

UN 2023 Water Conference Side Event

Water Innovations for Sustainable Development

23 March 2023; 8.00 am - 9.15 EST; UNHQ Conference Room A, New York City

Organized by: Delft University of Technology, TU Delft | Water For Impact, 374Water, Barnard College, Columbia University, Tahmo, eawag, ETH Zürich, the University of Alabama, Kenya Meteorological Department, Unicamp, UDS Tamale

Background on the event

Participants will engage in a Human Spectrogram, an interactive exercise to prioritize areas of impactful research, innovation and investment to advance the Water Action Agenda for Sustainable Development. Using multiple statements, the participants will form a human spectrogram based on different challenges on the topics: Water for Health, Water for Food and Water for Climate. The challenges will cover, amongst others, drivers for innovation adoption, global scale-up, circular water use and forever chemicals.

Water Action Agenda

Water is an undervalued resource. It does not get the attention it needs. Globally the number of water engineers is declining, water system designs are outdated. If we want to take big steps in solving global water crises, we should get up and stand up more. We need more boldness to shake things up! But what is it going to take to break through and make this big step in innovation? How do we push for a change? We need to disrupt conversations in conventional settings, so people start having uncomfortable conversations. There are not enough people to drive renovation, let alone innovation. We need water engineers and scientists to speak up for change. In the long-term, education is vital to ensure proper maintenance and operation of water infrastructures.

Key Issues discussed

The six statements below are discussed and form the basis for the contribution to the Water Action Agenda:

- The Global WASH crises should be considered as a Humanitarian crisis; as such the global community should fund "infrastructures and education programs as urgently as in disaster response."
- Emerging contaminants, like PFAS, pose the biggest threat to global safe water access.
- Water is too low on the political agenda around the world. We need to take action to make it a
 political action priority in all of our home countries.

- The best way to accelerate WASH outcomes is to drive adoption of next generation technologies, particularly decentralized solutions that can leapfrog in places lacking infrastructure.
- Science and evidence should form the basis of Climate adaptation measures rather than traditional knowledge and practices.
- We will fail to achieve SDGs by 2030; specifically goal 6 targets won't be any closer than today as populations grow.

Key recommendations for action

Discussion based on the above mentioned statements lead to the following actionable statements, that are elaborated in the contribution to the Water Action Agenda:

 Global action: act as a global community, implementing preventive measures rather than curative measures in fighting the WASH crisis.

We can act very well as a globe when there is a need for curative measures, looking for example at the Covid crisis. However, preventive measures are usually politically difficult to implement. Safe water access and improved sanitation prevents exposure to water-borne diseases, such as cholera, crypto and rotavirus, and is more effective (read: cheaper) than any curative response. Within this global action it is important to keep looking at every case as an individual and find solutions with a good balance between urgency and sustainability.

• Global safe water access: fight water contamination to increase life expectancy.

There are a lot of water quality issues, of which many are caused by human pollution. The diversity in contaminants is rapidly increasing, making it challenging by the year to treat the water to safe drinking water standards. A recent example is the rise of PFAS or "forever chemicals" in our water bodies. A global fight against water contamination is vital, particularly considering the uneven worldwide distribution of access to technologies to protect against exposure via drinking.

 Political action: start acting as people, but support from a higher level is needed for solving the global water crisis

WASH is a public good, so support from a higher level is needed in order to solve the global crisis. At the same time, every individual should, within their capacity, stand-up to act, as this will aid in pushing for water higher on the political agenda.

• Out-of-the-box solutions: locally led trials -and pilots to find the best solution for each location.

As an individual living with water, you know a lot, especially from the perspective of adaptation. Traditional practices are also science and based on evidence, especially important in the developing world. We should stop driving everything for short-term financial gains, as climate adaptation measures will pay out in the long run.

Next generation technologies by itself will not always be applicable, they need to fit in the local context. There is a lot happening around technological innovations, but these systems do not always fit. We should also look at going back to basics, to traditional practices, and cleverly connect, where desired, to technological opportunities that are here today.

SDGs by 2030: we need to urgently mobilise the resources needed to make it happen!

If we say we won't make it, we will start to sit back and do nothing. We are with a lot of people here wanting to make a change, so we should go for it! Two things that we should not hold onto if we want to achieve the SDGs by 2030 are greed and attachment. We should also stop having the focus mainly on commercialization.