



Adoption Dynamics of Rainwater Harvesting Systems in Urban Slums of Lagos, Nigeria: Water Security and Sanitation Impacts

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Abstract

Urban slums in Lagos, Nigeria face significant water security challenges, with inadequate infrastructure for clean drinking water and sanitation facilities. Qualitative research methods including semi-structured interviews and focus group discussions were employed to gather data from slum communities in Lagos, Nigeria. Residents adopted rainwater harvesting systems at varying rates: 34% of households reported installing one or more systems. The primary driver was perceived health benefits related to safer drinking water. Rainwater harvesting systems show promise as a community-led solution for improving water security and sanitation in urban slums, though uptake varies by socio-economic factors. Government should support the development of rainwater harvesting infrastructure and provide subsidies or education programmes to encourage wider adoption. rainwater harvesting, urban slums, Lagos, Nigeria, water security, sanitation

Keywords: *Geographic, Urbanization, Slums, Water Security, Sanitation, Qualitative Analysis, Participatory Methods*

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