IWA World Water Congress & Exhibition 2022

the international water association

Water for Smart Liveable Cities

Call for Content

www.worldwatercongress.org • #WorldWaterCongress

COPENHAGEN
DENMARK

11-15 SEPTEMBER
2022

Organised by:

IWA the international water association

Co-organiser:

DANVA

IWA the international water association DENMARK

Why Should You Submit Your Work to the IWA World Water Congress & Exhibition 2022?

- **Contribute with your work to shape the global water agenda.**
- **Connect with leading professionals from within and outside the water sector.**
- **Learn and grow professionally through early access to the best content.**
- **Network with over 10,000 delegates and visitors from over 100 countries worldwide.**

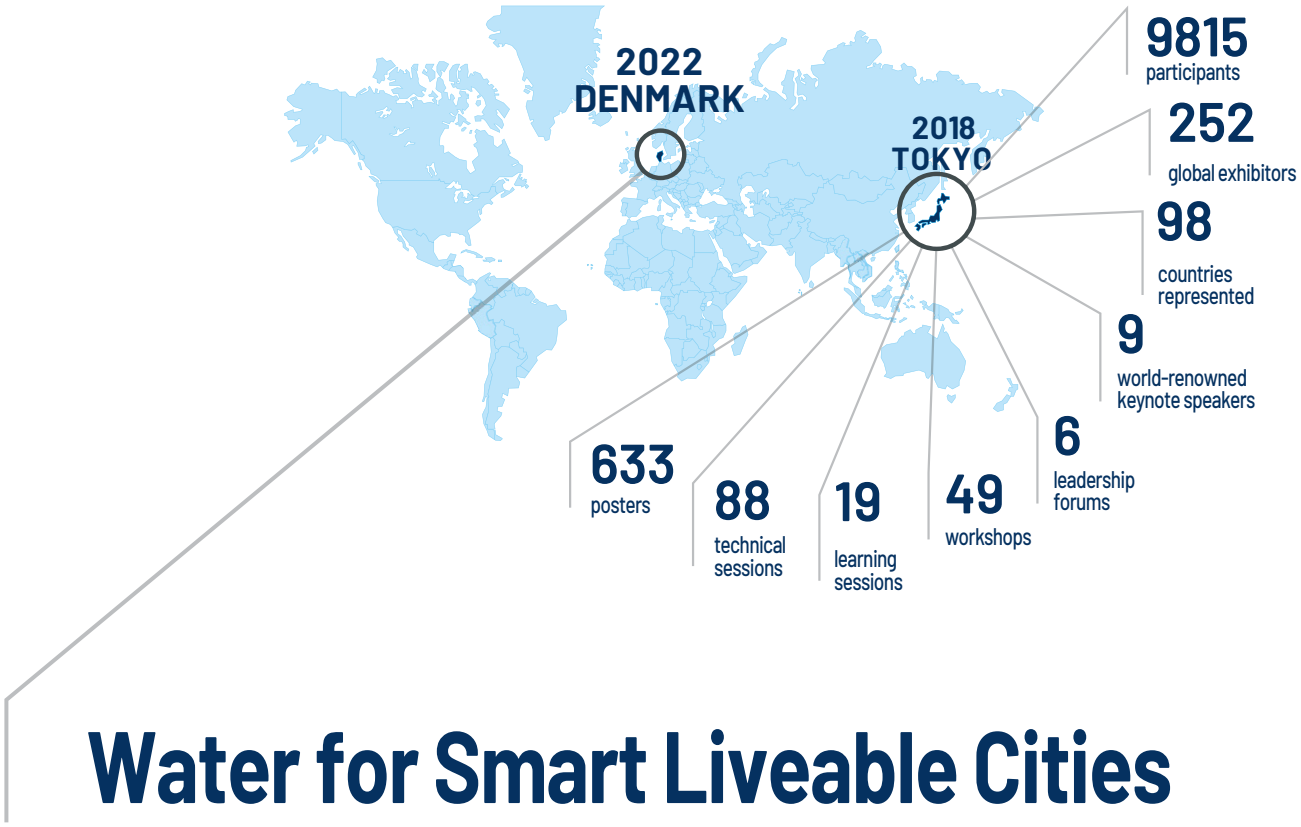
Denmark – Water For Smart Livable Cities

The 2022 World Water Congress & Exhibition in Copenhagen, Denmark is designed to bring together over 10,000 water professionals from academia, utilities, industry, government, regulators and NGOs and also engage the water-consuming industry, agriculture, architects and urban planners, hydrologists and soil and groundwater experts, social sciences, ICT-sector, the financial sector and others. The Congress is by nature a global forum for discussion. We invite you to be an active player in shaping the future of water at the IWA World Water Congress & Exhibition 2022 by submitting your outline papers, workshop or training proposals.

We are of course in a very challenging situation due to the global pandemic, which has only reinforced the importance of access to clean water and sanitation. In 2022, we have 8 years left to deliver on the UN 2030 Agenda for Change and meet the Sustainable Development Goals, including making significant progress on climate change mitigation as well as adaptation. This calls for a profound transformation, also in the water sector.

The IWA World Water Congress & Exhibition 2022 will take stock of the global water challenges we face, the emerging scientific breakthroughs and the innovative approaches and inspiring solutions validated around the world to set an unequivocal water-wise path ahead. With an emphasis on SDG6, dedicated to water and sanitation, the Congress will also highlight the interwoven relation of water with all 17 Global Goals and show examples of implementation and cooperation towards the fulfilment of the SDGs. Participants will present, analyse, discuss and highlight progress and solutions at high-level summits, technical sessions, poster sessions, workshops, training sessions and site-visits.

Through the underlying theme ‘Water for smart liveable cities’, a concept in which Denmark is leading, we will explore smart, holistic and liveable city solutions that utilize synergies between various intelligent systems, empower cities to adapt to a changing climate and meet the Paris agenda, whilst improving the quality of life and well-being of our societies. In addition, we will contribute to developing a global culture of innovation that can enable the radical transformations required.



Water for Smart Liveable Cities

19 Parallel Slots

- leaders forums
- technical sessions
- workshops
- skill development sessions
- masterlectures
- training
- plenary sessions
- business forums

#WorldWaterCongress 2022 in Copenhagen:

- Learn and grow professionally and expand your network through privileged access to the best content and the best people worldwide
- Visionary thinkers and compelling speakers on how water can create Smart Liveable Cities of the future, supported by the IWA Principles for Water Wise Cities.
- High-level summit with utility, government and city officials and other organisations about the progress towards implementation of the SDGs.
- Groundwater and digitalization as special focus areas.
- Engagement of the industry, agriculture and energy sectors.
- Advance opportunities for IWA Young Water Professionals and #EmergingWaterLeaders.
- Highlight global innovations and offer a global business platform.

What Can Authors Submit?

OUTLINE PAPERS

- Oral presentation (15 min) or poster;
- Oral presentations form technical sessions (90 min);
- Authors invited to potential publication with IWA Publishing.

WORKSHOP PROPOSALS

- 90 min workshop proposal;
- Designed to foster cooperation;
- Meant to generate ideas/ new solutions.

TRAINING PROPOSALS

- 90 min or back to back slots;
- Tailored to improve particular skills;
- Focused on specific topics or complementary skills.

Submit at www.worldwatercongress.org

Authors may submit an unlimited number of proposals. However, each presenting author can only be assigned up to two submissions during the Congress.

How Is Content Selected?

All the content submitted to the IWA World Water Congress and Exhibition 2022 will be peer reviewed by a panel of water professionals. The Programme Committee will then, considering their expertise and the results of the peer review, form the technical programme of the Congress.

The evaluation of the content will consider, among others:

- The impact of the work in addressing pressing water challenges;
- The originality of the work, describing new solutions or approaches;
- The fit between the thematic tracks and the proposal;
- The stage of development of the proposal (e.g. specific results based on data and/or a strong rational).

IWA expects to receive more than 2000 submissions. From the pool of submissions the Programme will include approximately 350 oral presentations, 600 poster presentations and 65 workshops and trainings.

Will Papers Be Published?

The Congress delegates will have access to digital pre-print proceedings that include the content that forms the technical programme. The submissions selected for oral presentation will be invited to submit a full paper and will be considered by IWA Publishing for potential publication in one of IWA Publishing journals.

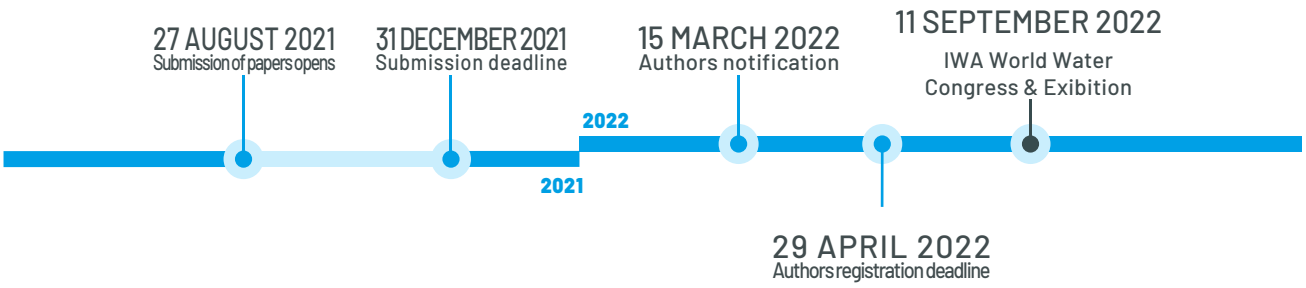
Author Registration Fee

All authors (oral presenters, poster presenters, workshop organizers, training organizers) are requested to register to attend the Congress. Presenting authors are eligible for discounted registration rates.

Authors do not need to be members of IWA. However, IWA members have access to a series of benefits that include significant registration discounts.

Become a member at www.iwa-network.org/join.

Key Dates



If you have any question, please consult www.worldwatercongress.org.

Topics for IWA WWCE 2022

WATER UTILITY MANAGEMENT

Track 1

Utility corporate performance and management

- Utility efficiency and benchmarking
- Utility-wide performance management & optimization approaches
- Utility-scale water savings and reuse initiatives
- Net-zero and carbon neutral urban water services
- Public-private sector water utility cooperation

Infrastructure and assets

- Asset management and optimization
- Infrastructure rehabilitation;
- Sewer overflow management at utility level
- Integration of decentralised solutions in a centralised system

Water services crisis management

- Management of extreme events (earthquakes, floods, bushfires, major accidents and attacks etc)
- COVID-19 pandemic impacts and responses at utility level
- Utility responses and adaptation to climate change impacts

The Digital Water Utility

- Utility data management and data security
- IoT initiatives, data and hardware integration at utility level
- Fully integrated digital water utility systems and approaches

Innovation Management and Support

- Incentivising innovation
- Fostering partnerships - internally and externally
- Progressing innovation from ideas utility

WASTEWATER & RESOURCE RECOVERY

Track 2

Biological wastewater treatment

- Nutrient removal
- Anaerobic processes
- Activated sludge processes
- Biofilm and granular sludge processes
- Membrane bioreactors
- Microbial ecology (communities, meta-omics)

Resource recovery techniques

- Water reclamation for non-potable reuse
- Energy efficiency and recovery
- Recovery of nutrients and chemicals
- Industry recycling and cross-industry synergies
- Bio-electrochemical processes

Physicochemical treatment

- Membrane applications in wastwater management
- Advanced oxidation processes
- Nanomaterials and nanotechnology
- Other physico-chemical treatment techniques

Dedicated treatment

- Treatment and recovery of industrial wastewater;
- Biosolids management & reuse
- Emerging contaminants (micropollutants, pharmaceuticals, microplastics...)
- Decentralised treatment and non-sewered sanitation
- Large wastewater treatment plants

Processes in sewage collection systems

- Sewer corrosion and odour management
- Sewer infiltration/exfiltration
- Wastewater epidemiology (viruses, bacteria, other pathogens)
- Tracing of pharmaceuticals and other chemicals (illicit drugs etc.) in sewer systems
- Trade waste (industry inflows) management

Digital wastewater treatment

- Instrumentation, control & automation
- Modelling treatment processes and integrated systems

DRINKING WATER & POTABLE REUSE

Track 3

Drinking water production

- Unit operations (coagulation, (bio) filtration, membrane processes, activated carbon, ozonation…)
- Groundwater-based drinking water production
- Decentralized solutions and production based on multiple water sources (e.g. rainwater, stormwater etc.)
- Potable reuse technologies
- Taste and odour management/removal
- Removal of emerging contaminants

Distribution systems

- Distribution piping (house/building plumbing, metal and plastic leaching etc.)
- Non-revenue water and leakage management
- Biofilms and pathogen management in water distribution
- Intermittent supply system challenges and optimisation

Microbial quality, disinfection and mangement of contaminants

- Pathogen detection and management
- Disinfection techniques and by-products management
- Emerging microbial contaminants/ pathogens and antibiotic resistant bacteria/genes
- Microbial and chemical risk assessment including toxicology

Management, policy and social aspects

- Water quality standards, regulations and economics
- Disaster management and water safety plans
- Water quality outbreak management – learning from crisis
- Water demand management and use efficiency
- Communication with stakeholders

Digital drinking water

- Modelling treatment processes and integrated systems
- Instrumentation, control & automation

CITY-SCALE PLANNING & OPERATIONS

Track 4

Planning

- Integration of water management and urban planning
- Modelling and other decision-support tools for urban water planning
- Resilience planning and design
- Impact of urban (re)development and densification on water management
- Impacts and mitigation of climate change

Infrastructure and Operations

- Modelling/optimisation of water supply and sewer networks and processes
- Sewer infiltration-inflows, unintended sewer in-/overflows
- Rehabilitation and retrofitting of water and wastewater infrastructure
- Rainwater, stormwater and urban drainage
- Urban scale groundwater management
- Water-energy interactions in the urban water cycle (eg centralised water heating/cooling etc.)

Digital Water Cities

- Sensors, instrumentation and IoT in urban systems
- From data to information to decision – integration across all city services
- Data management, accessibility and security
- Use of weather radar, numerical weather prediction, drones and remote sensing

Water Wise Cities

- Nature-based solutions, sponge cities and blue/green infrastructure
- Water-sensitive urban design and hybrid centralised/ decentralised solutions
- Transitioning to and implementation of sustainable and water wise cities
- Quantification of economic, human and environmental benefits of water wise solutions
- City-scale challenges and solutions to achieve the Sustainable Development Goals (SDGs)

COMMUNITIES, COMMUNICATION & PARTNERSHIPS

Track 5

Collaboration, capacity building and communication

- Community, customer and stakeholder engagement and communication at local level
- Community behaviour change – methods, communication and incentives
- Community-focused decision making
- Resilience planning across the water cycle and the community.
- Collaboration of local and regional government agencies with water service providers

Digital transformation

- Impacts of digital transformation on society, citizens, and businesses
- Customer management and engagement using digital tools
- Integration/management of databases across urban and water system

Policy and regulation

- Cost of water, pricing and incentives
- Regulation coordination across agencies (economic, environmental, services etc.)
- Incentives and drivers to enable change
- System thinking and planning
- Environmental impact assessment based planning
- Economic and financial drivers to create beneficial community outcomes

Cross-sectorial governance

- Enabling health, well-being and liveability outcomes
- Life with water, art and architecture
- Entrepreneurship and innovation partnerships
- Cross-institutional coordination
- Partnerships and cooperation in and beyond the water sector
- Water management in industries

WASH and community-scale water management

- Community-based water supply and management
- Small-scale/decentralised sanitation solutions at community level
- Pandemic / crisis management in developing countries

WATER RESOURCES & LARGE SCALE WATER MANAGEMENT

Track 6

Groundwater

- Groundwater mapping, monitoring and modelling
- Protection of groundwater quality and quantity
- Soil contamination and groundwater remediation
- Governance, management and institutional arrangements

Surface water

- Surface water monitoring systems and models
- Protection of surface water quality and quantity
- Source-to-sea pollution management
- Pollution from point sources – agriculture, industry, urban
- Diffuse pollution – sources and mitigation
- Water-related ecosystems and environmental flows

Integrated water resource management and climate resilience

- Water stress, droughts and floods, including impact of climate change
- Catchment management and natural capital approaches on different scales
- Large-scale nature-based solutions and biodiversity
- Water rights, trading and partnerships
- Water resource management and adaptation to climate change impacts

Holistic assessments and approaches

- Life cycle assessment, water efficiency, water footprint, virtual water, etc.
- Planetary boundaries and science of sustainability
- Water resource management towards Sustainable Development Goals (SDGs)
- Circular economy initiatives and approaches
- Challenges and progress towards achieving the Sustainable Development Goals (SDGs)

Programme Committee

CO-CHAIR
Eveline Volcke
Ghent University, Belgium

CO-CHAIR
Jurg Keller
Queensland University, Australia

Aaron Burton,
Affinity Water, UK

Innocent Nhapi Chinhoyi
University of Technology, Zimbabwe

Per Halkjaer Nielsen
Aalborg University, Denmark

Amy Pruden
Virginia Tech, USA

Jacob Amengor
IWASH, Ghana

Peter vanrolleghem
Laval University, Canada

Bright-Oridami Titilola
Lagos Water Corporation, Nigeria

Karsten Arnbjerg-Nielsen
Technical University of Denmark — DTU, Denmark

Shane Morgan
Urban Utilities, Australia

Buddhika Gunawardana
University of Moratuwa, Sri Lanka

Linda Amand
Käppala Association, Sweden

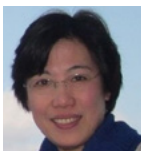
Srikanth Mutnuri
BITS Pilani, India

Caetano Dorea
University of Victoria, Canada

Linda Li
Dillon Consulting, Canada

Thammarat Koottatep
Asian Institute of Technology, Thailand

Cathy Hu Qing
Southern University, China



Mari Asami
National Institute of Public Health, Japan

Trine Munk
Ramboll, USA

Eiman Karar
UNEP, South Africa

Nilo Nascimento
Federal University of Minas Gerais, Brazil

Xia Huang
Tsinghua University, China

Ines Breda
Aalborg University, Denmark

Oscar Pintos
ADERASA, Argentina

ABOUT THE INTERNATIONAL WATER ASSOCIATION

The International Water Association (IWA) is the leading network and global knowledge hub for water professionals, and anyone committed to the future of water. IWA, which is a non-profit organisation, has a legacy of over 70 years.

IWA connects water professionals in over 130 countries to find solutions to global water challenges as part of a broader sustainability agenda. IWA connects scientists with professionals and communities so that pioneering research provides sustainable solutions.

In addition, the association promotes and supports technological innovation and best practices through international frameworks and standards. Through projects, events, and publications, IWA engages with its members to stimulate innovative ideas and content in support of IWA's vision of a water-wise world.

the international water association

INTERNATIONAL WATER ASSOCIATION

Export Building | Republic
1 Clove Crescent
London E14 2BA
United Kingdom
Tel: +44 207 654 5500
Fax: +44 207 654 5555
E-mail: water@iwahq.org

Company registered in England No.3597005
Registered Charity in England No.1076690

www.worldwatercongress.org
#WorldWaterCongress