Ripple Effect Burundi Year 1 Report for the Isle of Man Development Commission

Grantee organization	Ripple Effect Burundi
Project title	FISM: Food and Income Security for Communities affected by Climate Change in Mwaro Province, Burundi
Project location	Mwaro Province, Burundi
Total budget (from IOMDC)	£1,370,235
Project start/end date	01/07/2021 – 30/06/2023
This reporting period	01/07/2021 – 30/06/2022

Overall objective: The project will help communities in Mwaro Province build their resilience to climate change through regenerative agriculture, effective natural resource management and sustainable land management that will promote healthy and vibrant ecosystems. Improvements in gender equality and social inclusion will ensure that opportunities for change are maximised and that benefits are felt equitably across the whole community.

The project is working with 2,716 households in 7 zones of Nyabihanga and Bisoro communes, through 84 Self Help Groups. It will also engage with the wider community and promote the sharing of knowledge, skills and assets among project participants.

<u>Baseline Survey and Year 1 Impact Data</u>

A baseline survey was conducted in August 2021 and the same survey was repeated in July 2022. The results are as follows:

Objective 1: 2,100 households engage in Regenerative Agriculture practices to improve farm productivity so that at least 70% are classed as food secure or only mildly food insecure on the Household Food Insecurity Access Scale by project end

Response	**SHG**		**Community**	
	Baseline	**Y1**	**Baseline**	**Y1**
Food Secure	18%	56%	16%	37%
Mildly Food Insecure	43%	28%	35%	36%
Moderately Food Insecure	21%	12%	27%	18%
Severely Food Insecure	18%	4%	22%	9%

Analysis – there has been significant improvement in food security for both SHG and community members, with 84% of SHG members and 73% of community members now food secure or mildly food insecure in comparison to 61% and 51% respectively at baseline. We're confident that this can be attributed to improved agricultural techniques and better

farm planning leading to increased productivity. It is particularly interesting to see food security improve in the community at this early stage. We would usually expert this change to occur later in the project as techniques implemented by SHG members begin to be replicated by community members. We think the project's support for land collectivisation, which has been promoted by the Ministry of Agriculture in Burundi is contributing to this. The Ministry recently introduced a strategy for crop intensification which encourages farmers to pool their land and cultivate it at the same time, using the same seeds to establish what are known as Raying Centres. The theory behind these centres is that together, farmers will be able to source better quality seeds, verified by government agronomists and share their tools as they will use them in close proximity at similar times. It also means that agronomists can provide more effective support as they can be present for more farmers when they are preparing, planting and harvesting. Once the centres are established, they act as large demonstration sites for people in the surrounding communities to visit and learn from. Following an approved project revision request, the project has provided seeds and technical support for the centres, deepening their impact and bringing change at the community level.

Objective 2: 2,100 households adopt at least 4 Integrated Natural Resource Management (NRM) practices in order to help adapt to and mitigate climate change

Response	**SHG**		**Community**	
	Baseline	**Y1**	**Baseline**	**Y1**
At least 4 NRM practices	8%	66%	8%	31%

Analysis – there has been a significant increase in NRM practice, particularly among SHG members. Again, we attribute this to the project's training activities and also the technical support that has been provided to the Raying Centres, which has enabled community members to adopt improved techniques at an earlier stage than we would usually expect. It is also interesting to note the change of emphasis among these practices. At baseline, the most commonly used techniques were intercropping, resource mapping, agroforestry and composting but after one year of the project, soil erosion control is the most commonly practiced, both among SHG and community members and water resource management is now commonly practiced among the community from very low implementation rates at baseline. This gives us confidence that the project will help address the two most significant challenges identified in pre-project assessments – soil erosion and a lack of sustainable water sources.

Objective 3: 2,100 households engage in agribusiness activities so that at least 60% of participants earn over $1.90 (£1.50) a day, and save an average of £3 a month in order to increase their financial security and resilience to climatic shocks

Response	**SHG**		**Community**	
	Baseline	Y1	Baseline	Y1
Household earning more than $1.90/day	4%	33%	5%	29%
Average daily income	$0.40	$7.20	$0.70	$6.60
Saving more than £3 a month	11%	23%	11%	21%

Analysis – there has been a significant improvement in income for both SHG and community members. We attribute this to the increased productivity resulting from SHG training and the support for the Raying Centres, which has enabled farmers to produce

surplus for sale. We expect income to increase further in Year 2 as participants consolidate training in agribusiness, marketing and post-harvest management and begin to access financial resources through VSLAs and microfinance institutions for further investment in their businesses. There has also been a significant increase in the number of households saving more than £3 a month. This gives us confidence that increased income is in fact building financial resilience and that families are in a stronger position to withstand shocks and stresses caused by climate change. As income continues to increase in Year 2, we expect even more families to be in a position to save and financial management skills built through the project will encourage them to do so.

Objective 4: 2,100 households address gender imbalance at household and community level so that 70% of women report increased involvement in decision making and control over economic and natural resources and participate in the response to climate change

Response	**SHG**		**Community**	
	Baseline	**Y1**	**Baseline**	**Y1**
In most/all decisions	46%	70%	51%	62%
In some decisions	33%	30%	33%	28%
No involvement	21%	0%	17%	0%

Analysis – there has been a significant increase in women participating in decision making. Particularly encouraging is the fact that all women are now involved in decision making to some extent, compared with a baseline of 21% and 17% of SHG members and community members respectively who were not involved in decision making at all. It is also encouraging to see a significant increase in the number of women now involved in most or all decision-making processes, which suggests that changes instigated by the project are being applied universally and not just in respect of particular issues or resources.

Completed Project Activities:

<u>Objective 1</u>

Project launch - A project launch event was held and attended by the community and Government officials including the National Director of Rural Engineering, Irrigation and Greenhouse Development, who talked about his hopes for the project and the impact that Ripple Effect has made in other areas of the province because of their close collaboration with the ministry of Environment, Agriculture and Livestock.

PFT identification and training (1.1) - Project staff, in collaboration with Government Extension Workers and the local administration, successfully identified Peer Farmer Trainers (PFT) who will support community members in Bisoro and Nyabihanga communes. In total, 198 PFT have been identified, including 137 women and 61 men. They were trained in the cultivation of Irish potatoes, maize and beans, which are the most popular crops this year, following which they were able to advise the community on land selection for each crop, land preparation, seed selection, planting techniques, weeding, cropping care, pest and disease control, harvesting, conditioning and conservation. They were also trained in the establishment of tree nurseries to enable them to support project participants in their forestry, agroforestry and fruit tree planting activities.

Newly identified PFT after receipt of PFT kits

Study tours for PFT and Extension Workers (1.2) - A study tour was organized by the project in collaboration with the Ministry of Environment, Agriculture and Livestock, in order to learn best practice from other provinces. Learning came from:

1. **Raying centers:** This is a new Government approach where families pool some of their land and carry out the same activities using inputs sourced and shared at the same time. This has really increased productivity as more inputs are available to farmers and crop intensification makes the land more receptive to a particular seed. When the crops are harvested families can market their produce together, enabling them to obtain a higher price.
2. **Community contours:** the government is promoting systematic contour terracing across all hills, which is really increasing the viability of the terraces and protecting the land as the water drainage is much more uniform and flooding has been reduced.

Identification and training of Community Animal Health Workers (CAHW) (1.3) - the project has identified 98 CAHW, who have supported project participants to improve animal management techniques. They have been trained on animal feeding, animal breeding and disease management, including sensitisation on rift Valley fever. Particular emphasis was put on zero grazing, which is now a legal requirement in Burundi, and the subsequent need to cultivate fodder, both for animals and for sale.

Training in nutrition, food groups and safe cooking (1.5) - 198 peer farmers (137 females and 61 males) have been trained on basic nutrition practices including Infant and Young Child feeding, nutrition during pregnancy, exclusive maternal breastfeeding, complementary feeding, child health care, dietary diversity, food types, cooking demonstrations, and malnutrition screening for children. They are rolling this training out to SHG members.

Training Peer Farmers in Nutrition, food groups and safe cooking

Regenerative Agriculture Workshop (1.6) - held for Ripple Effect staff in order to build their technical capacity to train communities, PFT, CAHW and Extension Workers in the 'how' and 'why' of Regenerative Agriculture techniques.

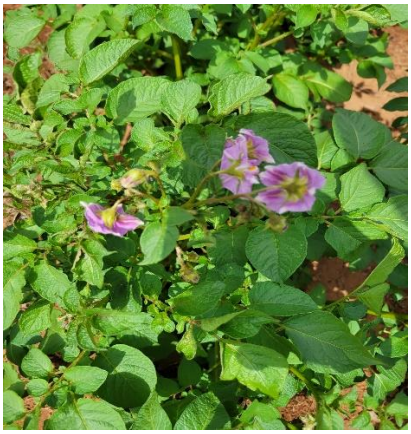
Provision of PFT and CAHW kits (5.1 and 5.4) – kits have been provided to PFT and CAHW to equip them for their roles.

Provision of seeds (5.2) - The project has supplied 198 PFT kits; 2,500 kg of maize; 10,900 kg of Beans; 80,000 kg of Irish potato seeds and 2000 kg of wheat resulting in 15,807 kg of Maize, 98,004 Kg of Beans and 543,322 kg of Irish Potatoes being harvested.

The project has also provided vegetables seeds: 78 kg of red onion seeds, 83 kg of cabbage seeds, 28 kg of tomato seeds, 14 kg of carrot seeds and 28 kg of African eggplant seeds.

The seeds, alongside improved watershed management (see Objective 3) have enabled farmers to plant maize and Irish potatoes in the marshlands (the land alongside the river), which had previously been unused. Through coordination with the Ministry of the Environment, Agriculture and Livestock, the project ensured that the farmers were well supported by qualified agriculture technicians from planting until harvest and activities under Objective 4 have encouraged farmers to engage in joint marketing activities with the crops grown.

Bean crop



Irish Potatoes crop

Wheat crop

<u>Objective 2</u>

SHG training on afforestation and nurseries (2.1) - To ensure that the nurseries could be established in the right season, the project has recruited Green Land Initiatives (GLI) who are experts in environmental protection, to help with the production of fruit, forestry and agro-forestry plants to be distributed in the project area. They have also trained project participants in the establishment of trees nurseries during this process.

To date, 100 hectares of land has been reforested with forest and agroforest trees including: 762,456 eucalyptus trees, 302,124 calliandra trees, 322,772 leucena trees, 69,700 grevillea trees, 34,008 cedrella trees, 70,090 avocadoes trees, 28,458 Japanese plum trees and 19,910 passion fruit seedlings. In line with our climate positive approach and national laws that prevent the use of bio-degradable plastics, the nurseries are using banana leaves instead of plastic bags to grow the seedlings.

Preparation is now underway for the October planting season where we expect farmers to plant a further 260,000 trees including 70,000 Avocadoes trees, 5,000 mangoes trees, 2,500 oranges trees, 2,500 lemon trees, 25,000 passion fruit trees, 30,000 Japanese plums trees, 100,000 eucalyptus trees and 25,000 grevillea trees. The Provincial Cabinet Office have expressed particular support for this element of the project as they want Mwaro to be known as the fruit barn of Burundi. Farmers are also enthusiastic as fruit can fetch a high price in Burundi and is becoming a key export market for growers.

Newly established nurseries with seedlings wrapped in environmentally friendly banana leaves ready for planting

Training on rainwater harvesting (2.2) – 277 SHG members, 166 females and 111 males have been trained on how to harvest rainwater for domestic and farm use during the dry season. 14 demo rainwater harvesting units were constructed in 14 households (7 in Bisoro and 7 in Nyabihanga communes) to support the training and encourage replication.

Training on energy saving cook stoves (2.3) – 267 participants (150 females and 117 males) were trained in renewable energy technologies in order to reduce air pollution from wood smoke caused by burning firewood, which provides the main source of energy in Mwaro, and to reduce greenhouse gases emitted during the natural decomposition of animal waste

Community meetings (2.4) - A community meeting was attended by 28 Colline Chiefs, (18 males, 10 female), 140 watersheds committees' members (102 females and 38 males) as well as Zone Chiefs, Commune Administrator and Provincial Technicians from the Bureau of Environment, Agriculture and Livestock to discuss environmental issues, and their impact on people's lives. The most common harmful environmental practices were identified as bush burning, tree cutting, overuse of plastic, poor food waste management, clothes washing in the river. All participants agreed that a wide scale sensitization approach is needed in the community to raise awareness of the damage caused by these practices and promote alternatives.

Coordination and GSADR (Food Security and Rural Development Sectorial Group) meetings (2.6) - The government of Burundi through the Ministry of Environment, Agriculture and livestock has initiated provincial meetings where all stakeholders (local and international NGOs) operating in the province meet and discuss their approaches, impact

and challenges working in and with the community. The FISM project has supported three meetings at both commune and province level in Mwaro to ensure good coordination with other actors and that the project remains aligned to the Government's environmental, agriculture and livestock policies.

Identify and establish Watershed Committees (WC) (2.7) – 140 Watershed Committee members (102 females and 38 males) have been identified, constituting 28 committees (5 members per colline). After evaluating the situation in their own colline, they will make recommendations for action, and plan and lead the implementation of activities using watershed management tools and techniques.

Workshop to design WC rules and bylaws and capacity building for effective leadership, administration and management (2.8) - a workshop was held for Watershed Committee members to raise awareness around the importance of watershed management when protecting and restoring degraded lands. With climate change, the frequency and intensity of severe meteorological and hydrological events is likely to increase in Mwaro, amplifying the risks of soil erosion and reduced crop yields, increasing the significance of watershed management. WC members were trained in different aspects of watershed management, including community sensitization, the digging system, material needs and activity monitoring. Further capacity building workshops will be held in Year 2.

Inputs for contour terracing (watershed management) (5.5) - To identify collines (hills) most in need of watershed management, a delegation was formed of project staff, technicians from the Ministry of Environment, the local administration and extension workers from the Provincial Bureau in charge of environmental protection. Following a field visit by the delegation, collines were classified according to their vulnerability and 2 were identified as in need of critical support owing to the danger presented by erosion at the top of the colline and the impact of the erosion on agricultural land at the foot of the colline. Magamba-Nyamitore colline was identified as the first to be protected by contours and 615 km of contours will be terraced. Preparatory activities began in March and 154km of contouring has been completed already. The labour required has also given people an opportunity to earn money to help them buy seeds, pay school fees and meet other household needs.

Impact of erosion caused by climate change

Contour terracing to mitigate climate change

Inputs for tree nurseries (5.7, 5.8) - The project has provided 1260 hoes, 420 pickaxes, 840 shovels, 28 sloped triangles, 84 watering cans, 84 cans and 42 sprayers to support community tree planting and contouring activities.

<u>Objective 3</u>

Training to identify potential value chains and income generating activities (3.1) – it's essential for farmers facing climate change to move from consumption to sale in order to increase their financial security and resilience to climate shocks. To ensure this, 267 participants (150 females and 117 males) have been trained on farming as a business and the identification of value chains and income generating opportunities for the crops they are growing. The training also encouraged the farmers to seek out opportunities for bulk sale to maximise profits, for example schools and camps where a lot of people require food at the same time.

Training SHG on joint income generating and marketing activities (3.2) – in addition to the sale of produce, 267 participants (150 females and 117 males) were also trained on other income generating opportunities including agrivets, soap making, livestock and banana wine. They also learnt about how to access financial resources from microfinance institutions in order to invest in their businesses.

Training SHG on how to request and use communal/rented land to grow market orientated crops (3.3) – some communal administrations and individual land owners have arable land that is not being used despite the potential for agricultural production. 267 participants (150 females and 117 males) have participated in training to explore the value of such land with a view to preparing a request to use the land for SHG and cooperative agricultural activities.

Training SHG in post-harvest management techniques to reduce losses and increase earning potential (3.4) – 267 participants (150 females and 117 males) have been trained in post-harvest management. Topics included identification of the right time to harvest (produce is ripe and weather conditions good for drying), ensuring hygienic conditions (ensuring packaging materials, drying area, storage shed for harvesting are all clean), ensuring animals do not eat or contaminate products.

Study tours for PFT and local government extension staff on post-harvest management (3.5) – 27 people participated in a 5-day visit to excelling local farms practicing good post-harvest management. Participants learnt about how to harvest, conserve and store maize and Irish potato so that rather than selling at the main harvest when prices are low, they can sell when supply drops and fetch a higher price.

Training SHG on VSLAs (3.7) - 198 peer farmers (137 females and 61 males) have been trained in VSLAs and have rolled this out to project participants. This is particularly valuable as even when community members have enough produce to sell, they lack the financial means to turn this into an income-generating activity. Before the project they were reliant on "merry go round" microfinance schemes that involve long waits for loans to become available, or engaging in "umugwazo", which is the act of selling crops before they are ready to harvest because they have no money to continue cultivation.

Inputs for VSLAs (5.12) - The project has provided 168 VSLAs Kits composed of 168 metallic boxes, 504 padlocks, 672 bowls, and 168 inkpads.

Vegetable harvests, producing surplus for sale

Objective 4

Establish self-help groups (SHG) (4.1) - project staff have identified 84 Self Help Groups in the two communes (48 SHG in Nyabihanga and 36 SHG in Bisoro). This was done in collaboration with the Governor's cabinet, the communal administrators and their counselor in charge of development; staff from the Provincial Bureau in Charge of Environment, Agriculture and Livestock and extension workers. To ensure social inclusion, specific vulnerabilities were prioritised so that 1% of members are from the Batwa community, 4% are people living with HIV, 13% are from women headed households, 4% are living with disabilities and 1% are from child headed households. Unemployed youth have also been prioritised and it is hoped they will particularly benefit from the enterprise development work. The SHGs have been subdivided into groups of 5 in order to support each other more intensively.

SHG establishment

Train SHG in group management (4.2 and 4.3) - SHG members were trained in envisioning, group structures, management, finance, administration and conflict resolution to ensure that they maximise the benefits and potential of their groups.

SHG Training - GSI Workshop (4.4, 4.5 and 4.6) – Ripple Effect's Regional Gender and Social Inclusion Officer provided training for staff and community leaders on Safeguarding, Gender and Social Inclusion and conflict resolution. This training was then relayed to 198 PFT (137 women and 61 men) who rolled it out to the rest of the project participants.