

Enhancing Urban Resilience and Livelihood Security Through Adoption of Pomology in the Face of a Changing Climate in Eldoret City, Kenya

Abstract

African cities are more vulnerable to climate change because they lack the capacity to cope with its impacts. With an expected increase in severity of climate change impacts coupled with rapid urbanization in African cities, livability of these cities will worsen. Eldoret city is not an exception. It faces increasing vulnerabilities due to climate change-related stormy rains, urban heat island effect and increased frequency of including: prolonged droughts and floods thus threatening the rapidly-expanding city as well the city dwellers'livelihoods. Harnessing the potential of urban pomology (fruit crop production) potential would go a long way in fostering resilience and survival of urban households. This study seeks to explore the crucial role of pomology in addressing the impact of climate change by strengthening urban resilience and livelihood security of households residing in the city. It will specifically assess the current state of fruit cultivation practices, assess vulnerability of Eldoret city dwellers to climate change impacts and map the spatial distribution of potential pomology sites in the city and its periphery. A mixed-method approach will be employed to collect data using household surveys, remotely sensed data and key informant interviews, focusing on the spatial distribution of pomology activities and their associated impacts on climate regulation and food production. Stratified random sampling will be used to select households engaged in pomology activities for quantitative surveys while purposive sampling will be used to target key informants and specific estates engaged in this practice. The study will apply both resilience theory and sustainable livelihoods theory to understand the complex interactions between pomology practice, climate change, and urban socio-economic dynamics. The findings will lead to the identification of effective pomology strategies for enhancing climate-resilient livelihoods as well as urban resilience. Evidence-based recommendations for integrating the practice into urban planning will also be provided.

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