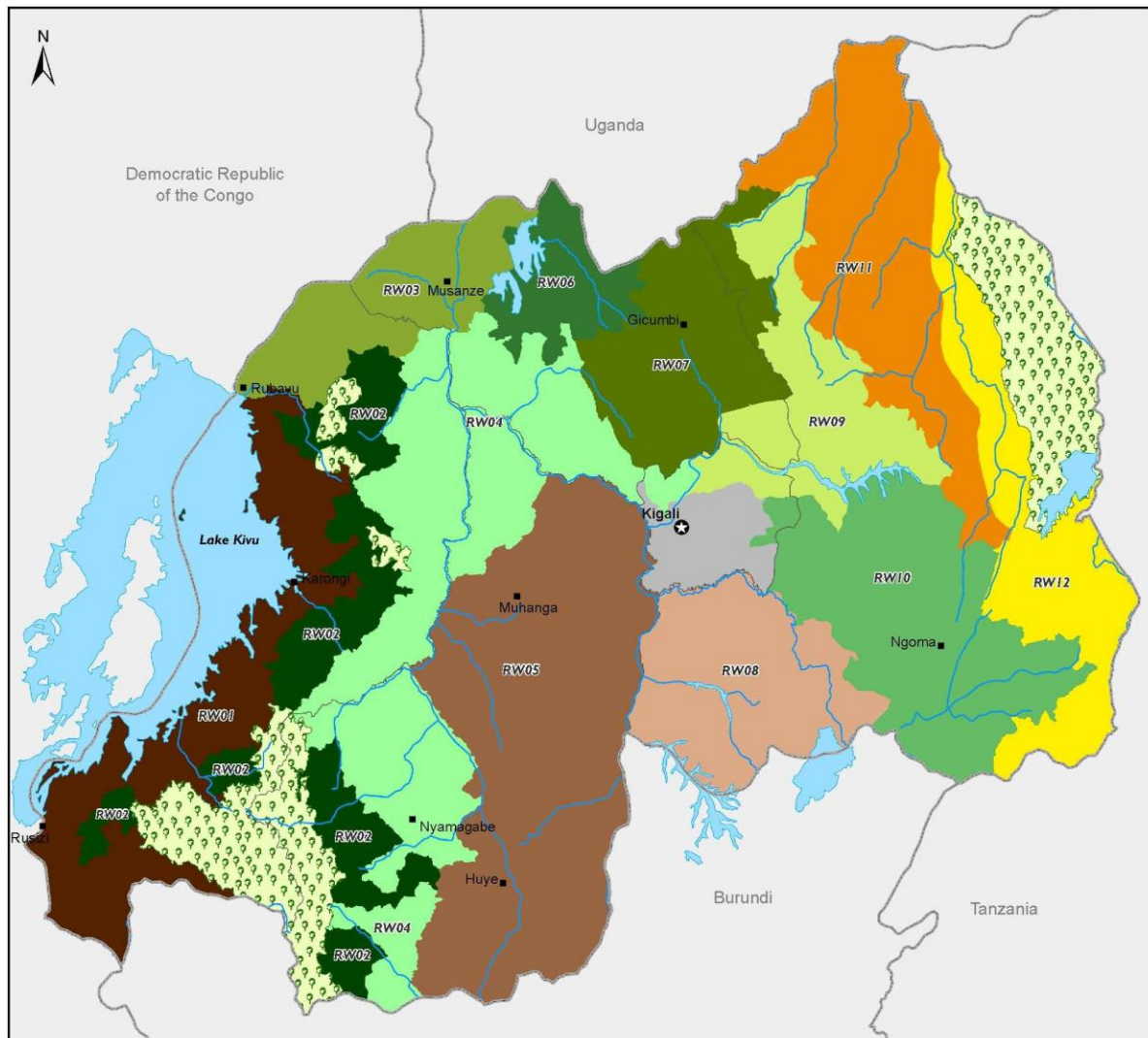




USAID
FROM THE AMERICAN PEOPLE



LIVELIHOODS ZONING “PLUS” ACTIVITY IN RWANDA

A SPECIAL REPORT BY THE FAMINE EARLY WARNING SYSTEMS NETWORK (FEWS NET)

August 2011

LIVELIHOODS ZONING “PLUS” ACTIVITY IN RWANDA

A SPECIAL REPORT BY THE FAMINE EARLY WARNING SYSTEMS NETWORK (FEWS
NET)

August 2011

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Contents

| | |
|--|----|
| Introduction | 4 |
| Methodology | 5 |
| National Livelihood Zone Map | 6 |
| Livelihoods Key Points | 7 |
| Rural Livelihood Zones Descriptions | 9 |
| Livelihood Zone 1: Lake Kivu Coffee Zone | 9 |
| Livelihood Zone 2: West Congo-Nile Crest Tea Zone | 11 |
| Livelihood Zone 3: Northwest Volcanic Irish Potato Zone | 14 |
| Livelihood Zone 4: East Congo-Nile Highland Farming Zone | 17 |
| Livelihood Zone 5: Central Plateau Cassava and Coffee Zone | 20 |
| Livelihood Zone 6: Northern Highlands Beans and Wheat Zone | 22 |
| Livelihood Zone 7: Central-Northern Highlands Irish potato, Beans and Vegetable Zone | 24 |
| Livelihood Zone 8: Bugesera Cassava Zone | 26 |
| Livelihood Zone 9: Eastern Plateau Mixed Agriculture Zone | 29 |
| Livelihood Zone 10: Southeastern Plateau Banana Zone | 31 |
| Livelihood Zone 11: Eastern Agro-Pastoral Zone | 33 |
| Livelihood Zone 12: Eastern Semi-Arid Agro-Pastoral Zone | 36 |
| Annex One: Sector by Livelihood Zone | 38 |
| Annex Two: Workshop Participants | 48 |

Acknowledgments

This work was done by Famine Early Warning Systems Network in collaboration with its partners Government of Rwanda's Ministry of Agriculture, Ministry of Disaster Management, Ministry of Local Government, National Institute of Statistics, and National University of Rwanda, Catholic Relief Services, Rwandan Red Cross, Care and World Vision. The descriptions and calendars were produced as a knowledge base for FEWS NET's activities in the country.

This report was prepared by Stephen Browne with Nora Lecumberri of FEG Consulting. The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Introduction

The Rwandan Livelihood Zoning exercise was a revision of the national livelihoods zoning originally created by FEWS NET and partners in 2003. The intention was to see if there were significant changes and to identify: a) whether some zones needed to be split, or new ones added; b) whether the boundaries of retained zones needed to be modified; and c) to gain an update on zone descriptions and seasonal calendars. Additionally, information was collected on the timing of access to food and income, resulting in the development of consumption and income calendars. Livelihood zoning offers a form of economic geography adapted to food security analysis. Administrative divisions may sometimes reflect natural features, with rivers or mountains as boundaries, but they have not usually been developed to reflect local economies. Livelihood zones therefore cross administrative boundaries. At the same time, for early warning as for most other purposes populations also need to be identified in relation to administrative units: therefore administrative boundaries are always clearly laid over the zones in any livelihoods map.

Rwanda is ecologically diverse for its size with highland mountain forests to savannah grasslands and low altitude marshes. Rwanda's geography in the western part of the country is characterized by highland mountain landscapes and gentle slopes leading toward the lowland areas in the east. Most of the country benefits from two agriculture seasons that are supported by two rainy seasons. In the lowland marshland areas some households also have a third season. Rainfall varies across Rwanda ranging from 1200mm to 2000mm in the western half of the country to 800mm to 1200mm in the east.

Rwanda is one of the most densely populated countries in the Great Lakes region estimated at 10.5 million residents and an average population density of 368 people per square kilometer.¹ As the population of the already densely populated fertile rural areas increases, access to Rwanda's limited resources, particularly land, will become more competitive. Currently the majority of households cultivate less than 0.5 hectares of land, and with a growth rate of 2.6% (for 2007), land owned and cultivated is expected to decrease further.

Agricultural production serves as the foundation for rural livelihoods across Rwanda. Nearly all households hand-till their land and rely on the bimodal rains to support agricultural production. In general, poorer households have small plots and grow mostly food crops. Though most of what they produce is for household consumption, they may sell small portions of their harvests to purchase essential items. Wealthier households typically have larger plots of land; they hire laborers and produce for both household production and for sale. Some of the wealthier households purchase crops when prices are lowest, usually after the harvest, and sell or trade when prices peak.

Though most of Rwanda's rural areas are relatively food self-sufficient, poorer households cannot meet all of their annual food needs on crop production from their own fields alone. One of the main limiting factors for this is access to land and the ability to cultivate it, which is the main difference between poorer households and wealthier households. In addition to own-production, poorer households depend on their labor capacity and small ruminant sales to purchase food from the market. In many areas, poorer households also will sell labor in exchange for a food.

¹ NISR, July 2007

Methodology

The revision of the Rwanda national livelihoods zones map was carried out in a four-day workshop in Kigali between May 23rd and 26th, 2011 with participants from government and agency partners.

This Livelihoods Zoning “Plus” product has been carried out using a rapid livelihoods assessment approach that aims to identify and describe trends and patterns in livelihoods that can be used as a starting point for early warning analysis. It is based on the Household Economy Analysis (HEA) methodology that FEWS NET uses as a foundation for its livelihoods activities.

The methodology used to develop this Livelihoods Zoning ‘Plus’ product consisted of two steps:

Step One: Representatives from each region come together in a national-level workshop to delineate the national map into livelihood zones, which are areas with similar livelihoods activities, agro-ecology, and access to markets.

Step Two: Descriptions of each livelihood zone are drafted at the national workshop, identifying the key characteristics of livelihoods found in each zone, as well as the Seasonal Calendar.

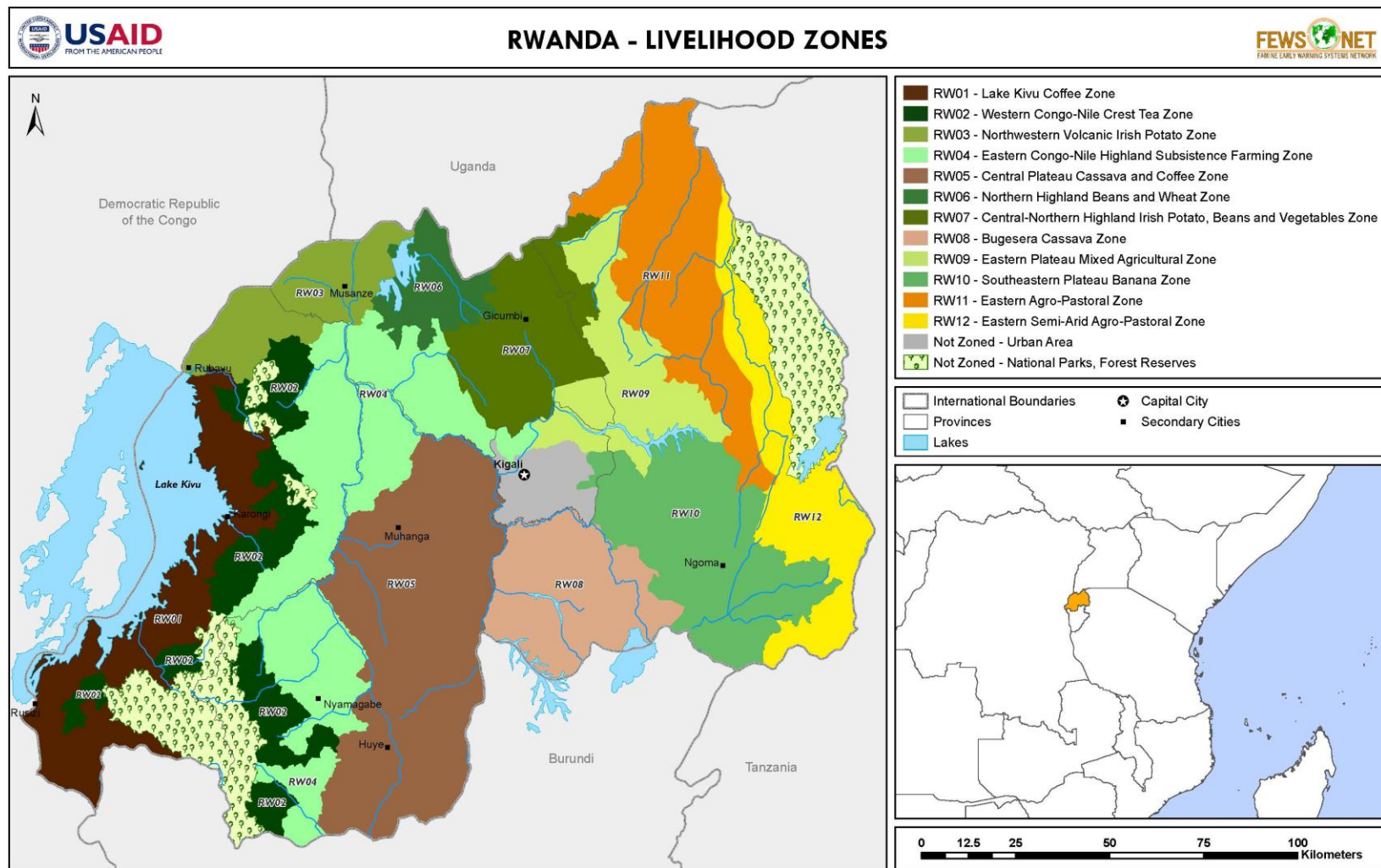
For more details on the Household Economy Analysis and principles, please visit the livelihoods section on www.fews.net or download the paper ‘[Application of the Livelihood Zone Maps and Profiles for Food Security Analysis and Early Warning](#)’².

This product is designed to be used as a reference tool and knowledge base for those working in food security, and livelihoods. It does not give recommendations for action, but rather provides the information which practitioners may use to undertake context analysis and inform their own programming decisions.

²

http://v4.fews.net/docs/Publications/Guidance_Application%20of%20Livelihood%20Zone%20Maps%20and%20Profiles_final_en.pdf

National Livelihood Zone Map



Livelihoods Key Points

- Most livelihoods in Rwanda were considered relatively food self-sufficient.
- Bugesera Cassava Zone is the only deficit food production zone in the country, which happens only in bad years. This zone is drought prone.
- Eastern Semi-Arid, Eastern Agro-Pastoral and parts of the East Congo-Nile Highland Farming Zone are at risk of acute food insecurity during bad production years.
- The three eastern livelihood zones (Bugesera Cassava, Eastern Agro-Pastoral and Eastern Semi-Arid Agro-Pastoral zones) are drought-prone areas.
- Poor households living in the Eastern Agro-Pastoral and Eastern Semi-Arid Agro-Pastoral, and Eastern Plateau Agriculture Zones purchase significant portions of their annual food needs.

National Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|------------------------------------|-----|------------|-----|-----------|----------|-----|------|---------|--------------|-----|-----------|-----|
| Seasons | | | | | | | | | | | | |
| Rainy seasons | | B | | | | | | | A | | | |
| Dry season | | | | | | | | | | | | |
| Lean season | | | | | | | | | More intense | | | |
| Key livelihood activities | | | | | | | | | | | | |
| Season A | h | | | | | | | | | | | h |
| Season B | | | | | h | | | | | | | |
| Season C | | | | | | h | | | | | | |
| Livestock | | | | | | | | OUT | IN | | | |
| Other livelihood activities | | | | | | | | | | | | |
| Local agricultural | | | | | | | | | | | | |
| Migrant labor | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Shocks and Hazards | | | | | | | | | | | | |
| Prolonged dry spell | | | | | | | | | | | | |
| Floods | | | | Highlands | | | | | | | Highlands | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

- Most livelihood zones depend on both rainy seasons A and B to support two harvest periods. Season A crops are harvested from December to February whereas Season B crops are harvested in May and June. In the low marshland areas some households will have a third harvest of rice, vegetables and some green maize, occurring from June to August (Season C).

- Generally there are two lean seasons in rural Rwanda. The first is the most intense and occurs from September to November. The second, less-severe lean season starts in April and ends around the middle of May or upon Season B's harvest.
- Most of the agriculture labor is paid in cash or in-kind and corresponds with the harvesting periods.
- The main hazards that affect production are drought and floods. Any deficits incurred from these hazards not only affect the production of poor households but also the demand for labor. Poor households are more at risk of food insecurity during droughts since they depend mainly on their own production and in-kind payments and market purchases mainly via agricultural labor to meet most of their annual food needs.
- To facilitate early warning, decision makers should monitor the zones at risk of prolonged dry spells in March and September. Insufficient rains during these months could increase the likelihood of poor harvests in May and December. Additionally, excessive rains in April/May and November/December result in landslides (in highland areas), water-logging of crops, and stunting of normal crop growth.

Rural Livelihood Zones Descriptions

| Livelihood Zone 1: Lake Kivu Coffee Zone | | |
|--|--|---|
| Monitoring Priority Low monitoring priority – this zone is relatively food self-sufficient, rarely receiving external assistance | | <p>The Lake Kivu Coffee Zone is relatively food self-sufficient. In bad years some households are at risk of food insecurity. Crop pests, frost and hail, and drops in international coffee prices are the most common drivers of food insecurity in the zone.</p> <p>This densely populated zone includes all sectors bordering the length of Lake Kivu continuing east for several kilometers. The zone’s landscape is hilly with relatively fertile soils and receives between 1300mm and 1700mm of rainfall annually. The two rainy seasons support two growing seasons, producing coffee, bananas, maize, beans and cassava. Though some households living along the lake engage in fishing, the majority of the zone’s population relies on agriculture.</p> <p>Land is one of the main constraints to agricultural production. Poorer households cultivate relatively small plots of land limiting the amount of crops they are capable of harvesting for both cash and household consumption. Though the zone is characterized as a relatively food self-sufficient zone the poor still purchase cassava for six months of the year and soya for four months.</p> <p>Market access is good as a major highway runs through the length of the zone connecting Rubavu district with Rusizi district. The zone’s proximity to Lake Kivu fosters strong trade ties with households living in the Democratic Republic of Congo (DRC). Arabica coffee is the zone’s primary cash crop and is sold by nearly all households in the zone. From the fields coffee is transported to washing stations then is taken to coffee factories for processing and international sale. Bananas are also grown alongside of coffee and are sold by all households at local markets. From the local markets bananas are sent to larger markets in Huye, Gisenyi, Musanze and to the DRC. Mutongo market, located in the southern part of the zone is its largest livestock market. Better-off households will sell cattle, goats and pigs while the poor sell goats, poultry and rabbits.</p> <p>Most of the labor demand is met by the poorer sector of the population. Few household members migrate outside the zone to look for work. Some will travel to towns within the zone from June to August to work in construction.</p> <p>Households living in Nzahaha and Bugarama sectors do not share the same livelihood patterns as the majority of households living in the zone. These households have the same characteristics as those</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Rainfed agriculture Very small-scale animal rearing | <u>Better-off</u> Rainfed agriculture Small-scale animal rearing Trade | |
| Staple Foods and Sources | | |
| <u>Poor</u> Cassava Kidney beans Banana Vegetables Soy beans | <u>Better-off</u> Irish potatoes Rice Meat/fish Kidney beans | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales (coffee, banana, beans) Livestock sales (goats, poultry, rabbits) | <u>Better-off</u> Trade Livestock sales (Cattle, pigs, goats) Crop sales (coffee, bananas, maize) | |
| Most Important Productive Assets | | |
| <u>Poor</u> Farm land Small livestock Labor for hire | <u>Better-off</u> Farm land Livestock | |
| Main Markets Mutongo Katembe Kibilizi | | |
| Shocks and Hazards Insufficient rainfall | | |

| | |
|---|--|
| Crop pest and rodents Unfavorable crop selling price Animal/poultry disease Hail/frost | living in Imbo Plain Livelihood Zone of Burundi. |
|---|--|

Livelihood Zone 1: Lake Kivu Coffee Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Cassava | mp | ik | mp | | op | | | lk | | mp | | |
| Vegetables | op | | | | | | | | | | | |
| Beans | ik | | | | op | | ik | | | | op | |
| Banana | op | | | | | | | | | | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Sale of crops | | | + | + | + | + | | | | | | |
| Sale of livestock | + | | | | | + | + | + | | | | + |
| Labor | | + | + | + | + | + | + | + | + | | | |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple food | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|-----------------|-----|------|---------|-----|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Coffee | | | h | | | t | | | lp | | pl | |
| Banana | h | | | | | | | | | | | |
| Bean 1 | lp | pl | w | | | h | | | | | | |
| Bean 2 | | | | | | | | lp | pl | w | | h |
| Cassava | | | | w | | h | | lp | pl | | w | |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| On-farm labor | | | | | | | | | | | | |
| Off-farm labor | | | | | | | | | | | | |
| Trade | + | | + | + | + | + | | | | | | + |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Crop pests | | | | | | | | | | | | |
| Human diseases | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | t/w | tending/weeding | | h | harvest | | |

+ indicates peak period

| Livelihood Zone 2: West Congo-Nile Crest Tea Zone | | |
|---|---|--|
| Monitoring Priority Medium due to very small land holdings for a about a quarter of the population | | <p>This non-contiguous zone is situated in the mountainous areas between the Kivu Lake Coffee and East Congo-Nile Highland Farming Zone. This zone is relatively food secure endowed with moderately fertile soils and annual precipitation ranging between 1700mm and 2000mm. The zone’s residents are heavily dependent on tea and the labor demands associated with its production. Any threat to tea production or marketing increases their risk of food insecurity.</p> <p>Land ownership and livestock holdings are two main determinants of wealth in the zone. Wealthier households typically cultivate more land and are the main producers of tea. Their economic position and access to resources allows them to own large animals such as cattle, in addition to goats and pigs. In addition to tea production, households also cultivate Irish potatoes, maize and beans. Poorer households reserve most of their land to cultivate food crops such as maize, beans, Irish and sweet potatoes and vegetables. They will sell surplus Irish potatoes, maize and beans when available. Unlike their wealthier neighbors, poor households lack the land and/or the ability to maintain cattle and pigs. Goats, poultry and rabbits are kept by the poor and serve as an important source of food and income.</p> <p>The mountainous terrain, poor road networks and remoteness limit market access in the zone. Irish potatoes and maize are sold locally, then are transported by wealthier households to the intermediary markets of Mukamira or Kabaya, then off to larger markets inside and outside the zone. Tea is taken from the fields to collection centers, then to any of the tea factories located in the zone (Nyabihu, Rubaya, Pfunda, Gisovu, Gisakuva or Shagasha). Livestock is sold locally to traders who then transport them to the larger livestock in Rugabano for resale or to intermediary markets. Most livestock sold stays within the region however goats and pigs are also exported to the DRC.</p> <p>As own stocks run out, the poor will purchase Irish potatoes and beans from the market. The Irish potatoes are sourced locally while beans are imported from the DRC via Rusizi,</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Cash crop production Small livestock rearing | <u>Better-off</u> Cash crop production Livestock rearing Trade | |
| Staple Foods and Sources | | |
| <u>Poor</u> Maize Vegetables Beans Irish potato Sweet potato | <u>Better-off</u> Irish potato Rice Meat Beans | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales (maize, Irish potato, beans) Small stock sales (goats, rabbits and poultry) | <u>Better-off</u> Crop sales (tea, maize, Irish potato) Livestock sales (Cattle, pigs and goats) Trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Smallstock Small garden | <u>Better-off</u> Land ownership Livestock | |
| Main Markets Muka mira – intermediary Kabaya – intermediary Rugabano – livestock | | |
| Shocks and Hazards Hail | | |

| | |
|--|---|
| <p>Crop disease</p> <p>Prolonged dry spell</p> | <p>Nyamasheke, Rubavu, Ngororero or Rutsiro.</p> <p>Tea plantations and factories serve as a labor magnet. The majority of poor households work on wealthier households' land, picking tea. Few poor household members travel to towns outside the zone from June to August to work in construction.</p> <p>As a response to the effects of a bad year, households may implement one or more of the following coping strategies to compensate for food and income losses. The poor will substitute cheaper foods for normal, preferred foods and forego some non-food purchases. They will also increase labor sales or migrate outside the zone to look for work. Though child labor is illegal in Rwanda, some households will pull children out of school to look for work, usually as housekeeping support.</p> |
|--|---|

Livelihood Zone 2: West Congo-Nile Crest Tea Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Maize | op | | | | ik | op | | | ik | | | |
| Vegetables | op | | | | | | | | | | | |
| Beans | op | mp | | op | | | ik | | | mp | op | |
| Irish potatoes | op | | | mp | | | op | | | | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Sale of crops | + | + | + | | | | | | + | + | + | + |
| Labor | + | + | + | + | + | | | | | + | + | + |
| Sale of livestock | + | + | | | | + | + | + | + | | | + |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple food | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|------|------------|-----|----------|-----|---------|------|-----|---------------|-----|-----|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Tea | h | | | | | | | | | | | |
| Irish potatoes 1 | | | lp | pl | | we | h | | | | | |
| Irish potatoes 2 | | | | | | | | lp | pl | | we | h |
| Maize 1 | h | | | | | | | lp | pl | we | | gh |
| Maize 2 | lp | pl | we | | | gh | h | | | | | |
| Beans | pl/h | pl | we | | | | | lp | pl | we | gh | h |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Charcoal/wood sales | | | | | | | | | | | | |
| On-farm labor (not tea) | | | | | | | | | | | | |
| Off-farm labor | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Crop pests | | | | | | | | | | | | |
| Hail | | | | | | | | | | | | |
| Legend | lp | land prep. | pl | planting | we | weeding | | g/h | green/harvest | | | |
| + indicates peak period | | | | | | | | | | | | |

Livelihood Zone 3: Northwest Volcanic Irish Potato Zone

| | | |
|---|--|---|
| Monitoring Priority Low – this is a surplus food-production zone and rarely experiences acute food insecure | | <p>Situated along Rwanda’s northwest border with the Democratic Republic of Congo and Uganda, the Northwest Volcanic Irish Potato Zone is an extension of Uganda’s Southwest Potato, Sorghum and Vegetable Zone. Though years of agricultural production has made the once highly fertile volcanic soils less productive, this zone is rarely at risk of acute food insecurity, producing surplus food in normal years.</p> <p>The zone’s cool climate and forested landscape benefits from bimodal rains receiving between 1500 and 1800 mm of precipitation annually. Rainfed agricultural production serves as the basis for rural household livelihoods though some households living along lakes Ruhondo and Burera will also engage in fishing. Irish potatoes, maize and beans are harvested twice annually while the main cash crop pyrethrum³ is harvested throughout the year.</p> <p>Land tenure defines wealth in the zone as it is the principal productive asset. The population of the zone is dense, and as a result most households are constrained to cultivating relatively small plots. The poorer sector of the population cultivates less than 0.5 hectares of land which limits the amounts of crops it is capable of harvesting, including the availability of crop residues which is a limiting factor for keeping livestock. Most poor households in this zone reserve their harvest for consumption and do not sell. Labor sales, both on and off-farm, are the only means for the poor to earn cash. Though some households will work on the farms of wealthier households, most source construction labor opportunities in Musange or Gisenyi towns. A few poor household members will travel to DRC, Uganda and/or Kigali to work.</p> <p>Despite the mountainous terrain, market access in the zone is good. Reliable road networks and the zone’s proximity to urban centers allow for a steady stream of commodities. The zone is well-known for Irish potato production, exporting surpluses throughout the country and to Burundi. Pyrethrum is sold to cooperatives, then is sold directly to the Sopyrwa Factory for processing. Musanze and Mukamira towns serve</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Agricultural production Agricultural labor Off-farm labor | <u>Better-off</u> Agricultural production Trade Livestock rearing | |
| Staple Foods and Sources | | |
| <u>Poor</u> Irish potato Maize Beans | <u>Better-off</u> Irish potato Beans Maize Peas | |
| Main income sources | | |
| <u>Poor</u> Labor sales | <u>Better-off</u> Crop sales – Irish potato, pyrethrum, maize Trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Household labor Agricultural tools | <u>Better-off</u> Land ownership Livestock sales Agricultural tools | |
| Main Markets Musanze town – retail and intermediate Mukamira – retail and intermediate Bigogwe – livestock Bugeshi – livestock | | |
| Shocks and Hazards Excessive rain Erratic rain Food price spikes | | |

³Pyrethrum is a natural insecticide

| | |
|--|--|
| | <p>as the zone's main intermediary markets. Crops are sold locally to traders, brought to intermediary markets, then transported to local destination markets within Rwanda. Bigogwe and Bugeshi are the two main livestock markets in the zone and specialize in cattle sales. Livestock-owning households sell goats and cattle to traders locally. The traders then take the animals to the DRC via Gisenyi or to meet Kigali's urban market.</p> |
|--|--|

Livelihood Zone 3: Northwest Volcanic Irish Potato Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Irish potatoes | op | | | | | | mp | | ik | | | op |
| Maize | ik | op | mp | | | | ik | op | mp | | | |
| Beans | op | | | | | op | | | | | op | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| On-farm work | + | + | + | + | + | | | + | + | + | + | + |
| Off-farm work | | | | | | | | | | | | |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple food | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|------|------------|-----|-----|----------|-----|------|---------|------|------|---------|------|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Pyrethrum (cash crop) | pl/h | pl/h | h | | | | | | | pl/h | pl/h | pl/h |
| Irish potatoes 1 | lp | | pl | we | h | | | | | | | |
| Irish potatoes 2 | h | | | | | | | lp | pl | we | h | |
| Maize 1 | | lp | pl | | we | | h | | | | | |
| Maize 2 | h | | | | | | | lp | pl | | we | |
| Beans 1 | | | lp | pl | we | h | | | | | | |
| Beans 2 | | | | | | | | lp | pl | we | h | |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Cattle sales | | | | | | | | | | | | |
| Labor migration | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Land slides | | | | | | | | | | | | |
| Irregular rain | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | Planting | | we | weeding | | h | harvest | |
| + indicates peak period | | | | | | | | | | | | |

Livelihood Zone 4: East Congo-Nile Highland Farming Zone

| | | |
|---|--|--|
| Monitoring Priority Medium –Households may only be at risk due to prolonged dry spells or severe flooding. | | <p>The East Congo-Nile Highland Farming Zone covers the high-altitude mountainous areas of Rwanda’s Southern Province. The 1200 to 1600mm of rainfall the zone receives annually sustains two agriculture campaigns, despite acidic soils. Most households exist at a subsistence.</p> <p>Households in this zone are dependent on rain-fed crop production as their main source of food and income. High population density and limited land availability confine households to own and cultivate small plots of land. As a result, poor households only cultivate food crops and opt to sell small quantities after the January and June harvests in order to purchase essential food and non-food items. Wealthier households typically have larger plots of land, allowing them to produce coffee and Irish potatoes, in addition to other food crops.</p> <p>Livestock ownership is very important for livelihoods in the zone and is a determinant of wealth. Like other areas, land ownership dictates the quantity and type of livestock households are able to keep. Wealthier households have the resources (e.g. pastures and crop residues) to feed larger animals such as cattle, as well as goats. Poorer households can only keep smaller animals such as goats, pigs and rabbits since they are unable to make the initial investment in larger animals and lack the resources to maintain them,</p> <p>Like the neighboring West Congo-Nile Crest Tea Zone, market access here is bad. Poor road conditions and the steep terrain obstruct access during the rainy seasons when instances of landslides occur more frequently. Transportation costs and poor market access may contribute to the poor selling their commodities in local markets rather than at Nyamagabe, Gakenke or Remera town markets.</p> <p>Better-off households produce and sell coffee, which is taken from the farmgate to washing stations at Maraba or Ruli then to destination markets within the country and internationally. In addition to coffee, they will also sell Irish potatoes, maize and wheat. These food crops are sold to traders at the farmgate and taken to external markets throughout Rwanda.</p> <p>The better-off also sell and trade livestock. Cattle and goats</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Agricultural production Small livestock rearing | <u>Better-off</u> Agricultural production Livestock rearing Trading | |
| Staple Foods and Sources | | |
| <u>Poor</u> Beans Sweet potato Maize Cassava | <u>Better-off</u> Beans Irish potato Rice Banana | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales Small livestock sales | <u>Better-off</u> Crop sales Livestock sales Trading - livestock/non-food items | |
| Most Important Productive Assets | | |
| <u>Poor</u> Ownership of land Small livestock Household labor | <u>Better-off</u> Ownership of land Livestock - Cattle | |
| Main Markets Nyamagabe – intermediate and retail Gakenke – intermediate and retail Remera – intermediate and retail | | |
| Shocks and Hazards Excessive rain Prolonged dry spell Soil erosion | | |

| | |
|--|--|
| | <p>are sold at Ruhango and Kaduha markets for local consumption. In addition to selling goats, the better-off will trade these animals for soap, oil, salt and other essentials to sell in local markets.</p> <p>The poor cannot meet all their cash needs from crop sales. Therefore, they must engage in local farm and off-farm labor to supplement their annual income. Most of the labor is sourced locally on the farms of wealthier households. However, some will find construction jobs in towns within the zone or in the cobalt mines outside the zone.</p> |
|--|--|

Livelihood Zone 4 : East Congo-Nile Highland Subsistence Farming Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Beans | op | | | mp | op | | | mp | | | | op |
| Sweet potatoes | op | | | | | | | | | | | |
| Maize | | op | | | mp | op | | mp | | | | |
| Cassava | | | | | | | | | mp | | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Crop sales | + | + | | | | + | + | | | | | |
| Off-farm work | + | + | | | | + | + | + | | | + | + |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple foods | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|------|---------|-------|-----|---------------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Sweet potatoes | pl | | | we | | h | | lp | pl | | lp | |
| Irish potatoes 1 | | lp/pl | we | | h | | | | | | | |
| Irish potatoes 2 | h | | | | | | | lp | lp/pl | we | | h |
| Maize | h | | | | | | | lp | pl | | gh | we |
| Wheat | | pl | | | | | h | | | | | |
| Beans 1 | | lp/pl | we | | h | | | | | | | |
| Beans 2 | h | | | | | | | lp | pl | we | | h |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Charcoal production | | | | | | | | | | | | |
| Mining (outside zone) | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Landslides/ heavy rain | | | | | | | | | | | | |
| Dry spells | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | g/h | green/harvest | |

+ indicates peak period

| Livelihood Zone 5: Central Plateau Cassava and Coffee Zone | | |
|---|---|---|
| Monitoring Priority Medium –this zone receives food and/or cash assistance once every five years | | <p>Situated to the west of the East Congo-Nile Highland Subsistence Farming Zone, this large, densely-populated zone is characterized by sandy, moderately fertile soils, rolling hills, grassland and bush scrubs. The zone receives between 800mm and 1200mm of rainfall spanning over two main rainy seasons. Residents of this relatively food self-sufficient zone depend primarily on rain-fed agriculture for both food and cash. The zone rarely is at risk of acute food insecurity; however, once every five years, households may receive either food or cash assistance.</p> <p>Land ownership and livestock were identified as the most important productive assets for all households in this zone. Increased population pressure has constrained access to land resulting in the cultivation of small plots. This is especially significant for the poorer sector of the population since they are heavily dependent on crop production for both cash and food. Unlike other areas, most poor households do not supplement their income with labor. Instead, they rely on the sale of cassava, coffee and beans, as well as small livestock sales and petty trade.</p> <p>Zone hazards have the potential of disrupting normal crop production, affecting household food and income access. The poor in this zone are more susceptible to the effects of hazards and incur food and cash deficits as a result, requiring assistance (either in food or cash) one year in five.</p> <p>A main transportation artery transects this large zone connecting the larger zone markets of Gitarama, Ruhango, Kinazi, Huye, Butari, and Gisagara with the larger urban market of Kigali. The main food crops sold - cassava and beans - are sold locally by producers and kept within the area. Coffee, the main cash crop, is taken to washing stations and sold to government-operated Rwandex Coffee export company.</p> <p>Most of the livestock sold in the zone is done at the local level and traded within the zone. Cattle, sold mostly by wealthier households, are taken to Kigali to meet the urban demand for beef. Smallstock, including goats and pigs are sold locally by all households to varying degrees.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Crop production Small livestock rearing Petty trading | <u>Better-off</u> Crop production Livestock rearing | |
| Staple Foods and Sources | | |
| <u>Poor</u> Sweet potato Cassava Beans Groundnuts | <u>Better-off</u> Irish potato Rice Beans Banana | |
| Main income sources | | |
| <u>Poor</u> Crop sales Small livestock sales Agricultural laboring Petty trade | <u>Better-off</u> Crop sales Livestock sales | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Livestock Bicycles | <u>Better-off</u> Land ownership Livestock Avocado trees | |
| Main Markets Ruhango – intermediate and retail Gitarama, Buringa, Musambira – intermediate and retail Kinanazi, Huye, Musha, Nyaruyeja – retail | | |
| Shocks and Hazards Prolonged dry spells Excessive rain, hail | | |

Livelihood Zone 5: Central Plateau Cassava and Coffee Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---------------------------------|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Sweet potatoes | op | | | | | | | | | | | |
| Cassava | op | | | | | | | | | | | |
| Beans | op | | | mp | op | | | | mp | | | op |
| Peanuts | op | | mp | mp | | | op | | mp | | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Crop sales | + | + | | + | | | | | + | | + | |
| Livestock sales | + | | | + | | | | + | | | | + |
| Petty trade | | | | | | | | | | | | |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple foods | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|------|------------|-----|-----|----------|-----|------|---------|-------|-----|---------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Sweet potatoes 1 | pl/h | | | | | | | | pl/h | | | |
| Sweet potatoes 2 | h | | | | | | | | pl/h | | | |
| Cassava* | pl | | | | | | | | lp/pl | | pl | |
| Coffee | | | | h | | lp | | | pl | | | |
| Beans 1 | lp | pl | we | | h | | | | | | | |
| Beans 2 | h | | | | | | | lp | pl | | we | h |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Peak livestock sales | | | | | | | | | | | | |
| Brick making | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Hail/ heavy rain | | | | | | | | | | | | |
| Dry spells | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

+ indicates peak period

*Cassava is planted twice a year and harvested all year,

Livelihood Zone 6: Northern Highlands Beans and Wheat Zone

| | | |
|--|--|---|
| Monitoring Priority This is a low priority zone. Most poor households can meet their annual food needs in a normal year through production or purchase, and there is rarely need of external assistance. | | <p>Located between eastern shores of Lake Burera, Lake Ruhondo and the Central-Northern Highlands Irish Potato, Beans and Vegetable Zone, households in this livelihood zone are able to meet most of their food needs from their own fields, supplement the remaining food from the market and in-kind payment. Livelihoods in this densely-populated mountainous zone are dependent on agricultural production and animal husbandry. Some households living on the shores of the lakes engage in fishing while those living near the marshlands along the Rugezi River produce rice. The zone has some minerals such as gold and wolfram (tungsten).</p> <p>The majority of households hand-till relatively small plots and depend on the 800mm to 1200mm of rain it receives annually. Beans, wheat, vegetables and maize are the primary crops produced for both household consumption and sale. All households sell surplus production after harvest. However, poorer households own and cultivate less land, and therefore have significantly smaller surpluses than the wealthy, if any.</p> <p>For the most part poorer households earn the bulk of their cash by working on the farms of their wealthier neighbors. Cash is earned after the first harvest season of wheat and maize. Poor households are also paid in-kind. Beans and wheat are provided in exchange for the second harvesting period of maize and wheat.</p> <p>Market access in this small zone is difficult as most farmers do not live near the local markets. Gitanga is the biggest retail/intermediary market in the zone serving mostly the four sectors in its nearest proximity. Most of the commodities sold are taken to the local markets and then to intermediary markets in the zone. Wheat can go as far as Gicumbi town, whereas beans go to Kigali or Musanze markets. Livestock (mostly goats and cattle) are brought to local markets and are then transported to the larger markets of Rubavu, Kigali and Nemba.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Crop production Local agricultural labor Small livestock rearing | <u>Better-off</u> Crop production Livestock rearing | |
| Staple Foods and Sources | | |
| <u>Poor</u> Irish potato Beans Sorghum Wheat | <u>Better-off</u> Irish potato Beans Maize Vegetables | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop Sales Goat sales | <u>Better-off</u> Crop sales Livestock sales | |
| Most Important Productive Assets | | |
| <u>Poor</u> Household labor Land ownership Agricultural tools | <u>Better-off</u> Land ownership Livestock Agricultural tools | |
| Main Markets Gitanga – retail and intermediary | | |
| Shocks and Hazards Erratic rainfall | | |

Livelihood Zone 6: Northern Highlands Beans and Wheat Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Beans | op | | | mp | | op | | ik | | mp | | op |
| Wheat | op | | | mp | | | op | | ik | mp | | op |
| Maize | op | | mp | | | | | | | | | |
| Irish potatoes | op | | mp | | | op | | | mp | | | op |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Agricultural labor | | + | + | + | + | | | | | + | + | |
| Crop sales | | + | + | + | | | + | + | | | | |
| Livestock sales | | | | | | | | | | | | |
| <u>Main Expenditure</u> | | | | | | | | | | | | |
| Staple food | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|------|---------|-------|-----|---------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Beans 1 | | | | | | | | lp | pl | we | | h |
| Beans 2 | | lp | pl | we | | h | | | | | | |
| Wheat 1 | | h | | | | | | | pl | | we | |
| Wheat 2 | | lp | pl | | we | | h | | | | | |
| Maize 1 | | h | | | | | | | lp/pl | | we | |
| Maize 2 | | lp | pl | | we | | h | | | | | |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| On-farm work | | | | | | | | | | | | |
| Peak livestock sales | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Irregular rain | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

+ indicates peak period

Livelihood Zone 7: Central-Northern Highlands Irish potato, Beans and Vegetable Zone

| | | |
|---|--|---|
| Monitoring Priority Low priority zone as most households are relatively food self-sufficient | | <p>The Central-Northern Highlands Irish Potato, Beans and Vegetable Zone stretches across the eastern part of Burera district, covers all of Rulindo districts and the northern-half of Gicumbi district. The mountainous terrain is covered with savannah grasslands, forests and terraced small farm plots. The zone is considered food self-sufficient, rarely at risk of acute food insecurity.</p> <p>Agriculture and livestock husbandry form the foundation of rural livelihoods. The production of Irish potatoes, beans, sweet potatoes and vegetables is supported by two rainy seasons - one from September to November and the other from February to April. Annually, 1000mm to 1500mm of rainfall percolates through the clay/sandy soils, sustaining two harvests. Livestock and livestock product sales are important for both household consumption and cash. The type and number of livestock kept by households is determined by their ability to maintain the animals sustainably. Wealthier households can afford to keep cattle in addition to goats and pigs. Poorer households lack sufficient capital to invest in larger animals like cattle and do not have the resources to maintain them. Therefore they are limited to raising smallstock such as goats, sheep and rabbits. The latter serves as a source of income when school fees are due whereas goats and sheep are more of an income source during the lean season.</p> <p>Market access is good. One of Rwanda’s main transportation corridors runs through the center of the zone connecting producers with the urban market of Kigali and the Ugandan border town of Gatuna. Most of the crops produced for the market as well as livestock and livestock products market are bound for Kigali. Producers sell commodities locally where traders buy and then transport to Kigali via intermediary markets. Byumba, Manyagiro, Gicumbi serve as the zone’s main intermediary and retail markets. Maize flour and beans from Uganda are brought in from Gatuna and make their way to local markets.</p> <p>Labor opportunities are the main income source for poorer households. On-farm labor is compensated both in-kind and in cash. Most of the labor performed is during the land preparation and weeding season of the agricultural campaigns. Some households seasonally migrate outside the zone from August to October to look for work in Kigali and/or Uganda.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Agricultural production Small livestock rearing | <u>Better-off</u> Agricultural production Livestock rearing Trading | |
| Staple Foods and Sources | | |
| <u>Poor</u> Irish potato Beans Sweet potato Maize | <u>Better-off</u> Irish potato Beans Sweet potato Maize | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales Rabbit sales | <u>Better-off</u> Crop sales Livestock sales Trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Household labor Land ownership Agricultural tools | <u>Better-off</u> Land ownership Livestock, including oxen Agricultural tools | |
| Main Markets Byumba – retail and intermediary Yaramba – retail and intermediary Miegove – retail and intermediary | | |
| Shocks and Hazards Erratic rainfall Drop in crop selling price | | |

Livelihood Zone 7: Central-Northern Highlands Irish Potato, Beans and Vegetable Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec | |
|---------------------------------|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|---|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | | |
| Irish potatoes | op | mp | | | op | | | mp | | | op | | |
| Beans | op | | | ik | | op | | mp | | | op | | |
| Sweet potatoes | mp | | | ik | | | | | mp | | | | |
| Maize | op | | ik | | | op | | | mp | | | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | | |
| Agricultural labor | + | | | | | | | | | | | | |
| Crop sales | + | | | | + | | + | | | | | | + |
| Rabbit sales | | | | | | | | | | | | | |
| <u>Main Expenditure</u> | | | | | | | | | | | | | |
| Staple food | | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Irish potato 1 | | | | | | | | lp | pl | we | | h |
| Irish potato 2 | | lp | pl | we | | h | | | | | | |
| Beans 1 | | | | | | | | lp | pl | we | | h |
| Beans 2 | | lp | pl | we | | h | | | | | | |
| Sweet potato | | | | lp | pl | | | | | h | | |
| Maize | | lp | pl | | we | | h | | lp | pl | | |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Peak shoat sales | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Irregular rain | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

+ indicates peak period

Livelihood Zone 8: Bugesera Cassava Zone

| | | |
|--|---|---|
| Monitoring Priority High monitoring priority as this is a drought-prone that typically has a food production deficit | | <p>The Bugesera Cassava Zone encompasses all of Bugesera District and includes Rukumberi and Jarama sectors of Ngoma District. All households in this zone rely on rain-fed agriculture to support their livelihood. Like other areas in Rwanda, this zone is bimodal. However one out of every two years, the first rainy season is insufficient, resulting in deficit crop production. Households can typically recover from initial losses during the second harvest. However in a bad year households, especially the poor, will be at risk of food insecurity.</p> <p>This is a relatively flat, lowland zone, characterized by savanna grassland and bush scrubs intermingled with small and fragmented farms. The zone receives approximately 800mm of rain annually supporting the production of cassava, maize, beans and sorghum. Households living around the various small lakes in the zone also are involved in fishing with nets.</p> <p>Primary productive assets are similar across the wealth spectrum. Land under cultivation, which is determined by ownership, dictates the amounts of yields households can harvest given optimal conditions. Livestock, cattle, goats and poultry are important assets for households as they are sold during times of need. Poorer households are restricted to owning small stock as they lack the resources to maintain larger animals. In addition to land and livestock, wealthier households own or have the means to rent small trucks. These trucks are used to transport beans, bananas and maize to neighboring communities in Burundi in exchange for beer and poultry.</p> <p>Market access is considered good as the zone is relatively close to both Kigali and Burundi. Road networks are well maintained and the terrain is relatively flat. The main local/regional markets in the zone are Nyamata (cassava), Ruhuha and Rweru. The main crops sold in the zone are cassava, maize and sorghum while the main livestock sold are goats, poultry and cattle. In terms of crops, farmers take their produce to local markets where they are bought by consumers within the same area. From the local market cassava is also purchased and taken to a processing plant near Nyamata, then sold to the consumer across the region.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Agricultural production Livestock rearing On and off-farm labor | <u>Better-off</u> Agricultural production Livestock rearing Cross-border trading | |
| Staple Foods and Sources | | |
| <u>Poor</u> Beans Sorghum Maize | <u>Better-off</u> Beans Cassava Maize | |
| Main income sources | | |
| <u>Poor</u> Goats sales Crop sales Labor sales | <u>Better-off</u> Crop sales Livestock sales Cross-border trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Small livestock Household labor | <u>Better-off</u> Land ownership Livestock Small trucks (rented and owned) | |
| Main Markets Nyamata – retail Ruhuha – intermediary Rweru - intermediary | | |
| Shocks and Hazards Prolonged dry spell Crop diseases Animal and poultry diseases | | |

| | |
|--|---|
| | <p>Livestock, mostly goats and poultry, are sold at the local market and then transported north to Kigali for the hotel and restaurant industry. Cattle are mostly consumed within the region.</p> <p>The labor market is mostly restricted to the rural areas however some poorer household members find construction work in Kigali and/or Burundi. Most of the on-farm labor is performed throughout the year and is paid in-kind not in cash.</p> |
|--|---|

Livelihood Zone 8: Bugesera Cassava Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Beans | op | | mp | ik | | op | | mp | | ik | | op |
| Maize | ik | | op | | | | | ik | | | | |
| Sorghum | mp | | | | | | | op | | | | mp |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Crop sales | | | | | | + | + | + | + | + | + | |
| Goat sales | + | + | + | + | | | | | + | + | + | + |
| Off-farm work | | | | | | | + | + | + | | | |
| <u>Main Expenditure</u> | | | | | | | | | | | | |
| Staple foods | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Beans | | lp | pl | we | h | | | | | | | |
| Sorghum | pl | | we | | | | h | | | | | lp |
| Maize 1 | | lp | pl | we | | | h | | | | | |
| Maize 2 | h | | | | | | | lp | | pl | we | |
| Cassava | | | | | | | h | lp | | pl | | we |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Labor migration | | | | | | | | | | | | |
| Peak livestock sales | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Dry spells | | | | | | | | | | | | |
| Animal diseases | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

+ indicates peak period

| Livelihood Zone 9: Eastern Plateau Mixed Agriculture Zone | | |
|---|---|--|
| Monitoring Priority Low - it is relatively food self-sufficient and rarely is in need of external food or cash assistance | | <p>This medium-populated zone borders Lake Muhazi to the south, the Central-Northern Highland Irish Potato, Beans and Vegetable Zone to the west and the Eastern Agro-Pastoral Zone to the East. The zone is hillier in the south and becomes flatter towards the north. The zone receives between 1000mm to 1200mm of rainfall annually during its two rainy seasons. In terms of food security the zone is food self-sufficient and is rarely in need of external food or cash assistance.</p> <p>Land ownership, livestock, household labor and agricultural tools are considered the main productive assets in the zone. Though poor households typically cultivate less land than their better-off neighbors, landholdings in this zone are larger than the zones located in the west. Larger tracts of land allow for a greater concentration of livestock holdings, especially goats. In addition to small ruminants, better-off households also raise cattle.</p> <p>Agricultural production and the labor associated with it form the basis of livelihoods in this zone. Wealthier households rely on crop production, specifically bananas, for both consumption and income. Poorer households also rely on crop production, however also earn significant food and cash from the labor demand of better-off and middle households. The main cash crops of the zone are bananas, coffee and maize. A minority of the population with access to localized marshlands in the northern part of the zone grows season C rice as a cash crop as well.</p> <p>As own food stocks subside, poor households will rely on the market in addition to in-kind payments to meet their remaining food needs. Reliable road networks and relatively flat terrain allow easy circulation of trucks, bicycles and motorcycles delivering commodities within the zone and to/from the main urban market in Kigali.</p> <p>The supply of labor is absorbed almost entirely by local agricultural demand. Few households will travel to Kigali and/or Nyagatare to look for work in construction or in the neighboring tin mines.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Agricultural production Small livestock rearing | <u>Better-off</u> Agricultural production Livestock rearing | |
| Staple Foods and Sources | | |
| <u>Poor</u> Bananas Beans Sweet potatoes Maize | <u>Better-off</u> Bananas Beans Maize Groundnuts | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales | <u>Better-off</u> Crop sales Livestock sales | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Household labor Agricultural tools | <u>Better-off</u> Land ownership Livestock | |
| Main Markets Kirarumuruzi, Karubamba, Mugera, Rwagitima, Ngarama, Mimuli – retail Gasange, Kabarore – livestock | | |
| Shocks and Hazards Prolonged dry spell Animal disease | | |

Livelihood Zone 9: Eastern Plateau Mixed-Agriculture Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---------------------------------|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| Staple Foods and Sources | | | | | | | | | | | | |
| Banana | ik | | | mp | | | ik | | | mp | | |
| Beans | op | | ik | mp | | | op | | ik | mp | | |
| Sweet Potato | op | | | mp | | | op | | | ik | | mp |
| Main Income Sources | | | | | | | | | | | | |
| Crop sales | | | | | | | | | | | | |
| Agricultural labor | | | | | | | | | | | | |
| Main Expenditures | | | | | | | | | | | | |
| Food purchases | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|------------------------------------|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------------|-----|
| Seasons | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| Key livelihood activities | | | | | | | | | | | | |
| Banana | h | | | pl | h | | | | | pl | | |
| Beans (1) | h | | we | | | | | lp | pl | we | | gh |
| Beans (2) | lp | pl | we | | gh | h | | | | | | |
| Maize (1) | h | | we | | | | | lp | pl | we | | gh |
| Maize (2) | lp | pl | we | | | gh | h | | | | | |
| Groundnuts (1) | h | | | | | | | lp | pl | we | | h |
| Groundnuts (2) | lp | pl | we | | | | h | | | | | |
| Coffee | | | | | | | | | | | | |
| Peak milk production | | | | | | | | | | | | |
| Peak livestock sales | | | | | | | | | | | | |
| Other livelihood activities | | | | | | | | | | | | |
| Trade | | | | | | | | | | | | |
| Agriculture labor | | | | | | | | | | | | |
| Shocks and Hazards | | | | | | | | | | | | |
| Prolonged dry spell | | | | | | | | | | | | |
| Animal diseases | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | Planting | | we | weeding | | g/h | green/harvest | |

+ indicates peak period

Livelihood Zone 10: Southeastern Plateau Banana Zone

| | | |
|--|--|---|
| Monitoring Priority Low - households in this zone are rarely at risk of acute food insecurity | | <p>The Southern Plateau Banana Zone encompasses most Ngoma and Rwamagana districts. The relatively flat terrain becomes increasingly hillier toward the border with Burundi. The 900mm to 1100mm of rainfall the zone receives annually allows for surplus production of food and cash crops. The zone is rarely at risk of acute food insecurity and over the past ten years has not received food or cash assistance.</p> <p>Renowned for the first area in Rwanda to produce bananas, this zone also grows beans, maize, cassava and coffee for household consumption and sale. Poorer households lack the land and agricultural resources to produce and sell coffee. Instead, these households opt to produce food crops selling a portion of their harvests to finance essential non-food items or preferred food items. The poor do not source all of their food from their own production alone. They also receive beans, cassava and maize as in-kind payment for working on better-off households’ farms. Bananas are purchased as own stocks subsidy.</p> <p>Livestock sales, mostly cattle, goats and pigs are a significant source of income for better-off households. Poorer households also keep goats as a livelihood safety net, or they tend to only sell if and when there is a problem. Poultry and rabbit sales are the most common livestock poorer households sell throughout the year. The poor sell poultry at local markets which are then transported to Nyakarambii, Ngoma or Rwanagana.</p> <p>Market access is considered good with a major highway cutting through the zone’s core. The relatively flat terrain allows for year-round market access. Coffee produced and sold is taken by producers to washing stations, then transported to Kigali. Bananas are brought to local markets where traders transport them to Nyakarambi, Ngoma and Kigali. Maize is also sold locally, then transported to Nyakarambi, then to the destination market at Kigali.</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Agricultural production Poultry rearing | <u>Better-off</u> Agricultural production Livestock rearing Trading | |
| Staple Foods and Sources | | |
| <u>Poor</u> Bananas Beans Cassava | <u>Better-off</u> Bananas Rice Beans Maize | |
| Main Income Sources | | |
| <u>Poor</u> Crop sales Labor sales Poultry sales | <u>Better-off</u> Crop sales Livestock product sales Trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Small livestock Household labor | <u>Better-off</u> Land ownership Livestock | |
| Main Markets Nyakarambi – intermediary Ngoma – intermediary Rwamagana – intermediary | | |
| Shocks and Hazards Crop diseases/pest Animal/poultry disease Prolonged dry spell Windstorms | | |

Livelihood Zone 10: Southern Plateau Banana Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|--|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| <u>Staple Foods and Sources</u> | | | | | | | | | | | | |
| Bananas | op | | | | | | | | | | | |
| Beans | op | | ik | | | op | | | ik | | | op |
| Cassava | op | | | | ik | | | mp | | op | | |
| <u>Main Income Sources</u> | | | | | | | | | | | | |
| Crop sales | | | | | | | | | | | | |
| Agricultural labor | | | | | | | | | | | | |
| Poultry sales | | | | | | | | | | | | |
| <u>Main Expenditures</u> | | | | | | | | | | | | |
| Staple foods | | | | | | | | | | | | |
| School fees | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------|-----|
| <u>Seasons</u> | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| <u>Key livelihood activities</u> | | | | | | | | | | | | |
| Bananas | h | | | | | | | | | | | |
| Rice | lp | pl | we | | | h | lp/p | we | | | | h |
| Beans | | lp | pl | we | h | | | lp | | pl | we | h |
| Cassava | | | | | | | h | lp | | pl | | we |
| Maize (1) | | h | h | | | | | lp | | pl | we | |
| Maize (2) | | lp | pl | we | | | h | | | | | |
| Peak milk production | | | | | | | | | | | | |
| Peak cattle sales | | | | | | | | | | | | |
| Peak shoat sales | | | | | | | | | | | | |
| <u>Other livelihood activities</u> | | | | | | | | | | | | |
| Agricultural labor | | | | | | | | | | | | |
| Petty trading | | | | | | | | | | | | |
| Construction labor | | | | | | | | | | | | |
| <u>Shocks and Hazards</u> | | | | | | | | | | | | |
| Prolonged dry spell | | | | | | | | | | | | |
| Crop pest/diseases | | | | | | | | | | | | |
| Livestock diseases | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | planting | | we | weeding | | h | harvest | |

+ indicates peak period

Livelihood Zone 11: Eastern Agro-Pastoral Zone

| | | |
|--|---|--|
| Monitoring Priority Medium - in normal years most households are able to produce enough to meet their food needs. Once every five years hazards affect production resulting in production deficits | | <p>The sparsely populated zone is typically a food surplus producing area. However one out of five years, prolonged dry spells and/or windstorms result in food deficits.</p> <p>This long, thin zone extends from the border with Uganda south through the western parts of Nyagatare, Gatsibo and Kayonza Districts. The sandy, moderately fertile soils support the growth of bush scrub, pastures and agricultural production. Two rainy seasons deposit 900mm to 1000mm of rain, sustaining crop production and pasture growth and recharging livestock watering holes.</p> <p>All households in this zone consume the same types of food; however, the quality and quantities of crops produced for consumption and sale increases with wealth. Better-off households are capable of producing surplus food to cover their annual needs and sell the remainder on the market. Poorer households, on the other hand, typically do not produce enough food to sustain themselves throughout the year. They also sell a small portion of maize and cassava immediately after harvest to cover pressing economic needs. As their own food stocks run out, the poor exchange labor for food and purchase food from the market.</p> <p>To finance food and non-food payments the poor work on better-off households' farm performing weeding and harvesting labor. In addition to on-farm work, the poor will also work in nearby mines, towns and across the border in Uganda.</p> <p>Maize, bananas and beans are the main crops sold in the zone. Most producers sell their goods at local markets to traders or to associations/cooperatives. Better-off households buy goods at local markets and transport them to the intermediary markets of Nyagatare, Rwagitima and Rwimiyaga using trucks, motorcycles or bicycles. During the rainy season the quantities sold at local and regional markets are</p> |
| Key Livelihoods Activities | | |
| <u>Poor</u> Local agricultural labor Crop production | <u>Better-off</u> Crop production Livestock rearing Trading | |
| Staple Foods and Sources | | |
| <u>Poor</u> Maize Beans Cassava Bananas | <u>Better-off</u> Maize Beans Cassava Bananas | |
| Main income sources | | |
| <u>Poor</u> Labor sales Crop sales Small livestock sales | <u>Better-off</u> Crop sales Milk sales Livestock sales Trade | |
| Most Important Productive Assets | | |
| <u>Poor</u> Land ownership Small livestock Household labor | <u>Better-off</u> Land ownership Livestock Bicycles and trucks | |
| Main Markets Karangazi, Nyawera, Gabiro - livestock Nyagatare – intermediary Rwagitima, Rwimiyaga – livestock and intermediary | | |
| Shocks and Hazards Prolonged dry spell Windstorm Crop pests Animal disease | | |

| | |
|--|---|
| | <p>reduced due to poor road conditions.</p> <p>Cattle, goats and poultry are the main types of livestock sold in the zone. Like crops, livestock are sold by households at the local markets and are bought by traders or associations. Traders buy animals when prices are lower, then sell them when food and non-food prices peak.</p> |
|--|---|

Livelihood Zone 11: Eastern Agro-Pastoral Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---------------------------------|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| Staple Foods and Sources | | | | | | | | | | | | |
| Maize | op | ik | | mp | | op | | | ik | | mp | op |
| Beans | op | ik | | mp | | | op | | ik | | mp | |
| Cassava | op | ik | | mp | | | op | | ik | | mp | |
| Banana | op | | | | | | | | | | | |
| Main Income Sources | | | | | | | | | | | | |
| Agricultural labor | + | + | + | | | + | | + | | | | |
| Crop sales | + | | | | | | + | | | | | |
| Livestock sales | | | | | | | | | | | | |
| Main Expenditures | | | | | | | | | | | | |
| Food purchases | | | | | | | | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|------------------------------------|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------------|-----|
| Seasons | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| Key livelihood activities | | | | | | | | | | | | |
| Maize (1) | h | | | | | | | lp | pl | we | | gh |
| Maize(2) | lp | pl | we | | | gh | h | | | | | lp |
| Cassava | | | | | | | | h | | lp | pl | |
| Banana | h | | | | | | | | | | | |
| Sweet potato | | h | | lp | pl | | | h | | lp | pl | |
| Peak milk production | | | | | | | | | | | | |
| Livestock sales | | | | | | | | | | | | |
| Other livelihood activities | | | | | | | | | | | | |
| Trade | | | | | | | | | | | | |
| Agricultural labor | | | | | | | | | | | | |
| Beer sales | | | | | | | | | | | | |
| Shocks and Hazards | | | | | | | | | | | | |
| Crop pests | | | | | | | | | | | | |
| Prolonged dry spell | | | | | | | | | | | | |
| Windstorms | | | | | | | | | | | | |
| Animal disease | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | Planting | | we | weeding | | g/h | green/harvest | |

+ indicates peak period

Livelihood Zone 12: Eastern Semi-Arid Agro-Pastoral Zone

| | | |
|---|---|--|
| Monitoring Priority High - vulnerability to drought is relatively high compared to the rest of the country | | A thin sliver of this zone borders the Akagera National park from north to south and expands into the south-eastern corner of the country bordering Tanzania. The zone is moderately populated, more sparsely populated towards the north. It is a flat area, covered with shrubs and forests, due to its proximity to the national park. The average rainfall is 900mm per annum. The soil is moderately fertile and clay-based. |
| Key Livelihoods Activities | | |
| <u>Poor</u> Agriculture Labor | <u>Better-off</u> Agriculture Farming Trade | Land ownership is the most important productive asset for all households and reliance on agriculture is notable across all sections of the population. Yet this zone is historically prone to drought. With many households dependent on agriculture, the level of vulnerability to drought is relatively high compared to the rest of the country. |
| Staple Foods and Sources | | |
| <u>Poor</u> Banana Beans Cassava | <u>Better-off</u> Banana Maize Beans Cassava | The south-eastern regions of Rwanda have become highly specialized in the large-scale production of bananas, a characteristic shared with this zone too. Bananas (cooking, dessert and brewing varieties) provide a source of food and income for households in this zone. |
| Main income sources | | |
| <u>Poor</u> Crop sales Livestock sales Local off-farm work | <u>Better-off</u> Crop sales Livestock sales Trade | Whilst agriculture is the main activity of the zone, pastoral and agro-pastoral groups are present in this area and most households own some livestock; cattle and goats for the better-off and goats and poultry for the poor. Fishing is practiced (using nets) in the zone’s small lakes and rivers, especially in Ndego, Nasho and Mpanga sectors. However, fish stocks are declining. |
| Most Important Productive Assets | | |
| <u>Poor</u> Land Goats and poultry Labor for hire | <u>Better-off</u> Land Cattle Small trucks and capital for trade | Market access is good throughout the zone. A paved road links the south of the zone with Kigali and a second national road lies to the west of the zone, in zone no. 11. Trade is very important for the wealthier households; some own (or rent) small trucks to assist them in their commercial activities. Migration in search of work within the zone commonly takes place between May and July and again in November and December. A small percentage of the population leaves for Kigali to work in construction or for the mining areas of the country. |
| Main Markets <u>Crops:</u> Bananas and maize: Kayanza>Kigali Sorghum: Kigali>Ruhengeri <u>Livestock:</u> Cows: Nyagatare/ Gatsibo/ Kayanza> Kigali/other provinces Goats: local markets>Kigali | | |

| | |
|--|--|
| Shocks and Hazards Drought (1 year in 2, between Oct-Jan) Outbreaks of animal diseases (1 year in 3, in June-July) | |
|--|--|

Livelihood Zone 12: Eastern Semi-Arid Agropastoral Zone

Primary Food, Income and Expenditure Calendar for the Poor

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|---------------------------------|-----|----------------|-----|-----|-----|-----------------|------|-----|------|-----------------|-----|-----|
| Staple Foods and Sources | | | | | | | | | | | | |
| Banana | mp | ik | | | | op | | | mp | | | |
| Beans | op | | | mp | | | | ik | | | | op |
| Cassava | op | | | mp | | ik | | mp | | op | | |
| Main Income Sources | | | | | | | | | | | | |
| Crop sales | + | + | + | | | + | + | + | | | | |
| Livestock sales | | | | | | | | + | + | + | + | + |
| Labor | + | + | + | + | + | + | + | | | | | |
| Legend | op | own production | | | mp | market purchase | | | ik | in-kind payment | | |

Seasonal Calendar

| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec |
|------------------------------------|-----|------------|-----|-----|----------|-----|------|---------|------|-----|---------|-----|
| Seasons | | | | | | | | | | | | |
| Rainy seasons | | | | | | | | | | | | |
| Dry seasons | | | | | | | | | | | | |
| Lean season | | | | | | | | | | | | |
| Key livelihood activities | | | | | | | | | | | | |
| Bananas | | lp | pl | we | h | | | | | | | |
| Beans | pl | | we | | | | h | | | | | lp |
| Cassava | | lp | pl | we | | | h | | | | | |
| Maize (1) | h | | | | | | | lp | | pl | we | |
| Maize (2) | | | | | | | h | lp | | pl | | we |
| Peak milk production | | | | | | | | | | | | |
| Livestock sales | | | | | | | | | | | | |
| Other livelihood activities | | | | | | | | | | | | |
| Petty trading | | | | | | | | | | | | |
| Off-farm labor | | | | | | | | | | | | |
| Agricultural labor | | | | | | | | | | | | |
| Shocks and Hazards | | | | | | | | | | | | |
| Prolonged dry spell | | | | | | | | | | | | |
| Flooding | | | | | | | | | | | | |
| Animal diseases | | | | | | | | | | | | |
| Legend | lp | land prep. | | pl | Planting | | we | weeding | | h | harvest | |

+ indicates peak period

Annex One: Sector by Livelihood Zone

Livelihood Zone 1: Lake Kivu Coffee Zone

| Province | District | Sector | Population |
|----------|------------|--------------|------------|
| Western | Karongi | Rubengera | 21573 |
| Western | Karongi | Bwishyura | 25171 |
| Western | Karongi | Gishyita | 15591 |
| Western | Karongi | Mubuga | 16434 |
| Western | Nyamasheke | Gihombo | 20387 |
| Western | Nyamasheke | Mahembe | 13744 |
| Western | Nyamasheke | Kirimbi | 18981 |
| Western | Nyamasheke | Macuba | 23736 |
| Western | Nyamasheke | Kagano | 26337 |
| Western | Nyamasheke | Kanjongo | 24903 |
| Western | Nyamasheke | Nyabitekero | 29263 |
| Western | Nyamasheke | Bushenge | 20193 |
| Western | Nyamasheke | Karengera | 25455 |
| Western | Nyamasheke | Bushekeri | 19248 |
| Western | Nyamasheke | Rangiro | 13203 |
| Western | Nyamasheke | Shangi | 23579 |
| Western | Nyamasheke | Karambi | 24971 |
| Western | Rubavu | Nyundo | 23986 |
| Western | Rubavu | Nyamyumba | 27487 |
| Western | Rusizi | Nkanka | 16638 |
| Western | Rusizi | Giheke | 18827 |
| Western | Rusizi | Gihundwe | 20964 |
| Western | Rusizi | Kamembe | 29895 |
| Western | Rusizi | Mururu | 19153 |
| Western | Rusizi | Nyakarenzo | 13224 |
| Western | Rusizi | Gitambi | 18476 |
| Western | Rusizi | Gashonga | 19752 |
| Western | Rusizi | Gikundamvura | 13913 |
| Western | Rusizi | Rwimbogo | 15605 |
| Western | Rusizi | Nzahaha | 23326 |
| Western | Rusizi | Bugarama | 20271 |
| Western | Rusizi | Muganza | 16781 |
| Western | Rusizi | Nkombo | 13359 |
| Western | Rusizi | Butare | 16932 |
| Western | Rusizi | Bweyeye | 12567 |
| Western | Rusizi | Nyakabuye | 24283 |
| Western | Rutsiro | Kivumu | 27400 |
| Western | Rutsiro | Ruhango | 24875 |
| Western | Rutsiro | Murunda | 22457 |

| | | | |
|---------|---------|-----------|-------|
| Western | Rutsiro | Mushonyi | 22232 |
| Western | Rutsiro | Boneza | 17139 |
| Western | Rutsiro | Musasa | 18110 |
| Western | Rutsiro | Mushubati | 19799 |
| Western | Rutsiro | Gihango | 18370 |
| Western | Rutsiro | Kigeyo | 22943 |

Livelihood Zone 2: West Congo-Nile Crest Tea Zone

| Province | District | Sector | Population |
|----------|------------|-------------|------------|
| Western | Karongi | Rugabano | 26897 |
| Western | Karongi | Gitesi | 20058 |
| Western | Karongi | Rwankuba | 34120 |
| Western | Karongi | Twumba | 21248 |
| Western | Ngororero | Muhanda | 23640 |
| Western | Nyabihu | Karago | 25498 |
| Western | Nyabihu | Rambura | 26181 |
| Western | Nyabihu | Muringa | 20175 |
| Southern | Nyamagabe | Gatare | 13857 |
| Southern | Nyamagabe | Buruhukiro | 19039 |
| Southern | Nyamagabe | Uwinkingi | 19330 |
| Southern | Nyamagabe | Tare | 18438 |
| Southern | Nyamagabe | Kitabi | 21678 |
| Western | Nyamasheke | Rugarambuga | 20407 |
| Western | Nyamasheke | Cyato | 20625 |
| Southern | Nyaruguru | Mata | 10570 |
| Southern | Nyaruguru | Nyabimata | 15376 |
| Southern | Nyaruguru | Ruheru | 19226 |
| Southern | Nyaruguru | Kivu | 14666 |
| Western | Rusizi | Nkungu | 17984 |
| Western | Rutsiro | Nyabirasi | 23992 |
| Western | Rutsiro | Manihira | 13069 |
| Western | Rutsiro | Rusebeya | 17379 |
| Western | Rutsiro | Mukura | 24970 |

Livelihood Zone 3: Northwest Volcanic Irish Potato Zone

| Province | District | Sector | Population |
|----------|----------|---------|------------|
| Northern | Burera | Kagogo | 15852 |
| Northern | Burera | Cyeru | 18913 |
| Northern | Burera | Kinoni | 21035 |
| Northern | Burera | Gahunga | 18232 |
| Northern | Burera | Cyanika | 29907 |
| Northern | Musanze | Cyuve | 18913 |

| | | | |
|----------|---------|------------|-------|
| Northern | Musanze | Musanze | 24961 |
| Northern | Musanze | Gacaca | 22082 |
| Northern | Musanze | Muko | 17137 |
| Northern | Musanze | Nkotsi | 12199 |
| Northern | Musanze | Muhoza | 35816 |
| Northern | Musanze | Kimonyi | 12971 |
| Northern | Musanze | Busogo | 16810 |
| Northern | Musanze | Rwaza | 19769 |
| Northern | Musanze | Gataraga | 20003 |
| Northern | Musanze | Shingiro | 18060 |
| Northern | Musanze | Kinigi | 22019 |
| Northern | Musanze | Nyange | 22819 |
| Western | Nyabihu | Mukamira | 25830 |
| Western | Nyabihu | Kintobo | 15508 |
| Western | Nyabihu | Jenda | 25673 |
| Western | Nyabihu | Bigogwe | 32317 |
| Western | Nyabihu | Kabatwa | 14957 |
| Western | Rubavu | Bugeshi | 25383 |
| Western | Rubavu | Busasamana | 24816 |
| Western | Rubavu | Mudende | 20645 |
| Western | Rubavu | Cyanzarwe | 19301 |
| Western | Rubavu | Kanzenze | 20161 |
| Western | Rubavu | Rubavu | 18088 |
| Western | Rubavu | Nyakiliba | 15894 |
| Western | Rubavu | Rugerero | 24252 |
| Western | Rubavu | Gisenyi | 51461 |
| Western | Rubavu | Kanama | 21179 |

Livelihood Zone 4: East Congo-Nile Highland Subsistence Farming Zone

| Province | District | Sector | Population |
|----------|----------|----------|------------|
| Northern | Gakenke | Cyabingo | 17763 |
| Northern | Gakenke | Gashenyi | 19290 |
| Northern | Gakenke | Rusasa | 17571 |
| Northern | Gakenke | Busengo | 20391 |
| Northern | Gakenke | Janja | 15296 |
| Northern | Gakenke | Gakenke | 20998 |
| Northern | Gakenke | Mugunga | 17051 |
| Northern | Gakenke | Rushasi | 17662 |
| Northern | Gakenke | Muzo | 19183 |
| Northern | Gakenke | Muyongwe | 15784 |
| Northern | Gakenke | Mataba | 13416 |
| Northern | Gakenke | Minazi | 13664 |
| Northern | Gakenke | Muhondo | 19926 |

| | | | |
|----------|-----------|-------------|-------|
| Northern | Gakenke | Ruli | 16457 |
| Northern | Gakenke | Coko | 15218 |
| Kigali | Gasabo | Jabana | 20174 |
| Kigali | Gasabo | Jali | 18704 |
| Southern | Huye | Kigoma | 20995 |
| Southern | Huye | Maraba | 20286 |
| Western | Karongi | Murundi | 22457 |
| Western | Karongi | Gashari | 21577 |
| Western | Karongi | Murambi | 18003 |
| Western | Karongi | Ruganda | 14498 |
| Western | Karongi | Mutuntu | 21317 |
| Southern | Muhanga | Nyabinoni | 17724 |
| Southern | Muhanga | Rongi | 19339 |
| Southern | Muhanga | Kibangu | 19337 |
| Southern | Muhanga | Kiyumba | 25777 |
| Southern | Muhanga | Rugendabari | 16559 |
| Southern | Muhanga | Kabacuzi | 24134 |
| Southern | Muhanga | Mushishiro | 20206 |
| Western | Ngororero | Matyazo | 24165 |
| Western | Ngororero | Kabaya | 28978 |
| Western | Ngororero | Ngororero | 25206 |
| Western | Ngororero | Hindiro | 21102 |
| Western | Ngororero | Kageyo | 21455 |
| Western | Ngororero | Kavumu | 23389 |
| Western | Ngororero | Muhororo | 18374 |
| Western | Ngororero | Sovu | 21168 |
| Western | Ngororero | Bwira | 16018 |
| Western | Ngororero | Gatumba | 20363 |
| Western | Ngororero | Ndaro | 19979 |
| Western | Ngororero | Nyange | 18412 |
| Western | Nyabihu | Rugera | 22962 |
| Western | Nyabihu | Rurembo | 23171 |
| Western | Nyabihu | Shyira | 16956 |
| Western | Nyabihu | Jomba | 19139 |
| Southern | Nyamagabe | Musange | 12405 |
| Southern | Nyamagabe | Mugano | 16903 |
| Southern | Nyamagabe | Kaduha | 16693 |
| Southern | Nyamagabe | Nkomane | 15935 |
| Southern | Nyamagabe | Mushubi | 12146 |
| Southern | Nyamagabe | Mbazi | 9225 |
| Southern | Nyamagabe | Musebeya | 19647 |
| Southern | Nyamagabe | Kibirizi | 17577 |
| Southern | Nyamagabe | Gasaka | 25151 |
| Southern | Nyamagabe | Kamegeli | 11254 |
| Southern | Nyamagabe | Kibumbwe | 10980 |

| | | | |
|----------|-----------|-----------|-------|
| Southern | Nyamagabe | Cyanika | 19749 |
| Southern | Nyanza | Nyagisozi | 20730 |
| Southern | Nyaruguru | Ruramba | 14265 |
| Southern | Nyaruguru | Muganza | 16774 |
| Southern | Nyaruguru | Munini | 16084 |
| Southern | Nyaruguru | Busanze | 20424 |
| Southern | Nyaruguru | Kibeho | 15983 |
| Northern | Rulindo | Rusiga | 9657 |
| Northern | Rulindo | Shyorongi | 18319 |
| Northern | Gakenke | Cyabingo | 17763 |

Livelihood Zone 5: Central Plateau Cassava and Coffee Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Southern | Gisagara | Mamba | 24502 |
| Southern | Gisagara | Gikonko | 16914 |
| Southern | Gisagara | Save | 25331 |
| Southern | Gisagara | Gishubi | 17033 |
| Southern | Gisagara | Ndora | 18572 |
| Southern | Gisagara | Kibilizi | 22584 |
| Southern | Gisagara | Muganza | 21321 |
| Southern | Gisagara | Mugombwa | 18575 |
| Southern | Gisagara | Kansi | 15650 |
| Southern | Gisagara | Mukindo | 22755 |
| Southern | Gisagara | Kigembe | 19421 |
| Southern | Gisagara | Nyanza | 18737 |
| Southern | Gisagara | Musha | 18039 |
| Southern | Huye | Kinazi | 17095 |
| Southern | Huye | Rwantiro | 15692 |
| Southern | Huye | Rusatira | 19561 |
| Southern | Huye | Simbi | 20031 |
| Southern | Huye | Ruhashya | 18424 |
| Southern | Huye | Mbazi | 25625 |
| Southern | Huye | Huye | 16933 |
| Southern | Huye | Karama | 13555 |
| Southern | Huye | Ngoma | 28828 |
| Southern | Huye | Tumba | 21225 |
| Southern | Huye | Gishamvu | 11457 |
| Southern | Huye | Mukura | 15739 |
| Southern | Kamonyi | Ngamba | 12506 |
| Southern | Kamonyi | Kayenzi | 14669 |
| Southern | Kamonyi | Karama | 20949 |
| Southern | Kamonyi | Rukoma | 31030 |
| Southern | Kamonyi | Kayumbu | 13657 |

| | | | |
|----------|-----------|--------------|-------|
| Southern | Kamonyi | Runda | 24621 |
| Southern | Kamonyi | Gacurabwenge | 21511 |
| Southern | Kamonyi | Musambira | 27371 |
| Southern | Kamonyi | Rugalika | 23118 |
| Southern | Kamonyi | Nyamiyaga | 25452 |
| Southern | Kamonyi | Nyarubaka | 19945 |
| Southern | Kamonyi | Mugina | 26507 |
| Southern | Muhanga | Cyeza | 28313 |
| Southern | Muhanga | Muhanga | 23926 |
| Southern | Muhanga | Nyarusange | 22924 |
| Southern | Muhanga | Nyamabuye | 34035 |
| Southern | Muhanga | Shyogwe | 34945 |
| Southern | Nyanza | Busoro | 24146 |
| Southern | Nyanza | Mukingo | 27904 |
| Southern | Nyanza | Cyabakamyi | 18018 |
| Southern | Nyanza | Kigoma | 26956 |
| Southern | Nyanza | Muyira | 22793 |
| Southern | Nyanza | Rwabicuma | 12555 |
| Southern | Nyanza | Kibirizi | 22032 |
| Southern | Nyanza | Busasamana | 33828 |
| Southern | Nyanza | Ntyazo | 16247 |
| Southern | Nyaruguru | Rusenge | 18853 |
| Southern | Nyaruguru | Ngera | 20005 |
| Southern | Nyaruguru | Cyahinda | 17281 |
| Southern | Nyaruguru | Nyagisozi | 15644 |
| Southern | Nyaruguru | Ngoma | 19039 |
| Southern | Ruhango | Mbuye | 31436 |
| Southern | Ruhango | Mwendo | 20354 |
| Southern | Ruhango | Byimana | 28492 |
| Southern | Ruhango | Kinihira | 21103 |
| Southern | Ruhango | Kinazi | 24996 |
| Southern | Ruhango | Ntongwe | 26800 |
| Southern | Ruhango | Kabagari | 19376 |
| Southern | Ruhango | Bweramana | 22239 |
| Southern | Ruhango | Ruhango | 51037 |

Livelihood Zone 6: Northern Highland Beans and Wheat Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Northern | Burera | Kivuye | 16154 |
| Northern | Burera | Gitovu | 15861 |
| Northern | Burera | Bungwe | 14826 |
| Northern | Burera | Rwerere | 18757 |
| Northern | Burera | Rusarabuge | 13702 |

| | | | |
|----------|---------|-------------|-------|
| Northern | Burera | Gatebe | 16807 |
| Northern | Burera | Rugendabari | 13954 |
| Northern | Burera | Ruhunde | 16924 |
| Northern | Burera | Nemba | 17346 |
| Northern | Burera | Butaro | 30780 |
| Northern | Burera | Kinyababa | 21129 |
| Northern | Burera | Rugarama | 20580 |
| Northern | Gakenke | Kamubuga | 19257 |
| Northern | Gakenke | Kivuruga | 16980 |
| Northern | Gakenke | Nemba | 14438 |
| Northern | Gakenke | Karambo | 11698 |
| Northern | Musanze | Gashaki | 14786 |
| Northern | Musanze | Remera | 19874 |

Livelihood Zone 7: Central-Northern Highland Irish Potato, Beans and Vegetable Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Eastern | Gatsibo | Nyagihanga | 21298 |
| Northern | Gicumbi | Kaniga | 15274 |
| Northern | Gicumbi | Rushaki | 12668 |
| Northern | Gicumbi | Cyumba | 13190 |
| Northern | Gicumbi | Rubaya | 9672 |
| Northern | Gicumbi | Mukarange | 16902 |
| Northern | Gicumbi | Shangasha | 15234 |
| Northern | Gicumbi | Manyagiro | 18050 |
| Northern | Gicumbi | Byumba | 35435 |
| Northern | Gicumbi | Bwisige | 14108 |
| Northern | Gicumbi | Nyankenke II | 18667 |
| Northern | Gicumbi | Miyove | 15039 |
| Northern | Gicumbi | Rukomo | 20760 |
| Northern | Gicumbi | Ruvune | 16284 |
| Northern | Gicumbi | Kageyo | 30367 |
| Northern | Gicumbi | Nyamiyaga | 15121 |
| Northern | Gicumbi | Mutete | 18065 |
| Northern | Gicumbi | Muko | 14941 |
| Eastern | Nyagatare | Karama | 19727 |
| Eastern | Nyagatare | Kiyombe | 16483 |
| Northern | Rulindo | Cyungo | 12598 |
| Northern | Rulindo | Rukozo | 13974 |
| Northern | Rulindo | Kisaro | 18209 |
| Northern | Rulindo | Base | 14620 |
| Northern | Rulindo | Kinihira | 14306 |
| Northern | Rulindo | Bushoki | 18240 |
| Northern | Rulindo | Buyoga | 20187 |

| | | | |
|----------|---------|-----------|-------|
| Northern | Rulindo | Tumba | 17840 |
| Northern | Rulindo | Burega | 12757 |
| Northern | Rulindo | Cyinzuzi | 12193 |
| Northern | Rulindo | Mbogo | 15522 |
| Northern | Rulindo | Masoro | 16565 |
| Northern | Rulindo | Ntarabana | 12211 |
| Northern | Rulindo | Murambi | 14300 |
| Northern | Rulindo | Ngoma | 9768 |

Livelihood Zone 8: Bugesera Cassava Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Eastern | Bugesera | Mwogo | 12162 |
| Eastern | Bugesera | Juru | 19211 |
| Eastern | Bugesera | Ntarama | 13977 |
| Eastern | Bugesera | Nyamata | 18966 |
| Eastern | Bugesera | Rilima | 27346 |
| Eastern | Bugesera | Musenyi | 20840 |
| Eastern | Bugesera | Gashora | 15248 |
| Eastern | Bugesera | Mayange | 14392 |
| Eastern | Bugesera | Shyara | 9933 |
| Eastern | Bugesera | Mareba | 19100 |
| Eastern | Bugesera | Ngeruka | 25900 |
| Eastern | Bugesera | Nyarugenge | 15343 |
| Eastern | Bugesera | Ruhuha | 17316 |
| Eastern | Bugesera | Rweru | 19637 |
| Eastern | Bugesera | Kamabuye | 17404 |
| Eastern | Ngoma | Rukumberi | 16971 |
| Eastern | Ngoma | Jarama | 18434 |
| Kigali | Nyarugenge | Mageragere | 14008 |

Livelihood Zone 9: Eastern Plateau Mixed Agriculture Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Kigali | Gasabo | Rutunga | 13598 |
| Kigali | Gasabo | Nduba | 15679 |
| Kigali | Gasabo | Gikomero | 12457 |
| Eastern | Gatsibo | Ngarama | 19815 |
| Eastern | Gatsibo | Gitoki | 22918 |
| Eastern | Gatsibo | Gatsibo | 21265 |
| Eastern | Gatsibo | Muhura | 21951 |
| Eastern | Gatsibo | Kiziguro | 20667 |
| Eastern | Gatsibo | Gasange | 18141 |
| Eastern | Gatsibo | Murambi | 18862 |

| | | | |
|----------|-----------|------------|-------|
| Eastern | Gatsibo | Kiramuruzi | 21674 |
| Northern | Gicumbi | Rwamiko | 11233 |
| Northern | Gicumbi | Giti | 12622 |
| Northern | Gicumbi | Bukure | 15328 |
| Eastern | Kayonza | Rukara | 23204 |
| Eastern | Nyagatare | Rukomo | 20945 |
| Eastern | Nyagatare | Gatunda | 19716 |
| Eastern | Nyagatare | Mimuli | 22452 |
| Eastern | Rwamagana | Fumbwe | 13752 |
| Eastern | Rwamagana | Musha | 13802 |

Livelihood Zone 10: Southeastern Plateau Banana Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Kigali | Gasabo | Rusororo | 24158 |
| Eastern | Kayonza | Mukarange | 19538 |
| Eastern | Kayonza | Nyamirama | 19359 |
| Eastern | Kayonza | Ruramira | 11399 |
| Eastern | Kayonza | Kabarondo | 19418 |
| Eastern | Kayonza | Murama | 14105 |
| Eastern | Kirehe | Mushikiri | 17541 |
| Eastern | Kirehe | Nyarubuye | 10832 |
| Eastern | Kirehe | Kirehe | 16374 |
| Eastern | Kirehe | Gatore | 19596 |
| Eastern | Kirehe | Gahara | 29659 |
| Eastern | Kirehe | Musaza | 18284 |
| Eastern | Kirehe | Kigina | 16520 |
| Eastern | Ngoma | Remera | 17167 |
| Eastern | Ngoma | Rurenge | 17363 |
| Eastern | Ngoma | Kibungo | 23286 |
| Eastern | Ngoma | Rukira | 18127 |
| Eastern | Ngoma | Kazo | 18318 |
| Eastern | Ngoma | Murama | 16775 |
| Eastern | Ngoma | Sake | 16533 |
| Eastern | Ngoma | Mutenderi | 14415 |
| Eastern | Ngoma | Mugesera | 19135 |
| Eastern | Ngoma | Zaza | 16772 |
| Eastern | Ngoma | Karembo | 10749 |
| Eastern | Ngoma | Gashanda | 11064 |
| Eastern | Rwamagana | Muhazi | 25766 |
| Eastern | Rwamagana | Gishari | 15017 |
| Eastern | Rwamagana | Munyiginya | 11072 |
| Eastern | Rwamagana | Gahengeri | 14891 |
| Eastern | Rwamagana | Kigabiro | 23906 |

| | | | |
|---------|-----------|-----------|-------|
| Eastern | Rwamagana | Mwulire | 13091 |
| Eastern | Rwamagana | Muyumbu | 15763 |
| Eastern | Rwamagana | Munyaga | 11079 |
| Eastern | Rwamagana | Nzige | 12475 |
| Eastern | Rwamagana | Rubona | 15877 |
| Eastern | Rwamagana | Nyakariro | 15568 |
| Eastern | Rwamagana | Karenge | 18443 |
| Eastern | Kirehe | Nyarubuye | 10832 |
| Eastern | Kirehe | Kirehe | 16374 |
| Eastern | Kirehe | Gatore | 19596 |
| Eastern | Kirehe | Gahara | 29659 |

Livelihood Zone 11: Eastern Agropastoral Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Eastern | Gatsibo | Kabarore | 21556 |
| Eastern | Nyagatare | Matimba | 13476 |
| Eastern | Nyagatare | Musheli | 14742 |
| Eastern | Nyagatare | Rwempasha | 11428 |
| Eastern | Nyagatare | Rwimiyaga | 16802 |
| Eastern | Nyagatare | Nyagatare | 19475 |
| Eastern | Nyagatare | Tabagwe | 18553 |
| Eastern | Nyagatare | Katabagemu | 22101 |

Livelihood Zone 12: Eastern Semi-Arid Agropastoral Zone

| Province | District | Sector | Population |
|-----------------|-----------------|---------------|-------------------|
| Eastern | Kayonza | Kabare | 25896 |
| Eastern | Kayonza | Ndego | 9071 |
| Eastern | Kirehe | Nasho | 20146 |
| Eastern | Kirehe | Mahama | 13130 |
| Eastern | Kirehe | Nyamugari | 23380 |
| Eastern | Kirehe | Kigarama | 21670 |
| Eastern | Kirehe | Mpanga | 22336 |

Annex Two: Workshop Participants

| Name | Title | Organization |
|----------------------------|--------------------------------|-----------------------------------|
| Eric Maniyo | District Agronomist | KAYONZA District |
| Jean Damascene | District Agronomist | KIREHE District |
| Jean Luc Rugema | District Agronomist | BUGESERA District |
| Ananie Niyibeshaho | District Agronomist | NYAMASHEKE District |
| Fabien Safari | District Agronomist | KARONGI District |
| Alexis Benimana | District Agronomist | NGORORERO District |
| Jean Pierre Nyirimanzi | Agriculture Officer | NYABIHU District |
| Cesarie Mugorukeye | BDC Manager | GICUMBI District |
| Philomene Mukabavuna | Agriculture Officer | MUSANZE District |
| Clarisse Munezero | Agriculture Officer | GISAGARA District |
| Donatha Mukamuganga | District Agronomist | NYAMAGABE District |
| Vedaste Mpagaritswenimana | District Agronomist | MUHANGA District |
| Theodomir Mugiraneza | GIS Officer | National University of Rwanda/GIS |
| Eric Maniyo | District Agronomist | KAYONZA District |
| Jean Damascene Nsengiyumva | District Agronomist | KIREHE District |
| Jean Luc Rugema | District Agronomist | BUGESERA District |
| Jean Baptiste Uwizeyimana | Agrometeorologiste | MINAGRI |
| Vedaste Gaseruka | Engineer | USAID |
| Catherine Uwamariya | Zootechnicienne | World Vision |
| Jean Claude Rumenera | Development Facilitator | World Vision |
| Venant Safali | Food Security Specialist | USAID |
| Brian Frantz | | USAID/CDO |
| Fidele Hakizimana | P.W Specialist | MINALOC/VUP |
| Agnes Mukamana | Program Manager | CARE |
| Justine Gatsinzi | National Coordinator/VUP | MINALOC/VUP |
| Eugene Kanyandekwe | CAP/PAPSTA | MINAGRI/PAPSTA |
| Janvier Gasasira | Coordinator | MINAGRI/PAPSTA |
| Didier Uhoraningoga | Agronomist | MINAGRI/PAPSTA |
| Claude Bizimana | | MINAGRI/PS Representative |
| André Ndagijimana | F/Coordinator | MINAGRI |
| Juvenal Ntambara | Principle Statistician | NISR |
| Dominique Habimana | Director/NISR | NISR |
| Zacharie Manirarora | Senior Agriculture Officer | CRS |
| Laura de Franchis | VAM | WFP |
| Angelique Murungil | | RED CROSS |
| Providence Tumukunde | Kiziba Camp Socio - Protection | MIDIMAR |
| Vestine Mukamurenzi | Disaster Researcher | MIDIMAR |