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Urban sanitation and climate change: A public service at risk

Landscape study and setting a knowledge and learning agenda

9 August 2022



ADB



Climate risks for urban sanitation service delivery

- Multiple known climate risks to sanitation infrastructure and services
- Flow-on health risks when services do not function

The landscape study describes current work on climate and urban sanitation, recent advances, challenges and developed a knowledge and learning agenda and implications for the sector.

Funded by the Bill and Melinda Gates Foundation
Included participation by more than 75 organisations.



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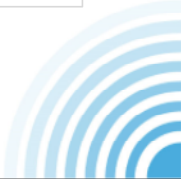




Current climate focus in urban sanitation



of organisations with this focus





Recent advances to address climate change impacts in urban sanitation

Institutions, policy and planning

- Policy integration
 - Integrating urban sanitation in national climate action planning ([Uganda](#), [Nepal](#), [Bangladesh](#), [World Bank CCDRs](#))
- New strategies and frameworks
 - Comprehensive strategies, frameworks and guidance to support climate resilient WASH programming ([UNICEF](#), [USAID](#), [Green Climate Fund](#), [World Bank 'Utilities of the Future'](#), [WHO](#))
- Institutional and regulatory reform
 - Targeting institutional reforms through infrastructure investments ([ADB](#))

Finance

- Engaging with the climate financing community ([WHO](#), [UNICEF](#), [SWA](#))
- Linking government WASH departments to climate funders and providing support to prepare grant applications ([Bangladesh](#))
- Emerging research on different ways of financing resilience and measuring this for urban sanitation
- Potential of certified climate bonds or green municipal bonds to finance the needs of urban sanitation, although the effectiveness needs to be evaluated ([HIC](#), [US](#), [Australia](#))



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Recent advances (contd.)

Infrastructure and Service Provision

- Nexus between digital technology and climate resilient sanitation
 - Potential of artificial intelligence to plan sanitation interventions more effectively and efficiently ([World Bank](#))
- Innovative climate resilient sanitation infrastructure
 - Provision of good onsite sanitation in drought-prone areas, which are reliant on groundwater ([World Bank Zambia](#))
- Nature-based solutions
 - City-wide integrated approach in small cities ([GCF](#))
- Working with private sector, CBOs and municipalities ([Madagascar](#), [Bangladesh](#), [Nepal](#))

User engagement

- Incorporating user experiences while designing flood-prone toilets and piloting these models in the community ([Lusaka](#), [Indonesia](#))
- Training community based organisations to manage sanitation infrastructure projects ([Togo](#))
- Research to understand user perceptions and preferences for suitable sanitation options for different local climate context
- Risk Communication and Community Engagement (RCCE) strategy for urban and rural sanitation ([Bangladesh](#))



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Most significant challenges to address climate change impacts on urban sanitation

Institutions, policy and planning

Lack of **coordinated policies** and wider coordination between climate, disaster and sanitation

Financing

Sanitation **budgets do not account for the costs of resilience** and adaptation (both increased capex and opex)

Infrastructure and service provision

Lack of **understanding** on how to deliver climate resilient city-wise inclusive sanitation

User engagement

Poor **use of data from households** and communities by local governments



Knowledge and learning agenda





Example learning agenda topics

Sharing experiences across countries and regions

- Examples of cross-sectoral coordination; successful and unsuccessful adaptation approaches

Evidence to convince policymakers to invest in climate resilience

- Numbers of people with low sanitation service level access and who frequently experience of climate hazards; scale and significance of public health impacts

Evidence to inform policy development

- Clarity on the financing costs, particularly the additional cost, for climate resilient sanitation in different climate contexts

Combined implementation and research initiatives

- In-situ implementation and evaluation of technologies and infrastructure in different climatic conditions; Initiatives to integrate water supply, sanitation and drainage

Local level data collection by government and implementers

- Impacts or damage on the sanitation chain in relevant climate events; Effects on people's lives, including of different groups (PWD, women, children etc.)

Academic research

- How can synergies and trade-offs in addressing mitigation and adaptation be optimised?





Implications and way forward

1. Sanitation needs to garner more attention in **climate policy dialogue and mechanisms**
2. **Strategic thought leadership** on key issues, such as synergising adaptation and mitigation, by leading agencies and academics with authority and credibility
3. There is for a **community of practice** (86% of participants interested) in urban sanitation and climate change:
 - Support **exchange across different contexts**, incentivise **implementers and researchers** to work together, evolve **climate resilient city-wide inclusive sanitation** and support **champions** to demonstrate the way forward
 - Address **common capacity building needs**, through new curriculum and online courses
4. **Greater intersectoral coordination** is needed, including joint work across sanitation, urban resilience, agriculture and other sectors





Thank you to the many participating organisations



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	Water Authority of Fiji (WAF)	WASH Institute, India	WaterAid UK	World Health Organization (WHO)	The World Bank	Water & Sanitation for the Urban Poor (WSUP) - Global, Bangladesh, Madagascar	



Report available soon!

