

Use of Climate Information Services and Impact on Farmers' Livelihoods in Arid and Semi-Arid Areas of Kenya

By Njoki Wango

Supervisors: Prof. Oluoch-Kosura, Prof. Onwong

Abstract

Agricultural production in Africa is mainly rainfed and highly vulnerable to climate change and variability. Extreme weather events like droughts, floods and high temperatures affect agricultural production and food security. Use of climate information services can have positive effect on agricultural yields, household incomes, food security, poverty reduction and enhance resilience against climate risks. Recent interest in weather and climate services has seen an increase in research to assess use and impact of climate information services on smallholders in Africa. There are also initiatives by governments to enhance climate change adaptation through investment in climate information services. However, there is a gap in knowledge on farmers' access and use of climate information services and the impact on food security, poverty and livelihood vulnerability particularly in arid and semi-arid areas.

The current study will use focus group discussions, key informant interviews and household surveys to collect data on the access and use of climate information services. A Heckprobit model will be used to assess the determinants of awareness, access and use of climate information among smallholder farmers in Makueni County in Kenya. To measure the impact of use of climate information services, the study shall estimate the average treatment effect of use on agricultural yields, household income, food security and livelihood vulnerability. Lastly, the study will assess the impact of climate change policies to identify pathways to enhance their outcomes. The results will inform policy on design of climate information services required to better connect climate information to users to better meet their needs and generate welfare gains and inform investment in climate information services.