



IWRA Update

Newsletter of the International Water Resources Association



MESSAGE FROM THE PRESIDENT p.1 | NEWS p.2 | LATEST ACTIVITIES p.3
 | UPCOMING EVENTS p.4 | SPECIAL SERIES ON CONGRESS THEMES p.5
 | PUBLICATIONS p.9

MESSAGE FROM THE PRESIDENT



**Dear IWRA Members, Colleagues
and Friends of Water,**

Season's greetings! It is a great pleasure to write to you as we draw towards the conclusion of a very active year at IWRA. During 2014, IWRA made strong and steady progress in engaging with major international processes. IWRA was named coordinator of the Design Group on "Ensuring Water Quality from Ridge to Reef" for the 7th World Water Forum where we are also coordinating a thematic session on "Water Quality: Smarter use for water security". IWRA is also co-organising a high level panel on IWRM. As resource management around the world must be considered more and more in a coherent and holistic manner, I am pleased to announce that IWRA recently joined the Action Platform for Source to Sea Management. It is an excellent opportunity for us as a freshwater community to forge better relations with saltwater stakeholders. IWRA also continues important work as a member of the OECD Water Governance Initiative, where we work on basin governance issues. It is important that the world's water community works together and it gives me pleasure to announce that the initiative shall hold its 5th meeting during IWRA's World Water Congress in Edinburgh in May next year. IWRA has a long history of engagement with the World Water Council, where we are a member of the Board of Governors. Throughout 2014, IWRA has been actively working on the council's task forces on IWRM and a World Water Heritage programme. The Millennium Development Goals have been a beacon, mobilising and focusing the attention of the water community for the last 14 years. As we head towards the finalisation of the new Sustainable Development Goals (SDG's) next year, IWRA, as a partner of UN Water, has been providing technical feedback on various UN reports and drafts. We shall continue to work towards the establishment of a dedicated and strong "water goal". Throughout 2014, IWRA also participated in and co-organised many events and meetings throughout the world, a couple of highlights include the 3rd Istanbul International Water Forum, where a particular focus was given to "Water Security and Legal Aspects of Water: confronting risks and challenges, seizing opportunities"; and the LatinAmerica Water Week, hosted by the government of Mexico and CONAGUA and where we had the honour of being received by Mexico's President, H.E. Enrique Peña Nieto.

IWRA membership reaches out to the knowledge community throughout the world. Our members now reach across 50 different countries. This year the Toyoko and Hiroshi Hori Education Fund, was awarded to four scholars from Tanzania, Uganda, Somalia and Palestine. Our geo-

graphical committees have also continued their usual activities, whilst new perspectives are being opened in other regions such as Oceania.

In 2014, publications continue to be a cornerstone for IWRA's dedication to linking knowledge to policy. Six issues of Water International have been published, including two special issues on "Frontiers of land and water governance in urban regions" and "Towards Equitable Water Governance". As this newsletter goes to print, a seventh issue of Water International will also be published. I'd like to take this opportunity to express my thanks to the editorial team for the high quality of their work.

This year also saw a strengthening of IWRA's dedication to increase the impact of our publications. A new series of policy briefings called the "IWRA Water International Policy Brief" has been launched; as well as a new series of webinars based on our flag-ship scientific journal, Water International.

Throughout 2014, IWRA's strategic focus on the Science and Policy Interface (SPI) has continued with the finalisation of a report mapping the International SPI Mechanisms in the water sector. IWRA also continued its work on the development of a "Global Compendium of Guidelines on Different Water Quality for Different Uses", with the completion of an updated draft report.

Finally, I would like to express my thanks to the continued hard work of the IWRA Executive Board, which met a four times this year; to the staff at the Executive Office for keeping a steady ship moving in a positive direction; and to all of IWRA's members who are the backbone of this important association of multi-disciplinary water experts.

In the spirit of continual renewal, on 15 December 2014 IWRA shall launch a call to seek candidates for the next IWRA Executive Board (2016-2018). I encourage all members to consider nominations to join the board and help IWRA to move from strength to strength!

2015 is shaping up to be a busy and significant year for the water community with the processes of the SDG's, the COP and the 7th World Water Forum. Our very own IWRA 15th World Water Congress shall be held in the beautiful city of Edinburgh, Scotland from 25 to 29 May. It should be a wonderful opportunity for us to actively contribute. Until then, I warmly wish you an enjoyable end of year and for those lucky enough to have one, a well-earned break. I look forward to seeing you in 2015!

Best regards,

Dogan Altinbilek.
IWRA President

NEWS news news news news



IWRA WATER INTERNATIONAL POLICY BRIEFING N°. 3

IWRA publish its Third Policy Briefing during this month and is entitled “Land and Water Governance In Urban Regions». This Brief follows the articles of *Water International* 39.6 - Special Issue on «Frontiers of land and water governance in urban regions» (the article of this issue are detailed on the Publication column of this newsletter).

This policy brief will be available on our website soon, on the dedicated column at: www.iwra.org/index.php?mainpage=217&page=265&subpage=

IWRA'S THIRD WEBINAR!

IWRA held its third webinar on 15 December, entitled “*Land and Water Governance In Urban Regions*».

The panelists have worked together to outline critical points in today's governance debate. Their unique framework has identified three types of governance; vertical, horizontal, and fluid. They apply these technical findings to broader questions about water quality and quantity. These questions defy political boundaries. The panelists argue that nations must expand research and monitoring programs which compile, exchange and share technical data and information to promote and expand good governance. These steps transform water quality issues from a source of conflict to a tool that enhances state cooperation.

This webinar is based on the themes discussed in the current IWRA policy brief which will be available on our website soon. **If you are interested in IWRA Webinars, we invite you to contact Scott McKenzie at: webinars@iwra.org**

IWRA LAUNCHES NEW AWARD FOR EXCELLENCE IN WATER RESOURCES MANAGEMENT !

IWRA launches new Award for Excellence in Water Resources Management !

Institutions that are responsible for water resources management are the frontline for delivering this precious resource for the people and for ensuring the protection of the environment. The newly created IWRA Award for Excellence in Water Resources Management seeks to honour those that have exhibited sustained excellence in water resources management. The inaugural award will be presented at the 15th World Water Congress in Edinburgh, Scotland that will be held from 25-29 May 2015.

CRYSTAL DROP AND VEN TE CHOW MEMORIAL LECTURE AWARDS - CALL FOR NOMINATIONS

A Call for Nominations for these two awards was open until 10 December. The Nominating Committee will now consider the candidates and the awardees will also be announced during the upcoming World Water Congress.

THE TOYOKO AND HIROSHI HORI EDUCATION FUND GRANT WAS GIVEN TO MR. TAHLIL AND DR. QUAHMAN

Mr. Abdulkadir Mohamed Tahlil (Somalia) Dr. Qahman (Palestine) have been accepted by the Hori Fund Task Force and were awarded this month.

More details about them and about this grant are available on the Hori Fund Webpage at: www.iwra.org/index.php?mainpage=164&page=230&subpage=

IWRA WAS ACCEPTED INTO THE STEERING COMMITTEE OF THE ACTION PLATFORM FROM SOURCE TO SEA MANAGEMENT

The Action Platform on Source to Sea Management was initiated in 2013 and was launched officially at the World Water Week 2014 in Stockholm. This is a global platform to convene key stakeholders from the freshwater, coastal and marine communities in order to stimulate effective partnerships and catalyze innovation and action. It will facilitate contact between decision makers and experts to provide on demand knowledge, support, advice and guidance to policy making and implementation on freshwater, land, coast and sea.

IWRA point contact on the Steering Committee is the IWRA Director, Tom Soo and you can contact him if you have any question at: office@iwra.org



IWRA EXECUTIVE BOARD MEMBERS ELECTION

The IWRA President, Dogan Altinbilek, appointed the Nominating Committee for the Election, to be held in 2015, for the 2016-2018 Executive Board Officers. A Call for Nominations will be published this month on the website and in the upcoming *Water International* issue. All members in good standing may self nominate or may nominate other member.

The election procedure is detailed in the IWRA Constitution that you can consult on the webpage: www.iwra.org/index.php?mainpage=58&page=188&subpage=

IWRA PRESIDENT PROF. DOGAN ALTINBILEK VISITS CHINA

IWRA President Prof. Dogan Altinbilek visits China in September. During the visit, he met with the Chinese Minister of Water Resources, Chen Lei, and the Vice Minister of Water Resources, Jiao Yong. Meetings were also held with IWRA

NEWS news news news news



Past President, Prof. Jun Xia, and Prof. Li Yuanyuan, President of the Chinese Chapter of IWRA. Whilst in China, he also toured several major water projects such as the Middle Canal Project which will transport water from Yangtze river to Beijing, the 'Two rivers and Four Lakes Water Ecological Project', the 'Xin'an Lingqu Canal' in Guilin. Prof. Altinbilek also participated in a workshop on Water Infrastructure Financing.

PROF. ASIT K. BISWAS NAMED BY WASTE AND WASTEWATER INTERNATIONAL MAGAZINE AS ONE OF THE TOP 25 GLOBAL WATER INDUSTRY LEADERS



The British magazine *Waste and Wastewater International* has just named Prof. Asit K. Biswas, IWRA Past President and Honorary Member of IWRA, as one of the top 25 global water industry leaders.

The citation for this prestigious award is as follows:

Acknowledged universally as one of the world's leading authorities on water management, Prof. Asit K. Biswas is the co-founder of the Third World Centre for Water Management in Mexico. Currently he is the Distinguished Visiting Professor at the Lee Kuan Yew School of Public Policy, Singapore. Formerly a professor in UK, Canada and Sweden, he was a member of the World Commission on Water. He has been a senior advisor to 19 governments, six Heads of the United Agencies and Secretary General of OECD. Dr. Biswas also advises Chairman of the Board or CEOs of four multinational companies, listed within the first 50 of the Fortune 500 companies, on corporate strategies and CSR. He is a Past President of the International Water Resources Association and one of the two founders of the World Water Council. Among his numerous awards are Stockholm Water Prize, which is considered to be the Nobel Prize for water, and six honorary Doctorates from the world's leading universities. He is the author of over 80 books. His work has been translated into 37 languages.

This is the third such accolade Prof. Biswas received. Last year Reuters named him top 10 water trailblazers of the world, and three years ago, Impeller magazine named him as one of the 30 water heroes of the world.

LATEST ACTIVITIES



IWRA Board meeting

VIDEOCONFERENCE, 11 SEPTEMBER 2014

The IWRA Executive Board held its 7th meeting since it took up its mandate in January 2013. The meeting was held by videoconference and the discussions were about the association business and updates.

Green Alternative Forum - Preparation Meeting for the 7th World Water Forum

XOCHITEPEC, MEXICO, 16-17 OCTOBER 2014



A preparatory meeting of the America Regional Process was organised to share experiences of experts and integrate The Mexican position for Korea. IWRA Executive Director, Tom Soo, delivered a plenary speech by video on «Adapting to change and risk management».

53rd Board of Governors Meeting, World Water Council

MARSEILLE, FRANCE, 27-28 OCTOBER 2014

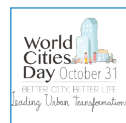


Various IWRA Executive Board members and staff participated in the 53rd Meeting of the Board of Governors of the World Water Council discussed the World Water Council business and the 7th World Water Forum preparation.

More information on the World Water Council website:
www.worldwatercouncil.org/index.php?id=1

World Cities Day, UN-Habitat

BARCELONA, SPAIN, 30 OCTOBER 2014



The first World Cities Day was commemorated on 31 October 2014 by UN-Habitat and its General theme is «Better City, Better Life». To this occasion, UN-Habitat and its City Resilience Profiling Programme (CRPP) and Global Water Operators' Partnership Alliance (GWOPA) together with the City Council of Barcelona, hosted a gathering for local civil society groups, NGOs, academia, local governments and other key

partners working on urban issue. IWRA Executive Director, Tom Soo, delivered a presentation on global water issues and cities and participated in a panel discussion.

More information on this initiative can be found at:
unhabitat.org/wcd/

ANEAS Annual Convention & Expo: Water and Energy for the well-being of Mexico

YUCATAN, MEXICO, 10-14 NOVEMBER 2014



This event aims to create a forum conducive to dialogue and inter-institutional linkage. It brings together national and international experts to present strategic solutions for drinking water management, its energy costs and the water requirements for energy generation.

You can visit the Official website at: www.aneas.com.mx

4th meeting of the OECD-Water Governance Initiative

PARIS, FRANCE, 24-25 NOVEMBER 2014



The OECD Water Governance Initiative is an international multi-stakeholder network of around 100 delegates from public, private and not-for-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.

This meeting continued work on the Basin Governance theme and also focused on case studies from Brazil and Tunisia and the development of OECD «principles» on Water Governance.

More information on the OECD webpage: www.oecd.org/gov/regional-policy/water-governance-initiative.htm



IWRA Board meeting

VIDEOCONFERENCE, 4 DECEMBER 2014

The IWRA Executive Board held its 8th meeting since it took up its mandate in January 2013. The meeting was held by videoconference. Among the different discussions, the new membership tariffs and categories were voted and will be published soon. Mr. Barry Greig, from the Scottish Government was invited to discuss the updates and future milestones of the XVth World Water Congress.

■ UPCOMING EVENTS



7th World Water Forum

DAEGU & GYEONGBUK, REP. OF
KOREA, 12-17 APRIL 2015

The Thematic sessions of the World Water Forum are currently designing the last version of their session proposals and defining the Implementation Roadmaps (IR). The IR will set out a strategic plan for implementing solutions for each theme and prioritised actions of this Forum.

For the Forum, IWRA is participating in processes involving several themes, including Green Growth, IWRM, and the Science-Policy Interface.

In particular, IWRA is leading the Design Group of theme 3.3 «Ensuring Water Quality from Ridge to Reef».

There are 5 sub-themes:

- 3.3.1 Water Quality: Smarter Use for Water Security
- 3.3.2 Monitoring and Reporting of Water Quality
- 3.3.3 Strengthening Frameworks for Governing and Managing Water Quality
- 3.3.4 Sustainable Wastewater Management and Reuse
- 3.3.5 Green investment for blue economy - managing sources for coastal and marine water quality improvements.

If you are interested in contributing to the process, please contact the IWRA Executive Office at: office@iwra.org

For more information about the Forum, visit the official website at: eng.worldwaterforum7.org/

World Water Congress 2015 Registrations Open



Registrations are now open! As an IWRA member, you can benefit from reduced registration fees. There is a even bigger reduction if you register early, **before 31 December 2014**.

Visit the www.worldwatercongress.com for more information and read the Congress Box on this newsletter on page 9.



SPECIAL SERIES ON THE THEMES OF THE XVth WORLD WATER CONGRESS

This month's issue of IWRA Update continues a special series of essays exploring the theme's of the XVth World Water Congress that should be held from 25 to 29 May 2014 in Edinburgh, Scotland. Prof. Nickum takes us on a review of various water paradigms and Prof. Eckstein and Ms. Martin Nagle highlights the importance of water law for good water management.

'REVISITING WATER PARADIGMS' -- FINDING THE RIGHT FRAME OF MIND

JAMES E. NICKUM
Vice-President, IWRA and Editor-in-Chief,
Water International



Water scarcity, water governance, water security, water productivity, virtual water, water footprints, green water, IWRM, hydrocentricity, hydrocracy, hydro-hegemony, hydrosolidarity, water grabs, resilience, river basin trajectories, water poverty, the water-food-energy nexus, water justice, adaptive management....It would be tempting to say that the water world is being inundated with a flood of concepts, frames, even paradigms, except that eventually floods recede. With new terms, there is no sign of abatement.

Hence it is timely for 'revisiting water paradigms' to be designated a subtheme of the XVth World Water Congress. In order to keep from being swamped, we need not only to be aware of the strengths and limitations of the words we use, but also to consider how and why we use them.

The stakes are high. Nobel Prize winner Daniel Kahneman (2011: 277) has warned that "once

you have accepted a theory and used it as a tool in your thinking, it is extraordinarily difficult to notice its flaws. If you come upon an observation that does not seem to fit the model, you assume that there must be a perfectly good explanation that you are somehow missing. You give the theory the benefit of the doubt, trusting the community of experts who have accepted it."

Once in a great while there has been a challenge to the hegemony of terms, such as the critical analyses of IWRM written by Biswas (2004) [the second most cited article in *Water International*] and Molle (2008), or of water crisis by Rogers et al. (2006). More often there have been attempts to give them some practical content and coherence, for example, Grigg's well-reasoned 2008 overview of IWRM, which is still the most read article online in *Water International*. Despite their popularity, these efforts have done little to deter the continued, profligate, and unreflective use of terms new and no longer so new.

Hence it is a pleasure to read the recently published marvellous little volume edited by Lautze (2014) on key concepts in water resource management (note: this is an unsolicited plug). According to Lautze, the insights generated by the flow of neologisms are "often encumbered by ambiguity, confusion and even fatigue". Looking at the most commonly used terms, he and his colleagues find that

- water scarcity is often conflated incorrectly with water stress, and lumps together high quantity uses such as agriculture that have low economic and human security value with the more modest but critical requirements of drinking water. Also, when prices are set at anything below market clearing levels, there is always economic water scarcity; and even then there are likely to be unmet needs by the poor, socially or physically defined.



- water governance, which should be about process, including that of defining goals, “is frequently inflated to include issues that go well beyond governance,” adopting a priori goals that are “often derived from the tenets of IWRM” and including institutions as well as processes.
- Water security “has come to infiltrate prominent discourse in the international water and development community ... [but] understandings of the term are murky” and rarely quantified. Indeed, attempts at quantification highlight the difficulty of bringing disparate risk-based issues into one terminological rainbow.
- Water productivity “holds value when employed together with other indicators [but] does not add value when applied in isolation in a particular location”; in those cases, related extant concepts such as water efficiency or agricultural productivity can do a better job.
- Virtual water and water footprints may help raise awareness but “do not contain sufficient information to determine smart public policies or to guide discussions regarding international trade” [86]; in fact, their use in those ways could inflict unnecessary harm on producers and households in areas where the opportunity cost of water is relatively low.
- Green, blue and otherwise colored water do not add scientific value to existing concepts and “can also prove dangerously misleading,”

So much for the big ones. In an appendix, Hanjra and Lautze touch base on 25 more trendy terms, including all the ones this essay began with aside from the last two, which they missed somehow. Some of these terms may help in bridging the science-policy interface, by framing problems in attention grabbing metaphors, but that can lead to a policy environment that is actually divorced all the more from a sound scientific understanding. In the end, to bring us back to the topic at hand, Lautze et al suggest that we begin by setting out the critical challenges to the water sector, then adopt those concepts that can tackle those challenges. Those terms can then be elevated to “paradigmatic status” [106].

But wait! These are concepts – or perhaps terms. How can we call them paradigms? Alas, that is another word on the loose that seems to have taken a number of concepts with it. Lautze

associates “paradigm” with concept. That may work to give them a pseudo-scientific cachet in a media-dominated policy world, but we must acknowledge that it is not exactly the use of the term as Thomas Kuhn (1962) brought it into current usage, as a framework for organizing and interpreting scientific observations, not rebundling policy domains or aspirations. The hydrological cycle is a paradigm in this sense; IWRM or water security are not. Perhaps they are discourses or frames? Pandora has more than one box of terms, or, to stay in metaphor, floods come from many directions.

We have much to discuss in the halls of Edinburgh. ●

TO REGISTER FOR THE WORLD WATER CONGRESS, VISIT:
www.worldwatercongress.com

References

- Biswas, A. (2004). Integrated water resources management: a reassessment. *Water International* 29(2): 248-256.
- Grigg, N.S. (2008). Integrated water resources management: balancing views and improving practice. *Water International* 33(3): 279-292.
- Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux.
- Kuhn, T (1962). *The Structure of Scientific Revolution* (2d Edition). University of Chicago Press.
- Lautze, J. ed. (2014). *Key Concepts in Water Resource Management: A review and critical evaluation*. Routledge (Earthscan).
- Rogers, P., M.R. Llamas, and L. Martínez-Cortina, ed. (2006). *Water Crisis: Myth or Reality?*. Taylor and Francis/Balkema.



WATER LAW: A LINCHPIN FOR SOUND WATER MANAGEMENT

GABRIEL ECKSTEIN

Professor of Law, Texas A&M University
School of Law and Treasurer, IWRA;

RENEE MARTIN-NAGLE

Visiting Scholar, Environmental Law Institute



Securing a sustainable supply of clean water is a critical issue for communities worldwide. Many nations and regions today face growing conditions of scarcity and depletion of their water resources. Others experience problems with preventing contamination and ensuring minimal water quality. Still others are challenged by poor water distribution mechanisms that affect the health of populations and ecosystems. Moreover, because of how inextricably fresh water resources are linked to food availability, energy production, and environmental security, the consequences of inadequate fresh water reverberate throughout societies and cultures.

Responses to these challenges have all too often focused on technical, economic and political solutions. Engineers and hydrologists typically offer methodological and technology-based approaches to augment supplies, reduce demand, or encourage greater efficiency in distribution and use. Economists proffer market-based management models for more effective and efficient distribution of fresh water resources. Politicians propose various policies and governance schemes to respond to the challenges. Often missing from the mix of proposals is the development of a sound legal foundation on which to develop and implement these technical, economic, and political solutions.

Many people consider “law” to encompass merely the legal provisions that governments, either individually or collectively, determine to be worthy of documentation and enforcement. However, the notion of “law” is much broader and includes those rules that a community, no

matter what its size, agrees will govern collective behavior. Water is the worthiest subject of reasoned collective behavior, since the existence of all species depends on access to that most vital of resources. Rules of collective behavior can develop in a number of ways, and not all of them need to be formally legislated to become rules. Law can arise as soon as two people, or two regions, agree on rules to share water equitably. Such agreements can evolve from informal patterns into policies, and thereafter into statutes or treaties.

Of course, rules and laws cannot be made in a vacuum. They must take into account cultural norms, societal needs, and scientific data. By serving as the crucible to combine norms, needs, and data as a means for producing agreed rules of collective behavior, water law serves as the linchpin that allows societal values and environmental constraints to find balance while it enables progress toward sustainable practices. When the agreed rules are broken, formal laws can serve yet another vital role for society by providing mechanisms to enforce proper behavior and establish liability.

The role of water law, at the local, national, and international levels of civil society, is an indispensable linchpin for securing a sustainable supply of clean water. It forms a base upon which to develop sound mechanisms for administering, allocating, and conserving fresh water resources. It also provides guidelines – sometimes rigid but other times flexible – by which to contour those strategies.

Water law enables societies to answer fundamental questions that must be addressed before formulating water management schemes, including:

- Does anyone own the water in the area?
- Who is entitled to use that water?
- What restrictions, if any, are there on the use of the water?



- How are conflicts between waters users avoided or resolved?
- How are dwindling water resources allocated among uses and users, both preexisting and new?
- What levels of pollution and other adverse impacts to fresh water resources are permitted, if any?
- How are environmental water requirements established and protected, including for in-stream uses and by surrounding ecosystems?
- How are the needs of “voiceless” stakeholders addressed?

Answers to these questions directly affect every type of water project, challenge, and strategy. Without a sound legal foundation establishing rules for the administration, allocation, and conservation of water, governmental policies and strategies often become impossible to implement or enforce. The absence of a rigorous legal foundation also can result in conflicts among policies and program objectives and inconsistencies in governance and procedures. Without legal structures, personal, political, or economic interests – rather than public strategies and priorities – may end up guiding water management projects. This is true at the local level as between direct users, at the national level among subnational regions and political units, and at the international level among riparians of transboundary watercourses and aquifers.

Legal principles, institutions, and procedures are central to the sound and sustainable administration, allocation, and conservation of fresh water resources. Moreover, they are indispensable mechanisms for addressing modern challenges facing global, regional, and local water resources, including increasing competition for shrinking reserves, climate change impacts on distribution and supplies, artificial and natural contamination of fresh water resources, and many other problems.

In recognition of the critical role that law plays in the realm of water management, the International Water Resources Association (IWRA) World Water Congress, which will be held in Edinburgh in May 2015, will feature a distinct track on Water Law at the National and International Levels to emphasize the importance of water law in addressing many of the world’s water challenges. The legal track will feature panels and related activities on such law-related

topics as: effective responses to global and regional water challenges like climate change and desertification; incentives for facilitating the generation and management of non-conventional sources of water; approaches for allocating water among competing uses and users; mechanisms for reconciling the land-water divide; responses to water pollution challenges; enhancement of customary and human rights to water; design of legal and institutional structures for managing groundwater resources; consideration of the transboundary dimension of river basins and aquifers; and innovation for managing and conserving water.

Significantly, the International Association for Water Law (AIDA) has partnered with IWRA to organize the legal track at the World Water Congress and has committed to help develop and promote the legal component, solicit and review law-related abstracts, and facilitate law-related panels and related activities. This partnership follows on the successful collaboration achieved at the previous IWRA Congress, held in 2011 in Porto-De-Galinhas, Brazil. Since its establishment in May 1967, AIDA and its members have been closely involved in analyzing and developing the nascent world of water law. Thus, AIDA brings to the Congress a long history of understanding the collective rules of water behavior.

As we all look to an uncertain future, rules for managing water are needed more than ever. Water law can serve as the linchpin around which silos are broken and various disciplines collaborate to produce the ideas and structures that will preserve our resources and ourselves. ●

References

- Eckstein, G., Paisley, R.K., Burchi, S., Curlier, M., and Stephan, R.M. (2010). *The Greening of Water Law*, UN Environmental Programme.
- Rieu-Clarke, Alistair (2005). *International Law and Sustainable Development: Lessons from the Law of International Watercourses*. IWA Publishing.
- Wouters, Patricia (2000). *The Relevance and Role of Water Law in the Sustainable Development of Freshwater From “Hydrosovereignty” to “Hydro-solidarity”*, *Water International*, Vol. 25, No. 2, pp. 202-207.

TO REGISTER FOR THE WORLD WATER
CONGRESS, VISIT:
www.worldwatercongress.com



XVth World Water Congress

A very healthy number of abstracts and proposals for special sessions were submitted to the International Scientific Committee (ISC) and are currently been processed.

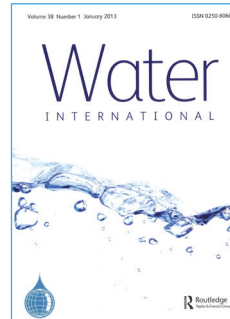
OOSKANews

In addition, a great series of interviews entitled «World Water Congress:... looks forward to Scotland» by OOSKA News with various water experts involved in the World Water Congress have been published on their online media: www.ooskanews.com

Since September, you can read on-line interviews of Prof. Dogan Altinbilek (IWRA President), Dr. Cecilia Tortajada (Chair of the International Scientific Committee), Prof Lilian Del Castillo-Laborde (IWRA Vice-President), Prof. Gabriel Eckstein (IWRA Treasurer), Dr. David Molden (Director General of ICIMOD), Dr. David Brooks (Canada's IISD) and James Horne (former Deputy Secretary in the Australian Department of Sustainability, Environment Water, Population and Communities).

Please remember that registrations for the Congress are now open and that the early bird rate applied until 31 December 2014.

■ PUBLICATIONS



WATER INTERNATIONAL **VOLUME 39, ISSUE 6**

SPECIAL ISSUE: **Frontiers of land** **and water governance** **in urban regions**

Editorial

- Frontiers of land and water governance in urban regions.
Thomas Hartmann & Tejo Spit - PAGES 791-797

Vertical Frontiers

- Groundwater governance and spatial planning challenges: examining sustainability and participation on the ground.
Gabriela Cuadrado-Quesada - PAGES 798-812

- Impact of short-rotation coppice on water and land resources.
Jens Hartwich, Jens Bölscher & Achim Schulte
PAGES 813-825

- Regional governance vis-a-vis water supply and wastewater disposal: research and applied science in two disconnected fields.
Martin Schmidt - PAGES 826-841

Horizontal Frontiers

- Managing urban riverscapes: towards a cultural perspective of land and water governance.
Meike Levin-Keitel
PAGES 842-857

- The governance dilemma in the Flanders coastal region between integrated water managers and spatial planners.
Karel Van den Berghe & Renaat De Sutter - PAGES 858-871

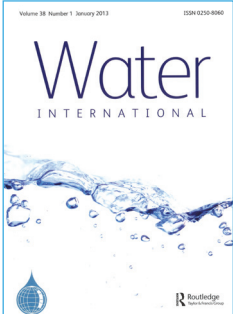
Fluid frontiers

- A co-evolving frontier between land and water: dilemmas of flexibility versus robustness in flood risk management.
Barbara Tempels & Thomas Hartmann - PAGES 872-883

- Urban planning lock-in: implications for the realization of adaptive options towards climate change risks.
Karen Hetz & Antje Bruns - PAGES 884-900

- Land and water governance on the shores of the Laurentian Great Lakes.
Richard K. Norton & Guy A. Meadows
PAGES 901-920

■ PUBLICATIONS



WATER INTERNATIONAL VOLUME 39, ISSUE 5

Articles

- A long-term view of water consumption in Barcelona (1860–2011): from deprivation to abundance and eco-efficiency? *Joan Ramon Ostos & Enric Tello* - PAGES 587-605
- Subsidizing the sustainability of rural water supply: the experience of the Brazilian rural rainwater-harvesting programme. *Uende A. F. Gomes, Léo Heller, Sandy Cairncross, Laia Domenèch & João L. Pena* - PAGES 606-619
- Irrigation infrastructure development in the Limarí Basin in Central Chile: implications for adaptation to climate variability and climate change. *S. Vicuna, P. Alvarez, O. Melo, L. Dale & F. Meza* - PAGES 620-634
- Towards sustainable irrigated Mediterranean agriculture: implications for water conservation in semi-arid environments. *Iván Francisco García-Tejero, Víctor Hugo Durán-Zuazo & José Luis Muriel-Fernández* - PAGES 635-648
- Are hydropower and irrigation development complements or substitutes? The example of the Nam Ngum River in the Mekong Basin. *G. Lacombe, S. Douangsavanh, J. Baker, C.T. Hoanh, R. Bartlett, M. Jeuland & C. Phongpachith* PAGES 649-670
- The political economy of metering agricultural tube wells in West Bengal, India. *Aditi Mukherji & Arijit Das* PAGES 671-685
- Let's bring in the floods: de-poldering in the Netherlands as a strategy for long-term delta survival? *Martijn F. van Staveren, Jeroen F. Warner, Jan P.M. van Tatenhove & Philippus Wester* - PAGES 686-700

Special section: 'The China Water Papers' – transboundary water cooperation in Asia with a focus on China: Editorial

- Introduction to 'The China Water Papers' – transboundary water cooperation in Asia with a focus on China
Patricia Wouters & Huiping Chen - PAGES 701-704

Special section: 'The China Water Papers' – transboundary water cooperation in Asia with a focus on China

- Contemporary legal analysis of China's transboundary water regimes: international law in practice. *Yu Su* PAGES 705-724
- Ten building blocks for sustainable water governance: an integrated method to assess the governance of water. *Marleen van Rijswijk, Jurian Edelenbos, Petra Hellegers, Matthijs Kok & Stefan Kuks* - PAGES 725-742
- Transboundary water law and vulnerable people: legal interpretations of the 'equitable use' principle. *Karina Vink* - PAGES 743-754
- Exploring China's approach to implementing 'eco-compensation' schemes: the Lake Tai watershed as case study considered through a legal lens. *Liping Dai* - PAGES 755-773

Discussion

- An exchange between Ben Crow and Yoram Eckstein on the global water crisis. PAGES 774-784

Best Paper Awards

- Water International Best Paper 2013 Awards. PAGES 785-788

Corrigendum

- Corrigendum. PAGE 789



**Follow IWRA
on TWITTER
& on FACEBOOK!**