

Sustainable Transition to Entrepreneurial Production in Agriculture through Upgrading

### Work Package 3

Participatory Strategy / Scenario Development and Implementation (NETFUND/ NARO)

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# Task 3.3: Participatory development of alternative agricultural transformation pathways (WUR)

Participatory identification of agricultural transformation pathways in Isingiro District, Uganda

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## Table of Contents

1. Introduction
1.1 The STEP-UP project3
1.2 Workshop objectives3
1.3 Methods used in the workshop4
1.4 Workshop participants4
2. Workshop opening and background4
2.1 Official opening4
2.2 Overview of trends in the past and drivers of change5
<b>3. Key results of the workshop</b>
<b>3.1 Participatory visioning</b> 6
3.1.1 Visioning of a sustainable future for agriculture and matooke value chains in Isingiro6
<b>3.2 Backcasting: moving backwards from the vision to the present</b> 8
3.2.1 Identification of obstacles to reach the vision for a sustainable matooke value chain9
3.2.2 Identification of opportunities to overcome the obstacles12
3.3 Indicators to measure effects of interventions and monitor progress towards the vision $14$
4. Way forward and closing of the workshop15
Annex 1: Participants' list
Annex 2: Opening remarks from LC3 Chairman of Rugaaga, Matthias



# Participatory identification of agricultural transformation pathways in Isingiro district, Uganda

STEP-UP Stakeholder workshop Isingiro, 12-13th September 2019

#### 1. Introduction

#### 1.1 The STEP-UP project

Sustainable intensification of agriculture provides a potential pathway to meet the growing demands for food on a global level. However, in practice adoption of many promising SI solutions remains disappointing, amongst others due to poor linkages to input and output markets and high investment risks. In the STEP-UP project, we aim to implement and assess sustainable intensification (SI) and market linkage (ML) strategies to enable small farm enterprises (SFEs) to step up towards food and nutrition security, sustainable development and income generation. The project focuses on banana and mango food value chains in Uganda and Kenya. Uganda is the leading banana-producing country in Africa, with the East African highland banana (EAHB) cultivar a staple to an estimated 10 million Ugandans. The banana marketing relies on complex food value chains (FVC) and is challenged by poor infrastructure.

STEP-UP aims to identify and implement strategies to upgrade production, processing and marketing of cooking banana (matooke) in two districts of Uganda: Isingiro and Kabarole. However, stakeholders engaged in banana value chains in these two districts may have diverging views on the desired future. Participatory scenario development and impact assessment are therefore powerful tools to guide discussion and convergence of views on the



necessary interventions enabling (agricultural) transformation pathways towards such a future. At the start of the STEP-UP project, a multi-stakeholder workshop is planned in both districts to establish a shared vision, to identify the steps needed to reach that vision, and to select relevant indicators that could measure the project's progress towards the vision. The first workshop was held on 12-13 September 2019, at the sub-county headquarters in Rugaaga.

#### 1.2 Workshop objectives

The workshop had the following objectives:

- 1. Participatory visioning of a desired future for agriculture and the matooke value chain in Isingiro district
- 2. Exploring obstacles and opportunities for reaching the vision
- 3. Identifying interventions for STEP-UP and other stakeholders that could lead to the vision
- 4. Participatory selection of relevant indicators that could track the progress towards the vision



#### 1.3 Methods used in the workshop

#### Participatory visioning

- Timeframe: next 10-20 years
- Visioning:
  - 1. Agriculture in Isingiro in a sustainable future
  - 2. Matooke value chain in Isingiro in a sustainable future
- The aim is to identify elements of a sustainable future that all stakeholders can agree on; hence to develop one common vision.

#### Backcasting

- Identification of obstacles to reach vision of sustainable matooke value chain (within broader agricultural context)
- Identify opportunities to overcome the obstacles. Distinguish between internal (STEP-UP and partners) and external opportunities. Build on potential interventions identified during kick-off workshop December 2018 and field visit July 2019.
- Identify priorities and concrete interventions for STEP-UP

Participatory selection of relevant indicators

- Which indicators are important to stakeholders?
- Vote to select most important indicators to monitor

#### 1.4 Workshop participants

Stakeholders along the matooke value chain in Isingiro/ Rugaaga (stakeholders from Birere were not present, although the site will be included in the project): farmers, cooperative chairs, representative of the cooperative union, processors (wine, cakes), transporters, NGOs, extension agents, researchers (MBAZARDI), financial institutes (Pride Uganda), LC3 chairman Rugaaga. A full list of participants is given in Annex 1.



#### 2. Workshop opening and background

#### 2.1 Official opening

The LC3 Chairman of Rugaaga officially opened the workshop. His opening remarks are included in Annex 2.



#### 2.2 Overview of trends in the past and drivers of change

Although the workshop aimed to look ahead, it is important to understand where we are coming from. The workshop therefore started with an overview of past trends and drivers of change in Rugaaga, presented by Anne Rietveld from Bioversity.

A summary of the results from the study:

Main changes include a reduction in forests and trees, grazing land and the diversity of crops grown (focus on banana). Other things have increased, such as the number of people in the area, the quality of the road network, water availability, electricity, the number of bare hills and run-off erosion, and the cultivation of matooke.

Drivers of this change are:

- The establishment of the refugee camp from the 1960's first introduced a market economy, for instance with an increased demand for banana beer.
- After 1986, peace in the area increased the security
- The population in Kampala increased and increased market demand for matooke
- The government, through NAADS, came up with good management programs for banana (increasing bunch sizes which were preferred by traders)
- With the money earned from matooke, people can now afford to pay school fees, build houses, acquire more land (society is changing to a place where people have money and need more money to improve themselves)

As a result:

- Social structures changed: before, people were more or less the same; now differences increased (e.g. large land, small land, immigrants, landless)
- With increased money involved in banana cultivation, men took over control. Some men invest this money in houses, sending their children to school and accessing good healthcare services. However, others married other wives and spread their income thinly.
- With increasing amounts of matooke sold, nutrients are taken away and worries about the loss of soil fertility arise
- Access to firewood has become problematic
- The diversity of food has decreased; people mainly eat matooke, or else sell it to buy posho. Yet, especially children need a variety of foods to grow well
- The drought which hit the area in 2016-2017 made people lose a lot, they were forced to get loans and are now faced with problems
- Grazing land reduced because of the expansion of matooke, and people own fewer goats and cows

Participants recognized the trends and changes. Additions to the challenges: there is money to be made in the packaging and loading of banana, e.g. at the collection centers, which has led to children dropping out of school; the well-off people are not educated, which shows a "wrong role model" and discourages children from going to school; high banana productivity has reduced the saving culture because people now think they will always have cash from sales - which had severe consequences during the drought in 2016/2017, when many people went hungry.

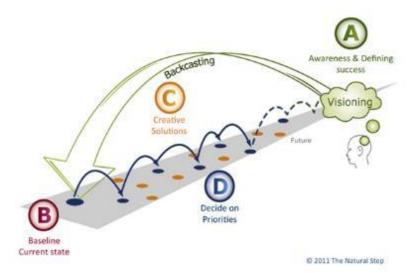
#### 3. Key results of the workshop

With the past trends and drivers of change in mind, the workshop then shifted its focus towards the future. Some time was devoted to agreeing on the meaning of "sustainability": *The use of resources in such a way that new generations can continue using these resources*.



#### 3.1 Participatory visioning

Participants were introduced to the ideas of participatory visioning (Fig. 1). The aim of was to arrive at a common vision for agriculture and the matooke value chain in Isingiro district. Participants were encouraged to dream big at this stage, and freely exchange ideas about their desirable future. The timeframe used for the visioning was the next 10 to 20 years.



# Fig. 1: Participatory visioning and backcasting as introduced to stakeholder in Isingiro (Source: https://www.naturalstep.ca/abcd)

#### 3.1.1 Visioning of a sustainable future for agriculture and matooke value chains in Isingiro

In a first exercise, participants discussed the question: "What will agriculture in Isingiro look like in a sustainable future?" Four groups were formed, each focusing on one sustainability domain: economic, food security, environmental and social. These domains were agreed upon with the STEP-UP project team during the kick-off workshop in December 2018. Participants wrote down their hopes or wishes for the future, and finally selected the five most important elements for the vision of agriculture in their domain.

Next, the groups did the same exercise but zooming in on the matooke value chain.

In a plenary feedback session, the groups presented their top-five elements for the vision of agriculture and the matooke value chain to the rest of the group (Tables 1 and 2).

	Economic	Food security	Environment	Social
1.	Improved road network (poor roads cause spoilage of banana)	Food is available throughout the year	Enough water for production	Husband and wife are open to each other and trustworthy
2.	Diversified income generating activities to reduce risk (requiring a small space, e.g. fruit trees, zero grazing, poultry or rabbits)	Different types of food are available	Re-use of waste products (waste collection for composting)	Have family meetings to share decisions and tasks



3.	High yields through irrigation and organic fertilizer	A balanced diet (incl. meat, milk, fruit, vegetables)	Good agronomic and environmental practices (advice, standards)	Have example/model families of e.g happy marriages, help others and have good behaviour
4.	Enhanced value addition (flour, cakes), especially at times of a bumper harvest	Food safety (e.g. no chemicals, safe waste management, education for proper use of chemical fertilizer)	Enforcement of environmental policies and mainstreaming in programmes	Youth to marry at 20+ (boys 25 and girls 23), when they are ready to live alone
5.	Direct market access with less influence of middle-men	Reduced post-harvest losses (e.g. better storage, improved shelf- life, processing)	Dissemination of environmental standards (e.g. similar to WASH principles)	Have other opportunities outside farming

#### Table 2: Top 5 elements of a sustainable future for the matooke value chain in Isingiro district

	Economic	Food security	Environment	Social
1.	Have access to labour saving techniques (harvest/ transport, weeding by spraying, land preparation by tractors)	Increased production and productivity, with area under matooke remaining the same	Enough water for matooke production and processing/ value addition	Equal participation of men and women in the matooke value chain (labour provision/ tasks, decision-making, marketing & expenses)
2.	Reduced dependence on climate (drought resistant varieties, irrigation)	Increased income for farmers to buy diverse food	Re-use of banana waste both at community level and in urban centres (e.g. from Kampala back to farmers' fields)	Cooperatives are active, each member has a voice and a vote
3.	Enhanced value addition (processing of bi- products like peels + processing industry in Rugaaga)	Awareness about the importance of a balanced diet	Well-conserved banana plantations (soil fertility, terracing, manure, mixed enterprises)	Casual labourers receive a fixed & high pay
4.	Improved marketing (without middle men, online, local marketing)	Improved post-harvest handling, value addition and shelf life of matooke for improved income and food safety	Zoning of crops to suitable landscapes for environmental protection (with exchange of products between zones)	
5.	Work in cooperatives (buying inputs, selling and marketing of produce)	Good agricultural practices applied	Development and enforcement of environmental standards in the banana value chain	



The visions for agriculture in general and the matooke value chain specifically had a large overlap. Participants mentioned that this was because matooke played such an important role, so when they thought of a vision for agriculture, they automatically pictured matooke.

The wish for processing and value addition of matooke and bi-products like banana peels or other parts came back in most of the groups, as well as the need to apply good agricultural practices to improve production and productivity. This also included the issue of improved access to water/ reduced vulnerability to drought. Improved functioning of cooperatives came out in multiple groups too.



#### Discussion in plenary:

After the presentation about the *economic* domain, it was brought up that one important element was missing: investments. The reasoning was that many of the features of the 'dreamed matooke value chain' require considerable investments, and thus, that this is an im portant and overriding aspect that should be addressed by the project.

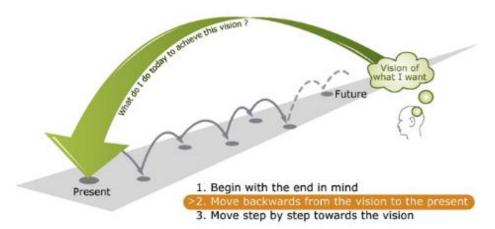
The discussion that followed the presentation by the *food security* group centered around the issue of food diversity. The group reasoned that if farmers focus mostly on matooke, they can buy other foods and vegetables with the income that is generated. However, it is the question whether 1) these alternative food sources are available (i.e. who grows these other foods if everyone grows only matooke), and 2) whether people would actually invest in diverse food sources, since Annes's study concluded that many farmers selling matooke still have poor diets, mainly consisting of staples (posho).

A question was raised after the *environmental* presentation: what kind of environmental standards was the group envisioning? Examples of these standards included: every farm should have a certain amount of trees, or should at least have a compost pit etc. One participant mentioned the request for a machine to de-hand and peel bananas on-farm.

#### 3.2 Backcasting: moving backwards from the vision to the present

On the second day of the workshop, participants were introduced to backcasting: the identification of the steps needed to reach the established vision (Fig. 2). The backcasting exercise was done for the vision of the matooke value chain only; as the focus of the STEP-UP project.





# Fig. 2: Backcasting: which steps are needed to reach the vision? (Source: https://www.naturalstep.ca/abcd)

3.2.1 Identification of obstacles to reach the vision for a sustainable matooke value chain

The backcasting started with the identification of obstacles that could arise when aiming to reach the vision. These obstacles were directly linked to the top-five elements of the vision for the matooke value chain (Table 3).

	Elements	Obstacles
	Economic	
1.	Have access to labour saving techniques (harvest/ transport, weeding by spraying, land preparation by tractors)	<ul> <li>No power in Rugaaga - limits use of machinery</li> <li>Electricity is expensive</li> <li>Inadequate investments from government, no subsidies</li> <li>Negative perception of people towards spraying</li> <li>Fake chemicals</li> <li>Government policy stopping the use of chemicals</li> </ul>
2.	Reduced dependence on climate (drought resistant varieties, irrigation)	<ul> <li>Limited funds</li> <li>No/ limited knowledge about irrigation</li> <li>Need to change planting arrangements (in lines) for irrigation</li> <li>People not willing to change from indigenous to new varieties</li> <li>Drought may become worse in the future</li> </ul>
3.	Enhanced value addition (processing + processing industry in Rugaaga)	<ul> <li>Limited knowledge on value addition</li> <li>Limited funds</li> <li>No power/ electricity</li> <li>Getting market for the processed matooke</li> </ul>
4.	Improved marketing (without middle men, online, local marketing)	<ul><li>Lack of skilled people/ knowledge to do marketing</li><li>No transport means to avoid middle men</li></ul>
5.	Work in cooperatives (buying inputs, selling and marketing of produce)	•

 Table 3: Elements of the vision and obstacles for reaching the vision of a sustainable matooke

 value chain in Isingiro for the economic, food security, environmental and social domain



#### Food security

- 1. Increased production and productivity, with area under matooke remaining the same
- 2. Increased income for farmers to buy diverse food
- 3. Awareness about the importance of a balanced diet
- Improved post-harvest handling, value addition and shelf life of matooke for improved income and food safety
- 5. Good agricultural practices applied

#### Environment

- 1. Enough water for matooke production and processing/ value addition
- 2. Re-use of banana waste both at community level and in urban centres
- Well-conserved banana plantations (soil fertility, terracing, manure, mixed enterprises)

4. Zoning of crops to suitable landscapes for environmental protection

- Drought
- Limited access to finance for loans to buy inputs
- Limited availability of manure and mineral fertilizer
- Climate change: unpredictability of the weather, pest & diseases, wind & hail
- Poor road infrastructure --> poor transport --> low prices
- Poor saving culture
- No knowledge on value addition for matooke
- Limited employment opportunities for educated youth --> low investment in sending children to school
- Not enough trainers
- Trainings target the rich people, poor not reached with campaigns
- Poor availability of radio/ TV/ other ICT channels for campaigns
- Limited access to equipment
- Limited knowledge on value addition
- Processing factories are far away
- Careless handling by unskilled people
- Limited access to finance
- Limited access to advisory & extension service
- Absence of demonstrations
- Rigid mindset of farmers
- Lack of knowledge on water harvesting
- Poverty (no resources to apply practices)
- Deforestation reduces water holding capacity
- No access to nearby water sources in uplands
- Drought
- Spread of pests & diseases when peduncles are reused?
- Lack of refrigerated trucks
- Inadequate technologies to recycle waste
- Low incomes prevent people from investing in good practices
- Lack of model farms which demonstrate good practices
- Limited awareness of best technologies
- Rigidity in adoption of new technologies
- Lack of land for terracing
- Soil exhaustion through overcropping
- Soil erosion
- Market forces favouring matooke
- Consumer taste & preference for matooke



5.	Development and enforcement of environmental standards in the banana value chain	<ul><li>Political interference</li><li>Lack of money to implement the standards</li></ul>
	Social	
1.	Equal participation of men and women in the matooke value chain	<ul><li>Cultural norms and habits</li><li>Men see women as weak and inferior</li><li>Parents prefer educating boys</li></ul>
2.	Cooperatives are active, each member has a voice and a vote	<ul> <li>Cooperatives-status of the members are different, the rich dominate while the poor and women are often inferior and have no voice</li> <li>Social conflicts and politics</li> <li>Tribalism</li> </ul>
3.	Casual labourers receive a fixed & high pay	<ul> <li>Casual labourers are not registered</li> <li>Labourers are not educated /aware of their rights</li> <li>Employers have different standards/ casual agreements</li> <li>Natural calamities/no money</li> </ul>

#### Discussion in plenary:

*Economic:* One of the main obstacles identified by the group were government policies, but it was commented that policies are not necessarily obstacles, since they can also bring positive changes. Also, the challenge of low demand of banana during the season was raised, but another participant commented that this is because people are not organized. Joint marketing and saving through cooperatives was suggested.

*Food security:* Any intervention/policy targeting the food security domain should consider *who* in the household is making decisions about the diet. It was commented that usually, women decide on the diet, only when food is scarce and needs to be bought, men decide.

*Social:* One of the obstacles identified by the social group was that women are still perceived as inferior. This was obstacle was challenged by one women, but affirmed by another women, who said that in



many cooperatives, women don't have a vote. Besides, it was commented that many cooperatives have more male members than female members, so that they even when they have a vote, women may still be underrepresented. А participant advocated for a 50:50% membership of men/ women in future. Another issue raised was that the rich, large farmers (men) tend to dominate the



coops, although the smaller farmers are many their voices are over-ruled by the few powerful. This is also cultural as poor people are supposed to be quiet and modest.

*Environment:* There was some discussion around water issues. The environmental group claimed that water availability was a major issue. According to the economic group, the problems revolve around the infrastructure needed for irrigation and the required investment, but water availability itself was not a problem. This statement was questioned by Anne, who mentioned that already, water levels in rivers and lake Nakivale are decreasing. Another person mentioned that since the hills were more bare (few trees left), there was more runoff, and less water availability. One more obstacle was mentioned in the environmental domain, namely the unwillingness of (local) politicians to enforce unpopular policies, such as enforcing people to leave more trees on the hills. A question was raised if people are not aware or are not sensitized about issues of water harvesting. The answer was that they have the knowledge but don't practice it well.

#### 3.2.2 Identification of opportunities to overcome the obstacles

Next, we went into the identification of opportunities to overcome the obstacles in reaching the vision for the matooke value chain in Isingiro. As many of the groups had identified similar obstacles, the obstacles were regrouped into obstacles related to production, post-harvest handling/ processing/ value addition and marketing/ policy (NB: these categories largely corresponded with the value chain segments identified during the STEP-UP kick-off workshop in December). New groups were formed around these three categories, and each group picked out the three main obstacles in their view. The groups listed a number of opportunities that would help the overcome the obstacles. Then, the groups rotated and added to the findings of the first group. In a final round, the last group identified promising interventions that STEP-UP could work on (Table 4).

Obstacle	Potential STEP-UP interventions and other opportunities to overcome obstacles
Production	
Limited knowledge/ extension	• Provide information on good agricultural practices (exchange visits to other sub- counties or demonstration sites banana agronomy)
	<ul> <li>Backyard gardening for home consumption</li> <li>More extension workers</li> <li>More interventions from NGOs</li> <li>Use of fertilizers</li> </ul>
Land scarcity	<ul> <li>Live in fixed settlements (planning &amp; concentration of houses)</li> <li>Land titles/ ownership</li> <li>Land consolidation</li> <li>Family planning</li> </ul>
Vulnerability to drought	<ul> <li>Link to government working on irrigation in banana</li> <li>Plant drought resistant crops on edges of field</li> <li>Increase water sources/ drill wells</li> <li>Sensitization on terracing</li> <li>Mulching</li> <li>Ditches</li> <li>Cover crops</li> </ul>

Table 4: Main obstacles and interventions in the matooke value chain identified for STEP-UP. Other opportunities (not considered as intervention for STEP-UP) in *Italic*.



Obstacle	Potential STEP-UP interventions and other opportunities to overcome obstacles
Post-harvest handlin	ng/ processing/ value addition
Limited awareness of best technologies	<ul> <li>Support group formation for knowledge sharing</li> <li>Training on processing of peels into compost; provide trainees with certificate to enable trust of other farmers; produce books or leaflets to refresh knowledge</li> </ul>
	<ul> <li>Sensitize farmers about post-harvest activities; and farmers sensitize others</li> <li>Exchange visits between sub-counties</li> <li>Better institutions (technical support) for knowledge on post-harvest activities</li> </ul>
No equipment/ factories for processing	<ul> <li>Support loan schemes to buy equipment</li> <li>Assess effects of establishment of agro-processing industry in Rugaaga</li> <li>Farmers' joint use of machines for processing (e.g. of peels)</li> </ul>
	<ul> <li>Government to provide equipment</li> <li>Use human labour instead of machines</li> <li>Attract processing industry</li> </ul>
Poor handling/ unskilled labour in handling	<ul> <li>Organize a collection centre and own transport at cooperative level (STEP-UP to help with linking and acquiring loans)</li> <li>Improve on packaging of matooke&gt; grading system?</li> </ul>
	<ul> <li>Sensitize all actors on the importance of handling</li> <li>Reduce costs of transportation (roads, rail, increased number of lorries)</li> <li>Quality control at the market place</li> </ul>
Marketing/ policy	
Lack of marketing skills	<ul> <li>Provide weighing machines to weigh in kgs</li> <li>Link to export markets (develop a website, link with specialists from NARO to measure the nutritional value of banana)</li> </ul>
	<ul> <li>Copy successful farmers/ businessmen</li> <li>Training/ workshop on marketing, business skills, record keeping</li> <li>Training on good quality, marketable products (e.g. through MAAIF)</li> <li>Co-learning in farmer groups</li> </ul>
Limited functioning of cooperatives	<ul> <li>Form groups for group collection of matooke</li> <li>Support functionality of cooperatives</li> <li>Packaging of matooke (packaging materials, training/ sensitization on packaging in crates/ boxes)</li> <li>Training on banana trends (customer preferences)</li> </ul>
	<ul> <li>Strong cooperatives support weaker ones</li> <li>Training/ awareness that "weaker" people also have rights</li> <li>Know where to go for help, problem resolution</li> </ul>
No transport means to avoid brokers	• Link to government/ agencies/ authorities to invest in collection centres, and to find direct market points in Kampala
	Access to loans for transport means

• Access to loans for transport means



(Policy:) No	Cooperatives to pull resources together
government	• Develop a saving culture within the cooperative
investment or subsidies	<ul> <li>Lobbying to government to put money in cooperatives instead of local government structures</li> <li>Linking to banks for agricultural loans with low interest rates</li> </ul>

#### 3.3 Indicators to measure effects of interventions and monitor progress towards the vision

As a final exercise of the workshop, participants were tasked to think about indicators that could be used to measure the effects of the selected interventions. The indicators serve to describe the current situation (where are we now in the different sustainability domains, what is the current diversity between farmers, and what is possible in the current situation: what can 'outstanding' farmers achieve?), and to

monitor change (are we moving in the right direction to reach our vision, are there any unintended or negative effects?).

From the interventions identified, we selected four example interventions that served as starting point for the discussion on relevant indicators. The group was split in two, and each group discussed two interventions.



 Table 8: Indicators to describe the current situation and to measure effects of STEP-UP

 interventions in the matooke value chain for four example interventions

Intervention	Indicators	How to measure?
Information provision on good agronomic practices	<ol> <li>Quality (bunch + finger size)</li> <li>Quantity (number of bunches)</li> </ol>	Reports from     farmers' records
	<ol> <li>Price per bunch</li> <li>Income</li> <li>Expanditures (braken down)</li> </ol>	<ul> <li>Monitoring by project team</li> </ul>
Pilot on grading system for banana clusters/ fingers	<ol> <li>Expenditures (broken down)</li> <li>Trace products from Rugaaga cooperative at the factory/ supermarket level</li> </ol>	9
	2. Trace at the producer side: handling practices (e.g. de-clustering, packaging practices)	
Training on processing and post- harvest handling	<ol> <li>Food security (expected increase with processin of matooke into flour for storage, or decrease because all matooke is sold)</li> </ol>	9
	<ol> <li>Availability of charcoal (produce banana brickets)</li> </ol>	
	3. Income + spread of income over year (sales off season)	-
	4. Number of jobs created	



Sensitization on packaging in	1.	Prices of bunches vs boxes/ kgs
crates/ boxes & weighing	2.	Income
	3.	Volumes sold (expected to increase because also
		smaller bunches can be sold at a higher price
		when packed in crates)
	4.	Post-harvest losses
	5.	Availability of organic inputs (easier to re-use
		peduncles with packaging on-farm)

#### 4. Way forward and closing of the workshop

The workshop yielded fruitful discussions on a vision for the matooke value chain in Isingiro, the obstacles that we may come across when trying to reach the vision, the possible interventions by STEP-UP and stakeholders and the indicators that could monitor progress towards achieving the vision. The STEP-UP team is tasked to translate the workshop results into concrete interventions and a plan of action. This will be done after the team has held a similar workshop with stakeholders in Rwiimi, Kabarole district. A joint identification of priority interventions will facilitate the implementation and allow for comparisons between both sites.

Closing remarks were made by the STEP-UP team, the LC3 chairman and the representative of the Farmer Cooperative Union.





### Annex 1: Participants' list

		UGANDA				
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#### Annex 2: Opening remarks from LC3 Chairman of Rugaaga, Matthias

The LC3 Chairman officially opened the workshop and in his opening remarks he mentioned that there are 1550 subcounties in Uganda and only three were chosen by the project. He said that therefore, people from Rugaaga are very lucky. He added that Rugaaga people are very hard working, but advised them to work harder because people in Fort Portal are also involved in the project and are doing the same. He mentioned that Isingiro can produce/pack 120 lorries of banana bunches per day, and that the collection centers collect more than 20 lorries per day. He emphasized that there is a high production of banana in Isingiro which is purely organic. He however mentioned the following challenges:

- 1. Prices: farmers invest a lot but traders pay little for the bananas so he requested STEP-UP to help improve prices.
- 2. He suggested three ways that can be used to improve on farmers income generation:
  - a. Wine production, cake making (value addition)
  - b. Get them local and international market (especially international market)
  - c. Improve on issues of transportation, he asked for trucks to transport peeled banana

He assured the team that Sustainability does not form a problem because they have been involved in banana production for generations. He went ahead to say that even their children know that school fees are paid from the money earned with matooke so they will be involved in banana production after completing their studies. He informed the team that BXW has been controlled up to 95%. They had witnessed a small attack but the NARO/Kawanda researchers took samples and sorted it out. He referred to the project objectives and said he can see there is a future for banana, he finally promised to work hard with the STEP-UP project team till the project succeeds.