

# Info Note

## Testing a new model combining micro-finance and farmer training to upscale the adoption of climate-smart agriculture practices by small-scale farmers in developing countries

*Applying an innovative micro-finance model to harness the uptake of climate-smart agriculture practices with Tanzanian smallholder farmers*

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DECEMBER 2018

### Key messages

- We test the impact pathway of a new model to upscale climate-smart agricultural practices among small-scale farmers in developing economies introduced by CARE in Iringa district, Tanzania.
- The model bundles village savings and loan associations with farmer field and business schools.
- The project will identify climate risk profiles of farmers in Iringa region and conduct household surveys to test the impact pathway of the model.
- The methods used in the research and findings of the project will be disseminated through workshops and capacity building activities in Tanzania.

This note introduces the climate-smart agriculture sustainable, productive, profitable, equitable and resilient (CSA-SuPER) research project implemented by a consortium comprising CARE International, International Center for Tropical Agriculture (CIAT), Sokoine University

of Agriculture (SUA), and Wageningen University and Research (WUR).

### Background

Climate change creates agricultural production and income losses and increases the risks to food security and nutrition for farming households. Compared to farmers from developed countries, those losses and risks are expected to be higher for about 500 million small-scale farming households in developing countries<sup>1</sup>, many of which are poor, food insecure and do not have the capacity to adapt to climate change. CSA practices (that increase agricultural productivity, enhance the resilience of farmers to climate change, and, where possible, mitigate greenhouse gas (GHG) emissions from agriculture<sup>2</sup>), can help in reducing risk and losses. It is, however, challenging to upscale the adoption of CSA practices by small-scale farmers in developing countries. Farmers often lack agricultural and agri-business knowledge and finance to invest in CSA practices. Many of them are socially disadvantaged, extremely poor, women, and youth. They are usually excluded from efforts to improve access to finance and knowledge about CSA practices. We therefore need new rural development models that will enhance agricultural and agri-business

<sup>1</sup> See <http://www.worldbank.org/en/news/feature/2016/02/25/a-year-in-the-lives-of-smallholder-farming-families> for the numbers of farming households.

<sup>2</sup> Please see <http://www.fao.org/climate-smart-agriculture/knowledge/practices/en/> for CSA practices defined by Food and Agricultural Organization (FAO).



knowledge, provide access to finance and empower socially disadvantaged groups at the same time to upscale the adoption of CSA practices.<sup>3</sup>

Can Farmer Field and Business Schools (FFBSs) and Village Savings and Loan Associations (VSLAs) serve as business models to upscale the adoption of CSA practices? FFBSs and VSLAs are instruments that address the lack of agricultural knowledge and finance to promote rural small-scale agricultural development in developing countries (see Box 1 for FFBS and VSLA approach). Previous research studies, however, have not found conclusive evidence on whether these instruments can upscale agricultural investment and sustainable production of small-scale farmers in developing countries when implemented alone.<sup>4</sup> The question is then whether an alternative model that bundles VSLAs with FFBSs can be successful to upscale the adoption of CSA practices. The answer to this question may be yes if, in the bundle, VSLAs address the lack of financial resources and FFBSs complement the VSLAs as knowledge platforms that deliver agricultural and agri-business knowledge on CSA to socially disadvantaged groups.

#### *Box 1: Farmer Field and Business Schools (FFBSs) and Village Savings and Loan Associations (VSLAs)*

FFBS is a participatory, women-focused extension approach that helps farmers build skills necessary to increase production; access markets and sell at competitive prices; collaborate with each other and engage in beneficial and efficient decision making. It also transforms the status and recognition of women by providing the support they require to be successful farmers, business people, leaders, and agents of change. Evidence shows that participation in the FFBS builds women's self-confidence and expands their autonomy; reduces gender-based violence; and garners respect from their families and communities. CARE (2017a)

VSLA is a self-managed group of 20-30 individuals, usually women, who meet on a regular basis to provide its members a safe place to save their money, access loans, and obtain emergency insurance. CARE (2017b)

## Objectives

CARE, CIAT, SUA, and WUR came together in the CSA-SuPER research project to study this new model for upscaling the adoption of CSA practices. The new model bundles VSLAs with FFBSs that deliver agricultural and agri-business knowledge to groups of small-scale women

farmers in developing countries. The model draws from CARE's *sustainable, productive, profitable, equitable and resilient* principles (see Box 2) to ensure that socially disadvantaged groups, particularly women, are not excluded and receive equal opportunities and services compared to other farmers.

#### *Box 2: SuPER Principles*

SuPER is a set of principles that guides CARE's work in small-scale agriculture in a changing climate. The outcomes we seek are food security and nutrition and greater resilience to climate change. By sustainable, we mean agriculture that is protecting and enhancing natural resources and at the same time driven by inclusive and accountable institutions and policies. We want sustainable social and economic policies that prioritize gender equality because we do not believe that sustainability is possible without tackling gender-based discrimination. By productive and profitable we mean that we want to increase yields and incomes among small-scale farmers. We want to specifically address the needs of women producers by reducing labour burden and increasing household nutrition. By equitable we mean enabling equal access to opportunities, resources, services and rewards for women farmers as well as men and promoting access to affordable, nutritious food for all. We want respect for human rights as part of the drive for equity. By resilience, we mean communities are able to withstand and recover from climate-related and other shocks by supporting community-based adaptation, connecting institutions, and collectives for better governance, and using market, technical and climate information to support farmer-led analysis, planning and risk management.

The main objective of the CSA-SuPER research project is to investigate the impact pathway of this model bundling VSLAs with FFBSs (FFBS+VSLA) (Figure 1). Specifically, the project answers four research questions derived from the impact pathway:

- What are the (separate and combined) impacts of financial service provision through VSLAs, and business training and capacity building by FFBSs on the adoption of CSA practices in mixed farming systems?
- How can (horizontal) village organization and (vertical) supply chain integration lead to business models that support the upscaling of CSA practices?

<sup>3</sup> For a detailed discussion on the effects of climate change and discussion on climate smart agriculture, see Beddington et al. (2012), Lipper et al. (2014), and Wheeler and von Braun (2013).

<sup>4</sup> For the evidence on VSLAs, see Karlan et al. (2017) and Ksoll et al. (2016). For the evidence on FFBSs see Larsen and Lilleør (2014).

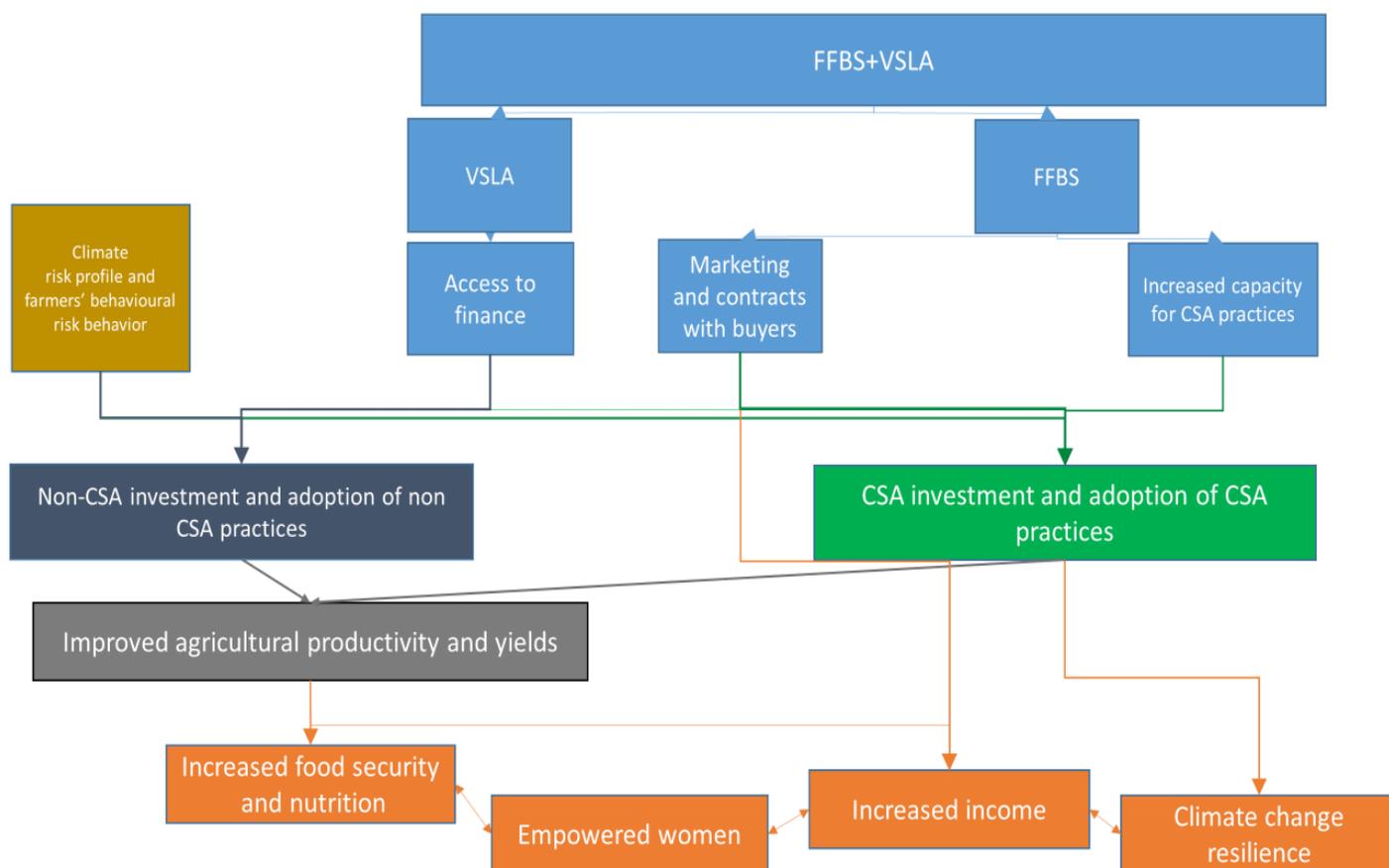


Figure 1: Impact pathway of FFBS+VSLA model

- What is the impact of improved linkages (at the input and the output side) on behavioral change towards risk management and portfolio diversification?
- Which changes in gender equity and social roles support durable adjustments towards climate resilience and dietary diversity?

To answer these questions, the CSA-SuPER research project is engaged in ongoing work. The investigation is based on Kukua ni Kujifunza<sup>5</sup> (KnK), an agriculture project of CARE-Tanzania which has introduced a soya value chain through existing FFBSs in 15 villages in Iringa, Tanzania (Figure 2). Climate vulnerability and capacity assessment, as well as climate risk profiling have been carried out in the region in order to learn which CSA practices might be viable and appropriate given the socio-cultural, economic and agro-climatic contexts. The project will compare the CSA practices and livelihoods of farmers from FFBS+VSLA villages to those of farmers from FFBS villages, and compare villages where there are no FFBSs or VSLAs.

## Major project outputs

There are four major project outputs of the project:

- **VSLAs:** The project will introduce 16 VSLAs in KnK project villages.
- **The research findings on the impact of the KnK project and FFBS+VSLA:** The project will conduct household surveys to evaluate the impact of the KnK project and test the impact of the FFBS+VSLA model on the adoption of CSA practices. The results of the evaluations will be shared with all stakeholders through reports, scientific publications, and presentations.
- **Climate risk profiles:** Climate risk profile reports are being developed to summarize the major climate risks and coping options for small-scale farmers in Iringa.
- **Capacity building:** The project team will train enumerators from SUA for the implementation of the surveys and share the knowledge on climate risk profile and impact evaluation tools with CARE-Tanzania staff.
- **Workshops:** The project will conduct workshops with the stakeholders to discuss lessons learned from the research.

<sup>5</sup> Kukua ni Kujifunza means *Growing is Learning* in Swahili



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