WWF Climate resilient agriculture draft M&E framework April 2021

Mahlathini Development Foundation (MDF) is conducting a Covid-response project in two provinces in South Africa. Due to the economic crisis created by Covid-19, people in rural areas may be highly affected. This project works with currently active rural farmers who are already familiar with climate resilient agriculture (CRA) to boost their production and increase diversity of produce. The two areas of project implementation are the mid and lower Drakensberg regions KZN (Bergville, SKZn and Midllands 110 participants) and in the Umzimvubu catchment area of the Eastern Cape (Matatiele, 160 participants).

This project differs from MDF's usual *modus operandi* in that it usually works with groups of farmers and introduces them to CRA, while this project works more intensively with individual farmers within these groups and assists them to implement a diversified basket of practices which includes vegetables, field cropping, and livestock integration. This M&E framework is designed to capture these changes, to assess whether this new model is working and to what extent it is working.

The aim, objectives, outcomes, and short-term gains of the project are set out below.

Project aim

Increased productivity and resilience in the mixed smallholder farming system through implementation of a basket of Climate Resilient Agriculture (CRA) practices

Project objectives

1. Work with existing CCA learning groups to scale up production in the short term within the confines of the COVID-19 pandemic
2. Support a range of intensified food production activities: vegetable production, field cropping and livestock integration
3. Improve social agency for value chain support (VSLAs, bulk buying, local farmer centres and local marketing initiatives) EK: Number of groups they join incl VSLA

Project outcomes

1. Food and nutrition security at household level for poor, rural homesteads with enough farming income to sustainably maintain farming activities in the short term
2. Development of social agency for community-led LED and social safety net improvement of the natural resource base

Short-term gains

- Increased availability of locally produced, healthy food (vegetables, field crops, poultry and livestock)
- Doubling the food production (70%-100% increase) will allow these households to have enough of a range of food stuffs to be self-sufficient and make enough income from their surplus to sustain their farming system
- Improved distribution of reasonably priced food and feed through local marketing systems will alleviate shortages in the villages and provide for easier access and
- Development of a community level social security net will improve social stability and well-being.

Project monitoring

From the changes that MDF wants to create, we have identified four aspects that need to be monitored:

1. Increased yield and production

This includes % size increase in land used, increase in yield, increased diversity in what is farmed (vegetables, field cropping, and livestock integration)

2. The use of more climate resilient agricultural (CRA) practices, and an intention to continue using them

This includes increased variety of adaptive CRA practices (for example, rainwater harvesting, tranches, more resilient crops, etc). It also needs to measure any change in attitudes towards this way of farming.

3. Improved selling and marketing of produce grown

This includes amounts sold and a percentage increase in farmer income, the role of youth in marketing, livestock auctions, setting up market stalls at events, vendors selling produce, and bakkie traders. The assumption is that most farmers are trying to sell on their own, but ceilings for sales are low and transactions costs are high, so marketing together begins to reach economies of scale. This has to be facilitated by MDF. This also includes VSLA records. MDF's experience is that without some money available very little can change for these farmers. MDF initiates the VSLAs and gathers monthly monitoring data.

4. Increased social agency

This includes inclusion in learning groups, VSLAs, and any other joint activities undertaken. Within a systemic development methodology, it is assumed that through working and learning together, people develop the ability to work together and become better at problem solving, and more motivated to tackle challenges. An example of how social agency might work is that farmers participate in learning groups and savings groups, and then may decide to form a joint planting group, or set up a small water committee, or seek formal recognition from local authority. The ultimate aim is to encourage these farmers to find a voice and engage with external stakeholders.

These data will be collected using quantitative tools that rely largely on MDF staff visiting farmers. They will be entered into an excel spread sheet (one per area) for collation and analysis. They will be compared to baseline data, and to expected results.

The monitoring tool that staff will use is copied below. This is abridged for the purposes of this framework document, with tables' rows and spaces for writing answers removed.

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1. CHARACTERISTICS OF THE PARTICIPANT

- Name and Surname:
- Village:
- Age:
- Gender:
- Household head (Yes/No):
- Number of household members (*Children & adults*):
- Main source of income (social grant/employment/self-employment/unemployed):
- Number of child and pension grants:

2. INCREASED YIELD AND PRODUCTION

a) What is the total land size **used**:

		Before (Size in m^2)	**Now (Size in m^2)**	**Comment:**
Increased in farming (Size) [Covers diversity and production]	Gardening			
	Field cropping			
	Livestock			

	(No of cattle, goats, chickens, pigs…)			
	Trees and other resources (no of fruit, indigenous…)			

b) What activities are undertaken:

Increased diversity in farming practices		**Yes/No Before**	**Y/N now**	**Comment: why or why not**
	Gardening			
	Field cropping			
	Livestock			
	Trees and other resources			

c) Practices, crops planted, livestock kept (detail and changes that give more detail to b))

Increased diversity (1)	**Management and practices before**	**Number of practices Before**	**No now**	**What has changed; new crops**	**What has changed; new practices**	**What has changed; new management**
Gardening	e.g. use of manure, flat beds			e.g Chinese cabbage, leeks	e.g Trenches, mulching, mixed cropping, P&D control	e.g Drip irrigation, tunnel
Field cropping	e.g. traditional cropping maize			e.g beans, cowpeas cc	e.g. CA, intercropping, cover crops,	e.g Close spacing, herbicides
Livestock						
Trees and other resources						

d) Growing season; longer, different, increased

Increased growing season		**Yes/no Before**	**Yes/no Now**	**Comment**
	Gardening			e.g.Now grows crops in winter in garden and fields
	Field cropping			
	Livestock			
	Trees and other resources			

e) Increase in diversity and yield

Increased productivity	**Types**	**BEFORE: Quantity (KG, No)**	**NOW: Quantity (KG,No)**	**Comment**
Gardening	e.g. spinach	40kg	80kg	Increased yield in trench beds
Field cropping				
Livestock				
Trees and other				

resources				

3. CLIMATE RESILIENT AGRICULTURE PRACTICES AND ATTITUDES

a) Five fingers conservation principles

Please list the practices and rate them				
				Detailed description of what is there- list practices.
Water management:				
Control of soil movement:				
Soil health:				
Improved crop management:				
Improved livestock management:				
Looking after indigenous plants:				

b) How has this project helped you to deal with climate change and variability in your garden? Complete table below

Past Issues	Past practice	Present practice	Impact (incl soil health and fertility and soil and water conservation	Lessons

c) Please rank the following elements for each practice you have decided to experiment with: Use a scale of -1 to +3 Note; This question works in tandem with the question above and now ranks the 'impacts' mentioned above.
-1 = worse than normal practice, 0=no change, 1=some positive change, 2=medium positive change, 3= high positive change

	Name of practice	Soil	Water	Productivity	Labour	Pest and disease control	Cost and maintenance	Livelihoods	Adaptation
1									
2									

3									

d) Water management

Increased water use efficiency (incl RWH, water holding, water access, water productivity)	Increase Access	Increase RWH	Increase water holding	increase water productivity (irrigation)	SCALE
					0= same or worse than before; 1= somewhat better than before, 2= much better than before

e) What have you learnt about dealing with climate change and the climatic extremes (intensity of rain, wind and sun)? How likely is it that you will continue to use each of these changes you have made? 0 = not at all likely, 1 = maybe, 2 = absolutely will. And how likely are you to tell friends about this (same scale).

Practice	Continue to use (0-2)	Tell friends (0-2)	Comments or reasons

4. HOUSEHOLD SELLING AND MARKETING

a) Income and food provision

Increased livelihood security (income)	Income before (ave monthly in Rands)…b4 COVID		Income now (Ave monthly in Rands)…		Comments
Markets	**List marketing options used before**		**List marketing options used now**		**Comments**
Increased livelihood security	**Food types (staples, veg, livestock, fruit)**	**Quantity/ week (kg)**	**No of times eaten /week (1-7)**	**Sales/week (in Rands)**	**Comments**

b) Why do you not sell more produce? What are some of the challenges you face?

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c) Safety nets and diversification

Increased livelihood diversity/options	**Income options Before**	**Income options Now**	**Comment; name new options e.g. which crops, etc**	**Scale**
				1=social grants; 2= remittances; 3=farming income;4= small business; 5=employment
Savings (safety, security, achievement)	**Amount per month Before**	**Amount per month Now**	**Use of savings**	**Scale**
				1=food; 2=household use; 3=education; 4= production; 5=other

d) VSLA

Member of a VSLA?	**Amount added**	**Amount loaned**	**What were loans used for?**

4. Social agency

a) Do you share your knowledge and experiences with the learning group or community members?

b) How do you share the knowledge gained with other members of your community?

c) What helps you to learn more about new innovations and information? (Specify what the farmer has learnt)

a) Listening to other farmers experiences and experiments

b) By doing and experimenting in own garden

c) Motivated by other farmers work and experiences

d) Learning workshops

d) Groups and activities

Collaborative actions/social agency	**Activities in groups Before- name**	**Activities in groups Now**	E.g. savings, church, learning groups, coops, farmers associations, work teams, selling, inputs, farmer centres,

			water committees …
Informed decision making	**Information used to choose activities Before**	**Information used to choose activities Now**	e.g. Other community members, learning in groups, written info, radio, facilitators, extension officers, etc
Positive mindsets	**Rate your mindset Before**	**Rate your mindset now**	SCALE:0=less positive about the future; 1=the same; 2=more positive about the future; 3=much more positive

Evaluation

The aim of the evaluation is to assess whether mixed farming methods can provide sustainable livelihoods for small-scale rural farmers, and the extent to which the activities undertaken by MDF work towards that aim. Two evaluations are scheduled for this project: a short formative evaluation in September 2021; and a longer summative evaluation in August 2022.

In the formative evaluation, MDF and I will ensure that we have gathered and analysed as much monitoring data as possible, to be able to assess whether agricultural, marketing, and agency behaviour have changed, and whether this has resulted in improved livelihoods. Using this information for each project area, I will conduct a series of staff workshops where they reflect on the model, and talk about the monitoring results: how and where it is working well, and how and where it is working less well. We will also check on the assumptions of the project and whether they are helping or hindering achievement of outcomes, and what can be done if they are. A staff workshop was conducted early in 2021 to solicit staff views on what to monitor, and some of the assumptions that this project and model are based on. The assumptions are:

1. It is assumed that mixed farming is a resilience strategy.
2. It is assumed that youth are interested in and are able to start small businesses.
3. It is assumed that new networks and relationship will form for local food systems.
4. It is assumed that farmers will learn financial literacy and planning skills from VSLAs, and that they will use extra income from farming to maintain farming activities.
5. It is also assumed that farmers will have the time, labour, and motivation/hope/get up and go/ to makes the changes that MDF suggests.

The evaluation workshop will largely rely on a SWOT analysis. Taking the results of each area, we will jointly consider the reasons for what the monitoring data are showing. A SWOT analysis is a useful tool because it includes an examination of internal and external forces. This project will take different forms in the different areas because of the contexts – local power structures, municipalities, the geography and distance to markets, etc – and we can begin to separate out the different SWOT factors that exist in each context. Once we have some understanding of why things are going well and less well, and whether our assumptions are correct or not, the staff will then be guided on generating action plans for moving forward. SWOT looks at:

STRENGTHS	OPPORTUNITIES

WEAKNESSES	THREATS (OR CHALLENGES)
This relates to the project itself, internal processes, and what works well and less well. It is at this level that we will be able to consider the assumptions	This relates to the external context in which the project sits. Here, we will try to uncover more assumptions that were made at the beginning, eg, there are no local barriers to joint marketing strategies
WAY FORWARD A plan will be developed to adapt implementation so that strengths are played to, weaknesses avoided, and efforts are made to address the assumptions directly	WAY FORWARD A plan will be developed to adapt implementation so that opportunities are grasped, threats and challenges are actively avoided, and efforts are made to address the assumptions directly
OUTSTANDING INFO WE NEED We may need to adapt the monitoring forms to gather more information	OUTSTANDING INFO WE NEED We may need to adapt the monitoring forms to gather more information

The summative evaluation will repeat the formative process and work to engage with farmers too to provide a more evidence. I will conduct a few field visits before the formative evaluation process to assess how monitoring is being achieved and any challenges facing staff who gather those data.