

# Buenos Aires Report

Conclusions, Key Messages  
and Outcomes

Water and Development Congress & Exhibition 2017



# Sustainable Solutions for Emerging Economies

“Developing and emerging economies will face some of the biggest and most disruptive water challenges over coming decades, but they also represent some of the biggest opportunities to deliver a sustainable, water-wise future.”

**Diane d'Arras** *President, International Water Association*

Water scarcity is one of the most pervasive challenges facing communities around the world; and water security is one of the most critical issues confronting countries and cities today. The pressures of rapid urbanisation, declining water quality, growing water demand and climate change, are driving water to the top of the political agenda. Leaders around the world increasingly recognise that water can be catalytic for raising living standards, driving sustainability and promoting development well beyond the water sector.

The IWA Water and Development Congress & Exhibition, held in Buenos Aires on 13-16 November 2017, was a unique opportunity to focus on water solutions that address these challenges in developing and emerging economies. The Congress convened more than 3000 participants from 82 countries to share knowledge and practical experiences; and to build new partnerships that accelerate change to deliver a sustainable water future.



“The global water community needs to accept the ‘new normal.’ This is characterized by climate change, increasing population, and the high demand for basic needs, and of course it is encapsulated in our collective ambition; to meet the Sustainable Development Goals”

says **Dhesigen Naidoo** *CEO of the Water Research Commission, South Africa*

## Thought leadership for a sustainable water future

Thought provoking plenary sessions with keynote presentations from some of the most prominent figures in the worlds of science, technology, industry, government, business and civil society, addressed the biggest issues facing water management in low- and middle-income countries, now and in the future. A major focus of the Congress was on how we achieve the **Sustainable Development Goals (SDGs)**, particularly SDG 6 on water and sanitation.



**Pablo Bereciartua** *Under Secretary of Water Resources, Ministry of Interior, Argentina*

In the opening session of the Congress, **Pablo Bereciartua** [video](#) delivered a vision to achieve the SDGs through Argentina's National Water Plan. **Henk Ovink** [video](#) (*Special Envoy to the Kingdom of The Netherlands*) argued that, because water is a connecting issue between energy, food, equality, security and the economy, we must seek transformative ways that convert water risks into opportunities.

“The future is more uncertain and more complex, and the solutions of yesterday will actually deliver more problems than they will provide solutions for the future.”

**Henk Ovink** *Special Envoy, Kingdom of The Netherlands*





The first day of the Congress opened with a focus on how to successfully fund the SDGs. **Guangzhe Chen** [video](#) (*Senior Director of Water Global Practice at the World Bank*) argued forcefully that the status quo was simply not an option if we were to raise the bar of access to water and sanitation. Funding the SDGs will require a “quantum leap” from current spending levels, particularly to achieve the “neglected” goal universal access to sanitation.

“Continuing with the business as usual approach we will simply have no chance to reach the Sustainable Development Goals.”

**Guangzhe Chen** *Senior Director, Water Global Practice, the World Bank Group*

**Eleanor Allen** [video](#) (*CEO, Water for People*) stressed the need for innovative financing if we are to quadruple spending from current levels, but stressed the need to address the three elements of “time and money and human capital” if we are to achieve the SDGs.

“We need more people in the water sector, to keep the infrastructure running and to make sure the level of services stays high.”



**Eleanor Allen** *CEO, Water for People*

Focusing on “neglected” sanitation, **Professor Barbara Frost** [video](#) (*University of Leeds, UK*) cautioned that universal access to sanitation shouldn't just focus on technologies and one size fits all solutions. Sanitation problems are complex and systems and services need work in a specific context, must be affordable to run, and have the right management and regulatory structures.

“I would like to see engineers, economists and urban planners deploying all of the tools we have to solve the specific problems you find in cities.” –

**Professor Barbara Evans** *Leeds University, UK*

The final plenary of the second day shared the vision of three emerging water leaders: **Suvritha Ramphal** (*Royal Danish Embassy, South Africa*), **Rianna Gonzales** (*Water Resources Agency, Trinidad and Tobago*) and **Yang Villa** (*Metro Pacific Water, Philippines*), that stressed the need for utilities to lead industry-wide and social innovations that extend traditional business models and adopt a full-ecosystem and nexus approach.

This was followed by a special keynote from **Professor Jeffrey Sachs** [video](#) (*Columbia University, USA*) who spoke of the need to look beyond the **3Rs** of Reduce, Reuse and Recycle, to the **3Ts** of Trading water virtually, Transforming unsafe water to be usable, and Traits of crops that can use saline water, as well as the **3Fs** of Finance, Fairness and Funding.

The final day of the Congress was opened by **Dhesigen Naidoo** [video](#) (*Water Research Commission, South Africa*) spoke about how the water profession must change if it is to navigate the “new normal”: a world in which climate change, population growth and growing demands for safe water and sanitation. Not only do we need new solutions, we need to do differently those things we do currently.

The final keynote of the Congress was delivered by **Benedito Braga** (*President, World Water Council, Brazil*). Stressing three pillars of water security: human security, socio-economic security and ecological security, but concluding that water resources management was ultimately a political issue.



**Barbara Evans** *Leeds University, UK* and  
**Marco Antonio Cevallos** *EPMAPS, Ecuador*

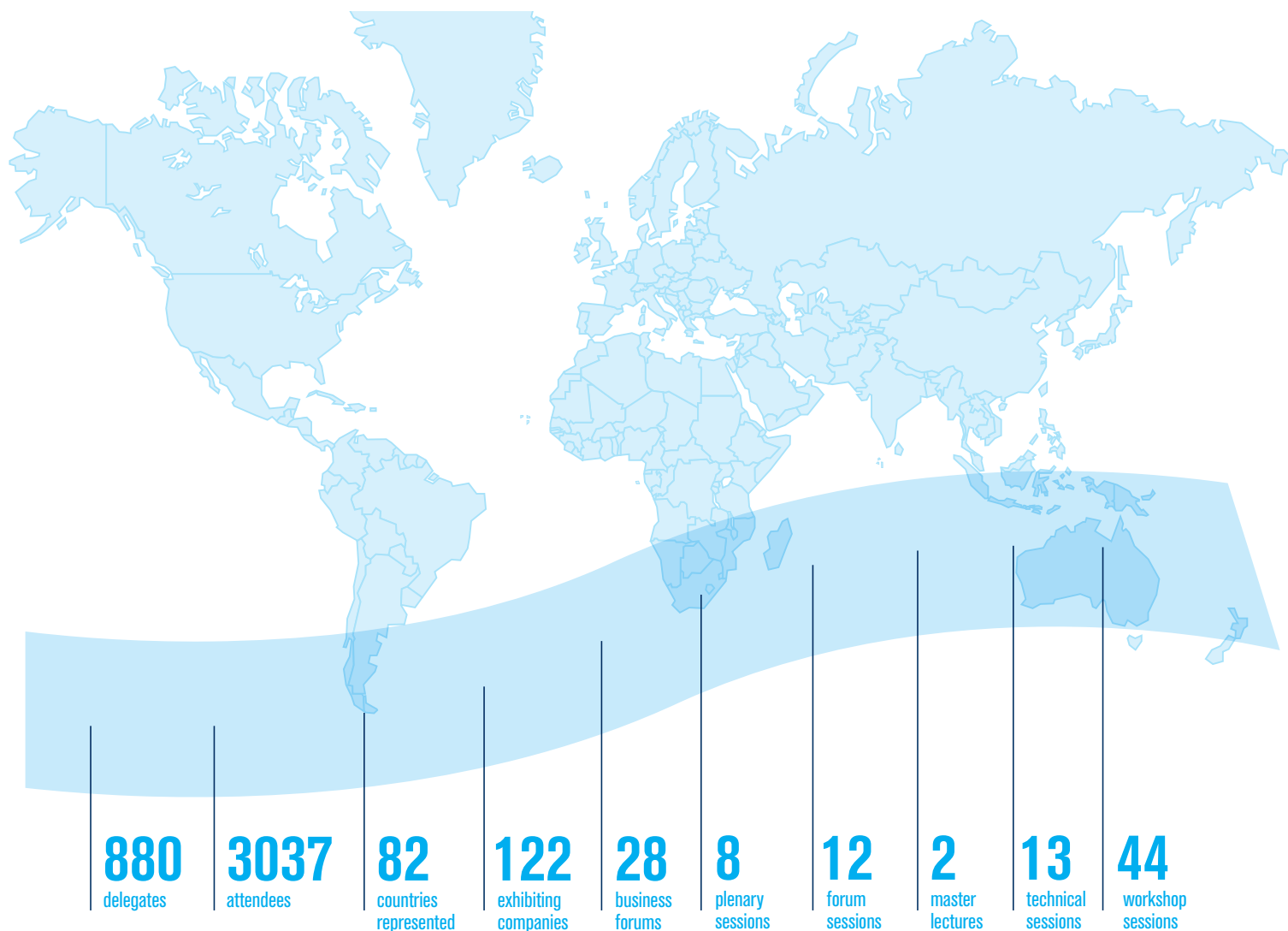
## IWA Development Award

Made in recognition of an outstanding innovation or contribution to science or practice leading to a demonstrable impact at national, regional or international levels in low- and middle-income countries. The 2017 IWA Development Award for Practice was made to **Marco Antonio Cevallos** (*EPMAPS, Ecuador*); the 2017 IWA Development Award for Research was made to **Professor Barbara Evans** (*Leeds University, UK*).

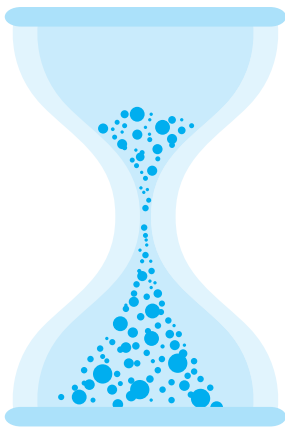
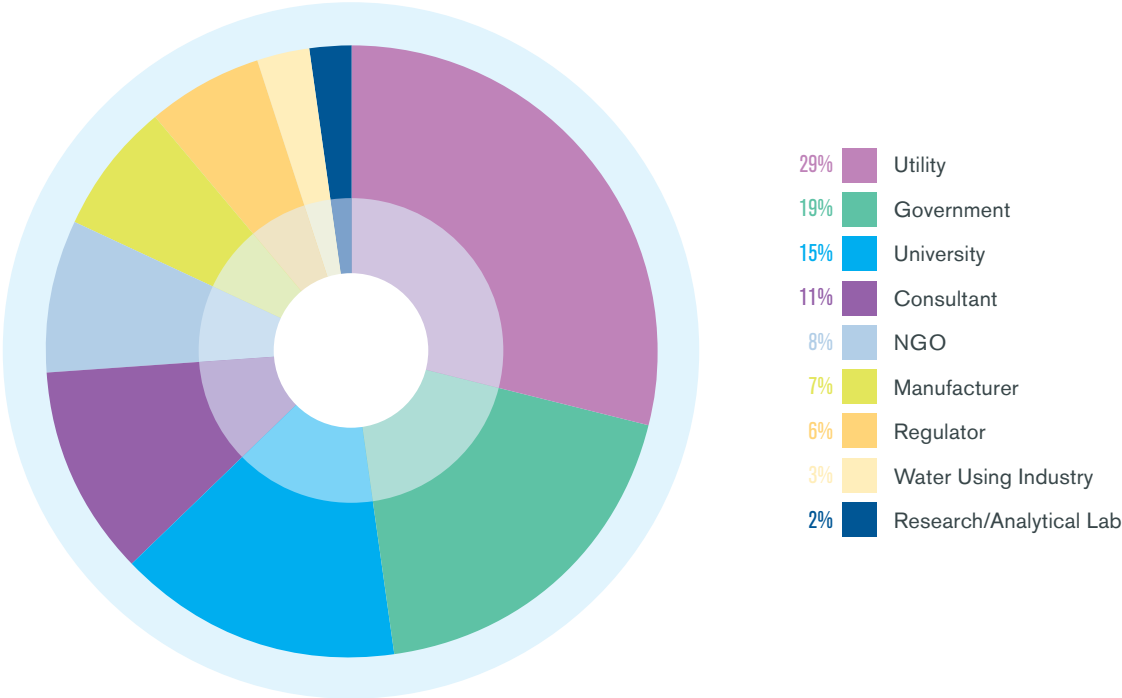
# The IWA Water and Development Congress & Exhibition:

## Sustainable Solutions for Emerging Economies

The IWA Water and Development Congress & Exhibition 2017 was a unique event focused on water solutions for developing countries and emerging economies. It brought together internationally renowned leaders in the sector to share knowledge and practical experiences; and to build new partnerships that accelerate change that delivers a sustainable water future.



What type of organisation do you work in?



**144 hours**  
of shared knowledge



**78 Media Participants**  
55 print media articles / 17 Radio and TV articles

## Theme 1

# Efficient utilities as drivers of Sustainable Development

Short-termism is a problem in many businesses and organizations, but for water utilities it is both pervasive and damaging. Many, if not most, utilities operate with only the short-term in mind. We can see this in the way they are reactionary rather than proactive: they tend to fix problems rather than plan ahead for resilience and sustainability.

Several factors contribute to this short-termism; it has a deeper cause than just failure to plan. Financial constraints force utilities to spend for bare survival with little or no investment in long-term maintenance and operational sustainability. Political interference often changes the utility's priorities and agenda every few years, as opposed to following a long-term systematic approach. Poor management and governance exacerbate these problems and lead utilities into a spiral of debilitating inefficiency.

Inefficiency manifests in various and interlinked aspects of utility operations. For example, high non-revenue water – prevalent among utilities in developing countries – results from inefficiencies in network operations, asset management, and commercial controls. The lack of skilled manpower, from operators to managers, is a result of inefficient human capital development, not only within the organization but in the water sector as a whole. The deprioritization of wastewater is symptomatic of inefficiency, for efficient utilities would naturally endeavour to achieve resource efficiency and recovery.

When utilities are relied on by millions of people for basic water and sanitation services, they must urgently address the inefficiencies that inhibit sustainability and resilience. Utility inefficiency threatens universal access to water and sanitation, one of the key targets of Sustainable Development Goal (SDG) 6. In addition, inefficient utilities compromise the sixteen other SDGs because water and sanitation are a pre-requisite and enabler for their attainment.

Utilities are in a position to drive the Sustainable Development Goals forward provided they strive for and continue to ensure efficiency. Water professionals must work together to achieve utility efficiency, and ultimately combat the short-termism that stalls sustainable development. Water professionals have always been agents of change in a consumptive and wasteful world. We have an inherent responsibility to shape and direct the sustainability agenda, and indeed we are in the best position to lead the achievement of SDG 6.

The challenges facing water professionals today are unlike at any other time. We are now experiencing the consequences of decades of destructive consumption. Likewise, we are now expected to lead the “nexus” approach which acknowledges the intertwined aspects of water for potable use, energy, and food production to create an environmentally sustainable balance. The demands on water professionals today are significant and urgent.



There are many obstacles that still hold back the potential of utilities and water professionals to lead the sustainability agenda. They can be summarized in terms of financial, human capital, and social constraints that breed inefficiency.

Financial constraints limit the ability of utilities to invest beyond the short-term. When the business model of a utility does not follow a full-cost recovery approach, it cannot cope with the demands of sustainable operations. Raising capital to invest in the sustainability and resilience of utilities is also a struggle especially for emerging economies.

Underdeveloped human capital limits the ability of utilities to operate optimally. Many schools and universities are ill-equipped to train future water professionals, from the operator to manager level. The gap in knowledge and skills only widens as new technologies and innovations emerge, and as water demand rises with population growth and rapid urbanization.

The lack of broad partnerships limits the potential of utilities to achieve social ends. Social innovation in the water sector is still largely underdeveloped. Many utilities still operate on the basis of infrastructure provision, that is, the expectation that social goals such as health and well-being can be addressed by the mere provision of water and sanitation facilities.

As complex as these issues may be, water professionals must hurdle them in order to combat inefficiency and transform utilities for sustainability. The solutions arising from the 5th IWA Water and Development Congress point towards a way forward. Themed “Sustainable Solutions for Emerging Economies”, the Congress emphasized the ways water professionals can transform utilities to develop an understanding of its role in sustainability, and indeed lead the achievement of SDG 6.





The role of the private sector and public-private partnerships were highlighted as key sources of financial capital to complement funding from government and international financing institutions. Guangzhe Chen of the World Bank advocated maximizing finance for development by ensuring that utilities efficiently use funding towards the fulfillment of the SDGs.

Competency-based approaches were favored as a framework for understanding and filling the capacity and professional development gaps in the water sector. More cost-effective ways of training water professionals were explored, such as the IWA's implementation of an e-learning platform. Eleanor Allen of Water for People presented case studies from which other water professionals can learn in order to shorten the learning curve in designing and implementing SDG-oriented solutions.

Finally, utilities must establish broad partnerships in order to shift towards a service-oriented mindset – a human-centric, sustainability-minded, and socially-conscious approach which Barbara Evans of the University of Leeds said can spur more innovations towards achieving SDG 6. The Emerging Water Leaders Forum suggested that, in order for utilities to promote resilience, innovative partnerships must be established with more stakeholders across the water cycle.

## Theme 2

# Sustainable Operations & Maintenance of water and sanitation systems

The failure to prioritize the operation and maintenance of water and sanitation systems has been an issue for decades. International agreement on achieving the Sustainable Development Goals has placed water and sanitation at the heart of the Goals, and has shone a bright light on how poorly this critical part of our water and sanitation systems has been resourced.

A lack of financial resources and poor investment in operation and maintenance of existing and new infrastructure is the biggest challenge to sustainable operations. This is often caused by (political) unwillingness to invest in outcomes that cannot be shown to the public, shareholders, board, and other stakeholders. This is particularly the case in the public sector, where job positions and elections may depend on demonstrable impact.

Another reason for poor financial investment is a lack of understanding of what the operation and maintenance requirements of new technologies and systems are. Thus includes the need for staff capacity and the cost of creating the processes to implement these new systems. Last but not least, there is a lack of data on existing systems and their assets. The result? Investment decisions are often poorly informed and an overall lack of resources for operation and maintenance.

One example was in Buenos Aires itself, where a large Wastewater Treatment Plant currently runs at only 1/3 of its operational capacity, and a lack of training and skills mean staff have difficulty operating and maintaining it.

The lack of human resources capacity in the operation and maintenance departments is the second key obstacle constraining the sustainability of our systems. Operators in developing and emerging economies generally have lower levels of education (certificate/diploma level), and are (often) significantly undercompensated. The remuneration packages are sometimes “appalling” and the risk of losing an already limited workforce to better paid jobs is ever present. The staff that remain behind often become demotivated.

The sector also struggles with a capacity gap, in part because of “brain drain”, but also because as technologies advance and investment in infrastructure is made, insufficient investment is committed to train staff to operate the technologies, and create and manage a systems new processes. Overall, many utilities lack adequate human resource management to plan the needs of the operations and maintenance workforce, attract new staff, work on career paths, and provide competitive compensation schemes.

Systems operation and maintenance in many developing and emerging economies is still largely reactive. This firefighting approach results in quick fixes rather than long-term sustainable solutions.

This overall lack of resources and planning manifests itself in various and interlinked ways in the system: non-revenue water, systems failure, breakdown in services, poor or bad quality services and dissatisfied customers. At its most extreme it can create health problems for customers.

The Sustainable Development Goals requires us to move to what Professor Barbara Evans referred to as “A service delivery approach”, and away from the “infrastructure delivery approach”. This will require the water sector to move towards investment in operation and maintenance above and beyond investing in infrastructure.

It would mean a holistic approach towards decision making for investments in new infrastructure. This must involve operations and maintenance department heads (and their staff) when considering the technologies, the context, the geographical fit, the existing system, the staff and their capacity versus what they would need to learn, the financial operation and maintenance investments, the longer term planning of the assets and their replacement.

It would require utilities to move towards a step-by-step implementation of a human resource management system. It would include improved knowledge of the (operation and maintenance) workforce; and a better planning and tracking of staff competencies, skills, ability and knowledge that translates to action. One example is the Competency Based Learning Framework, which could be adopted to clarify the higher level of competency increasingly expected of individuals. This model has been said to increase motivation among employees, as they know exactly what is expected of them.

It would require investing in a risk management or asset management system, starting from simplified action plans and moving towards more detailed planning and processes. And taking on these larger projects, can well be outsourced to an expert that works closely with the in-house team. It is vital that the expert knows and understands how to make implementation of new processes and procedures successful.

It would require improved communication and engagement with the public, and with municipalities in terms of reporting failures and or illegal connections, planning repairs, and in case of emergencies, such as floods, droughts, and water contamination. Having an established communication process with the public, as well as crisis communication policies and procedures, is critical to achieving sustainable operations and maintenance.

Whilst this may sound daunting at a time where all areas of the water sector have become incredibly important in light of the Sustainable Development Goals, and demanding in terms of actions needed, the Sustainable Development targets 6.1 and 6.2 will not be met if operation and maintenance is not prioritized.

We can only hope professionals, sector leaders and financial institutions will prioritise investment in operation and maintenance, seeing it as a return on investment by avoiding high costs of reactive maintenance, avoiding early-replacements of systems that break down, reducing non-revenue water, and even reducing energy costs. If that does not convince them, let's hope that improved services, customer satisfaction, reduced health risks and, in the end, the expansion of access to services will do the trick.



## Theme 3

# Integrating cities and water

The world we live in today is marred by inequalities in service delivery, income disparities and an advancing but uneven rate of technology adoption. With two thirds of the world's population expected to be concentrated in urban areas in 2030, authorities, urban planners and service delivery providers are faced with the very real challenge of navigating this “new normal”, balancing the needs of growing urban populations with increasing pressures on water availability, water quality and the impacts of climate change.

In his keynote address Yang Christian Villa said “the forces that have shaped the world to what it is today cannot bring us to where we want to be in the future. The way we understand our place in the environment, the way we conduct our businesses, and the way we relate to one another all have to change in order to build and maintain business, governance, and social resilience.” In the global water community our roles are being challenged. We need to recondition our thinking and adopt a business-unusual approach. We need to “fall in love with our challenges”, Villa argued, rather than with a tunnelled vision solution. We need to do this as of yesterday.

There is a role for everyone to play in navigating the “new normal” towards building a more resilient city in 2030. Global professional bodies, like IWA, could facilitate and fast-track learning from stories of success and failure in contributing to SDGs, with the aim of shortening the learning curve.

The technological or digital revolution demonstrates huge successes in improving water management and efficiencies along water and sanitation value chains. However, in low- to middle-income countries, servicing development needs have not kept pace with technological advances. In Argentina, some water utility companies prioritise an upgrade in utility technology systems over expanding provision for basic services, most notably sanitation services. There needs to be a balance between meeting basic needs of cities and upgrading or advancing systems. There needs to be more emphasis on integrated urban water management planning.

Professor Jeffrey Sachs argued that, for this to succeed, stakeholders of the 3 “R’s” of reduce, reuse replenish (government authorities, recycling companies, knowledge institutions) must work together with stakeholders of the 3 “F’s” and 3 “T’s”: Finance, Fairness and Funding (financiers, government authorities and civil society), and Trade, Transform and Traits (technology providers, law courts, and innovators).

Can this be interpreted as a new model for integrated urban water management planning? We know that investing in green and natural infrastructure pays off and can deliver multiple benefits to a wide range of stakeholders, and this inclusive, open platform is what cities need to build resiliency.

To be successful, this agenda must urgently address immense global sanitation problems. Solutions should be tailored to maximise wastewater as a resource for drinking water and other non-potable uses for fast growing urban populations. The “Sanitation Revolution” demands better planning, to include the whole sanitation value chain in combination with the water value chain when thinking about urban water.

This raised the question of whether we have enough wastewater to reuse and is there a market for it? In low- to middle-income countries the market for reuse and recycling of wastewater has not yet matured to the level of developed countries like Denmark, who are involved in industrial symbiosis - sharing of waste streams generated between wastewater and energy as inputs into industrial processes.

The incentives for integrating the sanitation revolution way of thinking is insufficient or in some cases not a priority in countries whose priority is to secure access to safe water and basic sanitation for all, before considering alternatives to water such as wastewater. This is observed in countries where standards and technologies have been adopted that are far too advanced for their present needs, leading to unproductive and unsustainable systems.

To put this into context, Guangzhe Chen of the World Bank stated that the world needs \$4 trillion in order to meet the SDG targets by 2030. Public sector money alone will not be sufficient to fill this gap. In trying to find the money, we must balance priorities between upgrading and advancing systems to ensure the infrastructure can cope with the increased usage, versus expanding service provision for an ever-increasing urban population.

So what does this mean for our future? Is a resilient future for all possible?

At the Emerging Water Leaders Forum, there was consensus that the vision of future cities is a shared, inclusive and open vision of the 3 Rs, 3 F's and 3 T's that Professor Jeffrey Sachs highlighted.

This is a future that ensures technology providers talk to the needs of the people and the capabilities of the water services entities; where architects, designers and engineers listen to the needs of the environment rather than the needs of capitalists; where future water leaders have a say in what their future city will look like. This is a future that ensures everyone is included in the conversation towards an all-inclusive, all-encompassing, resilient city that balances the capacity of the environment against the growing needs of a growing population.

## Theme 4

# Connecting basins and the cities that depend on them

### Water, a limited but critical resource

As the global population continues to increase, industries to grow and urban areas to expand, the need and demand for water is intensifying whilst the quantity of water on the planet remains the same.

Groundwater sources are being over-abstracted and recharge rates are reducing due to increased paved areas. Surface water flows are being impacted by human infrastructure and a changing climate is creating irregular patterns of rainfall, affecting water availability. Declining water quality due to industrial, agricultural and other human activities is also affecting the amount of available clean water. The result is less water to accommodate the needs of growing cities and urban populations, placing intense pressure on water basins.

How can cities and industries move forward to ensure that the basin on which they depend is protected? How can they make sure they have enough water to meet current and future needs?

Cities, and the utilities and industries operating within them, are key economic hubs. The way they manage water can make or break prosperity within a basin. These urban stakeholders have a critical role to play in preserving freshwater resources. City, industry and utility leaders have a critical stake in developing a healthy catchment, and they are vital to ensuring basins are protected. They can play a leading role in the planning and management of water resources from catchment to consumer, meeting growing demands and responding to the challenges of climate variability and change.

Improved water resource management requires stakeholder participation in planning and management from catchment to tap. To build successful partnerships and collaboration, governance strategies need to be improved and applied. Good governance is important and can create mechanisms to bridge the gap of mistrust to trust, which is important in executing projects.

There are a number of mechanisms by which urban stakeholders can better contribute to improved water resources management.

First and foremost, aligning urban development with basin management needs to be the new standard for all stakeholders. Planning a city's growth cannot happen without planning its freshwater resources, and assessing whether the basin has the capacity to balance the growing human needs of the city with ecosystem needs.

This could result in urban stakeholders investing in water solutions. In Peru, water regulator, SUNASS, is promoting a new policy mechanism for ecosystem services. This involves an agreement between upstream and downstream users through water tariffs. 1% of the fees go to upstream conservation and restoration of the ecosystem, positively impacting the efficiency

and effectiveness of the utility downstream. Raising water tariffs in industries where they are very low is seen as important, as this supports a conservation mentality undermined when excessive water use doesn't affect profits, or where using more water is cheaper than implementing a more water efficient approach.

There is an impetus towards investment in data and information systems to improve water resource management decision making through better predictions and forecasting. One area of focus is hydrological modelling to help predict and forecast hydrological extremes such as floods and droughts. The [Flood and Drought Portal](#) demonstrates the possibilities for modelling and how it can be used to prepare for and manage the challenges and risks caused by floods and droughts. This would allow a move from reactive planning to implement a risk-based approach that combines sensitivity analysis with cost benefits analysis before making strategic decisions.

Urban stakeholders must collaborate on integrating natural infrastructure to complement and optimise grey infrastructure to help address competing water needs. Natural infrastructure, if done right and under the right conditions, can prove to be as effective as grey infrastructure, while potentially providing a number of additional benefits.

For example, reducing flood risk by slowing and reducing stormwater discharges, which translates into reduced combined sewer overflows and lower pollutant loads. It can also have a positive effect on health, socio-environmental and economical benefits, improved air quality, creating green and recreational areas, and promoting green jobs.

There are still various challenges to implement natural infrastructure, including how we engage large water users, such as water utilities, to invest in natural infrastructure that provides services beyond their mandate. There is a need for financial models that divide the investment across urban stakeholders. Another challenge is the gap in scientific knowledge and guidance on how to build governance structures that allow green infrastructure to be managed across various actors and parts of the city. Without scientific evidence, it is hard to receive investment funds to explore nature-based solutions. The Nature Conservancy's Water Funds seeks to fill this gap and create a bond between upper and lower watersheds as well as its users.

These solutions can be summarized into three areas: 1) Incentives for sustainable basin management; 2) Data and information systems; and 3) investment of green infrastructure. It is important to customize the solutions taking into consideration not only the physical characteristics, but the socio-political and cultural characteristics. From the discussions and research, the will to move forward and effectively connect basins with the stakeholders that depend on them is there, but the pace of progress is not keeping pace with the challenges.



## The vision moving forward: The Basin Action Agenda

The *IWA Basin Action Agenda* is a call to action for basin-connected cities. The Basin Action Agenda will support the **IWA Principles for Water Wise Cities**, and provide pathways to enable urban stakeholders to secure sustainable water resources, protect water quality, and prepare (and respond) to extreme events.

The Agenda outlines the rationale for urban stakeholders to lead the way in realising their role as water stewards, and the different pathways and activities towards achieving more integrated water resources management from catchment to consumer. Many of these actions are already happening and the Agenda provides a framework for showcasing best practices to inspire urban end users to be aware and respond to what is happening in their watershed.





## Theme 5

# Water Policies, Regulations and Multi-Stakeholder Collaborations

“The global Water Community needs to accept the New Normal. This is characterized by climate change, increasing population and the high demand for basic needs, and of course it is encapsulated in our collective ambition; to meet the Sustainable Development Goals” said Dhesigen Naidoo (WRC South Africa) at the IWA Water Development Congress, whilst arguing that we need to do things differently.

Add the Human Right to Water and Sanitation (HRWS) and Paris Climate Agreement to the Sustainable Development Goals, and it is clear that countries need to spend significant time working on reforming multiple and interlinked sectors. But getting started on working differently is not easy as it sounds. There are several water governance issues that fuel uncertainty and hamper reform. These include:

- A failure to recognise inequality in access of water and sanitation of stakeholders at different levels;
- A disconnect between water organisations and decision makers;
- A lack of data, or at least trustworthy data, and missing connections to make decisions that benefit multitude of actors and sectors;
- There is still a lack of transparency and insight into policy and decision-making.

Reform will require interlinking everything connected to water: all sectors dependent or affected by water (energy, food, economic, environment, health); all the stakeholders involved (policy, science, practice, communities); and sharing all data (water availability, use, quality). It will be like creating a matrix organisation at national scale.

If we take the example of water scarcity, which increasingly affects many sectors and stakeholders, how will we manage water more widely to overcome water scarcity? We need to get the right people together, collect and analyse the appropriate data, so we can discuss and put forward alternative solutions, and use commonly agreed criteria and weighting scales to make informed decisions.

Whilst desalination is considered a costly solution to address water scarcity, using desalination in coastal cities might be cheaper, and more water and energy efficient, when the other option is transporting water from a distance. Decentralised techniques may also create energy savings, and thus water savings. Perhaps using green infrastructure as treatment method is sufficient for particular water uses, reducing energy use for treatment. At a minimum, it can help avoid untreated wastewater dumped into the environment from negatively impacting on human and environmental health.

These examples highlight that improved water governance can help sectors come together to plan the implementation of solutions that can help achieve multiple Sustainable Development Goals simultaneously.

To seek tailor made reforms, the global water community needs to understand that “the notion of the global project is critical, as no one can do this alone” said Dhesigen Naidoo. Experience,

knowledge, and evidence-based development need to be shared across the globe to kick-start reforms in at country level.

To achieve the Sustainable Development Goals (and in particular Goal 6) at national level, there is a need to focus on political prioritization, promoting evidence-based development (using evidence from other countries can be vital), and strengthening national planning processes across interlinked sectors.

Regulators will play a vital role in ensuring that the drinking water, sanitation and wastewater targets under Sustainable Development Goal 6 are met by 2030. This process already started in 2010 with the announcement of the Human Right to Water and Sanitation. The SDGs and the Human Right to Water and Sanitation reinforce each other. Each country must have their own regulatory framework, but the most important thing is that those frameworks emphasize national priorities and the most vulnerable people (the poor, homeless, victims of conflict, or those affected by natural disasters and the effects of climate change).

It has been challenging to ask regulators to implement the Human Rights to Water and Sanitation in countries that do not make important and essential information regarding water and sanitation public. Open dialogue, public disclosure and participation are essential, even while challenging to integrate.

Regulators need to better understand their role in the water and sanitation sector, bridging the gap between science, policy and community needs, which in turn leads to policy formulation that can satisfy the needs of consumers. There is a critical balance that all regulators need to keep in mind: new infrastructure, operation and maintenance of infrastructure, quality and sustainability of services (including financial sustainability), and the financial burden on customers (tariff-setting and affordability).

The biggest challenge to implement the global goals identified by regulators is not finances, it is the capacity of regulatory staff (both in numbers and competency) and the lack of interaction and participation of communities.

To transition to this sustainable model of service delivery with cost recovery and customer-oriented solutions, requires attracting new staff, and capacitating and changing behaviours of existing staff. It requires a staff able to work together, to co-produce knowledge and action that enhances the likelihood that findings, models, and decision support tools are scientifically credible, solutions-oriented, and relevant to management needs and stakeholder perspectives.

It is clear that the water governance, policy and regulation discussions of the future should not be discussed in isolation. They must be integrated in their respective themes, such as water and sanitation services; discussing quality standards and enforcement of drinking water quality, or of wastewater released into the environment, as well as customer engagement and participation discussions must raise issues of affordability and how information about regulations are moved to the customer. Regulators are the key stakeholders who can make this happen.

## Rapporteurs Recognition Buenos Aires



**Arlinda Ibrahimllari \***  
*Technical Director*  
*UKKO Joint Stock Company*  
*Albania*



**Charity N.Wambui Supeyo \***  
*Corporate Affairs Department*  
*Nairobi City Water & Sewerage Company Ltd*  
*Kenya*



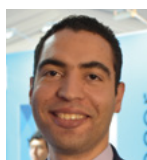
**Corina Nigro**  
*Chemical Engineer*  
*Agua y Saneamientos Argentinos S.A.*  
*Argentina*



**Dijana Draganovic \***  
*Hydro Advisor*  
*GIZ*  
*Albania*



**Dizzanne Billy**  
*Climate Tracker and Creative Director - Content, Strategy, and Account Services*  
*Paradox Studios/Life in Trinidad Marketing Ltd.*  
*Trinidad and Tobago*



**Hassan Tolba Aboelnga \***  
*Board Member*  
*World Youth Parliament for Water WYPW*  
*Egypt*



**Isaac Monney \***  
*Lecturer*  
*Department of Environmental Health and Sanitation University of Education Winneba*  
*Ghana*



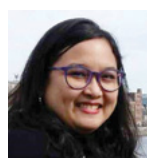
**Mohamed Hassan Tawfik \***  
*Consultant*  
*International water Association (IWA)*  
*Netherlands*



**Ntelekoa Mohasi**  
*Wastewater Manager*  
*Water and Sewerage Company (WASCO)*  
*Lesotho*



**Oscar Nunez**  
*Water Resource Specialist*  
*Superintendencia Nacional de Servicios de Saneamiento*  
*Peru*



**Palsiri Srirungruang \***  
*Scientist*  
*Metropolitan Waterworks Authority*  
*Thailand*



**Rianna Gonzales \***  
*Senior Water Planning Officer*  
*Water Resources Agency (WASA)*  
*Trinidad and Tobago*



**Sofia Amelia Castro Salvador \***  
*Coordinator of Institutional Affairs of Institute for the Sciences of Nature, Territory and Renewable Energies (INTE)*  
*Pontificia Universidad Católica del Peru, Peru*



**Suvritha Ramphal \***  
*Program officer for the strategic water sector programme*  
*Royal Danish Embassy*  
*South Africa*



**Vivien Newumbe \***  
*Principal PRO*  
*National Water and Sewerage Company*  
*Uganda*



**Yang Villa \***  
*Senior Manager for Public-Private Partnerships & Lead for Industry Innovation*  
*Metro Pacific Water*  
*Philippines*



**Yoany Sánchez Cruz**  
*Head of the Geographic Information System Department. Planning System, Technical Division.*  
*Aguas de La Habana Company*  
*Cuba*

**\* IWA members**

# Building water cooperation through a truly global Exhibition



A unique strength of the IWA Water & Development Congress and Exhibition is the seamless integration of the conference's leading-edge science and technology focus, with world-renowned water companies, utilities, governments, NGO's, research institutes and civil society organizations participating in the exhibition.

Designed to provide new networking and business opportunities, and to ensure maximum engagement between participants and exhibitors, the exhibition was at the heart of the four-day event. In Buenos Aires over 122 exhibitors, including country and thematic pavilions, and 3,072 participants over the four days of the event, made it a vibrant and valuable place for networking and doing business.

The exhibition presented a full picture of the global water sector: water utilities, governments, consultants, contractors, and technology providers presented their contribution to sustainable solutions in emerging economies globally. Individual exhibitors underlined the business power of their presence in the exhibition, and an analysis of exhibitors has shown that 90 percent considering their experience to be at or beyond their pre-event expectations.

"The African Water Association, as the leading organization in the WASH sector in Africa, is and will always be where important stakeholders gather to talk about drinking water and sound sanitation services, as well as environment, hygiene and climate change. That's the main reason for our participation in IWA congresses around the world, where we can highlight and share African expertise." -

**Sylvain Usher** *Executive Director of the African Water Association*







The balance between the conference and the exhibition, and excellent networking opportunities, were highlights for many. As was the Business Forum programme. With almost 50 sessions organized during the week, exhibitors used the Business Forums to showcase their thought leadership and technological innovations to a broad spectrum of attendees.

“The 2017 World Water Congress is an excellent opportunity for Serviur to show the full potential of the organization and to strengthen commercial ties between the private and public sector. A great occasion to reinforce our trademark image and connect with a highly qualified public. We believe that cultivating public-private partnerships is crucial to the longterm sustainability.”

#### **Serviur**

The exhibition had a focus on countries and global regions, as well as critical areas of the global water sector. One example was the Desalination & Water Reuse Pavilion, organized in by Aladyr, which showcased innovative technologies and companies from around the world.

“The IWA Water and Development Congress & Exhibition 2017 in Buenos Aires will give ZENNER a big opportunity to take its place in the global water community. We will show our intelligent and robust solutions for water, heat and gas metering for utilities and industry. The ZENNER product line includes apartment, residential and bulk water meters, heating and cooling meters, gas meters and up-to-date system technology such as remote-controlled radio and M-bus systems.” -

**Hanns-Josef Thiedes** *Export Director, ZENNER*

Solving global water challenges is at the heart of the Exhibition. The unique ability to bring all elements of the water sector together to debate and find solutions to these challenges is both its strength and attraction.

“Winters Instruments feels privileged to be involved with this important global event. We are excited by the opportunity to meet with so many inspired, passionate professionals who are tackling the world's water issues head on. As a manufacturer of lead free brass and wastewater instrumentation, Winters looks forward to meeting with attendees at the IWA Water and Development Conference & Exhibition to share our experiences and learn from their experiences.”

#### **Winters**



The IWA WDCE 2017 Buenos Aires is an excellent opportunity to showcase our unique pump systems designed for abrasive fluids and corrosive fluids. While we already work with AySA and leading water treatment entities in Argentina, the drive to upgrade water and effluent treatment plants creates fantastic opportunities to introduce new pump technologies that increase reliability and controllability and reduce operating costs.”

**Bradley Grant Dormer** *General Manager, All Pumps Argentina*

Watch [here](#) our exhibition video to find out more.



sponsors



strategic partners



© 2018 International Water Association

Published by the International Water Association. All rights reserved.

Requests for permission to reproduce or translate this material - whether for sale or non-commercial distribution - should be directed to IWA Media Office via the website ([www.iwa-network.org](http://www.iwa-network.org))

All reasonable precautions have been taken by the International Water Association to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the International Water Association be liable for damages arising from its use.



#### INTERNATIONAL WATER ASSOCIATION

Alliance House • 12 Caxton Street  
London SW1H 0QS United Kingdom  
Tel: +44 (0)20 7654 5500  
Fax: +44 (0)20 7654 5555  
E-mail: [water@iwahq.org](mailto:water@iwahq.org)

Company registered in England No.3597005  
Registered Office as above  
Registered Charity (England) No.1076690

inspiring change  
[www.iwa-network.org](http://www.iwa-network.org)