

## **Abstract**

Water constitutes a vital element of household food security for humans and livestock. Therefore, the general objective of this study was to establish the ease of water access, water scarcity and coping strategies used by rural communities in selected study sites of Makueni (Kilili sub-location in Makueni sub-county and Kyanguli sub-location in Kibwezi East sub-county), all located in Makueni County. The study involved a total of 70 households which were selected using cluster and simple random approach to gather quantitative data using household surveys. The data were collected using a structured questionnaire and in-depth interviews with key informants. The collected data was coded and analysed using the Statistical Package for Social Sciences (SPSS). Results from the analysed data were presented using tables. Results obtained revealed that majority of the households obtained water from rivers (78%), followed by shallow wells (31%), boreholes (28%), sand dams (24%) and springs (11%). However, most respondents at Kyanguli obtained water from rivers (94%) compared to Kilili (62%). Further, at Kilili sub-location, majority of the households got water within less than 1 km (46%) while at Kyanguli most respondents got water within 1-3 km (48%). Five major water access problems were documented in the study sites included increasing distance to water sources, high cost of water, dirty water, water scarcity and conflict with neighboring communities. In overall water scarcity was the commonest problem in both study sites (77%), followed by dirty water (62%), increasing distance to water sources (45%), high cost of water (44%) and conflict with neighboring communities (43%). Water use coping mechanisms identified in the study included use of water harvesting structures, soil conservation techniques, diversification of crop types and varieties, irrigation, water reuse, reducing number of livestock and reduced water use. In overall the commonly used water copying mechanisms included soil conservation (85%), water reuse (71%), reduced livestock (64%), reduced water use (55%) and crop diversification (54%). We concluded that water scarcity, dirty water, increasing distance to water sources, high cost of water and conflict with neighboring communities were the main challenges which led the households to develop water coping mechanisms in the selected sites of Makueni County. We recommend the results of this study to be used by policy makers in water development projects in Makueni to improve water availability and access in the selected study sites.