



Ministry of Infrastructure
and Water Management



Jaap Slootmaker

Vice-Minister of Water & Soil Affairs

**Ministry of Infrastructure and Water
Management**

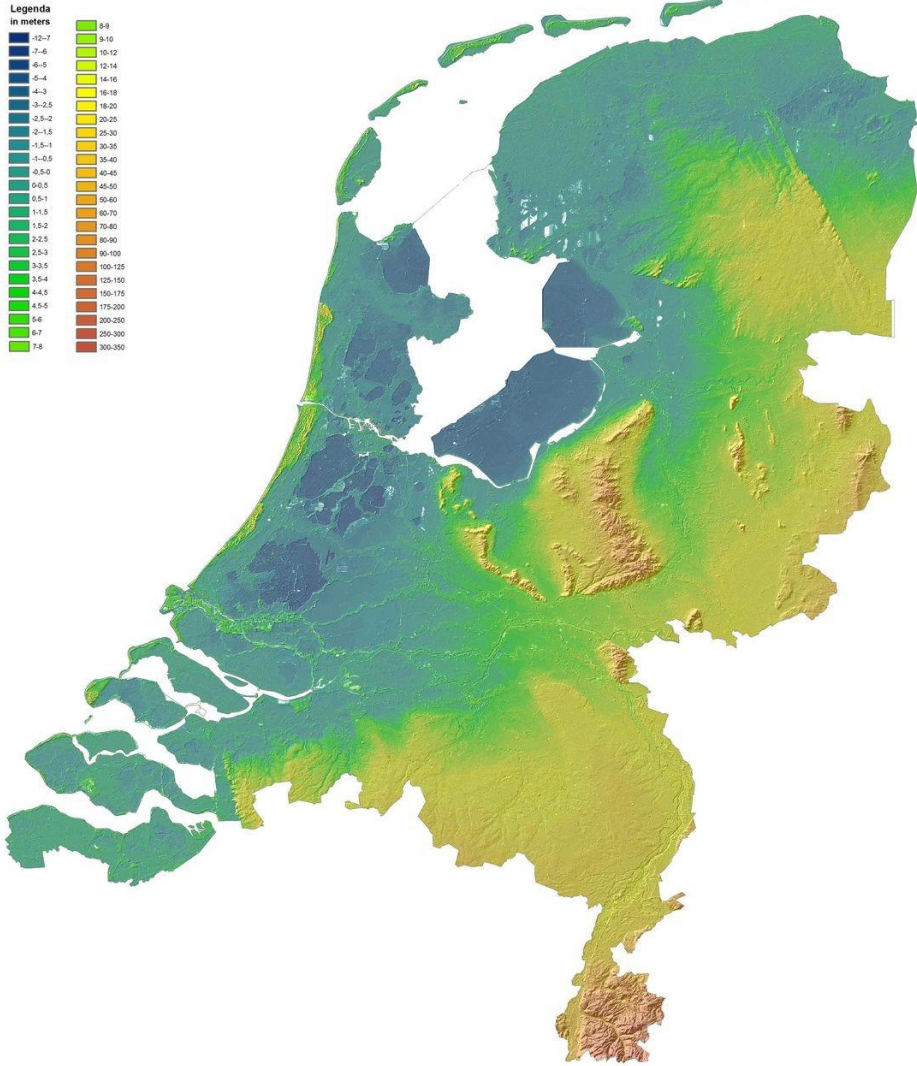
Government of the Netherlands







Actueel Hoogtebestand Nederland (AHN)
met reliëf-schaduwwerking



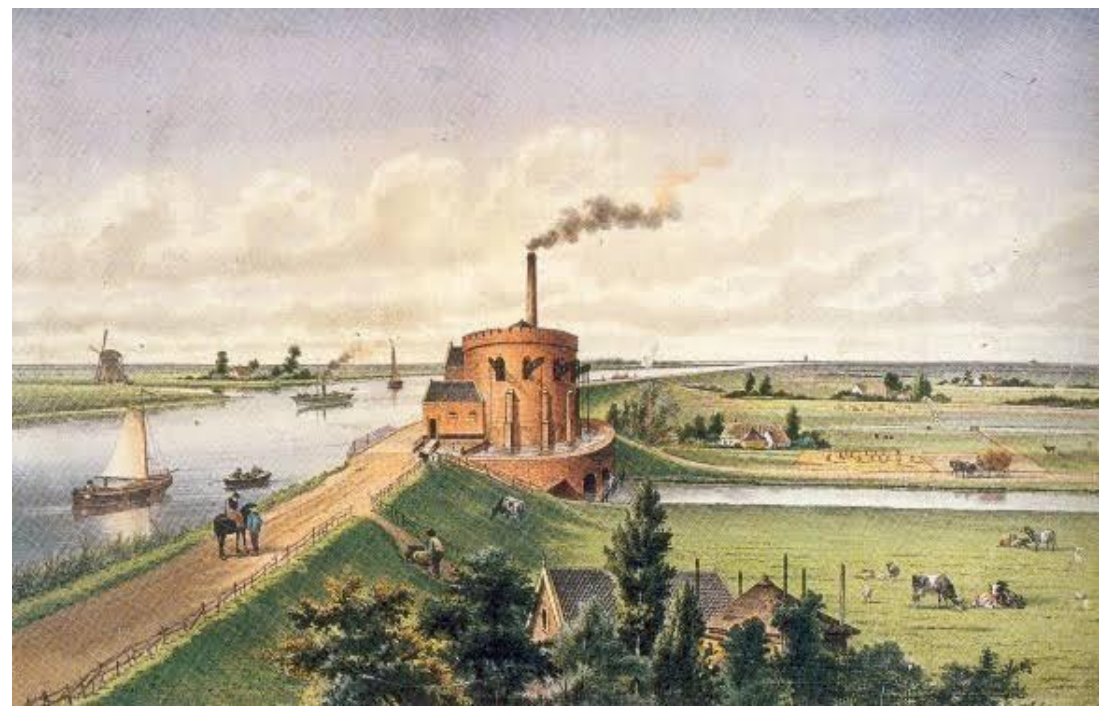
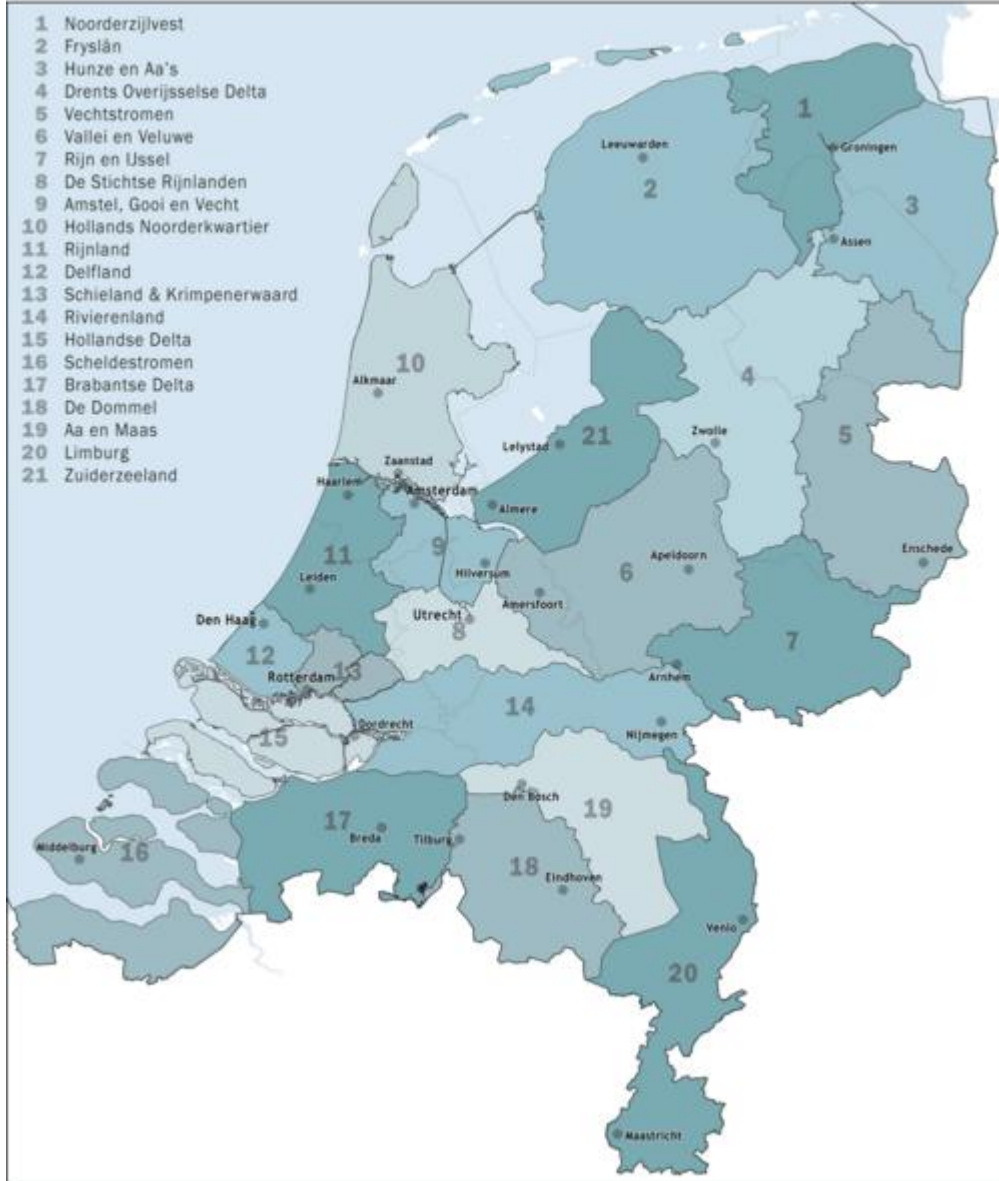
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WATERBEHEER 21 Waterschappen

2023

















Nederland in 2120

Zo zou het kunnen







**CENTRE OF
EXCELLENCE
ON WATER**

INDIA-NETHERLANDS

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Government of the Netherlands

Deltares

CDRI
Coalition for Disaster Resilient Infrastructure

UWIR Learning Webinar 1:

Series Launch and Introduction to Urban Water Infrastructure Resilience

15 July 2026 | 16:30-17:45 IST / 11:00-12:15 UTC



Register Here

Speakers



Amit Prothi
Director General,
CDRI



Sander Carpaaj
Program Manager, Climate
Adaptation and Water
International (KAWI),
Govt. of the Netherlands



Harsen Nyambe
Director of Sustainable
Environment and Blue
Economy, AUC



Dr. Krishna Vatsa
Member & Head of the
Department, NDMA



Ranjini Mukherjee
Director – Research,
Knowledge Management and
Capacity Development
CDRI



Emani Kumar
Executive Director,
ICLEI South Asia



Hans Gehrels
Strategic Advisor on Urban
Resilience, Deltares



Umamaheshwaran Rajasekar
Advisor – Urban Infrastructure
Resilience, CDRI



Doreen K. Kirima
Vice-Chairperson, Federation
of African Engineering
Organizations - Young
Engineers Committee (FAEO-
YEC)



Victor Shinde
Head-Water and Environment,
National Institute of Urban
Affairs, India

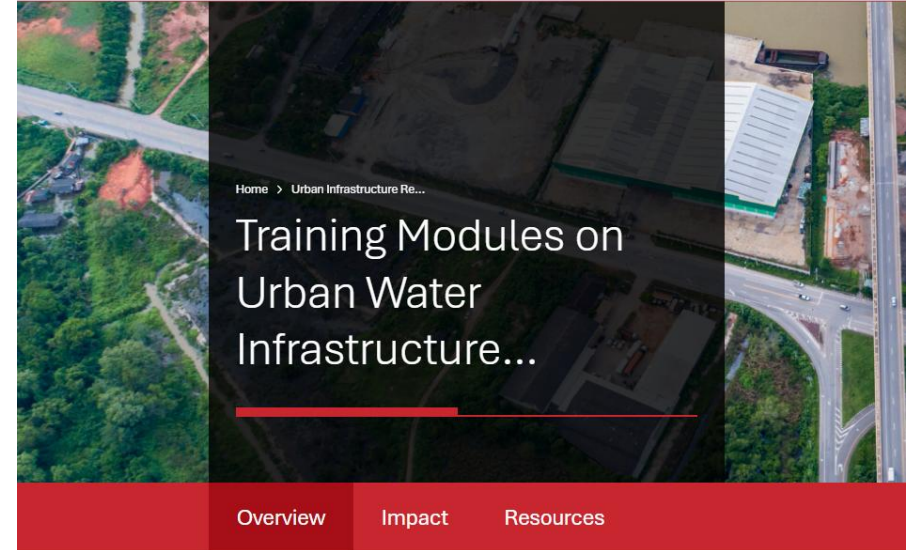


Naim Keruwala
Regional Director for South
and West Asia, C40 Cities

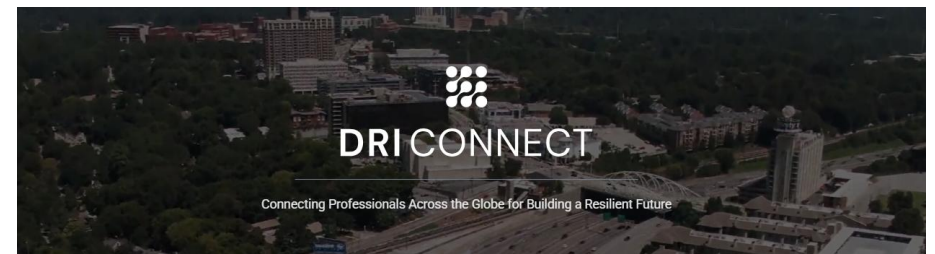


Raina Singh
Lead Specialist – Capacity
Development, CDRI

CDRI
Coalition for Disaster Resilient Infrastructure



Training Modules on Building Resilience of Urban Water Infrastructure Systems for managing Floods and Water Scarcity



The programme established a shared approach to developing resilient flood protection in the Sundarbans.



[Go back to timeline of previous assignments.](#)

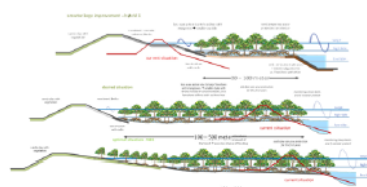
2022



System understanding: flood safety starts with the processed in the delta

The programme demonstrated that embankment failures are primarily symptoms of larger system processes. Foreshore erosion, tidal amplification, sediment deficits and channel dynamics determine where flood protection can succeed. The main outcome was a shift from reactive embankment repairs towards system-based planning and decision-making.

2023



Hybrid flood defence system: the foreshore is part of the flood defence

The collaboration confirmed that sustainable flood protection cannot rely on embankments alone. Stable foreshores, sediment accumulation and mangroves substantially reduce hydraulic loading, improve embankment stability and lower long-term maintenance requirements. Hybrid coastal protection therefore became the preferred design philosophy for the Sundarbans.

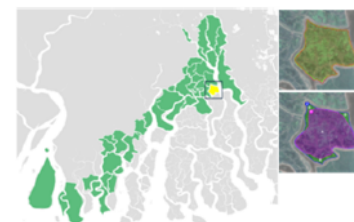
2024



Design guidance: a tailored approach for each of the vulnerable islands

The technical studies showed that each island requires its own strategy. Differences in erosion, exposure, land use, subsurface conditions and livelihoods mean that flood safety levels, embankment alignments and hybrid measures must be selected on a site-specific basis. The programme also concluded that a transparent, well-documented design process is essential to justify decisions, ensure quality and enable successful replication across future projects.

2025



Project delivery: successful implementation extends beyond engineering

Field validation demonstrated that implementation quality determines long-term performance. Construction quality, stakeholder engagement, land acquisition, risk management and quality assurance all proved equally important as the engineering design itself. Integrating these aspects into project preparation substantially improves project delivery and reduces implementation risks.

2026

Standard criteria for condition assessment

● Good	Asset in good condition. Problems are minimal.	Continue routine inspection and monitoring.	
● Fair	Minor deterioration noticed. Function still acceptable.	Plan and execute preventive maintenance.	
● Poor	Deterioration is significant. Risk of failure is increasing.	Carry out repairs/strengthening works.	
● Critical	Asset condition unacceptable. High risk of failure.	Urgent action to restore safety and performance.	

Asset management: flood resilience is a continuous process

The programme demonstrated that the lifetime of flood protection assets depends on proactive management after construction. Systematic inspection, monitoring and maintenance enable deterioration to be identified early, maintenance to be prioritised and costly emergency repairs to be avoided. Asset management therefore became an integral part of the flood resilience strategy.





NX Filtration – Mexpert Pilot Unit





Government of India
Ministry of Jal Shakti
Department of Water Resources,
River Development and Ganga Rejuvenation



9th INDIA INTERNATIONAL WATER WEEK-2026

CLIMATE RESILIENT WATER MANAGEMENT

 22 - 26 September, 2026

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9th India International Water Week-2026
September 22-26, 2026 | Bharat Mandapam, New Delhi