

# Copenhagen Report

Conclusions, key messages  
and outcomes

World Water Congress & Exhibition 2022



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## Introduction

Rapid population growth and increasing urbanisation indicate that the most pressing water challenges of the future lie in urban water management. Under the theme 'water for smart liveable cities', the 2022 IWA World Water Congress & Exhibition gathered 8,900 water professionals from utilities, academia, private companies, governments, and global organisations in Copenhagen, Denmark.

From 11 to 15 September 2022, as part of the most successful ever IWA Congress and Exhibition, water leaders discussed and presented innovative solutions to rethink urban water management to transform the cities of the future.



Host country Denmark and the wider Nordic region provided an ideal setting to inspire change, stimulate innovative research and for the sharing of best practices for a water-wise world. Members of the Danish government, including environment minister Lea Wermelin, and national politicians from around the world attended and participated. Policy makers, mayors – including environment mayor of Copenhagen Line Barfod, and other political figures joined the event, highlighting a successful connection between policy and practice. The 2022 IWA Congress & Exhibition presented the collective and state-of-the-art knowledge and practice through keynote speakers, technical presentations, posters, workshops, discussions, technology showcases, dialogues on emerging issues, and leadership forums. Discussions were focused around six main thematic tracks: water utility management; wastewater management; drinking water & potable reuse; city-scale planning and operations; communities, communications & partnerships; and water resources and large-scale water management. This was all supported by visibility of local expertise, with the Danish water sector showcasing cutting-edge innovations in water reuse, sustainable groundwater management practices and smart urban water solutions, inspiring water professionals from around the world.

As the leading global water sector membership organisation, IWA brings together water sector representatives at its Congresses to showcase excellence in research and practice. The 2022 edition was the most successful IWA Congress to date. This year it featured a dedicated High-Level Summit for the first time, adding a political dimension that covered three topics: finance, governance, and partnerships.

**“We cannot solve global challenges alone and for this reason we have invited other sectors and stakeholders to join us at the Congress to discuss together the most important challenges affecting us all: sustainability, water consumption, and urbanisation.”**

**Helle Katrine Andersen, DANVA**

Young water professionals (YWPs) were prominent at the Congress, with them having an even greater profile than during previous editions. In particular, the week saw announcement of an endowment fund for young water leaders, supported by founding donors Glen and Patty Daigger; and the announcement of funding for YWPs to participate in the 2023 UN meeting to review progress of the SDGs, supported by Grundfos. YWPs also had a prominent role in running and participating in sessions, including in a plenary session focused on Uniting Youth for Water.

The Congress was, again, the platform and forum for a number of initiatives and programmes. The 7th International Water Regulators forum was held. The largest ever Utility Leaders Forum to date drew the interest of over 250 utility professionals from around the world. Two dedicated forums were held – one for groundwater, the other for large industrial water users in connection with local challenges and solutions. Furthermore, innovators joined the Water Innovation Accelerator to catalyse partnerships and take forward practical opportunities, part of the wider Innovators Platform initiative supported by IWA. Finally, IWA used the Congress as the platform to launch a new initiative focused on Inclusive Urban Sanitation, which aims to reshape the global WASH agenda over the coming years.



IWA celebrates superior research and work in the international water sector. To recognise these achievements, the Copenhagen Congress & Exhibition was the occasion for presentations for IWA's prestigious global Awards programme, honouring excellence, leadership, innovation and the invaluable contribution of members to the Association and the wider industry.

The Exhibition forms an intrinsic part of the IWA World Water Congress & Exhibition and showcases country representations, industry-defining companies, and leading non-governmental organisations. At the intersection of ideas and action, the Exhibition and its integrated business forum and poster presentation areas widen the opportunities for sharing insights and progressing business opportunities.

“I believe water is the key to creating cities that are both sustainable and attractive places to live. Caring for the environment while managing well-functioning cities that are resilient, healthy and attractive places to live is a challenge facing cities all over the world – but it also represents opportunities.”

*Lea Wermelin, Danish Minister for Environment*

“For over 20 years, the biennial IWA World Water Congresses have served as pivotal moments for global, national and local water science and policy developments. I am pleased to say that the 2022 Congress has provided researchers, practitioners and wider decision makers with a much-needed space and opportunity to share experiences and challenges, articulate new solutions and goals, and engage in lively discussions that have positively impacted our world. This world-leading event has provided a fantastic opportunity to network and share innovative ideas with colleagues.”

*Tom Mollenkopf, IWA President*

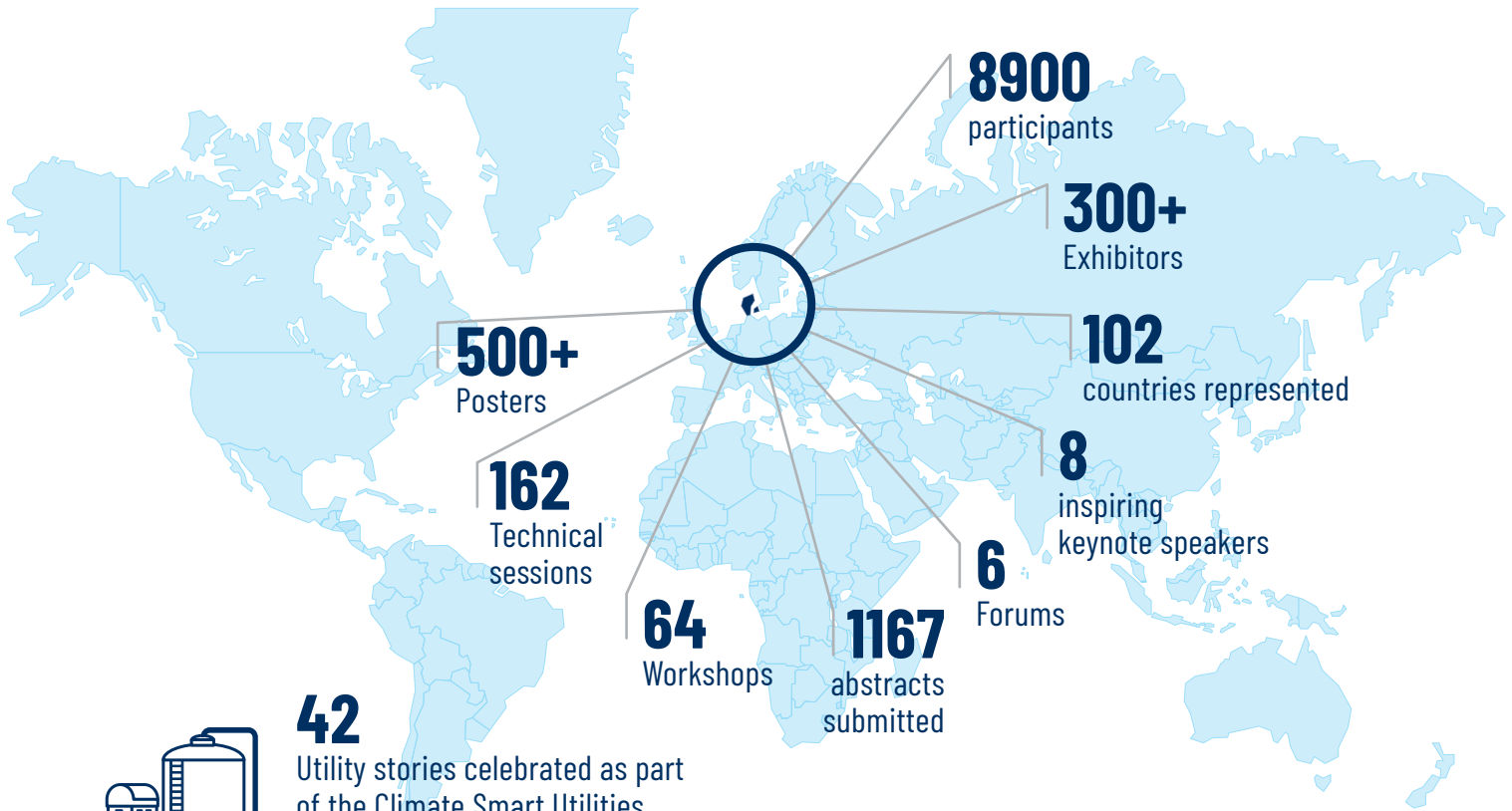
“All of the components combined to add even greater breadth and depth to our Congress. So, it is no wonder that we can say that Copenhagen has given IWA its most successful Congress ever. We have made history here in Copenhagen.”

*Kala Vairavamoorthy, IWA Executive Director*

# The congress in numbers

The 2022 IWA World Water Congress & Exhibition in Copenhagen was without doubt a huge success. It drew an overall footfall of 8900 participants from 102 countries.

The Congress programme included 162 technical sessions, 64 workshops, 1167 submitted papers, 500 posters presented, 6 forums, 9 plenaries, 8 keynotes, 2 master lectures, and a high-level political summit. This adds up to more than 480 hours of activities at the 2022 IWA World Water Congress & Exhibition. Combined, it represented IWA's largest and most successful Congress to date.



**42**  
Utility stories celebrated as part of the Climate Smart Utilities Recognition Programme



**830+**  
news articles about the Congress



**33**  
IWA Awards presented



**#1** on Twitter in Denmark  
#WorldWaterCongress

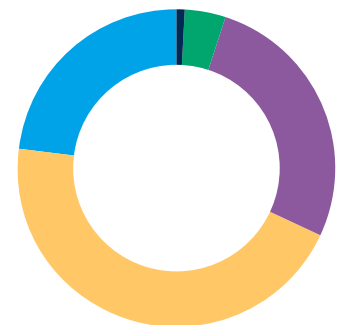
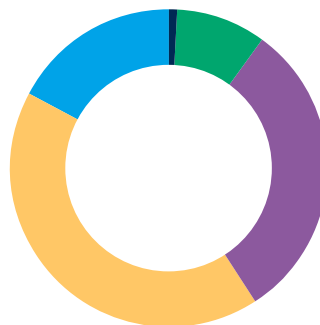


Hit **80,000**  
LinkedIn followers

## Survey – Participant satisfaction

Quality of sessions

Overall Congress



- Not satisfied
- Somewhat satisfied
- Satisfied
- Very satisfied
- Extremely satisfied





# Thought leadership for the water and sanitation sector

## Rapid Arctic Climate Change and Water Issues Around the World



**Professor Jason Eric Box**, *Glaciology and Climate, The Geological Survey of Denmark and Greenland (GEUS), Denmark*

“The arctic is warming at an alarming rate, four times faster than the rest of the globe. Melting ice sheets imply that we’re currently committing to around 25 ft of sea level rise that will unevenly impact the Global South.”

Jason Box has studied the Greenland ice sheet as part of more than 20 expeditions in Greenland since 1994. Professor Box outlined his broad perspective in climate and water issues, gained from university lecturing and studying the Arctic for over 9 years. The case of the Arctic highlights the water challenges ahead due to climate change. During the keynote speech, he illustrated the interactions between elements of the ice atmosphere ocean system derived from a combination of remote sensing, atmospheric modelling, and in-situ ground truth measurements.

Professor Box is contributing author to the past three Intergovernmental Panel on Climate Change reports, a leading member of the Arctic Council’s Arctic Monitoring and Assessment Program (AMAP), and a former Chair of the Cryosphere Focus Group of the American Geophysical Union.

## A Practical Perspective in Building Resilience into Urban Water Management



**Professor Rohit T Aggarwala**, *Commissioner for Environmental Protection, City of New York, USA*

“In NYC we are focused on establishing multiple layers of resiliency at different scales to respond to the multiple hazards our changing climate is bringing to the five boroughs. This includes green infrastructure, grid redundancy, coastal protection projects, emergency communication and much more. And importantly, this work must move forward with urgency, funding, and partnership with government and individuals. We will do all this with a fierce commitment to environmental justice, and prioritising the most vulnerable communities.”

Professor Rohit T Aggarwala is a widely recognised expert on urban sustainability, technology, and mobility. During the World Water Congress, he discussed innovative approaches for integrated urban water management and climate resilience. After illustrating the realities of New York City’s water and sanitation system, he added that green infrastructure needs to be equal in importance as grey infrastructure to better handle future climate events. He highlighted the need to speed up efficient procurement processes, rethink funding, and fully integrate green infrastructure and sewer systems for fully resilient cities.

## A Road Map for Achieving SDG 6.2, Sanitation for All and How to Connect the Unconnected



**Nathalie Olijslager**, Programme Director, UN 2023 Water Conference, Ministry of Foreign Affairs, Netherlands

“Behind every current crisis, there is water. Does that mean that water leads to crisis? It does. It does, when we don't think about it, don't analyse it, and above all don't invest in it. It does when we keep taking water for granted. But when we invest in water and create access to clean water, we can produce food, prevent diseases and therefore reduce the risks of disasters and crises.”

Nathalie Olijslager is an expert in Sustainable Economic Development, Economic Cooperation, and International Business, currently working as an Ambassador for the Dutch Ministry of Foreign Affairs. She is passionate about water and sanitation issues and is also Programme Director for the UN 2023 Water Conference in New York.

Her inspiring keynote speech at the World Water Congress focused on the most deprived and vulnerable communities which are often unconnected – both from sewer networks and from the wider water discourse. She observed that the key solution to limit global crises is by investing in water and sanitation globally. Furthermore, she underlined the key role that women and girls play in disadvantaged communities lacking improved access to water and sanitation services – adding that they could play an even greater role in society given better education and training opportunities. Finally, she reflected on climate adaptation, the role of sponge cities and water reuse, while also taking into account the role of youth and indigenous communities in developing inclusive and local solutions based on both scientific and traditional knowledge.

## Empowering Communities to Shape Sustainable Water Solutions – Incorporating Indigenous Knowledge



**Dr Dawn Martin-Hill**, Chair in Indigenous Studies at McMasters University, Hamilton, Ontario, Canada

“Six Nations is an urban indigenous reserve in Canada, surrounded by cities and close to Toronto but we do not have access to clean water. Our entire way of life is governed by water. It's spiritual, cultural, it's our identity. If you take that access away, you literally impact the culture in a fundamental way.”

Dawn Martin-Hill (Mohawk, Wolf Clan) holds a PhD in Cultural Anthropology and is one of the original founders of the Indigenous Studies Program at McMaster University in Canada. Dawn is passionate about community empowerment, sustainability and traditional environmental conservation practices. Most importantly, she is keen to share sustainable water solutions incorporating indigenous knowledge.

Dr Martin-Hill was the first-ever indigenous speaker at an IWA World Water Congress. Her participation was widely seen as a positive sign underlining IWA's growing support in favour of wider inclusion and different scientific worldviews. Her fascinating keynote speech presented unconventional thinking based on traditional ecological knowledge, illustrating research on the environment, connections with water and highlighting the struggles of Six Nations indigenous communities in Canada. The presentation concluded with an inspiring traditional water ceremony where participants brought together water from their places of origin representing all corners of the globe.

## Digital Water Unpacked



**Oliver Grievson**, Chair of IWA's Digital Programme, Technical Lead at Z-Tech Control Systems

**Enrique Cabrera**, Senior Vice President of IWA, Professor at Universitat Politècnica de València

“We can't achieve net zero without digital tools, without measuring to manage. Digital Water is an integral part of how we address challenges such as climate change.” *Oliver Grievson*

The Digital Water plenary session at the 2022 World Water Congress & Exhibition challenged those who attended to think about what Digital Water and Digital Transformation is and how these vital tools can contribute to the water industry.

The speakers hosted a debate around what Digital Water actually is, the need to adopt it, and why we must do so not only to address the sustainable development goals but also some of the most pressing challenges that the water industry faces from climate change and Net Zero. They also highlighted the benefits of digital water for water industry integration around concepts such as smart cities.

The digital water plenary session was highly interactive and engaged the audience, while challenging the norms, technologies and buzz commonly associated with digital water. This was just the start of the digitalisation journey for many present and the speakers expressed hope that the audience would continue this within their respective organisations.

## Uniting Youth for Water



**Inês Breda**, IWA Young Water Professional Denmark Chapter / Silhorko-Eurowater A/S

“Effective international water cooperation is based on the human element of trust. We are ready to unite youth around water. I ask you to take a leap of faith for youth.”

Inês Breda, PhD, is a young water professional with strong knowledge on filtration technology for drinking water production, currently working as a Product & Process Manager at Silhorko-Eurowater A/S, a Grundfos company.

Dr Breda delivered a powerful and deeply moving message to the World Water Congress audience: that we must open the door for young water professionals – they are key to solving the water challenges of the future.

She painted a dramatic picture of the current struggles that young water professionals face seeking to enter the water sector face and challenged the norms of the status quo. She proposed an intergenerational action agenda to stimulate better interactions and urged water leaders to build trust in the next generation of water leaders, so that we can act together on the challenges of tomorrow, including climate change. Her touching and heartfelt keynote speech was widely welcomed by the audience with a standing ovation.

## Learning to Dance in the Rain – How to Thrive in an Era of Climate Change



Paul O'Callaghan, CEO BlueTech Research

“The environmental movement has created alarm, but often it uses ‘othering language’ that makes people feel disconnected, separate and guilt ridden with environmental anxiety. We must rediscover the wonder of water and find ways that people can fall in love with it.”

The talk from BlueTech Research CEO Paul O'Callaghan looked at pathways towards regenerative water systems, creating an abundance mindset that can help make rain, hydrate the land, and cool the planet. The links between water and climate touched upon the role that the water sector has to play. The talk has featured case studies from Paul's work at BlueTech that link to this theme from all around the world, from water utilities, technology providers and end users. It explored the role of communication and storytelling to reconnect people with their water systems and activate a movement where people feel they have agency. The talk closed with a showing of the film *Our Blue World*.

Paul is the Founder and CEO of water innovation-focused global intelligence firm BlueTech Research. Paul co-produced the documentary *Brave Blue World*, which seeks to increase awareness of existing solutions to the water crisis. Available on Netflix, this has attracted support from a host of A-list celebrities. Paul regularly lectures and has recently spoken at Davos 2020, Web Summit 2020 and at Harvard and Cambridge Universities.

## Wastewater Gone Viral: Pandemic Signals from the Sewers



Gertjan Medema, Principal Microbiologist at KWR and Professor of Water & Health at Delft University of Technology, Netherlands

“With wastewater epidemiology gone viral, the sewage surveillance infrastructure in place and the interface between water and public health (re) established, now is the time to further expand opportunities for pandemic preparedness and health surveillance.”

Gertjan Medema is Principal Microbiologist at KWR Water Research Institute and Professor of Water & Health at Delft University of Technology, the Netherlands. His research focuses on understanding the transmission of infectious diseases and antimicrobial resistance via water systems, and how this can be prevented.

He introduced the World Water Congress audience to the trending topic of wastewater-based epidemiology and wastewater surveillance which boomed during COVID-19 and presented the latest methods for detection and removal of pathogens such as viruses, bacteria, and parasites in water. His pioneering insights on Quantitative Microbial Risk Assessment, antimicrobial resistance, and epidemiological research on the health effects of water systems inspired the audience to think differently about our water and wastewater systems. His talk also clearly highlighted the delicate connection between safe water system, public health, and policies.



## Highlights from the IWA Agenda: Raising awareness, connecting policy & practice, catalysing innovation

### High Level Summit: Politics and practice connect around water as a key to action on climate and the Sustainable Development Goals

The 2022 World Water Congress & Exhibition in Copenhagen hosted a High-Level Summit, held on 12 September, adding a political dimension by linking leading figures from the water sector with government and policymakers around the theme of water as a key to action on climate and the Sustainable Development Goals. The Summit covered three topics: finance, governance, and partnerships. These are crucial elements in addressing water challenges and delivering change on the ground to improve lives and protect the environment.

The High-Level Summit was a very successful event. Ministers and high-level city representatives were present, along with leading figures from the water sector, including utilities, companies, academia, national and international organisations. The connection between policy and practice at this event encouraged water professionals to keep making progress on water sustainability.

The starting point was UNEP's message that the world is not on track to meet the SDGs and for this to happen we must act now. It motivated participants to learn that they are not alone to feel the urgency to act. Furthermore, achieving the SDGs for the water sector is not just about SDG 6. Water projects can contribute to many other targets. Water can be an enabler for mitigation, adaptation, and the implementation of many other goals.

#### PARTICIPANTS

The summit saw 184 invited participants from 39 countries.

Four national ministers from Denmark, India, South Africa, the state minister for water from Tamil Nadu, India, as well as a representative of the Dutch government and the UN 2023 Water Conference all took part in the Summit.

Among speakers were the Lord Mayor of Copenhagen and four high-level city representatives from Tshwane (South Africa), Houston (USA), Freetown (Sierra Leone) and Glasgow (Scotland).

Further speakers represented three UN Organisations (UNEP, UNICEF, UN Habitat), two international financial institutions and seven international organisations.

#### TAKE-HOME MESSAGES

1. Make sure we link water to climate – and link climate adaptation and mitigation.
2. Make sure to address all SDGs in a holistic manner.
3. Connect to the sub-basin scale: urban water challenges have to be addressed beyond the city.
4. Foster transformative, equal, and cross-sectoral partnerships built on trust and transparency.
5. Overcome governance and financial barriers for the water sector to run operations and invest in solving future challenges in partnership with national and local governments.



## Climate Smart Utilities

Utilities are facing the impacts of climate change today and need to anticipate increasing challenges in the future. At the same time, utilities have a role to play in contributing to reducing GHG emissions, from their own emissions to those of their supply chain and those associated with their products usage.

### RECOGNITION PROGRAMME

The Recognition Programme under the IWA Climate Smart Utilities (CSU) initiative aimed at inspiring utilities and all their stakeholders to transition to be increasingly climate smart and to embrace the cultural shift on three interconnected pillars for action: adaptation, mitigation, and leadership. The programme identified and recognised 42 utilities for their efforts in tackling climate change. The World Water Congress gathered these utilities from across the globe in several technical sessions and workshops to share their climate journey.

With utilities in both developed and developing countries taking different steps in tackling climate change, the Climate Smart Utility Recognition Programme identified exceptional actions that were considered inspiring and ambitious also considering the local context. These exceptional actions were carried out by five utilities, namely: Aigües de Barcelona (Spain), AySA (Argentina), De Watergroep (Belgium), Dunea Dune & Water (Netherlands), and Ruhrverband (Germany). A dedicated Congress session on the Recognition Programme allowed the utilities to share their experiences on adaptation, mitigation and leadership. Recommendations on the need to make energy and climate neutrality a priority for all industries/companies in the fight against climate change was highlighted. Also, the role played by leadership in the provision of clean water and in the fight against climate change was recognised. Utilities also provided good examples of leadership for others to follow suit.

A recognition event was held during the closing ceremony to mark the outstanding performance of utilities in tackling

climate change. 42 utilities who took part in the recognition programme within the framework defined by IWA were honoured on stage and received a Climate Smart certificate.

### WORKSHOPS

This year's Congress offered multiple opportunities for utilities to share their climate journey. A workshop session on 'Exploring framework conditions for utilities to reduce GHG-emissions' was led by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), one of the initiators of the CSU initiative. In this session, three of the recognised climate smart utilities, namely Aguá Saneamento (Brazil), Manila Water (Philippines) and Yarra Valley Water (Australia), presented their climate smart actions, especially regarding implementation of mitigation measures and how framework conditions have played an enabling role. One of the key messages of the panel discussion was that the transformation towards a low-carbon water sector needs to happen now and can further be accelerated by exchanging best practices, with champions providing experiences and ready-to-use processes including procurement and installation examples for the implementation of climate smart techniques. Furthermore, the necessity to both mitigate and adapt to climate change at the same time was highlighted.

### POSTERS

A session 'Towards Climate Smart Utilities' was also held as part of the Utility Leaders Forum, with 22 utilities being given the opportunity to share their climate journey through posters submitted as part of the Climate Smart Utilities Recognition Programme. The diversity of the utilities, combined with their similar experience on specific issues, led to a very rich exchange on a wide range of topics such as adaptation planning, protection of water resources and diversifying the supply portfolio, efficiencies, energy production, urban stakeholders and citizens engagement, or how to go about assessing GHG emissions accurately, with presentations of three utilities, namely HOFOR (Denmark), Veolia Île-de-France / SEDIF (France) and Canal de Isabel (Spain).



## Inclusive Urban Sanitation

IWA launched a new initiative on Inclusive Urban Sanitation to reshape the global urban sanitation agenda focusing on the need for an accelerated and inclusive approach to expanding safe service coverage – beyond just technology advancements and infrastructural development.

The initiative was formally launched in Copenhagen, with the Congress putting a strong accent on the importance of sustainable and inclusive sanitation. This was demonstrated by a keynote plenary presenting “A Roadmap for Achieving SDG 6.2, Sanitation for All and How to Connect the Unconnected” by Nathalie Olijslager, Programme Director for the 2023 UN Water Conference.



Three strategic inclusive sanitation workshops were held, each with over 80 participants.

The ‘Learnings from Inclusive Urban Sanitation Initiative’ workshop provided an opportunity to initiate discussions to advance an inclusive sanitation agenda on a global scale. From the session, it was evident that political will, effective data utilisation, and strong systems are critical in advancing this agenda.

The ‘Gender Equality, Leadership and Inclusion in the WASH sector workshop’ provided an interactive session whereby participants critically reflected on key successes, enablers and challenges that gender minorities and other marginalised individuals or groups face during the five stages of the employment cycle – diagnostic, attraction, recruitment, retention, and advancement. This was aimed at promoting more inclusive WASH workplaces.

A key highlight of the workshop on ‘Policy to practice dialogue for mainstreaming Nature-based Solutions (NbS) in river-basin and cities’ was a keynote presentation that showcased successful integration of NbS in both a developed and a developing urban context, aimed at promoting integrated urban water management. Overall, keynote speakers and panellists shared learnings from diverse geographies and socio-economic contexts across all three workshops.

## Utility Leaders Forum

The Utility Leaders Forum (ULF) organised by IWA is an excellent platform for utility leaders to meet, expand their network and exchange knowledge among utility leaders from all over the world, while strengthening the community of utilities within IWA.

The 2022 ULF brought together over the course of two days some of the most prominent water utility leaders with the most impactful case studies of their experiences and knowledge. The Forum comprised of open, interactive, and structured dialogue around some of the most critical issues facing utilities. Around 250 participants joined the Forum to innovate and embrace climate ambitions. The event highlighted the crucial role played by utilities, especially during a critical time when they have to deal with climate change and international instability.

The Forum created a platform for discussion of the global and local challenges utilities experience in a changing environment and society. The forum focussed on five main sessions:

- Water Utilities as Community Leaders: Creating Integrated Water Management for Cities of the Future
- Accelerating Adoption of Innovation
- Evolving with Climate Change
- The Digital Utility
- Celebrating 2022 Climate Smart Utilities – Successes from Around the Globe and Recognition Event

*For a more detailed account of the 2022 Utility Leaders Forum, please visit: [iwa-network.org/utility-leaders-forum-outcomes-2022](https://iwa-network.org/utility-leaders-forum-outcomes-2022)*



## 7th International Water Regulators Forum

On 14-15 September 2022, the global network of regulators gathered in Copenhagen for the 7th International Water Regulators Forum to discuss today's burning issues impacting the regulation of water, sanitation, and water management services. Around 180 participants from different geographies graced this year's Forum. The theme of this year was 'Regulating Water Services in Times of Increasing Natural, Social, and Economic Uncertainty'. The Forum comprised three closed sessions (regulators-only) and two open sessions (for the Congress audience). The main objective of the Forum was for regulators to exchange knowledge and experiences on how regulatory functions are being delivered in unpredictable circumstances and conditions. Discussions were structured around highly interactive sessions that combined short inspirational presentations from across the globe and roundtable discussions on how regulators are dealing with natural, social and economic uncertainties. The roundtable discussions allowed participants and speakers to analyse and discuss in detail each topic, share comparative experiences, address proposed questions, and suggest recommendations.

The roundtable discussions centred around the sources and solutions to uncertainty. The main sources of economic uncertainty in most countries were found to be increasing inflation and energy prices. An interesting topic that was also deliberated on was how the Covid-19 pandemic shifted consumption from industrial to domestic which in turn affected revenue and tariff setting.

As recommendations to the different uncertainties, participants advised on strategies such as developing customised solutions, subsidies from government in times of uncertainty, increasing the use of green energy, investing in innovation, implementation of different tariffs for different customers, and regulators to use data for forecasting and recommendations. Another important aspect that transpired from the discussions was the 3Ts that regulators need to consider in delivering their functions:

1. Transparency – regulatory actions need to be consistent and fair;
2. Translation – the need to simplify the language of regulation in order to understand what is being done;
- and 3. Trust – the need to ensure that the regulations being formulated are for the benefit of the people and the environment. In conclusion, the participants agreed that regulators should be prepared to plan under uncertainty.

## Groundwater Forum

Groundwater is a critical water resource globally, and it is of particular importance in Denmark where it represents the biggest source of drinking water. Moreover, the 2022 UN World Water Day was dedicated to groundwater as an invisible resource to be protected.

The Groundwater Forum aimed to promote groundwater as key to achieving the Sustainable Development Goals and safe drinking water for all. The Forum provided examples from around the globe on the sustainable management of groundwater quantity and quality.

In three sessions, the Forum explored and facilitated discussions on groundwater topics such as groundwater management and cooperation around scarce resources and competing interests, quantifying groundwater sustainability, and protection of groundwater quality through risk assessment of emerging pollutants, sharing of groundwater data and more. Around 100 participants from all continents of the globe joined each of the three sessions.

Key issues discussed were the importance of the groundwater resources to enhance water security in the context of climate change and the importance of actions to ensure sustainability and protection of groundwater. The Forum found that management actions on physical sustainability and quality protection need to be ramped up. The threat from PFAS and emerging contaminants was discussed and found to be a very urgent issue for the water community to address.

## Innovators Platform

The Water Innovation Accelerator session on 14 September was the first main event to be held as part of the Innovators Platform initiative. The workshop day featured co-learning and co-creation activities for the approximately 80 invited participants, drawn from a mix of backgrounds to help catalyse partnerships that can take forward practical opportunities to innovate.

The Innovators Platform is a collaborative effort to inspire innovation around water. It is being guided by a steering committee of individuals with a shared passion for innovation and is supported by IWA. The





Copenhagen event was co-developed and facilitated by Water Valley Denmark, with input from Singapore’s PUB, who had led the first introductory Innovators Platform event during Singapore International Water Week in April.

The Innovators Platform considers innovation in a wide context, looking beyond technologies. It anticipates the broad benefits to society can be realised with innovation ‘through’ water. The aims of the Water Innovation Accelerator workshop were to identify possible initiatives where water solutions can contribute significant to a climate-positive world, to lay the foundations for new significant and impactful partnerships, and to build a cohort of inspired innovators who will be encouraged to accelerate next steps.

The workshop was built around the question: ‘What are the opportunities to benefit societies by harnessing water’s potential to bring about circular economy transformations delivering climate change adaptation or mitigation?’. It used Water Valley Denmark’s framework for open innovation – the ‘global innovation cycle’, a cycle of co-learning, co-creation, and co-effectuation. In the co-learning section, participants worked in roundtables to look at where best practice already exists. In the co-creation section, participants shared their dreams for the future, using pictures to envisage what the world may be like in 2050, and then shared ideas on the solutions and activities that could bring this about.

The participants successfully took first steps in building ideas and enthusiasm around 10 possible activity areas, such as the reuse of water and other resources, use of digital tools, and engaging with groups such as policy makers and students. Follow-up sessions aim to further encourage the formation and progress of partnerships around the various activity areas, with the expectation that future Innovators Platform events will provide a platform for progress to be shared.



## IWA Awards

IWA's prestigious Awards programme honours outstanding achievements and thought leadership by individuals, companies, and organisations in the water sector.

They awards distinguish those who have displayed conspicuous service to the profession and highlight exceptional performance in the research and practice of water management. The IWA Awards featured the Global Water Award, the Gender Diversity and Water Award, and the Young Leadership Award, as well the Project Innovation Awards with 18 winners in six categories including a grand winner.

### Global Water Award

**Nisha Mandani**, *Our Aim Foundation, India/USA*

Nisha Mandani is the winner of the 2022 IWA Global Water Award. Mrs Mandani with her Our AIM Foundation has been a world leader in providing support to those who need it most around the globe. Her vision and practice on serving communities to have access and resources for basic needs such as clean water and economic opportunities have helped millions, especially in Africa and South Asia. Her efforts on empowering women from water burdens so they can invest their time into professional development and achieve financial independence are admirable. She has helped built thousands of water and sanitation facilities for



communities, not only transforming lives but also boosting the local health and economy. Her approach of engaging all project stakeholders such as community leaders, donors, and governmental representatives are effective and exemplary.

In deciding to recognise the achievements of Mrs Mandani, the judges noted that she demonstrates an outstanding profile with clear vision and leadership on the water sector, generating important impacts for vulnerable communities. They recognised her work as a significant contribution to the provision of water and sanitation across many countries, with additional benefits associated with education, women and elders' rights which contribute to a positive impact on the areas of need.

**"My struggles have made me empathise the hardship of millions of women and children. Hence, I dedicate my life to become a beacon of hope for them through Our AIM Foundation."**



## Gender Diversity and Water Award

**Annabell Waititu**, *Bigfive Africa Ltd., Kenya*

Annabell Waititu is a founding partner and Vice President of Programs at Bigfive Africa and brings a distinguished 20-year career in the water and environment sectors in East Africa, particularly in the areas of policy reforms, gender equality mainstreaming, and climate resilience. Ms Waititu has worked on leading water sector initiatives and public sector projects including the Kenyan 2002 Water Act, Water for African Cities, the Lake Victoria Water and Sanitation programme, and the Nile Basin Initiative among others. She has consulted with the Kenyan Ministry of Water and Irrigation, UN Women, World Bank, UN HABITAT and many international donors and development partners. She is a Fellow at the Center for Governance and Sustainability at the University of Massachusetts, Boston and an associate of WOCAN (Women Organizing for Change in Agriculture and Natural resource management). She is also serving in various Boards of leading organisations and initiatives.

The judges noted that Ms Waititu has carried out various actions relating to gender in water, targeting water companies, international and sub-regional organisations, government institutions and more. As training is the first phase in the process for taking into account the gender dimension, she has worked hard in this context with innovative approaches. She has all the more merit in that in Africa there are still many things to achieve in this realm.



## Young Leadership Award

**Dr Céline Vaneekhaute**, *Canada*

Dr Vaneekhaute is associate professor at Université Laval in Quebec, Canada and director of the BioEngine Research Team on Green Process Engineering and Biorefineries, composed of over 15 full-time researchers under her principal supervision. Dr Vaneekhaute's innovative work on water resource recovery facilities has led to the achievement of numerous prestigious international research awards. The judges pointed out that Dr Vaneekhaute is notable for her power as a motivator, with significant examples from her voluntary involvement in a range of activities beyond research. Furthermore, Céline has demonstrated an ability to bridge research and practice, generating innovative and practical solutions to some of the most pressing problems in the water sector.

**“Optimal management of global water resources is one of the most crucial challenges of the 21st century. Beyond technological innovations, we all have the duty to raise awareness, work on our own improvements and those of our community, and by all potential means provide support to those people, organisms and areas that are most vulnerable. Working on water sustainability is working on the sustainability of all living things on this planet. What can be more motivating?”**



## Development Award: Research

Professor Damir Brdjanovic was selected as the winner of the IWA Development Award for Research because of his undisputed excellence in capacity development through education, research and innovation, particularly focusing on sustainable solutions to the sanitation challenge in urban settlements in LMICs (Low and Middle-Income Countries). He is known for his fearlessness in exploring the unexplored and for his diligence and hard work that leads to getting ever more complex undertakings accomplished. His life-long dedication to safe water and sanitation is significantly improving the quality of and expanding access to clean water and sanitation to all. There are numerous stories of beneficiaries of his work that provide evidence of the impact in the field and how education impacts the lives of people in LMICs, especially disadvantaged groups such as the urban poor, women and children, the elderly and people affected by natural and anthropological disasters. With his extraordinary courage and energy, he is an inspiring person who brings about changes in a sustainable way so that people can live healthy and productive lives.

## Development Award: Practice

Africa SandDam Foundation is the winner of the IWA Development Award for Practice. The organisation's approach to providing water to communities involves working with registered self-help groups working together towards achieving common objectives i.e., addressing water insecurity in their areas. ASDF to date has supported the successful implementation of 543 sand dams, 405 shallow wells installed with Afridev pumps at sand dam sites, 244 rainwater harvesting tanks in schools and the installation of 642 hand washing stations, 15 rock catchments, 6 solar-powered water distribution project and 1 drift road crossing. Since 2010, when the organisation was formed, they enabled a population of 887,536 people to improve access and availability of potable water whilst improving sanitation and hygiene. Out of the total beneficiaries, 64,628 school-going children have had access to safe drinking water and improved sanitation and hygiene.

## IWA Recognition Awards

### IWA HONORARY MEMBERSHIP AWARD



#### Helena Alegre

Helena has a wide national and international R&D experience on urban water systems, particularly in the fields of performance assessment and strategic asset management; she led the team who developed the IWA Performance Indicator system, as well as the team who developed the Portuguese national regulatory system for quality of services assessment. Helena has had multiple roles within IWA: member of the IWA Strategic Council, chair of the IWA Strategic Asset Management Specialist Group and Management Committee Member of the Benchmarking and Performance Assessment Specialist Group. She was IWA senior vice-president in 2010-2012. Helena also received the 2016 Outstanding Contribution to Water Management & Science Award.



#### Joan Rose

Joan is an international authority on water microbiology, water quality, and public health safety, and she co-directs both Michigan State University's Center for Advancing Microbial Risk Assessment (CAMRA) and its Center for Water Sciences (CWS). Joan, together with her water detectives, are developing new genetic analytics to study waterborne health threats. Water quality studies today tend to focus on the indicators of pathogens, but Joan's work targets actual threat agents such as viruses, mapping water quality and health risks in waterways throughout the world. Joan is a pioneer in the emerging science of viral metagenomics – sequencing virus DNA in water sources, discharges and shipping ballast using next-generation high-throughput technology. Joan has been a chair of the IWA Specialist Group on Health-related Water Microbiology, she is a Distinguished Fellow, was a Board Member from 2016 until 2021 and chaired the IWA COVID-19 Task Force.



#### Gérard Payen

Gérard is an experienced practitioner of water management and delivery of water services. He has been working for 30 years to solve water issues in many countries all around the globe. Today, he acts in various capacities to better mobilize the international community towards improving water management and achieving the water-related global targets (SDGs). As Chair of the IWA Strategic Council and Member of the Board from 2006 to 2016, he strived to assist the International Water Association to remain a well-governed membership organisation, and to become respected as the global voice of water professionals. He also guided IWA on the road towards

the Sustainable Development Goals and he was awarded the IWA Outstanding Service Award in 2016. His efforts to make the human right to safe drinking water and sanitation a reality led him to contribute to the related Manual for practitioners.



#### **Diane d'Arras**

Throughout her career, Diane d'Arras has held many positions of responsibility and was able to develop extensive operational experience within utilities, first in her native country France and

since 1993 worldwide within different continents. This has enabled Diane to gain broad vision and experience both nationally and internationally within developed and non-developing countries worldwide. Diane's experience has made her conscious of the various issues faced by international organisations and is therefore highly aware of the diversity of circumstances and challenges facing our world today within the water sector. She served as IWA President from 2016 to 2021 and has been a board member of the Association since 2010. She has been added to the Presidential Roll of Honour as a Past-President of the Association.

### **IWA OUTSTANDING SERVICE AWARD**



#### **Eveline Volcke**

Eveline Volcke is a professor at Ghent University, Belgium. She is the founder and head of the 'Biosystems Control (BioCo)' research group, focusing on efficient and sustainable process design

and control. Eveline has been an active IWA member for almost 20 years. She is an IWA Fellow and has served in the IWA World Water Congress Programme Committee since 2015.



#### **Jurg Keller**

Jurg is a leading water professional with nearly 30 years' experience mainly in academic research and teaching but always in close collaboration with the water industry. His key focus is

on urban water management aspects, particularly optimal integration of water and wastewater services and processes, using innovative technology and system solutions. Jurg is a Distinguished Fellow of IWA and of the Australian Academy of Technological Sciences and Engineering, and has received several awards and recognitions. Jurg played a key role in the IWA WWC&E in Brisbane in 2016 through his role on the Host Committee, was Chair of IWA Australia for many years, and has also served with distinction as Chair of the Programme Committee covering numerous Congresses.



## **IWA Publishing Award**

This established Award recognises significant contributions to IWA's publishing activities, including leadership and service in advancing the IWA Publishing book and journals programme. The 2022 IWA Publishing Award goes to Professor Chong-Yu Xu, University of Oslo, Norway. Professor Chong-Yu Xu became Editor of Hydrology Research in 2012 and worked tirelessly to improve the journal's effectiveness and reach. During Chong-Yu's Editorship, the journal achieved an Impact Factor of 2.475 in 2018, and that the annual output of articles grew from 37 to 138.

### **IWA PUBLISHING BEST SCIENTIFIC BOOK AWARD**

This award was created to identify the best Scientific Book published by IWA Publishing between 2020 and 2021. The prize was introduced by IWA Publishing's Books Commissioning Editor, Mark Hammond. This award recognises significant contributions to the scientific landscape of water research. Six books were shortlisted by the IWA Publishing Journal Editorial Boards and these titles were put forward to the IWA community as potential recipients of the new 'Best Scientific Book' prize. After a voting process over the course of four weeks with over 1,000 votes registered, Biological Wastewater Treatment: Second Edition emerged as the winner, receiving a commanding 88% of the votes. Biological Wastewater Treatment: Second Edition was edited by Guang-Hao Chen, Mark CM van Loosdrecht, George A Ekama and Damir Brdjanovic. IWA Publishing congratulates the editors on their achievement.



## Poster awards

Three best poster presentations were selected from the more than 500 posters submitted. These were:

- River Rejuvenation – Water Quality Issues and Challenges in The Ganga River Basin of India by Mitthan Lal Kansal, IIT Roorkee, India
- The Development of Water Quality-Based Covid-19 Surveillance for Non-Sewered Areas by Sudhir Pillay, Water Research Commission, South Africa
- 1,4-Dioxane Decomposition with VUV and its Computational Prediction Taking into Account Effects of Inorganic Ions by Taku Matsushita, Hokkaido University, Japan

## Project Innovation Awards

On 13 September, at a special event held in Copenhagen's Moltkes Palæ, the water sector celebrated outstanding innovation and leadership in the industry with a gala ceremony for the 18 winners across the six categories of the IWA Project Innovation Awards.

The 13th IWA Project Innovation Awards attracted a record 203 applications from 52 countries. The Keppel Marina East Desalination Plant in Singapore was selected by the jury as the overall winning project, receiving the Grand Innovation Award. The 13th PIA Awards were sponsored by the Saline Water Conversion Corporation.



## 2022 IWA Project Innovation Award Winners

### CATEGORY:

#### MARKET-CHANGING WATER TECHNOLOGY AND INFRASTRUCTURE

- **GOLD:**  
Choa Chu Kang Waterworks Membrane Expansion from PUB, Singapore
- **SILVER:**  
Sustainability and Resource Recovery from Organic Waste: The First Sludge & Food Waste Co-digestion Project in China from Tongji University, China
- **BRONZE:**  
Unlocking Opportunities in Sanitation: From Poo To Product (P2P) by NAWASSCOAL CO Ltd, Kenya

### CATEGORY:

#### PERFORMANCE IMPROVEMENT AND OPERATIONAL SOLUTIONS

- **GOLD:**  
Changi Water Reclamation Plant Digital Twin by Jacobs
- **SILVER:**  
Green Square – Enabling Urban Renewal Through Effective Flood Risk Management and Stormwater Harvesting (Climate Change), City of Sydney
- **BRONZE:**  
Environmentally Friendly Desalination System Concept: Transforming Seawater (LIFE DREAMER), Acciona

**CATEGORY:**

**BREAKTHROUGHS IN RESEARCH AND DEVELOPMENT**

- **GOLD:**  
Ferrate(VI)-enabled Emergency and Daily Household Water Treatment by Montclair State University
- **SILVER:**  
ViviMag: Urban Mining of Iron And Phosphate from Sewage by Wetsus
- **BRONZE:**  
Australia's First Biosolids Gasification Facility from Logan City

**CATEGORY:**

**EXCEPTIONAL PROJECT EXECUTION AND DELIVERY**

- **GOLD:**  
Keppel Marina East Desalination Plant, Keppel Seghers
- **SILVER:**  
Achieving a Paradigm Shift of Water Pollution Control and Social Development: Erhai Lake Project by China Water Environment Group, Shanghai Jiao Tong University & People's Government of Dali
- **BONZE:**  
Groundwater Replenishment Scheme, Water Corporation

**CATEGORY:**

**GOVERNANCE, INSTITUTIONS AND SOCIAL ENTERPRISE**

- **GOLD:**  
Circular Gavà – Heading Towards The Implementation Of Circular Opportunities In The Territory by CETAQUA
- **SILVER:**  
Proyecto Agua Segura, Argentina
- **BRONZE:**  
Perth Water Sensitive Transition Network by Monash Sustainable Development Institute

**CATEGORY:**

**SMART SYSTEMS AND THE DIGITAL WATER ECONOMY**

- **GOLD:**  
Buffalo's Wastewater Network Optimization Program, Xylem Inc.
- **SILVER:**  
Data-driven Decision Making – Developing the Data|APX Software Solution by Hering Vand
- **BRONZE:**  
Digital Engagement & Efficiency Through Collaboration by Moulton Niguel Water District, United States of America



## Grand Innovation Award

The Grand Innovation Award is presented to the category Gold Award winner that the award jury regards as most deserving of overall recognition as an outstanding example of innovation in the water sector. For 2022, The Global Innovation Award went to the Keppel Marina East Desalination Plant from Singapore for its unconventional water treatment plant.



## Exhibition

The IWA World Water Congress & Exhibition represented a microcosm of the global water sector, with technology providers, water utilities, governments, consultants, and contractors presenting their contribution to sustainable solutions. As an integrated element of this, the exhibition brought together 329 global exhibitors in 10,000m<sup>2</sup> of exhibition space.

The exhibition included country pavilions with their clustered approaches and solutions. Prominent among these was the pavilion of the Nordic region, with Denmark, Norway, Sweden, and Finland. Others included those of Japan, the Netherlands, Belgium, Australia, Switzerland, United Kingdom, Italy, and Canada, as well as the African Pavilion with contributions from African countries and the African Water Association (AfWA).

The IWA Pavilion, hosted by the IWA Secretariat and IWA Publishing, provided a continuous stream of programme updates, book launches, presentations, and space for official meetings with high-level organisations. It also attracted both existing and prospective members and allowed participants to engage with IWA, learn more about its activities and opportunities to get involved, and to find out about IWA's new membership platform, Connect Plus.

The Exhibition also featured two Business Forums, providing a continuous programme for sponsors and exhibitors to update participants on their innovations,

projects and technology. Another new highlight in the exhibition area was the Operations Challenge: a live challenge where various utilities competed on three themes – Maintenance, Collection Systems, and Safety – and overall team spirit and collaboration. In addition to all of this, Isle Utilities co-organised with IWA an Innovation Hub Pavilion, with start-ups from around the world, and the exhibition featured a Resource Recovery Pavilion organised by IWA's Resource Recovery group.

“The IWA World Water Congress & Exhibition provided us with a unique opportunity to meet with a broad set of stakeholders, all super relevant when addressing the water agenda. At the same time, it gave us the opportunity to share our perspectives as well as insights into our solutions.”

**Morten Riis**, Group Director – Grundfos





“ We hosted the biggest Danish pavilion ever, with more than 100 exhibitors at IWA World Water Congress & Exhibition in 2022 and have been very pleased with the cooperativeness and flexibility of IWA during the whole planning of the event. The actual event was fantastic with lots of professional interaction and a large number of visitors. Integrating the industrial side in the congress offered a very interesting new aspect for our exhibitors as well.”

*Ilse Korsvang, Head of Project Management - Danish Export Association*

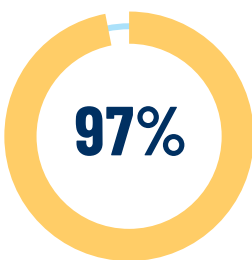
“ Hosting the Flanders Belgian Pavilion at WWCE enabled us to showcase our expertise on an international level. I really believe this is the place where you can do business. We have participated since 2012 and have seen the event growing gradually since then. Water issues are global, so we need to tackle them globally. The IWA conference offers the opportunity to be at the forefront of innovation. Looking forward to Toronto in 2024.”

*Stéphanie De Man, Project Officer and Events – Flanders Knowledge Centre Water (Vlakwa)*

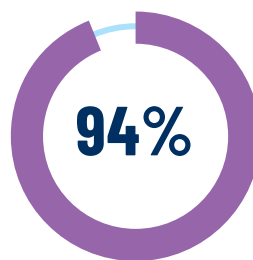
“ Nothing can replace face-to-face discussions with clients or academia. The 2022 IWA World Water Congress & Exhibition was the occasion to initiate new dialogues with water professionals from all over the world.”

*Dominique Gatel, Director Public Affairs/Water - Veolia*

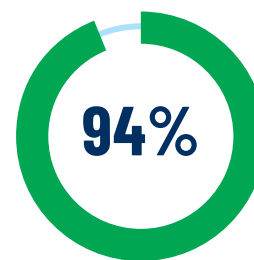
## Exhibitors' Survey – Official Results



of exhibitors agree that the quality of contacts at the IWA World Water Congress & Exhibition met or exceeded their expectations



of exhibitors see the IWA World Water Congress & Exhibition as a truly global event



of exhibitors conclude that the IWA World Water Congress & Exhibition met or exceeded their overall expectations



## Publication launches

### The circular economy of water and its contribution to the alleviation of the energy crisis

IWA has published the third edition of the Global Trends & Challenges in Water Science, Research and Management report. The report is a comprehensive compendium of hot topics and features from 28 IWA Specialist Groups. This edition was formally launched at the 2022 World Water Congress & Exhibition.

The report presents challenges and opportunities related to three main themes:

- Innovative Technologies
- Water and Health
- Resource Recovery and Circular Economy

The report finds that the circular economy and innovative technologies are among the main trends in water science, research and management.

The report also finds that a major ‘One Water’ paradigm shift is gaining momentum in the water industry, and more widely in society, embracing the concept of the circular economy, surrounding how we think about waste. This includes how wastewater is managed and reused for multiple applications.

Anaerobic digestion, bioethanol, acetic acid, lactate and hydrogen production, membranes and tri-generation are some of the most promising technology areas allowing the recovery of by-products and simultaneous production of heat, cooling and power along with technical, economic and environmental benefits. However, there are numerous other technologies currently being researched and implemented too. Additionally, the report suggests that agricultural water

reuse for irrigation of food crops is increasingly used and provides additional benefits such as a decreased need for fertilisers due to elevated nutrient content in recycled water.

“Processes such as Anaerobic Digestion are no longer seen as a ‘waste treatment’ technology but as a fundamental enabler of the envisaged circular economy through resource recovery, including energy, safe water and nutrients like phosphorus, with valuable by-products coming from industries, municipalities and agro-industrial settings.”

*Dr Hong Li, IWA Regional Director for Asia & Oceania*

Moreover, water reuse can also contribute to the alleviation of the current global energy crisis. Biogas from wastewater treatment is an energy source and can be upgraded to biogenic methane for vehicle fuel or as a natural gas substitute in gas grid systems.

Additionally, the report confirms that new technologies both related to hardware and software are providing a significant input to research, allowing new solutions to old problems, such as the mitigation of flooding, the maintenance of water systems, the location of leakage, contaminant intrusions and more. This trend will continue to change the water sector, giving managers a more complete vision of their systems and allowing for immediate actions.



## Handbook on Basin Connected Cities: Why and How Urban Stakeholders can be Active Water Stewards in their Basins co-published by IWA and INBO

The launch of the ‘Handbook on Basin-Connected Cities’ at the Congress highlights a holistic approach recognising the water basin as a system advocates equitable allocations, increased efficiencies and connectivity across the respective basin. The Action Agenda builds on the ‘Principles for WaterWise Cities’, with a focus on how cities can be active water stewards in their wider water basins.

By proactively taking part in basin management, the city secures water, food and energy resources, protects water quality, and increases resilience to extreme events. It is an opportune time to encourage collaborative action to improve connectivity between urban and wider basin stakeholders to optimise costs, resilience, and biodiversity. Implementing appropriate and sustainable solutions in line with governance in cities and their basins means working towards public policy coherence and efficient water management across administrative boundaries and sectors. This includes stakeholder engagement across catchments involving institutional actors, representatives of the civil sphere and citizens.

The Handbook involves three steps: the drivers for action or risks such as flooding, water scarcity and pollution; pathways for action through assessment, planning and implementation; and foundations for action from developing a vision to building capacity to improving governance

“The Handbook highlights the city-basin approach connecting urban areas with their watersheds. Urban areas and their rural hinterlands must improve coordination and connectivity at the technical, economic and political levels. This is why it is crucial to work on collecting experiences, producing recommendations and documenting the debate.”

**Eric Tardieu**, *General Secretary of the International Network of Basin Organizations*



## Digital Water Book: A Strategic Digital Transformation for the Water Industry

The IWA Digital Water Programme formally launched its latest publication, the Digital Water Book, at the Congress, providing a compilation of the knowledge shared and generated so far in the IWA Digital Water Programme.

This book is a collection of papers published under the IWA Digital Water Programme’s White Paper series. To date, nine such papers have been published, authored by diverse and expert members. The book gives insight into some of the best practices found in digitalisation, combining academic research and industrial applications, and presenting case studies of successful implementation. The authors want this book to be a guide to utilities, water managers, water stewards, and everyone interested in the digital transformation journey.

“We at IWA continue to lead the global discourse on digital water by leveraging the deep wells of proficiency within our membership. In this era, only by sharing our collective knowledge and promoting collaboration can we ensure the ongoing improvement of our sector. Doing so will improve efficiency in the sector, reduce our carbon footprint, and ultimately lead to improved outcomes in water management and sanitation for all.”

**Kala Vairavamoorthy**, *IWA Executive Director*



## IWA's dynamic membership

### IWA Fellows and Distinguished Fellows

IWA Fellows and Distinguished Fellows are individual water professionals who receive recognition from their peers for their sustained outstanding contribution to the water profession and the industry, and to helping deliver IWA's mission of creating a water-wise world, improving the wellbeing of societies and the environment. IWA announced 7 new IWA Distinguished Fellows and 15 new IWA Fellows at Copenhagen.

#### NEW IWA DISTINGUISHED FELLOWS:

**Aijie Wang**, *China*; **Eveline Volcke**, *Belgium*;  
**Jaime Baptista**, *Portugal*; **Juan Lema**, *Spain*;  
**Maria Helena Alegre**, *Portugal*; **Min Yang**, *China*;  
**Rao Surampalli**, *United States*.

#### NEW IWA FELLOWS

**Annalisa Contos**, *Australia*; **Banu Ormeci**, *Canada*;  
**Barth Smets**, *Denmark*; **Ed McCormick**, *United States*;  
**Gary Wyeth**, *Thailand*; **Jennifer McKay**, *Australia*;  
**Jeroen Langeveld**, *Netherlands*; **Jun Ma**, *China*;  
**Oliver Grievson**, *UK*; **Rajiv Mittal**, *India*;  
**Rosina Girones**, *Spain*; **Taku Fujiwara**, *Japan*;  
**Viviane Yargeau**, *Canada*; **Xingcan Zheng**, *China*;  
**Zhiwei Wang**, *China*.

### Young Water Professionals at the Congress

The impact of Young Water Professionals at an IWA Congress has never been as evident as during this edition.

YWPs were involved in events with the YWP Country Chapters and the YWP Steering Committee, panel debates, technical sessions – where they acted as rapporteurs, professional speed dating and networking activities, as well as the 2022 IWA WWC&E 'Young Water Professionals Dinner', sponsored by Rambøll and supported by the IWA YWP Denmark Chapter. During the Congress, the YWP Podcast, organised by the IWA YWP Denmark Chapter, gave comments by and for YWPs about the content of the Congress and its activities.

Young Water Professionals also took part in the Emerging Water Leaders Forum, an open platform for young and emerging water leaders to work with peers to start planning for the future of the water sector that they will lead. The topic of this year's Forum was 'Challenges in the Water Sector and How to Make an Impact as Young Water Professional'. Participants were invited to discuss and design solutions among their peers to address big challenges in the water sector across their region.

The Congress Plenary Session dedicated to youth titled 'Uniting Youth for Water' was delivered by Inês Breda, Secretary of the YWP Steering Committee, who urged everyone to reflect on the importance of including young professionals in the conversations related to the future of the water sector and allow them to lead the change toward a water-wise world.



## IWA Specialist Groups

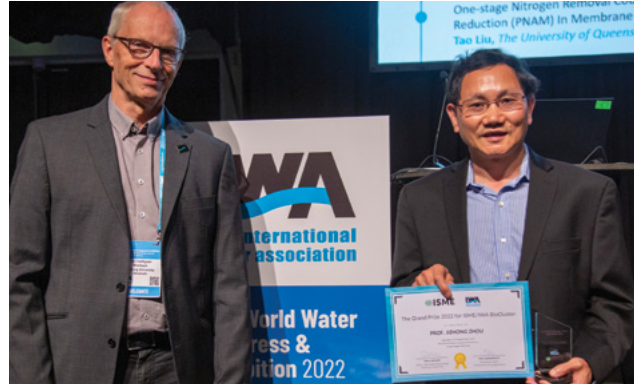
As a backbone of IWA World Water Congress 2022, the IWA Specialist Groups organised workshops, hosted open meetings, and launched new reports and online platforms. Through existing platforms, these engaged members also discussed and brainstormed on IWA core activities such as publishing, programmes, and thematic events.

Specialist Groups also met during the Specialist Group Leaders Forum, one of the best opportunities for groups to discuss and work together on facilitating networking and knowledge exchange mechanisms, allowing greater interaction, collaboration and better access to the networks' knowledge and expertise, as well as strategic planning and implementation.

The Specialist Group Leaders Forum 2022 on 10 September provided a unique face-to-face opportunity for the group leaders to communicate with each other and also with the IWA Secretariat. During the forum, Specialist Group leaders had the opportunity to discuss issues relating to IWA strategies, exchange experiences on group management and member engagement, and link with other IWA Communities and new initiatives. During World Café roundtables, group leaders focused on strategic discussion on four topics:

- Collaboration with other SGs
- Post-covid world: future planning for SGs
- Virtual Formats and Learnings: dos and don'ts
- Communication with members and SGs management

The event and discussions highlighted challenges and opportunities for SGs in exchanging knowledge and experiences as members and leaders of the largest global water association.



## IWA Task Groups and Clusters

The **IWA Resource Recovery Cluster** has proudly presented a textbook entitled 'Resource Recovery from Water: Principles and Application' launched at the WWCE. The development of the book was coordinated by the cluster and led by Prof. Ilje Pikaar and Prof. Jeremy Guest and also included various other cluster members as editors and/or authors of sections of the book. The cluster also organised a highly successful "Resource Recovery Exhibition" at the WWCE in Copenhagen, sponsored by Aquaminerals and Cranfield University. The exhibition was led by Prof. Ana Soares and Olaf van der Kolk. The aim of the exhibition was to deliver an informative and sensorial journey towards the exploration of recovered products from drinking water production and wastewater treatment facilities as well as debate and collate expert opinion on this topic.

To highlight the importance and impact of interdisciplinary research at the interface of microbial ecology, water & wastewater treatment and engineering sciences, the **IWA BioCluster** has successfully organised sessions and workshops at the Congress and announced two IWA/ISME BioCluster Award Winners: Prof Jizhong Zhou, University of Oklahoma (picture above) and Dr Christopher E. Lawson, University of Toronto. Additionally, members Tom Curtis, Jizhong Zhou and Fangqiong Ling delivered insightful talks in Copenhagen.

The **IWA Task Group on Sustainable Use of Water by Industry** has published a book entitled 'Sustainable Industrial Water Use: Perspectives, Incentives, and Tools' and successfully presented the findings during the Congress in Copenhagen.

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# Acknowledgements

From all at the International Water Association, we would like to express our deepest appreciation to the following for their tireless and important work done to make the 2022 edition of the IWA World Water Congress & Exhibition such a success! Thank you:

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**Ilse Korsvang** Danish Export - Water

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