

Annual Review

2021





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IWA – Robust & Resilient



Tom Mollenkopf
IWA President

Kalanithy Vairavamoorthy
IWA Executive Director

Looking back over 2021, we see a year that featured some outstanding highlights. These are highlights that built on and contributed further to the robustness and resilience of our fantastic global network of water sector professionals.

In particular, it was a year in which the Association took important steps to further expand our dissemination of information and knowledge. IWA Publishing moved publication of ten journals to the ‘subscribe to open’ Open Access model, greatly increasing the accessibility of this valuable content. Alongside this, numerous books were also made available on an Open Access basis.

Next, we are a network organisation and the very essence of a network is the ability of those within it to interact and communicate. We have remained determined to support this, despite the challenges of the COVID-19 pandemic. It was therefore a huge achievement to hold our first virtual World Water Congress during 2021. This successfully covered a broad range of themes, providing access to high-quality presentations and discussions for participants around the world – importantly facilitating access for many who might not normally travel to our physical events.

This virtual delivery of the World Water Congress built on pandemic mitigation measures that were initiated in 2020 and were continued and scaled up in 2021. Adapting to the ‘new normal’ of online meetings, workshops, and conferences, we delivered some 20 online events during the year, including the increasingly popular use of webinars.

This Digital World Water Congress also provided an opportunity for us to publicly acknowledge and celebrate the latest winners of our Awards programme, most notably our Global Water Award winner, Marcos von Sperling, and our Women in Water Award winner, Nafisa Barot.

Alongside this, we of course continued to make great progress with our programmes throughout the year, especially with our Digital Water Programme, our Climate Smart Utilities initiative, and the Regulating for Citywide Inclusive Sanitation initiative. Through these activities, IWA plays an influential role in shaping the strategic direction of our sector.

Given all of this, we can surely say that during 2021 the Association continued to advance its core mission as a global reference point for water professionals working on all aspects of the water cycle. This has been visible through our diverse activities and is evidenced in our strong membership base, that remained steady in terms of membership numbers despite the demands of the pandemic.

We thank all who have contributed to our vibrant organisation – one that has shown itself to be both robust and resilient.

Tom Mollenkopf, *IWA President*

Kalanithy Vairavamoorthy, *IWA Executive Director*

Events

Connecting the Global Water Community

Digital World Water Congress

With the COVID-19 pandemic imposing major limitations on travel during 2021, IWA responded with a rapid scale-up of digital offerings to support knowledge exchange and networking. An important undertaking on this front was the first ever delivery of a major IWA World Water Congress in a virtual format. IWA held the Digital World Water Congress from 24 May to 4 June 2021, and the event proved to be a great success! The Congress was designed so as to promote engagement and interaction among participants while also providing compelling and informative content.

The event attracted more than 2,300 registered delegates representing 95 countries.



KEYNOTE SPEAKERS:

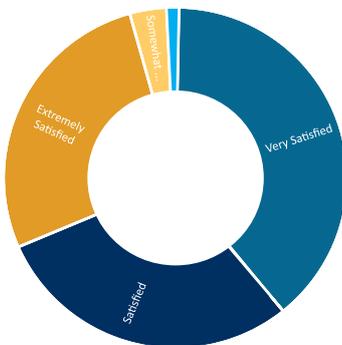
David Sedlak, *Berkeley Water Center*;
Akinwumi A. Adesina, *African Development Bank Group*;
Emma Howard Boyd, *Environment Agency*.

During the opening ceremony of the 2021 Digital World Water Congress, the latest awards were celebrated recognising the outstanding achievements of IWA members and water sector professionals (see page 17).

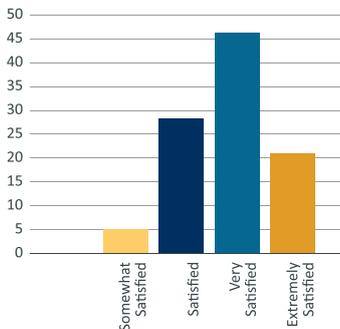
The wider Congress programme featured three fantastic keynote speakers and special screenings of three award-winning documentaries.

Overall, the IWA Digital World Water Congress garnered a great response, with 96% of attendees indicating that they were happy or extremely satisfied.

Overall Rating of the Congress



Quality of Sessions



During the industry-leading conference, **51 technical sessions** were delivered, each featuring a live Q&A session to encourage interaction among attendees. Some **150 papers** were presented across the sessions covering further research and insights into how to move to a more water-wise world. In addition, **310 poster presentations** were made available on demand to the audience to read about new innovations for water management.

Over the past 12 months, IWA has demonstrated its ability to adapt to changing circumstances. There has been a desire for greater online engagement among both members and non-members, leading IWA to develop new formats for its audiences.

New formats have included webinars, online panels, online dialogues, member inductions, online conferences and YWP chapter global coordination meetings. Most of these activities have been made available on-demand via the IWA Learn platform.

IWA staff participated in multiple partner and Specialist Group events, representing the Association, and leveraging the opportunities presented by these events. These events included: AIDIS Congress, IWA Microbial Ecology and Water Engineering event, FIAR (Ibero-America Forum on Regulation), and World Water Week, Stockholm.

The online events programme in 2021 included 33 virtual events and gathered over 9,500 registrations from individuals around the world. This programme

covered topics such as *'Intensifying biological treatment through selection processes'*, *'How can water and wastewater utilities in Africa help meet the SDGs?'*, *'Detecting COVID-19 Variants in Wastewater'* and many more. All IWA webinar content is available on demand on the website.

In addition, the IWA India chapter developed a webinar series to engage professionals through extensive knowledge sharing and panel discussions. To date, the India chapter has held 10 webinars and three online workshops and training sessions, gathering more than 5,000 participants from South Asia.

Finally, the IWA office in China hosted an extensive suite of webinars (10) to facilitate engagement and knowledge sharing, as well as organising the Membrane Technology regional conference with more than 400 participants. Moreover, the office successfully hosted the virtual IWA Water in Industry Conference and delivered a physical training event *'Water in Industry'*.

33 online events, 9,500+ registered participants



IWA Activity in Numbers



1M +

Website page views 1M+



110K

Total Newsletter subscriptions 110K



24%

Facebook followers 37K (24% increase)



23%

Twitter followers 19.6K (23% increase)



26%

LinkedIn followers 69.2K (26% increase)



23%

WeChat followers 44.1K (23% increase)



23K

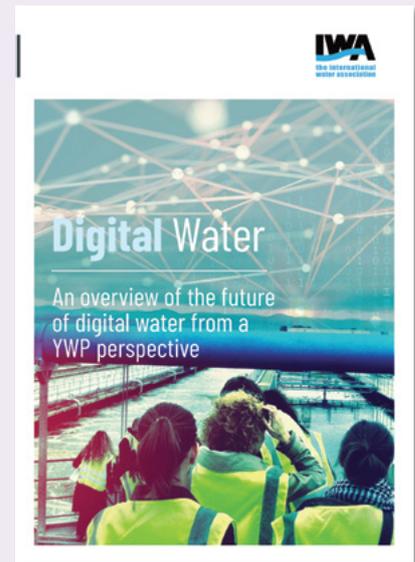
IWA Connect users: 23 K



330K

Video views: 330K (across Vimeo & YouTube)

Programmes



Digital Water Programme

Against a backdrop of rapid technology developments and widening opportunities for digitally-based transformation, IWA's Digital Water Programme aims to act as a catalyst for innovation, knowledge and best practices around digitalization for the water industry. The programme has been a key area of focus throughout 2021, helping water utilities transition to the next generation of smart water systems. Activities under the Digital Water Programme in 2021 included:

- White paper series: '*Operational digital twins in the urban water sector*', which highlights how digital twins can help the water industry to improve performance of its infrastructure; '*The value of meta-data for water resource recovery facilities*', which presents the 'meta-data challenge' and highlights the need to consider meta-data when collecting information as part of good digitalisation practices; and '*An overview of the future of digital water from a YWP perspective*', which contains a snapshot of the current situation regarding digitalisation of the water sector as well as a vision for this transformation.
- Webinars, podcasts, blogs, and videos to promote the overall Digital Water Programme.
- Launch of the *Digital Transformation Hub*. The DTHub brings together suppliers, utility representatives, and water experts, providing a repository of knowledge and experiences in line with Objective 4 of the IWA Digital Water Programme: 'create a focal point in IWA for the digitalisation of the water sector'. The main aim of the DTHub is to provide digital water professionals with an up-to-date overview platform sharing pilot experiences executed within a utility environment.
- Formation of the *Water-Cybersecurity group* on IWA Connect in April 2021. The group aims to collect resources and share links to projects, journal papers, news and information related to cybersecurity in the water sector.
- *Digital Project of the Month*, which systematizes digital water projects implemented worldwide and promotes the most relevant ones in IWA communications.

Regulating for Citywide Inclusive Sanitation (R-CWIS)

Regulators and regulations are crucial to the provision of services, creating the foundation for their delivery. The initiative *Regulating for Citywide Inclusive Sanitation* aims at identifying the needs, opportunities, and tools for action to support and inspire regulators in their contribution to achieving citywide inclusive sanitation in the context of the UN Sustainable Development Goals.

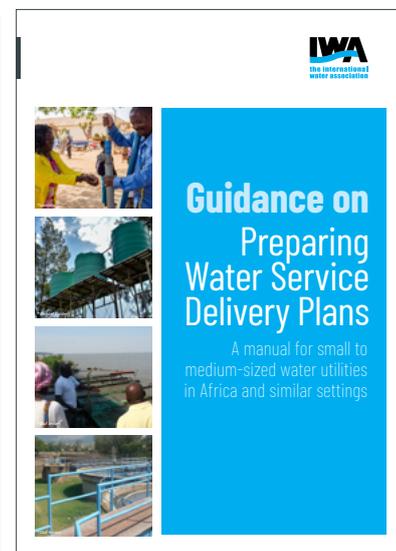
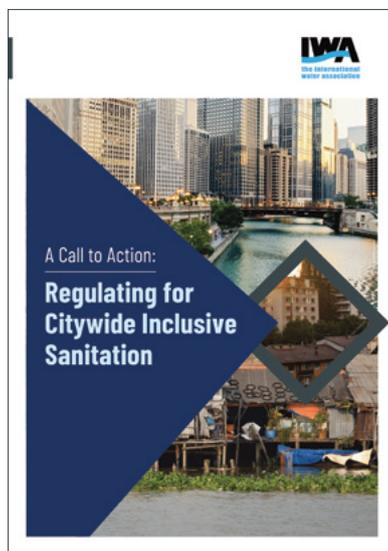
Citywide inclusive sanitation is a public service approach to planning and implementing urban sanitation systems to achieve outcomes summarised in Sustainable Development Goal 6: safe, equitable and sustainable sanitation for all, irrespective of where people live within the city or what technologies are used to serve them.

During 2021, IWA hosted two successful webinars to support this initiative – ‘*Regulating Service Providers for CWIS*’, in January 2021, and the ‘*CWIS: Regulating Challenges*’ online panel, in June 2021.

In addition to the webinars, several published items were released or prepared to further awareness of the initiative, featuring:

- *Call to Action on Regulating for CWIS*, which was launched in a High-Level Panel hosted in June 2021 and has been translated into four other languages (Czech, Portuguese, Romanian and Spanish)
- *Broadening regulatory horizons promoting CWIS* (blog post)
- *Squaring the Circle* (thought-piece/blog post)
- *Regulating for CWIS Lessons Learnt* (built on compiled case studies)

Future efforts under the CWIS programme will seek to professionalise and mainstream the CWIS approach among and beyond sector leaders and professionals, and during 2021 the Association received notification that it will receive support for this work from the Bill & Melinda Gates Foundation.



Operation and Maintenance Network (OMN)

The Operation and Maintenance Network aims to improve the operation and maintenance of water and wastewater systems in developing countries in order to contribute to the sustainability of water and wastewater services and, as a result, to public health. The Network facilitates the exchange of experience, knowledge, and information on the O&M of water supply and wastewater systems by bringing together service providers, external support agencies, and other stakeholders. The OMN has now been merged into the Water Safety Portal <https://wportal.org/operation-maintenance-network/>

In 2021, IWA released the relevant publication *Guidance on Preparing Water Service Delivery Plans: A manual for small to medium-sized water utilities in Africa and similar settings*.



Climate Smart Utilities

With awareness growing around the urgent need for action on climate change, IWA's Climate Smart Utilities initiative aims at assisting water, wastewater, and urban drainage utilities in improving their climate resilience by adapting to a changing climate while contributing to significant and sustainable reductions in carbon emissions.

The initiative is structured around four pillars:

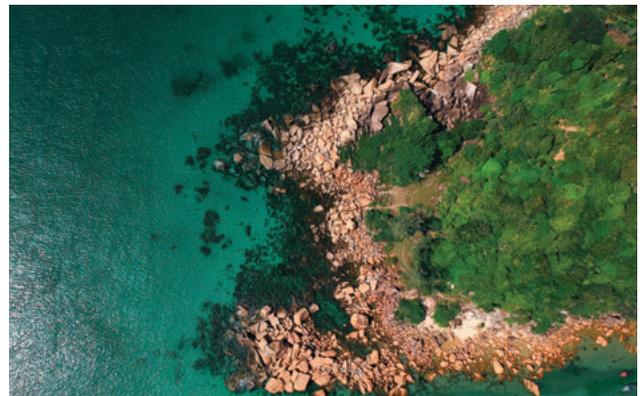
- *Communities of practice* around adaptation and mitigation
- A web platform to support utilities sharing resources
- A peer-to-peer *utility leaders exchange* programme
- A *Climate Smart Utility Vision* with an upcoming *Recognition Programme*

In 2021, IWA leveraged the Climate Smart Utilities initiative at COP26 in Scotland, with involvement in hosting five meetings and getting together almost 100 participants.

In addition to this, the initiative was supported by four successful webinars and presentations at various international events, such as the 'Water in the Race to Zero' event.

Further programme progress

IWA is also a partner in the EU Horizon 2020 project Prime Water, which kicked off in November 2019 and will run until 2022. This is a Horizon 2020-funded research project that generates information on the effects of upstream changes on future water quality and quantity. In November 2021, IWA moderated the **PrimeWater Multi User Panel Stakeholders** Week with 500+ registrants and expert presentations from multiple sectors (water resources management, disaster risk management, potable water, energy, amenity, recreation and aquaculture).



In August 2021, IWA signed a Memorandum of Understanding with **GEO AquaWatch**. GEO AquaWatch and IWA both have a same goal of enabling water professionals to access and share information on the application of Earth Observation information and technologies for improved water management.

In addition, 2021 saw further progress with the **AquaRating** approach, which helps water utilities become creditworthy and drive innovation by assessing their performance. In the past 12 months, there have been AquaRating assessments conducted in Sierra Leone and Mongolia.



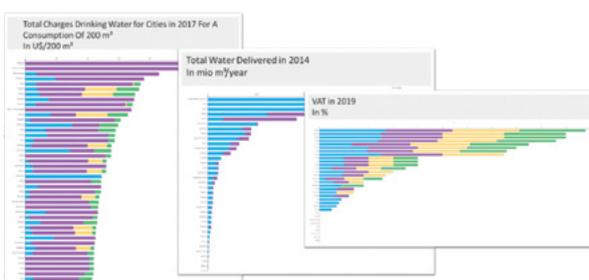
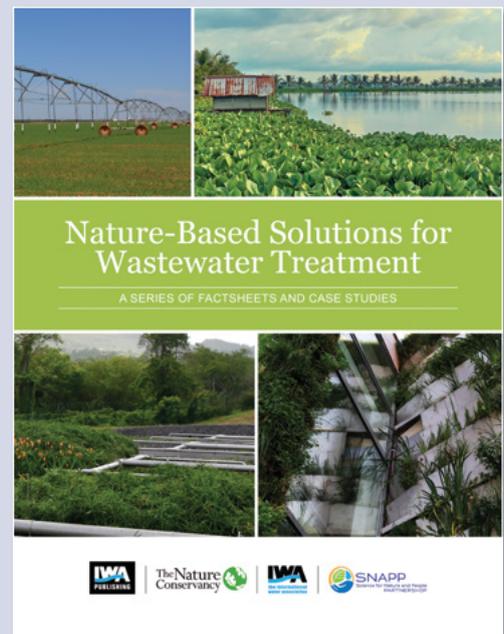
Specialist Groups



IWA supports a thriving array of thematic communities, featuring Specialist Groups working across important topic areas in the sector. In 2021, IWA's Specialist Groups made a substantial contribution to water community engagement, organising 14 successful conferences, 7 webinars, and producing and distributing 15 newsletters to exchange knowledge and industry trends.

Among the highlights of the activities of IWA communities during 2021, the *Nature-Based Solutions (NBS) for Water and Sanitation Working Group* (NBS WG) was launched in November 2021. The aim of the WG is to build on the work of the recent NBS Task Group. The Task Group provided technical input and peer review of the publication of the book *Nature Based Solutions for Wastewater Treatment* and a web-based tool for identifying water sanitation solutions. The NBS WG aims to start as an activity of the IWA SG on Wetland Systems for Water Pollution Control (WS4WPC) and aspires to be the IWA platform for promoting NBS, with the specific aim of exploring how SGs across IWA can come together on this topic, possibly in the form of an IWA Cluster.

Members of the NBS WG authored the book *Nature Based Solutions for Wastewater Treatment* (IWA Publishing, August 2021). This book serves as a compilation of technical references, case examples, and guidance for applying nature-based solutions for treatment of domestic wastewater and enables a wide variety of stakeholders to understand the design parameters, removal efficiencies, costs, co-benefits for both people and nature, and trade-offs for consideration in their local context.



Also in 2021, the Statistics and Economics SG worked on the *International Statistics for Water Services platform* which focuses on water consumption of households and small businesses (latest version released in November 2021). It is a tool that every water professional should know about since it provides statistics on the water industry, such as tables and figures on abstraction, consumption, tariffs, and data on sewerage and wastewater treatment.

Governing Members

Governing Members are at the heart of building IWA's vision of a world in which water is wisely managed.



Governing Members are IWA on the ground at the national and regional level, convening people locally to share best practices and explore new ways of innovating to implement water solutions. In 2021, IWA was pleased to welcome several important additions to its Governing Membership network, with partnerships being established to secure Governing Membership for Bolivia and Vietnam.

Bolivia

“As Governing Members in Bolivia, we believe it is essential to gather professionals in our country who can solve the water crisis using the latest science, knowledge and work experience within a framework of sustainability. IWA provides support and access to the most appropriate technological tools for a water-wise future” — Cecilia Soto, Chair of the Bolivia Governing Member.

Vietnam

“The Vietnam Water Supply and Sewage Association (VWSA) has an important position in the field of water, technical infrastructure and environment protection in Vietnam. The signing of any MoU with IWA is an important activity for the VWSA, giving opportunity for the Vietnam water industry to integrate with the global water network. We realize that with the mission of connecting water industry experts around the world with advanced and sustainable approaches, the IWA will support and lead countries to develop together and solve the problems and challenges of the water sector together. Being member of IWA, the countries can learn from each other via IWA platforms, find most effective implementation and management of sustainable water, avoid failures from lessons of others. I wish the cooperation of VWSA and IWA more and more developed and achieve good results,” — Mr. Nguyen Ngoc Diep, VWSA Chairman.

Membership



7,791

Individuals

(Individual members, Nominated Representatives, Nominated Academics)



313

Corporates



54

Universities

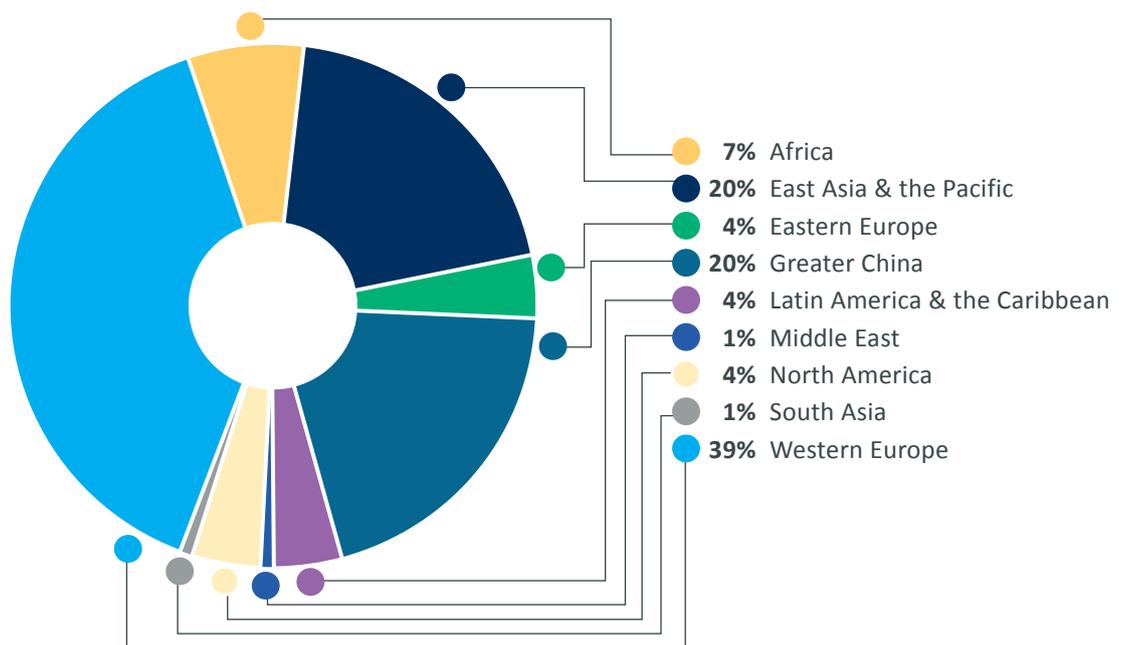


53

Governing Members

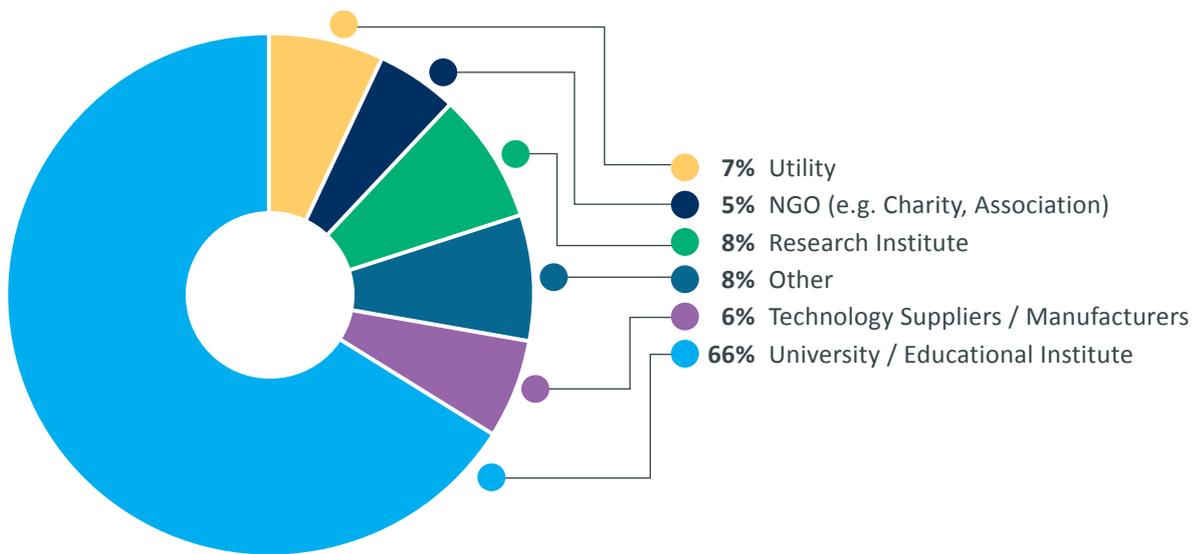


IWA membership per region

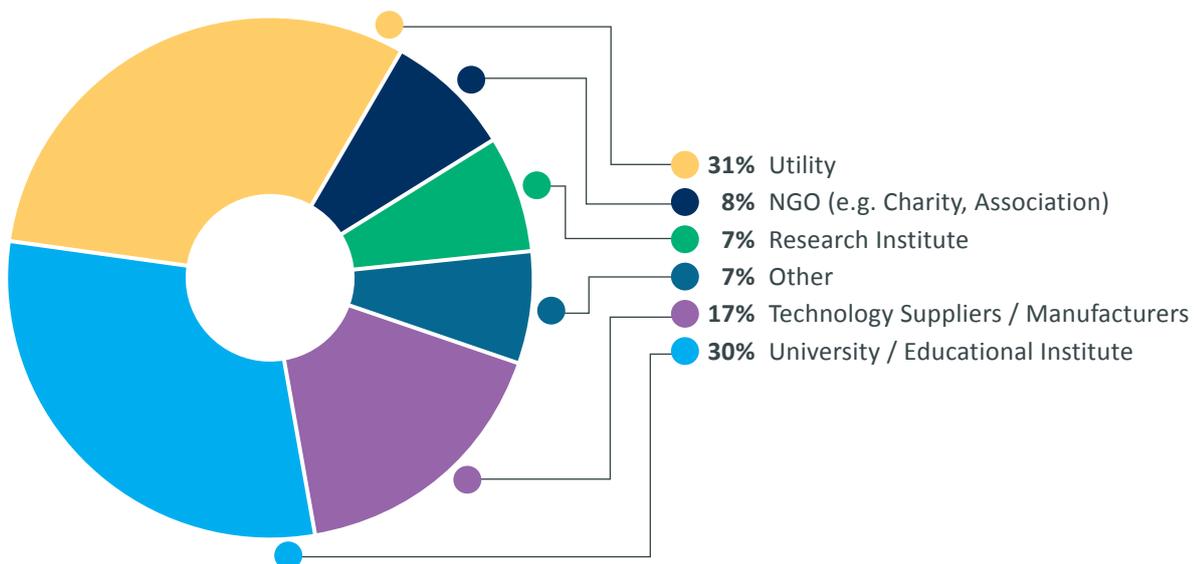


IWA membership per profession

Individual IWA members



Corporate IWA members



IWA Publishing

This has been a landmark year for IWA Publishing. All the journals that have been published directly are now Open Access, which means that they are free to read for everyone.



Open Access for Everyone

During 2021, IWA Publishing switched ten journals to Open Access following a model called 'Subscribe To Open' (S2O). These include *Water Science and Technology*, the *Journal of Water and Health*, *AQUA*, *Water Policy*, and the *Journal of Hydroinformatics*. In addition to these, 19 Open Access books were released in 2021. While the S2O journal model provides Open Access to everyone, libraries continue to pay subscriptions. This revenue stream allows the journals to be both free to read and free to publish in.

Publications Progress in Numbers

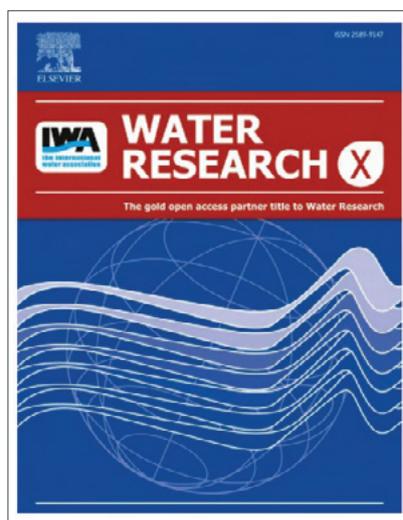
Open Access has had an instant impact. In 2021, the number of journal papers downloaded nearly doubled. Readers from all over the world have contributed to this increase in readership. IWA Publishing journals are now truly being read by the entire global water community. Alongside this progress, the average Impact Factor of the journals (the average number of times each paper is cited in other papers) increased by 37% in the 2020 dataset, which was published in June 2021, driven by a 41% growth in citations between 2018 and 2020.

Article submissions increased by 10% in 2021, with the growth coming from all continents. In addition, the Net Promoter Score for writers who publish in IWA Publishing journals has surged to 83, indicating that they are enthusiastic and happy about their experience.



Successful Publishing Collaboration with Elsevier

The organisation has a long-standing and highly successful publishing collaboration with Elsevier for *Water Research*. That partnership now also covers the Open Access journal *Water Research X (WRX)*, which will receive its first Impact Factor in 2022. The current projection is that it will be in the region of 8.500 – high enough to be placed in the top five of the Water Resources category. IWA also collaborates with Elsevier in the publication of *Water Resources and Industry*. *WRI* has been accepted for indexing in the Journal Citation Reports and is scheduled to receive its first Impact Factor in 2022.



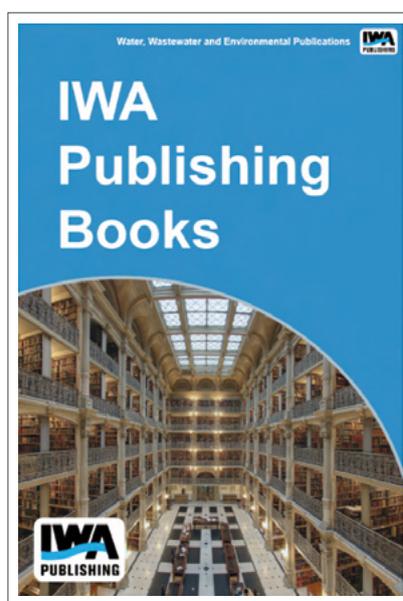
Making Better Journals for the Future

This year, IWA Publishing collaborated with journal editors to make their processes as efficient as possible. Consequently, the average time to reach a First Decision in 2021 was 18% less than it was in 2020. That's an 11-day improvement for each approved item. *Water Science and Technology* decisions are now typically made within 30 days. The journals are becoming speedier while remaining committed to thorough peer review.

Moreover, IWA Publishing journals are now completely compliant with the EU's Horizon Europe programme and the requirements of other national and non-governmental funding organisations.

Publishing in Non-English Languages

IWA Publishing continues to expand its range of non-English publications. Books published in 2021 included a Hindi translation of *Wetland Technology*, a French version of *Climate-resilient Water Safety Plans* and Spanish translations of *Performance Indicators for Wastewater Services*, *Treatment Wetlands*, *Standard Definitions for Water Losses* and *Wetland Technology*.



The Source Magazine

The Source is IWA's quarterly magazine, delivered both in print and online. It is available to all IWA members as a benefit of membership.

The magazine's content reflects IWA's goal of inspiring a world in which water is wisely managed, offering features, viewpoints, and updates to help readers keep up to speed with the issues that shape the sector, and leading responses to these topics.

Recent topics covered in detail in 2021 included: a round-up of examples of initiatives for stimulating water sector innovation; examples and strategic perspectives on the use of non-sewered sanitation; leading global cases illustrating growing application of water reuse; and tools to support water sector progress with resilience.

The Source can be viewed online at www.thesourcemagazine.org.

The website is updated on a regular basis with new and engaging content.



View The Source online at www.thesourcemagazine.org



Follow @WaterSourceMag on Twitter



Young Water Professionals (YWP)



Previous edition of the International Young Water Professionals Conference

At the forefront of the design, development, and implementation of current change processes, IWA's activities for Young Water Professionals (YWPs) aim to empower the next generation of water leaders.

Over the past year, IWA has continued to improve its value proposition for IWA YWP members delivering open activities as well as member-only interaction and services.

IWA invests in YWPs by empowering them both within the Association and across the water industry.

During 2021, two virtual get-togethers were organised, which attracted 275 attendees.

The focus of these events was 'The future of WASH' (January 2021) and 'Next Generation Water Action: Turning Challenges into Opportunities' (July 2021).

Moreover, IWA hosted virtually the Emerging Water Leaders Forum in November 2021, with a total of 345 registrations. The forum was held over three days and included an online panel, a workshop, and networking opportunities.



Awards



IWA has a range of awards to provide recognition for notable contributions to the water sector worldwide.

These include the Global Water Award, the Women in Water Award, the Project Innovation Award, the IWA Professional Development Award, the Water & Development Award, the Young Leadership Award, and the IWA/ISME (International Society for Microbial Ecology) BioCluster Award. The latest awards were celebrated during the opening ceremony of the **2021 Digital World Water Congress**, recognising the outstanding achievements of IWA members and water sector professionals.



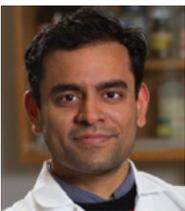
The **IWA Global Water Award** recognises those individuals who, through innovative leadership and practice, have made a significant contribution to a world in which water is wisely managed. Inspirational academic **Marcos von Sperling**, of Universidade Federal de Minas Gerais in Brazil, won this acclaimed award.





The **IWA Women in Water Award**, which celebrates the work of women in the field of water, was won by sanitation advocate **Nafisa Barot**. The award recognises the key role played by women, but also seeks to encourage greater inclusion and female leadership in the water sector.

The **IWA Professional Development Award** recognises water sector companies that are making a significant contribution to the professional development of their employees, supporting the attraction, development, and retention of the next generation of water leaders. Malaysian sewerage company **Indah Water Konsortium** won the IWA Professional Development Award for its exceptional record of developing talent in the sector.



The **IWA Young Leadership Award** is granted to an exceptional young water professional who demonstrates significant achievements in their career, outstanding leadership, and the potential to play an influential role in the water industry in the future. Renowned scientist and engineer **Dr Siddhartha Roy** had been announced as the award winner prior to the Digital Congress.



Moreover, in 2021 there were three recipients of the Honorary Membership Award. This award recognises outstanding and sustained contributions of members in relation to the water sector and the Association. The exceptional individuals who received this recognition are **Professor Jiri Wanner**, from the University of Chemistry and Technology in Prague, Czech Republic, **Professor Mark van Loosdrecht**, from Delft University of Technology in the Netherlands, and outgoing IWA President, **Diane d'Arras**.

IWA World Water Congress & Exhibition 2022

The IWA World Water Congress & Exhibition is the global event for the water industry. It attracts over 10,000 leading professionals and companies from across the water sector, including thought leaders from within and outside the industry. Together they create new insights into how pioneering science, technological innovation, and best practice shape water management.

The Congress is designed to bring together water professionals and 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 provides new networking and business opportunities, and ensures maximum interaction between participants, exhibitors and sponsors. It connects likeminded attendees and has a track record of fostering new collaborations and partnerships. The event also provides a platform for exhibitors and sponsors to raise their profile among leading water professionals and companies.

This upcoming edition of the World Water Congress & Exhibition in Copenhagen, Denmark will bring together participants from around the world for a week of discussions and networking under the broad theme of 'water for smart liveable cities'. Spanning sector ambitions for progress with the Sustainable Development Goals (SDGs) and action on climate change mitigation and adaptation, delegates will benefit from a comprehensive programme of technical sessions, workshops, technical tours, a high-level summit, and an exhibition, alongside a social programme and the opportunity to explore the attractions of the great city of Copenhagen.

For more information, please visit www.worldwatercongress.org

- 2018 Tokyo
- 2016 Brisbane
- 2014 Lisbon
- 2012 Busan
- 2010 Montreal
- 2008 Vienna
- 2006 Beijing
- 2004 Marrakesh
- 2002 Melbourne
- 2001 Berlin
- 2000 Paris

Benefits of attending



Thought Leadership



Brand Awareness



Networking



Collaboration



Credibility



Entertainment

Previous Conference in Numbers (Tokyo)

9815

participants

462

presentations

280

hours

252

exhibitors

75%

decision-makers

IWA World Water Congress & Exhibition



COPENHAGEN
DENMARK

11-15 SEPTEMBER

2022



Organised by:



Co-organiser:



www.worldwatercongress.org

[#WorldWaterCongress](https://twitter.com/WorldWaterCongress)

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