



ANNEX 5.3 FINAL NARRATIVE REPORT MARCH 2023





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LIST OF ACRONYMS USED IN THE REPORT

AI	Artificial Insemination
AIRTEA	Strengthening Agricultural Knowledge and Innovation Ecosystem for Inclusive Rural Transformation and Livelihoods in Eastern Africa
CAK	Cooperative Alliance of Kenya
CCBI	Co-op Consultancy and Bancassurance Intermediary
DIP	Dairy Innovation platform
DRI	Dairy Research Institute
EU	European Union
FAO	Food and Agricultural Organization
FARA	Forum for Agricultural Research in Africa
ICTs	Information and communication Technology
KAGRC	Kenya Animal Genetic Resources Centre
KALRO	Kenya Agricultural and Livestock Research Organization
KAOP	Kenya Agricultural Observatory Platform
KCC	Kenya Cooperative Creameries
MOU	Memorandum of understanding
MSP	Multi-stakeholder Innovation Platform
TIMP	Technologies, Innovation and Management Practices
ToT	Trainer of Trainers
TV	Television





Description

- 1.1. Name of project leader:
Daniel O. Marube
- 1.2. Title of the action:
Leveraging the benefits of Multi Stakeholders Partnership to Support Rural Women and Youth in Dairy Sector in Kenya
- 1.3. Contract number:FED/2020/421-369.
- 1.4. Start date and end date of the action:
1/02/2022 to 31/07/2024.
- 1.5. Target country(ies) or region(s): 4
selected counties (Nyandarua, Nyeri, Kirinyaga and Embu) in Kenya.
- 1.6. Final beneficiaries &/or target groups (if different) (including numbers of women and men): Final beneficiaries are 10,000 women and 5,000 youths and the target beneficiaries are 2,520 farmers out of whom, women are 1680 and the youths are 840.
- 1.7. Country(ies) in which the activities take place (if different from 1.6): 'Target groups' are the groups/entities who will be directly positively affected by the project at the project purpose level, and 'final beneficiaries' are those who will benefit from the project in the long term at the level of the society or sector at large.

Assessment of the implementation of action activities and its results

EXECUTIVE SUMMARY OF THE ACTION

Please give a global overview of the action's implementation for the whole duration of the project During the reporting period, all preparatory activities for the project implementation were put in place. Project implementation team was identified, beneficiaries and partners engaged. Dairy Innovation platform (DIP) was put in place bringing together Kenya Animal Genetic Resources Centre (KAGRC), Dairy Research Institute of Kenya Agricultural and Livestock Research Organization (KALRO), Co-op Consultancy and Bancassurance Intermediary (CCBI) as well as officials from the National and County Governments of Embu, Nyeri, Kirinyaga and Nyandarua. Multi-stakeholder Innovation Platform (MSP) was formed bringing project implementing partners and beneficiaries together for common understanding of the AIRTEA project and building consensus on implementation framework and timelines. The six beneficiary dairy co-operatives are Nyala in Nyandarua County, Wakulima and Enderasha in Nyeri County, Kirima slopes in Kirinyaga County as well as Mburugu and Mkulima Bora in Embu County. Baseline survey was carried out in the project sites and areas of project intervention identified. The survey findings were used for triangulation of findings of the MIP meeting. The DIP benefitted from a benchmarking tour at KALRO DRI on forage based dairy production. Trainings on dairy best management practices were conducted using a 5-day training curriculum and involved 51 women and 30 youth beneficiaries. Achievement in TOT training was 64% and expected to be complete within two weeks into April. This will allow for cascading of trainings to follower farmers. Training areas covered group dynamics and cohesion, production of basal and supplementary feeds, hydroponic fodder production, feeding practices, breeding, genetics and animal health, milk handling and hygiene, record keeping and financial management, ICT innovations in agribusiness and extension services. Partners within the DIP delivered the trainings using a range of interactive sessions, including lectures, discussions, field excursions and hands-on practical demonstrations. With adoption of technologies, innovations and management practices (TIMPS) discussed during the training sessions, it is expected that milk production will increase, more milk sold through the cooperative societies and hence improved livelihood from enhanced incomes. Uptake of youth and women membership in governance of cooperatives is taking root.

Referring to the updated result matrix, describe the level of achievement of the outcome(s) on both the final beneficiaries &/ or target group (if different) and the situation in the target country or target region which the action addressed.

Please explain if the intervention logic has proved to be valid, including with the possible changes and their justifications presented in earlier reports, comment the likeliness of reaching the final target(s) related to the impact in a near future (specify).

Please indicate any modification that have be brought to the Logical framework matrix since the start of the Action and explain briefly why (complete explanation should be placed in the 2.2 section under the relevant level considered: outcomes, outputs, activities).

RESULTS AND ACTIVITIES

RESULTS

The narrative report should be based on the monitoring and evaluation system set up using as a basis the Logical framework matrix. As such, narrative reports must inform all the indicators defined in the logical framework (result framework). Monitoring and/or evaluation reports relating to the performance of the Action shall be used and mentioned in the narrative report. All the monitoring and/or evaluation reports shall be submitted to the Commission with the Final narrative report.

What is your assessment of the results of the action so far? Include observations on the performance and the achievement of outputs, outcomes and impact and whether the action has had any unforeseen positive or negative results.

The results of the AIRTEA TP_010 actions undertaken is quite commendable in spite of a few challenges encountered in the course of the project implementation. The preliminary activities of the signing of the consortium partnership agreement, the baseline survey and the establishment of a dairy innovation platform was done successfully. The dairy innovation platform enabled the project to bring on board other partners like Kenya Agriculture and Livestock Research Organization (KALRO), Naivasha whose contribution towards the training of women and youth is commendable. The project has also benefitted from KALRO, Dairy Research Institute (DRI) Naivasha through a benchmarking study at their innovation unit dairy demo farm. In addition, the project identified and started working with Agrotunnel International to add their expertise on fodder production

using hydroponics technology and other smart technologies in agriculture. The combination of these expertise led to the smooth implementation of the training of trainers where the majority of the trained participant's expressed that the training was relevant and increased their knowledge on animal husbandry and the use of smart technologies.

As one of them put it in the evaluation at the end of the 5-day training of trainers (TOT), he said... "according to the training there are some issues I learnt, I have never come across from other trainings e.g. planting Napier together with desmodium; spacing of silage maize and planting forage which matures within 6 days..."

Explain how the Action has mainstreamed cross-cutting issues such as promotion of human rights, gender equality, democracy, good governance, children's rights and indigenous peoples, youth, environmental sustainability and combating HIV/AIDS (if there is a strong prevalence in the target country/region).

Development cannot be fully realized when the concerns and experiences of women, men and youth are not integrated in all agriculture and rural development efforts (FAO 2012). Development interventions often fail because they do not take into account the different roles, needs and priorities of men and women (FAO, 2014). In recognition to this development principle, the AIRTEA project deliberately targeted women and youth in organized groups and linked them with dairy Multi-stakeholder Innovation Platform (MSP). One MSP was established bringing strengths from dairy processing, extension, genetics, research and technology development as well as technology solution providers. Further, to ensure environmental sustainability, the project is promoting the establishment of forage and shrub based tree nurseries and planting of the same by the women and youth direct beneficiaries over the project period. For good governance, there is one co-operative that has put in place a policy that enables youths and women's membership in the governing body of the co-operative. A number of women and youths are recognised as champions and they eventually vie for board member status through a competitive electoral process. There are now youths and women in the board of management. It is therefore possible to encourage the other co-operatives to put in place similar policies that will help address inclusivity in co-operative governance which is predominantly male

Referring to the final updated logframe matrix please comment the level of achievement of all the results on the basis of the corresponding current value of the indicators and all the related activities implemented during the reporting period.

- the level of achievement on the basis of the corresponding baseline, target

and current value of the indicators, making reference to the assumptions and risks defined in the Logical framework

The establishment of one Multi-stakeholder Innovation Platforms and linkages along dairy value chain has been successfully achieved as planned with more partners identified and added to the platform namely KALRO Naivasha Dairy Research Institute which is offering dairy advisory services, we have also linked the women and youths to KALRO Embu, as a source for seedlings for fodder production as well as a private stakeholder offering additional ICT innovations in agribusiness and extension services.

Including those of people with disabilities.

For more information, see 'Guidance note on disability and development' at https://ec.europa.eu/europeaid/disability-inclusive-development-cooperation-guidance-note-eu-staff_en

See Guidance on Gender equality at

https://ec.europa.eu/europeaid/toolkit-mainstreaming-gender-equality-ec-development-cooperation_en

See Guideline for environmental integration at

https://ec.europa.eu/europeaid/sectors/economic-growth/environment-and-green-economy/climate-change-and-environment_en

Fifty-one (51) women and 30 youth farmers out of the targeted 80 women and 40 youths respectively trained making a total of 81 or 67.5% ToT's out of the 120 planned. The cascade training to other 2,400 women and youth is yet to be carried out.

The process of contracts/MOU signing between the women and youth with service providers is on-going.

- the activities covered and implemented. Activities should be linked to corresponding output(s) through clear numbering.

OUTCOME 1- Increased involvement of women and youth linking multi-stakeholder innovation platforms to solutions at the county level.

For meaningful development to be achieved, concerns and experiences of women, men and youth are integral in all agriculture and rural development efforts (FAO 2012). Development interventions often fail because they do not take into account the different roles, needs and priorities of men and women (FAO, 2014). In recognition to this development principle, the AIRTEA project deliberately targeted women and youth in organized groups and linked them with dairy Multi-stakeholder Innovation Platform (MSP). One MSP was established bringing strengths from dairy processing, extension, genetics, research and technology development as well as technology solution providers.

Comment on final status of indicators associated to Oc and explain any changes, especially any underperformance; refer to the indicators and assumptions in the Logframe:

(Possibly) intermediary Outcome 1 (iOc1) – “<Title of intermediary Outcome 1>”

Output 1.1 Multi-stakeholder Innovation Platforms and linkages along dairy value chains established and supported.

Following the above assessment of results, please elaborate on all the topics/activities covered.

The government through the Kenya’s Youth Development Policy made a commitment to boost youth employment rates through agriculture and agribusiness but the mechanisms to do so remains scanty. Thus the Multi-Stakeholder Innovation Platform (MSP) is one mechanism, which offers hope in realizing the women and youth government agenda and the sustainability of AIRTEA Project past the project period. Cooperative Alliance of Kenya which is the lead partner in the project, is collaborating with the MSP Partners in addressing these constraints to help boost milk production volumes and value, and to help lower cost of milk production to make it profitable for dairy farmers and create jobs especially for the youths and women. This will boost their meaningful participation in the dairy sector, which will in turn, increase their incomes and improve their livelihoods, food security and safety.

Activity 1.1.1. Setting up DIP platform.

The Dairy Innovation Platform (DIP) was officially launched on 6th of October 2022. It brought together most of the dairy value chain actors namely Performer Agribusiness Ltd, Kenya Animal Genetic Resources Centre (KAGRC) Dairy Research Institute of KALRO, Co-op Consultancy and Bancassurance Intermediary, New KCC as well as officials from the National and County Governments of Embu, Nyeri, Kirinyaga and Nyandarua. These sector players highlighted the challenges facing the women and youth dairy farmers. The main challenges are limited or no access to productive assets, low performing breeds, low quality feeds, inadequate feeds due to effects of climate change, high cost of concentrates, affordable credit, livestock diseases, low milk prices, policy and political risks in terms of changes in the costs, taxes and market access and limited involvement in the value chain activities beyond farms.

The meeting proposed the following solutions to the challenges.



Challenges that turn as opportunities for the project	Proposed solution
Limited or no access to productive assets by women and youth	<ul style="list-style-type: none"> - Civic education - Demystifying cultures that discourage youth and women participation e.g. through sensitization and education. - Deliberate inclusion of gender issues through policy in planning in CIDP, Departmental strategic plans. - Training youth to engage in other value chains (e.g. ICT, training, fodder/forage production, rations provision to farmers, and farmer services like record keeping and AI) in addition to keeping cows. - Boosting access of youth to dairy financing. - Making it lucrative for youth and women or more lucrative than other competing sub-sectors.
Low quality feeds	<ul style="list-style-type: none"> - Upscale and invest more in production of nutrient rich pastures and fodders e.g. Brachiaria, Lucerne etc. - Boosting on research and preferring forage/fodder over concentrates in feed rations.
Low performing breeds.	<ul style="list-style-type: none"> - Upscale on subsidized A.I - Increase access to uptake of breeds that increase milk production while emphasizing on breeds that are favorable to the local climates.
Inadequate feeds due to effects of climate change	<ul style="list-style-type: none"> - Upscale on pasture and fodder production, timely harvesting and conservation
High cost of concentrates	<ul style="list-style-type: none"> - Promote on-farm feed formulation and homemade rations - Support farmers to produce feeds locally and digitize the determining of ration formulations.
Unaffordable credit to farmers	<ul style="list-style-type: none"> - Link farmers to farmer friendly lending institutions with tailor made products
Livestock diseases	<ul style="list-style-type: none"> - Upscale on county livestock diseases surveillance and vaccination programs. - Upscale insurance to farm animals and activities.
Low milk prices	<ul style="list-style-type: none"> - Guaranteed Minimum returns
High cost of labor	<ul style="list-style-type: none"> - Mechanization and digitization. Moving from a volume-based to profitability based focus in fodder, forage, and general dairy farming.
Illegal milk trading by brokers and other traders	<ul style="list-style-type: none"> - Enforcement of the dairy laws and regulations on milk marketing
Policy and political risks (Changes in costs, taxes, market access)	<ul style="list-style-type: none"> - Invest in market intelligence/ Participate in development and implementation of industry regulations

Activity 1.1.2: Setting up of Multi-stakeholder Innovation platform

The meeting at White Rhino Hotel explored the constraints and opportunities in the dairy sector, developed and strengthened partnerships for enhanced collaborative learning among the dairy value chain actors. Additionally, the meeting explored other relevant stakeholders to partner with and mechanisms for cross-learning to increase productivity and incomes for smallholder dairy farms targeting the youth and women.

The forum introduced the AIRTEA Project to six beneficiary dairy co-operatives namely Nyala in Nyandarua County, Wakulima and Enderasha in Nyeri County, Kirima slopes in Kirinyaga County as well as Mburugu and Mkulima Bora in Embu County.

The meeting agreed on the role to be played by each stakeholder for the success of the project. The keynote speakers were drawn from Perfometer Agribusiness Ltd, Kenya Animal Genetic Resource Centre (KAGRC) Dairy Research Institute (DRI) of KALRO, Co-op Consultancy and Bancassurance Intermediary (CCBI) as well as officials from the National and County Governments of Embu, Kirinyaga, Nyeri and Nyandarua.

The topics covered included: Sustainable Dairy Farming – the role of Cooperative Aggregators and



Official Opening by Diana Kendi, County Executive Committee member – Ministry of Trade, Tourism, Culture and Co-operative Development, Nyeri County

innovations; Improving Livestock Productivity Using Breeding Technologies; Forage based dairy systems in Kenya: Lessons from the smallholder dairy innovation support unit by KALRO-Naivasha; Provision of extension services to dairy farmers for improved milk production and increasing milk production through access to affordable financial services, strategic leadership and risk management. Other presentations were made by County Government Officials from Embu, Kirinyaga, Nyandarua and Nyeri. The established Multi Stakeholder Plat-

form is to be cascaded down to the six benefitting co-operative societies in order to provide the beneficiaries with an opportunity for business linkages, sharing of innovations, smart technologies, dissemination of research outputs, transfer of knowledge and skills through training and discussion on dairy policy related issues with the relevant authorities.



Mrs. Anid Kariuki, representing County Director of Co-operatives, Embu County during the MSP meeting

The MSP platform is contributing to alleviating Kenya’s huge youth and women unemployment crises with World Bank showing that about 13.84% and 6% respectively are unemployed, yet youth, for instance, comprise 70% of the entire Kenyan population. Given that low employment rates contribute to high poverty levels and poor livelihoods, there is dire need to alleviate the problem.

Please explain any problems (e.g. delay, cancellation, postponement of activities) which have arisen and how they have been addressed (if applicable)

Prolonged drought has adversely affected some of the target groups. Shortage of feeds has affected milk production with reduced daily intake by dairy cooperatives. In return, reduced milk yield has reduced household access to food and income. Further, costs of maintenance of the dairy

cattle has increased, considering that farmers purchase costly and sometimes low quality feeds. The problems have been addressed through the selection of drought escaping forage crops that can be conserved as hay or silage, purchase of water for limited irrigation of forages to maintain dairy cattle and the use of smart technologies such as hydroponic fodder production and the purchase of feeds to maintain the animals.

Please list any risks that might have jeopardised the realisation of some activities and explain how they have been tackled.

The only risk experienced that might have jeopardised the realization of some activities is the interruption of project implementation during the political elections season from July to September 2022. The peaceful transition

thereafter enabled us to proceed with project implementation successfully. In addition, the current government has a lot of goodwill for the agriculture sector.

Activity 1.1.3. Develop a value chain upgrading plan and Business Plan

A baseline survey was conducted involving the six beneficiary dairy cooperatives. The survey identified actors along the dairy value chain in the four Counties from which the beneficiary cooperatives are drawn from.

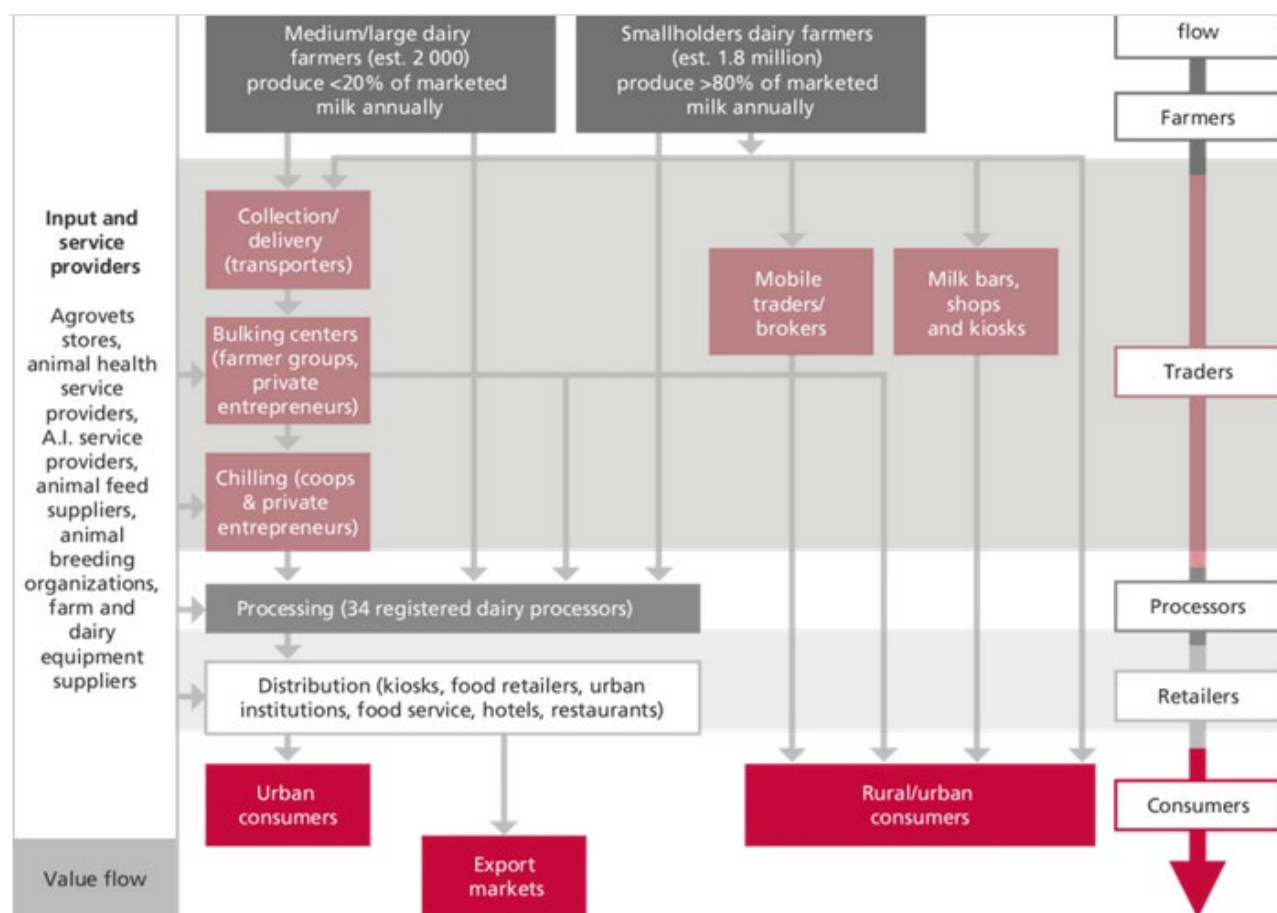


Figure 1: Typical milk value chain in Kenya (Gerald Katothya, 2017)

The next set of activities will be to carry out value chain analysis within the project intervention Counties. The purpose of the analysis will be to gain further understanding the systemic constraints and conditions under which the dairy value chain can achieve higher levels of performance or competitiveness. Value chain analysis will therefore establish ways for improving the competitiveness of value chains with large numbers of

small firms, and also expanding the depth and breadth of benefits generated. The results of the analysis offer industry stakeholders a vision for value chain competitiveness and form the basis for a strategy for minimizing constraints to end market opportunities and advancing sustainable competitiveness.

Activity 1.1.4. Organize/ conduct MSP platform meetings

To keep track of project implementation and put corrective measures where necessary, MSP meetings are planned quarterly. They will serve as forums for monitoring and feedback on project implementation. The next MSP is planned for April 2023.

Output 1.2 Technical Capacities of youth and women involved in multi-stakeholder Innovation Platforms strengthened.

As envisioned, the MSP partners contributed to the training curriculum development to address the subsector challenges in a holistic approach. A 5-day training programme served as a guide in the delivery of the need-based training to the women and youth and the turn up for the training was commendable. Others who joined the women and youth for the 5-day training were the cooperatives extension service providers who appreciated the knowledge and skills imparted.

Following the above assessment of results, please elaborate on all the topics/activities covered.

Activity 1.2.1 Training of women and youth champions on economic services, improved animal nutrition and breeding program. (120 TOTs in place)

Fifty-one women and 30 youth farmers out of the targeted 80 women and 40 youths were trained under Trainer of Trainers (ToT) programme. Training beneficiaries were as follows:

Cooperative	Total ToTs		
	Women	Youth	
Mkulima Bora Dairy	14	6	20
Mburugu Dairy CS	11	7	18
Wakulima Dairy	16	11	27
Kirima Slopes	10	6	16
Total	51	30	81

A further 29 women and 10 youths from Endarasha Farmers and Nyala Dairy Cooperatives in Nyeri and Nyandarua Counties respectively will also be trained. The learning modules aimed at providing participants with in-depth knowledge of the best practices in groups management and dairy farming. Training areas covered group dynamics and cohesion, production of basal and supplementary feeds, hydroponic fodder production, feeding practices, breeding, genetics and animal health, milk handling and hygiene, record keeping and financial management, ICT innovations in agribusiness and extension services. Partners within the Innovation Platform delivered the trainings with a range of interactive sessions, including lectures, discussions, field day excursions and hands-on practical demonstrations.

Activity 1.2.2 Cascade trainings to other women and youth dairy farmers (2,400)

The cascade trainings to other women and youth will continue in the next step after training all the 120 women and youths. Each cooperative will form a group of two trained ToTs who will be facilitated to cascade the trainings for 20 farmers. This exercise will be done twice during the project period resulting to training 2,400 women

and youths as direct beneficiaries. The approach of the training will take the form of discussion groups with the ToTs facilitating the discussion with backstopping offered by cooperative and government extension officers. Where required, experts from the MSP will be called upon for clarification of technical issues.

SO2. Adopt a knowledge sharing mechanism for farmers and other value chain actors

For effective development and implementation of new techniques of production and new ways of working and thinking in agriculture, the sharing and application of agricultural knowledge from research in farming is essential. Farmers, being knowledge recipients and contributors need to apply the newly acquired knowledge in their farming practice. However, farmer feedback on dairy technologies and management practices should be entrenched in knowledge development.

Comment on final status of indicators associated to Oc and explain any changes, especially any underperformance; refer to the indicators and assumptions in the Logframe:
(Possibly) intermediary Outcome 1 (iOc1) – “<Title of intermediary Outcome 1>”

Increased demand for improved forage planting materials: These include Napier grass, desmodium, lucerne, forage sweet potato vines, fodder maize and fodder trees.

Output 2.1 Percentage of stakeholders accessing and using adopted Management Information System (e.g. Msoko).

Within agriculture, mobile tools can help boost crop yields, link producers to buyers, teach farmers best practices, and help users prepare for the

potential effects of climate change. Some of the challenges that face farmers in use of mobile applications are lack of awareness and training to the structuring of the applications. There is need for careful thought on utility of different delivery channels (for example radio, TV or face-to-face contact). This can help contextualise farmer’s needs, therefore, design an intervention that suites different unique circumstances of farmers.

Following the above assessment of results, please elaborate on all the topics/activities covered.

Activity 2.1.1: Adopt and link the dairy farmers to a Management Information System (e.g. Msoko)

The capacity building was done to women and youths on how to access and adopt Management Information Systems. The CAK has developed Cooptech application that will help digitize dairy and coffee value chains. It is useful in obtaining data on number of dairy and coffee farmers, number of dairy cattle, milk production and sales and enable farmers have interaction with dairy experts. Other mobile platforms introduced are Kenya Agricultural Advisory Platform (KAOP) which is an integrated online platform that uses Geo-data from satellites to generate real-time and location specific weather information and use of KALRO selector. The KALRO selector application advises farmers on location specific information on crops to grow, forages to establish and livestock to keep. Farmers were trained on use of KALROs Digital Dairy application that has feed budgeting, records on milk production and sales and breeding records. It allows for query and response as well as developing simple reports. What remains is continuous monitoring the application of these digital apps where it will eventually be established on the percentage of women and youths using the application in our next semi-annual report.

Outcome – “<New interaction with mobile phone applications>”

SO3: Improved profitability and employment opportunities along the dairy value chains.

The AIRTEA project promotes adoption of best agricultural practices that will lead to increased business opportunities in the dairy value chain. For instance, increased use of forages grown on-farm will lead to less off-farm purchases and hence more profitability of the dairy enterprise. Increased milk yield envisaged in the project provides opportunities for bulking activity that the youth are involved in, creating employment.

Comment on final status of indicators associated to Oc and explain any changes, especially any underperformance; refer to the indicators and assumptions in the Logframe:

(Possibly) intermediary Outcome 1 (iOc1) – “<Title of intermediary Outcome 1>”

(Increased business to business partnerships)

Output 3.1 Increased number of contracts/MOU signed along dairy value chain

The project implementation team will keep track of milk volumes in the project sites. From records, the dairy groups will be encouraged to market surplus milk through cooperatives and milk processors using formal contracts and memoranda of understanding. Baseline report indicated that farmers sell milk informally due to cash flow problems. It is expected that through prompt payments and competitive pricing through formal contracts, there will be a reduction in informal marketing.

Following the above assessment of results, please elaborate on all the topics/activities covered.

Activity 3.1.1 Organize Coaching programs and learning exchange visits

Adoption process is known to be slow in agricultural technologies as it is intrinsic. During training, ToTs assembled in selected farms to appreciate adopted practises. To fast track adoption of best practices among participating farmers, learning exchange visits will be held. In selecting farms for cross learning, careful thought will be placed on farmer circumstances for success attribution purposes.

Please explain any problems (e.g. delay, cancellation, postponement of activities) which have arisen and how they have been addressed (if applicable)

Please list any risks that might have jeopardised the realisation of some activities and explain how they have been tackled.

Training on best practices in dairy was the first activity in the project implementation directly involving farmers. The activity had to coincide with the onset of the rains, that slightly delayed. Use of the demonstration farms was incorporated for training. This will elicit demand for improved fodder planting materials and other inputs to support production and conservation.

Activity 3.1.2: Organize Business 2 Business (B2B) meetings with value chain actors to seek partnerships (markets and financial services)

Farmer demand for inputs and credit facilities are immediate in the project implementation. Some of the participating farmer organizations have credit facilities for their members in which recovery is through check off system on milk delivery. However, the upcoming farmer cooperatives will require

arrangements with solution providers to access credit and inputs, for instance in capital intensive investments such as cow housing.

1.1. What has your organisation, or any actor involved in the Action learned from the Action and how has this learning (including evidence from monitoring and evaluations) -been utilised and disseminated? What has and has not worked?

Through interactions with Government and cooperatives extension staff, it is evident that cow housing with cut and carry systems of feeding increases milk production at household level compared to extensive production systems. Key challenges remain diminishing land sizes and enterprise competition at farm level. Use of improved technologies and management practices has potential to revolutionize dairy. There is evidence of fluctuations in milk delivery in cooperatives across seasons such that the dry season production is almost half production during the wet (rain) season. This calls for proper planning in feeds production and conservation to manage cattle throughout the year. Higher costs of milk processing during the dry season is attributed to lower intake volumes. What is learned is that conservation of forages for use during the dry season will help reduce the fluctuations. Previous approaches to extension such as training and visit has become untenable due to reducing extension personnel. Extension appreciates the group and cooperative approach advocated by CAK in reaching out to dairy farmers as the approach is instrumental in reaching many people at a short time. The grouping ideology is further being utilized in ToT trainings and cascading to follower farmers in the project. Through the Multistakeholder Innovation Platform, it is clear that partners have strengths that the project can leverage on. For instance, KALRO has dairy expertise in dairy forages and feed-

ing and has developed free applications that farmers and extension can apply. KAGRC brings expertise in use of breeding catalogues in selection of sires for AI. Farmers are now better placed to make informed decisions in breeding.

Describe if the action will continue after the support from the European Union has ended. Are there any follow up activities envisaged? What will ensure the sustainability of the action? (Sustainability Plan) Improved dairy productivity, use of appropriate dairy genetics, records keeping for profitability assessment and use of mobile phone-based applications, all have relevance to farmers, cooperatives and other dairy stakeholders. These will have relevance post-project period. For sustainability, engagement with cooperative extension is necessary on all these aspects. Some of the cooperatives have credit facilities for members under milk payment check-off system. This arrangement will be useful for farmers in demanding inputs and services in dairy production post project phase. Similarly, cooperatives have arrangements with AI providers or have this service within their portfolio and will be used after the project phase. As part of their routine engagement with farmers, extension staff from County Governments and cooperatives will follow up on technology adoption post project period.

The Logical framework (logframe)

Matrix should evolve during the Action project (i.e. the projects) lifetime: new lines can be added for listing new activities as well as new columns for intermediary targets (milestones) when it is relevant and values will be regularly updated in the column foreseen for reporting purpose (see "Current value"). The term "results" refers to the outputs, outcome(s) and impact of the Action. Kindly fill in the Annex 4 logframe can be revised as necessary (in line with the provisions defined in Article 9.4 of the General Conditions).

RESULTS MATRIX/LOGICAL FRAMEWORK*			Guiding Notes
Name of Organization	Co-operative Alliance of Kenya		
Contact Person	Mr. Daniel O. Marube		
Project Title:	Leveraging the benefits of Multi Stakeholders Partnership to Support Rural Women and Youth in Dairy Sector in Kenya		
Duration	1/02/2022 to 31/07/2024		
Development objective: To improve livelihoods of women and youth dairy farmers in four counties of Kenya.			To increase income and improve livelihood, food and nutrition security and safety of the women and youth dairy farmers in four counties in Kenya.
	Objectively verifiable indicator	Means of verification	Key assumptions
	Percentage increase in household income for participating smallholder rural farmers by the end of 2025	National/county bureau of statistics report	There will be no unrests or restrictions to prevent collection of data
	Percentage Increase in jobs created for youth and women along the dairy value chain by the end of 2025	National/county bureau of statistics report	Political stability will prevail. Youth and women will provide required information

<p>Outcome 1:</p> <p>SO1. Increased involvement of women and youth linking multi-stakeholder innovation platforms to solutions at the county level.</p>		<p>1.1 Percentage of youths in a functional DIP in the dairy value chain</p>	<ul style="list-style-type: none"> - Project report, -AIRTEA M& E platform 	<ul style="list-style-type: none"> - County political stability - Dairy farmers (Women and youth) adopt the improved dairy technology - Increased demand for dairy products 	<p>Outcomes:</p> <p>Improved dairy production skills among youth</p> <p>Improved access and use of digital solutions in dairy</p> <p>Increased milk productivity and sales</p>
		<p>1.2 Percentage increase of women in a functional DIP in the dairy value chain</p>	<ul style="list-style-type: none"> - Project report - AIRTEA M& E platform 		<p>Improved production skills among women</p> <p>Improved access to digital solutions in dairy</p> <p>Increased milk productivity and sales</p>
<p>Output 1.1</p> <p>Multi-stakeholder Innovation Platforms and linkages along dairy value chain established and supported.</p>		<p>1.1.1 Number of Dairy Innovation Platform Established</p>	<ul style="list-style-type: none"> - Signed consortium agreement and minutes of the Innovation Platform meetings held. - Project reports - AIRTEA M&E platform 		<p>Outputs:</p> <p>A five-day training curriculum developed and utilized</p> <p>Training conducted on best dairy farming practices in four cooperatives.</p>
<p>Activity 1.1.1</p> <p>Conduct a baseline study</p>	<p>Report of baseline study</p>	<p>List of participants during interviews</p> <p>Baseline report</p>	<p>Respondents are willing to share data and information willingly</p>		<p>Output activities:</p> <p>Terms of reference for the baseline study developed</p> <p>Bids developed and floated for consultancy services</p> <p>Baseline study carried out as specified in the activity TOR</p> <p>Baseline data collected and collated from the project sites</p> <p>Baseline report compiled and shared.</p>

Activity 1.1.2		Minutes of DIP meetings		
Set up DIP platform		Participants list	Institutions will be willing to participate in DIP platforms	Mix of skills from different organizations forming the DIP
Activity 1.1.3		Record of participants in value chain mapping	Interests of actors within the value chain will not supersede the goal of upgrading process	Develop value chain map
Develop a value chain upgrading plan and Business Plan:		Report of the value chain analysis		Collect data of performance of each node of the map
		Value chain upgrading business plan		
Activity 1.1.4		List of participants	Adequate notice will be issued to participants	Identify meeting dates, agenda and venue
Organize/ conduct MSP platform meetings:		Minutes of MSP meetings		Invite participants
		Project reports		Conduct and keep a record of MSP meetings
Output 1.2				Development of training schedule
Strengthened capacities of youth and women involved in multi-stakeholder Innovation Platforms.	1.2.1 Number of women dairy farmers trained on husbandry practices in dairy farming	- Attendance Sheet and workshop report	Training venues and time schedules will be favourable to women	Timely invitations for training
		- Project reports		Training conducted
	1.2.2 Number of youth farmers trained on husbandry practices in dairy farming	- Workshop report	Youth will be willing to take up new insights during training	
		- Project reports		
	1.2.3 Percentage of women dairy farmers using acquired skills in innovation platforms (1680)	Project reports	Women will be willing to take up new skills in dairy	
	1.2.4 Percentage of Youth dairy farmers using acquired skills in innovation platforms (840)	Project reports	The youth will be willing to take up new skills in dairy	

Activity 1.2.1				
Train women and youth champions on economic services, improved animal nutrition and breeding program. (120 TOTs in place)	Number of follower farmers trained		Training reports	
Activity 1.2.2			Follower farmers will be willing to be trained by TOTs	Groups of follower farmers are formed Trainings are conducted
Kindly insert more rows to accommodate more activities as needed				
Outcome 2:				
S02.Adopt a knowledge sharing mechanism for farmers and other value chain actors				
Output 2.1				
Percentage of stakeholders accessing and using adopted Management Information System (e.g. Msoko)	Knowledge Management strategy and Information System in place		Project Report	
Activity 2.1.1				Appropriate mobile based packages identified
Adopt and link the dairy farmers to a Management Information System (Msoko)	Number of framers using mobile-based applications in dairy	Project reports	Internet access will not be a hindrance to uptake of identified technologies	Selected packages uploaded in farmers phones for use
Kindly include more rows to accommodate more activities as needed				
Outcome 3:				
S03: Improved profitability and employment opportunities along the dairy value chains.	3.1.1Number of new business signed contracts/ MOUs with other value chain actors	Project Report	Conducive agricultural business environment within the participating Counties in Kenya	

Output 3.1		Signed Contracts		Agency problem will not prevail in execution of the contracts		Parties to enter into contract are identified	
Increased number of contracts/MOU signed along dairy value chain.		Project reports				Obligations of each party to the contract are made clear	
Activity 3.1.1							
Organize Coaching programs and learning exchange visits.		Report of exchange visits					
Activity.3.1.2							
Organize Business 2 Business (B2B) meetings with value chain actors to seek		List of participants					
		Project reports					
Kindly include more rows to accommodate more activities as needed							
*Please insert more rows to accommodate more outcomes , outputs and activity according to your project needs							

1.9. Explain how the action has mainstreamed cross-cutting issues such as promotion of human rights, gender equality, democracy, good governance, children’s rights and indigenous peoples, environmental sustainability and combating HIV/AIDS (if there is a strong prevalence in the target country/region)

The establishment of a functional MSP platform was welcome by the partners and beneficiary as it brought together the key value chain actors in one sitting to discuss and resolve real issues together including leveraging on the good practices from amongst themselves. Learning about group dynamics helped the women and youth to know how they can stick together in times of crisis. To mitigate against climate change, the technology of hydroponic fodder production for livestock came in handy and the youths in particular were excited to learn a new technology, never heard of before of growing fodder without soil. Please summarise the results of the feedback received from the beneficiaries and others. (Increased business to business partnerships).

1.10. What has your organisation, or any actor involved in the action learned from the action and how has this learning been utilised and disseminated?

Following the MSP meeting, a number of experiences were brought to the fore. For example, that KALRO was already implementing a similar Project like AIRTEA. And following this knowledge, a benchmarking visit was carried out to KALRO Naivasha to learn more on demo farm establishment, feed budgeting, cow housing and nutrient cycling. The learning has contributed significantly to guiding the implementation of the project including laying strategies for the demo farm establishment in selected cooperatives to serve as learning centres for the women and youth beneficiaries.

Other emerging opportunities for the project in regard to environmental sustainability is the need for the establishment of fodder tree nurseries, bulking of Napier grass, sweet potatoes and Brachiaria through splits. Incorporation of Lucerne and Desmodium in cattle diets ensures cheap source of proteins necessary for high milk

yields. Forage conservation cushion farmers from the vagaries of the dry season.

The women and youth farmer trainers will be involved in the establishment of the demo plots in the identified sites where they will also be guided on how to establish the nurseries for the fodder trees and shrubs at their farms and how to cascade this knowledge to other 2,400 farmers within their outreach.

Including those of people with disabilities. For more information, see 'Guidance note on disability and development' at https://ec.europa.eu/europeaid/disability-inclusive-development-cooperation-guidance-note-eu-staff_en

https://ec.europa.eu/europeaid/toolkit-mainstreaming-gender-equality-ec-development-cooperation_en

Guidelines for environmental integration are available at: https://ec.europa.eu/europeaid/sectors/economic-growth/environment-and-green-economy/climate-change-and-environment_en

Please refer to EC Guidelines on gender equality, disabilities, etc.

1.11 Please list all materials (and number of copies) produced during the action on whatever format (please enclose a copy of each item, except if you have already done so in the past).

- i. Pay sheets – 90 copies
- ii. Attendance sheets – 90 copies
- iii. Notes on hydroponic fodder production from Agrotunnel International – 80 copies (for 4 co-operatives)
- iv. Notes on Key Consideration in dairy animal breeding – 80 copies, Sire Catalogue Interpretation from Kenya Animal Genetic Resource Centre (KAGRC) - 80 copies
- v. Training programs for Mburugu Dairy Co-operative, Mkulima Bora Dairy Co-operative, Kirima slopes dairy Co-operative and Waku-lima Dairy Co-operative. 80 copies, 20 per co-operative
- vi. Notes on Group Dynamics – 80 copies, Forage Conservation – 80 copies and Calf feeding – 80 copies from Kenya Agricultural and Livestock Research Organization (KALRO)

- vii. Notes on Financial literacy and record keeping from Co-op consultancy Bancassurance Intermediary – 80 copies
- viii. Notes on tech-solution in agriculture from Agrotunnel International – 80 copies
- ix. Notes on ICT in Agriculture – 40 copies
- x. Fact sheets 80 copies
- xi. Notebooks – 120 notebooks
- xii. Stationeries - assorted

Please state how the items produced are being distributed and to whom

The materials were distributed to the 81 TOT trainees during the training sessions by CAK representatives.

1.12 Please list all contracts (works, supplies, services) above EUR 10 000 awarded for the implementation of the action for the whole implementation period giving for each contract the amount, the name of the contractor and a brief description on how the contractor was selected, including compliance with EU restrictive measures.

There were no such contracts awarded.

Beneficiary	County	Relationship
Mburugu Dairy	Embu	The relationship with Mburugu Dairy is going on well. The Board is supportive in that they acquired an asset, land, following the introduction of the AIRTEA Project to be used for the establishment of the demo farm for use as a training ground for other farmers by the trained women and youth. In addition, the selection of the women and youth participating in the AIRTEA Project took into account the geographical coverage and location of the farmers being within a radius of 1 to 2 kilometres from the co-operative meaning the project impact will be widespread leading to sustainability past the project period.
Mkulima Bora Dairy	Embu	The relationship with Mkulima Bora Dairy is going on well. The Board is supportive to the project. In addition the selection of the women and youth participating in the AIRTEA Project took into account that the men have left dairy farming exclusively for the women to serve as a source of income for their social needs. The geographical coverage and location of the farmers is within a radius of 1 to 3 kilometres from the co-operative meaning the project impact will be widespread leading to sustainability past the project period.
Kirima Slopes Dairy	Kirinyaga	The relationship with Kirima Slopes Dairy is going on well. The Chairperson of the Board is supportive to the project. In addition the selection of the women and youth participating in the AIRTEA Project took into account that the men have left dairy farming for the women to serve as a source of income for their social needs while men draw their livelihood from coffee and tea.
Wakulima Dairy	Nyeri	The relationship with Wakulima Dairy is going on well. The Chairman and two Board members were in attendance as keynote speakers to motivate the women and youths. They indicated that they have the Wakulima Dairy Policy on inclusivity for women and youth and were ready to give them opportunities for leadership in the dairy no matter the age. They appreciated the AIRTEA Project and saw it as a God given solution for encouraging the youths to embrace dairy farming as a source of income and for improving livelihoods.
Enderasha Farmers Co-operative Society	Nyeri	The relationship with Enderasha Farmers Co-operative is moving in the right direction where the co-operative has identified the beneficiaries to the project and they look forward to empowering the women and the young farmers to undertake zero grazing for increased milk production and to move from free range style of dairy farming where they do not give the animals concentrates and supplements. It is good to note that the low milk production is as a result of poor feeding of the good breeds they have.
Nyala Dairy	Nyandarua	<p>The relationship with Nyala Dairy is moving in the right direction where the co-operative has identified the beneficiaries to the project and they look forward to empowering the women and the young farmers to undertake zero grazing for increased milk production and to move from free range style of dairy farming where they do not give the animals concentrates and supplements. It is good to note that the low milk production is as a result of poor feeding of the good breeds they have.</p> <p>However the biggest challenge with Nyala is the long distances covered from one household to another and to the co-operative with some beneficiaries coming from as far as 30kms away.</p>

Is the above partnership between the beneficiaries of the action and implementers going to continue after the end of this action? If yes, how? If no, why?

Yes, the partnership between the beneficiaries and the implementers will continue after the end of the project given the interest of solving the common challenge of food insecurity and adverse effects of climate change. This is possible through leveraging best practices inherent in the MSP platform. There is also the government good will where H.E the President has pledged to invest at least 500 billion shillings (\$4.2 billion) in agriculture and small businesses over five years. That investment would include providing animal feed and seeds to boost yields in line with the Bottom-Up economic model. The Co-operative Alliance of Kenya will ensure that the farmers' interests are captured through the co-operative leader's participation in the on-going dialogue for the operationalization of the bottom-up economic model.

How would you assess the relationship between your organisation and State authorities in the action countries? How has this relationship affected the action?

The Co-operative Alliance of Kenya has positioned itself very well as the spokesman and voice of the co-operative movement and the State has recognized this. The CAK in consultation with the Government convenes quarterly leadership forums where discussions revolve around legislation of policy, legal and regulatory framework in order to create an enabling environment for spurring the social and economic growth for the sector. For example the following forums were convened in consultation and participation of the national and county governments in the year 2022;-

Co-operative Leaders Meeting to Review and Discuss the Implementation of Regulations for the National Co-operative Bill 2021 was held on 30th March to 2nd April 2022 at Amboseli National Park, Oltukai Lodge



Harnessing East Africa Potential through Regional Co-operatives Collaboration to Uptake Opportunities of East Africa Community was held on 20th - 24th September, 2022 At Mt. Meru Hotel Arusha - Tanzania and attended by co-operative leaders from Tanzania.

Consultative Meeting on Realignment of Cooperative Societies Activities with the New Government for Greater Impact took place from 16th - 19th November 2022 at Sawela Lodges, Moi South Lake Road, Naivasha. These are a reflection of the cordial working relations existing between CAK and the State.



The former President, H. E. UHURU KENYATTA, CGH, graced the International Co-operative Day celebrations held on 4th July, 2022 as the Guest of Honor.

Where applicable, describe your relationship with any other organisations involved in implementing the action: Not Applicable.

Associate(s) (if any)

Contractor(s) (if any)

Final beneficiaries and target groups

Other third parties involved (including other donors, other government agencies or local government units, NGOs, etc.)

Where applicable, outline any links and synergies you have developed with other actions.

Not Applicable

If your organisation has received previous EU grants in view of strengthening the same target group, in how far has this action been able to build upon/complement the previous one(s)? (List all previous relevant EU grants).

The CAK received the EU grants for the AIRTEA Project as the first grant. Hence there are no previous grants to report on.

How do you evaluate cooperation with the services of the contracting authority which is icipe? Not Applicable.

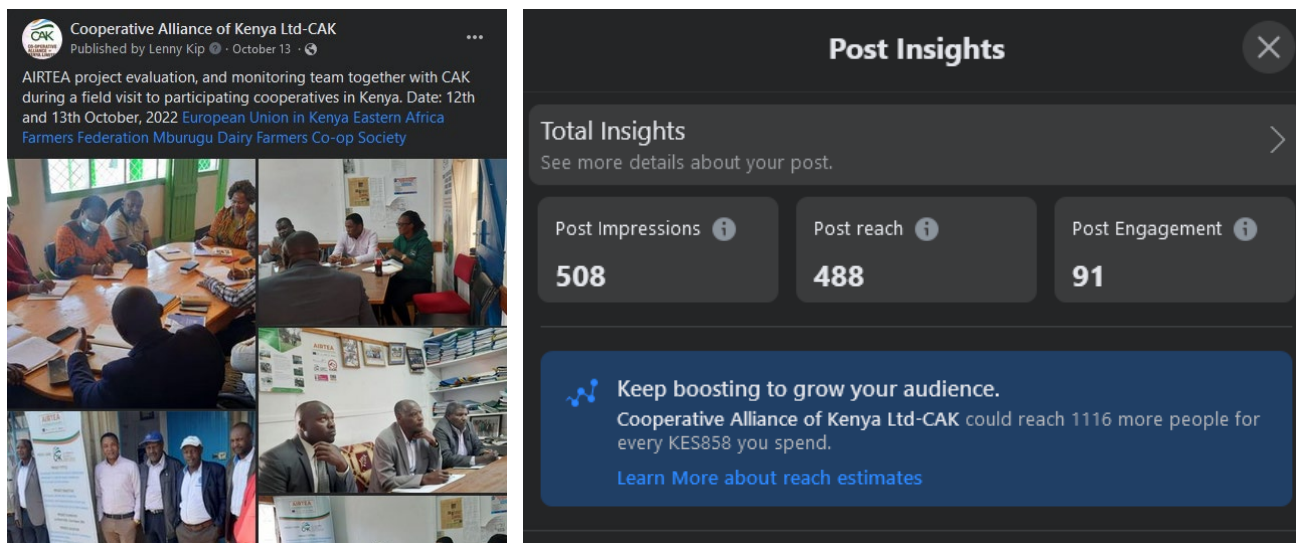
3.8 Where applicable, include a traineeship report on each traineeship which ended in the reporting period to be prepared by the trainee including the result of the traineeship and assessment of the qualifications obtained by the trainee with a view to his/her future employment

No traineeship was undertaken during the AIRTEA Project implementation period.

Visibility

How is the visibility of the EU, FARA and the consortium partners' contribution being ensured in the action?

AIRTEA TP_010 ensured that the banners, Fact Sheets, Stickers the writing materials and all communication materials to our partners and beneficiaries contained the logos of the AIRTEA Project and in this way we increased the visibility of EU, FARA and the consortium partners. In addition to this, we succeeded in developing a documentary where we recognized the support of EU, FARA and the consortium partners. Another way that we increased the visibility of the EU, FARA and the consortium partners was the use of social media to post the activities as they were going on for the women and young people as well as including the hashtags for our partners and the participating cooperatives in every post.



The consortium partners may wish to publicise the results of actions. Do you have any objection to this report being published on the EuropeAid website? If so, please state your objections here.


We have no objection to this report being published in the EuropeAid website.

Location of records, accounting and supporting documents

Please indicate in a table the location of records, accounting and supporting documents for each beneficiary and affiliated entity entitled to incur costs.

The AIRTEA Project TP_010 was coordinated and implemented by the lead partner, the Co-operative Alliance of Kenya with no transfer of funds to another entity.

Name of the contact person for the action: **DANIEL MARIUBE**

Signature:  Location: **CAK - NAIROBI**

Date report due: **27 MARCH, 2023** Date report sent: **4th APRIL, 2023**



CONTACT US

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