



# Water Strategies for Drought Resilience in Uganda's Horn of Africa Landscape

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## Abstract

Uganda's Horn of Africa landscape is vulnerable to droughts, affecting agricultural productivity and rural livelihoods. The study employed a mixed-method approach combining quantitative surveys with qualitative interviews among farmers and local stakeholders. Data from 120 households were analysed using descriptive statistics to identify key issues and preferences regarding water resource use. Farmers expressed significant concern about erratic rainfall patterns, leading to a preference for rainwater harvesting structures (RWS) over other water management practices like irrigation systems. The study underscores the importance of tailored water strategies that incorporate local knowledge and community preferences. Implementing RWS should be prioritised in future drought resilience programmes, alongside capacity building for sustainable water resource management. The empirical specification follows  $Y = \beta_{0+\beta}^{-} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** Horn of Africa, agroecology, GIS, hydrology, resilience, sustainability, participatory mapping

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