



Rainwater Harvesting Systems and Water Security in Kenyan Cities: Economic and Environmental Implications for Secondary School Teachers

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Abstract

Rainwater harvesting (RWH) systems are increasingly being implemented in urban areas to enhance water security and manage scarce resources. A policy analysis approach was employed to evaluate existing RWH systems, considering their cost-effectiveness and sustainability in urban settings. Secondary school teachers reported a significant increase (25%) in water reliability from RWH systems, particularly in areas with limited municipal water supply. RWH systems offer promising solutions for improving water security among secondary school teachers but require further financial support and community engagement to scale up effectively. Investment in RWH infrastructure should be prioritised by urban planning authorities, alongside educational campaigns to promote sustainable use of harvested rainwater.

Keywords: *Geographical Indicators, Urbanization, Policy Frameworks, Water Scarcity, Community Engagement, Economic Viability, Environmental Sustainability*

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