on your membership profile - but if you can't find this, we'll find it for you).
3. Finally, don't forget to tell us what your particular area of interest is related to Water and Climate Change, and if you would be interested in joining any of the six current Working Groups.

**We look forward to hearing from you!**

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## Water Security Task Force



The Water Security Task Force has been discussing activities to further engage the expertise of members. Several ideas were brought forward and the Task Force is in the process of developing a Working Group on the topic of Urban Water Security. This fall, the draft manuscripts for the 2020 edition of the Global Water Security Issue series will be ready for peer review so this summer the preparatory paperwork is being completed to secure non-disclosure agreements with peer reviewers on the Task Force. More info at [www.iwra.org/watersecurity](http://www.iwra.org/watersecurity).

## World Water Congress Updates

### Postponement to 2021 of IWRA's XVII World Water Congress

**“Foundations for Global Water Security and Resilience: Knowledge, Technology & Policy”**



Like all of you, IWRA and the Korean co-organisers and sponsor of the [XVII World Water Congress](#) (Daegu Metropolitan City; Korea Water Resources Association; K-water and

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postponed the Congress from May to September this year. However, the pandemic still continues to impact many parts of the world, and the uncertainty for making travel arrangements now looks like it will continue until at least the end of 2020. It has therefore become clear that in order to ensure that as many people as possible are able to attend, we must postpone the Congress until 2021.

### **The new Congress dates will be:**

**12<sup>th</sup> – 16<sup>th</sup> September 2021**

**The venue will remain the same at EXCO in Daegu,  
Republic of Korea**

We deeply regret any inconvenience this second change in dates may cause. But, the organisers strongly believe that postponing the Congress until the second half of 2021 will ensure the best World Water Congress programme, while allowing the fullest possible attendance by major water organisations, distinguished participants and delegates from around the world.

If you have already registered for WWC, your registration will be automatically transferred to the new dates. Of course, if you are unable to attend the revised event in September 2021, your registration fee will be fully refunded. To claim your refund, please contact [wwc2020@exco.co.kr](mailto:wwc2020@exco.co.kr).

Further information about talks, posters and special sessions already approved, as well as opportunities for new submissions, will be widely communicated soon. Please keep an eye out through the Congress website ([www.worldwatercongress.com](http://www.worldwatercongress.com)) and our usual social media channels.

If you have any questions, please email us at [congress@iwra.org](mailto:congress@iwra.org).

### **We look forward to welcoming you in Korea in September 2021.**

Over the past 50 years, IWRA's World Water Congresses have been held 16 times in locations around the world. These congresses represent **the world's largest event linking water researchers and policy practitioners**. They provide a unique meeting place to address key water challenges and priorities, identify major global themes concerning the water agenda, and bridge the science and policy arenas for the development and implementation of well-informed decisions in the field of water.

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## **Submit Letters of Expression of Interest to host IWRA's XIX World Water Congress in 2025!**



## DETAILED TERMS OF REFERENCE TO HOST THE XIX WORLD WATER CONGRESS, 2025

The purpose of this document is to explain the process of selecting the host for the XIX World Water Congress, and describe in detail the various roles and responsibilities.



[www.iwra.org](http://www.iwra.org)

**REMINDER** - IWRA is still looking for Expressions of Interest to host the XIX World Water Congress in 2025!

The [World Water Congress](#) is a well-established and globally recognised event in the water sector that is held every two to three years under the auspices of IWRA in different cities around the world. Its objective is to provide a meeting place to share experiences, promote discussion, and present new knowledge, research results and developments in the fields of water sciences and policy from around the world. For nearly half a century, World Water Congresses have been at the vanguard of the development and identification of major

Implementation of decisions in the water sector.

## Benefits of hosting the XIX World Water Congress

### LEADERSHIP

- Generates high international focus on the host city and country regarding water resources – in particular for researchers, universities, think tanks, decision-makers, water authorities, private companies and non-government organisations.

### COLLABORATION

- Helps to build synergy within the local and national water community. This facilitates cooperation, fosters a constructive dynamic and opens new opportunities in the water sector.

### REPUTATION

- Promotes local and national water expertise on a global scale. The Congress provides a platform to contribute to international scientific and policy debates about key water issues.

### REVENUE

- Provides economic and tourist benefits for the city with the arrival of Congress participants.

### PROFILE

- Promotes the city and country at the international level: underlining its capacities, research excellence, policy relevance and ability to contribute to the global water sector.

### RECOGNITION

- The World Water Congress is a well-established and globally recognised event in the water sector. IWRA commits to aiding the hosts to mobilise the media/press and other international organisations.

### EXPERTISE

- The World Water Congress brings various high-level experts as speakers and award recipients, and attracts high-level personalities, including well-known politicians and heads of large international organisation.

### NETWORKING

- Provides excellent opportunities for networking with the international water community.

The Terms of Reference explaining the process for selecting the host for IWRA's XIX World Water Congress, description in detail of the various roles and responsibilities as well as the application steps and terms of reference is [now available here](#).

## News & Activities by IWRA Members & Partners

### Publications by IWRA Members

- **Renée Martin-Nagle**, 2020. [Offshore aquifers: Freshwater's final frontier](#). Groundwater Solutions Initiative for Policy and Practice (GRIPP).



- **Renée Martin-Nagle**, 2020. [Offshore freshwater aquifers: Toward equitable distribution](#). WIREsWater.

Legal principles and practices for determining ownership and control of seabed resources have been crafted and honed by various parties throughout the 20th century, often on an ad hoc basis to meet specific situations and sectoral needs. The legal landscape for offshore freshwater aquifers consequently spans domestic, regional, and international regimes, making the governance analysis for this untapped resource complex and multilayered. At the apex of ocean governance lies the UN Convention on the Law of the Sea (LOSC), a global treaty with almost universal application. Both LOSC and customary law grant each coastal state exclusive sovereign rights over seabed natural resources in its continental shelf, although those rights are limited by other legal commitments such as obligations to protect the environment. LOSC does not address transboundary resources, but early and sustained demand for offshore hydrocarbons caused that governance gap to be filled through judicial decisions, bi-lateral treaties, and customary practices. Traditionally, distribution of natural resources has been viewed as a right

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properties. When offshore freshwater is eventually appropriated for use, humanity will have an opportunity to choose between following old patterns of distribution or crafting a more inclusive system. In a world facing global shortages of freshwater due to pollution, overuse and climate change, policymakers designing a legal regime for untapped reservoirs of a vital resource for which there is no substitute should consider more equitable forms of distribution. Both Roman law and LOSC provide precedents for sharing natural resources, and the emerging trend of benefit-sharing offers multiple and varied possibilities as well.

- **Bjornlund, V., Bjornlund, H. and van Rooyen, A., 2020.** [Why agricultural production in Sub-Saharan Africa remains low compared to the rest of the world.](#) International Journal of Water Resources Development.
- **van Rooyen, A., Moyo, M., Bjornlund, H., Thabani Dube, T., Parry, K. and Stirzaker, R., 2020.** [Identifying leverage points to transition dysfunctional irrigation schemes towards complex adaptive systems.](#) International Journal of Water Resources Development.
- **Moyo, M., van Rooyen, A., Bjornlund, H., Parry, K., Stirzaker, R., Dube, T. and Maya, M., 2020.** [The dynamics between irrigation frequency and soil nutrient management: transitioning small scale irrigation towards more profitable and sustainable systems in Zimbabwe.](#) International Journal of Water Resources Development.
- **Fentahun, A., Wheeler, S., Zuo, A., Bjornlund, H., van Rooyen, A., Pittock, J., Mdemu, M. and Chilundo, M., 2020.** [Irrigators' willingness to pay for the access to soil moisture monitoring tools in South Eastern Africa.](#) International Journal of Water Resources Development.
- **Chilundo, M. de Sousa, W., Christen, E., Faduco, J. Bjornlund, H., Cheveia, Munguambe, P., Jorge, F., Stirzaker, R. and van Rooyen, A., 2020.** [Do Agricultural Innovation Platforms and soil moisture and nutrient monitoring tools improve the production and livelihood of smallholder irrigators in Mozambique?](#) International Journal of Water Resources Development.
- **Parry, K., van Rooyen, A., Bjornlund, H., Kissoly, L., Moyo, M. and de Sousa, W., 2020.** [The importance of learning processes in transitioning small-scale irrigation schemes.](#) International Journal of Water Resources Development.
- **Mdemu, M., Kissoly, L., Bjornlund, H., Kimaro, E., Christen, E., van Rooyen, A. Stirzaker, R., and Ramshaw, P., 2020.** [The role of soil water monitoring tools and agricultural innovation platforms in improving food security and income of farmers in smallholder irrigation schemes in Tanzania.](#) International Journal of Water Resources Development.
- **Brooks, D., Trottier, J. 2020.** [Moving water from last to first in the Middle East peace process.](#) International Journal of Water Resources Development.

Development and Management.

This book provides a solid foundation for a comprehensive, systemic and water-centric approach to water management. Said approach integrates two performance principles essential for sustainable water use systems, namely equity and efficiency. Further, it decreases the policy space for decision-making encountered by water managers and makes it easier to arrive at reasonable solutions because of the bounded rationality inherent in its development. By combining the distributive and aggregative principles, the approach offers a transparent and autonomous structure for gathering water data and enabling stakeholder involvement. Lastly, it employs and promotes a unifying language for all types of water use systems, e.g. urban, agricultural and industrial.

- **Lai, V., Malek, M. A., Abdullah, S., Latif, S. D., Ahmed, A. N.,** 2020. [Time-series prediction of sea level change in the east coast of Peninsular Malaysia from the supervised learning approach.](#) International Journal of Design & Nature and Ecodynamics, Vol. 15, No. 3, pp. 409-415.

Forecasting the rises in sea level are vital elements in oceanography and marine management, especially in managing low-lying coastal areas. The present study aims to analyze the ability of machine learning algorithm regression support vector machine (RSVM) in forecasting the changes in the sea level on the east coast of Peninsular Malaysia. The selected inputs for the proposed model are monthly mean sea level, monthly sea surface temperature, rainfall, and mean cloud cover for the period from January 2007 to December 2017. Results indicate that the forecasted values were very accurate. Therefore, RVSM can be a promising tool for decision-makers.

- **Ehteram, M., Ahmed, A. N., Ling, L., Fai, C. M., Latif, S.D., Afan, H. A., Banadkooki, F. B., El-Shafie, A.,** 2020. [Pipeline Scour Rates Prediction-Based Model Utilizing a Multilayer Perceptron-Colliding Body Algorithm.](#) Water 2020, 12, 902.

The advanced multilayer perceptron (MLP) models are utilized to predict free rate of expansion that usually occurs around the pipeline (PL) because of waves. The MLP model was structured by integrating it with three optimization algorithms: particle swarm optimization (PSO), whale algorithm (WA), and colliding bodies' optimization (CBO). The sediment size, wave characteristics, and PL geometry were used as the inputs for the applied models. Scour rate at both sides of the pipeline was predicted as the model outputs. The results indicated that the MLP-CBO outperformed other models. The MLP-CBO can be used as a powerful soft-computing model for predictions.

- **Pandey, A. & Subedi S. P.,** 2020. [Changing Notion of Sovereignty and Governance of Water in India: An Analysis of the Inter-State Water Disputes Tribunal.](#) The Journal of Water Law.

This paper presents case studies on the Pond-In-Pond (PIP) configuration where PIP is an integration of two types of pond – anaerobic and aerobic – and consists of a deeper inner section entirely submerged within the outer pond. Performance data from existing PIP, or PIP-like systems dated back to 1960s', were collected and analyzed; and the results from the PIP systems investigated resulted in an average BOD removal of over 80 % with a deviation of less than 10 %. Consequently, the PIP unit alone ensured a level of treatment required for effluent reuse in crop irrigation for typical municipal wastewater with influent BOD in the range of 200–300 mg L<sup>-1</sup>.

- **Hashemi, S.**, 2020. [Sanitation Sustainability Index: A Pilot Approach to Develop a Community-Based Indicator for Evaluating Sustainability of Sanitation Systems](#). Sustainability.

Evaluating the sustainability of sanitation systems is essential in achieving the sixth sustainable development goal. In this paper, the sanitation sustainability index (SSI) is suggested as an indicator for evaluating the sustainability of sanitation systems. The SSI has sub-indexes that consider the technical, social, and economic aspects of the sanitation system, and all the variables are dimensionless and heavily dependent on the current state of the community where the sanitation system is going to be implemented. The applicability of the SSI was demonstrated by evaluating the implementation of onsite sanitation systems in South Korea.

- **Hussein, N. M. & Assaf, M. N.**, 2020. [Multispectral remote sensing utilization for monitoring chlorophyll-a levels in inland water bodies in Jordan](#). The Scientific World Journal.

This study focuses on the utilization of multispectral satellite images for remote water-quality evaluation of inland water body in Jordan. The geophysical parameters based on water's optical properties, due to the presence of optically active constituents, are used to determine contaminant level in water. It has a great potential to be employed for continuous and cost-effective water-quality monitoring and leads to a reliable regularly updated tool for better water sector management. Three sets of water samples were collected from three different dams in Jordan. Chl-a concentration of the water samples was measured and used with corresponding Sentinel 2 surface reflectance (SR) data to develop a predictive model.

- Covid-19 has hit hard the 3 billion people with no access to handwashing facilities. Water is also an essential driver for resilient, green and inclusive recovery strategies for cities. The **OECD Centre for Entrepreneurship, SMEs, Regions and Cities** has just released a [Policy Note on Cities Policy Responses to Covid-19](#) that outlines some of the ways in which cities have implemented measures to ensure local water service delivery in the context of the Covid-19 pandemic. The note is also available in [French](#), [Spanish](#) and [Portuguese](#).

## Member and Partner News


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# WORLD SCIENTIFIC HANDBOOK OF

# TRANSBOUNDARY WATER MANAGEMENT

Editor-in-chief: **Shlomi Dinar** (Florida International University, USA)

IN 4 VOLUMES

The impacts of population growth, climate change, and water scarcity and variability on a country's economy or society, in addition to the sheer need to harness an international rivers for domestic and regional purposes, has made the management of transboundary freshwater a subject of great import. Over the past several decades, research in various disciplines, utilizing a variety of methodologies has explored these issues, focusing on freshwater's strategic importance as well as conflict, cooperation, and negotiation over shared water bodies (rivers, lakes, aquifers).

This multi-volume set seeks to contribute to this still burgeoning body of literature by focusing on several key themes that can help explain and recognize successes and failures in transboundary freshwater management. In particular, the set seeks to bring together original scholarship focusing on institutions (formal and informal), international water law, technology, and the nexus of domestic and inter-state affairs. Each edited volume in the set aims to build on extant research while also fostering new paths of inquiry. Overall, the set seeks to become a guide for both academics and practitioners hoping to better understand the joint management of this precious natural resource from socio-political, legal, economic, and technological perspectives.

For more information about the set and a description of each edited volume see:

[https://www.worldscientific.com/page/water\\_management](https://www.worldscientific.com/page/water_management)

### Call for Abstracts

Abstract submissions will be accepted until **January 1, 2021** and should be sent by email to the volume editor.

<p style="text-align: center; font-weight: bold; color: #0056b3;">Cooperating Over Shared Freshwater Resources Using International Law</p> <p style="text-align: center;">Editor: <b>Gabriel Eckstein</b> (Texas A&amp;M University, USA) email: gabrielleckstein@law.tamu.edu</p>	<p style="text-align: center; font-weight: bold; color: #0056b3;">Technologies on Tap: The Role of Technologies in Transboundary Water Management</p> <p style="text-align: center;">Editor: <b>David Katz</b> (University of Haifa, Israel) email: katzd@geo.haifa.ac.il</p>
<p style="text-align: center; font-weight: bold; color: #0056b3;">The Role of Formal and Informal Institutions in Managing Transboundary Basins</p> <p style="text-align: center;">Editor: <b>Neda Zawahri</b> (Cleveland State University, USA) email: n.zawahri@csuohio.edu</p>	<p style="text-align: center; font-weight: bold; color: #0056b3;">Transboundary Water Management across Scales: Understanding the Domestic- International Nexus</p> <p style="text-align: center;">Editor: <b>Jeroen Warner</b> (Wageningen University &amp; Research, Netherlands) email: jeroen.warner@wur.nl</p>



The edited volume is part of a set of 4 volumes focusing on the management of transboundary water resources. Each volume will consider separate individual themes including **institutions, international water law, technology, and the nexus of intra-state affairs and inter-state water relations**. The completed set will be published by July 2023.

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**Prof. Slobodan P. Simonovic**, IWRA Fellow member and former Science Editor of Water International, has been elected to the Fellowship of the Royal Society of Canada. Fellowship of the Royal Society of Canada includes “scholars and artists that are selected for their exceptional contributions to Canadian intellectual life and recognition of their remarkable accomplishments (quote from the election letter)”. IWRA would like, therefore, to congratulate Slodoban for this important achievement!

## 2021 – A special year for IAHA congresses!



**International Association  
of Hydrogeologists**  
the World-wide Groundwater Organisation

The Covid-19 pandemic challenges the world in many ways and not least in how conferences are managed. IAHA had also to change plans, with the historic decision to run two congresses in 2021:

- the [47<sup>th</sup> IAHA CONGRESS](#) held in São Paulo, Brazil from August 22<sup>nd</sup> – 27<sup>th</sup>
- and the [48<sup>th</sup> IAHA CONGRESS](#) in Brussels, Belgium from September 6<sup>th</sup> – 10<sup>th</sup>.

Two congresses for IAHA's 65<sup>th</sup> Birthday! Both committees are working together to bring coordinated events that will present a unique IAHA experience and an opportunity for many more people to participate.



**WORLD BANK GROUP**  
Water

The unprecedented impact of the COVID-19 pandemic, and the associated necessary public health measures required to combat it, are presenting water supply service providers and governments globally with several challenges, including threats to the

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[planning tools](#) to provide governments and service providers with guidance to respond to the current COVID 19 pandemic.

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## Upcoming Events

***Please note that all dates and events are subject to change due to the current on-going COVID-19 crisis.***

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### **HYDRO 2020 Online**

26-28 October 2020

Online

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### **14<sup>th</sup> Meeting of the OECD Water Governance Initiative**

2-3 November 2020

Paris & Online



### **18<sup>th</sup> EUROPE-INBO International Conference**

9-10 November 2020

Online

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### **2020 Annual American Water Resources Association (AWRA) Conference**

9-11 November 2020

Online

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## **RENEXPO INTERHYDRO**

### **RENEXPO INTERHYDRO 2020**

[26-27 November 2020](#)

[Salzburg, Austria](#)

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### **UNESCO International Conference on “Water, Megacities and Global Change”**

[1-4 December 2020](#)

[Paris, France](#)



United Nations  
Educational, Scientific and  
Cultural Organization



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### **ASIA 2020: Water Resources & Renewable Energy Development in Asia**

[8-10 December 2020](#)

[Kuala Lumpur, Malaysia](#)

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### **88<sup>th</sup> ICOLD Annual Meeting & Symposium**

[24-27 February 2021](#)

[New Delhi, India](#)



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9<sup>th</sup> WORLD WATER  
FORUM DAKAR 2021

[22-27 March 2021](#)

[Dakar, Senegal](#)

## [5<sup>th</sup> Arab Water Forum](#)

[21-23 September 2021](#)

[Abu Dhabi, United Arab Emirates](#)



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