

YOUNG WATER LEADERS SUMMIT

10th - 12th of July, 2016

REPORT OF THE YWLS





Editor's note:

It has been nearly three months since the Young Water Leaders Summit, and we hope that this document comes at an opportune time to recap key lessons learnt, resurface good memories of the event, and reignite the passion that we felt at YWLS!

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A GLIMPSE OF THE YOUNG WATER LEADERS SUMMIT

The preparation of this document and overall participation of the Water Youth Network members in the Young Water Leader Summit 2016 would not have been possible without the kind support from our sponsors.

Therefore, Water Youth Network would like to acknowledge :



PUB, Singapore's National Water Agency,

For their dedication towards developing young talent and the organisation of the Young Water Leader Summit,



ADB, the Asian Development Bank,



The Scottish Government,

For the support they provided for Water Youth Network, making it possible for us to contribute meaningfully in this important event,

The Young Water Leader Summit is organised as part of the Singapore International Water Week, by PUB, Singapore's National Water Agency.



As we start counting the days till the next Young Water Leaders Summit, we would like to thank the following groups who have contributed significantly to the success of the 2016 edition :

ORGANISING PARTNERS



Water Youth Network:

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- *Singapore International Water Week,*
on pages 1, 7, 8, 9, 10, 11, 12, 13, 14, 15, 23, 25, 41, 44
- *PRRC : Pasig River Rehabilitation Commission,* on page 21 and 22



Introductory words

The Young Water Leaders Summit (YWLS) is a flagship event at the Singapore International Water Week, a premier global platform to share and co-create innovative water solutions. This year, we welcomed close to 90 young water leaders from 30 countries at the YWLS. The event received good feedback in many areas and we would like to take this opportunity to thank those who had contributed to the YWLS 2016.

The first success of the programme was the interaction opportunities created between young and senior leaders. We thank the senior water leaders at the YWLS 2016 –

- Mr Henk Ovink, Special Envoy for International Water Affairs for the Kingdom of the Netherlands;
- Mr Booky Oren, Chairman & CEO of Booky Oren Global Water Technologies;
- Ms Diane D'Arras, President-elect of IWA & Senior Executive VP of Suez;
- Ms Zhang Lei, Senior VP of PotenEnvironment Group & CEO of Aquapoten Company Ltd; and
- Dr Amy Khor, Senior Minister of State, Ministry of Environment and Water Resources & Ministry of Health

for their willingness to share their experiences and thoughts through dialogues and panel sessions such as the “Water Leaders Panel”. Many delegates found themselves deeply inspired by the sessions.

YWLS 2016 had an overarching theme on “Innovation”, and many delegates found the sessions eye-opening. Sessions such as “See the Change: Mapping Water Innovation Globally” and “Local to Global Pathways: Using the Sustainable Business Canvas” equipped delegates with new knowledge and skills on innovative water projects and developing sustainable projects. Our key programme partners Water Youth Network, International Water Association Young Water Professionals and World Youth Parliament for Water were integral in achieving this success.

Last, but not the least, YWLS also brought together a very diverse mix of young water leaders and the camaraderie among delegates built an environment conducive for creating quality discussions. Three YWLS delegates – Mr Adam Purvis, Mr David Pong and Ms Karmina Alejandro, also stepped up their contributions by sharing their experiences in the “Learn from Peers” session. My heartfelt thanks go out to each one of the YWLS delegates, who made the YWLS 2016 an event to remember.

In the pages to follow, this outcome document captures salient learning points from the sessions and discussions at YWLS 2016. We have also added interview articles capturing advice offered by senior water professionals in this edition, continuing the YWLS’s belief in the synergies of integrating young and senior water leaders. We hope you enjoy the articles, and we welcome you to join us in the next edition of the YWLS in 2018.

Bernard Tan
Managing Director, Singapore International Water Week
PUB, Singapore’s National Water Agency





I. The Young Water Leader Summit

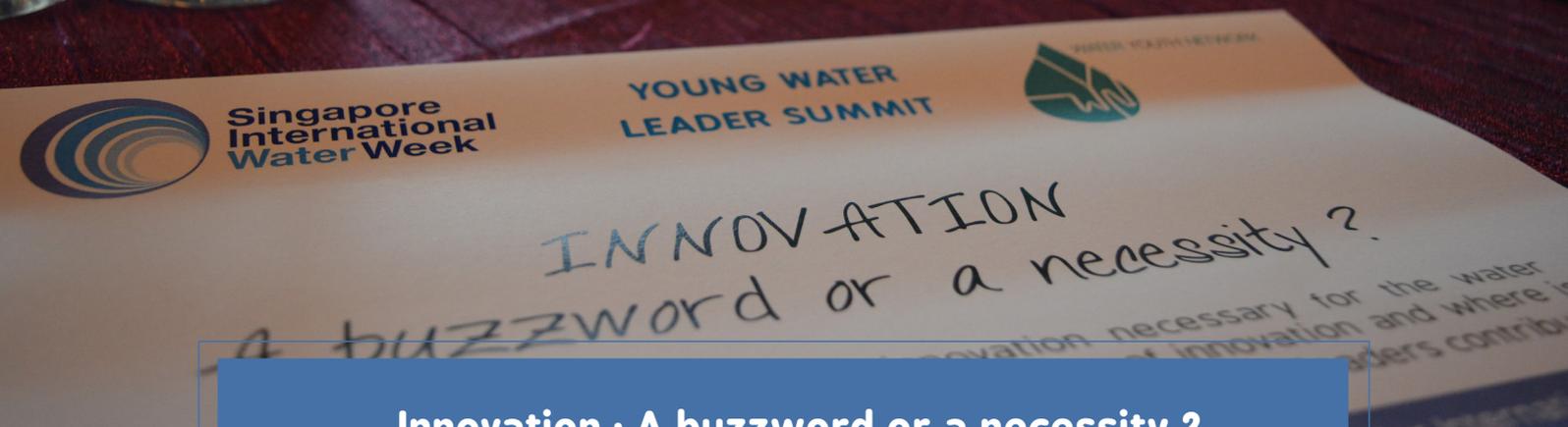
Summary and key learnings

In order to emphasise the importance of youth and to foster their inclusion within the Singapore International Water Week (SIWW), the Public Utility Board of Singapore (PUB), has launched the Young Water Leader Summit (YWLS), with its first edition in 2014 and the second in 2016.

The main objectives of the event are diverse and complementary, from fostering interconnections, developing innovations, strengthening youth voices, to more generally, creating opportunities for the 100 young water leaders selected.

Structured by a rich programme, the Summit enabled participants to discover new topics, to brainstorm and to interact with each other through different forms of sessions. With this Report, we hope you will benefit from its key leanings.

But perhaps most importantly, the YWLS has the potential to develop future projects and partnerships, by shaping a common water language and by helping solidify old friendships, and forging new ones between young delegates who might one day, cross paths again.



Innovation : A buzzword or a necessity ?

July 10th, 2016

The primary objective of this session was to question the concept of innovation as it stands today: is it only a buzzword or is it a necessity? The secondary objective was to ask- what roles can young water leaders play in expanding and deepening the movement of innovation in the sector? With that in mind, we set out to open the YWLS at SIWW with a provoking talk by our visionary speaker Mr. Henk Ovink, Special Envoy for International Water Affairs for the Kingdom of the Netherlands. We could not have invited a better person to inspire us and challenge us on thinking about where the edge of innovation is in the water space.

Main lessons learnt :

- Innovation is not only about invention but also about how we come together and create holistic and integrated approaches to issues that are persistent
- Our generation can offer fresh ideas and help senior leaders get unstuck from conventional approaches and processes that distract from inside-out innovation
- Innovation is about tackling HOW to tackle the problems

Before Mr Ovink began his intervention, Dona Geagea, from Water Youth Network, made sure to frame some key pieces first to our delegates. We explained that we believe water is a complex challenge- not a complicated one. Complex challenges are persistent in nature and usually larger in scale, requiring concerted efforts globally to tackle them. Due to their complex nature, additionally to unpredictable and uncontrolled factors such as climate change, political currents, economic crises etc., their outcomes often cannot be guaranteed. How do we then address complex challenges? Through on-going attempts at innovating and collaborating.



Mr Ovink, as an Ambassador for Water, is responsible for advocating on water issues around the world. He views water as a connecting global issue and an opportunity for comprehensive cultural change. He developed and led the reputed 'Rebuild by Design' contest, which was awarded by the Obama Administration as first and most groundbreaking Federal Challenge. CNN designated Rebuild by Design as one of the most innovative ideas of 2013.

Mr Ovink explained that in order to achieve lasting innovation and impact, it is important to use the transformative and integrative approach based on a cultural change. This involves collaboration of everyone in mind and heart. He started by showing a slide with pictures of each of the delegates, highlighting the importance of including everybody onboard if we aim for a real change.

Four personalities led his list of inspiring people: Alexander van Humbolt, who traveled the world working with complexity related to many environmental, physical and biological components including mankind; Mariana Mazzucato and her strong position on collaboration; President Obama, who tries his best to inspire the world to look differently at these wicked problems; and finally within this new generation, his niece Rosa who is already a water ambassador in The Netherlands at 8 years old.



He explained that we face big challenges since 60% of the world's population is located in risky zones, where most of the natural disasters occur, all of them involving water (e.g. water scarcity, water pollution, sea level rise, etc.). We need to talk about water, because it is a scarce good and it is connected to all other global risks. In the next decade people will feel the impact of climate change.

Two billion people will suffer of too much water and another 2 billion of too little water. The solutions are not easy but it is clear that we need to get a better way to mitigate those impacts in a process called innovation, which should not care about regulations, policies and rules that usually are based on the science of yesterday. We need room for innovation and to strengthen collaboration that brings all people together.

«We need an approach based on a long term comprehensive plan and strategy that is connected to short term intervention, projects and investments in a process that is inclusive based on collaboration between all».

Mr Ovink emphasized that the approach should be inclusive, meaning that the door is always open to all, it is never too late and there are no excuses not to invite someone. In this sense, we need to be transparent in the way we take action and it is crucial to build institutional capacity. Finally he closed his inspiring speech by empowering young leaders to take an active role in the high level panel on water so we can get to a global water approach.

“How can young leaders strengthen and enforce a global approach on water collectively with water leaders?”

From this question, a rich dialogue session ensued afterwards among delegates. Delegates realised that often, for our generation, innovation is driven by purpose. Our generation is about the “business as unusual”; so much of how we exist is networked and distributed, not hierarchical. A recurrent point raised, was that in order to meaningfully innovate, youth should be integrated into existing processes alongside the seniors (not on separate “Youth Panels” that bid more service to the idea of inclusion rather than to meaningful and active integration). Given the right conditions are in place, we can become empowered agents of change as we are key stakeholders of the future



A team of delegates was tasked with capturing these outcomes and delivering them in a creative and bold way to Mr. Henk Ovink, as well as sharing them with the rest of the delegates. If we are talking about innovation, let us start by innovating in the way we communicate our ideas as young leaders at these international water gatherings!



See The Change: Mapping Water Innovation Globally

July 10th, 2016

After an inspiring morning session and strong message sent by Mr. Henk Ovink, the second session organised by the Water Youth Network was dedicated to unveiling types, scope and location of innovative projects in the water sector. This session was designed for delegates to exchange innovative solutions that have emerged in their regions in order to tackle water challenges. In this way, a database of innovative water projects can be co-created and a platform for knowledge and ideas exchange between YWLS delegates can be formed.

Main lessons learnt :

- Innovation appears across different scales and challenges in the water sector
- Young people play an active role in innovation in the water sector
- ‘The beauty of simplicity’- innovation is not always about technological advancements
- There is a need for enhanced learning between different regions about innovation

This interactive session provided a representation of where innovation is happening around the world, visualized through a world map that was hung on the wall. The ultimate aim of the session was to populate the map of innovation, tapping into the collective wisdom of the delegates present with us. Delegates were divided into groups, and each delegates shared a project from their region during the roundtable discussions. Together, as a group, they agreed on which projects they wished to discuss in detail and add to the map of innovation.





The group discussion was followed by a 'harvesting' process - which means a process of sharing outcomes with the larger audience. Each group presented up to 5 projects discussed and attached them to the map. The projects were classified according to scale: local (pink), national (blue) or international level (yellow). The harvesting generated a vast amount of projects with different scopes and locations.

Examples provided were ranging from community-led initiatives to high-tech water technologies. It was inspiring to see and listen, especially when delegates were the creators of some of those projects or were playing an important role in their growth.

Among the projects delegates worked on:

- *Floating Farm project in the Philippines* (Local project): Floating grid farms to allow plants to grow on flood waters.
- *Blue/Green + No Drops in South Africa* (National project) on water/Wastewater quality management: Rewards or penalization based on standardized scorecard, which drove improvements in water quality management systems.
- *Water Innovation Lab from Canada* (International project) : which does capacity building programme for young water entrepreneurs. They develop social innovation through interactive and collaborative methods used instead of unidirectional approaches of a regular conference.



An additional success of the session was that several delegates were willing to use their projects as a case study for the next YWLS session: Local to Global Pathways. Additionally, you can find the full list of projects mentioned in the Annex n°C.





Water Leaders Panel

July 10th, 2016

During the Water Professional Panel moderated by the International Water Association- Young Water Professionals, three Senior Water Leaders shared their career experiences. The objective of the session was to provide the YWLS delegates the opportunity to interact with water experts, and to receive practical advices on career advancement and professional development. The crowd of young water leaders responded well to the shared experience, some of the advices immediately being captured on social media platforms.

Main lessons learnt :

- Future Careers will not be conventional anymore. Young professionals should break away from career silos and fully embraces a multidisciplinary and cross-sectoral approach
- When approaching a complex problem, it is necessary to adopt an interdisciplinary methodology and an open mind-set approach, “Welcoming” rather than “fearing” a new situation.
- In terms of communication, the delegates emphasized the differences between Leadership and Management, and the importance of inspiration and empowerment.



Mr. Booky Oren, «Booky Oren Global Water Technologies Ltd.» started off by sharing the story of how his country, Israel, has turned into a “Water Independent State” based on implementation of a variety of technological solutions. Partnerships are essential for Israel in order to successfully leverage its unique capabilities, and Mr Oren emphasized that similar action should not be underestimated by the youth. When he initiated his company, which was first focused on a large scale implementation of proven innovative technologies and today is operating in the “Global Water Partnership Hub”, Mr. Oren posed the question “How do we implement Innovation on a Global Scale?”. He gave the example of “i2i” - “innovation to implementation” as a guide for driving change which must come from a partnership between the old and new generations.



Ms. Diane d'Arras, SUEZ/IWA, gave an exceptionally hands-on presentation from her experiences in her work career, as well as the new elected President of IWA. Her advice covered topics from how to attain a “good-start” to having a “healthier” water career. She mentioned that “We, in our network see a high potential in Young Water Professionals as we consider that they are Leaders of the Future”. Her sharing certainly sparked some lively reflections around the room, especially her advice, “Make sure you choose your boss and not the other way around”. When it comes to changing careers, Ms. d'Arras gave her own example of shifting from the Operations to R&D. She mentioned that even though change can often initially appear threatening, it can serve as a catalyst to go on to new and better possibilities. As YWL we must always, try to find opportunities that allow new experiences to come into our lives.



Ms. Zhang Lei, CEO, Aquapoten Company Limited, began by sharing her connection with water since she started working in the industry six years ago. Despite her background in Law, Ms. Zhang joined the water industry, grew up with “Poten” and is today to be the CEO of Aquapoten Company Limited. “[Working in the] *water Industry is building my dream of environmental protection*”, mentioned Ms. Lei. Focusing on the three parts of her business; Aquapoten Company Limited, Poten Capital, and International Business Division Ms. Zhang gave an overview of how critical is to be focused, attempt to dependably enhance ourselves and to be persistent in our dreams.

After the presentations of the Water Leaders Panel panellist, delegates gathered on roundtables to discuss 4 main topics :

Solving Complex Problems

Delegates recognized a few key relevant components for solving complex water challenges and issues which must be checked when pondering approaches to deriving solutions.

- Interdisciplinary methodology and an open mind-set approach are critical
- The complex issues ought to be broken down into smaller issues and after that will be more likely to be solved
- When approaching a problem, it is necessary to adopt a “*Welcoming*” approach instead of a “*Fearing it*” reaction
- Any barriers created by the present environment and existing practices can be overcome by keeping in mind the end goal to bolster changes and encourage desired solutions
- We have to start thinking about water in a more holistic way

World of Water Careers

Most of the delegates were willing to contribute to the water sector. They expressed their wish to have an impact and make a difference in the water industry.

- Future Careers will not be conventional anymore; Try to move away from career silos: “*Break the Silos*”
- Water related careers should fully embrace the multidisciplinary and cross-sectoral nature of Integrated Water Resource Management
- YWL are the water users of the future, and thus should not hesitate to become involved at all levels of policy-making of water-related policies, programs and projects

Networking

Through conceptualizing «Networking» in the water industry, the YWL listed methods for connecting with individuals, and organizations. “*Networking is a valuable tool which is rarely utilized sufficiently by some of us*”. Delegates’ also emphasised the need to expand the “*Golden Triangle*” of business, government and civil society, to include more stakeholders.

- Try to “*brand*” yourself in the water sector
- Expand your network, source for opportunities (such as receiving recommendation, referrals or finding a job)
- Allow some time to make connections, exchanges of ideas
- Online network - it can help keeping the relations alive and offers successful platforms (e.g. IWA Connect, LinkedIn). This is more successful if the first contact is in person

Communication with Leadership

Communication empowers young people and young professionals to access quality, evidence-based information and sets the stage for them to connect with experienced professionals to gain insights and share experiences and perspectives.

- Think «*outside the box*» and express with conviction
- Respect old leadership but be innovative and learn from their experience, combined with your fresh perspectives
- Remove barriers between Employers and employees
- YWL must have the courage and confidence to voice out their ideas



The lasting piece of advice came from Ms. D’Arras, who encouraged the YWL to join the existing opportunities to contribute and network within the water sector. No matter in which field or experience, everyone can make a difference as she believes that there is a huge potential coming from the YWL to shaping future water diplomacy.



Learn from Peers

July 10th, 2016

The Learn from Peers session first showcased three young water leaders and their innovative courses of action, and following that, encouraged the attendees to think in a creative way by troubleshooting some various challenges the speakers previously had faced.

Main lessons learnt :

- Learn from others: be inspired and internalize learnings
- Keep an open mind: accept even the most audacious ideas in the idea generation stage
- Evaluate and analyze: recognize your key roadblocks, and work from there

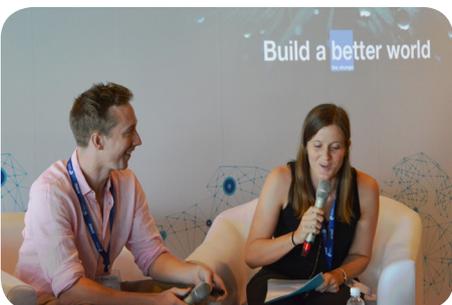
The three speakers, David Pong from Singapore, Karmina Alejandro from the Philippines, and Adam Purvis from Scotland, all had in common a unique, creative and successful path.



Karmina heads Maynilad Water Services, Inc.'s (Philippines' largest private water solutions provider) Social Media Unit – a prime tool for reaching out to customers. Knowing that in 2015, 90% of Filipino internet users have active social media accounts, it is no surprise that the company's strategy revolved around the use of social media for outreach purposes. By doing so, their dropped-call rates have been halved, response time was reduced and engagement rate went up- all this while being more cost efficient. The success of this innovative method of outreach is evident in the improvement in acceptance rate for Maynilad's Sanitation Services from 30% to 50% in only three years.



David and his team founded a water startup called WaterROAM, that develops simple, portable, durable & affordable water filtration systems to help affected communities in disaster-hit sites and rural developments obtain clean drinking water. By filling the gap between existing solutions which are both bulky and slow or require constant resupply, their systems have already brought safe drinking water to more than 15,000 people. The fast growing success of WaterROAM was acclaimed during the next session by Dr Amy Khor, Senior Minister of State for the Environment and Water Resources of Singapore.



Our final speaker, Adam, is the founder of the Metta Network and Power of Youth. In his own words, the next project of POY is to "take some of the world's leading water technology entrepreneurs and work with Indian entrepreneurs to build, mainstream and scale these technologies and bring them to the world". A network will be formed of hand-picked entrepreneurs, growth partners and senior government leaders which will meet for a retreat every 6 months in India, where the need for water expertise is one of the greatest. The truly inspiring model of POY no doubt contributes to the journey in achieving Sustainable Development Goal n°6, Clean Water and Sanitation.

The three presentations left the delegates inspired, ready to come up with creative solutions during the second part of the session. Four different challenges were shared between the tables, in the form of short case scenarios. Each challenge was suggested by a speaker, who had personally faced the situation in the past. Thus, the speakers were able to guide the delegates as they navigated these challenges in round-table discussions.

Challenge 1: Promoting the water sector: what strategies can NGOs utilise to retain young actors?

Delegates suggested better working environment and benefits, but the heart of their strategy was to roll-out a mentorship programme. The mentorship programme would serve to engage employees and gather timely feedback to prevent high attrition rate. A cross-NGO programme was also proposed to share feedback and best practices, so as to harvest the synergies between NGOs facing the same issue. The other salient point from the team was to ensure that the work employees were doing had tangible meaning. Thus, they proposed to send employees to local communities to witness the value they were bringing through their work.

Challenge 2: Stability of water projects in politically changing settings

One delegate explained how she experienced the same issue with implementing a project in a politically-volatile environment. The project was in a stand-still and not progressing due to frequent elections, where subsequent governing bodies disagreed with previous ones, and did not feel like stakeholders in the project. Thus, she shared from her experience that in such a context, communication and engagement with the new governing body is crucial and closer monitoring of the project is required.

Challenge 3: Scaling-up water projects: how to successfully adapt to a wider and more diverse reality

The team creatively provided a 12-step programme for scaling up a water project where previous efforts have failed:

1. Analysis of failure through various aspects
2. Community engagement to see what will work for them
3. Pilot programmes to test out the proposal
4. Analysis of data to ensure the technology works
5. Design contest (local people and students) to solve new problems
6. Pattern finding to pick out the best solutions
7. Communication on the project through movies and a reality show
8. Financial funding, perhaps through the reality show proposed
9. Check for existing inventions to ascertain the need of the project
10. Presenting at external conferences
11. Motivate the region
12. World ends up as a better place !

Challenge 4: Catching up with sanitation targets, after reaching drinking water goals

The team proposed the need for PPP with regards to financing the initiative. Also, they highlighted the importance of cooperation between the companies and local authorities to achieve sanitation goals. They believed that local authorities are key in implementing tariffs for sewerage and waste water services to ensure sustainability. Public awareness is also crucial in meeting sanitation goals, and the team proposed having a mascot, such as PUB's Water Wally, to increase the effectiveness of communication.



Hopefully, YWLS delegates will go back to their communities while keeping a mind-set open to innovative and audacious solutions!



Journey toward Water Sustainability

July 10th, 2016

Innovation plays a critical role in Singapore’s relentless efforts towards water sustainability. A special guest from the Singapore government was invited to share valuable insights on the water journey the country has been through. Dr Amy Khor, Senior Minister of State, Ministry of the Environment and Water Resources and Ministry of Health addressed the Young Water Leaders in this dialogue.

The Minister started with sharing two milestones in the Singapore Water Story. The first of which is the Marina Barrage, exactly where the Young Water Leaders Summit was located. It was the result of the visionary thinking of Singapore’s founding Prime Minister, the late Mr Lee Kuan Yew that a dam was built across the Marina Channel to create a freshwater reservoir right in the middle of the city. It was a daunting task, as the Singapore River was heavily polluted at that time, but the innovation and hard work of the project team brought the dam to fruition. The Minister next shared on used water recycling, which Singapore experimented with since the 1970s. However, the cost and reliability stood as bulwarks in its progress. Singapore never lost sight of this vision, and three decades down, with the advent of reverse osmosis membranes made NEWater a feasible reality. Through these milestones, the Minister highlighted the keys to success: vision, engineering and scientific innovation, careful planning and tenacious implementation.

With these successes as a backdrop, the Minister encouraged the delegates to hold on to their aspirations, driven by talent and tenacity, and contribute to finding solutions to challenges in the water sector. With millions lacking access to clean drinking water and basic sanitation, exacerbated by climate change, innovative low-cost solutions are sorely needed.

Some recent innovative technological advancements were highlighted:

- Filter kits developed to produce clean water quickly by Mr David Pong through his start-up WaterROAM, a social entrepreneurship with a vision of worldwide water accessibility.
- Aquaporin-infused membranes, a research project collaboration between Aquaporin Asia and Nanyang Technological University and supported by PUB, with potential to half the energy usage in the desalination process.

The Minister concluded her address with highlighting Singapore’s resolve in building the water sector through investing in R&D, and working closely with universities and private companies for test-bedding ideas, and welcomed young delegates to be plugged in to Singapore’s water cluster.



After the inspiring speech by the Minister, the session launched into a dialogue moderated by Ms Asma Bachikh, President of the World Youth Parliament for Water. Several questions posed gave particular insight to Singapore's stand in the global water platform, and how innovation is built.

How can Singapore help achieve Sustainable Development Goals with regards to Clean Water in developing countries?

The Minister shared that Singapore started off in the same situation as developing countries, with little financial resources and poor management of water resources. In its transit to the leader it is today, in the management of water resources, Singapore has learnt from many different countries. Given this experience, Singapore's first contribution is in sharing of her experiences and know-how, through forums like the Singapore International Water Week where best practices are passed on to other countries, and where collaborations can be forged. Singapore also cooperates with international organizations like the World Bank and Asian Development Bank to enable discussions on ways to resolve water challenges.

Singapore's success story also highlights the importance of human capital. It is innovation through the ingenuity of people that has brought the country to its current stage of development. Recognizing this importance, PUB has set up a Singapore Water Academy (SgWA) not only to enhance the competencies of its engineers, but also local and overseas professionals and government officials.

Singapore also brings water sustainability beyond local borders, with PUB's young engineers organizing overseas expeditions with aid-relief agencies such as YMCA and Mercy Relief to Nam Cuong Commune in Northern Vietnam and Ban Kok Wan Village in Laos to design and install Reverse Osmosis Systems for water supply, lay water pipes and conduct outreach programmes educating on the importance of hygiene and water quality.

What are the critical enabling factors to ensure Young Water Leaders innovate?

The occurrence of an innovation-friendly eco-system is not by chance, but by design. The single-mindedness of the government to build a creative economy is needed to achieve this objective. The first area of focus for Singapore is education, which builds the foundation for innovation. Equipping the young with know-how, critical thinking skills and the ability to accept risks are critical, especially in encouraging innovation in Technology. Singapore has also started to look at nurturing an entrepreneurial spirit from young, rather than starting only in University.

The second area of focus for Singapore is building an innovation-friendly environment. Singapore set up the National Research Foundation, which finances efforts in R&D, spanning a wide range beyond the water sector. Test-bedding opportunities are also abundant, which help to test feasibility of ideas. Lastly, to ensure a pipeline of talent, graduate scholarships are also available for Young Water Leaders.

While the public sector has a role to play, the Minister reminded that the private sector also features significantly. Companies must encourage innovation. This can be through promoting research and development within the company itself or collaborating with the academia and government to create new knowledge and products.

The Minister highlighted that for Singapore, strong political will was evident in driving the change. The founding Prime Minister said *"Every other policy had to bend knees to water survival and water independence."* However, behind the visionary was a tenacious team of implementers, consisting of Young Water Leaders. The Minister encouraged the delegates to forge forward and work together. Taking this thought to the global context, if the government does not drive the change, the young should not be disheartened but should take up the leadership instead, relying on global platforms to collaborate and learn best practices. A word of advice from the Minister: *"Think Global, Act Local"*.





Local to Global pathways

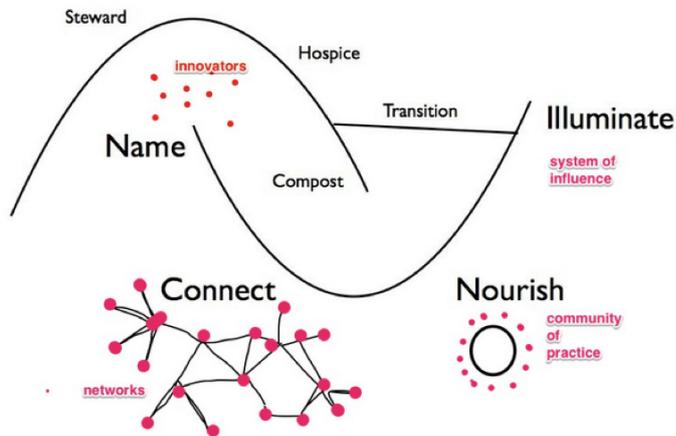
July 12th, 2016

This session began with a provocative icebreaker that made us think about the ways we are conditioned to do things- how can we achieve the same results by doing it differently, collaboratively and innovatively? We continued with a brief summary of the two loops of change theory and how we- as young water professionals- can play a role in this movement. Are we innovators, connectors, leaders, etc. ?

Main lessons learnt :

- We all can be part of an “emerging” new system either as innovators, connectors or supporters during the transition- Everybody counts.
- The Sustainable Model Business Canvas can help us to see beyond what is obvious, we challenged ourselves by using this tool on fresh and on-going projects and connecting them from local to global.

The Two-Loops of Change Theory, created by the Berkana Institute, principally states that there are two systems at play: an existing old system and an “emerging” new system. According to this theory, the existing system is unsustainable and in a process of self-destruction (thinks peak oil, immigration crisis, climate change, financial crisis etc.). In these systems, we all play different roles. Some of us work in the old system and are supporting it in its process of dying- giving it hospice.



Some, have decided to step out of the old system and innovate, create new ideas and projects that are too bold for the old system- those are the trailblazers, pioneers and innovators. Then you have the “connectors”, playing an important role - connecting the trailblazers together, building the links, nurturing and supporting them and strengthening them to build the “emergent” system.

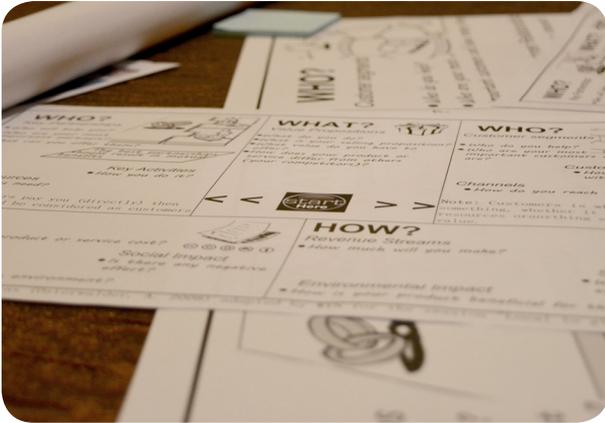
We are all playing a role in this process,
but which one?

The question was posed to delegates, asking them as young professionals and leaders, where do they see themselves in these Two-Loops of Change?



Following this reflective exercise, and in follow up to sessions WYN hosted on July 10th, YWLS delegates were introduced to the Sustainable Business Model Canvas as a key tool in developing innovations, and connecting them from the local to the global.

Visually we can link the product or service with the customer, potential and strategic partners and consider the environmental costs and benefits. In this regard, we wanted to use this Canvas model to give a tangible and useful tool to, depending on the type of project, scale up or scale across. Scaling up, by connecting local initiatives to global pathways; Scaling across, by taking the idea from one community and replicating it in another one.



Delegates worked on assigned case studies and brainstormed ideas about how young water professionals can connect these local initiatives to the global movement of change and innovation. From those case studies, two were shared by delegates who wanted to receive input and ideas in developing their projects further.



The delegates were invited to choose any of the projects, based on which they felt they could best contribute to. It was fascinating to be part of the group discussions, and to observe how the experience and knowledge of the delegates contribute meaningfully to the main objective of the session. The use of the business model canvas encouraged the delegates to think beyond the product or service and to look for alternative and innovative solutions on how to boost these initiatives to the next level.



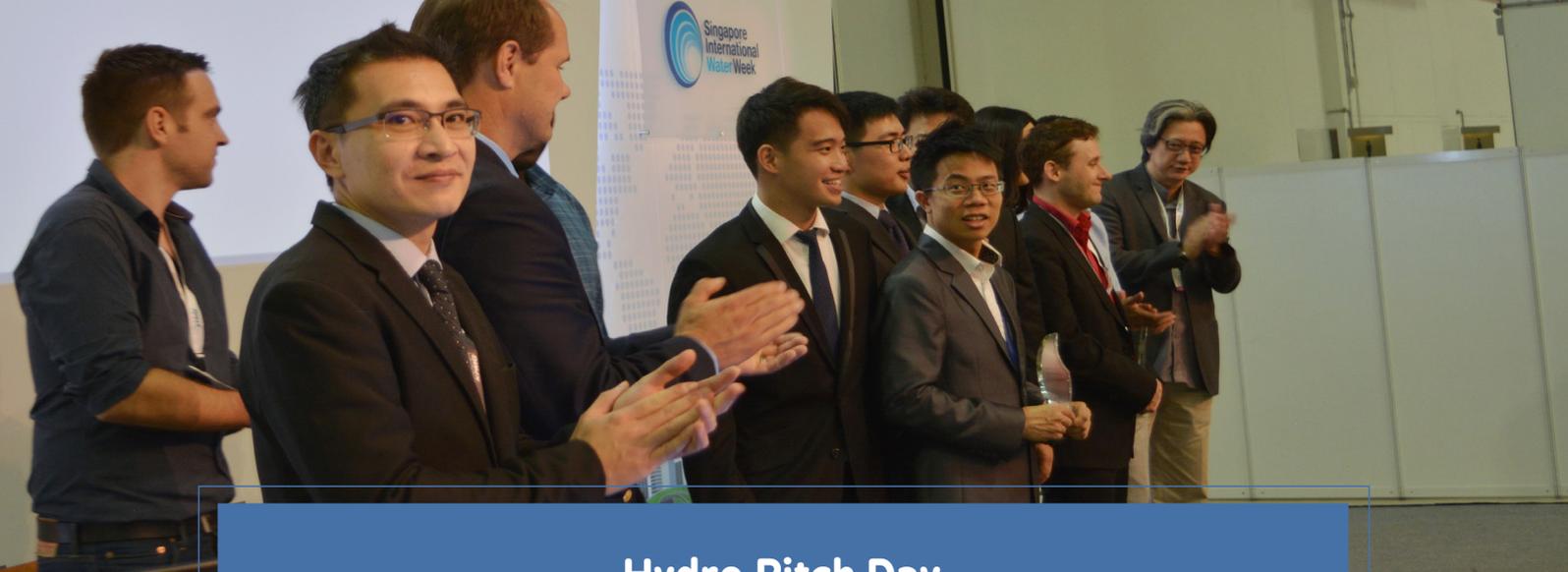
We closed the session by listening to key insights from the delegates about their experience using this tool. All the ideas that emerged during the session are being reported back to the organizations.



II. Singapore International Water Week Reflections

International events act as platforms, offering support for encounters, partnerships, brainstorming, among many other opportunities. The Singapore International Water Week has become a landmark for water professionals, gathering over 20 000 participants from across the world, and bringing together industry, academia, and international organisations.

Once again this year, the YWL delegates had the opportunity to attend part of the sessions and activities held during the Water Week. The delegates had a door-opening pass, to the latest innovation revealed in the Expo and the chance to attend the high-level Water Leader Summit. All these, allow them to engaged properly and to be able to contribute with their unique point of view.



Hydro Pitch Day

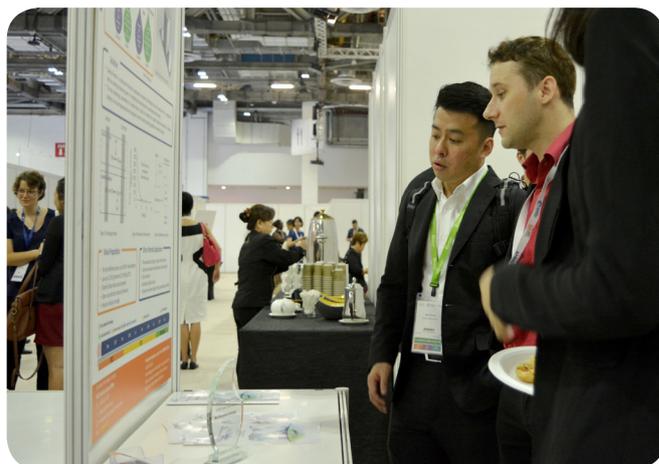
July 11th, 2016

For the second time, the Singapore International Water Week introduced the participants of the HydroPreneur Programme through an interesting exercise. After a 6 months intensive industry-oriented training programme, the 6 teams of young water entrepreneurs pitched their products on stage in front of water businessmen and experts.

The HydroPreneur Programme, jointly organised by NUS Enterprise and PUB, is an industry-oriented entrepreneurship programme aimed at accelerating commercialisation and nurturing a new generation of water entrepreneurs. Mentors from the water industry were paired with each team to guide and advise them.

Six teams went through the HydroPreneur Programme and pitched their ideas to the panel and the audience on Monday, 11 July. Their ideas and projects covered diverse thematic: pore size distribution measurement of membranes (Project Evapo-Pometry); treatment of non-biodegradable wastewater (Project Electrofonton); water deoxygenation (Project Multi-bore Membrane); water filtration for disaster-hit location (ROAMFilter Plus); increase in the permeation of membranes (Project Inverse Fluidised Bed); on-the-spot and on-line monitoring of water toxicity (Project Toxic Sensor – BacLum).

After the presentations, the panel and the audience voted on the best projects. ROAMFilter Plus was awarded Most Investment Potential. The YWLS delegates had already met with its Chief Executive Officer, David Pong, during the YWLS, and listened to his presentation as a panellist in the Learn from Peers session. Electrofonton received the Most Disruptive Technology award. BacLum was awarded with the Rising Hydropreneur Star award.



The teams were all very enthusiastic about sharing their ideas and their pitches were short and to-the-point. This exercise was a good opportunity to showcase what young entrepreneurs are doing in Singapore and around the world. The HydroPreneur Programme is a concrete example of the added value of mentoring and nurturing environment regarding innovation.

Focus on WaterROAM : ROAMFilter Plus



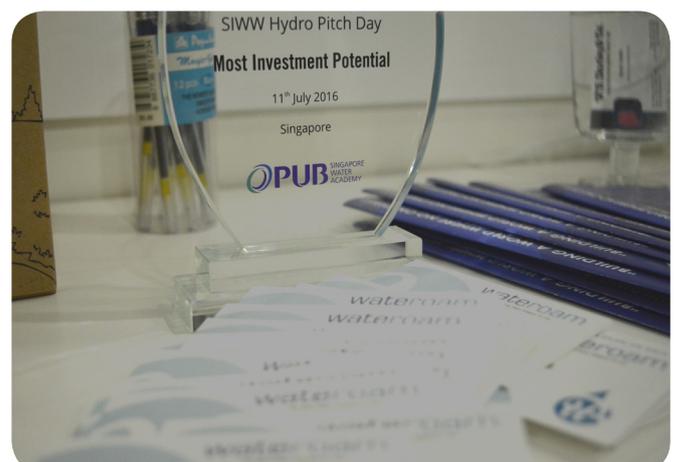
WaterROAM, a water innovation enterprise, was founded in Singapore in 2014 by a group of students from the National University of Singapore. Eager to put their knowledge and abilities at the service of society, they developed water filtration solutions that bring access to clean drinking water. Simple, portable, durable, and affordable, their water filters have proven to be particularly useful in context of disaster-hit locations, or in rural development areas.

Their latest project, ROAMfilter Plus, which was awarded during the Hydro Pitch Day, has the potential to significantly improve the access to clean drinking water. It deploys a water filtration system capable of producing up to 250 litres of clean water per hour – the requirement for more than 80 persons every hour as stated by the World Health Organization.

Its efficacy and simplicity to operate makes it a useful tool for disaster relief environments, but also a good filtration for water storage tanks, rainwater harvesting systems or freshwater river, well and lake.

Key features :

- Simple to operate and maintain
- Production of 250 litres of clean water per hour
- Hand pump / electric pump / gravity-fed operation
- Ultrafiltration technology, 0.02 micron
- Operating Pressure: <2 bar
- pH Range: 3-9
- High resilience to debris and particles
- Lightweight : 4.5 kg weight (including accessories)





Reviving the soul of the Metropolitan Manila

Kyle, a young public servant and an advocate for river conservation, has been working at the Pasig River Rehabilitation Commission¹, in Manila, Philippines. Energetic and enthusiast, we have asked her to describe some of the inputs of attending the YWLS and SIWW and how she has linked it to her professional projects.

“The rivers are souls of our cities.”

These are the words that were engraved in my mind after I listened to the presentation of Mr. Aníbal Gaviria Correa, former mayor of Medellín, Colombia, during the Lee Kuan Yew World City Prize and Water Prize Lectures. Medellín City is hailed for its innovative urbanism, and this prompted me to immediately look for the initiatives that led to its remarkable reinvention, especially their waterways.

Its transformation fervently resonated with me as I joined the Young Water Leaders Summit (YWLS) in hope of adopting new strategies and be informed of recently developed technologies which I could bring back to the Philippines and incorporate in the rehabilitation plans of the Pasig River system.

A historical lifeline of transport and economic development, the Pasig River is a 27-km waterway which runs through the heart of the most populous region of the country. It is an artery that connects two ecologically and economically significant water bodies:

Manila Bay which is the Philippines’ main port of maritime trade; and Laguna de Bay, the third largest inland lake in Southeast Asia which is utilize for power generation, agricultural irrigation, and regarded as an important resource for domestic water supply. Pasig River is considered an epitome of urban decay and reviving it and its 47 tributaries will not just be an astonishing feat but a miracle on its own.



PHOTO BY: JEP TAGLE
PRRC - PASIG RIVER REHABILITATION COMMISSION

*The PRRC is a government organization mandated to rehabilitate and restore the Pasig River and its tributaries. It is also a coordinating body which synchronizes the projects and plans of national government agencies, local government units, and other institutions for the Pasig River system. For proposals and partnership, you may reach the PRRC at: prrc.emd@gmail.com.

In the past, much of the Philippine government's efforts were directed towards the main river ; however, since 2008, the Pasig River Rehabilitation Commission (PRRC) together with ABS-CBN Foundation's Kapit Bisig para sa Ilog Pasig and other organizations started to focus on the sources of pollution—its tributaries. These tributaries are characterized by rampant untreated wastewater discharge, massive volume of municipal solid waste, and the presence of shanties. These appalling conditions pose a multitude of hazards to the communities residing along the riverbanks.

As of this writing, PRRC has developed 14 tributaries through relocation of informal settlers, reclamation of the 3 to 10 meter buffer zones, and the establishment of Environmental Preservation Areas (EPAs) such as linear parks. Intensive campaigns and workshops have been conducted in order to educate the communities and to ensure that they will be active in sustaining the developed waterways. Additionally, water quality monitoring and waste management programs have been regularly performed to reinforce environmental and sanitation regulations. Regrettably, our work faces technological challenges- the technologies installed in some waterways that are used to capture and treat wastewater from households with no septic systems are inadequate, expensive and unsustainable. Due to this, PRRC is actively exploring innovations for watershed management and water quality improvement



Pasig River's tributaries: Estero de Paco before its rehabilitation



Pasig River's tributaries: Estero de Paco after its rehabilitation

There is also a need to stress that regulatory agencies and local government units must develop long-term solutions in the management of urban stormwater, domestic, commercial and industrial wastewater, and municipal solid waste. During the closing session entitled "Charting Pathways to Water Sustainability and Resilience in Cities" of the Water Leaders Summit, Singapore's Ambassador-At-Large at the Ministry of Foreign Affairs, Professor Tommy Koh expressed that the lack of political will is a shameful excuse. Since the Philippines has recently embarked upon a new administration, I am hopeful that the 'lack of political will' excuse will completely vanish along with all the pollution coming into our river system.

Despite these prevailing challenges, I have witnessed how the footprints of these rehabilitation efforts manifested in the quality of our waterways as well as the welfare of the communities residing along them. Needless to say, YWLS exposed me to various innovative solutions for wastewater and urban stormwater management. These lessons, along with other prodigious ideas from YWLS delegates, will serve as a guide in the revival of the soul of Metropolitan Manila.



LEE KUAN YEW WATER PRIZE LECTURE

Lee Kuan Yew Prizes Lectures

July 11th, 2016

The Prize Lectures is one of the highlights of the joint Singapore International Water Week – World Cities Summit – Clean Enviro Summit, and the YWLS delegates had the exciting opportunity to attend and be inspired by the laureates. During the session, two prizes were given: Lee Kuan Yew Water Prize to Prof John Anthony Cherry from the University of Ontario, and Lee Kuan Yew World City Prize to the City of Medellin in Colombia (represented by the current Major Mr Gutierrez Zuluaga, and by the former Mayor, Mr. Gaviria Correa). The prizes are awarded to the outstanding individuals and cities that demonstrate significant contributions towards building liveable, resilient and sustainable urban future

The session started with an introduction by Prof Kishore Mahbubani from the Lee Kuan Yew School of Public Policy, who reminded the delegates that urbanisation is transforming our world dramatically, creating unseen challenges. A powerful message that leadership, good governance, urban planning and innovative technologies are key for the cities of the future.

A lifelong dedication to the management and protection of groundwater resources

Prof John Anthony Cherry is a hydrogeologist that revolutionized field work in his discipline by developing innovative approaches. The lecture started with a message that water scarcity is, and will continue, shaping how we live and what we eat. Almost 50% of world population is dependent on groundwater resources for their drinking water, ground water constituting 95% of the usable freshwater on the planet. Prof. Cherry outlined four main challenges experienced in groundwater resource management: 1) contamination, 2) pumping too much, 3) pumping too little and 4) pumping in the wrong zone. Securing appropriate quality and quantity of water for everyone presents a wicked problem. To address those challenges, and to develop better groundwater management practices Mr. Cherry advocated a call for collaborative efforts, collaboration for institutions and structures to partner, collaboration for everyone to become involved. He highlighted that even the changes in one's individual behaviour (e.g. diet changes) can contribute to the solution of water scarcity problem.

"The city does not start over every 4 years" - Federico Gutierrez Zuluaga, Major of Medellin

Just a decade ago, Medellin in Colombia was a synonym for an unsafe city, with the highest murder rate in the world. Today Medellin is a model for urban innovation and social entrepreneurship. The story of Medellin was shared by both its current and previous majors, demonstrating how vision for a better future connects different political viewpoints. Medellin applied a transformative approach in constructing this now liveable city, fighting inequality and becoming a just city with free, happier citizens. In order to reach that, the local government started a range of projects, such as constructing escalators to provide ease of access to people living in the hills surrounding the cities, developing a green belt around the city that also serves as a resilience buffer for natural hazards, innovating ethics of aesthetics where the waste dump was transformed to the 'garden for life', investing in research and development. The city leaders sent a message that transformation to better tomorrow is a process, and one should not be blinded with current successes.

The YWLS delegates, no matter from which professional background they are coming, had an opportunity to take home inspiring messages. The laureates demonstrated that motivation starting from an individual level and shared vision can deliver change. The challenges ahead of our generation are grand, but so are the stakes. Only collective action and long term vision can facilitate a bright future.

"We breathe optimism and this brought a difference"

Federico Gutierrez Zuluaga

Reporter: Robert Sakic Trogrlic



Opinion Piece: Experiencing the YWLS

A 38 hours round-flight - and everything in-between

When you are starting a career in the water sector as a “Young professional” (and I stress the “Young” part because some of us are even in our early or mid-30s), you often find yourself surrounded by the “senior professionals”. As a fresher in the sector, you can often feel overwhelmed and out of place, next to professionals who give you the impression of knowing everything about the water sector, its actors, and functioning, etc. But even though age and knowledge are strongly correlated, in many cases this assumption is a bias.

So you keep on looking for ways to get more involved with all the knowledge and decisions that are being taken in the water sector globally. You find forums in which you can participate actively with people that are living similar professional realities as you, that are willing to share experience and knowledge, as well as expand their contacts network (because you never know, having a friend working on archaeobacterial prokaryotes might be very useful).

As you learn about the Singapore International Water Week, you realize that it has a Young Water Leaders Summit in it. You get excited, you apply and *boom!* you get selected. Intended for “young” water leaders you get full of expectations of this event, of the opportunities and encounters it could lead to. You download every possible document related to the event you could find, fold your best professional apparel into your suitcase, research about the sightseeing in Singapore (because you don’t always have the opportunity to travel to such a modern and advanced city). And off you go, travelling across continents to attend the event. You arrive full of excitement... and empty of energy because the jetlag is killing you.

If this was your first time in Singapore I bet you couldn’t help the bedazzled face watching all the skyscrapers of the city on the way to your hotel. The big day is here. You get up early and take a morning cold shower to be fully awake (and smell good in the smothering heat of Singapore). First day at the event, and you relax – internet routers everywhere – Hello Whats-app, Gmail, and social media. Note to yourself – do not write e-mails while walking, because you could fall in a ground-level-fountain... Yes, it did happen to one of our colleagues. The worst part was walking around with wet shoes for the rest of the day.



As the days pass, and you experience the YWLS & SIWW, some of the following things will certainly happen:

- You will meet dozens (and more) of persons, be surprised how easy it becomes to start a discussion
- You will discover jobs and positions differently, through the path and stories of the people you meet
- You will attend as many sessions as possible, driven by the innovative edge, the outstanding speeches or your interest in the topics (yes, reverse osmosis membrane can be sexy).
- You will relate to people, because their intervention has links with your daily work or because they strongly agree with your personal beliefs and theories.
- You will encounter people working on the same area as you, helping you to discover new approaches about your daily work.
- You will try to share as much time as possible with the people you have connected with, so you organize dinners or hang outs once the daily event activities are done (whiskey tasting at the Scottish Booth doesn't count).
- The next day you will be exhausted because of the outrageously late hour you went to bed and your motivation to attend the early sessions the next day
- You won't regret it
- Needless to say, that time will pass extremely fast
- The last day of the event you will enjoy celebrating with a group of people that you have bonded really fast with, while at the same time, feel a bit sad that this great experience has come to an end already.
- You will wish you had started the event with the same level of connection, closeness and interaction with the YWLS delegates that when you finished it.
- You will go home with lots of adventures and new things to share.
- The contact list of your phone, facebook, twitter and linkedin will definitely increase
- You will (finally) find the inspiration you needed to pursue your projects in the water sector
- You will look forward to participate in these events again!

Your enthusiasm and participation in these events not only enrich you but they also show all the young professionals out there that we do have a voice, a place and the will of making things happen towards a more sustainable water-based world. Now, more than ever, you have the responsibility of making this possible...

Spread the word !





III. Meeting the professionals Junior & Senior

As the Week finished and as we reflected the key lessons learnt, the main 'take-home' element that last over time, remains the new relationships built, and the people we had the opportunity to meet and connect with, both junior and senior.

By attending the event the delegates had the possibility to not only share with each other their knowledge and know-how, but also to discuss and learn from other generations. The organisers made it indeed one of their priorities, to facilitate the exchange and knowledge, through network events, exchange platforms and activities during the YWLS and more generally within SIWW.

Additionally, Water Youth Network (WYN) would like to share with the delegates, some of the interviews made during SIWW, on the theme of the '*perks and challenges of being a young professional*'. We interviewed successful water professionals from different fields, related to the water sector, asking them to share with us their journey growing from a young professional to an experienced professional.

Tips & Advice

Jon Rathjen, Scottish government

Jon Rathjen is the team leader of the Water Industry Team in the Scottish Government. He has kindly accepted our interview, to share with us professional advice and some feedbacks from his experiences.

What was your first job and how it had an impact in your life?

When I was doing university jobs, I was already pretty determined to work in public policy, which eventually I did get. I was initially responsible for information security (IT) in ports, airports and taxation policy and over time I moved to areas more focused in people. I spend some time on identity and help people interact with services. While I started my journey thinking about how services operate, in parallel, the whole idea of resource management started to get up the agenda. I then moved to climate change policy where I was in charge with supporting community action, following a vision within the country: not just to understand but to react in a different and dynamic way, to engage. Now in the water sector I'm trying similarly to present our vision of water management, to get people to act positively, to respond in order to have a nation that is proud of how we manage water and that takes an active and participative role in it as well. From my experiences there is always a human dimension. And on my perspective, it is always the most important dimension of whatever job you have, and you can push it forward, whatever the technical aspects you happened to land with.

What is your recommendation for an effective team work ?

Definitely to make sure you have a hierarchy in the sense of responsibility in decision-making; but have almost no hierarchy in the sense of inputs, ideas and creativity. I think you have to separate those two things. Totally flat structures tend to not deliver things well because people are confused about their role. People roles and responsibilities and where they fit in the organization should be clear, and in parallel, everybody should have a voice. So if you are operating as a team leader make sure you bring in all the voices on the table. If you are new to a team or are starting your career, I would recommend to wait for your opportunity, and then contribute concisely and clearly.

Every time your propositions or adjustments have proven to be sound, people will build trust in you and that is when you will get more influence. Listen, understand and identify the weak spots which have to be improved and need you to be. Focus on the thing you want to achieve, not on speed, appraisal, volume or whatever it might be. That's why patience is not necessary the enemy, or the lack, of ambition.

What are the skills and human qualities someone in your position needs?

One important thing is to remember you cannot be someone you are not. You must always have a reflective sense of your own skills and strengths, and then build a team around it to make the whole package. I always have people on my team that can do things that I'm not so good at. I value how people do those things, and which allows me to concentrate on the things I am stronger at. There is a mistake that people try to do everything themselves and to be the best at everything. There are remarkable individuals, multifaceted and brilliant at everything. But they are rare, most of us have weaknesses. We should recognize what are our major strengths and allow colleagues to bring experience around and fill the things we are weak at. That's how team are created and that's what makes success.

How important is the work environment?

The best bits about my job at the moment and the reason it works is because I have a very clear idea of where my key objectives are, where I can go, do and understand my resources (financial, staff, etc.). When you have a stable framework you can prioritize and just get on with the business. I got a team that is hard working, committed, we have a clear vision and everyone is attached to that vision, believes in it. We make progress and we celebrate our success because we have clear roles within the team, which they own, so they can take personal responsibility and pride having delivered the tasks. The team as a



whole can take pride in their achievement as well. It is a cliché in some sense but it is really important that people feel both supported and empowered. So if I give someone a task, and s/he fails, I take responsibility; and if s/he succeed we both share the success. In my opinion, it is a one way stream when it comes to failure, it is the manager's problem ; but it is two ways street when it comes to success and you both take the benefit.

How do you manage to have different points of view?

It's a sense of personal humility; your well-being is not more valuable than other person's well-being. You are probably wise to listen to all the views, and actually the trick, in a sense, is to be reflective of the work of different views. If you are the person who can coordinate and collaborate these ideas and bring it together, that is a management skill. Simply to propose your own ideas is not necessarily the way to run a business. It can be a strength in some jobs but in most, I would say that the strongest person is the one that synthesize, and actually create something that is greater than the sum of the parts.

What makes someone an innovator?

People should recognize that innovation is not about thinking something magical. Innovation might be a process, a system or an approach, just a way to bring new ideas to the business. So innovators come in different forms: you might have a technical innovator, the little magic black box; you more likely will have innovators on how to deliver a project, how you can improve it, how you do it for less money and so on. Innovations are multifaceted and each can be valuable. Innovations that are truly game changing come along less often they also require the skills to integrate those complex or dramatic shift technologies into your model. You need an innovator to bring that idea in, fit in your work and the existing pattern. So innovation is constant and reacts to external factors.

Portraits of water professionals



“My generation role models are doers, not talkers. We are far more excited by entrepreneurs who are building things, by taking the future into their own hands, using their own resources, their intuition to build things that create a positive impact in the world.”

Adam, Co-funder and Director of Power of Youth, The Metta Network



“I do have a lot of good role models around me, who put efforts in doing things, working diligently and dedicatedly. Sometimes it is not about the work itself, but rather the people you are working with”

“I think it is the passion that influences me most, cause it is quite contagious. Passion and energy !”

Xueyi, Senior Manager, Industry Development Department, PUB Singapore’s National Water Agency



“You know in Albanian we don’t actually have a word for networking. For me, networking is about sharing. Sharing experiences, knowledge, contacts.”

Arlinda, Technical Director of the Sanitation Department, Korca Water Utility and member of IWA-yp

Tips & Advice

Diane d'Arras, IWA / SUEZ

Diane d'Arras is currently President Elect of IWA, International Water Association, and Executive Vice President, Water Europe of SUEZ. She has kindly accepted our interview, to share with us professional advice and some feedbacks from her experiences.



Could you tell us, how did you join the water sector ?

Joining the water sector wasn't really a hazard. I follow my studies at l'Ecole des Ponts [et Chaussées], in civil engineering, where there is a major specialising on the environment and urban infrastructures. I followed this path, and quite naturally started an internship in the Basin Agency, which offered me my first job. Afterwards, I joined Lyonnaise des Eaux [now SUEZ], in France then in Argentina, where I worked successively as Manager of the Water Production, Wastewater Collection, then Operations Manager [Network and Customers management].

Afterwards I also experienced the Research and Development sector [Head of R&D at Degremont then SUEZ]. When I was young, I didn't have the ambition to work specifically in the water sector. What I wanted was to become an engineer. It is the School that I chose, and the major offered there, that guided me in drawing this path. An appetite for environmental matters and the chance to work in exciting projects, made me stay in the sector.

Could you share with us a 'water story' ?

In the 80's, I was the first lady in Lyonnaise des Eaux, to actually go on the field. Until then, only men were allowed. They decided to propose me the production. Not the network. The network was 'too big' for a first step, they were reluctant. When I arrived, there were some apprehensions "what will happen with a lady in charge of the production?". So they tested me - I had to ascend a water tank, quite high; then to climb down inside a well, to have a look. I didn't mind. It was a very interesting part of my life, to be on the field, to be discussing, to be in contact with people. It took me some time until I had the opportunity to work in the network, and later the wastewater sectors - drinking water seems to be more acceptable for a woman. They had to see if I was resistant enough. She is ? Next step !

People mention often how habits can influence them – do you have any success habits ?

I believe each of us develop our own habits, because it is a way to help ourselves. For example I don't think the success habits of Obama could apply to everyone else. On my case, I am quite logical, I am an engineer, but also have some emotions, and emotional skills. Now we even speak of emotional intelligence. Habits are keys, even though I don't know how often I use them. You have to develop the kind of habits which, in a certain way, help you to control or to react on your nature. For example, I have learnt that if there is something I feel is not right – I should react. Listen to my emotions, but also take the time to balance them: write it down, wait till the next day, etc.

In our societies we have to navigate in between group dynamics, especially in big companies, do you have advice on how to work in teams ?

I think a company is quite similar to a family. You have to remember, when you want to develop your network, that you have to give and receive. Two ways doesn't mean that it is equilibrated. Maybe you give more and you receive less, or maybe the opposite. But it has to work two ways. That's very important for the team spirit.

Listening. I consider that it is absolutely necessary. Some people don't listen. Sometimes because they need to listen themselves to convince themselves, to formalize. Do listen and ask people to speak. Give them the opportunity to speak, create a space where they feel free to express, and even challenge them, in order for them to explain.

Is there some common lines you find on the way young people work ?

I don't think there is a general scheme of what young people do and don't. I would recommend them to be careful in not

over-estimating the skills of their managers – the boss is not a god, he is the boss. He has qualities and weakness that they need to evaluate, in order to adapt if they can. A boss is never perfect.

Sometimes, people are expecting from managing Directors that they know everything. But the world is more complex – the manager has some information, some vision. The communications, the exchanges, are part of the necessity. Knowledge is not something that you receive suddenly and that is absolutely written. Some bosses are more visionary, some are less visionary but more operational, some are in-between. Analyse and adapt.

Wearing both IWA and SUEZ hats, do you have advices to young professionals who arrive in the sector, on how to integrate the water community ?

First of all, it takes time. The water family is a solid family, but it also means that you develop relations on time. The objective is not how many people you can put in your LinkedIn, it is more how many people you have met several times. And yes, at the beginning you are a new entrant, but make sure to meet people of your age. I believe it is best to network with people whom are in-between 10 years older and younger – because they are the one with whom you are going to live the long term.

And of course at the moment you are young, so you don't have high level positions. But it doesn't matter - you are going to progress, and they are going to progress. Needless to say, it is helpful to know older people. But the network you are building with young professionals, it is probably the most interesting, the most solid.

Tips & Advice

Alexandros Makarigakis, UNESCO

Dr Alexandros Makarigakis, is currently a Programme Specialist responsible for the Water for Human Settlements at UNESCO' International Hydrological Programme, the United Nations Educational, Scientific and Cultural Organization. He has kindly accepted our interview, to share with us professional advice and some feedbacks from his experiences.

Could you tell us how you arrived in the water sector?

I started in Academia. My first love was academic research and to run programmes on the side. I am an environmental engineer by profession; environmental engineering covers numerous areas, you can do practically everything. I specialised in my Master's Programme in physico-chemical process for wastewater treatment and did research in New York City's wastewater treatment plants, and later did my PhD in bioremediation of groundwater from BTEX (Benzene, Toluene, Ethylbenzene and Xylenes).

You are no longer in Academia, how did you decide to change?

I am Greek and had been in the States for 12 years. And you know how you can be romantic about the place you are coming from? I thought going back was a good idea. I thought wrong. I decided to leave the U.S.A and Academia, where I was teaching at graduate level and doing research, and give Greece a try. Once I got there I knew I needed a job. I started with a consulting firm for peanuts, literally. I was making more as a research assistant in my Master's (not even talking about the salary as a researcher in my PhD) than my first job. But, I think that young people must understand, when you have an opportunity, you grab it regardless. When you are young, you need to build a résumé, and to diversify it. You are not making it interesting by staying at home, waiting for the perfect job to appear. You have to do what it takes in order to get to the next step. I stayed in that job 6 months, and then moved to another consulting firm in environmental engineering, larger and with more interesting projects. I was lucky to start managing international projects in neighbouring countries—Turkey, Egypt, etc.

Was it not difficult to move from academia to consultancy to International org. ?

There were lot of difficult points, but you have to be persistent and look on improving

yourself. And that's what I mean by step by step: you start with a small consultancy firm, then you move to a bigger one, and within the consultancy firm, you do one project, a second project, etc. One step at the time - like sports: you look at one game at the time, while keeping a target in the back of your mind. For me the main thing was to do an excellent job on whatever projects I had my hands in. At the end of the day, you have to be a professional. Being professional to me, is someone who can work with anyone, be able to perform, and act towards anyone properly - at any time, regardless of the weight and stress of their job, regardless of your plans. Nobody lost because they were working hard. You will earn the esteems and respects of your colleagues, normally from your superior, and build a name, a reputation for yourself.

Working in the UN, any tips on managing intercultural dialogues?

I was lucky because my school was in New York City, so I am accustomed to working in a multicultural environment. It is crucial to remain open to the fact that not everyone is like you. Even people from the same country are different, so why would someone from a totally different background be similar?

Be patient. You might have brilliant ideas, but you can save it for the end of the discussion. People will still appreciate you and your ideas, despite that you are the last person to talk. Make sure you respect others, and allow them to talk and express their thoughts, even if you disagree with them. There are different ways to disagree with people—you can disagree with a person in a way that they will listen to you, or in a way that even if they are wrong, they will block your views, because of the way you convey your message.

Another thing is the importance of communication. People from different continents go about the same thing differently. The lack of communication skills can give you the wrong idea about someone. You have



to give it some time, create a facilitating environment, where they can express themselves better.

What does a «dream manager» look like for you ?

My first manager at UNESCO was a dream manager: in Namibia, my manager was a lady from Trinidad, who could motivate her staff - be a leader, not a boss. For me, an ideal manager is someone who leads by example, a leader. At the same time, it's a person with high emotional intelligence, who can definitely control themselves and absorb stress. Someone who gives you advices, but at the same time, let you be, give you space to think, to start develop critical thinking skills, and even let you make mistakes (of course within limits). Whether you are the adviser or working for people, you have to see and understand how the others operate. Everyone has a different way of thinking, and different things to bring on the table.

Have you always known you wanted to work internationally?

To tell you the truth, I wanted to go back to the US and the academic sector. But when I was in Greece, it was getting close to the Olympics, so we had many interesting projects and opportunities. In my opinion, you need to be ready. I have noticed a lot of people are afraid to leave the comfort and security of their home, and take that step to the unknown. They shouldn't be, because this is part of life. We don't have a choice anymore, you have to be thinking internationally. You have to go over your insecurities, about how it would be there: you will have a life there, it will be nice. At the end of the day, we do adapt, no matter where we are. My second job in Greece was comfortable, I would have gotten a good life but I could not picture myself in it in the future. You see a ceiling in each organisation, and you should question whether this is where you want to be in the future. If not, start looking elsewhere.

Portraits of water professionals



“Back then, when I was about to graduate, I thought I had to find a job. I would go to a networking session, get 50 business cards, feel great ! But I received no emails back. What was I doing wrong ? If you find one person that you have a really good conversation with, that person will remember you. And that’s what mattered : genuine relationships.”

Raad, Senior Research Analyst,
WaterTAP



“We have inherited an obsession with goals, objectives, and metrics from the past generation. I am more interested in people’s dream. Our generation is dealing with challenges at an un precedented level of complexity. It will take a lot more than goals and objectives to tackle this. It will take more passion and more dreaming together the water future we want to see.”

Dona, Stakeholder Engagement
Specialist, Consultant



“I have learnt a lot about people, culture, about technologies and opportunities. I can’t wait to go home and share it. Tell them I saw this, heard that. Maybe we can try this and that. Being here, and seeing for yourself. I would probably not have been on the internet and typed «food digaster technology»”

Nishana, Quality Control Supervisor, Water
and Sewerage Authority
of Trinidad and Tobago

Tips & Advice

Christy Davis, World Vision International

Christy Davis is currently is World Vision International's South Asia & Pacific Regional Director for Partnerships Development and the Executive Director of the Asia P3 Hub. She has kindly accepted our interview, to share with us professional advice and some feedbacks from her experiences.



How did you arrive in the water sector?

I have been working with World Vision for over 5 years, and we just launched this new incubation hub [the AsiaP3Hub, a cross-sector incubator of partnerships, innovations and inclusive business models which initially focus on water solutions]. How interesting that I could have my fourth or fifth career in what is practically a start up? When I was your age, I knew I wanted to do something international, that crossed cultures, but I wasn't any more directed than that.

I have been in Asia my whole adult life, doing a lot of different things: teaching, coordinating cross-cultural events and then went corporate. I worked for FedEx for a long time in process improvement. The process improvement skills I developed through my 30s have proven invaluable over the years, and I subsequently set up a consulting firm doing process improvement and evaluations after I left FedEx. World Vision was one of my clients at that time. I got into partnerships after the Asian tsunami, I worked for the United Nations Development Program (UNDP) as a Public Private Partnership advisor. This gave me practical experience working across the different sectors, and introduced me to the development and humanitarian spaces. I realized I wanted to stay in work which was meaningful and impactful and helpful to others.

What would be your advice in term of career path?

I think it's not a linear path, life is not linear. Plans are good, but things happen unexpectedly. There is so much uncertainty in the world today. The more flexible and nimble we are, the more resilient we become. I think it is important to focus on the who we are rather than the what we do. Also, I've learned that no experience is ever wasted - in my role now leading the Asia P3 Hub I am tapping all of the work and personal experiences of my past 25 years! But it is easy to get impatient. "I am going to do this for a year then I will do something else". But stick with something long enough, to get good at it and to really build some sound networks and

relationships. We are building social capital over decades. These years we travel turn into decades far too quickly. It is amazing how relationships we nurtured once upon a time can come back into your life in some unexpected way, bringing support and benefit in ways we cannot imagine. Have the courage, the discipline and the patience to stay the course, and think about the skills you want to develop to support the passions that you have.

What do you think are crucial soft skills in professional settings?

To be honest with you, I believe soft skills are pivotal in relationships, both personally and professionally. I have had colleagues who were brilliant but challenging to work with. Yes, we want to work with smart people, but important soft skills such as communication, interpersonal skills, adaptability and problem-solving are also critical for successful teams. I would recommend to focus on relationships, be intentional, be trustworthy, be a person worthy of respect. Walk your talk and know your core value. We always say "oh I have those values", but when I was younger, I didn't know what my values were about. I think it is very important to think on what your values are, and what is important to you. Create network and friendships that are not just about what you can get out of it, but what you can give. And the more giving we are, the more we are going to attract the kind of people we want in life.

How do you handle multicultural relations?

Clear concise communication is key, and understanding that we may have very different ways of communicating with one another. This is true anyway, and can be heightened in a cross-cultural environment. My number one thing is to always assume the other person means well. I presume good will. This is important especially in a busy or stressed environment. Also, because we have different expectations or ways of communicating, choose not to be offended if something strikes you "wrong". Being offended is a choice. I may not like something or think you are rude, but I don't have to take it on.

And those are hard things, I am better at this some days than others. There are different cultures, ways of working, which are valid. One of the challenges I come across in conflict management, is that almost 80% of the time, we use culture as an excuse for personality's conflicts. I think it is important to do our homework on the cultures we are working in and with, and not to default personalities issues on cultural misunderstanding.

Do you have tips on how to create a nice working environment?

I would recommend empowering people with as much responsibility and independence as they are able to manage. Authoritarian management is not my style. I like to focus on the respective strengths we have and how we can optimize and share them for the overall benefit of the team. Then as a manager I am going to ask "how much can I give you that you can handle? Go with it, run with it, and keep me posted". We talk about "empowerment" - but what does this really look like? It is important to entrust people with the resources, structure, and support they need to be successful. This takes effort but is the best way to work!

Any thoughts on the water sector?

As a person new to the water sector, I find this space fascinating and compelling.

Here in SIWW, I am overwhelmed by all that is happening, from latest innovation in water filters to massive investments on water infrastructures. It makes sense because water is next to air, our number one survival resource.

What is hard sometimes is the hugeness of it. And which explains why there are so many technical experts. I guess it comes back to the main priority of our Asia P3 Hub: how do we work across the different sectors, leveraging the expertise along the water value chain (which here in Singapore and in the region is phenomenal), and do our part to contribute to changed lives? I'm very excited about the possibilities!

Tips & Advice

Paul Bowen, Coca Cola / WEF

Dr. Paul Bowen is currently Director of Sustainable Operations, The Coca-Cola Company and President-elect of the Water Environment Federation. He has kindly accepted our interview, to share with us professional advice and some feedbacks from his experiences



Could you tell us, how did you join the water sector?

I have been interested by the environment and water since I was a small child. It has been a passion for a long time and I had the chance to turn it into a profession. I started my undergraduate diploma in chemistry, with minors in biology and physics - I was interested in the whole thing. I went to graduate school to study environmental engineering and felt in love with the profession.

I was excited about research and wanted to stay in academia. Chose a career and became a college professor. That didn't work out for a number of reasons, but because of the research I had done, I was able to get a job with a consulting group. Going from the theoretical to the application was challenging. I discovered it wasn't always like in the books, and that you could use the same skills that you had developed as a researcher to consulting.

My current employer [Coca Cola] appreciated so much the project I presented with the Consulting firm, that they called to check if I would come to work for them, leading me to move from consulting to industry. Again it was around a passion for water which led me to tremendous opportunities to grow, to expand into new areas and to develop as a professional.

What was your first job and how did it influenced you ?

My first job was Assistant professor at the University of Oklahoma. I was teaching. A lot of it was learning what was important to the students. Not only to share book knowledge, but conveying it a way that showed value to them. I really enjoyed the independence that research gave you, and that aspect taught me how to manage projects, to deal with people and to write reports.

I think in any type of 'first job', the primary

thing that you learn is "how to deal with people". You have to understand that you are dealing with people whom are as smart or smarter than you, and often more experienced. It is not about showing that you know more, that you are bright - they wouldn't have hired you if they didn't think you were bright - It is about listening, absorbing, learning from mentors in your company to grow as a professional. Sometimes I feel people get out of school and the first thing they want to do is be a manager, be the vice-president, be a CEO...

But you weren't born into running a marathon, you first learnt to walk, to run, and then you had to train. The same thing is true in any type of professional life.

Could you share a water story which left an impression on you ?

Four months after I joined Coca Cola, I went to a meeting where I stood up in front of plant managers, production people:

"I am the new water guy, we all need to be concerned about water, there is this big drought, everybody needs to be concerned, etc".

They completely ignored me. We didn't have iPhones in those days, so everybody pulled out their pagers and started going through their messages... I had lost this crowd. I knew what I was doing was important, so I had to figure out a way to get there. I worked on it, and 6 months later had another meeting with the same group. After I started the presentation, similarly, *"big drought, we need to act, it can save you a lot of water..."* they were all reaching for their pager. When I said *"I can save every plant in here a 100 000 dollars"*, they eyes lift up. *"All you have to do are those five things"*. Immediately, they recognised I would bring value and I got credibility.

I learnt that it is crucial to learn to speak

the same language. Similarly, this is what we have been working on with our manufacturers, by helping them understand the risks associated with water (all sort of risks: economic, quantity, quality, the social and political, etc.), how those risks plays out in their specific areas, and how to navigate them. The one thing in industry people want to avoid is risk. Remember to analyse the priorities of your interlocutor and adapt your language in order to understand each other.

Are there any advices you would have given to yourself thirty years ago?

Thirty years ago I would not have imagine that I would be where I am today, because I thought I would have a career as an Academician. If I was to go back – I would recommend myself to do the best of my abilities, at everything I was given to do. In the long run, it gives you so many benefits, you know. You have to always consider and think, that someone is looking at the product of your work.

It was the product of my work that got me to each next stage. My research helped me get into consultancy. The consultants liked the efforts, liked the product. The consultancy job led me to Coca Cola. They liked the project, they liked the passion...

Do you think they are soft skills which are particularly valuable in the work place?

One of the most valuable skills is being able to accept criticism. It is not that you get it wrong, but that there are better ways to do it, or the company way to do it. And you have to be willing to accept those. Every organisation had a different little twist on how you do things. You still use the same presentation skills, the same writing skills, etc, but you add a twist. The ability to adapt is key.

Portraits of water professionals



“After some time in Tanzania working on access to water with different communities, I returned to South Africa. I started to work as a consultant. But after a year, I realised I was winning away, and could not fulfil my passion. I decided to resigned, and began my own project. It is very exciting but also sometimes daunting. The emotions have definitely been up and down, but I believe it is necessary. With time, you become stronger, you realised adversity is something you have to overcome, working for bigger things and to keep on the passion.”

Aurelia, Director
Triple Two Consulting



“Doing more with less. That’s what impact really means to me. Because we have those training this education, and those capabilities. How can we channel them to be able to do more, with the same amount of efforts? The water sector is appealing, because it is important and there are still so many things to be done. It is about connecting knowledge with the people who needs it. Sometimes you just need simple solutions. ”

Ezequiel, Research Associate
Ph.D. Candidate, SCELSE



“This year’s YWLS allows us to rethink the challenges, reinvent the solutions, and revalue the impact of our initiatives and innovations. And ultimately, it reminds us that we must have relentless optimism to view each challenge as another opportunity to create ripples of change in our own communities as well as to not lose the passion to seek significance and be at the front line of a global movement.”

Kyle, Project Development Officer,
Environmental Management Division,
Pasig River Rehabilitation Commission

Tips & Advice

Rebekah Brown, Monash University

Professor Rebekah Brown is Director of Monash Sustainable Development Institute, Monash University, a leading interdisciplinary research and education centre working to advance the knowledge, policy and practice of sustainable development. She has kindly accepted our interview to share some of her personal and professional experience and advice.

Could you share with us, how did you arrive in the water sector ?

It is by chance really.

I did a civil engineering bachelor degree, all the traditional stuff. But I didn't study anything that had a social purpose, or social values. That radically changed when I started studying subjects related to water and the environment. And I thought *oh great, finally something that's not just about economic efficiency and minimising the amount of concrete needed for the structure, even though economic efficiency is important.*

I studied civil engineering nearly 25 years ago. It was part of the old engineering paradigm, I was one of the few women in my year across the whole engineering programme. At that time I felt that civil engineering was quite boring, everything we were taught to design was fairly ugly and grey. But when I was introduced to water projects, water appeared like 'colour', it had social values and purpose which was exciting.

We just attended an event on partnership. What would be your advice to foster partnerships ?

Partnership is certainly one way. Networks are another. I think that for a young water professional, your work environment is crucial. Additionally, there are always opportunities to grow new networks outside as well. When I look back on the last 25 years and on the people I connected with – I believe we really connected because we had a shared idea about the

world. I also think it's important that the network you create in the long term should cross sectors and disciplines. It helps to find people who see the world in similar ways. It can be hard to find them though, especially since not everyone signs up to international water associations.

Do you have any role models, persons that have influenced you or contributed significantly to your path ?

Not explicitly. There was certainly no one similar to me that I could identify with. When I graduated, all the significant personalities in place were white 60 year-old men.

But some were incredibly passionate and inspiring of course and were making a difference in the world. I would examine what they did, what they were passionate about, and I suppose that would influence me. However I never had a dedicated mentor or coach, or someone that I would idealise to have a career similar to; perhaps it's best to say I have had many and varied role models from different areas and walks of life.

Would you have any recommendations on how to balance the 'work life equation' ?

I personally don't like the framing of 'work-life equation', because it assumes there is an optimal equation. It really comes down to a matter of priorities and personal values and I think everyone does the best they can based on their personal circumstances. Like many working parents



with young children, I am constantly juggling, planning ahead and making sure I prioritise the needs of my family while making the best strategic decisions that I can about how best to invest my energy in work.

How would you define the ideal job ? What would it look like for you ?

Hard question! Something that keeps me intellectually stimulated, thinking hard and that doesn't have easy solutions. I love difficulty and complexity. I thrive in challenging environments. My current position is like that.

As a director, you manage many people. Could you share with us leadership lessons ?

I think there are many different approaches to leadership - there is no one 'correct' way, but here is what I have learnt over the last couple of decades that seems to work for me:

- Don't pretend, just be authentic ;
- Inspire more than tell ;
- Allow people to make mistakes and to own them ;
- Be clear that you have accountability ;
- Be visible ;
- Empower people by focusing on the outcome, and let them decide on how to get there.

Tips & Advice

Joppe Cramwinckel, WBCSD

Joppe Cramwinckel is currently Water Director of the World Business Council for Sustainable Development. He has kindly accepted our interview to share with us professional advice and some feedbacks from his experience.



What was your first job and how has it influenced your career?

When I studied engineering, I never wanted to be an engineer; I'm a very bad engineer, I wanted to work in a broader field. At that time the Dutch government had created positions for young professionals. For my first job, I spent 2 years in Caracas, Venezuela, to represent the [industrial] government organizations as a junior professional.

First year alone, the second year under a senior advisor, who was great to work with. In continuity to this 'Industrial path', an opportunity came to work for UNIDO [United Nations Industrial Development Organisation] as a staff member. However I was probably one of the very few who after 5 years said it is not for me. I've been lucky in the sense that I worked with people who were more senior than I was, who always helped me to think what I should be doing next. After 5 years I realised that "hey, I'm an industrial government advisor but I've never been in industry, how can it be?". Then Shell popped up and I shifted to the industry.

Was it a challenge to move from an international organisation to a business?

Of course. Especially since at that time, big companies were not used to getting mid-career people in the organization, so it was difficult to establish yourself as an individual in the organization, because you were working with people who had built up relationships in the organization and understood its framework for years. But I made a career choice, very conscious. The choice was: you are going to be a drifter in the organization or you take up one specific aspect of the business (in that case it was refining). I decided to become a drifter, the first the environmental advisor Shell had. I was never educated for what I was doing and had to more or less invent my own role.

What would be your advice for young people to develop their career?

Be awake and see what is happening around you. Be open to opportunities, accepting that the next job will not necessarily be the best job in the world but as long as it helps you get where you want to go it is fine. Don't be afraid, you are a valuable person. Take it as a learning experience, ask questions.

I think the most important thing is to believe in yourself, that you can do it. My philosophy is that I should give space for those people. Some cannot allow that space and would like to be told every week what they'll be doing, I cannot work with those people. I find it very difficult because I can't even plan my own life like that. So choosing your work environment is also good. Find places where there are opportunities, but also invest in yourself, and lastly, look around at what is available.

Have you always known you wanted to work internationally?

I lived 18 years in the same village. When my family left to the United States, from that moment I knew I didn't want to spend another 18 years in the same village again. I believe that roots are important thought. I couldn't be an international drifter, I'm still a Dutchman, I still have my roots there. For me it's very important to have your roots, to belong to something, otherwise you're lost and the only thing you'll do is living a very artificial life. Of course, I couldn't live 25 years in Holland on the same street but it doesn't mean that I don't feel Dutch. Roots are a funny thing, because you could think that if you go back to your roots, then everything is fine, of course it's not the case. So you have to invest in that continuity. Nobody is really asking you to come home and nobody really wants you elsewhere, thus you have to reinvent yourself, in order for you to feel comfortable.

With the WBCSD you work a lot on partnerships. How do you make an efficient one?

The key is to have aligned goals. If we don't go after the same thing, partnership is dead. Aligning your objectives and listening to the others, what they want out of it, is key. Without, it's the same people sitting in a room and looking at each other.

For me, whoever I work with has to align a little bit with the focus that we have [natural infrastructures, water stewardship, water reuse, access to water and sanitation, etc.]. Just telling me that I have to work with young people is almost a no-go. Are you interested in preventing plastic going into oceans? All right, then we can start talking. Are you interested in spinning the water cycle? Alright. Are you interested in natural infrastructure investment? Good. What are your views? How do you want to do it? Perhaps, there is way that we can do it together.

Then we start talking about something concrete. Maybe our agenda is not good enough, because we are missing elements, and we are open for that, but it has to be a little bit tangible. Otherwise it becomes very still.

Do you think they are soft skills which are particularly valuable in the work place?

One of the most valuable skills is being able to accept criticism. It is not that you get it wrong, but that there are better ways to do it, or the company way to do it. And you have to be willing to accept those. Every organisation had a different little twist on how you do things. You still use the same presentation skills, the same writing skills, etc, but you add a twist. The ability to adapt is key.

Portraits of water professionals



“I grew up as a strong believer that technologies could solve the world problems. I did my engineering, and realised that all those technologies, they exist. We have technologies to supply water, some to clean water, etc. So why does the world still have water problems? During my engineering Master, I had a class on water and governance. It was an eye opener. It brought me to this understanding: if a large part is technical, an at least equally large part is how those things are implemented. Bridging the gap in-between engineers and policy-makers, this is the most challenging problem we face.”

Nishtha, Ph.D. Candidate,
National University of Singapore (NUS)



“I make a lot of mistakes. The best way to move forward is to learn about your mistakes, and be open about it. Nothing is perfect. We have to improve governments to learn how to make mistake better. Because making mistake is so much part of the innovation and learning curve. It’s core and central. As long again, as you can be transparent, open, and evaluate, and improve. Then the mistake is an inspiration for your aspirations”

Henk, Special Envoy for international Water Affairs for the Kingdom of the Netherlands



“I feel like everything you do related to water has an impact. I work on wastewater and energy optimisation, I want to believe that it has an impact at some level. But this Summit made me think in a more ambitious way in term of impact-making. The higher you go, the more impacts the decisions you take have. I want to be part of this generation who is going to make good decisions for water management. I want to be part of that”

Nerea, Student Researcher
VCS, Denmark



Annexes

Annex A: YWLS 2016 Programme

Annex B: List of the Delegates

Annex C: Database of innovative water projects generated by delegates



Annex A: YWLS 2016 Programme

Innovate and Exchange Date : 10 July 2016, Sunday Venue : Marina Barrage Level 2, Gallery Café	
8:00 am	Registration and breakfast
9:00 am	Welcome remarks Mr Yeo Sheng Wei, Assistant Managing Director, SIWW
9:05 am	Innovation : A Buzzworld or a necessity <i>Session co-organised by WYN</i> Guest : Mr Henk Ovink, Special Envoy for international Water Affairs for the Kingdom of the Netherlands Moderators: Ms Dona Geagea and Ms. Veronica Minaya (WYN)
10:15 am	See the Change : Mapping Water Innovation Globally <i>Session co-organised by WYN</i> Moderator: Ms Dona Geagea, Robert Sakic, Ms Veronica Minaya, (WYN)
11:00 am	Tea break
11:15 am	Water Leaders Panel <i>Session co-organiser: IWA YWP</i> Guests : <ul style="list-style-type: none"> • Mr Booky Oren, Chairman and CEO, Booky Oren Global Water Technologies • Ms Diane d'Arras, President, IWA & Senior Executive Vice President (Water, Western Europe), SUEZ • Ms Zhang Lei, Director and Senior Vice President, PotenEnvironment Group & CEO, Aquapoten Company Limited Moderator: Mr Randolph Webb, International Water Association Young Water Professionals (IWA YWP) & Xylem Inc.
12.45 pm	Lunch <i>Sponsored by International Desalination Association Young Leaders Programme (IDA YLP)</i>
1.50 pm	Sharing by IDA YLP Presenter: Dr Victor Sim, IDA YLP Committee Member
2.00 pm	Learn from Peers <i>Session co-organiser: WYPW</i> Speakers: <ul style="list-style-type: none"> • Mr Adam Purvis, Co-founder & Director of Power of Youth, The Metta Network • Mr David Pong, CEO, Wateroam • Ms Karmina Alejandro, Head of Social Media, Maynilad Water Services Moderator: Ms Anne-Sophie Sainte-Marie, World Youth Parliament for Water (WYPW)
3.30pm	Dialogue: Journey towards Water Sustainability Guest : Dr Amy Khor, Senior Minister of State for the Environment and Water Resources of Singapore Moderator: Ms Asma Bachikh, WYPW
6.00 pm	SIWW Opening Ceremony , Marina Bay Sands, Level 5, Grand Ballroom



Dive into Global perspectives

Date : 11 July 2016, Monday

Venue : Marina Bay Sands, Level 5, Grand Ballroom

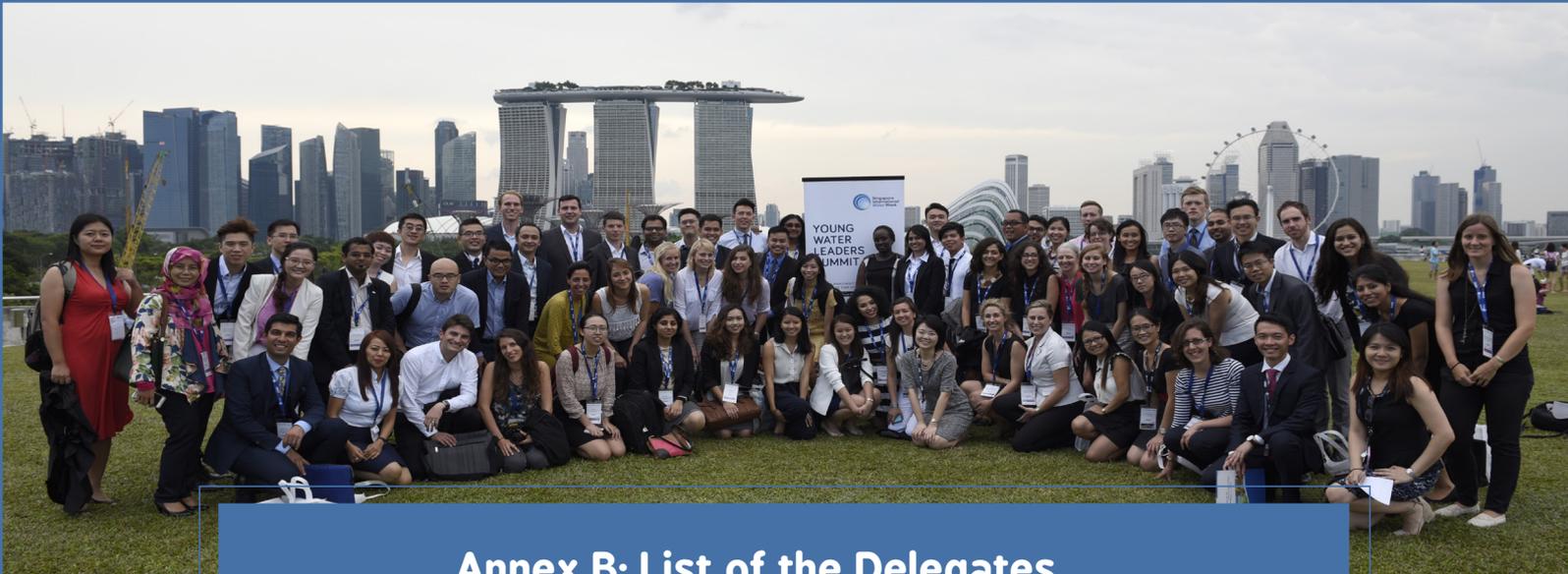
9.00 am	In-Conversation on «Towards a Liveable, Sustainable and Resilient Future» (Joint SIWW-WCS-CESS) In presence of Professor Tommy Koh (Ambassador-At-Large, Ministry of Foreign Affairs, Singapore; and Chairperson, Water Leaders Summit and Singapore’s Deputy Prime Minister, Tharman Shanmugaratnam.
10.15 am	Opening Plenary Session 1 on «Leadership and Governance for a Liveable, Sustainable and Resilient Future» (Joint SIWW-WCS-CESS)
11.30 am	Opening Plenary Session 2 on «Partnerships and Collaborations for a Liveable, Sustainable and Resilient Future» (Joint SIWW-WCS-CESS)
1.45 pm	Lee Kuan Yew World City Prize and Water Prize Lectures (Joint SIWW-WCS-CESS) Chaired by Professor Kishore Mahbubani (Dean and Professor in the Practice of Public Policy of the Lee Kuan Yew School of Public Policy)
3.00 pm	Hydro Pitch Day

Shape the Future of Water

Date : 12 July 2016, Tuesday

Venue : Marina Bay Sands, Level 5, Grand Ballroom

8.00 am	[Water Leaders Summit Session] Water Leaders Roundtable- «Future of World’s Water beyond 2030» Session Chairperson: Prof Asit K. Biswas, Distinguished Visiting Professor, Lee Kuan Yew School of Public Policy, Singapore; and co-Founder, Third World Centre for Water Management
9.45 am	Local to Global Pathways: Using the Sustainable Business Canvas <i>Session co-organised by WYN</i> Moderator: Ms Dona Geagea, Ms Veronica Minaya, (WYN)
11.15 am	[Water Leaders Summit Session] Closing Session- «Charting Pathways to Water Sustainability and Resilience in Cities» Session Chairperson: Prof Tommy Koh, Ambassador-at-Large, Ministry of Foreign Affairs, Singapore; and Chairperson, Water Leaders Summit
4.00pm onwards	Social Programme Along Singapore River <ul style="list-style-type: none"> • City Highlights Tour • YWLS Closing Reception

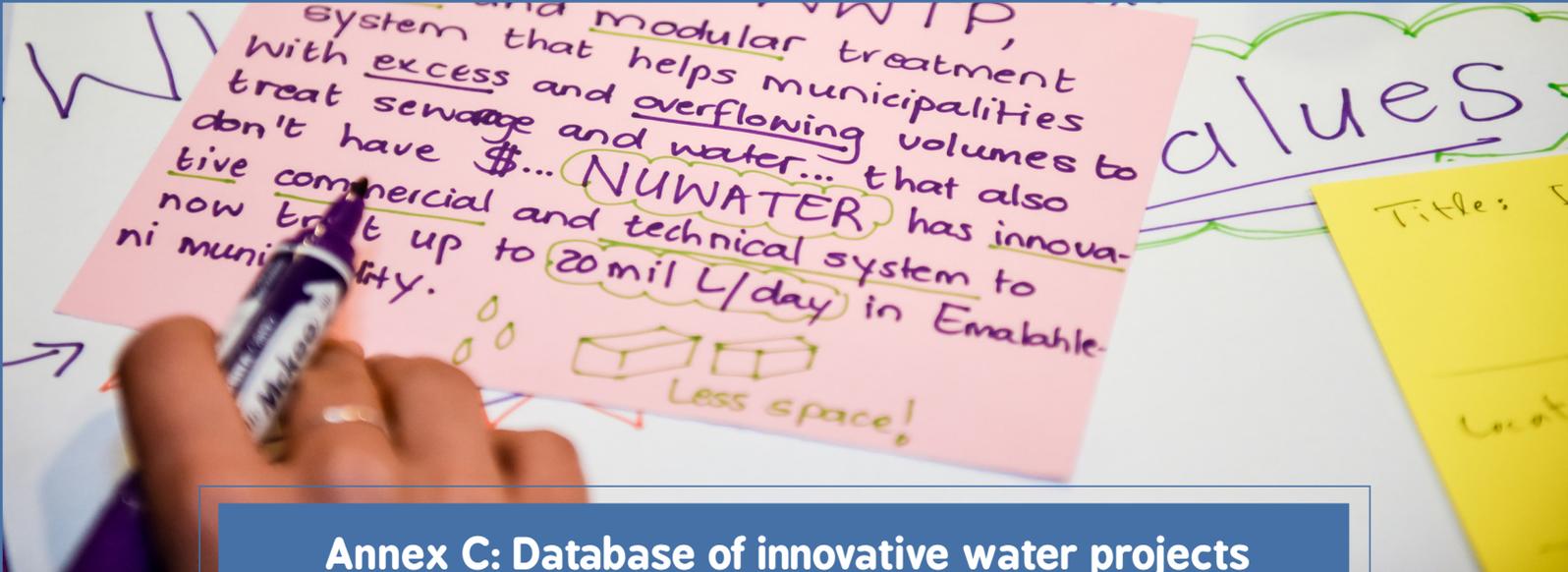


Annex B: List of the Delegates

Name	Designation	Organisation	Nationality
Mr Adam Purvis	Co-founder & Director of Power of Youth	The Metta Network	British
Ms Alix Lerebours	Board Member	Water Youth Network	French
Ms Anne-Sophie Sainte-Marie	North American Representative	World Youth Parliament for Water	Canadian
Mr Arash Zamyadi	Senior Research Associate	University of New South Wales (UNSW), Sydney	Canadian
Ms Arlinda Ibrahimllari	Technical Director of the Sanitation Department	UKKO JSC	Albanian
Ms Asma Bachikh	President	World Youth Parliament For Water	Moroccan
Ms Aurelia Van Eeden	Director	Triple Two Consulting	South African
Mr Ben Tam	Senior Technology Consultant	Isle Utilities	British
Ms Cadence Hsien	Environmental Engineer	ECOSOFTT	Singaporean
Mr Christian Marx Villa	Project Development Manager	MetroPac Water Investments Corp.	Filipino
Mr David Pong	Chief Executive Officer	WaterOAM	Singaporean
Mr David Bullin	Forecasting And Resource Planning Manager	Northumbrian Water	British
Ms Deepa Maggo	Associate	World Business Council for Sustainable Development (WBCSD)	Indian
Ms Defne Osmanoglou	Policy advisor water and sustainable urbanizing deltas	Ministry of Foreign Affairs of the Netherlands	Dutch
Mr Dominik Dominiak	Senior Water Treatment Specialist	Grundfos	Polish
Ms Dona Geagea	Stakeholder Engagement Specialist	Waterlution / Water Youth Network	Canadian
Ms Eilís Furlong	Technical Policy Manager	Northumbrian Water	Irish
Mr Ezequiel Santillan	Research Associate- Ph.D. Candidate	Singapore Centre for Environmental Life Sciences Engineering (SCELSE)	Argentinean
Mr Hendri Hendrawan	Water Sector Leader Civil & Environment Engineer	Mott MacDonald	Indonesian
Mr Huw Pohlner	Senior Consultant	Aither	Australian
Ms Iiron Ovidia	Water Engineer	Hagihon Water Utility of Jerusalem	Israeli
Mr James Moo	Ph.D. Student	Nanyang Technology University (NTU)	Singaporean
Mr Jason Wong	Senior Planner, Policy & Planning	PUB	Singaporean
Ms Jessica Kaliski	Associate	SeeSaw Group	American

Name	Designation	Organisation	Nationality
Ms Jia Shin Ho	Ph.D. Student	Nanyang Technology University (NTU)	Malaysian
Mr Jie Zhao	Ph.D. Student	Nanyang Technology University (NTU)	Chinese
Mr Joo Kwan Ong	Senior Engineer (Process)	Hydrochem (S) Pte Ltd	Singaporean
Mr Jordan Ruff	Product Manager	Xylem	American
Mr Joseph Jordan	Water Treatment	Xylem Inc.	American
Ms Karmina Alejandro	Head, Social Media	Maynilad Water Services, Inc.	Filipino
Ms Kelly Ser	Senior Planner, Policy & Planning	PUB	Singaporean
Mr Kris Catangcatang	Energy/IMS Manager	Maynilad Water Services, Inc.	Filipino
Mr Kshitij Asthana	Associate	AECOM Singapore Pte. Ltd.	Indian
Mr Kum Fai Lai	Deputy Operation Manager	Sembcorp	Chinese
Ms Kyle Esperanza R. Zuleta	Project Development Officer	Pasig River Rehabilitation Commission	Filipino
Ms Lisa Bross	Researcher	Institute for Water Sciences at the University of the Federal Armed Forces, Munich	German
Ms Maelis Monnier	Governance and Innovation Officer	Lydec (Casablanca Water/Wastewater Utility)	French
Ms Magdalena Feil	Project Manager	TUV-SUD	German
Ms Marijn Korndewal	Policy Advisor	Dutch Royal Water Network / Dutch National Water Traineeship	Dutch
Mr Melvin B Solomon	Senior Hydrologist	Woodfields Consultants Inc.	Filipino
Ms Miao He	Ph.D. Student	National University of Singapore (NUS)	Chinese
Ms Mukta Akter	Executive Secretary	Bangladesh Water Partnership	Bangladeshi
Mr Mynampati Kalyan Chakravarthy	Managing Director	Hydroinformatics Institute	Indian
Ms Nerea Uri Carreño	Student Researcher	VCS, Denmark	Spanish
Ms Nishana Ramsawak	Quality Control Supervisor	Water and Sewerage Authority of Trinidad and Tobago	Trinidadian
Ms Nishtha Manocha	Ph.D. Candidate	National University of Singapore (NUS)	Indian
Ms Norhayati Abdullah	Research Manager	Universiti Teknologi Malaysia	Malaysian
Mr Peng Wang	Lead Engineer	GE Water & Process Technology	Chinese
Mr Pengkai Zheng	Senior Manager	Beijing Capital Water Co.Ltd	Chinese
Ms Qianlin Zoe Ong	Environmental Engineer	DHI Water & Environment (S) Pte Ltd	Singaporean
Mr Raad Seraj	Senior Research Analyst	WaterTAP	Bangladeshi
Mr Randolph Webb	Sr. Analyst, Corporate Strategy and Business Development	Xylem Inc.	American
Mr Robert Sakic Trogrlic	Ph.D. Student	Heriot- Watt University/ Water Youth Network	Croatian
Mr Ryan De Sotto	Research Engineer	National University of Singapore (NUS)	Filipino

Name	Designation	Organisation	Nationality
Mr Ryan Christopher Cabling	Sales Engineer	Xylem	Filipino
Mr Sheng Jin	Project Director	Sino French Solutions Limited	Chinese
Ms Shimin Charmaine Marie Ng	Research Fellow	National University of Singapore (NUS)	Singaporean
Ms Shruti Pavagadhi	Research Fellow	Singapore Centre for Environmental Life Sciences Engineering (SCELSE)	Indian
Ms Shu Yi Chow	Environmental Engineer	CH2M HILL Singapore Pte. Ltd.	Singaporean
Mr Sibusiso Mnguni	Scientist	Rand Water	South African
Mr Sin Kong Melvin Thoo	Senior Engineer, O&M (Water)	Hyflux Engineering Pte Ltd	Singaporean
Ms Sukriti Lama	Scientist	West Bengal Pollution Control Board	Indian
Ms Sylvia R. Kawera	Masters student	European University of Lefke	Rwandan
Ms Teng Yun	Senior Engineer	UES Holdings Pte Ltd	Singaporean
Ms Thu Hien Le	Senior Engineer, Catchment & Waterways	PUB	Vietnamese
Mr Ting Lin	Assistant Process Manager	UES Holdings Pte Ltd	Chinese
Ms Trine Stausgaard Munk	Project Manager	Rambøll	Danish
Ms Veronica Minaya	Ph.D. Researcher	UNESCO-IHE / Water Youth Network	Ecuadorian
Ms Veronica Diaz Sosa	Ph.D.researcher	UTC Prague / WYN	Mexican
Mr Victor Sim	Process Engineer / Scientist	CH2M Singapore / Newri	Singaporean
Ms Wanzhen Tang	Senior Planner, Policy & Planning	PUB	Singaporean
Mr Wee Loong Tay	Project Engineer	Hydrochem (S) Pte Ltd	Singaporean
Ms Xingxia Chen	Senior Engineer, Water Supply Network	PUB	Singaporean
Ms Xue Feng Chen	Senior Instrumentation and Control Engineer	Hydrochem(s) Pte Ltd	Chinese
Mr Yang Zhao	Head of RO Department	Aquaporin Asia Pte Ltd	Chinese
Ms Yang Xuan Pek	Consultant	Amane Advisors	Singaporean
Ms Yaning Zhang	Engineer	Xylem	Singaporean
Mr Ying Li Tan	Engineer	Sembcorp	Singaporean
Ms Ying Shan Lau	Senior Manager, Sustainability Office	PUB	Singaporean
Ms Ying Yu Ong	Assistant Manager	UES Holdings Pte Ltd	Singaporean
Ms Yolanda Oosthuizen	Senior Manager Risk	Sembcorp Silulumanzi	South African
Mr Yung Kit Lee	Mechanical Engineer	Mott Macdonald Pte Ltd	Malaysian
Mr Zan He	Technology Manager	BEIJING CAPITAL CO., LTD	Chinese
Mr Md Ismail Hussain	Business Owner	lh Impex	Bangladeshi



Annex C: Database of innovative water projects generated by delegates

During the session mapping innovative practice, delegates were invited to present projects from their country or region that they thought were worth sharing. From local to global, from rainwater harvesting to sponge cities, a plethora of projects were listed.

If you would like to learn more on the projects mentioned, and potentially reach other delegates who also share an interest in the activity/sector, we have compiled the list of projects and their YWLS contact. “YWLS contact” refers to the YWLS delegate whom mentioned the project during the sessions, either because s/he thought it was interesting, or had contributed to the project with his/her work or association.

Colour legend: Pink – Local ; Blue – National ; Yellow – International

Project	Location or origin	Available information	YWLS contact
‘Missed call’ system	Angola	http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/06/Development-Workshop-Angola_-_Case-Study.pdf	Jessica Kaliski - jessica@greenseesaw.org
Infrastructure for ‘a gap’ between rainy and dry months	Rwanda		Sylvia R. Kawera sylviek44@gmail.com
Training based certification	Albania	https://www.usaid.gov/albania/news-information/press-releases/ministry-usaid-project-certify-water-sector-operators	
Solar-driven membrane distillation for desalination	Singapore	https://www.pub.gov.sg/marinabarrage/	
Self-organized water management in rural areas	India		
Rainwater management	Indonesia	Jakarta Bay- Indonesia ; 70% of rainwater is recovered-> innovation in water catchment system	
Clean water for crops	Guatemala	http://bigideas.berkeley.edu/winners/clean-water-for-crops-as-simple-as-sand-and-seeds-uc-davis/	
Cloudburst Management Plan	Denmark	http://en.klimatilpasning.dk/media/665626/cph_-_cloud-burst_management_plan.pdf	Trine Munk trsv@ramboll.com
Waste H2O management	Trinidad and Tobago	http://www.bvsde.paho.org/bvsacd/cef-2/WWwastewa.pdf	nishanaramsawak@ gmail.com
WATEROAM	Singapore	http://www.wateroam.com/	David Pong
Enhancing youth capacity in climate change adaptation	Bangladesh	http://www.gwp.org/Global/Activities/Youth%20docs/Factsheet_Bangladesh_April-2016.pdf?bcsi_scan_e724fdb549f88b03=0&bcsi_scan_filename=Factsheet_Bangladesh_April-2016.pdf	Mukta Akter bwp@dhaka.net
Monitor DTSS with drone/UAV	Singapore	http://www.straitstimes.com/singapore/environment/pub-keen-to-send-in-the-drones	
MMDA Flood Control System	Philippines	http://www.mmda.gov.ph/index.php/mmda-offices/flood-control-and-sewerage-management	
Decentralized WWTP	Philippines	http://www.sswm.info/sites/default/files/reference_attachments/BORDA%202008%20Decentralized%20Wastewater%20Treatment%20System%20Case%20Study_0.pdf	

Project	Location or origin	Available information	YWLS contact
Floating farm project	Philippines	The grid farm will float during flood events	Melvin Solomon msolomon@wa.com.ph
ABC Waters at Kallang River	Singapore	https://www.pub.gov.sg/abcwaters	Ms Lau Ying Shan Lau_ying_shan@pub.gov.sg
NEWater (Water reclamation)	Singapore	http://www.water-technology.net/projects/changi-reclamation/	Lin Ting linting@uel.sg
Blue for green cities	United Kingdom	http://www.bluegreencities.ac.uk/bluegreencities/index.aspx	
Watershed Network App	Philippines	University of Philippines (Social Innovation)	Melvin Solomon solomon.melvin@gmail.com
Hippo Roller	South Africa	http://www.hipporoller.org/	
Water Trading in the Murray-Darling Basin	Australia	http://www.mdba.gov.au/publications/mdba-reports/water-markets-murray-darling-basin	
Finance and Market Platform for Water & Wastewater Infrastructure	United States		
California Shade Balls	United States	http://www.nytimes.com/2015/08/13/us/in-california-millions-of-shade-balls-combat-a-nagging-drought.html?_r=0	
Beijing Underground Wastewater Treatment	China	http://www.chinadaily.com.cn/china/2016-05/23/content_25419045.htm	Dao Xiang Cun, 2013
Pilot Sponge Cities	China	http://china.nlabassade.org/binaries/content/assets/postenweb/c/china/zaken-doen-in-china/sectoren/water/2016-factsheet-sponge-cities-pilot-project-china.pdf	
4 Rivers Projects	South Korea	http://www.un.org/waterforlifedecade/green_economy_2011/pdf/session_8_water_planning_cases_korea.pdf	
Room for the River	The Netherlands	https://www.ruimtevoorderivier.nl/english/	
Swachh Bharat Mission	India	https://swachhbharat.mygov.in/	Sukriti Lama sukritijs_13@gmail.com Deepa Maggo maggo@wbcsd.org
Hydro Nations Entrepreneurial Ecosystems	Scotland/India	http://www.hydronationscholars.scot/	
Low Energy, No Aeration	Singapore/US/Korea	http://www.doosanhydro.com/en/technology/lena_mbr.do	Ryan de Sotto ceerbds@nus.edu.sg
Water Innovation Lab	Canada	https://waterlution.org/water-innovation-labs/	Dona Geagea dgeagea@gmail.com
Smart monitoring for on-time management	-		
CoreTech	-	Blockchain technology Enables micro-finance for water entrepreneurs for remote areas Micro transaction	
Wastewater to Electricity	-		
Salinity Intrusion in Deltas	Indonesia		
Miya Water's	Israel		
World of Flood Defences	Netherlands	Mapping flood defences Water purification devices for rural communities	huw.pohlner@aither.com.au