

# 1<sup>st</sup> World Summit on Leaving No One Behind

Geneva, 7-8<sup>th</sup> February 2019, WIPO Conference Hall  
Human Rights-Based Solutions for Access to Water and Sanitation

## **A Human Rights-Based Summit for Water and Sanitation**

The World Summit on Leaving No One Behind aims to fill a need that is not yet met by other water conferences and provides a kick-off event as part of the 2019 UN-Water campaign on this theme. The emphasis is on human rights to water and sanitation, and the focus is on finding and implementing workable solutions with support from sponsors, by bringing expert, governance leaders and funding agencies together. Solutions need to be innovative, economical and easy to implement. Overarching these constraints there also needs to be a supportive political climate and strengthened governance to overcome corruption, inertia, and budgetary constraints.

The nexus of these three aspects of Human Rights-Based Water Governance, Innovative Technology and Economic Feasibility provides a topic for this Summit, and a platform to bring together ideas and people in a constructive environment. This year (2019), the themes of the Summit are centred around Women, Refugees & Migrants, Indigenous Peoples, Children & Youth, Rural Areas and Climate Change. Linking to the UN-Water campaign of 2020, the next year's Summit will be focused on the role of Climate Change and its effect on the Leaving No One Behind agenda to ensure safe and sustainable access to water and sanitation for all.

# FLAGSHIP PROJECTS

highlighting accessible and innovative solutions that are relevant for people from least developed countries and situations aggravated by poverty, water scarcity, location, climate change, conflict situations or cultural and gender barriers. Winning

project will receive the **Leaving No One Behind Innovation Award** at the Gala Awards Dinner along with seed funding to start the programme and develop the idea further. Projects can run for at least a year, with presentation of progress at the 2020 2<sup>nd</sup> World Summit on Leaving No One Behind.

## FLAGSHIP 1

*Resource Circulation Sanitation Showcase to Provide Sustainable Sanitation in Remote Areas*  
Shervin Hashemi & Mooyoung Han, Seoul National University

An innovative sanitation system named "Resource Circulated Sanitation (RCS)" has been developed along with a showcase project to investigate the technical efficiency and sustainability of implementation in a remote area. The system includes four sections: a dry toilet seat, urine reactor, faeces reactor, and a rainwater harvesting system to provide water for sanitary applications. The seat efficiently separates urine from faeces, storing them in their reactors. Urine is stored in a tank-in-series reactor while faeces along with other hygienic materials, such as biodegradable toilet papers, are led into a batch reactor including sawdust for the composting process. The reactors are well-designed based on the estimated amount of usage and retention time of 10 to 15 days. With its nature-based treatment for sanitation, the system meets the recommendations of WHO guidelines for remote areas and does not need complicated infrastructure.

## FLAGSHIP 2

*New Technologies to Strengthen Local Water Governance in the Pipiripau River Basin, Federal District, Brazil*, Gustavo Carneiro, Regulatory Agency for Water, Energy and Basic Sanitation of the Federal District (ADASA)

This project will facilitate the installation of low-cost sensors on water pumps and irrigation pivot systems across the river banks of the Pipiripau River basin. These sensors detect when the water withdrawal systems are in operation and transmit logged data via the mobile phone network to the cloud to become available for real-time display on interactive online dashboards with maps, tables and graphs for all registered users. The information can be displayed in tablets and smartphones, via customized app, from anywhere with access to the internet, thus providing data transparency and water use accountability. Rural producers, water utility companies, local regulatory agencies and other institutions will have access to the app, ensuring all registered users, without discrimination, will be able to monitor and enforce compliance with negotiated water allocation schemes. This will also facilitate the financial sustainability of the monitoring system.

## FLAGSHIP 3

*Testing Innovative Technologies for Provision of Water, Sanitation and Hygiene in Humanitarian Settings*, Lars Schoebitz & Alison Weber & Myles Elledge, Biomass Controls

The purpose of this project is to test the technical, economic and social feasibility of an integrated approach to the provision of WASH, MHM and energy recovery in humanitarian settings. Innovative and decentralised treatment technologies have been designed to address key issues of communities in areas that are difficult to reach with conventional wastewater, faecal sludge or other waste treatment solutions. The solutions are suitable for remote locations without access to electricity, but are equally applicable to urban contexts. The facilities provide technical primary barriers to disrupt the transmission of diarrhoeal and infectious diseases by safe containment and thermal treatment of excreta. Technologies are designed to comply with national and global standards for air emissions, discharge of liquid effluent, heavy metals in solids output and pathogen reduction. All treatment products are pathogen-free. This project provides an opportunity to deliver evidence and verification of the effectiveness of integrated WASH and MHM services in humanitarian settings

## FLAGSHIP 4

*Optimizing Groundwater Management in Botswana: A Focus on the Agricultural Sector, a Citizen Science Approach*, Phemelo Makoba, Botswana Department of Water and Sanitation

Groundwater management data availability is a challenge when assessing groundwater management. Climate change has heavily affected the living patterns in the rural communities in Botswana, consequently calling for optimisation of efforts to manage groundwater resources which are now more exposed to pollution. In this project, farmers will be provided with dip meters and flow meters in their individual operating boreholes. After induction training, the farmers will be responsible for recording water levels before and after pumping and recording flow meters with minimal supervision. Data will be collected electronically and as raw data on a weekly basis from the farmers for data processing and archiving. Water samples will be collected fortnightly from all the boreholes covered during the pilot stage for water quality analysis. The project will indicate where there are issues of groundwater pollution so that corrective measures may be put in place. Simultaneously, farmers will gain confidence and ownership of groundwater management.

## FLAGSHIP 5

*Improve Accessibility of Water and Sanitation in Slums*  
Gianluca Crispi & Robert Lewis-Lettington, UN-Habitat, Kenya/Iran

Slums sit outside the regulations on land use, building permission and infrastructure and service provision. They are often based on illegally occupied land, and lack the infrastructures and services normally provided in urban contexts. UN-Habitat has developed a legal assessment tool to identify legal constraints for slum prevention and upgrading, with the goal of ensuring the right to water and sanitation for the urban poor and improve the lives of over 881 million slum dwellers. The tool will help urban managers and other key stakeholders to conduct a comprehensive legal analysis and understand if the existing regulatory frameworks support or hinder slum upgrading and prevention efforts. The Tool assesses the legal framework on basic services, land, planning, housing and financing that are influential to improve living standards. In each area, the Tool uses a set of indicators to capture the essential elements that matter most for slum upgrading and access to basic services, guided by SDGs, New Urban Agenda, UN-Habitat's core values and International Human Rights Law.

## FLAGSHIP 6

*How to Make Rural Drinking Water Sustainable: Lessons from Latin America*  
Pedro Miguel Carrasco Loyola, Avina Foundation, Ecuador

Community organisations for water and sanitation services work to ensure compliance with fundamental human rights and public health. However, if they lack recognition and visibility, their work is often not remunerated so limiting their capacity to administer, operate and maintain systems. This project aims to build a document that describes at least three successful experiences for community water management in Latin American countries, prioritising success factors such as local and national public policies, levels of associativity among organisations, role of women and opportunities for the strengthening of local capacities. It will serve as a practical guide for the work that the OCSAS develop in other countries and regions. It also aims to enhance the exchange of experiences and knowledge between similar organizations. The project places a special emphasis on technical innovation processes and experiences where public policies are favourable to community water management and where public community partnerships are working.

**EXPLORATORY PROJECTS** are ideas that have yet to be tested, but have potential to solve a particular issue or problem associated with enabling access to water and sanitation.

## SESSION 1 • WOMEN

*FOG Water Vapor Harvesting Netting Arrangement,*

Alain Al-Helaly, Albea

Innovative model to increase the surface area of fog collection and improving the deposition of water vapor on the netting surface, and containeris to facilitate transporting and deployment.

*Rainwater Harvesting as an Alternative Water Source in CKDu Affected Areas in Sri Lanka,*

Deepthi Wickramasinghe, University of Colombo

Usage of village level rain water harvesting societies to overcome water shortage issues to provide safe and clean drinking water and reduce the time spent on fetching water.

*Community-Based Monitoring and Advocacy for Fluoride Contamination in Drinking Water in*

*Luangwa district, Zambia, Evans Tembo, ENVAROS*

Analysis of fluoride in drinking water and its public health implication to address the issue of high levels of dental fluorosis among children.

## SESSION 2 • INDIGENOUS PEOPLES

*Effect of Storage Conditions and Sunlight on the Quality of Sachet Nylon and Vended Water,*

Kenneth N Aroh & Ismail Bab, National Oil Spill Detection and Response Agency

In response to increasing cases of contamination, this project will determine the effect of storage conditions and sunlight exposure on extensively used sachet nylon and vended sachet water.

*Building an Enabling Environment for Universal Access to Safe Water in Colombia,*

Eva Manzano, Centre for Affordable Water and Sanitation Technology

Capacity development services, sector coordination and knowledge sharing activities to provide people living in rural and remote communities with access to HWTS technologies.

*Community-Based Water Tenure: Comparative Legal Analysis of Indigenous and Local Communities' Recognized Freshwater Rights, Stephanie Keene & Jessica Troel, Rights and Resources Initiative*

Measuring the extent to which countries' national laws recognise and protect Indigenous Peoples'/ local communities' freshwater rights to provide the basis for data-driven advocacy future analysis.

## SESSION 3 • REFUGEES AND MIGRANTS

*Gender-Equitable Development in Congo: Strengthening Capacity for Water, Sanitation and Hygiene and Menstrual Hygiene Management, Panthea Pouramin, Nidhi Nagabhatla & Raphael Tshimanga, United Nations University Institute for Water, Environment and Health*

Examine the state of WASH and MHM among women & girls within selected migrant communities to develop and implement a pilot eLearning training of trainers capacity building program.

*Greywater Reuse for Crop Production in Refugee Camps, Burcu Yazici, Turkish Water Institute*

Pilot application of introducing greywater reuse in temporary shelter centres to irrigate edible crops along with engaging all stakeholders and capacity-building for refugees on WASH.

*Solar Powered Iron Removal, Mubiana Muyangwa, WaterAid Zambia*

Create a prototype of solar powered iron removal system to combat issues of low access to water supply due to high iron content in the underground water sources.

The chosen projects will present and be considered for pilot funding from the sponsoring organisations. Progress and results from pilot studies chosen for funding will be presented at World Water Week 2019 in Stockholm, Sweden.

## SESSION 4 • YOUTH WITH WORLD YOUTH PARLIAMENT FOR WATER

*Fluoride Mitigation from Water Wells through Nature Based Local Water Security Solutions for Developing Countries, Jos C Raphael, District Rainwater Harvesting Mission*

Using nature-based and cost-effective methods to direct rain water into open and deep tube wells and deep tube wells to dilute fluoride levels in drinking water.

*Drinking Water Analysis as a Criteria of Human Rights Condition, Hisashi Saito, iuventum e.V.*

Introduce and establish a new criterion to measure human rights conditions by analysing the quality of drinking water, effectively enabling evaluation of different regions and situations.

*Local Government Lead Action to Translate Policy Commitment - Inclusive Sanitation Progress for Disabled Children, Ramisetty Murali & Snehalatha Mekala, Freshwater Action Network South*

*Asia & South Asia Consortium for Interdisciplinary Water Resources Studies*

Establish partnership with sub-national and district level local governments to develop model communities where children's sanitation needs are fully met.

## SESSION 5 • CLIMATE CHANGE & RURAL AREAS

*Nature Based Local Water Security Solution for Water Quality & Resource Improvements*

*Befitting Developing Countries, Jos C Raphael, District Rainwater Harvesting Mission*

Using a Climatic Change Adaptation technique of "well recharging technologies" to avert coastal desalination and shallow aquifer recharging in other terrains, as well as drought and floods.

*Investigation of Wetlands of International Importance – Point Calimere Wildlife and Bird*

*Sanctuary, Tamil Nadu, India, R. Vignesh, Vel Tech*

Using Remote Sensing and GIS to collect real-time data to provide indicators on the deterioration of the wetland ecosystem to guide policy on its maintenance and preservation.

*Innovative and Smart Ways to Improve Wastewater Management in River Atoyac, Central Mexico, Aquileo Hernandez & Pedro Rodriguez & Estefania Martinez, CIEMAD and IPN*

Using multiple technological and analytical strategies to detect pollution events and identify pollution sources as a way to enable sustainable wastewater management.

## Summit Scientific Committee

The Summit Scientific Committee has reviewed all abstracts and made the final selection of projects being presented at the World Summit on Leaving No One Behind based on agreed criteria. The members of the Summit Scientific Committee also serve as judges at the Summit to choose the winning projects. The Committee includes experts in human rights to water and sanitation, water governance and water technologies that can supply people that are being left behind.

Chair: Michael Jarraud (WMO)

Annemiek Jenniskens & Lesha Witmer (WfWP)

Ania Grobicki (FAO)

Bacre Ndiaye (OHCHR)

Celia Bedoya, (IADB)

Dirk Hanschel (MLU Halle-Wittenberg)

Dominique Berod (WMO)

Eibe Reidel (WaterLex)

Guillermo Donoso & Tom Soo (IWRA)

Maria Querol (WaterLex)

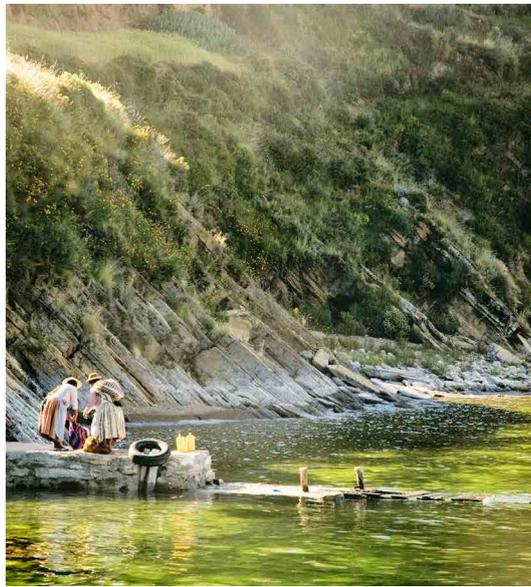
Murray Burt (UNHCR)

Phillippe Cullet (SOAS)

Rio Hada (OHCHR)

# Leaving No One Behind Award

At the Gala Award Dinner on February 7, 2019, the Leaving No One Behind Innovation Award will be awarded to the most promising idea presented to the first day of Flagship Project presentations. The Leaving No One Behind Award includes funding for the winner to start a feasibility study. The winning idea can be either technology or policy driven, and it must aim to help solve the issue of how to ensure access to water and sanitation for people in marginalised situations. The members of the Summit Scientific Committee serve as judges of the final vote.



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Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

Swiss Agency for Development  
and Cooperation SDC



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