

## LIVELIHOOD CHOICE AND CLIMATE CHANGE

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It is now common knowledge that climate change is real and there will be long term changes in temperatures, precipitation, humidity etc. These changes undoubtedly have a marked impact on agricultural activities. Traditionally, effect of such variables on agriculture is measured by using crop production models. However, in view that such abstract models does not take behavioural changes of households have prompted researchers to criticize such techniques stating that such models over estimate adverse impacts of climate changes. Previous researches have reported that rural households in Africa, developing Asia and Latin America derive 40-45 %, 30 %, and 40 % of their income respectively from non-agricultural sources. Thus, agricultural households may have developed different livelihood strategies as an adaptation to climate change. Data from the Income and Expenditure Survey conducted by the Department of Census and Statistics was used to assess whether climate change impacts livelihood choice of farmers. The survey contained details of 4861 famers. First, six livelihood groups were identified from a cluster analysis using income shares of famers. These six groups were then related to climate normals in a multinomial logistic framework controlling for other socioeconomic variables that may influence the livelihood choice of farmers. Results reveal that livelihood choices are sensitive to climate. Minimum and maximum temperatures and rainfall have a significant non-linear impact on the choice of livelihoods. Therefore, in predicting impact of climate change on smallholder agriculture, possible adaptations in terms of livelihood diversity need to be considered and if not such predictions may over estimate adverse impacts.

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