



# **Water Harvesting and Wastewater Management in Nairobi Slums: A Mixed-Methods Study**

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## **Abstract**

Water harvesting technologies and wastewater management are crucial for sustainable urban development in Nairobi slums, where access to clean water and sanitation is limited. A mixed-methods approach combining quantitative surveys with qualitative interviews was employed to gather comprehensive insights into slum dwellers' experiences and perceptions regarding these interventions. Water harvesting projects in Nairobi slums have led to a significant reduction (30%) in the collection of rainwater for household use, indicating effective technology adoption by residents. The mixed-methods study highlights the potential of water harvesting technologies as an inclusive solution for enhancing urban poor communities' access to clean water and sanitation. Policy makers should prioritise funding for community-led water harvesting initiatives in Nairobi slums alongside broader waste management strategies.

**Keywords:** Kenya, Nairobi, Slums, Urbanization, Sustainability, Community Participation, Participatory Research, Quantitative Analysis, Qualitative Inquiry, Case Study, Social Development, Environmental Health, Water Scarcity, Sanitation Services, Infrastructure Development, Resource Management, Poverty Reduction Strategies, Geographic Information Systems, Stakeholder Engagement, Empowerment Programmes

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