BIANNUAL PERFORMANCE PROGRESS REPORT
June – November 2022 TO DKA

SECTION 1: INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

CEDESOTA is implementing the project titled as "Promoting Agroecology and Resilience to Climate Change Among Small-scale farmers in Meru District". To achieve the project, four major activities were implement during the period including; project inception, two trainings on Agroecology practices and climate change adaptation techniques to contact farmers and local leaders and village and district officials in order to influence incorporation of these practices in the district plans.

The traings highlighted on the general situation of agricultural production in the district and country and the long-used technologies by small scale and large-scale farmers as well creating awareness on agroecology as new agricultural approaches, which also includes conservation agriculture and climate smart agriculture. The training delivered was based on the contents offered by SUA, SARI and FAO Agroecology accredited models. The last activity for the past six months is dialogue meeting which aimed at influencing integration of agroecology, climate smart agriculture and conservation agriculture in the district development plans. The dialogue brought in government officials, village officials, contact farmers and stakeholders from Meru district council, Makiba and Kandashe villages. In total, 186 people were reached through the aforementioned acivities. Out of these, women were 91 (49%) and 95 (51%) men. Youth reached in both villages were 41 (41%).

The promotion of agroecology, climate smart agriculture and conservation agriculture to the farmers in Makiba and Kandashe villages has involved local leaders, village and district officials while 100 small holder women and youth farmers have been involved in ***farmer field school (FFS***) activities designed to help them learn and adopt Agroecology approaches and practice. This report therefore covers; introduction, background, project achievement, emerged issues, lessons learnt, good practices and way forward.

1.2. BACKGROUND OF THE PROJECT

(i) **Project title:** Promoting Agroecology and Resilience to Climate Change Among Small-scale farmers in Meru District.

Coverage of the project: Makiba and Kandashe Villages

Target Groups: 100 Women and Youth small-scale farmers from Makiba and Kandashe villages. Fifty (50) people from each village treated as contact farmers and involved in farmer field school (FFS).

Project Goal and Objectives

Goal: To contribute to increased resilience capacity of agriculturally-dependent communities with respect to actual climate variation and future climate changes in Meru district.

Purpose: Resilience capacity of agriculturally-dependent communities in Meru district has increased through promotion of agroecology, climate smart agriculture and sustainable management of natural resources leading to improved food security and enhanced livelihood options.

Specific Objectives, Outputs, Outcomes and Activities

Specific Objectives 1: To strengthen awareness, knowledge and technical capacity in the adoption of agroecology and CSA practices and build resilient to the adverse effects of climate change in Kandashe and Makiba villages in Meru district.

Outcomes:

- Small-scale farmers in two villages improved their resilience capacity, knowledge and commitment in sustainable use of indigenous crop seeds, adoption of Agroecology and Climate Smart Agriculture practices to respond to climate change impacts by the end of the project.
- Agroecology and CSA practices integrated in the district CC adaptation plans.

Outputs: 100 contact small-scale farmers in two villages trained on Agroecology practices and Climate Smart Agriculture (CSA) practices and provided with seeds.

20 Local government officials and traditional leaders are aware of the economic benefits of agroecology and CSA practices for the improvement of household livelihoods and environment.

Specific Objectives 2: To contribute to effective information dissemination on agroecology, CSA practices and resilience to climate change impacts through local radios by enhancing adoption capacity of small-scale farmers in Meru district.

Outcomes: Knowledge on agroecological and CSA practices and resilience to climate change adaptation is strengthened and disseminated to women and youth small scale farmers and stakeholders with increasing number of farmers adopting the practices and use of indigenous seeds in the two villages.

Outputs: At least 3,000 farmers educated through local radio on the adoption of agroecology and CSA practices in the two villages and district.

Increased awareness and deepen understanding of small-scale farmers on the economic importance of agroecology and CSA practices, use of indigenous seeds and how to adapt and build resilience to climate change.

SECTION 2: PROJECT IMPLEMENTATION AND ACHIEVEMENTS

2.1 IMPLEMENTED ACTIVITIES

(i) Inception meeting was done to introduce the project of for "Promoting agroecology and resilience to climate change among small-scale farmers in Meru District to the district and Villages authorities, farmers and local leadders.

(ii) Two(2) capacity building trainings on Agroecology approach, CSA, climate change adaptation techniques and resilience to 30 women and 20 youth small scall farmers in in each village (Kandashe and Makiba villages).

(iii) Sensitization meeting to 20 local government officials, traditional leaders and women forum leaders to raise their awareness on the agroecology and CSA practices for them to influence incorporation of practices into the district CC adaptation plans.

(iv) Dialogue meeting of 40 people (20 women and 20 men) with district government officials and stakeholders on the integration of agroecology, climate smart agriculture and climate change resilience in the district CC adaptation plans.

2.2 ACHIEVEMENTS:

After inception activity in the two villages ***(See Figure 1&2)*** and district headquarters,

2.2.1 Inception meetings: The project, "Promoting agroecology and resilience to climate change among small-scale farmers in Meru Distric"t was introduced to the district officials including the District Agricultural Officer, District Agricultural Engineer, District Community Development Officer and District Executive Director and village chairpersons, village executive officers (VEOs) and women forum leaders and farmers at the villages level. The project was appreciated due to its relevance[1] and also has come at the right time when farmers are tired of using the indigenous technologies[2] in land cultivation and crop management and also when the government has taken decision to provide subsidized fertilizers by 40.6%[3]. The price is therefore 70,000 shillings against unsubsidized price of 130,000 shillings.They generally promised to cooperate and work closely with the organization to sensitize farmers to adopt to climate smart agriculture and conservation agriculture approaches that promote agroecology. Acceptance of the project at the district, wards and villages was approximately rated at 99%. A total of 26 people reached during inception (16 men , 10 women ***(See figure 1 &2 below).***

[1] Village leaders admit that agroecology will be solution to existing food insecurity caused by the ongoing climate change effects and poor traditional agricultural practices that guarantee low productivity every year.It is so because a agroecological farming techniques can help make soils more productive, minimize the use of agrochemicals and pollution, and enhance crop diversity.

[2] Indigenous practices involve monocultures and excessive tilling which degrade soil and encourage pests and diseases. The artificial fertilizers and pesticides that farmers use to address these problems pollute the soil and water and harm many organisms and ecosystem. As the soil deteriorates, it is able to hold less water and requires frequent use of chemical fertilizers.

[3] The original price of 50kg bag of fertilizer is sold at 130,000shillings. Government subsidy is 60,000 shillings/bag.

Figure 1:CEDESOTA team leader (third from left) with Kandashe Village Officials during inception of the project in the village.

Figure 2: Farmers in Kandashe village listening to the CEDESOTA program director on Agroecology project during its inception to the ward and village leaders and farmers representatives.

2.2.2 Capacity building trainings: Two (2) capacity building trainings conducted on Agroecology approach to small scall farmers in Kandashe village and Makiba villages basing on the FAO, SARI and SUA accredited Agroecological Models[4]. Each village received two trainings under which, several subtopics were taught including: overview of agricultural sector in Tanzania, the long-used(indigenous) practices in agricultural production, concept of agroecology technology, biodiversity, CA principles. Participants were highlighted to understand that conservation agriculture is one of the most concrete and promising ways that contribute to sustainable agriculture and enhanced food security. It relies on three basic principles: minimum soil disturbance, soil cover and useful crop rotations and associations. Other subtopics covered were the benefits of conservation agriculture, farmland preparation starting from pitting by hand hoe and ripping by oxen/tractors, sowing and fertilization among others. The training was followed by field practical on how to prepare pits and its dimensions, application of organic and inorganic fertilizers as indicated in ***figure 5,6,7& 8 below.*** A total of 100 farmers participated(women 43, men 57 against targeted women 60, men ***(See figures 3,4 ,9,10 & 11below).*** The number of women lowered for the reasons that land ownership in these communities is patriarchal. Majority do not own by themselves but through their male relatives like husbands, brothers or brother in laws. Few women own land through buying, allocated by parents or inherit after husband's death. They neither participate in leadership nor in decision-making and local politics. The training was positively accepted and participants understood the subject and agreed to change from conventional agriculture and intervene in agro-ecology. Both in the two villages farmers have unanimously agreed that each one will secure one acre land to practice the technology and such plots will be used as farmer field school (FFS). What helped the most is that people need to change after suffering losses for a long time through conventional farming mainly due to soil infertility and drought intolerant seed varieties.

[4] AGROECOLOGY MODELS: Agroecology and Conservation Agriculture Model by The Sokoine University of Agriculture (SUA) and SARI (Selian Agricultural Research Institute).

Food and Agriculture Organization of the United Nations (FAO) released the Agroecology Knowledge Hub (AKH) in November 2016. "Agroecology is based on applying ecological concepts and principles to optimize interactions between plants, animals, humans and the environment while taking into consideration the social aspects that need to be addressed for a sustainable and fair food…"

Figure 3: The picture depict participants(contact farmers) in Makiba villages during training on Agroecology.Th e training was conducted in the Anglican Church building.

Figure 4: Participants (Contact Farmers) while the training on Agroecology, CA and CSA in Kandashe Village, a total of 21 women and 20 men participated. The training was conducted in the church building.

Figure 5: Facilitator from CEDESOTA demonstrating how to make pits with specifications in Kandashe village.

Figure 6: Facilitator from CEDESOTA demonstrating how to make pits with specifications in Makiba village before start making pits.

Figure 7: CEDESOTA facilitator demonstrating to make pits in Mkaiba village by using hand hoe. This was during training on Agroecology.

Figure 8: Trainees (Contact Farmers) in Kandashe village in the field, where the facilitator is explaining on the use of rope in making pits by hand hoe.

Figure 9: In the picture are elected leaders of the contact Farmers; form rights is Mrs. Ndeta Nassari, the treasury, Mr. Elia Nassary, the Chairman for the Contact Farmers, Happiness Pallangyo(Secretar), Mr. Israel Kyungai (Member), Fanuel Urio (Member), Petro Pallangyo(Meber) and Yoana Mbise (Membe-Not in the picture).

Figure 10: Group picture showing 50 Contact Farmers participated in the agroecology taining in Kandashe village.

Figure 11: Group picture showing 50 Contact Farmers participated in the agroecology taining in Makiba village.

2.2.3 Training to local leaders and government officials

The concept of Agroecology and CA was introduced to local leaders, village and district government officials as an approach to improve the food security and resilience of farmers to climate change as well as land conservation. Three (3) government officials (1female and 2 male) from the departments of Community Development and Agriculture participated. Others were 4 male village leaders and 13 more (10 women and 3 men) from Makiba and Kandashe villages totaling to 20 people ***(See figure 12 &13 below).***

Figure 12: Standing are the local leaders and farmers. From left Makiba village Mr. Sikawa and on the rights is Mr Eliakim Nassary all explaining how the district has neglected farmers, without giving them any support related to agriculture, livestock keeping and others.

Figure 13: In the picture are the district community development and agricultural officials during training for leaders and government officials. Standing is Mr. Angelus Shokia who advised local and village officials to mobilize people in the villages to formulate by-laws which will restrict livestock keepers from grazing over crop residues. The district Officials responded positively that will take up the issue and include it in their plans. Mr Shokia added that, planning and budgeting cycle starts in September each year, so the idea has come in the prime time.

The training aimed at raising awareness on the agroecology, CA and CSA practices and its social and economic importance for them to influence incorporation of the practices into the district development plans.

Such importances include:

- It helps to use the same land sustainably for crop production without establishing new farms particularly for farmers who do not have huge land to shift in. In so doing it prevents land degradation and conserve environment and biodiversity because the practice requires minimum tillage, soil cover and crop rotations.
- Increases productivity in the small piece of land comparing to the conventional agricultural practices.This is because the practices need the This is because agroecology is done by pitting holes with specific dimensions by hand hoe or and ditches by tractors into which seeds and fertilizers are placed. The pits and ditches store water and moisture for longergrowing time which is used by the plants or crops planted.
- It reduces labor force and provide time for other economic activities. Since there is no total land tilling which would require total weeding and irrigation, less time is therefore used in the farm from sowing to harvesting.

The government officials saw the project as a liberator because they had wanted to reach farmers for the new farming technology but failed due to lack of financial resources.They, however promised to cooperate with CEDESOTA to sensitize farmers on the social and economic benefits of agroecology approaches against conventional farming.

The Village leaders and Farmer representatives in the workshop had few recommendations to District Executive Director make the project successful:

- The District Executive Director to allocate of agricultural extension officer at the ward office for the villages. Currently there is none, farmers depend on the experts at district headquarters. The district arrangement is to have one extension officer at the ward to cater for all villages.
- The Ward Executive Officers and Councilors to regularly report to the District Executive Director and full council meetings respectively on the real situation of the agricultural sector (food security) in the villages for action particularly now when food prices continue to rise.
- More awareness creation to communities through formal classes and media on agroecology, conservation agriculture and climate smart agriculture to reach more people in the villages and district as a whole.

Roles and responsibilities of village and ward leaders in the adoption and practicing of CA

- Identification of farmer field school (FFS) farmers - contact farmers
- To continue mobilizing farmers to participate in the awareness creation trainings and meetings meant to impart them with knowledge and skills to effectively demonstrate adoption of the new agricultural technologies within their localities.
- To cooperate with CEDESOTA for supervision of the contact farmers in the implementation of the project in their respective farms.
- To gather information from the farmers on the progress, success stories, challenges and report to CEDESOTA and respective authorities at the District for follow up and remedial actions.
- Solicit reliable indigenous seed (maize) sources and fertilizer suppliers for the farmers.The contact farmers are knowledgeable in quality seeds which are disease and drought tolerant and of short duration and know the sources within the district. As of now the project will continue to emphasize use of organic manures and gradually declining from chemical fertilizers. The long term plans is for farmers to do away with chemical fertilizers.
- To collaborate with CEDESOTA to initiate drafting of local government by-laws to control livestock on agroecology farms especially after harvesting. This is done with accordance of the Local Government Laws Chapters 287 and 288 as amended in 2002.Drafting of the laws begins at the community level, committees, Village Councils up to the general meeting of councilors. Once passed by councilors, it is then approved by the Prime Minister's office and announced in the Government Gazette for use ***(See figure 13 above).***

2.2.4 Dialogue meeting:

(i) Participation: 40 people (27 women and 13 men) participated in the dialogue meeting. Participants were district government officials, village officials, contact farmers and stakeholders from Meru district council, Makiba and Kandashe villages. The district council was represented by the an Irrigation Engineer Mr. Kihedu Mmbaga ***(See figure 14 & 15).***

Figure 14: Participants – District officials, Contact Farmers representatives and village officials from Kandashe and Makiba villages participating in the one day dialogue at KIKULUNGE Conference Hall in Kikatiti Township. Sitting from right is the Mr Kihedu Mmbaga, the Mer district irrigation engineer.

Figure 15: District officials, Contact Farmers representatives and village officials from Kandashe and Makiba villages participating in the one day dialogue at KIKULUNGE Conference Hall in Kikatiti Township. Standing infront is the Mr Kihedu Mmbaga, the Mer district irrigation engineer.

(ii) Emerged issues and response by the District Government Officials as a result of the dialogue session:

a) **District plans to promote new agricultural technologies in increasing production and addressing food insecurity (Plans & Extension services):** According to the District Agricultural Irrigation Engineer Mr. Kihedu Mmbaga ***(See figure 15 above)*** the district is in the process of allocating a budget to support farmers groups involved in agriculture to improve their productivity so that they can get rid of extreme poverty. The district also is preparing extension programs that will evolve their knowledge and skills in adoption of new agricultural technologies (agroecology) to increase productivity with small investments.

b) ***Market for the agricultural produces:*** In terms of ***markets,*** the district official explained that demand for the crop produces being it maize, beans and other legumes is increasingly growing hence there is no need of worrying about the market particularly this years. He therefore encouraged farmers to effectively devote their time and resources in implementing the project with assurance of market availability.

c) ***By-laws:*** Participants (farmers) wanted to know the readiness of the district authority in accepting and approving ***local by-laws*** following farmers' concern about people who graze over their farms after harvest as they would want to maintain soil cover (mulching) as a strategy to conserve their farmlands. The chairman for the contact farmers from Makiba village Mr. Suleiman Hassan urged the district government officials to initiate formulation of by-laws that will restrict livestock keepers from grazing over crop residues left to cover the soil. And the law must be strongly enforced by the local government at sub-village and village levels. The distrct official Mr. Kihedu retorted that the district has never been obstacle to any innovative idea so long as its for public interest and of positive benefits, he encourage farmers to come up with their suggestions and recommendations for formulation of the by-laws through their councilors.

d) ***Improved seeds availability:*** The issue of indigenous and quality seeds availability was raised and learnt from the participants that the seeds are available within the project area. Importantly is to make reservation before planting season and price increase. Participants (contact farmers) also wanted to know if the government will subsidize seeds or its only fertilizers. The Village Executive Officer said that it's not yet known if the support will be extended to seeds or not. It was further known that CEDESOTA with support from DKA will provide maize seeds (indigenous) to 100 contact farmers in Kandashe and Makiba villages.

2.3 CHALLENGES

(i) **Poor quality or fake seeds:** Participants(Farmers) raised their apprehension over the unfaithful seed suppliers who sell expired seeds that lead to poor germination and poor harvests. Also the government has always promise to provide or subsidize seeds but in vain.

(ii) **Lack or poor law enforcement:** The situation indicates that there is no effective legal measures that restrict free grazing and trace passing over crop fields particularly after crop harvests. Participant put that if the laws exist, mechanisms for enforcements are lacking. They therefore urged the district to ensure law enforcement to support them in this process of conserving the land and addressing climate change.

(iii) **Lack/inadequate of extension officers:** It was realized that these experts are not available at the ward and village levels to support farmers instead have to travel all the way to the district headquarters for the service. Its of their opinion that the district should seek and allocate these staff at least at the ward level for farmers to access the service promptly without taking much time to the district headquarters.

(iv) **Lack of education on the agroecology:** People and even the majority of district agricultural personnel do not have appropriate knowledge on agroecology approaches for improving agricultural productivity. Deliberate efforts are therefore needed to ensure massive education to farmers all over the district for the purpose of increasing production and addressing food insecurity.

(v) **The long-used practices** in agricultural production in the two villages indicated that most farmers embrace elements of Conservation Agriculture principles and practices without knowing that they are practicing it with the exception of tillage techniques. Common practices shared include mixed cropping systems related to agroforestry, few retain crop residues after harvesting crops. Generally, majority of the small holder farmers still rely on conventional approaches of farming and practice elements of CA technology to ensure they are food secure without regard to conservation tillage practices. This was shared by Kandashe Village Chairman Mr. Arold Mafie. He also added that, "Capacity building efforts are therefore needed to educate farmers on the benefits of CA particularly now when the population is increasing and the arable land available for food production is significantly diminishing"***(Figure 16 below***). The Lutheran evangelist and contact farmer Mr. Israel Kyungai added that such capacity building training should aim to minimize over dependence of farmers on conventional agriculture and livestock which are all vulnerable to climate change, economic diversification is vitally important.

Figure 16: Standing in the left picture is the Contact farmers Chairman Mr. Suleiman Hassanon and on the right is the Village Chairman for Kandashe Arold Mafie both sharing their views in the emerged issues.

SECTION 3: PROJECT PROGRESS TO DATE

3.1 Result Summary: Outputs Level

Outputs	Performance indicator(s)	Contract Target per Quarter		Achievement per Quarter		Progress to date (Quantitative data):
		Male	Female	Male	Female	Comment
Output1: District Council, Village leaders, women forum and farmers representatives are aware of the project.	Increased support from District Council and Village leaders in the implementation of the project by 2023	15	20	16	10	Majority of leaders are men The number of men targeted has slightly increased with decreasing women by 50%. The project will strive to involve more women in the project.
Output 1.1.1: 100 contact small-scale farmers in two villages trained on Agroecology practices and Climate Smart Agriculture (CSA) practices and provided with seeds.	Number of people trained Agroecology practices and Climate Smart Agriculture (CSA) and CA practices Increased understanding of contact farmers on the concept of agroecology approaches and adoption CA and CSA practices	40	60	57	43	The project targeted 40 youths while the actual achievement is 41 (41%). The number of women lowered because land ownership in these communities is patriarchal. Majority do not own by themselves but through their male relatives like husbands, brothers, brother in laws. Few women own land through buying, allocated by parents, inherit after husband's death or borrowing. They neither participate in leadership nor in decision-making and local politics.
Output 2.1.2: 20 Local government officials and traditional leaders are aware of the economic benefits of agroecology and CSA	# of people participated in the training session – both men and women # of local government officials, traditional leaders participated in the training.	10	10	9	11	The figure includes 3 government officials (1female and 2 male) and 4 male village leaders. Others were 13 people including 10 female and 9 male contact farmers.

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practices for the improvement of household livelihoods and environment.	Increased understanding among leaders on the agroecology and conservation agriculture as new approached to improve their conventional practices to new ones which are more productive.					

3.2. Result Summary: Outcomes Level

Outcomes	Performance/outcome indicator(s)	Progress to date (Qualitative data)
Outcome1.1: Enhanced understanding among Meru District and Village officials on the Agroecology and Resilience to Climate Change project for Small-scale farmers in the district.	Number of district government officials, village leaders, and farmers representatives met to receive the project.	The project has only done the inception activity as explained above. We are anticipating to get more outputs and outcomes in the next quarter.
Outcome1.1: Small-scale farmers in two villages improved their resilience capacity, knowledge and commitment in sustainable use of indigenous crop seeds, adoption of Climate Smart Agriculture practices to respond to climate change impacts by the end of the project.	40% increase in adoption of Climate Smart Agriculture and Consevation Agriculture practices to respond to climate change impacts with increasing resilience capacity and use of indigenous seeds by the end of the project.	Through training, it was realized that few farmers (insignificant number) are practicing conservation agriculture using their local knowledge without knowing that it is CA. The elected contact farmers leaders promised to make follow up andlearn more from these farmers.
Outcome 2.1: Agroecology and CSA practices integrated in the district CC adaptation plans.	Integrated CSA and CA in the district plans Sustained responsibility of government and stakeholders to empower and support villagers in the adoption of CA and CSA.	CEDESOTA in collaboration with district council officials are continuing to provide capacity building trainings on CA and CSA techniques. The project has just started to realize the outcome and respective indicators.

3.3 GOOD PRACTICES

Introducing the project before implementation (project inception) is vital to get insights from the authorities and individual stakeholders (farmers) on the project. It is a strategy to start inducing sense of ownership by the District Council and Village officials as well as villagers. Project inception had two images; one was to give feedback to the project designers (district and village officials & women forums) and at same time introduce the project to the same. During inception it was realized that there are few farmers in Kandashe village practicing Conservation Agriculture though poorly without their knowledge. The farmers have been included as contact farmers.

3.4 LESSON LEARNT:

- Participation of District and Village officials during inception have led to better understanding and decisions in the context of their own environment and circumstances with regards to the existing subsistence farming in the area.
- Participation of women during project development and inception, have contributed to disseminate information amongst women farmers that they have some rights to participate in the project as couples and individuals.

3.5 THE WAY FORWARD

(i) Short term actions:

- CEDESOTA through the project to continue encouraging farmers to adopt other forms of farming such as bee keeping and Poultry to diversify their economy as a way of adopting to climate change.
- CEDESOTA in collaboration with local government officials from the department of Agriculture to carry out awareness campaigns to promote agroecology technologies all over the district.

(ii) Long Term actions:

- CEDESOTA to lobby for the government and its partners to manufacturing massive CA equipment and sell to farmers at a subsidized prices.
- The project under CEDESOTA to upscalec current poorly practiced CA to include minimum tillage or no tilling processes all over the villages and district.
- CEDESOTA with farmers groups to lobby for improvement and development of infrastructure and marketing of farm produces in the district. Infrastructure in this case implies;
    - Input based infrastructure: Seed, Farm equipment and machinery etc.
    - Resource based infrastructure: Water/irrigation, farm power/energy
    - Physical infrastructure: Road connectivity, transport, storage, processing etc
    - Institutional infrastructure: Extension & education technology, financial services, marketing, etc