

# IWA SPECIALIST GROUP NEWSLETTER

May 2020

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Write to Us!

## WRITE TO US!

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Oliver Nachevski



Rita Salgado Brito

## Message from the Chair

I welcome you to the IWA SAM-SG newsletter where you can find an update on the group's recent activities and the plan for the coming months.

Asset Management (AM) in the water sector is all about managing water infrastructure in a sustainable way, while dealing with performance, risk and cost, with intergenerational responsibility. In these days, facing the COVID-19 pandemic, an increased risk is posed on our water infrastructures. Utilities need to manage the impact of the pandemic on their staff and infrastructure and to reassure their stakeholders about potential concerns.

In this issue you will find our focus on dealing with the pandemic with AM, on the aftermath of LESAM 2019, our Leading-Edge Strategic Asset Management conference, and also on our next webinar on the role of public policies as levers for AM.

You will meet Takayuki Sawai, a member of our SAM-SG Management Committee. You will also meet an AM Champion, Copperleaf, as an organization that puts AM into practice.

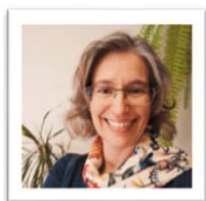
You will find out more about our path for creating AM success stories, namely the IWA International SAM Forum 2020 in Belgrade, aiming for the regional dissemination of AM best practices.

Highlights on the news from the IWA network are also provided.

Subscribe to our Newsletter and let us know your thoughts, comments and suggestions – they will always be very welcome. We will publish 2 issues per year.

As a final note, I assure our SAM Specialist Group members and readers that our management committee is working high effectively from home and keeping our SAM plans going!

## Meet the SAM SG Management Committee Member: Takayuki Sawai



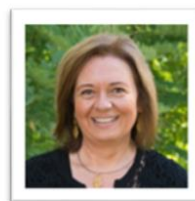
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### Takayuki Sawai

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In 2008, I was involved in ISO/TC 224, which develops international standards and guidelines related to water industry. This is the beginning of my career concerning Asset Management. I worked with the committee until 2018 to develop the AM guidelines for water utilities which aim to support the application of ISO 5500X standards to the water sector. In parallel with ISO work, I started to participate in IWA Leading-Edge Strategic Asset Management (LESAM) conferences to strengthen the communication on the latest trends of AM with the specialists around the world. I believe that a total of 5 participations since 2011 make me a real LESAMER!



Takayuki Sawai

With the release of the ISO 5500X in 2014, “Asset Management” has become a universal language. In Japan, it is not easy for most public utilities to implement this kind of management system, because of the business environment in such vertically structured organizations, the bottom-up approach based on on-site experience, etc. On the other hand, the concept of AM is being translated into practical applications and various support tools and technologies to promote the introduction of AM and improve asset analysis have been developed.

LESAM is the best platform to share those studies and experiences and to help find out what the suitable and applicable methods are for each country.

Through the activities of SAM-SG, I would like to spread proper understanding of AM as an initiative to continuous business improvement and disseminate new AM-related research and technologies which can be helpful for other countries. Looking forward to seeing you at the next LESAM!

## Dealing with COVID-19 with Asset Management

COVID-19 pandemic has struck us as an unprecedented and overwhelming reality. The water sector has a role to play in this global challenge.

Utilities need to reassure their stakeholders about potential concerns, stating that water does not constitute a relevant route of transmission and that, to date, no case of a faecal-oral transmission of the virus has been reported. In parallel, as there are reports on the detection of the virus in sewage, apparently sewage monitoring could be a sensitive tool to track the circulation of the virus in the population. Check the March 2020 WHO Interim Guidance on Water, sanitation, hygiene, and waste management for the COVID-19 virus (<https://www.who.int/publications-detail/water-sanitation-hygiene-and-waste-management-for-covid-19>) and also the IWA publishing handpicked articles, relevant to the ongoing efforts against COVID-19 (<https://www.iwapublishing.com/news/covid-19-related-resources-free-content>) for more information.

Also, utilities need to manage the impact of the COVID-19 pandemic on their staff and sustainability, as absence from work may lead to maintenance backlogs, deterioration of assets and reduction in service levels. Non-essential maintenance, repair and upgrade work will be deferred, possibly for months. Also, quite a few new building projects are on hold. Check this very interesting article on the subject: <https://www.linkedin.com/pulse/could-covid-19-set-infrastructure-owners-back-decades-iain-cranston/>.

In addition, in some countries, lowering taxes or eliminating the obligation to pay the water bill is under consideration. This line of support for residents in their lower income expectations, must be considered both in the short- and long-term effect AM analysis of the pandemic on water utilities. Cash flow issues, adding to staffing challenges, facility access during containment or quarantine and supply chain conditions, is becoming a major concern for utilities and infrastructure owners in general. We must learn from this experience. We have been impressed by how well prepared many utilities are, reacting to the immediate crisis. They have shown an agility to adapt that is quite remarkable.

This crisis, as all serious crises, is a must-not-miss opportunity to innovate, to make plans and act differently. Additionally, it is when resources are scarcer that their rational use becomes more important. We must act short term with a long term-thinking in mind. This situation may also force us to rethink our water systems, bearing mitigation of disruptions in mind. This might include the use of automation where possible to reduce reliance on staff, while maintaining service levels. We cannot afford to continue with like-for-like replacements when an asset reaches its end of life. We must rethink our infrastructures. Asset management addresses these concerns, as it is all about managing water infrastructure in a sustainable way, while dealing with performance, risk and cost, and keeping up with stakeholders' expectations. Also, intergenerational responsibility is at the core of AM – and we all agree we need to be prepared for any future global events like the one we face today.



## After LESAM 2019



In September 2019, the SAM-SG teamed up with the Benchmarking and Performance Assessment SG and the Canadian Water and Wastewater Association to organize back-to-back Performance Indicators and Leading-Edge Strategic Asset Management conferences in Vancouver, Canada. These biennial conferences attract specialists from all over the world, creating a wonderful forum to share and learn about the latest developments in these contiguous areas. Experts from 18 countries met for five days at the University of British Columbia's downtown campus and enjoyed the warm Canadian hospitality at social events in Vancouver's scenic harbor, at Science World and in Yaletown's pubs.

Performance indicators are not only used for regulatory reporting and internal or national benchmarking – they are increasingly used as the enablers of the asset management decision-making frameworks used by water utilities. This

became very apparent during joint panel discussions on Wednesday's common PI/LESAM day, and again in the LESAM section of the conference where utilities from every continent presented their challenges and solutions – including fast increasing adherence to ISO 55001 and adoption of advanced project valuation and portfolio optimization techniques.

A post-event survey reinforced the relevance of the LESAM conferences, with 90% of the respondents stating the conference format was either Good or Very Good. Similarly, 87% of the respondents thought the conference offered good value for money, and 85% felt they had gained valuable knowledge and insights, and made interesting new connections.

The next LESAM conference is planned in Bordeaux, France in autumn 2021.

## SAM SG Webinar

Do not miss our next webinar focused on how public policies can foster strategic asset management.

The sustainability of water infrastructure does not solely depend on the will of individual utilities to implement asset management. It is crucial to pave the way to service effectiveness and sustainability by including the asset management concern in the water public policies, with the right tools and incentives.



This webinar will bring together experts on public policy and regulation of water services and discuss:

- what public policy is;
- how public policy can foster strategic asset management;
- how different countries have been doing this.

The webinar will be approximately 1 hour and will take place on Wednesday, May 6, 15:00 Amsterdam time.

To join, kindly use:

<https://iwa-network.org/learn/how-can-public-policies-foster-strategic-asset-management/>



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## Meet the Asset Management champions: Copperleaf

### Decision analytics: driving capital efficiency in an evolving industry

Over the past century, the water industry has steadily increased its technical and business proficiency, while improving public health and protecting the environment. However, water utilities today are facing unprecedented challenges related to the stewardship of this robust yet aging infrastructure. Renewal and replacement of water and wastewater assets are key concerns, yet budgetary constraints and limited public support for rate increases are making it increasingly challenging for utilities to continue to meet service level targets and minimize disruptions.

As utilities evolve their strategy to adapt to these challenges, they must align their investment decisions to support new goals and objectives. They must focus their limited capital and labour on the continued quality and reliability of the essential services they provide, while

simultaneously investing in new technologies and initiatives to manage resource availability and meet future demands.

In a world of aging assets, and ever-increasing constraints, making decisions about which projects to invest in, and when, is no easy task.

For the last 20 years, Copperleaf has been helping utilities deliver capital efficiency. This means ensuring every euro is being spent in the most effective way possible - to maximize the value each project delivers to the utility, its customers, and society. Our experience and methodology have been incorporated into an enterprise software solution named C55 that has been adopted by some of the largest, most well-respected organisations in the world - across a variety of sectors.

### Decision analytics at work

A good example of why utilities might adopt Copperleaf's asset investment planning solution can be found at Anglian Water in the UK. When it embarked on a 10-year journey to improve its asset management practices, it recognised an opportunity to enhance its expenditure optimisation and planning capability, and establish an industry-leading investment planning practice.

While Anglian Water had a high level of investment planning maturity and capability, the Strategic Investment Management team recognized that advances in enterprise software and visualization could help the company stay at the forefront of investment planning best practice by addressing a number of key goals:

- Create a living plan from which any regulatory submission is a simple snapshot;
- Provide better insights into the risk and performance of the entire asset base;
- Bring together an understanding of asset risk, cost planning, project scoping, and investment plan optimization, alongside actual spend on in-flight projects;
- Integrate whole life asset management from cradle to grave, i.e. consider all costs throughout the lifecycle, as opposed to just assessing capital investments;
- Ensure investment decisions support the company's strategic goals and commitments - in alignment with ISO 55001 best practices.
- Predict the long-term needs of diverse assets: forecast asset sustainment needs based on risk and economics, and create an investment strategy that maximises business value while proactively managing risk.
- Optimise portfolios of investments to realise the greatest value: identify the optimal combination of investment alternatives and timing that respect all funding and resource constraints—and deliver the greatest value to your business.
- Manage portfolios to maintain the highest execution performance: establish a more efficient and effective process to manage investments through their full lifecycle. Track variances between planned and actual performance and re-optimize plans to drive continuous improvement.

Chris Royce, Anglian Water's Head of Strategic Investment summarises the deployment of C55 as follows: "We now have a fantastic solution that combines the power and capability of the core C55 solution with the maturity of the UK water sector. It's really exciting to see. This continuous planning and management capability really puts us in a new space.

From a functional perspective, the key thing is that Copperleaf comes at it focused on shareholder value and their top down financial optimization gives us an enhanced capability to build the best possible plan for our shareholders and customers."

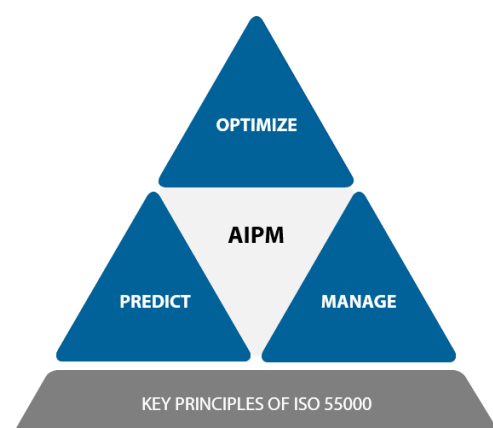
## Asset Investment Planning & Management (AIPM)

AIPM is a best practice that helps asset-intensive organisations make complex investment decisions with confidence. It can help identify and evaluate asset risks and opportunities, understand how they change over time, and make decisions that deliver the greatest value to the organisation. AIPM is highly aligned with ISO 55001 and provides an enterprise-wide platform that enables businesses to:

## Conclusion

Water is our most critical resource, and the reliability and resiliency of our water infrastructure impacts our health, our quality of life, our environment, and the economy. Decision analytics can help water utilities align investment strategies with the initiatives that will best address these key challenges — today and in the future.

For more information, visit [www.copperleaf.com](http://www.copperleaf.com).





# Asset Management Success Story

## IWA International SAM Forum 2020

19 NOV 2020 / BELGRADE / SERBIA



The International Water Association (IWA) officially supports the organization of an international high-level event dedicated to Strategic Asset Management – the **IWA International SAM Forum 2020**.

The event will take place in **Belgrade, Serbia on 19<sup>th</sup> November 2020**.

The **Organizers** of IWA International SAM Forum 2020 are: IWA SAM-SG, GIZ (Deutsche Gesellschaft fuer Internationale Zusammenarbeit), UTVSI (Association for Water Technology and Sanitary Engineering from Belgrade, Serbia), IAWD (International Association of Water Supply Companies in the Danube River Catchment Area, Vienna, Austria) and Hydro-Comp Enterprises (Cyprus).

With this event, SAM-SG aims to address all of its targets, which are to promote and disseminate leading-edge approaches to Strategic Asset Management; to promote regional activities, to leverage the participation of young water professionals and to consolidate an IWA vision, key principles and best practices of infrastructure asset management. The thematic **Focus** of the IWA International SAM Forum 2020 will be on:

- Resilience and climate change (adapting systems and making them more resilient);
- Sound public policy and standardization;
- Long-term planning (sustainable planning of AM measures).

Two keynote speakers, 8 to 10 presenters and over 50 delegates are expected to participate on the Forum.

Check if you are amongst the targeted **Participants** on the Forum:

- Members of IWA SAM-SG;
- International Financing Institutions (EU, EBRD, KfW, EIB, ...);
- Ministers responsible for the coordination of the Water Sector in South-Eastern Europe;
- National regulators in South-Eastern Europe;
- Academics from renewed universities;
- Water utility associations in South-Eastern Europe;
- Local government associations in South-Eastern Europe;
- Public utility companies in South-Eastern Europe;
- Young water professionals;
- Asset management experts and professionals.

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# News From IWA Headquarters

## [Information resources on water and Covid-19](#)

The Covid-19 pandemic is raising many questions for the water supply and wastewater sector around the world. This includes the public seeking reassurance about potential concerns. The organisations who provide water and wastewater services have to respond to this. Here we provide links to some of the leading and most respected sources to help support understanding and discussion at this crucial time.

## [Joining forces – IWA and AfWA](#)

The African Water Association (AfWA) Congress & Exhibition was hosted in Kampala, Uganda on February 20<sup>th</sup>, and it was also the venue of the IWA Board of Directors meeting. During this occasion, both organisations met to conceptualise a joint vision for the future of water professionals in Africa.

## [Climate Change and Water – 2020 World Water Day](#)

World Water Day 2020, on 22 March, was about water and climate change – and how the two are inextricably linked. Adapting to the water effects of climate change will protect health and save lives. Using water more efficiently will reduce greenhouse gases. We cannot afford to wait. Everyone has a role to play.

## [New dates for IWA events](#)

In light of on-going development of the global spread of COVID-19, a number of IWA events have been rescheduled, including the IWA Water and Industry Conference, the IWA Smart Solutions for Water Losses Conference, the IWA Digital Water Summit, and the IWA Leading Edge Technologies Conference.

## [Be a part of the Emerging Water Leaders Steering Committee 2020-2022](#)

We are looking for passionate, motivated young IWA members (aged 35 and below) to lead the IWA young water professionals community! This a representative body that will provide advice about appropriate ways to serve young professionals needs, and lead its community to contribute to IWA's activities.

## [Nominations for IWA Fellowship are open!](#)

Do you know anyone who has dedicated their lives to solving global water issues? Who is an IWA member? Who has made outstanding contributions to the national and regional water sector, as well as within the IWA? If so, submit your nominations before 29 March 2020!

## [Call for Nominations of IWA Distinguished Fellows now open!](#)

Do you know an IWA Fellow with a longstanding career and impact in the global water sector? Have they made extraordinary long-term (at least 10 years) contributions to the global water sector and held leadership roles performed in support of IWA's mission and objectives? Submit your nominations now!

## [AquaRating – Transforming Management of Water Utilities](#)

AquaRating is the new way to help you in transforming the management of water and sanitation utilities. It was discussed at the 20th African Water Association Congress and Exhibition in Kampala, Uganda, in February 2020, along with other innovations that accelerate access to water and sanitation for all.

## [IWA Launches a new Young Water Professionals Chapter in Canada](#)

A new IWA Young Water Professional Chapter has been launched in Canada, aiming to be an inclusive, forward thinking, and supportive community for all early career Canadians working in the water sector. It has the goal of gathering together early career professionals working in the country's water sector so that they can network and share knowledge.

## [Do you know the next IWA Young Leadership awardee?](#)

Do you know a young water leader who is making an impact by demonstrating leadership, setting goals beyond themselves, taking initiative, and motivating others? Someone who is a role model for his or her peers? Nominate them for the IWA Young Leadership Award before 6 April 2020.

## [The largest Water Utility in India and IWA engage](#)

The International Water Association and Chennai Metropolitan Water Supply and Sewerage Board sign Memorandum of Understanding for greater collaboration in India, with a focus on capacity development in the sector towards the goal of realizing water-wise cities.



## Selected Books

### **We Need to Change to Solve the Water Crisis: Humanity is not a Plague: How 10 Billion People can Exist Together**

*Cees Buisman*

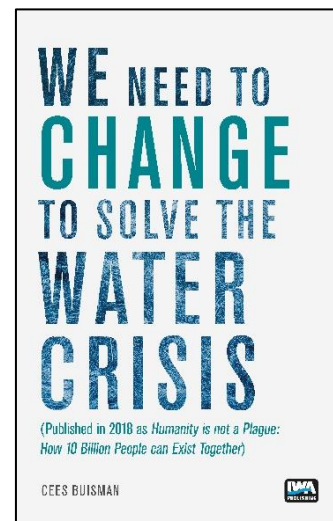
ISBN: 9781789061406

April 2020 • 144 Pages • Paperback

IWA Members price: £ 11.00 / US\$ 17.00 / € 14.00

<https://www.iwapublishing.com/books/9781789061390/we-need-change-solve-water-crisis-humanity-not-plague-how-10-billion-people-can>

In this essay, Cees Buisman sharply analyses some of the problems facing mankind, such as fresh water shortages, whilst overturning several clichés and offering unexpected, positive solutions. Overpopulation is not the problem; the effects of our actions on the rest of the world have a much greater impact. 'Back to nature' is not the solution, nor is an overreliance on science and innovation. In fact, large-scale technologies could even increase our problems.



### **Assessment of Treatment Plant Performance and Water Quality Data: A Guide for Students, Researchers and Practitioners**

*Marcos Von Sperling, Matthew E. Verbyla and Sílvia M. A. C. Oliveira*

ISBN: 9781780409313

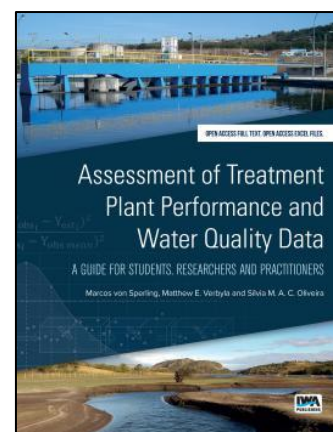
January 2020 • 640 Pages • Paperback

 **Open Access eBook: Available for FREE download!**

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<https://www.iwapublishing.com/books/9781780409313/assessment-treatment-plant-performance-and-water-quality-data-guide-students>

The major concepts are illustrated by 92 fully worked-out examples, which are supported by 75 freely-downloadable Excel spreadsheets. Each chapter concludes with a checklist for your report. If you are a student, researcher or practitioner planning to use or already using treatment plant and water quality monitoring data, then this book is for you!



### **Reducing Energy for Urban Water and Wastewater: Prospects for China**

*Kate Smith and Shuming Liu*

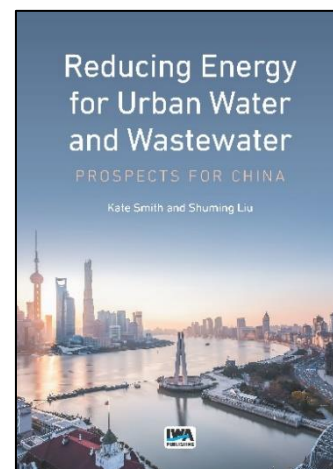
ISBN: 9781780409931

September 2019 • 170 Pages • Paperback

IWA Members price: £ 53.00 / US\$ 80.00 / € 66.00

<https://www.iwapublishing.com/books/9781780409931/reducing-energy-urban-water-and-wastewater-prospects-china>

Cities use large amounts of costly energy to supply water and treat wastewater, especially in China, one of the world's largest providers of urban water and sanitation services. Reducing Energy for Urban Water and Wastewater shows how cities can reduce energy use, cut costs and curb greenhouse gas emissions. First, it guides the reader through water supply and wastewater treatment, explaining how energy is used at each step.



## Selected Publications

### Capturing different perspectives on integrated urban water management issues

Lachlan Guthrie, Casey Furlong and Saman De Silva

*Water Policy*, March 2020

<https://doi.org/10.2166/wp.2020.200>

### Performance assessment of Swedish sewer pipe network using pipe blockage and other associated performance indicators



#### Open Access Article

E. Okwori, M. Viklander and A. Hedström

*H2Open Journal*, March 2020

<https://doi.org/10.2166/h2oj.2020.027>

### A review of nature-based solutions for urban water management in European circular cities: a critical assessment based on case studies and literature



#### Open Access Article

Hasan Volkan Oral, Pedro Carvalho, Magdalena Gajewska, Nadia Ursino, Fabio Masi, Eric D. van Hullebusch, Jan K. Kazak, Alfonso Exposito, Giulia Cipolletta, Theis Raaschou Andersen, David Christian Finger, Lena Simperler, Martin Regelsberger, Vit Rous, Matej Radinja, Gianluigi Buttiglieri, Pawel Krzeminski, Anacleto Rizzo, Kaveh Dehghanian, Mariyana Nikolova and Martin Zimmermann

*Blue-Green Systems*, January 2020, 2(1): 112-136

<https://doi.org/10.2166/bgs.2020.932>

## H2Open Journal

H2Open Journal is an open access journal that publishes original, peer-reviewed, internationally relevant articles covering all aspects of 21st century water research: fundamental science, application of science and technology and impact of societal, political, and economic factors.

It considers research papers, critical reviews and short communications; multi-disciplinary articles are encouraged.



#### APC's are waived until 2021.

Find out more here: <https://iwaponline.com/h2open>

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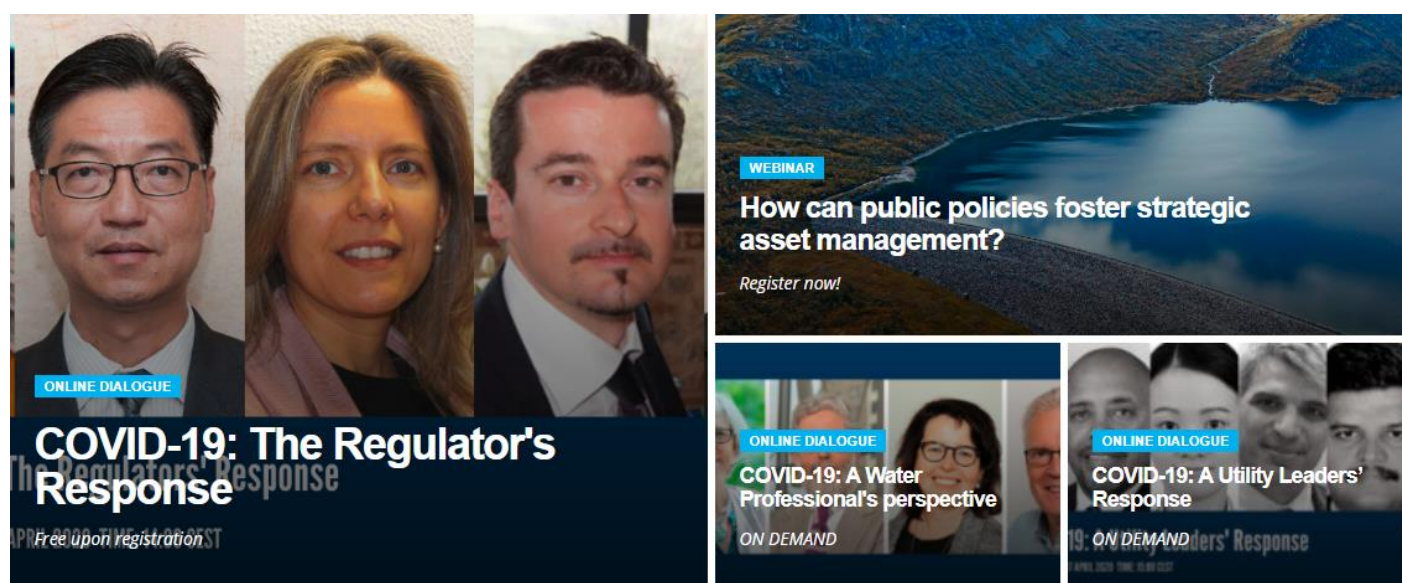
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## IWA Learn

### The place for learning & professional development in the water sector

Professionals in the water sector require continuous development to be able to stay abreast with the changing environment circumstances. No matter in which stage of your career, IWA provides you with guidance and opportunities to build up the competences required to succeed. This includes a set of tools on how to develop your career, as well as opportunity of professional updating, learning, training and networking.

To learn more, visit the IWA Learn platform: <https://iwa-network.org/iwa-learn/>



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**COVID-19: A Utility Leaders' Response**

ON DEMAND



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The Newsletter is an opportunity to share information worldwide: points of view; policy developments; research; activities and events. If you have an interesting project, comments, or are planning a conference or workshop, send it to us, including contact point for more information.

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