



CRITICAL ECOSYSTEM
PARTNERSHIP FUND

Zirarese Cooperative

ACTION PLAN

Training workshop

“Improve Livelihoods – Save the Forest”



March 16th, 2017

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1. Introduction

Zirarese cooperative is a cooperative of cattle breeders and milk producers in Nkungu sector, Rusizi district, Rwanda. Created three years ago in 2014 with 65 members, it comprises 265 members today, among which 113 have actually paid their contribution.

Cattle breeders raise their cows in a “zero grazing system”. They thus have to face the daily challenge to provide their cattle with fodder they collect, and, during the dry season, with grains they buy.



Today, members of the cooperative sell their milk in the city of Rusizi (about 280 liters every day). They plan to build a milk collection facility in order to facilitate the collection of milk and trip to the market. They already bought a plot of land. The cooperative has a patrimony of FRW 700 000 (around USD 850).

The members of the cooperative are supported by HEIFER, an American NGO, through the project “One cow, one family”.



Thirty members of the Zirarese cooperative participated in a “**Solutions worth Sharing**” workshop conducted by RESILIENCE NOW on the invitation and with the support of ARECO RWANDA NZIZA to contribute to the conservation effort around Cyamudongo Forest (Nyungwe National Park).

The workshop is part of RESILIENCE NOW’s project “*Civil Society Engagement in and around Cyamudongo Forest (Nyungwe National Park – Rwanda)*” to enable cooperatives to improve their livelihoods while reducing their imprint on natural resources. This project is funded by the CEPF (CRITICAL ECOSYSTEM PARTNERSHIP FUND).

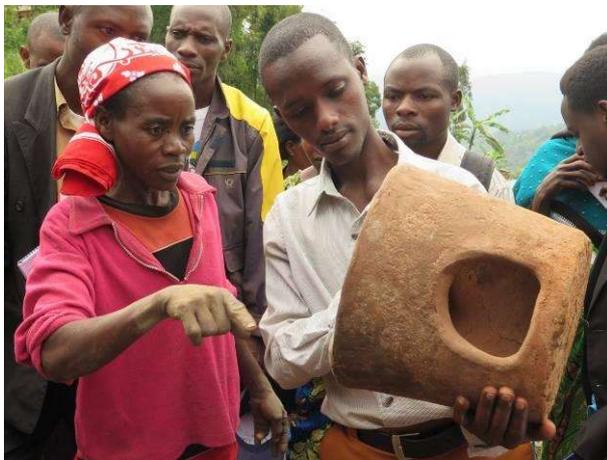
The workshop took place March 6th-16th, 2017 in the Nkungu Sector facilities. After conducting a resilience assessment, members of the Zirarese cooperative undertook a field trip to learn best practices from other communities. They then collectively built and committed to the present action plan.

2. Methodology of the workshop

Before the workshop, an inventory of local initiatives had been done by RESILIENCE NOW to identify in Rwanda best practices and technologies that reduce pressure on natural resources in the field of agriculture, energy and income generation. A selection of them has been visited during the workshop.

The workshop conducted with the cooperative was held in three parts:

1/ The **situation assessment** is the time of awareness raising. During 3 days, the participants identify problems and risks, list their strengths and assets and discuss the future they want. The importance of the environment for community resilience is highlighted. *(Details of the activities in the Appendices).*



2/ The **study trip** is the time of capacity building. During 4 days, the participants, divided in groups, **explore alternatives** to their practices. They visit solutions developed locally by other communities and learn peer-to-peer. The lessons learnt and experiences shared are then presented to the other participants and discussed. *(Details of the projects visited in the Appendices).*

3/ The **action plan drafting** is the time of action taking. During 2 days, the participants choose the solutions they want to implement and commit to them by determining their appropriate contribution. The participants draft an action plan and commit to its implementation. *(Details of the action plan below).*



The findings of the **situation assessment** done by Zirarese cooperative are presented in the Appendices I and II (as well as the project visited during the study trip). But please note that the goal of this project phase is to raise the participants' awareness on their problems, which is a requirement for durable behavior changes. The findings are not as much important, this is why the present document focuses mainly on the engagements taken in the Action Plan.

3. Action Plan

The action plan built with Zirarese contains three parts:

Threngthen the cooperative
by discussing further and decide on fonctionning practices used by other cooperatives met



Threngthen the members
by committing individually on technical solutions learnt during the workshop



Plan a common project
by assessing the assets and needs and planning the different steps in time



- Members who can't pay the contribution can, in substitute, work for the cooperative;
- Members who can't pay the contribution can have it paid by other members. They will have to reimburse them later and in the meantime the functioning of the cooperative is not penalized;
- Members who don't pay the contribution see their share reduced accordingly during the distribution of dividends;
- Members who don't pay the contribution several times are excluded from the cooperative.

Management of absences

Zirarese cooperative does not have any penalty system when members don't show up at the cooperative meetings or activities. This absenteeism is a problem since it prevents decisions to be taken or activities to be undertaken. Zirarese cooperative will discuss management of absence practices used by cooperatives they met, such as:

- Members who show up are given an incentive ("attendance fee");
- Members who don't show up pay a penalty, the amount depending on if the absence is justified or not;
- Members who don't show up too much in a row are excluded from the cooperative.

Practices of solidarity between members

Zirarese cooperative has activities that don't answer the primary goal of the cooperative, but serve as solidarity practices for its members. Among them:

- Sensitization to encourage members to subscribe to a healthcare insurance;
- Support to household vegetable gardens;
- Share of seeds;
- Distribution of cows;
- Professional training in cow breeding and others.

Zirarese cooperative will discuss other solidarity practices used by cooperatives they met, such as:

- Knowledge sharing;
- Pool of seeds;
- Pool of work.
- Work on the quality of seeds;
- Serve as caution for access to credit;
- Pay the healthcare insurance for members who can't afford it, in exchange of their work;
- Offer job opportunities;
- Open bank account for children.

This chart sums up the ideas to be discussed in order to improve the operation of the cooperative.

THEME	COOP NZIRAREZE	IDEAS TO DISCUSS
INITIAL INVESTMENT IGISHORO	PART SOCIALE 10000 FRW 125 membres	COTISATION 600F TRAVAIL en COHUN UMUSANZU 600FRW UKOREKA HAMWE COTISATION 500 F + 2 fiches IMISANZU + IMI - ZINGA ISIRI CHEVRES puis PARTS SOCIALES du DEPART 200000F SHINGIRO I HENE + IMAMI IMPAMU/ INFUYANYO SUBVENTION/CAFÉ
CONTRIBUTION IMISANZU	500 FRW/mois KU KWEEZI	RIEN de impayé NTA MAMIDE A CI BWA
ABSENCE GUSIBA	RIEN NTA CYO	COTISATIONS - LORS PARTAGE KOPERATYVE IRYISHYURA COTISATION - TRAVAIL GUCORA IMIBYI ZI COTISATION SPRET PAR COOP KUMUGUZIRA
SOLIDARITY UBUFATANYE	SENSIBILISATION AUTOUR DE UBUFATANYE GA KU BYISHYURA NE KU KWIVURWA PARTAGE DES SEMENCES GUSANGIRA IMBU TO SOUTIEN JARDIN POTAGE UTUKI MATW IGIKONI DISTRIBUTION VACHE GUTANGA INYA FORMATION PROFESSIONNELLE AMAHUGURWA Y'UMWUGA	JETONS DE PRESENCE INSIMBURA MO BYIZI AMENDE absence multiple → 100F GUSIRA UFITE IMPAMU AMENDE absence → 5 absence → 100F AMENDE absence → 10 absence → 100F PARTAGE CONNAILANCE GUSANGIRA UBUMENYI AVANCE COTISATION MUTUELLE SANTÉ AVANCE KUMUSA NEU MU KWIVURWA CREATION d'EMPLOI IMIRIMO MUSA JA SOLIDARITE de TRAVAIL UBUFATANYE KA MURIMO COUVERTURE de COMPTE pour enfants KONTI ZI ABANA BATO SEMENCES de QUALITE IMBU TO NE ZI

3.2. Strengthen the members

This is the second part of the Action Plan. The strength of a cooperative comes from its members and when strengthening the members, the cooperative is strengthened. Participants to the workshop committed individually on technical solutions, learnt during the workshop, to improve their livelihoods.

Radical terraces preparation and fodder plantation

Erosion is an important issue on the slopes of the numerous hills of the area. Terrace cultivation is a technique that both mitigates erosion and facilitates farming condition.



Fodder can be planted on the sides of the terraces and ditches, to fix them and provide for the cattle.

TERRASSE + FOURRAGE

UMUHIGO:
Umuhigo amashya:
- HARUKOMA J. Umuhigo
- UMUKOMA Umuhigo
- MUKOMA Umuhigo
- Baza umuhigo
- TWAACIYU Umuhigo
- Umuhigo Umuhigo
- Sibomana Umuhigo

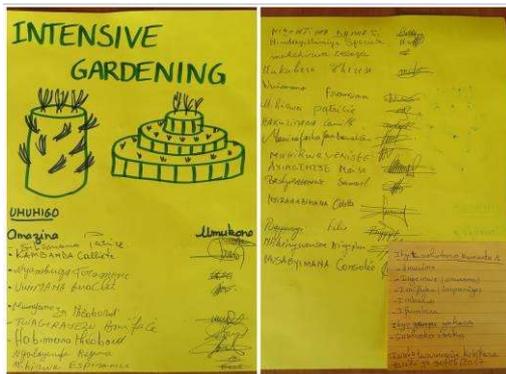
Umuhigo

This solution gathers 29 cooperative members. Existing terraces will be restored. This group decided to share between themselves seeds and cuttings for the fodder. They will also get together to dig the ditches and plant the fodder. Some members suggested also creating a tree nursery for agroforestry on the terrace.
Date of execution: by Feb 2018.

Intensive vegetable gardening

Intensive vegetable gardening gathers several farming techniques, which common goal is to optimize yields on small cultivated areas.

Among those techniques: bag crops, pyramid kitchen garden, etc.

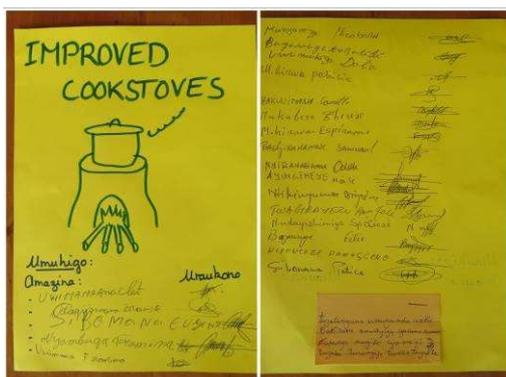


This solution gathers 24 cooperative members. Each member would bring the plot of land, seeds, bags, plants and manure. The members together will seek markets for the produces.

This group of members insisted on fixing a three months' deadline and said we could come and evaluate on June 30th 2017.

Improved cooking stoves

Improved cooking stoves are a technology that replaces traditional stoves (3 stones holding the pan with fire underneath). Improved cooking stoves reduce the consumption of firewood by 3 and also reduce the emission of toxic smokes.

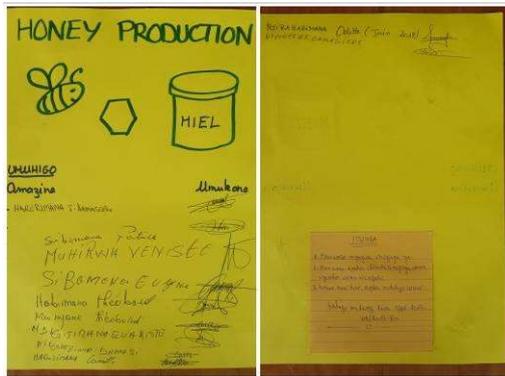


This solution gathers 21 cooperative members. The group decided that members will help each other for the installation of the cooking stoves in their respective kitchen. They insisted on fixing a three months' deadline and said everybody would be equipped by July 2017.

Beekeeping

Modern beekeeping is a way to increase honey production using the modern bee hives. This technique prevents forest destruction by the fires which are lit while harvesting honey from wild



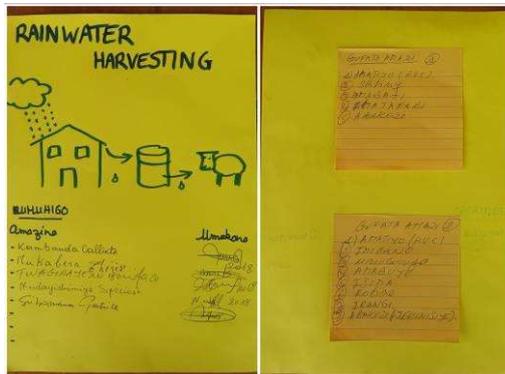


bees. It is a more convenient and productive way to collect honey and it generates an income for the farmers.

This solution gathers 11 cooperative members. The group decided each member will have its own hive and would commit to give to another group a hive with bees. One member committed on providing a plot of land to host the hives. They decided the hives will be in place by September 2017.

Rainwater harvesting

This installation collects rainwater from rooftops thanks to gutters and drain pipes. The water is stored in a cistern which can be bought, or made of tarp, bamboo and concrete. A manual pumping system helps collect easily the water for the cattle, the kitchen garden or family use. The water remains available during the whole year, even during the dry season.



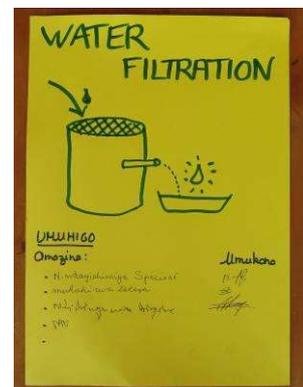
This solution gathers 5 cooperative members. Both kinds of cistern will be introduced. Women will go for the plastic tanks; they will gather a hose, tarp, corrugated iron, tiles and workforce. Men will go for the cement tanks; they will gather hoses, bamboos, sand, stones, cement, tap, paint, and a technician. They will help each other's for the installation.

Water filtration



This simple system enables people to purify easily soiled water. Dirty water is filtered by a net and by sand. It requires very little materials.

This solution gathers 3 cooperative members.



Biogas

The fermentation of manure (from cows, pigs and even humans) produces biogas which is used as a fuel to cook. That way, less or even no firewood is needed to cook. This technology requires at least 2 cows and a good and safe installation to avoid biogas leaks.

This solution gathers 1 cooperative member.



3.3. Plan a common project

This is the third part of the Action Plan. The main project of Zirarese cooperative consists in setting up a milk collection facility. Currently, the cooperative members sell their milk miles away which is time consuming. It also leads to a quality loss of the milk during transportation. Having a milk collection facility would be more convenient and would increase the revenue of milk selling.

In this project, Zirarese is already supported by an NGO: HEIFER. During the workshop, the participants expressed their wish for help in the planning of this project of construction of a milk collection facility.

The methodology used to plan this project has been the following: brainstorming of the assets/resources and of the needs; definition of the different steps and activities; planning of the time schedule for those activities.

Zirarese identified the following resources:

- The cooperative is united, motivated, they have workforce, they have shares;
- They have members, with will and ideas;
- Among members, they have the following competences: two members are veterinarians, one member is an accountant, one is an agronomist;
- Most of the members already have at least one cows;
- They have started to collect the milk with jerrycans;
- They already have a client to buy the milk: therefore, the market exists;
- They already have bought the field and prepared the building foundations;
- They have the capacity to contract a credit for the rest of the building and equipment;
- They have the support of the sector and of the other authorities;
- They already have a partner, HEIFER. HEIFER is an NGO which conducts the program “One Cow, One Family”, it gave a training to Zirarese members and helped them build stalls. Heifer also committed to giving a motorbike to facilitate the milk collection in every farm.

Zirarese decided on the following planning:

Step 1 – Organize the Milk Production – March 2017

Zirarese assets	Needs
Farmers have cows	More cows to increase the production
Farmers have stalls	More stalls in parallel to the increase of herds
No water issue	Water tanks for those in need
Veterinarian skills are available	Animal medicine
Training received in cattle breeding, etc.	More training
Partner (HEIFER)	Fodder and grains to improve the cattle feeding
Authorities support	

Step 2 – Organize the Milk Collection – October 2017

Zirarese assets	Needs
Jerrycans are already available	More jerrycans
1 motorbike (given by HEIFER)	4 motorbikes to collect the milk from every home
Client is here (market ready)	Milk quality assessment equipment

Step 3 – Milk Collection Facility Bulding – January 2018

Zirarese assets	Needs
Plot of land for the building	Credit to build the facility and buy equipment
Foundations of the facility	Partners to follow the project
Accountant to run the facility	Building and equipment (storage and refrigerating facilities, quality tools, etc.)

Step 4 – Milk Collection – December 2018

To go further in the planning, Zirarese needs to budget every step of the milk collection facility building. The cooperative also need to write the business plan to run efficiently the facility.



4. Community commitment

During the closing ceremony, representatives of the participants gave this speech:

“We will not any more got and get fodder in the forest, we are going to fight erosion and collect rainwater, we will teach others that we can grow in pots, filter water, use efficient stoves, and even biogas for those who have the capacity. With our knowledge, we can go from nothing and arrive somewhere. Beekeeping can bring us an income.”

The action plan posters were given to the cooperative and to the sector representative to seal the participants’ commitment.

5. Conclusion

Thanks to the active participation of its members, this workshop helped Zirarese cooperative to identify its strengths and weaknesses, identify its problems and discover solutions developed in Rwanda in order to improve their livelihoods and protect the Cyamudongo forest at the same time.

The action plan built by Zirarese now needs to be implemented by its members with the support from the park and sector authorities and its partners (HEIFER, ARECO, RESILIENCE NOW). The enthusiasm, motivation and participation of every member during the workshop augurs a strong development of the whole cooperative.

The implementation of the actions will be followed up regularly by Zirarese partners through field visits. In May 2017, improved cooking stoves will be introduced in 250 households by ARECO. Resilience Now training team will visit again the cooperative in June 2017 and other visits are planned in the coming months.

6. Acknowledgments

We want to thank particularly the authorities, organizations and individuals that made this workshop possible:

- ARECO RWANDA NZIZA (Association Rwandaise des écologistes)
- RDB (Rwanda Development Board)
- Nkungu Sector leaders
- Rusizi District Authorities
- Zirarese Cooperative
- HEIFER

The organizations visited during the study trip:

- REDO (Rural Environment Development Organisation)
- WCS (Wildlife Conservation Society)
- KCHDP (Kirambi Community Health and Development Programme)
- AVSI Foundation

Our funders:

- Birdlife and CEPF (Critical Ecosystem Partnership Fund)

7. Appendices

7.1. *Situation Assessment*

Activities and their main objectives

- Presentation of the Cyamudongo forest biodiversity and conservation issues by the Nyungwe Park authorities;
- History timeline: to know the evolution and important events of the cooperative and the forest;
- Trends chart: to understand trends through time as well as correlation between them;
- Seasonal calendar: to identify the work distribution around the year, climatic constraints, variation of resources and cultural events;
- Problems brainstorming and prioritization: to identify what is the main problem faced by the community. This has been conducted in groups of gender;
- Problem tree: to identify and classify the causes (roots) of a problem (trunk) and the consequences (branches) in economic, social and environmental aspects;
- Solution tree: to transform the problem tree into a solution tree by identified solutions to solve the problem and its causes;
- Community strengths: to identify the resources and strengths of the cooperative. This has been done by groups of age.

Results and posters

Please, note that the results of the situation assessment do not necessary reflect the truth, but the perception of the participants.

A. Presentation of the Cyamudongo forest biodiversity

This presentation of the conservation issues regarding Cyamundongo forest biodiversity by the authorities of the Nyungwe National Park led to the following awareness rising among participants:

- Each species has a specific role in the stability of the forest ecosystem. If one species disappears, the entire ecosystem can collapse. The example of the extinction of the elephants in the Nyungwe National Park in 1999 led to the proliferation of a plant which stifles many other plants today.

- The well-being and development of the people living around the forest is deeply tight to the health of the forest ecosystem. Forest provides for a lot of ecosystem services: climate regulation, erosion prevention, water filtration, tourism revenue, etc. Those services have a wide impact not only at the local scale but also at the country and world wild scale.
- Illegal activities in the forest are strongly punished.
- It is possible to get compensation in case of wildlife damages (although it is a long process).
- Each person living around the forest, and especially the members of the cooperative, carry responsibility for the forest conservation. Everyone at their scale can sensitize and educate others to the conservation of the forest ecosystem and its species.



B. History timeline of the cooperative

This activity led the participants to identify the main events affecting the cooperative and the forest evolution. The following events were stressed out:

- Main steps of Cyamudongo forest conservation (1985: protection of Cyamudongo forest and creation of buffer zones, 1986: introduction of improved cookstoves in the area).
- Main social events (1960: all women wear skirts, 1967: first car in the area, 1983: health improvement with wild large scale vaccination, 1998: improvement of women' freedom of speech, 2000: most children wear shoes, etc.)
- Main agricultural practices evolution (1978: creation of terraces, 1986: drainage of the wetlands, 2007: "One Family, One Cow" program, 2010: cattle must stay in stalls, etc.)
- Main administrative evolutions (2000: definition of the sector limits)
- Main climate disasters (1989: hail followed by starvation, drought followed by starvation).

- The strong and negative impact of the genocide (1994) on the people, the agricultural practices and forest ecosystem.



C. Trends chart

To create the trends chart we proceeded in 2 steps.

First, groups by gender had to brainstorm the environmental/ agricultural (green stickers) and social (orange stickers) trends affecting the cooperative. It is interesting to note that women were more eager to underline the social trends and that men paid more attention to agricultural trends.

Then, after putting together all suggestions, the participants had to order the trends by causes and consequences relation.



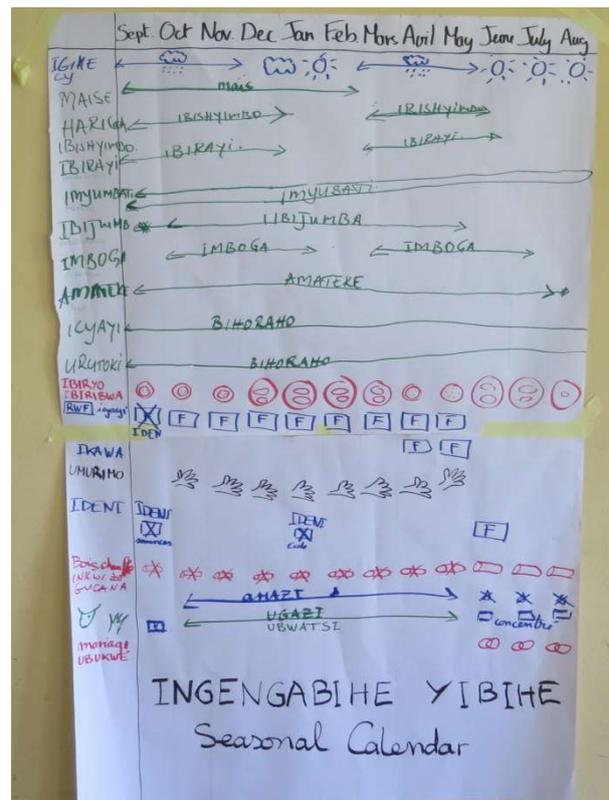
One main result was to realize the negative impact of population growth on the size of the cultivated lands, and the change of agricultural practices that led to yield drops. Population growth also affected wood availability (for fuel and construction). Among others was stressed out that augmentation of cattle breeding led to more manure and better yields. Negative impact of pesticides on bees and therefore honey production and cash availability was underlined. The following chart illustrates all the trends and its relations together identified by the community.

D. Seasonal calendar

This activity was led with all the participants. It helped the group visualize the organization of the agricultural work throughout the year, the main work peaks (during harvests), cash availability periods (e.g. after harvest), etc.

The creation of this calendar led to interesting exchanges between participants:

- It appeared that the dry and wet seasons were not as easy to determine as before, due to climate change. The agricultural practices had to evolve (change in plantation season, use of adapted seeds, unpredictable yields, etc.)
- The problem of forage availability and the need to use “concentrés” (grains) to feed the cattle was underlined.
- Debts issues for most participants before harvest and planting times season was mentioned.



E. Problems brainstorming

This activity was done by gender groups. Although some of the issues faced by the cooperative and the participants arose from the previous activities, we decided to continue this process of problem identification by a brainstorming session.

The results were the following:

Problems identified by men

- Low milk price, milk collection center is too far;
- Lands are losing fertility, cultivated areas are too small;
- Crops are affected by diseases;
- Transportation problems: need of bikes, motorbikes and cars to develop activities;
- Climate is changing;
- There is no irrigation and little wood availabilities.

Problems identified by women

- Lack of manure
- Lack of forage
- Lack of water
- Cattle and crops diseases
- Transportation problems
- Erosion
- Need of electricity
- Bad seeds quality



After putting together all the answers, they were grouped by themes and the group found a consensus that most of those problems could stem from one main problem: **low income**.

F. Problem tree

The participants built a tree to explore the causes and consequences of the chosen problem: **low income**. The trunk of the tree stood for the problem. Its branches symbolized the consequences and the roots the causes of the problem.

First, we had the group brainstorm the **consequences** (branches) of having low income and sorted them into 3 categories: economic, social and environmental consequences.

(Rwanda Development Board). Location: Western Province, Nyamasheke District, Ruharambuga sector.

- **Beekeeping and honey selling.** Implemented by WCS and RDB (Rwanda Development Board). Location: Southern province, Nyamagabe District, Kitabi sector.
- Socio economic improvement of HMP around Nyungwe National Park. Best practices visited: **goats and compost, vegetable gardens and soil conservation.** Implemented by REDO (*Rural Environment Development Organisation*). Location: Southern province, Nyamagabe District, Uwinkingi sector.
- Increased household income through cooperatives development by accessing market. Best practices visited: **vegetable gardens, rain water harvesting for agriculture irrigation and household uses and animal husbandry/zero grazing system.** Implemented by KCHDP (Kirambi Community Health and Development Programme). Location: Southern province, Nyanza District, Kirambi sector.
- URI INZIRA Project. Best practices visited: **use of the saving and loan schemes with a very reduced interest and management of income generating activities.** Implemented by AVSI Foundation. Location: Southern province, KAMONYI district, Musambira sector.