Adoption of Technologies to Increase the Resilience of Smallholder Farmers in Zambia

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Introduction

- Over the past decades, on top of the world's agenda and Zambia respectively, has been "Poverty eradication, food, and nutritional security".
- Since the underlying problem of low productivity has been amplified by the adverse effects of climate change, the agenda has been broadened addressing climate change adaptation and environmental sustainability.
- To enhance mitigation and adaptation and build smallholder resilience, the Zambian government and other stakeholders are implementing programmes aimed at scaling up the uptake of Climate Smart Agricultural (CSA).
- However, the issue at hand is how these programmes have impacted small-scale farmers. In many cases, even existing knowledge, technologies, and inputs have not reached farmers yet (FAO and Kodikara 2010).
- The objectives of this study will be underpinned by two theories ("Expected utility" and the theory of "Diffusion".) that align concomitantly with the research gap.

Objectives

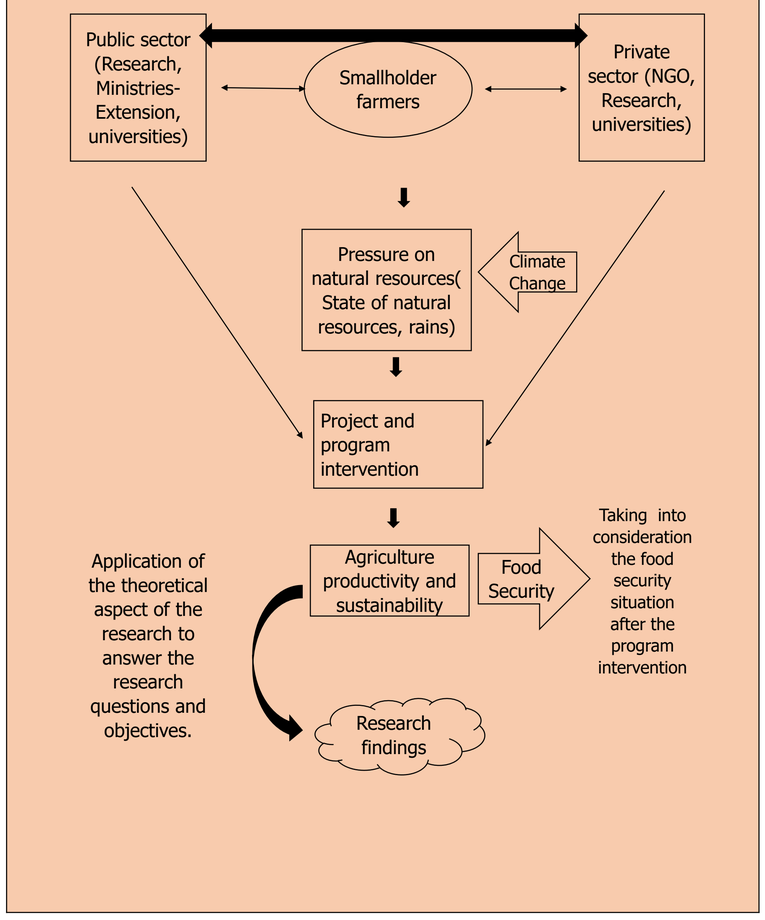
Objective:

Analyze the integration process, and effectiveness willingness of the smallholder farmers to adopt the new technologies from the programmes.

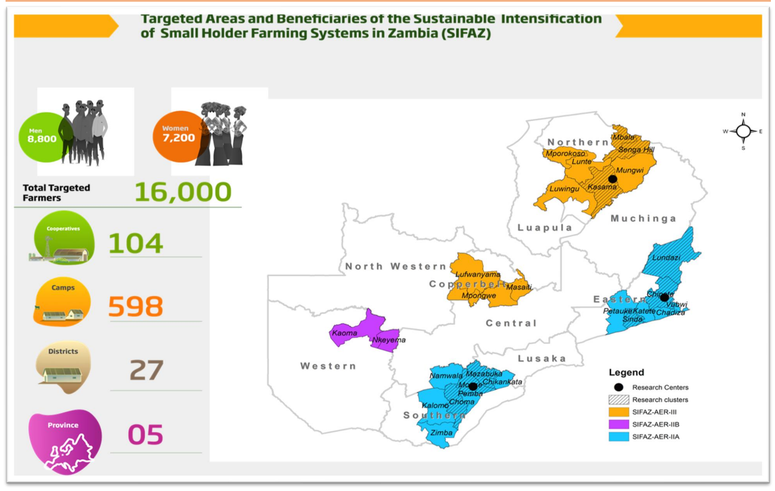
Specific Objectives:

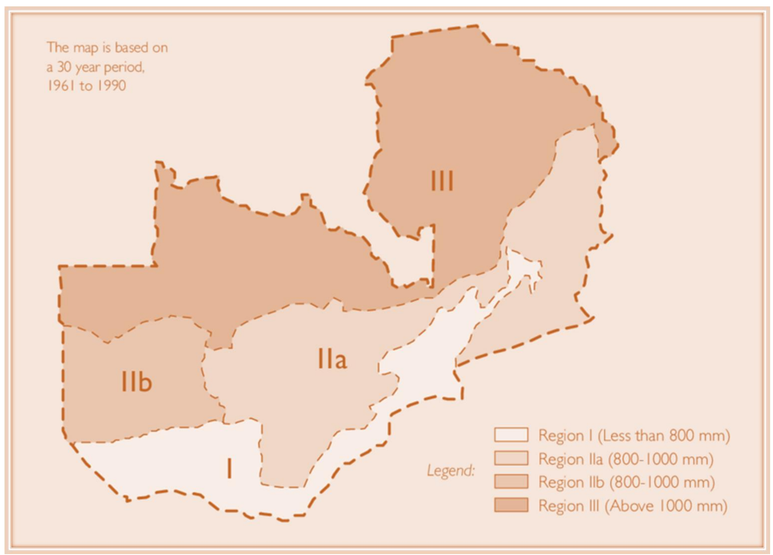
1) What factors motivate farmers to adopt sustainable intensification practices and complimentary climate-smart agriculture technologies?
2) How are the technologies impacting the productivity of the farmers, taking into account the climate-smart crop production system?
3) Access the devised system to the sustainability of the intervention.

Conceptual framework



National Target





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Methodology

- The conceptual framework will incorporate and link three components: agri-environmental problem (deterioration of natural production factors), farmers' capacity and response, and action of the respective community, NGO, and public sectors.
- This whole concept takes the idea of a knowledge transfer process and adoption of new technologies.

Study Area:

- 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 locals.
- These areas are the maize baskets of the nation and receive a lot of attention with development projects.

Method and statistical tools:

- Mixed method approach of quantitative and qualitative. Empirical research.
- Interview about 400 farmers in the two districts. 200 from the adopters of the technology (beneficiaries) in the SIFAZ project. Which has about 16000 beneficiaries
- Simple random sampling will be used to select 200 non-project beneficiaries from the control group.
- Descriptive statistics, linear regression of model, logistic and probit regression model, and propensity score matching(PSM) will be explored to analyze and interpret the data.

Impact fo programme/project :
Increased smallholder farmers' productivity, income and employment opportunities while pursuing a gender sensitive approach.
Outcome of the Programme/projecti:
Improved sustainable and climate smart crop production and land management practices, with a gender sensitive approach.

Acknowledgments

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