

**▶ WWCH 2023 TOPIC and CHALLENGE List**

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| **Main Topic** | **SDGs****links** | **Challenge** |
| **Water and Wastewater Treatment** | **6.1 & 6.2** | **(Challenge) Energy-efficient (or Carbon-emission-reducing) Water Recycling and Reuse** |
| (Key words) water and wastewater treatment technology, safe and clean technology for drinking water, sanitation and health science, sea water desalination, WASH for public health |
| **(Challenge) Resource Recovery in Water and Wastewater Treatment** |
| (Key words) Energy generation technology, Nutrients recovery system in water treatment, |
| **Efficient Water Management** | **6.4** | **(Challenge) Sustainable Water Resource Management** |
| (Key words) water-cycle security, groundwater development, policy for integrated water management, governance for transboundary and shared water resources |
| **(Challenge) Water Management for Water-Energy-Food Nexus** |
| (Key words) water-energy production technology, Technology for achieving water-energy-food nexus, hydropower technology |
| **Water and Natural Disasters** | **11.5** | **(Challenge)** **Flood/Drought Risk Assessment and Management** |
| (Key words) flood prevention, climate change scenarios and prediction, drought analysis and management, risk assessment and adaptation, water and disasters, groundwater development |
| **(Challenge) Depletion and Pollution of Water Caused by Natural Disaster** |
| (Key words) water related composite hazards, drinking water shortage by earthquake, coastal disaster and tsunami, portable water treatment system |
| **Smart Water****Technologies** | **6.5** | **(Challenge) ICBM, ICT based Integrated Water Management** |
| (Key words) water and creative economy, smart water management, smart disaster management system, smart agricultural water management, standardized smart water grid technology, water management information systems, RS and GIS applications for securing water resources, best management practices of IWRM, advanced water governance through multi-directional information system. |
| **Ecosystem and Water** | **6.6** | **(Challenge) Nature-based Solutions for Ecological Recovery and Resilient Water Cycle** |
| (Key words) wetland conservation and restoration, environmental flow, river restoration, ecosystem service |
| **(Challenge) Ecological Urban Water Cycle under Heavy Rainfall Event** |
| (Key words) utilizing LID and GI, resilience cities, ecological flow |