

Newsletter

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THE SUPPORT OF SCIENCE AND POLICY DIALOGUES TO THE IMPLEMENTATION OF THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

The third journey of the 17th IWRA World Water Congress commenced with a discussion around the opportunities for addressing the interconnected resource challenges needed to achieve the SDGs. The focus was on lessons learned for achieving the SDGs based on the experiences of the panellists.

The High Level Panel was moderated by **Mr. Rabi Mohtar**, Chair of the Awards Committee at IWRA and Dean at the Faculty of Agricultural and Food Sciences in the American University of Beirut (FAFS-AUB) and TEES Research Professor at Texas A&M University who initiated the discussion around the role of science in supporting policy decisions in specific countries, like Senegal.

As underlined in the panel, by **Mr. Abdoulaye Sene**, Executive Secretary and Co-Chairman of the Preparatory Committee for the Organisation of the 9th World Water Forum (Dakar, March 2022), Senegal is a pioneering country



in Africa known for the management of transboundary rivers and water management due to the support of partners from the sanitation field as well as the reforms aiming at attracting public private partnerships (PPPs).

Under that approach, quality and access to water have been at the core of policy decisions. In 2020, access to drinking water was estimated to 96% compared to 82% in the past. The difference is significantly higher in rural areas, where this figure has reached 98% compared to 88% in the past.

One of the key initiatives presented in the panel was the National Blue Fund, an example of multi-stakeholder partnership that has been based on the scientific vision. Another approach underlined was constituted by platforms of coordination that include the private sector, civil society entities and all ministries related to water. As for the future, capacity

« We would like to join the international trends on SDGs, as we decided to implement ESG elements in K-Water work complying to international measures, »
Jong-jin Lee, Vice-President and Chief Global Officer at K-Water

building and the establishment of a doctoral school on water and water quality at the University of Senegal were highlighted as mayor objectives.

Ms. Nara Lee, Partnership and Liaison Officer and Assistant FAO Representative in Korea, addressed the role that the SDGs are playing in decision making as well as in capacity building and technical expertise. About

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FOREWORD

BY CALLUM CLENCH, EXECUTIVE DIRECTOR AT IWRA



The need to gather, to exchange and to propose solutions

We are in the mid of our 17th IWRA World Water Congress, where we are meeting delegates from around the world representing international organisations, researchers from the most reputed water institutions and experts who are committed to contribute. It is inevitable to think in what has brought us here.

Since the first IWRA Congress that took place in Chicago in 1973, to the last Congress that was conducted in Cancun, Mexico in 2017, renovated commitment and willingness to advance has led the work of IWRA.

Having the unique opportunity to convene in these days in South Korea hosted jointly by the Ministry of the Environment and Daegu City is more

than a reward to us. We were firm in our decision to do all possible and impossible efforts to make this event happen, as this coincides with very critical times.

The theme of the Congress -Foundations for Global Water Security and Resilience: Knowledge, Technology and Policy- represents the so many challenges that have been exacerbated since the outbreak of the global pandemic that we are still suffering.

Guaranteeing water security appears fundamental to any functioning nation, and in failing to do so, a country might collapse. Simple preventative measures, like handwashing, have become truly complex in many of the contexts that IWRA focuses its efforts. What happened where access to water is not guaranteed, for instance? In a global context where 30 percent of the world's population

(2.3 billion people) does not have access to basic handwashing facilities, infection increases easily and rapidly. The additional low vaccination rate of Covid-19 amplifies associated risks.

The World Water Congress that we are having in Daegu in these days may not come up with the answers for handling the ongoing Covid-19 pandemic. However, it will provide the setting for conversations that will inform thinking on how we manage the next pandemic. Only through collaboration, global exchanges, innovative solutions and commitment, aspects that have been underlined in most sessions of this Congress, we will be able to face what the future brings us.

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**“Water issues constitute
 a governance and a
 financial problem”**

Water shortages, access to water and quality constitute key concerns at global level. Despite the progress done in the last decades through the Millennium Development Goals 2015 and the subsequent Agenda 2030, still over 2 billion people do not have access to safely managed drinking water. Additionally, over 4 million do not enjoy sanitation services.

Under the risks posed by these, what is the way forward to put these themes in the global debates? According to Ms. Stephanie Laronde, Director of the Support Department at the Institutional and Technical Cooperation of the Office International de l'Eau,

“a lot of progress in sanitation and water were realised, but it's not normal that we are still in this situation today. It's not a technical problem but a governance problem, organisational of public policies and financial problem.”

the contribution of FAO to SDG6, **Ms. Lee** mentioned the provision of water data and information for better decision making, which is an important tool to support members to reduce water stress and increase water efficiency.

The relevance of innovation and more effective governance systems including innovative financing, access to quality water and sustainable management and increased investment in water infrastructure were also underlined.

Mr. Jong-jin Lee, Vice-President and Chief Global Officer at K-Water addressed the need to advance towards carbon neutrality. *“We would like to join the international trends on SDGs, as we decided to implement ESG elements in K-Water work complying to international measures,”* he stated.

With regard to innovative approaches, he mentioned the relevance of digital technology to establish smart water management tools in Korea as well as renewable energies. Partnerships were also mentioned as one of the needed approaches, and the example of the agreement with the Government of Pakistan was showcased.

Dr. Bassel Daher, Assistant Research Scientist from Texas A&M underlined the role of the SDGs as a roadmap for governments to achieve sustainable development and commented on specific experiences focusing on SDG6, SDG2, SDG 7. In particular, he presented the case study of Morocco, Lebanon and US and the need to bring different stakeholders in the discussion.

Dr. Raya Stephan, Deputy Editor in Chief at Water International, commented that “some countries have created mechanisms and committees on water, but they are not functioning.” Miscoordination, lack of financial mechanisms and the inclusion of multiple stakeholders were mentioned as strategies to avoid these situations.

A final theme was posed by the way forward to open opportunities to foster public-private partnerships, a discussion where the role of UN Global Compact was explored. Under that theme, the role of IWRA to facilitate partnerships between the private sector and the academia was underlined by the panelists.

Given the impact of the COVID-19 pandemic, that Ms. Laronde explains as “a delay in the decision making and the set up of projects, lowering the fluidity of exchanges between different actors and donors,” what can we expect in the coming years around water and sanitation global debates?

“It will be necessary to accelerate investments and improve the maintenance of water and sanitation facilities, which implies more ambitious reforms in terms of governance and more mobilized funds to accompany these investments and operations -she says- In many countries, investments are made but in such unsatisfactory conditions that they are abandoned. There are many steps on the different continents of the developing countries that do not work, or work very badly, and therefore huge sums of money are wasted without any results for health or the environment.”

Training and capacity building on water-related themes has been often underlined as key areas to progress. As Ms. Laronde emphasises, *“one of the weak points of the system is training, at all levels, from the design of the facilities, the design of the management methods, the operation and maintenance of the facilities, to the implementation of good pricing policies.”*

In that regard, events like the IWRA World Water Congress help to advance and to further exchange successful practices.

“We are in an important moment to say things clearly, to assume the report, the diagnosis, to share it and to try to draw up a common way to all of the actors and that each one assumes its responsibilities to improve this situation which is not worthy of the humanity,” she concludes.

HAPPY 50TH ANNIVERSARY IWRA AND THANKS FOR CELEBRATING WITH US THIS MILESTONE!



The 17th IWRA World Water Congress could not come at a better time as the event coincides with a key milestone in the history of the Association: its 50th anniversary.

Together with the 50th anniversary reception celebrated at the World Water Congress, the IWRA 50th Anniversary Committee and the IWRA Awards Committee organised a series of interviews, included the theme under Water International, the official journal of IWRA and the 50th Anniversary Awards.

Since it was founded in 1971, IWRA has provided a multidisciplinary forum for the water sector through publications, events and projects. Today IWRA has become a platform of more than 2000 members from over 120 countries.

Partnerships of different nature have been guiding the efforts of IWRA, especially around the Online Conference held in 2020 and 2021 respectively with the support of UNESCO and FAO.

Besides these global references at UN level, IWRA has worked closely

with the OECD, SIWI, the World Water Council, K-Water just to mention a few and a long list of reputed higher education institutions, among others. Special attention should be given

to the seminars and other capacity building activities that have been aligned with the commitment of so many water experts around the world. Of specific mention is the new Master Classes series on Water Diplomacy and Cooperation that were facilitated in the last months as a joint initiative with the Universities Partnership for Water Cooperation and Diplomacy and the invaluable support of key institutions such as the IHE Delft Institute for Water Education, Dr. Lena Salame, from the Geneva Water Hub, and Dr. Aaron Wolf, Professor of Geography at the College of Earth, Ocean and Atmospheric Sciences at Oregon State University (OSU).

Now, are already immersed in the preparation phase of the next 18th World Water Congress, IWRA celebrates the achievements and engagement around it but it assumes the high level of responsibility to contribute to global efforts around water resources management.

INTERVIEW

WAQAS BURNEY, PARTNER MANAGER AT GOOGLE SEARCH (APAC)

“Given global climate change, water debates are becoming much more unpredictable by their locations, timing and effect”



Technology and innovation have been present in most of the debates, discussions and exchanges of the 17th IWRA World Water Congress. The presence of Google in the Congress is the best representation of the interlinkages between water and technology.

How do you think that water debates are influenced by higher connectivity, technology and innovation?

Water debates had always been around and even got worse recently due to climate change, but the recent technology changes: internet connectivity, smartphones and social media are new and actually serve as an enabler to cope with these water debates. Once an alert is out there, the key challenge is to make sure it reaches the right people at the right time. These new technologies have created a new standard of communication that allows our partners and us to disseminate flood information within local communities. Moreover, the flood information and forecast can be much more localized and very specific per village and per day. That practically can help the population in different villages to make their own timely and informed decisions at time of disaster.

The recent advance in technology and computation power allows us to develop ML based forecasting models and to significantly improve flood forecast and information and enhance the level of alerting previously available out there. That includes longer forecast lead times, improved forecast resolutions (in time and area), visual inundation maps to identify hyper local affected areas.

You lead crisis response in the Asia Pacific Region, can you tell us more about the experience of Google on that topic in this part of the world? (the Flood Forecasting initiative in Bangladesh, Pakistan and others)

Floods have always been a major force of nature in the region, but in recent years the severity of flooding events has been increasing due to climate change and other effects. To help mitigate the harms of severe flooding, we're collaborating with many regional partners. This includes national government agencies such as the Indian Central Water Commission and the Bangladesh Water Development Board, as well as aid organizations such as the International Federations of the Red Cross and Red Crescent Societies. These partnerships make sure that critical life-saving information reaches everyone who needs it - including individuals

in affected regions using standard Google products, vulnerable populations that don't have access to the internet, and the relevant disaster management agencies. We are looking to expand to additional countries in the region and beyond to ensure enhanced flood information and alerting reaches anyone who needs it.

What do you think about the debates around these issues in the coming years? Do we have new opportunities harnessed by the pandemic?

Given global climate change, water debates are becoming much more unpredictable by their locations, timing and effect. More people are affected by floods and need to adjust their life accordingly. Providing a trustworthy early warning system to the affected population has been proven as the best way to reduce the surprise effect. Coping with the pandemic while the floods are still going on, had set new limitations that had just proven the need in new technologies for communication and disseminating early warning systems. In the coming years we plan to mainly find the right ways to reach more affected people and mainly remove technological and other obstacles to provide this early warning system communication.



BUILDING RESILIENT SYSTEMS FOR CLIMATE CHANGE, GROWING POPULATIONS AND PANDEMICS



Two case studies served to represent a long-lasting conflict over recovering or “developing” the environment in Korea: Seoul and Jeju Island.

In Seoul, Ahn’Yang stream starts from the mountain area and goes through downtown of Seoul. This was selected as the first case study. Upstream is surrounded by nature and downstream was highly urbanized. Downstream citizens had a strong preference on using the urban stream for activities, while upstream citizens wanted to keep the original, natural shape of the river. For Jeju island, the Sahn’Jee Stream was selected. The condition was the same as Seoul, upstream is in nature and downstream is urbanized. The test was conducted to ask opinions of various people such as citizens, policymaker, governments, and representatives.

The result was that people in Ahn’Yang were more focused on social usage since the city is highly urbanized, they want to use the resource for lifestyle benefits. It

showed that social, activities, and using space for living had a higher value. In comparison, San’Jee highlighted strong preferences for ecological restoration, with an appetite to revitalize the landscape. In order to better mitigate and defuse conflicts, various expert groups are needed and evaluations should be taken place on a regular basis. The presenter noted that engagement and dispute / conflict resolution can be a slow and time intensive process.

Speakers

Bassel Daher

Texas A&M University

Moderator

Chang-Yu Hong

Pukyong National University Assistant

Professor

Key-note Speaker

Presentations

Chang-Yu Hong

The effects of Urban flood risk and local river management policy : comparative case study of citizen perception

**INTERVIEW WITH
DR. BASSEL DAHER,
ASSISTANT RESEARCH
SCIENTIST AT THE TEXAS
A&M ENERGY INSTITUTE**



“IWRA is uniquely positioned to bring together multiple stakeholders to address the complex challenges that our water systems face today”

In 50 years the debates around water management have evolved dramatically, and as we saw in the CoP, experts are trying to integrate them in the Climate Change discussions, how other achievements in the last 50 years could you underline with regard to water resource management?

As our world continues to face shocks such as pandemics, climate change and conflict, there is a need to improve our ability for rapid response in order to ensure the resilience and sustainability of water systems. Solutions to many of the challenges that face our water system will not exclusively come from within the water sector itself. Viewing water-



related challenges from a systems lens allows for understanding the tight interconnections between the water system and other biophysical, social, environmental, and economic systems tightly interconnected with it. This in turn would allow for developing solutions that are consistent with the complexity and uncertainty of the challenges we expect to face. The past 50 years have seen progress in this direction, yet there is a need for improved cooperation across sectors and for addressing the barriers that may hinder collective action. There is also a need for innovating across different disciplinary expertise which needs to be properly incentivized and supported.

What is still lacking in the way water resources are managed under the global cooperation framework?

As we work toward implementing the Sustainable Development Goals, we need to ensure that we do not advance some goals at the expense of others. These goals are tightly interconnected, therefore developing an understanding

of the existing synergies and potential trade-offs across them is imperative. Science can play a key role in developing the necessary evidence and tools to support in evaluating the environmental, social, and economic sustainability of different interventions, and in evaluating these synergies and trade-offs. The key challenge lies in the ability to translate the developed science and utilize it to catalyse a cross-sectoral dialogue that results in coherent policies and aligned national and international investments and resource allocation.

What would you like to see in the coming 50 years of IWRA?

IWRA has been playing a key role, serving as a global platform that connects interdisciplinary researchers and policymakers globally. This has resulted in the production and dissemination of knowledge at the interface of science and policy on topics related to sustainable use and management of water. IWRA is uniquely positioned to bring together engineers, lawyers, social scientists, development professionals, public

The key challenge lies in the ability to translate the developed science and utilize it to catalyse a cross-sectoral dialogue that results in coherent policies and aligned national and international investments and resource allocation.

health professionals, among others, to provide the system-level view that is required to address the complex challenges that face our water systems today. Furthermore, through its emphasis on engaging early career and young professionals in its different committees and activities, I see IWRA playing a key role in facilitating an intergenerational dialogue and knowledge exchange. This will contribute to the sustainability and growth of the association in one hand. This will also result in positioning the Association as a hub, attracting top young talents in the water sector globally.

THE WORLD WATER CONGRESS IN IMAGES

