

Enhancing Resilient Street Infrastructure to Combat Extreme Heat and Inner-City Flooding with Active Travel and Water-Sensitive Solutions in Brazil (Porto Alegre)



Location
Porto Alegre



Period
2025 - 2027



Funding
\$439,502.50



Beneficiaries
270,000

Implementing Partner



Nodal Government Agency



- Secretariat of Innovation and Technology, Municipality of Porto Alegre

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

- The April–May 2024 floods exposed critical failures in drainage systems and urban connectivity, especially in low-density industrial areas built on floodplains.
- This project responds to four key gaps that hinder inclusive, climate-adaptive urban development and regeneration: ineffective stormwater management, lack of data-driven planning tools, fragmented pedestrian networks, and limited municipal capacity.
- Using geospatial diagnostics and water-sensitive designs, the project will strengthen infrastructure resilience, foster stakeholder ownership, and mobilize equity-based financing for adaptive, neighbourhood-specific solutions aligned with long-term climate and development goals.

Objective and Outputs

- Develop five geospatial databases across four Priority Urban Territories (TPUs) to identify risks and guide climate-resilient interventions.
- Facilitate 16 community dialogues involving 500 participants—50 percent from vulnerable groups inclusive of women, children, elderly and differently abled people—to co-design adaptive solutions tailored to local needs.
- Conduct eight stakeholder workshops to refine resilient urban plans and generate actionable recommendations for safer, climate-adaptive neighbourhoods.
- Create four climate-adaptive pedestrian plans and develop investment-ready models highlighting co-benefits such as economic efficiency, health gains, and enhanced mobility.

Impact

- Residents will gain safer pedestrian pathways and stronger transport connectivity, enhancing urban resilience. Neighbouring cities will benefit from shared knowledge, enabling replication of climate-adaptive solutions.
- By protecting critical infrastructure, the project will reduce flood risks and service disruptions, generating an estimated \$25 million in savings and strengthening long-term urban resilience.
- With \$5 million secured from multi-lateral development banks, private sector and national/local governments budgets, the city will implement a flood mitigation plan, boosting infrastructure resilience and ensuring sustainable service delivery amid growing climate risks.



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