

ABSTRACT

Rural communities in Kenya are often faced with challenges when it comes to accessing adequate and safe water for household use. This is often a result of the underdevelopment of water infrastructure in rural areas. Water projects in rural communities are implemented through community engagement. However, most times communities lack empirical data to back the implementation of said projects. This study aims to assess the water security of a rural sub-location in terms of water quality and quantity, with a focus on household water supply to provide community members and policy makers with solid empirical data to aid in decision-making on water interventions in the area. The study involved a mixed-method approach to gather data on sources of household water supply, household characteristics, household water consumption, the challenges faced by households in accessing water and the water quality of the sources. Data collection was done through observations, household surveys, key-informant interviews, focus-group discussions and laboratory tests. Questionnaires were administered to 96 households within the study area and interviews were done with the chief, the area field water officer, a healthcare worker and two self-help groups within the community. The results of the study revealed that although the available water sources produced a sufficient amount of water for household consumption, a significant number of households relied on a few sources. The study also established that the distance to the water source, queueing times, water quality, family size, efforts used in accessing water and income capacity influenced the rate of household water consumption. Furthermore, the study identified various challenges affecting households in accessing safe water including inadequate water infrastructure, water quality issues, the cost of accessing water, limited water storage facilities and unreliable piped water supply. Finally, recommendations are made to address the identified challenges and improve water security in the area. These include improving the available water sources, improving water infrastructure and storage facilities, enhancing water quality through monitoring and treatment and promoting water conservation practices in the area.