

Sub Saharan Challenge Program (SSA CP)
Lake Kivu Pilot Learning Site (LKPLS)

MARKET BASELINE SURVEY REPORT

BY

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1.0 Introduction

Like many other Sub-Saharan farming communities, many small scale farmers in lake Kivu Pilot Learning site are subsistence producers. They grow, eat and leave little for sale. This makes them remain poor as they only rely on agricultural products. Efforts are yet to be made to help them release time and labor into intensive agricultural production that would create excess production for marketing and related businesses to improve households incomes (Blackben and Bhanu, 1999). Various approaches have been used by different interventions in the past to develop markets for agricultural products such as agricultural research and development. Yet, farmers face many challenges that require new procedures that builds on past experiences in an integrated manner. Among these challenges there is insufficient food, degraded soils, soil erosion, limited entrepreneurial skills, and fragmented farmlands, high population densities, high dependency ratios, unfavorable policies or non enforcement of policies, limited access to inputs, services, information and technologies for production, poor markets access for their products, and lack of adequate infrastructures. A new approach namely Integrated Agricultural Research for Development (IAR4D) is suggested by the Forum for Agricultural Research (FARA). This approach aims at improving market access and diversifying agro-enterprises which will encourage farmers to adopt new technologies, participate in markets, and conserve their environment in order to have equitable positive impacts on rural livelihoods in the Pilot learning Site (PLS). Better knowledge of exiting market conditions, opportunities and constraints is needed to indicate areas that need sufficient consideration in achieving the above goal. Thus a market/trader baseline survey was undertaken at the beginning of this year (2009) to complement the household baseline survey held earlier in the site. The market survey addressed the following:

- ✓ What are the existing market opportunities in terms of demands, markets, and products for selected crops in the research area,
- ✓ What socio-economic conditions restrain engagement in agricultural input and output markets, and;

- ✓ What are the constraints and options to improve current market situation in the Lake Kivu Pilot Learning Site.

In view of the above, the main purpose of this report is to give market situational account upon which subsequent efforts will be built to provide efficient marketing systems that work better for smallholder farmers in the LKPLS. Specifically, in this report we give the knowledge of current socio-economic characteristics of traders and an assessment of value chains, access to market information and other market services, existing constraints and opportunities for improved market access and diversified agro- enterprises.

2.0 Methodology

This section describes the study area, approaches for data collection and analysis. As part of the larger baseline survey, TF 3 in the LKPLS carried out an output trader/market survey in the Lake Kivu Pilot Learning Site project area in early 2009. The survey covered the three countries of Rwanda, Uganda and the Democratic Republic of Congo (DRC). The survey was not restricted to the traders and markets in the LKPLS only; rather it extended to markets that are considered captive to the products from the learning sites. Thus 16 markets were sampled from Ruhengeri-Gisenyi axis in Rwanda; Goma-Rutshuru in the DRC, and Kabale-Kisoro in Uganda. The markets were spread in 11 districts in the three countries. The districts contained sites considered as counterfactual or control, conventional, and clean sites. The districts in which the survey took place were: Kabale, Kisoro and Mbarara in Uganda; Kigali, Rubavu, Burera, and Musanze in Rwanda; and, Goma, Kisigari, Mvunyi Shanga, and Buzi in the DRC. The target markets were characterized using GIS tool (Andy et al, 2008)¹. Four market categories were sampled after the market characterization. These comprised regional markets, cross border markets, national markets, and local markets. Markets surveyed were selected on the following basis:

¹ Selecting sites to prove the concept of integrated agricultural research for development
Andrew Farrow, Chris Opondo, Moses Tenywa, K.P.C. Rao, Ephraim Nkonya, Rose Njeru, Lubanga Lunze, ...etc

Regional markets- these trade in products from several countries. Regional markets are not necessarily border markets. They are known for their relatively large sizes. These included Goma, Kigali and Mbarara. National markets such as Ruhengeri (Musanze) were also included in this group.

National markets: Comprise of major markets within a country and are likely to receive products from most parts of the country. National markets were merged with regional markets for this survey

Cross border markets- these trade in products from at least two countries and are situated near border points of these countries. These markets included Gisenyi (Rubavu) for Rwanda/DRC , Kisoro, Rwanda/Uganda, Bunagana for Uganda/DRC.

Local markets are found in the sites of interest and are of varying sizes. Their selection was based also on whether the sites are located in areas considered to have good market or poor market access. This criterion however applies more to the local markets. From these markets, 496 trader respondents were randomly selected including wholesalers, transporters, brokers, retailers, and collectors. However, 456 usable cases were achieved in the survey. Finally, 5 types of commodities were selected based on pre-market survey results from each country. The map below depicts the diversity of market access and potential sites within the LKPLS.

Table 1: Traders by Country

Country	Frequency	Percentage
Uganda	142	31.1
Rwanda	150	32.9
DRC	164	36.0
Total	456	100.0

Source: Survey data

Enterprises sampled

The enterprises that were sampled for trader survey were extracted from the initial LKPLS validation report. (Source: SSA CP LKPLS validation report). A list of these products is available as an appendix. The enterprises were further subjected to market reconnaissance to establish their presence in the market before finally being included in the survey.

Beans are the most traded product in the region. It is a staple food in the three countries. Other major crops include irish potatoes, sorghum and cabbages. Specific country differences are discussed below.

Table 2. The enterprises that were surveyed were:

Type	Frequency	Percent %
Irish potatoes	74	16
Beans	102	22
Beef	11	2
Passion fruits	27	6
Sorghum	60	13
Cabbages	53	12
Wheat	6	1
Maize	33	7
Bananas	39	9
Cassava leaves	17	4
Cassava	11	2.
Chewing cane	6	1
Coffee	2	0.4
Other	14	3

Distribution of traders by Gender

Both women and men participate in commodity trade within the region where majority operate as sole traders. There is less than 10% of them who belong to any marketing groups or associations (Table 3). It is also evident that whereas men dominated trade in Uganda compared to women, the reverse is the reality in DRC.

Table 3: Gender of the sampled traders

Country	Gender		Association/Group (%)
	Male (%)	Female (%)	
Uganda	65.5%	28.2%	6.3%
Rwanda	58.0%	40.7%	1.3%
DRC	31.1%	68.9%	0%

Source: Survey data

In Rwanda, gender differential among traders was least. This could be a pattern that is following the conflict situation in these countries. As the proposal document indicated, the choice of the participating countries in Lake Kivu site was to compare and see how conflict experience continuum affects the impacts of agricultural production and trade. Uganda is more than 20 years from crisis and therefore, homesteads have more or less normalized, allowing the traditional patriarchy systems of food management to take place, where men venture out as the main household providers. Women stay home to take care of the families. This scenario presents a typical normal African household set up. Rwanda is about 15 years out of crisis, and men outnumber women marginally in trade. But in DRC, a country which is still in crisis, the women have taken over what would have been traditionally men's roles of venturing out of the homesteads into long and short distance trade activities. The women are the main food traders in DRC.

4.0 Country Specific results

4.1 Uganda

Location (districts) and markets in Uganda

Table 5 below describes the percentage of the respondents according to the districts where they were during the interview. These districts correspond to market outlets for Innovation Platform commodities or enterprises. Thus, about

43 % of the respondents were from Kabale, 40% from Kisoro and about 17% from Mbarara (Table 3). Mbarara is not one of the research site markets, but products from the research sites are traded there.

Table 4: Sampled district for Market survey – Uganda

District	Frequency	Percentage
Kabale	60	42.9
Kisoro	56	40.0
Mbarara	24	17.1
Total	140	100.0

Source: Survey data

Table 5 below describes the percentage of respondents in each of the market sampled for the survey. These were the markets that guided the site selection process for the Innovation Platform at the initial stages of setting of the research project. About 24% were found in Kabale Central, 11% from Kashasha market, about 27% from Kisoro, 19% from Bunagana and about 18% from Mbarara.

Table 5: Markets sampled for the survey in Uganda

Market	Frequency	Percentage
Kabale central	33	23.6
Kashasha	16	11.4
Kisoro	40	28.6
Bunagana	26	18.6
Mbarara	25	17.9
Total	140	100.0

Source: Survey data

Types of traders

Among the traders sampled, 26% were wholesalers in the markets studied in Uganda, about 33% were retailers, 25 % collectors, 5% transporters, and about 11% agents/brokers-these are those who look for buyers and sellers and get paid by both parties for such a service (Table 6).

Table 6: Trader type in Uganda

Trader Type	Frequency	Percentage
wholesaler	37	26.2
retailer	46	32.6
transporters	7	5.0
collectors	35	24.8
agents/brokers	16	11.3
Total	141	100.0

Source: Survey data

Trader socioeconomic characteristics

Most of the traders had some form of education with majority having primary school education and above. Illiterate traders comprised of 22%, Primary school graduates 51%, secondary school leavers 23 % while those with post secondary education were about 3% (Table 7 below).

Table 7: Traders' Education Levels

Education Level	Frequency	Percentage
Non formal	31	22.0
Primary school	72	51.1
Secondary	33	23.4
Post secondary	4	2.8
University	1	0.7
Total	141	100

Source: Survey data

Languages spoken by traders

Most of the traders in Uganda, spoke more than one language (Table 8). Only about 21% spoke only one language. The rest spoke more than one language as follows: about 38% spoke two languages, 24% spoke three languages, 15% four languages and about 2% spoke five languages.

Table 8: Languages spoken by traders in Uganda

Number of Languages	Frequency	Percentage
1	30	21.4
2	53	37.9
3	33	23.6
4	21	15.0
5	3	2.1
Total	140	100.0

Source: Survey data

4.2. RWANDA

Districts and Markets

In Rwanda, about 25% of the traders were from Musanze district, 26% from Rubavu, 13% from Burera and 34% from Kigali (Table 11) of which Kigali is the capital city.

Table 9: Distribution of traders as per Districts in Rwanda

District	Frequency	Percentage
Musanze	38	25.3
Rubavu	39	26.0
Burera	20	13.3
Kigali	52	34.7
Kisigari	1	0.7
Total	150	100.0

Source: Survey data

Markets in Rwanda

The sampled traders operated in various markets with 17% operating in Musanze market, 10% in Byangabo, 20% in Rubavu, about 7% in Kabumba, 12% in Kirambo and 33% in Kigali (Table 10).

Table 10: Distribution of Rwanda Markets

Markets	Frequency	Percentage
Bunagana	1	0.7
Musanze	26	17.3
Byangabo	15	10.0
Rubavu	30	20.0
Kabumba	10	6.7
Kirambo	18	12.0
Kigali	50	33.3
Total	150	100.0

Source: Survey data

Types of traders

In Rwanda, 16% of the traders were wholesalers, about 37% retailers, 18% transporters, while collectors and agents were about 15% each in the markets sampled as indicated in 11 table below.

Table 11: Distribution of Trader type

Trader Type	Frequency	Percentage
Wholesaler	24	16.0
Retailer	55	36.7
Transporters	27	18.0
Collectors	22	14.7
Agents/brokers	22	14.7
Total	150	100.0

Source: Survey data

Socioeconomic characteristics of traders

Like in Uganda, primary level graduates dominated the market. They comprise about 59% of all the players in the commodity markets in Rwanda. About 28% are illiterate and about 13% have secondary education.

Table 12: Trader Education levels

Education Level	Frequency	Percentage
Non formal	40	26.7
Primary school	89	59.3
Secondary	20	13.3
University	1	.7
Total	150	100.0

Source: Survey data

Languages spoken by traders

Interestingly, most Rwanda traders speak only one language comprising of 77% of the sample (Table 13). Those who can speak two languages are about 19% and only about 3% spoke three languages. Less than 1% can speak four languages. This compares poorly with the Ugandan and DRC colleagues who command on average two languages.

Table 13: Trader language competence in Rwanda

Number of Languages	Frequency	Percentage
1	116	77.3
2	29	19.3
3	4	2.7
4	1	0.7
Total	150	100.0

Source: Survey data

4.3 DEMOCRATIC REPUBLIC OF CONGO

Districts of markets

In DRC, about 29% of the respondents were from Kisigari, 29% are from Mvunyi-Shanga, 20% from Buzi and about 23% from Goma (Table 15).

Table 14: District of the Markets in DRC

District	Frequency	Percentage
Kisigari	47	28.7
mvunyi shanga	48	29.3
Buzi	32	19.5
Goma	37	22.6
Total	164	100.0

Source: Survey data

Sampled Markets

The markets sampled for the survey included Kalengera, Kabaya, Shasha, Minova and Goma. In Kalengera, about 16% of the traders were sampled, Kabaya 13%, Shasha about 29%, Minova 20%, and Goma about 23%.

Table 15: Sampled Markets

Market	Frequency	Percentage
Kalengera	26	15.9
Kabaya	21	12.8
Shasha	47	28.7
Minova	32	19.5
Goma	37	22.6
Total	164	100.0

Source: Survey data

Types of Traders

Among the sampled traders in DRC, about 29% were wholesalers, 34% retailers, 20% transporters and 18% collectors (Table 17). There were no agents/brokers found in DRC marketing chain.

Table 16: Distribution of Trader Type

Trader Type	Frequency	Percentage
Wholesaler	47	28.7
Retailer	55	33.5
Transporters	33	20.1
Collectors	29	17.7
Total	164	100.0

Source: Survey data

Trader Socioeconomic characteristics

Just like the other two countries, about 46% of the traders were primary education graduates, about 29% were illiterate, 20% had secondary education and about 4% had post secondary education (Table 19).

Table 17: Education Level of the Traders

Education Level	Frequency	Percentage
non formal	48	29.3
primary school	75	45.7
secondary	33	20.1
post secondary	7	4.3
university	1	0.6
Total	164	100.0

Source: Survey data

Languages spoken by traders

Of the traders from DRC, about 70% spoke more than one language (Table 9). Very few traders (5%) only spoke one language. From the sample, 20% spoke three languages, about 4% spoke four languages and about 2% spoke five languages.

Table 18: Trader Language in DRC

Number of Languages	Frequency	Percentage
1	8	4.9
2	114	69.5
3	33	20.1
4	6	3.7
5	3	1.8
Total	164	100.0

Source: Survey data

In summary the mean language competence of traders in all the three countries indicate that Rwanda trails DRC and Uganda in the number of languages her traders can speak (Table 20). Most as indicated earlier can only speak Kinyarwanda, whereas in Uganda and DRC, traders have an average of two languages in their command. Thus, the latter two have added advantage when it comes to cross border trade.

Table 19: Language summary among the three countries

Country	Mean	N
Uganda	2.39	140
Rwanda	1.27	150
DRC	2.28	164

Source: Survey data

5.0 MARKET ACCESS

Distances of Traders from the Main Town

The table below shows the distances between the location of the traders and the main towns where they market their products. It is in DRC where traders are furthest from the main town about, 36Kms away on average. Rwandese traders are closest to their main towns with an average of 7.7 km and Uganda has 11.5 km (Table 20).

Table 20: Distance in kilometers to the main town.

Country	N	Mean (km)	Maximum (km)
Uganda	141	11.5170	76.00
Rwanda	150	7.7067	45.00
DRC	160	35.6377	66.00

Source: Survey data

Distances to the main road

The distances to the main road from where the traders operated differed according to the country. Rwanda registered minimal distance to a main road of less than a kilometer, while Uganda had double (over 4 km) the distance that DRC traders registered of about 2 km to the main road (Table 21). There are several assumptions that one can make out of this. First that in Uganda, relative security for over 20 years has built confidence in traders and they can move goods further distances from and to the main road. In DRC, the volatile situation dictates settlements that are as close to the main roads as possible and traders are comfortable in these settlements. They provide a sense of security and offer strategies for escape in case of trouble and easy access to emergency services when needed. Rwanda is a small nation with high population density, coupled with an ever improving road network. Thus, traders are near the main roads.

Table 21: Distances to the main road

Country	N	Mean	Maximum
Uganda	142	4.6125	26.40
Rwanda	150	.2533	7.00
DRC	162	2.0575	60.00

Source: Survey data

Years of Experience in trading

Traders in the region seem to have had the same number of years of experience in the trade as indicated in table 23 below. This seems to be the time Laurent Kabila became the president in DRC, an event associated with improved ties among the three countries possibly leading to increased trading relationships and opportunities.

Table 23: Distribution of Years of Experience in Trading

Country	N	Mean
Uganda	142	9.1620
Rwanda	150	9.1000
DRC	164	8.1463
Total	456	8.7763

Source: Survey data

Business ownership

Most of the trading businesses across the region are owned solely by the traders as the table below indicates. 93% in Uganda, 99 % in Rwanda and about 95% in DRC. Traders operating as a branch of another firm were few about 2.5% and were only found in DRC (Table 24). Minimal partnership with foreign firms, cooperatives, limited company, association and joint ventures was found in Uganda and DRC. Rwanda has only two categories sole ownership and cooperatives which has a significant representation compared to the other two

countries. Rwanda has 1.3% of the traders operating in cooperatives whereas the other two have less than 1% of the traders as cooperators.

Table 24: Distribution of Business Ownership by Country

Ownership	Country		
	Uganda	Rwanda	DRC
Sole Trader	93.0%	98.7%	94.5%
Branch of another firm	0.0%	0.0%	2.5%
Partnership with foreign firm	0.7%	0.0%	0.6%
Partnership with local firm	0.0%	0.0%	0.6%
Cooperative	0.7%	1.3%	0.6%
Ltd company	0.7%	0.0%	0.0%
Associations	1.4%	0.0%	1.2%
Joint venture	3.5%	0.0%	0.0%

Source: Survey data

Start of Business

Most of the traders started their businesses themselves. Thus they were not only the sole owners but also the sole starters of their businesses (Table 25).

Table 25: Proportion of businesses started by the owners

Owner started business	Country		
	Uganda	Rwanda	DRC
Yes	98.6%	99.3%	91.5%
No	1.4%	0.7%	7.9%

Source: Survey data

Source of Business Finances

Most entrepreneurs were the main financiers of their businesses. Interesting observation in Rwanda is that family members did not assist in any way, whereas family members in DRC contributed about 20% of the finances required in

starting the food business and in Uganda, family contribution was about 9%. However, in Rwanda there was an incidence of a foreigner' input in setting up business which is not available in the other two countries (Table 26).

Table 26: Source of Business Finances

Financier	Country		
	Uganda	Rwanda	DRC
Owner	83.0%	97.3%	69.8%
Family members	9.2%	0.0%	19.8%
Non family members residing locally	1.4%	0.0%	4.3%
Non family members residing elsewhere	0.7%	0.0%	2.5%
Local company	0.7%	0.7%	1.2%
Local bank or investor	1.4%	1.3%	1.9%
Foreign bank or investor	0.0%	0.7%	0.0%
Alternative financial institution like NGO	3.5%	0.0%	0.6%

Source: Survey data

Trader communication facilities

Table 27 below shows that most traders own and use mobile phones across the three countries. However, DRC traders' use of mobile phones is low 32% compared to Rwanda's 72% and Uganda 71%.

Nevertheless, the radio is a significant communication facility in the region as indicated by radio ownership among traders which is high, at about 81% in Uganda, 84% in Rwanda and about 67% in DRC. Other alternatives such as computers, internet and computers are insignificant in the region. Only in Rwanda the use of computers and internet traced at very minimal levels of 0.7% and about 3% respectively.

Table 27: Communication Facilities used by Traders

Communication Facilities	Response	Country		
		Uganda	Rwanda	DRC
Own mobile	Yes	71.0%	72.1%	32.3%
	No	29.0%	27.9%	67.7%
Own line	Yes	3.5%	2.7%	3.0%
	No	96.5%	96.0%	97.0%
Use computer	Yes	0.0%	0.7%	0.0%
	No	100.0%	99.3%	96.9%
Internet access	Yes	1.4%	.7%	0.0%
	No	98.6%	99.3%	99.4%
Email address	Yes	2.8%	.7%	0.0%
	No	97.2%	99.3%	100.0%
Radio	Yes	81.7%	84.0%	66.7%
	No	18.3%	16.0%	33.3%
TV	Yes	16.9%	24.7%	14.8%
	No	82.4%	75.3%	85.2%

Source: Survey data

Major sources of transportation

Table 28, below shows the major means of transportation used by the traders in the region. Public transport in Uganda provides 39% of the transport requirements, while 20% is hired transport. But in Rwanda and DRC, human beings transport most goods compared to the other forms of transport. In Rwanda, 25% of transportation needs are met by people who carry products on their heads or backs. In DRC it is 44% who do the same. Thus, it is clear that substantial percentages of goods traded are carried on the head/shoulder or back in the regions. DRC leads in goods ferried by human beings on their heads/shoulders or backs. In Uganda, human transport is a very close third means after public means and hired transport. In Rwanda and DRC, it is the lead form of transporting goods for trade. This is in line with what Blackben and

Chanu (1999) found in SSA, that about 60% of traded commodities are ferried by human beings to the markets or collection points. Women take the lion's share in transporting goods to the market or correction points.

Ownership of Transport facilities

Few traders own transport vehicles for their businesses and most of those who do are found in Rwanda where at least 10% of the traders own their transport vehicles. In Uganda, substantial percentage of traders 39% hires transport. Such services are low in Rwanda 10% and DRC 9%.

Table 28: Major sources of Transportation

Major Transport	Country		
	Uganda	Rwanda	DRC
Own vehicle	5.7%	9.9%	6.3%
Hired vehicle	20.0%	19.0%	8.9%
Public transport	39.3%	9.9%	14.6%
Motor bike	1.4%	0.0%	1.3%
Non motorized- bike, cart etc	15.0%	18.3%	24.7%
On head/shoulder/back	17.1%	25.4%	44.3%
Other	0.7%	17.6%	0.0%

Source: Survey data

Transportation Methods: Shared transport

Sharing of transport among traders is more common in Uganda 46%. In DRC 29% of the traders share transport, but in Rwanda, only 5% share transport (Table 29).

Table 29: Participation in Shared Transport

Transport	Response	Country		
		Uganda	Rwanda	DRC
Shared transport	Yes	46.3%	5.4%	28.7%
	No	52.2%	93.8%	69.2%
Not shared	Weak collaboration	8.8%	2.5%	16.3%
	Need entire space	36.8%	28.7%	7.1%
	Do not use vehicle	50.0%	43.4%	62.2%
	Disputes in pooling transport	0	3.3%	6.1%
	Other	1.5%	21.3%	5.1%

Source: Survey data

Business constraints

Unreliable supply of goods was a major constraint to about 20% of the traders in Uganda and about 11% in DRC, but was not an issue in Rwanda. Rwandese major challenge has been the taxes as reported by about 21% of the traders (Table 30). Taxation is a modest challenge in Uganda and DRC as reported by 7% and 12 % of the traders respectively. This is because in Uganda, taxation requirements are not adhered to, whereas in DRC, there exists “negotiable” inconvenient taxes in the absence of proper tax regulations.

Credit challenge was more uniformly felt, though Uganda had more traders 19% who listed it as a challenge, Rwanda about 13% and DRC 10%. Continuity of the business problem was more an issue in Uganda and DRC with 16.2% and 12.2% respectively and a very insignificant challenge in Rwanda (1.3%). Price volatility was a major challenge in Rwanda and DRC as reported by 29% and 14% of the traders respectively but, insignificant in Uganda 0.7%.

Table 30: Constraints to Business

Constraints	Country		
	Uganda	Rwanda	DRC
Unreliable/irregular supply	19.7%	0.7%	11.6%
Taxes and levies	7.0%	20.7%	12.2%
Government regulations/ bureaucracy	2.1%	.7%	5.5%
Raw material quality and prices	0.7%	1.3%	2.4%
Labor costs	0.7%	2.0%	0.0%
Consumer demand	9.9%	3.3%	14.0%
High fuel/energy costs	7.0%	0.0%	2.4%
Seasonality of raw material	1.4%	10.7%	1.2%
Lack of knowledge/technology	0.7%	0.7%	3.6%
Competition	7.7%	1.3%	1.2%
Credit availability	19.0%	12.7%	10.4%
Poor road/rail infrastructure	3.5%	3.3%	4.3%
Succession/continuity problems	16.2%	2.0%	12.2%
Price volatility	0.7%	28.7%	14.0%
Lack of space/elements of weather	0.7%	8.0%	0.0%
Transport problems	0.0%	3.3%	1.8%
Other	2.8%	0.7%	3.0%

Source: Survey data

Main suppliers of traded products

In all the three countries, private farmers were the major product suppliers (table 31). In Uganda about 73% of the trader supply was from private farmers or individual farmers with 50% in Rwanda and 68% in DRC (Table 31). The notable lower participation of individual farmers supply in Rwanda may be due to the fact that the government is encouraging cooperatives and associations among farmers. Hence there are more farmer associations supplying traders with goods in Rwanda than in Uganda and DRC. Collectors in Rwanda provide about 29% of the goods to the traders. This is almost double of what they provide in the

other two countries. Own production in all the three countries was minimal in the market, with 1% in Rwanda, 4% in Uganda and 8% in DRC.

Table 31: Supplier Categories

Main Suppliers	Country		
	Uganda	Rwanda	DRC
Private farmers	72.5%	50.0%	67.7%
Farmer associations	1.5%	12.7%	2.4%
Own production	3.8%	1.3%	7.9%
Collectors	16.8%	29.3%	16.5%
Agent/broker	5.3%	3.3%	0.6%
Processor	0.0%	0.7%	0.0%
Others	0.0%	2.0%	4.9%

Source: Survey data

6.0 GENDER PERSPECTIVES OF TRADING ACTIVITIES

Distance to the nearest town, experience and gender

Distances from the nearest town and the nearest road by gender gives us very interesting observations. In Uganda men move almost 4 times further than women traders who do not seem to venture too far away from their localities (Table 32). But associations in Uganda move goods over 20 km to the nearest road. In Rwanda, the same pattern is repeated, men travel further than women but not with as a large margin as in Uganda. But associations in Rwanda travel less than individuals. One would expect associations to travel further than individuals where they market their members' products at better prices than what local markets could offer. In DRC there are no associations. Women in DRC travel further distances than men to the nearest road and town, and they travel the longest distances to the nearest towns in the region.

Table 32: Distance (km) to the nearest town/road, experience (yrs) by Gender and country

Country	Gender	Dist-town	Dist-road	Experience in trading
Uganda	Male	14.42	5.07	9.84
	Female	2.80	2.44	7.85
	Association/group	20.60	9.57	8.22
	Total	11.52	4.61	9.18
Rwanda	Male	9.01	0.17	7.91
	Female	6.00	0.38	10.38
	Association/group	3.00	0.00	22.00
	Total	7.71	0.25	9.10
DRC	Male	32.36	1.49	9.04
	Female	37.13	2.32	7.80
	Total	35.64	2.06	8.18

Source: Survey data

Gender and Trader type

Men in Uganda, take the lion's share in wholesale trade among all the wholesale men in the region (51%) followed by the men in Rwanda 47% (Table 32). DRC men participate in transportation where they take half of the transportation business in the region followed by Rwandese who provides 41% of transportation needs in the region. Uganda collectors take about 61% of the collection business while Rwandese lead in agent/brokerage with 56% of the trade in this sector in the region. DRC women take the lion's share of wholesaling among women in the region 78% and in transport 71%, while Rwanda women dominate in agents/brokerage with 80% of the business in the region.

Table 33: Gender, trader type and country

Gender	Trader type	Country		
		Uganda	Rwanda	DRC
Male	Wholesaler	50.8	30.5	18.6
	Retailer	47.1	41.2	11.8
	Transporters	8.9	41.1	50
	Collectors	60.6	21.2	18.2
	Agents/brokers	43.8	56.3	0
Female	wholesalers	8.7	13.0	78.3
	Retailers	21	32.4	46.7
	transporters	0	28.6	71.4
	collectors	25.5	29.4	45.1
	Agents/brokers	20	80	0

Source: Survey data

Market and Gender

a) Uganda markets

The country specific tables below show gendered participation in various markets for the sampled commodities for this survey. Though, there is cross border trade, traders do not criss-cross within the regional markets much. Each group seems to concentrate its operations within their respective national boundaries, in spite of the ease to cross from one country to the other in the region. In Uganda, 41% of those trading in Kisoro market were women but they were poorly represented in Kashasha market. Men seem to participate fairly evenly across all the markets as table 34 below shows. Associations and groups were more active in Bunagana with 33% and in Kisoro and Kashasha with 22% each.

Table 34: Markets as per country and gender

Gender	Markets					Total
	kabale central	kashasha	kisoro	bunagana	mbarara	
male	23.9	15.2	23.9	14.1	22.8	100
female	25.6	0	41	25.6	7.7	100
Association/group	11.1	22.2	22.2	33.3	11.1	100

Source: Survey data

b) Rwanda Markets

In Rwanda, men dominated trade in Kiramabo and Kigali food markets, while women dominated Musanze and Rubavu markets. While men's presence was in all markets, women were absent in Kirambo in the trade for the sampled commodities.

Table 35: Rwanda Markets

Gender	Markets						Total
	musanze	byangabo	rubavu	kabumba	kirambo	kigali	
male	9.2	8	18.4	4.6	20.7	39.1	100
female	29.5	13.1	23	9.8	0	23	100
Association/ group	0	0	0	0	0	100	100

Source: Survey data

c) DRC Markets

In DRC, in general most traders are women. However, in specific markets in the pilot area, men dominate Shasha and Goma Markets by being the more at 39% and 28% respectively compared to women's participation in these markets at 24% and 20% respectively. Women traders took the lead in all the other markets in the site. Men's participation in Kabaya market was insignificant at 2%.

Table 36: DRC Markets

Gender	Markets					
	Kalengera	kabaya	shasha	minova	goma	Total
male	13.7	2	39.2	17.6	27.5	100
female	16.8	17.7	23.9	20.4	20.4	100

Source: Survey data

Traders' Education

Education and gender by country as shown in table 37 below indicates that the highest percentage of traders with non formal and primary education are from Rwanda (40% and 42%), while Uganda dominates with secondary school holders (47%), and DRC dominates for those with post secondary school education (56%). This may be a reflection of employment situation in each country. Due to active conflicts in DRC, it is possible that higher educated people are not able to participate in formal employment and hence engage in informal employment such as food trade. The other reason could be attributed to DRC road infrastructure which is very poor forcing most food traders to use aircrafts. This may be calling for better educated traders due to the requirements of air transport. Some of the food from DRC research site ends up in Kinshasa, Lubumbashi, Kindu by air and to Bukavu by boat. Among the women DRC dominates in all the categories (the non formal, primary and secondary and post secondary certificate holders). Male traders with university education operated equally (33%) in all the countries. No women graduates found in food trade in the site.

Table 37: Traders' education by country and gender

Gender	Education	Country			Total
		Uganda	Rwanda	DRC	
male	Non formal	35	40	25	100
	Primary school	38.9	42.1	19	100
	Secondary	47.2	32.1	20.8	100
	post secondary	44.4	0	55.6	100
	University	33.3	33.3	33.3	100
female	Non formal	22.1	28.6	49.4	100
	Primary school	16.3	34.6	49	100
	Secondary	19.4	9.7	71	100
	Post secondary	0	0	100	100

Source: Survey data

Product by country and gender

On product by country and gender, we find that Ugandan men dominate the Irish potatoes (77%), beef (92%) and passion fruit businesses (68%) in the region.

a) Uganda

In Uganda, men dominate all the trades. Women participate more in cabbages and beans. They do not engage in beef trade at all.

Table 38: Product by country and gender -Uganda

Product	Gender		Association/group	Total
	Male	Female		
Irish potatoes	76.7	20.0	3.3	100
Beans	55.6	40.7	3.7	100
Beef	91.7	0	8.3	100
Passion fruits	68.2	31.8	0	100
Sorghum	58.8	35.3	5.9	100
cabbages	47.6	42.9	9.5	100

Source: Survey data

b) Rwanda

In Rwanda, men dominated the beans 62% and sorghum trade 72%, while women dominated cabbage 52%, maize 88% and Banana trade 53%. Women did not venture into some crops where men were the sole traders such as Beef, wheat and Passion Fruits. Associations in Rwanda participated more in handling Irish potatoes where they commanded 8% of the trade. Note is taken of Imbaraga Cooperative in Rwanda which is very active in the site engaging in the production and marketing of Irish potatoes in the learning site.

Table 39: Product by country and gender - Rwanda

Product	Gender			Total
	Male	Female	Association/group	
Irish potatoes	57.7	34.6	7.7	100
Beans	61.5	38.5		100
Beef	100	0		100
Passion fruits	100	0		100
Sorghum	72.4	27.6		100
Cabbages	47.6	52.4		100
Wheat	100	0		100
Maize	12.5	87.5		100
Bananas	46.7	53.3		100

Source: Survey data

c) DRC

In DRC, the only product that women do not engage in is coffee, which is the only male domain in the site. Table 40 below, shows the gendered participation in commodity trade in DRC. Here, women are the main traders as mentioned earlier, in all commodities except coffee. They take most of the trade in beans (83%) trade, Sorghum (78%) and Irish Potatoes (67%).

Table 40: DRC

Product	Gender		
	Male	Female	Total
Irish potatoes	33.3	66.7	100
Beans	16.7	83.3	100
Sorghum	22.2	77.8	100
Cabbages	44.4	55.6	100
Maize	30.8	69.2	100

Bananas	40.9	59.1	100
Cassava leaves	41.2	58.8	100
Chewing cane	33.3	66.7	100
Coffee	100	0	100

Source: Survey data

In summary, Rwandese men dominate bean, sorghum and wheat trade, while DRC men dominate maize and banana trade among the male traders in the region. On the other hand, Ugandan women dominate trade in passion fruits only. Rwandese women dominate trade in cabbages and sorghum, while DRC women dominate in Irish potatoes, beans, maize, cassava leaves, cassava and chewing cane. Associations found in Uganda control Beans, Beef, Sorghum and Cabbage trade while those in Rwanda only work with Irish potatoes. In DRC there are no trade associations found for the sampled commodities.

Trader Types as per gender given country

In Uganda, men dominate all trader types, while in Rwanda women dominate retailing (62%) and collecting (68%). In DRC women dominate all trader types, while men dominate transportation (85%) especially motorized and on both locally made wooden bicycles and imported ones. Associations are more active as transporters in Uganda, where they provide 29% of transport needs and in Rwanda where they provide about 7% of transport needs. See table 41 below.

Table 41: Trader type by gender and country

Country	Trader type	Gender			Total
		Male	female	Association/group	
Uganda	Wholesaler	81.1	10.8	8.1	100
	Retailer	52.2	47.8	0	100
	Transporters	71.4	0	28.6	100
	Collectors	57.1	37.1	5.7	100
	Agents/brokers	87.5	6.3	6.3	100
Rwanda	Wholesalers	75	25.0	0	100
	Retailers	38.2	61.8	0	100
	Transporters	85.2	7.4	7.4	100
	Collectors	31.8	68.2	0	100
	Agents/brokers	81.8	18.2	0	100
DRC	Wholesalers	23.4	76.6	0	100
	Retailers	10.9	89.1	0	100
	Transporters	84.8	15.2	0	100
	collectors	20.7	79.3	0	100

Source: Survey data

7.0 Bulk Traders

After undertaking the trader survey in the markets sampled, the market team realized that most of those who handled the products in the study site were not necessarily the bulkers of the same. There was another category of traders who amassed most of the goods for far off markets. The team agreed to carry out a diagnostic survey of the bulk traders in the region. Results presented below from DRC, but we hope that from Rwanda and Uganda will be coming soon.

Bulk traders in the Democratic Republic of Congo

The purpose of the diagnostic survey was to identify key, high end bulk buyers and to establish their willingness to be linked to the farmers in our pilot site. The farmers will then enter into arrangements/contracts to supply the bulk buyers with the products of interest. The other objective was to track the flow of agricultural products from the learning sites to various markets, including neighboring countries and the main regional markets such as Kampala, Nairobi and Kinshasa. The products that were tracked were Beans, Bananas, Irish potatoes, Maize, Sweet potatoes, Cassava, Onions and Cabbages.

Table 42 below shows the type of products that are sourced from our study sites in DRC, their destinations and the bulk traders involved. As we have indicated elsewhere in this draft, women in DRC take the lion's share in the market of agricultural products traded in the region. Of 13 bulk bean traders, 8 were women and 5 were men who took their goods by air to Kinshasa, Kindu, Kisangani, Lubumbashi and Kasai. Men dominated bulking of Cassava leaves for domestic market and Bukavu markets where goods are ferried by boats through lake Kivu. They also dominated banana trade where the bulked goods also went to Bukavu by boat or to Uganda by road. Women took the lead in bulking all the other commodities for various destinations. We can conclude that few men are into air transport systems. They are more comfortable on road or water with their goods.

Table 42: Product, destination and gender

Entreprese	Destination	Total Number	Gender	
			Male	Female
Beans	Kinshasa-Kindu- Kisangani-Lubumbashi and Kasai	13	5	8
Cassava	Bukavu	11	2	9
Cassava leaves	Goma and Bukavu	33	30	3
Irish patato	Kinshasa-Kindu- Kisangani-Lubumbashi and Kasai	8	0	8
Sweet potatoes	Bukavu-Uvira	12	6	6
Onion	Kinshasa-Kindu- Kisangani-Lubumbashi and Kasai	8	0	8
Cabbage	Kinshasa-Kindu- Kisangani-Lubumbashi and Kasai	8	0	8
Banana	Rwanda-Bukavu-Uganda	23	19	4
Maize	Bukavu-Uvira-Kamituga	12	3	9

Source: bulk traders diagnostic survey

Beans

Thirteen bulk traders (8 women and 5 men) were surveyed for beans. The traders bulk the beans for the following markets in each season: Kinshasa, Lubumbashi, Kindu, Kisangani and Bukavu. The most common bean types are Bilbil, pigeon vert, Semeki Zela, Goma and Tanzania

Bananas

Bananas are bought in bunches. Each trader buys about 40 bananas bunches per day. Most of the bananas are consumed in Goma, but some find their way

into Rwanda through Gisenyi banana market. The Gisenyi banana market is separate from the general Gisenyi market. Some, especially the plantain is also sold in Uganda through the Virunga National Park route. This is where farm inputs such as fertilizers and chemicals are purchased especially for use in Irish potatoes farming in Kisigari. There are no input dealers in Goma.

Irish potatoes

Irish potatoes traders in Goma bulk for local consumption and for export to distant markets (Kinshasa, Lubumbashi, Kindu, Kisangani and Bukavu). These markets are also the ones where beans are taken to. The red colored potatoes are the type that is taken to these far off markets. Sometime the bukavu markets is used as a transit market to other markets such as the way to other region market like Uvira and Kalemie in Shaba province.

Maize

Maize is grown for export. Maize bulk traders often take the product to Rwanda (mostly for further processing and resale in the DRC especially in Goma and Bukavu). Maize are also export to the following markets: Bukavu, Uganda via Jomba and Uvira.

Cassava

Cassava production has dropped with the mosaic disease attack. However, the little that is available is bought by bulk traders who produce flour for local consumption in Goma and the surrounding areas. Cassava is milled by local millers.

Bukavu, Uvira and Kamituga in the South Kivu province are other markets of interest. Cassava is milled by local millers. The cassava leaves is the main products which are very selling in local market and every days about 35 to 50 bicycles of cassava leaves are selling in Goma markets.

Onions, Sweet Potatoes and Cabbages

Traders in these items purchase whatever comes to the market. They never have enough produce for sale as the quantities produced are quite low. But a substantial amount finds its way to the far off market where beans and potatoes are sold.

Transportation arrangements for products from the region

Air transport is used to transport bulked products to markets in Kinshasa, Kindu and Lubumbashi. The major airline companies transporting food in the DRC include Central Africa Airways Compagnie d'Aviation Africaine (CAA), Hewa Bora Airlines, Goma Air, Ban Air, and Service Air.

Table 43 below shows the average quantity each airline lifts to various destinations and the average trips each makes per week. In total, airlines make about ten trips and handle between 185-235 tons of food per week to various destinations in DRC.

On the other hand, transport by sea (boats) is used to take products to Bukavu and parts of Rwanda. Road transport is used to transport goods to Uganda and other parts of Rwanda.

Table 43: Major Airlines transporting agricultural products in the DRC

Airline	flights per week	Average quantity per Freight	Total average tons
Air services	3	20- 25 Tonnes	60-75
Ban air	2	15-21 Tons	30-42
Hewa Bora	1	20- 23 Tons	20-23
CAA	3	20- 25 Tons	60-75
Goma air	1	15 – 20 Tons	15-20
total	10		185-230 tons

Source: bulk traders diagnostic survey

Food transport costs by air

Table 44 below shows actual destinations and the cost of ferrying the products to each one of them. Each airline has its own costs per kilogram of food to various destinations. 1 US\$ is the highest price so far for a kilogram of food to Kinshasa which is the furthest market.

Table 44: Destinations and costs charged by airlines

Airline	Destination	Number of trips per week	Price /Kg in USD	Quantity per trip
CAA	Kinshasa	3	1	20 000
	Kindu	3	0.65	20 000
	Kisangani	3	0.80	20 000
HEWA BORA	Kinshasa	2	0.8	10 000
	Kisangani	2	0.85	10 000
	Lubumbashi	2	1	10 000
GOMA AIR	Kinshasa	4	1	15 000
	Kindu	4	1	15 000
	Kisangani	4	1	15 000
	Lubumbashi	4	1	15 000
BAN AIR	Kinshasa	3	1	18 000
	Kindu	2	0.75	15 000
	Kisangani	2	0.80	11 000
	Lubumbashi	1	0.90	8 000
SERVICE AIR	Kinshasa	3	1.20	15 000
	Kindu	2	0.70	10 000
	Kisangani	3	0.85	10 000
	Lubumbashi	1	0.90	8 000

Source: bulk traders diagnostic survey

Kinshasa markets and prices

As table 45 below indicates, the major markets in Kinshasa are Kinshasa-Zigida, Kinshasa-Liberte, and Kinshasa –Central. These markets differ slightly in prices the Goma products that are distinctively labeled by the retailers.

Table 45: Prices for Goma products (Congolese Francs)

Markets	Enterprise	Price	Unit
Kinshasa – zigida	Beans	750	Cup
	Irish potatoes	1500	Kg
	Onions	1200	Basin
Kinshasa - Liberté	Beans	800	Cup
	Onions	1300	Basin
Kinshasa - Central	Beans	800	Cup
Matadi - Central	Beans	280	Small glass

Source: Bulk traders' diagnostic survey

Products from Goma are labeled to distinguish them from products from China, Tanzania and other places. They also fetch a higher price than the competitors especially from China and Tanzania. Table 46 and 47 below show price comparisons between Goma products in different Kinshasa markets, and those from elsewhere.

Table 46 : Prices for products from China (Congolesse Francs)

Marché	Enterprise	Price	Goma products	Unit
Kinshasa – Zigida	Beans	600	750	Cup
	onion	1000	1200	Small basin
Kinshasa - Liberté	Beans	700		Cup
	onions	1200	1300	Small basin
Kinshasa - Central	Beans	700		Cup
Matadi - Central	Beans	250		Small glass

Source : Bulk traders' diagnostic Survey

Table 47 : Prices of products from Tanzania (Congolesse Francs)

Marché	Enterprise	Price	Goma products	Unit
Kinshasa – zigida	Beans	650	750	Cup
Kinshasa - Liberté	Beans	700	800	Cup
Kinshasa - Central	Beans	700	800	Cup
Matadi - Central	Beans	200	280	Small glass

Source: Bulk traders' diagnostic survey

Challenges facing Bulk Traders

Since most traders have to bulk before exporting, it is important that the products remain in good condition. However, most traders complained that products rot by the time they get them to their destinations. The bean traders complained of beans changing color from green/yellow to brown as the bean ages. The color change forces the traders to reduce the prices of the products. Customers/consumers do not like discolored products. Onions and Irish potatoes also rot by the time they get to their destinations. This forces the trader

to buy as cheaply as possible because of anticipated losses. These are issues of harvesting too early and other post harvest management challenges facing our farmers and traders alike.

NB: None of the products was processed in any form as it moved across the chain from the farmer to the consumer.

8.0 Summary and Discussion

The above is a draft of the findings from the trader survey in LKPLS. It is a highlight of the kind of players the site have who are engaged in re-distributing agricultural products from the farmers to the consumers. It points to interesting market scenarios we have in the region.

1. Domestic market for local foods exists. However, the market is disorganized as indicated by first several players in the value chain (wholesalers, retailers, transporters, collectors, brokers/agents) and the low participation of cooperatives, associations and groups in all the three countries. Therefore, it may be important to organize the traders also into buying cooperatives if IAR4D is to work and put money in farmers' pockets.
2. Women play a very crucial role in food trade in the site in general. But they are critical in DRC. They are the major food distributors in the country. Thus, if markets are to be organized, will women still have their lion's share of the trade?
3. Bulk traders whom we met said they never have enough. They would bulk more especially if post harvest challenges are addressed.
4. Cassava, a staple food in the region is in very low supply due to mosaic and other diseases and pests. Its production needs to be improved fast with more resistant tubers and better management of the cassava ecosystems.
5. Radios and mobile phones are in wide use among traders. It may be advisable to bring on board as partners the local radio stations, and mobile phone dealers, as part of the project's communication strategies.

6. There is need to encourage traders to form associations or cooperatives for bulk purchasing of commodities from farmers who should also be in marketing associations or cooperatives. This may be one of the ways of organizing this disorganized food market in the region.

Discussion

Given the above market scenario in LKPLS, what can SSA-CP do to proof that IAR4D works from a market perspective? According to Mahajan, Vijay (2009), “African markets are not plug and play....There is always a missing piece in the puzzle” (pg 102). This is true in LKPLS, there are several pieces missing in the market puzzle. These include, credit to both farmers and traders, labeling and branding, promotion and advertising, value addition and packaging, post harvest management, security and infrastructure especially in DRC. Using IAR4D approach, as main facilitators, we must creatively think of organizing food markets in the region. A few questions may help in guiding us in how to address the above challenges.

- ✓ Why is the primary producer (small-scale farmer) not getting maximum benefits for his/her labor?
- ✓ How should the disorganized markets be organized to get to a win-win situation for all the players in the value chain?
- ✓ What can be done to transform the raw foods into some form of processed goods, branded, easier to move and that can fetch better prices?
- ✓ Can we transform our products to take advantage of our infrastructure conditions?
- ✓ What skills do the various players in the chain need to proof the IAR4D concept?
- ✓ Who are the key players to be involved in organizing markets?
- ✓ Which is our consumer market and what does it need, in what form, and what quantities? NB: Like the rest of SSA, the lake region has a young population and it is growing younger with 41% of the population in the region being under 15 years of age (Mahajan, 2009). According to the

population reference bureau quoted by Mahajan, by 2050-that is 40 years from now, DRC and Uganda will join Ethiopia, Nigeria and Egypt as the most populous nations in the world. And most of them will be young and well connected in the current communication technologies. This is our consumer market. How do we package our agricultural products for them?

References

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Appendix 2

A list of products that were included in the SSA CP

Maize

Beans

Milk/dairy products

Irish potatoes

Some fruits: Tomato fruit?

Vegetables

Groundnuts

Soya

Vanilla

Garlic

Ginger

Chili

Tomatoes

Onions

Cabbage

Bananas/apple banana

Sorghum

Milk

Passion fruits

Honey

Fish farming

Wheat

Peas

Tea

Macadamia

Apple

Artemisia

Cinchona

Mustard