

# IWRA *Update*

Newsletter of the International Water Resources Association

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*IWRA 46<sup>th</sup> Anniversary*





## EDITORIAL

Patrick Lavarde, IWRA President

2017 was yet another busy and rewarding year for IWRA, not just because of our XVI World Water Congress, but also because of a number of other projects and activities that took place. All of these were aligned with IWRA's mission to improve and expand the understanding of water issues by promoting water research and knowledge sharing. We have worked hard to better engage with our multidisciplinary network of members and key partners to continually improve water resource decision-making in more sustainable ways.

Bringing together around 1,200 people from all regions of the world, one of the year's highlights was of course *IWRA's XVI World Water Congress* held in Cancun, Mexico from 28<sup>th</sup> May – 3<sup>rd</sup> June with amazing logistical support by CONAGUA. The focus of the congress was on the science-policy interface. The congress continues to be a great opportunity to share the latest research on water resource management, and to build on existing as well as to develop new networks. For example, the IWRA signed several agreements, including one with the *Korean Water Resources Association* (KWRA) which is confirmed as the host of the next Congress to be held in Daegu, Republic of Korea, in May 2020, and one with the *International Commission on Irrigation and Drainage* (ICID) for joint collaboration. It was also an opportunity for key regional stakeholders to meet in advance of the 8<sup>th</sup> World Water Forum planned to take place in Brasilia in March 2018.

Furthermore, at Cancun the IWRA initiated a joint project on *Smart Water Management* (SWM) with *K-water* and has already started collecting case studies from around the world for its report. As part of this project, IWRA has also launched its first Task Force through an open call for members to join a panel of experts to participate in this project as well as other SWM activities. Likewise, another open call for panellists was made for its *Water Quality* (WQ) Task Force, which will contribute to a Compendium on Global Water Quality Guidelines. This project is supported by the former ONEMA and the *World Water Council*.

IWRA's flagship journal publication *Water International* expanded from 7 to 8 issues in 2018. The journal has been around since in 1975 and already counts 42 volumes. We also ran 4 dedicated *webinars* in 2017, contributing to both 2017 World Water Day and 2017 World Toilet Day, as well as focusing on special thematic issues of *Water International*. Linked to the special issues of *Water International*, a number of *policy briefs* were also published, and of course you are reading our 4<sup>th</sup> edition of our newsletter *IWRA Update* for 2017.

## EDITORIAL (CONT.)

Patrick Lavarde, IWRA President

Finally, it was a big year for getting out to meet IWRA members and key partners in the water sector, through our participation in a number of water related meetings and events. These included the 2<sup>nd</sup> Stakeholder Consultation Meeting for the 8<sup>th</sup> World Water Forum, 2017 World Water Week, Korea International Water Week 2017 & 1<sup>st</sup> Asia International Water Week, Connecting and Protecting our Seas, 63<sup>rd</sup> Board of Governors Meeting, and the 10<sup>th</sup> OECD – Water Governance Initiative Meeting.

2018 is already set to be an exciting year, and will offer the Executive Office the chance to focus more on improving the engagement we have with you our members. Our efforts will concentrate mainly on IWRA's Board Members Elections, the 8<sup>th</sup> World Water Forum in Brasilia and Korea International Water Week 2018, as well as the launch of the Science Policy Interface Task Force. And of course we are already starting to prepare for the XVII World Water Congress in Daegu, Korea. The membership space of the website will be totally renewed, and the hard work required to get our publications out will go on.

I wish you all happy holidays for the New Year (whether they be summer or winter celebrations, depending on your part of the world). Do stay tuned for more news and opportunities to work together with IWRA ([www.iwra.org](http://www.iwra.org)). We are always happy to hear from our members and would like to hear your ideas for potential projects, events and initiatives that support the use of sound science to develop strong water policies, and to improve the sustainable management of global water resources. The support and participation of our members and partners is always welcome.

See you in 2018!

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# INTERVIEW

Philippe Guettier,

FWP General Director & IWRA Institutional Member

*> What is the French Water Partnership (FWP)?*

The French Water Partnership is a platform that gathers together all the key French water stakeholders, while operating at international level. Bringing together more than 150 public and private members, such as research and training institutes, NGOs, companies, regional and local authorities, parliamentarians, the state and public institutions, and experts, the FWP has spent 10 years leading a collective advocacy for water so that it becomes a real priority in sustainable development policies worldwide. The FWP also stands as a facilitator for exchanges between the French and international water communities. In that respect, the FWP is an active member of international networks such as the IWRA and the World Water Council.

*> What are the most important issues in water for FWP?*

There are many water challenges today. According to a 2012 report by the OECD, an estimated 40% of the world's population will be confronted to water scarcity by 2050. The climate change context will intensify existing pressure on water, leading to degraded and/or scarcer water resources, generating conflicts and migration waves, food security and health problems, etc. As of now, the world is not prepared to face such a situation. For the FWP, a first step to tackle these issues is to recognize that water is a central piece of the worldwide development puzzle. As such, it must be handled on all levels:

1. International level: working with the international frameworks at hand, such as the UN Sustainable Development Goals (SDGs), the Paris Climate Agreement, the Sendai framework on risks and disasters, etc.
2. National level: lobbying and engaging with governments, national donors, etc.
3. Local level: powering solutions alongside civil society.

*> What type of work and activities is FWP currently undertaking to address these issues?*

The FWP is leading a steadfast advocacy on the importance of water within the Sustainable Development Goals (SDGs), and the Paris Climate Agreement, producing collective messages and research material on the matter with its multi-stakeholder working groups ([find out more here](#)).

The FWP is a founding element of the **#Climateiswater** initiative, created at COP21 in Paris, uniting major international water organizations to plead with one voice to have water included within the climate change discussions. Since COP21, this collective network has been in charge of the organization of an official water day at the following COPs.



**Philippe Guettier**

*Philippe Guettier is an engineer in Public Health and Environment. He has dedicated his career to global, European and Mediterranean water issues. He has worked for many years for the French Ministry in charge of Environment. He has been the General Director of the French Water Partnership since 2012.*

## INTERVIEW

Philippe Guettier, FWP General Director & IWRA Institutional Member

The FWP has also worked to mobilize the French government on the implementation of the SDGs at national level, co-organising a workshop this year focused on water. In 2018, the FWP will be present at strategic events such as the United Nations High level Political Forum in New York as well as COP24 in Poland to showcase its work and the French expertise on these subjects.

Three other fields of activity are also currently being explored:

1. Biodiversity, with a focus on nature based solutions
2. Source to Sea Water Management
3. Social and Human Sciences and Policies Interfaces

### > *Why is the 8<sup>th</sup> World Water Forum important?*

The 8<sup>th</sup> World Water Forum will be a stepping stone leading to two of the most important events of 2018. Firstly, a High Level Political Forum in July, which will bring a special focus to SDG 6 on Water. Secondly, COP24, which will take place in Katowice, Poland in November, will showcase the progress of the Paris Climate Agreement so far.

As the biggest international gathering of water stakeholders in the world, the 8th World Water Forum will necessarily play an important part in building an international water advocacy for these two events, as well as raise awareness among the political stakeholders present.

The FWP has the mandate to coordinate the French presence there. It will manage the "French Pavilion" and organise several high level events to show the diversity of the French expertise on subjects such as the SDGs, the fight against climate change, and nature based solutions. The FWP is also keen to facilitate exchanges between French stakeholders and their international counterparts.

**Learn more about the FWP here:**

**[www.partenariat-francais-eau.fr/en](http://www.partenariat-francais-eau.fr/en)**



# NEW IWRA TASK FORCES

IWRA is excited to announce two new Task Forces, the Smart Water Management Task Force and the Water Quality Task Force, which will assist IWRA as expert advisory panels for on-going projects and share knowledge with the broader water community. Below you can have a more detailed view of both Task Forces.

## SMART WATER MANAGEMENT TASK FORCE

The Smart Water Management (SWM) Task Force (TF) will be providing their expert advice on IWRA's current joint project on this subject with the Korean Water Resources Corporation (K-water). As part of this project, the SWM TF will review and provide advice on the exemplary SWM case studies currently being developed by water experts from 10 countries around the world. These cases include smart, automated and real-time technology solutions for water challenges including water quality, access, droughts, floods, irrigation efficiency, groundwater management, sanitation, ecosystem protection and more. The SWM TF will also provide their input on the analysis of the cases to enable IWRA and K-water to share insights to the broader water community on how SWM can assist with resolving current water challenges and supporting the Sustainable Development Goals effectively and efficiently.

As SWM is an emerging field, we were delighted to receive such interest in the project and the SWM TF from experts in a range of related water fields, with 22 applicants representing 12 countries from around the world, from both developing and more developed regions. These experts will bring their knowledge and skills in water resources management, technology, engineering, planning and policy to strengthen the SWM Project and share insights into this new and exciting field. After a tough selection process, we are delighted to announce the selected panellists for the SWM TF:

- [Henning Bjornlund](#) (Australia), Research Professor, Water Policy and Management, University of South Australia – representing IWRA's Scientific, Technical & Publications Committee)
- [Sinafekesh Girma](#) (Ethiopia), Student, Integrated Water Resource Management, University of Applied Sciences Cologne
- [Neil Grigg](#) (United States), Professor, Civil and Environmental Engineering, Colorado State University
- [Shaofeng Jia](#) (China), Deputy Director, Centre for Water Resources Research, China & Professor, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Science
- [Blanca Jiménez Cisneros](#), Director, Water Sciences and Secretary, International Hydrological Program-IHP, UNESCO
- [Paul Omondi Agwanda](#) (Kenya), Student, MSc Water Resource Development & Management, Sungkyunkwan University
- [Fernando Ortiz Westendarp](#) (Mexico), Program Manager, North American Development Bank
- [Mary Trudeau](#) (Canada), Director, Envirings Incorporated
- [Muhammad Wajid Ijaz](#) (Pakistan), Environmental Protection Agency, Pakistan & Ph.D. Student, Environmental Engineering, U.S.-Pakistan Centre for Advanced Studies in Water

**For more details on the SWM TF panellists or the Task Force itself please visit:**

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

# NEW IWRA TASK FORCES

## WATER QUALITY TASK FORCE

The most recent addition to the IWRA Task Forces (TF) is the IWRA Water Quality TF. The panellists on this TF will be providing their expertise to support the programme of work on water quality that is currently being undertaken by IWRA. The first major task will be in assisting with reviewing and completing the IWRA Water Quality Compendium (Global Compendium on Water Quality Frameworks - Which Quality for which Use), a project that has been supported by the former ONEMA and the World Water Council. The five sections of the Compendium include water uses for domestic, agricultural, industrial, energy and ecosystem purposes, and the final draft publication of this project can be expected to be presented at the 8<sup>th</sup> World Water Forum in Brasilia next March 2018.

After an open call to IWRA members to join the Water Quality TF, almost 40 applications representing 25 different countries were received, with great representation from both women and developing countries. A big thank you to everyone who put forth applications for this TF and helped spread the word as this was a fantastic result!

In mid-December, the IWRA TF Selection Committee decided on a group of 14 panellists and we are now pleased to announce the IWRA Water Quality TF panellists:

- **Thomas Arsuffi** (United States), Director, Llano River Field Station, Texas Tech University
- **Malcolm Gander** (United States), Environmental Manager, United States Department of Defense
- **Alex Godoy Faundez** (Chile), Director, Sustainability Research Centre and Strategic Resource Management, Universidad del Desarrollo
- **Maxwell Anim Gyampo** (Ghana), Student, PhD in Water Resources Management and Engineering, University for Development Studies (UDS)
- **Rajiv Kangabam** (India), Post-Doctoral Fellow, Agricultural Biotechnology, Assam Agricultural University
- **D.L. Marrin** (United States), Consulting Scientist, Water Sciences & Insights
- **Saskia Nowicki** (Canada), Student, PhD in Water Quality and Health, University of Oxford
- **Amrisha Pandey** (India), Student, PhD in International Environmental Law, University of Leeds
- **Jocelyn Pesquera** (Philippines), Member, Cebu City Council
- **Roxana Salazar** (Costa Rica), Member, Board of Directors, Costa Rica National Institute for Water and Sanitation
- **Raya Stephan** (France), Consultant, Legal expert, IWRA Board Director
- **Carla Toranzo** (Peru), Doctoral Researcher, Doctor of Business Administration, Maastricht School of Management & CENTRUM Graduate Business School Pontificia Universidad Católica del Perú
- **Sisira Withanachchi** (Germany), Student, PhD in Water Quality Governance, University of Kassel
- **Hua Xie** (United States), Research Fellow, Environment and Production Technology Division, International Food Policy Research Institute

**If you wish to learn more about the IWRA water quality project or its TF panellists, please visit [www.iwra.org/waterquality](http://www.iwra.org/waterquality)**



# LATEST ACTIVITIES

## ECOLOGICAL ENGINEERING AND CLIMATE RISKS: INTERNATIONAL WORKSHOP ON WATER & CLIMATE September 20-22, 2017, Paris, France



IWRA's newest Project Officer Heather Bond, and the IWRA Editor-in-Chief James Nickum, represented IWRA at this international workshop in Paris in September. Organised by the Seine-Normandy Water Agency and French Development Agency, it was a space for education and dialogue to discuss the technical and political elements of nature-based options to global water challenges.

Viewing nature as part of the solution rather than the problem is especially true as it relates to climate risks, as ecosystems are resilient to climatic changes and so should be central to planning schemes. It was acknowledged that action must be taken at the local level, to understand specific sites and potential solutions, as well as at the national level to provide funding and resources.

Topics of discussion included risk management by ecosystems and the role of biodiversity in climate action, with project presentations on nature-based solutions to mitigate coastal erosion, prevent floods, combat droughts and soil erosion in agriculture and limit pressures on water resources. Finally, engineering and technological analysis was followed by policy and feasibility considerations- upscaling from local pilot projects into large-scale political projects with visibility and media coverage. It was identified that nature-based solutions need clear economic incentives and revenue streams, through monetizing options (the cost of doing nothing vs solutions), emphasizing public goods and flexibility, and creating value capture mechanisms.

*"Nature needs to be our ally in meeting our challenges."* – Francois Saudavet, President of Seine-Normandy river basin committee.

*"Let's not use solutions of the past to combat problems of the future."* – Paul Michelet, Deputy Director of the French Agency for Biodiversity.

## CONNECTING AND PROTECTING OUR SEAS October 12-13, 2017, Monaco

The IWRA Executive Director Callum Clench attended this event in Monaco hosted by the Prince Albert II of Monaco Foundation and the Swedish Embassy in France. "Connecting and Protecting Our Seas: Initiatives in the Baltic and the Mediterranean" took place on the 12<sup>th</sup> and 13<sup>th</sup> of October. This was a good opportunity to engage with actors in the often neglected "sea" component of the "water quality from source to sea" (or ridge to reef) thematic area.

This event was a follow-up to the United Nations Ocean Conference in New York held in June 2017 and aimed to facilitate the exchange of experiences and know-how in dealing with the preservation of the marine environment. As such, the scientific, economic and cultural aspects of sustainable ocean management were addressed during the various discussions. This included the economics of maritime transport and the impact of climate change on the marine ecosystem, and international high-level sessions, in the presence of HSH Prince Albert II of Monaco and HRH Prince Carl Philip of Sweden and ministers from the two countries.

As both the Mediterranean and Baltic Seas share common problems associated with being enclosed, this event also highlighted the ties between Sweden and the Principality as well as the possible synergies between socio-economic development and protection of their respective marine ecosystems.





# LATEST ACTIVITIES

## 10<sup>TH</sup> MEETING OF THE OECD WATER GOVERNANCE INITIATIVE 20-21 November 2017, Vienna, Austria



On the 20<sup>th</sup> to the 21<sup>st</sup> of November, the OECD Water Governance Initiative held its 10<sup>th</sup> meeting at the City Hall of Vienna, Austria. The meeting gathered 70+ practitioners, policymakers and representatives from major stakeholder groups. The agenda, list of participants, the slides and pictures from the event are accessible online. The meeting was attended by both the IWRA Executive Director Callum Clench, and the Editor-in-Chief of Water International James Nickum – who presented the prelaunch of the Water International's Special Issue on the OECD Principles on Water Governance. This was a joint OECD/IWRA initiative to help bridge the science-policy gap. This issue contains five contributions by unique teams of scholars and practitioners from within the Water Governance Initiative.

The OECD Water Governance Initiative is a multi-stakeholder network of 100+ delegates from public, private and non-profit sectors gathering twice a year in a Policy Forum to share on-going reforms, projects, lessons and good practices in support of better governance in the water sector. It was launched in March 2013 and is currently chaired by Peter Glas of the Dutch Water Authorities. The WGI is hosted by the OECD, and coordinated by a multi-stakeholder steering committee.

The meeting offered the chance to update delegates on the latest developments of the initiative, and activities taking place in associated events. In addition to the Water International special issue launch, the OECD report "Water charges in Brazil: The Ways Forward" was also launched by Mr. Ricardo Andrade, Director, ANA (Brazil). Case studies and pilot tests were discussed and workshops were held.

For more information, please contact  
[water.governance@oecd.org](mailto:water.governance@oecd.org)

## LAND4FLOODS - NATURAL FLOOD RETENTION ON PRIVATE LAND 9-10 November 2017, Prague, Czech Republic



Water International Editor-in-Chief James E. Nickum participated in the inaugural workshop for the EU COST (Cooperation on Science and Technology) supported LAND4FLOOD Cost Action organized by Lenka Slavikova and Thomas Hartmann. The workshop was hosted by the Jan Evangelista Purkyně University and it was held 9-10 November 2017 in Prague, Czech Republic.

In 2017, the EU COST action LAND4FLOODS started an endeavour to explore how land owners can be encouraged to adapt land uses and land management strategies which allow for increased water retention capacity. The four-year cost action supports a research-driven open network of academics and practitioners who are seeking practical ways of reconciling flood risk management and land management, especially on privately held property. This successful workshop attracted several dozen participants from around the European Union.

One distinguished outcome of the Association's collaboration with EU COST is a forthcoming new series of sponsored IWRA Policy Briefs. This project is likely to generate one or two proposals for special issues of Water International.

Get more information on: [www.cost.eu](http://www.cost.eu)  
 and here [www.land4flood.eu](http://www.land4flood.eu)  
 Principle contacts: [lenka.slavikova@ujep.cz](mailto:lenka.slavikova@ujep.cz) and  
[thomas.hartmann@udo.edu](mailto:thomas.hartmann@udo.edu).



# LATEST ACTIVITIES

## IWRA WEBINAR: WORLD TOILET DAY 2017 – WASTEWATER



IWRA celebrated World Toilet Day 2017 with a dedicated webinar that brought together both academics and practitioners to explore some key issues related to this year's theme – Wastewater.

Our panellists were particularly attuned to gender issues, focusing on the need to break down taboo issues such as menstrual health, and be sensitive to gender concerns, including risk of assault when using sanitation services outside of the home in many developing countries.

Other key questions came around cultural and social dimensions and investigated the roles of wastewater reuse and queried if flush toilet systems were really the solution for everyone. This highlights how people in different countries perceive and face unique challenges that need to be addressed in the proper context. All of our presenters could agree on broader universal goals, but recognized that achieving them are not a 'one size fits all' solution.

This webinar counted with the participation of more than 75 registrants from all over the world, and our invited panellists included V. S. Saravanan (University of Bonn, Germany), Freya Mills (University of Technology, Australia), Halshka Graczyk (Institute for Work and Health, Switzerland), Sonja Loy (Texas A&M University, United States), and Gunilla Oberg (University of British Columbia, Canada). It was moderated by Scott McKenzie (University of British Columbia, Canada).

A high resolution recorded video of the webinar is available on [IWRA's website](#) and on our channel on [YouTube](#).

## ONE PLANET SUMMIT 12 December 2017, Paris, France

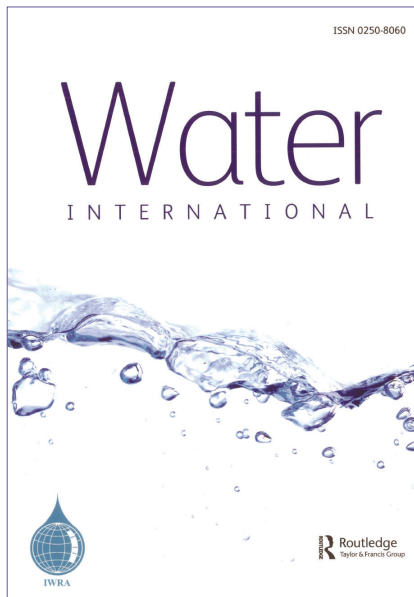


On 12 December 2017, the President of the French Republic, Emmanuel Macron, the President of the World Bank Group, Jim Yong Kim, and the Secretary-General of the United Nations, António Guterres, gathered together among other distinguished invitees to address the ecological emergency for our planet. In Paris, they jointly called international leaders and committed citizens from around the world for concrete action after two years of the signature of the historic Paris Agreement.

International water organisations and institutions also participated on this event helping to raise the profile of water on these discussions and on related international climate agendas. Overall, good progress was made to address water related issues on these debates and its critical role both in adaptation and mitigation strategies presently around the world.

Obtain more information on the objectives, results, programme, venue and much more in the following link here:

[www.oneplanetsummit.fr](http://www.oneplanetsummit.fr)



## PUBLICATIONS

### *Water International* Volume 42, Issue 7, 2017

PAGES 777 - 927

#### RESEARCH ARTICLES

- *Shipping water across the US–Mexico border: international governance dimensions of desalination for export*, Stephen P. Mumme, Jamie McEvoy, Nicolas Pineda & Margaret Wilder - Pages: 777-793
- *A user-centred approach to irrigation performance: drip irrigation in the Khrichfa area, Morocco*, Saskia van der Kooij, Marcel Kuper, Margreet Z. Zwarteveen & Charlotte M. S. de Fraiture - Pages : 794-809
- *Participatory rural appraisal to assess groundwater resources in Al-Mujaylis, Tihama Coastal Plain, Yemen*, Wahib Al-Qubatee, Henk Ritzema, Adel Al-Weshali, Frank van Steenbergen & Petra J. G. J. Hellegers - Pages: 810-830
- *The effect of physical accessibility and service level of water supply on economic accessibility: a case study of Bandung City, Indonesia*, Anindrya Nastiti, Arief Sudradjat, Gertjan W. Geerling, A.J.M Smits, Dwina Roosmini & Barti Setiani Muntalif - Pages: 831-851
- *Effects of hydrological changes on cooperation in transnational catchments: the case of the Syr Darya*, D. Bocchiola, M. G. Pelosi & A. Soncini - Pages: 852-873
- *Actual and perceived causes of flood risk: climate versus anthropogenic effects in a wet zone catchment in Sri Lanka*, Nishadi Eriyagama, Madusanka Thilakarathne, Praveen Tharuka, Tharindu Munaweera, Lal Muthuwatta, Vladimir Smakhtin, Wickrama Waththage Premachandra, Dhammi Pindeniya, N. S. Wijayarathne & Lakshika Udamulla - Pages: 874-892

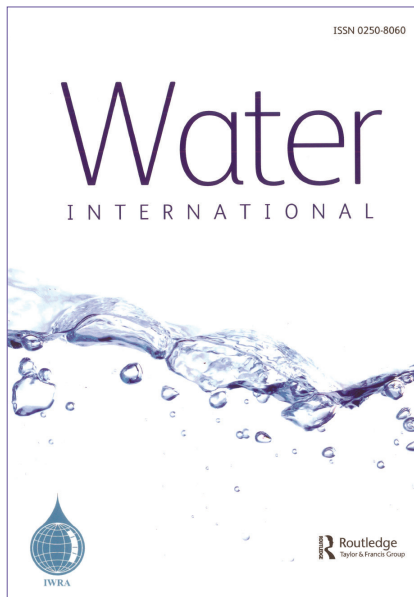
#### COMMENTARY

- *Riparianization of the Mekong River Commission*, Andrea K. Gerlak & Andrea Haefner - Pages: 893-902

#### IWRA DOCUMENTS

- *IWRA's new Articles of Incorporation and Bylaws (to amend and replace the 1971 Articles of Incorporation [Constitution] and 2009 Bylaws): A note from the Secretary-General*, Guy Fradin - Page: 903
- *Amended and Restated Articles of Incorporation of International Water Resources Association, Inc.* - Pages: 904-924
- *International Water Resources Association (IWRA) XVI World Water Congress, Cancun Declaration: Call for Action to Bridge Science and Water Policy-Making for Sustainable Development* - Pages: 925-927





## PUBLICATIONS

### *Water International* Volume 42, Issue 8, 2017

PAGES 929 - 1036

#### RESEARCH ARTICLES

- *Assessing the legitimacy of flood risk governance arrangements in Europe: insights from intra-country evaluations*, Maria Pettersson, Marleen van Rijswijk, Cathy Suykens, Meghan Alexander, Kristina Ek & Sally Priest - Pages: 929-944
- *A cooperative framework for optimizing transboundary hydropower development*, Seemanta Sharma Bhagabati, Akiyuki Kawasaki & Mukand Singh Babel - Pages: 945 - 966
- *Comparison of water pricing for publicly and privately owned water utilities in the United States*, Isaac W. Wait & William Adam Petrie - Pages: 967 - 980
- *Trend and variability of rainfall in two river basins in Sri Lanka: an analysis of meteorological data and farmers' perceptions*, L. Muthuwatta, H. P. T. W. Perera, N. Eriyagama, K. B. N. Upamali Surangika & W. W. Premachandra - Pages: 981 - 999
- *The politics of water reform and environmental sustainability in the Murray – Darling Basin*, James Horne - Pages: 1000 - 1021

#### TECHNICAL NOTE

- *Assessment of fog-water collection on the eastern escarpment of Eritrea*, Mussie Fessehayee, Sabah A. Abdul-Wahab, Michael J. Savage, Thomas Kohler, Tseggai Gherezghiher & Hans Hurni - Pages: 1022 - 1036



# PUBLICATIONS

## By Members and Partners



*International Journal of Water Resources Development*  
*Politics and Policies for Water Resources Management in India*  
Edited by Cecilia Tortajada & Asit K. Biswas  
1-146, 2018

[> Read more](#)

### Article recommended from this journal:

#### *Powering or Sharing Water in the Brahmaputra River Basin*

Anamika Barua, Guwahati, Sumit Vij & Mirza Zulfiqur Rahman  
1-15, 2017

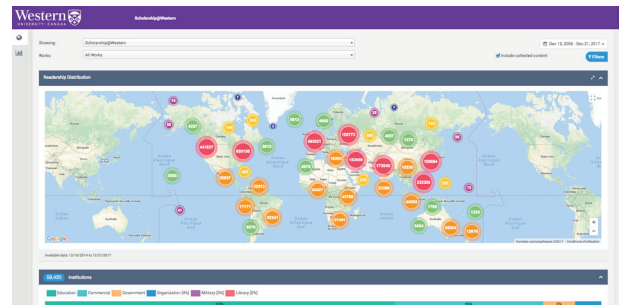
This article examines the power interplay that shapes the transboundary water interaction in the Brahmaputra River basin. The article provides two key insights based on data sharing and bilateralism aspects. First, the lack of a standard, hydrological data-sharing mechanism has created a sense of mistrust between riparians. Second, bilateralism and power asymmetry between the riparian countries has created a sense of unilateral control over the Brahmaputra River. This article concludes that due to regional geo-politics, issues of sovereignty, and unequal power, negotiation for a multilateral basin-wide treaty at this moment is a non-starter in the Brahmaputra basin.

[> More information](#)

#### *Water Resources Research Reports - the Blue Books Facility for Intelligent Decision Support - University of Western Ontario*

Volume 100

The Facility for Intelligent Decision Support (FIDS) was officially opened on May 12, 1989 in Winnipeg at the University of Manitoba. In 2000, FIDS moved to its current location at the University of Western Ontario, Department of Civil and Environmental Engineering. Currently, this facility supports interdisciplinary research in systems analysis and the development of deterministic



and stochastic simulation, optimization, multi criteria analysis, and other decision-making methodologies for addressing challenging system of systems problems lying at the confluence of society, technology and the environment, with applications in water resources management, hydrology, energy, climate change and public infrastructure, from a sustainable development perspective. Other main contributions include modelling risk and resilience of complex systems.

One of the main activities of FIDS is the publication of the Water Resources Research Reports - the Blue Books, initiated by an IWRA Fellow Member, Mr. Slobodan P. Simonovic. These technical reports include detailed presentations of the research conducted by a dedicated research team. These reports are provided by the International Standard Book Number (ISBN) as a unique numeric commercial book identifier by the International ISBN Agency.

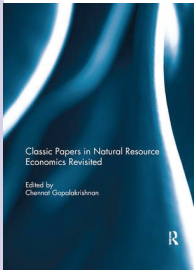
This month marks a major milestone in the publication of Blue Books with its 100 volume. The initial idea of these reports was to provide some continuity in the research conducted by Mr. Simonovic's group and provide an instrument for disseminating research results in a much more detailed form including software, data, presentation of the methodology, examples, etc.

Currently the Blue Books have been downloaded 69,268 times by researchers across the world and are available on both these websites: [www.eng.uwo.ca](http://www.eng.uwo.ca) and [dashboard.bepress.com](http://dashboard.bepress.com)



# PUBLICATIONS

*By Members and Partners*



## *Classic Papers in Natural Resource Economics Revisited (2016)*

Chennat Gopalakrishnan  
 2017, Routledge

Classic Papers in Natural Resource Economics Revisited is an edited volume of original commentaries from leading scholars in the natural resource economics and policy field, commissioned for the Journal of Natural Resources Policy Research. This book represents the culmination of a 7-year effort. The 7 classic papers - Arrow-Lind, Coase, Hardin, Nordhaus, Ostrom, Solow, and Samuelsom - included in this volume attempt to capture the essence of discourse in the field in a representative fashion. A total of 71 scholars from 11 countries, in 48 papers, examine, analyse, evaluate and probe the 7 classic papers included in this book in an attempt to understand why these papers have become classics in the field.

### > More information

*Gopalakrishnan is a Professor Emeritus at the University of Hawaii at Manoa and a fellow of both AWRA and IWRA.*

## *Circular of the Network for Cooperation in Integrated Water Resource Management for Sustainable Development in Latin America and the Caribbean –*

English version  
 8 pages, 2017



CEPAL

Comisión Económica para América Latina y el Caribe

Contents of issue No. 47:

- Editorial remarks: New Sustainable Development Goals (SDG) indicators for drinking water and sanitation services
- Water security challenges in Latin America and the Caribbean
- Cost estimates related to water security in agriculture as an adaptation measure to climate change in Chile
- The water, energy and food Nexus in Latin America and the Caribbean: planning, regulatory framework and

identification of priority interconnections

- Water and cooperatives: at the crossroads between the global and the local
- Launch of the Safe Water Investment Fund in Peru
- National Water Plan in Argentina
- Special Regulation for Basin Organizations in Honduras
- Workshop on "Desalination as an alternative for drinking water supply"

Hard-copies are available by air mail, free of charge, while supplies last. Requests should be addressed to [andrei.jouravlev@cepal.org](mailto:andrei.jouravlev@cepal.org), indicating complete postal address.

## *Vulnerability, Impacts and Assessment of Climate Change on Jakarta and Venice*

Arianna Varrani & Michael Nones  
 1-9, 2017

In the near future, cities located in coastal areas are likely to suffer from climatic changes more than all other human systems. The demographic growth, combined with sea-level rise and global warming related to natural causes and anthropogenic activities, endanger those systems. Therefore, to effectively cope with new climate changes, coastal cities need improvements to be more sustainable, resilient and liveable, applying flexible design approaches rather than a traditional one

This paper highlights such concepts presenting two case studies of important coastal cities: Venice, in Northern Italy, and Jakarta, the capital city of Indonesia. Although characterized by completely different climatic conditions and living habits, these two metropolises are highly impacted by humans and threatened by similar factors like subsidence and sea-level rise, which increase their exposure to future calamities principally driven by climate change. The present situation shows that, for the future, the resilience of coastal cities can be increased only using a mix of approaches at various levels, spanning from technical measures to adaptable planning instruments that consider future uncertainties.

### > More information



## PUBLICATIONS

*By Members and Partners*

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*Binational Study of the Transboundary San Pedro Aquifer, Callegary, J.B., Minjárez Sosa, I., Tapia Villaseñor, E.M., dos Santos, P., Monreal Saavedra, R., Grijalva Noriega, F.J., Huth, A.K., Gray, F., Scott, C.A., Megdal, S.B., Oroz Ramos, L.A., Rangel Medina, M. & Leenhouts, J.M.*

2016, United States-Mexico International Boundary and Water Commission Report

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This study marks the first time that government and university scientists from Mexico and the United States have collaborated to collect data and jointly prepare binational and bilingual databases and maps of the Transboundary San Pedro Aquifer, which spans the border between the states of Arizona and Sonora. Results illustrate the integration of water, geology, climate, and vegetation across the border, and build an agreed-upon scientific foundation which can be used by land managers and decision-makers to make informed decisions about current and future water management. In developing this project, we developed both a socio-physical approach that can provide advice and a template for work on transboundary aquifers around the world.

**> Spanish version**

**> English version**

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*Anthropogenic Activity-Induced Water Quality Degradation in the Loktak Lake, a RAMSAR Site in the Indo-Burma Biodiversity Hotspot*

Rajiv Das Kangabam & Munisamy Govindaraju  
1-10, 2017

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Wetlands contribute to human well-being and poverty alleviation. The increase in human population leads to more demand for water and degradation of the water bodies around the globe, resulting in scarcity of water.

The aim of the present study was to assess the impact of anthropogenic activity on the water quality of the Loktak Lake. Water samples were collected seasonally, namely, monsoon, post monsoon, winter and pre-monsoon, during 2013–2014 from 10 sites. For each water sample, 20 physicochemical parameters were analysed using the American Public Health Association method.

Furthermore, 11 significant parameter values were used to develop the water quality index (WQI). The result shows high concentrations of nitrite (5.45–11.83 mg/l) and nitrate (93.67–177.75 mg/l) in rivers which is beyond the permissible limit and higher compared to the Loktak. Highest turbidity was observed at Langthabal with 21 NTU, which is above the permissible limit. The WQI of the Loktak ranged from 64 to 77, while for rivers they ranged from 53 to 95, which indicates that the water is in a very poor state. The WQI values of rivers are higher compared with those of the lake, and it was identified that water from the rivers is a major reason for increase in pollution in the lake water.

The study suggests the need for long-term monitoring of the lake aquatic ecosystem and identification of pollution sites for proper management of the lake water. The WQI is an important tool to enable the public and decision makers to evaluate the water quality of the Loktak Lake.

**> More information**

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*Sovereignty and the Development of a “Community of Interests” Approach*

F. Rocha Loures  
212-250, 2015

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This chapter analyses the history, content and role of the community-of-interests doctrine as a theoretical framework underpinning international water law in an increasingly interdependent world. The volume in which it appears is part of the Series “A History of Water”, just completed after more than 15 years of work. With chapters by over 250 scholars from various disciplines and almost 100 countries, the series gives a long-term historical and comparative perspective to the understanding of the complex relationship between water and society across different regions.

Information on the complete “A History of Water” Series is available here: [waterhistory.b.uib.no](http://waterhistory.b.uib.no)

# UPCOMING EVENTS

## EVENTS BY MEMBERS AND PARTNERS



### **8<sup>th</sup> World Water Forum - "Sharing Water"**

**18 – 23 March, 2018, Brasilia, Brazil**

The World Water Forum is the world's biggest water-related event and is organized by the World Water Council (WWC), an international organization that brings together all those interested in the theme of water. Its mission is "to promote awareness, build political commitment and trigger action on critical water issues at all levels, to facilitate the efficient conservation, protection, development, planning, management and use of water in all its dimensions on an environmentally sustainable basis for the benefit of all life on Earth".

The World Water Forum contributes to the dialogue of the decision-making process on water at the global level, seeking to achieve the rational and sustainable use of this resource. Given its political, technical and institutional scope, one of the Forum's main features is the open, democratic participation of actors drawn from different sectors, making it an event of the greatest importance on the international agenda.

Continuing in from its role at the 7<sup>th</sup> World Water Forum as Champion for the Theme "Ensuring Water Quality from Ridge to Reef", IWRA continues this role for the 8<sup>th</sup> World Water Forum. The IWRA Executive Office is part of the coordination group for the cross-cutting Theme of Capacity, as well as the topic coordination group for "Climate Science and Water management: the communication between science and decision/policy making" under the Theme of Climate. Last but not least, IWRA is the topic lead for "Ensuring Water Quality from Ridge to Reef", which now sits under the Theme of Ecosystems. In this lead role Project Officer Alice Colson is providing support and general coordination to the three session groups, and liaising between the sessions and the Thematic Commission.

Given IWRA's strong involvement in this major water event, the Executive Office will have a stand in the Expo area for the whole Forum week. We are looking forward to seeing you there!



### **International Water Summit**

**15 – 18 January 2018, Abu Dhabi, UAE**

The International Water Summit (IWS) is the world's leading global exhibition dedicated to developing solutions for water sustainability in arid regions. IWS brings together over 9,200 visitors from 111 countries attracting government leaders, policy makers, entrepreneurs and decision makers. It constitutes an important opportunity to network and source products from 150+ exhibiting companies from 22 countries and to uncover the latest advances in water sustainability. For more information and to register please visit: [www.internationalwatersummit.com](http://www.internationalwatersummit.com)



### **UN Water Meeting in Rome**

**1 – 2 February 2018, Rome, Italy**

The 28<sup>th</sup> UN-Water Meeting will take place from 1-2 February 2018, at IFAD headquarters in Rome, Italy. Agenda items include: 2030 Agenda update and related intergovernmental processes; Monitoring and reporting; Launch of the World Water Data Initiative – Good Practice Guidelines; Updates on World Toilet Day 2017 on Wastewater and World Water Day 2018 on Nature for Water; Selection of Coordinator(s) of World Toilet Day 2018 and World Water Day 2019; Support to the "International Decade for Action – Water for Sustainable Development" 2018 – 2028; and the Work Programme 2018-2019. Find out more at: [www.unwater.org](http://www.unwater.org)

## UPCOMING EVENTS



### **The 62<sup>nd</sup> Australasian Agricultural & Resource Economics Society (AARES) Annual Conference 2018**

**6 – 9 February 2018, Adelaide, South Australia**

This event is annually organized by the Australian Agricultural and Resource Economics Society. The conference attracts 250 to 300 delegates from around the world in the fields of agricultural, environmental, food, resource and development economics and agribusiness. The conference offers pre-conference workshops, keynote addresses by distinguished speakers, mini-symposia, selected and contributed paper sessions and a vibrant social program. Calls for pre-conference workshop, mini-symposia or special session proposals are now open. Please visit the conference website for more information on how to submit a session or workshop proposal. Early bird registration is open from early October until 31st December 2017.

Find out more at: [www.aares.org.au](http://www.aares.org.au)



### **WASH Futures Conference 2018**

**5 – 9 March 2018, Brisbane, Australia**

WASH Futures Conference 2018 will explore the core theme of Collaboration for Universal WASH and is hosted by the International Water Centre in partnership with the Australian Government Department of Foreign Affairs and Trade. It will bring together water, sanitation and hygiene professionals from around the world to share innovations and evidence about ways to achieve a WASH future in which the water, sanitation and hygiene needs for all are sustained.

The Conference features over 120 presentations across 24 thematic sessions and 18 training workshops, along with networking opportunities and a trade exhibition. Delegates will hear from four distinguished international Keynote Speakers including Professor Barbara Evans (Chair in Public Health Engineering, University of Leeds) and Professor Val Curtis (Environmental Health Group Director, London School of Hygiene and Tropical Medicine).

A panel discussion on Achieving WASH at Scale will also provide delegates with an opportunity to hear from representatives from the governments of India, Cambodia and Indonesia on their challenges and strategies for achieving successful large-scale WASH.

For more information please visit: [washfutures.com](http://washfutures.com)

### **ASIA 2018: Seventh International Conference and Exhibition on Water Resources and Renewable Energy Development in Asia**

**13 – 15 March 2018, Danang, Vietnam**

Supported by IWRA, ASIA 2018 will provide a platform for international experts from around 50 countries to focus on issues of direct relevance to Asia: helping advance projects which will exploit the remaining renewable energy potential; exploring investment opportunities and strategies; addressing major challenges such as climate resilience, and the management of floods and earthquakes; encouraging best practice in project implementation; and, reviewing advances in technology for both new and refurbishment schemes.

Recognizing that Asia is the region of the world with the largest current programme of water resources and hydro development, but also some of the greatest challenges to face, including natural hazards, challenging sites, and in some countries limited resources, Aqua~Media has been organizing regional conferences in Asia since 2006.



## UPCOMING EVENTS



**14.º Congresso da água**  
 Évora 17, 18 e 19 março 2018  
 Gestão dos recursos hídricos: novos desafios

Key participants include government representatives (from ministries and utilities), planners, researchers, consultants, owners and operators of water infrastructure and hydro plants, contractors, suppliers, officers from the relevant professional associations, academics and students. To find out more, please visit: [www.hydropower-dams.com](http://www.hydropower-dams.com)

### Portuguese Water Congress

**7 – 9 May 2018, Évora, Portugal**

The Portuguese Water Resources Association (APRH) is hosting the 14th Water Congress in Évora from March 7<sup>th</sup> to 9<sup>th</sup>, 2018. The theme will be “Water Resources Management: New Challenges”. The Water Congress will address Water Resources Management at various levels, at a critical time of change that requires new solutions and actions that minimize these problems in the future. In this framework, the APRH invites all its associates and wider technical-scientific community to this discussion forum, to help all stakeholders in Water Resources Management find convincing scientifically based solutions for water resolution problems. This invitation extends to the Portuguese-speaking countries that, coming with their own experiences, will enrich the discussion. Find out more at: [www.aprh.pt](http://www.aprh.pt)



### International Symposium of Eco-Hydrology and Water Security: Opportunities & Challenges from Developing Countries

**16 – 18 October 2018, Xi'an City, Shaanxi Province, China**

This symposium will focus on “water for ecosystem” and “water for community” raising two essential topics, namely eco-hydrology and water security. Both global and regional levels of water policy and water strategy will be considered, which are crucial for top level sustainable planning of water-based development of urban city and rural areas especially in highly-populated developing regions. This international symposium will focus on water security problem (e.g. water supply, rivers drying up, water quality, floods etc.) and ecosystem-related water issues (e.g., wetland degradation, hydrobiology, ecosystem resilience) in the global community with some focus on developing regions. It is intended to discuss the frontier of eco-hydrology and sustainable development based on environmentally friendly solutions, together with the international frontiers of hydrological science programmes, e.g., Panta Rhei from IAHS, new Eco-hydrology Programme from IHP-UNESCO and Future Earth. The symposium will bring together top experts from scientific institutions and international organizations and will provide an open platform for the discussion about theories, methodologies and their practices facing to demands from developing countries in the world including China practices.

Contacts:

Secretary General: Prof. SONG Jinxi, [jinxisong@nwu.edu.cn](mailto:jinxisong@nwu.edu.cn)

Chairman: Prof. XIA, Jun, [xiaj@igsnrr.ac.cn](mailto:xiaj@igsnrr.ac.cn)

# CALL FOR NOMINATIONS & APPLICATIONS

## Future Earth Call for Nominations



Future Earth is glad to announce its call for nominations for the Steering Committee of the Knowledge-Action Network on the Water-Energy-Food Nexus (Nexus KAN). Terms will begin in February 2018, and the deadline for nominations is 20 January 2018.

You can access the call for nominations on [Future Earth's website](http://futureearth.org).

This call is open to scientists, decision makers, practitioners and civil society actors, especially to "bridgers", individuals who have a strong record of working at disciplinary and/or sectoral interfaces at an international scale.

For questions or queries about this call, the Nexus KAN or Future Earth, please contact:

[sandrine.paillard@futureearth.org](mailto:sandrine.paillard@futureearth.org)

## Water Security Short Course 2018

*25-29 June at the University of East Anglia (UEA), Norwich, UK*

The School of International Development and Water Security Research Centre both at UEA, invite you to attend a short course on Water Security to be held 25-29 June 2018.

This week-long course will critically reflect on the practical and theoretical facets of water security to develop a better foundation upon which to achieve developmental and environmental objectives. You will be introduced to and explore different interpretations of water security in an international and developing economy context. You will acquire a wide variety of tools and analytical frameworks from a variety of disciplines and an extended understanding of this key national and global issue and will leave the course with an ability to critically assess and address current water security issues and policies and to gain an appreciation of the relations between water security and development, health, climate, food, and national security. The course is delivered by a range of different academics currently researching in these fields. This is also an excellent opportunity to develop your contacts and networks.

### Teaching team:

Bruce Lankford is Professor of Water and Irrigation Policy with more than 30 years' experience in agriculture, irrigation and water resources management. His research covers irrigation management in Sub-Saharan Africa; games in natural resource management; resource use efficiency and the paracommons; river basin management; water allocation; and water and ecosystem services. He was responsible for the publication of two books on water security and resource efficiency in 2013.

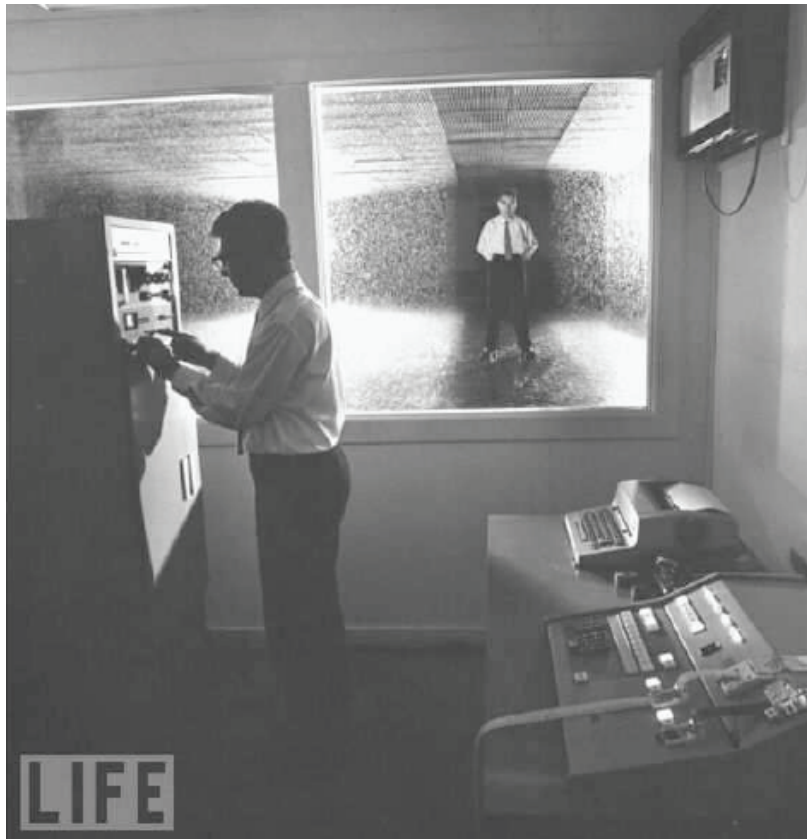
Contributors include Prof Tony Allan (KCL/London Water Research Group), Ana Cascao, Declan Conway (LSE), Geoff Darch (Anglian Water), Tyler Farrow (Water Witness), Marisa Goulden (UEA), Jo-Anne Geere (UEA), Nick Hepworth (Water Witness), Kevin Hiscock (UEA), David Tickner (WWF), Mark Zeitoun (UEA).

*Register now and take advantage of a discount before the Early Bird deadline*

# PHOTO GALLERY

## IWRA's 46<sup>th</sup> Anniversary

IWRA celebrated its 46<sup>th</sup> anniversary on November 29<sup>th</sup>. Below there is a selection of photographs highlighting iconic moments from the Association and its members throughout these 5 decades.



➤ Ven Te Chow, first IWRA's President, posing for Life magazine (6 June **1969**).



➤ Prof. Biswas and Dr. Abu-Zeid with Vice Premier Fang Yi of China in Beijing. Behind the Vice Premier is Dr. Nickum, current Board member and Editor-in-Chief, back in **1980**.



➤ Creation of the World Water Council at the VIII World Water Congress in Cairo (**1994**). Special session including representatives from IDRC, ICID, IWSA, IAWQ, IAHR, IAHS, ICOLD and IWRA's President, Mahmoud Abu-Zeid.



## PHOTO GALLERY IWRA's 46<sup>th</sup> Anniversary



> From left to right, Ben Dziegielewski, Monica Porto, Ben Braga, Luis García, Lilian Laborde, Cecilia Tortajada, Asit Biswas, Kaya Yasinok during the IWRA workshop on Water Policies and Institutions in Latin America, Salvador, Brazil, **2000**.



> View from the audience at IWRA's XIII World Water Congress plenary room in Montpellier, France, 1-4 September, **2008**.



> From left to right, Guy Fradin, Raya Stephan, Patrick Lavarde, James Nickum, Henning Bjornlund, Aziza Akhmouch, Renée Martin-Nagle, Bruce Currie-Alder, Yuanyuan Li and Callum Clench at the entrance of the CICC venue before the start of the XVI World Water Congress in Cancun, Mexico, **2017**.

**Newsletter December 2017, Volume 30, Issue 4**

Editor: Callum Clench

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[www.nathalie-lyoncaen.com](http://www.nathalie-lyoncaen.com)

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

