



HER HARVEST  
OUR FUTURE



Southern Africa Sub-Region – Impact Growth Strategy (IGS)

## Four Opportunities in Climate Resilient Agriculture

Climate Resilient Agriculture Hub - Learning Brief

Issue #5 June 2018

CARE has learned that sustainable agriculture that ensures food security must be based on the active engagement of farmers, workers, entrepreneurs and consumers, especially women and marginalized groups, to ensure that their needs and capacities are central. And CARE understands the serious risks that climate change and environmental degradation pose to agriculture and ecosystems services and the related need to adapt to change and uncertainty. Our work on gender and social inclusion has taught us that empowering farming women brings many societal, community and individual benefits and that realizing the rights of women and girls requires constant attention. CARE also recognizes the critical role that agriculture plays in improving household nutrition and the progress needed in this area. Finally, learning on *water smart agriculture* and other agro-ecological practices and models, combined with a market systems approach based on inclusive financial services, has taught us that integrated and context specific interventions are critical.

**Challenges and options.** Climate change and the uncertainty it brings is a game-changer in agriculture. Certain agriculture approaches are disrupted by climate change because of variations in seasonality, crop choices, cropping patterns etc. The impacts of climate change on agriculture means adaptation and continual learning become essential. Farmers need new skills and social learning is key to continuously adapted agriculture decision-making. Determining what sort of adaptation strategies are required in agriculture in any given context first requires vulnerability and capacity assessment and analysis, followed by community adaptation or development planning processes in addition to farm systems and risk analysis. An understanding of the differential impacts on women and men is critical to this. But we also, critically, need to understand what is needed for good decision making for adaptation strategies. What is it that helps farmers make optimal adaptation decisions? An approach which integrates community based adaptation (CBA) and Farmer Field and Business Schools (FFBS) can help by guiding a social learning process towards well-informed agriculture decisions and innovations. But then farmers also need access to finance. Millions of producers, often working in isolation, have little power and influence, and are often disconnected from formal or even informal financial support systems. Many live and work in such remote areas that the demand for their produce is extremely low – or non-existent. Savings led financial inclusion – particularly through Village Savings and Loans is a reliable way to reach these vulnerable communities either directly or indirectly as community capital increases and informal safety nets improve.

**Southern Africa.** Projections tell us that warmer conditions associated with more frequent hot days are likely over most of the interior of southern Africa in the future. Decreases in rainfall are projected in some areas and increases expected in others, underscoring urgent need for mitigation action at the global level and for community-based adaption at local level. Given that southern Africa is among the poorest regions in the world, with nearly 45% of the population living on less than 1 US\$ per day, it is imperative that adaptation finance reaches the most affected communities and results in improved food and nutrition security.

**Portfolio review.** In early 2018, CARE completed a review of the extent to which programming with small-scale farmers in southern Africa is achieving sustainability (both institutional and agro-ecological); productivity (in terms of yields and incomes) that delivers food and nutrition security; equity (enabling equal access to resources for women and men) and; resilience (to withstand and recover from climate-related and other shocks). The review identifies where CARE is achieving transformative breakthroughs and outlines some key successes and challenges. Below is a brief summary of our learning – upon which we make recommendations for our programming.

We find progress on **institutional sustainability** through work on partner capacity strengthening, land-rights programming and inclusive governance. We are now committed to increasing attention to civil society engagement as a means to drive sustainable development. All programmes cited savings-led financial inclusion as key to sustainability due to financial and socio-political empowerment outcomes – particularly for women. From an **agro-ecological sustainability** perspective, natural resource management standards are high but improvements on the measurement of ecosystem services are necessary. In Tanzania, our research on climate resilient agro-ecological practices (particularly ‘water smart agriculture’ practices that respond to seasonal rainfall challenges) found that both staple (maize) and cover crop seed production increased over project cycle. Additional observed outcomes included reduced erosion; improved soil structure; improved infiltration and moisture efficiency; improved soil health and nutrient retention; and lower machinery, labour, and maintenance costs – all contributing to agro-ecological sustainability and community resilience.

On **productivity**, there is extensive evidence of yield and income increases (particularly for women) with a wide spectrum of successful innovative approaches despite cyclical shocks and chronic stress in the agriculture sector. We find that our market systems work is improving through engagement with the private sector and application of the Farmer Field and Business School model. Research demonstrates that the model results in a \$31 return for every \$1 invested over just 3 years. In Tanzania, one project saw a 59% yield increase in cassava production; a 73% yield increase in sesame production and increase in net income of women from agricultural produce from USD165 to USD215 per annum. The sale of sesame, regarded as a women’s value chain, allowed women to purchase foods that balanced their meals to achieve nutritional and dietary requirements. We also find that new partnerships with service and input providers and output purchasers are emerging – mostly building on established Village Savings and Loans Associations.

**Equity** is assessed predominantly from a gender perspective and findings indicate that the integration of gender responsive and transformative approaches is essential in order to meet our goals. Evidence of increased women’s empowerment is strong; particularly where project designs include transformative actions such as engaging men. In Malawi, net annual income from agriculture production activities in which women participate substantially increased over a three year period and survey and qualitative findings show that women strongly link increased agricultural income to project participation. There is innovative work on rights and entitlements to natural resources, particularly land, and attention to pastoralists as a neglected group. We have learned that gender-related challenges in problem statements and gender-transformative commitments in project aims or outcomes must be met by gender-responsive actions and indicators.

Findings on **resilience** are positive and based to considerable degree on successful integration of learning on disaster risk management in programming and on consistent application of gender and power analyses and related actions. Research in 2017 examines the impact of cash transfer work on resilience, based on a study of such schemes in Zimbabwe, Niger and Ethiopia. We find that unconditional, multi-purpose cash assistance can be effective for building shorter-term absorptive resilience by boosting consumption and reducing negative coping strategies. A recommendation from a resilience perspective is that cash transfer

programmes should be coupled with collective-action structures to support grassroots transformative change. In some cases climate vulnerability and capacity analysis has also led to more comprehensive understanding of risks. Documented learning on the links between development and humanitarian action is needed but the region has examples of successful integration of climate change adaptation models – with participatory scenario planning in particular an area of growing interest.

#### ***Four Opportunities in Climate Resilient Agriculture***

Our portfolio review provided extensive lessons on what is working and what is not and we offer the following recommendations based on its evidence and learning and the opportunities that exist.

##### **1) De-risk agriculture for small-scale producers, especially women, through savings-led financial inclusion**

- 1.1) All future food and nutrition security and climate resilience programs in the sub-region should use VSLAs. An analysis of CARE's food security programming (2007-2017) demonstrates a 22-percentage-point difference in women's participation between programs implemented through VSLAs and those that were not. VSLAs are therefore a viable means to improve equity of opportunity for women in agriculture.
- 1.2) Work together with government and private sector actors to sustainably scale VSLAs. Given their role in improving food and nutrition security, savings group creation should not only be a responsibility of NGOs. Joint efforts that involve governments and the private sector to identify and scale sustainable VSLA models will allow farmers to spread risk more easily.
- 1.3) Link climate and agriculture services to savings and loans associations. VSLAs are social platforms and financial service providers are now creating products that cater for group dynamics. VSLAs thus increase opportunities for new investment in production from credit products, as well as providing a cushion against climate-related and other shocks.

##### **2) Seek nutrition outcomes from actions in adaptation in agriculture**

- 2.1) Adaptation in agriculture for food insecure communities must consider dietary diversity. Nutrition-sensitive actions can always be taken in agriculture projects and it is incumbent upon development actors to ensure adaptation and resilience leads to progressive reductions in malnutrition.
- 2.2) Integrate policy actions in climate change and agriculture with nutrition. More inter-sectoral dialogue and coherence is required in order to take advantage of synergies and achieve better outcomes.

##### **3) Use Farmer Field and Business Schools as social learning platforms to scale out climate resilient practices**

- 3.1) Adaptive capacity strengthening in agriculture requires stimulating farmer-led learning. The use of farmer field and business schools can be cost effective and when linked to savings and loans associations can stimulate aggregation, local entrepreneurship and market engagement.
- 3.2) Nutrition and gender transformative outcomes should be goals of farmer field schools and other extension interventions. Improved nutrition status and increased economic empowerment for women are proven benefits of the FFBS model.
- 3.3) Direct climate and agriculture finance significantly more towards local adaptation planning and action and the governance structures that support this. Localized and decentralized action can lead to more empowered and responsive local government.

#### **4) Make gender equality and women's empowerment essential aims of adaptation in agriculture programming**

- 4.1) Analyse gender and social norms and barriers when designing climate resilient agriculture or adaptation in agriculture programs. Differential vulnerability means that climate change affects women and men – and boys and girls – differently and adaptation actions must be responsive to this.
- 4.2) Facilitate equal access to agriculture and climate information for all small-scale farmers. Information and services must address women and girls' tasks and priorities which are often culturally or socially defined.
- 4.3) Engage men at all stages of gender equality and women's empowerment actions. At all political levels, and among non-governmental, research and private sector service providers, input suppliers and market actors, gender and power dynamics should be understood and addressed proactively.

#### ***Conclusion***

While there is some evidence that the promotion of climate resilient practices in agriculture can raise the incomes and yields of farmers, investment remains limited and policy inconsistent. Successful practices have yet to be adopted and scaled out to the extent required to lift small-scale farming households, and particularly women, out of poverty and convince governments and donors that this is a viable path to national food and nutrition security. Scaling agriculture that is at once sustainable, productive, equitable and resilient will, however, depend less on 'technical packages' than we may believe. More importantly, it requires strengthening farmer learning and innovation processes, through improved access to knowledge and information from conventional and other extension and advisory services and through access to inclusive financial services. Wider scale adoption of good practices will come from hands-on experience, first-hand observation, continual learning and better decision-making. This makes social learning through community-based processes and structures an essential approach to understand and promote. Finally unless persistent gender-based inequalities and discrimination in the provision of services and information is tackled, both climate change adaptation and agriculture actions will fail to meet their potential in delivering national, regional and global development objectives. For this reason, CARE is placing primary importance on gender equality and women's empowerment in its interventions to increase food and nutrition security and resilience to climate change.

**end**