

ResilientHydroTwin Project kicked off under NWO-DST Water Disaster Management (WDM)

ResilientHydroTwin is one of three projects awarded under the Water Disaster Management (WDM) program, a collaborative effort between India and the Netherlands facilitated by the NWO-DST Merian cooperation. These three projects convened for a joint kickoff ceremony at the NWO offices in Utrecht, Netherlands, from October 15th to 17th, 2024.



The ResilientHydroTwin project, led by Dr. Ranjith Kuttantharappel Soman (TU Delft) and Prof. Ashwin Mahalingam (IIT Madras), was well represented at the event, with both project leaders attending. Additional attendees included team members Dr Maria Nogal, Dr Johan Ninan, Dr Marian Bosch-Rekvelde, and Erica Arango from TU Delft; Prof. Balaji Narasimhan from IIT Madras; Dr Pieter Pauwels and DrÖzgün Balaban from TU Eindhoven; as well as Ben Nott, a representative from one of the project's partners, BlancoLAB. This consortium brings together diverse expertise to create city-level digital twins—virtual models that integrate hydrological, hydraulic, transport, and water management systems to simulate city behavior during extreme water events.

ResilientHydroTwin project works alongside **LODESTAR**, which uses satellite data and AI-driven dashboards for disaster forecasting, and **RESTARTin**, which applies multi-scale modeling and socio-economic assessments to develop adaptive strategies. These initiatives aim to tackle the growing challenges of floods and droughts exacerbated by urbanization and climate change. ResilientHydroTwin is notable for its focus on digital innovation and fostering collaboration with stakeholders, setting the stage for progress in urban water disaster management.

The kick-off meeting in Utrecht brought together researchers and stakeholders from all three consortia in India and the Netherlands. Technical sessions on the first day focused on identifying connections between the projects and refining their individual plans. On day two, Bas Kolen (UvA and HKV) delivered a keynote on the Dutch approach to flood risk management, followed by a panel discussion on intercultural collaboration, highlighting trust and stakeholder engagement. The final day featured a field visit to Dordrecht, where participants learned about innovative water management practices, including the use of elevated zones for flood evacuation.

