



INTRA-ACP GCCA+ PROGRAMME An initiative of the ACP Group of States funded by the European Union's European Development Fund

HARNESSING CLIMATE-SMART AGRICULTURE (CSA) PRACTICES TO REDUCE THE IMPACTS OF CLIMATE CHANGE IN SOUTHERN AFRICA

CCARDESA Monthly Progress Report

For the Month of October 2022

By

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Abbreviations

ACP	African, Caribbean, and Pacific
CA	Conservation Agriculture
CCARDESA	Centre for Coordination of Agricultural Research and Development in Southern Africa
CSA	Climate-Smart Agriculture
EU	European Union
FAO	Food and Agricultural Organisation of the United Nations
GCCA+	Global Climate Change Alliance Plus
GPM	Grant and Programmes Manager
PoA	Plan of Action
GWPSA	Global Water Partnership Southern Africa
RO	Regional Organisation
TNA	Training Needs Assessment
WEF	Water-Energy-Food Nexus
SACREEE	SADC Centre for Renewable Energy and Energy Efficiency
SADC	Southern Africa Development Community

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1. PROJECT DESCRIPTION

- 1.1. Name of Lead Applicant of the grant contract: **Dr. Barthlomew Chataika**
- 1.2. Name and title of the contact person: **Dr. Barthlomew Chataika (Lead Contact)**
- 1.3. Name of beneficiary(ies) and affiliated entity(ies) in the Action: **Ministry of Agriculture
Ministry of Energy, Community Members, Commodity value chain actors**
- 1.4. Title of the Action: **Harnessing climate smart agriculture (CSA) practices to reduce the impacts of climate change in Southern Africa**
- 1.5. Contract number: *SADC 3/5/2/82*
- 1.6. Start date and end date of the reporting period: **1st to 31st October, 2022**
- 1.7. Target country(ies) or region(s): **Zambia**
- 1.8. Final beneficiaries &/or target groups (if different) (including numbers of women and men): **Approximately 500 men and women including youths**

2. ASSESSMENT OF IMPLEMENTATION OF ACTION ACTIVITIES

2.1. Executive summary of the Action

The GCCA+ Programme, which is in its second year of implementation, is funded by the EU and managed by the SADC Secretariat in Southern Africa. The programme has a number of components which are being implemented by four different subsidiary organisations of SADC which include CCARDESA, SACREE and GWP SA. In this programme, CCARDESA is implementing the component that deals with harnessing climate smart agriculture practices to mitigate the impact of climate change on farming systems. The countries of focus for CCARDESA are Botswana, Malawi, Namibia, Zambia and Zimbabwe.

During the month of October 2022, CCARDESA focused on a write shop in pursuit of some of the key outputs on the second-year work plan for the GCCA+ programme. To this end, nine professional experts on climate change and CSA were mobilised from the MS including Botswana, Malawi, Zimbabwe, and Zambia to develop the SADC CSA handbook, and the CSA training manual including CSA knowledge products. The writeshop was convened to take place from the 12th to the 24th of October, 2022 in Siavonga district of Zambia for a period of 12 days (Attendance list of participants attached).

Surveillance of the ongoing activities at the WEF Nexus site also continued during the period under review.

2.2. Activities lined up for Implementation during the month of October 2022

The activities that were lined up for implementation in the month of October included but not limited to the following-:

- ✓ 2.7 A review, updating and finalising the existing inventory of CSA technologies
- ✓ 2.8 Developing a SADC handbook on CSA technologies
- ✓ 2.13 Identifying the most promising CSA technologies and disseminate them through national partners
- ✓ 2.15 Establish irrigation systems and provide CSA inputs in model sites
- ✓ 5.16 Review update and enhance visuals of CSA technology briefs
- ✓ 5.17 Develop CSA knowledge products

2.3. Results Achieved

2.3.1. Review, update and finalise existing inventory of CSA technologies

In addition to a desk review and consultations which have been on going to update the inventory of CSA technologies domiciled in each SADC member state, the write shop made an effort to list the existing CSA technologies. A draft copy of the inventory will soon be shared with the Contact person at CCARDESA (Dr. Chataika) for review. The CSA technologies were classified according to the respective pillars they belong to in terms of productivity technologies, mitigation technologies and adaptation technologies.

2.3.2. Developing a SADC handbook on CSA technologies

The development of the SADC handbook was one of the key outputs that was achieved through the writeshop that took place in Siavonga district of Zambia. The draft soft copy of the CSA handbook was shared with CCARDES for further review and is yet to be finalised upon receipt of inputs from CCARDESA and the other ROs. The draft CSA handbook was shared soon after the write shop.

Through the write shop, the most promising CSA technologies by pillar were identified and collapsed into best-bet technologies in the draft SADC CSA handbook. In total, 14 best-bet technologies were identified as captured under Chapters 4,5, 6, and 7 of the draft CSA handbook. The list of the best bet technologies captured are-:

Best bets under the Productivity Pillar

- i) *Conservation Agriculture with Trees (CAWT)*
- ii) *Fodder Production and Conservation*
- iii) *Pull and Push in Cereal Farming Systems*
- iv) *Mixed crop, livestock and aquaculture production in Zambia*
- v) *Increased access to new and improved crop varieties*

Best bets under the Adaptation Pillar

- i) *Conservation agriculture with cover crop mixtures*
- ii) *Drought tolerant crop varieties*
- iii) *Solar-powered water pump Drip Irrigation System for off season Vegetable Production*

Best bets under the Mitigation Pillar

- i) *Agroforestry intervention*
- ii) *Biochar intervention in farming systems*
- iii) *Residue retention in farming systems*
- iv) *Cover crops in farming systems*

Solar Energy based Best bets

- i) *Solar energy sources*
- ii) *Hydropower sources*

2.3.3. *Establish Irrigation systems and provide CSA inputs in model sites*

During the month of October, the contractor had embarked on laying out irrigation facilities with an indication that the complete drip irrigation facility would be handed over in the month of November. The type and quantities of inputs for the vegetable crops the farmers want to grow in the first year of production has been communicated to CCARDESA through a **Plan of Action (PoA)** that is currently receiving the appropriate attention of the Contact person at CCARDESA. The vegetables which the farmers wish to grow in the first year of production include cabbage, tomato, African eggplants (Impwa), Okra, and green maize. In addition to seed, the other inputs requested for to support the production process at the WEF nexus demonstration site are pesticides, fungicides, appropriate fertilisers, and knapsack sprayers.

The number of beneficiaries to the WEF nexus demonstration site was updated during the month of October to a total of 114 beneficiaries consisting of **59 Males** and **55 Females**. Technical backstopping activities are yet to be embarked upon during the production process at the WEF nexus demonstration site when the irrigation facility becomes operational. Among the technical issues to focus on during the production process will include land preparation, correct plant spacing, weeding, Integrated Soil Fertility Management (ISFM) practices, Integrated Pest and Disease Management (IPDM) practices; including harvesting and post-harvest management practices.

2.3.4. *Review update and enhance visuals of CSA technology briefs*

During the write shop, a communication specialist from the National Agricultural Information Services in Zambia and a journalist from the Zambia Daily mail were part of the writing team and took up the task of reviewing and updating the CSA visuals. The technology briefs are yet to be formalised for dissemination to stakeholders through the CCARDESA communication channels.

2.3.5. *Develop CSA Knowledge products*

Developing the CSA knowledge products was part of the CSA write shop outputs. In total three knowledge products were developed by the team of CSA professional experts. The knowledge products that were developed are:-

- i) Knowledge product for fish farming/Aquaculture
- ii) Knowledge product on CSA Extension Approaches
- iii) CSA decision tool for smallholder farmers

2.3.6. Backstopping the ongoing activities at the WEF Nexus Demonstration site

At the time of one of the backstopping visits undertaken on the 27th October 2022, it was established that the Contractor had already started laying out the drip irrigation pipes. During the same visit, the community also requested for some add on facilities to the irrigation system to be put in place justified as follows:-

- i) The community was of the view that toilets will be required because farmers will be working on their respective plots for long hours and they will be handling food related items that would dictate sanitary conditions
- ii) The power house structure, would need security by way of putting burglar bars to the door and windows so as to protect some sensitive items which will be stored inside against thieves and vandalism.
- iii) The livestock drinking trough should be elongated and raised up so that the water volume can be increased and accommodate more drinking animals at a time



The layout of irrigation pipes at Katapazi WEF during the time of the visit on the 27th October, 2022

2.4. The Challenges and Opportunities

The major challenge observed is that the installation of the proposed drip irrigation system is slightly taking longer than expected. At the time of the visit on the 27th October the second borehole discharge capacity had not yet been determined because the Contractor was still searching for the suitable material to have the pump tested. According to the Contractor, the complete installation of the irrigation facility may go up to November thereby coinciding with the start of the rain season. However, information with respect to when the actual production could start is required to inform the timely procurement of inputs for the vegetable production process. In particular, contracting a service provider to supply vegetable seedlings which will enable the farmers to grow vegetables under irrigation was probably the focus of the project. After all, the impact of the irrigation intervention will be better felt if it is practiced off season instead of the rain season.

3. SUMMARY PROGRESS ON THE ACTIVITIES PLANNED FOR THE MONTH OF AUGUST, 2022

3.1. Summary Progress Status of Activities on the work plan to date

As extracted from the GCCA+ work plan, the progress made against the activities that were proposed for the month of October 2022 is summarised as presented in **Table 1**

Table 1. Activities to focus on in the Month of August

Proposed Activity	Main Activity in the previous Month of July	Plan of Action in the previous Month of September	Status of Progress
5.16	Review, update and enhance visuals of existing CSA technology briefs	Engage the focal point person responsible for the activity in the write shop slated for the 12 th - 24 th October to prepare visuals which could also be used for policy briefs	The focal point person for this activity was engaged during the write shop that ended on the 24 th of October. The visuals will be part of the policy briefs to be an update
2.7.	<i>Review, update and finalise existing inventory of CSA technologies</i>	Conduct Desk review and consultations with national partners of CSA as well as conducting a write shop to update the inventory.	The inventory of the CSA material was part of the CSA write shop outputs but nonetheless requires an update and format.
2.15	<i>Establish irrigation systems and provide CSA inputs in model sites</i>	Monitoring the progress made at the WEF nexus demonstration site in order to inform the Focal point person at CCARDESA	The area to be planted has been established. The plan of action is such that cabbage, tomato, okra and African eggplant will be planted to 0.25 hectares each except for maize that will be planted to 1 hectare. The type and quantity of inputs have been established to kick start production.
3.6	Provide CSA trainings based on the needs assessment priorities in Zambia.	Design generic training material for use by MS through the write shop	Generic CSA training material was documented as reference material
6.35	<i>Develop training materials</i>	Facilitate the development of CSA training material through a write shop	The generic training material has been prepared in form of reference material for use by MS including Zambia

6.45.	Identification of trainer and training of beneficiaries	Identify and organise training staff to provide the first training session of beneficiaries for the indicated modules	Training staff were identified and engaged to conduct the first training session in Zambia.
6.43	Monitoring and technical support	Mobilise beneficiary farmers towards the required agronomic practices	Backstopping activities have already started in form of the required preparations for the production processes at the WEF nexus demonstration site

4. PROPOSED ACTIVITIES FOR THE MONTH OF November 2022

As extracted from the GCCA+ work plan, the following activities will be focused upon for the month of September 2022.

Table 2: Activities to focus on in the Month of November

Proposed Activity	Action Plan
5.16 Review, update and enhance visuals of existing CSA technology briefs	<ul style="list-style-type: none"> Work with the CSA focal point person to share the updated CSA visuals for dissemination
2.7. Review, update and finalise existing inventory of CSA technologies	<ul style="list-style-type: none"> Design the format and collapse the already identified CSA technologies from the CSA handbook into an inventory. The inventory should show the number of CSA technologies
2.15 Establish irrigation systems and provide CSA inputs in model sites	<ul style="list-style-type: none">
3.6 Provide CSA trainings based on the needs assessment priorities in Zambia.	<ul style="list-style-type: none"> Prepare and organise resource persons to conduct the second session of the CSA training course based on the plan of action that was approved by the GPM and share the outputs through an evaluation progress report to indicate the number of beneficiaries trained including the levels of satisfaction by the beneficiaries
6.35 Develop training materials	<ul style="list-style-type: none"> Validate the CSA training manual based on the input of the SADC ROs
6.45. Identification of trainer and training of beneficiaries	<ul style="list-style-type: none"> Organise training material and staff for the indicated modules of the second training session and provide quality control through the Focal point person at CCARDESA

6.43 Monitoring and technical support

- Provide progress reports to update the GPM on any developments on the ongoing activities.
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THE END

Name of the contact person for the Action: Dr. Barthlomew Chataika

Signature:

Location: Gaborone

Date report due: 1st November 2022

Date report sent: 14th November, 2022