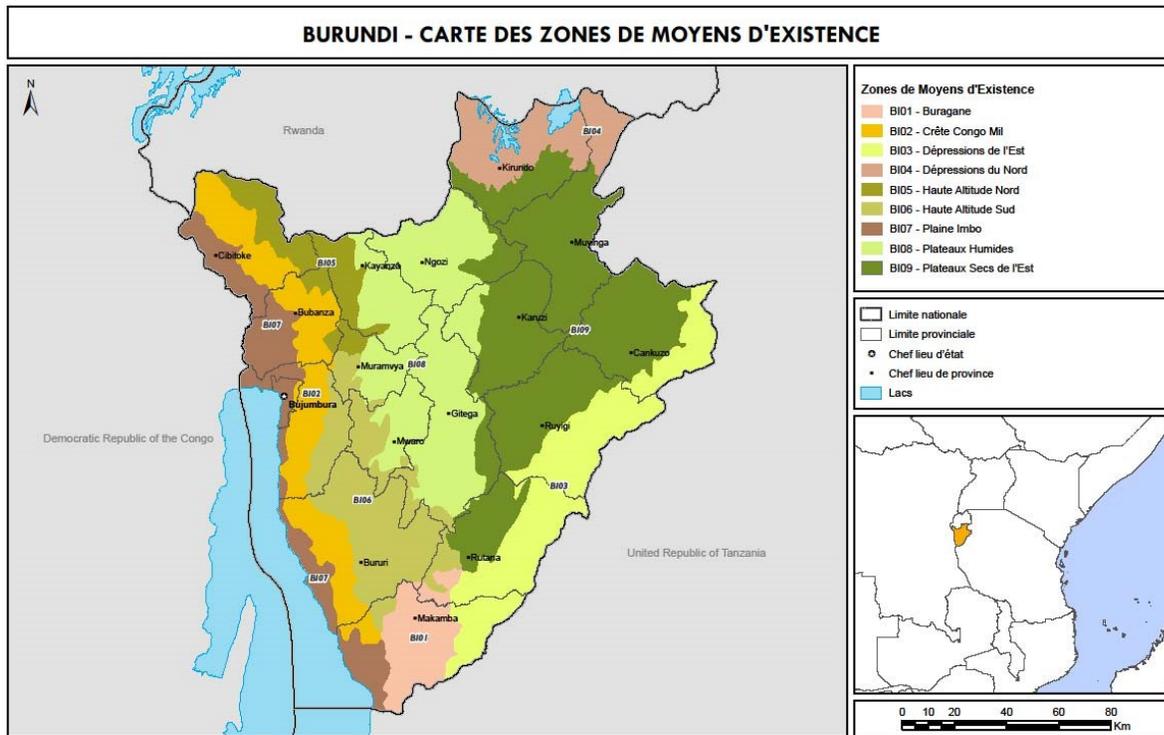


LIVELIHOODS ZONING “Plus” ACTIVITY IN BURUNDI

A SPECIAL REPORT BY

THE FAMINE EARLY WARNING SYSTEM NETWORK (FEWS NET)

February 2021 update



Acknowledgements and Disclaimer

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About FEWS NET

Created in response to the 1984 famines in East and West Africa, FEWS NET provides early warning and integrated, forward looking analysis of the many factors that contribute to food insecurity. FEWS NET aims to inform decision makers and contribute to their emergency response planning; support partners in conducting early warning analysis and forecasting; and provide technical assistance to partner-led initiatives.

To learn more about the FEWS NET project, please visit www.fews.net.

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Acronyms and Abbreviations

HEA	Household Economy Analysis
FAO	Food and Agricultural Organization
FEWS NET	Famine Early Warning Systems Network
IPC	Integrated Food Security Phase Classification
MINEAGRI	Ministère de l'Environnement, de l'Agriculture et de l'Élevage du Burundi
WFP	World Food Programme
USAID	U.S. Agency for International Development

1. Introduction

This product aims to identify the main components and characteristics of rural livelihoods in Burundi to provide a starting point for early warning assessments. The livelihoods zoning activity was designed to establish a food security baseline document that could be used to inform the needs of more in-depth post-hazard assessments. The livelihood zone maps and descriptions form part of the knowledge base for FEWS NET's food security monitoring activities. However, these tools are not intended as a comprehensive food security analysis or monitoring tool, but rather they aim to provide a reference point, a geographical framework for interpreting existing monitoring data on production, prices, and other indicators to identify potential hazard effects. Assessment and monitoring teams may wish to use zoning as a sampling frame in their surveys.

1.1 Methodology

Household Economy Analysis (HEA) is a framework for analyzing the range of ways in which households of different socio-economic status access the products and services they need to survive, maintain production, and live what is locally considered an acceptable lifestyle. The analytical framework coherently organizes and makes practical use of a wide range of information from many levels, including local knowledge, detailed field information on the household economy, national census data, official agricultural production data, local and regional market price data.

The systematic organization of this information and data begins with the identification of what the HEA calls "livelihood zones". A livelihood zone is a geographical zone in which most households share the same ecology, natural resources, and general economic environment, and thus the same production methods and opportunities for generating income (although income is realized according to household wealth, composition, and status which determines relative wealth). This means that if one were to move from one zone to another, one would expect to see different production and consumption methods determined by local factors, such as geography and trade opportunities.

The identification and characterization of livelihood zones, which are useful as a reference point, is only the first of three activities in the HEA analysis process. The second activity is the collection of primary data through an in-depth field survey of all or selected zones for analysis. Quantified livelihoods data are collected for each zone, by wealth group, including data on crop and livestock production, cash income from on-farm and off-farm activities, as well as household expenditure, the effects of hazards, and the ability of different wealth groups to cope with them. The third activity of the HEA is the use of secondary data on the impact of hazards (for example, rain delays, floods, market disruptions or conflicts) to conduct a quantified analysis of their likely impact at the household level over a given period. This third activity is called "Outcome Analysis". This exercise can be repeated annually, seasonally or at any frequency as required for follow-up. Outcome analysis is used to determine what would be the appropriate means and level of assistance in a short-term emergency, or to help assess the likely outcomes of a longer-term development program, or to consider adjustments in policy to support rural populations.

1.2 Livelihoods zoning update (2020/2021)

This exercise is an update of the national livelihoods zoning originally developed by FEWS NET and its partners in 2009. The purpose of the review is to confirm whether the characteristic of the zones still reflects the local realities of the household economy across the country or whether there have been major changes in the options available to rural households for generating food and income that would require an update of the product. This update was particularly necessary prior to the development of five HEA baselines in five livelihood zones as part of the Tubehoneza project, an EU-funded project with the overall objective of building sustainable resilience in rural Burundi.

The revision of the map and zone descriptions was done through a remote process that required input from national partners with direct knowledge and understanding of local livelihoods in each zone to confirm or update the zone's descriptions. The network of members of the IPC Technical Working Group and the provincial data collection focal points of MINEAGRIE were given priority for the success of this work. An in-person review workshop was not possible due to the global Covid-19 pandemic.

The development of the original map in 2009 was the product of a national workshop, held in Bujumbura with the participation of representatives of government agencies and international organizations working in the country, including representatives from each region, as well as national officials (see Annex 1).

The steps followed during the zoning workshop are the following:

Prior to the workshop:

1. Review of secondary livelihoods data
2. Develop base maps of the country, designed to allow the drawing of zones
3. Develop thematic reference maps (for example, soils, agroecology, population density, rivers, and infrastructure)

During the workshop:

4. Presentation of the HEA and the zoning methodology
5. Plenary session to sketch out the livelihood zones on the base map through discussion in plenary
6. Work in groups to define the specific nature of each zone and provide information on agroecology and climate, access to land and other productive assets, agricultural and livestock production, staple foods, main markets used by people, seasonality, and hazards, among others
7. Validation of the map and descriptions in plenary sessions

After the workshop

8. Visits to validate information from the national workshop, carried out in three provinces: Muramvya, Kirundo, and Rutana.

Changes made in 2021

The collaborative review of the 2009 zoning document aimed to include the major changes that have taken place between 2009 and now. Only minor changes were necessary. These are summarized below, including:

- The inclusion of additional crops typically grown in the livelihood zone, either for household consumption or for sale, or both
- The inclusion of additional markets that serve local people living in the livelihood zone

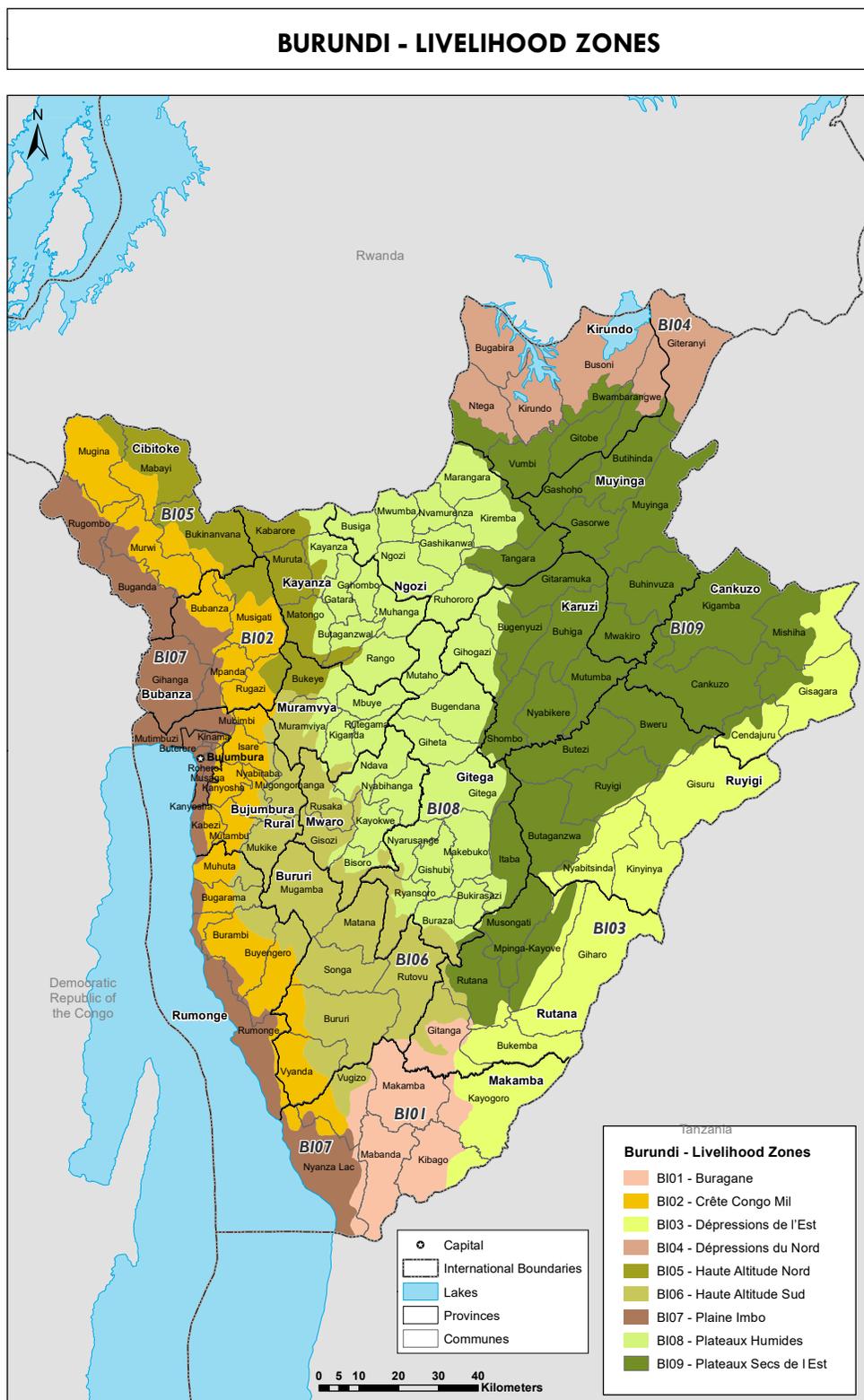
Table I. Changes made per zone

Zone	Revisions	Zone	Revisions
BI01	<ul style="list-style-type: none"> • New crops: sweet potato, maize, rice, <i>colocase</i> (taro) • Remove annual humanitarian assistance • Markets: Murenge and Nyange 	BI06	<ul style="list-style-type: none"> • Markets: Tora and Bururi
BI02	<ul style="list-style-type: none"> • New crops: peas, <i>colocase</i>, vegetables, palm oil • Household labor destination: includes the lake area (West) and other neighboring zones in the East 	BI07	<ul style="list-style-type: none"> • New crops: palm oil
BI03	<ul style="list-style-type: none"> • New crops: maize and palm oil • Information on returnees: also in Mishiha and Cendajuru 	BI08	<ul style="list-style-type: none"> • New crops: potatoes and rice • Eliminate food aid

	<ul style="list-style-type: none"> • Markets: Kirehe and Twinkwavu 		
BI04	<ul style="list-style-type: none"> • New crops: maize and rice • Markets: Gatare, central Ntega, and Ruzo 	BI09	<ul style="list-style-type: none"> • New crops: potatoes and maize - • Cattle breeding (better off hhs) • Markets: Kirehe
BI05	<ul style="list-style-type: none"> • New crops: wheat, peas, vegetables, and fruits • Markets: Bugarama (livestock) and along the R1 (fruits and vegetables) 		

Apart from some linguistic changes and the development of some descriptive points, the document has not undergone major changes. This means that the initial division into nine livelihood zones remains valid and that the description of the main livelihoods of the population living in each zone can be considered as representative of the current realities in each zone.

2. Map of livelihood zones



3. Descriptions of livelihood zones

Livelihood Zone #1 – Buragane		
Food Crops	Cassava Beans Sweet potatoes Colocase (taro) Maize Rice	<p>This sparsely populated agropastoral zone is located in the very south of the country and borders Tanzania to the south. The zone is hilly with peaks of 1,440 to 1,800 meters and flat valleys. Rainfall is average (1,100 to 1,400 mm/year).</p> <p>The soil, a sandy clay, is very fertile but exposed to erosion. Bananas, cassava, beans, sweet potato, and maize are the main crops. Goats make up the majority of livestock and are common in most households. In addition to goats, better-off households also own livestock and pigs, while less well-off households carry out poultry farming.</p> <p>Cassava, sweet potatoes, rice, and beans are the primary sources of food. Poorer households also consume sweet potatoes. Better-off households rely mainly on their own production and make up any shortfall with food purchases. Poorer households rely mainly on food purchases and on their own production. The most vulnerable households also rely on humanitarian assistance and often resort to selling labor.</p> <p>Local agricultural work, which constitutes 80 percent of local labor, and work in local towns, which accounts for 15 percent, are the main sources of income for poorer households. A small percentage of poor household members migrate outside the zone in search of opportunities to do daily work. In the dry season, they go to Nyanza-Lac to work in palm oil production. They also go to Tanzania at any point of the year. Income from manual labor is followed by income from the sale of crops (bananas and cassava) and livestock. For better-off households, income comes mainly from the sale of crops (bananas, cassava, and beans), trade and the sale of livestock. The proximity of Tanzania makes cross-border trade an important feature of the zone.</p> <p>This zone has a lot of potential thanks to:</p> <ul style="list-style-type: none"> its topography with many marshes; its position in relation to the main road networks inside and outside the country. <p>However, the reintegration of returnees is still a major issue.</p> <p>It should be noted that the zone remains prone to animal and crop diseases due to cross-border movements with Tanzania. Also, the fall in fishing due to pollution affects households by reducing opportunities to sell labor and by increasing the price of fish.</p>
Sold Crops	Bananas Cassava Beans Maize Colocase (taro) Sweet potato	
Livestock	Goats Livestock Pigs Poultry	
Cash Income	Daily labor Crop sales Trade Livestock sales Agricultural labor sales	
Main Markets	<p><u>Crops</u> Makamba Mabanda Murenge (in the Makamba commune Nyange in the Makamba commune)</p> <p><u>Livestock</u> Musenye (in the Mabanda commune)</p>	
Hazards	Rain failure Crop disease Erosion Flooding Livestock diseases	

Livelihood Zone #2 –Crête Congo Nil		
Food Crops	Cassava Beans Sweet potatoes Maize Peas Colocase (taro)	<p>The <i>Congo Nil Ridge livelihood zone</i> is a narrow strip that runs from the far northwest of the country to the south. This mountainous region rises above the Imbo plain and serves as a dramatic transition between the low-lying zones of the far west and the mountainous regions further east. Altitudes vary accordingly between 1,000 and 1,800 meters. Due to its topography of steep mountainous terrain with diverse foothills, this zone is particularly prone to various hazards such as: heavy rains, hailstorms, high winds, erosion, landslides, and flooding in the low-lying zones. The zone is known for large-scale small livestock farming. However, all poor households raise farmyard animals (chickens/ducks), rabbits and turkeys, while the better off and middle-class households raise small and large livestock for fattening.</p> <p>In general, the <i>Congo Nile Ridge</i> zone relies on lateritic soils, which are considered to be fertile. The crops are mainly rain fed, with an annual rainfall between 1,000 and 1,250 mm. There are also small plots of land owned by wealthy households, which are used for off-season cultivation in low-lying zones for irrigated crops (mainly vegetables and maize, in season C). The main food crops are beans, sweet potatoes, cassava, maize, and peas. Different food crops are grown by different socio-economic groups: poorer households grow sweet potatoes, colocase (taro), and eggplants, while maize is grown by middle and wealthier households. These wealthy households with larger land holdings also grow and sell coffee, palm oil, bananas, and cassava, while the poorest regularly sell sweet potatoes, colocase (taro), and beans. Households with more resources produce most of their own food, while poorer households rely on the market as their main source of food.</p>
Sold Crops	Bananas Sweet potatoes Beans Cassava Peas Vegetables Palm oil (better off hhs) Coffee (better off hhs)	
Livestock	Cattle Goats Pigs Poultry	
Cash Income	Crop sales Daily labor Livestock sales	
Main Markets	Muzinda (Imbo) Mugina Musigati Muhuta Buyengero Nyabiraba Mutambu (large livestock) Mubimbi (pigs) Ndora (goats)	<p>The sources of income in the zone are diversified and still depend on socio-economic categories. Poor households depend on daily labor, the sale of farmyard animals (chickens/ducks), firewood, work in quarries, as well as work opportunities in the neighboring Imbo Plain, the lake area (west) and other neighboring zones in the east. The income of wealthy households comes from the sale of cash crops (palm oil, bananas, coffee), livestock (mainly goats and cows for fattening) and petty trade. In addition, the large forest cover available in the zone means that wood is one of the sources of household income in the zone.</p>
Hazards	Landslides Erosion Hail Crop disease Price volatility (coffee) Flooding in low-lying zones High winds	<p>Food aid exists through the supply of school canteens (in some schools only) and through community aid. However, it is sometimes distributed once a year to the most vulnerable populations, depending on the case, and to returnees living in the far south.</p>

Livelihood Zone #3 –Dépressions de l’Est		
Food Crops	Cassava Maize Beans Sorghum Sweet potatoes Bananas	The flat green savannas are characteristic of this surplus region in the far east of the country. This zone shares a long border with Tanzania. Repatriation is an important factor in the economy, especially in the municipalities of Giharo and Bukemba in the south, as well as Mishiha and Cendajuru municipalities, given the availability of arable land. These regions constitute the settlement zones of many returnees.
Sold Crops	Cassava Beans Sorghum Peanuts Rice Palm oil (better off hhs)	The altitude here varies between 1,125 and 1,500 m, which makes this zone lower than the neighboring zones. As a result, the temperatures, between 28 and 30°C, are also relatively warm. Crops are mainly dry, although there are some small, irrigated plots. The annual rainfall is between 1,100 and 1,400 mm. The soils are relatively fertile lateritic soils (oxisols). Own production, supplemented by purchases, is the main source of food. Cassava, followed by sweet potatoes, beans, and bananas, is the main crop for all households. Poorer households tend to consume more sweet potatoes than beans, while the reverse is true for better-off households.
Livestock	Goats Pigs Cattle Poultry	The sale of crops, mainly cassava and beans, is the main source of income for all households. Poorer households also sell sorghum, while better-off households also sell peanuts and rice. Palm oil cultivation has expanded in Cendajuru and Mishiha and is currently in production, especially by wealthy households. For poorer households, manual agricultural labor and the sale of livestock (goats and poultry) are a secondary source of income. There are opportunities for agricultural labor both locally and in Tanzania. Better-off households also earn money by selling livestock (cattle and goats) and through petty trade. Transporting goods by bicycle and weaving baskets are also sources of income. Water deficit is the main problem in the zone and is becoming more and more serious. Flooding is a problem approximately every five years.
Cash Income	Crop Sales Agricultural labor (both locally and in Tanzania) Livestock sales Petty trade Bicycle transport	
Main Markets	Kayogoro Kinyinya Gisuru Kirehe (Mishiha) Twinkwavu (Cendajuru)	
Hazards	Rain failure Crop disease Floods	

Livelihood Zone #4 –Dépression du Nord		
Food Crops	Cassava Bananas Sweet potatoes Beans Maize Rice	<p>This zone, located in the far north-east of the country is characterized by agricultural surpluses, but also by relatively frequent rainfall, which results in annual relief in some places.</p> <p>The hilly landscape is traversed by rivers flowing into two lakes and which form the northern border with Rwanda. Annual rainfall varies between 800 and 1,000 mm and the average temperature is 27 to 29°C. The wooded savanna constitutes the natural vegetation. The local lateritic soils are generally fertile. The population is relatively dense and, as a result, the farms are modest. The value of livestock is inferior to that of crops. Only better-off households have livestock, while poorer households have goats and poultry.</p>
Sold Crops	Sorghum Bananas Cassava Beans Market gardening Maize Rice	<p>The crops are generally rain fed. Beans are not only a particularly important food crop, but they sell well. Other main food crops are also sold. Sorghum is a specific food crop that is not often consumed but sold, mainly to neighboring Ngozi and Bururi provinces where it is used for beer production. Cassava is the primary staple food. Sweet potatoes are consumed mainly by poorer households and bananas by better-off households. Even for the poorest households, crops production is the main source of food during the year; the rest of the food is bought at the market.</p>
Livestock	Goats Pigs Livestock Poultry	<p>As for the sources of income, the poorer households sell crops but also depend on the local sale of their manual labor (the preparation of the soil is done primarily by ploughing). Better-off households sell both crops and livestock and have capital to undertake trade activities.</p>
Cash Income	Crop sales Daily labor Livestock sales Trade	<p>The proximity with Rwanda constitutes an opportunity to sell labor in this neighboring country, given the high value of the Rwandan franc compared to the Burundian franc. The Rwandan franc is two times the Burundian franc. This practice is peaks during the lean season.</p>
Main Markets	Kabanga Central Kirundo Giteranyi Ruhehe Busoni-Rulase Marembo Gatare Central Ntega Ruzo	
Hazards	Water deficit Crop disease Excessive rainfall (occasional)	

Livelihood Zone #5 –Haute Altitude Nord		
Food Crops	Sweet potatoes Maize Bananas Beans/peas Potato Wheat Vegetables	This zone includes the northern part of the mountainous terrain that runs through the west of the country. To the east, it reaches the highest point of the Congo Nile Ridge. Forests form a major component of the natural vegetation and are a major source of wood and provide a humid microclimate. Rainfall is relatively high. The main road from Bujumbura to Rwanda passes through the zone which offers opportunities to sell crops and vegetables.
Sold Crops	Sweet potatoes Beans/peas Tea Bananas Potatoes Maize Vegetables Fruits	Rainfall in the zone is the highest in the country, reaching 1,400 to 1,600 mm per year, while the temperature varies from moderate to cool. These two factors favor a wide range of rain fed crops. The land is ploughed by hand with the use of hoes. The soils are acidic but still considered moderately fertile. Maize is the main cereal and, like beans, is grown by all households. Poorer households tend to grow sweet potatoes and bananas, while better-off households produce potatoes, tea, and vegetables (a major cash crop). Poorer individuals normally manage to sell only a few sweet potatoes and bananas. In contrast to better-off households, the fields of poorer households fall far short of their basic food needs, and these households rely heavily on the market and on food they receive directly as payment for their labor.
Livestock	Cattle Goats Pigs Poultry Rabbits Guinea pigs	Casual labor is the main source of income for poorer households. More often than not, it involves local agricultural labor, work in the tea and flour milling industries and in brick making. But a significant part also comes from work in the cities, especially Bujumbura. Most of the income of better-off individuals comes from the sale of crops, vegetables, and livestock, but they also corner the market on wood, which is used in charcoal production and construction.
Cash Income	Crop sales Livestock sales Daily labor Wood sales Work in tea factories and flour mills (poor households)	As regards livestock, the emphasis is on small livestock – rabbits, and guinea pigs – which are kept around the property. The better-off households also raise pigs and cattle. The population density is higher than in the neighboring livelihood zone, High Altitude South.
Main Markets	Kayanza Kabarore (small ruminants) Bugarama (livestock) Along the R1 (fruits and vegetables)	
Hazards	Hail High winds Crop disease Landslides	

Livelihood Zone #6 –Haute Altitude Sud		
Food Crops	Sweet potatoes Maize Bananas Beans Potatoes	This zone includes the southern part of the mountainous terrain that runs through the west of the country. To the east, it touches the highest elevation of the Congo Nile Ridge. Rainfall is relatively constant in this zone. It is known that production in this zone is for household consumption rather than for the wider market.
Sold Crops	Sweet potatoes Bananas Beans Potatoes Maize	Rainfall is relatively high, reaching 1,200 to 1,400 mm per year. Ample rainfall combined with moderate to cool temperatures supports a wide range of rain fed crops. The soil is productive, though considered less fertile than that of the high-altitude livelihood zone in the north. Nevertheless, intensive farming is developing in the zone. The land is ploughed by hand with the use of hoes. All households grow maize (the main cereal) and beans. Poorer households tend to grow sweet potatoes, while better-off households grow potatoes and bananas. Poorer individuals normally manage to sell only a few sweet potatoes. In contrast to better-off households, the fields of poorer households fall far short of their staple food needs. Poorer households rely heavily on the market for food and on the food they receive directly as payment for their labor.
Livestock	Goats and sheep Livestock Poultry	Local agricultural labor is the main source of income for poorer households. Better-off people can earn a greater part of their income from crops and the sale of livestock. They also control the timber market. Other commercial activities are relatively limited because of the poor road network and limited marketing opportunities.
Cash Income	Crop sales Livestock sales Daily labor Tree sales Charcoal	
Main Markets	Matana (livestock) Ruvibago (crops) Tora Bururi	The population density in the southern part of the zone is lower. The extensive pastures favor larger agricultural holdings. There is sufficient grass to raise sheep and cattle, though only better-off households can practice this activity. Poorer households only raise goats and poultry. The tall forests are a major source of wood, which better-off households sell to poorer households to produce charcoal. Remittances from family members living in urban centers are mentioned as another source of income that enables households to send more children to school than would otherwise be possible.
Hazards	Hail High winds Crop disease	

Livelihood Zone #7 –Plaine d’Imbo		
Food Crops	Cassava Rice Beans Maize	<p>This flat, low-lying zone (780 to 1,000 m) extends along the length of the westernmost part of the country. In the north, it touches the DRC and continues south along the coast of Lake Tanganyika to the southern tip of Burundi. It is one of the hottest (28 to 32°C) and driest parts of Burundi where average rainfall does not reach 900 mm per year. The impact of returnees on the local economy is strongest here, especially in the southern municipalities of Rumonge and Nyaza Lac.</p> <p>Despite the relatively fertile soils of the alluvial lithosol type, every year this zone has a food deficit due to water shortages as well as floods. Food aid is frequent and is distributed every year. The main crops are cassava, rice, maize, and beans. Tomatoes are an important cash crop. Own crops and purchases are the main food source for all households. Poorer households supplement their food with fishing.</p> <p>Apart from the sale of crops, the sale of agricultural labor and fishing (for poorer households), as well as mining and palm oil cultivation (for better-off households) are a main source of income. Transporting goods by bicycle (or by motor vehicle for those who can afford it) is also an important income-generating activity. The large number of markets with relatively good access and a good road network facilitates trade and transport in the zone, and also includes trade and labor sales with the DRC. Livestock breeding is common, although better-off households tend to raise more livestock, while poorer households are generally limited to pig, goat and poultry farming.</p> <p>The proximity of Lake Tanganyika provides the zone with a source of income (fishing) and a protein diet (<i>ndagara</i> accompanies the consumption of cassava, which is considered the main source of food in the zone).</p>
Sold Crops	Rice Cassava Tomatoes Bananas Maize Palm oil (Rumonge and Nyanza-lac)	
Livestock	Goats Pigs Livestock Poultry	
Cash Income	Crop sales Livestock sales Daily labor Tree sales Charcoal Extraction of rubble from rivers and quarries	
Main Markets	Matana (livestock) Ruvibago (crops) Tora Bururi	
Hazards	Hail High winds Crop disease	

Livelihood Zone #8 – Plateaux Humides		
Food Crops	Sweet potatoes/potatoes Maize Rice Beans Cassava Bananas	<p>This agropastoral zone is located in the central part of the country. It is known as one of the main coffee-producing regions of the country. It is a hilly region that reaches heights between 1,400 and 1,800 m with average rainfall. The high population density in the zone is the main cause of vulnerability and many households only have access to 0.2 hectares for six to seven people. There is also frequent migration of daily labor to Bujumbura and Rumonge. There has been little repatriation of refugees in the region, which is one of the most densely populated in the country. As a result, land is scarce.</p> <p>The moderately fertile soils are a useful resource for the manufacture of products such as bricks, pottery, and tiles.</p> <p>Bananas, rice, maize, beans, potatoes, cassava, and sweet potatoes are the main crops grown and sold in the zone. Better-off individuals also grow coffee, which is their main cash crop. Access to food is through market purchases (the main source for the poor) and own production (the main source for better-off households).</p> <p>For the poor, the sale of local farm labor is the main source of income. Poorer households also migrate out of the zone in search of new opportunities to find work. Better-off households generate income from the sale of coffee, food crops and livestock products. Trade and small businesses are also a major source of income for better-off households.</p> <p>Better-off households raise cattle, in addition to goats and pigs, which are widely kept by all households in the zone. Poorer households also raise poultry. The sale of livestock is a major source of additional income for households.</p>
Sold Crops	Beans Rice Maize Coffee Bananas Sweet potatoes Potatoes Cassava Avocados	
Livestock	Goats Cattle Pigs Poultry	
Cash Income	Daily labor Crop sales Trade Livestock sales	
Main Markets	<u>Crops</u> Gitega Mutaho Ngozi <u>Livestock</u> Zege (Gitega)	
Hazards	Water shortage Soil erosion Crop diseases Livestock diseases	

Livelihood Zone #9 – Plateaux Secs de l’Est		
Food Crops	Maize Bananas Beans Sweet potatoes Potatoes	This zone, characterized by rolling hills that slope gently down to form flat-bottomed valleys and marshy zones, constitutes the eastern part of the country. This densely populated agricultural zone has a more moderate climate than the neighboring regions and rainfall (1,100 to 1,400 mm per year) is more abundant than in the north. There are often delays in the rains and emergency humanitarian aid is needed almost every year to meet the food needs of the poor.
Sold Crops	Bananas Rice Avocados Sweet potatoes	
Livestock	Poultry, Goats Cattle	The altitude varies from 1,200 m to 1,800 m. The natural vegetation is shrubby savannah, and the acidic sandy-clay soil is mostly infertile due to erosion, deforestation, and overuse caused by overpopulation.
Cash Income	Daily labor (including migration labor to the north, to Tanzania and to Rwanda) Crop sales Poultry sales Trade Livestock sales	
Main Markets	<u>Crops</u> Kirehe Gasenyi (Gisagana) Muyingo <u>Livestock</u> Shinge (Kigambo) Kirehe (Mishiha) Nyuro (Gisogara)	Bananas and rice are the main cash crops for both poorer and better-off households. Thanks to the abundance of swamps, rice grows well even in season C (except for Cankuzo, where swamps and lowlands face water shortages). All households have access to these swamps, but poorer households rent these plots from better-off households, or cultivate them under sharecropping or similar arrangements. Poor households eat mainly sweet potatoes and local vegetables; they also have poultry. Better-off households consume their own bananas and beans, and raise poultry and goats. Food for both poor and the better-off households is obtained mainly through market purchases and own production. Humanitarian aid is a significant supplement for poor households.
Hazards	Rain failure Crop disease Livestock disease Erosion/landslides	Sources of income vary greatly depending on the economic level of each household. The income of poor households comes mainly from daily manual labor, both locally and in Tanzania (migration) and, to a lesser extent, from crop and poultry sales. For better-off households, the greater part of their income comes from crop sales and trade. There are several crop and livestock markets in the region. The region has so far had a low refugee repatriation rate.

4. Seasonal calendars

Seasonal Calendar - Burundi - October 2009

Zone 1 - Buragane

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
SEASONS														
Rainy seasons				Short rainy season				Long rainy season						
Dry Seasons														
Agricultural Seasons				Season A					Season B				Season C ->	
Hunger Periods														
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
CROPS														
Maize	All	A	Preparation	Planting	Weeding				Harvest					
		C				Harvest						Preparation	Planting	Weeding
Beans	All	A		Planting	Weeding	Harvest								
		B						Planting	Weeding		Harvest			
		C		Harvest									Planting	Weeding
Cassava	All		Planting			Weeding					Harvest			
Banana	All		Planting						Harvest					
Sweet Potato	Poor		Planting			Weeding		Harvest			Planting			
Livestock														
Cattle	Better-off		Sales	Births			In-heat						Migration	Sales
Goats/Sheep	All		Sales			Sales	In-heat					Births		
Pigs	Better-off		Sales			Sales								
Poultry	Poor		Sales						Sales					
OTHER														
Staple food purchase	All													
Agricultural Labor	Poor													
Agricultural Spending (credit)	All													
School Fees	All													
Social spending	All													
Illness	All													

Seasonal Calendar - Burundi - October 2009

Zone 3 - Depressions de l'Est

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
SEASONS														
Rainy seasons				Short rainy season				Long rainy season						
Dry Seasons														
Agricultural Seasons				Season A					Season B				Season C	
Hunger Periods														
	Wealth Group	Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
CROPS														
Beans	All	A		Planting	Weeding		Harvest							
		B							Planting	Weeding		Harvest		
Cassava	All	A			Planting									
		B								Planting				
Sorghum	Poor				Planting								Harvest	
Rice	Better-off				Nursery	Pick-out					Harvest			
Groundnuts	Better-off			Planting		Weeding				Harvest				
Banana	All			Planting			Harvest							Harvest
LIVESTOCK														
Cattle	Better-off		Sales					Milk production						
Goats	All		Sales					Sales						
Pigs	Poor		Sales					Sales			Sales			
Poultry	Poor		Sales											
OTHER														
Staple food purchase														
Agricultural labor			Peak	Weak				Peak		Weak				
Agricultural spending (credit)														
School fees														
Social Spending														
Malaria														
Diarrhea														
Income														

Seasonal Calendar - Burundi - October 2009

Zone 4 - Depressions du Nord

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
SEASONS														
Rainy seasons				Short rainy season				Long rainy season						
Dry Seasons														
Agricultural Seasons				Season A					Season B				Season C ->	
Hunger Periods														
	Wealth Group	Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
CROPS														
Beans	All	A		Planting	Weeding		Harvest							
		B							Planting	Weeding		Harvest		
Sorghum	All				Planting			Weeding				Harvest		
Cassava	All	A			Planting									
		B							Planting					
Sweet Potato	Poor			Planting				Planting	Harvest					Harvest
LIVESTOCK														
Cattle	Better-off		Sales					Milk Production						
Goats	All		Sales					Sales						
Poultry	All		Sales											
Bee Keeping													Sales	
Fishing			Sales											
OTHER														
Staple food purchase														
Agricultural labor														
Agricultural spending (credit)														
School fees														
Social spending														
Malaria														
Diarrhea														
Income														

Seasonal Calendar - Burundi - October 2009

Zone 5 - Haute Altitude Nord

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	
SEASONS			Short rainy season						Long rainy season						
Rainy seasons															
Dry Seasons															
Agricultural Seasons			Season A						Season B						
Agricultural Seasons									Season C ->						
Hunger Periods			Big hunger period						Small hunger period						
Hunger Periods															
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	
CROPS	Wealth Group	Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug	
Maize	All	A	-> Prep	Planting					Harvest					Prep->	
		C				Harvest					Prep	Planting			
Beans	All	B						Prep	Planting			Harvest			
		C		Harvest							Prep	Planting			
Peas		B					Prep	Planting			Harvest				
Irish Potato	Better-off	A	-> Preparation		Planting			Harvest						Preparation ->	
		B					Prep	Planting				Harvest			
		C		Harvest							Prep	Planting			
Vegetables	Better-off	C	Harvest								Prep	Planting			
Sweet Potato	Poor	A	-> Preparation		Planting			Harvest						Preparation ->	
		B	Harvest				Preparation			Planting					
		C		Harvest							Prep	Planting			
Banana	All	A	-> Preparation	Planting									Preparation ->		
Wheat	Better-off	B					Preparation		Planting						
Coffee	Better-off	B								Harvest					
Tea	Better-off	B		Harvest											
LIVESTOCK															
Goats	Better-off		Sales								In-beat				
Pigs	Better-off		Sales								In-beat				
Rabbits	Poor		Sales												
Poultry	Poor		Sales												
Guinea Pigs	Better-off		Sales												
OTHER															
Staple food purchase															
Inputs															
School fees															
Local labor															
Migratory labor			Migratory labor to the Plaine d'Imbo												
Social spending															

Seasonal Calendar - Burundi - October 2009

Zone 7 - Plaine Imbo

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
SEASONS														
Rainy seasons				Short rainy season					Long rainy season					
Dry Seasons														
Agricultural Seasons				Season A					Season B					
Hunger Periods														
	Wealth Group	Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
CROPS														
Maize	All	A		Planting	Weeding		Harvest							
Beans	All	A		Planting	Weeding		Harvest							
		B						Planting	Weeding		Harvest			
Cassava	All	A			Planting									
		B							Planting					
Rice	All		Nursery	Pick-out		Weeding	Weeding	Weeding			Harvest			
Oil Palm	All			Planting				Weeding						Nursery
Cotton	Better-off					Planting	Weeding				Harvest			
Tomato		A		Planting	Weeding		Harvest							
		B						Planting	Weeding		Harvest			
LIVESTOCK														
Cattle	Better-off		Sales				Milk Production							
Goats	All			Sales				Sales						
Pigs	All		Sales					Sales			Sales			
Poultry	All		Sales											
Bee Keeping													Sales	
OTHER														
Staple food purchase														
Local labor														
Agricultural spending														
School fees														
Social spending														
Malaria														
Diarrhea														
Income														

Seasonal Calendar - Burundi - October 2009

Zone 8 - Plateaux Humides

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug		
SEASONS																
Rainy seasons			Short rainy season			Long rainy season										
Dry Seasons																
Agricultural Seasons			Season A						Season B						Seasons C ->	
Hunger Periods																
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug		
CROPS																
	Wealth Group	Season	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug		
Maize	All	A	Preparation	Planting	Weeding				Harvest							
		C				Harvest						Preparation	Planting	Weeding		
Beans	All	A		Planting	Weeding	Harvest										
		B						Planting	Weeding		Harvest					
		C		Harvest									Planting	Weeding		
Cassava	All			Plantation		Weeding							Harvest			
Rice	Better-off					Planting	Weeding					Harvest				
Groundnuts	Better-off					Planting	Weeding			Harvest						
Banana	All			Plantation							Harvest					
Sweet potato	Poor			Planting	Weeding			Harvest				Planting				
Vegetables	Better-off															
Coffee	Better-off															
LIVESTOCK																
Cattle	Better-off		Sales	Births		In-heat							Migration	Sales		
Goats/Sheep	All		Sales		Sales	In-heat						Births				
Pigs	All		Sales		Sales											
Poultry	Poor		Sales						Sales							
OTHER																
Staple food purchase																
Agricultural labor																
Agricultural spending (credit)																
School fees																
Social spending																
Illness																

Seasonal Calendar - Burundi - October 2009

Zone 9 - Plateaux Secs de l'Est

			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
SEASONS														
Rainy seasons				Short rainy season				Long rainy season						
Dry Seasons														
Agricultural Seasons				Season A					Season B				Seasons C ->	
Hunger Periods														
			Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Jul	Aug
Crops														
Maize	All	A	Preparation	Planting	Weeding				Harvest					
		C				Harvest						Preparation	Planting	Weeding
Beans	All	A		Planting	Weeding		Harvest							
		B							Planting	Weeding		Harvest		
		C		Harvest									Planting	Weeding
Cassava	All		Planting			Weeding						Harvest		
Rice	All						Planting	Weeding				Harvest		
Groundnuts	All						Planting		Weeding			Harvest		
Banana	All		Planting							Harvest				
Sweet Potato	Poor			Planting			Weeding		Harvest			Planting		
Vegetables	All		Harvest									Planting		Harvest
Coffee	All			Planting				Harvest						
LIVESTOCK														
Goats	All		Sales			Sales	In-heat					Births		
Poultry	All		Sales						Sales					
OTHER														
Staple food purchase														
Agricultural labor														
Agricultural spending (credit)														
School fees														
Social spending														
Illness														

Annex 1. Workshop participants

2020/21 review participants

	Name	Organization	E-mail
1	MIGAMBI Nicodeme	BPEAE Kirundo	migambinicode@gmail.com
2	MUNEZERO Téléspore	BPEAE Makamba	munezerotelesphore@gmail.com
3	NZEYIMANA Rémy	BPEAE Muramvya	remynzeyimana@yahoo.fr
4	NDAYIKEZE Juvénal	BPEAE Bururi	j.ndayikeze2015@gmail.com
5	NIJIMBERE Francine	BPEAE Gitega	francineniji@gmail.com
6	MANIRAKIZA Cyrille	BPEAE Kayanza	cmanirakiza@yahoo.fr
7	BARIKURYAYO Privat	BPEAE Ngozi	barikuryayop@gmail.com
8	NDENZAKO Elvis	BPEAE Cankuzo	elvisnden2017@gmail.com
9	MINANI Prime	BPEAE Rutana	primeminani@gmail.com
10	NDACAYISABA Noël	BPEAE-Muyinga	noelndac@gmail.com
11	NIJIMBERE Ernest	BPEAE Rumonge	nijimbere.ernest@yahoo.fr
12	NIBIZI Joseph	BPEAE-Buja Rural	nibizijoseph28@gmail.com
13	RUPEREZA Célestin	BPEAE Cibitoke	ruperezacel@yahoo.fr
14	MINANI Prime	BPEAE Rutana	primeminani@gmail.com
15	NDENZAKO Elvis	BPEAE Cankuzo	elvisnden2017@gmail.com
16	NIBIZI Joseph	BPEAE-Buja Rural	nibizijoseph28@gmail.com
17	Issa Fabrice	PACT-Buja Rural	pactbu@yahoo.fr
18	Méthode Niyongendako	FEWS NET Burundi	mniyongendako@fews.com
19	Nora Lecumberri	FEWS NET	nlecumberri@fews.com

2009 workshop participants

	Nom et Prénom	Institutions	E-mail
1	BANYANKIYE Pégase	CRS Bujumbura	banyankiye@yahoo.fr
2	BUTOYI Frédérique	DPAE Muramvya	frederiquebutoyi@yahoo.fr
3	GAHUNGU Richard	MINAGRIE Bujumbura	richard_gahungu@yahoo.fr
4	MAHWANE Jean	WFP Ngozi	jean.mahwane@wfp.org
5	MAMIRAKIZA Alexis	DPAE Mahamba	nyarushatsi@yahoo.fr
6	MWERU Alphonse	DPAE Cankuzo	alphonsemweru@yahoo.fr
7	NDAKOZE Alain Gilbert	FAO Gitega	alain.ndakoze@fao.org
8	NDAYISENGA Jeanne Françoise	WFP Bujumbura	jeanne_francoise.ndayisenga@wfp.org
9	NDIKUMAGENGE Pierre	BAP / PAIR Bujumbura	pndikumagenge@odai.com
10	NDIZEYE J. Chrysostome	CARITAS Bujumbura	izerespoir@yahoo.fr
11	NDUWIMANA Martin	MINAGRIE Bujumbura	nduwiman@yahoo.fr
12	NGENDAKUMANA J. Berchmans	DGMAVA Gitega	-
13	NINGANZA Longin	DGPAE Bujumbura	nionganza2001@yahoo.fr
14	NIYONGENDAKO Méthode	FAO Bujumbura	methode.niyongendako@fao.org
15	NJEJIMANA Jeanine	MINAGRIE Bujumbura	njejeanine@yahoo.fr
16	NTAHONKIRIYE Omer	DGMAVA Gitega	ntahonkiriyeo@yahoo.fr
17	NTAKARUTIMANA Rose	DGPAE Bujumbura	rosenta2000@yahoo.fr
18	NZEYIMANA Marc	COPEL Buruni	nzeyimanamarc@yahoo.fr
19	NZITUNGA Isaac	MINAGRIE Bujumbura	nzitunga@yahoo.fr
20	RURANTIJE Aloys	IGEBU Gitega	arurantije@yahoo.fr

Annex 2. Partners met during field verification visits (2009)

MURAMVYA

Alfred Babo
Directeur Adjoint de DPAE Muramvya
Albabo11@yahoo.com
Frédérique Butoyi
DPAE Kirundo
Responsable SAP/SSA Muramvya frederiquebutoyi@yahoo.fr
Tel: (+257) 79 917 680

KIRUNDO

Elie Ndayisaba
Chef de service Formation-Vulgarisation DPAE Kirundo
ndayisabaelie@yahoo.fr
Tel: (+257) 79 811 402
Pierre-Claver Butera
Agro Action Allemande Responsable SAP/SSA Kirundo
buterapierreclaver@yahoo.fr
Tel : (+257) 79 903 501

RUTANA

Cassien Kanyegeri
Directeur Provincial DPAE Rutana kanyegericassi@yahoo.fr
Tel: (+257) 79 937 243
Emile Sindaharaye
HELP Channel Burundi Chef d'Antenne Sud sindemile@yahoo.fr
Tel : 79 986 419
Venant Harizinana
Charge des Projets de Reboisement et Sécurité Alimentaire
Tel : 77 746 816