CDRI
Coalition for Disaster Resilient Infrastructure

IRAF | Urban Infrastructure Resilience Programme

Safe and Resilient Water Supply for Western Cities – Integrating Climate Resilience into Water Safety Plans of the Ambatale Water Supply Scheme in Sri Lanka

Location
Colombo, Kotte, Kelaniya

Period
2025 - 2027

Funding
$ 469,232

Beneficiaries
2.2 million

Implementing Partner

UN-HABITAT

Nodal Government Agency

National Water Supply Drainage Board, Sri Lanka

About Urban Infrastructure Resilience Programme (UIRP)

With cities generating 80 percent of global Gross Domestic Product and rapid urbanization expected to bring 70 percent of the world's population into urban areas by 2050, the need for resilient infrastructure has never been more critical. Extreme climatic events increasingly threaten urban systems, making proactive adaptation essential. CDRI's UIRP helps member countries integrate disaster and climate resilience into infrastructure planning, operation and maintenance, augmenting investments, ensuring sustainable and resilient urban growth.

Context and Background

- Colombo, Kotte, and Kelaniya experience frequent floods and droughts that degrade water quality and cause interruptions in water supply services. Flooding causes contamination at water intakes, while droughts lead to salinity intrusion and pollution from low river flows.
- Growing migration, new housing, and tourism developments increase demand on aging water infrastructure, raising treatment costs and service disruptions in densely populated urban areas such as Colombo and Kotte.
- The project addresses the vulnerability of water supply infrastructure by improving pollution monitoring, supporting sustainable land use in catchments, and building institutional capacity for climate-resilient planning and management for safe and secured water supply.

Objective and Outputs

- Water supply operations in the target Urban Local Bodies (ULB) will be strengthened through integrated use of real-time hydrological and chemical data, supported by a decision support system to improve operations and maintenance of the Ambatale Water Supply Scheme (AWSS).
- A catchment management plan led by ULBs will be developed, based on assessments and early warning system data, to reduce pollution and protect water quality during extreme weather events.
- The project will identify and prioritize both structural and non-structural interventions to ensure efficient operations and maintenance of the AWSS and enhance urban water resilience.
- ULB and National Water Supply and Drainage Board professionals will be trained in climate-resilient infrastructure and water safety planning, enabling national-level upscaling through the integration of resilience into WSP Edition II.

Impact

- 2.2 million residents across Colombo, Kotte, and Kelaniya—including women, children, the elderly, persons with disabilities, and low-income communities—will benefit from safe, reliable drinking water services, especially during climate-related disruptions.
- Around 100 staff from national, provincial and local governments will be equipped with data-driven, risk-informed planning skills, enabling them to manage water infrastructure more effectively during floods and droughts.
- Over $3.5 million has been secured from bilateral and multilateral institutions to implement resilient catchment management plans, alongside an additional $60,000 leveraged through local bank partnerships with the National Water and Drainage Board.

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