NORDIC CLIMATE FACILITY

Nordic Development Fund • Nordic Environment Finance Corporation

Final Report

Version 2, 2.12.2014

ADAPTea: Climate Change Adaptation for Fairtrade Tea Producers in East Africa,

Kenya, Uganda, Tanzania and Rwanda

Grantee: Vi-skogen

Local Partner: Fairtrade Africa

Other Partner: Fairtrade Labelling Organization (FLO)

Project start date: 01/03/2013

Project end date*:* 31/03/2015

28/05/2015

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1. EXECUTIVE SUMMARY

The ADAPTea: Climate Change Adaptation for FAIRTRADE Tea Producers in East Africa project was implemented from March 2013 – March 2015 by Vi Skogen, Fairtrade Africa and Fairtrade Labelling Organization (FLO) organizations. The project responds on the need to adapt climate change effects in tea sector. Research show that tea growing region will become unsuitable. Implementing adaptation strategies in tea industry will protect livelihoods of over 800,000 smallholder farmers in East Africa (EA). The main objective of the project was to develop the climate change adaptive capacity and resilience for improved productivity of small-holder fairtrade tea farmers in Eastern Africa. The project purpose was to integrate Sustainable Agriculture Land Management (SALM) into tea production system to ensure sustained production.

The first objective of the project was to integrate SALM practices into small-holder tea farming systems in East Africa. As a result 14, 682 small-holder farmers from 21 Fairtrade tea producer organisations were trained on Sustainable Agriculture Land Management (SALM) technologies of which 86 % of them adopted at least 3 SALM practices. To promote SALM practices and train farmers, 96 extension staff of which 9 were full time extension employees and 87 field extension staff from SPOs, 206 Community Resource Persons (CRPs) and 467 lead farmers were trained. Also 24 new demonstration plots and 28 Farmer Field Schools were established with SALM technologies to train farmers. About 720 and 819 farmers accessed demonstration plots and attended farmer field schools respectively. The project developed a farmer SALM training manual and it was translated into Kiswahili and Kinyarwanda. Farmer knowledge on SALM practices has improved.

The second objective was to establish an information and communication sharing platform for small-holder Fairtrade tea farmers. The project has developed a functional online and SMS communication platforms to make climate and SALM information as well as other resources accessible to a wide range of farmers across East Africa. Training of model farmers and extension staff is being facilitated by the manuals. About 28 representatives of Kenyan SPOs and 7 Vi Agroforestry staff were trained on how to use the website and SMS platform during ADAPTea exit workshop. The website will be maintained by Fairtrade Africa.

The third objective was to strengthen small-holder Fairtrade tea farmers' organisations to provide adequate services to their members. The organisational development (OD) systems were assessed using octagon tool and all 21 SPOs have octagon reports and plans of OD to strengthen them to provide better and democratic services to members.

The fourth objective of this project was to strengthen small-holder Fairtrade tea producers' participation in the tea value supply chain, both regionally and at international levels. As a result of this project, Fairtrade and Tea Research Foundation of Kenya and the World Agroforestry Centre (ICRAF) have collaboration

for research opportunities in small-holder tea sector. All 21 SPOs have participated in Tea Product Network meetings. Ten SPOs representatives participated at the Fairtrade convention in South Africa (Cape Town). The project was presented to key Fairtrade commercial partners in the UK where the majority of East African tea is sold to raise awareness on the impacts of climate change on producers and looking for future engagement and support for a second phase.

The fifth objective was to mainstream gender equality the famer and organisation levels. The project trained and supported 21 SPOs to develop actionable gender policies and guidelines which has started mainstreaming gender equality at organisational and farmer group levels. The management and farmer representatives became aware of gender, its importance in tea production and their attitudes, gender insensitivity and blindness was reduced.

The last and sixth objective was to develop Fairtrade producers' Climate Change risk and Opportunity Assessments (ROAs). Climate Change related risks including variability of rainfall and fluctuations of temperature, crop failure, pests and diseases, frost, soil erosion and leaching of nutrient were discovered. These events were increasing in the recent decades and the productivity of tea was on decline. The project developed climate change adaptation 21 activity plans using ROA and baselines information.

The project achieved its targets due technical capacity development among SPOs extension staff, CRPs and Lead Farmers. About 86 % of farmers adopted at least 3 SALM practices of which 8 % of farmers their food production improved. Other benefits of the project include gender equality knowledge, gender policies and organisational development. The project experienced aspects of increased productivity, adaptation and mitigation to climate change. Key lessons learnt include the SALM adoption approach is through commodity-business based approach for social, economic and environmental benefits. It's key to enhance institutional capacity development and extension advisory services. Feasibility studies, assessments and partnership analysis are key to plan a project to avoid delays and stakeholders interest conflicts.

Geographical and terrain ruggedness, high training expectation from farmers, conflicts of interests, budgetary constraints and environmental risks were major risks. Through ROAs, SALM approach, leadership, cost sharing and participatory extension led project success. After consultation with Kenya Tea Development Agency (KTDA), it was indicated that 5 SPOs in the original proposal had already received training and hence were replaced with 5 new producer organisations. The project partnership, collaboration and host countries government institutional support is positive and synergies are increasingly being pursued. The key conclusions of the project is the adoption of SALM practices has strong influence on increased productivity, adaptation and mitigation of climate change in tea farming system. Climate Change Risk and Opportunity Assessments were key for risk analysis, planning, community ownership and selection of SALM adaptation

strategies. The production SALM manuals, website and SMS platform is a form of knowledge management to sustain technology into future. Organizational development, gender equality and partnership are key to empower and strengthen the SPOs to improve on service delivery. To reduce farmer training costs, we recommend partnerships, networking and linkages to farmer support system. The SPOs developed second phase plans to scale up the project activities. Fairtrade has a programme plan already to continue supporting SPOs to sustain and expand project activities.

2. ASSESSMENT OF IMPLEMENTATION OF THE PROJECT

2.1 Implementation of Activities

Activity 1: Training of technical staff assistants

The project target was to train 21 SPOs on Sustainable Agriculture Land Management (SALM) practices. During the project period, all SPOs were both technical staff and farmers. A total of 96 extension officers were trained on SALM practices, Risk and Opportunity Assessment (ROA), monitoring, gender, contract negotiation and organisational development. The project extension staff trained were 9 employed full time technical staff and 87 staff from Smallholder Producers Organisations (SPOs) staff (field managers, extensions, Field Service Coordinators (FSC) and Tea Extension Service Assistants (TESAs).)The trainings were organized by Vi Agroforestry in conjunction with SPOs. The technical extension staff were given SALM training manual guiding them to train Community Resource Persons (CRPs), Lead Farmers and farmer groups depending SPO's needs and capacities. The staff trained 206 Community Resource Persons who disseminated SALM practices to 467 Lead Farmers and 14,682 farmers within the 21 SPOs. As a result of this project activity 12,626 farmers implemented at least 3 SALM practices on their farms. The project trained more farmers as expected because after sensitization more farmers were interested in the trainings and joined training groups. This was cost efficient as the number of members in farmers groups did not increase the cost of training.

Activity 1a: Producer Sustainable Agriculture Land Management (SALM) Training Material

The project target was to produce a producer friendly training material in English, Kiswahili, Kiganda and Kinyarwanda. The Kiganda translation was unnecessary since farmers in the area does not speak Kiganda. As a result of the project, the SALM manual was developed and was used to train 96 extension officers, 206 Community Resource Persons 467 Lead Farmer and 14,682 farmers using Training of Trainers (ToTs) approach. The project printed 1,500 and distributed copies of the SALM manual. The Kinyarwanda version is being finalised and 500 copies will be printed and distributed. As a result of this activity the staff and farmers were able to access climate change and SALM practices knowledge. The climate change and adaptation

awareness of farmers is increased towards resilience capacity building. They can refer and be able to disseminate SALM skills to many farmers in the tea sector.

Activity 2a: Making use of demonstration sites

The project targeted to establish 21 demonstration sites of Sustainable Agriculture Land Management (SALM) practices and technologies to support training farmer trainers and groups of implementing farmers. As a result of the project 24 demonstration plots were established and 65 existing were improved based on tea sector farmer curriculum and SALM model. The initial target was the project to establish 21 demonstration plots (1 per SPO) based on SALM practices however, most SPOs had planned also to increase demonstration plots. They got interested in SALM model approach some SPOs had to increase plots. A total of 720 farmers accessed the 24 demonstration plots directly and improved their SALM skills and have become model farmers and their farms have become learning sites for other farmers. The project collaborated by integrating SALM model into Kenya Tea Development Agency (KTDA) curriculum of demonstrations plots.

Activity 2a: Farmer Field Schools (FFS)

The project target was to establish 21 Farmer Field Schools (FFSs) to train a total of 630 farmers based on SALM model, KTDA and Tea Research Institutions curriculum. As a result of the project, 28 functional FFSs were established and 819 farmers graduated with SALM knowledge. The FFS approach helped to empower CRPs technically and FFS approach is a ToTs' approach within the SPOs. The reason of overachieving is that the Ugandan SPOs had more targets on FFSs, FFS is their interested extension approach and the combination of training more farmers groups accessing same demonstration plots. The farmers who graduated from FFSs have become famer trainers and model farmers who are using their farms as learning sites training fellow farmers in groups.

Activity 3: Visits to Vi Agroforestry training sites and the exchange of ideas with in-country visits to the farmer-owned demonstration sites

The project targeted to support four farmer trainers' visits in the areas already with established SALM practices training sites (Agroforestry Training Centers) by Vi Agroforestry. These training sites were far away from the project areas and logistical costs involved were high. Instead of visiting Vi Agroforestry training sites, Field staff, SPOs and Community Resource Persons arranged exchange visits between farmers and using demonstration plots. This was an efficient model for learning in the local areas.

Activity 4: Development of online and Short Message System (SMS) communication platform

The project targeted to establish 4 online and 4 SMS's platforms suitable for information sharing piloted throughout the project period. As a result of this project

1 online platform and 1 SMS platform that uses 4 mobile lines (provided by country mobile phone network providers) were established to enhance capacity of SPOs and farmers to access climate change adaptation strategies and information across East Africa region. The manuals of online and SMS were developed to show the use and were shared to all Fairtrade partners. Developing single information platforms was feasible and cost-efficient. The 28 representatives of 14 SPOs from Kenya were trained on how to use the website and SMS platform during ADAPTea exist workshop. The training of other SPO was to be supported by Fairtrade administrator. Fairtrade Eastern and Central Africa Network is organizing a regional event that shall include assessing user rates, satisfaction of content, challenges and possible solutions. This activity was delayed due to procurement and design processes taking longer than expected. Fairtrade Africa has a designated website and SMS component and now takes on the role of administrator to support all users and ensure the content is up to date. The web-based online platform can be accessed on http://adaptea.fairclimatedeal.net/ and the SMS platforms can be accessed https://cloud.frontlinesms.com/login/auth

Activity 5: Training model farmers and extensions staff on the use of the SMS

The project targeted to train 42 model farmers and SPO 21 extensions staff (each from SPO) on the use of the SMS platform to help other farmers log in and use the platform. During project implementation, the training was conducted to 28 SPOs' representatives (21 extension staff and 7 Community Resource Persons). This activity delayed to be accomplished as planned due to procurement process to contract a consultant to carry out assessments, engage mobile providers and putting all procedures in place. The activity was to be finalised late in the project period and fairtrade will continue with the activity.

Activity 6: Farmers and Organisation Leaders trained on governance

The project targeted to train 21 SPOs' leaders (staff and board members) on governance that involves organisational development and capacity building of farmers' organisations. The first step involved conducting an organisational assessment using the octagon tool to establish benchmarks on organisational results, outputs, capacity and relevance. As a result of this activity, the assessments on governance in terms of structural strengths, weaknesses and opportunities led to planning of trainings and capacity development to fill the gaps. A total of 252 leaders were trained on octagon and governance. They developed specific SPO governance activities which include capacity building in terms of democracy, participatory decision making, women and youth involvement. SPOs that lack competence in the business and complete tea value chain developed a comprehensive long-term plans of capacity development. The project supported 21 SPOs to gain strong technical, financial and managerial capacity development can participate in competitive national and international markets.

Activity 7: Training Farmers and Organisation on business management skills

The project targeted train all 21 SPOs and 14,000 farmers on business management skills. The project conducted SALM trainings to 14,682 farmers using a holistic approach of SALM, Farmer Enterprise Development (FED) and Village Saving and Loaning Associations (VSLA). The FED component trains farmers to select, compare and conduct farm enterprises as profitable business while VSLA requires every farmer to save and borrow loans from their groups to invest into enterprises and SALM practices. The trainings enabled 86 % of farmers adopting SALM practices, increase food production, start selecting and diversifying farm enterprises. Farmers groups started planning to establish strategic and collective enterprises, joining savings and loaning associations.

Activity 8: Farmers and their organisations are equipped with skills to manage sales and input contracts and to link up with markets

The project planned and accomplished the following five sub-activities.:

Activity 8a: Management trained in contract negotiation

The project targeted to train 21 SPOs on contract negotiation. In Uganda, a total of 48 SPO leaders from 4 SPOs were trained specifically on contract negotiation. In the other 17 SPOs, the training was integrated into organisational development trainings. The reasons for incorporating the contract management trainings were similarities and components of the training. It was more cost and time efficient to conduct one comprehensive training covering all. The technical skills of 21 SPOs on contract negotiation on contract skills, styles, process and types has improved among the SPO leaders.

Activity 8b: Effective system of management, accountability and control established and operational

The project targeted to strengthen SPOs in management, accountability and governance. As a result of this project, SPOs staff, Board Members and farmer representatives were trained and assessed on these issues. Each SPO were trained on organisational development and the octagon assessment was done. Based on the result, each of the 21 SPOs developed an organisational development plan which they today use to strengthen their organisations.

Activity 8c: farmers' participation in Fairtrade fairs and tea product meetings

The project targeted to support 10 SPOs representatives (farmers, staff and board members) to participate in the Fairtrade fairs and tea product meetings. As a result of this project, 2 Tea Product Network meetings for Eastern Africa tea farmers were conducted where all 21 SPOs participated. The 10 SPOs with 11 farmer and 2 staff participants were sponsored to participate in the fourth Africa Fairtrade Convention (AFC), in Stellenbosch, South Africa in 2014. The 10 SPOs, were supported to exhibit

their high quality and Fairtrade produced tea in the side-lines trade fairs, seminars and conventions. The representatives gained knowledge on climate change impacts on tea, tea production, quality and marketing under Fairtrade Standard. The 13 participants interacted on business contracting with commercial partners in the events. This process was aimed to create direct link of SPOs to market and create learning platform for market expectation.

Activity 8d: Field visits to Fairtrade farms on the side-lines of Tea Product Network

The project targeted commercial partners to visit every country to see Fairtrade farms with SALM practices to experience adaptation, social and environmental benefits. The project planned for four visits but during the project span, two visits were conducted by Fairtrade Foundation, Commercial Partners namely Ringtons and Waitrose) in Tanzania and Kenya. This was a mission of Fairtrade Foundation to evaluate the effectiveness of Fairtrade Standards and climate change adaptation in tea sector. A documentation of success of Fairtrade farms was developed to share this experience with commercial partners in Europe.

Activity 8e: Meetings with commercial partners in the UK to present the project

The project through FLO targeted to 4 meetings to present ADAPTea project information to Commercial Partners in UK. The project also targeted 2 follow-up meetings with commercial partners to prepare partnership, investment and commercial plans with SPOs for sustainable production and marketing of tea in UK. As a result of the project, FLO conducted 4 meetings with commercial partners (Waitrose) and Fairtrade Foundation in the UK to present the project so that commercial partners could start long-term investment planning into the project. The project also achieved 2 follow up meetings to prepare investment and commercial plans. One meeting was conducted by FLO, Fairtrade Foundation and Waitrose and another meeting with Waitrose who participated in the Project Advisory Panel meeting. One commercial partner (Waitrose) in the UK was interested and presented with further information by the climate change team of FLO. Waitrose decided to take active part in the project by participating in the Project Advisory Panel and visited the project sites in Kenya (Sireet SPO) and Tanzania (ITOA SPO). This meetings and follow ups led the commercial partners to be interested on future support and engagement supporting to scale up the project in the phase II of the project. The investment plans were not developed during the project for Fairtrade Foundation has taken leading role to engage partners in long-term commitment process which takes longer time beyond the project period.

Activity 9: Training on gender roles in farm production and gender equality and in the management of tea producer organisation

The project targeted 21 SPOs to train staff, leaders (board members) and 14,000 farmers on gender roles in farm production and gender equality in management of SPOs. As a result of the project, a gender equality training programme was designed

to train gender roles, equality mainstreaming at SPO and farmer levels. The project organized 21 formal gender planning, trainings and gender policy development meetings. These meetings led to 206 community resource persons, 252 SPO leader representatives and 87 extension staff trained on gender roles and mainstreaming. Every SPO developed a gender policy and an action plan. The farmer trainings were achieved through SALM trainings sessions and follow up meetings. The 14,682 farmers who were trained on SALM practices were also trained on gender roles. It's through the policy and action plan that every SPO has specific and practical gender needs that will be addressed as long-term plan.

Activity 9a: Preparing gender policy guidelines at the organisational level

The project targeted 21 SPOs developing their own gender policies responding to their specific and practical gender needs and stipulate their intended roles. As a result of this project, 21 SPOs developed gender policies that respond to gender practical needs. The policies stipulate policy strategies and statements to respond to gender needs in the specific SPO. The policies focus on long-term SPO engaging in mainstreaming gender equality in tea value chain. The resources available in the project did not allow household level gender analysis or studies to get in-depth knowledge on practical gender needs. However, in the SPOs gender policies and action plans, gender activities are continuous plans for SPOs and Fairtrade Africa to follow up in the sustainability plan or phase II.

Activity 10: Training farmers on Climate Change Risk and Opportunity Assessments (ROAs)

The project targeted to conduct 21 Climate Change Risk and Opportunity Assessments (ROAs). This involves training project staff and extension staff technically how to carry out ROAs. The SPOs then invite about 30 participants who are representatives from partners, local government leaders, farmers, staff and leaders from the SPO area. Representation should include women, youth, geographical location, Lead Farmers, farmer trainers and marginalised groups such as HIV/AIDs and widows. The ROA facilitators sensitize participants on climate change and its impacts on society and tea. The participants are divided into five groups to carry out group discussion on tea production problems, challenges and possible local solutions. The most 3 risks are scored and ranked from all groups and possible adaptation strategies (SALM practices) are linked to risks as remedies. This will lead to facilitators developing ROA report and an adaptation activity plan. The following activities were carried out to reach the desired results under this activity.

10a: Training of extension agents

The project targeted to train 5 technical staff, 9 project extension officers from Vi Agroforestry and Fairtrade Africa. The staff were to train SPO extension staff and CRPs. As a result of this project 13 staff were trained on ROA by FLO staff from Bonn. Thereafter, staff trained 87 extension agents and 206 CRPs.

Activity 11b: Data Collection

The project targeted to carryout 21 participatory assessments, collecting information on production calendar, climate change risks, effects and adaptation strategies as explained in section 10. As a result of this activity project collected data, analysed and formed information. Data on the climatic risks found included fluctuations of temperature, humidity, wind and rainfall leading to extreme weather events such as droughts, flooding, frost, proliferation of pest and diseases, weeds, soil erosion and soil degradation.

The climate change impacts included damages to crops through lodging, withering, evapotranspiration, interference of flowering and pollination, spoilage, rotting, pounding, shredding of leaves, shattering of fruits and seeds.

All ROAs confirm the low production trend in tea farming system. The vulnerability in tea production relates to and increases with factors such as poor state of infrastructure, unskilled labour, insufficient water and energy supply, lack of reliable market information, lack of governance, inequalities in gender, volatile prices and volatile markets. Appropriate adaptation strategies to cope with the factors above were found to be adoption of SALM practices, diversification of crops, organisational and business development, and increased access for farmers to financial services. Some of the best-fit SALM strategies included use of crop residues, use of manure or compost, mulching, agroforestry, use of improved crop varieties or clones, use of cover crops, farm or crop diversification, mixed farming, terracing, irrigation, early planting, correct pruning, intercropping, conservation tillage and efficient fertilizer applications. The results of this knowledge enabled 12, 626 farmers to adopt SALM practices to deal with challenges and climate change risks in tea farming

Activity 10c: Compiling Climate Change Risk and Opportunity Assessment Reports

The project targeted 21 SPOs developed 21 ROA reports that is every SPO develop its ROA report. The SPOs together with extension staff as facilitators analysed data and wrote the reports. The technical staff from Vi Agroforestry and Fairtrade supported the SPOs to compile reports as the SPOs lacked technical skills and equipment such as laptops. As a result of this activity 21 reports were written and SPO staff are able to develop ROA reports. The ROA process in 10 Kenyan SPOs was delayed due KTDA discussions with us on changing the SPOs they had an interest to benefit from the project. Due to high demand of ROA reports by partners and SPOs the consultant was hired to edit all ROAs reports to be uploaded on the ADAPTea website.

Activity 10d: Planning meetings and Activity plans

The project targeted to develop 21 activity plans based on SALM practices as well as ROA, baseline and local experiences findings. The activity plans were to cover 2 years of project implementation as well as future expansion of the SPO. As a result of this activity all the 21 SPOs developed SALM adaptation activity plans. The

content of most plans consisted of holding planning meetings, mobilization and sensitization of farmers, quarterly reviews, SALM trainings, establishing demonstration plots, establishing farmer field schools, activity monitoring and other activities suiting the SPO needs. The SPO activity plan was to reach out to at least 700 farmers with trainings and adoption of SALM practices and other activities was part of the activity plans.

Activity 12: Risk monitoring indicators will be established and continuously monitored through project period

The project targeted that after the project baseline survey, the ROA reports and activity plans develop activity indicators and milestones to follow up during project implementation. As a result of this project 38 indicators were established and were monitored during baseline survey and end of project surveys successfully. Most indicators were achieved apart from investment plans (see annex 1) and overall the project has assisted about 86 % of farmers targeted adopt SALM practices and acquire all project knowledge (see attached Logical Framework Matrix).

2.2 Deviations from the Planned Activities

2.4.1 Activities that have not taken place

1. Visits to Vi Agroforestry training sites and the exchange of ideas with in-country visits to the farmer-owned demonstration sites. The reason was unfeasibility due to logistics and budget constraints. However, farmers had within SPOs famer exchange visits.

2. Fairtrade Africa targeted to develop 4 agreements or MOUs with research institutions in order to provide basis for collaboration on research. However, agreements showed not to be necessary from meetings with research partners. For example, the Tea Research Foundation of Kenya and the World Agroforestry Centre, provided information to the project partners for inclusion in the SALM Manual. Fortunately Fairtrade Africa had 2 existing agreements with Strathmore University and Moshi Universities based on business development.

3. Training model farmers and extensionsist staffs on the use of the SMS platforms: The platform was finalised late by the consultant and time could not allow the training as planned. Fairtrade has planned a training in the second phase of the project.

2.4.2 Unforeseen activities that have taken place

1. The project targeted to train 42 Community Resource Persons and 21 technical extension persons only. It was discussed by partners that this targets were low to reach 14,000 farmers and were not representative in the geographical locations of farmers. As a result of this activity, the project

managed to train 87 extension staff, 206 Community Resource Persons and 467 Lead Farmers. Every lead farmer with the help of CRPs targeted to train 30 farmers in the neighbourhoods and use his or neighbouring farm as learning sites. The Lead Farmers were model farmers. This approach assisted to train the farmers targeted within a period of one year and more farmers are trainers for purposes of sustainability and scaling up.

2.3 Achievement of Outputs and Objectives

The main objective for the project was to develop the climate change adaptive capacity and resilience for improved productivity of smallholder Fairtrade tea farmers in East Africa.

This objective was achieved by training 14,682 farmers trained and 86 % of them adopting SALM practices. As a result of this project, 86 % of the farmers adopted SALM practices. This is above the target of 60%. Additionally, as a result of this project, the food crop productivity increased by 8 % during the project period.

However, the overall tea productivity was constant. The project period was short to allow SALM practices to start impacting on soil nutrient and productivity. The achievement of all the results under different objectives, outputs and activities are listed in the updated Logical Framework Matrix (see Annex 1).

The project also achieved a number of other unintended positive results. For example, the use of improved cooking stoves increased especially among female farmers. This significantly reduces the stress on natural forests in the area. Additionally, several farmers diversified their farm enterprises after trainings on Farm Enterprise Development. Moreover, the tree diversity increased in the project area, for example most farmers were planting *Grevillea robusta* in the area but 40 species indigenous agroforestry trees were promoted (this tree species are listed in the SALM manual).

3. CLIMATE CHANGE

The ROAs revealed a number of climate related risks and vulnerabilities of climate variability and climate change in tea sector. This led to SPOs developing activity plans for risk reduction management.

The 21 Fairtrade certified SPOs have an estimate of 127,000 members and the project empowered 14,682 of these farmers. As a result the farmer' skills on sustainable land management and climate change risks was improved. Today, 86 % of the farmers are adopting SALM practices to enhance productivity, increase resilience to climate change and improve carbon sequestration. On average, a farmer adopted three SALM practices. The SALM adoption among farmers has enhanced the processes of restoration and rehabilitation of degraded lands. The

results can already be seen in the project area, for example practices such as the use of organic compost has increased crop yields by 8 % annually. Additionally, the tree diversity has improved availability of fruit trees, timber trees, firewood trees, fodder trees and soil fertility improvement trees.

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To ensure sustainability in the farmers' adaption to climate change, the project developed 24 demonstration farms and several farmers today act as learning and monitoring sites. The monitoring system adopted has shown the increase of soil organic matter and indication of an increase in productivity of food crops.

The SALM manual together with the online platform and the SMS platform for information sharing, are knowledge management structures that continues to capacity build farmers on climate change. Via the platforms, farmers can access climate information, access data and also send questions via SMS and receive reliable answers. For example, information on income diversification, tree species and other relevant farming information can be accessed via the platforms. Climate Change is also tackled long term by linking commercial partners to the SPOs. Fairtrade has initiated processes to link commercial partners to sustainably support SPOs to adapt to climate change from production to marketing supply chains. The climate change information and other capacity support is to be maintained by partnerships of developing agents, standards, service providers and research institutions. The 21 SPOs carried out octagon assessments and developed impact plans based on Fairtrade environmental standards and SALM technologies.

4. DEVELOPMENT IMPACTS AND CROSS-CUTTING ISSUES

Human Capital: Human Capital was strengthened by technical capacity building of extension staff, Community Resource Persons and Lead Farmers. Additionally, human capital was strengthened by training farmer groups and organisational development. The online platform and SMS platform ensures long term knowledge management. The above has jointly led to 86 % of the farmers in the project adopting at least 3 SALM practices.

Social: The SPOs were strengthened to be able to offer services to its members in a democratic manner. The SALM practices adoption has led to an 8 % increase in food productivity which has improved the livelihoods of the farmer families involved in the project.

Financial and enterprises: The savings and loaning associations increased in the project area, leading to more farmers having access to financial services. Informal saving increased from 22% in 2012 to 45% in 2014. Additionally, farmers diversified their enterprises and ventured into enterprises such as tree products, vegetable production, dairy, poultry and constructing improved cooking stoves for fee. This has led to increased incomes for the farmer families in the area.

Institutional: The partnership, networking and collaboration was strengthened between Fairtrade, Vi Agroforestry and other organisations (such as ETP, Café direct, KTDA, CIFOR, commercial partners). The SPOs octagon assessments and the planning that followed improved the institutional governance and accountability. Additionally, the partnerships formed between SPOs and commercial partners has increased the service delivery to its members.

Environment: The trainings on and adoption of SALM practices improved the natural capital in the tea growing farming systems. Additionally, soil fertility, soil organic matter and soil water use efficiency improved. The planting of trees under agroforestry systems led to land restoration and increased biodiversity. Bee keeping was adopted for ecological enterprises. Additionally, use of solar energy and use of improved cooking stoves was which resulted in a more sustainable use of land resources.

Human Rights: In the SPOs involved in the project, the participatory decision making processes improved, as well as level of democracy and equal opportunities for men and women. .

Gender equality: Gender equality mainstreaming in areas such as processes, planning and policy development has empowered SPOs in tea supply chains. Every SPO was trained on gender equality mainstreaming and developed a gender policy to guide the tea production and supply chain. Farmers and SPO leaders are aware of gender equality.

5. ASSESSMENT OF THE RESULTS AND IMPACTS OF THE PROJECT

5.1 Relevance

The project responded to global, regional, national and local policy and institutional frameworks to address impacts of climate change and development in agricultural sector. The project addressed social, economic and environmental sustainability aspects. The project improved human, natural, social and financial capitals among the SPOs and farmers as explained in section 4. The SALM knowledge and adoption among farmers has increased the climate adaptive capacity of farmers. It has also increased the sustainable land management, soil organic matter, biodiversity, productivity and income for farmers.

5.2 Effectiveness

In several of the indicators, the project exceeded targets. For example, the project trained 87 extension staff which was over the target of 21 staff. The project also trained 206 Community Resource Persons, which was over the target of 42 CRP. Also 86 % of the farmers (12,626 farmers) adopted SALM practices, which is above the target of 60%. However, the overall tea productivity was constant. The project period was too short to allow SALM practices to start impacting on soil nutrient and productivity positively. Also there was project delays on starting activities at the same time throughout the SPOs. In Kenya, Kenya Tea Development Agency managed (KTDA) SPOs delayed due to (KTDA) resistance to give them go ahead. KTDA wanted project funds to be managed by their head office and also were not for the initial selected SPOs. This led to meetings of conflict resolution. The resolution involved changing five SPOs and with other that KTDA selected and this process made activities to start late and late accomplishment of activities such as gender trainings and governance. The activity to engage commercial partners to develop investment plans with SPOs was not finalised and Fairtrade Foundation has process plan to accomplish in the second phase which commercial partners and Fairtrade want to pursue.

5.3 Efficiency

Overall, the project expended a total of 637,985 EUROS over the two year period (2013–2014). There were no hitches experienced with the flow of funds between the funding agencies the respective project areas offices in the field. A study of carried out by Stockholm Environmental Institute (SEI), which was funded by United Nations Environment Programme (UNEP) and DFID in 2009 estimated that the total cost to provide advisory services for agroforestry interventions in terms of administration, capacity building, logistics, and provision of resources is approximately €15 per farm household/year (equal to € 30 for the two year period). This project reached 14,682 farmers at a cost of € 637,985 implying each farm household was reached at € 43 for the two year period. This is higher than the estimated costs in 2009 but taking into consideration the high inflation averaging 8% in the region. The cost per farm household is € 44 which is within the actual cost realised. The project therefore delivered results efficiently.

5.4 Impact

The project has had a strong positive effect on participants (staff, board members and farmers) in the 21 SPOs. The project partners increased their technical capacity, shared experiences, improved networks and linkages, increased visibility and ventured into new collaboration in the project areas and among stakeholders. The project developed a SALM manual, an online platform and a SMS platform that made it possible to capacity build 14,682 farmers and the stakeholders. Most farmers (86 %) adopted at least three SALM practices in the tea farming landscape.

The major impact observed was increased crop productivity and diversification of food crops. From the final survey carried out, maize productivity had increased substantially from 829 kg per acre to 912 kg per acre. Banana productivity increased from 2,389 kg per acre to 2,510 kg per acre. The trainings of SALM and crop diversification influenced farmers to utilise existing land more efficiently which led to more on-farm food production.

Additionally, the project increased of the number of tree nurseries and tress established in the area. Which increase biodiversity, soil and water conservation, timber, fruit, fuel, fodder and income. The project also has resulted in the adoption and implementation of gender policies in 21 SPOs, with action plans to mainstream gender in tea production value chains. The organisational assessments using the octagon tool led to activity plans that strengthen the 21 SPOs in terms of governing and accountability systems. The project has also increased access to data for farmers and their technical skills.

5.5 Innovativeness and learning

Sustainable Agriculture Land Management is a unique set of technologies that lead to three agricultural outputs; increased productivity, strengthened resilience and improved mitigation to climate change. The SALM practices build on both traditional and scientific knowledge, and they are easily adopted by farmers. The practices influence small-holder farmers' agricultural productivity within 2 – 5 years. When SALM practices are institutionalised among farming communities, the practices can restore and stabilise soil nutrients and improve livelihoods and improve ecosystems. The adoption of SALM practices increases yields while at the same time conserving and protecting soil. The SALM model has increased knowledge among tea farmers and their SPOs on climate change adaptation and mitigation. This will continue to add value to the Fairtrade brand and in future.

The online platform and the SMS platform is an innovative way of sharing information[1] and transfer knowledge to farmers on how to adapt to climate change. These platforms and other information packages will continue disseminating the results of the project. The SPOs involved in this project have developed post-project plans to continue disseminating the SALM knowledge to more Fairtrade certified producers.

[1] http://adaptea.fairclimatedeal.net/ and https://cloud.frontlinesms.com/login/auth links respectively. http://www.viagroforestry.org/who-we-are/resources/publications/

6. SUSTAINABILITY AND POTENTIAL FOR SCALING UP AND FOLLOW-UP INVESTMENTS

The project activities will continue after the support from the NCF. The project was implemented together with 21 SPOs, which is farmer organisations with extension structures and technical capacities in place. The technical capacities among the SPOs Community Resource Persons and the Lead Farmers will continue to grow due to commitment of SPOs adaptation activity plans and project exit strategy. The SPOs conducted end project plans for sustaining and scaling up project activities.

In the end project plans, the collaboration between Fairtrade and SPOs is maintained under Fairtrade standard certification requirements. The project activities scaling up will be part of the achievements of the standard. The collaboration between Vi Agroforestry, Fairtrade and SPOs will continue. For example, extension work to farmers will expand through the Vi Agroforestry funded project ASOPTHEA in Rwanda. The 21 SPOs has developed scale up strategies and the organisations take full responsibilities of follow up and sustain the project activities. Fourteen SPOs planned to use part of FAITRADE premiums such 10% of premiums to finance project activities and scale up.

Social sustainability: The SALM model enhances farmers to intensify to improve food production, income and nutrition securities. This has business and farmer financial attractiveness to continue.

Institutional sustainability: The project has trained farmer trainers (Community Resource Persons, Lead Farmers and Technical Staff) to remain offering advisory services as well as advocacy and lobbying services to farmers in the project are. The project has strengthened the SPOs in regards to governance, accountability and technical expertise. This has improved their ability to deliver high quality services to their members, making them sustainable and relevant to members.

Gender equity: Tea production is dominated by men in terms of ownership and revenues. Women provide 80 % of the labour in tea production, but entitlement and benefits are significantly lower than men. With SALM and gender trainings, the empowerment of women in tea production improves at all levels. Leading to equal participation and empowerment to increase production sustaining the tea value chains.

Environmental sustainability: The project trained SPOs on climate change, sustainable agriculture land management, agroforestry, gender equality and aspects of governance. These are aspects of sustainable development principles hence environmental sustainability

7. FINANCIAL REPORTING

7.1 General

The bookkeeping is done locally in the project countries. Some of it is done by Vi Agroforestry while other is done by Fairtrade Africa. The consolidation of the reports is then done by the Vi Agroforestry Regional Accountant based in Nairobi, Kenya.

7.2 Costs and funding

The detailed costs and funding for the reporting period have been attached to this report. Please see attachment no. 1 – 16 for further details. A transaction overview has been provided in the file “Financial report to NCF”.

8. CONCLUSIONS AND RECOMMENDATIONS

The project activities has led to increased productivity trends of diversity of crops, resilience and mitigation of climate change. The project baselines and Risk and Opportunity Assessments are critical in informing the choice of local strategies to be used to build adaptation or resilience of agriculture. The adaptation indicators can be developed over such assessment and followed during adaptation period. The development of SALM training manuals, online and SMS information platforms to transfer adaptation knowledge in agriculture to farmers is key for sustainability of knowledge. Also institutional technical capacity development of farmer organisations at all levels is key and it ensures sustainability and adaptation to climate change. The gender equality in tea production is key element of sustainability and poverty reduction. This project showed successful case of adoption of simple technologies that influence social, economic and environmental impacts is a short period of time. The SALM adoption is one of the major solutions in agriculture that is impacted by changing climate. Stakeholder analysis and collaboration is key to implement SALM model in cost-efficient manner. It is a common challenge to have many farmers demanding extension advisory services already constrained by institutional budgets and inadequate technical capacity. With partnerships, linkages and networking technical capacities and budget constraints can be solved.

For SALM projects under tea farming system long-term implementation of SALM practices for a period more than 3 – 5 years is recommended to influence soil and tea productivity. The SALM practices in tea farming system it is recommended to have enough funds to budget and to motivate Community Resource Persons and technical staff to support large number of farmers being trained. It also important to build long-term partnerships, programmes and strengthen government involvement in SALM projects to transfer project knowledge and activities for sustainability once NGOs leave the area.