



Urban water management

in the Netherlands,
globally and
cooperation with India

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Water Commissioner India

*Ministry of Infrastructure & Water Management
Government of the Netherlands*







Room for the River - Nijmegen (NL)

Aim to accommodate high Rhine river levels coming from Germany through an additional floodplain, as well create areas for recreation and biodiversity.

Status: constructed and proven concept







Tidal Park Kielhaven, Rotterdam (NL)



Combines a city park with a natural estuary system.
Status: constructed

Collaboration between the Municipality of Rotterdam and ARK Nature Development





Rijnhaven, Rotterdam (NL)





Global: Big U – Manhattan, New York, USA



Rebuild by Design
inclusive design-
driven process,
post-Hurricane
Katrina

Involved NL
expertise: One
Architecture,
Arcadis, REBEL

Status: constructed
in separate
projects per city
sub-district



Water as Leverage approach



An innovative and inclusive approach to help cities adapt to climate change by addressing water-related challenges, such as flooding, drought, and pollution via inclusive design-driven trajectories of design workshops.

Water as Leverage acts as a catalyst by including all stakeholders incl. financiers from the start, and by developing integrated, transformative, long-term urban resilience strategies and projects through multi-stakeholder partnerships.

Design Teams combine Dutch and other international water experts, architects, engineers with local knowledge partners and community mobilisers.



Water as Leverage Principles & Steps

8 Principles,
which can guide
through all
6 Project phases





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Initiation and preparation

Identification of local urban water challenges and opportunities



Project ideation

Development of local urban water processes, strategies and projects, analysing them towards implementation



(Pre-)Feasibility

Establishing a multi-scale finance strategy, ensuring for project preparation, and capital investment and operations



Implementation

Implementing a project and development of operations and replicable plans



Operation and maintenance

Monitoring performance and development of adaptive management techniques to adapt the project over time



Upscaling

Translating the project's concept into plans and policies that can be replicated in other locations in the city, other cities and other countries



Water as Leverage
For Resilient Cities

8 Initiatives in 7 Countries



Water as Leverage
For Resilient Cities



Water as Leverage
Academy



We received **39 initiatives** from
25 countries for the 2nd edition
of the Water as Leverage City
Champion Challenge





African Union ICLEI Deltores CDRI

UWIR Learning Webinar 1:
Series Launch and Introduction to
Urban Water Infrastructure Resilience

18 July 2026 / 10:30-12:45 EST / 11:30-12:15 LMT

[Register Here](#)

Speakers

 David Kariuki Minister of Water and Irrigation Government of Kenya	 David Kariuki Minister of Water and Irrigation Government of Kenya	 David Kariuki Minister of Water and Irrigation Government of Kenya	 David Kariuki Minister of Water and Irrigation Government of Kenya	 David Kariuki Minister of Water and Irrigation Government of Kenya	 David Kariuki Minister of Water and Irrigation Government of Kenya
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CDRI



Building Resilience in Building Resilience of Urban Water Infrastructure
By Addressing Flooding, Health and Water Security





Water cooperation with India:

Strategic Water Partnership (SWP)



Upgrading of previous MoU

Signed in 2022 by Ministers of
Jal Shakti and Infrastructure &
Water Management

Valid until March 2027

Shared intention to renew during
PM Modi visit in May 2026



Under the SWP we work in



- the Ganga River Basin with the National Mission for Clean Ganga incl. Water as Leverage, the India-Netherlands Centre of Excellence on Water at IIT Delhi and (G)RCA
- In Kerala, post-floods 2018
- In West-Bengal, flood risk management
- Gujarat/Kalpazar Project – Afsluitdijk cooperation



CENTRE OF
EXCELLENCE
ON WATER
INDIA-NETHERLANDS





Water as Leverage for Resilient Indian Cities

- In **Chennai**, Tamil Nadu since 2018

City of 1,000 Tanks: Water Balance at Little Flower Convent => upscaling



Muttukadu Resilient Waterscape



DEMONSTRATION AND UPSCALING





**Water as Leverage
Prayagraj**
for Resilient Indian Cities

Water as Leverage for Resilient Indian Cities: Prayagraj

In Prayagraj, Uttar Pradesh since 2023, WaL integrated into the Urban River Management Framework (URMP) Prayagraj.

2 priority interventions:

- Eco-friendly Yamuna riverfront development
- Kalindipuram stream & waterbody rejuvenation

Sangam City joins hands with Netherlands for flood resilience

Prayagraj, To resolve drainage issues, the city has decided to adopt "river-centric" urban planning model.

A one-day workshop (WaL) brought together the experts from Netherlands and across



the country to address the city's water challenges. It concluded on Friday. The event addressed the critical state of city's internal waterways, especially the Kalindipuram stream and Sagar Khadar Nadi.

Through the Water as Leverage (WaL) programme, experts proposed a nature-based solution to separate the city's wastewater from natural stream water to create a green and clean corridor.

By 2025 Kaulin Nadi, part of resilient Yamuna Riverfront including an ecological park and a demonstration plot' was proposed.

Organised by the State Mission for Clean Ganga (SMCGG) along with the Government of the Netherlands, the initiative operationalises the city-specific Urban River Management Plan (URMP). The SMCGG

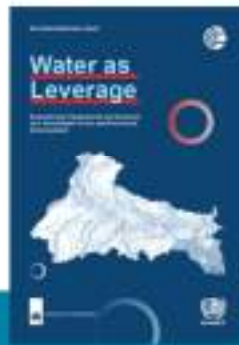


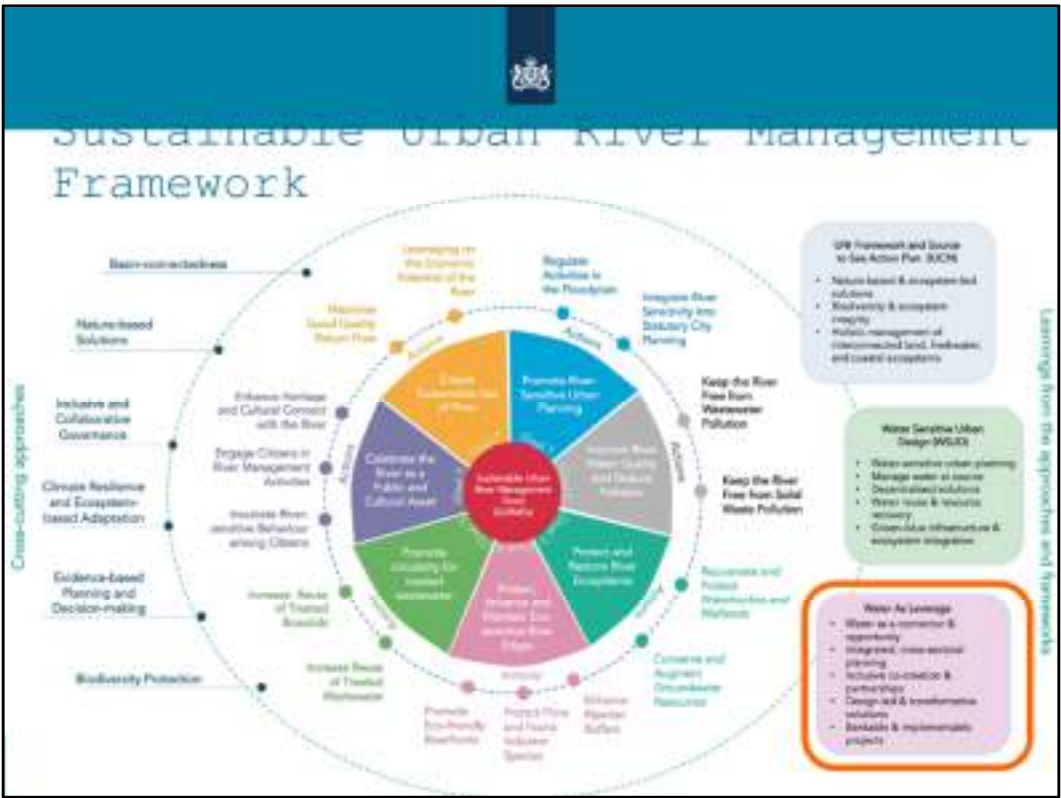
Water as Leverage
Prayagraj



Water as Leverage & URMP framework

At national level, integrating Water as Leverage 8 Principles into the Urban River Management Framework (URMP), being rolled out in 60 cities in 4 states, and global URMP Framework.







Sustainable Urban River Management Framework

The SURM is built around 7 core goals:

1. Promote River-Sensitive Urban Planning
2. Improve River Water Quality And Reduce Pollution
3. Protect And Restore River Ecosystems
4. Protect, Enhance And Maintain Eco-Sensitive River Edges
5. Promote Circularity For Treated Wastewater
6. Celebrate The River As A Public And Cultural Asset
7. Ensure Sustainable Use Of River





The Netherlands & GRCA



GRCA nodal ministry: Min. I&WM

GRCA member city: The Hague





Tackling Sea Level Rise in The Hague

Scenario 'zero'

City by the sea

City behind the dunes



THE HAGUE: A COAST THAT CAN GROW

- A 2100 vision links flood safety, spatial planning and quality of life.

- Preferred option - "City Behind the Dunes": add sand to form a ~200 m dune landscape seaward of Scheveningen

CORRAL DUINPILOT: LEARNING BY DOING

- Co-creating Scheveningen "Dune Park" pilot with municipality and Tu Delft in CORRAL (2020-22)

- Vegetation traps wind-blown sand so dunes grow naturally and act as defence force



Tackling Sea level rise in The Hague





Thank you

தனயவாத நுண்றி

