



SESSION DESCRIPTION FORM 2.

10TH WORLD WATER FORUM

Session Code and Title:

T3SS. Disaster Risk Reduction and Management

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

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

Water-related disasters, such as floods and droughts, have been occurring more frequently with unprecedented severity and extent in many parts of the world. Floods have increased 2.3 times and droughts 1.3 times, comparing the number of reported disasters to the respective 20-year periods, 1980-1999 and 2000-2019. Nearly 95% of the infrastructure loss and damage reported between 2010 and 2019 were due to water-related disasters. At least 1.4 billion people have been affected by droughts and 1.6 billion by floods between 2000 and 2019. As a result, complex, cascading, and systemic risks that usually lurk within social, economic, and environmental systems have suddenly emerged, threatening humanity beyond boundaries in space and time. Extreme precipitation is projected to intensify by about 7% for each 1degree of global warming, and every additional 0.5degree warming causes discernible increases in agricultural and ecological droughts in some regions.

Increasing water-related disaster resilience entails concerted efforts by various stakeholders. However, government agencies typically address flood and drought management separately within their mandates and rarely collaborate to reduce these risks synergistically, although floods and droughts are just opposite ends of the same hydro-climatic spectrum. This siloed approach makes it much harder to seize key opportunities to ensure protection against the two hazards. To improve flood and drought disaster resilience in an inter-connective way, we need to maximize the use of existing knowledge and introduce new types of science and technology that serve broad and collective societal needs. Building this new approach requires interdisciplinary research, collaboration, and cooperation among natural sciences, engineering, social and political sciences, and the humanities. Transdisciplinary collaboration and close communication between scientists, practitioners, and policymakers are essential.

To deepen the understanding of the water-related disasters and to seek effective and doable solutions, Sub-theme 3 (ST3) on "Disaster Risk Reduction and Management" focuses on the following five topics: (A) integrated flood prevention and management; (B) drought prevention and management; (C) ecosystem-based DRR in the water sector; (D) climate-smart, sustainable and improved resilience of water infrastructures; and (E) early warning systems for all and emergency response mechanisms. In addition to a total of eleven thematic sessions, ST3 organizes two ST3 cross-cutting sessions and three overarching cross-cutting sessions to clarify interdisciplinary and transdisciplinary collaborative approaches. ST3 also contributes to two high-level panels to identify concrete actions and international consensus building.

This session aims to take stock of the overall discussions and identify steps that need to be taken to integrate knowledge across disciplines, foster cooperation among governments, international organizations, academia, civil society and the private sector, and develop human resources to drive these efforts forward.

Detailed Sub Theme 3 Synthesis Session plan:

ESTIMATED TIMING	ITEM DESCRIPTION / ROLE	SPEAKERS	SPEAKERS STATUS (OK OR TBC)
3min.	Opening Remarks	Session Coordinator	OK
5min.	Report on HLP8: EW4All	Prof. KOIKE Toshio, ICHARM, Japan	OK

5min.	Report on T3E: Early Warning	Dr. Stefan Uhlenbrook, WMO	OK
5min.	Report on T3D: Climate	Ms. Ir. Gandes Sawitri, M.T., PUPR	OK
5min.	Report on T3C: EcoDRR	Mr. Geoffrey Wilson, ADB	OK
5min.	Report on T3B: Droughts	M.Eng. Romorajausia, S.T., PUPR, Indonesia	OK
5min.	Report on T3A: Floods	Ms. Annegien Tijssen, Deltares, Netherlands	OK
5min.	Report on T3CC: Cross-cutting	Prof. KOIKE Toshio, ICHARM, Japan	OK
5min.	Report on CC7: Pre-disaster Investment	Mr. MARUYAMA Kazuki, MLIT, Japan	OK
5min.	Report on CC8: Optimization	Dr. Yumiko Yasuda, GWP	OK
5min.	Report on CC9: Data	Dr. SOBUE Shinichi, JAXA	OK
5min.	Report on HLP15: Bandung Spirit Water Summit	Prof. HIROKI Kenzo, HELP Secretariat, Japan	OK
30min.	Panel Discussion	Moderated by Session Coordinator	OK
2min.	Closing remarks	Session Coordinator	OK