



SESSION DESCRIPTION FORM 2.

10TH WORLD WATER FORUM

This Session Description Form 2 is for the specified program of the session. Please complete this form no later than 28th of February 2024.

**The session description 1 (online form) is separately requested for the session coordinators to deliver a concise session outline with the contact info and the logistical requests.*

Session Code and Title:

T3D2. Improving the resilience of water infrastructure to climate change

Session Coordinators (Name, Position, Organization, email, mobile number):

Mr. Michio OTA, Advisor, Japan Water Agency (JWA), monarbo7810@hotmail.com, +81-9022387801
Dr. Suhua WU, Dam Safety Management Center of the Ministry of Water Resources, P. R. CHINA, shwu@nhri.cn, + 86-13951915529
Ms. Brooke Yamakoshi, Regional Water, Sanitation and Hygiene Manager for UNICEF, East Asia and Pacific, byamakoshi@unicef.org, +1-8473705446

Session Description including objectives and expected outcomes (500 words maximum):

The objective of T3D2 session is to provide participants from the world water communities with a platform to discuss issues (gaps between ideal and actual situations) and challenges (actions to bridge the gaps) related to the resilience of water and sanitation infrastructure, which plays an important role in protecting lives, properties, and socioeconomic activities from the water-related disasters that are becoming more severe and more frequent due to climate change.

The session will highlight the need for climate resilient water and sanitation services to ensure that services continue to function as needed under increased uncertainty and pressures, changing hydrological/hydrogeological conditions, and more frequent extreme weather events. The session will start by sharing best practices in assessing and enhancing the resilience of water and sanitation services, by governments that have carried out comprehensive climate risk assessments and developed a climate rationale for the WASH sector.

Specifically, the following matters will be discussed with due considerations to social inequalities in gender, ethnics, and other socioeconomic conditions;

- Climate risk assessments and the need to develop a strong climate rationale for water and sanitation services in order to direct investments in the sector toward adaptation (government funds and ODA)
- Lessons learned, initiatives and strategies implemented to cope with extreme hydrological events in the last decade, and the challenges lying ahead.
- A framework consisting of: 1. Education and awareness, 2. Building technical expertise, 3. Climate-informed planning and design, 4. Monitoring and evaluation, 5. Knowledge exchange and learning across the world water communities, 6. Prioritize green infrastructure and Nature-Based Solutions
- How to introduce climate sensitivity in parameter estimations that are used in the design process for the future water demand estimation and flow rate estimation to mitigate flood risk based on climate change scenarios
- Water scarcity scenarios due to insufficient water resources to optimize design techniques and a good operational framework for water demands by creating systems of low total cost and high resilience
- How to proceed with projects of upgrading water infrastructures such as existing dams, barrages, etc. from a view point of asset management considering the future climate change scenarios Resilient water infrastructure providing reliable water resources and services, and respond quickly to disaster events and emergencies, thereby reducing losses and recovery time, especially for vulnerable groups that may be mostly affected.

Government agencies, universities and research institutes in each country participated in the discussion will be able to conduct challenge setting with their policies and strategies, and science-based technologies. Expected outcomes are the followings;

- Securing budgets for the water infrastructure development projects
- Supporting ODA project formations
- Developing technologies to ensure 1. Longevity of existing water infrastructure, 2. Upgrading dam reservoir O&M by advancing the accuracy of weather forecasts, 3. Optimizing and streamlining water infrastructure O&M using AI and IoT, 4. Capacity building by developing e-learning programs on countermeasures against water disasters, 5. Conducting joint researches on climate change, 6. Holding a forum in collaboration with space agencies and disaster management agencies.

Detailed Session plan:

ESTIMATED TIMING	ITEM DESCRIPTION / ROLE	SPEAKERS	SPEAKERS STATUS (OK OR TBC)
2 minutes	Opening	Dr. Suhua WU	T3D2 Coordinator
15 minutes	Plenary/Panelist/Presenter Title: Integrated Reservoir Operation for Flood, Sediment and Hydropower Management using Ensemble Rainfall Prediction	Dr. Tetsuya SUMI	Professor, Disaster Prevention Research Institute, Kyoto University, Japan (confirmed)
15 minutes	Plenary/Panelist/Presenter Title :Matrix Management System for safety operation of Reservoir Dams >.	Mr. Jinbao Sheng,	Chief engineer of Dam Safety Management Center, MWR, China (confirmed)
15 minutes	Plenary/Panelist/Presenter Title: Water Security in Cagayan River Basin: Assessment of Impact of Present and Future Climate to Water Resources and Demands for Agriculture, Domestic and Industry using the Water Evaluation and Planning (WEAP) Model	Dr. Orlando F. Balderama	Professor and Vice President for Research and Development, Isabela State University, Philippines (confirmed)
5-10 minutes	Panelist/Presenter Title: Ecosystem-based approach to support climate-resilient water infrastructure in Red River Basin	Mr. Lan Thanh Ha	Institute of Water Resources Planning/Red River Basin Organization, Vietnam (confirmed)
5-10 minutes	Panelist/Presenter Title: Water infrastructure design considering climate change scenarios: water scarcity, demand increase and intermittent water supply	Mr. Santiago Gómez Molina	World Youth Parliament for Water, Colombia (confirmed)
5-10 minutes	Panelist/Presenter Title: Engaging Women and youth in community engagement for supporting water security	Ms. Kusum Athukorala	Global Water Partnership, South Asia /Women for Water Partnership (confirmed)
5-10 minutes	Panelist/Presenter	Dr. Toshio OKAZUMI	Executive Officer/Senior Chief Engineer, TOKEN C.E.E.



	Title:” Water resource planning in an uncertain society - Critical water resource assessment and countermeasures that appropriately coordinate software and hardware-		Consultants, Co.,Ltd., Japan (confirmed)
5-10 minutes	Panelist/Presenter	Ms. Silvia Gaya	Regional Adviser, Water, Sanitation, Hygiene, Climate and Environment, UNICEF
5-10 minutes	Panelist/Presenter	Dr. Armelle Perrin-Guinot	Director, Veolia, France (HQ) (confirmed)
3 minutes	Closing	Mr. Takaaki KUSAKABE	DG, International Affairs, JWA (confirmed)