

RESILIM-O:
Resilience in the Limpopo Basin
Program- Olifants

MILESTONE 1: Inception Report
Under the
Lower Olifants catchment
Agricultural Support Initiative
(AgriSI)

13/04/2018



Acknowledgements

The USAID: RESILIM-O project is funded by the U.S. Agency for International Development under USAID/Southern Africa RESILIENCE IN THE LIMPOPO BASIN PROGRAM (RESILIM). The RESILIM-O project is implemented by the Association for Water and Rural Development (AWARD), in collaboration with partners. Cooperative Agreement nr AID-674-A-13-00008.

© Association for Water and Rural Development (AWARD)

P O Box 1919

Hoedspruit 1380

Limpopo, South Africa

T 015-793 0503

W award.org.za

Company Reg. No. 98/03011/08

Non-profit org. Reg. No. 006 - 821



ABOUT USAID: RESILIM

USAID's Resilience in the Limpopo River Basin (RESILIM) program addresses ongoing degradation in the Limpopo River Basin in southern Africa, where people face water shortages, increased floods, and declines in crop productivity as climate change further stresses an already water limited region.

There are two components to the program; one operating at a basin-scale (RESILIM-B, which is implemented by USA-based Chemonics and addresses similar issues at the scale of the four SADC member states that share the Limpopo Basin (South Africa, Botswana, Zimbabwe and Mozambique) and a catchment-scale project (RESILIM-O) that It is being implemented by the Association for Water and Rural Development (AWARD). Both projects share the same overall objectives. You can find out more information on the RESILIM projects on www.usaid.gov website and www.award.org.za.

The USAID's RESILIM-O focusses on the Olifants catchment. The program aims to reduce the vulnerability of people and ecosystems in the Olifants Catchment specifically, by improving how transboundary natural resources are managed. By understanding the systemic causes of vulnerability, including climate vulnerability, it is promoting new ways of thinking and acting to promote integrated water and biodiversity management.

ABOUT AWARD

At AWARD, we recognize that the natural world's resources are limited, and undergoing rapid depletion and transformation. We know current practices of use and management are inadequate to deal with the changes and challenges we are facing. We design practical interventions to address the vulnerability of people and ecosystems, and merge considerations from both environmental and social perspectives. Our approach involves thinking across disciplines, boundaries and systems.

We are working with diverse people and institutions in the water and biodiversity sectors in the Olifants River Catchment to understand the multiple vulnerabilities to change, including climate change. Along with quality scientific contributions, our engagement in the socio-political context of the Olifants River Catchment allows us begin to begin to institutionalize integrated, resilience-based practices, providing a foundation for robust development policy and practice in the in this river catchment, and beyond¹.

The Olifants Catchment: An overview

The Olifants River Catchment falls within the Limpopo River Basin, which is part of an international drainage basin that stretches across South Africa, Mozambique, Zimbabwe and Botswana. In fact, the Olifants River contributes nearly 40% of the water that flows in the Limpopo River making it an important catchment in the system as a whole².

¹ AWARD: Annual Report.2016/2017 Financial Year. RESILIENCE IN THE LIMPOPO – OLIFANTS.10/31/2017

²As above



washing and drinking and use it for recreational and spiritual practices. Subsistence farmers in Mozambique rely heavily on the catchment's flood plains. There are also large mines and associated industries, large scale agriculture and the wildlife economy, which all rely on a healthy, functioning river system. Often people forget that what they do upstream affects people down stream, sometimes with dire consequences.

The catchment is our home and it is worth investing in its future. The work reported here is part of the ongoing activities of the RESILIM- O project under the grant from USAID: Southern Africa.



Project partners



Mahlatini Development Foundation (MDF) is a small public benefit non-profit organization consisting of rural development practitioners who specialize in participatory learning and action processes, sustainable natural resource management and low external input farming systems, including a focus on rain water harvesting, conservation agriculture, intensive homestead food production, food security, climate change adaptation micro finance and enterprise development.

MDF designs and implements rural development programmes and training processes providing learning processes for adults all the way from semi- literate farmers to post graduate university level. We work in partnership with government and non-government organisations alike. We are sensitive to and mainstream where possible gender, disability and people living with HIV/AIDs



Contents

Table of Contents

1 Executive Summary	9
1.1 Progress for the reporting period	9
2 Project Objectives	9
2.1 Overview of RESILIM-O Project objectives.....	9
2.2 Sub-grant Project Objectives	10
3 Theory of Change.....	10
4 Milestone Description.....	16
4.1 Definition of milestone and purpose.....	16
5 Project management plan	19
5.1 Summary of project implementation process	19
6 Monitoring, evaluation, learning and reporting (MERL) plan	20
6.1 Draft framework & indicators.....	20
6.1.1 Baseline	21
6.1.2 Ongoing monitoring.....	21
6.1.3 Evaluation.....	21
7 Media and communications strategy	21
8 Sub-grant protocols and procedures	22
9 Approach/ Process/ Activities	24
9.1 Summary of activities	24
9.2 Progress and Results	24
9.2.1 Learning and mentoring	24
9.2.2 Innovations and Experimentation	26
9.2.3 Work Plan for 2018.	28
10 Appendices	30
10.1 Appendix 1: Gantt Chart AgriSi 2018-2019.....	30
10.2 Appendix 2:	33
13.3 Appendix 3: Homestead assessment monitoring sheet (baseline)	36
13.4 Appendix 4: Garden monitoring and individual experimentation plan	42
13.5 Appendix 5: Attendance registers for CA demonstration workshops: December 2017- Turkey, Mametje and Botshabelo.	44
13.6 Appendix 6: Establishment of CA trial or experimental sites	45



13.6.1 Trial size and layouts	45
13.6.2. Progress of Koko Maphori’s trial plots	45
13.6.3 Monitoring of CA trials	46



1 Executive Summary

1.1 Progress for the reporting period

Continuation from reporting for final quarter of 2017 (Milestone 7):

- Initiation of a new learning group in Sedawa-extension (Turkey; 1st training workshop
- Re-introducing Conservation Agriculture to a larger group of participants, including cover crops - sunflower, millet/sorghum and cowpeas.
- Set up of quantitative measurement instrumentation for CA trials and tunnels

The proposal for continuation of the AgriSi programme has been developed and submitted. This inception report includes the finalised implementation plans, project management plans and MERL framework

IMPLEMENTATION TEAM

MAHLATHINI: Erna Kruger, Sylvester Selala, Nozipho Zwane (Intern), Betty Maimela (intern)
AWARD: Cryton Zazu, Bigboy Mkhabela,

2 Project Objectives

2.1 Overview of RESILIM-O Project objectives

RESILIM-O is large multi-faceted, multi-stakeholder, cross-boundary programme to reduce vulnerability to climate change through building improved transboundary water and biodiversity governance and management of the Olifants Basin through the adoption of science-based strategies that enhance the resilience of its people and ecosystems through systemic and social learning approaches. The programme has been running for five years and is being implemented by AWARD (The Association for Water and Rural Development) with funding from USAID.

The Agricultural Support Initiative (AgriSI) was initiated as a sub-grant process within the larger programmed towards the end of 2016. This initiative works specifically with climate change adaptation processes with smallholder communities in the lower Olifants River basin. It is being implemented jointly by Mahlathini Development Foundation and AWARD.

The Agricultural Support Initiative (AgriSI) addresses two of the RESILIM-O programme objectives directly:

- i. To institutionalize systemic, collaborative planning and action for resilience of ecosystems and associated livelihoods through enhancing the capacity of stakeholders to sustainably manage natural resources of the Olifants River Basin under different scenarios
- ii. To reduce vulnerability to climate change and other factors by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements.



2.2 Sub-grant Project Objectives

Sound agro-ecological practices for soil and water conservation (SWC) and the ability to self-organise and act collectively are regarded as fundamental for building adaptive capacity and resilience to climate change. Not only do agro-ecological farming approaches require minimum external inputs - which may be expensive and increase dependency if subsidised - but they foster farmers' sense that they can build sustainable futures from local inputs and efforts. With knowledge about the potential impacts of climate change included in the learning journey, farmers can make purposeful decisions around practices such as seed and crop-type. This approach supports livelihood diversification - also fundamental for increased resilience - through 'value-added' associated activities such as seedling production, tree nurseries and bee-keeping.

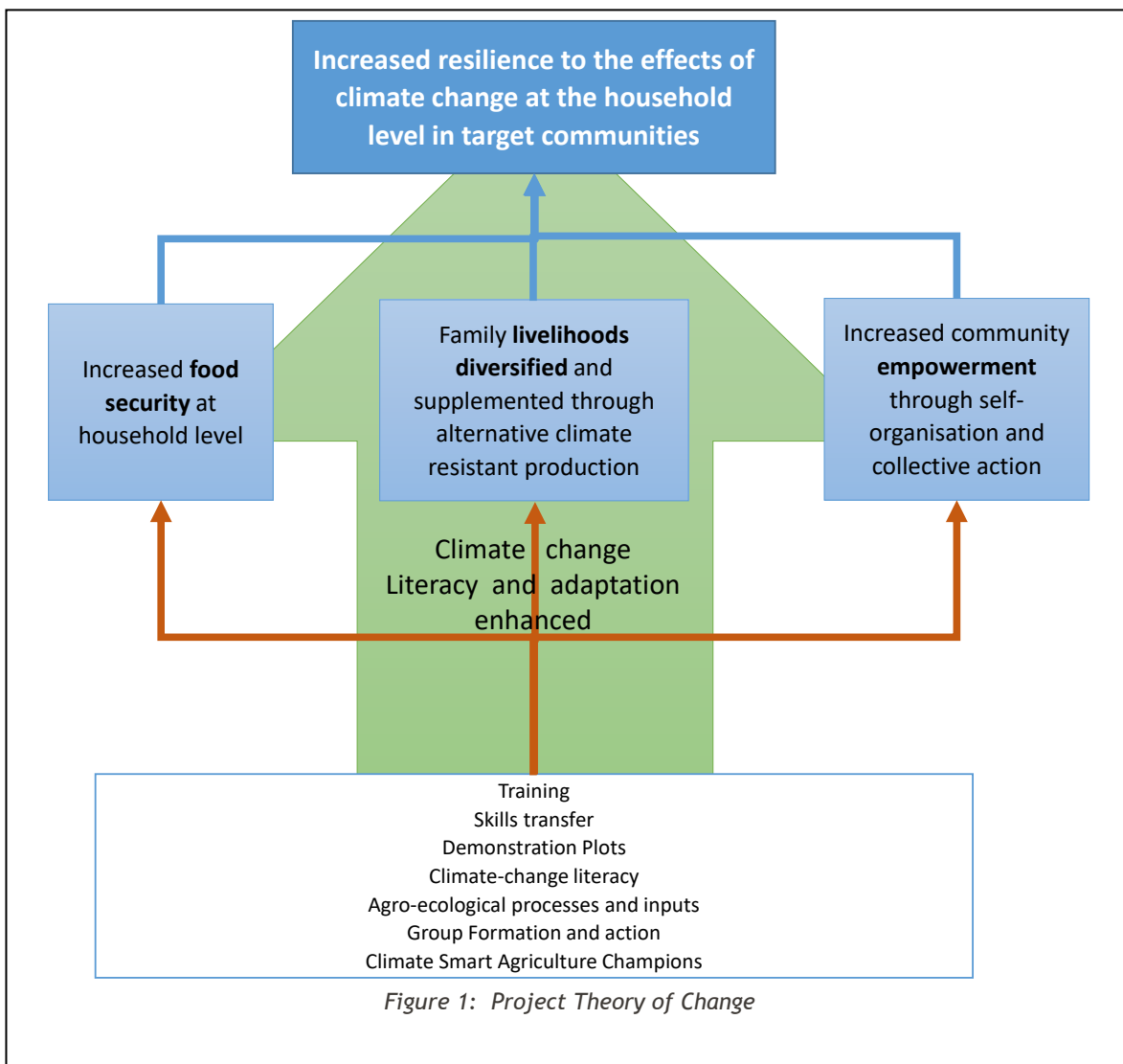
The overall aim of the Agricultural Support Initiative is to enhance the resilience of the people and ecosystems in selected villages (5-6) in the Lower Olifants River basin, using a systemic social learning approach, exploring the question: *What are you learning about the socio-economic and biophysical characteristics of your environment and how these are changing and how are you able to respond to that?*

The overarching objective of this work is to provide support for increased adaptive capacity and resilience to the effects of climate change for households involved in agriculture in select communities of the Olifants River Catchment through:

- Improved soil and water conservation and agro-ecological practices for increased food security
- Livelihood diversification and supplementation through alternative climate resistant production;
- Increased community empowerment as a result of self-organisation and collective action.
-

3 Theory of Change

The Theory of Change (Figure 1) captures the key pathways to the intended outcome and remains the same for the proposed 2nd year of implementation.



Below is a table outlining the theory of change for the AgriSi (Pahse 2) process for 2018-2019



THEORY OF CHANGE:							
Overall Objectives		KRA 1: To institutionalize systemic, collaborative planning and action for resilience of ecosystems and associated livelihoods through enhancing the capacity of stakeholders to sustainably manage natural resources of the Olifants River Basin under different scenarios					
		KRA 4: To reduce vulnerability to climate change and other factors by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements					
AgrSI (Phase 2) Objective		To provide support for increased adaptive capacity and resilience to the effects of climate change for households involved in agriculture in select communities of the Olifants River Catchment					
Objectives	Key activities	Activities	Outputs/ milestones	Outcomes/ deliverables	Verifiable indicators	Climate change indicators	Targets
Increased community empowerment as a result of self-organisation and collective action.	Visioning and decision support	Initial introductions, baseline information, climate, soil and water mapping (past, present, future),	Community participation profiles. Baselines for all participating households.	Community level analysis and increased understanding of climate change. Linkages with local stakeholders	Baseline reports for new village/s	2:4.8.2-14: Using CC information or vulnerability assessments to inform decisions and actions. Developing a plan of action to respond to and build resilience to climate change impacts.	~125 participants
		Visioning and scenario development	Climate change maps for participating villages	Exploration of the SES under different future scenarios, collaborative understanding of climate change impacts.	2-3 Scenarios developed at a local level with baskets of options for best practice		Climate change adaptation scenarios and decision making reports -x 3
		Learning group and Local facilitator (LF) mentoring and support	Learning groups and local facilitators/champions identified,	Capacity building for learning groups and LFs; incl savings, group activities, community awareness,	Progress reports		6-7 learning groups 6 CC champions(LFs)



			functioning and agency developed				
	Networking and cross visits	Seasonal review and planning sessions for each learning group. Open days for showcasing activities and creating awareness in the broader community.	Seasonal review and planning sessions. Open day programmes and events,	Increased awareness and community level organisation; collective action	Seasonal review and planning reports (x3). Open day programmes and summary reports (2)	3:4.8.2-26. Number of stakeholders with increased capacity: use climate information in decision making; With increased knowledge of climate change impacts and response options.	35% of participants show increased knowledge and response
		Cross visits between learning groups in the lower and middle ORB and linking to and taking part in other stakeholder networking activities	Cross visits conducted inside the ORB(1-2)		Cross visit summary report (1-2)		



<p>Improved soil and water conservation and agro-ecological farming practices for increased food security</p>	<p>Learning and mentoring</p>	<p>4X day practical homestead based learning sessions (in soil and water conservation, intensive homestead food production and conservation agriculture) for each of 3-5 learning groups.</p>	<p>Training outlines, handouts, materials and reports (3grps x3 trainings)</p>	<p>Improved, diversified production. Soil and water conservation practices implemented.</p>	<p>Training reports. Gardening monitoring reports. Attendance registers</p>		<p>45% of participants implement at least 1 CC adaptation response, 25% of participants implement 2-3 responses and 5-10% implement >3. Final training manual by April 2017</p>
		<p>Ongoing mentoring and monitoring with further learning and support activities as required and requested (1 day/month x 12 months).</p>	<p>Introduction, demonstration and piloting of best practice options (new and local ideas)</p>	<p>Monitoring of implementation of best practices at household level. Identification and awareness raising around local and new best practice options (at least 2 identified and introduced)</p>	<p>Photo diaries, case studies, B2O reports</p>	<p>3:4.8.2-26. Number of stakeholders with increased capacity: use climate information in decision making; With increased knowledge of climate change impacts and response options; Stakeholders implementing water saving strategies; Individuals diversifying incomes towards</p>	<p>5 case studies developed</p>
<p>Livelihood diversification and supplementation through alternative climate resistant production and</p>		<p>Focus sessions on climate change aspects and considerations to be included here (3/year).</p>			<p>Reports on 3 focus sessions, that include at least 2 new and or local best practice options.</p>		<p>4 CC w/s impact summaries</p>



alternative income production options						less climate sensitive activities	
	Experimentation and introduction to innovations	Individuals undertake experiments with qualitative and quantitative monitoring.	S&WC and agroecological practices implemented and monitored for at least 50 individuals	Monitoring of implementation of best practices at household level. Final review and reporting of the experimentation and implementation process.	Individual experimentation plans, and garden monitoring reports		Best practice booklet by July 2018
		Visits from local facilitators/champions and ongoing homestead food production monitoring (monthly for each participant).			Local facilitator monthly timesheets, photos		
	Collaborative work	Learning groups undertake joint soil and water conservation works in teams and implement planned activities for all households (3 days/month). Provision of technical and limited infrastructural support and incentives for these activities.	S&WC and practices implemented and monitored for learning group teams	Collaborative work strengthen local organisational and facilitation capacity and	Collaborative S&WC works catalogued and reported on. (Min of 3 sites)		35% of participants engage in collaborative work at least once.



4 Milestone Description

4.1 Definition of milestone and purpose

Milestone descriptions have been developed for AgriSI (Phase 2) for the period starting April 2018 and ending October 2019. The table below summarises these activities against the milestones and indicates due dates of these milestones.

Table 1: Mahlathini Development Foundation Milestone Schedule: March 2018-October 2019

Milestone Title	Activity	Outputs	Verification	Due Date
1. Inception AWARD: R105,423.97 MDF: R34,285.71	i. Update project proposal. ii. Develop MERL Framework including theory of change. iii. Update project implementation plan with indicators and targets. iv. Project Management plan. v. Consolidate project activities for phase 1	i. Inception report. ii. Phase 1 final report.	1. Inception report that includes the following: <ul style="list-style-type: none"> i. Updated project implementation plan. ii. MERL Framework. iii. Project Management Plan. 2. Phase 1 final report. <ul style="list-style-type: none"> • Reflection of implementation against planned activities as per proposal. • Final overall MERL data. • Lessons learnt and recommendations. 	13 Apr 2018
2. Progress Report No. 1 (Apr'18 - Jun'18) AWARD: R162,237.39 MDF: R34,285.71	i. Baseline new learning group - Turkey, Decision support and planning ii. Learning sessions; review of S&WC and CSA, for all groups (1 day). iii. Individual farmer experimentation - prioritized, garden monitoring. iv. LF training; qualitative quantitative monitoring v. Networking; Part video	i. DSS process and reports. ii. training reports iii. Monitoring forms, LF process, iv. M&E framework for household level measurements and monitoring v. Invitations, Participatory video, visual aids	Milestone report as per reporting template provided by AWARD. Annexes: <ul style="list-style-type: none"> i. Vision and scenarios record. ii. Training outlines, handouts, attendance registers. iii. Report, photos, monitoring. iv. Progress report. v. Networking report; part video 	07 Jul 2018



<p>3. Progress Report No. 2 (Jul'18 - Sept'18) AWARD: R238,086.62 MDF: R34,285.71</p>	<p>i. Learning sessions; review of S&WC and CSA, for all groups (1 day), Seed saving and seed banks, crop calendars training- all groups (1 day). ii. Individual farmer experimentation - prioritized, garden monitoring. iii. Tunnel construction iv. Cluster network session; Impacts of activities</p>	<p>i. Training reports. ii. Monitoring forms, LF process. iii. Construction process, implementation. iv. Combination of learning groups, LFs from different villages,</p>	<p>Milestone report as per reporting template provided by AWARD. Annexes: i. Training outlines, handouts, attendance registers. ii. Report, photos, monitoring. iii. Progress report. iv. Report</p>	<p>10 Oct 2018</p>
<p>4. Progress Report No. 3 (Oct'18 - Dec'18) AWARD: R149,929.35 MDF: R34,285.71</p>	<p>i. Learning sessions; Poultry production, fodder production(CA), livelihoods diversification (1 day for selected groups). ii. Individual farmer experimentation - prioritized, garden monitoring. iii. Cluster network session; Impacts of activities; Village learning group open day - 2 villages</p>	<p>i. Training reports. ii. Monitoring forms, LF process. iii. Combination of learning groups, LFs from different villages,</p>	<p>Milestone report as per reporting template provided by AWARD. Annexes: i. Training outlines, handouts, attendance registers. ii. Report, photos, monitoring. iii. Progress report.</p>	<p>18 Jan 2019</p>
<p>5. Progress Report 4. (Jan'19-Mar'19) AWARD: R170,852,67 MDF: R34,285.71</p>	<p>i. Baseline new learning group, plus initial review of other new learning groups. Decision support and planning 5 learning groups. ii. Learning sessions; Fruit Production (1 day) - selected groups. iii. Individual farmer experimentation - prioritized, garden monitoring. iv. Qualitative and quantitative monitoring; tunnels, TWH tanks, drip kits.</p>	<p>i. DSS process and reports. ii. Training reports iii. Monitoring forms, LF process, iv. M&E framework for household level measurements and monitoring.</p>	<p>Milestone report as per reporting template provided by AWARD. Annexes: i. Vision and scenarios record. ii. Training outlines, handouts, attendance registers. iii. Report, photos, monitoring. iv. Progress report.</p>	<p>12 Apr 2019</p>
<p>6. Progress Report No. 5 (Apr'19-Jun'19) AWARD: R154,203.66 MDF: R34,285.71</p>	<p>i. Learning sessions; Marketing, herbs for all groups (1-2 days per group). ii. Individual farmer experimentation - prioritized, garden monitoring.</p>	<p>i. Training reports. ii. Monitoring forms, LF process. iii. M&E framework for household level</p>	<p>Milestone report as per reporting template provided by AWARD. Annexes:</p>	<p>12 Jul 2019</p>



	<ul style="list-style-type: none"> iii. Qualitative and quantitative monitoring; tunnels, RWH tanks, drip kits. Garden monitoring. iv. Cluster network session; Impacts of activities 	<ul style="list-style-type: none"> measurements and monitoring. iv. Combination of learning groups, LFs from different villages, 	<ul style="list-style-type: none"> i. Training outlines, handouts, attendance registers. ii. Report, photos, monitoring. iii. Progress report. iv. Report 	
<p>7. Progress report No. 6 and Final Project Report (Jul'19 - Sept'19) AWARD: R190,387.36 MDF: R34,285.71</p>	<ul style="list-style-type: none"> i. Learning sessions; review of S&WC and CSA, for all groups (1 day). Crop calendars reviews ii. Individual farmer experimentation - prioritized, garden monitoring. iii. Qualitative and quantitative monitoring; tunnels, RWH tanks, drip kits. Garden monitoring. iv. Impact review 	<ul style="list-style-type: none"> i. Training reports. ii. Monitoring forms, LF process. iii. M&E framework for household level measurements and monitoring. iv. Combination of learning groups, LFs from different villages, 	<ul style="list-style-type: none"> 1. Milestone report as per reporting template provided by AWARD. <p>Annexes:</p> <ul style="list-style-type: none"> i. Training outlines, handouts, attendance registers. ii. Report, photos, monitoring. <ul style="list-style-type: none"> 2. Final Project Report <ul style="list-style-type: none"> • Reflection on implementation against planned activities as per proposal. • Final overall MERL data • Lessons learnt and recommendations. • Communication materials. 	18 Oct 2019



5 Project management plan

The Mahlathini Development Foundation field team is to make biweekly trips to the area on a bimonthly basis for the coming 18 month period. In addition, a process is being put in place for employment of an intern that would be locally based and managed under the AgriSI team and manager at AWARD to provide for continuity and assist with monitoring and fieldwork.

Implementation planning is to coincide with the milestones and a project implementation committee consisting of all field based and management staff. These will meet at the end of each milestone (bi-monthly) to do a review and planning forward session, work on progress towards indicators, compilation of monitoring report and progress reports.

Bi-monthly reports will be compiled by the field team (Sylvester, Erna, intern) using the Monthly Assessment Form (See Appendix 2). Progress reports according to the 6Milestones developed are to be submitted as well. Additional documentation is to include the following where appropriate:

- Baselines; group and individual/homestead
- B2O reports; for each event (field team)
- Bi -monthly planning calendars and activity plans
- Bi-monthly team review summaries (field and management team) - MERL
- Garden monitoring forms (local facilitators and field team)
- Farmers self-assessment group process (2x/yr) (farmers, local facilitators, field team)
- Open days reports

5.1 Summary of project implementation process

- In each of the 7 villages where learning groups have been established to date (Botshabelo, Mametja, Sedawa, Turkey, Willows, the Oaks and Lepelle), MDF will continue the learning and mentoring process according to review and planning for each group.
- This will include 3 days of training in soil and water conservation, gardening techniques (soil management) and nutrition and livelihoods diversification as well as new topics identified by the respective groups such as poultry production, planting calendars and seed saving.
- Each learning group will undertake:
 1. A deepening of the climate change dialogues process to include assessment of practices for impact on adaptation and resilience
 2. In-depth qualitative and quantitative measurement of results of practices implemented for assessment of impact and
 3. Discussions and mentoring centred around livelihoods diversification options for learning group members
- Participants undertake:
 1. Individual farmer level experimentation processes.
 2. Work together on joint activities identified by the group for broader scale land rehabilitation and SWC (soil and water conservation).
 3. Technical innovation demonstrations at collaboratively chosen homesteads such as rain water harvesting and storage structures, small green houses and micro drip irrigation systems.
 4. Monitoring sessions to check how the implementation is going, from time to time (bi monthly).
 5. Cross learning visits to other villages doing similar work.



6. Open days and stakeholder involvement of for example the Ground Truth team, Hoedspruit Hub, LIMA, the Local municipalities etc to engage in the CC adaptation processes the participants are working with.
- Local facilitators support learning groups by doing garden visits and support for each participant every month, to help with implementation of farmer experiments and also do garden level co-monitoring. They provide a link between AWARD and community and assist with setting up meetings and processes, arrange for joint working activities, help to identify the sites for technical innovation demonstrations, provide logistical support and also provide a channel for feedback from the community regarding process and implementation. They work 8-10 days per month and receive a stipend of R200/day. Local facilitators will also come together for further learning and monitoring sessions between themselves and be provided with opportunities for deepening their own practice through cross visits as well as leadership courses and processes supported inter alia by the Hoedspruit Hub.

The Gantt chart outlining the implementation plan is attached in Appendix 1

6 Monitoring, evaluation, learning and reporting (MERL) plan

6.1 Final framework & indicators

(See Theory of Change above for targets and overall indicators)

In addition, regular (bi-monthly) summaries of progress using the following indicators will be made.

Indicator	Overall target
No of participants in learning groups	120
No of learning groups	6-7
No of local facilitators	6
Percentage of participants engaged in CC adaptation responses	1-2 (45%) 2-3 (25%) >3 (10-15%)
No of participants experimenting with new innovations -local -co-designed	15% 45%
No of participants showing increased knowledge	35%
Percentage of participants engaged in collaborative activities	35%
Percentage of participants with improved livelihoods -increased availability of food -increased income -increased diversity of activities and livelihoods options	40% 5% 5%
Qualitative assessments; -stakeholder engagement -Increased understanding and agency to act towards achieving increased resilience - Adaptation and innovations into local context -Potential for increased resilience -Social engagement	Stories, case studies (5), CC impact summaries (4), best practices booklet



6.1.1 Baseline

- **A baseline interview:** (homestead assessment form - Appendix 3) that gives an indication of present situation and implementation (not a full livelihoods questionnaire, but includes some aspects of livelihoods).
- **Facilitator observation checklist:** Interviewers/ facilitators assist the household participant to draw a homestead land use plan with present practices and flag issues and potential innovations (what they are thinking of doing now) for the household. In addition, they make certain observations that are needed for the overall planning processes
- **Homestead drawing:** This shows the whole homestead and present infrastructure, gardening, water flow, erosion, other SWC management issues and present innovations and or activities (e.g. jo-jo tanks, boreholes, furrows, orchard, etc.). This will be returned to the participant in a plastic sleeve once copies are made- so that they can use that for planning their experimentation.
- **A baseline report:** Compilation of information from the group level climate change assessments, five fingers, scenario development and design of CC assessment sheets

6.1.2 Ongoing monitoring

- **Garden monitoring form (Monthly):** (See Appendix 4) To be filled in monthly for each participant by and with the local facilitator to assess CC adaptation and gardening implementation. These compiled with photographs of the garden into
- **Stories or case studies (5):** Within the themes of managing adaptively, thinking systemically, innovation towards positive change, self -organisation leading to collective action and learning together. (for media and communications dissemination)
- **Group reflections and open days (x5):** Using the cc assessments and plans review progress and also level of change and impact- incorporating defined indicators
- **Project Team reflections (bi-monthly):** Reflection on CC adaptation using indicators alongside general progress, issues, learning and planning. (project implementation committee)

6.1.3 Evaluation

- Progress reports (x6) and final report - based on project deliverables and milestones.

Upon close out a final close out report stating zero continued financial responsibility from USAID will be written

7 Media and communications strategy

The function is largely around communicating the information from the sub-grant to AWARD.

MEDIA: media desk, clips, newspaper stories, small handbooks.

The particular area of practise with its indicators need to be communicated as stories (successes, challenges -video clips). The elements of this reporting will be provided by AWARD.

The M&E - MERL plan go together. In bi- monthly reports we need to put in information about the type of information this is.

Who will we be communicating with? Need to decide on the partners for this...

- SADC countries and issues here; board messages



- Interested audiences: Government departments, Municipalities - and messages to communicate
- Involved audiences; those interested and linked as stakeholders; Local economic development desk, traditional authorities, water users associations, - messaging strategy
- Committed audiences - farmers we are working with. - are we producing handbooks and handouts, other tools and PRA materials for example-personalised niche messaging

Products and Tools

- Digital: websites available - page of the project - new stories interesting things - “Our Olifants” - is a social media platform for all role players. Civil society can put on their own information
- Digital: AWARD website is more formal
- Printed; booklets, briefs, flyers (not really for farmers) calling cards, banners, pullups, reports, maps, ad hoc materials and support:
 - o Project brochure needs to be produced 4-8 pages - explains with pictures (Objectives, who you working with...)
 - o Reports; USAID branding; disclaimer, acknowledgements - public consumption not the standard reports....may be at the end of the contract...
 - o Bi-monthly reports; just summaries
 - o Quarterly report and annual reports - M&E report
 - o Photos and profiles; stakeholder profiles (to go back to the farmer and track her story) - the champions- local facilitators. *-Folders on the computer... all photos must be properly captioned.*
 - o Photos of the catchment; context river, soil, mountain, rain, farming...
 - o User generated content; farmers, stakeholders
 - o Media: AWARD will run this; media releases, special features (People’s Weather)

Print, electronic media and publicity products are required outside of the monthly, quarterly, etc. reports, aligned very closely to the M&E budget (commitment).

Proposed products

- Case studies
- Open day and group reflection reports

Marking and branding

Marking and branding will follow provisions in Section M2 of the USAID FAA Standard Provisions as appropriate.

8 Sub-grant protocols and procedures

Overall, post-award administration requirements were presented and clarified by AWARD; in addition to standard operating procedures. The following are specific highlights noted by MDF:

- Work always through AWARD. USAID may check records and also require a presentation to be made. Also need access to records for milestone verification. All records etc. belong to USAID and need to be submitted to them in full.
- Any after contract amendments of milestones (Dates and activities) have to go through USAID.
- Milestones: Documentation is sent to Cryton who does the verification of the documentation prior to sending through to finance (Mayford and Julia) for payment. Site visits are a requirement - this will probably be covered by work BB is doing.
- Payments: USAID pays out advance payments according to milestones - if milestones are going to change - if timing changes- then we need to let USAID know. Approval for changes usually does not



take a long time. Invoice per milestone rather than actual expenditure- with supporting documentation.



9 Approach/ Process/ Activities

9.1 Summary of activities

This section gives an indication of activities undertaken during the reporting period to achieve the outcomes for this period, time spent and people involved.

Table 2: Summary of activities for the reporting period December 2017-January 2018.

DATE	DESCRIPTION OF ACTIVITY	Time	WHO WAS INVOLVED
2017/12/04-08	CA demonstration workshops; turkey, Botshabelo, Mametje	5 days	Sylvester
2017/12/11-15	Installation of instrumentation for quantitative measurements: CA and tunnels	5 days	Sylvester
2018/01/08-09	Reporting	2 days	Sylvester

Sylvester: 12days

9.2 Progress and Results

9.2.1 Learning and mentoring

Conservation Agriculture demonstration sessions were held in three villages between 05-08 December 2017. In addition, small quantities of seed were provided to learning group members to undertake small CA experimental plots in their own homesteads (OPV maize- yellow, sugar beans, jugo beans and summer cover crops (sunflower)

The CA learning sessions included demonstration of hand held planters (MBLI planters) and an oxen drawn (Napick) planter. These were left with learning group members to continue their individual planting.

The attendance registers for these workshops are attached in Appendix 5.

Below are a selection of photographs indicative of the learning and demonstration process.



Above left: The Turkey learning group in session for CA workshop. Above right: Sylvester demonstrating the use of the Napick animal drawn planter



Above left: the turkey learning group planting the intercropping conservation agriculture demonstration, using basins for maize and rows for beans. They are adding some lime and bone-meal to the planting stations and covering the basins with leaves for mulching.

Above right; The group also opted to plant larger areas of single crop blocks - here they are planting maize in basins



Above left; The oxen drawn planter has been hitched to a team of donkeys for planting.

Right; Distribution of cups of seed to participants for their individual homestead based conservation agriculture experiments

NOTE; Christina Thobejane and Alex Makgopa, the Local Facilitators from Sedawa helped as co-facilitators for this learning process. They were then able to play a lead facilitation role in the CA workshops conducted subsequently in Botshabelo and Mametja

9.2.1.1 Demonstration of the Oxen drawn planter

The CA trials were established in big fields outside the homesteads, sometimes it's difficult to plant these big fields by hand. We have introduced an Oxen drawn planter as an option to those farmers who would like to try CA on a relatively bigger scale. The people in the area do not have oxen, They use donkeys for ploughing purposes and it has been a while since anyone has used donkeys for this purpose.



Some of the challenges were:

- Not being able to control the donkeys (they could not plant in a straight line, meaning it was hard to maintain a consistent inter row spacing) - this could have been the case because the donkeys were not well trained
- Changing discs in the planter, each of the participants wanted to learn technical things (hands on) on the planter - this took too long
- Clays soil, in areas where soils have high clay content, the seed tine was blocked by the clay and the planter was not planting - this helped us learn that once need to allow the soil to drain a bit before planting with a oxen drawn planter
- Transporting the planter from one site to the other was a bit of a problem - the planter cannot fit into a small bakkie, especially if the bakkie has a canopy.

Despite, the above mentioned challenges, participants liked the planter and felt it would be very useful to have one in each of the villages. One of the participants in Turkey (Mr Mogofe) has committed to purchasing one for himself. Mr Mogofe, has big field which he estimated to about 30 hectares, and he pays R 1 000/ ha for tractor hire, but he's got some donkeys which he can use with the planter



Above left and right: Planting the intercropping conservation agriculture demonstration sites for Mametja (6 Dec) and Botshableo (8 December), respectively

In addition, three conservation agriculture trial sites were set up, so that more quantitative measurements could be undertaken there. 1000m² trials were planted; in Sedawa (Koko Maphori), Mametja (Lerato Lewele) and Botshabelo (Seemole Malepe). See Appendix 6 for the CA trial layout report

9.2.2 Innovations and Experimentation



The second week of December provided time to start installation of the instrumentation for more quantitative measurements of water balances and water productivity for some of the experiments. This information is meant to augment the farmers' visual assessments and assist in determining impact of these practices on adaptive capacity and building of resilience.

Rain gauges and run-off plots were installed at the three CA farmer level CA trial plots and gravimetric soil samples were taken. In both setting up of instrumentation and collection of data the two Local facilitators - Christian Thobejane and Alex Makgopha will play leading roles. They have been trained on how to do the monitoring and data collection processes and will undertake these on a weekly and monthly basis as required.

Right: A run-off plot installed at Lerato Lewelle's field plot (Mametja) in her CA trial



Right: Christina Thobejane demonstrated taking the water from run-off plots, where volume and turbidity are recorded. These measurements are taken 1-2 days after each rainfall event.

For the vegetable production experimentation process, three volunteers with tunnels were chosen and each has undertaken an experiment of planting inside and outside their tunnel; using trench beds, mixed cropping and mulching in both.

These experiments will then be monitored by the farmers visually for growth and yield. They will record all irrigation in both plots (amount of water applied). In addition quantitative measurements for water availability are to be conducted using Chameleon sensors and further data is to be recorded from the weather station set up at Christina Thobejane's homestead.

The pictures below indicate the installation of the weather station and Chameleon sensors.





Right: Sylvester and Christina working on setting up the weather station in her yard and Far Right: Christina's daughter surveys the successfully installed weather station.



Above Left: The soil auger used for gravimetric soil water sampling and for drilling the holes for the Chameleon water sensors. Above centre: Sylvester installing a Chameleon sensor in a trench inside a tunnel. And Above right: The automatic reader for water availability attached to the Chameleon sensor in a trench bed. These are uploaded via the internet using cell phones on a weekly basis.

9.2.3 Work Plan for 2018.

Continuation of activities into 2018-2019:

1. Negotiation for continuation of the process through AWARD for the coming year
2. Negotiation of a partnership with the WRC project on community level adaptation to ensure continuation and co-funding of the process going forward (2-3 years) - albeit on a much reduced level of implementation
3. Collaboration with Lima RDF in combining activities across the two programmes- their food security and small business initiative and AgriSI. Training of facilitators in climate sensitive facilitation and implementation of best options for good practices will be undertaken.
4. Continuation of garden monitoring and support for Local Facilitators and learning groups
5. Introduction of new facets such a VSLAs (Village Savings and Loan Schemes) and small livestock production activities
6. Introduction of fodder production and management options for livestock.
7. A focus on seed saving, seed banks, cropping calendars, introduction of new varieties, and varieties that are resistant to increasing temperatures and drought.



8. Mentoring and support for livelihoods diversification strategies
9. Limited support for a focus on fruit tree production, notably in Lepelle and Willows where participants have requested trees.
10. Monitoring processes are to be put in place for management of the tunnels constructed and also the 3 underground RWH tanks, alongside continued garden monitoring processes. Quantitative measurements are to be undertaken to assess water productivity of some of the CSA practices
11. Village level cross visits for all participants to explore and interrogate the options for tunnels and RWH storage, as well as other innovations introduced.
12. Use of participatory video as a tool to build agency in the villages for CCA activities and communicate successes and issues with relevant stakeholders



10 Appendices

10.1 Appendix 1: Gantt Chart AgriSi 2018-2019

Activity	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct
Desktop stakeholder analysis (for Networking)	█	█																		
MDF: Set up Quant mon for tunnels and CA, 1 st training in Turkey, Agroecology forum	█	█																		
Field visits (baseline & monitoring/support)		█			█															
MDF: DSS-baseline, 2 nd training turkey, LF training, Ukuvuna X visit, start with further tunnel construction, Part video training			DSS baseline Part Video	LF trg																
Organize Networking meetings X 2			█	█						█	█									
MDF: , tunnels, 3 rd trg Turkey; 1 st Trg Sedawa, Finale,						Seed saving	Crop calendars, herbs	Open		█	█									



Botshabelo, Mametja. Seed saving and seed banks (4 villages), crop calendars								days												
Run DICLAD meetings (Marmetja)																				
Run DICLAD meetings (Sekhukune/Carpri con)																				
Agro ecology Cluster Leadership training																				
Workshop on livelihoods Diversification																				
MDF: Livelihoods diversification; Poultry production (1-2 villages - Mazwi). : Fodder production training, w CA, (2-3 villages) CCA decision support and planning experimentation									Poultry prod	Fodder, CA	DSS; review impact									
Cross Learning exchange visits X 2																				
MDF: Fruit production training and demos (Lepelle). 3rd Trg Sedawa, Finale,												Fruit production	New groups - baseline	DSS						



Botshabelo, Mametja																				
Agroecology Farmers' Fair (shared learning)																				
MDF:Marketing of veg, herbs (2-3 villages), further tunnels. Cross visits -open days																				
Youth in Agriculture awareness																				
MDF: Crop calendars review. Finalise experimentation, review workshops, final report																				



10.2 Appendix 2:

1. Bi-monthly assessment

Contributing to RESILIM-O KRA (key result area) 4: **To reduce vulnerability to climate change and other factors by supporting collective action, informed adaptation strategies and practices and tenable Institutional arrangements.**

The process of intervention with farmer participants will follow the chronology outlined below:

- Understanding current practices
 - Develop a vision of what could be
 - Discuss innovations and agree to try; sometimes with collaborative work
 - Develop a farm design and plan that includes experimentation with new ideas
 - Ongoing mentoring of implementation and experimentation
 - Periodic cluster sessions
 - Periodic monitoring and self-assessment
 - And networking and cross visits (1 of each per year)
- A. On a bi-monthly basis photographs from all field staff is to be given captions and compiled in one directory to be placed on drop box.
- B. Regular (bi-monthly) summaries of progress using the following indicators will be made:

Indicator	Overall target
No of participants in learning groups	120
No of learning groups	6-7
No of local facilitators	6
Percentage of participants engaged in CC adaptation responses	1-2 (45%) 2-3 (25%) >3 (10-15%)
No of participants experimenting with new innovations	
-local	15%
-co-designed	45%
No of participants showing increased knowledge	35%
Percentage of participants engaged in collaborative activities	35%
Percentage of participants with improved livelihoods	
-increased availability of food	40%
-increased income	5%
-increased diversity of activities and livelihoods options	5%
Qualitative assessments; -stakeholder engagement -Increased understanding and agency to act towards increased resilience - Adaptation and innovations into local context -Potential for increased resilience -Social engagement	Stories, case studies(5), CC impact summaries (4), best practices booklet

- C. And there are more qualitative questions to consider that can draw out change in various domains through systemic reflection.

BI-MONTHLY FORM.....Date.....Project.....



Each team member who has been part of interventions at community level in the month add their figures and perspective to come up with a corroborated summary figure for the month.

Indicator	No
No of participants in learning groups	As per registers (with Erna and Sylvester)
No of learning groups	As per registers
No of local facilitators	
Percentage of participants engaged in CC adaptation responses	1-2 (%) See below 2-3 (%) >3 (%)
No of participants experimenting with new innovations -local -co-designed	Dependant on observations from HH interviews which have not yet taken place. - -
No of participants showing increased knowledge	
Percentage of participants engaged in collaborative activities	
Percentage of participants with improved livelihoods -increased availability of food -increased income -increased diversity of activities and livelihoods options	
Examples of local adaptations and innovations that have come to the for (Describe what it is who is doing it and where- with an idea of where it has come from and what the intention of the innovation/adaptation is)	
Understanding: Examples of people showing an increased understanding (i) of CCA adaptation and increased agency (ii) towards increasing their resilience	
Actions: Examples of people showing an increased understanding (i) of CCA adaptation and increased agency (ii) towards increasing their resilience	
Examples of increased potential towards resilience	



*For the examples the person's name and surname and village needs to be given

2. Project Life Change Questions:

1. Do we have examples or stories of how we or others are in the process of adaptive management related to CC? (adapt, reflect and respond to....) and examples of what this adaptive management is?
2. Do we have stories that show innovation or lack of innovation towards positive change? What insights have we gained into how innovation can lead to positive change?(INCREASED RESILIENCE)
3. Do we have stories that show evidence of, or an interest in self organisation towards collective action? What insights have we gained into how self organisation can lead to collective action?
4. Do we have stories to show that learning together is happening or that there is an interest in learning together? What insights have we gained about how to learn together?
5. Do we have stories of how we and or others are able to think systemically? What insights have we gained?
6. Do we have stories of how we and or others are able to be inclusive and democratic? What insights have we gained about how this can be achieved? (STAKEHOLDER ENGAGEMENT).



13.3 Appendix 3: Homestead assessment monitoring sheet (baseline)

Interviewer:

Signature Householder: Permission

A. IDENTIFICATION OF HOUSEHOLD	
DATE:	
LOCAL MUNICIPALITY	
LOCATION; Village	
Cluster; subvillage/learning group	
HOUSEHOLD NUMBER; GPS COORDINATES (give a no so that you can use that no for ID of photographs!! And take a pic of the householder, her garden and interesting innovations	

B. RESIDENTS OF HOUSEHOLD		
Head of household name & surname		
Gender, age		
Person interviewed; Name, Surname, Age		
Disabilities; physical, mental - injuries, chronic diseases, HIV/AIDs, bed ridden, ...		
Number of people who are permanent residents of the household. Those that eat and sleep in the household for at least 5 days a week:		
	Male	Female
Number of people of these ages and gender in the household:	0 - 5	
	6 - 12	
	13- 18	
	19-25	
	26-40	
	41-59	
	60+	

C. LIVELIHOOD ASSETS: INCOME FROM ALL SOURCES										
Read the list aloud; tick the box which corresponds to the resident members who are older than 18yrs of age. Leave rows blank for categories that do not apply.										
1) INCOME CATEGORY PER MONTH	1	2	3	4	5	6	7	8	9	
a. Wage or casual work										



b. Income from family members (remittance)	1) food										
	2) cash										
	3) goods										
c. Income from local farm produce											
d. Income from non-local farm produce											
e. Income from formal or informal business											
f. Income from renting dwelling											
g. Pension/disability/other social grant (No of ea type of grant)											
h. Income Aid from formal organisations other than Gov.	1) food										
	2) cash										
	3) vouchers										
i. Other (specify)											
j. Refuse to answer											
k. Don't know											
l. No income											
Amount per person											
2) TOTAL AVERAGE INCOME/ MONTH		Per households									
Categories		Code		Categories		Code					
R0		1		R1600 - R3200		5					
R50 - R400		2		R3200 - R6400		6					
R400 - R800		3		R6400 - R12800		7					
R800 - R1600		4									

D. HOUSEHOLD ASSETS: EXPENSES FROM ALL SOURCES

Read the list aloud, circle the code that applies and complete the information for that row; if an annual expense, give a monthly estimate.

3) EXPENSE CATEGORY	Code	Amount
----------------------------	-------------	---------------



a. Food and groceries	1		Last month
b. Utilities (water, electricity, etc)	2		Last month
c. Transportation	3		Last month
d. Savings	4		Last month
e. Medical	5		Last month
f. Education (school fees, uniforms, etc.)	6		Last month
g. Insurance (life, burial, etc.)	7		Last month
h. Debt service/repayment	8		Last month
i. Other (specify type of)	9		Last month
j. NONE	10		
k. Refuse to answer	11		

Garden description and size: Include a map drawing of homestead with all aspects including fencing, water sources, fruit, windbreaks, trees, vegetables, kraals. run off, dwellings, slope, aspect, erosion: Proportion of vegetable garden in use:- cultivated within the last 6 months (Put as a percentage)

PRESENT INFRASTRUCTURE?			
	Yes	No	Comments; On quantity, state, interesting things..
a. Fencing			
b. Jo-Jo tanks			
c. Municipal water supply - tap in yard - reliability- how often it works			
d. Irrigation; hoses, pipes, buckets, bottles			
e. Other - local innovations - boreholes.....			

PRESENT PRACTISES?



	Yes	No	Detailed description of what is there) (Name all types of plants present, with some idea of quantity)
a) Vegetables			
b) Fruit			
c) Herbs and multifunctional plants (including windbreaks, hedges, flowers)			
d) Nursery			
e) Field crops (CA)			
f) Livestock			
g) Soil fertility: (What is used, how much who often) (Compost ,manure (type), fertilizer, liquid manure, green manures, legumes.....			
h) Garden management; tillage practices (incl furrows			
i) Livestock integration:			

CONSERVATION PRINCIPLES?			
	Yes	No	Detailed description of what is there- list practices
Water management: a) Infiltration (soil structure, texture, organic matter,...) b) Greywater use and management (filtered, ash, dedicated structures) c) Water harvesting and storage (diversion furrows, swales, bunds, small stone walls, check dams, gabions, Water conservation (organic matter, mulching) d)			
Soil erosion control e) contours, ditches, f) stone lines, g) furrows (function)			



h)			
Soil health i) State of soil; presence of organic matter, presence of erosion, presence of compaction (is the soil very hard just below the surface, j) Bed design (trench beds, ridges, dedicated beds and paths, terraces, sunken/raised beds, k) Compost, improved manure, green manures, legumes, l)			
Diversity/ crop management m) Mixed cropping n) Crop rotation o) Seed saving p) Nursery/ propagation q) Continuity- seedling production r) Natural pest and disease control practices s)			
Wild/ diverse plants t) Indigenous or medicinal plants u) Windbreaks/ hedges/ live fencing v) Herbs, bee fodder, pest and disease control species			

HOUSEHOLD PROVISIONING (comments from interviewee)

Food provided for family; what, how much, how often (staples ,vegetables, fruit, small livestock):

Nutritional aspects of cropping:

Selling: what, how much, how often



Household observation checklist (for the interviewer)	
Extent and diversity of garden (presence of resources, manure, different trees,	
Labour and general health	
Overall situation in the household (are there any obvious social issues)	
Any local innovations and interesting things (different plants, unusual crops - e.g. white sorghum, millet, juko beans, herbs, wild plants, medicinal plants, herbs, fruit)	
Social engagement - groups, stokvels, church, farming, selling,	
Non agricultural livelihood activities (e.g craft, use of natural resources in the area, selling water...?...	
Environmental issues; soil degradation, erosion,	
Potential for SWC and RWH - are there nice paved areas, no of houses to collect water from, willingness in household to contribute labour	
Suitability for technical innovation (greenhouse, drip kits, RWH)-	
Potential as local facilitator	
Interest and potential for field cropping and being a CA volunteer	
Other	



13.4 Appendix 4: Garden monitoring and individual experimentation plan

NAME AND SURNAME:

VILLAGE:

DATE:

CONSERVATION PRINCIPLES? FIVE FINGERS				
	●	●	●	Detailed description of what is there- list practices
Water management: w) Infiltration/ run off , crusting x) Organic matter in and on the soil y) Greywater use and management (filtered, ash, dedicated structures - tower garden/sack garden) z) Water harvesting and storage (check dams, gabions, drums, basins.. small dams, Jo-Jos) aa) Mulching bb) Drip irrigation cc) Other.....				
Control of soil movement: dd) Contours, diversion ditches, swales, bunds, ee) stone lines, ff) furrows (function) gg) Other.....				
Soil health: hh) Bed design (trench beds, ridges, dedicated beds and paths, terraces, sunken/raised beds, banana basins, eco circles.. ii) Compost, improved manure, green manures, legumes, jj)				
Improved crop management: kk) Mixed cropping ll) Crop rotation mm) Seed saving nn) Nursery/ propagation oo) Continuity- seedling production pp) Natural pest and disease control practices				



qq)				
Looking after indigenous plants: rr) Indigenous or medicinal plants ss) Indigenous fruit tt) Other indigenous plants; including windbreaks, hedges... uu) Bee fodder, pest and disease control species				

HOUSEHOLD PROVISIONING (comments from interviewee)

Food provided for family; what, how much, how often (staples ,vegetables, fruit, small livestock):

Selling: what, how much, how often

INDIVIDUAL EXPERIMENTATION

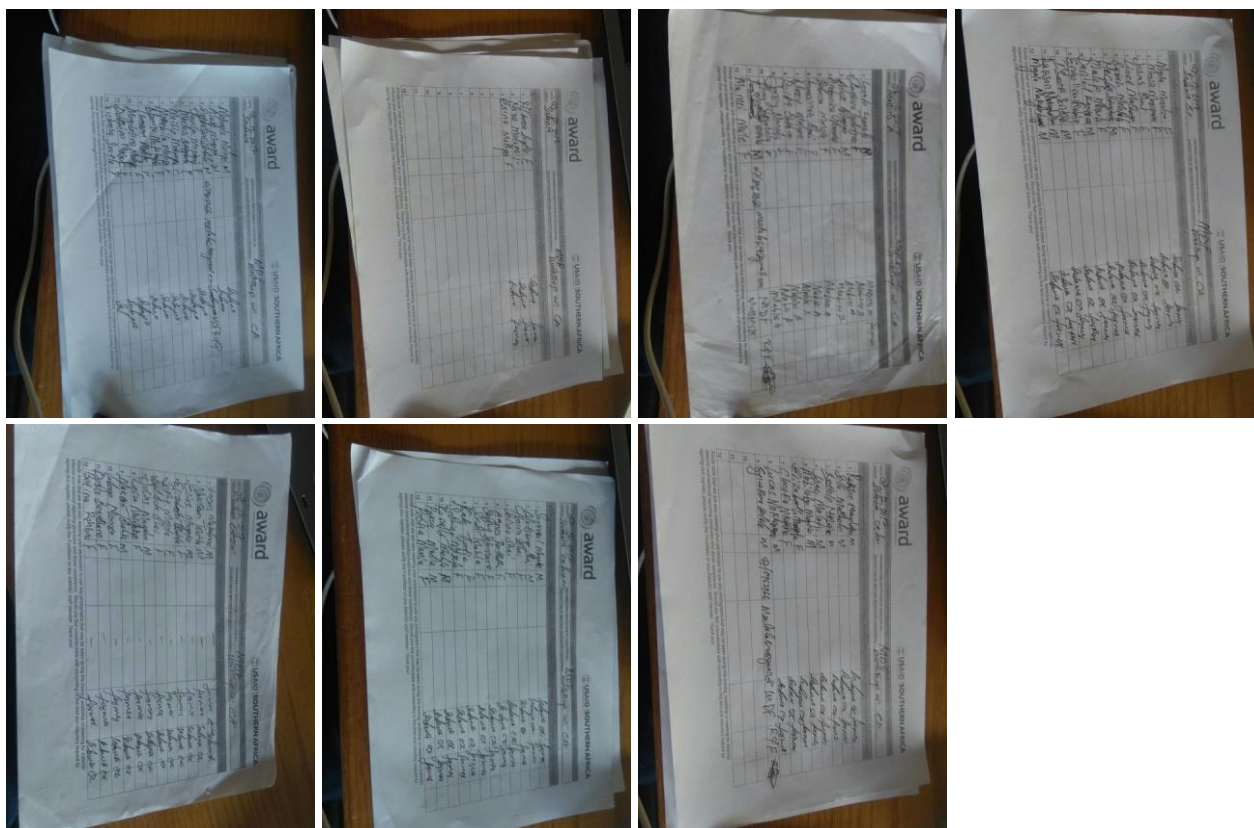
Please list:

1.
2.
3.
4.
5.

And draw in as part of the farmer work plan



13.5 Appendix 5: Attendance registers for CA demonstration workshops: December 2017- Turkey, Mametje and Botshabelo.





13.6 Appendix 6: Establishment of CA trial or experimental sites

Three conservation agriculture (CA) trials were established in the rural communities of Mametja in the Limpopo province. In recent years, this area has been characterized by low and erratic rainfall. These trials were established to evaluate how CA performs under extreme weather conditions (high temperatures, low and erratic rainfall) faced in the area as compared to traditional farming practices (conventional tillage). Some of the parameters to be evaluated are water productivity and social acceptability and yield. With the area having received 150 mm in the 2016/2017 growing season CA trials did not perform well under these conditions. The trials were established in 3 fields, situated in Sedawa (Koko Maphori), Mametja (at Lerato Lewele) and Botshabelo (Seemole Malepe). The trials were planted by members of the learning group, and this was organized in the form of a workshop of CA and the trial sites are going to be used as demonstration sites. The soil type is almost completely different at each of the sites which might make the results more representative of the area. Soil fertility samples were taken at these plots, as well as gravimetric water soil samples. Run-off plots and rain gauges were also installed.

13.6.1 Trial size and layouts

The trial sizes were kept at the same size for all three participants and the layouts are as shown in the diagrams below. The size of individual plots is 10 m² and the total trial size is 1000 m².

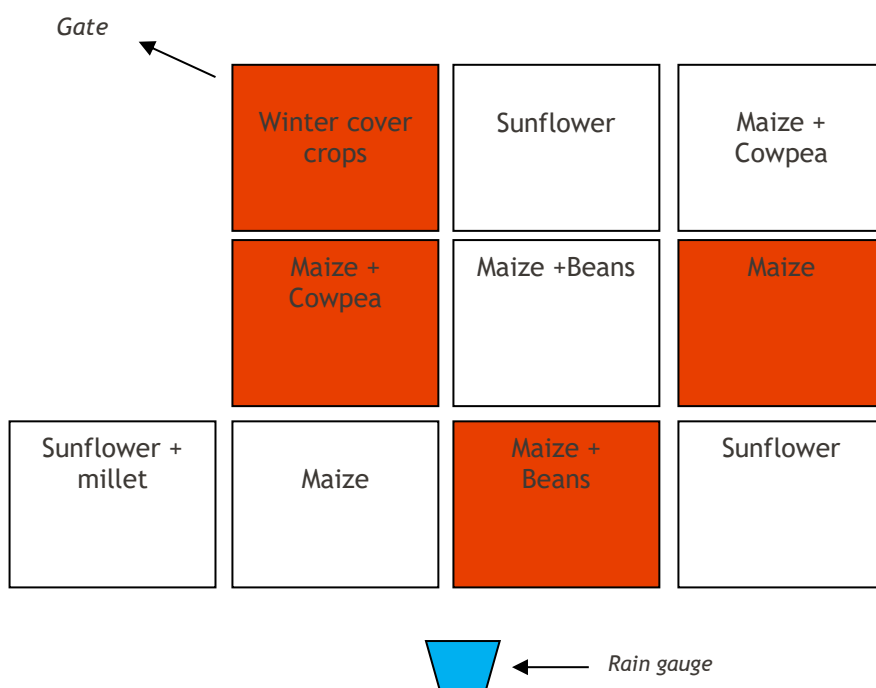


Figure 1. CA trial layout for Koko Maphori's field (N.B plots highlighted in brown is where runoff plot have been installed)

13.6.2. Progress of Koko Maphori's trial plots



There was good germination of cowpeas, maize and beans, respectively. However, due to higher temperature and low rainfall during December, the maize wilted in some of the plots the only thing visible was the cowpea. Winter cover crops did not germinate at all. These plots were replanted in January and the progress is to be reported in the March progress report.

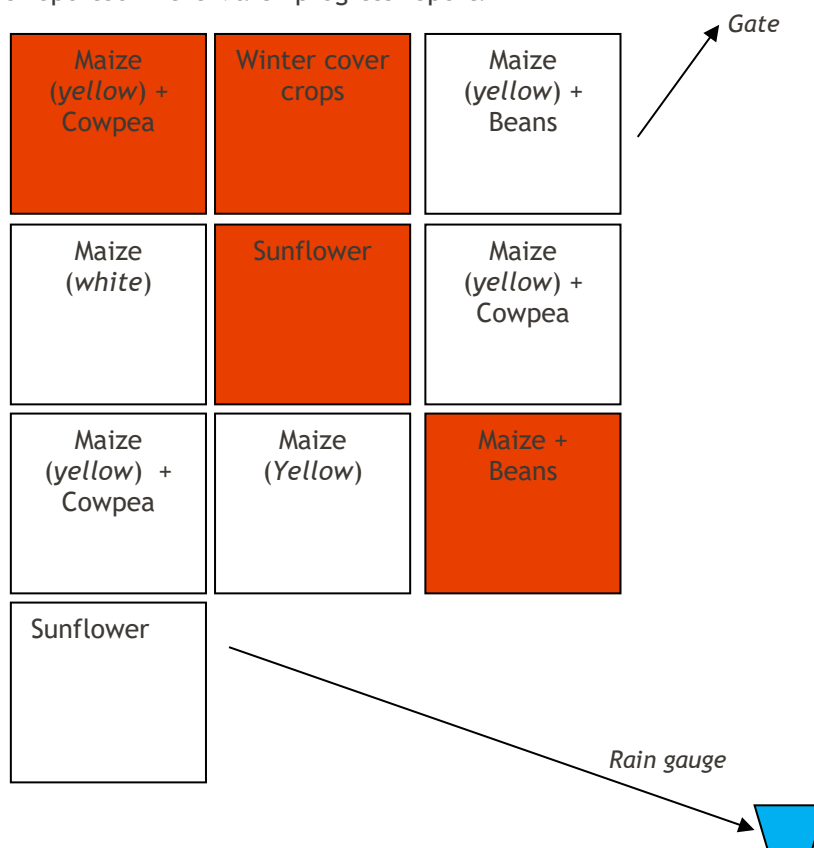


Figure 2: Trial layout for Lerato Lewele (N.B. plots highlighted in brown indicates where runoff plot were installed)

13.6.2.1 Progress on this trial

The soils in the plot dry out quickly which has lead to crops planted in the trial dying in December of 2017. This site has since been discontinued and the trial has been moved to Meisy Mokwena in Sedawa. The progress on Meisy Mokwena's trial is to be reported in the March 2018 progress report

13.6.3 Monitoring of CA trials

The following measurements are to be take the trials sites

- Rainfall records (a rainfall data sheet has been developed and given to the local facilitator for collection of rainfall records. The rainfall records shall be forwarded to MDF via WhatsApp on regular basis)
- Runoff readings (similarly, data sheet for capturing runoff data has been developed and given to the LFs)
- Gravimetric soil moisture samples (these samples will be collected at 5 different stages of crop developments and shall be collected only in the plots were runoff plots have been installed. The first and second batch of samples have been collected for Koko Maphori's trial plots)
- Soil fertility samples (collected)
- Soil health samples (yet to be collected)
- Infiltration tests (yet to be done)



- Soil structure tests (yet to be done)

Priority and attention has been given to collection gravimetric soil moisture samples, because these samples are time specific and required a lot of attention and are more labour intensive. Gravimetric soil moisture samples have been discontinued in plots that had to be replanted and new samples need to be collected at the right stages of crop development. Gravimetric water samples were collected at planting in 2 of the sites, namely Lerato Lewele and Koko Mapori 's fields. An a second set of gravimetric water samples were collected at Koko Maphori's plot in early January of 2018.

Summary:

LF Christina Thobejane with assistance from Alex will be responsible for monitoring of the CA trial sites (we advised other participants be involved in monitoring as a way of learning about indicators to be measured)

