



**INTEGRATING THE HORTICULTURAL COUNCIL FOR AFRICA IN  
THE NILE BASIN INITIATIVE'S ANALYSIS AND SUSTAINABILITY  
OF CROSS BORDER TRADE IN FRUITS & VEGETABLES ALONG  
THE SELECTED CORRIDOR**

**FINAL REPORT (November 2012)**

**SUBMITTED TO THE NILE BASIN INITIATIVE FOR REGIONAL  
AGRICULTURAL TRADE AND PRODUCTIVITY PROJECT  
(NBI/RATP2)**

**BY  
THE HORTICULTURAL COUNCIL FOR AFRICA**



*“When the final word is written about capacity building within the non-profit sector in our times, what will the record show? For many practitioners, from whatever role—consultant or technical assistance provider, grant maker or researcher—the most compelling test will be whether organizations and the sector as a whole have become stronger and more effective in their efforts..”*

***Deborah Linnel***

## Acknowledgement

The Horticultural Council for Africa would like to take this opportunity to thank the Regional Project Manager Mr Innocent Ntabana for incorporating the HCA into the study and for his support and guidance during the study, Dr Helen Natu for his technical support and the PMU team for all their support during the study.

Many thanks also go to the member states for their welcome and willingness to share information and data with the team during the study. Special thanks also goes to the consultants MA consultant group and Resource management and policy analysis institute (REMPAI) especially Prof Ockello ogutu and DR John Mburu for patience and time in taking HCA through the fruit and vegetable corridor and analysis of the project.

HCA would also like to thank all its members, Fresh Produce Exporters Association of Kenya(FPEAK), Kenya Flower council(KFC), Horticultural Development Organization of Malawi(HODOM), Rwanda Flower Council, Tanzania Exporters association(TANEXA),Tanzania Horticultural association (TAHA), Horticultural Exporters Association of Uganda(HORTEXA), Horticultural promotion organization of Uganda(HPOU), Zambia Exporter Growers Association(ZEGA), Horticulture promotion Council of Zimbabwe(HPC),Ethiopian Horticulture producer and exporters association(EHPEA).

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## Executive summary

Many projects have been carried out along the sub-Saharan African and the riparian states are no exception. After completion of the projects and the funds are all used up, the results and the reports are forgotten and other new projects come up. The long-time impact of these projects is not felt and very few individuals or organizations benefit from these projects in the long run. Due to the hard economic times, many donor agencies are facing cutbacks and developing countries are receiving less assistance. There is need to ensure the sustainability of projects that are already underway so that the riparian can make effective and productive use of the funds available but declining resources. One solution to ensuring sustainability is through engaging those who will be able to continue with the work even after completion. The Nile basin initiative (NBI) through Nile equatorial Lake Subsidiary Action Program (NELSAP) Regional Agricultural Trade and productivity project (RATP) decided to do this in their project on analysis and sustainability of cross border trade along selected corridors. NELSAP/RAPT seek to promote regional trade as a means to improve the efficiency of water use for productive agriculture.

The Horticultural Council for Africa (HCA) was one other organization selected to collaborate in the analysis and sustainability of cross border trade specifically in the fruits and vegetables corridor. The fruits and vegetables selected for the study were passion fruits, pineapple, banana and Irish potatoes. The cross border trade involved four countries: Kenya, Uganda, Burundi and Rwanda.

HCA was selected for this study because of aim of promoting cross border trade and increasing the regions competitiveness in export horticulture to other continents. HCA has member associations in the region of study (Fresh produce exporters association of Kenya (FPEAK), Rwanda Flower Producers and exporters Federation, Horticultural exporters association of Uganda, Horticultural promotion organization of Uganda (HPOU), Kenya Flower council (KFC)). HCA and its member associations do not serve the members only but the whole horticultural industry within Africa. HCA aims to increase the regions competitiveness.

The aim of incorporating HCA was to increase its capacity in Methodology and technical knowledge of analysis of cross border trade while considering factors like youth and gender functionalities, and investment potential and in turn HCA would ensure sustainability of the project by in passing the information to the stakeholders in the sector. The increased Capacity gained will be used to carry out other analysis of cross border trade in the area that may help come up with investment potential and also ensure efficient water use. According to Deborah Linnel, the aim of capacity building of the non-profit organizations is to improve the quality of life in the communities, contribute to the society's willingness to embrace systems change and sustainable solutions to the issues that non-profit organizations now tackle year after year.

HCA worked closely with the consultant, Resource Management and Policy Analysis Institute (REMPAI) and M.A Consulting Group who were carrying out the study. HCA

offered two competent officers who took part in data collection, validation, analysis, coming up with investment potentials in the fruit and vegetable corridor and writing the report 'Analysis of Cross-border Trade in Agricultural products along Selected Corridors of The Nile Basin region' M.A Consulting Group in association with Resource management and policy analysis Institute (REMPAI)

This is a report of the participation of HCA in the study from the start to completion and areas in which it can work with NBI and/or other member states to promote cross border trade through the investment potentials identified.

HCA is grateful for the support it received from stakeholders during the study and for the Nile basin Initiative through its Nile equatorial lake subsidiary action program (NELSAP) for the opportunity to participate in the study of 'Analysis of Cross-border Trade in Agricultural Products along Selected Corridors of the Nile Basin Region'.

We look forward to continued corporation and collaboration in enhancing the livelihoods of communities dependent on the fruits & vegetables sector in Africa.

## **Introduction**

### **Project overview**

The Nile Basin Initiative (NBI), through the Nile Equatorial Lakes Subsidiary Action Program's (NELSAP) Regional Agricultural Trade and Productivity project seeks to promote regional agricultural trade as a means to improve the efficiency of water use for productive agriculture. The Nile Equatorial Lakes Subsidiary Action Program, Regional Agricultural Trade and Productivity Project (NELSAP RATP Project) decided to carry out a case study on analysis and sustainability of cross border trade on fruits and vegetables along selected corridors.

The fruits and vegetables selected for this study were banana, passion fruit, pineapples and Irish potatoes along the trans-boundary trade corridor linking Burundi-Rwanda-Uganda-Kenya.

For sustainability of regional horticultural trade after the project is complete, the Horticultural Council for Africa was asked to participate because of its involvement in promoting regional horticultural competitiveness and because the countries involved in the study are its members. HCA represents those involved in this trade and could easily access data readily through its members. Participation of the Horticultural Council of Africa was to strengthen its capacity in the methodology and technical Knowledge of fruit and vegetable trade, investment and gender analysis for sustainability of cross border trade corridor. Upon completion of the project, HCA can build upon the knowledge and skills gained during the assignment in the future for horticultural advocacy. HCA is crucial in ensuring sustainability of the project by working with other organizations in association with the member states in implementing the investment potential identified during the study.

The participation of Horticultural council for Africa involves collaboration with the consultant, Resource Management and Policy Analysis Institute (REMPAI), in identifying and documenting for fruits and vegetables of appropriate results on cross border trade practices; ways of reducing impediments to trade, investment potentials and positive gender & youth functionalities, for effective & sustainable cross border trade. HCA will be responsible for presenting appropriate results of cross border trade- related programs to the decision makers of the Nile basin countries for action.

### **Overview of the Nile basin initiative**

The Nile Basin Initiative (NBI) is a partnership of the riparian states that seeks to develop the river in a cooperative manner, share substantial socio-economic benefits, and promote regional peace and security through its shared vision of “sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources”. NBI's Strategic Action Program is made up of the Shared Vision Program (SVP) and Subsidiary Action Programs (SAPs). The SAPS are mandated to initiate concrete investments and actions on the ground in the Eastern Nile (ENSAP) and in the Nile Equatorial Lakes sub-basins (NELSAP). The integration of the Horticultural Council of



Africa in the analysis and sustainability of cross border trade in fruits and vegetables along selected corridors is an effort being made by the NELSAP.

### **The Nile Equatorial Lakes Subsidiary Action Program (NELSAP)**

The Nile Equatorial Lakes Subsidiary Action Program has its coordination unit based in Kigali, Rwanda and reports to the Nile Equatorial Lakes Technical Advisory Committee (NELTAC) and the NBI Secretariat for strategic guidance. The NELTAC reports to the Nile Equatorial Lakes Council of Ministers (NELCOM). The Nile Basin Initiative (NBI), through the Nile Equatorial Lakes Subsidiary Action Program's (NELSAP) Regional Agricultural Trade and Productivity project seeks to promote regional agricultural trade as a means to improve the efficiency of water use for productive agriculture. One study to be undertaken in the second phase of the NELSAP/Regional Agricultural Trade and Productivity (RATP2) is on cross border trade in fruits and vegetables along selected corridors. A key element in this study is the participation of the Horticultural Council of Africa (HCA) as it represents those involved in this trade and can access data readily through its members and, upon completion, can utilize and build upon the knowledge and skills gained during the assignment.

### **Regional Agricultural Trade & Productivity (RATP2) Project**

RATP is a technical assistance project financed by CIDA through a recipient-executed trust fund. The project is managed by a Project Management Unit (PMU) based in Bujumbura-Burundi, and is administratively linked to the NBI's Subsidiary Action Program for the Nile Equatorial Lakes (NELSAP), which has a coordinating unit (NELSAP-CU) based in Kigali. The project supports generation of agricultural knowledge that is basin-wide, in line with the aims of the NBI's Institutional Strengthening Project (ISP) and NELSAP's Subsidiary Action Program. The RATP project is operationalized in two phases of which Phase1 has been completed. The project is now running its Phase2 with four components. The third component of RATP2 is focused on incorporating agricultural trade into basin water resource planning and management. An outcome of this component is the integration of agricultural trade issues into the Basin's strategic water resource planning and management, by identifying and documenting impediments to cross border trade, through a study of cross border trade in agricultural products along selected corridors.

Subsequently, RATP2 project has built, in its work plan under Component 3, an activity that integrates the Horticultural Council of Africa in the analysis and sustainability of cross border trade in fruits and vegetables along selected corridors.

### **Overview of Horticultural council for Africa**

Horticultural Council for Africa (HCA) is a regional network established by national horticultural associations from different countries to address constraints the region is facing in maintaining competitiveness in the horticultural export market, both within the region markets and the European markets. Horticulture Council for Africa (HCA) has been formed not to compete with national associations but rather to complement the efforts of country associations through a unified approach.



Over the last 25 years, value of horticulture exports from Southern and Eastern Africa had increased by over 50% and currently contributes about 18% of the agricultural exports. However, some countries are lagging behind while are way ahead in terms of quality and volume of horticultural produce. HCA provide a network where member associations can get to exchange knowledge and technologies from countries with long term experience in horticultural production and export like Kenya in providing market linkages and improving the incomes and livelihood of small scale producers. .

The development of horticulture in the region has been due to the collaborative effort of different stakeholders within the sector governmental and non- governmental. However, there is still more to be done in terms of policies which would improve trade within the region. The barrier to trade within the region is affected by both tariff and non-tariff barriers which have led many small scale traders to engage in unrecorded/ informal trade. . HCA, through collaboration with other member states and other stakeholders needs to have a unified voice on some of the challenges in developing the horticultural sector, shared regionally especially in policy advocacy at both international and national levels e.g. WTO negotiations, COMESA and EAC negotiations on issues related to Horticulture. Benefits could also be derived from organizing technical information exchange and skills which some of the horticultural farmers associations already share informally.

### **HCA Vision**

A united and internationally competitive regional horticultural industry

### **HCA Mission**

Promote growth of horticultural sector in Africa through information sharing, collaborative research/technology, environmental sustainability and collective bargaining.

## **Objective of participation of HCA**

### **General objective**

To create an enabling environment for the undertaking of collaborative efforts by the NBI and the HCA geared towards improving cross border trade of fruits and vegetables along selected corridors.

### **The specific objectives**

- To create linkages between NBI and the HCA for collaborative activities and responsibilities in undertaking studies to enhance trade in regional fruits and vegetables.
- To, collaboratively with the consultant, undertake the study and disseminate results of the analysis of cross border trade of fruits and vegetables along selected corridors; and in the process enhance HCA's capacities in utilizing methodology and tools for the identification & reduction of impediments to cross border trade of fruits and vegetables; investment potential and gender analysis along corridors. In addition,

enhance HCA’s organizational strength and capacity to undertake activities, including advocacy.

- To, collaboratively with the consultant, document: issues/practices that could be used in the improvement of cross border trade of the Nile Basin member countries along the corridors in regard to fruits and vegetables; potential trans-boundary investments; and cross border trade gender-related functionalities.

The outcome of the project was geared towards contributing to effective and sustainable trans-boundary trade; identification of trade-related investment potential; and fruits and vegetables cross border trade gender analysis for the benefit of NB member countries along the specified trade corridors.

### **Purpose of this report**

This is the final report on HCA participation in achieving the above objectives while undertaking the study in ‘the analysis of cross border trade on fruits and vegetables corridors’. The report contains the methodology use in the analysis and a summary of the results obtained in the study including the corridors identified between the four countries, Burundi-Rwanda-Uganda-Kenya. This report also shows disseminate of the results to the stakeholders involved in the production and trade of cross border trade.

### **Main tasks undertaken**

<b>Task</b>	<b>Particulars</b>	<b>Status</b>
Task 1	Collaboration in linkage creation between NBI and HCA in the “Analysis of cross border trade in fruits and vegetables along selected corridors”.	Complete
Task 2	Participation in the facilitation of data collection and analysis activities of the study “Analysis of cross border trade in agricultural products along selected corridors”.	Complete
Task 3	Validation of data and study reports.	Complete
Task 4	In collaboration with the consultant, document the uptake of identified appropriate results on cross border trade practices; investment potentials and gender functionalities identified by the study, for effective & sustainable fruits and vegetable cross border trade along corridors.	complete
Task 5	Facilitate the dissemination of results to the stakeholders and decision makers of the NB countries.	Complete

## **Background information on regional horticultural trade across the Riparian states**

Horticulture is one of the leading export earners for most of these riparian states. In Kenya for example, the export earnings have continued to grow at annual rate of 15-20% per annum over the last decade with last year's earning increasing by 17.4%. Horticulture has generally experienced an expansion in export levels due to favourable international prices and the nearness of the riparian states to the European Union. There has been a shift of most small-scale farmers from producing cereals and pulses which is the food crop of these countries to the production of horticultural products like fruits and vegetables because of its high returns and they grow fast. The move towards the production of fruits and Vegetables is seen as a means of alleviating poverty which most of the small scale farmers are living in.

Currently more than 70% of fruits and vegetables produced in the riparian states are produced by small holder farmers who own parcels of land ranging from  $\frac{1}{4}$  an acre to less than 5 acres. However due to stringent requirement of the European markets, not all the small scale farmers who are engaging in horticulture can get access to this market. Most of these farmers have opted to trade their produce within their local market and the surplus is sold to the neighbouring countries. A lot of attention has been given to export horticulture trade to the European Union while ignoring local and regional trade.

Regional trade has been around since time indefinite. Regional trade is uses both recorded and unrecorded channels. Because of the tariff and nontariff barriers, most traders, especially small scale traders are involved in unrecorded trade. Unrecorded trade provides employment to the different stakeholders on both sides of the countries that are involved in trade and thus provide income for these involved. In addition, informal trade ensures food security within the region and provides market for the surplus produced in one country. The ready market within the region helps to stabilize food supply and prices in both countries at different times of the year.

However, regional trade faces many challenges which prevent it from functioning normally because of the similarities of goods produced and trade policies. In addition to this, different levels of taxation on different sides of the border, local taxes instituted by the local councils, 'Facilitation' paid to armies, police and other government officials and harassment of women who engage in cross border trade have forced most of the stakeholders involved in the regional trade to practice informal/unrecorded trade in order to make a profit. This trade normally involves movement of goods in small parcels and this trade is not accounted for.

Because of the unrecorded trade it is very difficult to obtain accurate data which can be used for national planning and policy development in the region. Each independent state has its systems of recording goods traded across the borders but they have not been able to come up with a system of recording the informal trade.

The countries involved in the trade have to join together in order to come up with a uniform system that will collect accurate and informative data that can be useful to all. The private sector has to take initiative in joining the different states and coming up with a system that

could benefit them and the states involved. The Horticultural Council for Africa (HCA) is a regional network established by member countries national association to look after the interest of the private sector, unit the different countries and to increase the regions competitiveness.

Analysis of trade is vital in coming up with information that can be used in advocacy and development of new policies that will benefit the riparian states in the region. The study of the analysis of cross border trade of fruits and vegetables along selected corridor selected four countries and four commodities. The riparian states however deals with a variety of products which also need to be included in developing of trade policies which can enhance investment potential and look at gender and youth dimensions.

For sustainability of the project, the horticultural council for Africa was brought on board to promote trade in the area. Horticultural council for Africa does not only seek to benefit their members but to improve the regional Horticultural competitiveness.

## **HCA participation in the study**

### **Data and information collection in the Corridor**

The riparian states which were involved in the study all have national offices that collect data that is trades with their neighbouring countries. Though all the countries produce the same products, some have more comparative advantage in terms of cost of production which creates a deficit in the amount exported to the amount imported. This can be attributed to agrological conditions, skills of the different countries and to some extent the political climate of the states.

It is the deficit in export and import, that has influences the existence of Tariff and Non-tariff barriers whose aim is to protect the losing countries. EAC and COMESA have tried to Cub the Tariff barriers so as to ensure the borders remain open but the Non-Tariff barriers are still a challenge in the area.

#### **a) Identification and characterization of the trade corridors**

The methodology used in identifying the trade corridor was through literature review and through Key informant interviews. These provided a guide on what is produced in what region. This was followed up with visits to the main production areas and then following the product along the value chain to the final consumption market.

The trade corridors were profiled on the basis of the following parameters:

- i. Major agro-ecological zones within the corridor
- ii. Commodities produced, traded and the direction of trade flow
- iii. Seasonality of production and trade
- iv. Major trade constraints and opportunities

#### b) Estimating Informal Cross-border Trade (ICBT)

The method used for estimating informal or unrecorded cross border trade was by use of border monitors. This was found to be the most accurate method of collecting the data by Ackello-Ogutu in his 1996 paper on “Informal cross border trade methodology. This method of actually setting up monitors has been adopted by RATES, COMESA, EAC, FEWSNET and ReSAKSS. Official records however can also be used from national offices. Across the border it has been found that import data in one country is normally higher than export data. The difference is informal trade to the exporting country. However, this does not take into account the amount traded through routes that are not manned by the officials of the countries or the small quantities that are carried across by the consumers.

Border points for the study were made on the basis of popularity, volume and regularity of trade. The monitors selected in the different points were locals from that region who could speak the local language and who the informal traders could open up to. It was also vital for the monitors to be able to read and write for then to be able to accurately record what is happening across the border corridors.

The monitors who were strategically placed around the border points were formal and unrecorded trade took place obtained information on the magnitude, trade patterns and seasonality of the four commodities: Banana, Passion, pineapples and Irish Potatoes. The monitors also took note of gender/youth dimension and the constraints/benefits that the informal/unrecorded traders face in their operations.

Due to time and cost implications, the monitoring could not be done throughout the year. Based on Ackello-Ogutu (1996) ICBT methodology, 60days was found to be representative enough to extrapolate trade flow to one year and compare data with other agencies.

One major limitation of using monitors is that cross border trade takes place at order hours of night when monitoring was not being done. In addition, horticultural products are seasonal and have their peak and low levels within each season. During the study, it was assumed that there were no dramatic changes that might affect seasonality.

#### c) Estimating formal trade along selected corridors

Stakeholders involved in cross border trade are more open to share their data and information than those involved in informal trade. The information from the traders was obtained through

- i. Key informant interviews
- ii. Questionnaire issued to different stakeholders along the value chain
- iii. Focus group discussions

The data collected from the questionnaire were compared to the information received from other data collection agencies. These agencies are both NGOs and governmental and they collect data in terms of Volume and Value for formal trade. Information for this study were obtained from UNCOMTRADE, FAOSTAT, customs in Nile Basin countries, records from Ministries of Trade and Industry, case study reports, RATIN, UBOS, FEWSNET and other

internet sources. Information of source and origin were obtained from the countries of Import.



#### **Focus groups discussions**

##### **d) Projected trade flows**

Different methods were used to collect this information;

- i. Desk Literature review
- ii. Focus group discussions
- iii. Formal and informal actors' interviews

Trade flow was made from projected annual growth rates of both formal and informal trade. This was obtained for each commodity in terms of volume and value.

#### **Data and information review**

The aspects for the review concentrated on

- a) What had been done in terms of the status of the field work, data, information and documents collected
- b) Identification of potential investments for the different stakeholders and action to be taken by specific persons/institutions.
- c) Way forward for the project

What had been carried out by 23<sup>rd</sup> January 2012 was collection of data using the questionnaire. The data in the questionnaire were checked against the intended output of the project. From the process the project was in the right path except data and information had not been collected from major stakeholders and regional economic co-operations (RECs). It was agreed that the stakeholders in the different corridors involved could be interviewed.

In the review the data collected included the path followed by the goods from production to consumption, challenges facing the different stakeholders in the value chain, impediments to trade, and opportunities.

During the validation, investment potentials for different stakeholders were discussed. These potentials were touching on either one or more of the following:

- Water use
- Cross border
- Gender

The investment potentials for the fruits and vegetable corridors in vegetables as were written in Dr. Hellen Omme- Natu's report were

1. Lake Victoria water infrastructure and landing site
2. Dry Agro-processing/infrastructure: Cottage industries of dehydrated vegetables by women and youth
3. Wet Agro- processing/infrastructure for passion juice, mango juice
4. Nile Basin commodity exchange
5. Nile basin Agricultural training centre

## Data analysis

### a) Data entry and analysis

The statistical tool that was used for analysis was Statistical Package for Social Scientists (SPSS). SPSS enables one to manage analyse and present data and it was very applicable in this study because we were looking at the social implication of trade to the different stakeholders within the value chain.

Variables of the different aspects that were collected in the questionnaire were created and the data entered as per the response in the questionnaire. Descriptive were carried out to find out the number of stakeholders who responded in the same way and what are the common factors.

### b) Value Chain analysis

A value chain consists of the set of activities undertaken in the management of the flow of goods and services along the value-added chain of agricultural and/or food products, in order to realize superior customer value at the lowest possible cost (Genova et al., 2006).

Fruits and vegetables value chains were divided into four stages: Production, Marketing, Processing, and Distribution. Each of these stages has actors that directly handle the product from the farm until they get to the final consumer. This includes the stakeholders who directly handle the product to those who are involved indirectly through service delivery like the government, research, extension, and credit institutions.



Analysis of the value chains of the different commodities requires collection of both primary and secondary data from their respective direct and indirect actors. The data collected included:

- Commodity traded and gender of the trader
- Size of exporter/importer e.g., small vs. large
- Questions on the interaction between sellers/buyers on both sides of the border
- Nature of contractual arrangements [if any] in place
- Constraints to trade e.g., effects of customs, police roadblocks, sanitary requirements and the strategies the exporters/importers use to circumvent/deal with them
- Whether gender has any influence on how the constraints are dealt with

The steps that were used in the development of the value chain were

- i. Identification of the commodity form, alternative channels and final markets
- ii. Establishing the value chain structure at different stages (market concentration and market power)
- iii. Identification of the key functions/activities along the value chain, the value they add along the value chain and the cost incurred.
- iv. Identification of participants performing each function, including gender and youth functionalities
- v. Mapping inter-relationships between participants
- vi. Apportioning actual values at different stages as per cent of prices paid by consumers (final price is taken as 100%)

It is from the development and analysis of the value chain that aspects of efficient water use, gender and youth functionalities, impediments to trade and investment potential were looked into. The following aspects were looked into along the value chain

- i. Where is the most value added to the value chain and what are the resources used including water?
- ii. Who are most important actors within the value chain and what is their share from the price paid by the consumer?
- iii. What is the institutional framework?
- iv. What are the main bottlenecks that affect formal and informal trade?
- v. What are the market potentials for growth and upgrading?
- vi. What is the size of the sector/chain?
- vii. Are there synergies exist?

### **Dissemination of report**

The final phase of the study was dissemination of the results to the stakeholders: Horticultural producers, Cross Border Traders, Transporters, Brokers, Governments, Regional economic communities and NGOs.

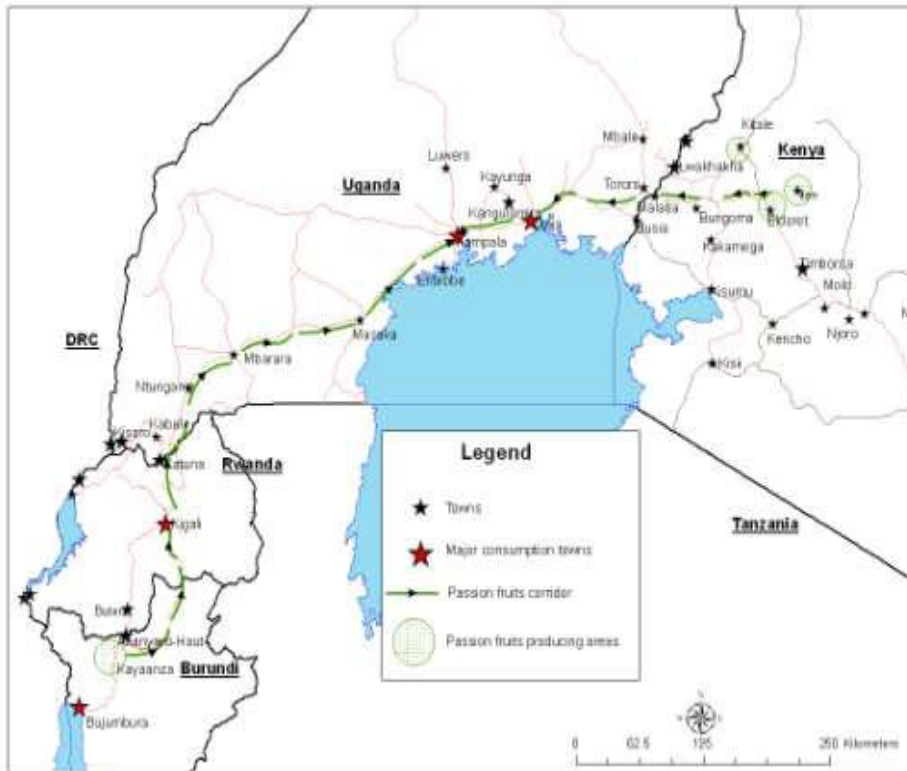
Before the dissemination of the final results, a consultative meeting for the different stakeholders was called where the report presented to them and the discussions held on the different areas the stakeholders felt were not fully explored. The Consultative workshop was held on the report was held on 29th May 2012 in Bujumbura, Burundi.

The final dissemination workshop was held on 23rd November 2012 after discussions of the consultative meeting from stakeholders were considered. During the dissemination workshop, the report was presented to all the stakeholders with emphasis on how the different members states and other stakeholders could collaborate in implementing the investment potential identified during the study. Below is a table showing the investment potentials identified during the study.

<b>Investment</b>	<b>Institutions proposed to coordinate investment</b>		
	<b>NBI</b>	<b>Member Countries</b>	<b>HCA</b>
Policy reforms and strategies		<b>X</b>	
Regional seed Multiplication centres		<b>X</b>	
Good Agricultural practices (GAP)		<b>X</b>	
Improving water transport and landing sites on L. Victoria	<b>X</b>	<b>X</b>	
Strategic storage facilities for fruits and vegetables		<b>X</b>	<b>X</b>
wet agro-processing of fruits and vegetables		<b>X</b>	<b>X</b>
Dry agro-processing of fruits and vegetables		<b>X</b>	<b>X</b>

## Results and Discussion per Commodity

### Passion



#### Passion production and consumption areas and directions of flow

The two major producers of passion fruit within the corridors selected are Kenya and Rwanda with a production of 55,116 and 13,000 metric tons respectively. The main production area in Rwanda is Matongo communi in Kayanza province and in Kenya, passion fruit is mainly produced in Uasin Gishu and Keiyo counties in the rift valley province. Rwanda has a potential of producing 20-15tons/Ha but is currently producing 15tons/Ha and this is because of lack of good quality seeds and nobody to coordinate the supply and quality. The farmers thus get seeds from their neighbours which are of poor quality and which increases the spread of fungal and bacterial diseases. This makes it difficult to comply with stringent quality, hygiene and traceability requirements of the EU markets. Kenya has however managed to break through to the EU markets mainly due to the co-operation of the government agencies like horticultural crops development authority and the private sector organizations like fresh produce exporters association of Kenya in ensuring compliance to standards.

Rwanda is the number one producer of passion traded within the corridor and Uganda being the number one consumer of the passion fruit traded within the region. Uganda imports passion from both Kenya and Rwanda. Rwanda also exports its passion fruit to Burundi. Previously, the number one importer of Kenyan passion fruit was the EU market but due to its stringent compliant standards and the transportation costs, Kenya has found a new market in Uganda. The major consumer market in Uganda is Kampala.

The production of passion fruit is mainly rain fed. River Chepkoilel which joins river Nzoia and drains into Lake Victoria is used by some farmers to irrigate passion fruit trees during the dry season. Rwanda's peak season is between January-June with minor season in July-December. Kenya's peak season is in April-December and the low season in January-March. There is always passion fruit to be traded to Uganda and the two producing countries do not have to compete for the market.

Most passion fruit in both countries is sold to the middlemen at the farm gate who transport them to the different markets. However, some producers in Bugor in Iten have set up collection centre where the traders can collect the produce with them having a better bargaining power. The bag of passion fruits weighs 70-85 kg during the rainy seasons and between 60-65 kg during the dry season.

On gender along the value chain, production is mainly dominated by men this was quite evident in Kayaanza. Women dominate the retail area of passion fruit with men mostly doing brokering in the two corridors.

### **Constraints and potential opportunities for producers and traders**

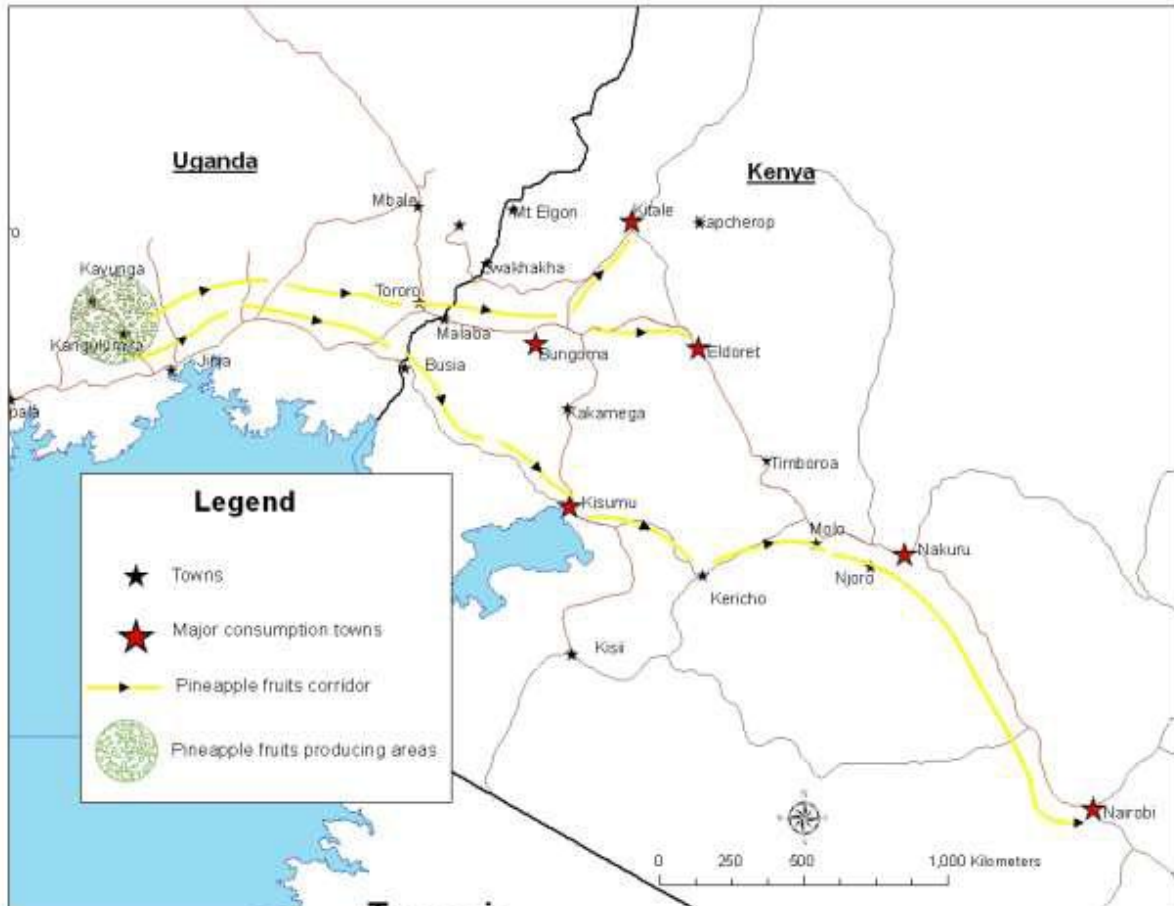
Producers and traders who participate in the cross border trade face many challenges. These hinder the development of trade along the corridor and encourage informal trade. Informal trade though helps to provide income and employment opportunity in the area, there is little room for expansion as the traders are afraid of carrying large volumes that may be intercepted. Below are the major challenges that hinder cross border trade along the corridors

- i. Lack of clean seeds: this is a major setback to producers. A long the Nile Basin, there are very many suppliers who provide very few seeds of passion fruit. The farmers are thus forced to obtain seeds from their neighbours who are not clean and are infected with diseases. The farmers thus get low yields and are discouraged from growing passion fruit.
- ii. Poor infrastructure: this refers to poor roads, poor market structure and poor storage facilities which increase the costs of trade and increases postharvest losses. The poor marketing structures and roads bring about the issue of insecurity especially to the women traders who go very early to fend for their families.
- iii. Lack of capital: Most people in the Nile Basin countries are living below the poverty level. Getting capital to start farming and engage in trade is a challenge as they do not have collateral to ask for loans. Thus most of them are small scale producers and traders with few engaging in informal cross border trade.
- iv. Lack of training to comply with standards: Among the countries selected for the study, Kenya is leading in complying with EU standards. This has mainly been due to the initiative of the private sector and the assistance of the government. In the other countries, compliance to standards is a major challenge due to lack of awareness and training. Because of these they produce poor quality products using methods that are harmful to humans and the environment. The environment gets degraded and the yield from the farms gets lower and lower.
- v. Low farm prices at farm gate: During peak season, farmers get very low prices for their inputs a case that can be credited to lack of market information, poor storage

structures and lack of processing of these produce. This causes few players to benefit in the value chain.

Though there are many challenges in the passion fruit value chain, these challenges can be turned into opportunities for investments.

## Pineapple



**Pineapple production and consumption areas and directions of flow**

Pineapple traded within the region comes from Uganda in an area called Kangulumira I in Kayunga district. Pineapple farming in Kangulumira is done by individuals. There are no farmer groups because land is limiting. Small scale producers of pineapples own farms of less than 5 acres. Individual farming allows farmers to concentrate on their individual farms by maximizing inputs like fertilizer, manure, labour hence high productivity per unit.

There are two major pineapple seasons in Kangulumira: October to December and January to March. However the off-season is also regarded as a low season since there are pineapples during this period though they are few. The off-season occurs in April to September.

Since 2008, Uganda's production and trade of pineapples has increased due to Uganda government's commitment in assisting farmers. The government provides

- i. subsidized planting materials,
- ii. agricultural advisory services,
- iii. subsidized fertilizers and chemicals,
- iv. construction of sheds and stores in the open air markets,
- v. value addition through construction of juice making factories

Trade in pineapples from Kangulumira involves many middlemen and brokers who act as a source of market information. This reduces the returns to farmers. During the low season the pineapple sells at very high prices of US\$ 0.3-0.4 per piece, and very low prices of US\$ 0.1-0.2 during peak season at farm gate.

Kenya is the major consumer of Uganda's pineapples which enter into Kenya through Busia and Malaba border. The commodities are transported using pick-ups and big trucks to Nairobi- Kenya. The pineapples pass through Kitale, Eldoret and finally reach their destination in Nairobi.

Production is dominated by the male youths of 25 years and above. This is because the commodity requires strong people during harvesting, storage and transportation. However the traders are dominated by both adult males and females. In Nairobi, most of the retail traders are adult males. Small-scale processors common in the intermediate and consumption markets often employ adult females.

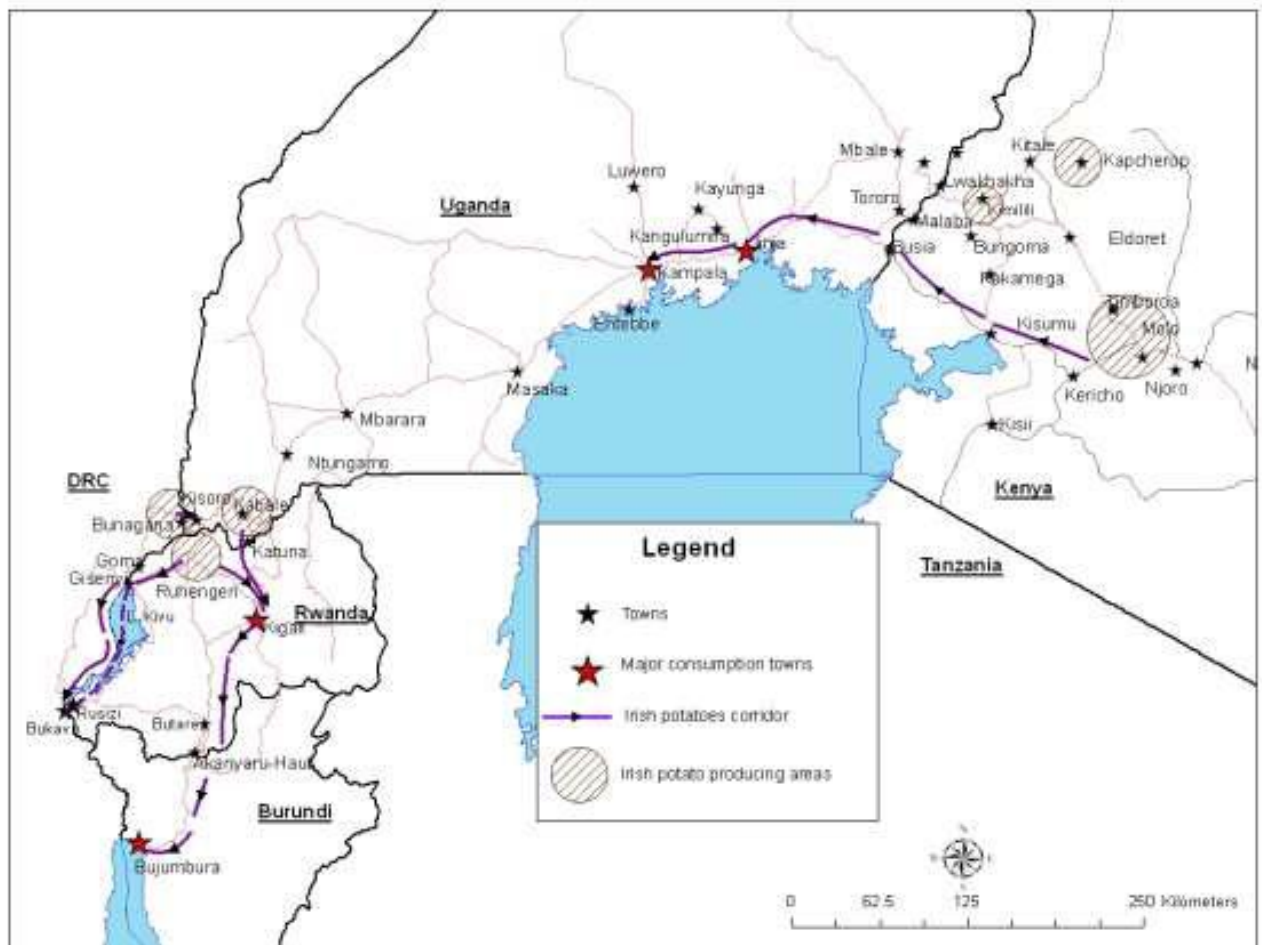
### **Constraints and potential opportunities for producers and traders**

The Ugandan Government intervention has worked towards reducing some of the constraints are facing. However, there are still challenges that farmers and traders are facing in cross border trade along the selected corridor. There is need for the government to work with the private sector in order to eliminate some of these challenges

- i. Lack of certified planting materials: This is one of the major challenges in Uganda. Though the government has endeavoured in providing planting material, it is not sufficient and farmers obtain materials from their neighbours which are infected and give low yields.
- ii. Lack of credit facilities: pineapple farmers in Uganda are small scale farmers who own less than 0.5acres of land. Accessing credit facilities is a challenge because of lack of collateral. In order for production in Kangulumira to expand, the farmers need to invest in inputs which they cannot afford. Traders too have a challenge in getting credit facilities for expansion of their business and to acquire proper storage facilities. The small scale traders and farmers thus sell their produce and low prices in order to avoid the storage costs.
- iii. poor infrastructure: this is the major impediment to cross border trade. There are poor roads from the production area to the market area. During transportation, allot of post-harvest losses occur which are due to physical injuries.

Expensive inputs: most of the pineapple farmers are leaving below the poverty level and cannot afford inputs like fertilizers and crop protection products. Even after subsidise, the farmers still find it a challenge to acquire the inputs needed for the crops.

## Irish potatoes



### Irish potato production and consumption areas and directions of flow

#### a) Kenya-Uganda corridor

Among the selected countries for the study, Kenya leads in the production of Irish Potatoes with an average of 856,661 tonnes for the last 10yrs according to FAOSTAT. The success of Irish potatoes in Kenya is due to high demand of the product especially in its urban areas and the intensive research-extension programmes on the commodity. Potatoes grown in Kenya are clean and free of diseases because the seeds are produced through tissue culture methods and are of high yielding variety.

Potatoes are produced in Timboroa, Molo, Mt. Elgon (Noromorio and Kapsokwony) and Marakwet districts in Kenya. Timboroa is the leading producer of Irish potatoes. Production is carried out in individually owned farms. On average, a small producer owns half an acre, a medium scale producer 1-3 acre and a large scale producer owns 5-10acre. In Kenya, the high production seasons are in the months of June- August and December - January while the low production season occurs in the months of February -May. In Timboroa, an acre



produces about 12000Kg of potatoes. The price of potatoes ranges from Kshs 800-3500/140kg bag.

During dry periods producers near rivers practice irrigation using gravitational flow of water in open channels and pipes. The rivers used for irrigation are Kipkundul and Moiben that finally drain into Lake Victoria as River Nzoia. Producers in this area practice individual production because they were ignorant of the benefits of collective farming in a group.

These potatoes find a major market in Nairobi the capital city of Kenya. However, the potatoes still find their way to the neighbouring countries. Along the corridor, Uganda is the major consumer of the Potatoes from Kenya. The potatoes flow into Uganda through the Malaba and the Busia border. The produce once they cross the border are sold at Sofia open air market which is in Uganda. Trade in Sofia market is dominated by females. The major consumption areas of the Kenya Irish potatoes in Uganda are Kampala and Jinja.

The price of the potatoes varies depending on seasonality, variety and grade. Potatoes have to be graded into 3 categories which fetch different prices: Grade 1 consisting of clean and big sized Irish potatoes, Grade 2 with medium sized Irish potatoes and Grade 3 with small sized Irish potatoes.

During the rainy season the producers have to transport their produce to the immediate market or to the main road because the roads are impassable because they are muddy and slippery. Small scale producers Transport Irish potatoes to the immediate local markets using donkeys which can carry 70Kgs. Donkeys are hired for slightly more than a dollar per trip. Large scale producers however, use tractors which carry the potatoes to the main road where they are collected by traders with big trucks. A tractor can carry approximately 2400Kg per trip. During the dry season, brokers and traders buy Irish potatoes at the farm gate. The produce is then transported across the border to Uganda using big trucks.

On Gender dynamics: in Timboroa females of the age bracket 25-40 are in production with men assisting in the transportation of the produce to the markets; around Mt Elgon, there is division of labour, men of the ages 18-30 prepare land spray and store the produce while females of the ages 18-30 do the planting, weeding, harvesting and selling; in Marakwet men of the ages 20-40 dominate production.

#### **Constraints and potential opportunities for producers and traders**

- i. Diseases(potato blight)lack of effective control for pests and diseases, inadequate extension services
- ii. Lack of certified seeds and well adopted varieties
- iii. High input prices
- iv. Lack of access to credit facilities
- v. Poor infrastructure especially connecting the production areas and the local markets
- vi. Lack of proper storage facilities

- vii. Price fluctuations: affect both traders and producers.
- viii. Use of exploitative bags: 120-160Kg bags

### **Production and trade opportunities for producers to increase their incomes**

- Clean seed multiplication by establishment of a seed bulking centre,
- Establishment of controlled packaging to stop exploitation by brokers and wholesalers, and
- Availability of increased extension advice to increase their production.
- The producers have also the opportunity of adding value to their potatoes to get better prices. This could be achieved through making of chips, crisps and also large scale starch production for bleaching textiles.

#### **b) Uganda- Rwanda and Rwanda- Uganda**

April to September potatoes flow from Uganda to Rwanda and in November to January, potatoes flow from Rwanda to Uganda.

The major production areas in Rwanda are Musanze and Gisenyi districts and in Uganda, the major production areas are in Kabale and Kisoro in the south west of Uganda. Around May to August which is a dry season in Uganda, potatoes are produced in Muko which is a swampy area. Kabale is the highest production area in Uganda and it has attracted investors who are currently construction a crisp and chips processing plant in the area. Potatoes grow well in high altitude areas and in both countries; they are produce in highlands except in Uganda where it is produced in the lowland swampy area of Muko.

The potatoes find local market in each of their own capital cities (Kigali for Rwanda and Kampala for Uganda) due to the changing dietary requirements. Trade of Irish potatoes between the two borders occurs along the cross the Kyanika border from where it moves to Kigali and Kampala depending on the flow.

In Uganda, the Irish potatoes producers own 1-3 acres of land each. An acre produces about 3600Kg of potatoes. For Muko, the swampy area, about 2400Kg of potatoes is produced per acre. Production is done individually because they feel this will enable proper management of the farms.

In Uganda, the small scale producers carry their potatoes on their heads or using bicycles and take them rural collection points which are situated near main roads. For large scale producers, traders collect the produce using big trucks of 12-25 tonnes.

In Rwanda, the producers have organized themselves into co-operatives that help them to market their produce. However, the producers still produce individually because land is owned individually. The farmers have also formed associations in which they perform value addition to their products. The farmers clean and package their Irish potatoes and they sell them for high prices to supermarkets. Some associations make start which they sell to textile industries. Value addition and other technological advancements have also enhanced Irish potatoes in the area.

In Rwanda, the mode of transportation of Irish potatoes from producers is by donkeys, bicycles and small trucks depending on the scale of production. Cross border traders use big trucks to transport the Irish Potatoes to the neighbouring regional markets. Within the markets transportation is mainly by carts and human transport where they carry them on their heads or shoulder.

On gender dynamics in both countries, females do land preparation and marketing while the men do spraying, storage, and transportation. Those who work in the production area whether male or female are between the ages of 18-40years.

### **Constraints and potential opportunities for producers and traders**

- diseases like potato blight, bacterial wilt and fusarium,
- lack of production inputs like knapsack sprayers,
- soil erosion in their farms due to the hilly topography of the area, inadequate rainfall during dry seasons
- Lack of clean and selected planting materials.
- The major trade problems experienced in the area are poor market prices and
- poor road infrastructure and a
- Lack of organization of farmers into marketing groups or associations that would bargain for better commodity prices.

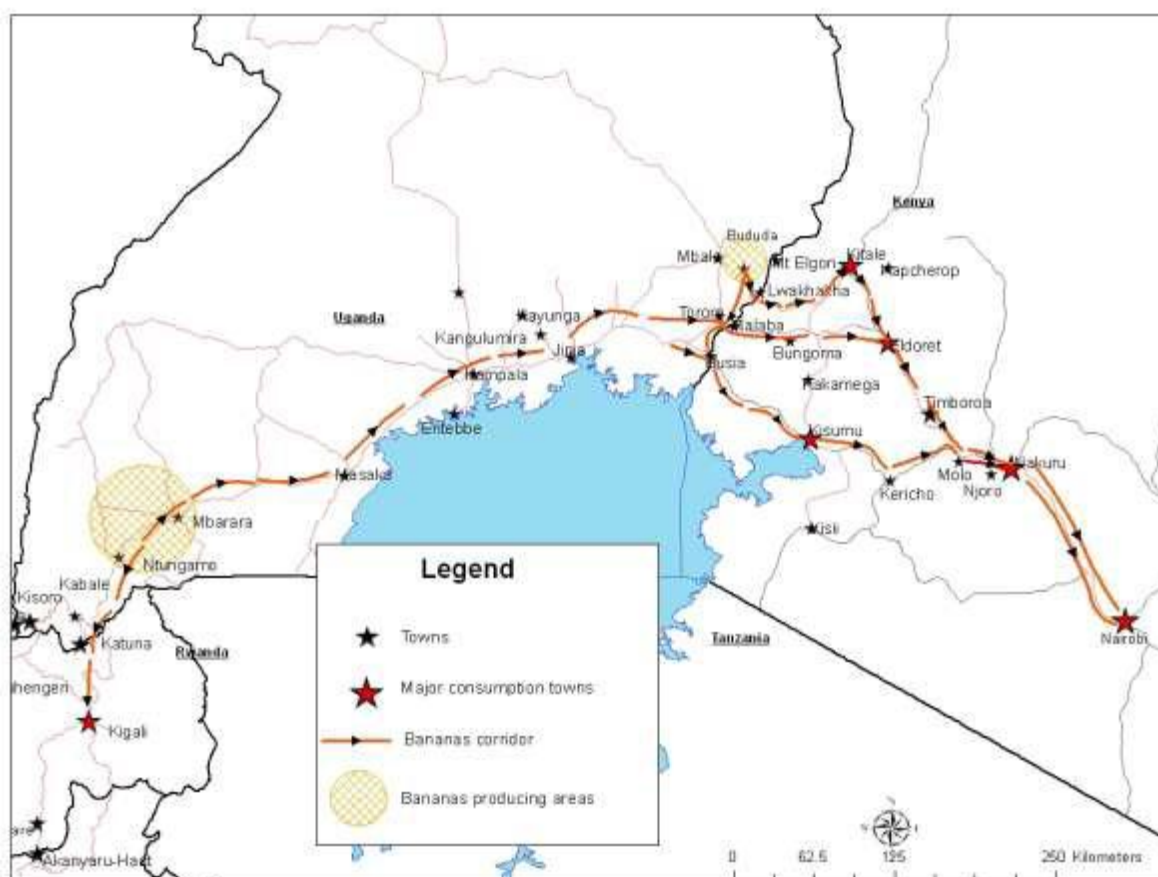
The production opportunities in the area include participation of producers in

- Seed bulking in order to enhance availability of clean seeds and increase production. Trade would be enhanced by establishment of trade regulations such as a standardization of bag weight.

### **Roles to be played by different agencies at the production level**

- The standardization of the bag weight was perceived as a role of the government and private sector.
- The government could also enhance production of Irish potatoes
- improving the road infrastructure that connects the production area to markets,
- providing clean planting materials and
- advisory services to farmers,
- Looking for ready markets and constructing storage facilities in the production areas.

## Banana



**Banana production and consumption areas and directions of flow**

**Table 2: Banana production in tonnes ('000')**

country	2002	2003	2004	2005	2006	2007	2008	2009	2010
Kenya	1073	1019	1200	1200	1238	1187	1687	1687	1583
Burundi	1603	1600	1650	1720	1780	1701	1760	620	137
Rwanda	2784	2408	2470	2593	2653	2686	2604	2994	2749
Uganda	10503	10303	10288	9608	9617	9805	9954	10104	10150

Source: FAOSTAT 2012 (Combination of desert banana and plantains)

Among the countries selected for the study, Uganda is the leading producer of banana followed by Kenya with an average production of 600,000 tonnes in the last 17 years and 400,000 tonnes in the last five years for Uganda and Kenya respectively. Production in Kenya has increased in the last five years due to the new technology of producing cleaning seedlings: tissue culture. Tissue culture bananas give high yields and grow very fast. Uganda however has been producing bananas for a long time because it is their staple food and they have Knowledge and skills of its production. Uganda research institutes for bananas and has developed a strong system of delivering extension services.

Most farmers in Uganda are small scale farmers who grow their crops individually. However, the farmers are in well organized and managed marketing schemes with saving and credit facilities.

Uganda is the largest exporter of banana within the region and it sells it to Kenya and Rwanda. Bananas gain entry into Kenya through the Busia, Malaba and Lwakhakha borders while they go into Rwanda through the Katuna border.

The major production areas in Uganda are Bududa, Ntungamo/Mbarara regions. These are areas of cool wet climate which favour the production of bananas.

Women of the age's 20-45years dominate the production of Bananas in the region. Transportation and marketing is done by the youth who are 25-35 years old.

Though bananas are found in the markets throughout the year, the high season is in December to March with low season being in August to October. This is because banana production is rain fed.

Transportation to the neighbouring regional markets is through Lorries. The major consumption market in Kenya is Nairobi with some consumed in Kisumu, Kitale, Eldoret and Nakuru.

#### **Constraints and potential opportunities for producers and traders**

- i. Diseases (bacterial banana wilt).
- ii. Marketing problems as they lack collective marketing.
- iii. Poor infrastructure: Good and modern markets with proper roofing and facilities such as electricity. Investment in proper waste disposal and management in the markets. , abundant production during the good seasons does not always translate to increased producer income.
- iv. Exploitation by brokers.
- v. They lack well-built markets with proper roofing to allow business activities to take place even when it is raining.
- vi. High cost of transportation, High transport costs and high charges at weigh bridges, customs and 'facilitation' fees.
- vii. Expensive inputs: Soil degradation and land declination.
- viii. Price fluctuations: Food prices are major drivers of inflation while price volatility leads to household income risks and uncertainties.
- ix. Lack of credit facilities

Though they are faced with these constraints, they have some production opportunities such as:

- i. Value addition on bananas by making and packaging wine, chips, etc..This will reduce wastage when there is surplus production.
- ii. Exploring new markets like South Sudan.
- iii. Access and availability of extension services on new technologies.

## Revenue distribution along the value chain

IRISH POTATOES								
Corridor	Rwanda - Uganda		Rwanda- Burundi		Kenya-Uganda		Uganda-Rwanda	
	Selling price (USD)	% revenue distribution	Selling price (USD)	% revenue distribution	Selling price (USD)	% revenue distribution	Selling price (USD)	% revenue distribution
<b>Wholesaler 1</b>	0.17	55.74	0.17	44.16	0.215	57.33	0.175	44.3
<b>wholesaler 2</b>	0.25	26.23	0.25	20.78	0.25	9.33	0.21	8.86
<b>Retailer 1 (Border retailer)</b>	0.275	8.2	0.275	6.49	0.27	5.33	0.26	12.66
<b>Retailer 2 (Importing country)</b>	0.305	9.84	0.385	28.57	0.375	28	0.395	34.18

PASSION FRUIT				
Corridor	Kenya-Uganda		Uganda-Burundi	
	Selling price (USD)	% revenue distribution	Selling price (USD)	% revenue distribution
<b>Wholesaler 1</b>	0.4875	45.56	0.5	45.45
<b>wholesaler 2</b>	0.63	13.32	0.615	10.45
<b>Retailer 1 (Border retailer)</b>	0.655	2.34	0.845	20.91
<b>Retailer 2 (Importing country)</b>	1.07	38.79	1.1	23.18

BANANA				
Corridor	Uganda(Budada)-Kenya		Uganda(Ntungamo)-Kenya	
	Selling price (USD)	% revenue distribution	Selling price (USD)	% revenue distribution
<b>Wholesaler 1</b>	5.175	62.16	2.025	24.32
<b>wholesaler 2</b>	6.5	15.92	2.775	9.01
<b>Retailer 1 (Border retailer)</b>	6.775	21.92	8.325	66.67

PINEAPPLES
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Corridor	Uganda-Rwanda	
	Selling price (USD)	% revenue distribution
<b>Wholesaler 1</b>	0.1808	74.07
<b>wholesaler 2</b>	0.2441	25.93

## HCA Collaborative Linkage with Nile Basin Member States

From the study, the horticultural council for Africa found investment potential for collaborative linkage with the Nile Basin countries in order to improve trade along the different corridors and thus increase the competitiveness of the whole region.

### Capacity building of smallholder farmers to engage in formal trade



#### i. **Standardization of practice and quality across the region through Good Agricultural practices**

Commodities traded across the borders vary in terms of quality thus causing unequal trade between the different states. One way in which HCA can partner with the Nile Basin States is to assist the region come up with a standardized tool of producing good quality produce which is uniform and will reduce the discrepancies in prices for the same commodity. Some associations in east Africa are already using the standards in Good Agricultural practices and some of them have benchmarked these standards to GlobalGAP. For example, FPEAK in Kenya has its own KenyaGAP which is benchmarked to GlobalGAP. In addition the Some HCA member associations have developed East Africa GAP which is GlobalGAP written in Kiswahili.

The horticultural council can work with other member states in building the capacity of small scale farmers to practice Good Agricultural Practices (GAP) and having them certified. This



will require collaboration of both the governments of the different states and the non-governmental stakeholders.

HCA can also partner and work with the Nile basin member states and other associations that have their own GAPs to benchmark the Nile basin GAP. The Nile Basin GAP will govern the production of horticultural commodities and the regions will receive good quality produce. The producers will also benefit by getting good returns for their produce.

#### **ii. Nile basin training centre**

A training centre is another area where HCA link with the Nile basin member states in order to improve trade within the region.

From the study it was evident that most of the traders were not aware of the Regional Economic communities (RECs) like the EAC and COMESA, which created an enabling environment for regional trade to flourish by reducing the cost of doing business. Most traders got engage in informal/unrecorded trade because they do not know that there are regional trade agreements that can protect them from exploitation by government officials at the border. The government officials at the border may also be ignorant of these trade agreements. The training centre will concentrate in training the masses and the government officials on the meanings and implications of the RECs.

In addition, the training centre will help in offering training on better farming methods, different value addition methods, how to gather market intelligence, and many more issues that are pertinent in developing trade regionally.

Unlike other institutions of higher learning, the training centre will offer practical training on horticultural production, regional trade and regional policies that are tailor made for the region. This training centre will be for those already engaging in regional trade and those who wish to engage in regional trade.

#### **iii. Trade Information management and dissemination system for Small Holder Farmers**

Small holder farmers are not aware of the market prices and are thus left to the mercies of the brokers and even the trades do not ready information on production and thus have to rely on brokers or go around looking for the produce.

HCA can work together with the member states to develop and information centre where prices of goods and production areas and seasonality are available to the farmers through the SMS system or online. This will reduce the cost of doing business for farmers and reduce losses that occur during storage at the farm level.

The information and management system can be run and managed from the Nile basin Training centre.

## Marketing support for small holder farmers/traders

### i. Development of infrastructure

Little support is given to cross border traders in terms of transport and storage facilities. Traders have to transport their goods in difficult conditions before they can get to trade and this causes a lot loss. From the study, poor post-harvest handling losses and losses during transit accounts for 42.8% of the total loss.

Reasons for losses	Mean percentages				
	Bananas	Passion Fruits	Pineapples	Irish Potatoes	Overall
Pest damage	0	6.9	5.3	1.8	3.5
Poor Post harvest handling	27.3	6.9	36.8	8.8	20
Fire	0	3.4	0	0	0.9
Rotting	0	31	5.3	63.2	24.9
Over ripening	0	10.3	0	0	2.5
Deterioration in quality dues to early harvesting	0	6.9	0	3.5	2.6
Theft	40.9	10.3	10.5	1.8	15.9
Damage during transit	31.8	24.1	42.1	15.8	28.4
poor storage	0	0	0	5.3	1.3
	100	100	100	100	100



**Bananas being rained on outside**



**A trader crossing L. Victoria; No landing site**

Lake Victoria is a resource that is shared by the Nile basin states, Kenya, Uganda and Tanzania which is not being utilized fully to promote and develop trade. Very few traders use it to transport goods from one state to another. Another resource is the Lake Tanganyika that is also not being utilized to its full potential.

One major hindrance to this is the lack of proper infrastructure and security across the lakes. A landing site needs to be developed with proper handling equipment for the commodities once they dock. This will reduce the cost of transportation especially for heavy commodities like Avocados and Irish Potatoes and will also reduce the amount of post-harvest losses that occur due to poor handling.

HCA together with RECs can lobby and advocate for the state together with other NGOs to develop landing strips at the lakes and roads which traders use to transport.

HCA can also lobby to have the government construct storage facilities that would help preserve the quality. In addition to reducing post-harvest losses, the facilities will help reduce price fluctuations brought about by seasonality of the produce.

### **Regional seed multiplication centres**

Production in the region has declined considerably due to poor quality seeds and propagation material. There is need to have regional seed multiplication centre where clean new varieties of seeds can be made available to the farmers.

The multiplication centre should be certified and meet standard. In addition, the sites should have proper propagation training programmes at the sites for training farmers.

### **Value addition and agro-processing**

From the study, it was observed that some farmers had already started engaging in value addition for example preparation of juices from passion fruit and making of starch used in the textile industry from potatoes. However, the farmers, lack proper training on standards and

management and they also do not have enough financial support to undertake the ventures in a large scale that could be profitable to them.



HCA is prepared work together with other RECs to lobby governments to encourage more private sector investment in the sector through tax incentives, providing financial support in terms of loans etc. This will encourage small scale holders to venture into value addition.

## Collaborative uptake and Sustainability by HCA and Member States

Investment	What HCA is doing	Collaborators	Benefits	Assumptions
1. wet agro-processing of fruits and vegetables	<ul style="list-style-type: none"> <li>• Training farmers on value addition members</li> </ul>	<ul style="list-style-type: none"> <li>• NBI</li> <li>• NGOs</li> <li>• Private Co-operate investors e.g Coca cola</li> <li>• Farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Employment creation for women and youth</li> <li>• promote commercialization among small scale farmers</li> <li>• reduce post-harvest losses</li> <li>• reduce price fluctuation caused by season variation</li> </ul> <p>Beneficiaries: women and youth, producers</p>	<ul style="list-style-type: none"> <li>• there is a large surplus of horticultural produce for processing</li> </ul>
2. Dry agro-processing of fruits and vegetables	<ul style="list-style-type: none"> <li>• Training farmers on value addition members</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• Private Corporate investors</li> <li>• Farmers</li> </ul>	<ul style="list-style-type: none"> <li>• Employment creation for women and youth</li> <li>• promote commercialization among small scale farmers</li> <li>• reduce post-harvest losses</li> <li>• reduce price fluctuation caused by season variation</li> </ul> <p>Beneficiaries: women and youth, producers</p>	<ul style="list-style-type: none"> <li>• there is a large surplus of horticultural produce for processing</li> </ul>
3. Policy reforms and strategies	<ul style="list-style-type: none"> <li>• Advocating for favourable environment that reduce tariff and Non-Tariff barriers that will promote cross border trade</li> </ul>	<ul style="list-style-type: none"> <li>• Member state</li> <li>• RECs e.g COMESA, EAC</li> </ul>	<ul style="list-style-type: none"> <li>• Promote investments</li> <li>• Increase income of small holder producers and traders</li> </ul> <p>Beneficiaries: Traders and member states. producers</p>	<ul style="list-style-type: none"> <li>• Advocacy is a process and cannot have a time limit</li> </ul>
4. Regional seed Multiplication centres	<ul style="list-style-type: none"> <li>• Together with its members, training farmers and good propagation techniques e.g. grafting</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs</li> <li>• Farmer groups</li> <li>• Private investors</li> </ul>	<ul style="list-style-type: none"> <li>• Good healthy seeds that will increase production</li> <li>• Reduce postharvest losses</li> <li>• Employment creation of women and youth</li> <li>• Increased income of small</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of the importance of clean seed is available</li> </ul>

Investment	What HCA is doing	Collaborators	Benefits	Assumptions
			scale farmers Beneficiaries: women and youth, farmers, entrepreneurs	
5. Good Agricultural practices (GAP)	<ul style="list-style-type: none"> <li>working with its member associations EAGAP</li> </ul>	<ul style="list-style-type: none"> <li>NGOs</li> <li>Farmer groups</li> <li>Member states</li> </ul>	<ul style="list-style-type: none"> <li>Increased food safety and standards</li> <li>Improved quality of horticultural goods traded</li> <li>Ensure fair trade among the countries</li> <li>Facilitate traceability</li> </ul> Beneficiaries: producers	<ul style="list-style-type: none"> <li>Farmers are willing to be trained on GAP and implement GAP</li> <li>Training materials are available</li> </ul>
6. Nile Basin training centre	<ul style="list-style-type: none"> <li>Trainings at the Horticultural Practical Training centre in Kenya</li> </ul>	<ul style="list-style-type: none"> <li>NBI</li> <li>Member states</li> <li>NGOs</li> </ul>	<ul style="list-style-type: none"> <li>Build the capacity of small holder farmers</li> <li>Build the capacity of traders and border officers on different trade policies and their rights</li> </ul> Beneficiaries: stakeholders along the value chain	<ul style="list-style-type: none"> <li>Traders are ignorant of trade policies</li> </ul>
7. Improving water transport and landing sites on L. Victoria	<ul style="list-style-type: none"> <li>Advocate and lobby for development of transport system within the region</li> </ul>	<ul style="list-style-type: none"> <li>NBI</li> <li>Member states</li> </ul>	<ul style="list-style-type: none"> <li>Link areas of surplus to areas of deficit</li> <li>Increase incentive of local producers and traders</li> <li>create employment opportunities to youth(men)</li> <li>increase competitiveness</li> </ul> Beneficiaries: youth especially young men, traders	<ul style="list-style-type: none"> <li>Will improve cross border trade and encourage traders to engage in formal trade</li> </ul>
8. Strategic storage facilities for fruits and vegetables		<ul style="list-style-type: none"> <li>Member states</li> <li>NGOs</li> <li>Private investors</li> </ul>	<ul style="list-style-type: none"> <li>Reduce spoilage and wastage</li> <li>Create employment for women and youth</li> <li>reduce price fluctuation</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

Investment	What HCA is doing	Collaborators	Benefits	Assumptions
			<p>caused by season variation</p> <ul style="list-style-type: none"> <li>• increase income of producers</li> </ul> <p>Beneficiaries: producers, traders, entrepreneurs</p>	



