

Impact of climate change, climate variability and adaptation strategies on water resources availability

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The aim of this study was to examine the impacts of climate change and climate variability on water resources availability and adaptation strategies in Singida Municipality. A range of data collection tools were used including household surveys, questionnaires, key informants interviews, group discussions, and remote sensing. Questionnaires were administered to a sample of 97 households. Data were analyzed using descriptive and quantitative methods. The findings revealed that although Singida Municipality is located in the semi-arid area where water resource is limited, is not the only main factor for water scarcity in the Municipality. However, climate change and climate variability has intensified and worsened the situation. About 97% of surveyed households perceive climate change based on how it affects directly water resources availability, farming activities and their livelihoods. The findings have further showed that, communities in the study area either have been coping or adapting to climate change impacts on water resource availability. They have been doing so by buying water at a very high price, sharing water with animals and travelling long distances, spending almost 8 hours on queues waiting for water as well as diversifying economic activities. However, these strategies need to be enhanced. Interventions to reduce climate change impacts need to consider households and communities differences in terms of resources endowments, experiences and safety mechanisms which distinguish them in term of exposure, sensitivity, vulnerability and hence adaptive capacity.