

# Kopainya Cooperative Action Plan



**Capacity Development Workshop  
“Improve Livelihoods – Protect the Forest”  
June 22nd, 2017**

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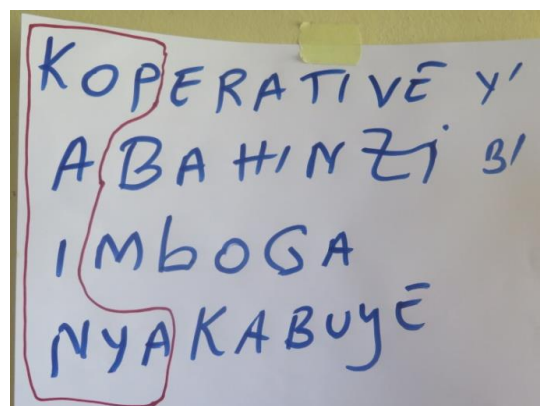
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# 1. Introduction

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**Kopainya cooperative** is a cooperative of vegetable growers in Nyakabuye sector, Rusizi district, Rwanda. The cooperative was created three years ago, in 2014. It has 80 members today, who represent most of the vegetable growers in Nyakabuye sector. The cooperative has a vocation to gather them all eventually. It is run by a committee of 7 members.



*Cooperative of Vegetable Producers in Nyakabuye*

**Activities:** Members of the cooperative grow vegetables on plots of land located close to Cyamudongo Forest. They grow on neighboring plots, each member being responsible for their own plot. They grow vegetables such as tomatoes, eggplants, cabbages, red peppers. The cooperative aims to share seeds and fertilizers. Members of the cooperative buy chemical fertilizers (NPK and urea), as well as organic fertilizers. Cows were bought by the cooperative in order to fertilize the fields, but the cows died, allegedly because they were sick when they were bought. The cooperative doesn't have any partners.

**Financial functioning:** Members have to buy 10 000 FRW of shares when joining the cooperative, and then pay a contribution of 200 FRW each quarter. In June 2017, the cooperative had gathered 250 000 FRW of savings in a bank account.

**Challenges:** So far, the production is little and difficult to sell. Members don't have any means of conservation and have to sell their crop as soon as possible after harvest. Because there is a greater market opportunity, they reach the nearby Democratic Republic of Congo to sell their production, which requires 4 hours of walk. Members also face plant diseases, which have appeared in their fields. Change in the rain pattern - the rain stopping in May instead of June - also affected the production. The seeds were not adapted and they had to cease to produce peas. Sometimes, they also face crop destruction by tailed monkeys from the Park, who eat or destroy the vegetables.

**Additional information about the participants of the workshop:** All participants of the workshop (30) have a vegetable garden at their house. Most of them have small animals, like pigs, goats and hens. Half of them have their own cows. Twenty-three of them use improved cookstoves to cook. Two are members of another cooperative: coffee production and cookstove promotion. A third have already been in Kigali, the same proportion has already been abroad, mainly in Congo and Burundi. Half of the participants have already seen a Chimpanzee.





**“Solutions worth Sharing” workshop:** Thirty members of the Kopainya 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 as well as reduce their imprint on natural resources. This project is funded by the CEPF (CRITICAL ECOSYSTEM PARTNERSHIP FUND).

The workshop with Kopainya cooperative took place June 14<sup>th</sup>-22<sup>th</sup>, 2017 in the Nyakabuye Sector facilities. After conducting a resilience assessment, members of the Kopainya cooperative undertook a field trip to learn best practices from other communities. They then collectively built and committed to the present action plan.

A previous workshop took place in March 2017 with another cooperative, Zirarese, a cooperative of milk producers, in Nkungu Sector.

## 2. Methodology of the workshop

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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. They were primarily sought in the fields of agriculture, energy and income generation. A selection of them has been included in the study trip of 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 2 days, the participants, divided in 2 groups, **explore alternatives** to their practices. They visit solutions developed locally by other communities and learn peer-to-peer from other people. The lessons learnt and experiences shared are then presented to the whole group 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).*







Modern beekeeping is a way to increase honey production, by using the modern beehives. This technique prevents forest destruction by the fires which are lit when harvesting honey from wild bees. It is a more convenient and productive way to collect honey and it generates an income for the farmers.

Participants to the workshop assessed their assets and needs and planned the different steps in time.



#### Steps for this activity were:

- Participants investigated the means they need for the project to be implemented,
- They identified the assets they already have,
- They grouped means they need to gather by ways to reach them,
- They planned a time schedule of their activities.

#### Assets (what members of Kopainya cooperative already have) are:

- Bees (coming from traditional hives),
- Workforce/ Labor (the cooperative members),
- A plot of land to put the beehives,
- Trees to build the shelter for the beehives.

### Means that need to be gathered:

- Training in beekeeping. This can be done with the help of a partner organization. A document of project needs to be drafted to approach them.
- Money to buy the hives, the hardware for the hive shelters and supplies for the beekeeper protection. This money can come from contributions of the members, a bank loan or subventions.
- A partnership with a cooperative to collect and deliver the honey to the Nyungwe Honey Center. The collection cooperative will provide the supplies for the harvesting, process and storage of the honey.



Nyungwe Honey Collection and Sealing Center

### Scheduled activities and deadlines are:

- |  |                   |
|--|-------------------|
| - A project document is written                        | by September 2017 |
| - The necessary money is gathered                      | by January 2018   |
| - An agreement is passed with a collection cooperative | by February 2018  |

### Why did a cooperative of vegetable producers choose to implement a honey production project?

It's a bit surprising that a cooperative of vegetable producers chose to develop a honey production activity instead of improving vegetable production. Especially since during the study trip an "example field" as well as the fields of an individual with spectacular production, both implementing improved agricultural techniques, had been visited.

When asked why they chose honey production as a common project, the participants answered:

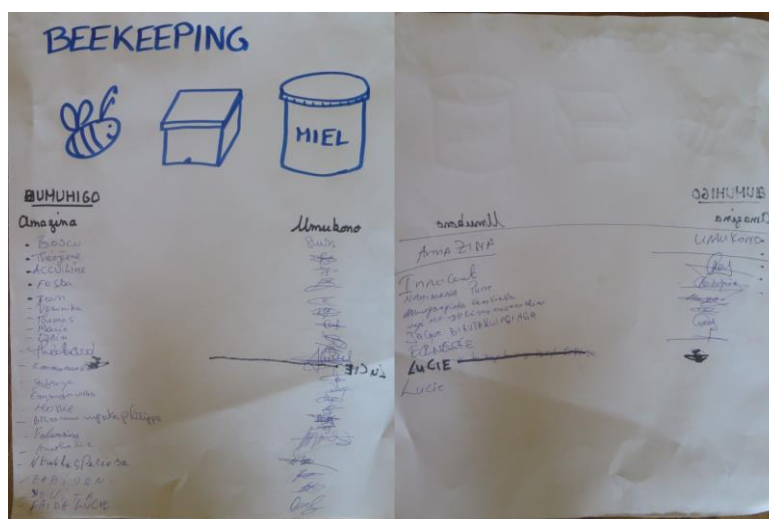
- Vegetable growing is only a part time activity (during the dry seasons), honey production can be done easily as a complementary activity, particularly off-season.
- Vegetable growing is not producing enough income. The production is little and there is no real perspective of improving quantities. Finding a market is difficult: the producers need to go all the way to DRC, across the border, to sell their production.
- Honey selling, in comparison, is generating a lot of income and requires little maintenance. The money generated from honey selling could be used to improve the



vegetable growing activity. Participants want to step out of poverty and they can't visualize this objective while remaining vegetable growers.

- Honey production is an activity that protects the environment. Bees will pollinate the vegetables and fruit flowers and thus serve their primary activity. (Participants noted that they shouldn't put pesticides, if any, during the day, but only at night when bees are inside the hives).
- There is a real challenge in arable land availability. Honey production doesn't require land in itself. Beehives will be easily placed on plots of land used for other purposes.

As it is not in the core of the cooperative activity (vegetable growing), this common project needs to be voted in a general assembly. Until so, participants were asked to commit individually. **28 participants** signed for the modern beekeeping activity.



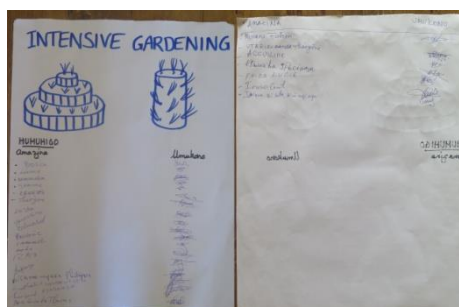
### 3.2. Commit individually to solutions visited

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 one or several technical solutions, learnt during the workshop, to improve their livelihoods.

#### Intensive vegetable gardening

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



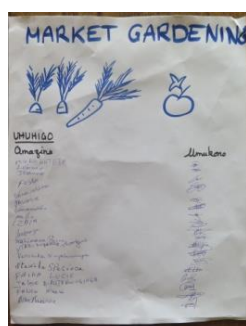


Among those techniques: bag crops, pyramid kitchen garden, etc.

This solution gathers **25 participants**. Members said they would start this activity in September 2017, with the rainy season. They committed to help each other in implementing the techniques. They also decided to be models for their neighbors.

## Market gardening

Market gardening consists in cultivating crops (vegetable) that can be sold on the market. Some are already cultivated by Kopainya (tomatoes) but others are not (carrots). This solution



consists in implementing improved cultivation techniques learnt during the study trip like mulching, thinning carrots, etc.

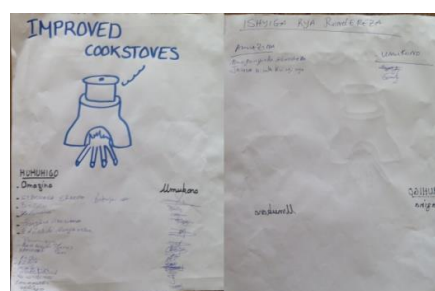


Though not chosen as a common project for the cooperative, this solution was chosen by **18 participants**. Members of this group will look for a common plot of land, manure, plant health products and markets for their production. They will start in July 2017.

## Efficient cookstoves

Compared to traditional stoves (a fire in between 3 stones to support the pan), efficient cookstoves reduce the consumption of firewood by two as well as the emission of toxic smokes.

This solution gathers **17 participants**. Members decided that they will help each other for the installation of their efficient cookstoves in their kitchen. They insisted on fixing a two months' deadline and said everybody would be equipped by August 2017.

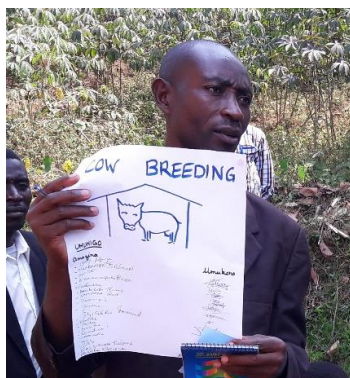


They didn't know at the time that in ARECO would distribute 250 improved cookstoves in households of members of the cooperative as well as neighboring ones in August 2017. This action would help beneficiaries to achieve this engagement.

## Cow breeding in stalls

Breeding cows in stalls combined with fodder cultivation is a technique that allows breeding one or several cows even if the surface of the farm is very small. Pasture can be very small and is mostly used to have the cows exercise

outdoor. Breeding in stalls also facilitate milking as well as collecting manure to fertilize crop lands.

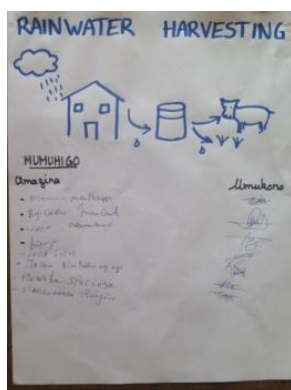


This solution gathers **18 participants**. Members of this group will help each other find cows as well as cultivate fodder. The cows will turn on the fields, even of those who have no stalls. They will start in October 2017.

## Rainwater harvesting

This installation collects rainwater from rooftops to give to the cattle, water the kitchen garden or answer family use. The water remains available during the whole year, even during the dry season. The water is collected thanks to gutters and drain pipes. It is stored

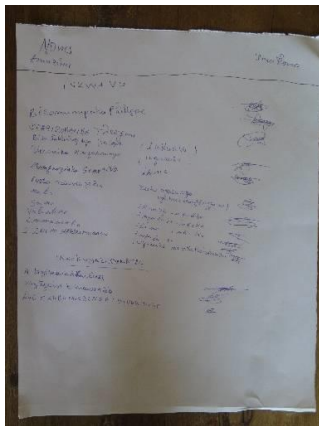
in a cistern made of tarp, bamboo and concrete. A manual pumping system helps distribute easily the water.



This solution gathers **8 participants**. They will help each other for the installation. They will gather plastic sheeting, gutters, build the tank room and the PVC pump. They will do so before October 2017, when the rainy season starts.



Two additional solutions were signed for:



**Rabbits breeding:** This solution gathers at least **11 participants**.

**Poultry breeding:** This solution gathers at least **3 participants**.



The terrace, combined with fodder plantation as stabilization, though discussed in groups, did not get any signature.

### ***3.3. Take action to protect the forest***

This is the third part of the Action Plan. The participants committed to take action to protect the forest, individually and as a cooperative.

Participants found that they benefit from Cyamudongo forest because it brings the following services:

- fresh air,
- clean water,
- rain,
- pollination
- soil maintain,
- revenue (tourism),
- electricity,
- beauty and joy.

Also, though it is forbidden to collect it in Cyamudongo forest, a forest can provide for:

- Material for housing, textile and fuel,
- Fruits, fodder and medicinal products.

In order to protect Cyamudongo forest, the participants suggested the following actions:

- Be role models and do no illegal activities in the first place.
- Inform other people about climate change and the role of the forest in its mitigation.

- Inform other people about the overall utility of the forest: provision of fresh air, clean water, rain, pollination, soil maintenance, revenue (tourism), electricity, beauty and joy.
- Sensitize other people about the consequences of illegal activities (poaching, tree cutting, mining, fire setting...).
- Exchange good practices learnt during the “Solutions Worth Sharing” workshop (rainwater harvesting, intensive vegetable gardening, improved cookstoves, cow breeding in stalls, water filtration, beekeeping...).
- Grow plants that do not appeal to forest animals, in order to keep these inside the forest.



The cooperative will discuss these actions and may decide of a collective code of conduct for all members of the cooperative. No deadline was decided.

## 4. Community commitment

During the closing ceremony, the work of the participants was presented to the officials. Were present:

- The Deputy Chief warden of Nyungwe National Park in charge of community work (Norbert Karegire)
- The Executive Secretary of NYAKABUYE sector (James Ngirabatware) and his representative in charge of cooperatives (Juvenal Hamenyimana)
- The Executive secretary of Kamanu cell (Florent Harerimana)
- The National Coordinator of ARECO RWANDA NZIZA (Dancilla Mukakamari)
- The Executive Director of Resilience Now (Florence Gibert)
- The President of Kopainya Cooperative (Innocent Byigero)

The posters summarizing the action plan were given to the cooperative and to the sector representative to seal the participants' commitment. The sector committed to help the cooperative in the achievement of its action plan.



Presentation of the work of the participants



Official speeches (here the Executive Secretary of Nyakauye Sector)



Distribution ceremony of the certificate of participation

Celebration !





## 5. Conclusion

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Thanks to the active participation of Kopainya cooperative members, this workshop allowed this cooperative to identify its strengths and weaknesses, identify its problems and discover solutions developed in Rwanda – solutions that improve the members livelihoods and protect Cyamudongo forest at the same time.

The action plan built by Kopainya cooperative now needs to be implemented. The enthusiasm, motivation and implication of participating members during the workshop augur the adhesion of the other members and an effective implementation of the action plan. The support of the Park and the sector authorities will be helpful.

The implementation of the action plan by Kopainya cooperative will be followed up regularly by ARECO AND RESILIENCE NOW through field visits. ARECO will visit the cooperative during summer 2017 and Resilience Now will visit during autumn 2017.

## 6. Acknowledgments

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

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

The organizations visited during the study trip:

- REDO (Rural Environment Development Organisation)
- WCS (Wildlife Conservation Society)
- RDB (Rwanda Development Board)
- KCHDP (Kirambi Community Health and Development Programme)
- AVSI Foundation
- Zirarese cooperative
- Cookstoves cooperative AMAHUMBEZI YA CYAMUDONGO

Our funder:

- CEPF (Critical Ecosystem Partnership Fund) and Birdlife International, its regional implementation team for the Eastern Afromontane hotspot.

# 7. Appendices

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## ***7.1. Situation Assessment***

### **Activities and their main objectives**

- **Presentation** of the Cyamudongo forest biodiversity and conservation issues by the Nyungwe National Park authorities;
- **Role games** to develop an argumentation on why it is important to protect the forest;
- **History timeline** to share 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. The corresponding activities have 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 identifying solutions to solve the problem and its causes;
- **Community strengths** to identify the resources and strengths of the cooperative. This has been done in little groups.

### **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:

- The well-being and economic development of people living around the forest are deeply tight to the health of the forest ecosystem. Forests provide many ecosystem services: climate regulation, erosion prevention, water filtration, etc. These services have a great impact not only at the local scale but also at the country and at a worldwide scale.
- 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.
- 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.
- Illegal activities in the forest are strongly punished.
- Although it is a long process, it is possible to get financial compensation in case of damages caused by wildlife.

**The participants divided into 2 groups, played a role game where they had to argue against people who wanted to pay them off and cut out the forest for profit.** They had to argue why the forest should not been sold at any price.



## B. History timeline



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 : 1990 - deforestation followed by disparition of many animals from the forest, 1996 - protection of Cyamudongo forest
- Main **social** events : 1905, 1945 - churches implantation, 1960 - men wear trousers, 1970 - women change their hair style, 1974 and 2009 - change in roof materials, 2002 - gender equity, etc.
- Main **socio - economic** events : 1982 - cement factory implementation, 1991 - electricity arrives in the area, 2007 - mobile phones become mainstream
- Main **agricultural** events and practices evolution : 1940 - starvation, creation of terraces, 1986 - drainage of the wetlands, 2007 - “One Family, One Cow” program, 2010 - cattle must stay in stalls, etc.
- Main **political and administrative** evolutions : beginning of the 20<sup>th</sup> century - Cyamudongo area is governed by a king, 1960 - democracy
- Main **climate disasters** and its consequences : 2006 - drought followed by starvation, 2010 - climate change is tangible, 2016 - drought followed by poor yields of maize .
- The strong and negative impact of the **genocide** (1994) on the people, the agricultural practices and forest ecosystem.

## C. Trends chart



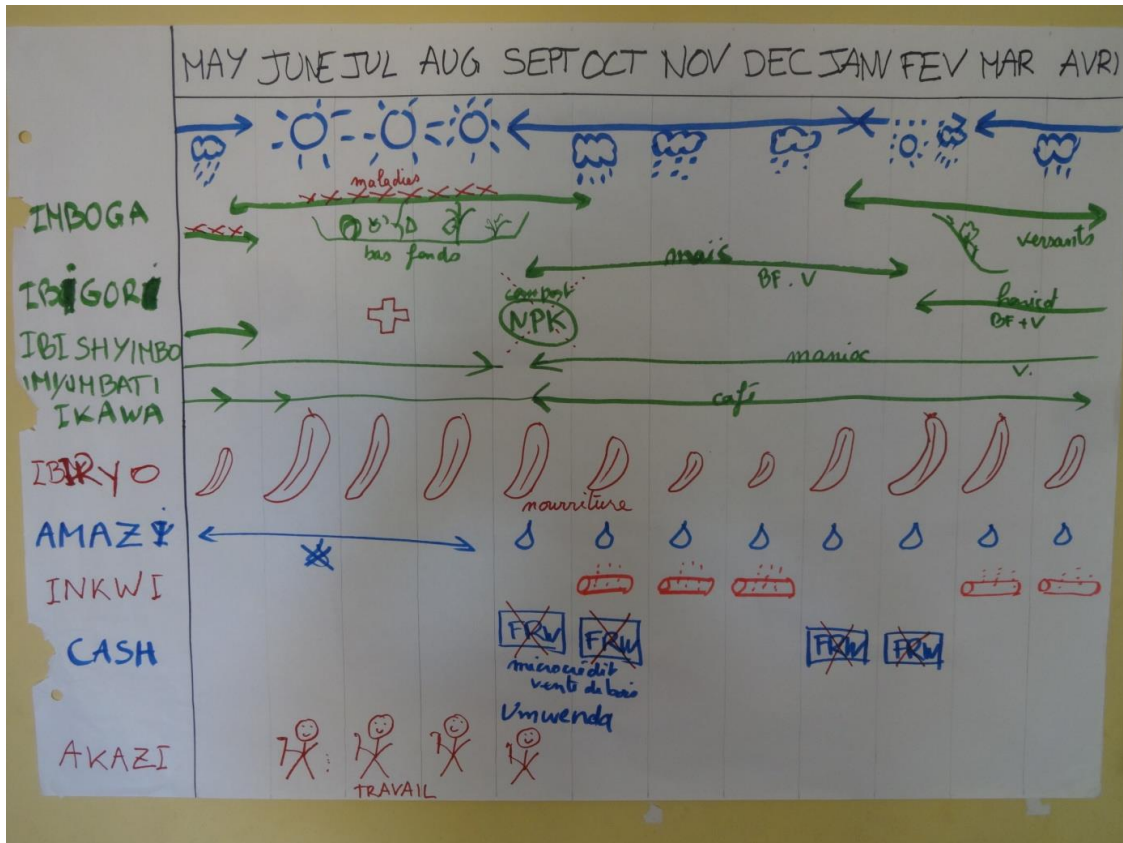
To create the trends chart we proceeded in 2 steps.

First, groups by gender brainstormed the environmental/agricultural (green stickers) and social (orange stickers) trends affecting the cooperative. Then, after putting together all suggestions, the participants ordered the trends by relations of causes and consequences.

One main result was to realize the negative impact of population growth on the size of the cultivated lands. This conducted to tree cutting and erosion of the fields which affected negatively the yields. Also, the diminution of fodder for the cows led to a decline in manure production, also affecting the yields. Because of the need to buy fertilizers, people had to get into debt. At the same time, the loan rates increased. Last, the diminution of agriculture production led to a decrease of the revenues, thus to less food for the families.

The chart illustrates all the trends and its relations together, identified by the community.

## D. Seasonal calendar

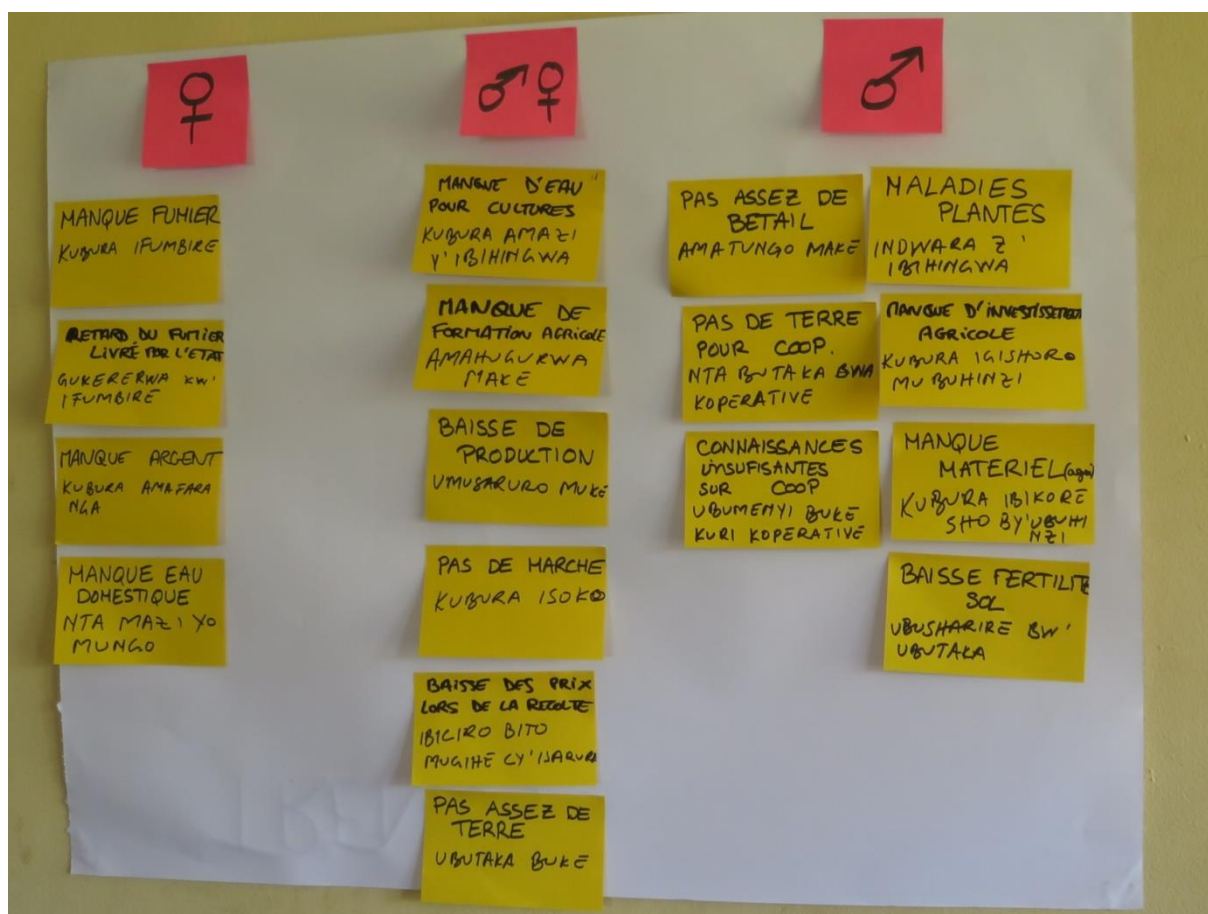


This activity was led with all the participants. It helped the group visualize the organization of the agricultural work throughout the year, the main work peaks (during harvests), the periods when cash is available (after harvest), etc.

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

- The dry and rainy seasons are not as easy to determine as before, due to climate change. The agricultural practices had to evolve: change in plantation season, cease of plantations which are not adapted to the climate anymore (green peas), unpredictable yields, etc.
- The two dry seasons are the periods when the cooperative can cultivate vegetables (on different types of land). It is the moment of the year when a lot of workforce is most needed. Recently, diseases appeared in vegetable fields during the long dry season.
- The problem of manure availability and fertilizers availability was stressed out. To buy seeds and fertilizers, farmers get into debts.
- Dry wood availability is a problem during the wet seasons.

## E. Problems brainstorming



Some of the issues faced by the cooperative and the participants arose from previous activities. A brainstorming session continued this work of problem identification. This activity was done by groups of gender. The results were the following:

Problems identified only by women	Problems identified by both women and men	Problems identified only by men
<ul style="list-style-type: none"> <li>- Drop in soil fertility</li> <li>- Plant diseases</li> <li>- Not enough cattle</li> <li>- Lack of agricultural investment</li> <li>- Lack of knowledge</li> <li>- Inappropriate cultivating tools</li> <li>- No ownership of land for the cooperative</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of water for cultures</li> <li>- Lack of training in cultivation</li> <li>- Drop of production</li> <li>- Drop of crop prices</li> <li>- Market is too far</li> <li>- Not enough land</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of manure</li> <li>- Delays in fertilizers distribution</li> <li>- Lack of money</li> <li>- No running water</li> </ul>

After putting together the answers, they were grouped by themes and the participants agreed that most problems stemmed from one: **the drop in agricultural production.**



## F. Problem tree



The participants built a tree to explore the causes and consequences of the core problem: **a low agricultural production**. The trunk of the tree symbolized the core problem. Its branches symbolized the consequences. Its roots symbolized the causes.

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

- **Economic consequences:** debts, poverty, poor mobilization in programs;
- **Social consequences:** no payment of school fees, starvation, family disagreement, lack of self confidence, no access to healthcare;
- **Environmental consequences:** tree cutting, not enough food for cattle.

In a second time, the participants brainstormed the **causes** (roots) of low agricultural production: climate change, lack of investment, lack of knowledge, small piece of land, plant diseases, bad seeds quality, lack of soil fertility, lack of manure, erosion, population growth, deforestation, wood consuming activities, etc.

Then, the participants organized the causes by relations, in order to identify the deepest roots of the problem. The final result is illustrated by the problem tree above.

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Below are a few examples:

- Kopainya Cooperative Action plan – June 2017 – Resilience Now / ARECO

## H. Strengths of the cooperative



The strengths of the cooperative have been brainstormed by groups of 10 persons. But first, each group have played a role game where some persons of the group were doubtful of the advantages of being part of Kopainya cooperative and the others had to convince them to join the cooperative by finding strong arguments.

The identified strengths and advantages of Kopainya cooperative are:

- Solidarity between members
- Health insurance
- Unity
- Partners
- Cattle
- Better access to market
- Access to trainings (agricultural, conservation, etc.)
- Income generation
- Cease of illegal activities
- Better future.

## 7.2. Projects visited during the study trip

Projects and organizations visited during the study trip:

- Promoting **energy efficient cookstoves** for sustainable conservation of Cyamudongo forest. Implemented by ARECO (Rwandan Association of Ecologists). *Western Province, Rusizi district, Nyakabuye sector.*

- **Biogas production and agricultural practices.** Visit of the facility of one Zirarese cooperative member. *Western Province, Rusizi district, Nkungu sector.*
- **Modern beekeeping:** Visit of the facility of one Zirarese cooperative member. *Western Province, Rusizi district, Nkungu sector.*
- **Beekeeping and honey selling.** Implemented by WCS and RDB (Rwanda Development Board). *Southern province, Nyamagabe District, Kitabi sector.*
- Socio economic improvement of HMP (Historically Marginalized People) around Nyungwe National Park. Best practices visited: **goats breeding and compost making, vegetable gardens and soil conservation.** Implemented by REDO (Rural Environment Development Organisation). *Southern province, Nyamagabe District, Uwinkingi sector.*
- Increased household income through cooperative development and better access to market. Best practices visited: **vegetable gardens, rainwater harvesting and animal husbandry/zero grazing system.** Implemented by KCHDP (Kirambi Community Health and Development Program). *Southern province, Nyanza District, Kirambi sector.*
- URI INZIRA Project. Best practices visited: **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.*

Solutions seen during the study trip (some projects gathered several solutions):

- Water filtration
- Confection of improved cookstoves
- Domestic use of improved cookstoves
- Creation of artificial land (improved gardening)
- Foundations of a milk collection facility
- Technical itinerary for the improved cultivation of tomatoes (school field)
- Technical itinerary for the cultivation of carrots (individual field)
- Cow breeding in stalls
- Compost making
- Rainwater harvesting
- Biogas
- Rabbit breeding
- Modern beekeeping
- Slope runoff water collection ponds
- Hen breeding
- Water sprinkler
- Honey collection and seeling center
- Goat breeding by HMP
- Progressive terraces (flattened with antierosion ditches and plantation of trees) and radical terraces (flatten intensive earth work).