



Uhira Wunguke-Irrigate to Win Project

Knowledge Sharing and Project Closure Event Report



Dereva Hotel, Rwamagana, Rwanda 8 September 2022

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Executive Summary

Since 2018, the European Cooperative for Rural Development (EUCORD) in partnership with ICCO Cooperation (now Cordaid) and funded by the Achmea Foundation, implemented the Uhira Wunguke or Irrigate to Win Project. The project's goal was to pilot sustainable financing solutions with 19 cooperatives for the introduction of water efficient irrigation technologies in drought prone areas of the Eastern Province of Rwanda. The grant targeted 19 cooperatives in eastern Rwanda, to procure the equipment through a loan rather than a donation. The project addressed market constraints by improving the productivity of food and high value crops, introducing affordable irrigation technologies, and securing financing windows for farmers. The overall result strengthened the resilience of agricultural activities and countered the negative impact of climate change in the project intervention area.

As the project has come to its closure, EUCORD and Cordaid organized a Knowledge Sharing & Project Closure Event. The purpose of the event was to communicate and share achievements and lessons learnt for the sustainability of small-scale irrigation, horticultural value chains and agribusiness in drought prone areas of Eastern Province of Rwanda.

The event was held on September 8th, 2022 at Dereva Hotel in Rwamagana. All stakeholders and partners involved in the Uhira Wunguke project's implementation, as well as international organizations and public and private Institutions gathered for the occasion.

This report records the proceedings of the event.

Acronyms

AIF Africa Improved Food

BPR Banque Populaire du Rwanda

CREATE Community Revenue Enhancement through Agricultural Technology Extension

GoR Government of Rwanda

JADF Joint Action Development Forum

EAX East Africa Exchange

EUCORD European Cooperative for Rural Development

FONERWA Fonds National de l'Environnement (The Rwanda Green Fund)

GAP Good Agricultural Practices

ICCO Interchurch Organization for Development Cooperation

MFI Micro Finance Institutions

FI Finance Institutions

MINAGRI Ministry of Agriculture and Animal Resources

NAEB National Agricultural Export Development Board

RAB Rwanda Agriculture and Animal Resources Development Board

SACCO Saving and Credit Cooperative Organization

SAIP Sustainable Agricultural Intensification and Food Security Project

SMEs Small and Medium Enterprises

SSIT Small Scale Irrigation Technology

PPP Public Private Partnership

Background

In recent years, weather patterns in Rwanda have become increasingly erratic, resulting in reduced yields and crop failures due to changes in rainfall distribution. To address this challenge, EUCORD in collaboration with IFC and as part of the CREATE project, piloted different low to medium cost irrigation technologies, to show how resilience to climate change can be built at the farm level. It was learned that several factors hinder the widespread adoption of irrigation technologies (for smallholder farmers).

- Unfamiliarity with available low-cost irrigation technologies and associated benefits
- Lack of private sector involvement in the irrigation sector
- Lack of financial products to support investments in irrigation
- Poor access to finance by cooperatives and farmers
- Lack of management capacity and bankability of cooperatives
- Lack of capacity in production, post-harvest and marketing
- Poor market linkages

To overcome these limitations, EUCORD designed the Uhira Wunguke- Irrigate to Win Project. The goal was to pilot sustainable financing solutions with 19 cooperatives for the introduction of water efficient irrigation technologies in Eastern Rwanda. The overall expected impact was to strengthen the resilience of agriculture in Rwanda by increasing the area of land under improved irrigation by 150 ha over 3 years.

The combined services supported farmers in breaking the vicious cycle caused by the lack of access to markets, financing and, irrigation equipment, restraining factors to agricultural growth:

- 1. **Access to finance**: advise on financing models /solutions; linking cooperatives to MFIs; building financial capacities of cooperative members.
- Access to irrigation: on-farm demonstrations of irrigation equipment; advise on low cost and context customized water efficient irrigation technologies; linking farmers to irrigation service providers; stimulate supply chain of low-cost irrigation technologies, training farmers on use and maintenance of irrigation equipment.
- 3. **Access to markets**: capacity building on agricultural practices to improve production and marketing, management and finance to better access markets; linking farmers to markets/buyers.

Agenda

Time	Topic	Responsible			
09:30	Guests arrive	All			
9:45	Welcoming guests and setting the stage	Revocatus Shyaka, Project Manager,			
		Cordaid. Event Moderator			
10:05	Opening remarks	Jean Claude Muhirwa, EUCORD			
		Project Coordinator.			
10:10	Video on most significant	EUCORD			
	changes(irrigation, access to finance,				
10.15	access to market)				
10:15	Welcome remarks	Rwamagana District			
10:30	Group photo	Event Moderator			
10:35	Health break	Dereva Hotel			
11:05	Spotlight on project results and lessons	Niels Hanssens, EUCORD Executive			
	learned	Director			
		Patrick Birasa, CORDAID Country			
		Representative			
11:40	Irrigation and access to finance status,	Egide Kanamugire, SSIT Program			
11.50	challenge and opportunities in Rwanda	Coordinator, RAB			
11:50	Panel, Q & A	Egide Kanamugire, RAB			
		Guillaume Manishimwe, EUCORD			
		Munyaneza, COPEDU PLC			
		Patrick Birasa, Cordaid			
		Jean Marie Vianney Nyamurasa,			
		Duhuzimbaraga cooperative			
13:00	Wayforward	Jean Claude Muhirwa, EUCORD			
13: 05	Certificate award to cooperatives	Niels Hanssens, EUCORD			
13: 15	Closing remarks	Rwamagana District			
13:30	Lunch	Dereva Hotel			
13:45	Cocktail and networking	EUCORD- All			

Irrigation, Horticulture and Agribusiness challenges - Opportunities and Lessons Learned during the Irrigate to Win Project



UHIRA WUNGUKE Knowledge Sharing & Project Closure Event, 8 September 2022

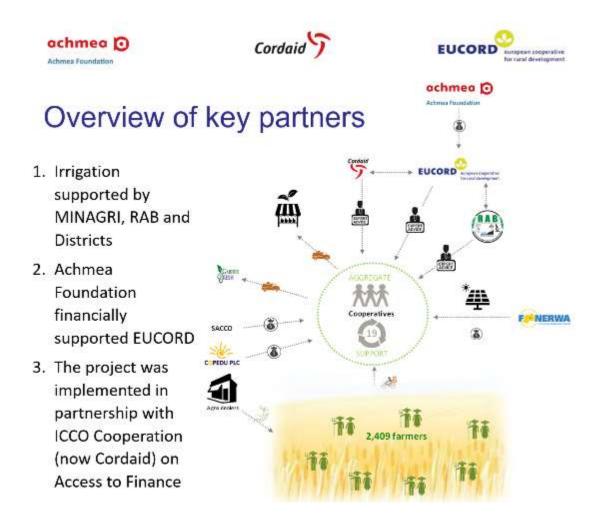






Irrigate to Win: Activities

- Access to finance: advise on financing models /solutions; linking cooperatives to MFIs; building financial capacity of cooperative members.
- Access to irrigation: on-farm demonstrations of irrigation equipment; advise on low cost and water efficient irrigation technologies; linking farmers to irrigation service providers; training farmers on use and maintenance of irrigation equipment.
- Access to markets: capacity building on agricultural practices to improve production and marketing, management and finance to better access markets; linking farmers to markets/buyers.



Key Achievements

- 124 ha under improved irrigation including 44 ha under portable solar powered irrigation
- USD 174,750 mobilized for irrigation equipment, cold storage and agricultural inputs
- 18 Irrigation systems purchased by cooperative farmers
- additional net income of 1,363 to 7,381 USD/ha/year
- 2,058 farmers including 982 women (48%) from 19 cooperatives trained on vegetable production and GAP
- 117 farmers including 51 women (43%) from 19 cooperatives trained on financial management and marketing
- 19 cooperatives trained on irrigation use, operation, maintenance and management

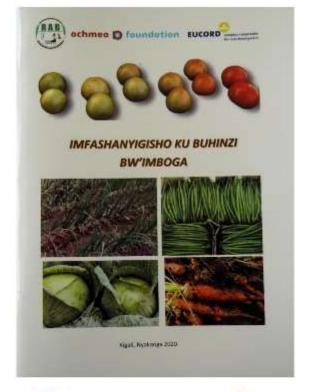








Training manual on vegetable production









FONERWA funded the Growing with Change Project thanks to UHIRA WUNGUKE's success

- Goal: to support farmers' cooperatives to sustainably increase quantity and quality of high value crops by promoting irrigation systems with zero GHG emissions, solar energy cold rooms and maize drying facilities for post-harvest losses reduction.
- Specifically, the projects aimed to promote the use of climate resilient agriculture technologies to help farming households cope with the changing climate.
- The project funded by Rwanda Green Fund and co-funded by Achmea Foundation established 24 solar powered irrigation systems, constructed 2 solar dryers and 2 cold rooms to reduce post harvest handling losses in drought prone areas of the Eastern Province of Rwanda





Key Challenges and Mitigation

Challenges	Mitigation SAIP & FONERWA funded projects	
Insufficient subsidies for small scale irrigation in districts		
Lack of reliable international market as a result of Covid-19 consequences	Sales to local buyers (Dereva Hotel, Silent Hill Hotel, North Harvest, Park & Pick, Pride Farms) & crop diversification (e.g. introduction of passion fruit)	
Farmers are reluctant to invest in expensive irrigation materials because of market uncertainties	Adoption of small-scale irrigation systems with minimum equipment such as motor pumps with hose pipes	

Lessons Learned

- SSIT associated with high value crops is profitable and generates an additional net income between 1,363 to 7,381 USD/ha/year.
- Supplemental irrigation in A season in drought prone areas of the Eastern province helps to improve crop yield.
- In 2022 A, average maize yield with supplemental irrigation was 6.5 ton/ha compared to 4 ton/ha w/o irrigation, a yield increase of 62.5%.
- The involvement of local government is key for successful implementation of the project in rural areas and for the ownership and sustainability of the project.
- The project has proven that smallholders can be linked profitably to export markets. A higher standard of quality and consistency is required but cooperatives can help. There seems a fair bit of room for further professionalization and scaling of cooperatives.











Lessons Learned, cont.

Where further support is needed:

- Government to continue support harvest and post-harvest handling infrastructure as it is doing for inputs
- Farmers organizations need to be more business-oriented (management skills training)
- Private sector needs to be strengthened to access international markets









Quotes from Key Informants

"The goals of the Uhira
Wunguke project are perfectly
aligned with the Government
objectives." (Innocent
Matabishi – Agribusiness
policy manager Dutch
Embassy)

"Irrigate to Win strengthens the weakest link in the value chain. The business model works " (Patrick Birasa, Country Manager Cordaid)

"Before contract farming exporters were saying there is no production and farmers were claiming there is no market!" (Fabian Ngoga, Project Manager CREATE)

"The key success factor in expanding the number of hectares under irrigation is the affordability for farmers." (Salim Mbarushimana Ignite Power)

"For crops to be exported there is quite a bit more compliance involved, also when it comes to irrigation " (Innocent Nzabamwita – Irrigation Specialist RAB/SAIP)







Jeannette MUKARUKUNDO & Olive Kabatesi, Members of DUHUZIMBARAGA MUHAZI Cooperative, Rwamagana

"The project strengthened our capacity in good agricultural practices for vegetable production, linked us with the market and finance. Thanks to the project we acquired irrigation equipment worth \$3,944 and we can now produce vegetables in our greenhouse all year around. We are supplying 350 kg of cucumber to PRIDE farms every week and we expect to do so for 8 months/year."

"Our Cooperative got a loan of \$6,000 from UMURENGE SACCO to extend our activities and we shifted from subsistence agriculture to a business-oriented agriculture due to EUCORD's and Achmea Foundation's technical and financial support."









































Cordaid's contribution to Uhira Wunguke

By Patrick Birasa, Cordaid Country Representative

(LANGUAGE COULD BE IMPROVED, BUT IF IT'S A QUOTE I MIGHT LEAVE IT LIKE THIS)

ICCO Cooperation (now Cordaid since 2021), brought its expertise to the Uhira Wunguke project for the successful implementation of the project. Its key expertise is categorized into 3 areas:

- 1. Access to finance
- 2. Capacity building of Entrepreneurs / Coops/ SMEs
- 3. Inclusion of marginalized groups

Access to Finance

- Capacity building of FIs:
 - Market assessment
 - Product development
 - Risk management
 - o Capital mobilization
 - o Business planning
 - Digitalization
- Financial education
- Savings mobilization

Capacity building of Entrepreneurs / Coops/ SMEs

- Governance & business planning
- Market linkages
- Business Development Services
- Value Chain Development

Inclusion of marginalized groups

- Financial service development & linkage for refugees, youth, women
- Business skilling of marginalized groups for economic empowerment

Thanks to ICCO:

- 18 cooperatives were facilitated to access loans from COPEDU PLC and SACCO
- 2 Studies guiding asset loan products were developed: vegetable value chain finance analysis, irrigation kits and working capital finance product
- 6 financial linkage workshops were organized, which brought together financial institutions and cooperatives
- All 19 cooperatives were able to access financial education

Uhira Wunguke's contribution to the development of the intervention area

By Ukizuru Innocent, Rwamagana District Agronomist

The Uhira Wunguke Project was piloted by EUCORD and ICCO Cooperation (now Cordaid), in two districts of drought prone areas of the Eastern Province, Rwamagana and Kayonza. EUCORD already implemented a previous project in the same region, the Community Revenue Enhancement through Agricultural Technology Extension (CREATE) project. By connecting smallholder farmers to urban markets, restoring essential social services and rebuilding local community cohesion and infrastructure, the projects ought to boost agricultural production and increase food security. The project contributed to the expansion of maize productivity in the region: among the 50 supported cooperatives, the average maize yields rose from 1.8 to 4.5 tons/ha. The project also raised awareness on the importance of good post-harvest management to produce a flatoxin-free maize, leading to improved maize quality and a reduced amount of rejected maize. The project strengthened the maize value chain, from production to marketing, through the introduction of contract farming with reliable buyers such as Prodev / Minimex, AIF, EAX.

The beneficiary farmers in the area saw an increase in income as a result of the improvements in maize quality and quantity, as well as the organization of the value chain. However, the region's dry spells and erratic rainfall presented another unresolved challenge hampering agriculture and livelihoods in general.

Therefore, Uhira Wunguke came as a remedy through its combined services to support farmers in breaking the never-ending downward spiral caused by the lack of access to irrigation, markets and financing, which results in weak agricultural growth in the project intervention area.

EUCORD and its Uhira Wunguke Project are therefore appreciated for their contribution to district development, and for transforming farmers' livelihoods in the project intervention area. Thanks to the project activities, the district was twice ranked first in the district performance contract evaluation during the project lifetime. As a result, EUCORD received every year an official certificate of appreciation from the Rwamagana and Kayonza District as symbol of an international NGO that makes change in the life of rural communities.

Therefore, farmers are recommended to sustainably manage the project achievements and to scale up the activities as they become self-resilient.

Panel Discussion

Panelists

- 1. Patrick Birasa, Cordaid Country Representative
- 2. Egide Kanamugire, RAB SSIT Program Coordinator
- 3. Ferdinand Munyaneza, COPEDU PLC, Rwamagana Branch Manager
- 4. Jean Marie Vianney Nyamurasa, President of Duhuzimbaraga Muhazi Cooperative, Rwamagana
- 5. Guillaume Manishimwe, EUCORD field Agronomist, Kayonza District

What was the role of NGOs and PPP partnership in the successful implementation of the project?

The role of NGOs, namely EUCORD and Cordaid, started with project design. The project was developed by EUCORD based on the experience and lessons learnt from the previous project, CREATE.ICCO (now Cordaid) was then involved in the project's implementation due to its expertise in assisting entrepreneurs, cooperatives and SMEs in gaining access to financing. The entire project was carried out through Public-Private-Partnership. The Rwamagana and Kayonza Districts were primarily involved through the Joint Action Development Forum (JADF) planning, Monitoring and Evaluation meetings and activities. The private sector was mainly involved in activities related to access to finance and access to markets. Micro Finance Institutions, such as COPEDU PLC, SACCO and BPR Bank Plc, actively participated. Many exporters, including Garden Fresh and other local buyers, private companies and hotels signed contract farming with farmers. The public sector was also involved. Cooperatives operating on the Uhira Wunguke Project were offered 50% subsidies to cover irrigation equipment costs, thanks to the help of MINAGRI, SAIP and RAB. They also participated in building the capacity of cooperatives for the operation and maintenance of irrigation infrastructure. RAB made a significant contribution in strengthening farmers' abilities to produce vegetables and engage in good agricultural practices. Additionally, irrigation service providers, such as GCTC and Ignite Power Rwanda Ltd, were active in the business of providing irrigation infrastructures to farmers' cooperatives. Finally, cooperatives played a significant role in project planning, implementation, and monitoring and evaluation. The project turned into a success thanks to the synergy, contribution and active participation of all parties involved.

What are Rwanda's irrigation and access to finance status, challenges and opportunities?

The GoR's Small-Scale Irrigation Technology (SSIT) program aims to support smallholder farmers in overcoming the financial and knowledge-related constraints associated with small-scale irrigation development. The program was launched in 2015 with the goal of developing 25,000 ha of irrigated land by 2024. The main component of the SSIT program is the provision of a partial subsidy for farmers to acquire irrigation kits (pumps and water distribution technologies). The idea is that providing smallholder farmers in Rwanda with subsidized access to affordable irrigation technologies will increase their agricultural productivity and alleviate the impact of climate change-induced droughts.

Currently 20,787.5 hectares are under small scale irrigation in Rwanda. The Sustainable Agricultural Intensification and Food Security Project (SAIP), which is working in 9 districts in

Rwanda, is subsidizing 50 per cent of irrigation equipment. The project is also subsidizing 75 per cent of the total cost of irrigation equipment powered by solar energy in an effort to encourage the use of green energy and reduce greenhouse gas emissions from agriculture.

In addition, Ignite Power Rwanda Ltd subsidizes another 20 per cent, thus farmers can purchase solar irrigation equipment paying only 5 per cent of their total value when working with the Company.

How MFIs worked with the project?

COPEDU Plc was the first Micro Finance Institution to offer agricultural loans to smallholder farmers in project intervention areas, which was risky at that time. However, due to strengthened financial and management capacity of farmers, cooperative good governance and leadership, planning and budgeting, as well as good agricultural practices, smallholder farmers became business oriented and were able to reimburse loans and access to more funds. Nowadays, the farmers are trusted by almost all micro-finance institutions and banks.

How farmers can guarantee the project sustainability?

Firstly, the project is sustainable since it was designed based on existing problems addressed by farmers themselves and from the lessons learnt from the previous CREATE project. Further, it was implemented by farmers themselves with technical, financial support and coordination from EUCORD and other partners and stakeholders. Farmers participated in seasonal /activities planning, seasonal monitoring and evaluation. The project design, implementation, monitoring and evaluation ensured that all interventions were gender and age responsive and considered the specific needs of men, women and youth, as well as the gendered inequalities that may prevent women and other vulnerable groups from benefitting from interventions.

The capacity of local technicians and farmers on operation, use, maintenance and management of irrigation and post-harvest handling infrastructures was strengthened through trainings, demonstrations, field days and open days.

The project built the capacity of local technicians, farmer promoters and farmers on Global Agricultural Practices (GAP), quality of legumes and vegetables for export, improving crop productivity and ultimately household nutrition and farmers income.

Additionally, smallholder farmers' financial and management capacity was developed and strengthened to support and scale up sustainable climate-resilient agricultural techniques. Cooperatives and their members have been trained on leadership and financial management to improve their capacity to appear financially reliable to lending organizations. EUCORD has gained experience carrying out leadership trainings to its cooperative members within the framework of the CREATE project, using the latest "Scope Insight assessment" of cooperatives that revealed weaknesses, particularly in the areas of governance and financial management. Sessions covered topics such as business plan, members hip task and responsibility, cooperative leadership/governance and marketing, financial management and operations.

Moreover, cooperatives were given access to an operation and maintenance fund for irrigation and postharvest handling infrastructures. Each season, the fund receives 5% of net income. As a result, it will be possible to sustainably use and maintain the equipment.

Lastly, cooperatives will take advantage of RAB/SAIP's offer to subsidize 75% of solar irrigation equipment and of an extra 20% subsidy by Ignite Power Rwanda Ltd to extend the area under irrigation.

How is the status of access to market for farmers cooperatives involved in the project and what are your future plans?

Prior to Covid-19, six farming contracts were signed between farmers and exporters for fresh beans. However, several lockdowns and mobility restrictions have occurred during the pandemic. Air traffic has been disrupted, while it was the sole mode of transport available for the export of vegetables. The access to the international market was seriously affected. As a result, most of the buyers / exporters were unable to provide contracts to farmers. Farmers have also been reluctant to take loans, while they are uncertain about the market. As a response to the unreliable export market due to Covid-19, the diversification of vegetables (instead of only green beans) was planned as an alternative strategy, having impacted positively the project and its stakeholders. Efforts were made to link cooperatives with the local market and 13 new local contracts were negotiated and signed between cooperatives and local buyers. Today, one cooperative using greenhouses in Rwamagana has a permanent contract with Pride Farms to grow organic vegetables. Exporters also start to resume their activities. Contracts for exports with cooperatives are expected to be signed in the following season. However, cooperatives will need to improve standards and quality of their products while maintaining a steady supply. A notable example that it is possible for smallholder cooperatives to be linked profitably to export markets is the case of six cooperatives that managed to supply to exporters. There appears to be space for further professionalization and scaling of cooperatives.

Project Way Forward

While the Uhira Wunguke Project comes to its end, EUCORD is still active on ground. Field agronomists are ready to provide cooperative with technical support when needed. However, farmers will then need to sustainably manage the infrastructure created by the project and to demonstrate their willingness to scale up project activities.

Interestingly, EUCORD received a grant from Achmea Foundation to implement a new project on Sunflower Value Chain development in Rwanda. The project is expected to be implemented in Kayonza, Rwamagana, Rulindo and Ruhango District. The project's goal is to enhance the livelihoods of smallholder farmers through income generation from sunflower production, processing and use in Rwanda.

The project is a direct response to (i) the low income of smallholder farmers in Rwanda who practice subsistence agriculture; and (ii) the import of raw materials needed by local food processing plants, especially edible oil refineries, in response to the population's demand for edible oil. At present, Rwanda imports the majority of its edible oil. The situation was made worse by the conflict between Russia and Ukraine, from which large amounts of sunflower were imported. As a result, their price dramatically increased. If nothing is done, the smallholder farmers already living in poor conditions will be further impoverished.

The project will benefit farmers' households who practice subsistence agriculture in the same Uhira Wunguke intervention area (Rwamagana, Kayonza), as well as in the districts of Rulindo, and Ruhango. At national level, the project will reduce the dependency on imported cooking oil, decreasing or stabilizing in turn the price of imported oil. In addition to the edible oil extracted from sunflower seeds, the project could explore market opportunities for the "whole seed" (fruit) that is sold as a snack food, either raw or after being roasted in ovens. As for household consumption, processing in the form of porridge flour or as substitute for peanuts is also an option. Sunflower residues can be used as substrates for mushroom and as raw material for animal feed production.

Sunflower cultivation has a positive impact on biodiversity as it attracts bees and other insects crucial for crop pollination. During the A and B season, sunflower can be cultivated as a rain-fed crop. Sunflower production does not present any risk to food security, as it can be intercropped with soya and beans in season B. The advantages of sunflower compared to other crops is that sunflower is not demanding in terms of seed, water and fertilizer requirement. As a result, the Uhira Wunguke farmers will benefit from the project as well.

Certificate of Appreciation

Certificates of appreciation were issued by EUCORD, Cordaid, Districts and RAB to cooperatives involved in Uhira Wunguke Project. In total 18 cooperatives. The list of cooperatives that received certificate is attached to the Annex 1.

ANNEX

Annex 1: List of cooperatives that received a certificate of appreciation

Nr	Cooperative	District	Sector
1	TWITEZIMBERE NYABOMBE	Kayonza	Gahini
2	DUTERIMBERE SHIRINYOTA	Kayonza	Nyamirama
3	TWISUNGANE MIGERA	Kayonza	Mwiri
4	KARAMBO1	Kayonza	Mukarange
5	ABIBUMBYE	Kayonza	Rukara
6	ABAJENEZA	Kayonza	Nyamirama
7	TWUNGUBUMWE	Kayonza	Murundi
8	ABIZERANYE-KABARONDO	Kayonza	Kabarondo
9	IMIRASIRE	Kayonza	Rukara
10	DUHUZIMBARAGA MUHAZI	Rwamagana	Muhazi
11	COOPALEG	Rwamagana	Gahengeri
12	TERIMBERE Gishari	Rwamagana	Gishari
13	COCUMAKI	Rwamagana	Kigabiro
14	ISUKA IRAKIZA	Rwamagana	Muhazi
15	URUMURI RWA MUSHA	Rwamagana	Musha
16	TERIMBERE MUHINZI	Rwamagana	Karenge
17	TWITEZIMBERE MUSHA	Rwamagana	Musha
18	IMBARUTSO ZA KAREMBO	Ngoma	Karembo

Annex 2: Articles and video on UhiraWunguke

1. Article on how EUCORD transformed livelihoods of rural farmers in drought prone areas of Eastern Province, Rwanda

https://www.newtimes.co.rw/article/1094/news/featured/how-eucord-transformed-livelihoods-indrought-prone-eastern-province

2. How farmers, buyers, districts and financial managers discuss the impact of UhiraWunguke Project

https://www.youtube.com/watch?v=RkiKO60m9oc