

# LASER PULSE

Long-term Assistance and Services for Research (LASER)  
Partners for University-Led Solutions Engine (PULSE)

## DESK REVIEW AND MARKET STUDY IN KASAI AND KASAI CENTRAL PROVINCES OF THE DEMOCRATIC REPUBLIC OF THE CONGO (DRC)

SUPPLEMENT TO AGREEMENT NO. AID-7200AA18CA00009

AOR Name: Kevin Roberts

January 2023

This publication was produced for review by the United States Agency International Development (USAID). It was produced for the LASER PULSE Project, managed by Purdue University. The views expressed in this publication do not necessarily reflect the views of USAID or the United States Government.



## **ABOUT LASER PULSE**

LASER (Long-term Assistance and Services for Research) PULSE (Partners for University-Led Solutions Engine) is a \$70M program funded through USAID's Innovation, Technology, and Research Hub, that delivers research-driven solutions to field-sourced development challenges in USAID partner countries.

A consortium led by Purdue University, with core partners Catholic Relief Services, Indiana University, Makerere University, and the University of Notre Dame, implements the LASER PULSE program through a growing network of 3,000+ researchers and development practitioners in 74 countries.

LASER PULSE collaborates with USAID missions, bureaus, and independent offices, and other local stakeholders to identify research needs for critical development challenges, and funds and strengthens the capacity of researcher-practitioner teams to co-design solutions that translate into policy and practice.

## **ACKNOWLEDGEMENTS**

The compilation of this desk review and market study was accomplished with the involvement of a variety of professionals with a shared humanitarian drive. Daniel Houston, Andrea Procopio, and Rick Spencer, among others, from the Bureau of Humanitarian Assistance team at USAID provided invaluable leadership and technical support. We would like to give our special thanks to Andrea Procopio for her tireless commitment to review and provide substantive and editorial comments. Her suggestions and revisions significantly improved the quality of the report. Brent Wells and Corrie Willson (Sutherland) from Innovation, Technology & Research Hub (ITR) at USAID shared their keen operational guidance. LASER PULSE staff, particularly Yuehwern Yih, Betty Bugusu, and Leulseged Kasa, served as tireless support and guidance throughout the project. Yuehwern Yih from LASER PULSE's Research and Publications Working Group provided a thoughtful and thorough review. Donatien PandiKuziku Malakasa, Country Representative of Famine Early Warning Systems Network (FEWS NET), provided key documents and information, and was very responsive to the team in support of this report. Bonaventure Fandohan of Octopus Consulting & Insight Lead directed the data collection and went beyond expectations in his efforts providing key documents and sharing pictures from the field. We would also like to thank Didier Alia for his contributions to the study design. Finally, we would like to extend special thanks to Krista Kelley, Prudence Mbah, and Angela Lasso Jimenez of the Purdue Policy Research Institute for their work.

## **SUGGESTED CITATION**

Kakpo, A., Sagbo, N.S., Connaughton, S. L., Kibriya, S., and Yehouenou, L. 2023. Desk Review and Market Study in Kasai and Kasai Central Provinces of the Democratic Republic of the Congo (DRC). West Lafayette, IN: Long-term Assistance and Services for Research - Partners for University-Led Solutions Engine (LASER PULSE Consortium).

## Executive Summary

This Desk Review and Market Study, led by Purdue University, the Conflict and Development Foundation, and NFK Consulting generates insights to inform the design of potential Resilience Food Security Activities (RFSAs) in the provinces of Kasai and Kasai Central in the Democratic Republic of the Congo (DRC). Specifically, this study conducts (i) a market analysis to inform the Bellmon Determination and the selection of food assistance modalities in Kasai and Kasai Central, and (ii) a desk review to provide USAID's Bureau of Humanitarian Assistance (BHA) and potential implementing partners with a contextual understanding regarding the resilience and food and nutrition security situation, stakeholders, and key activity design issues for consideration.

## General Context

The DRC is the largest country in Sub-Saharan Africa, with pervasive poverty, civil conflict, and chronic food insecurity (World Bank 2022). Located in central DRC, Kasai and Kasai Central are two landlocked provinces. The provinces derive their names from the Kasai River, the second-longest river in the DRC. Before the 2015 partition, Kasai and Kasai Central were part of the Kasai Occidental province.

Kasai has an area of 95,631 km<sup>2</sup> with an estimated population of 3.2 million people in 2019, while Kasai Central is much smaller but more populated, with an area of 59,500 km<sup>2</sup> and a population of 3.7 million inhabitants in the same year (INS 2021). The Kasai province shares borders with the provinces of Mai-Ndombe and Tshuapa to its northwest, the province of Sankuru to its northeast, the province of Kasai Central to its east, the provinces of Kwango and Kwilu to its west, and the Angolan province of Lunda Norte to its south. The Kasai Central province borders the Sankuru province in the north, the Kasai province in the west, the Kasai Oriental and Lomami provinces in the east, and the Lualaba province in the south.

Although Kasai and Kasai Central have great potential to be economically developed, they are among the poorest provinces in the country. In 2021, Kasai and Kasai Central recorded the second and third-highest numbers of people who were in IPC level 3 (crisis) food insecurity, with 2.1 and 2 million people (IPC 2021), respectively. Furthermore, the two provinces were the epicenter of the 2016–2017 armed conflicts, the effects of which continue to plague the provinces to date. The main sources of livelihood in the two provinces are subsistence-level agriculture, livestock production, and mining.

## Methodology

This study drew on an extensive literature review as well as primary qualitative data and secondary data. The primary data were collected through six key informant interviews (KIIs), three in each province. Each key informant answered a number of questions listed in the scope of work (see Annex 3 for the interview guide). Additionally, secondary data, including rainfall data for the Kasai and Kasai Central provinces for the past five years (2017-2021) was obtained from the World Food Programme (WFP) Data Viz platform. Monthly market price data for major staple crops grown in Kasai and Kasai Central from August 2020 to October 2022 was collected from FEWS NET. One of the limitations of this study is that the researchers were not able to consult the National and Provincial Ministry of the Economy and the Ministry of Foreign Trade for the DRC.

## **Market Context**

Markets in Kasai and Kasai Central are not well integrated into national and international markets (WFP 2017). Markets in the two provinces are characterized by strong price seasonality. Over the past three years, market prices have been trending upward (FEWS NET 2021), which could present challenges for food accessibility. High food prices, low household income, and the poor state of road infrastructure are the three major challenges to household food accessibility in Kasai and Kasai Central.

## **Consumption and Dietary Habits**

The typical household food basket in Kasai and Kasai Central includes the following staple foods: cassava, legumes (including cowpeas, groundnuts, and other dried beans to a lesser extent), maize, plantains, and rice. Cassava is most commonly blended and pounded with maize meal to make fufu. Palm oil also plays an important role in the dietary habits of people living in Kasai and Kasai Central. Irish and sweet potatoes are grown but are not an integral part of the residents' dietary habits.

## **Production and Imports**

Agriculture is the main source of food and income for the majority of households in Kasai and Kasai Central, with cassava, maize, and rice being the major crops grown. Supply of these staple foods is insufficient to meet local demand. In a typical year, local production only covers 30 to 40 percent of food demand. The gap is filled through imports from Zambia and South Africa. The inability of local production to meet demand can be attributed to factors such as a lack of labor, a lack of agricultural inputs, and a lack of access to credit.

## **Infrastructure**

### **Road and Railroads**

Roads in Kasai and Kasai Central, as in other regions of the DRC, are inadequate and often impassable which exacerbates poverty and malnutrition (USAID 2016). The two provinces possess a road network, which consists of 1,977 km of national paved roads. These roads were paved in 1976 and have been maintained recently. The portion of the road connecting Kananga and Kalamba Mbuji, for example, has recently been renovated through an African Development Bank (AfdB) project (USAID 2015a). However, overall the road network is in poor condition and needs significant improvement. Kasai and Kasai Central also have 1,147 km of unpaved provincial roads and 11,486 km of agricultural service roads. In terms of rail infrastructure, the state-owned train (Société Nationale des Chemins de Fer du Congo) runs through Kananga in Kasai Central, but does so very erratically, if at all (USAID 2015a).

### **Ports**

Waterways offer some opportunities to transport goods and food assistance into the Kasai provinces through ports. The port of Ilebo in Kasai is regularly used to bring goods up the river from Kinshasa; these goods are then sold in the town of Luebo (over 20 km away). Barges are not able to come directly to Luebo due to sand drifts on the riverbed. Therefore, goods are offloaded onto smaller boats at the port and transported to their final destination. Transportation from Kinshasa to the port of Ilebo is viable, but large-scale, overland transport and the distribution of commodities beyond Luebo is very difficult.

### **Digital Infrastructure**

According to the 2018 Multiple Indicator Cluster Survey 6 (MICS), 33 percent of households in Kasai and 29 percent of those in Kasai Central have at least one mobile phone. There are also more than thirty local radio and television stations in the two Kasai provinces. According to the MICS Survey (2018), 19 percent of men between ages 15 and 49 have access to at least one type of media (newspaper, radio, or television) in Kasai, as opposed to four percent of women. In Kasai Central, 21 percent of men and five percent of women have access to at least one type of media.

### **Financial Services**

One main challenge facing households in Kasai and Kasai Central is the lack of access to formal banking services. Many of the provinces' residents rely on informal financial services, such as informal lenders, and informal savings, as well as credit groups, and microfinance institutions to meet their financial needs. Examples of the major microfinance institutions operating in the Kasai region include the Foundation for International Community Assistance (FINCA), Grameen International, and MicroCred. These informal financial services can be risky and often come with high-interest rates, making them difficult for many people to afford. The lack of access to formal financial services makes it challenging for people in Kasai and Kasai Central to access credit and invest in their income-generating activities.

### **Storage Facilities**

There are few storage facilities in Kasai and Kasai Central. Some of the existing facilities were built as part of the integrated infrastructure projects of the Coopération Technique Belge (CTB). CTB also built modest-sized community warehouses (ranging from approximately 300m<sup>2</sup> to 640m<sup>2</sup>) in a number of villages in Kasai. At the river ports of Bene Debele and Luebo, the Office National des Transports storage facility is available, along with others owned by the Catholic diocese in Luebo and a commercial operator. Facilities in Luebo also includes a newly built and privately owned facility.

### **Delivery Mechanisms**

Electronic payment systems, such as mobile money, can help reduce the costs and risks associated with distributing cash transfers, especially in areas with limited infrastructure or financial services (Blattman et al. 2014). In Kasai and Kasai Central, since a low percentage of households are expected to use mobile phones, if a cash transfer is preferred, a combination of existing financial services will be the most effective method for cash disbursement. A combination of mobile money delivery and delivery via microfinance institutions works in rural settings.

### **Food Assistance and Bellmon Determination**

Many assistance modalities can be implemented in Kasai and Kasai Central including in-kind food assistance, cash transfers, and food vouchers. Since Kasai and Kasai Central are not self-sufficient in maize production, food assistance can primarily focus on imports from Zambia. A major challenge in planning the delivery of food aid is the quality of local storage infrastructures. There are very few quality storage facilities in Kasai and Kasai Central, which could pose significant challenges to the implementation of food aid in those provinces. Therefore, the following factors should be considered for potential in-kind food assistance in Kasai and Kasai Central: access and distribution, local food availability and prices, cultural and dietary preferences, and nutrition.

One noteworthy food assistance procurement factor is that the DRC government does not impose restrictions on the import of food products, even in the case of Genetically Modified Organisms (GMOs). This could facilitate regional and international procurement. GMO multiplication (growing) is forbidden in the country.

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## Acronyms

<b>ADRA</b>	Adventist Development and Relief Agency
<b>AfDB</b>	African Development Bank
<b>BHA</b>	Bureau of Humanitarian Assistance
<b>CTB</b>	Coopération Technique Belge
<b>DRC</b>	Democratic Republic of the Congo
<b>EFSA</b>	Emergency Food Security Assessment Study
<b>FAO</b>	United Nations Food and Agriculture Organization
<b>FINCA</b>	Foundation for International Community Assistance
<b>ICRC</b>	International Committee of the Red Cross
<b>INS</b>	National Institute of Statistics (Institut National de la Statistique)
<b>LRP</b>	Local and Regional Procurement
<b>MICS</b>	Multiple Indicator Cluster Survey
<b>MNO</b>	Mobile Network Operators
<b>NGO</b>	Non-Governmental Organization
<b>RFSA</b>	Resilience Food Security Activity
<b>UNICEF</b>	United Nations Children's Fund
<b>USAID</b>	United States Agency for International Development
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WFP</b>	World Food Programme

## 1. Introduction

With a population of approximately 93 million (INS 2021), the Democratic Republic of the Congo (DRC) is the fourth most populated country in Africa and is projected to be the eighth most populous country in the world by 2050. In terms of land area, the DRC is the largest country in Sub-Saharan Africa and the second largest country in Africa (2,344,858 km<sup>2</sup>). The DRC has vast natural resources, including 80 million hectares of arable land and immense mineral reserves. These factors give the DRC the potential to be one of the richest countries in the world. However, the DRC is currently one of the five poorest countries in the world, with 64 percent of the country's population living on less than \$2.15 USD per day (World Bank 2022).

The DRC is also among the countries with the greatest number of people suffering from acute food insecurity and malnutrition, making it one of the countries with largest needs for food assistance in the world. It is estimated that 27 million Congolese (26 percent of the DRC's population) experienced severe food insecurity in 2021 (IPC 2022). As of March 2022, the Integrated Food Security Phase Classification (IPC) estimated that 857,000 children between the ages of 6 months and 59 months as well as 468,000 pregnant women in the DRC have suffered from acute malnutrition (IPC 2022). Furthermore, 42 percent of children are stunted in the DRC, a figure which is considered high according to the World Health Organization (WHO) (USAID 2021).

Armed conflicts in the DRC over the past three decades have worsened the food security and malnutrition situation of the country's most vulnerable populations. In early 2017, approximately 1.7 million people were forced to move away from their homes after armed conflicts erupted in the Kasai region. This resulted in thousands of households losing their main source of income and livelihood (USAID 2021). The COVID-19 global pandemic created additional challenges for both urban and rural households. The pandemic caused the disruption of inputs into the agricultural supply chain (e.g., seeds, fertilizer, and pesticides) resulting in a rise in staple crop prices. This has, in turn, exacerbated food insecurity and malnutrition in vulnerable households.

Kasai and Kasai Central, located in central DRC, are two of the poorest provinces in the country. In 2021, Kasai recorded the second-highest number of people (2.1 million) with severe food insecurity in the DRC. Kasai Central had the third highest number of people (2 million) with severe food insecurity in the country. In addition, the two provinces were the epicenter of the 2016–2017 armed conflicts which contributed to the deterioration of the food security status of people living in the region.

With this context in mind, this study conducts:

- market analysis to inform the Bellmon Determination<sup>1</sup> and the selection of food assistance modalities in Kasai and Kasai Central, and
- a desk review to provide USAID's Bureau of Humanitarian Assistance (BHA) and potential implementing partners with a contextual understanding regarding the resilience and food and nutrition security situation, stakeholders, and key

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<sup>1</sup> See [https://pdf.usaid.gov/pdf\\_docs/PA00TQVT.pdf](https://pdf.usaid.gov/pdf_docs/PA00TQVT.pdf)

activity design issues for consideration.

The information presented in this report has been collected through a literature review complemented by secondary data, discussions with development and humanitarian actors, and key informant interviews (KIIs). Some of the interviews were conducted remotely for efficiency and to reduce travel time. The field visits and aforementioned interviews/discussions provided critical ground knowledge. The region lacks up to date comprehensive quantitative information about food commodities and facilities. However, the report used the qualitative data collected to fill in those gaps.

## 2. Overview of the Kasai and Kasai Central Provinces

The Kasai and Kasai Central provinces are two of the country’s most remote provinces. The provinces derive their names from the Kasai River, the second longest river in the DRC. Before the 2015 partition, Kasai and Kasai Central were part of the Kasai Occidental province. The region is historically known for being a diamond reserve.

The Kasai province shares borders with the provinces of Mai-Ndombe and Tshuapa to its northwest, the province of Sankuru to its northeast, the province of Kasai Central to its east, the Kwilu and Kwango provinces to its west, and the Angolan province of Lunda Norte to its south. The Kasai Central province borders the Sankuru province in the north, the Kasai province in the west, the Kasai Oriental and Lomami provinces in the east, and the Lualaba province in the south.



**Figure 1: Map of Kasai and Kasai Central Provinces**

Source: Authors 2022

## 2.1. Socio-Economic and Political Context

### 2.1.1. Population

As of 2019, Kasai (95,631 km<sup>2</sup>) had a population of 3.2 million inhabitants (3.4 percent of the total DRC population), 49 percent of which were female (INS<sup>2</sup> 2019). In the same year, Kasai Central (59,500 km<sup>2</sup>) had a population of 3.7 million inhabitants (approximately 4 percent of the DRC's population in 2019), of whom, approximately 51 percent are female (INS 2019). Both provinces have a young population, with almost two-thirds of Kasai residents and more than 70 percent of Kasai Central inhabitants being 30 years old or younger (Figure 2).

The predominant ethnic groups found in Kasai are the Kete, the Kuba, the Lulua, and the Tetela, while the major ethnic groups in Kasai Central are the Kete, the Lulua, and the Luntu. Although many dialects are used in these provinces, the major languages spoken are Tshiluba and French (Calderon and Englebert 2019).

Agriculture is the main source of income for most households in Kasai and Kasai Central, followed by livestock production and fishing. Some households in Kasai are also involved in diamond mining and the exploitation of forest resources (INS 2021).

### 2.1.2. Climate and Vegetation

Kasai and Kasai Central have a wet (tropical) and dry (savanna) climate, providing the provinces with great potential for agricultural production. The provinces have approximately ten rainy months, which are divided into two seasons. The first rainy season runs from mid-August to mid-January and the second rainy season runs from mid-January to mid-June. The dry season runs from mid-June to mid-August. On average Kasai receives about 1100 mm of rainfall per year and Kasai Central receives around 1200 mm of rainfall annually. The average daily temperature in Kasai and Kasai Central varies between approximately 70° F to 88° F (21°C to 31°C) (World and Climate<sup>3</sup> 2022). Kasai and Kasai Central are covered by the dense humid (or equatorial) forest in the north, the savanna in the south, and the subequatorial forest in other parts of the two provinces. The hydrography is mainly composed of the Kasai River, itself fed by several tributaries. The soil in these two Kasai provinces is rich and fertile and well-suited to growing staple crops such as maize, rice, cowpeas, cassava, and vegetables (ICRC 2021).

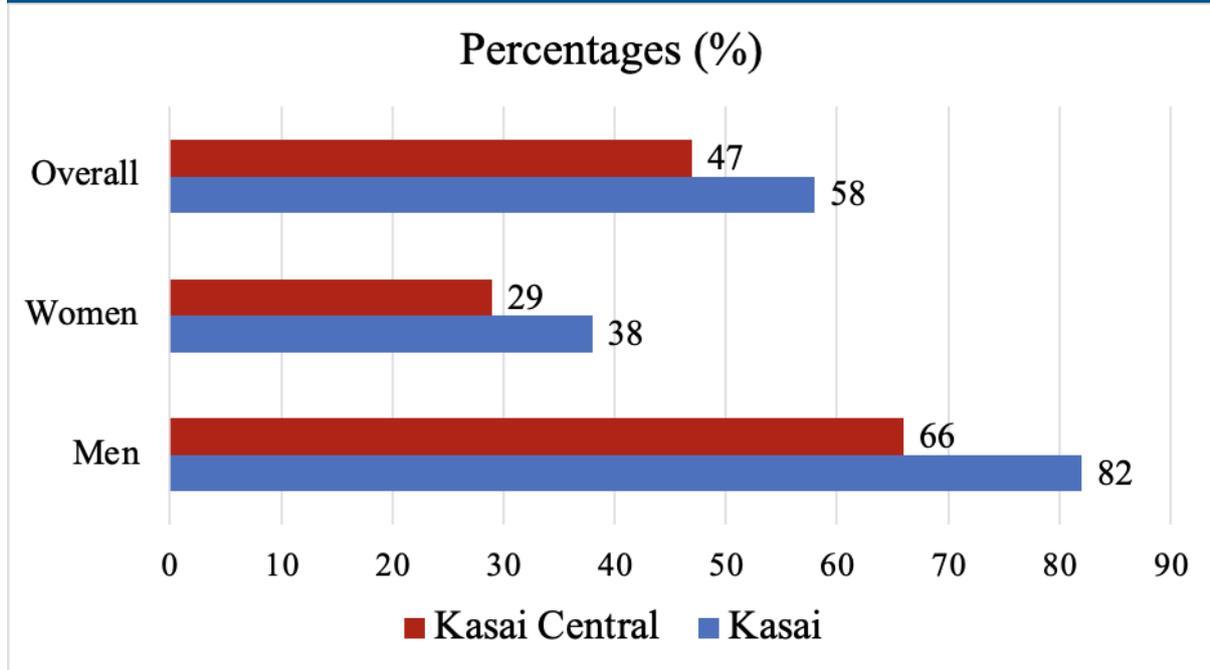
### 2.1.3. Access to Education

In terms of literacy and access to education, the situation in Kasai and Kasai Central provinces is alarming. Data from the National Institute of Statistics (INS 2021) put the overall literacy rate (number of individuals aged 15 years or more who can read and write) in 2017 in Kasai and Kasai Central at around 58 percent and 47 percent, respectively. The national literacy rate in 2017 was 77 percent. Literacy rates for men in Kasai stand at approximately 82 percent, but the rate for women is much lower at around 38 percent. A similar disparity in literacy rates between men and women is also observed in Kasai Central (66 percent for men and 29 percent for women) (Figure 2).

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<sup>2</sup> National Institute of Statistics in the DRC (Institut National de la Statistique in French)

<sup>3</sup> Refer to: <https://tcktkctck.org/democratic-republic-of-the-congo/kasai> and <https://tcktkctck.org/democratic-republic-of-the-congo/kasai-central>



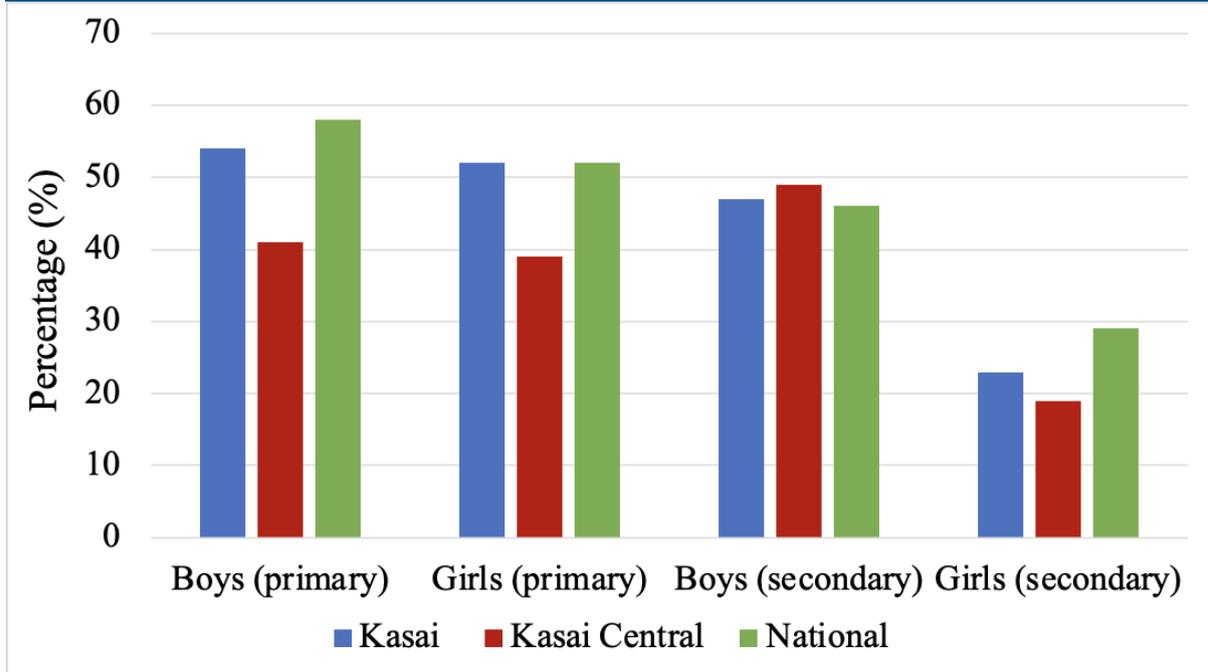
**Figure 2: Literacy Rates in Kasai and Kasai Central by Sex in 2017**

Source: INS 2021

As far as formal education is concerned, approximately 75,000 boys (aged 6 years and older) in Kasai were enrolled in the first year of primary school in 2017, versus 68,000 girls. In Kasai Central, 88,000 boys and 76,000 girls attended the first year of primary school in 2017. Figure 3 displays the completion rates for primary and secondary school by sex in Kasai and Kasai Central in 2017. Boys who have attended primary school in Kasai have a 54 percent completion rate versus a completion rate of 52 percent for girls. The national primary school completion rate for boys and girls is 58 percent and 52 percent, respectively (Figure 3). On the other hand, 41 percent of boys and 39 percent of girls who started primary school in Kasai Central completed it.

At the secondary school level, there was a 47 percent completion rate for boys in Kasai in 2017, and a 23 percent completion rate for girls. In Kasai Central, about 49 percent of boys had completed secondary school, while 19 percent of girls had done so in 2017. The secondary school completion rate for boys was higher than the national average for boys (46 percent), but the completion rate for girls was lower than the national average for girls (29 percent) in 2017 (INS 2021).

Few people in Kasai and Kasai Central attend university. Data from the DRC’s Ministry of Higher Education show that of all students enrolled in a university program in the country in 2016, only about 3 percent came from Kasai Central (of which 24 percent were women), and only 1 percent came from Kasai (of which only 11 percent were women).



**Figure 3: School Completion Rates in Kasai and Kasai Central by Sex in 2017**

Source: INS 2021

Students in Kasai and Kasai Central face numerous challenges that often lead to school dropouts. Among those challenges are the lack of financial means to cover tuition and the shortage of school furniture and basic essentials such as backpacks, books, and pens. Data from INS reveals that more than 91 percent of students who dropped out of primary school in Kasai mentioned high tuition as the main reason, and 47 percent in Kasai Central indicated the same. Other major reasons for dropouts in Kasai and Kasai Central include distance from school, insecurity, early pregnancies, and diseases. Furthermore, the 2016 Kasai inter-communal conflict negatively impacted school attendance. According to a survey conducted in the Kasai region in 2018, the Kasai conflict left the majority of schools in the region either burned or looted. Most officials and teachers left and decided not to return because of the inter-communal crisis (Toma 2018).

**2.1.4. Poverty**

Poverty is a complex, multidimensional phenomenon. Although lack of monetary resources is often used to define poverty, a full description of households' poverty status will also account for dimensions such as lack of access to education and basic healthcare, lack of freedom, inability to participate in community activities, and lack of a sense of belonging to society. In terms of monetary resources, 72 and 73 percent<sup>4</sup> of people living in Kasai and Kasai Central, respectively, were poor in 2020 (SDG Indicators Cluster Survey 2020). The national average that year was 56.2 percent. Looking at non-monetary poverty, 77 percent of Kasai residents were found to be poor, while 60 percent of Kasai Central residents were found to be poor in 2020. The national non-monetary poverty average was 50 percent in 2020 (OCDD and INS 2021).

<sup>4</sup> These figures were calculated using the DRC's national poverty line in 2020.

## 2.2. Infrastructure

The geographic isolation of Kasai and Kasai Central from the rest of the DRC is reflected in the deterioration and lack of infrastructure in the two provinces. Kasai and Kasai Central are landlocked provinces within a country that is nearly landlocked. Neither of these two provinces have 24-hour municipal electricity. Even the major cities in the two provinces generate less than ten hours of electricity per day and frequently less than six hours. This poor infrastructure has both direct and indirect effects on agricultural production and the economy, including transportation, processing, and storage, among other aspects.

### 2.2.1. Road and Rail Infrastructure

In general, roads in Kasai and Kasai Central are not in good condition, and are in some cases impassable, which exacerbates poverty and malnutrition (USAID 2016). The two provinces possess a road network, which consists of 1,977 km of national paved roads. This road network was paved in 1976 and has had some recent maintenance done to it. However, it is in poor condition and needs major improvements. Kasai has a paved road that goes from Tshikapa to Kinshasa and the portion of the road located in Kasai Central, connecting Kananga and Kalamba Mbuji, has recently been renovated through an African Development Bank (AfdB) project (USAID 2015a). Kasai and Kasai Central also have 1,147 km of unpaved provincial roads and 11,486 km of agricultural service roads. In terms of rail infrastructure, the state-owned train (Société Nationale des Chemins de Fer du Congo) is able to run through Kananga in Kasai Central, but does so erratically, if at all (USAID 2015a).



**Figure 4: Kabambaie Bridge (Kasai)**  
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**Figure 5: Road in Luiza (Kasai Central)**

### 2.2.2. Domestic Transportation and Distribution of Food

The lack of roads in Kasai and Kasai Central, as well as the dilapidated state of the current roads, is a significant barrier to domestic transportation and distribution of food items to areas across the country. In addition, the rail system works at a limited capacity due to a lack of maintenance and has a poor network to reach the other parts of the DRC. Although the Kasai River is another means of domestic transportation, water transportation has not filled the gap in inefficient and costly food distribution due to a lack of dredging and the insufficient availability of docks and jetties. Hence, when food arrives from towns such as Ilebo, it is transported via the poor road or rail system, or on some occasions, by airplane (USAID 2015b).



**Figure 6: Train Station in Ilebo (Kasai)**



**Figure 7: Train Station in Kananga (Kasai Central)**

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### 2.2.3. Ports and Airports

The DRC’s waterways offer some opportunities to transport goods and food assistance into the Kasai provinces through ports. The port of Ilebo in Kasai is regularly used to bring goods up the river from Kinshasa. These goods are then sold in the town of Luebo (over 20 km away). Barges are not able to come directly to Luebo due to sand drifts on the riverbed. Therefore, goods are offloaded onto smaller boats at the port and transported to their final destination. Facilities in Luebo include limited storage owned by the government, a newly built and privately owned facility, and storage facilities owned by the Catholic dioceses. In the past five years, Caritas, in conjunction with the World Food Programme (WFP), has brought in-kind assistance into the Kasai province, albeit in limited quantity. Transportation from Kinshasa to the port of Ilebo is viable, but large-scale, overland transport and distribution of commodities beyond Luebo is difficult. It is important to note that all ports in Kasai are alongside rivers and not by the ocean. Regarding airport infrastructures, information obtained from our KIIs reveals that most territories in Kasai and Kasai Central have an airstrip.



**Figure 8: Port of Ilebo (Kasai)**

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**Figure 9: Airstrip in Ilebo (Kasai)**

### 2.2.4. Electricity

Since 1970, the electricity supply in the DRC has been managed by the Société Nationale d’Electricité. Power is generated from the hydroelectric power stations through Inga I and Inga II dams in Kongo Central Province (USDC ITA 2021). In 2006, the country

was generating only 1,150 MW and supplying electricity to only 10 percent of the population (Lukamba-Muhiya and Uken 2006). Currently, the country is generating just over 2,800 MW. This low power generation is responsible for the country's frequent power blackouts. The electricity shortage has remained an infrastructural challenge hampering productivity.

Currently, less than 10 percent of the Congolese population have access to electricity (USAID 2021). Electricity supply in Kasai and Kasai Central is very low, with just over 31 MW of installed capacity (DRC NIPA 2022). Currently, there are 560,000 Kasai households and 670,000 households in Kasai Central without access to electricity (USAID 2019). In March 2022, the DRC's government, in partnership with the International Finance Corporation, launched a program to increase electricity access in the DRC with Kasai and Kasai Central as part of their focus (DRC NIPA 2022).

### **2.2.5. Digital Infrastructure**

Overall, digital infrastructure in the DRC is underdeveloped, with only 8.6 percent of the population being internet users in 2017 (World Bank 2020), making it one of the African countries with the lowest internet and mobile access. Digital infrastructure in Kasai and Kasai Central are reflective of the limited digital infrastructure at the national level. The telephone network in the two provinces is made up of the public sector (Congolese Post and Telecommunications Company) and the private sector (Airtel, Vodacom, and Orange). According to the MICS survey (2018), 33 percent and 29 percent of households in Kasai and Kasai Central, respectively, possess at least one mobile phone. There are also more than thirty local radio and television stations in the two Kasai provinces. According to the MICS survey (2018), 19 percent of men between the ages of 15 and 49 have access to at least one type of media (newspaper, radio, or television) in Kasai, as opposed to four percent of women. In Kasai Central, 21 percent of men and five percent of women have access to at least one type of media.

### **2.2.6. Market Infrastructure**

Storage facilities are scarce in the Kasai provinces, even though one of the integrated infrastructure projects of the CTB built a number of sizable market structures that include storage facilities. CTB also built modest-sized commodity warehouses (ranging from approximately 300 m<sup>2</sup> to 640 m<sup>2</sup>) in a number of villages in Kasai. At the river ports of Bene Debele and Luebo, the Office National des Transports storage is available, along with facilities owned by the Catholic diocese in Luebo and a commercial operator. The insufficient storage in the two provinces has been recognized and is being addressed by the development and humanitarian community. The WFP recently built two new storage facilities in Kananga and Tshikapa as part of its Emergency Preparedness Activity program<sup>5</sup>.

### **2.2.7. Access to Financial Services and Digital Finance Availability**

Access to finance and informal banking can play a crucial role in the economic development of a region. This is especially true in Kasai and Kasai Central. These provinces, located in the central part of the country, are home to a large and diverse population. Yet many of the residents live in poverty and lack access to formal financial services.

One main challenge facing households in Kasai and Kasai Central is the lack of access to formal banking services. Many of the residents of these provinces rely on informal

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<sup>5</sup> <https://docs.wfp.org/api/documents/WFP-0000069951/download/>

financial services (e.g., informal lenders, moneylenders, and informal savings), credit groups, and microfinance institutions to meet their financial needs. Some of the microfinance institutions operating in the Kasai region include:

- **The Foundation for International Community Assistance (FINCA).** FINCA is a global microfinance organization that provides financial services to low-income individuals and small businesses in the DRC, with a branch in Kasai Central.
- **Grameen International.** The Grameen Foundation is a nonprofit organization that works to improve the lives of poor and marginalized communities by providing access to financial services and other resources. The Grameen Foundation partners with local microfinance institutions to provide microfinance services, including loans, savings, and insurance products, to poor and low-income households and small businesses in the Kasai and Kasai Central provinces.
- **MicroCred.** MicroCred is a microfinance institution that operates in several countries around the world, including the DRC. MicroCred works to provide microfinance services to individuals and small businesses in urban and rural areas, including in Kasai and Kasai Central.

These informal financial services can be risky and often come with high-interest rates, making them difficult for many people to afford. The lack of access to formal financial services also makes it challenging for people in Kasai and Kasai Central to access credit, and invest in their income generating activities.

Digital finance, which refers to the use of electronic means to conduct financial transactions, such as making payments, transferring money, or accessing financial services, is utilized to improve access to financial services for people in Kasai and Kasai Central. One benefit of digital finance is that it allows people to access financial services remotely, without needing to visit a physical bank or financial institution. This is especially important in areas with limited access to traditional banking services. Digital finance is also more convenient and faster than traditional methods, as it allows individuals to conduct transactions and access financial information online or through their mobile phones. Digital finance is being used in Kasai and Kasai Central through mobile banking services, such as M-Pesa and Orange Money, which allow individuals to make payments and transfer money using their mobile phones. These services are often provided by telecommunications companies and can be accessed through a mobile app or by using SMS text messaging.

### 3. Food Security and Malnutrition Context

To obtain a comprehensive understanding of the food security and the import and deficit situation of Kasai and Kasai Central provinces, the research team accessed reports and databases from the DRC Ministry of Agriculture, the DRC Ministry of Planning, the WFP, the Famine Early Warning Systems Network (FEWS NET), the Food and Agriculture Organization (FAO), the Foreign Agricultural Services/USDA, the World Bank, and USAID. While the aggregate information provided a depiction of necessity and deficiency, the datasets were neither complete nor up-to-date. To complement this information the team conducted KIIs. The data gaps were thereby filled with field excerpts and local knowledge. Some of the crop production and consumption levels were hard to determine as the subsistence level farmers consumed their own production and therefore, in some instances,

are not able to document exact numbers. In addition, the import data is not complete due to porous intra-border petty trading in local markets.

The analysis focused on the four pillars of food security: food availability, food accessibility, food utilization and nutrition, and food stability. However, the extremely large difference between available and accessible food commodities and the actual requirement is distinct in all accounts. Our qualitative and quantitative estimations provide an approximation of the ubiquitous need for food commodities for the citizens of Kasai and Kasai Central.

### 3.1. Food Availability

#### 3.1.1. Main Sources of Food

The major sources of food for households in Kasai and Kasai Central are agriculture and livestock production and, to a lesser extent, fishing. The majority of households in Kasai and Kasai Central are engaged in agricultural production, with cassava, maize, and rice being the major agricultural crops produced. Data from the INS show that cassava and maize production in Kasai have been on a steady rise over the past few years. Rice production in Kasai has also increased over the past few years (Table 1). Similar production trends are observed in Kasai Central. In this province, there was a slight increase in cassava and maize production between 2016 and 2019, while rice production increased from 2016 to 2017 but sharply decreased from 2017 to 2019 (Table 2).

**Table 1: Production of Key Agricultural Crops in Kasai (in tons)**

	2016	2017	2018	2019
Cassava	2,108,174	2,166,239	2,285,568	2,348,519
Maize	192,515	197,236	202,073	207,029
Paddy rice	34,333	35,016	35,713	36,424
Sweet potatoes	30,170	32,315	34,613	37,075
Peanut	9,228	9,482	9,743	10,011
Cowpeas	4,403	4,469	4,536	4,604

Source: Statistical Yearbooks 2021 – INS

**Table 2: Production of Key Agricultural Crops in Kasai Central (in tons)**

	2016	2017	2018	2019
Cassava	1,272,290	1,307,333	1,343,341	1,380,341
Maize	156,468	160,305	164,238	168,266
Paddy rice	24,815	26,579	2,847	3,049
Sweet potatoes	28,057	28,829	29,623	30,439
Peanut	28,949	29,525	30,112	31,310
Cowpeas	9,130	9,390	9,663	9,671

Source: Statistical Yearbooks 2021 – INS

### 3.1.2. Food Deficit

Despite this apparent increase in staple crop production, data collected through recent KIIs reveal that local production is insufficient to meet households' food demands. A market study conducted in the Kasai region in 2017 shows that in a normal year, local production only covers 30 to 40 percent of food demand (WFP 2017a). Production deficit estimates for the major staple crops grown in Kasai and Kasai Central are not readily available, but the Ministry of Agriculture estimated that the national production deficit for cereal (rice, maize, millet, sorghum, etc.) was about 9 million tons in 2019, nearly twice the cereal production available at the national level in the same year.

Figures A3 - A9 in the appendix show production deficits by territory for different categories of crops in 2019, using the food needs *coverage rate* ("taux de couverture des besoins alimentaires" in French) calculated by the Ministry of Agriculture with the formula below:

$$\text{The coverage rate} = \left( \frac{\text{Crop Gross Production} - \text{Loss} - \text{Seeds}}{\text{Total population} * \text{Consumption norms}} \right) * 100$$

The coverage rate expresses the relationship between consumption and households' food needs. It helps gauge the capacity of agricultural households to cover their food consumption needs with their own production. Figures A3 – A9 in the appendix suggest that for most crops, agricultural households in most territories of Kasai and Kasai Central did not meet their consumption needs with their production. Specifically, Figure A3 shows that the territories of Kamonia and Mweka in Kasai, and those of Luiza, Kazumba and Demba in Kasai Central experienced a deficit for cowpeas in 2019. There was not sufficient data to assess the coverage rate for beans in the provinces except for the territory of Dibaya in Kasai Central, which experienced a deficit (Appendix Figure A4). Appendix Figure A5 shows that Kamonia, Mweka and almost all territories in Kasai Central had a deficit for maize. Kamonia also had a deficit for cassava, whereas Mweka had a surplus for cassava in 2019. Data for other territories of Kasai were missing. Appendix Figures A6, A7, A8 and A9 show that Kamonia and Mweka, and almost all territories in Kasai Central experienced a deficit for peanuts and other cereals in 2019.

In most years, the deficit in staple crops is filled through imports from neighboring countries such as Zambia and Angola (WFP 2017a). The inability of local production to meet demand can be attributed to several factors. The Comprehensive Emergency Food Security Assessment Study (EFSA) conducted in Kasai and Kasai Central finds that the lack of agricultural inputs, inadequate technology, and limited access to credit are the main challenges faced by agricultural households (EFSA 2020). Furthermore, KIIs mentioned that violent conflicts in the Kasai region have displaced thousands of agricultural households and prevented them from partaking in agricultural activities. Other factors contributing to the inability of staple crop production to meet local demand include negative rainfall shocks and the lack of:

- Producer organizations
- Storage facilities
- Mechanization
- Commercial orientation (producer groups),
- Agronomic expertise
- Improved storage and post harvest handling, services and buyers.

Although the EFSA study found that the majority of households in Kasai and Kasai Central claim to possess arable land, access to land is actually a constraint to agricultural production in these two provinces. This is because land tenure in the DRC is often informal and not well-defined, which leads to disputes over land ownership. This is a barrier to agricultural production, as farmers may be afraid to invest in land to which they do not have a clear title. In addition, many smallholder farmers in Kasai and Kasai Central may not have access to sufficient land to meet their needs. Land in the region is often divided into small plots, making it difficult for farmers to produce enough to meet their own needs and generate a surplus for sale. This limits their ability to earn a livelihood from agriculture. In addition, poor road infrastructure makes it difficult to reach and cultivate land in remote areas.

Yields also affect food availability. Yields for the major crops produced in Kasai and Kasai Central during the 2017-2018 growing season are shown in Table 3. The yields for all crops in both provinces, with the exception of maize in Kasai, are below the national average yields for each crop.

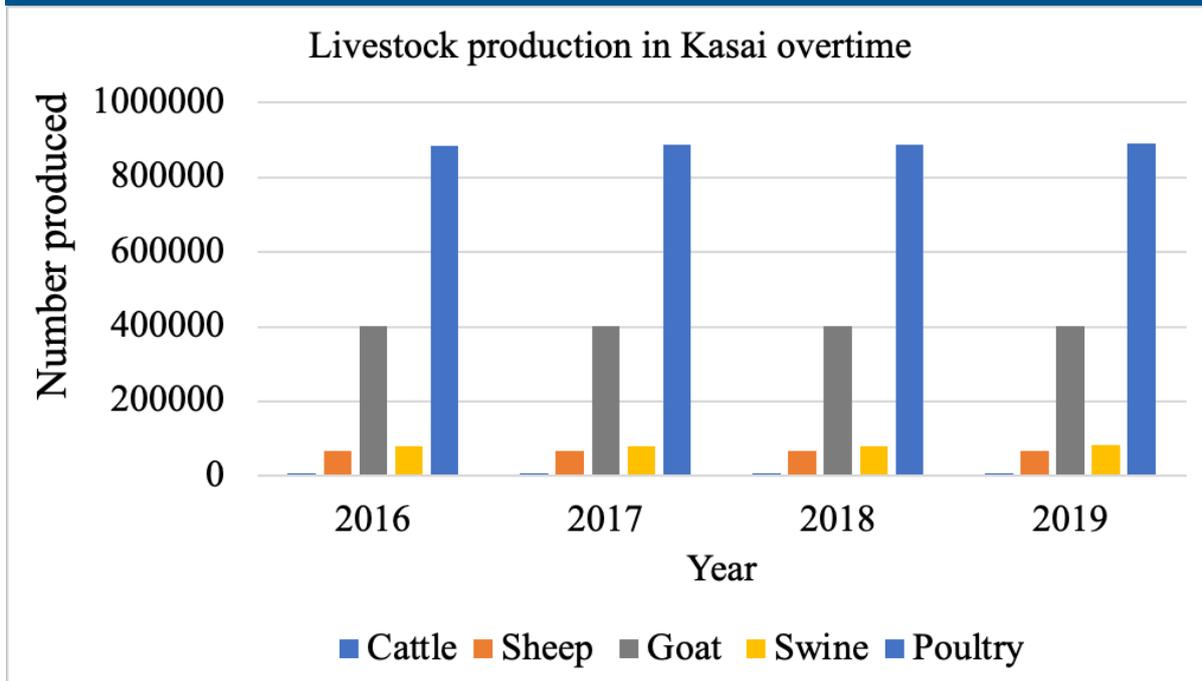
**Table 3: Yields of major crops grown in Kasai and Kasai Central in 2017-2018 growing season**

Crop	Yield (tons/hectare)		
	Kasai	Kasai Central	National Average
Cassava	5.84	5.22	10.9
Maize	0.89	0.59	0.80
Rice	0.61	0.62	0.80
Sweet potato	0.75	1.15	2.18
Peanut	0.64	0.54	0.66
Cowpea	0.75	0.65	-

Source: Ministry of Agriculture, DRC 2018

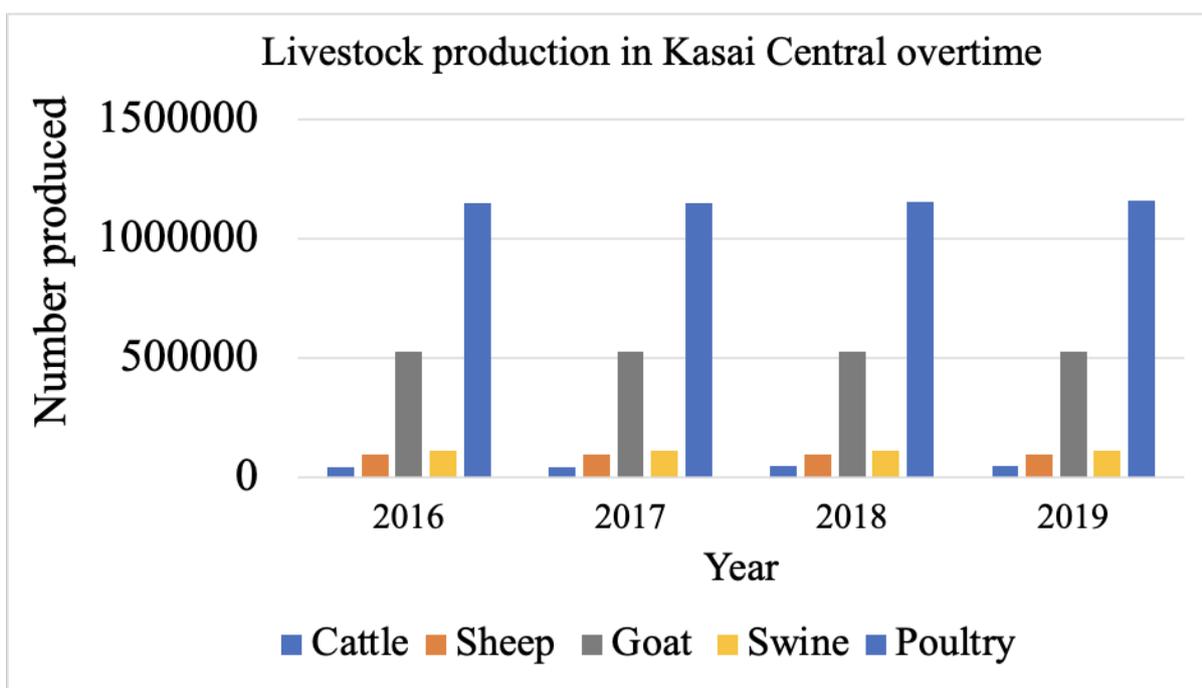
Cassava is the highest-yielding crop in both provinces, with yields exceeding five tons per hectare, while yields for cereals like maize and rice, and legumes like peanuts and cowpeas are the lowest with less than one ton per hectare. Additionally, sweet potato yields are also below one ton per hectare in both provinces. In general, yields in Kasai Central are lower than those in Kasai, with the exception of sweet potatoes.

Another source of food for households in Kasai and Kasai Central is livestock production. Livestock production serves as a valuable asset for households, providing both a source of food and a means of generating income through the sale of animal products. Poultry is the main animal raised by households, followed by goats, swine, and sheep. Figures 10 and 11 show the evolution of the number of different types of animals raised in Kasai and Kasai Central, respectively. There was no notable increase in the number of animals raised in the provinces between 2016 and 2019.



**Figure 10: Evolution of the number of different animals raised in Kasai**

Source: Statistical Yearbooks 2021 – INS



**Figure 11: Evolution of the number of different animals raised in Kasai Central**

Source: Statistical Yearbooks 2021 - INS

Livestock production in the Kasai and Kasai Central provinces is affected by a range of challenges, including limited access to veterinary services, poor infrastructure, limited access to credit, poor quality of feed, limited access to water, disease outbreaks, and conflict and insecurity. These challenges make it difficult for households to effectively raise and manage their livestock, and they impact their ability to generate income from this sector.

Although Kasai and Kasai Central are crossed by a long river, few households in the two provinces practice fishing. According to a 2015 USAID report, 8% of households in the former Kasai Occidental province (which includes the Kasai and Kasai Central provinces) identify fishing as one of their three livelihoods, suggesting opportunities to expand aquaculture exist in both provinces.

### **3.1.3. Gender and Asset Ownership**

Gender differences in the food systems across the Kasai and Kasai Central provinces may affect food availability. As mentioned above, agriculture is the main source of livelihood in Kasai and Kasai Central and is usually practiced as a subsistence activity. The majority of agricultural activities are done by women, while men are more involved in activities related to diamond extraction (Toma 2018). In terms of the division of labor, men are usually in charge of livestock management, while women are mostly responsible for poultry management. Men generally make all important decisions within the household, including how much money to spend on food and how to utilize food aid received, as well as children's education and health-related decisions. Women are considered the primary income earners in a relatively low percentage of households (Toma 2018). According to the 2018 MICS survey, only 23 percent of households are headed by women in Kasai whereas in Kasai Central only 32 percent of households are headed by women.

Even though there has been some progress in recent years, gender inequality persists in the DRC. The practice of patrilineal inheritance in the local culture restricts women's access to property and land rights. Furthermore, the absence of laws that secure women's right to own and inherit property further hinders their ability to acquire land ownership and other forms of property (Toma 2018).

## **3.2. Food Accessibility**

Low agricultural production, high food prices, low household income, and the poor quality of road infrastructure are the major determinants of household food accessibility in Kasai and Kasai Central. Despite the poor road quality, households in these provinces supplement their own food production with food from markets (USAID 2015a). Food prices represent another important challenge to food access in Kasai and Kasai Central. High market prices limit poor households' market participation. For example, the poor road quality increases transportation costs, and as a result, households pay more to buy food. Additionally, since Kasai and Kasai Central are deficit areas, prices are usually higher in these provinces than other areas. The high level of poverty in these two provinces further limits households' access to adequate quantities of food. Events such as armed conflicts and COVID-19 aggravated this situation, as they led to unprecedentedly high prices.

## **3.3. Food Utilization and Nutrition**

The typical household's food basket in Kasai and Kasai Central includes cassava, legumes (including cowpeas, groundnuts, and other dried beans, to a lesser extent), maize, plantains, and rice. Cassava is most commonly blended and pounded with maize meal to make fufu. Palm oil also plays an important role in the diets of people living in Kasai and Kasai Central. Irish and sweet potatoes are grown but are not a common part of residents' diets.

### 3.3.1. Child Health and Nutritional Status

Malnutrition during early childhood has been associated with adverse effects on brain development, school performance, economic productivity in adulthood, and maternal reproductive outcomes (Black 2013; Victora et al. 2008; Watkins 2016). Acute childhood malnutrition and stunting are prevalent in the DRC. Following decades of conflicts, there are about 1.9 million children suffering from acute malnutrition in the DRC (UN OCHA 2017).

According to a 2017 WFP report, approximately 141,500 children in the Kasai province were expected to experience moderate malnutrition due to the 2016 Kasai conflict, while more than 105,000 children were expected to suffer moderate malnutrition due to the crisis in Kasai Central. Table 4 compares the expected number of moderately malnourished children in the two provinces with that of children in three of their neighboring provinces (Kasai Oriental, Lomami, and Sankuru). Kasai and Kasai Central clearly stand out as the provinces with the highest number of expected malnourished children.

Table 4: Number of moderately malnourished children in Kasai and Kasai Central and surrounding provinces in 2017

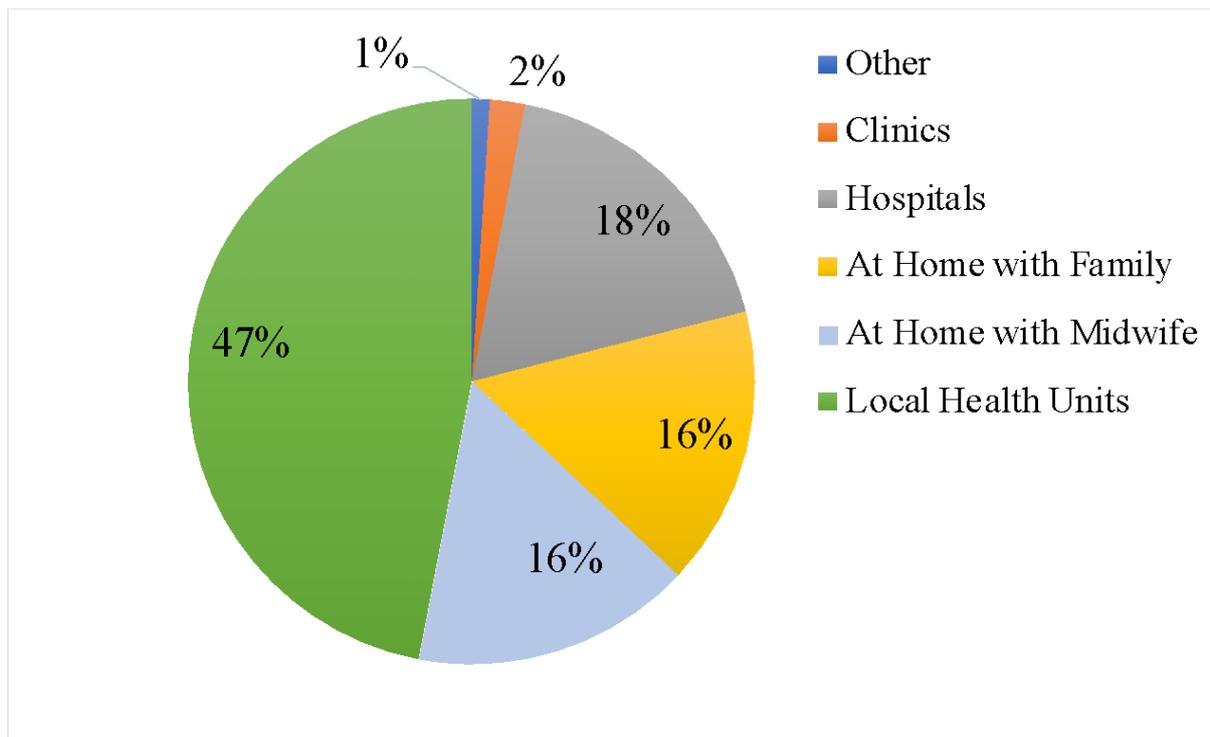
Province	Expected Number of Malnourished
Kasai	141,536
Kasai Central	105,238
Kasai Oriental	94,195
Lomami	65,674
Sankuru	49,360
TOTAL (Expected)	456,003

Source: WFP 2017a

In 2018, the United Nations Children's Fund (UNICEF) estimated that more than 770,000 young children in the Kasai region were malnourished, including 400,000 children under the age of five (10 percent of the under-five population) who urgently needed treatment to recover from severe acute malnutrition. Stunting among children under the age of five is also prevalent in the Kasais. Approximately 47 percent and 54 percent of children under the age of two are stunted in Kasai and Kasai Central, respectively (MICS 2018).

### 3.3.2. Maternal Health

In general, there is a low rate of maternal deaths among pregnant women in Kasai and Kasai Central. Provincial Health Department statistics for January–October 2017 recorded 39 maternal deaths for 126,992 births in the former Kasai Occidental province. Despite this low rate of maternal deaths, pregnant women face a number of challenges. A study conducted in the Kasai province shows that less than half (47 percent) of pregnant women surveyed gave birth at a health center (Toma 2018). The study also shows that pregnant women were left to give birth at home either alone or with a midwife due to a lack of money, lack of available health facilities, or because of the long distance they had to travel to get to the nearest health facility. Recent conflicts in the Kasai region have increased insecurity and made the situation worse by discouraging people from walking long distances to seek health care (Toma 2018).



**Figure 12: Locations Where Women Give Birth in Kasai**

Source: Toma 2018

### 3.3.3. Water, Sanitation, and Hygiene

Households in Kasai and Kasai Central face serious water, sanitation, and hygiene (WASH) challenges. Only 11 percent of Kasai households have access to drinkable water, while this is the case for eight percent of households in Kasai Central (MICS 2018). Only two percent of households in Kasai and four percent in Kasai Central have access to basic sanitation services (MICS 2018) resulting in many children practicing open defecation (USAID 2015). As far as hygiene is concerned, less than one percent of households in Kasai and approximately four percent in Kasai Central have a facility on their premises where they can wash their hands with soap (MICS 2018). This lack of WASH infrastructure is a significant contributor to the high prevalence of diarrhea, other morbidities, and malnutrition in Kasai (USAID 2015). Ensuring that there is a hygienic environment and addressing WASH issues for children will be crucial in reducing stunting in Kasai and Kasai Central.

### 3.4. Food Stability

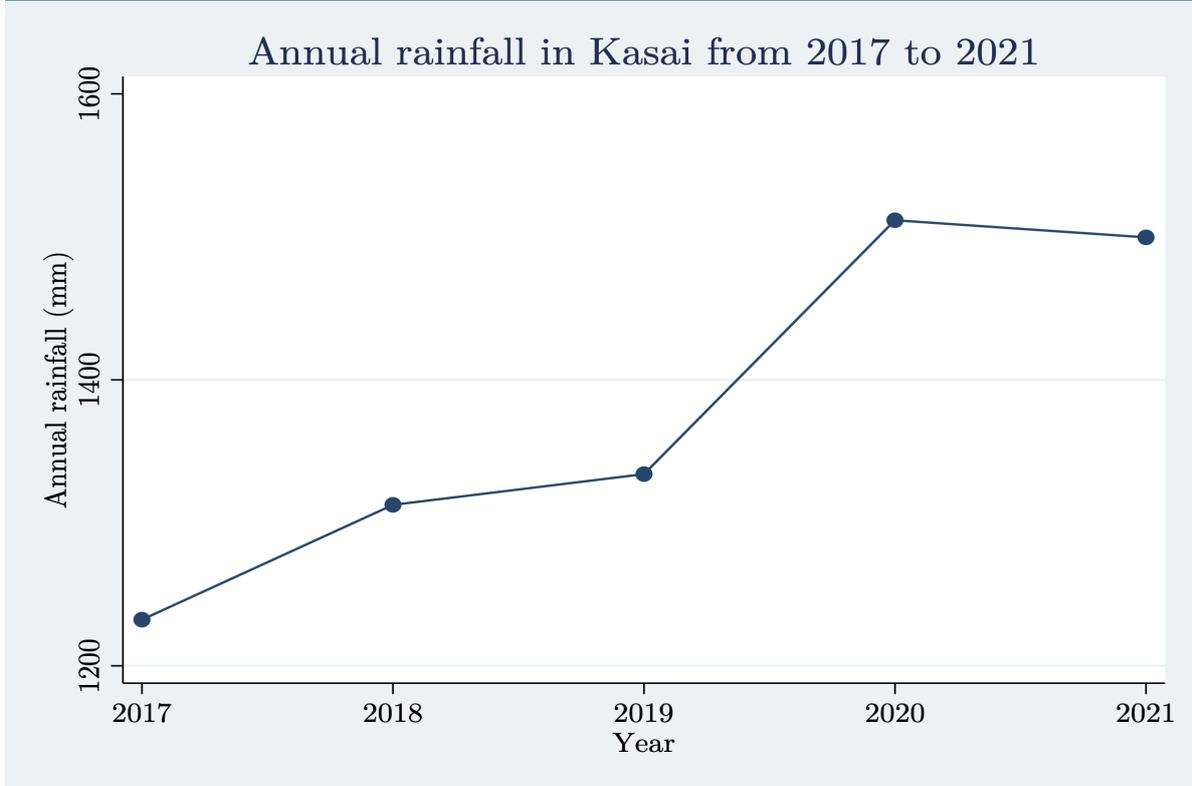
Food stability refers to one’s ability to maintain adequate access to food despite weather shocks, price shocks, political instability, and economic factors. The lack of food stability often results in malnutrition. The DRC has been gripped by national political deadlock and has also been plagued by localized armed conflicts in recent years. In the central region of Kasai, the conflict between government forces and the Kamwina Nsapu militia escalated dramatically in the first quarter of 2017 and caused a serious humanitarian crisis extending over five provinces. The crisis contributed to extensive food insecurity and exacerbated the local population’s existing vulnerabilities (Toma 2018). Further, according to the key informants interviewed, the conflicts had lingering effects on household food security, as many households met their food demand through humanitarian assistance until recently.

### 3.4.1. Weather Shocks and Food Access

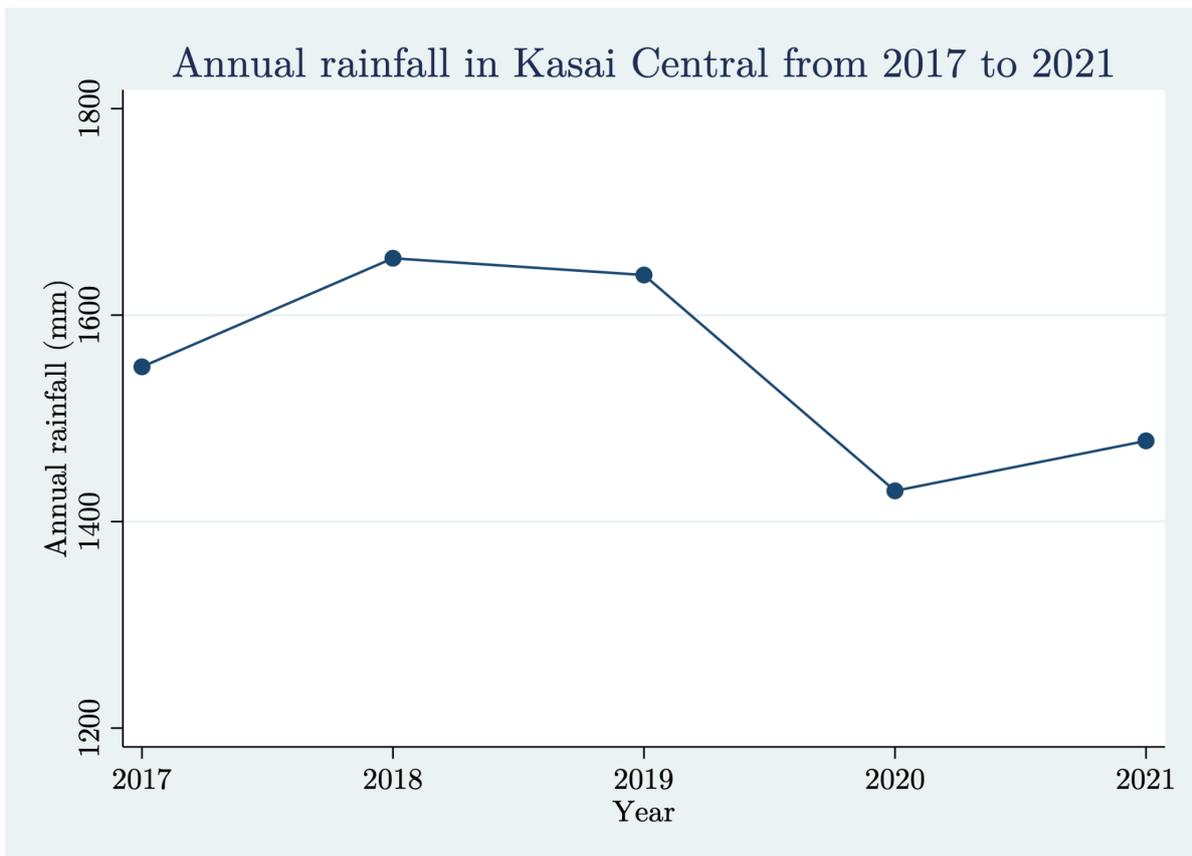
Much like the rest of Africa, the DRC's agriculture is primarily rainfed. In the DRC, rainfall is a key determinant of food security as most farmers engage in subsistence farming and are vulnerable to weather shocks. Too little rain shortens the growing season and prevents some crops from completing their natural growth cycle. On the other hand, too much rain results in flooding and landslides, destroying crops and assets. Figures 13 and 14 depict the evolution of annual rainfall in Kasai and Kasai Central from 2017 to 2021. Total annual rainfall in Kasai increased from 2017 to 2020, particularly between 2019 and 2020, but then slightly decreased between 2020 and 2021. On the other hand, total annual rainfall in Kasai Central has been on a downward trend since 2017, with the largest rain deficits occurring between 2019 and 2020.

This rainfall variability negatively impacts staple crop production in Kasai and Kasai Central, and consequently, affects food availability. Rainfall anomalies in Kasai and Kasai Central for the past three years are displayed in Figures A10 through A15. Rainfall deficits that occur during the plant's vegetative cycle (the first few months of the growing season) are usually more detrimental to crop production. Both provinces show no apparent rainfall deficits at the beginning of the first part of the first rainy season in 2021. The first rainy season is from August to January. However, a 20 percent deficit was observed later in the season (in October and November) (Figures A10 and A11).

However, there was more than a 20 percent rainfall surplus at the beginning of the second rainy season of the 2021 agricultural season (January-May 2022) in both provinces. In the 2020 agricultural season, there was little to no rainfall deficit at the beginning of the first rainy season (August-December 2020) (Figures A12 and A13) in both provinces, but there was around a 20 percent rainfall deficit in the first few months of the second rainy season of 2020 (January-May 2021) (Figures A14 and A15). With these erratic rainfall changes, crop production and output prices will fluctuate and negatively impact household food demand.



**Figure 13: Annual Rainfall in Kasai Over the Past 5 Years**  
 Source: Authors' calculations using data from WFP Data Viz



**Figure 14: Annual Rainfall in Kasai Central Over the Past 5 Years**  
 Source: Authors' calculations using data from WFP Data Viz

### 3.4.2. Conflicts and Food Security

Households in Kasai and Kasai Central provinces have suffered the effects of the 2016-2017 armed conflicts. A focus group discussion conducted by Toma (2018) after the conflicts shows that participants from the Kasai province need tools and seeds for crop production. Overall, the biggest concern for the majority of participants was that they no longer had access to their farms. This lack of access means that people are unable to produce staple crops for direct consumption or cash crops to generate household income, thus negatively affecting their food security and nutritional status.

Additionally, the loss of livestock also negatively affected households' food stability. Livestock is generally a crucial form of capital, and the loss of animals has deprived affected communities of crucial economic assets and a potential mechanism to cope with shocks (Toma 2018). Many households experienced thefts of their animals during the conflicts or sold them in order to raise cash for urgent needs. The loss of farms, and especially livestock, has reduced the income-generating potential of households in the Kasai provinces. Conflicts have increased the cost of living, and the lack of access to agricultural activities has resulted in the population becoming extremely food insecure. These issues remain relevant today (KIIs 2022).

## 4. Market Context in Kasai and Kasai Central

### 4.1. General Market Context

There are three categories of markets in the Kasai province:

- Rural markets at the border with Angola (Kamako market, Tshisenge market and Nsumbula market): These markets are located at least 150 kilometers from Tshikapa. They supply densely populated cities at the territorial level with various manufactured products, building materials, and food products such as fresh fish and chickens.
- Rural markets within the territories (Kamonia market, Dekese market, Mweka market and Luebo market, Ilebo market): These markets are found in large shopping centers in the territory capitals.
- Urban markets: The most important urban markets are Kamalenge market, Kangolongolo market, and Tukunyema market. These markets supply the four corners of the provincial capital.

Markets located at the Angolan border are only open on Wednesdays and Saturdays. Bartering is common at these markets, with products such as cassava cossette, cans of strong alcohol, and manufactured goods being exchanged for food. Most of the participants involved in these markets buy wholesale products and sell them at retail prices in Tshikapa and different territories in Kamonia, Luebo, and Mweka.

Similar categories of markets are found in Kasai Central. There are four rural markets on the border with Angola (Kamako, Nsumbula, Kamonia, and Tshisenge markets), which supply agricultural products such as (maize, cassava, cowpeas, rice, palm oil, among others) to the province. In Luiza, one of the major border cities in Kasai Central, the main markets are Masuika, Luiza City, Luambo (border post with Angola) and Kalamba-Mbuji (border post with Angola). Some of the rural markets within the territories include the Kazumba, Mwetshi,

Bukonde, Tshimbulu, and Tshikula markets. There are three urban markets located in Kananga, the capital of the province: Kamalenge, Tukunyema, and Kangolongolo markets.

Wholesalers, retailers, and traders frequent urban and rural markets in Kasai and Kasai Central. Retailers make up the majority of customers in urban markets, with a smaller number of wholesalers. In rural areas, traders purchase directly from farmers and sell in consumer markets to either retailers or to wholesalers. Traders typically set the purchase price for farmers, while wholesalers in consumer markets often collude to set the price.

Many villages in Kasai and Kasai Central do not have markets. Households living in these villages have to travel long distances, usually by foot or by bike, to reach the nearest market. For markets located in the capital cities of the provinces, traders and customers usually travel less than one kilometer. As for village-level markets, people travel an average of 15 kilometers. The most common means of transport used by wholesalers to carry their products are bicycles, locally called “bayanda.” A few wholesalers use motorcycles, and others travel by bus. In such conditions, transport and other transaction costs are high and play an important role in household market participation.



**Figure 15: Market in Ilebo (Kasai)**



**Figure 16: Market in Kananga (Kasai Central)**

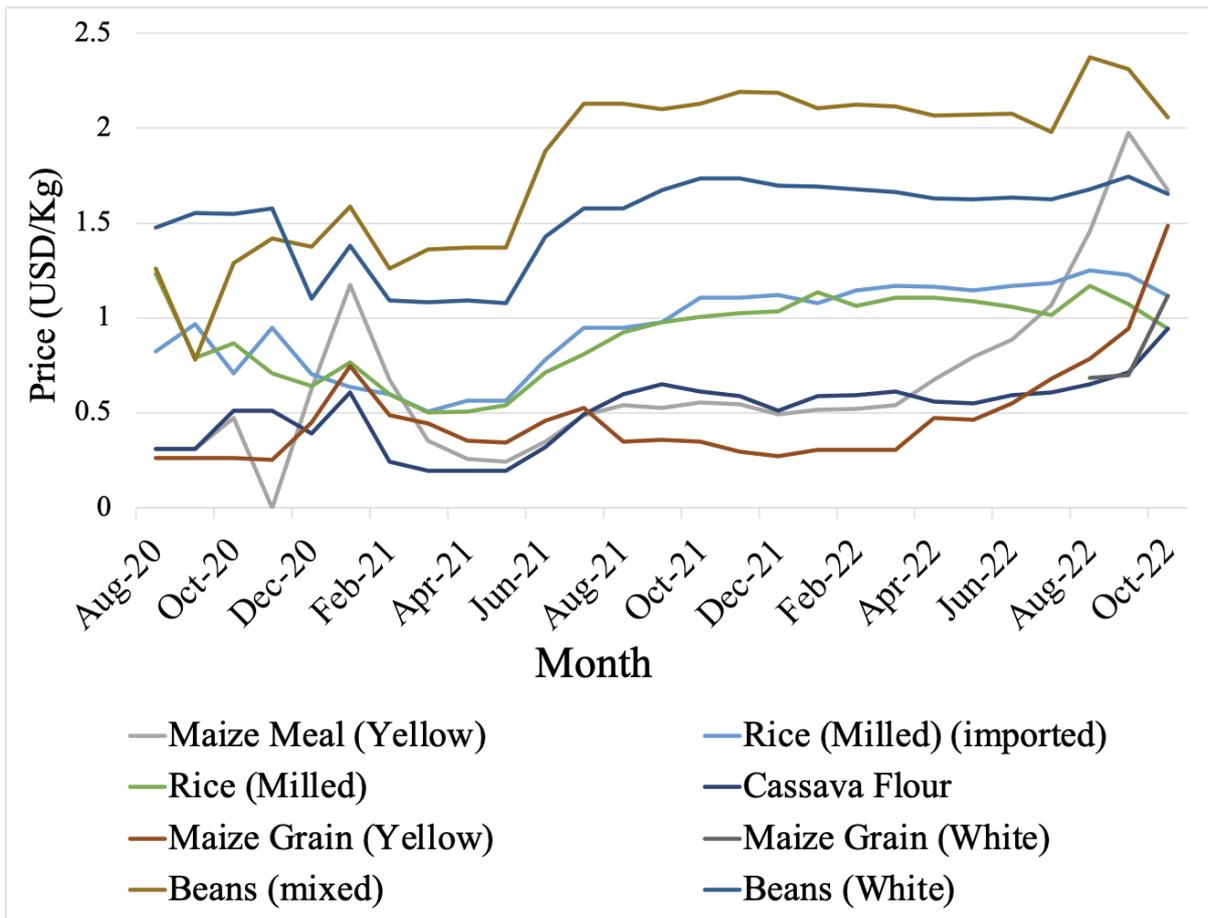
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The inadequate road infrastructure in Kasai and Kasai Central limits the movement of goods in the provinces and hinders the integration of markets with major markets in the DRC. Most markets in the two provinces are primarily dependent on nearby production areas for their supplies, which makes them vulnerable to local supply shocks, such as weather shocks. The railway plays a critical role connecting production basins and the main centers of consumption. The supply of food in the Kasai and Kasai Central provinces is transported mainly by train, especially during the rainy season. During the dry season, it is possible to transport food products to Tshikapa by road, but high transport costs also limit trade flows. However, although trains remain the cheapest means of transport for traders and wholesalers, they do not run very frequently. Moreover, fuel supply challenges reduce their travel frequencies, which may pose challenges for food supply.

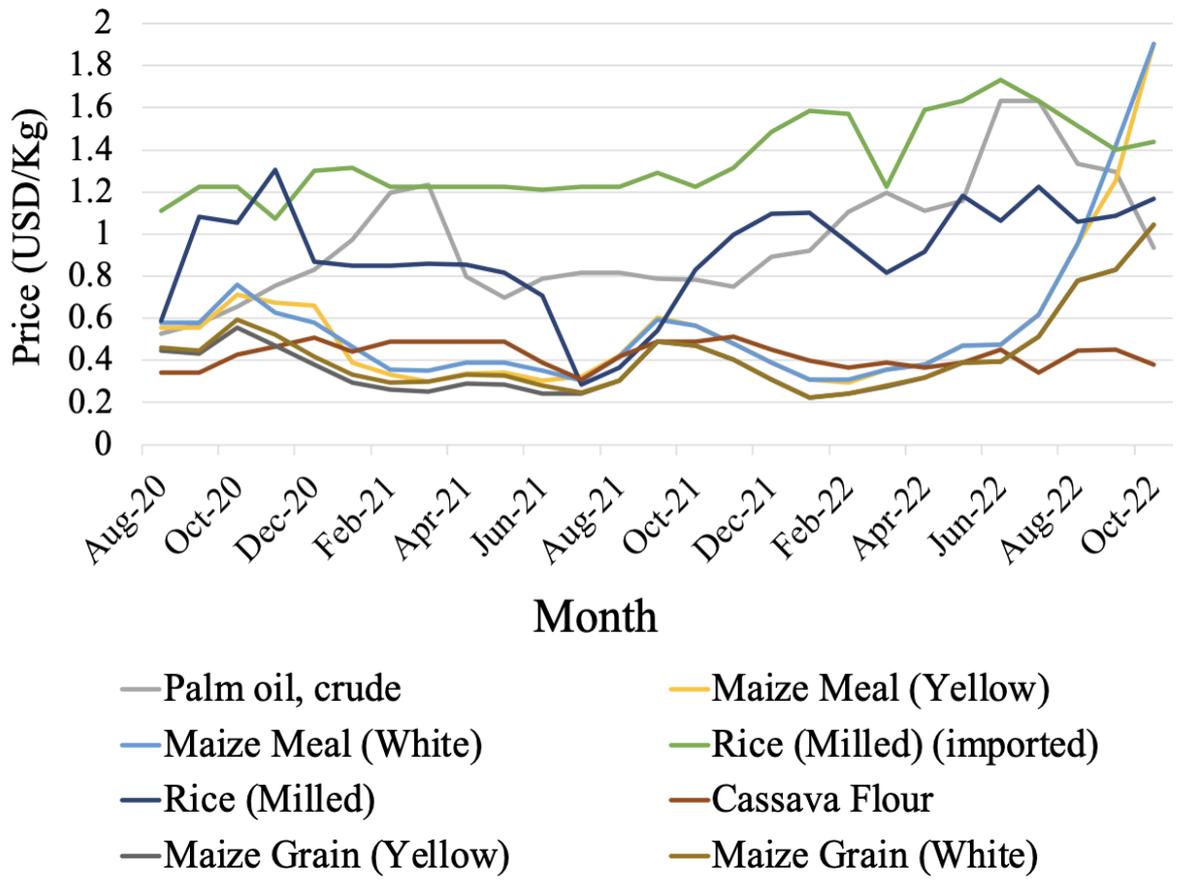
## 4.2. Price Trends

As discussed above, market prices play an important role in household food accessibility. Markets in Kasai and Kasai Central are characterized by strong seasonal price variations that are mostly driven by production levels, which are influenced by external factors, such as weather shocks. In a typical agricultural year, market prices are low right

after the harvest, when there is an abundance of supply on the market and high during the growing season (lean season), when stocks of food are low. This general trend is illustrated in Figures 17 and 18. The graphs show monthly market prices for the major staple crops sold in the Tshikapa market in Kasai and the Kananga market in Kasai Central. Overall, prices are shown to be low in the post-harvest season of both rainy seasons (February-March for the first season and July-August for the second season) and are high in the June-July period, right before harvest of the second rainy season. The graphs also show that in general, market prices in Kasai and Kasai Central have been on the rise since August 2020.



**Figure 17: Price Seasonality in the Tshikapa Market (Kasai)**  
 Source: FEWSNET Price data; Note: 1USD=2,052 CDF



**Figure 18: Price Seasonality in the Kananga Market (Kasai Central)**

Source: FEWSNET Price data; Note: 1USD=2,052 CDF

These seasonal changes in price affect household food demand. As discussed in Section 3.2, high staple food prices represent a significant challenge for food access. In periods when market prices are high, poor households find it very difficult to buy food. Most households have to sell their products after harvest when prices are low to pay for school fees, medical expenses, and other pressing family needs, and then buy the same products in the lean season when prices are high (this is referred to as sell-low, buy-high behavior). This is exacerbated by the fact that households often store a low percentage of their harvest (Kakpo 2022). Very few households are able to take advantage of price arbitrage: storing harvest in the post-harvest season when prices are low, and selling in the lean season when prices are high (Burke et al 2019).

### 4.3. Market Context in Times of Crisis

The seasonal price changes depicted above can be exacerbated or disrupted by external shocks or in times of crisis. For instance, negative weather shocks will lower staple crop production and the production of other cash crops that households grow. These strong negative income effects often lead households to display sell-low, buy-high behaviors. This will amplify existing price seasonality and increase the negative impacts of weather shocks on households, especially the most vulnerable ones. Moreover, in times of crisis like the COVID-19 pandemic or armed conflicts, the overall level of output supply is low, and markets react with a price increase (IPCC 2022).

#### **4.4. Trade with Neighboring Provinces/Countries**

Trade flows for four of the major staple crops grown in Kasai and Kasai Central (cassava, maize, cowpeas, and rice) are discussed in this section. This discussion draws from a market study conducted by FEWS NET in the Kasai region in 2015.

Cassava is one of the most important staple crops consumed in Kasai and Kasai Central. It is consumed in many forms such as raw, roasted, or made into tapioca. It is also used to make local liquor. Trade flows for cassava mostly center around two densely populated areas in the Kasai and Kasai Central provinces: Kananga and Tshikapa. These flows are characterized by a short distribution channel, with most of the production remaining close to production centers (Figure A16). Both Kasai and Kasai Central are self-sufficient in cassava, although a few deficit areas are found in the urban centers of Kananga in Kasai Central and around the territory of Tshikapa in Kasai.

Maize is another important staple crop in the Kasai and Kasai Central provinces. Both provinces have deficits in maize supply and rely on imports from Zambia to meet market demand. Imports from Zambia enter the DRC through Kinshasa and transit through the Katanga Province via Lubumbashi before getting to the Kasais (Figure A17).

Although cowpeas are not as highly consumed as cassava and maize, they are an important staple crop for Kasai households. Cowpea production is high enough to allow for self-sufficiency and some surplus. Marketing channels are short and most of the production is sold at local retail markets. Farmers usually sell directly to retailers or to collection points where bicycle merchants bring them from Mbuji-Mayi in Kasai Oriental to local markets. Some of the cowpea production is exported from the surplus areas (e.g., Luiza and Kananga) to Angola (Figure 18).

Similar to cowpeas, rice is not consumed as much as cassava and maize, and mostly serves as an alternative to these two staple foods. Rice trades mainly occur via bicycles from Lodja in Sankuru province to Tshikapa, Ilebo, and Kananga. Rice also flows down the river from Dekese in Kasai to Kinshasa via Ilebo (Figure 19).

### **5. Food Assistance in Kasai and Kasai Central**

#### **5.1. Historical Food Assistance Needs in Kasai and Kasai Central**

In response to the armed conflicts in the Kasai region, the WFP quickly scaled up life-saving food and nutrition assistance to support approximately 500,000 people affected by the major crisis (WFP 2017b). As expected, the number of people who received food assistance was high in the aftermath of the conflicts. In 2018, the WFP prioritized the internally displaced persons in Kasai and Kasai Central in their response because these two provinces housed more than 85 percent of the internally displaced people in the DRC. The WFP met the needs of those affected by providing general food distribution and nutrition interventions. WFP specifically targeted pregnant women and girls, people living with HIV and tuberculosis, and children between six and 59 months old. Further, the WFP indicates that as a result of the conflict, in 2017 over 300,000 children in Kasai were at risk of dying from acute malnutrition (WFP 2017b).

#### **5.2. Food and Nutrition Assistance Activities**

Being one of the countries with the largest humanitarian needs in the world, the DRC has received various types of assistance from multiple international organizations over the

years. BHA partners with many organizations to deliver various kinds of assistance to vulnerable populations in the Kasais. Table 5 displays the partnering institutions, the amount disbursed, and the type of assistance in the fiscal year of 2022, up to July 2022.

**Table 5: USAID/BHA Humanitarian Funding in Kasai and Kasai Central**

<b>Implementing partner</b>	<b>Activity</b>	<b>Location</b>	<b>Amount</b>
Action Contre la Faim	Agriculture, Food Assistance, Nutrition	Ituri, Kasai, Kasai Central, Kasai Oriental, North Kivu, South Kivu, Maniema	\$62,523,500
Adventist Development and Relief Agency (ADRA)	Agriculture, Economic Recovery and Market Systems (ERMS), Food Assistance, WASH	Kasai	\$10,270,000
Catholic Relief Services	Agriculture, (Disaster Risk Reduction Policy and Practice) DRRPP, ERMS, Food Assistance, Shelter and Settlements, WASH	Kasai Central, Tanganyika	\$14,697,398

Source: USAID, Fact Sheet#4, July 2022.

In addition to the USAID partners listed in this table, the WFP is one of the major providers of food and nutrition assistance, including cash transfers, in-kind food assistance, and voucher programs in Kasai and Kasai Central (WFP 2017b). The WFP also provides emergency assistance in cases of crisis (e.g., violent conflict, extreme weather event, COVID-19). The WFP established a WFP-led Logistics Cluster to reach the affected communities. These logistic platforms were quickly established in Kananga (Kasai Central) and Tshikapa (Kasai ). They supported about 75 organizations to provide life-saving assistance to approximately 2.3 million vulnerable people in Kasai, Kasai Central, and Kasai Oriental (WFP 2017b). This response strategy was co-developed by the WFP and the United Nations' FAO, which guided the operation of the response and food assistance.

Other organizations that provide various types of assistance in Kasai and Kasai Central include UNICEF, the United Nations' FAO, ADRA, Action for Hunger, World Vision, the International Committee of the Red Cross (ICRC), the World Bank, and the AfDB. In addition, the DRC's government plans to implement the National Agricultural Development Plan and the Multisectoral Programme for Nutrition and Health in the Kasai and Kasai Central provinces.

## 6. Considerations for Program Design in Kasai and Kasai Central

Many assistance modalities can be implemented in Kasai and Kasai Central. This section explores in-kind food assistance, cash transfers, and food vouchers.

In-kind food assistance was the first type of humanitarian response provided to vulnerable populations in the DRC. While cash transfers and voucher programs can be used in most crisis situations due to their flexible nature, in-kind food assistance is usually designed to be used in very specific contexts. For instance, in-kind food assistance could be more appropriate when the target population is facing acute malnutrition challenges and needs to be assisted with specific types of foods.

Since Kasai and Kasai Central are not self-sufficient in maize production, food assistance can primarily focus on imports from Zambia. A major challenge in planning the delivery of food aid is the quality of local storage infrastructures. As outlined in Section 2.2, there are very few quality storage facilities in Kasai and Kasai Central, which could pose significant challenges to the implementation of food aid in those provinces.

Therefore, the following factors should be considered for potential in-kind food assistance in Kasai and Kasai Central:

- **Access and distribution:** Ensuring that food assistance reaches those who need it most can be challenging in the Kasai and Kasai Central provinces due to poor infrastructure and insecurity. It is important to carefully plan distribution channels to ensure that food reaches its intended recipients.
- **Local food availability and prices:** It is important to assess local food availability and prices before implementing in-kind food assistance, and to consider complementary interventions such as targeted agricultural support or food-for-work programs to support local food systems.
- **Cultural and dietary preferences:** In-kind food assistance should take into account the cultural and dietary preferences of the communities it is intended to serve. For example, in the Kasai and Kasai Central provinces, cassava is a staple food and may be preferred to other food items. It is important to consult with local communities and involve them in the design and implementation of in-kind food assistance programs to ensure that the food provided is acceptable and culturally appropriate.
- **Nutritional considerations:** In-kind food assistance should aim to provide a nutritionally balanced diet. It is important to consider the micronutrient content of the food provided, as well as the frequency and timing of distribution, to ensure that it meets the nutritional needs of the population.

Cash transfers are another form of assistance commonly implemented. Given the overall lack of market integration in Kasai and Kasai Central and the seasonality of prices, a cash injection in Kasai and Kasai Central could be a double-edged sword. The isolation of most rural markets and the risk of collusion can lead to prolonged price increases in the event of cash transfers. However, these perverse effects could be contained if harvests after cash transfers are good and the participants are trained on how to efficiently use the cash. A good example is described in Box 1.

***Box 1: Case of the cash transfer by CARITAS in Kananga***

“Caritas Kananga is one of the actors that implemented a large-scale cash cash transfer (4000 households) in Tshikula (Kasai-central). Each household received 121,000 FC, or about 100 USD. These distributions of cash took place in two phases: October-December 2016 and May-July 2017. The first phase of the distribution occurred at the beginning of the crisis while the second phase coincided with the harvests of the short agricultural season. Discussions with these beneficiaries show that these distributions of cash did not disrupt the markets. The beneficiaries used part of the cash (20%) to the purchase of non-food items while 80% is devoted to the purchase of food. The beneficiaries purchased basic food products (maize and cassava) directly from local producers in the production basins because the prices are more advantageous there. Furthermore, these beneficiaries were able to go to Kananga (70 km) to buy manufactured food items. These choices have reduced the pressure on local markets, thus limiting the rise in prices.”

The example in Box 1 illustrates how we can prevent market distortions caused by cash transfers when the transfers are properly targeted and the recipients are educated on how to use the cash. It is also important to ensure that the transfers are timed correctly so that the recipients receive the cash when they need it most and use it for the intended purpose. For instance, evidence shows that smallholder farmers who receive cash transfers immediately after harvest are able to use the funds to store their harvest and take advantage of arbitrage opportunities later in the lean season (Burke et al 2019). Evidence of the impacts of cash transfers on market prices shows that even when cash transfers cause inflation, it is localized and temporary (WFP 2017a).

Furthermore, cash transfer programs alone are unlikely to increase grain market prices. In a recent market study in the Kasai region (WFP 2017a), grain traders stated that the increase in the number of customers following a cash transfer did not cause a price increase. Less than 20 percent of traders predicted that prices would increase due to cash transfers. Participants are commonly able to negotiate prices down with traders, as was the case for the participants of the Caritas cash transfer program. Moreover, the fact that non-participants will also demand the same product prevents traders from increasing prices uncontrollably. Cash transfers can be optimized if participants are trained in income-generating activities, as this will allow them to spend part of the cash on these activities and further increase their income.

The effectiveness of cash transfer programs also depends on the delivery mechanism. Evidence shows that cash-based interventions that use the most accessible existing financial services in place have been the most successful. Cash disbursement via mobile money was shown to deliver good results in countries with wide use of mobile money services. The use of mobile money for cash transfers in the DRC has not produced good results. In some cases, Mobile Money Operators (MNOs) have signed contracts to deliver mobile money that they have never delivered or they delivered the mobile money with long delays. Moreover,

receiving a transfer of more than \$100 USD requires an identity document which many people, particularly displaced people, may not have. In other instances, aid agencies in the DRC have used manual cash delivery. However, manual cash delivery might be costly and time-consuming.

Gender dynamics in cash transfers interventions are worth discussing. Evidence suggests that although cash transfers and voucher interventions can positively impact women and girls across an array of empowerment dimensions, the results are often mixed (Simon 2019). A few studies show that while cash transfers have improved women's decision making and bargaining power within the household arena, men remain the final decision makers (Brady 2011; Browne 2014). Other studies show that cash transfers may lead to additional responsibilities for women within the household, which may create extra burdens on them in certain contexts (Bastagli et al. 2016). As such, cash-based interventions should understand the drivers of women's unpaid work within a given context to best adapt programming. Moreover, there is growing recognition in the development sector that cash-based interventions reinforce existing gender stereotypes (Wasilkowska 2012). For instance, a large transfer amount may pose a threat to traditional male roles within the household and lead to tensions and violence (Wasilkowska 2012).

Some aid agencies prefer vouchers to cash because they allow donors to have more control over the type of assistance they provide (e.g., vouchers for seeds, animals, non-food intervention, food, school supplies). There are usually two types of voucher interventions: voucher fairs and vouchers in markets (Bailey 2017). Voucher fairs are day-long events where vendors and participants meet at one location for an exchange of goods and vouchers. Food voucher initiatives often promote the acquisition of food from local producers, and this boosts local production and creates jobs. This also means that aid agencies should accompany such programs with agricultural-based interventions to help farmers boost their crop production and meet the surging food demand. By increasing local food production, voucher initiatives could help stabilize market prices. However, if the increase in vouchers is not accompanied by an increase in production, and if vouchers can be redeemed at banks or financial institutions, then the expected outcomes will not be achieved, and the program may generate inflation.

## 7. Conclusions

This study used a combination of literature review, data from KIIs, and secondary data to provide insights and evidence that will help to inform the planning of RFSAs in the Kasai and Kasai Central provinces of the DRC. Although Kasai and Kasai Central have a very young population, a favorable climate for agricultural production, and mineral reserves, they frequently record high rates of food insecurity. Furthermore, the state of child malnutrition in Kasai and Kasai Central is worrying. Recent armed conflicts in the region have worsened household living conditions and have led to the displacement of millions of Kasai residents. Despite many displaced households returning to their homes, they are still recovering from the impact of the conflict.

In general, infrastructure in Kasai and Kasai Central is in poor condition. Specifically, roads in Kasai and Kasai Central have deteriorated and need major renovations. In addition, there are very few storage facilities in the two provinces. Markets in the Kasai and Kasai Central provinces are not well integrated into major national and international markets, making it hard for households living in the region to buy and sell goods. Markets in the two provinces are characterized by strong price seasonality. Market prices over the past three years have been on an upward trend, which could present challenges for food accessibility. High food prices, low household income, and the poor state of road infrastructure are three major challenges to household food accessibility in Kasai and Kasai Central.

As discussed in Section 3, households in Kasai and Kasai Central face many pressing challenges simultaneously, including acute food malnutrition, lack of access to financial services, constraints to agricultural production, and more. In light of these challenges, a cash transfer with a single purpose is likely to be ineffective. As such, providing complementary interventions may be better suited to the Kasai and Kasai Central context:

- **Providing complementary interventions:** Cash transfers can be more effective when they are paired with complementary interventions such as nutrition education or health services. For example, a study in Latin America found that a cash transfer program that included a nutrition component was more effective at reducing malnutrition among children than a cash transfer program without a nutrition component (Segura-Pérez et al. 2016).
- **Use of electronic payment systems:** Electronic payment systems, such as mobile money, can help to reduce the costs and risks associated with distributing cash transfers, especially in areas with limited infrastructure or financial services (Blattman et al. 2014). In Kasai and Kasai Central, since a low percentage of households are expected to use mobile phones, if a cash transfer is preferred, a combination of existing financial services will be the most effective method for cash disbursement. A combination of mobile money delivery and delivery via microfinance institutions works in rural settings (Pazarbasioglu et al. 2020).
- **Building partnerships with local organizations:** Working with local organizations, such as community-based organizations or local governments, can help to ensure that cash transfers are tailored to the specific needs and context of the region. It can also help to build local ownership and the sustainability of the program. A study on cash transfer interventions in poor rural areas of Mexico found that programs that engaged with local organizations and communities were more effective at reducing poverty and promoting social inclusion (Skoufias et al. 2013).

Furthermore, in instances where markets are not well integrated, the following practices have shown to produce positive results for cash transfer interventions, and can potentially be replicated in the context of Kasai and Kasai Central. Because markets in Kasai and Kasai Central are not integrated into major markets in the DRC, the following factors need to be considered for a successful cash transfer intervention:

- Cash transfers may consider targeting areas with nearby production basins that generate a surplus and can supply local markets. This approach can reduce transaction costs incurred by participant households when participating in the market.
- Organize a province-wide information session, and invite all actors that will be involved in the cash transfer to participate (participants, traders, MNOs, and microfinance institutions). Doing so can provide an opportunity for all stakeholders to have access to the same level of information and may facilitate a smooth and efficient implementation of planned activities.
- Improve traders' access to formal credit in order to increase their supply capacity.
- Pursue efforts to improve rural infrastructure (e.g., roads, storage facilities) in order to stimulate interregional exchanges (e.g., integration of markets).

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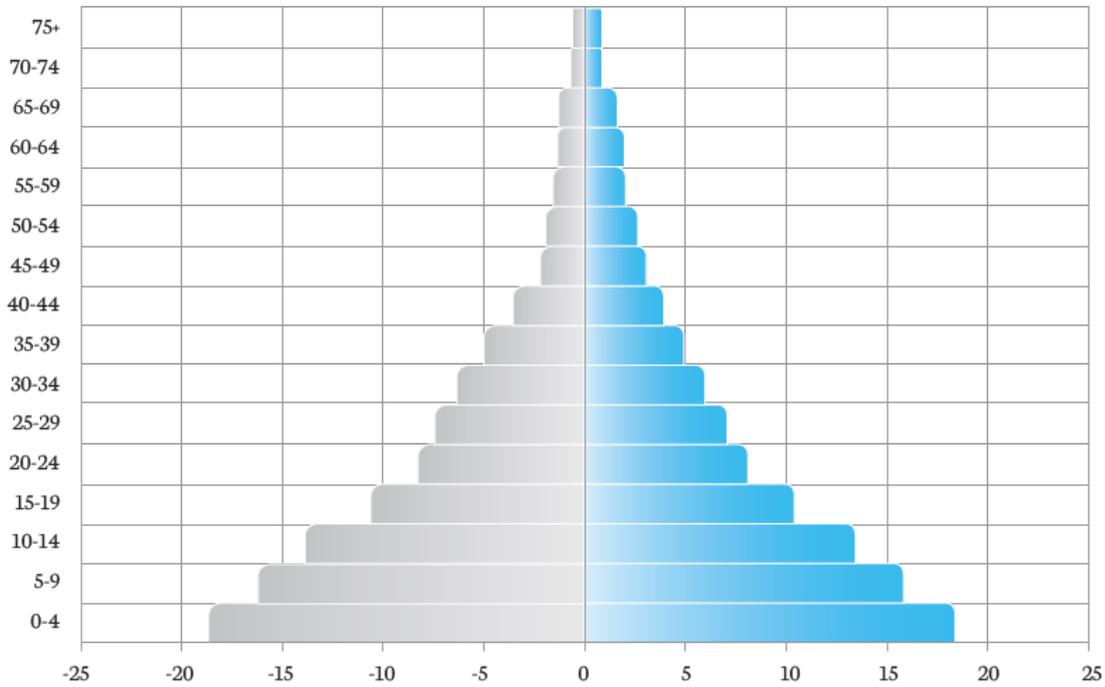
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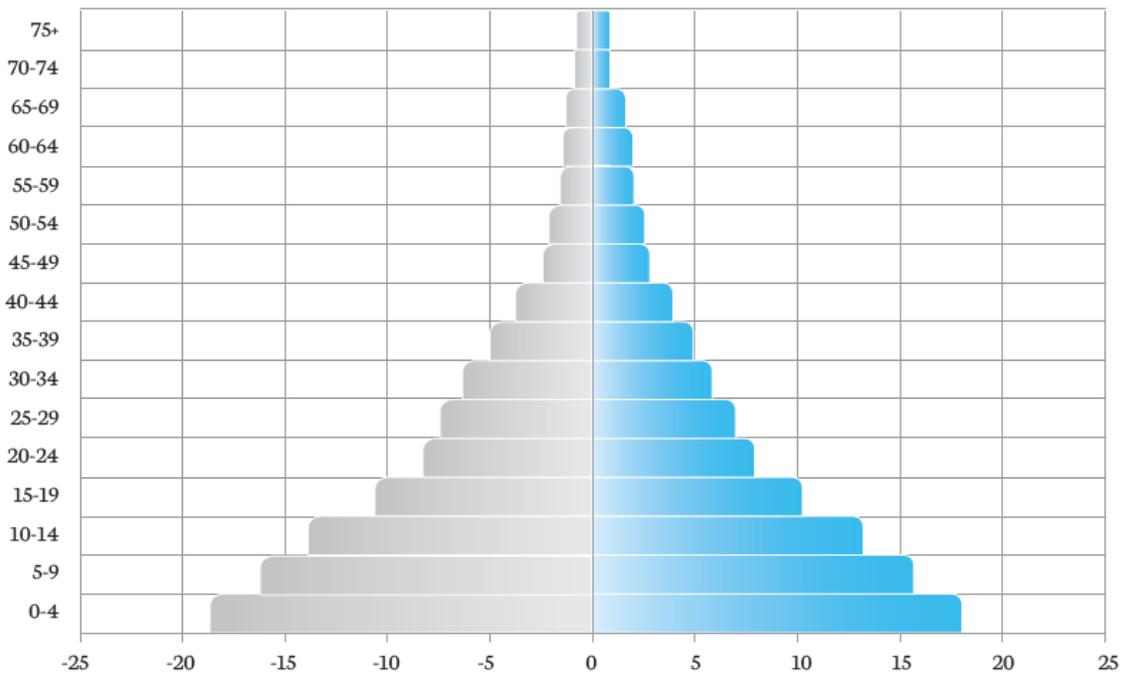
**Annexes**

**Annex 1: Figures**



**Figure A1: Population in Kasai by Age Group and Sex**

Source: INS 2021

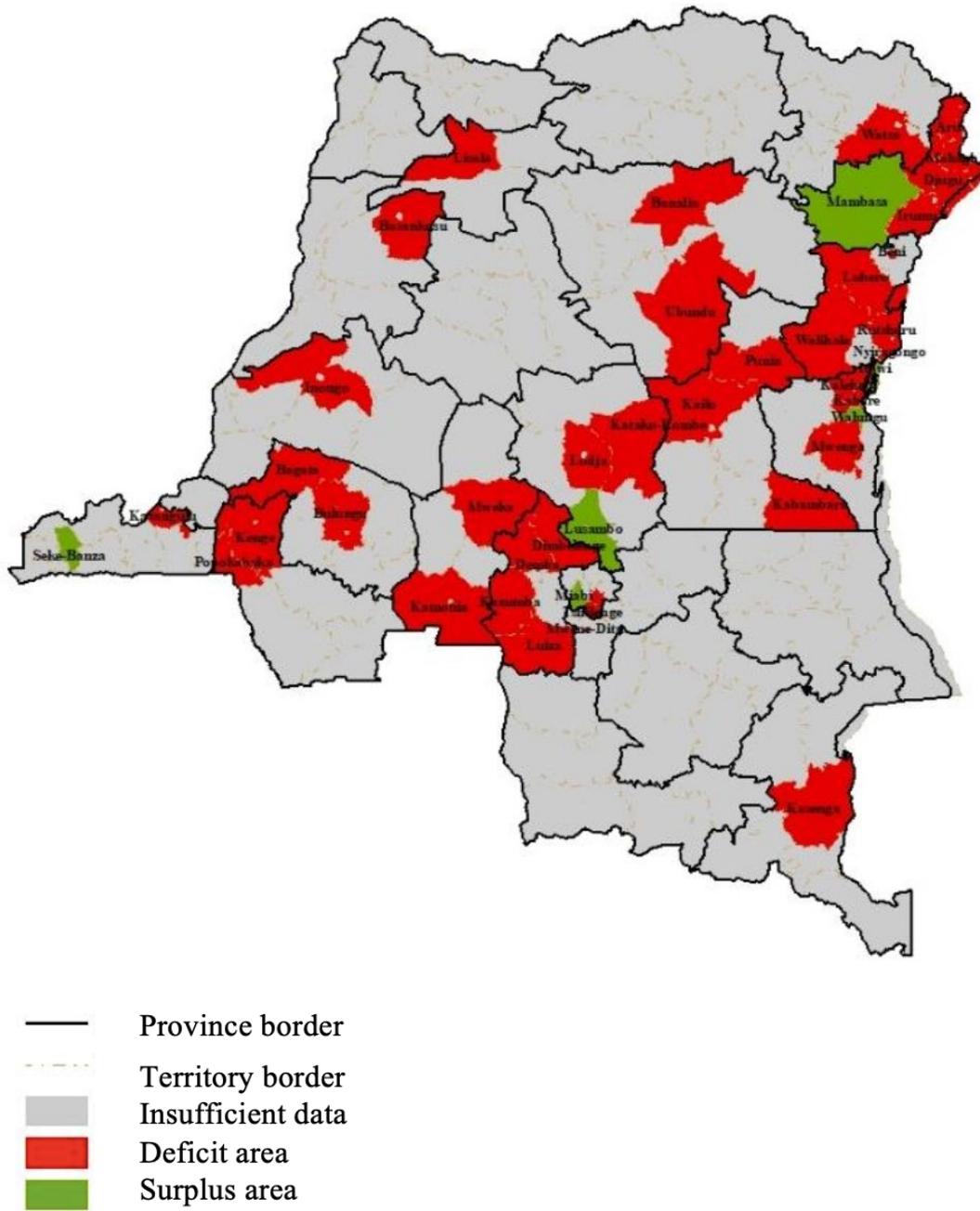


**Figure A2: Population in Kasai Central by Age Group and Sex**

Source: INS 2021

Note: Figure A1 and figure A2 show the distribution of populations in Kasai and Kasai Central by age group and by sex (gray bars for male and blue bars for female).



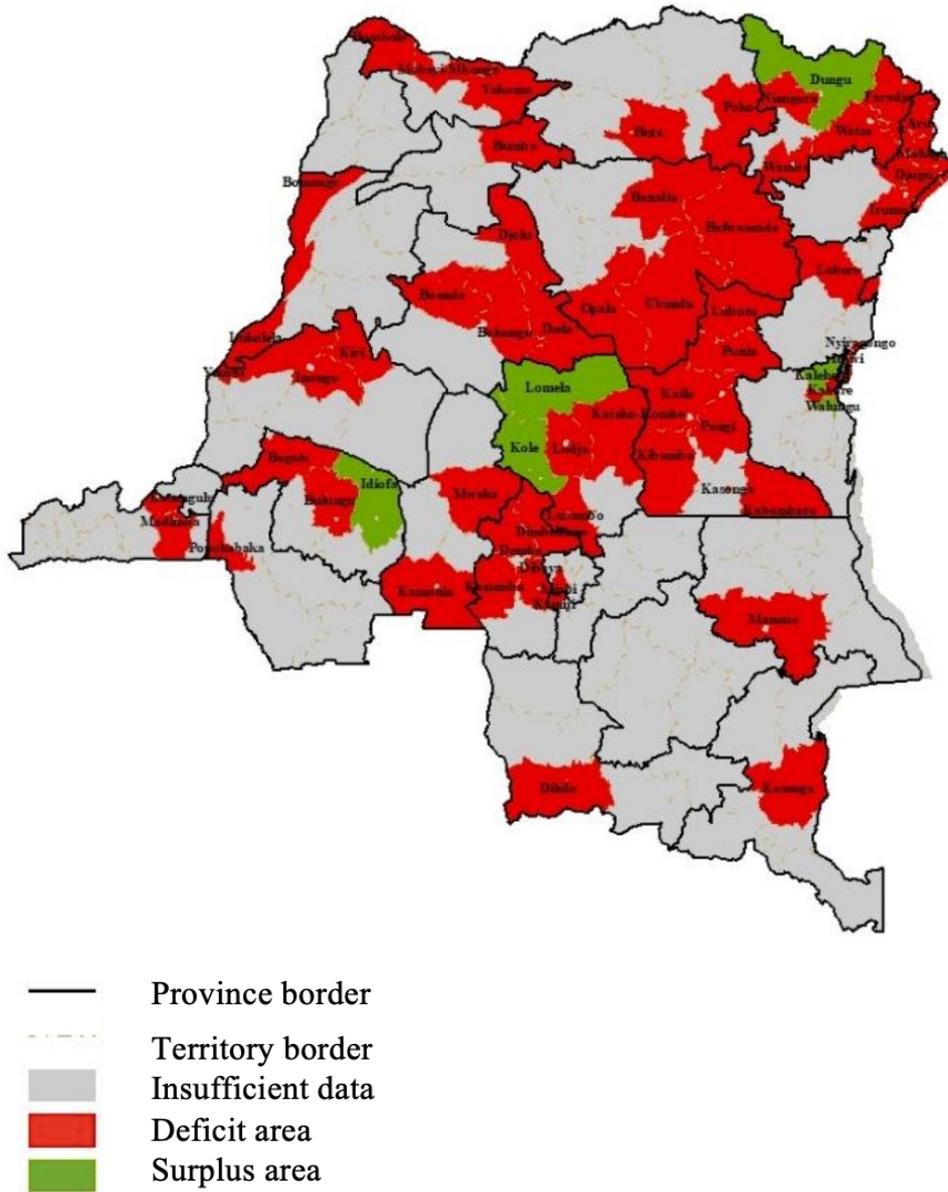


**Figure A4: Food Needs Coverage Rate for Cowpeas**  
 Source: Ministry of Agriculture 2019







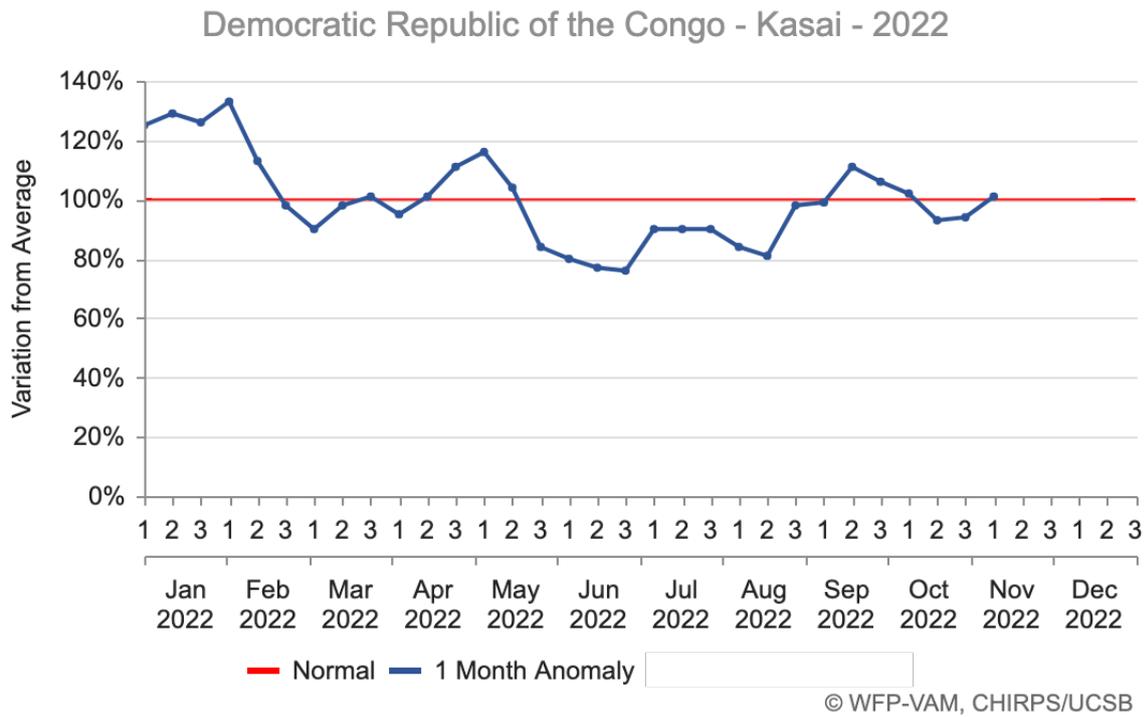


**Figure A8: Food Needs Coverage Rate for Cereals**

Source: Ministry of Agriculture 2019

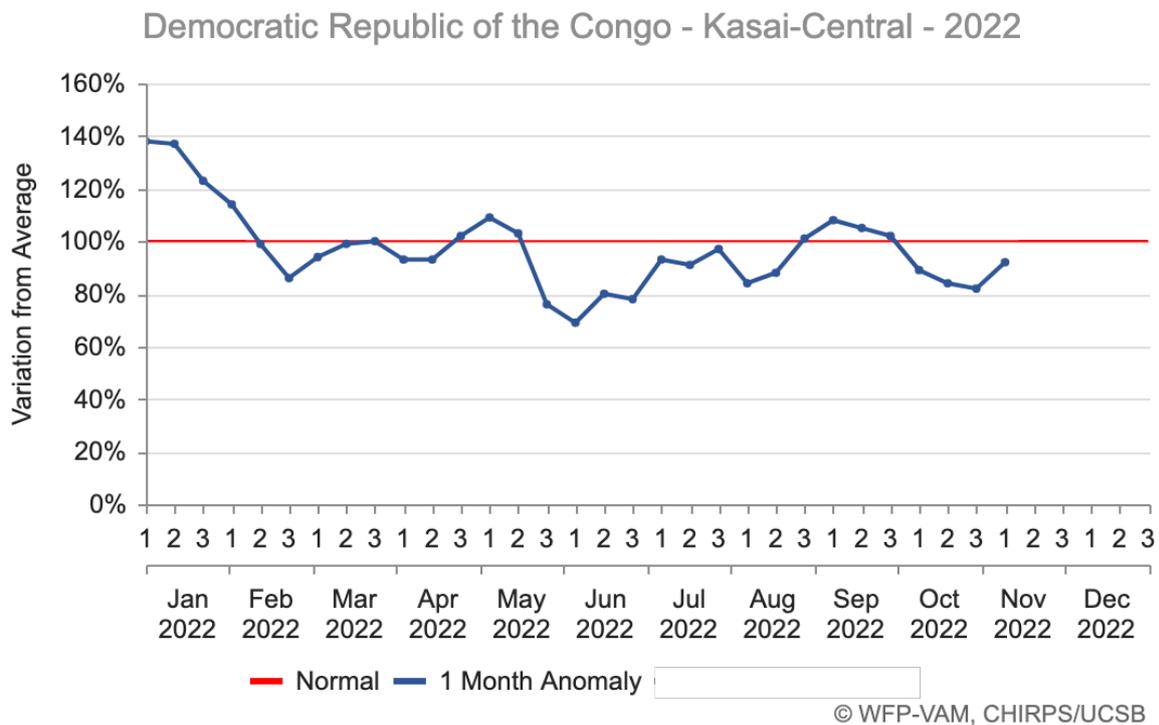


Figures A10 to A15 show the one-month rainfall anomaly (blue line), which represents the ratio between rainfall for a given month and the long-term (20-year) average for that month, expressed in percentages. Values below the red line represent rainfall deficits, while values above the red line represent rainfall surpluses.



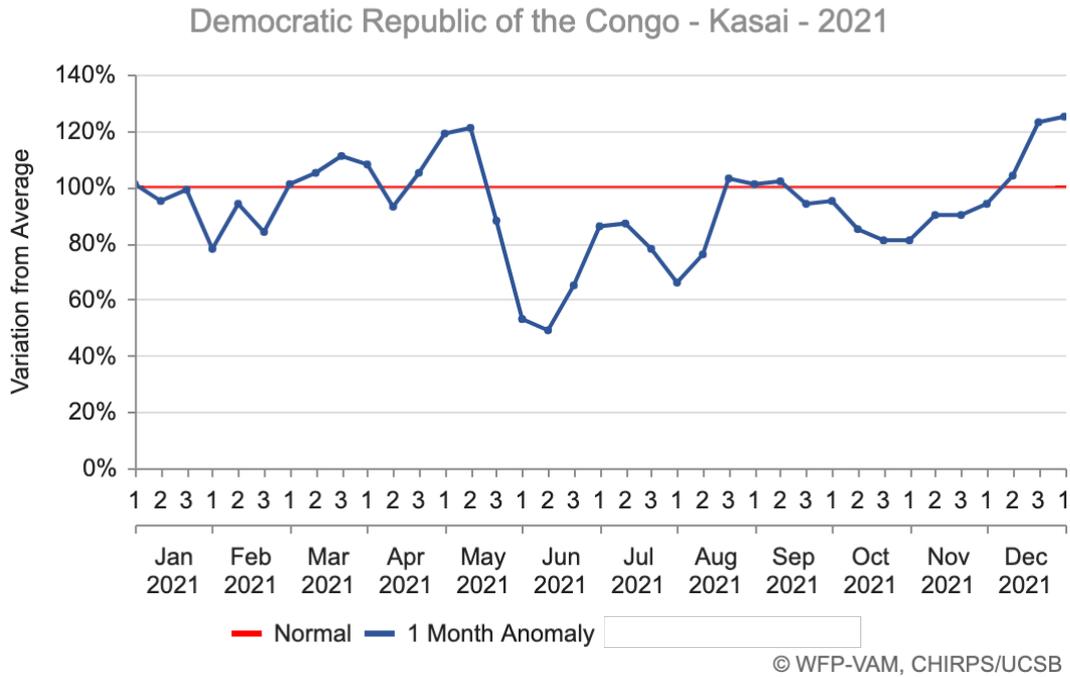
**Figure A10: One-month Rainfall Anomaly for 2022 in Kasai**

Source: Data Viz WFP 2022



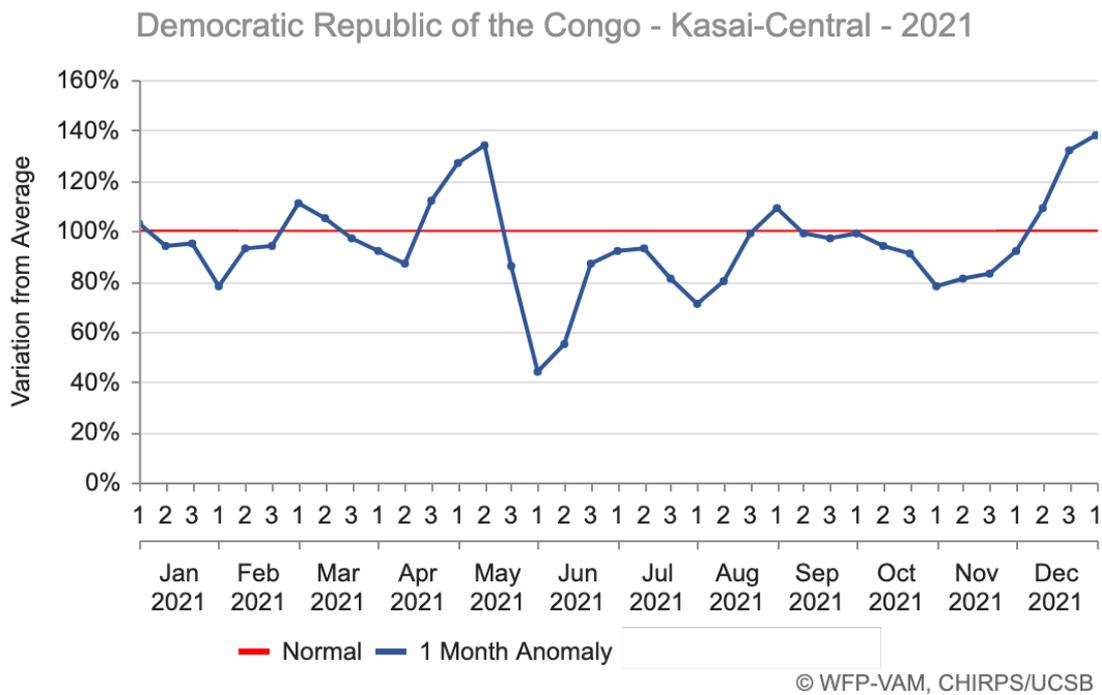
**Figure A11: One-month Rainfall Anomaly for 2022 in Kasai Central**

Source: Data Viz WFP 2022



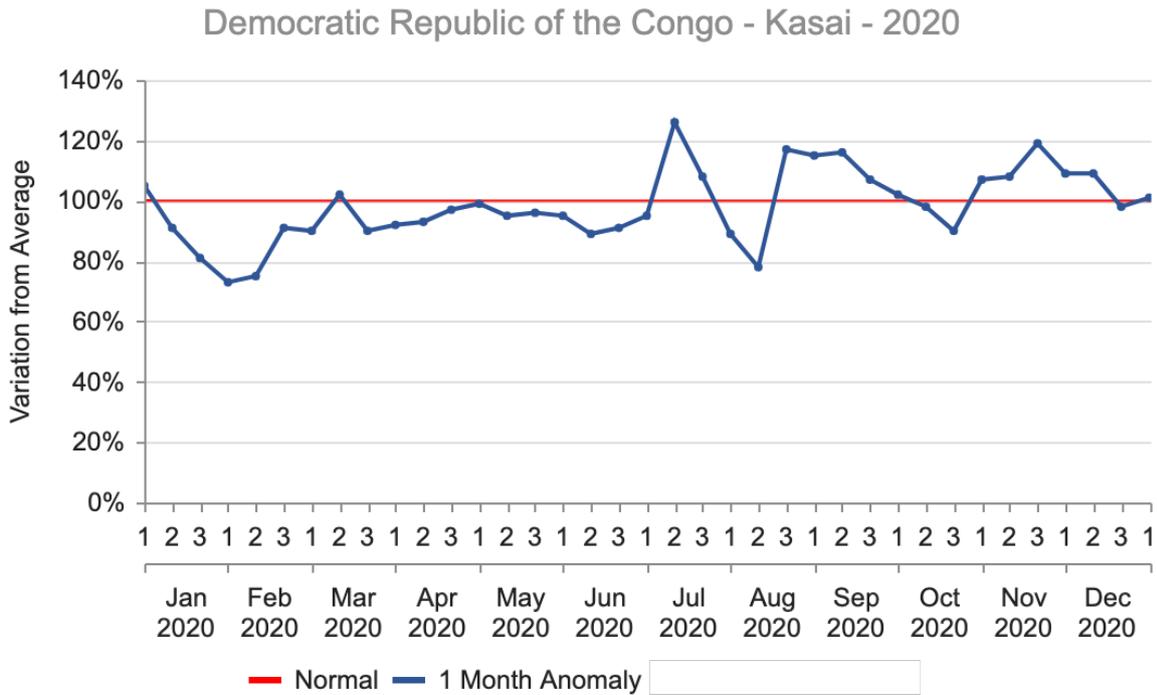
**Figure A12: One-month Rainfall Anomaly for 2021 in Kasai**

Source: Data Viz WFP 2022



**Figure A13: One-month Rainfall Anomaly for 2021 in Kasai Central**

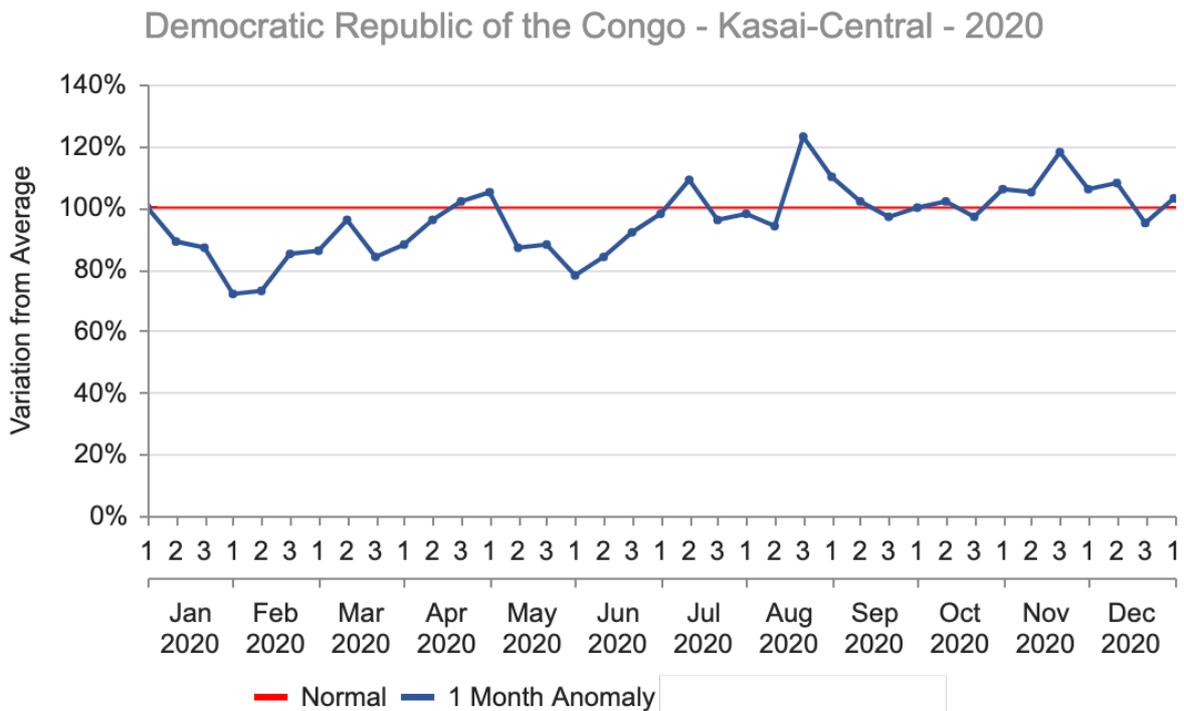
Source: Data Viz WFP 2022



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**Figure A14: One-month Rainfall Anomaly for 2020 in Kasai**

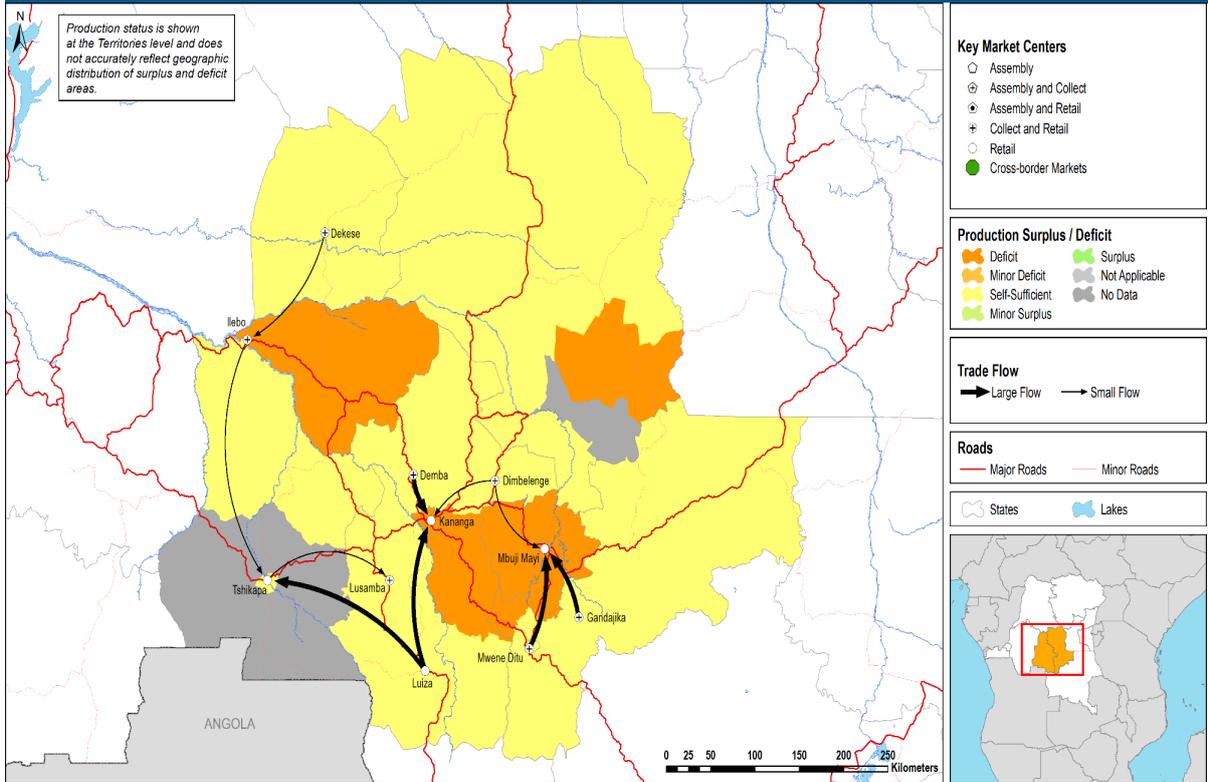
Source: Data Viz WFP 2022



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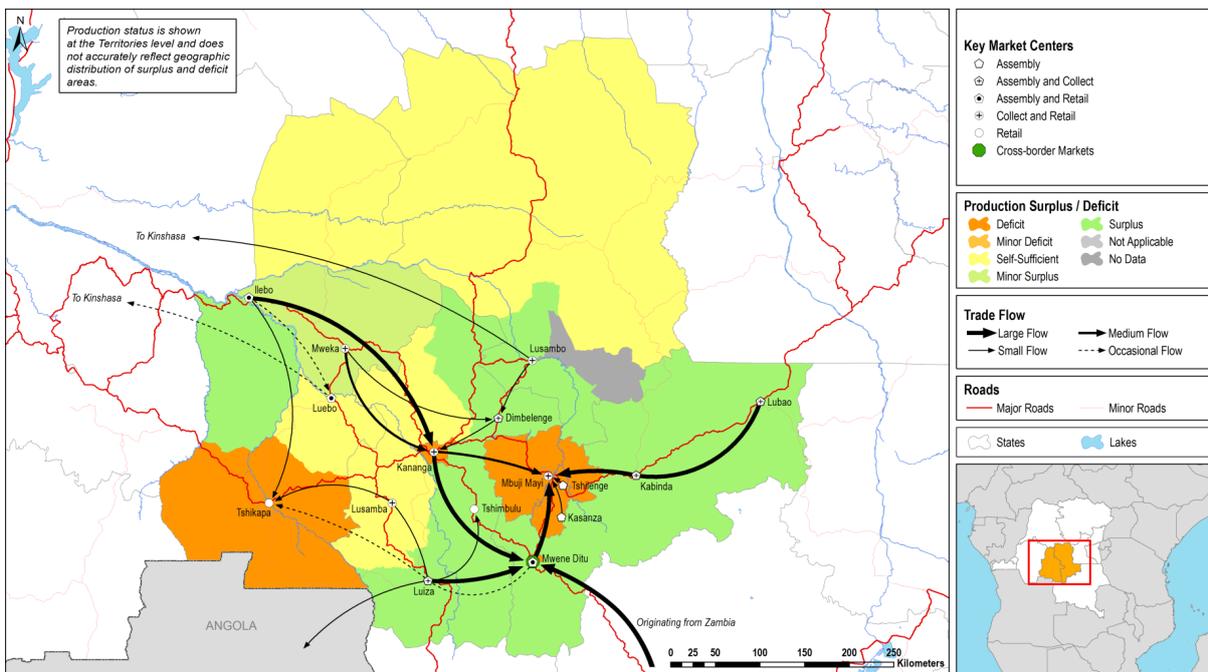
**Figure A15: One-month Rainfall Anomaly for 2020 Kasai Central**

Source: Data Viz WFP 2022



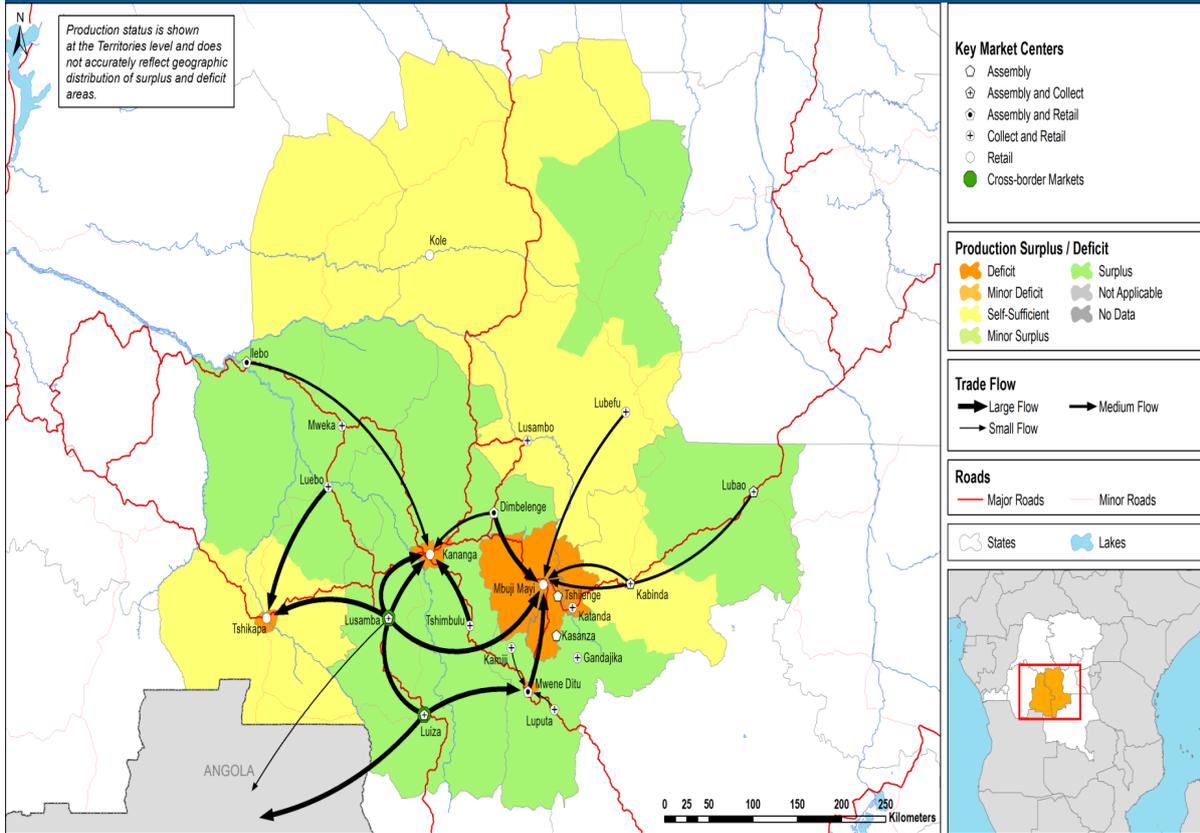
**Figure A16: Trade Flows for Cassava in the Kasai region**

Source: USAID 2015

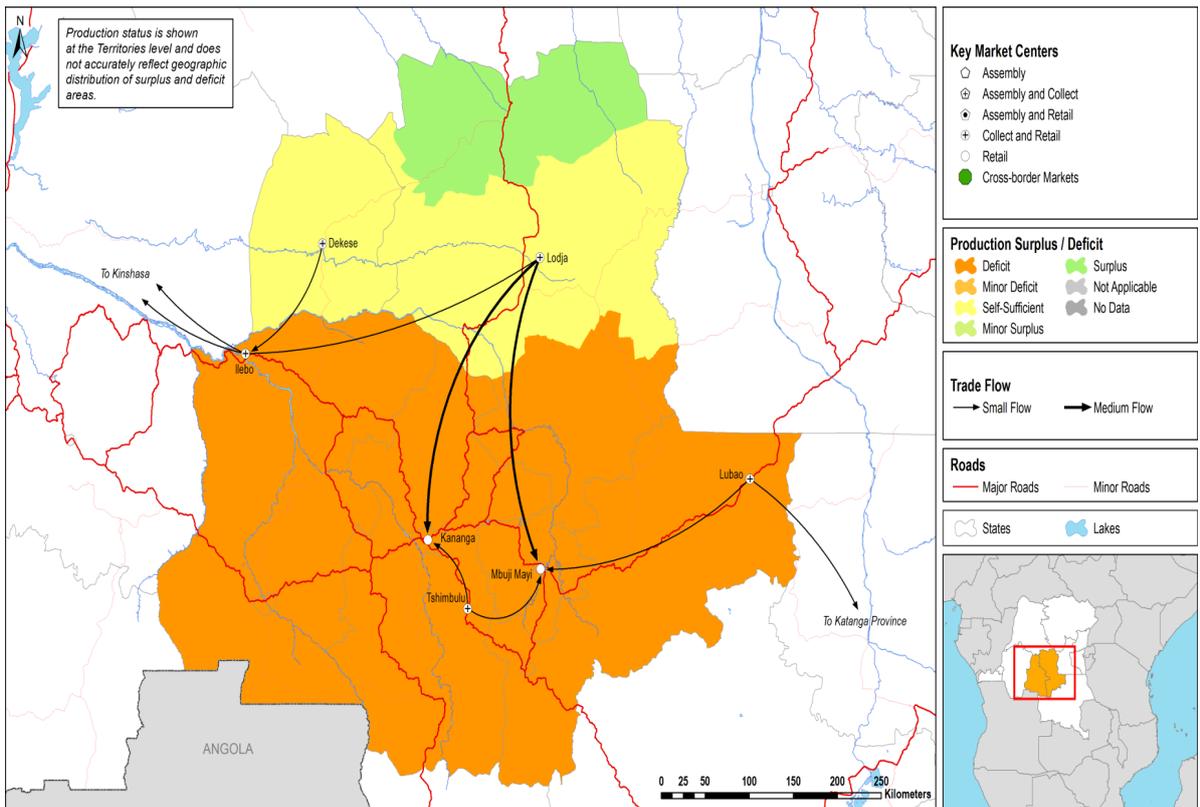


**Figure A17: Trade Flows for Maize in the Kasai region**

Source: USAID 2015



**Figure A18: Trade Flows for Cowpeas in the Kasai region**  
Source: USAID 2015



**Figure A19: Trade Flows for Rice in the Kasai region**  
Source: USAID 2015

## **Annex 2: Methodology and Source of Information**

This study drew on an extensive literature review as well as primary qualitative data and secondary data. The primary data were collected through 6 key informant interviews (KIIs), three in each province. Each key informant answered a number of open-ended questions listed in the scope of work (see Annex 3 for interview guide). Additionally, secondary data, including rainfall data for the Kasai and Kasai Central provinces for the past five years (2017-2021) was obtained from the World Food Programme (WFP) Data Viz platform. Monthly market price data for major staple crops grown in Kasai and Kasai Central was collected from FEWS NET, spanning from August 2020 to October 2022. One of the limitations of our study is that it did not consult the National and Provincial Ministry of the Economy and the Ministry of Foreign Trade for the DRC.

## **Annex 3: Key Informant Interview Guide**

### **Section 1: US In-kind, Local Procurement, Regional Procurement and/or International Procurement**

The goal here is to understand the factors involved with delivering in-kind food assistance.

1. Are there adequate ports, transportation, and storage available to ensure the in-kind commodities can be stored and distributed without substantial waste?
2. To what extent would the distribution of the commodities in each province result in a substantial disincentive or interference with domestic agricultural production or marketing?
3. To what extent are there any restrictions on modalities and/or delivery mechanisms by relevant authorities (e.g., formal or informal government policies)?
  - a. What are the risks to delivering assistance across modalities (security, fraud, liquidity, government interference, etc.)?
  - b. What, if any, restrictions does the DRC's government impose on the importation of commodities, e.g., genetically modified organisms (GMO) considerations?
  - c. What is the recent history of export restrictions from neighboring countries and how might they affect the reliability of regional procurement options?
4. What food assistance activities are currently or have recently been implemented in the area and what modalities/delivery mechanisms did they utilize? What were the key lessons learned and challenges faced?

### **Section 2: Food Availability**

The goal here is to get an understanding of the extent to which food is available in sufficient quantities for purchase in markets in the provinces of Kasai, Kasai Central, and Tanganyika. It is also important to understand 1) market quality and ability to meet local demand and 2) to what extent markets for staple foods function in the provinces.

1. What are the key markets in the provinces of Kasai, Kasai Central, and Tanganyika?
2. What is the market structure, conduct, and performance for key food staples (cassava, plantains, groundnuts, maize, beans, rice, potatoes, soybeans, and edible oil) in the provinces of Kasai, Kasai Central, and Tanganyika and the marketing basins that serve those areas?

3. What is the production capacity of these staple foods in the provinces? Is it typically self-sufficient, deficit or surplus-producing?
4. How do rainfall and access to water affect food availability?
5. (Get documents or data to graph price trends for key commodities in the three provinces): What are the current and longer-term commodity price trends, for multiple years if available, for staple food markets in the targeted area?
6. What is the basic profile of key markets in, and serving, the provinces (key commodities sold, types of vendors, typology of market size/type, quantities traded, market days/schedule)?
  - a. Describe the roles of various market actors (wholesalers, middlemen, retailers, and transporters) and price-setting behavior.
7. To what extent are key reference markets accessible to populations vulnerable to nutrition and food insecurity and does accessibility vary (by gender, age, ethnicity, socioeconomic status, language, religion, disability, and the socially excluded)?
8. To what extent are the local markets integrated with national, regional, and/or international markets?
9. When the supply of locally produced food is insufficient to meet local demand, does the market meet demand (price responsive)?
10. What are the factors that introduce variability (or instability) in availability and price levels? These may be localized, national, regional, or international.
11. How do shocks (especially conflict), migration, environmental, and other contextual factors influence and impact:
  - a. Food availability
  - b. The functionality of the markets and staple commodity price trends
  - c. The capacity of the private sector, government, and non-government actors to provide agricultural production-related services (inputs, extension, marketing, etc.) for staple food and livestock

### Section 3: Food Access

The goal here is to get an understanding of the extent to which extremely poor and vulnerable households can access food in the three provinces.

1. What are the main staples accessed through own production (including cassava, plantains, groundnuts, maize, beans, rice, potatoes, soybeans, and edible oil and livestock such as goats, pigs, rabbits, guinea pigs, and chickens)?
  - a. How does this vary by key demographics?
  - b. What proportion is this of their total food needs?
2. What percentage of average household expenditure is on market food purchases?
  - a. How do purchase patterns vary seasonally?
3. What is the typical food basket consumed by households in each of the three provinces? To what extent are there differences in how people access food based on their level of wealth, vulnerability, and other social characteristics (sex, age, ethnicity, political affiliation, etc.)?
4. What are the main sources of income for the food insecure?
5. To what extent do households in each province diversify their livelihoods?
6. How do populations access markets?
  - a. Who typically purchases commodities for the household?
  - b. How do people travel to the market (modes of transport)?
  - c. How far do they typically travel and what average costs do they typically incur?

- d. How do people of different socioeconomic groups generally use cash, credit, or barter to purchase goods and any relevant services (e.g., milling) at food markets?
- e. How do shocks (especially conflict), migration, environmental, and other contextual factors affect access to markets and other food sources?
7. Do small-scale farmers have access to high-quality, affordable seeds for cassava, plantain cuttings, groundnuts, maize, beans, rice, potatoes, and soybeans?
8. How do people cope if they have inadequate access to food? To what extent are there differences in how people access food based on sex, age, socioeconomic status, and other social characteristics?

#### **Section 4: Food Utilization and Nutrition**

The goal here is to understand food utilization and nutrition trends and how they vary by province and across demographics

1. What are the current, recent, and projected trends related to malnutrition, dietary diversity for women and children, child feeding, family planning, infectious diseases (i.e., upper respiratory disease, COVID-19, malaria), acute diarrheal illnesses, water and sanitation access, and hygiene behavior?
  - a. To what extent are there differences in these trends based on socioeconomic status, vulnerability, education level, immigration status, and other social characteristics (sex, age, ethnicity, political affiliation, etc.)?
  - b. How do these trends change because of a shock?
  - c. What other characteristics, risks, and factors are associated with or contribute to poor nutrition-related outcomes?
2. What are the structure and characteristics of systems that provide nutrition, family planning, water, sanitation, and hygiene-related resources and services, especially related to the surveillance, prevention, and treatment of malnutrition?
  - a. How does access to nutrition-related resources and services differ between communities, ethnic groups, youth, and adult men and women? How does this affect nutrition-related outcomes?
  - b. What is the current level of capacity of the private sector, government, and non-government stakeholders to provide nutrition-related services, especially during shocks or emergencies?

#### **Section 5: Cash Transfers, Food Vouchers, or Small-Scale Local Procurement**

The goal here is to understand the range of feasible modality delivery mechanisms within the provinces as related to cash transfers, food vouchers, or small-scale improvement.

1. How does the current macroeconomic context, particularly as it relates to uncertainty around Congolese Francs and US dollar exchange fluctuations, affect the feasibility of cash and voucher-based transfers?
2. To what extent are markets able to provide the necessary commodities in the quantity and [BHA commodity quality](#) needed to meet demand without inducing price increases at a rate above an appropriate benchmark for average inflation?
3. Assuming current market conditions hold in the next one to two years, which transfer modalities could be implemented and at what scale without significantly distorting markets?

4. Who are the available financial service providers, including mobile money providers, banks, micro-finance institutions, Savings and Credit Corporation, etc?
  - a. What are their capacities, coverage, reliability, and ability to meet program needs (liquidity)?
  - b. What are the current adoption rates and/or size of the customer base in relevant geographic areas (bank accounts, mobile phones, etc.)?
5. Do local literacy and numeracy levels provide a distinct barrier to delivery mechanism success?
  - a. Are market actors able to access credit?
6. What are the particular risks to delivering assistance across modalities (security, fraud, liquidity, etc.)?
7. Does the DRC's government or local organizations have the capacity to test commodities to ensure quality as per the [Codex Alimentarius Recommended International Code of Practice: General Principles of Food Hygiene CAC/RCP 1-1969 Rev 4 – 2003](#)?

### **Section 6: Key Stakeholder Mapping**

1. Who are the various actors involved in resilience and food and nutrition security in the focus geographic area?
2. What are the structure and characteristics of informal and formal mechanisms of social protection? To what extent are there differences in how people access social protection based on their level of wealth, vulnerability, and other social characteristics (sex, age, ethnicity, etc.)? This includes Gender-Based Violence (GBV) services, such as government and NGOs providing legal, psychosocial, protection, or medical services.
3. What are the mandates, missions, and objectives of each stakeholder?
4. What alliances and relationships exist between stakeholders?
5. What are the strengths, challenges, risks and opportunities for collaboration or coordination associated with working with each stakeholder?
6. What are the key resilience and food and nutrition security policies, strategies, and plans that exist or are planned?
7. What programs and projects exist or are currently planned in the provinces?
  - a. Where are programs geographically and programmatically?
  - b. What are the objectives of the programs and who are the intended participants?
  - c. What type and level of resources do the programs and projects provide?
  - d. What is the timing and duration of the programs and projects?
8. What activities have been most successful and least successful in improving the resilience of those most vulnerable to nutrition and food insecurity? What factors contributed most significantly to high and poor performance?

### **Annex 4: List of Key Informants Interviewed**

- Kamonia Territory Administrator (Kasai)
- Local village nurse (Kasai)
- Territory-level Agricultural Division Technician (Kasai)
- Local Price and Market Specialist (Dibaya, Kasai Central)
- Province-level Inspection Coordinator (Kasai Central)
- Local Agricultural Monitoring Specialist (Kasai Central)
- FEWS NET Country Representative