Republic - Export Building, 1st Floor
1 Clove Crescent

London E14 2BA

Tel: +44 (0)20 7654 5500

Fax: +44 (0)20 7654 5555

E-mail: water@iwahq.org

www.iwa-network.org

IWA Webinar "IWA Side Event at the 2023 UN Water Conference: Resilient and Inclusive Sanitation in combatting Climate Change Events and Extremities.''

Q and A Report – 22/03/2023

Webinar available at: https://iwa-network.org/learn/iwa-side-event-at-the-2023-un-water-conference-resilient-and-inclusive-sanitation-in-combatting-climate-change-events-and-extremities/

Questions received from participants during registration:

#	Questions	Speaker	Answer
1	How is drainage design part of resilient sanitation?	JAY BHAGWAN	If resilient sanitation reduces the need for water and flushing, offers on-site treatment, then the only issue to deal with is greywater. This can be repurposed and integrated into reuse with drainage systems. drainage will always be needed but WSD offers pathways to manage this better and as an opportunity.
2	How does a decentralized approach to non-sewered sanitation relate to pathogen exposure?	Jay Bhagwan	The decentralised approach is about confining and treating human waste nearest to source or at source. Thus it contributes to breaking the transmission. Pit latrines still offers this benefit. BUT THEY NOT ASPIRATIONAL.

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Questions received from participants via the Q&A:

#	Questions	Speaker	Answer
1	How do you successfully pitch urban sanitation projects within a climate finance paradigm? Is it stronger to promote the mitigation or adaptation benefits?		live answered
2	Does the framework of Sanitation Sensitive Design for Cities overlap with the Water Sensitive Cities Framework? With cities in emerging economies already set on stone, where overhaul is not readily possible, how can the existing core cities areas be adapted and how can the new suburban growth be shaped?		The answer is yes, in fact SSD has a bigger impact on the WSD process. SSD is built on the principles of non-sewered solutions and decentralised systems. This has a direct impact on water requirements and can reduce demand by 40 to 60%. Thus this impacts on the water supply and its issues such as water losses etc. are all reduced. It is also more resistance to climate effects.
3	Juliet: Resilient sanitation infrastructure requires a vibrant ecosystem which can handle operation and maintenance. How much focus is given to creating or nurturing an existing ecosystem to repair the infrastructure ? Are there finances which target this aspect?		Absolutely agree, attention to service delivery arrangements across different public and private actors that form that ecosystem is critical. This needs a model of 'sustainable cost recovery' for the overall system that is providing sanitation as an essential public service. Sustainable cost recovery means that a funding mix of tariffs from customers (eg paying for desludging or sewerage), taxes (like sanitation taxes built into property taxes) and transfers (public funds allocated to sanitation). Climate resilience will likely require additional costs- higher skills for operators, more responsive services during events- so these all need to be budgeted for and part of the overall financial picture.
4	Given the limitation imposed by the geography on the cities in Himalayan region, does the forum intend to shortlist	Hitesh	Due to the difficult terrain, having customised technologies for the Himalayan cities is required. What works where.

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	technologies for laying pipelines, treatment plants? Is there inherent capacities to handle the technological challenges and the pressures of urbanization for extending water and sanitation infrastructure?		For instance, for desludging in narrow lanes with steep slopes, in India there are companies who are making a customized technological intervention for the same.
5	Does the Sanipath tool allow one to compare and contrast the different toilet technologies which are deployed on ground? Is there a precedence where the tool was used for this purpose?	Suraja Raj	Hello, The Sani Path Tool does not directly compare technologies as it is designed to assess multiple different pathways of exposure to faecal contamination. However, it could be used in communities with different toilet technologies and the relative risks compared. The Sani Path Too has been used in communities with a variety of solutions and the methods could be used to monitor different solutions as well. Please feel free to reach out sraj@emory.edu if there are other questions about this topic.
6	We understand that Manila Water seeks to draw green energy. Is Manila Water involved in tweaking the existing wastewater treatment processes to reduce process emissions?	Jennifer	Yes, this is correct. To start, 60% of wastewater treatment opex is power, our team is now looking for a cost-efficient blower system to further rationalise the power consumption of our facilities. We are also looking for alternative chemicals for ww treatment that are available locally or if we can produce such as onsite chlorine generation.
7	And when we are dealing with those circular economy concepts, a closely designed system with mixed concepts using NBS and a wastewater treatment facility with minimum sensing technology is a must in the near future.		agree, it is a transition - like electric vehicles
8	Any successful examples of products from the sanitation value chain?		Oil, protein, biochar, phosphates, nitrates, energy.

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9	Manila Water involved in deploying Nature based solutions? If so, can the example be stated and the reason for deploying this Nature based solution	Jennifer	This is part of our R&D study but currently we have not utilised such a solution on a larger scale.
10	Thank you. are there any documented success stories?		google sanergy or sanivation or liquid gold
11	Pericles: What are the precautions under which the dredging of the lagoon bed is done as it can recontaminate the water? Is your utility undertaking an assessment to choose appropriate use of processes to increase efficiency and reduce process emissions?		Yes, it is a great engineering project, supported by technology and case studies already applied in similar situations, supported by the nature-based solutions that the region promotes. All actions are monitored and validated by the regulatory agency and the environmental agency in Rio de Janeiro. All parts of the project are interconnected. Thanks for the question!
12	Could the Panelists please comment on what they see are priority information needs that could be addressed by research on climate resilience and sanitation?		The Landscape study we conducted came up with a knowledge and learning agenda based on evidence gaps and learning needs put forward by diverse stakeholders. You can find it here: https://www.uts.edu.au/sites/default/files/2022-09/UTS-ISF_2022_Urban%20sanitation%20and%20climate%20change_Landscape%20study%20%281%29.pdf
13	Arne: What is the power of attribution when we say 1 dollar invested in sanitation yields x dollar in health? Is there any active effort to improve attributions of Nature based solutions		live answered
14	Utilities in emerging economies when they are getting increasingly comfortable with centralized solutions, with the push to NSS, they now depend increasingly on external technical support as they lack	Jay Bhagwan/ Hitesh	We still see bureaucrats fuelling and perpetuating this wicked problem in the developing world. in south Africa we have nearly 80% of plant not meeting compliance and nearly 40% not operational. we build systems and not the

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	the expertise? How can we ensure that the tech and policy ecosystem is self-sufficient?		necessary skills to support. but the costs are also an issue. In India, only 40% of the households are connected to sewered or centralised systems. While rest of the households are connected to septic tanks (ideally followed by soak pits), from where the waste goes through drains to water bodies or contaminates ground water. Also keeping in view, the cost involved in centralized systems. It's ideal to have non-sewered sanitation or decentralized approach. Furthermore, the existing centralized systems are underutilized thus to ensure maximal utilization of the existing systems co-treatment is an option.
15	What role can international law and policy play in action/acceleration for water security and sanitation? Are there examples of successful implementations in the Global North as an example for the Global South?		live answered
16	Are aerosols from open urban drains a pathway for gastrointestinal diseases especially given the proximity and how intertwined the open drains and channels with habitations	Suraja Raj	Aerosols are not something we have explored in the SaniPath Tool. Our risk assumptions are looking for an ingestion (either directly or indirectly) from the different pathways. You can read more about the assumptions for the SaniPath tool in our tool paper: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0234364
17	How can we involve the Humans / Resident Assoc./ Rotary Clubs who are present across globe?		Involving multiple stakeholders which are important in decision making is important to create an informed decision and also to bring the sense of ownership. This can be done through consultative workshops.