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Adaptive capacity of small-scale farmers to climate induced vulnerability in Rachuonyo sub- county, Kenya

Environmental degradation reduces plant cover leading to increase in concentration of greenhouse gasses in the atmosphere that ultimately leads to climate change. One effect of climate change is an increase the intensity in flooding and drought which negatively affects the small-scale farmers. The farmer needs to adapt to the new climatic conditions if they are to successfully continue with their farming activities. This study assesses the adaptive capacity of small-scale farmer in Rachuonyo District to climate change as a result of the changing land cover. It accesses traditional coping mechanism used by the small-scale farmers and explore ways of using land use planning to improve adaptive capacity of these farmers in the face of changing climate. Specifically the study: identifiedland use changes that have taken place in Rachuonyo District over the past 30 years due to land activities; evaluated community based adaptation mechanism by small-scale farmers to climate change; and, explored ways of using land use planning to improve the adaptive capacity of small scale farmers to climate change. The study was conducted through a cross-sectional survey design which is one type of observational study that involves data collection from a population, or a representative subset, at one specific point in time. The study used a population size of 307,126 which is the population of Rachuonyo District (Census 1999). The sample size was 210. This sample size is determined based on an equation $n=N \sqrt{1+N(e)^2}$. Both primary and secondary data was subjected to descriptive analyses to determine descriptive statistics such as mean, frequencies, percentages, modes, range, median, maxima and minima. The result was then be presented in the form of percentages, bar-charts, dialogue boxes and table. Qualitative data from Focus Group Discussion was organized and clustered into themes then results used to triangulate the other findings. These findings will be generally used by planners and specifically by the small scale farmers to improve their farming practices.