

# **Implication of Climate Change and Variability on Livelihood Diversification in Rural Communities**

**A Case of Kang'dend and Jobad Villages in Karatu District**

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## **Abstract**

This paper examines the implication of climate change and variability on dynamics of livelihood diversification in rural communities in Eastern Tanzania particularly Karatu district in Arusha region. The study was guided by the following specific objectives: to identify and document the livelihood activities; and assess their contribution on household income, to examine the drivers of livelihood diversification, and to examine the influence of climate change and variability on livelihood diversification. The study employed a case study approach whereby qualitative and quantitative data was collected. Data collection methods included interviews, questionnaires, focus group discussion and reviewing several reports. A total of 120 households were taken as a sample to represent the entire population. The study observed that farming, livestock keeping, non-farm employment and business are the existing livelihood activities in the study area but with significant contribution to household income. Climate change and variability observed to be the main drivers of livelihood diversification with influence on the mobility of people and livestock to the study area. Effects of climate change and variability experienced in the study area are droughts, floods, and low agricultural yields, loss of pasture, pests and diseases. Communities' adaptation measures the impacts of climate change are mixed cropping, irrigated agriculture, and crop rotation, use of agro-chemicals, destocking, non-farm employment and business. Global joint efforts for environmental conservation should be implemented so as to rescue the environment from the effects of climate change and variability.