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Adoption of technologies to increase the resilience of smallholder farmers in Zambia

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Abstract

Smallholder farmers are currently facing various challenges related to climate change. There is low productivity and food insecurities are rising due to crop failure caused by floods, drought, and pests. Many climate smart agricultural technologies (CSAT), such as conservation farming, have been introduced to farmers by the public and private sectors. To what extent these technologies have enhanced resilience, improved agricultural productivity, reduced food insecurities, increased household incomes, and improved the land to continue supporting rural livelihoods remains the critical knowledge gap for most researchers and policymakers.

The objective of this study is to investigate the knowledge transfer process of technologies in dealing with climate change while assuring high and sufficient crop productivity, whilst fostering a sustainable agricultural system. Specifically, the study will: i.) Identify technologies promoted and practised either from traditional or as a result of research, ii.) Investigate how farmers learn about alternative CSAT considering private, public, and NGO initiatives, and the role of communities, iii.) Investigate the attitudes of farmers towards CSAT alternatives identified, iv.) To draw policy lessons for the public, private sector, and civil societies.

The study will try to use the multidisciplinary framework that will include the sustainable livelihood framework (SLF) with the francophone agrarian system analysis approach and the development anthropology.

The study will be conducted in the Kalomo and Monze districts of the southern province of Zambia. Both lie in the agroecological zone I where rainfall is below 1000 mm. These areas are most hit by droughts and floods, with agriculture being the main activity for the local population. These areas are the maize basket of the nation.

Keywords: Climate change, climate smart agricultural technologies, crop productivity, food security, precipitation, soil