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THEME: Strengthening Research and Innovations for Climate Adaptation and Sustainable Development

Effects of Land Management Practice on Adaptation of Smallholder Farming System in Kakamega County

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Abstract

Agriculture is one of the economic pillars that Kenya heavily relies upon and it directly influences the overall economic performance. Towards the end of 2011 Kenya experienced extreme weather changes that resulted in the severe draught in most parts of the country. Western Kenya has experienced rapid population growth (4.7%), land sub-division and food shortage over the years. According to Swynnerton Plan in 1954, Western Kenya was among the first regions in Kenya to get land title deeds enabling land owners to access credit services to grow cash crops and keep grade cattle for commercial purposes. Rural households consist of subsistence farmers who rely on agriculture for socio-economic stability amidst poor farming systems. Farm harvest is sold at or before harvest to meet basic needs. Adaptations can either be planned or autonomous with the later being done without awareness of the climate preconditions but based on experience and prevailing conditions (Smithers & Smith, 2009). In this context land use has reduced rural agricultural land into built land and small agricultural plots increasing food demand and competition for fertile land by internal migration. This research focused on food security, land subdivision and land demand on the adaptation of the smallholder farming system. A cross sectional survey design using mixed methods was carried out with a target population of 280 farmers. The sample size drawn was 84. Questionnaires and interview schedules were used to gather data. Qualitative data was analyzed using content analysis and quantitative data analyzed using inferential statistics. The study made use of spearman's rho correlation coefficient in order to establish the extent to which various land management practices in Kakamega County influence adaptation of smallholder farming systems. The results of the current study indicate that food security had a correlation coefficient r = - 0.003, land subdivision, r = - 0.44 while land demand had the highest r = 0.042. This clearly indicated that the question of food security and land subdivision did not have as much influence on adaptation of smallholder farming systems in Kakamega as compared to land demand. The results shall be useful to smallholder farmers, development practitioners and policy makers. This study will help to improve on the farming systems and land use policies especially in alleviating food poverty in Kakamega County.

Key words: Adaptation, land use, food poverty, farming systems