Republic of Rwanda
Ministry of Agriculture & Animal Resources

NISR
NATIONAL INSTITUTE OF STATISTICS OF RWANDA

WFP World Food Programme

Comprehensive Food Security and Vulnerability Analysis (CFSVA)

Rwanda 2024

Co-funded by the European Union

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Rwanda: Comprehensive Food Security and Vulnerability Analysis 2024 (Data collected in April 2024)

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Financial support for this study was provided by European Union's Directorate-General for International Partnerships (INTPA), United States Agency for International Development (USAID), Swiss Agency for Development and Cooperation (SDC), Food and Agriculture Organisation (FAO) and World Food Programme (WFP).

June 2025

The 2024 Rwanda CFSVA is available online at:

https://dataviz.vam.wfp.org/reports?current_page=1&country=rwa and www.statistics.gov.rw

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Acronyms and abbreviations

ANC	Antenatal Care
CAADP	Comprehensive Africa Agriculture Development Programme
CARI	Consolidated Approach for Reporting Food Security Indicators
CBR	Central Bank Rate
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CIP	Crop Intensification Program
CPI	Consumer Price Index
DPEM	District Plans to Eliminate Malnutrition
DRC	Democratic Republic of Congo
EA	Enumeration Areas
EAC	East African Community
ECD	Early Childhood Development
EDPRS	Economic Development and Poverty Reduction Strategy
EICV	Integrated Household Living Conditions Survey
FAO	Food and Agriculture Organization of the United Nations
FBF	Fortified Blended Foods
FCG	Food Consumption Group
FCS	Food Consumption Score
FCS-N	Food Consumption Score Nutritional Quality Analysis
FES	Food Expenditure Share
FY	Fiscal Year
GDP	Gross Domestic Product
ha	Hectare
HDDS	Household Dietary Diversity Score
HH	Household
HHH	Head of Household
IYCF	Infant and Young Child Feeding
JADF	Joint Action Development Forum
JANFSA	Joint Approach to Nutrition and Food Security Assessment
LCS	Livelihood Coping Strategy Index

LODA	Local Administrative Entities Development Agency
MAD	Minimum Acceptable Diet
MAM	Moderate Acute Malnutrition
MCCs	Milk Collection Points and Centres
MDD	Minimum Dietary Diversity
MDD-W	Minimum Dietary Diversity for Women
MFI	Market Functionality Index
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government
MINEMA	Ministry in Charge of Emergency Management (Former MIDIMAR)
MMF	Minimum Meal Frequency
MPI	Multidimensional Poverty Index
MUAC	Mid-Upper Arm Circumference
NBR	National Bank of Rwanda
NCDA	National Child Development Agency
NCDs	Non-communicable Diseases
NCPD	National Council for Persons with Disabilities
NDCs	Nationally Determined Contributions
NGO	Non-Governmental Organization
NISR	National Institute of Statistics of Rwanda
NRS	National Rehabilitation Service
NST	National Strategy for Transformation
ODK	Open Data Kit
PBWG	Pregnant and Breastfeeding Women and Girls
PCA	Principal Component Analysis
PPS	Probability Proportional to Size
proGres	Profile Global Registration System
PSTA	Strategic Plan for the Transformation of Agriculture
PSU	Primary Sampling Unit
RAB	Rwanda Agriculture Development Board
rCSI	Reduced Coping Strategy Index
RDRC	Rwanda Demobilization and Reintegration Commission

RWF	Rwandan Franc
SAM	Severe Acute Malnutrition
SBCC	Social Behaviour Change Communication
SDGs	Sustainable Development Goals
SNS	Smart Nkunganire System
SP-SSP	Social Protection Sector Strategic Plan
TEAM	Technical Advisory Group on Nutrition Monitoring
TLU	Tropical Livestock Unit
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
USD	United States Dollar
VAM	Vulnerability Analysis and Mapping (WFP)
VUP	Vision 2020 Umurenge Program
WFP	United Nations World Food Programme

Foreword

The Government of Rwanda, through the Ministry of Agriculture and Animal Resources (MINAGRI) and the National Institute of Statistics Rwanda (NISR), in collaboration with the United Nations World Food Programme (WFP), conducted a nationwide Comprehensive Food Security and Vulnerability Analysis (CFSVA) between April and May 2024.

Since 2006, the CFSVA has been conducted every three years, documenting significant progress in reducing poverty, food insecurity, and malnutrition in Rwanda.

The 2024 CFSVA provides a detailed analysis of the food and nutrition security situation across all 30 districts in Rwanda. Now in its seventh edition, the report examines the socio-economic and demographic drivers contributing to food and nutrition insecurity and offers targeted recommendations for social protection, food security, and nutrition interventions.

The report identifies who the food-insecure and vulnerable populations are, where they live, how many they are, why they are vulnerable or food insecure, and what can be done to improve their lives and livelihoods. It emphasizes the need to strengthen household resilience to climate-related shocks.

MURENZI Ivan

Director General

National Institute of Statistics of Rwanda

Acknowledgments

This Comprehensive Food Security and Vulnerability Assessment 2024 (CFSVA 2024) was a collaborative effort between the National Institute of Statistics Rwanda (NISR), the Ministry of Agriculture and Animal Resources (MINAGRI), and the United Nations World Food Programme (WFP).

This assessment was made possible through the generous financial and in-kind support of the European Union's Directorate-General for International Partnerships (INTPA), United States Agency for International Development (USAID), Swiss Agency for Development and Cooperation (SDC), Food and Agriculture Organisation (FAO) and WFP.

The CFSVA was coordinated by a technical working group comprising NISR, MINAGRI, and WFP, with contributions from FAO, GAIN, and UNICEF.

We extend our gratitude to the WFP team for mobilizing resources, providing technical leadership, coordinating the survey, delivering training, supervising fieldwork, processing and analysing data, and report writing in collaboration with MINAGRI and NISR.

Lastly, we recognize the hard work of the data collectors and express our heartfelt appreciation to the households who generously contributed their time and insights by participating in the survey.

Dr Olivier KAMANA

Permanent Secretary

Ministry of Agriculture and Animal Resources

Executive Summary

Between 2021 and 2024, Rwanda's economy demonstrated resilience by rebounding strongly from global and regional shocks, including COVID-19. Food security and nutrition continue to be central to national development, with significant progress toward SDG2 (zero hunger). However, structural challenges such as the topographic characteristics of the country and growing frequency of climate-related shocks continue to hinder consistent progress across the country. Rwanda's National Strategy for Transformation and PSTA5 aim to address these challenges. The key findings of the 2024 Comprehensive Food Security and Vulnerability Assessment are:

Food security	Between 2021 and 2024, food security in Rwanda improved, with 83 percent of households now food secure—meaning they can meet essential food, and non-food needs without engaging in atypical coping strategies, have an adequate diet and allocate a low share of their budget to food needs. This is an increase from 79 percent in 2021 and corresponds to 2.8 million food secure households. However, about 1.5 million of these households are only marginally food secure, placing them at high risk of slipping back into food insecurity. Approximately 586,000 households—or 17 percent of households—are food insecure, including 35,500 facing severe food insecurity.
Geographical location of food insecure households	The Western and Southern Provinces recorded the highest levels of food insecurity—with 23 percent and 16 percent of households affected, respectively. Kigali City is the most food secure province, with only 4 percent of its households considered food insecure, followed by the Eastern Province at 14 percent. At the district level, Rubavu and Nyamasheke in the West, and Nyamagabe in the South, report the highest number of food-insecure households.
Profile of food insecure households	Food insecure households are more likely to reside in rural areas and rely on daily labour as primary source of income. Households headed by individuals with no formal education or by individuals who cannot engage in income generating activities due to old age, youth, or disability are also more likely to be food insecure. Other factors associated with food insecurity are exposure to shocks and natural disasters and the composition of the household members.
Food availability and food prices	Food commodities are widely available in local markets, though availability and price stability vary by region and type of commodity. Driven by global supply disruptions, the conflict in Ukraine and climate shocks affecting domestic production, overall prices increased by 40 percent between April 2021 and May 2024, with food prices rising by 60 percent. Despite this, market dependence remains high, with most households sourcing key commodities such as beans (61%), cereals (86%), tubers (60%), and vegetables (59%) from markets.
Gender aspects on food security	Households headed by women are more likely to be food insecure than those headed by men. The CFSVA found that 27 percent of households in Rwanda are headed by women. Female heads of household are often widows and tend to be less educated than their male counterparts. Women are primarily engaged in agricultural production and agricultural labour, while men are more likely to be employed as unskilled labourers (non-agricultural), skilled labourers, in salaried work or in their own business. As a result, female-headed households are typically involved in lower-paying work.
Dietary Diversity	The consumption of poor diets is associated with limited access to nutrient-dense food. Among households with poor food consumption, 23 percent do not consume

	vitamin A-rich foods, and 43 percent report never consuming protein-rich foods, such as animal-source food (ASF) like meat, milk and eggs. Consumption of ASF foods is particularly low among households with inadequate and poor diets. In a week, almost all households consuming poor diets never consume ASF. Even among households with acceptable food consumption, the consumption of iron-rich foods remains infrequent, with 6 in 10 households failing to consume a diet sufficiently diverse to meet nutrient needs within a week.
Malnutrition	The nutritional status of children under five years has improved, with progress on stunting. Stunting—a key indicator of chronic malnutrition—remains a key nutritional issue in Rwanda. Results show a steady decline from 37 percent in 2015 to 32 percent in 2021 and 30 percent in 2024. Wasting has fluctuated slightly, rising from 1.7 percent in 2015 to 2.4 percent in 2021, before decreasing again to 2.1 percent in 2024. Though low, trends in wasting rates suggest that acute malnutrition remains sensitive to short-term shocks affected food availability and access to healthcare. Similarly, the prevalence of undernutrition rose from 8.1 percent in 2015 to 9.3 percent in 2021, before declining to 8 percent in 2024.
Geographical location of the malnourished	The Western and Northern Provinces show high stunting rates (37% and 34%, respectively), both above national average. The Northern Province also has the highest wasting rate (2.8%), while Kigali City reports a much lower rate (1.3%). This suggests that children may face a combination of poor diets and barriers to accessing healthcare or delays in care-seeking behaviour. The disparities require deeper analysis of province- and district-specific drivers of stunting.
Child diets	The Minimum Dietary Diversity (MDD) for children aged 6-23 months rose from 33 percent to 45 percent between 2021 and 2024, indicating improved diet diversity and better micronutrient intake for healthy growth. In the same period, the Minimum Meal Frequency (MMF) increased from 34 percent to 40 percent, reflecting improved adherence to feeding guidelines and better stronger nutritional support for early childhood development. Despite an improvement recorded, children's diets remain poor. Between 2021 and 2024, the share of children meeting the Minimum Acceptable Diet (MAD, based on MMD and MMF) increased from 16 percent to 23 percent, indicating progress in diet quality and frequency. The 2024 CFSVA also reveals regional disparities, with the Northern Province (29%) and Kigali City (27%) including the largest share of children consuming MADs, while the Western, Southern, and Eastern provinces falling below the national average. These findings underscore the need for targeted interventions to improve child nutrition in underperforming regions.
Women's diets	Dietary diversity among women improved between 2021 and 2024, with an increase in the share of women consuming diversified diets from 32 percent to 41 percent. Nevertheless, consumption of nutrient-rich foods such as eggs, meat and vitamin-A rich vegetables remains limited. Provincial and rural-urban differences remain, with 52 percent of women in urban settings achieving diet diversity, compared to only 36 percent in rural areas.
Shocks and coping capacity	Shocks continue to drive food insecurity, with nearly a third of households affected in 2024, particularly in the Southern Province (40%). Over half of Rwandan households are vulnerable to environmental shocks, and 83 percent of those impacted struggle to access or afford sufficient quantities of food.

Key recommendations	In line with the National Strategy for Transformation II (NST2), and the Fifth Strategic Plan for Agriculture Transformation (PSTA5), key recommendations from the 2024 CFSVA include: 1. Food Security: Reduce disparities in food security by addressing key drivers, such as improving post-harvest management, market access, and resource availability, particularly in provinces with the highest levels of food insecurity. 2. Stunting Prevention: Accelerate efforts to prevent and reduce stunting by using a systems wide approach that integrates health, education, and nutrition-sensitive food systems to promote healthy diets. 3. Climate Resilience: Strengthen climate resilience by enhancing national early warning systems, improving disaster preparedness, and increasing local investments in climate adaptation, such as climate-smart public works and conservation agriculture. 4. Private Sector Engagement: Create a favourable environment and facilitating access to financing to drive private sector involvement in creating long-term solutions for food security, job creation, and economic resilience.

1 Background

1.1 Geography

Rwanda is a landlocked country in East-Central Africa, known as the "land of a thousand hills" due to its diverse and steep topography. Covering approximately 26,338 square kilometres, Rwanda is home to a landscape that ranges from high mountains—including the Congo Nile Ridge and the volcanic regions in the northwest—to the flatter eastern savannah to the extensive wetlands of Akagera National Park. Elevations vary significantly, from around 900 meters in the lowlands to over 4,500 meters in mountainous regions, creating varied microclimates across the country. This diverse terrain directly influences the distribution of agricultural activities and adds to land management challenges.

Rwanda's climate is classified as tropical temperate, shaped by its high average elevation of around 1,600 meters. The country experiences two primary rainy seasons—the longer rainy season from March to May and a shorter one from October to December—interspersed with dry periods from June to August and briefly in January and February. Annual rainfall averages about 1,156 mm, but there is considerable regional variation due to differences in elevation and proximity to large water bodies. The western regions receive more precipitation, while the eastern parts of Rwanda are typically drier, often affected by semi-arid conditions. This variation in rainfall and climate plays a crucial role in determining agricultural potential and shaping regional food security dynamics.

Land use in Rwanda is heavily influenced by its geography and population pressures, with over 58 percent of the land used for agriculture. The high population density, coupled with the fact that Rwanda is a small, landlocked country, puts significant pressure on available land resources. These pressures have resulted in widespread deforestation and the conversion of natural vegetation to croplands to meet growing food demands, which exacerbate challenges such as land degradation and soil erosion. The country's soils, though diverse, are often fragile and prone to erosion, especially on hilltops and hillsides where 70 percent of Rwanda's farmland is located.[1] This has prompted widespread adoption of soil conservation measures like terracing to maintain agricultural productivity and counteract land degradation. Understanding these geographic and climatic factors is essential for assessing the challenges and opportunities in Rwanda's efforts to achieve sustainable food security, as they directly influence agricultural productivity, resource availability, and regional variations in food access.

1.1.1 Natural risks and hazards

Rwanda's topography, characterized by steep hills and diverse elevations, significantly contributes to the country's vulnerability to natural disasters, including floods, landslides, droughts, windstorms, and earthquakes. According to the Ministry in charge of Emergency Management (MINEMA), the frequency and intensity of these disasters have increased over recent years, heavily influenced by climate change.[2] Notably, in 2023, severe flooding and landslides from May 2 to May 3 led to the death of more than 130 people, displaced many more, and caused substantial damage to infrastructure, homes, and

[1] World Bank, 2021. *Climate Risk Profile: Rwanda.* The World Bank Group

[2] MINEMA, 2023. *Annual Disaster Report – 2022.*

agricultural lands.[3] This event was one of the most severe in recent history, with landslides affecting over 2,300 households and damaging 788 hectares of crops. The government has since mobilized resources to provide relief and rehabilitate affected areas, emphasizing the need for resilience in the face of such recurring hazards.

The Western and Northern provinces of Rwanda are especially vulnerable to floods and landslides, especially during the rainy seasons. One of the most devastating recent disasters occurred in May 2023, leading to significant loss of life and damage to critical infrastructure. This episode highlighted the impact of increased rainfall intensity on soil stability, resulting in severe soil erosion and damage to farmlands, which are essential for the livelihoods of many Rwandans. Furthermore, in 2022, Rwanda faced significant climate variability, with both excessive rainfall and periods of drought. Floods and rainstorms were particularly damaging, affecting over 1,800 households and damaging 445 hectares of crops.[4]

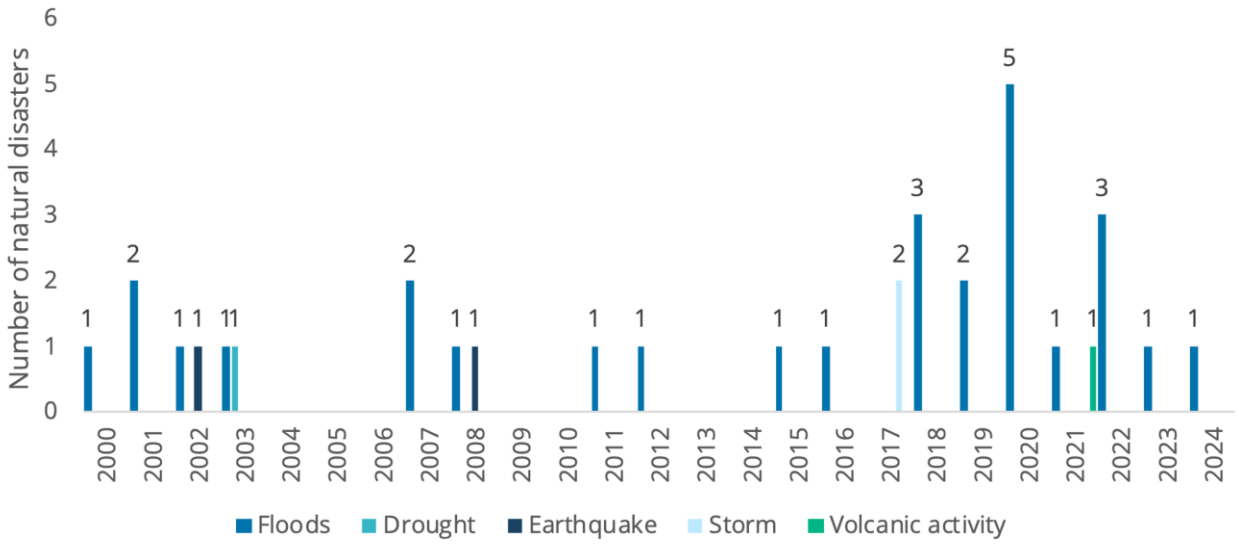
While some regions suffer from excessive rainfall, others, particularly in the Eastern and Southern parts of the country, face prolonged dry spells. According to the Rwanda Climate Analysis (WFP, 2020), dry spells tend to be longer during the March-May core rainfall period, especially in the south eastern region. These irregular rainfalls impact crop yields and water availability, straining food security. In recent years, growing rainfall variability has increasingly affected agricultural productivity, necessitating investments in irrigation systems and water management to stabilize production during dry periods. The variability in rainfall patterns underscores the need for adaptive measures to ensure food security amidst changing climate conditions.

Earthquake activity is less frequent but poses a notable risk, particularly in the western regions near the Democratic Republic of Congo (DRC). For example, tremors from the May 2021 eruption of Mount Nyiragongo in the DRC were felt in parts of Rwanda, causing minor structural damage. These events highlight the ongoing seismic risks that, while not as common as floods or droughts, require continuous monitoring and preparedness to minimize potential impacts.

[3] Government of Rwanda. 2023. *Government Steps Up Response to Flood Disaster*. https://www.gov.rw/blog-detail/government-steps-up-response-to-flood-disasters

[4] MINEMA, 2024. *Disaster Effects Report – 2023.*

Figure 1.1: Natural disasters in Rwanda recorded by the EMDAT database (2000 - 2023)



Source: estimates based on CRED/EMDAT data

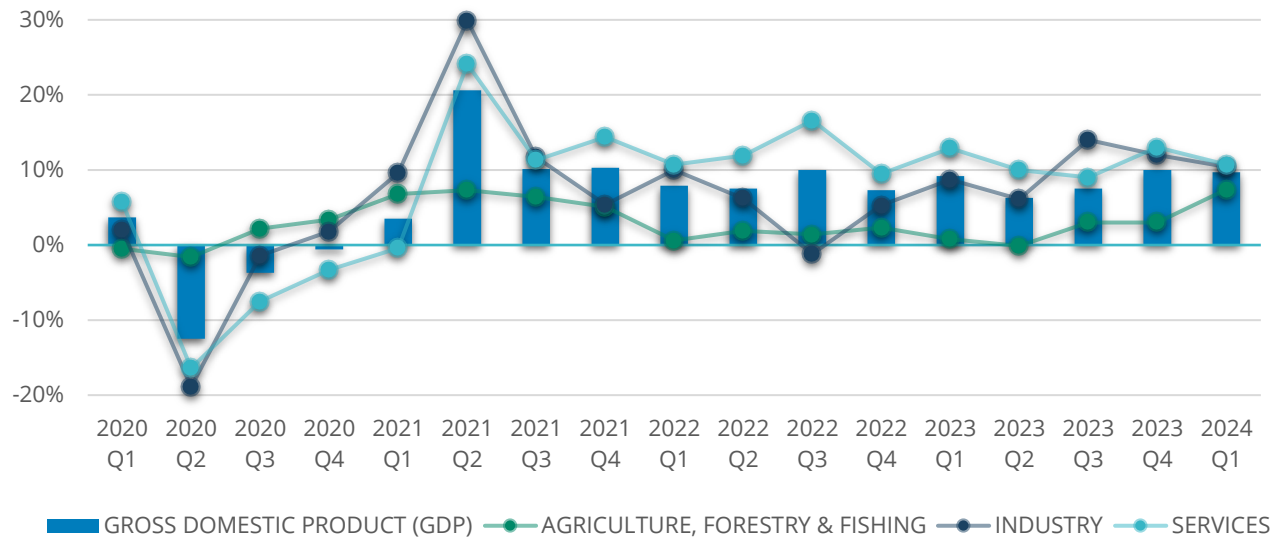
1.2 Macro-economic context

1.2.1 Gross Domestic Product

From 2021 to 2024, Rwanda's economy has shown great resilience, quickly recovering after the downturn caused by the COVID-19 pandemic. Over the last decade, Rwanda has made significant strides in economic and structural reforms, achieving steady economic growth and transformation. This economic growth has been driven by key sectors such as mining, tourism and coffee and tea exports. Rwanda's economic structure continues to be dominated by the services (44%) and agricultural (27%) sectors, with industry (22%) playing an increasingly important role.[5] Prior to the pandemic, Rwanda's economy grew at an impressive rate of around 10 percent annually, largely driven by substantial public investment in infrastructure, particularly as part of the National Strategy for Transformation (NST1). However, 2020 saw a contraction of 3.4 percent in GDP due to the global economic downturn caused by the pandemic.[6] Despite these challenges, Rwanda's economy rebounded strongly in 2021, registering a GDP growth of 11 percent, and maintained a growth rate of 8 percent in both 2022 and 2023.

[5] National Institute of Statistics of Rwanda (NISR), 2023. *Gross Domestic Product: National Accounts 2023.*
[6] World Bank, 2024. *Rwanda Economic Update – February 2024*. Washington, D.C.: World Bank Group.

Figure 1.2: Quarterly GDP growth rate (2020-2024)



Source: Author's own elaboration based on NISR data

The services and industry sectors led the recovery. Throughout 2023, the services sector continued to be the largest contributor to Rwanda's GDP, expanding by 11 percent. Growth in the services sector was driven by robust performance in wholesale and retail trade (9%), hotels and restaurants (18 %), transport (13%), and information and communication services (35%).[7] The industrial sector also showed promising growth, contributing 22 percent to GDP in 2023, an increase from 20 percent in 2021.[8] Manufacturing led this growth, expanding by 11 percent, while the construction sector grew by 12 percent. Notable subsectors such as food processing and textiles saw significant improvements, with food manufacturing growing by 14 percent.[9] The industry's overall performance was crucial in driving post-pandemic recovery, especially given Rwanda's focus on diversifying its economic base.

The agriculture sector, though stable in terms of its GDP contribution, faced several challenges, particularly due to adverse weather conditions and reduced input usage. As a result, growth in the agriculture sector slowed to 2 percent in 2023 compared to the previous year, with food crop production remaining relatively flat. Export crops, like tea and coffee, declined by 4 percent during the same period.[10] However, the sector is expected to recover in 2024, thanks to favourable weather conditions during the 2023 September—November rainfall season.

Continued structural reforms and public investments will likely sustain Rwanda's medium-term growth prospects, further solidifying its position as one of Africa's fastest-growing economies. Looking ahead, Rwanda's GDP growth is projected to stabilize at 7.2 percent in 2024, supported by continued strong performance in the services and industry sectors.[11] Key infrastructure projects, such as

[7] National Institute of Statistics of Rwanda (NISR), 2023. *Gross Domestic Product: National Accounts 2023.*
[8] National Institute of Statistics of Rwanda (NISR), 2021. *Gross Domestic Product: National Accounts 2021.*
[9] NISR, 2023.
[10] NISR, 2023.
[11] World Bank, 2024. *Rwanda Economic Update – February 2024*. Washington, D.C.: World Bank Group.

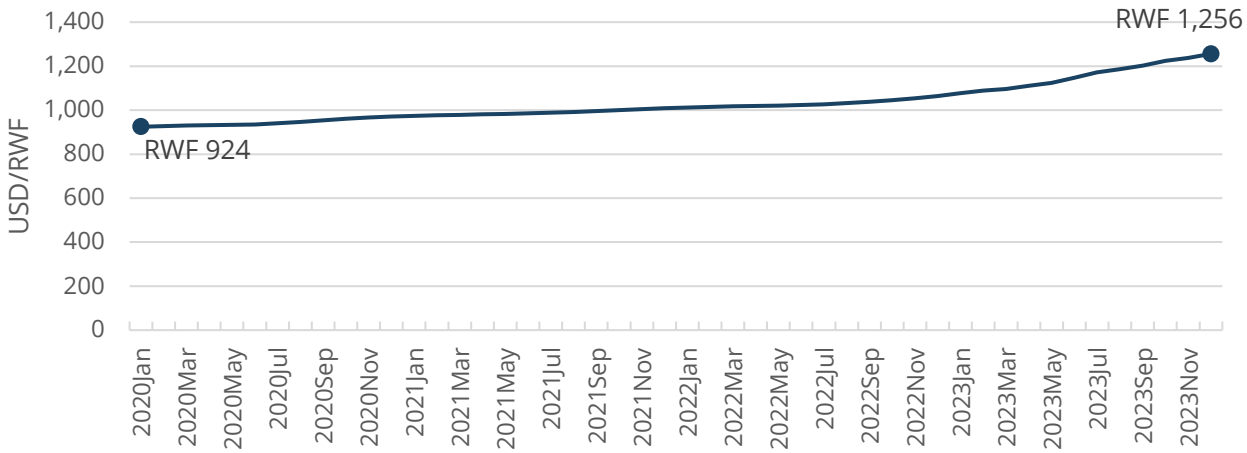
the construction of Bugesera International Airport and the refurbishment of the Amahoro Stadium, are expected to drive further growth.[12] Additionally, the government's fiscal consolidation efforts, aimed at managing public debt and reducing subsidies, will shape Rwanda's economic outlook in the medium term.

1.2.2 Rwandan Franc depreciation

Between 2021 and 2023, the Rwandan Franc (RFW) depreciated by almost 9 percent against the US dollar (USD).[13] This followed a period of appreciation in 2021 due to factors like increased export proceeds and foreign aid.[14] The National Bank of Rwanda (NBR) attributes the depreciation to a widening trade deficit and the strengthening of the dollar. While the NBR expects the dollar to weaken once the Federal Reserve eases its monetary policy, potentially stabilizing the RWF, the trend of depreciation continued into 2024, reaching a 9.3 percent nominal effective depreciation against a weighted average of major trading partner currencies by March 2024.[15]

The economic effects of the depreciation were notable, particularly as it contributed to higher inflation for imported goods. In response to rising inflation, which accelerated in 2022 due to global supply chain disruptions, increasing international commodity prices, and domestic weather shocks that impacted food prices, the NBR implemented a tightened monetary policy. The Central Bank Rate (CBR) was raised from 5 percent in June 2022 to 7 percent in June 2023 to curb inflation. Furthermore, the NBR intervened by selling foreign reserves to moderate the exchange rate volatility. This intervention led to a reduction in Rwanda's foreign reserves, which fell to USD 1,827 million by mid-2023, down from USD 1,927 million in 2022, covering about 4.4 months of imports.[16]

Figure 1.3*: Nominal USD/RWF Exchange Rate (Jan 2020 to December 2023)*



Source: Author's own elaboration based on Central Bank's data

[12] IMF, 2023. *Rwanda: Economic Outlook and Debt Sustainability Analysis.* Washington, D.C.: IMF.
[13] National Bank of Rwanda (NBR), 2023. Annual Report 2022/23. National Bank of Rwanda.
[14]NBR, 2022. Annual Report 2021/22. National Bank of Rwanda.
[15] NBR, 2024. Monetary Policy Report – May 2024. National Bank of Rwanda.
[16] NBR, 2022. Annual Report 2021/22.National Bank of Rwanda.

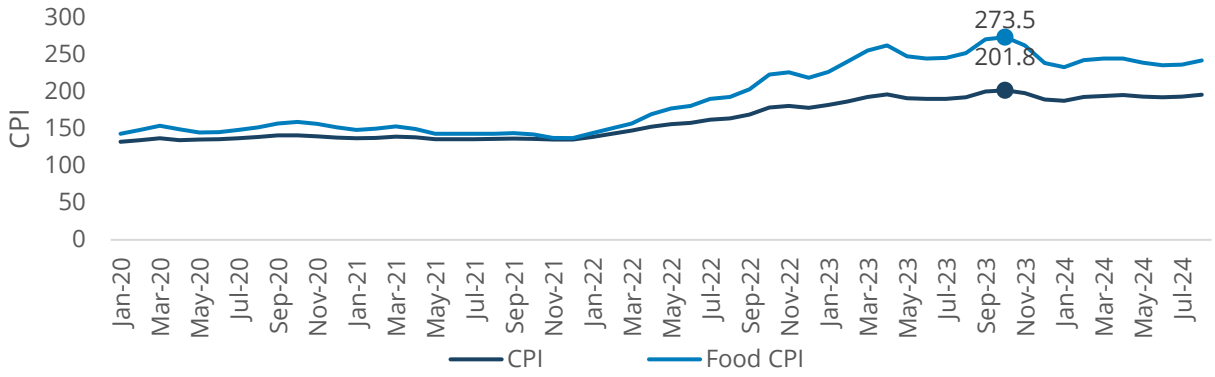
1.2.3 Inflation and Food Prices

Headline inflation in Rwanda grew from 4.2 percent in 2021 to 4.6 percent in 2022, then rose significantly to 18.2 percent in 2023. This surge was driven by global supply chain disruptions caused by the COVID-19 pandemic and the conflict in Ukraine, as well as domestic weather shocks that impacted food prices.[17] These factors led to significant increases in the prices of essential commodities, including food and energy. As a significant importer of these goods, Rwanda has faced mounting inflationary pressures due to these global price hikes. Headline inflation, peaked in November 2022, largely attributed to increased food prices, particularly for essential items such as fresh products.[18]

Food prices have been a major driver of inflation in Rwanda. The increase in headline inflation between fiscal year (FY) 2021/22 and FY 2022/23 was largely attributed to a surge in fresh food inflation, which rose from 1.5 percent to 41.8 percent. This was due to a combination of factors, including poor agricultural performance caused by unfavourable weather conditions, such as irregular rainfall, as well as the May 2023 floods that severely affected agricultural production.[19] The sensitivity of Rwanda's consumer price index (CPI) to fluctuations in food prices underscores the importance of food price stability for the country's economic well-being. Recognizing this, the Rwandan government has attempted to mitigate the inflationary effects of rising global prices by maintaining subsidies on essential goods and services such as fuel, transport, and electricity.

The CPI data shows that food and non-alcoholic beverages carried the highest weight (2,819) in the CPI basket in Rwanda, followed by housing, water, electricity, gas, and other fuels (1,728). This indicates the significant influence of food prices on the general price level in Rwanda. The CPI grew significantly between 2021 and 2024, reaching its peak at the end of 2023 (Figure 1.4). The monthly data clearly shows this general upward trend, reflecting the inflationary pressures during this period (see Figure 1.4).

Figure 1.4: Consumer Price Index (2020 - 2024)



[17] IMF, 2023. *Rwanda: Economic Outlook and Debt Sustainability Analysis.* Washington, D.C.: IMF

[18] National Bank of Rwanda (NBR), 2023. *Annual Report 2022/23*. Kigali, Rwanda: National Bank of Rwanda.

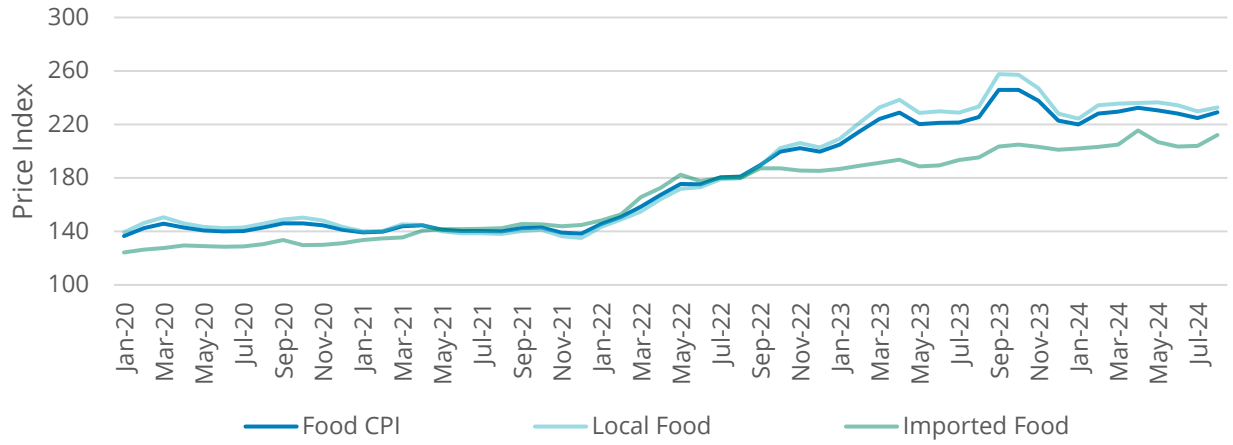
[19] The Consumer Price Index (CPI) is a measure of the average change over time of goods and services purchased by households. The CPI uses a Modified Laspeyres formula to calculate the index. The reference period (CPI=100) is February 2014. The reference population for the CPI consists of all households, both urban and rural in Rwanda. The household basket includes 1,622 products sold in many places spread all over the country. Weights used for the index are from the Household Living Conditions Survey (EICV4) results conducted in 2013-2014 with a sample of 14,419 households.

Source: Author's own elaboration based on NISR data

Since the beginning of 2024, inflation has significantly decelerated, driven by declines in both core and fresh food inflation. During the first quarter, core inflation fell to 5.6 percent, largely due to lower prices for processed food items, while fresh food inflation decreased to 2.5 percent thanks to improved food supplies. However, energy inflation rose to 2.7 percent, reflecting higher solid fuel prices. By the second quarter of 2024, fresh food inflation continued to decline as a result of strong agricultural performance during Season 2024B and favourable base effects from the prior year. However, headline inflation edged up slightly to 5.1 percent due to rising core and energy inflation, which offset the decrease in fresh food inflation.[20]

The prices of locally-produced food items have risen more sharply than imported food products. Several factors contribute to this trend. Firstly, local food production has been impacted by higher input costs, including fertilizer and energy. Fertilizer prices have remained elevated globally due to supply chain disruptions from the conflict in Ukraine.[21] Additionally, energy inflation, particularly in solid fuels, has further raised the costs of farming activities such as transportation and food processing.[22] The depreciation of the RWF has compounded these effects further increasing the cost of imported inputs for local production. While imported food prices are also influenced by global market trends, stronger fiscal management and a relative stabilization in global supply chains have mitigated their rise to some extent. Finally, local production has faced challenges like inconsistent rainfall, which have constrained the supply of staples, such as beans and maize, further driving up prices of locally produced food.[23] Thus, the cost structure of local production, driven by input prices, currency depreciation, and environmental factors, has led to faster increases in local food prices compared to imported goods (see figure 1.5).

Figure 1.5: Price Index of local and imported food (Urban)



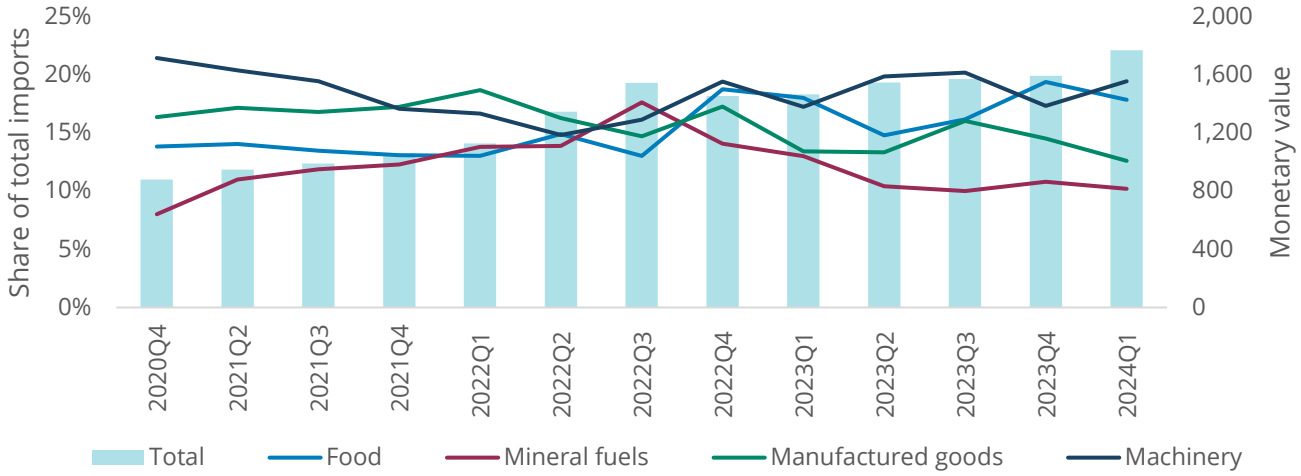
[20] National Bank of Rwanda (NBR), 2024. *Monetary Policy Report – August 2024*. Kigali, Rwanda: National Bank of Rwanda.
[21] IMF, 2023. *Rwanda: Economic Outlook and Debt Sustainability Analysis.* Washington, D.C.: IMF
[22] National Bank of Rwanda (NBR), 2023. *Annual Report 2022/23*. Kigali, Rwanda: National Bank of Rwanda.
[23] Ibid.

Source: Author's own elaboration based on NISR data

1.2.4 Trade deficit

Rwanda remains a net food importer, with food imports constituting a significant portion of its total import bill. The value of food imports surged over the last three fiscal years.[24] The COVID-19 pandemic and the conflict in Ukraine have caused significant disruptions to global supply chains, leading to increased prices for essential commodities, including food. Furthermore, two consecutive unfavourable agricultural seasons in 2023 have resulted in a decline in domestic food production contributing to a 65 percent year-on-year increase in food imports.[25] These trends underscore the country's heavy dependence on rain-fed agriculture, which makes it vulnerable to weather shocks, such as floods and droughts.

Figure 1.6: Composition of imports as percentage of total imports (2020 -2024)



Source: estimates based on NISR data

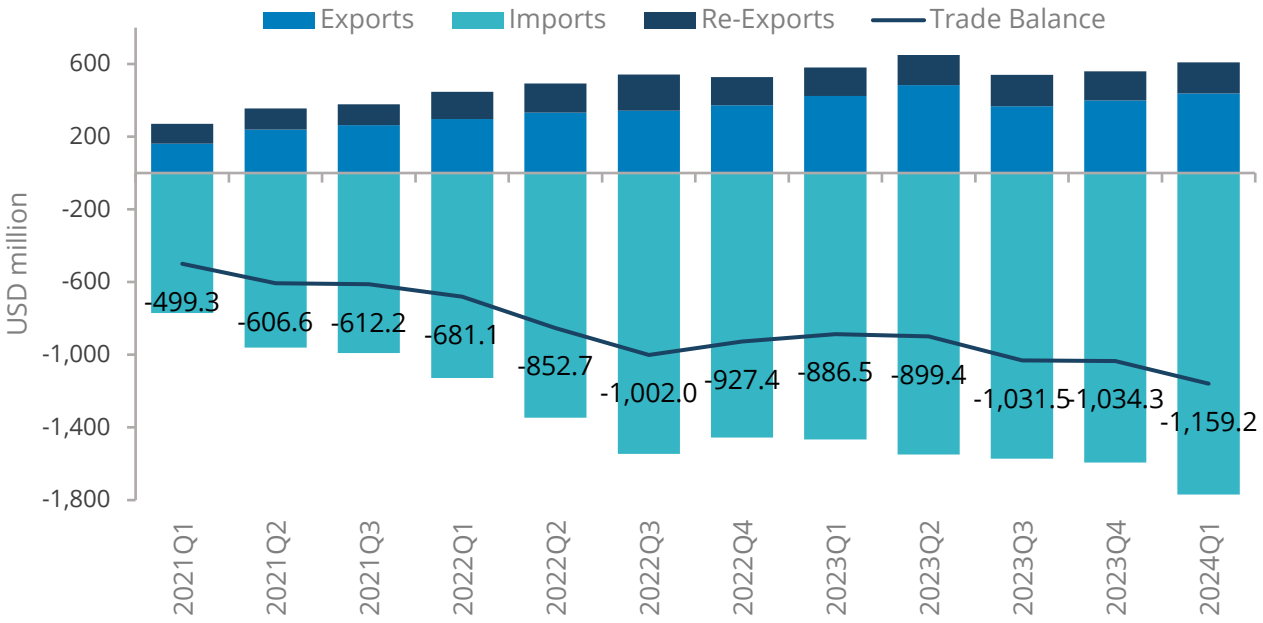
Rwanda's trade deficit has widened significantly since 2021, driven by the sharp rise in imports, particularly food imports. As of 2023, Rwanda's current account deficit widened to almost 12 percent of GDP, mainly propelled by the increased volume of food imports, construction materials, and transport goods.[26] Although exports grew by 16.5 percent in FY 2021/2022 and by 29.8 percent in FY 2022/2023, this growth was insufficient to offset the surge in imports.[27] The slowdown in the mining sector and weak demand for Rwanda's traditional exports, such as coffee and tea, compounded the trade imbalance.[28] In contrast, tourism and remittance inflows remained strong. However, the increase in food imports has exacerbated the trade deficit and put significant pressure on the country's external balance.

The widening trade and current account deficits placed significant pressure on the RWF. By the end of March 2024, the RWF had depreciated by 2.1 percent against the USD, reflecting the country's growing

[24] The fiscal year starts in July and ends in June. The 2023/2024 fiscal year ended in June 2024.
[25] IMF, 2023. *Rwanda: Economic Outlook and Debt Sustainability Analysis.* Washington, D.C.: IMF
[26] World Bank, 2024. *Rwanda Economic Update – February 2024*. Washington, D.C.: World Bank Group.
[27] National Bank of Rwanda (NBR), 2023. *Annual Report 2022/23*. Kigali, Rwanda: National Bank of Rwanda.
[28] World Bank, 2024. *Rwanda Economic Update – February 2024*. Washington, D.C.: World Bank Group.

import needs and the ongoing strain on foreign reserves.[29] In turn, this depreciation contributed to further increase the cost of imports, exacerbating the impact on the country's external balances and contributing to domestic inflation pressures.[30]

Figure 1.7: Current account deficit and values of yearly imports and exports (2021-2024)



Source: Author's own elaboration based on NISR data

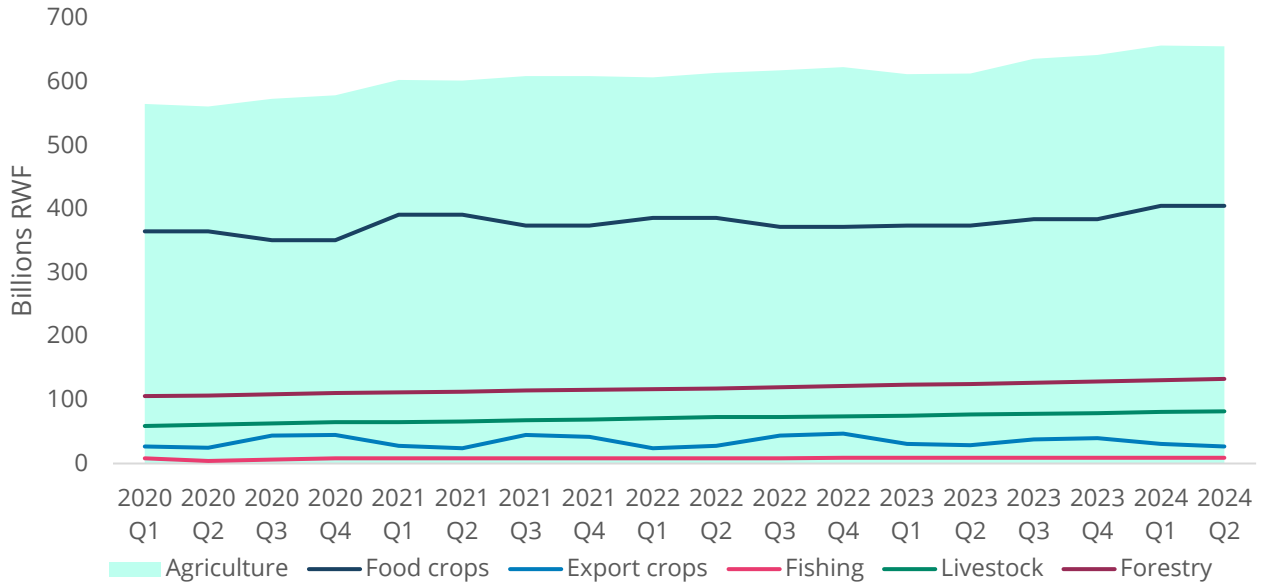
1.2.5 Agricultural economy and production

Agriculture plays a vital role in Rwanda's economy, contributing to over one-fourth of the GDP (in current prices). As of May 2024, food crops represent 58 percent of the agricultural GDP, followed by forestry (21%) and livestock products (15%). Export crops contribute about 4 percent. The agricultural sector grew by about 9 percent between 2021 (Q2) and 2024 (Q2), from 603 to 656 billion RWF (at constant 2017 prices). Food crops increased by about 4 percent whereas export crops (mainly coffee and tea) grew by 13 percent. Livestock and fishing recorded the highest growth rates, at 24 and 13 percent, respectively.

Agriculture remains the largest employer in the country, accounting for approximately 67 percent of female and 48 percent of male employment. Approximately 39.3 percent of Rwanda's working population is employed in agriculture, forestry, and fishing; a slight decline compared to 2023.[31] However, the relative majority (45%) of those outside of the labour force engaged in subsistence farming, relying on small-scale farming as their primary source of livelihood.[32]

[29] National Bank of Rwanda (NBR), 2023. *Annual Report 2022/23*. Kigali, Rwanda: National Bank of Rwanda.
[30] IMF, 2023. *Rwanda: Economic Outlook and Debt Sustainability Analysis.* Washington, D.C.: IMF
[31] NISR, 2024. *Labour Force Survey – Quarter 2, 2024.* Kigali, National Institute of Statistics of Rwanda.
[32] The introduction of 2013 standards on work, employment, and labour underutilization statistics split workers in agriculture occupations into two categories: market oriented and non-market oriented (Subsistence agriculture). Workers in the former category are considered as employed while those in latter are not counted as employed.

Figure 1.8: Composition of Rwanda's Agricultural GDP (2020-2024)



Source: Author's own elaboration based on NISR data

The predominant crops are maize, beans, and potatoes, alongside export crops such as coffee and tea, which are vital to foreign exchange. Seasonal crops account for most of the cultivated land, while permanent crops such as bananas and cassava are also widely grown. Throughout the 2021-2024 period, "Food and Live Animals" was the largest export category in value (19% of total exports as of 2024 Q1), after "Other Commodities and Transactions". At the same time, food has also remained the second largest category of imports (18% as of 2024 Q1).[33] The main trading partners for imports were China (23%), India (12%), and Tanzania (10%). The largest destinations for Rwandan exports were the United Arab Emirates (61%), the Democratic Republic of the Congo (12 %), and China (4%).

Agriculture in Rwanda is primarily rain-fed, which leaves it highly vulnerable to weather-related shocks such as droughts and floods. As of 2023, only 10 percent of Rwanda's cropland was irrigated, limiting the country's ability to mitigate the effects of droughts and irregular rains.[34] The vulnerability of the sector was evident during the 2021-2023 period as agriculture faced severe challenges driven by climate disruptions, including droughts and the floods of May 2023. These adverse conditions led to a reduction in the output of key crops, including beans, with production declining by 9 percent in season 2022A, followed by a 16 percent decrease in season 2023A. Maize production fell by 8 percent in season 2022A, affecting household food availability.

In the 2024A agricultural season, Rwanda's key crops recorded diverse trends in both cultivation and productivity compared to the 2023A agricultural season, with production improvements in key staples. Maize, beans, and bananas were the most widely cultivated, with maize covering 249,435 hectares (ha), beans 329,001 ha, and bananas 273,223 ha[35]. Maize production saw a 30 percent increase

[33] NISR, 2024. *Formal External Trade in Goods Report, Quarter 1, 2024.* Kigali: National Institute of Statistics of Rwanda
[34] IMF, 2023. Rwanda: Economic Outlook and Debt Sustainability Analysis. Washington, D.C.: IMF
[35] NISR, 2024. Season A 2024 report: Seasonal Agricultural Survey (Season A, 2024) | National Institute of Statistics Rwanda

from the previous year, driven by expanded cultivation and higher yields, particularly on large-scale farms. Beans also experienced an 18 percent rise in production, supported by improved yields and a 5 percent increase in land use. Paddy rice and bananas showed moderate growth, with production rising by 8 percent and 6 percent, respectively, thanks to improved yields. On the contrary, cassava faced a 15 percent decline in production, despite more land being allocated, due to declining yields. Nonetheless, cassava retains the highest yield per ha at 13.3 tons, followed by Irish potatoes at 8.5 tons, while beans had the lowest yield at 709 kilograms (Kg) per ha. Larger farms, particularly for maize and bananas, consistently outperformed smaller operations, highlighting disparities in productivity based on scale and crop type.

The increased production for many commodities during season 2024A was a combination of favourable rains, significant training and outreach efforts implemented by the Ministry of Agriculture and Animal Resources (MINAGRI) to enhance extension service delivery and increased cultivated land for maize and beans. For instance, during season 2024A the number of farmers reached and registered in the Smart Nkunganire[36] for input use was 2,001,538, representing a 76 percent increase from season 2023A (1,138,047 farmers reached). The number of established demonstration plots also increased by 57 percent in 2024A compared to season 2023A[37].

Furthermore, the cultivated land for maize in the Eastern province, which constitutes the largest share of maize production, increased by 20 percent compared to season 2023A, following a MINAGRI guideline[38] requesting large livestock farmers to allocate 70 percent of their farmland to crop production use, especially in Nyagatare, Gatsibo, Kirehe and Kayonza districts.

1.3 Social and Development context

1.3.1 Population trends

Rwanda remains one of the most densely populated countries in Africa, with 501 inhabitants per square kilometre (km^2) as of 2022 and this figure is expected to increase steadily until 2052.[39] According to the fifth Population and Housing Census, the population increased from 10.5 million in 2012 to 13.2 million in 2022 with an average annual growth rate of 2.3 percent over the period. The country continues to experience rapid population expansion, with projections estimating a population of more than 23 million by 2052. The 2022 Census also estimates that by 2052, the population density of Rwanda is expected to be at least 887 inhabitants per km^2 (low scenario). This rapid population growth places additional pressure on land and resources, highlighting the need for sustainable agricultural practices and effective land-use strategies to ensure food security.

The population remains predominantly young, but the trend is one of aging population. As of 2022, individuals under the age of 30 represent more than 65 percent of Rwanda's population. However, this share is down from 74 percent in 2002 and is projected to further reduce to 54 percent in 2050. The

[36] The Smart Nkunganire System (SNS) is a supply chain management system that was built in 2017 by BK Techouse Ltd, in collaboration with the Rwanda Agriculture Development Board (RAB) to digitalise the end-to-end value chain of the Agro-Input Subsidy program. This system is mainly used for farmer registration, transparent distribution of agricultural inputs, and real-time monitoring of the agricultural input supply chain.
[37] MINAGRI, 2024. Annual report 2023/2024, available on Link
[38] This guideline was issued in September 2023, ahead of season 2024.
[39] NISR, 2023. *Fifth Rwanda Population and Housing Census, 2022*. Kigali: National Institute of Statistics of Rwanda.

current total fertility rate (women aged 15-49) is 3.8 in rural areas and 3.2 in urban ones, with a national average of 3.6 births per woman in 2022. There is a clear downward trend with the fertility rate decreasing from 5.9 in 2002, to 4.0 in 2012, and further down to 3.6 in 2022. At the same time, life expectancy at birth grew from 64.5 years in 2012 to 69.6 in 2022.

Rwanda remains a prevalently rural country, highlighting the pressure on agricultural land to sustain food production. As of 2022, except for the city of Kigali, all provinces remain predominantly rural, with 78 to 85 percent of the population residing in rural areas. As Kigali accounts for about 13 percent of the total population, this means there are approximately three urban residents (27.9%) for every seven rural residents (72.1%). The provincial population distribution shows that Eastern and Southern Provinces are the most populous, constituting half of the total population of Rwanda.

1.3.2 Migration

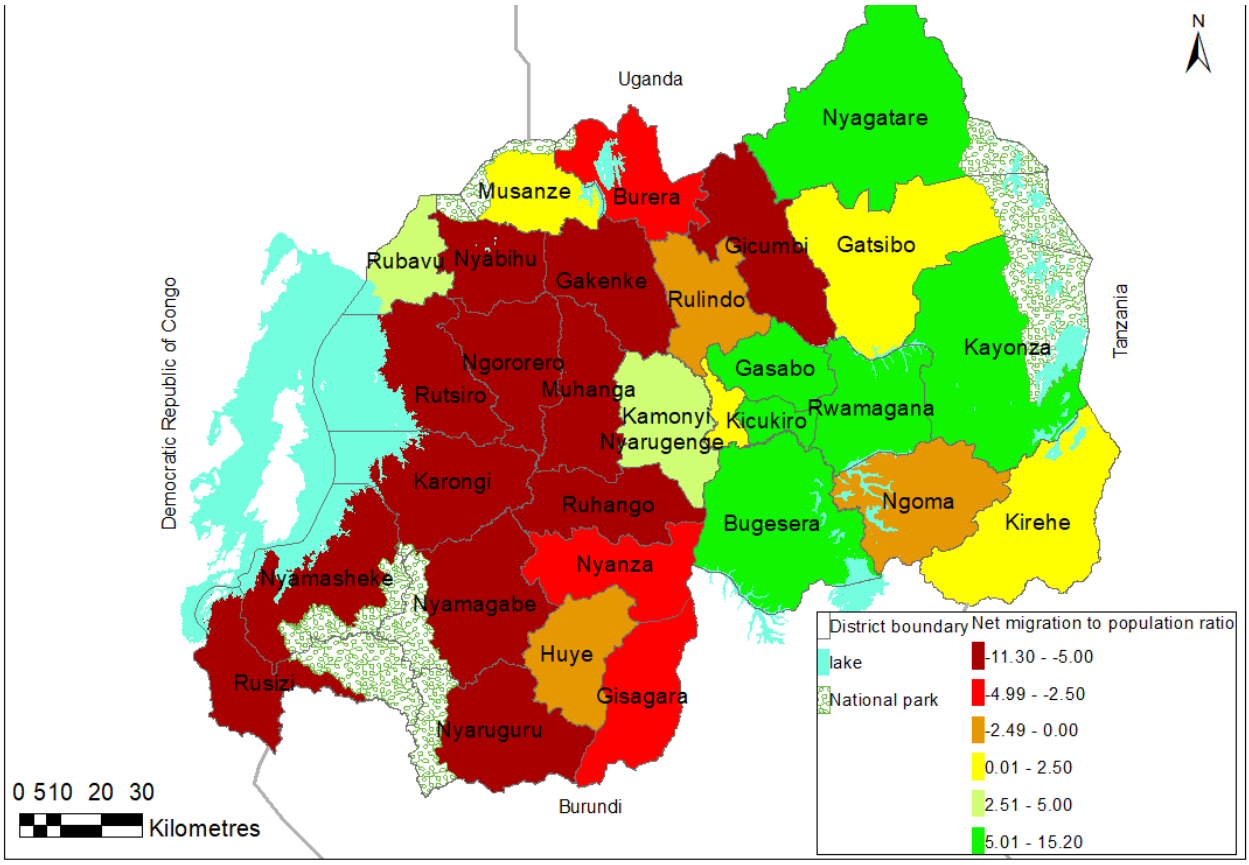
Internal migration in Rwanda remains limited, with Kigali City and the Eastern Province being the main destinations. According to the 2022 Census, 2.2 million residents were living outside their province of birth, which accounts for approximately 17 percent of the total population. Kigali City and the Eastern Province emerged as the top destinations for lifetime migrants, with 948,017 in-migrants settling in the Eastern Province and 835,715 in Kigali City.[40]

Looking at recent migration, which occurred in the five years preceding the Census, there were 889 thousand recent migrants, of which one third (355 thousand) live in the City of Kigali and 306 thousand live in Eastern Province. Hence, while the Southern, Northern, and Western provinces experienced negative net migration stocks, net migration remains positive for Kigali City and the Eastern province. These internal migration patterns reflect a trend in urbanization and economic opportunities, with Kigali City offering better employment prospects and services, particularly in the informal sector, where urban migrants are often employed. Similarly, the Eastern Province has been a hub for agricultural investment, attracting rural-urban migrants seeking farmland and work in agricultural enterprises.

Rwanda has seen an increase in international immigration, particularly from the East African Community (EAC) countries. As of 2022, the percentage of foreign-born that reside in Rwanda is about 3 percent of the population. Their share in urban areas rises to 5.6 percent, whereas it drops to 1.7 percent in rural areas.[41] The majority of international immigrants have resided in their current district for 10 or more years, regardless of gender and specific area of residence. The main countries of origin are neighbouring countries, namely DRC, Uganda, Burundi, and Tanzania.

[40] NISR, 2023. *Fifth Rwanda Population and Housing Census, 2022*. Kigali: National Institute of Statistics of Rwanda.
[41] NISR, 2023. *Fifth Rwanda Population and Housing Census, 2022.*

Map 1.1: Net migration stock (as population ration, 2022)



Source: NISR, 2023. Fifth Rwanda Population and Housing Census, 2022

Rwanda also continues to host a significant number of refugees, mostly from neighbouring countries. As of August 2024, Rwanda was home to about 135,000 refugees and asylum seekers according to the United Nations High Commissioner for Refugees (UNHCR), a slight increase from 127,000 at the end of 2021.[42] Refugees come predominantly from the DRC and Burundi. Out of the total refugee population, nearly half live in the Mahama refugee camps. Together with the other camps, namely Kigeme, Kiziba, Mugombwa, and Nyabiheke these camps host up to 91 percent of the refugee population. Since the start of 2024, about 8,623 individuals (including 2,565 new births) have been registered in Rwanda, 79 percent of whom are new arrivals from DRC, 13 percent from Burundi, and 2 percent from Eritrea. Refugees are given basic services, cash transfers as well as food and nutrition assistance. Until April 2021, WFP and UNHCR Rwanda, under the overall guidance of the MINEMA, provided status-based food and cash assistance to refugees residing in camps. However, due to steadily declining financial resources and the recognition that household vulnerability levels vary, needs-based targeted assistance was introduced in May 2021. Refugee households in camps were classified based on their vulnerability levels (highly vulnerable, moderately vulnerable, and least vulnerable) to determine their eligibility for targeted food assistance. Eligibility criteria, closely linked to vulnerability, were established to define each of the three

[42] UNHCR, 2024. *Rwanda – Population Dashboard. Overview of Refugees and Asylum-Seekers in Rwanda as of 31 August 2024.*

groups. All refugee households registered in UNHCR's ProGres database were subsequently categorized into these three groups, each receiving different transfer amounts based on their classification.

1.3.3 Poverty trends

The prevalence of multidimensional poverty declined from 34.5 percent in 2012 to 30.4 percent in 2022. The fifth household and population census measured the non-monetary poverty in Rwanda using the Multidimensional Poverty Index (MPI) which focuses on three fundamental dimensions of human well-being: Education, Health, and Living Standards.[43] The results indicated that, at the national level, about 887,508 people were classified as severely poor and 3,139,395 moderately poor, making a total of 4,026,903, which represents 30.4 percent of the population. There is a substantial decline in non-monetary poverty if one considers that the incidence of poverty was as high as 45.7 percent in 2002.[44]

Kigali City is the province with the lowest incidence of multidimensional poverty (10%), followed by the Northern Province with about 30 percent. The Eastern, Southern and Western Provinces all have poverty headcount ratios higher than the national average (35%). Both monetary and non-monetary poverty estimates consistently identify the Western Province as the poorest and Kigali as the most affluent. However, the latest Integrated Household Living Conditions Survey (EICV)-based monetary poverty estimates identify the Eastern Province as relatively better off. This discrepancy between monetary and non-monetary poverty rankings may be attributed to differences in household income versus living conditions. The Eastern Province benefits from higher agricultural productivity, which boosts household income and consumption, explaining its better performance in monetary poverty estimates. However, the region lags behind in infrastructure, housing quality, and access to social services, such as health facilities, schools, and electricity, reflecting its dependence on primary sector activities. Additionally, malaria remains a significant public health issue in the Eastern Province, contributing to higher child mortality rates. These factors collectively help explain why the Eastern Province ranks lower on non-monetary poverty measures, despite its relatively higher income levels.

Rural areas have a much higher incidence of multidimensional poverty, at 37.3 percent compared to 13.4 percent in urban areas. This rural/urban divide is observed across all provinces. At the district level, Kicukiro in Kigali City has the lowest poverty rate at 6.7 percent, followed by Nyarugenge (9%), and Gasabo (11%). On the other hand, the districts of Gisagara and Nyanza, in the Southern Province, as well as Rutsiro in the Western Province, have the highest poverty incidence ranging from 40 to 45 percent. The districts with higher poverty incidence tend to be those with a higher concentration of rural settlements. The lower quality of social infrastructure in rural areas is a key driver of non-monetary poverty beyond households' characteristics.

[43] The MPI is computed on the basis of the Alkire-and-Foster method. Three dimensions are combined to produce the MPI index: Education, Health, and Living standards. Each dimension receives a weight equivalent to one-third (1/3). Each dimension is evaluated through a set of deprivation indicators. The selected indicators then equally share the dimension's weight as they are used to compute individual deprivation scores. Individual scores are later added up to yield a comprehensive deprivation score, whose value ranges from 0 to 1.

[44] NISR, 2023. *Fifth Rwanda Population and Housing Census, 2022*. Kigali: National Institute of Statistics of Rwanda.

1.4 Government policies

The Government of Rwanda has implemented comprehensive strategies and policies to promote sustainable development, improve food security, and tackle malnutrition, with a strong emphasis on reducing stunting (chronic malnutrition). These efforts focus on economic transformation, agricultural modernization, the rollout of social protection programmes, and human capital development to foster inclusive growth and resilience to environmental and climate shocks. By prioritizing job creation, enhanced public services, climate adaptation, and market integration, Rwanda aims to reduce poverty and strengthen livelihoods. The following sections provide a detailed overview of the policies, strategies, and interventions, highlighting their medium- to long-term objectives.

1.4.1 Rwanda's Vision 2050

Rwanda's Vision 2050 aims to transform the country into an upper-middle-income nation by 2035 and a high-income nation by 2050 through inclusive and sustainable growth. Key priorities include economic transformation, human capital development, and urbanization, with a target of 70 percent urbanization and a per capita income of USD 12,476 by 2050. Investments in education, healthcare, infrastructure, and sustainable agriculture are expected to drive this transformation, while strong governance and environmental protection are critical to ensuring resilience against climate change and equity.[45] [46]

1.4.2 National Strategy for Transformation II – NST2

The Second National Strategy for Transformation (NST2) – covering the years 2024-2029 – builds on NST1 to advance Rwanda toward Vision 2050. The NST2 outlines five key priorities, including: (i) job creation; (ii) reduction of stunting and malnutrition; (iii) boosting exports; (iv) improving the quality of education; (v) enhancing public service delivery. NST2 focuses on economic transformation, industrialization and private sector growth to strengthen the country's export capacity and investments. The NST2 also tackles climate change, access to health and social protection, while promoting digital innovation and gender equality. The strategy ensures inclusive and sustainable development through economic growth, social equity, and governance reforms.

1.4.3 Strategic Plan for Agriculture Transformation – PSTA 5

The Fifth Strategic Plan for Agriculture Transformation (PSTA5) – covering the years 2024-2029 – aligns with NST2 and Vision 2050, aiming to modernize Rwanda's agriculture while reducing labour dependence. It prioritizes productivity, climate resilience, financial access, and global market integration, emphasizing youth and gender inclusion. The PSTA5 supports private sector engagement, regional integration, and innovation, aligning with national and global frameworks such as the National Determined Contributions (NDC), the Comprehensive Africa Agriculture Development Programme (CAADP) and the United Nations' Sustainable Development Goals (SDGs), especially SDG 2, which focuses on ending hunger and promoting sustainable agriculture. The strategy aims to enhance food security,

[45] Republic of Rwanda, 2020. *Vision 2050.*

[46] World Bank, 2020. Country Partnership Framework for the Period of FY21-FY26.

sustainable agriculture, and economic growth, positioning Rwanda as a leader in agricultural transformation.

1.4.4 The National Early Childhood Development Strategic Plan 2018-2024 and the National Family and Nutrition Policy

The National Strategic Plan for Early Childhood Development (2018-2024) supports Early Childhood Development (ECD) efforts by expanding access to quality services, aligning with NST (2017-2024) to ensure all children can thrive.

The National Family and Nutrition Policy (2024) advances Vision 2050 by addressing stunting, malnutrition, and undernutrition, through a multisectoral approach involving health, agriculture, social protection, and education. The policy utilizes initiatives such as the District Plans to Eliminate Malnutrition (DPEM), community-based health programs, social behaviour change communication (SBCC) campaigns and the National Multisectoral Nutrition Strategy and nutrition budget tracking systems to ensure effective implementation.

1.4.5 Social Protection Sector Strategic Plan 2018 – 2024

The *National Social Protection Policy* safeguards individuals from life-cycle and livelihood risks while promoting poverty reduction and self-reliance. It reinforces Rwanda's commitment to an inclusive social protection system, ensuring income security for the most vulnerable.[47] This policy is supported by the Social Protection Sector Strategic Plan (SP-SSP) 2018-2024, which outlines key priorities include poverty reduction, nutrition and social safety nets, with a focus on children, people with disabilities, and disaster-affected populations. The plan prioritizes: (1) social security schemes for income support, (2) emergency assistance for short-term crises, (3) social care services for the vulnerable, and (4) linkages to complementary livelihood support services. The strategy also emphasizes disaster response, aiming to strengthen support for households and communities affected by shocks and crises, with a focus on building resilience and promoting recovery.

2 Rationale and Objectives

The Comprehensive Food Security and Vulnerability Analysis (CFSVA), conducted every three years in Rwanda, provides vital data on household food security and nutrition. It offers detailed insights into household vulnerability, to food and nutrition insecurity by assessing key indicators such as food consumption and coping strategies. By evaluating the impact of shocks, the CFSVA helps policymakers identify priority areas and improve food security interventions across the country.

The 2024 CFSVA is instrumental in monitoring the progress of Rwanda's key strategies, such as the NST1, the Malabo Declaration and the PSTA4. Conducted by the MINAGRI, the National Institute of Statistics of Rwanda (NISR), the World Food Programme (WFP) and partners, the CFSVA provides updated data on food insecurity and malnutrition to track advancements in achieving household food and nutrition security, as outlined in priority areas 2 and 3 of the PSTA4.

[47] Ministry of Local Government – Rwanda, 2020. National Social Protection Policy, June 2020.

The survey assesses the impact of short rains during the 2022B and 2023A seasons and global increases in food and fertilizer prices on household food security. It aligns with SDG targets such as zero hunger, responsible consumption and production, and climate change mitigation, while also supporting the Malabo Declaration goals to end hunger, reduce poverty, and strengthen climate resilience by 2025. Specifically, the 2024 CFSVA intends to:

- Assess the key trends and geographic patterns in food and nutrition security
- Analyse potential underlying causes of the food insecurity
- Highlight the implications for ongoing as well as future social protection, food security and nutrition interventions
- Provide monitoring data for the agriculture sector to enable informed implementation of PSTA5.

3 Methodology

3.1 Food Security concepts

Food security is commonly defined as a state in which "all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life".[48] It is a multidimensional concept encompassing food availability, access, utilization, and stability over time.[49] Achieving food security requires not only adequate food intake but also resilient systems capable of adapting to shocks. Food security is shaped by household livelihood strategies, which depend on the assets and resources available to the household.

Food availability refers to the physical presence of food at the national, regional, or household level, determined by domestic production, imports, stocks, and assistance.[50] It represents the supply side of food security and is influenced by factors such as agricultural productivity, climate conditions, infrastructure, and trade policies. However, the mere presence of food does not ensure food security if households lack the means to access it.

Food access refers to a household's ability to obtain adequate food through market purchases, barter, or assistance.[51] It includes physical access, such as functioning markets and transportation, and economic access, determined by income, assets, and food costs. Social factors, such as support networks and cultural food-sharing practices, also play a role. Ensuring stable and equitable access over time is critical for maintaining food security at both the household and national levels.

Food utilization refers to how food within a household is used and an individual's ability to absorb and utilize nutrients, which depends on their health status, diet and the body's efficiency in processing food. It encompasses factors such as food storage, preparation, diet quality, feeding practices, and individual

[48] FAO, 1996. *Rome Declaration on World Food Security.*
[49] WFP, 2009. *Comprehensive Food Security & Vulnerability Analysis Guidelines.*
[50] WFP, 2020. *Essential Needs Assessment Guidelines.*
[51] WFP, 2009. *Comprehensive Food Security & Vulnerability Analysis Guidelines.*

health conditions, all of which are essential for achieving proper nutrition. Effective utilization also requires access to clean water, sanitation, healthcare, and knowledge about nutrition and hygiene.

Stability refers to the consistent and resilient availability, access, and utilization of food over time. A household is food secure when it maintains reliable access to food year-round, without disruptions from short-term issues such as seasonal shortages or long-term risks, including conflicts or climate shocks.

Vulnerability in the context of food security refers to "the probability of an acute decline in access to food or consumption, often in relation to a critical threshold that defines minimum levels of human well-being".[52] It is influenced by two factors:

i) Exposure to Risk—the probability of events such as natural disasters, conflicts, or economic shocks causing welfare loss

ii) Risk Management Capacity—the ability to manage, mitigate, and respond to these risks.

Coping capacity depends on the severity of the shock and structural factors, including poverty, social safety nets, and resource access. Poorer households, with limited coping mechanisms, are more vulnerable to food insecurity during shocks.

3.2 Nutritional concepts

Nutrition is the process of consuming and utilizing food to meet the body's dietary needs for growth, development, and health maintenance. It is a key aspect of the "food utilization" dimension of food security, focusing on both sufficient food intake and effective nutrient absorption.[53] Proper nutrition is vital for health, cognitive development, and physical ability, while malnutrition can severely impact individuals and communities, particularly vulnerable populations.

Malnutrition arises from an inadequate, excessive, or imbalanced intake of nutrients, leading to poor health, growth issues, and other complications.[54] It can result from insufficient food, lack of dietary diversity, or health conditions affecting nutrient absorption. As a key aspect of food security, malnutrition weakens human development, economic growth, and societal resilience, thereby exacerbating food insecurity.

Acute malnutrition, or wasting, is a rapid decline in nutritional status caused by shocks such as disease, disasters, food shortages, or conflict.[55] It is diagnosed using measurements such as weight-for-height, Mid-Upper Arm Circumference (MUAC), or signs of nutritional oedema. Moderate Acute Malnutrition (MAM) involves moderate deficits and increases the risk of disease and mortality but can be effectively treated with appropriate care and nutrition support.[56] Severe Acute Malnutrition (SAM) is a critical

[52] WFP, 2002. *VAM Standard Analytical Framework.*
[53] WFP, 2009. *Comprehensive Food Security & Vulnerability Analysis Guidelines.*
[54] WFP, 2017. *Emergency Food Security Assessment Handbook*
[55] WFP, 2017. *Emergency Food Security Assessment Handbook.*
[56] WFP, 2012. Moderate Acute Malnutrition: A Decision Tool for Emergencies.

condition, marked by extreme weight deficits, very low MUAC (<115 mm), or bilateral oedema, requiring urgent therapeutic intervention to prevent life-threatening outcomes.

Chronic malnutrition, or stunting, is a long-term condition indicated by low height-for-age, caused by prolonged nutrient deficiencies, frequent infections, and poor Infant and Young Child Feeding (IYCF) practices.[57] Unlike acute malnutrition, stunting reflects early-life growth and developmental failures, leading to irreversible physical and cognitive damage. It negatively impacts education, economic productivity, and overall well-being, often perpetuating cycles of poverty and food insecurity across generations.

3.3 Conceptual Framework

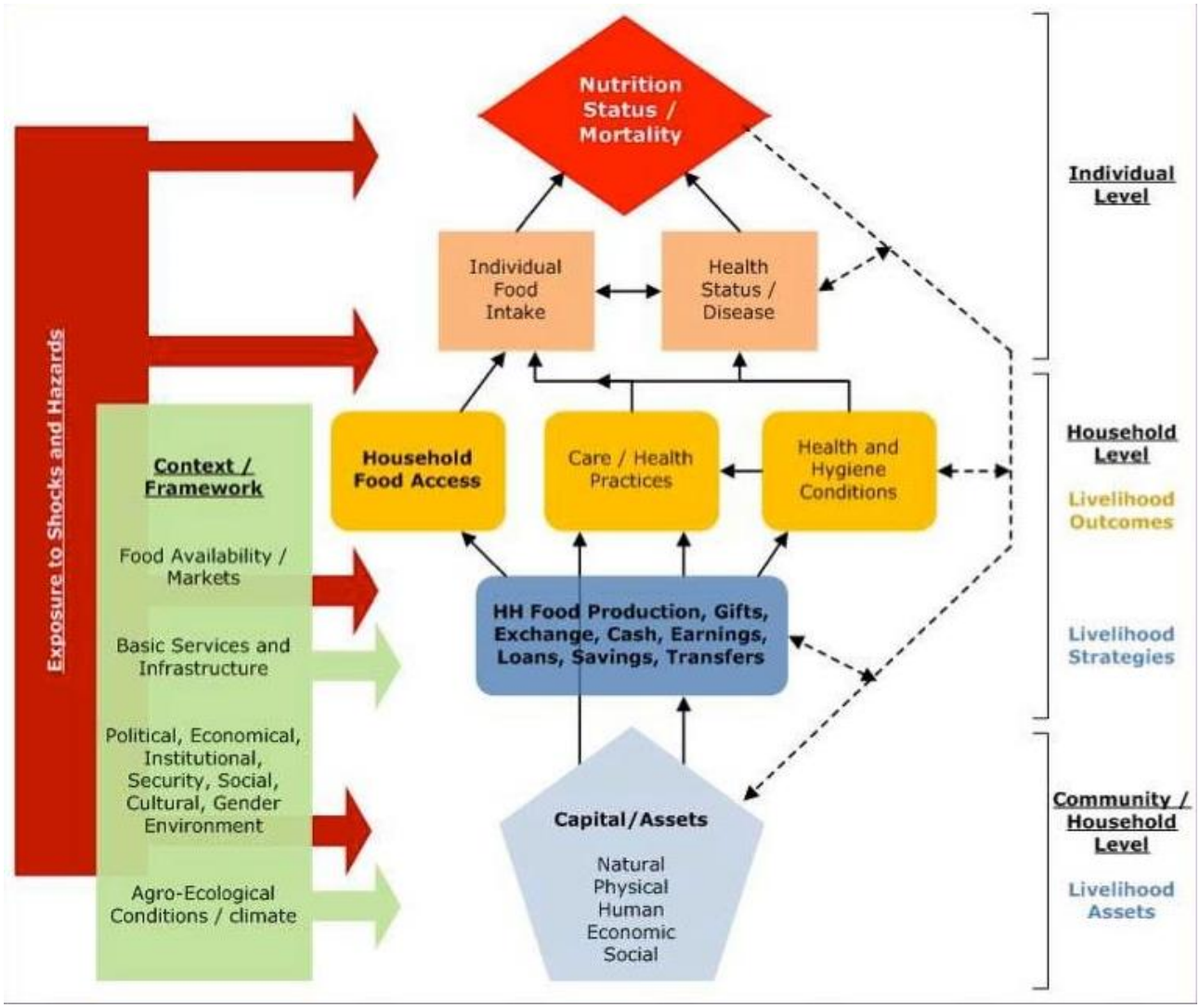
The 2024 CFSVA utilizes the WFP's adaptation of UNICEF's conceptual framework on child and maternal malnutrition, incorporating household food security and livelihood dimensions.[58] The framework (see Figure 3.1) offers a comprehensive approach to food and nutrition security, guiding interventions to address vulnerabilities at community, household, and individual levels.

At the community level, food security is shaped by socio-economic and environmental factors such as infrastructure, agricultural productivity, market access, and governance. Food availability relies on local production, trade, and functional markets. Communities with strong food systems, adequate stocking and storage capacity, and market access are more resilient to food insecurity. Social cohesion and networks also play a vital role in supporting vulnerable community members, especially during crises.

[57] UNICEF, 2021. Improving Young Children's Diets During the Complementary Feeding Period.

[58] WFP & UNICEF, 2016. *Technical Guidance for the Joint Approach to Nutrition and Food Security Assessment (JANFSA).*

Figure 3.1: Food and Nutrition Security Conceptual Framework



Source: WFP & UNICEF, 2016

Household-level food security focuses on a household's ability to obtain sufficient and nutritious food through production, purchase, or other means such as barter or assistance. It emphasizes food access, influenced by income, employment, and coping strategies, as well as resource allocation among members. Key factors include household composition, gender roles, and access to resources such as land and credit. Intra-household dynamics and decision-making are crucial for equitable food distribution, which often varies between households, particularly those headed by men versus women.

At the individual level, food utilization focuses on how food is consumed and the body's ability to absorb essential nutrients. It emphasizes food quality, including dietary diversity and nutritional adequacy. Intra-household food allocation can create disparities, often affecting women, children, and other nutritionally vulnerable groups. Factors like health status, clean water, and sanitation play a key role in nutrient absorption. Vulnerable groups, such as pregnant and breastfeeding women and girls (PBWG), infants, and the elderly, require targeted interventions to ensure proper nutrition and improved health outcomes.

The objectives of the CFSVA are also aligned with the "2024-2030 WFP Strategy to Improve Diets and Address Malnutrition"[59] by providing critical insights to inform and update policies and strategies targeting these issues. The results of the survey serve as a tool to reduce the frequency and severity of malnutrition, particularly in areas most vulnerable to shocks and crises. It aims to generate evidence to promote the consumption of healthy, nutritious diets among high-risk populations, while strengthening national systems and capacities to mitigate crisis impacts and sustain long-term dietary improvements. Furthermore, the CFSVA supports initiatives to address social norms and practices that hinder equitable and inclusive access to nutritious diets.

3.4 Sampling & Data Collection

The 2024 Comprehensive Food Security and Vulnerability Assessment (CFSVA) employed a stratified two-stage sampling approach designed to ensure statistical representativeness at the district level. In the first stage, data from the 2022 Population and Housing Census and the Rwanda Demographic and Health Survey were used, with each district serving as a stratum and villages, or Enumeration Areas (EAs), as the primary sampling units (PSUs). The NISR's 2020 mapping operation identified 24,339 EAs, forming the basis for the 2022 Census, Post Enumeration Survey, and future inter-censual surveys. Depending on physical and demographic factors, an EA may comprise a whole village or parts of one or two villages. Villages were systematically selected using Probability Proportional to Size (PPS), giving larger villages a higher chance of inclusion. The total sample consists of 900 EAs across Rwanda's 30 districts, ensuring comprehensive geographical coverage.

At the second stage of sampling, households were randomly selected within each sampled village. From the official list provided by village authorities, 10 households were systematically selected using a random start and a calculated interval based on the total number of households in each village. An additional three reserve households were also identified to replace any non-responding households. The target sample size for each district was 300 households, leading to a total sample size of 9,000 households across Rwanda.

Weighting procedures were employed to account for variations in household sizes across villages and to correct for non-response. The basic weight for each household was calculated as the inverse of its probability of selection, ensuring that the results were representative of the overall population in each district. Additionally, adjustments were made for non-interviews and replacement households to maintain accuracy. The final dataset provides comprehensive and representative information on food security and nutrition at the national, provincial, and district levels.

Data collection was conducted across all 30 districts of Rwanda between April 26th and June 2nd 2024. The survey employed three primary instruments: a community questionnaire administered to key informants to gather information on community infrastructure, agriculture, markets, and shocks; a household questionnaire, which covered demographics, livelihoods, assets, and food consumption, among other topics; and a mother and child questionnaire targeting women of reproductive age, with a focus on health, nutrition, and anthropometry. The questionnaires were first developed in English and later translated into Kinyarwanda. Data collection was facilitated using tablets programmed with Open

[59] WFP. 2024-2030 WFP Strategy to Improve Diets and Address Malnutrition, December 2024.

Data Kit (ODK) software, ensuring efficiency and accuracy. Enumerators received nine days of training to standardize data collection and anthropometric measurement procedures.

3.5 Data Analysis: the CARI approach

This report's analysis uses WFP's Consolidated Approach for Reporting Indicators of Food Security (CARI) to assess Rwanda's overall food security. The CARI combines food security indicators into a single index, evaluating food consumption, economic vulnerability, and coping strategies. It classifies households on a 4-point scale: Food Secure, Marginally Food Secure, Moderately Food Insecure, and Severely Food Insecure. The overall prevalence of food insecurity is calculated by combining the rates of moderately and severely food-insecure households. Using the CARI approach consistently across CFSVA reports enables tracking food security trends over time.

Table 3.1: Description of the overall WFP food security classification

CARI CATEGORY	DESCRIPTION	CLASSIFICATION
Food Secure (1)	Able to meet food needs without engaging in reduced and livelihood coping strategies for food security.	Food Secure
Marginally Secure (2)	Has minimally inadequate food consumption, relies on reduced coping and applies stress coping strategies to secure food needs.	
Moderately Insecure (3)	Has food consumption gaps and unable to meet required food needs without applying crisis coping strategies.	Food Insecure
Severely Insecure (4)	Has extreme food consumption gaps OR has extreme loss of livelihood assets that will lead to food consumption gaps, or worse.	

Source: WFP, 2021

3.6 Limitations

Sampling Framework. The 2024 CFSVA sampling framework allows for national-level urban and rural breakdowns but not district-level comparisons due to sample size limitations. A larger sample would be needed for reliable urban-rural analysis within districts, which is impractical due to cost and logistical constraints.

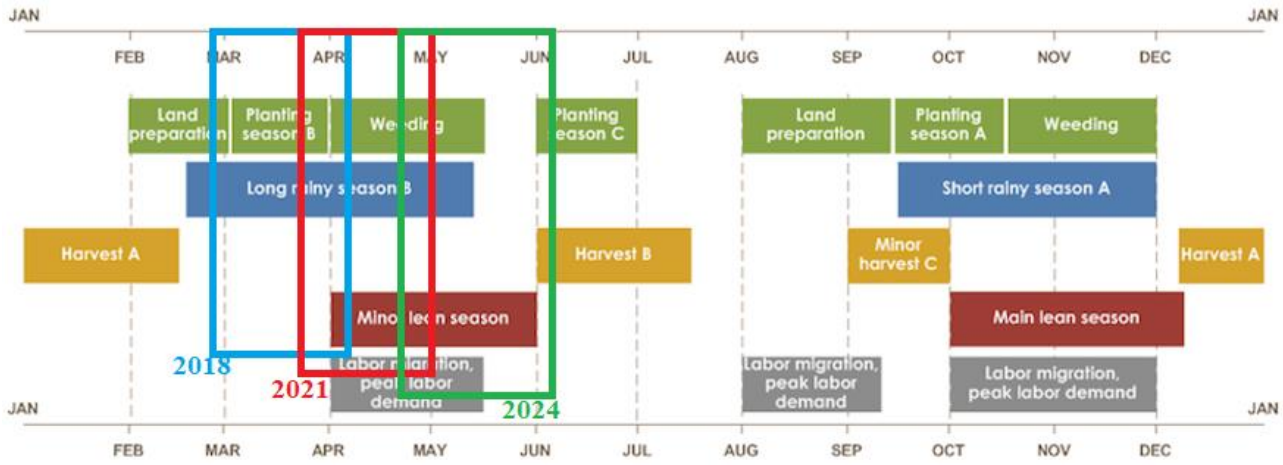
Change in enumeration areas. The sampling framework reflects updates from the 2020 NISR mapping exercise, which identified 24,339 new Enumeration Areas (EAs) used as the primary unit of analysis for the 2022 census and subsequent surveys. This marks the first CFSVA round using the updated EAs, which differs from prior exercises.

CARI guidelines. The 2024 CFSVA adopts WFP's revised CARI guidelines, introduced in 2021, which impact the estimates for the CARI's Current Status. The updated methodology now includes both the Food Consumption Score (FCS) and the reduced coping strategy index (rCSI) to better classify households as "Food Secure" or "Marginally Food Secure." This change was made to better understand the relationship between adequate diets and the use of consumption-based coping mechanisms. Since the 2021 CFSVA

relied on the previous CARI, where Current Status was measured only by the FCS, comparisons with past results for "Food Secure" and "Marginally Food Secure" households are only indicative. However, the overall distinction between food secure and insecure households remains consistent (see Section 9 for more details).

Seasonality. The 2024 CFSVA data collection occurred from late April to early June, later than previous rounds and further away from season A harvesting. In comparison, the 2021 CFSVA was conducted from early April to early May, just before the lean season, and the 2018 CFSVA took place from early March to early April. This timing shift may affect observed food security trends by capturing different stages of food availability and seasonal conditions.

Figure 3.2: Timeline of CFSVA data collection from 2018 to 2024



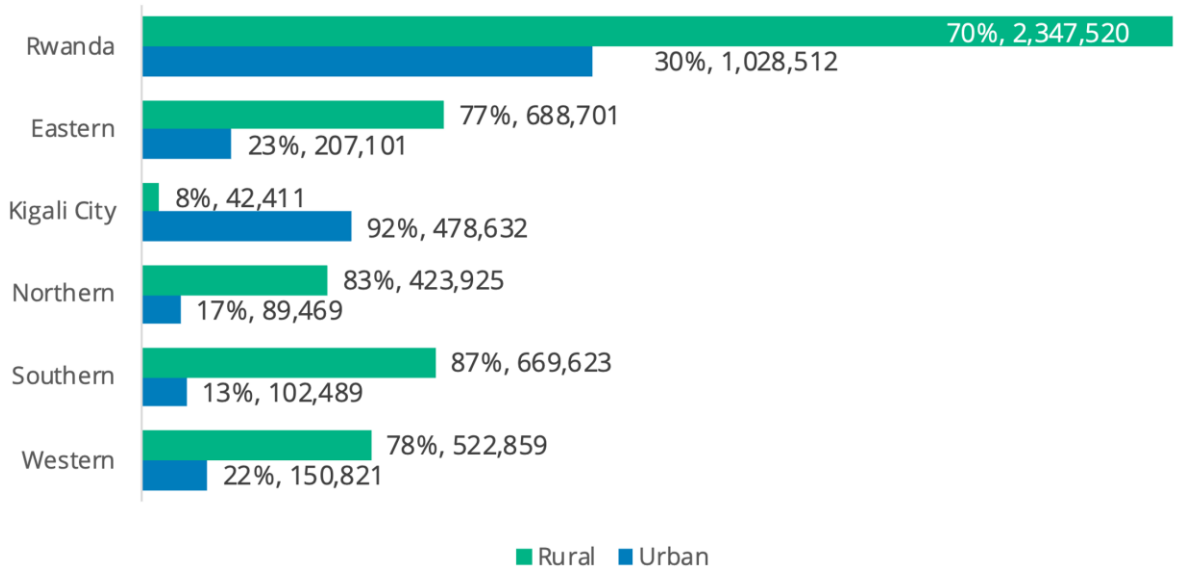
Source: FEWS Net

4 Households' description

4.1 Household demographics

The 2024 CFSVA data show that Rwanda remains predominantly rural, with 70 percent of households living in rural areas. Kigali City is the exception, with 92 percent of households in urban settings. In other provinces, rural households make up between 77 percent and 87 percent of the population. Overall, approximately 2.3 million households are in rural areas, while about 1 million are in urban areas (see figure 4.1).

Figure 4.1: Estimated prevalence number of households per province by rural and urban settings



Source: estimates based on CFSVA 2024 data

The median household size in 2024 is 4 members, with an average of 4.2, down from 4.7 in 2021. Household sizes range from 1 to 16 members, with 51 percent of households having 2 to 4 members. Average household size varies by province, from 4.6 members in the Western Province to 4.0 in Kigali City. However, there are no significant differences in household size between rural and urban households (see figure 4.2).

Figure 4.2: Average household size by province

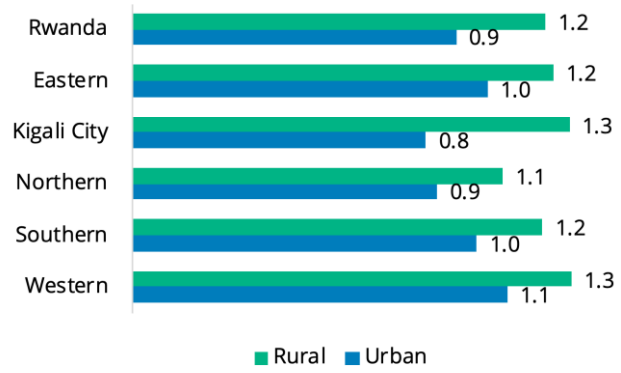


Figure 4.3: Average dependency ratio by province

Source: estimates based on CFSVA 2024 data.

The 2024 CFSVA data show that Rwanda's average dependency ratio is 1.11, slightly lower than 1.19 in 2021, indicating more dependents than economically active members across all provinces (see figure 4.3). Kigali City has the lowest dependency ratio (0.88), while the Western Province has the highest (1.22). Additionally, 8 percent of households have at least one member with disabilities, ranging from 5.6 percent in Kigali City to 9.5 percent in the Southern Province. On average, there are 52 economically active members per 100 household members.

4.2 Characteristics of the head of the household

Most heads of households are aged between 18 and 39 (42%) or 40 and 60 (36%). The median age of household heads is 42 years, with 22 percent of households headed by elderly individuals[60] and only 0.08 percent led by minors. In Kigali City, household heads are younger on average (40 years), and the prevalence of elderly-headed households is significantly lower compared to other provinces.

At the national level, nearly 4 percent of household heads report living with a disability, with walking impairments (59 %), sight issues (17 %), and cognitive disabilities (13 %) being the most common. Approximately 15 percent of households are headed by an inactive individual, either elder[61] or disabled. The prevalence of households headed by disabled heads ranges from 3 percent in Kigali City to 5 percent in the Southern Province.

Most households are led by men (73 %) and individuals in stable partnerships (68 %). Around 15 percent of households are headed by widows or widowers, approximately 10 percent by single individuals, and 7 percent by divorced or separated persons. Female heads of households are more likely to be widowed than their male counterparts, with over 90 percent of male heads in stable relationships compared to only 8 percent of female heads. This pattern is consistent across provinces.

Table 4.1: Characteristics of the Head of Household

Characteristics of the HHH		Overall	Male	Female
Gender	Male	73.3%		
	Female	26.7%		
Median age		42	40	54
Age	Under 18	0.1%	0.1%	0.1%
	18-39 years old	41.8%	48.0%	24.6%
	40-60 years old	36.1%	36.4%	35.2%
	>60 years old	22.0%	15.5%	40.1%
Marital status	Married	47.2%	62.8%	4.3%
	Partner	21.1%	27.6%	3.5%
	Divorced	3.4%	1.0%	9.9%
	Separated	3.2%	1.2%	8.7%
	Widow/Widower	15.3%	1.4%	53.5%
	Never married (single)	9.8%	6.0%	20.0%
Has disability		4.0%	3.1%	6.5%
Is inactive		10.2%	27.9%	14.9%
Dependency ratio		1.1	1.1	1.3
Can read and write	Yes	70.4%	77.5%	51.0%
	No	26.3%	19.5%	44.8%
	Only read	3.3%	3.0%	4.2%
Level of education attained	Not completed primary	53.4%	0.0%	0.0%
	Completed primary	23.8%	26.3%	16.9%
	Vocational school	1.2%	1.2%	1.1%
	Some/still secondary	9.5%	10.7%	6.1%
	Completed secondary	6.9%	7.6%	5.2%
	Some/still university	1.4%	1.4%	1.6%
	Completed university	3.7%	4.5%	1.6%
The head of household holds managerial roles in his community	No	92.8%	91.6%	96.1%
	Yes	7.2%	8.4%	3.9%

Source: estimates based on CFSVA 2024 data

[60] Aged above 60.

[61] Aged above 65.

Female-headed households are more frequently led by elderly individuals or those living with a disability and have fewer active members compared to male-headed households. Male-headed households average 54 active members per 100 household members, while female-headed households average 44. Nevertheless,15 percent of female heads of households are inactive, compared to 28 percent of their male counterparts. These disparities, consistent across provinces, suggest that female-headed households face greater challenges in ensuring food security for their members.

Female heads of household are more likely to be illiterate and have lower educational attainment than their male counterparts. Nationally, 26 percent of household heads cannot read or write, rising to 45 percent among female heads of households compared to 20 percent among male heads. Additionally, 657 percent of female heads did not complete primary education, compared to 47 percent of males, and only 8 percent of female heads have secondary education or higher, compared to 13 percent of males.

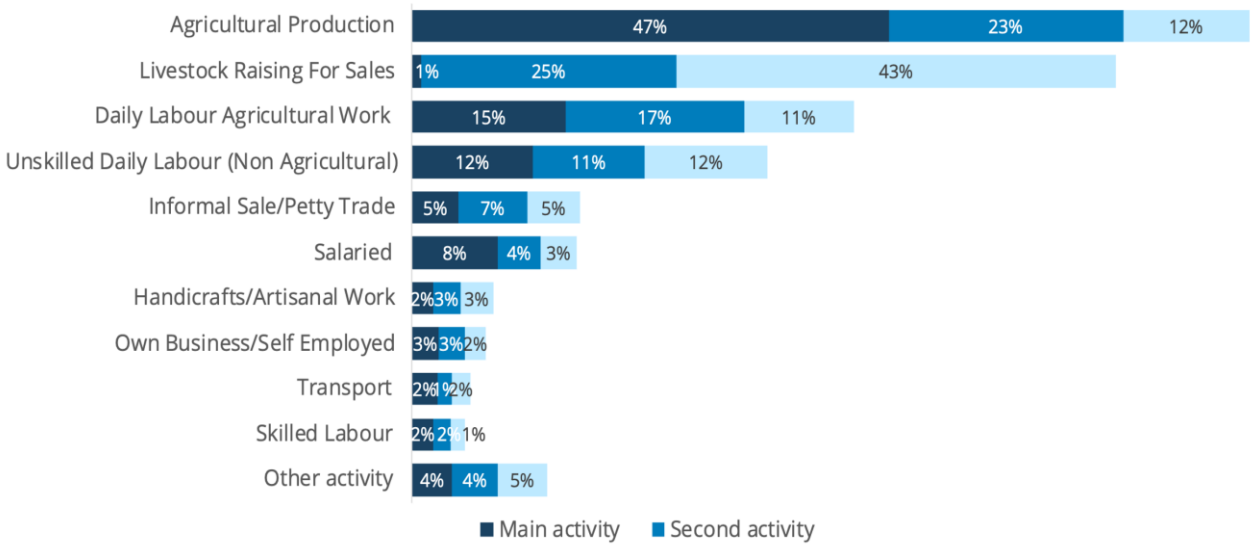
About 7 percent of household heads hold managerial roles in their community with notable gender disparities – 4 percent of women compared to 8 percent of men. These roles are less common in Kigali City (under 5 %) compared to the Northern (9 %) and Western Provinces (8 %). Nearly half of all household heads participate in associations or cooperatives, up from one-third in 2021, with 18 percent taking on managerial roles. While gender differences in participation are minimal, significant variations exist across provinces.

4.3 Livelihood groups

More than half of households (56 %) relied on multiple income-generating activities, while only 43 percent of household members were engaged in livelihood activities. The reliance on a single income source is highest in Kigali City (71%) and lowest in the Northern (28%) and Western (33%) provinces. On average, the primary activity accounts for 82 percent of household income, with the contribution ranging from 91 percent in Kigali City to 74 percent in the Northern Province. Households with multiple income sources often do so because their primary activity does not generate sufficient income, as evidenced by a positive correlation between per-capita income and reliance on the main activity.

The majority of households rely on agriculture for their livelihood, with 82 percent engaged in agricultural production and 69 percent in livestock raising. Only 32 percent reported their primary livelihood activity as seasonal. The second most common main activities are daily agricultural labour (43%) and unskilled daily labour (35%). Since the 2021 CFSVA, there has been an increase in households involved in salaried employment (from 5 to 14%) and petty trade (from 3 to 5%).

Figure 4.4: Prevalence of the three main income-generating activities



Source: estimates based on CFSVA 2024 data

On average, 43 percent of household members are active and contributing to income. Households in Kigali have the highest share of working members (46%), while the Western province has the lowest (40 %). With greater urbanization, the active population in Kigali City is more likely to have shifted from agriculture to salaried employment and trade compared to the predominantly rural provinces, which may explain this trend. Other contributing factors include the expansion of the service sector and Rwanda's policy on off-farm job creation. Per-capita income is positively correlated with the proportion of working household members but negatively correlated with the prevalence of rural households – implying that households with more members involved in income generating activities or households living in urban settings earn more.

Households in Rwanda are classified into ten livelihood groups based on their main income-generating activities and expenditure levels, offering insights into diverse economic activities. Agricultural households are further divided into three sub-groups: agro-pastoralists, earning at least 10 percent of income from livestock; low-income agriculturalists, with annual per capita expenditures below 214,721 RWF; and medium/high-income agriculturalists, whose expenditures exceed this threshold.[62] The ten livelihood groups are: (1) low-income agriculturalists, (2) medium/high-income agriculturalists, (3) agro-pastoralists, (4) agricultural daily labourers, (5) unskilled daily labourers, (6) skilled labourers, (7) traders and petty traders, (8) salaried workers or business owners, (9) artisanal workers and households depending on remittances or external support, including assistance.

Half of Rwandan households are classified as agriculturalists, earning at least 60 percent of their income from farming activities (see Table 4.1). This group includes low-, medium-, and high-income agriculturalists, as well as agro-pastoralists. Agricultural daily labourers and unskilled labourers account for 24 percent of households, while 15 percent earn income from trade, business, skilled labour, artisanal work, or salaried employment. Since the 2021 CFSVA, there has been a significant decline in the share of

[62] The threshold is based on the last estimate of the poverty line (EICV 2016) adjusted for currency depreciation. In 2016, the NISR estimated a value of RWF 159,375 equivalent to USD 185.

low-income agriculturalists (from 35 to 24%) and agricultural daily labourers (from 19 to 12%). Meanwhile, households in the salaried/own business group have increased from 5 to 14 percent.

Table 4.2: Prevalence of livelihood groups

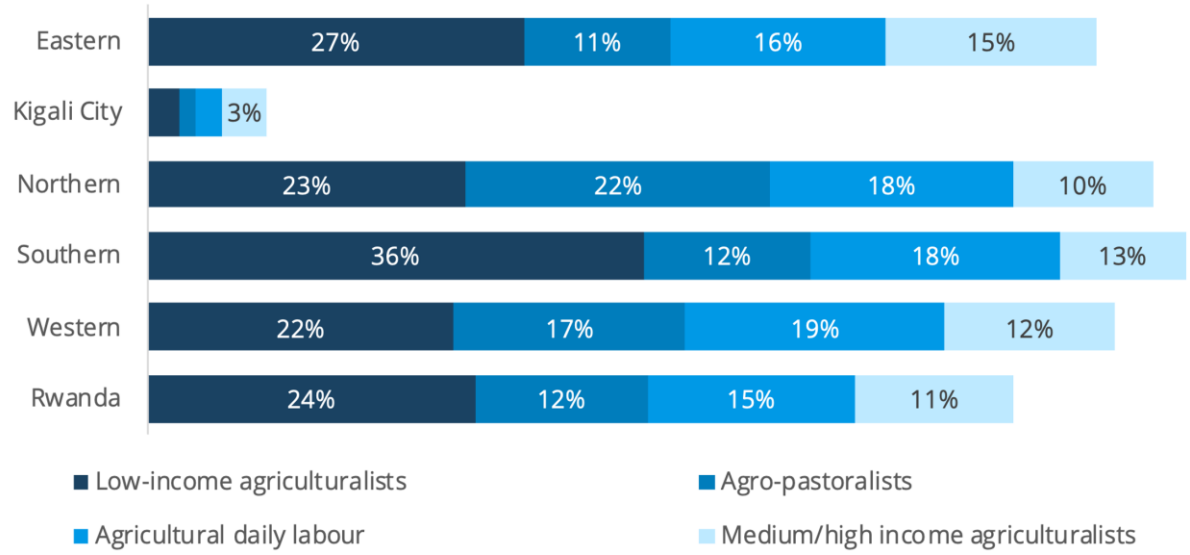
LIVELIHOOD GROUPS	DESCRIPTION (based on average group characteristics)	Percentage	
		2021	2024
Low-income agriculturalists	Low-income agriculturalists obtain the vast majority (83 %) of their income from their own land, with some contribution from daily agricultural labour (8 %).	35%	▼24%
Agricultural daily labour	Agricultural daily labourers gain 79 percent of their income from daily agricultural labour and 13 percent from their own crop production.	19%	▼12%
Agro-pastoralists	The main income source of Agro-pastoralists is crop production on their own land (63 %) with an important contribution from raising livestock for sale (29 %).	15%	15%
Medium/high income agriculturalists	The medium/high income agriculturalists obtain the vast majority (82 %) of their income from their own land and other numerous activities.	9%	▲11%
Artisanal work/other	Artisans and households in other activities gain 79 percent of their income from artisanal work and from their own agricultural production (6 %).	5%	▼2%
Unskilled daily labour	These households combine income from daily labour (84 %) with agricultural production (5 %).	7%	▲12%
Salaried work/own business	This group gains 54 percent of income from salaried work and 15 percent from their own business or self-employment.	5%	▲14%
External support/transfers	This group gains 67 percent of income from remittances from friends and relatives and 27 percent from donations, VUP direct transfers and other social transfers or self-employment.	N/A	2%
Trade/petty trade	These households on average get 71 percent of their income from informal/petty trade, 11 percent from trade with agricultural products and 6 percent from their own agricultural production.	3%	▲5%
Skilled labour	This group gains 86 percent of income from unspecified skilled labour activities.	2%	2%

Source: estimates based on CFSVA 2024 and 2021 data

Outside Kigali City, most Rwandan households depend on agriculture, with agricultural households evenly distributed across provinces except Kigali. In Kigali, livelihoods are primarily salaried or self-employed work (35 %) and non-agricultural daily labour (29 %). The Eastern Province has the highest

share of medium/high-income agriculturalists (15 %), the Southern Province has the most low-income agriculturalists (36 %), and the Northern Province leads in agro-pastoralists (22 %), see figure 4.5.

Figure 4.5: Prevalence of agriculture-based livelihoods, by province



Source: estimates based on CFSVA 2024 data

Households headed by women or less-educated individuals are more likely to be low-income agriculturalists or agricultural daily labourers. Male-headed households have a higher prevalence of salaried or self-employed workers (15 %) and agro-pastoralists (13 %), while female-headed households are more likely to be low-income agriculturalists (28 %) or agricultural daily labourers (18 %) but rarely skilled labourers (0.8 %). Highly educated heads are more often salaried or self-employed, while those with incomplete primary education are more likely to lead low-income or agricultural daily labour households. Skilled labour is most common among heads with vocational training.

Figure 4.6: Prevalence of livelihood groups, by gender of the HHH

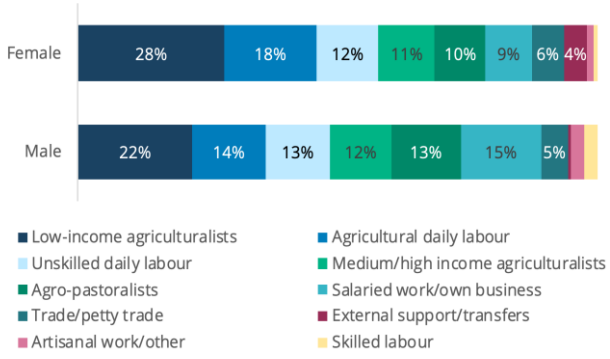
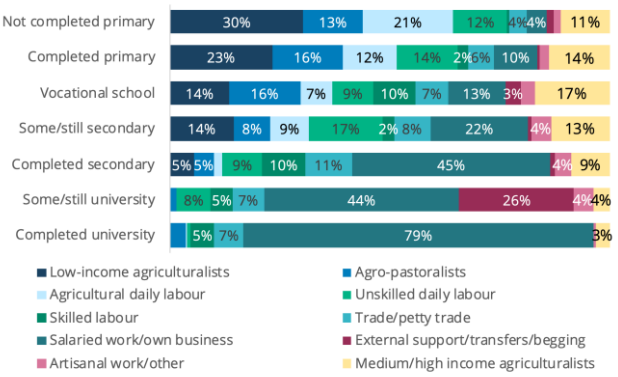


Figure 4.7: Prevalence of main livelihood groups, by education of the HHH

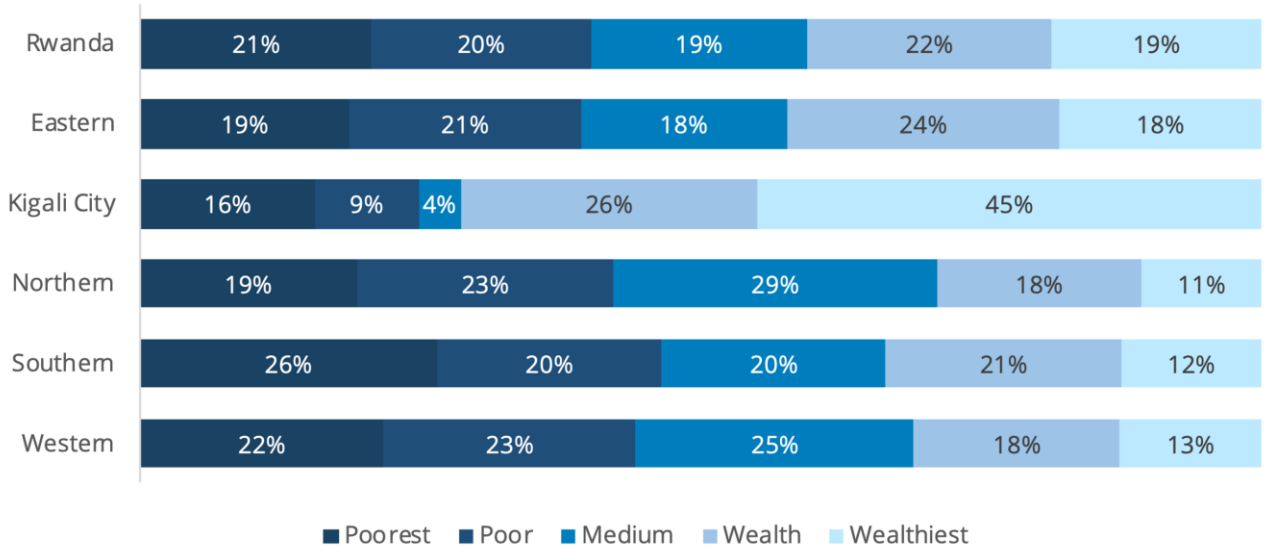


Source: estimates based on CFSVA 2024 data

4.4 Household wealth

A wealth index[63] classifies households by estimated wealth status, revealing that **wealthy households are predominantly located in Kigali City, where only 25 percent of households fall into the two poorest quintiles, compared to about 40 percent in other provinces.** The majority -71 percent- of households in Kigali City fall into the two richest quintiles, compared to only 29 percent in the Northern Province.

Figure 4.8: Prevalence of wealth quintiles, by province

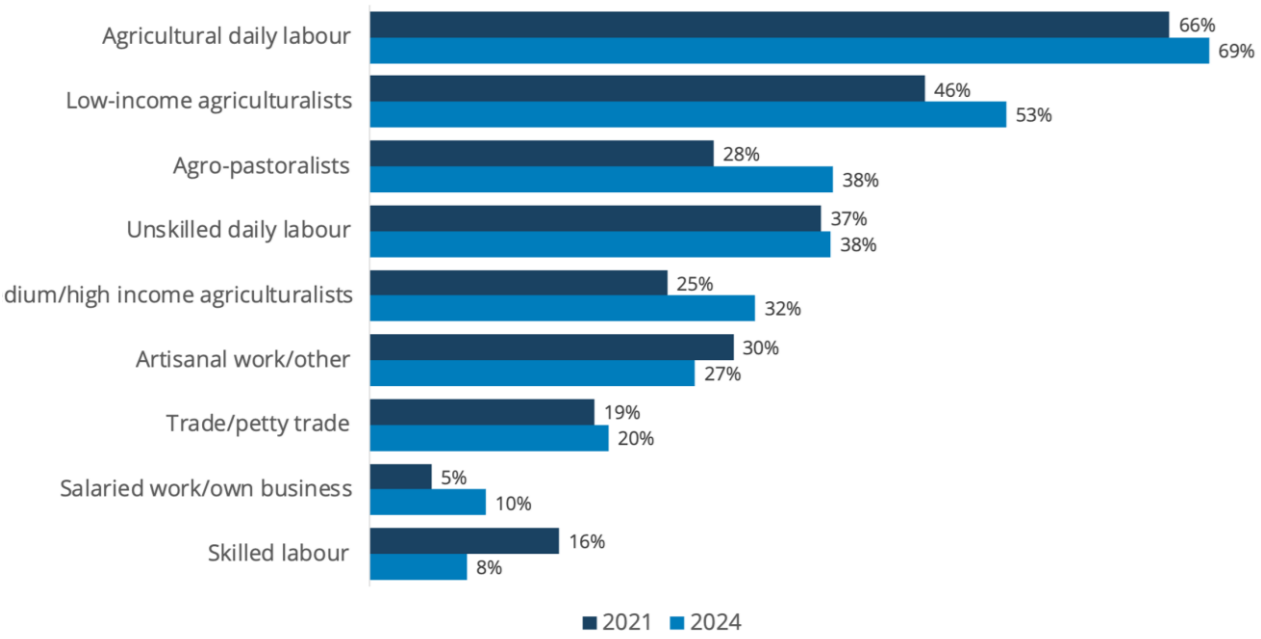


Source: estimates based on CFSVA 2024 data

The highest prevalence of impoverished households is among the agricultural daily labourers and the low-income agriculturalist, with respectively 69 and 53 percent of households in these livelihoods falling into the two lowest quintiles (Figure 4.9). The lowest share is found among skilled salaried or self-employed workers (10 %) and traders or petty traders (20 %). However, the proportion of salaried workers in the poorest quintile has slightly increased since 2021, while the share of poor agro-pastoralist households rose from 28 percent to 38 percent.

[63] The 2024 CFSVA uses a wealth index, developed through principal component analysis (PCA), to classify households based on asset ownership and housing characteristics. Indicators include items like TVs, mobile phones, and housing features such as improved lighting, flooring, walls, toilet facilities, and multiple sleeping rooms. The index measures relative wealth, reflecting long-term economic status rather than absolute poverty or wealth.

Figure 4.9: Prevalence of households in the two bottom quintiles, by livelihood group[64]



Source: estimates based on CFSVA 2024 data

4.5 Housing conditions

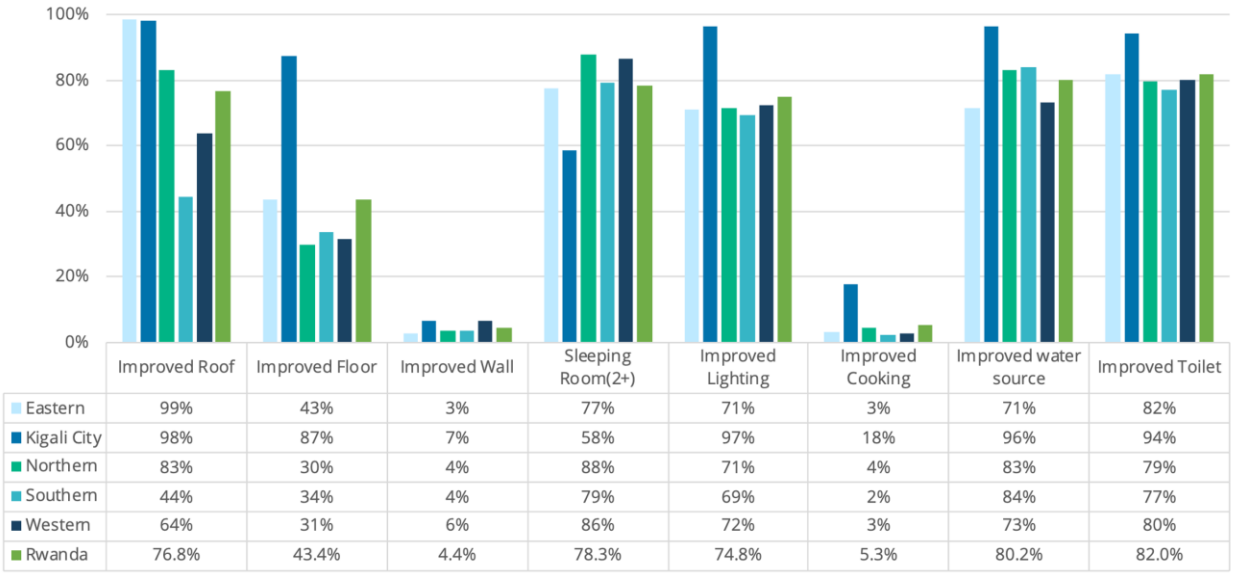
Nearly three-quarters of Rwandan households own their homes, except in Kigali City, where over 60 percent rent their accommodation. In other provinces, the percentage of households who rent their accommodation ranges from 10 to 22 percent. Kigali also has the highest crowding index, with 2.3 household members per room, compared to the national average of 2 and 1.8 in the Northern Province. Additionally, only 58 percent of accommodations in Kigali have more than two sleeping rooms, below the national average of 78 percent.

Dwellings in Kigali, though more crowded, generally have better facilities. Nearly all dwellings in Rwanda have improved roofing, and 87 percent of dwellings in Kigali have improved floors compared to 30 to 44 percent in Northern and Eastern Provinces, respectively. Most dwellings across the country lack improved walls, lighting, and cooking facilities[65].

[64]External support/transfers are excluded from the comparison as this livelihood group was not part of the 2021 classification.

[65] The limited number of houses with improved walls in Rwanda is primarily due to most homes being constructed before the enforcement of guidelines requiring durable materials. The 2022 Census revealed that only about 5 percent of houses nationwide are built using durable materials such as fired bricks, cement blocks, and stones.

Figure 4.10: Prevalence of housing conditions, by province



	Improved Roof	Improved Floor	Improved Wall	Sleeping Room(2+)	Improved Lighting	Improved Cooking	Improved water source	Improved Toilet
Eastern	99%	43%	3%	77%	71%	3%	71%	82%
Kigali City	98%	87%	7%	58%	97%	18%	96%	94%
Northern	83%	30%	4%	88%	71%	4%	83%	79%
Southern	44%	34%	4%	79%	69%	2%	84%	77%
Western	64%	31%	6%	86%	72%	3%	73%	80%
Rwanda	76.8%	43.4%	4.4%	78.3%	74.8%	5.3%	80.2%	82.0%

Source: estimates based on CFSVA 2024 data

Eighty percent of households in Rwanda have access to improved drinking water sources, up from 76 percent in 2021, with the highest access in Kigali City and the lowest in the Eastern Province. Similarly, access to improved sanitation facilities increased from 80 percent to 82 percent, with pit latrines being the most common type (79 %). In Kigali City, 94 percent of households have access to improved sanitation facilities, the highest among all provinces.

Outside Kigali, public taps and boreholes with pumps are the main sources of drinking water, used by 32 percent and 29 percent of households, respectively. In Kigali City, 91 percent of households use public or home taps. In the Eastern Province, 19 percent of households still rely on lakes, ponds, or rivers for drinking water, which explains the highest average water-fetching time of 20 minutes, compared to 13 minutes in Kigali City. Households using ponds or rivers take about 26 minutes to access water, while those using public taps take only 12 minutes.

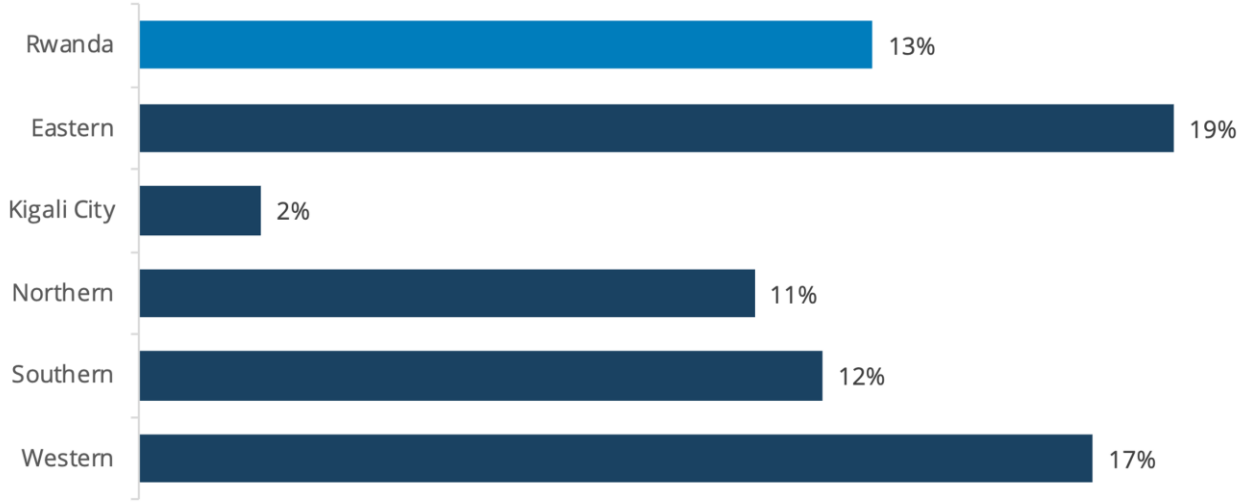
Table 4.3: Prevalence of types of water sources, by province

Source of water	Eastern	Kigali city	Northern	Southern	Western	Rwanda
Public Tap	41.0%	40.5%	39.2%	19.6%	29.6%	33.5%
Tap at home	10.8%	49.6%	12.5%	9.7%	15.5%	17.7%
Borehole	11.1%	5.1%	30.9%	51.1%	27.9%	25.7%
Protected well/spring	6.3%	0.3%	0.4%	2.5%	0.2%	2.4%
Vendor	2.2%	0.8%	0.1%	0.9%	0.1%	0.9%
Improved Sources	71.3%	96.2%	83.1%	83.8%	73.2%	80.2%
Rainwater	2.5%	0.2%	0.7%	0.7%	2.2%	1.4%
Surface water (lake/river)	19.0%	2.0%	5.6%	8.0%	11.2%	10.3%
Unprotected well/spring	6.6%	0.6%	10.6%	7.4%	12.8%	7.7%
Other	0.7%	1.0%	0.0%	0.2%	0.6%	0.5%
Unimproved sources	28.7%	3.8%	16.9%	16.2%	26.8%	19.8%

Source: estimates based on CFSVA 2024 data.

The majority of Rwandan households (59 %) do not treat their water before use, rising to 67 percent among those without access to improved drinking water. Boiling is the most common treatment method for those who do treat their water (34 %). The highest share of households consuming untreated water from unimproved sources is in the Eastern (19 %) and Western (17 %) Provinces, see figure 4.11.

Figure 4.11: Prevalence of households consuming untreated water from unimproved sources, by province



Source: estimates based on CFSVA 2024 data

5 Food availability

5.1 Availability of food commodities in the market

Food commodities are widely available in local markets, though availability and price stability vary by region and commodity type. A 2022 WFP national market assessment across 204 markets indicated strong market functionality, with food availability rated at 7.5 out of 10 and the variety of food items scoring even higher at 7.8.[66] However, price instability remains a significant challenge, receiving a low score of 1.4 out of 10, highlighting issues such as rising prices and supply chain disruptions.[67]

Although a diverse range of grains and cereals are sold in most of the markets, fortified foods remained scarce[68]. Rwandan markets widely offer grains, with locally produced maize flour being the most common, available in 96 percent of surveyed markets. Fortified maize flour is less prevalent, found in only 23 percent of markets, with the highest availability in Kigali City (32%) and lower availability in the Northern (6%) and Eastern (18%) Provinces. Locally produced unfortified maize flour is both more

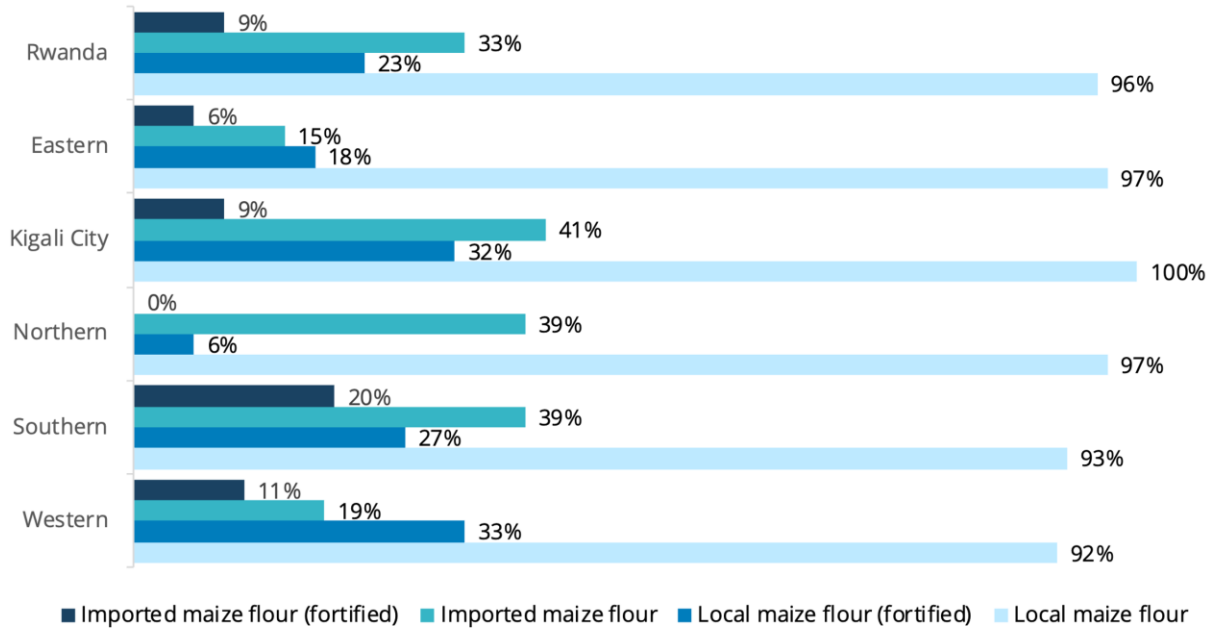
[66] WFP, 2022. *Rwanda market assessment for the national school feeding programme 2022.*

[67] The Market Functionality Index methodology is WFP's standardized market assessment approach that aims to quantify market functionality in a score per marketplace, while also identifying weaknesses or areas of interventions to improve the efficiency of markets. The market functionality is assessed across nine dimensions: 1) Assortment of essential goods, 2) Availability, 3) Price, 4) Resilience of supply chains, 5) Competition, 6) Infrastructure, 7) Service, 8) Food quality, and 9) Access & Protection. Markets are globally scored on a scale from 0 to 10 to allow comparability, where full market functionality (MFI=10) refers to a fully developed, efficient, and functional market. The MFI methodology is available here

[68] Besides being more expensive than unfortified food, there is a lack of awareness regarding the production and consumption of fortified food. The *Rwanda market assessment for the national school feeding programme 2022* found that 22 percent of surveyed schools were unaware of fortified or biofortified options, while 11 percent could not differentiate between fortified and non-fortified food. Higher costs and lack of awareness have likely affected the supply and demand dynamics on the markets.

available and more affordable, averaging RWF 757/Kg in June 2022, compared to RWF 942/Kg for imported maize flour and RWF 835/Kg for fortified maize flour.

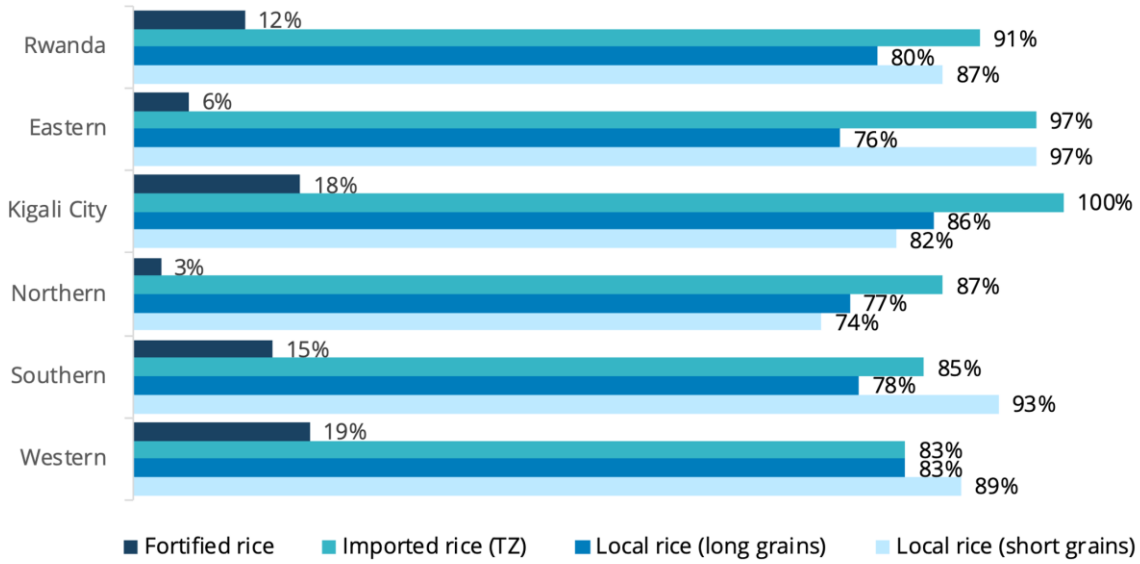
Figure 5.1: Availability of Maize flours in local markets, by province (2022)



Source: WFP (2022)

Rice is widely available in Rwandan markets, with Tanzanian rice being the most common, found in 91 percent of markets, especially in Kigali City and the Eastern Province. Locally produced short-grain rice is available in 87 percent of markets, while local long-grain rice is found in 80 percent. Markets in the Western and Southern Provinces mainly sell short-grain rice varieties.

Figure 5.2: Rice availability in local markets, by province (2022)

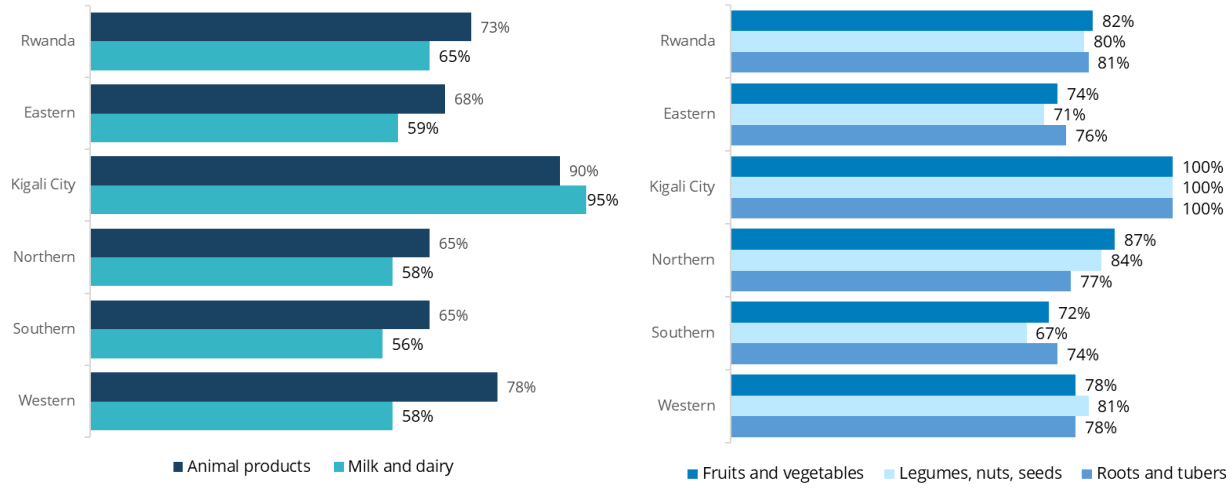


Source: WFP (2022)

Roots and tubers are widely available in Rwandan markets, with Irish potatoes found in 84 percent of markets, sweet potatoes in 81 percent, and cassava flour in 80 percent. In Kigali City, all markets sell Irish potatoes, cassava roots, cassava flour, and sweet potatoes, while the Southern Province offers less variety, with less than 70 percent of markets selling these products. Orange-fleshed sweet potatoes, a biofortified variety, are available in 61 percent of markets in Kigali City, but only in 30-40 percent of the rest of markets in other provinces. Prices reflect regional production patterns, with cassava and Irish potatoes being cheaper in high-production areas like the Southern, Western, and Northern Provinces, while prices are higher in Kigali City and the Northern Province for cassava.

Beans are the most widely available pulse in Rwanda, found in 90 percent of markets, while peas are less accessible, particularly in the Eastern (55%) and Southern (53%) Provinces. Peas from the Southern Province are typically sold in Kigali City, while the Eastern Province depends on imports. High-iron biofortified beans are available in 40 percent of markets, with the highest availability in Kigali City (61%) and the lowest in the Western Province (30%). Their high cost, ranging from RWF 1,208/Kg in Kigali City to RWF 600/Kg in the Northern Province, limits affordability.

Figure 5.3: Availability of non-cereal commodities in local markets, by province (2022)



Source: WFP (2022)

Dried fish and eggs are the most common animal products in Rwandan markets, available in 82 percent and 77 percent of markets, respectively. While animal products and dairy are widely available in Kigali City markets, they are less accessible in other provinces. This may be due to farmers selling directly to the 120 operational Milk Collection Points and Centres (MCCs)[69] across Rwanda, which primarily serve local communities, according to MINAGRI.

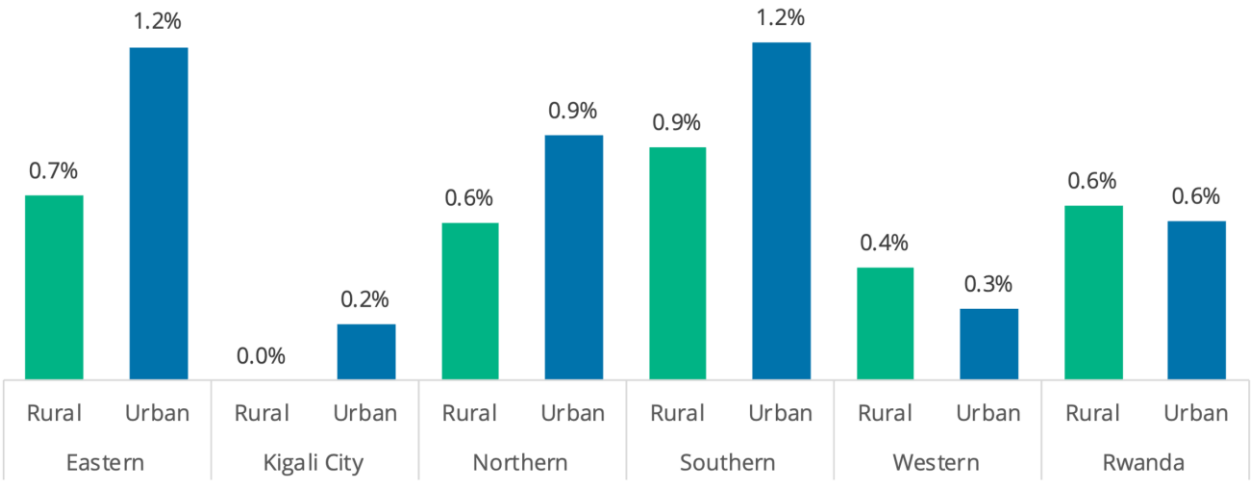
Fruits and vegetables are widely available in Rwandan markets, though papaya and spinach are found in fewer than 70 percent of markets. Rural markets often have lower quantities, as Kigali City serves as the primary trade hub. The Southern and Eastern Provinces have lower market availability, with

[69] The Ministerial Order No. 001/11.30 of 10/02/2016, issued by the Ministry of Agriculture and Animal Resources (MINAGRI), emphasizes that milk should be collected at MCCs, where it undergoes quality testing before sale.

less than 75 percent of markets offering fruits and vegetables. Prices for these products are high in both rural and urban areas.

The 2024 CFSVA data confirm that food commodities are widely available in local markets across Rwanda. Nationally, less than 1 percent of households reported experiencing food shortages due to market unavailability in the week prior to the survey. Even in the Southern and Eastern Provinces, where some food groups were less available, only 1.2 percent of urban households and less than 1 percent of rural households reported food shortages (see Figure 5.4).

Figure 5.4: Prevalence of households reporting food shortages because of lack of products on the market

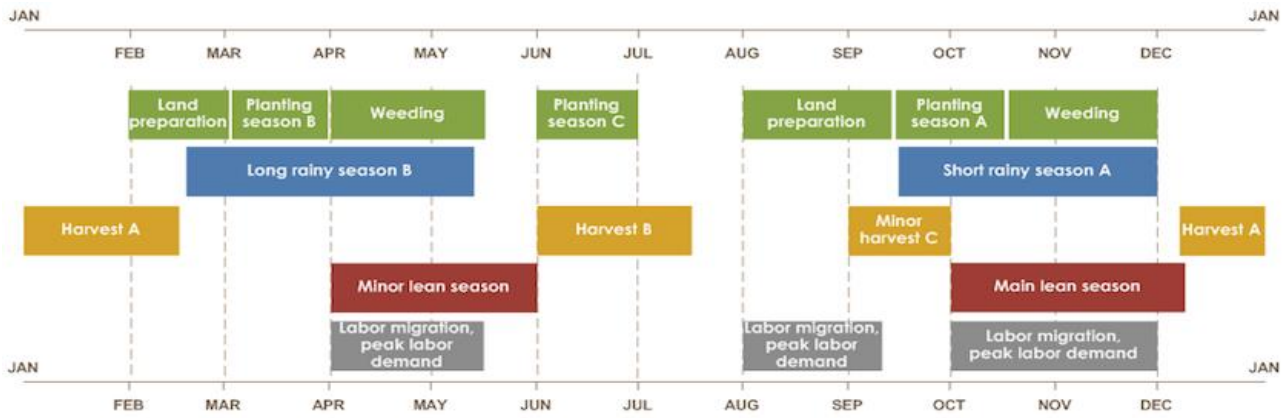


Source: estimates based on CFSVA 2024 data

5.2 Farm characteristics

Rwanda has two main agricultural seasons: Season A (September to February) with harvests in December-February, and Season B (March to June) with harvests in June-July. A third season, Season C (July to September), occurs in lowland marshlands with harvests in September. Of Rwanda's 2.376 million ha of land, 58 percent (1.37 million ha) is used for agriculture, primarily small-scale and rainfed. However, irrigation usage has increased from 10 percent in 2021 to 13 percent in 2024.

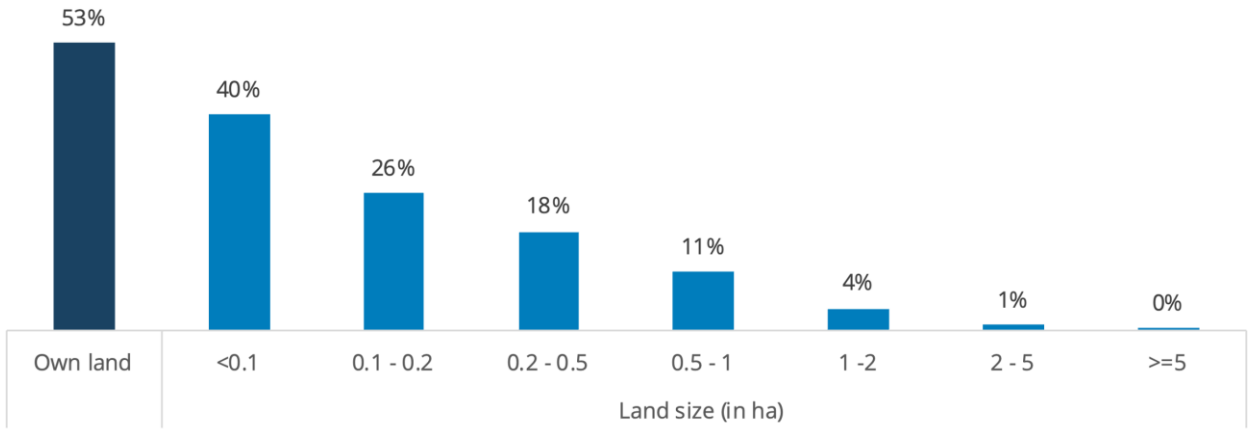
Figure 5.5: Seasonal agricultural calendar



Source: FEWS Net

CFSVA data show a decline in land ownership, from 69 percent in 2021 to 53 percent in 2024, with 84 percent of landowners cultivating less than 0.5 ha. In Kigali City, only 11 percent of households own farming land, compared to 74 percent in the Northern Province and 64 percent in the Western Province. Median land sizes range from 0.1 to 0.2 ha across provinces. Households farming more than 0.5 ha are most common in the Eastern Province (20%) and least common in Kigali City (12%). A small fraction (0.2 %) of households owns land exceeding 5 ha, primarily in Kigali City's Kicukiro district.

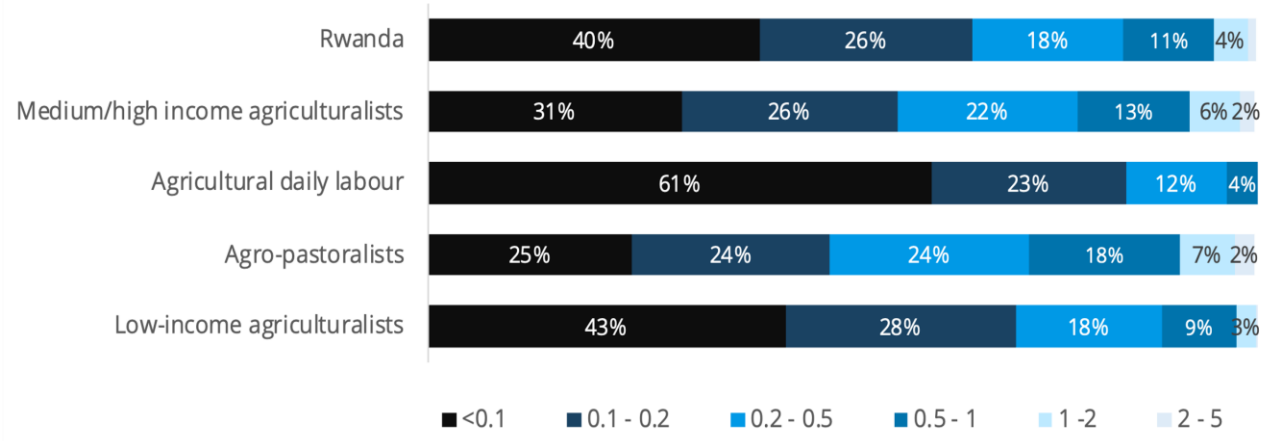
Figure 5.6: Prevalence of land size in Rwanda



Source: estimates based on CFSVA 2024 data

Among rural households, landownership is more common, but land sizes are generally smaller. Agricultural daily labourers have the highest percentage of non-owners (56%), compared to 20 percent for low-income agriculturalists, 21 percent for medium/high-income agriculturalists, and 9 percent for agro-pastoralists. Most agricultural daily labourers who own land cultivate less than 0.1 ha (61%). Similarly, 89 percent of low-income agriculturalists farm less than 0.5 ha. Larger plots are more common among agro-pastoralists and medium/high-income agriculturalists, though over 90 percent in both groups own less than one ha.

Figure 5.7: Land size (in ha) by livelihood group



Source: estimates based on CFSVA 2024 data

Land ownership increases with the age of the household head. Only 33 percent of households headed by individuals under 40 own farming land, compared to 61 percent for those aged 40-60 and 79 percent for those over 60. However, land size distribution remains similar across all age groups (see Table 5.1).

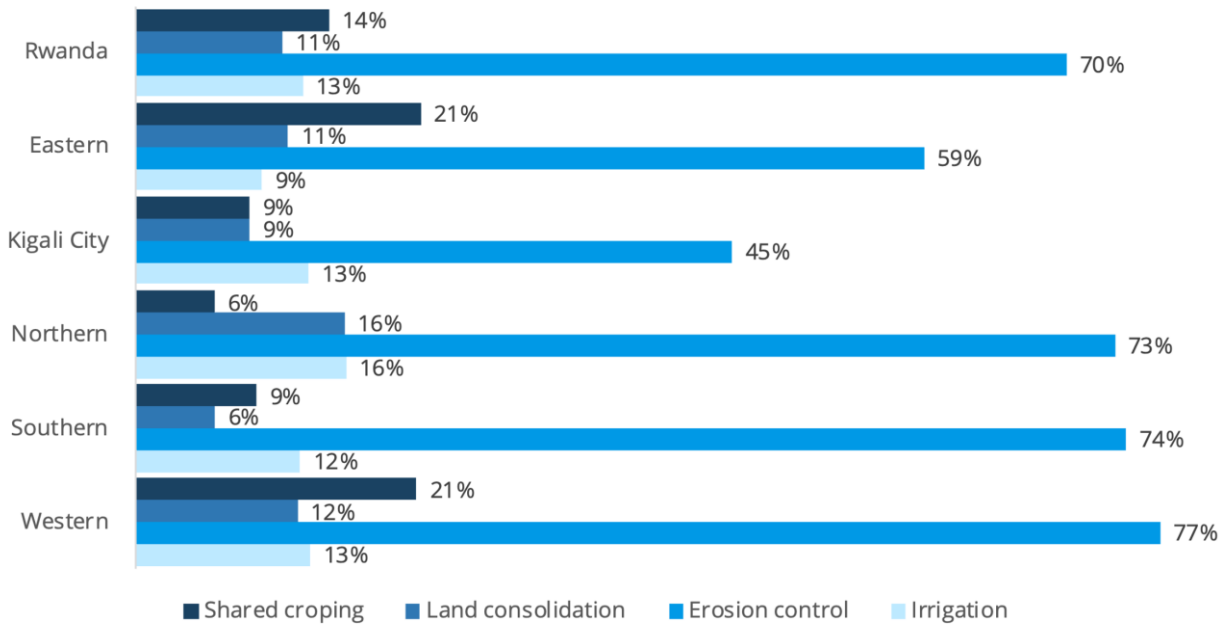
Table 5.1: *Land size by age of the head of household*

Land size in ha	Age of the head of the household		
	18-39	40-60	>60
<0.1	48.6%	37.4%	36.6%
0.1 - 0.2	23.2%	26.1%	26.8%
0.2 - 0.5	16.6%	18.9%	18.9%
0.5 - 1	8.0%	11.9%	11.9%
1 -2	2.9%	4.6%	4.1%
2 - 5	0.7%	1.0%	1.4%
>=5	0.1%	0.2%	0.3%

Source: estimates based on CFSVA 2024 data

Most farming land in Rwanda is protected against soil erosion, with 70 percent of households implementing such measures, up from 63 percent in 2021. However, only 45 percent of households in Kigali City implement erosion protection. Irrigation use varies, with 9 percent of households using it in the Eastern Province and 16 percent in the Northern Province. Land consolidation and sharecropping remain relatively low and stable, practiced by 11 percent and 14 percent of households, respectively. During the Season 2024A, organic fertilizers were widely used by 89 percent of households, while fewer farmers utilized improved seeds (40%) and pesticides (40%).[70]

Figure 5.8: Prevalence of land practices, by province



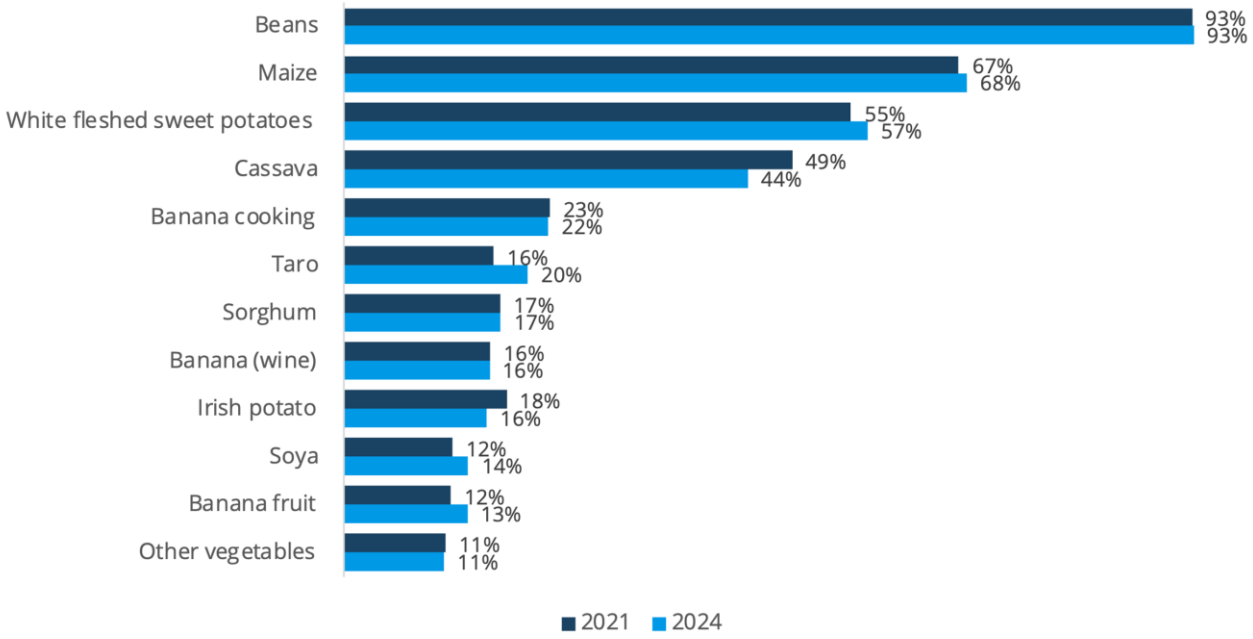
Source: estimates based on CFSVA 2024 data

[70] NISR, 2024. *Seasonal Agricultural Survey – Season A 2024.* National Institute of Statistics Rwanda.

5.3 Domestic production

The main food crops cultivated by most Rwandan households are beans (93%), maize (68%), and white-fleshed sweet potatoes (57%). Other common crops include cassava (cultivated by 44% of households), cooking bananas (22%), and taro (17%). During the Season 2024A, cultivation of beans and white-fleshed sweet potatoes increased significantly compared to 2021, from 81 to 93 percent and 31 to 48 percent, respectively. Land allocation in 2024 included 1 million ha for seasonal crops, 0.511 million ha for permanent crops, and 0.124 million ha for permanent pasture.[71]

Figure 5.9: Prevalence of types of crops in Season 2024A



Source: estimates based on CFSVA 2024 data

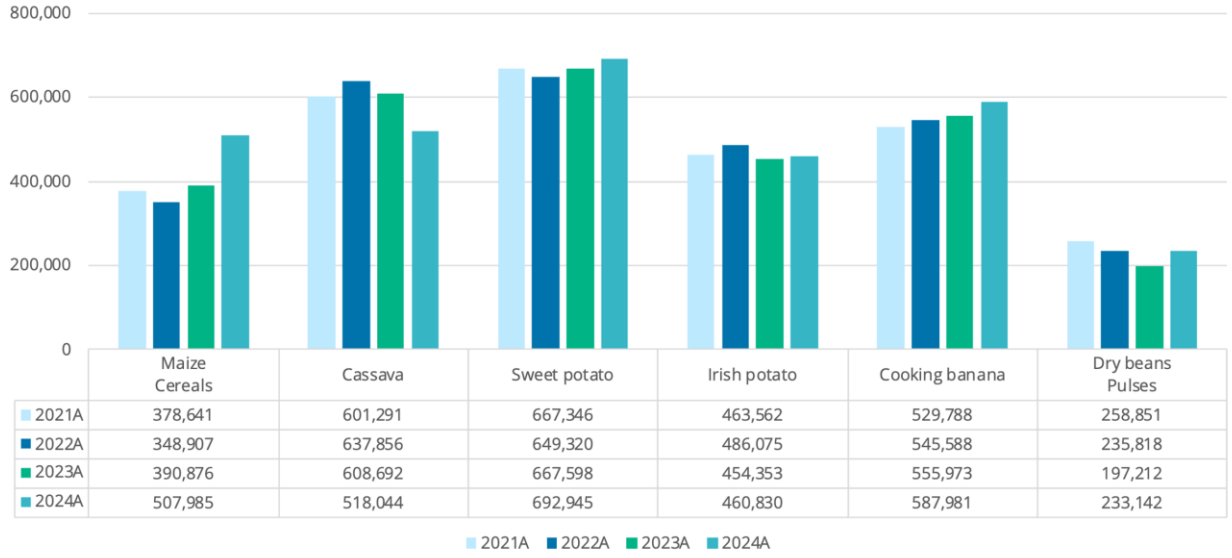
Crop production in Rwanda showed mixed trends between 2021 and 2024. While maize grain, cooking bananas, paddy rice and sweet potatoes saw notable increases from Season 2021A to Season 2024A due to favourable rains, (up 34, 11, 8 and 4 percent, respectively, see Figure 5.11)[72], key staples like cassava, dry beans, and Irish potatoes experienced declines of down to 14 percent.

Despite an 8 percent decline in 2022, maize production surged by 30 percent from 2023A to 2024A. Paddy rice production also increased overall, with a slight dip in 2023 followed by an 8 percent rebound in 2024. Cassava production peaked at 637,856 tons in 2022 but declined by 5 percent in 2023 and 15 percent in 2024 due to disease and planting material shortages. Irish potato production decreased by 7 percent in 2023, with a slight recovery in 2024. However, sweet potatoes and cooking bananas continued to increase, with gains of 4 percent and 6 percent, respectively, from 2023A to 2024A.

[71] Ibid.

[72] NISR, 2024. *Seasonal Agricultural Survey - Season A, 2024.* National Institute of Statistics Rwanda.

Figure 5.10: Production (in tonnes) of key crops between 2021 and 2024



	Maize Cereals	Cassava	Sweet potato	Irish potato	Cooking banana	Dry beans Pulses
2021A	378,641	601,291	667,346	463,562	529,788	258,851
2022A	348,907	637,856	649,320	486,075	545,588	235,818
2023A	390,876	608,692	667,598	454,353	555,973	197,212
2024A	507,985	518,044	692,945	460,830	587,981	233,142

Source: NISR, Seasonal Agricultural Surveys

In 2024 about 52 percent of households reported raising livestock, primarily cattle, goats, pigs, and chickens (Figure 5.11). The 2024 CFSVA confirms the findings of the 2022 Census, with the most owned livestock being cows (30% of households), followed by goats (20%), pigs (16%), chickens (13%), and rabbits (4%). The data also reveal that livestock ownership is most prevalent in the Northern (66%) and Southern (65%) provinces. (Figure 5.12).

Figure 5.11: Prevalence of types of livestock owned

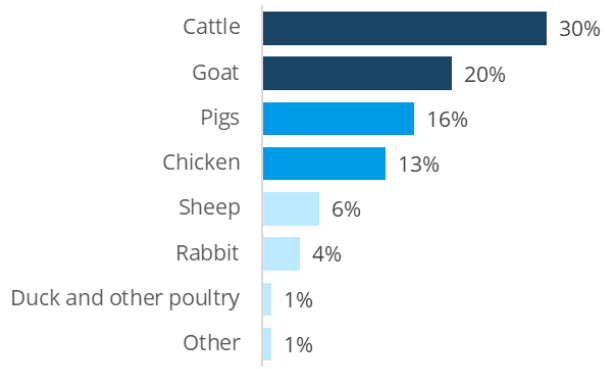
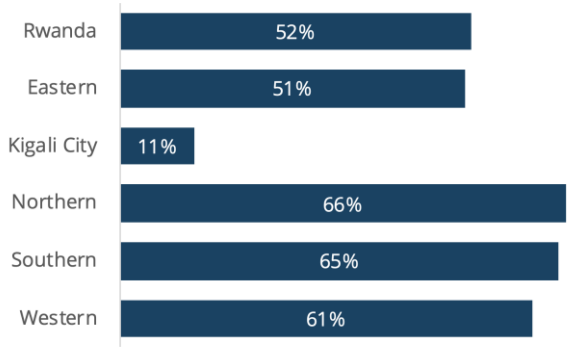


Figure 5.12: Prevalence of livestock ownership, by province

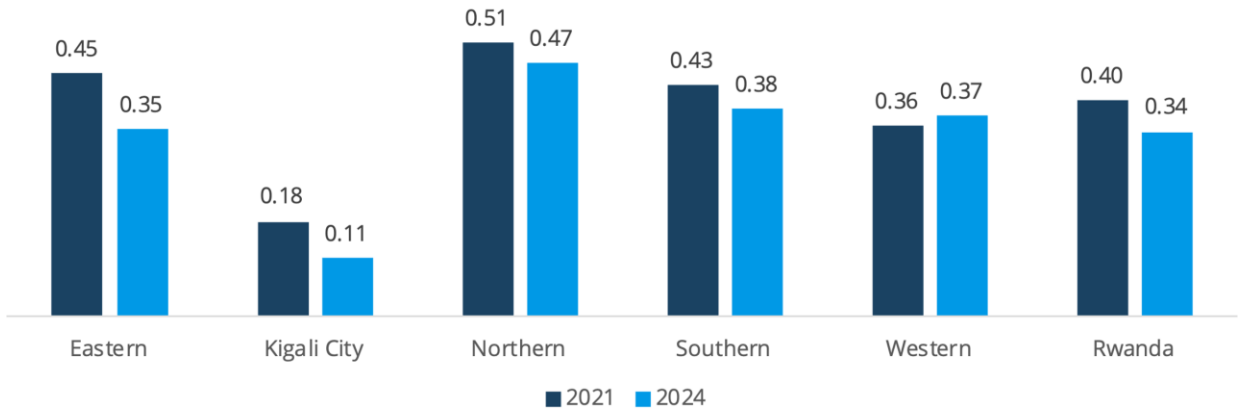


Source: estimates based on 2024 CFSVA data

Among households that rear cattle, 93 percent own up to two cows, with the majority (73%) having only one. Livestock farming is generally small-scale, with cattle grazing on fallow land and marginal areas. As a result, farmers have adopted semi-permanent stabling and grow fodder crops, though ranching is expanding in the Umutara and Gishwati areas. The low proportion of households with livestock is

reflected in the low average Tropical Livestock Unit (TLU) values across provinces (see Figure 5.13).[73] Additionally, there has been a 15 percent reduction in livestock ownership nationwide, with the TLU dropping from 0.40 in 2021 to 0.34 in 2024.

Figure 5.13: Tropical Livestock Unit, by province



Source: estimates based on 2024 CFSVA and 2021 CFSVA data

5.4 Use of own production and food stock

On average, households planned to keep between 66 and 71 percent of their Season 2024A harvest of three main crops for their own consumption. Nearly 90 percent of households grew beans, followed by maize (54%) and white-fleshed sweet potatoes (43%). Among those growing beans, 72 percent of the harvest was intended for consumption, with 12 percent for sale. Similarly, 56 percent of maize was planned for consumption and 36 percent for sale, while 78 percent of white-fleshed sweet potatoes was planned for consumption and 14 percent for sale.

Figure 5.14: Main use for Season 2024A harvest of the top three food commodities

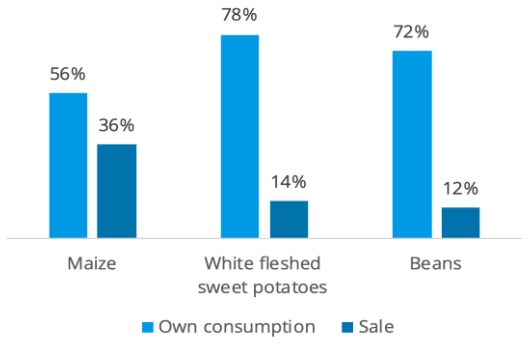
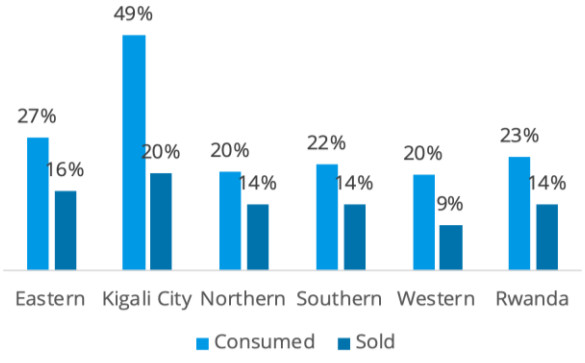


Figure 5.15: Main use of animal products, by province



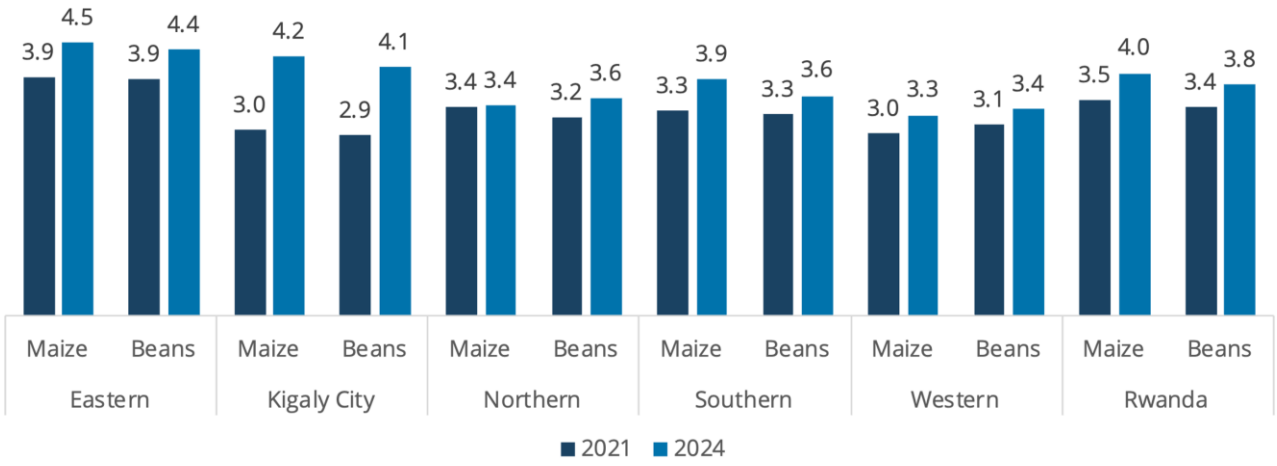
Source: estimates based on 2024 CFSVA data

[73] The Tropical Livestock Unit (TLU) is a standardized unit used to quantify livestock ownership across different species by expressing them in terms of a common denominator, typically based on the average weight or economic value of the animals. For example, one cow is equivalent to one TLU, while sheep or goats may be assigned a fraction (e.g., 0.1 TLU per animal). The TLU allows for cross-species comparisons and provides a measure of livestock holdings' contribution to household wealth and resilience.

The stock duration for the two main commodities, beans and maize, increased by 10 percent compared to 2021. On average, beans are stored for 3.8 months and maize for 4 months, which is 0.4 and 0.5 months longer than in 2021 (Figure 5.16). Stock durations are longer in the Eastern Province and Kigali City, with Kigali City seeing the greatest increase compared to 2021.

Households in the Eastern Province are likely to accumulate more food stocks as they produce more. Indeed, the Eastern province contributes approximately 60 percent of the country's maize production and nearly 40 percent of national bean production. Conversely, households in Kigali City, being predominantly urban, have access to a diverse range of foods through markets, potentially affecting their ability to stockpile supplies, particularly during lean seasons.

Figure 5.16: Average stock duration (months) for maize and beans in 2021 and 2024, by province

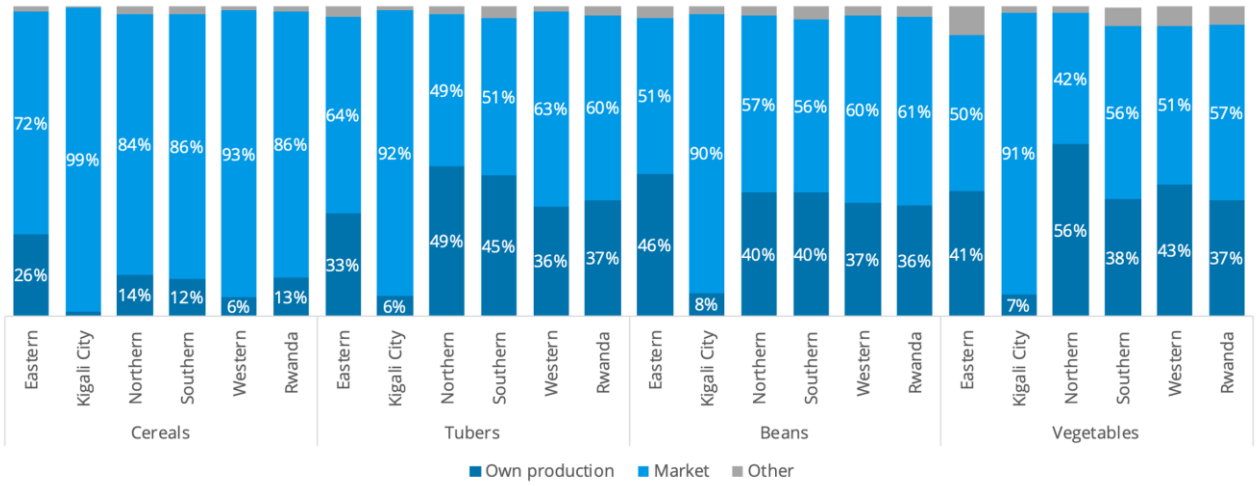


Source: estimates based on 2024 CFSVA data

Despite most of the harvest being kept for personal consumption, the majority of households, including those in rural provinces, rely on the market for food commodities. This is likely a result of land consolidation, a governmental policy introduced under the Crop Intensification Program (CIP). The policy aims to enhance agricultural productivity by grouping small farms into larger, coordinated plots. Farmers retain ownership but cultivate priority crops collectively, benefiting from subsidized inputs, extension services, and improved market access. This approach aims to boost yields, strengthen market bargaining power, and support food security.

Nationally, most households sourced beans (61%), cereals (86%), tubers (60%), and vegetables (59%) from the market over the past 12 months. (Figure 5.17). This reliance is partly due to the short duration of stocks, which do not last between Harvest A (mid-February) and Harvest B (mid-July). Households are more reliant on the market for cereals than for beans, tubers, or vegetables. In Kigali City, reliance on own production is much lower, ranging from 1 percent for cereals to 8 percent for beans, compared to other provinces.

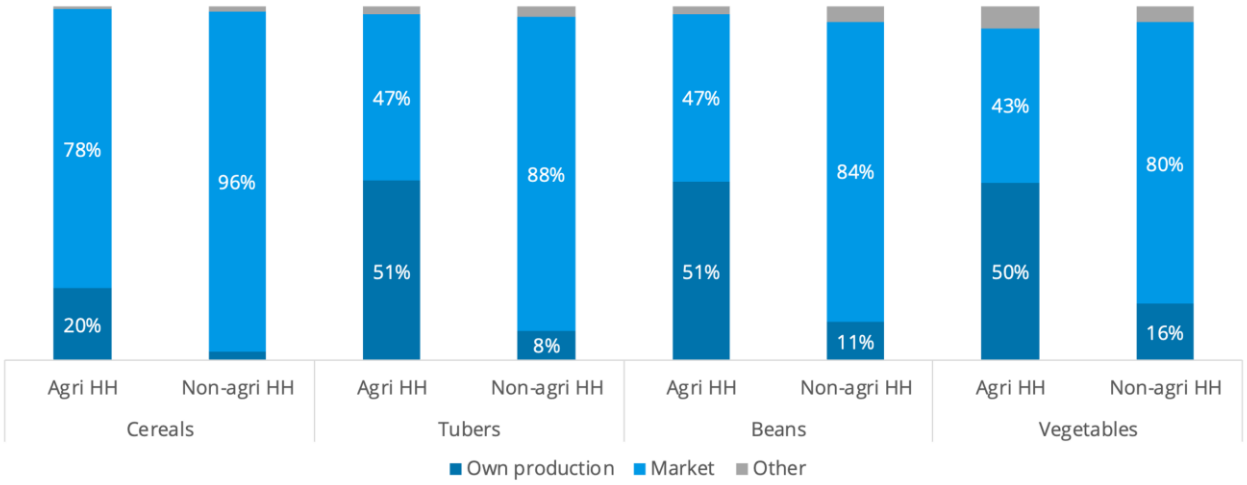
Figure 5.17: Main source of key food commodities over the past 12 months, by province



Source: estimates based on 2024 CFSVA data

Although agricultural households rely more on their own production compared to non-agricultural households, they still have a high dependency on the market.[74] Nearly half of agricultural households rely on the market for beans (47 %), tubers (47 %), and vegetables (46 %), see Figure 5.18. Market reliance for cereals was reported by 79 percent of farming households, linked to the high consumption of processed cereals.[75]This highlights the limitations of small-scale agricultural production in both quantity and diversity, as well as challenges with post-harvest and storage management that affect food availability and quality year-round.

Figure 5.18: Main source of key food commodities over the last 12 months for farming and non-farming households



Source: estimates based on 2024 CFSVA data

[74]These are households in the agro-pastoralist, low-income and medium/high-income agriculturalists, and agricultural daily labours livelihood groups.

[75] The very high market dependency for cereals is partly explained by the high consumption of processed maize (maize flour) compared to maize grain. Also, in the rice value chain, producers sell their harvests to rice millers and buy the processed rice.

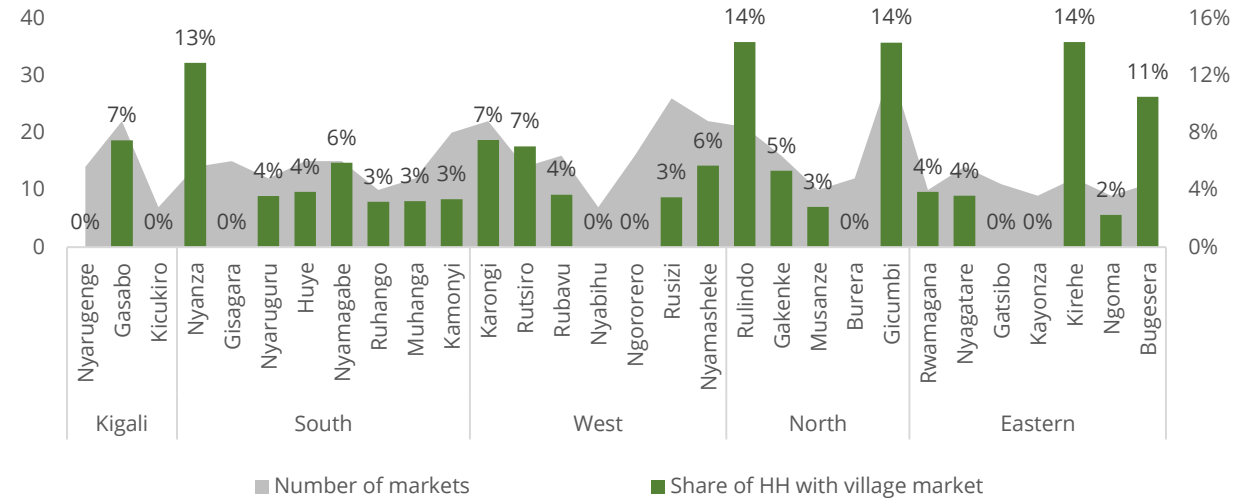
Only 23 percent of livestock owners reported consuming products from their animals in the past month, a slight decline from 28 percent in 2021. Consumption of animal products was highest in Kigali City, where 11 percent of the respondents reported raising livestock, and half of them consumed their animal products. On average, 14 percent of households raising livestock sold their products in the markets, with the lowest percentage in the Western Province (9 %) and the highest in Kigali City (20 %).

6 Food access

6.1 Physical access

According to the 2024 CFSVA, 4.8 percent of households had a market in their village. Rwanda has nearly 450 markets, with at least one major market in each district. Market availability is higher in the Northern Province (reported by 7.3 % of households), particularly in Rulindo and Gicumbi, where 14 percent of households have a market in their village. Availability is lower in Kigali City (3.9 %)[76] and the Western Province (4 %).

Figure 6.1: Number of markets and share of households with a village market, by district



Source: estimates based on 2024 CFSVA data

The average minimum time to reach a point of sale is 33 minutes.[77] Households in villages with a market take only 18 minutes on average. The Western province has the longest average distance (39 minutes) while the Eastern Province has the shortest (23 minutes). The physical accessibility of the Western Province is impacted by its mountainous topography, characterized by very high altitudes, compared to other provinces.

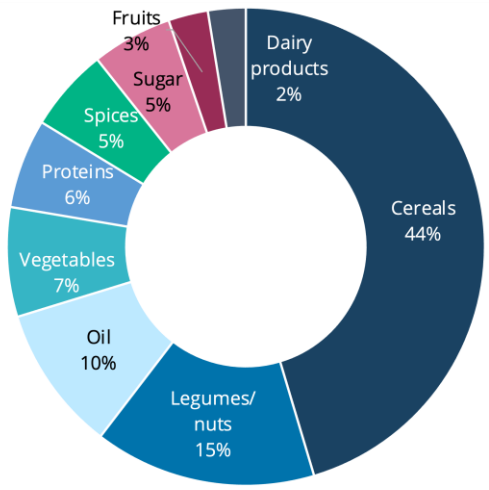
[76] The key reason to having more markets in rural areas is that Kigali city and other urban areas tend to have fewer but larger markets, as opposed to rural areas where they have several market points, which are small in nature (most times these are evening markets where farmers sell their production, and in most cases, these are open markets-no building).

[77] This question draws on the sub-sample of households reporting to sell their products.

6.2 Economic access

Reported per-capita income has doubled in nominal terms compared to 2021. Even when accounting for currency depreciation using the average exchange rate from the year before the CFSVA survey, the increase remains twofold at the national level. The largest increase occurred in the Western Province, while the smallest was in Kigali City. However, the average per-capita income in Kigali City is still more than double that of other provinces. The nationwide increase is partly due to the significant economic impact of the COVID-19 pandemic in 2021, which caused households to face major constraints in economic activities.

Figure 6.2: Average composition of food expenditures



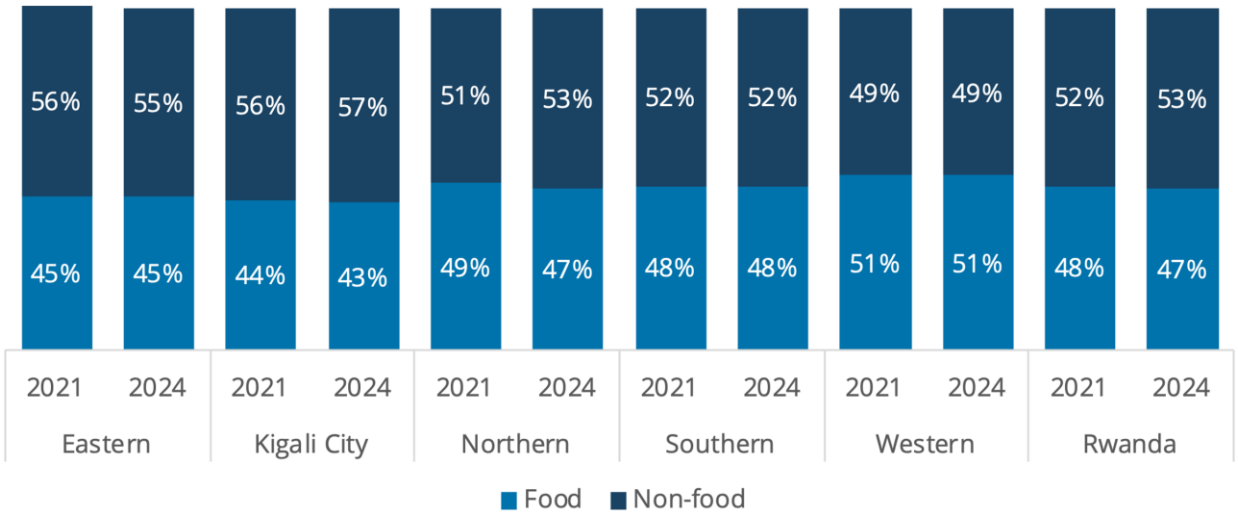
Source: estimates based on 2024 CFSVA data

Household expenditures reflect purchasing power, which influences food access. A higher share spent on food suggests higher vulnerability to economic shocks such as price spikes, especially if households mainly rely on purchases for food.

Food expenditures are primarily focused on cereals, which account for 44 percent of the average household's monthly spending, followed by legumes (15%) and oil and spices (10%). Only 7 percent is spent on vegetables and fruits, and 6 percent on protein-rich items like meat and fish. Compared with non-agricultural households, households with agriculture-related livelihoods spend more on legumes (14% vs. 15%) and oil and spices (11% vs. 17%). Non-agricultural households, on the other hand, spend more on vegetables and fruits (11 % vs. 9 %) and protein-rich items (10% vs. 7%). Compared with the national average, households in the Northern province spend more on legumes and nuts (21%), while spending less on cereals (40%). The Western province recorded the highest share of expenditure on cereals (48%).

Households allocate on average 47 percent of their monthly expenditures on food, similar to the 48 percent reported in the 2021 CFSVA. The Western Province has the highest food expenditure share (51%), while Kigali City has the lowest (43%). Non-food expenditures include hygiene products (17%), property costs (10%), cooking energy (8%), and education (8%).

Figure 6.3: Average share of food expenditures, by province



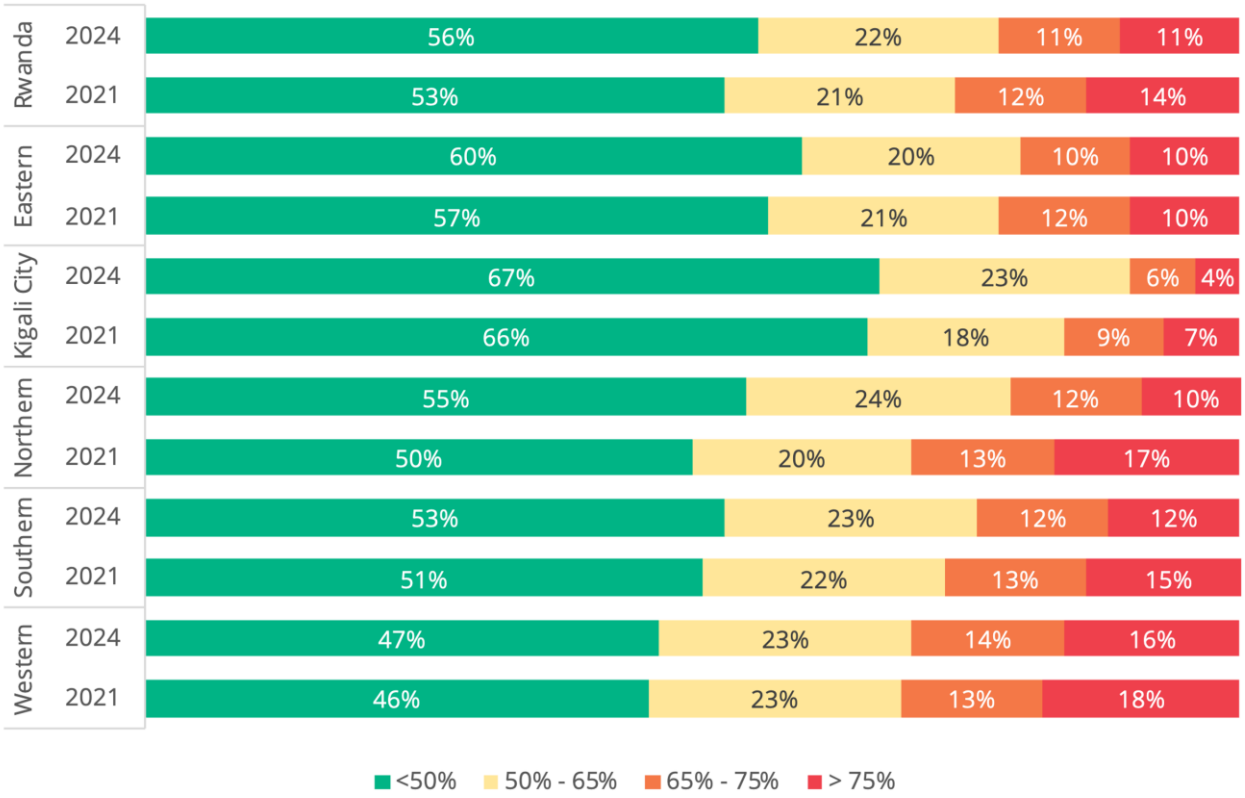
Source: estimates based on 2024 CFSVA data

Based on the share of food expenditures, most households in Rwanda are economically vulnerable (56% of households), although more than one in ten households is highly economically vulnerable to food insecurity (11%).[78] Nearly 90 percent of households in Kigali City have low economic vulnerability, spending less than 65 percent of their budget on food. In contrast, the Western province has the highest share of households that allocate more than 75 percent of their monthly budget to food (16% of households). The situation is particularly concerning in Rubavu, where 22 percent of households reportedly spend more than 75 percent of their monthly budget on food.

All provinces show an increase in the prevalence of households with medium-to-low share of expenditure on food (less than 65% of their monthly budget) since 2021. Nationally, the prevalence of household spending less than 50 percent of their monthly budget on food rose from 53 to 56 percent, while the share of households allocating more than 75 percent of their monthly budget on food dropped from 14 to 11 percent (see Figure 6.4)**.** The Northern province saw the greatest improvement, from 70 percent in 2021 to 79 percent in 2024, a relative 12 percent increase. While there is a positive trend across provinces, the prevalence of very high economically vulnerable households in the Eastern province remains stable at 10 percent.

[78] When food expenditure share is used as a proxy for household economic vulnerability, the following thresholds apply:
- Low economic vulnerability: households spend less than 50 percent of their monthly budget on food.
- Moderate economic vulnerability: households allocate 50–65 percent of their budget to food.
- High economic vulnerability: households spend 65–75 percent of their budget on food.
- Very high economic vulnerability: households allocate more than 75 percent of their budget to food.
These thresholds are calculated at the household level. See: WFP, 2024. Food Expenditure Share (FES) Guidance Note. Rome: World Food Programme.

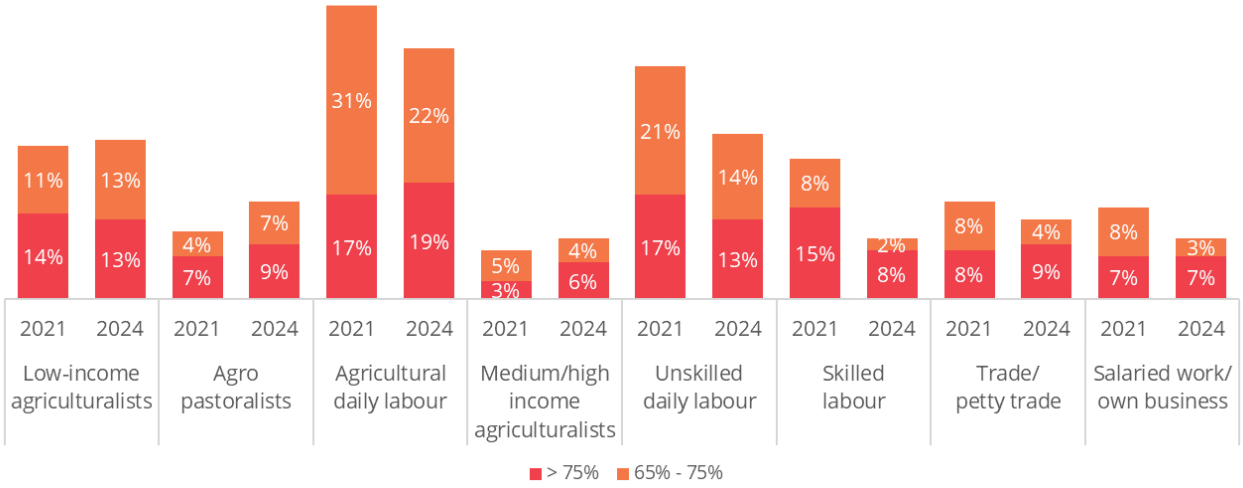
Figure 6.4: Prevalence of FES categories, by province



Source: estimates based on 2024 CFSVA data

The highest prevalence of economically vulnerable households is among agricultural daily labourers (41%) and unskilled daily labourers (27%), though both groups have shown significant improvements compared to 2021 (see Figure 6.5). The share of agricultural daily labourers spending more than 75 percent of their monthly budget on food decreased from 31 to 22 percent, and from 21 to 14 percent among unskilled daily labourers. In contrast, 90 percent of medium/high-income agriculturalist households are not economically vulnerable to food insecurity, with a slight decrease from 92 percent in 2021, suggesting that own production helps mitigate low incomes.

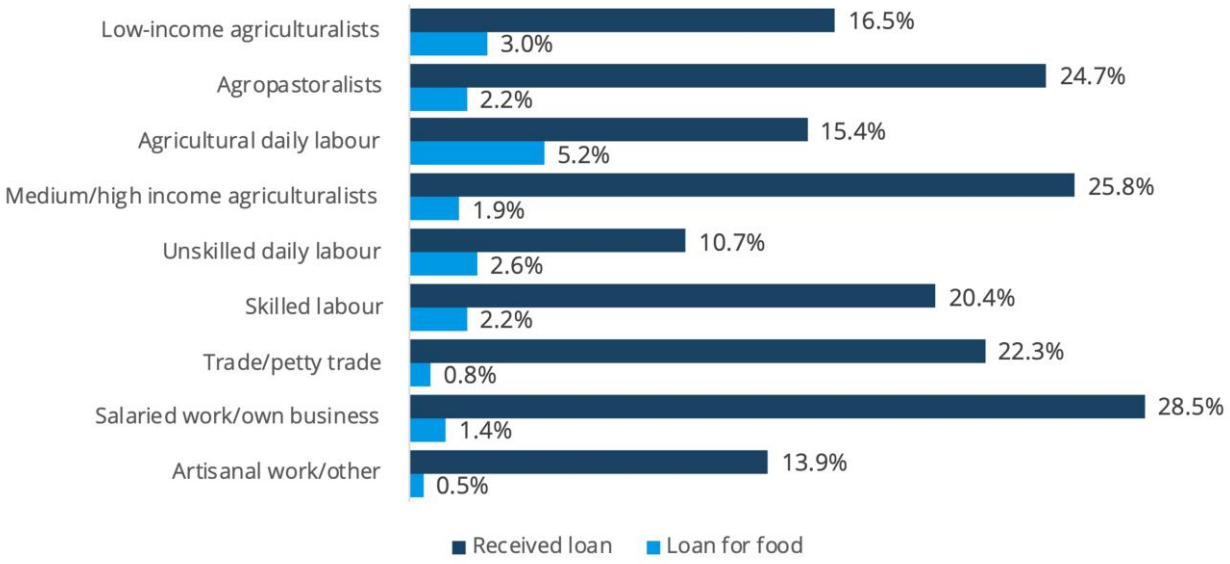
Figure 6.5: Prevalence of economically vulnerable households, by livelihood groups



Source: estimates based on 2024 CFSVA data

Purchasing food is the third most common use of loans, with 20 percent of households requesting in the past 12 months, and 97 percent of them granted access to credit. The main reasons for borrowing include paying for agricultural and livestock activities (23%), business investment (16%), and food purchases (14%). The use of credit is more common among salaried and self-employed workers (28%) and agro-pastoralists (25%), while agricultural daily labourers (5%) and low-income agriculturalists (3%) are more likely to borrow for food (see Figure 6.6).

Figure 6.6: Prevalence of loans for purchasing food, by livelihood groups

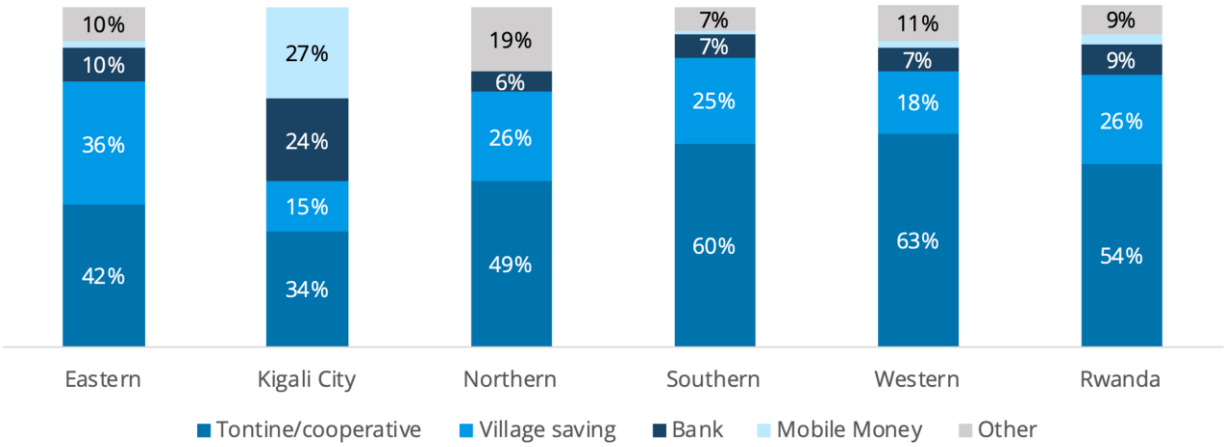


Source: estimates based on 2024 CFSVA data

The main source of credit for purchasing food is Tontine/Cooperative (54%), with only 9 percent of loans coming from banks (Figure 6.7); village savings are the second most important source (used by

26% of households). While Tontine/Cooperative is the primary source nationwide, there are notable provincial differences. In Kigali City, reliance on mobile money (27%) and formal banks (24%) is higher, whereas in other provinces, village savings are the second most common source of credit for food, ranging from 18 percent in the Western Province to 37 percent in the Eastern Province.

Figure 6.7: Main sources of credit for purchasing food, by province



Source: estimates based on 2024 CFSVA data

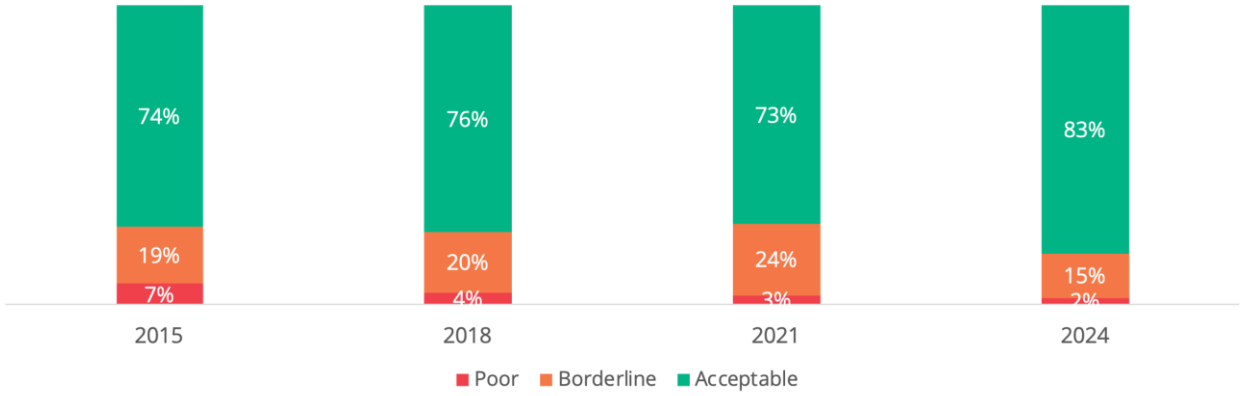
7 Food consumption

7.1 Food Consumption Score and Food Consumption Groups[79]

Food consumption has improved compared to 2021 due to better production in season 2024A, which increased food availability at the household and the market level. The percentage of households with acceptable food consumption increased from 73 percent to 83 percent, a 14 percent improvement (see Figure 7.1). As a result, the prevalence of households with inadequate food consumption decreased from 27 percent in 2021 to 17 percent in 2024.

[79] The basis of the current household food security description is the food consumption score (FCS) and its thresholds food consumption groups (FCG). FCS is used to assess household food security, based on dietary diversity, food frequency, and the nutritional value of food groups consumed over seven days. The score is calculated by multiplying the frequency of each food group by its weight and summing these values. The maximum score is 112, indicating daily consumption of all food groups. Households are categorized into three food consumption groups: poor (0-21), borderline (21.5-35), and acceptable (above 35).

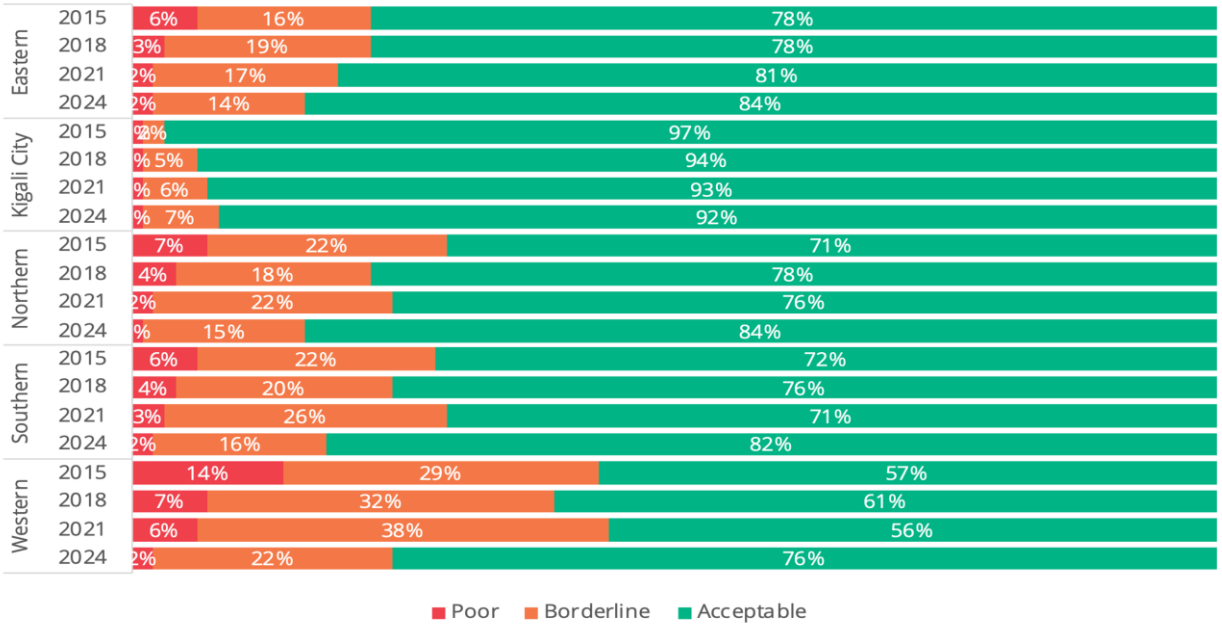
Figure 7.1: Prevalence of Food Consumption Groups from 2015 to 2024



Source: estimates based on CFSVA data

Kigali City remains the province with the highest prevalence of households with adequate diets, with only 8 percent having inadequate food consumption. However, Kigali is the only province with a negative trend, as the share of households with adequate food consumption decreased from 97 percent in 2015 to 92 percent in 2024. All other provinces show positive trends. The Western Province has the highest prevalence of inadequate food consumption (24 %). This might be due to different factors, including high levels of poverty – affecting economic access to food, low and poorly diversified production of staple foods as well as the characteristics of the soil and topography[80] – affecting crop production and availability of food from own production. Nevertheless, the Western Province recorded the greatest improvement in the prevalence of inadequate food consumption compared to 2021, with a 44 percent reduction.

Figure 7.2: Prevalence of FCG, by province

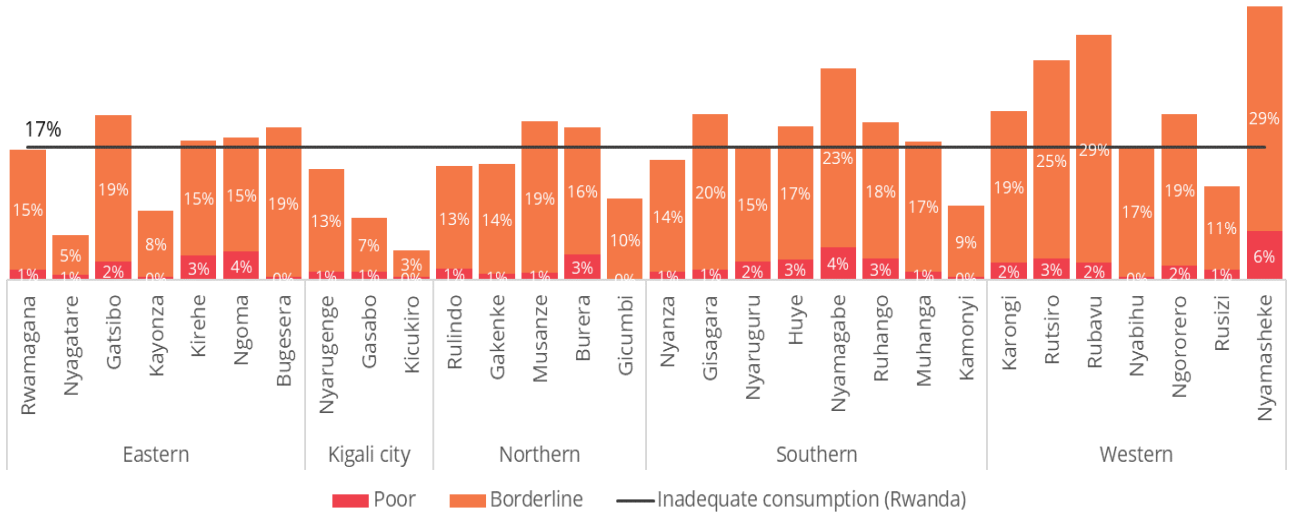


Source: estimates based on 2024 CFSVA data

[80]These characteristics make these areas susceptible to soil erosion. Additionally, the soil is acidic and requires extensive input use.

Most districts in the Western Province have a higher prevalence of households with inadequate food consumption than the national average, with Nyamasheke (35 %), Rubavu (31 %) and Rutsiro (28 %) recording the highest prevalence of households consuming inadequate diets. In contrast, all three districts in Kigali City have lower prevalence of inadequate food consumption compared to the national average (see Figure 7.3).

Figure 7.3: Prevalence of households with inadequate food consumption, by district



Source: estimates based on 2024 CFSVA data

7.2 Food Consumption Score Nutritional Quality Analysis (FCS-N)

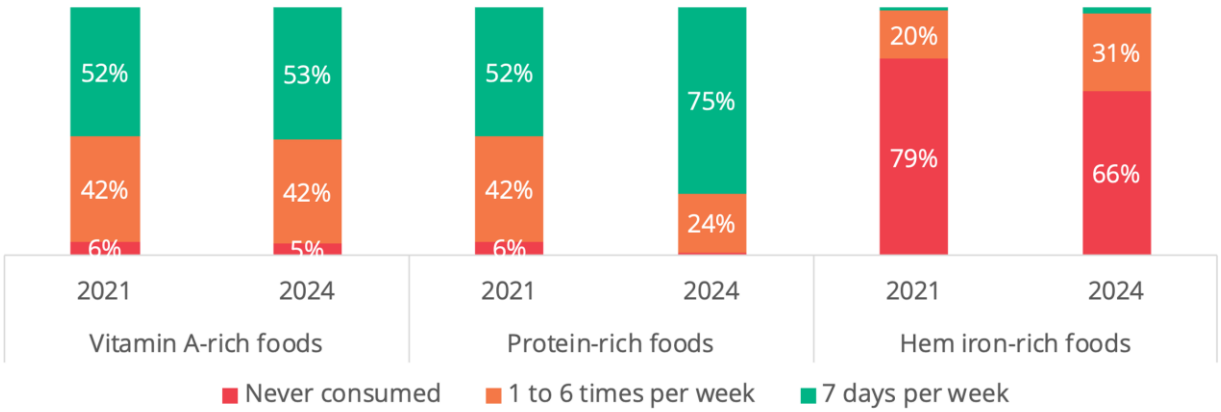
The Food Consumption Score Nutritional Quality Analysis (FCS-N) assesses household nutritional health by measuring the intake of Vitamin A, Protein, and Hem Iron[81]. It builds on the FCS, which tracks the consumption of food groups over a 7-day period and provides key insights into dietary quality and well-being.

At the national level, vitamin A- and protein-rich foods are widely consumed, with only 6 percent of households never consuming them on a weekly basis. The consumption of vitamin A-rich foods remained unchanged between 2021 and 2024 while the proportion of households consuming protein-rich foods weekly, increased significantly from 52 percent in 2021 to 75 percent in 2024 (Figure 7.4). Despite this improvement, the consumption of Hem iron-rich foods remains infrequent, although the

[81] Vitamin A-rich foods include dairy products, organ meat, eggs, orange vegetables, green leafy vegetables, and orange fruits. Protein-rich foods consist of pulses, dairy products, flesh and organ meat, fish, and eggs. Heme iron-rich foods include flesh meat, organ meat, and fish. For further details, refer to the Food Consumption Score & Food Consumption Score Nutritional Analysis Guidance Note, April 2024.

percentage of households never consuming them declined from 79 percent in 2021 to 66 percent in 2024.

Figure 7.4: Prevalence of households consuming nutrient-rich foods (FCS-N), 2021 - 2023



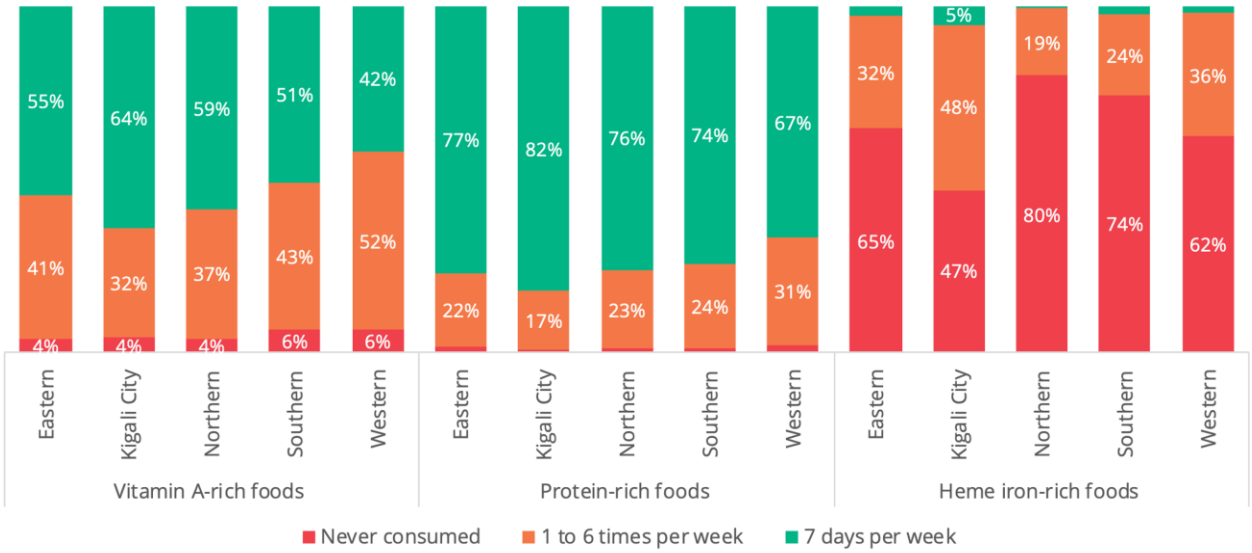
Source: estimates based on 2024 CFSVA data

At the provincial level, the consumption of nutrient-rich foods varies, with vitamin A- and protein-rich foods being more commonly consumed than Hem iron-rich foods. In detail:

- Vitamin A-rich foods: The Western (42 %) and Southern (51 %) provinces had the lowest proportion of households consuming these foods weekly (see Figure 7.5), while consumption was higher in Kigali City (consumed by 64 % of households) and the Northern Province (59 %).
- Protein-rich foods: Consumption is more frequent across all provinces, ranging from 67 percent in the Western Province to 82 percent of households in Kigali City reporting weekly intake.
- Hem iron-rich foods: Consumption remains low, particularly in the Northern Province, where 80 percent of households never consume them weekly. The Southern (74 % of households) and Eastern (65 %) provinces also showed low consumption levels.

These findings highlight the need for targeted nutrition interventions, especially for women, who are at higher risk of micronutrient deficiencies, particularly iron deficiency anaemia.

Figure 7.5: Prevalence of households consuming nutrient-rich foods (FCS-N) by province



Source: estimates based on 2024 CFSVA data

Further analysis of consumption of nutrient rich foods by the FCS food consumption groups (FGC) shows that households with inadequate diets, particularly those with poor food consumption, have lower intake of vitamin A- and protein-rich foods. In detail:

- Vitamin A and protein intake: Among households with poor food consumption, 23 percent do not consume vitamin A-rich foods, and 43 percent never consume protein-rich foods (see Figures 7.6 and 7.7).
- Hem iron-rich foods: Consumption is particularly low among households with inadequate diets. An estimated 97 percent of households with poor diets and 94 percent with borderline diets never consume Hem iron-rich foods weekly (see Figure 7.8). Even among households with acceptable FCS, the consumption of Hem iron-rich foods remains infrequent, with 60 percent of households with adequate diets reporting no weekly intake.

These findings highlight concerning dietary gaps, particularly in Hem iron consumption, among households with poor and borderline diets.

Figure 7.6: Prevalence of households consuming Vitamin A-rich food by FCG

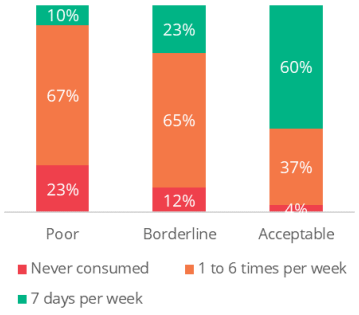


Figure 7.7: Prevalence of households consuming protein-rich food by FCG

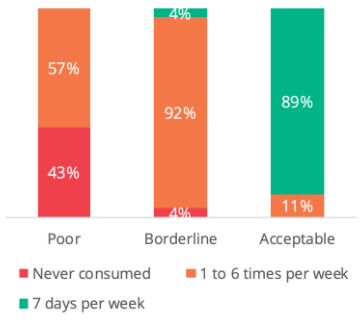
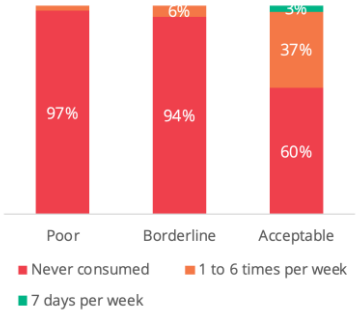


Figure 7.8: Prevalence of households consuming Hem iron-rich food by FCG



Source: estimates based on 2024 CFSVA data

7.3 Dietary Diversity

To provide a more comprehensive picture on the food consumption by Rwandan households, information from the FCS and FCS-N is complemented by the Household Dietary Diversity Score (HDDS)[82].

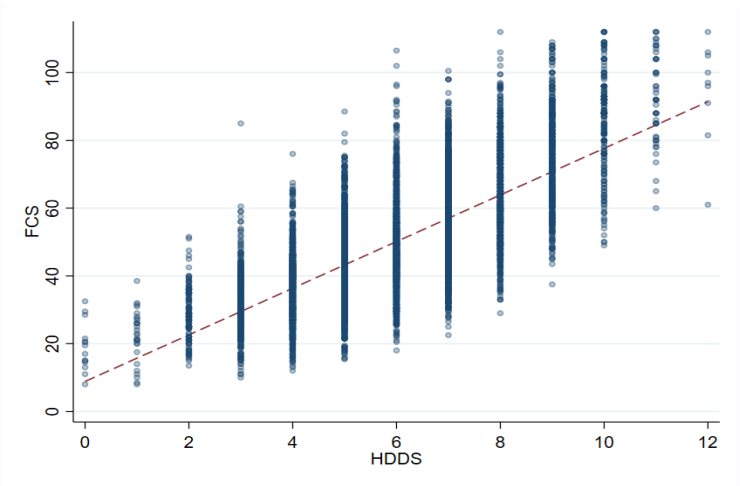
Rwandan households consumed an average of 5.94 food groups daily, with a median value of 6. Most households consumed pulses (83 %) and roots and tubers (84 %), with vegetables (75 %) and cereals (63 %) also common (see Table 7.1). Protein-rich foods, such as meat and eggs, were the least consumed, with fewer than 5 percent of the households reporting consumption.

Table 7.1: Prevalence of households consuming selected food groups, by province

Province	Cereals	Roots	Pulses	Milk	Meat	Fish	Eggs	Vegetables	Fruits
Eastern	68%	80%	86%	19%	3%	8%	2%	74%	19%
Kigali City	83%	82%	91%	39%	12%	13%	5%	75%	33%
Northern	73%	93%	87%	16%	2%	4%	1%	77%	17%
Southern	47%	85%	82%	13%	2%	4%	1%	77%	17%
Western	58%	80%	73%	9%	2%	7%	1%	74%	15%
Rwanda	63%	84%	83%	17%	4%	7%	2%	75%	19%

Source: estimates based on 2024 CFSVA data

Figure 7.9: Correlation between FCS and HDDS



Source: estimates based on 2024 CFSVA data

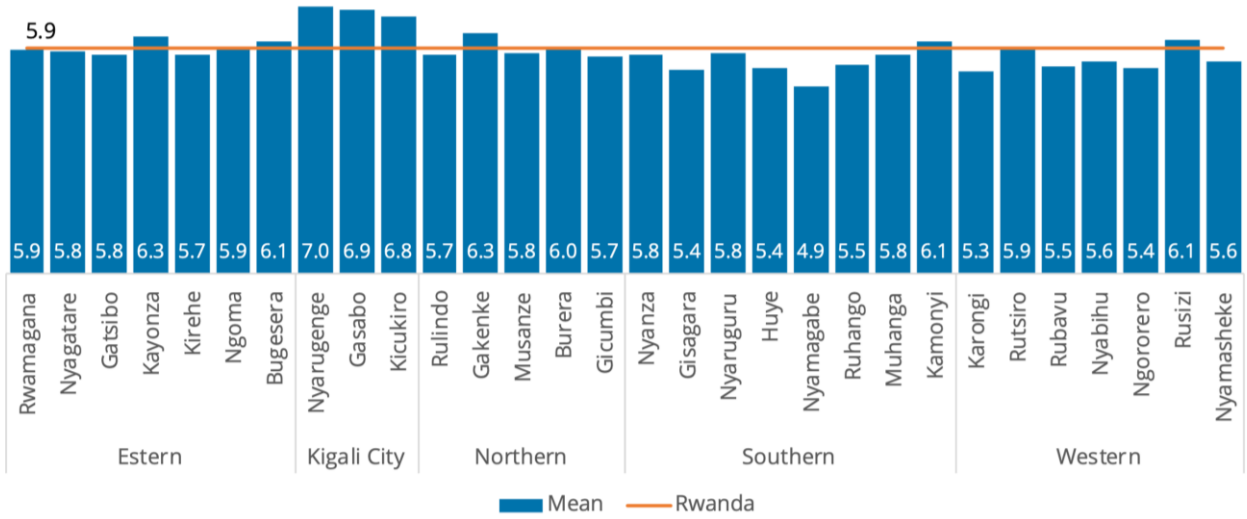
Households with a higher FCS also tend to have greater dietary diversity, as shown by the correlation between the FCS and the HDDS (Figure 7.9). Households with poor food consumption consume on average fewer than three food groups (2.93), while those with acceptable food consumption consume on average six food groups (6.3). The most significant difference is in the consumption of protein-rich foods: at least 14 percent of households with acceptable consumption eat fish, 5 percent eat meat, and 5 percent eat eggs, whereas none of the households with poor consumption reported eating these foods.

The districts with the lowest dietary diversity are Nyamagabe (4.9) in the Southern Province and Karongi (5.3) in the Western Province. Although there are no set cut-offs for adequate or inadequate

[82] While the Food Consumption Score provides essential information on people's diet during the seven days before the survey, it does not provide information about the consumed quantity of each food group. The HDDS focuses on assessing dietary quality and complements previous indicators that address food consumption (FCS) t. The HDDS aims to reflect the ability of households to access a variety of foods. A standard list of 12 food groups is used to gather information on the food consumed in the past 24 hours. Information for each group is of a bivariate type (yes/no). All food groups have the same weight with the HDDS being the simple sum (from 0 to 12) of the number of consumed food groups.

dietary diversity in the HDDS, previous CFSVAs show that food-insecure households typically consume fewer than five food groups, mainly tubers, vegetables, pulses, and condiments.

Figure 7.10: Average dietary diversity (HDDS), by district



Source: estimates based on 2024 CFSVA data

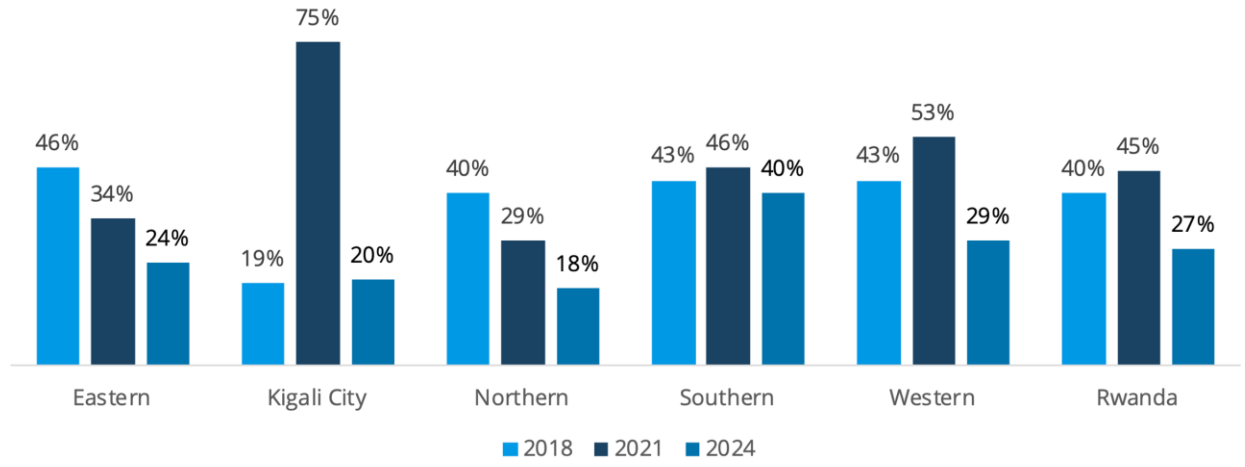
8 Shocks and coping strategies

8.1 Shocks affecting household assets and food security

The 2024 CFSVA shows a positive trend across Rwanda, with fewer households reporting shocks that affected their food security and assets. The percentage of households experiencing such shocks decreased from 45 percent in 2021 to 27 percent in 2024, a 40 percent decline, indicating progress in resilience and recovery from the COVID-19 pandemic (see Figure 8.1), which was the main reported shock affecting households' livelihoods in 2021. Kigali City saw the most significant improvement, with shocks decreasing from 75 percent in 2021 to 20 percent in 2024. However, the severity and frequency of shocks vary by region, with the Northern Province reporting the lowest prevalence of households reporting at least one shock in the twelve months before the survey (18 %) and the Southern Province the highest (40 %), with only a modest decrease since 2021.

As the effects of the COVID-19 pandemic fade, natural hazards have become the main shocks reported by households in 2024. At the national level, 56 percent of households reported environmental hazards as the main shock, up from 36 percent in 2021. The second most common shock is the death or illness of a household member (18 %) and loss of employment or income (12 %), which nearly doubled from 7 percent in 2021. Despite high inflation, only 5 percent of households reported high prices as the main shock.

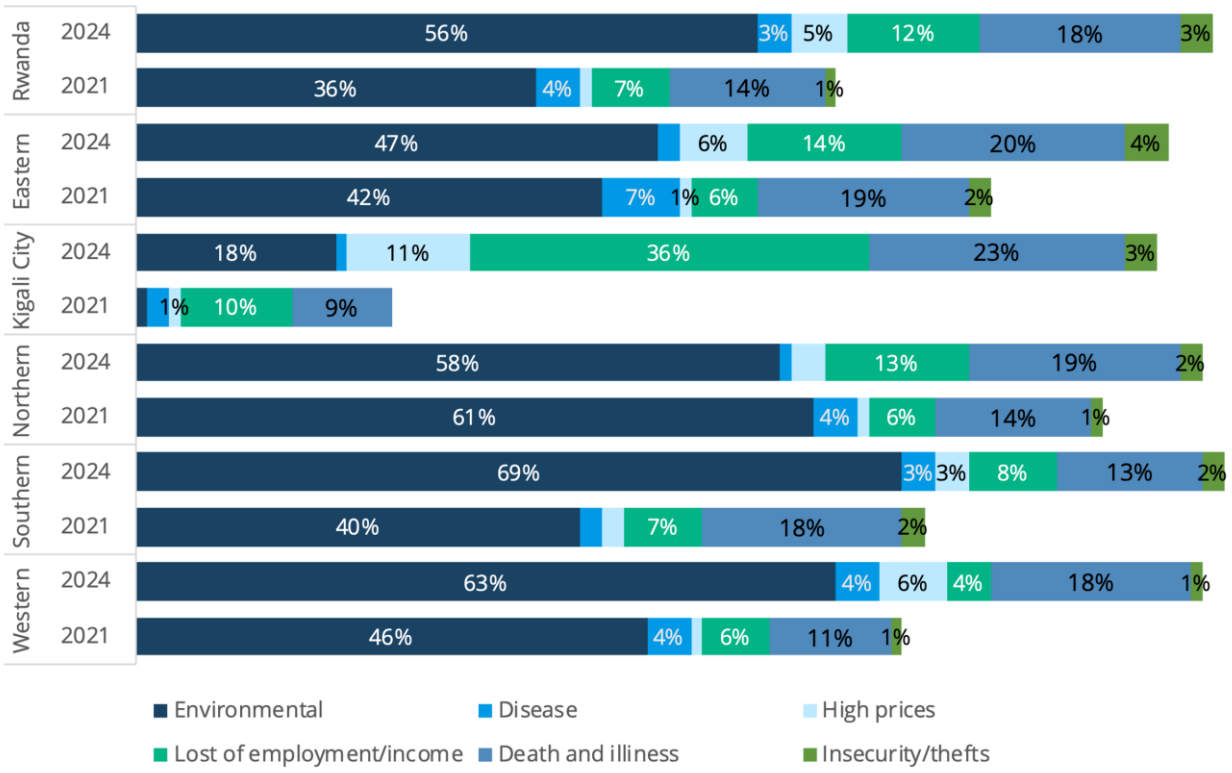
Figure 8.1: Prevalence of households reporting shocks during the past 12 months, by province



Source: estimates based on 2024, 2021, and 2018 CFSVA data

In 2024, natural hazards were the main shocks outside Kigali City, while reduced employment or income was the primary issue, within Kigali, with a threefold increase (from 10 % in 2021 to 36 % in 2024). The Southern Province was most affected by environmental shocks (reported by 69 % of households), followed by the Western and Northern provinces (reported by 63 and 58 % of households, respectively). In Kigali City, only 18 percent of affected households reported natural hazards (Figure 8.2). Unusually high prices, especially for food, were more common in Kigali—reported by 11 percent of households—than in other regions.

Figure 8.2: Main category of shocks affecting households in 2021 and 2024, by province

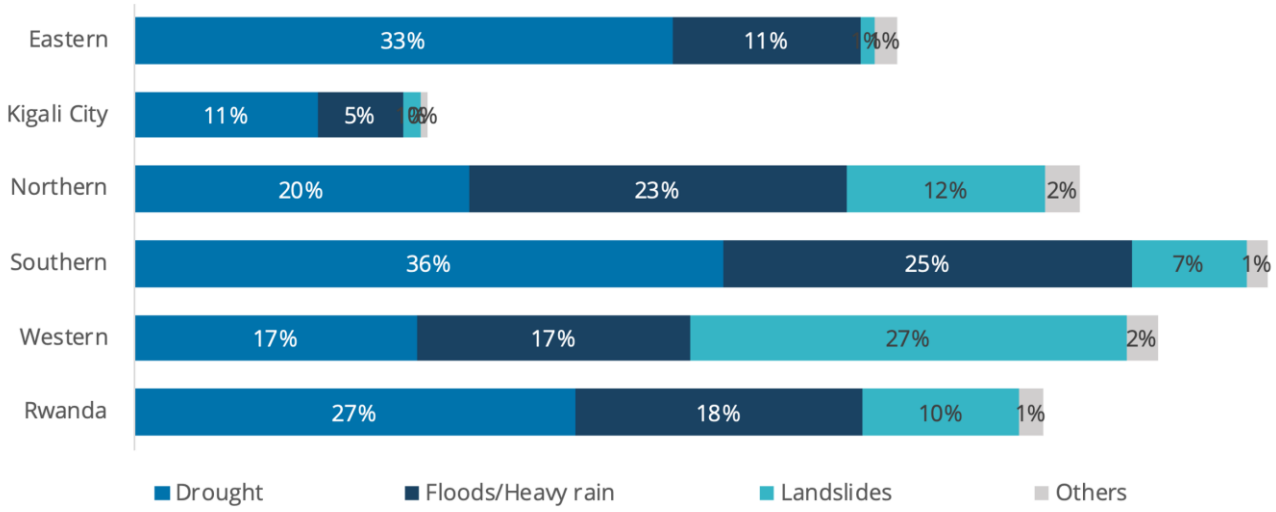


Note: the "other" category is not shown, and it includes COVID-19. Figures are calculated as proportion of households who reported suffering an unusual situation over the last 12 months.
Source: estimates based on 2024 and 2021 CFSVA data.

8.1.1 Natural hazards

Droughts as a main shock were reported ten times more frequently compared to 2021. In 2024, droughts were the most common natural hazard, reported by 27 percent of households experiencing shocks, with the Southern (36 %) and Eastern provinces (33 %) including the highest percentage of households reporting drought as major shock. Households in Kigali City were the least affected by droughts (reported by 11 % of households). Heavy rains and flooding affected 6 percent of households, especially in the Southern Province (11 %). Landslides were most common in the Western Province, reported by 10 percent of households. Overall, natural hazards impacted regions differently, with the Southern Province most affected by drought and rainfall, while the Western Province experienced more landslides.

Figure 8.3: Prevalence of specific environmental shocks, by province



Source: estimates based on 2024 CFSVA data

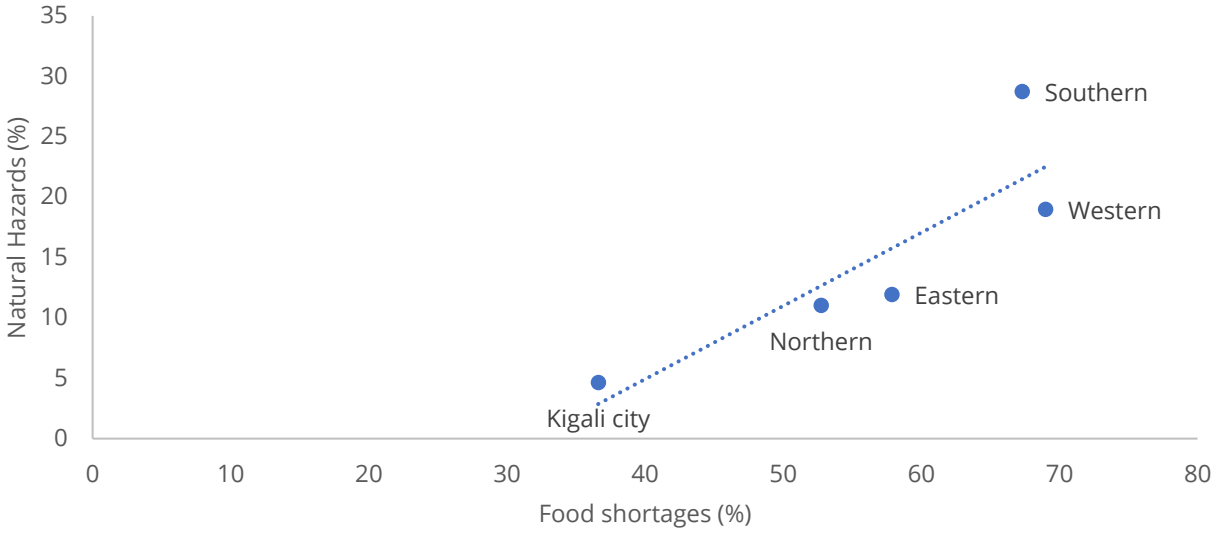
In the Southern province, over a quarter of households in most districts reported being affected by environmental shocks in the 12 months before the survey, with Gisagara being the most impacted (81 percent of households being affected by environmental shocks), mainly due to droughts (39 %) and floods/heavy rains (40 %, see Figure 8.4). Other heavily affected districts include Nyamagabe (80 % of households reporting environmental shocks), primarily due to droughts (34 %). Rubavu in the Western Province is the district with the highest percentage of households reporting environmental shocks (84 %), largely due to floods and heavy rains (affecting 41 % of households) and landslides (27 %). Ngororero and Nyabihu are also severely impacted by landslides (reported by 51 and 52 % of households, respectively). The Eastern Province experienced fewer mixed hazards, with Kirehe and Gatsibo mostly affected by droughts. Northern and Kigali City districts report lower impacts, though Burera in the Northern Province faces significant exposure to floods (affecting 59 % of households reporting an environmental shock).

Households affected by natural hazards are more likely to report difficulties accessing enough food or money to buy food. On average, 58 percent of households reported food shortages in the past 12 months. This figure rises to 83 percent among households affected by environmental shocks, indicating a higher likelihood of food access difficulties for those impacted by natural hazards.

Figure 8.4: Prevalence of households affected by natural hazards in 2024, by district

Source: estimates based on 2024 CFSVA data

Figure 8.5: Prevalence of households reporting food shortages and natural hazards, by province



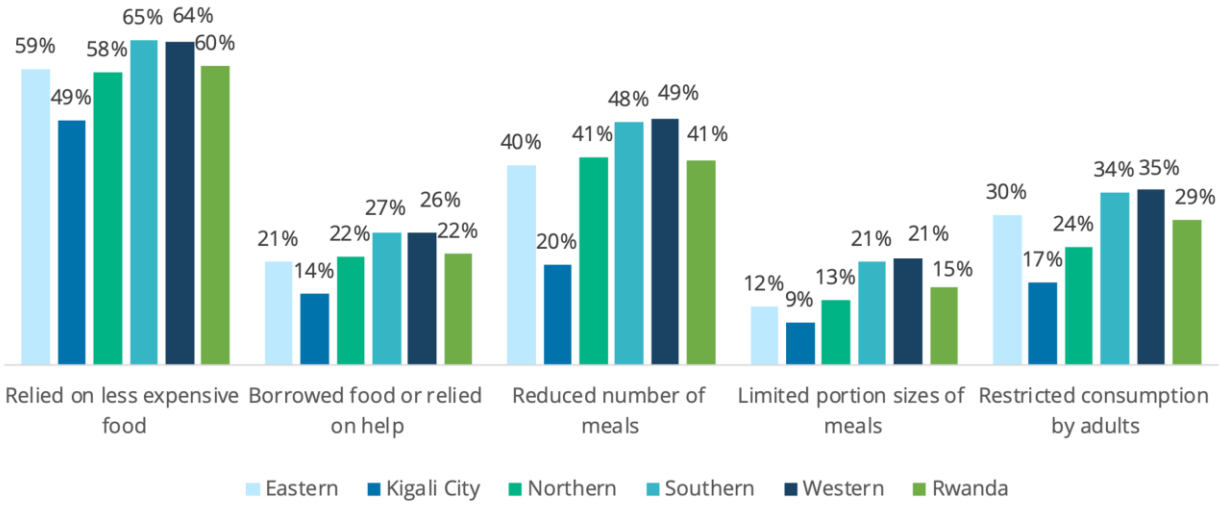
Source: estimates based on 2024 CFSVA data.

8.2 Consumption-based coping strategies

At the time of the 2024 CFSVA survey, 65 percent of households reported using at least one consumption-based coping strategy, with the Southern and Western provinces showing the highest adoption rate (reported by 73 % of households in both provinces). The most common strategy was *relying on less preferred and expensive food*, used by 60 percent of households on average (see Figure 8.6). The least common strategy was *limiting portion sizes*, used by 15 percent of households. The use of consumption-based strategies was less prevalent in Kigali City.

The most severe consumption-based coping strategy— *restricted consumption by adults in order for small children to eat*—was adopted by 29 percent of households in Rwanda. The highest prevalence was in the Western (35 %) and Southern (34 %) provinces.

Figure 8.6: Prevalence of households adopting consumption-based coping strategies, by province



Source: estimates based on 2024 CFSVA data

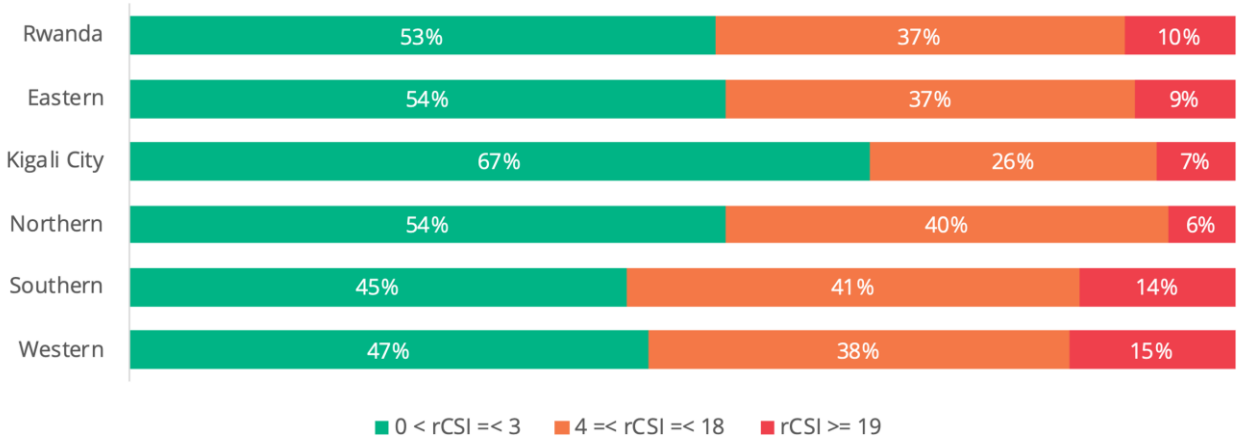
The reduced Coping Strategies Index (rCSI) is an indicator used to compare the hardship faced by households due to a shortage of food. The index measures the frequency and severity of the food consumption behaviours the households had to engage in due to food shortage in the 7 days prior to the survey.[83]

The average rCSI in Rwanda is 6.6, with 10 percent of households having high levels of coping (rCSI >19) and around 37 percent with medium levels of coping (4 < rCSI < 18). As shown in Figure 8.7, the prevalence of households with high levels of coping is much higher in the Western (15 %) and Southern (14 %) provinces, more than double the rates in the Northern province (6 province) and Kigali City (7 %). Meanwhile, Kigali City has the highest share of households with low coping (rCSI <3)—67 % of households).

[83] The rCSI is a simplified version of the full Coping Strategies Index, which serves as a proxy for household food insecurity. A higher rCSI score indicates greater reliance on negative coping strategies and, therefore, higher food insecurity. When used categorically, an rCSI score above 19 suggests significant food access challenges, a score between 4 and 19 indicates limited access to food, and a score below 4 reflects good food access. The rCSI considers both the frequency and severity of five coping strategies used by households in the seven days before the survey to manage food scarcity:

- Eating less-preferred foods (severity weight = 1)
- Borrowing food/money from friends or relatives (severity weight = 2)
- Reducing the number of meals per day (severity weight = 1)
- Reducing portion sizes at mealtime (severity weight = 1)
- Restricting adult intake to allow small children to eat (severity weight = 3).

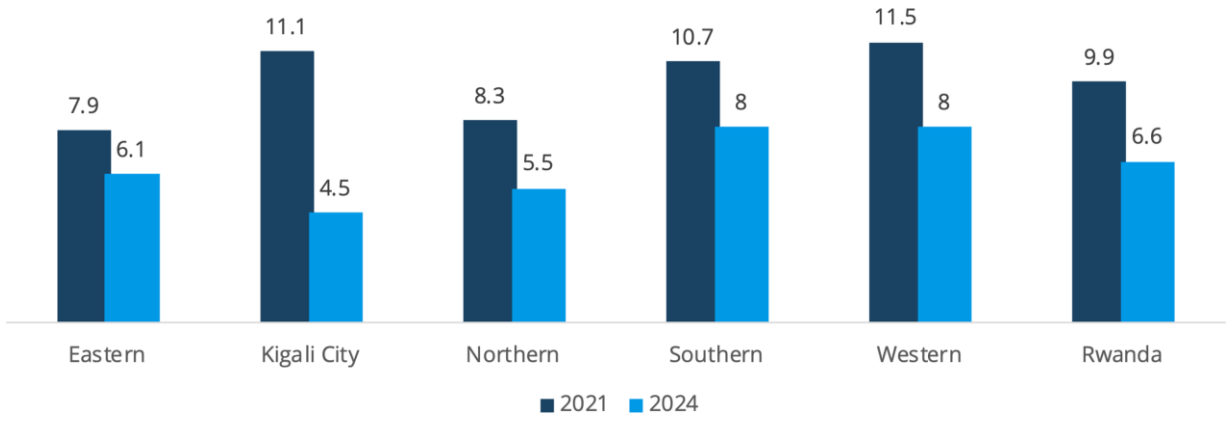
Figure 8.7: Prevalence of rCSI categories, by province



Source: estimates based on 2024 CFSVA data

There has been a country-wide decrease in the use of consumption-based coping strategies since 2021, with the average rCSI dropping from 9.9 to 6.6 (Figure 8.8). The greatest reduction occurred in Kigali City (down 60 %), while the Eastern Province saw a more modest decrease (down 23 %). However, districts such as Ruhango and Kamonyi, in the Southern Province, and Rwamagana in the Eastern Province are exceptions to the positive trend. Furthermore, there has been a slight increase in the share of households *relying on less preferred or less expensive food*, from 57 percent in 2021 to 60 percent in 2024.

Figure 8.8: Average rCSI by province



Source: estimates based on 2024 CFSVA data

8.3 Livelihood-based coping strategies

The Livelihood Coping Strategies is an indicator that helps assess households' medium- and long-term capacity to cope with food insecurity or lack of money to purchase food, and their ability to overcome future challenges. This indicator is based on a series of questions about households' experiences with livelihood stress and the depletion of assets to manage food shortages. Livelihood-based coping strategies are categorized into stress, crisis, or emergency strategies as shown in Table 8.1 below. Stress strategies (such as selling assets or spending savings) indicate reduced ability to handle future shocks, while crisis strategies (such as harvesting immature crops) might reduce future

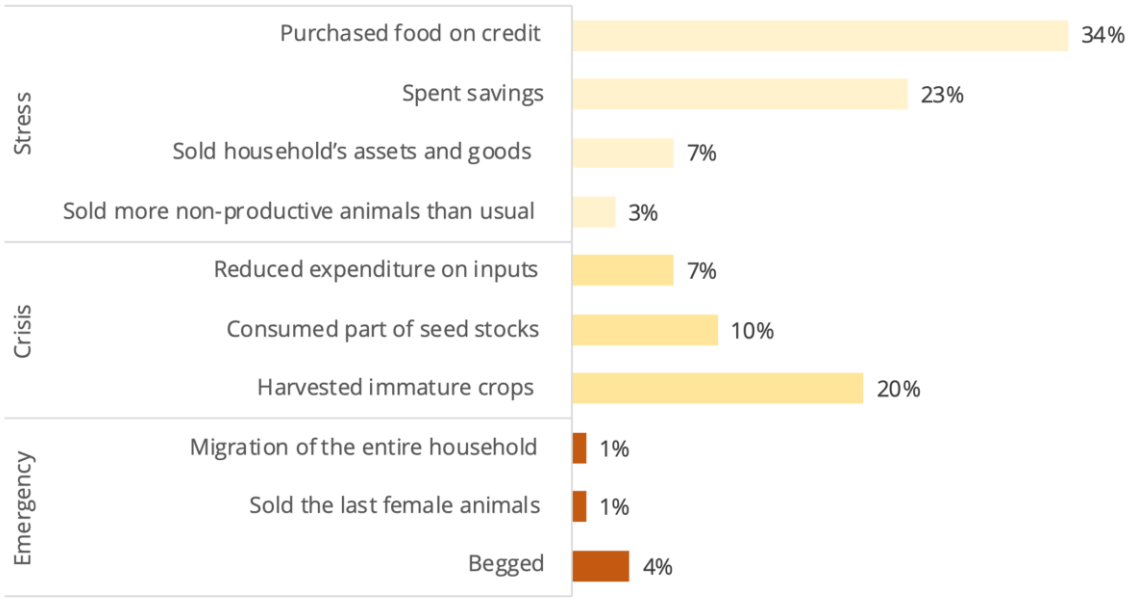
productivity. Emergency strategies, including selling the last female animal, are extreme and hard to reverse, affecting long-term food security and livelihoods.

Table 8.1: Livelihood-based coping strategies

LIVELIHOOD-BASED STRATEGY	CLASSIFICATION
Sold household's assets and goods Spent savings Purchased food on credit Sold more non-productive animals than usual	Stress
Harvested immature crops Consumed part of seed stocks for next season Reduced expenditure on inputs (e.g., fertilizers, pesticides, etc.)	Crisis
Begged Sold the last female animals Migration of the entire household	Emergency

Most households (63 %) reported using at least one livelihood-based coping strategy in the last 30 days. The most common strategy was purchasing food on credit, adopted by 34 percent of households. About 23 percent reported spending savings, and 20 percent harvested immature crops. Very few households used emergency strategies, such as selling the last female animals (1 %) or migrating with the entire household (1 %).

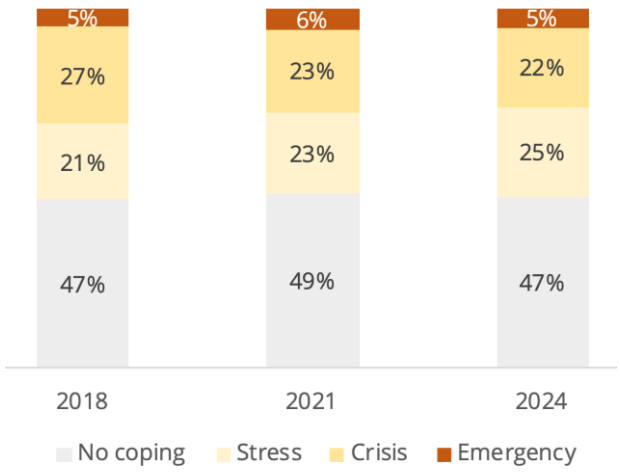
Figure 8.9: Prevalence of Livelihood-based coping strategies among Rwandan households



Source: estimates based on 2024 CFSVA data

The prevalence of households not using livelihood-based coping strategies remains stable at 47 percent (Figure 8.10), indicating that nearly half of Rwandan households maintain their standard of living without resorting to negative coping mechanisms. There is a positive trend in the reduction of households adopting emergency and crisis strategies, which decreased from 32 percent in 2018 to 29 percent in 2021, and further down to 27 percent in 2024. This suggests a shift away from more severe strategies that can cause irreversible or long-term damage to households' livelihoods. However, the prevalence of households using stress strategies has increased from 21 percent in 2018 to 25 percent in 2024, indicating households are still depleting resources despite some level of resilience.

Figure 8.10: Prevalence of LCSI categories from 2018 to 2024

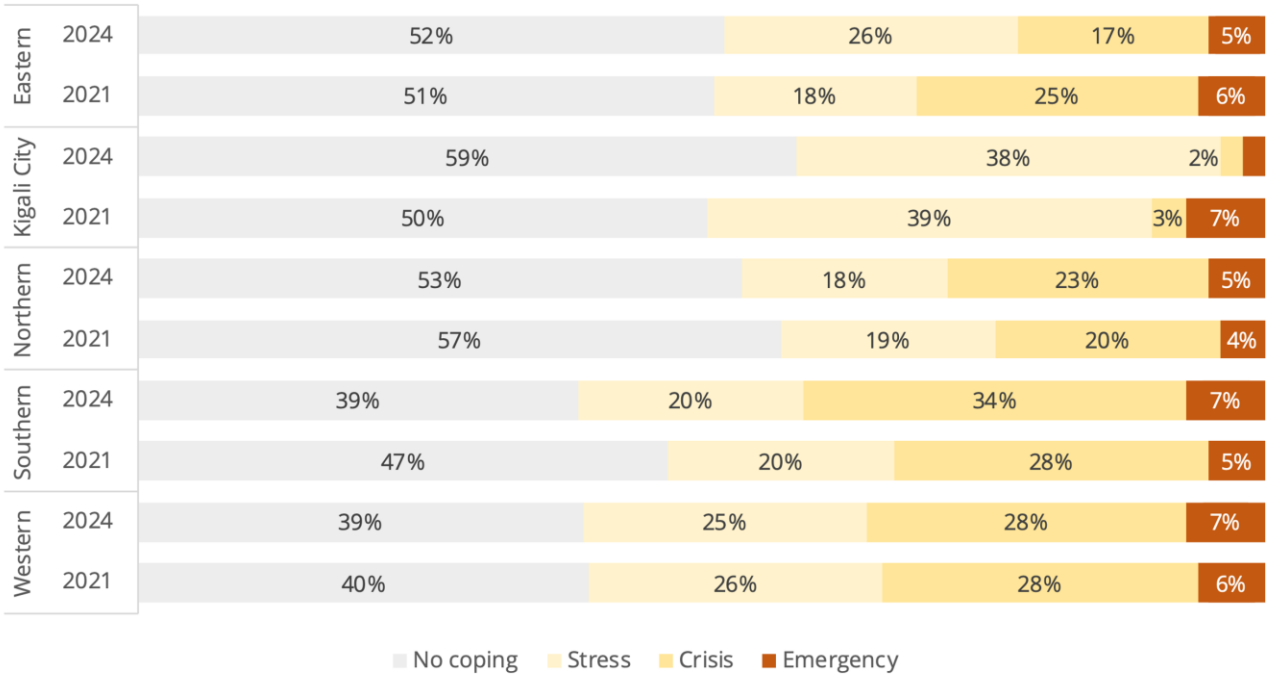


Source: estimates based on 2024 CFSVA data

Kigali City saw the highest improvement, with 59 percent of households not adopting any coping strategy, up from 50 percent in 2021, indicating increased stability (Figure 8.11). In contrast, the Southern Province and Northern Provinces saw a negative trend, with a rise in the use of crisis and emergency strategies. The share of households resorting to crisis and emergency strategies in the Southern Province increased from 33 percent in 2021 to 41 percent in 2024, while the Northern Province it rose from 24 percent to 28 percent. The Western Province remained relatively stable, with 35 percent of households adopting crisis or emergency strategies. This suggests that while Kigali City and the Eastern Province made progress, the coping capacity in households in the Southern and Northern provinces is still weak.

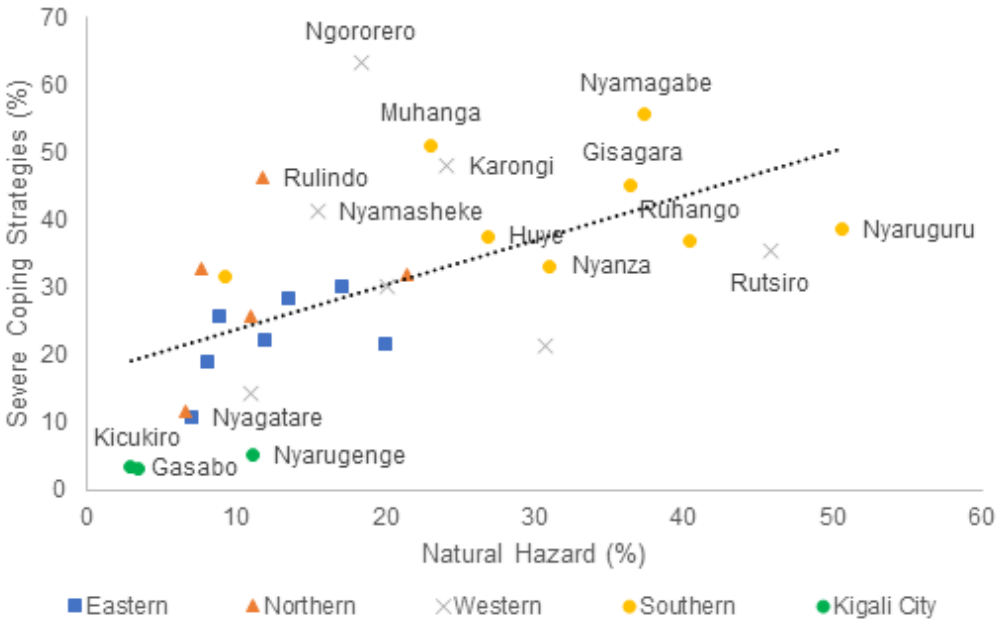
The divergent trends are influenced by the incidence of natural hazards, which are most prevalent in the Southern Province and least in Kigali City. Districts with a higher use of crisis or emergency strategies also report more households affected by environmental shocks, especially in the Southern Province. Severe asset depletion is highest in Ngororero (63 %), Nyamagabe (55 %), and Muhanga (51 %) districts.

Figure 8.11: Prevalence of LCSI categories, by province



Source: estimates based on 2024 CFSVA data

Figure 8.12: Prevalence of households affected by natural shocks and adopting severe livelihood-based coping strategies, by district



Source: estimates based on 2024 CFSVA data

9 Food security status

The Consolidated Approach to Reporting Indicators of Food Security (CARI) provides a comprehensive overview of Rwanda's overall food security status, summarized in a table called the CARI console (see table 9.1).[84]

Table 9.1: Indicators considered in a CARI console

Domain		Indicator	Food secure	Marginally Food Secure	Moderately Food Insecure	Severely Food Insecure
Current Status	Food Consumption	FCS & rCSI	Acceptable & rCSI <4	Acceptable & rCSI >=4	Borderline	Poor
Coping Capacity	Economic Vulnerability	FES	< 50%	50% - 65%	65% - 75%	> 75%
	Asset Depletion	LCS	None	Stress	Crisis	Emergency

Between 2021 and 2024, food security in Rwanda improved due to better diets, reduced reliance on severe coping strategies, and lower allocation of household monthly budget on food. The proportion of severely food insecure households dropped from 2 percent to 1 percent, and moderately food insecure households decreased from 19 percent to 16 percent. As a result, the percent of food secure households (food secure and marginally food secure) increased from 79 percent to 83 percent. However, around 35,523 households remain severely food insecure, and 551,000 are moderately food insecure, indicating that 17 percent of households still face food security challenges.

As shown in section 7.1, a higher proportion of Rwandan households are consuming more nutritious diets, leading to improved food security. This, combined with a decrease in the use of consumption-based coping mechanisms (with the rCSI dropping from 9.9 in 2021 to 6.6 in 2024), resulted in 83 percent of households achieving adequate consumption levels without resorting to severe coping strategies. While indicative[85], this marks a significant improvement compared to 73 percent of households being food secure based on food consumption in 2021. Consequently, the proportion of households classified as food insecure in the Food Consumption domain decreased from 27 percent in 2021 to 17 percent in 2024, representing a 40 percent relative reduction. This positive shift underscores the effectiveness of interventions aimed at stabilizing household food security during this period.

In the economic vulnerability domain of the CARI, which measures households' ability to meet food needs without overburdening their budget, there was modest improvement between 2021 and 2024. As shown in section 6.2, households' purchasing power has significantly improved since 2021, offsetting

[84] The CARI is a standardized method that combines multiple food security indicators into a single index. It evaluates two key aspects of food security: (i) the current food consumption status of households and (ii) their ability to sustain food consumption over time, measured by economic vulnerability and coping strategies. For the current status, the FCS and the rCSI are merged into a summary indicator; for coping capacity, the FES and the LCS are similarly combined into another summary indicator. These components are integrated into a final 4-point scale, categorizing households as: (1) Food Secure, (2) Marginally Food Secure, (3) Moderately Food Insecure, or (4) Severely Food Insecure. This comprehensive approach offers a detailed understanding of food security by considering both current and future household food needs. For more information, refer to the Technical Guidance for WFP – Consolidated Approach for Reporting Indicators of Food Security (CARI), Third Edition.

[85] Refer to section 3.6 limitations about the revised CARI.

the impact of currency depreciation and rising food prices on the affordability of commodities. Consequently, the proportion of households categorized as food secure based on economic vulnerability increased from 74 percent to 78 percent. This suggests more households can meet their food needs without spending unsustainable portions of their income on food. However, 22 percent of households still experience economic strain in accessing food – including 11 percent facing severe difficulties – indicating that many remain vulnerable to economic shocks.

Vulnerability to shocks remains high, as seen in the asset depletion domain, where minimal improvement occurred between 2021 and 2024. In 2021, 29 percent of households were moderately or severely food insecure due to asset depletion and implementation of livelihood-based coping mechanisms, and by 2024, this dropped slightly to 27 percent, with a small decrease in severely food insecure households (from 5.6 % to 5.4 %). Considering that households had to cope with the persisting negative effects of COVID-19, even a minimal reduction in the prevalence of severe asset depletion is a positive sign. Additionally, this slight reduction suggests fewer households are selling assets or using harmful strategies to access food. However, nearly a third of households still rely on negative coping mechanisms, indicating the need for further support to strengthen resilience.

Table 9.2: CARI console for 2021 and 2024

Domain			Indicator	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
CFSVA 2021	*Current Status*	Food Consumption	FCS	73%		24%	3%
	Coping Capacity	Economic Vulnerability	FES	53%	21%	12%	14%
		Asset Depletion	LCS	48%	23%	23%	6%
CARI 2021				**41%**	**38%**	**19%**	**2%**
# of households				1,072,553	987,629	489,361	46,474
CFSVA 2024	*Current Status*	Food Consumption	FCS & rCSI	50%	33%	15%	2%
	Coping Capacity	Economic Vulnerability	FES	56%	22%	11%	11%
		Asset Depletion	LCS	48%	25%	22%	5%
CARI 2024[86]				**36%**	**47%**	**16%**	**1%**
# of households				1,205,546	1,583,970	550,993	35,523

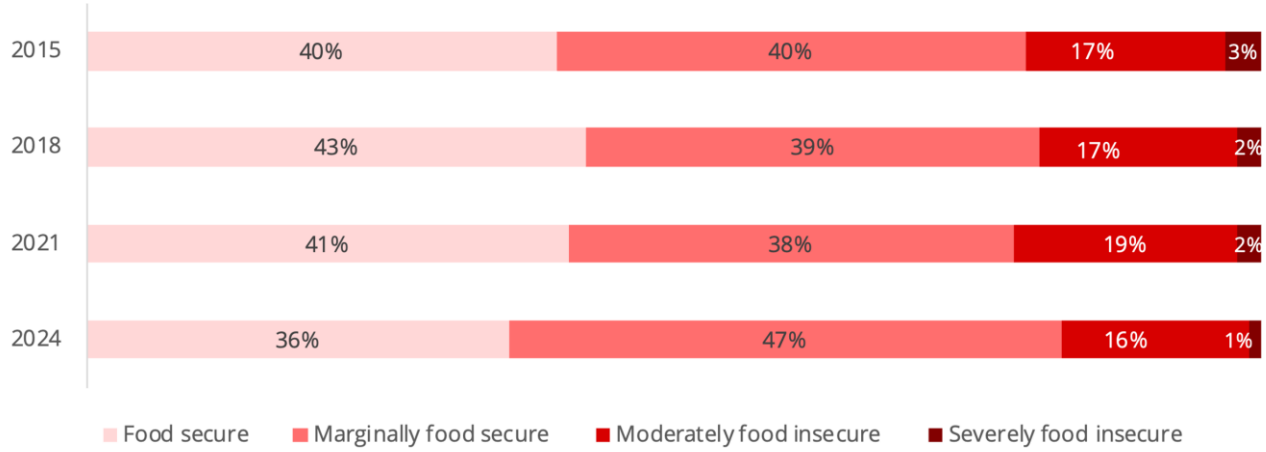
Source: estimates based on 2024 CFSVA data

From 2015 to 2024, food security in Rwanda has improved, despite the ripple effects of the COVID-19 pandemic and the conflict in Ukraine. In 2015, 80 percent of households were at least marginally food secure, rising to 83 percent by 2024. The share of severely food insecure households dropped from 3 percent in 2015 to just 1 percent in 2024, reflecting progress for vulnerable populations. However, global shocks such as the pandemic and the Ukraine conflict temporarily disrupted this trend, with the

[86] The breakdown of individuals is as follows: 5,209,041 are food secure, 6,599,504 are marginally food secure, 2,228,123 are moderately food insecure, and 131,997 are severely food insecure.

prevalence of food insecurity rising to 21 percent in 2021. Overall, the long-term trend shows a reduction in food insecurity, with an increasing proportion of households becoming at least marginally food secure. This reflects steady progress, though it also highlights the ongoing challenges of achieving full food security. Trends covering the past decade also demonstrate how external shocks, such as pandemics, can temporarily disrupt progress.

Figure 9.1: Long-term trends in food security from 2015 to 2024



Source: estimates based on 2024 CFSVA data

Food security disparities in Rwanda reflect differing trends across provinces. The Eastern, Northern, and Western provinces have fully recovered from the 2021 setbacks, with food insecurity lower than in 2018. In contrast, the Southern province has experienced a persisting increase in food insecurity, rising from 20.5 percent in 2018 to 23.4 percent in 2024, making it the second most food insecure province. The higher exposure to shocks and natural hazards has significantly impacted on food security in this province (see Section 8). This province also showed the highest use of both consumption-based and livelihood-based coping strategies, further depleting assets and hindering food security improvements.

Kigali City, the most food-secure province, saw a slight improvement in food insecurity, decreasing from 5 percent in 2021 to 4 percent in 2024, though still higher than the 2 percent in 2018. Compared to the Eastern, Western, and Northern provinces, Kigali City experienced a slower recovery in food security, largely due to the severe economic shocks in 2021, when 75 percent of households were affected. This explains why food insecurity in Kigali in 2024 remains higher than in 2018, despite improvements, reflecting resilience but not a full return to pre-pandemic levels.

9.1 Where are the food insecure?

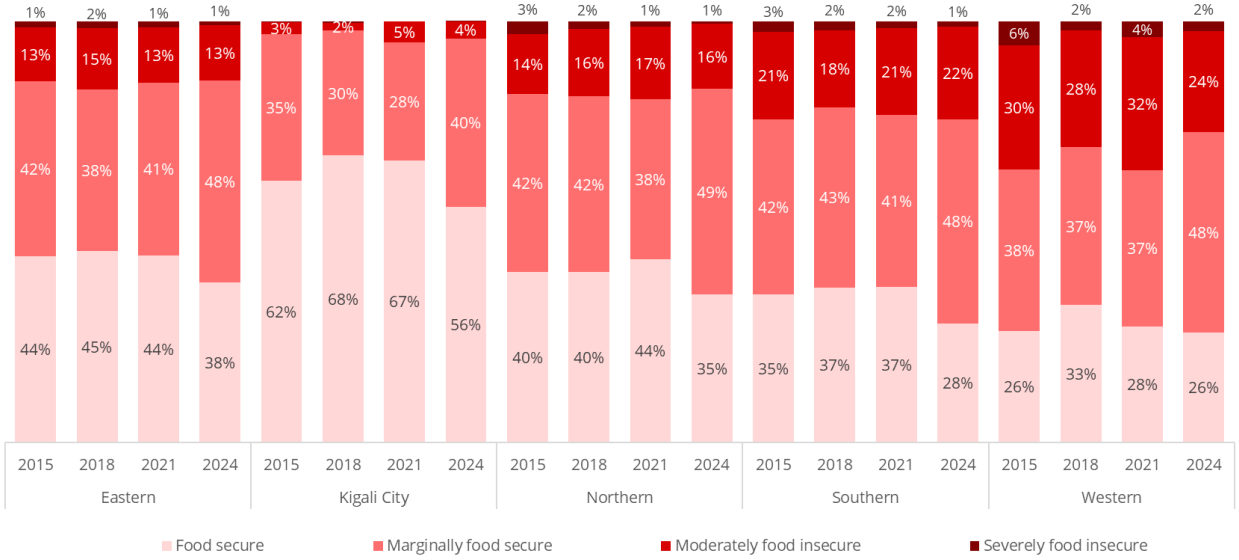
Food insecurity in Rwanda varies by province, with the highest prevalence in the Western and Southern Provinces, while Kigali City shows significantly better outcomes (Figure 9.2). Kigali City, the least affected by shocks and with the lowest poverty rates, has the highest proportion of food secure households (56 %), with nearly no households classified as severely food insecure (0.1 %).

In contrast, the Western Province has the highest food insecurity prevalence, with 26 percent of households food insecure, including 2 percent severely insecure. This region also faces higher poverty rates than the national average, higher prevalence of inadequate diets, and lower dietary diversity.

The Southern Province also struggles with high poverty rates, frequent environmental shocks, and increased use of emergency coping strategies, resulting in 23 percent of households being food insecure.

The Eastern and Northern Provinces show slightly better outcomes, with 14 percent and 17 percent of households food insecure, respectively.

Figure 9.2: Prevalence of CARI categories from 2018 to 2024, by province



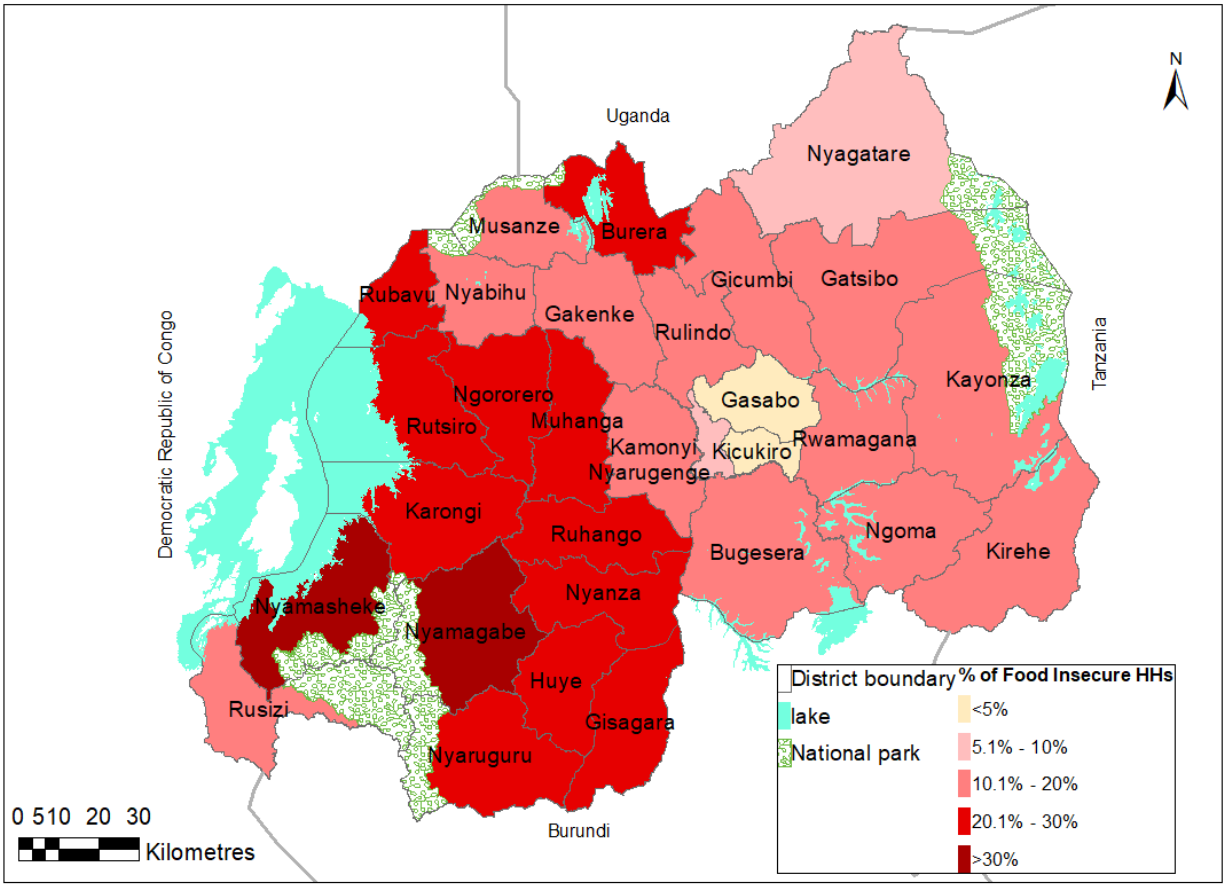
Source: estimates based on 2024 CFSVA data

Nearly all districts in the Western and Southern provinces have higher food insecurity rates than the national average, with these provinces accounting for 69 percent of severely food insecure households and 60 percent of moderately food insecure households.

Nyamasheke (38 %) and Nyamagabe (35 %) districts in Western Province have the highest prevalence of food insecure households. Nyamasheke also saw an increase in stunting rates from 2015 to 2020[87], reflecting serious malnutrition and food security challenges. The district's reliance on firewood for cooking (reported by 95 of households) contribute to health problems[88], affecting the absorption of micronutrients, while widespread cultivation of cassava for consumption offers limited nutritional variety.

[87] NCDA, 2022. *Narratives behind the stunting reduction and non-reduction in districts of Rwanda: A case study.* National Child Development Agency.
[88] NISR, 2023. *Fifth Population and Housing Census. District Profile – Nyamasheke.* National Institute of Statistics of Rwanda.

Map 9.1: Prevalence of food insecurity by district (2024)

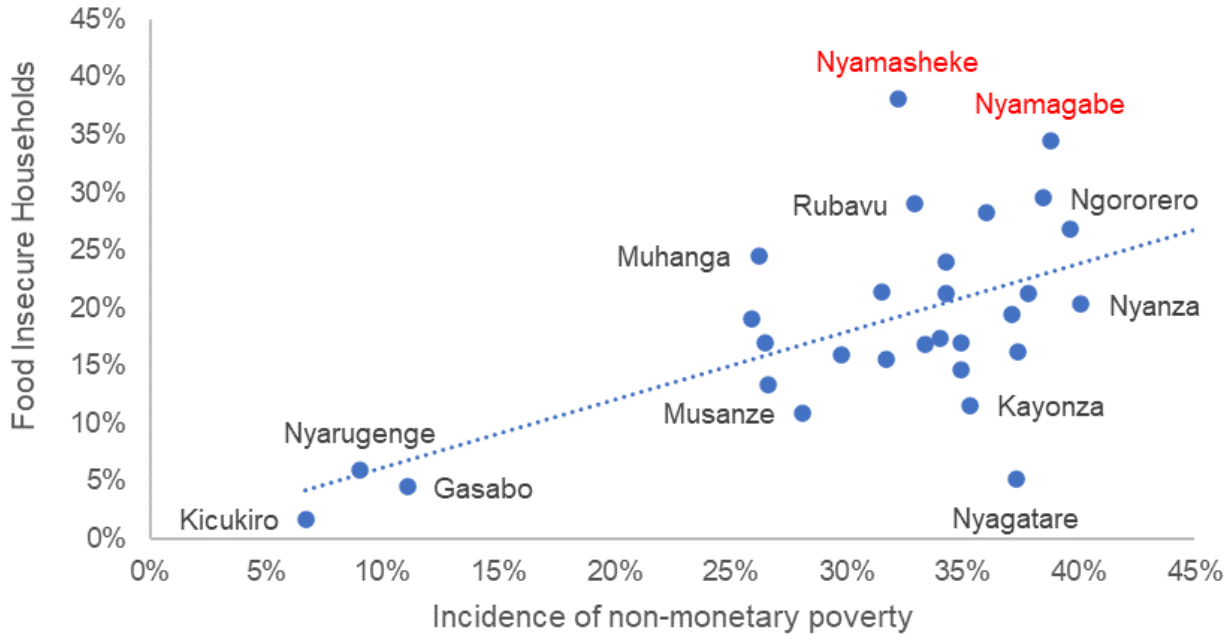


Source: estimates based on 2024 CFSVA data

In Nyamagabe, in the Southern Province, a 39 percent non-monetary poverty rate indicates many residents lack the means to secure adequate food[89]. Figure 9.4 highlights the strong correlation between multidimensional deprivation and food insecurity at the district level.

[89] NISR, 2023. *Fifth Population and Housing Census. District Profile – Nyamagabe.* National Institute of Statistics of Rwanda.

Figure 9.3: Prevalence of food insecure households (2024) and non-monetary poverty (2022), by district



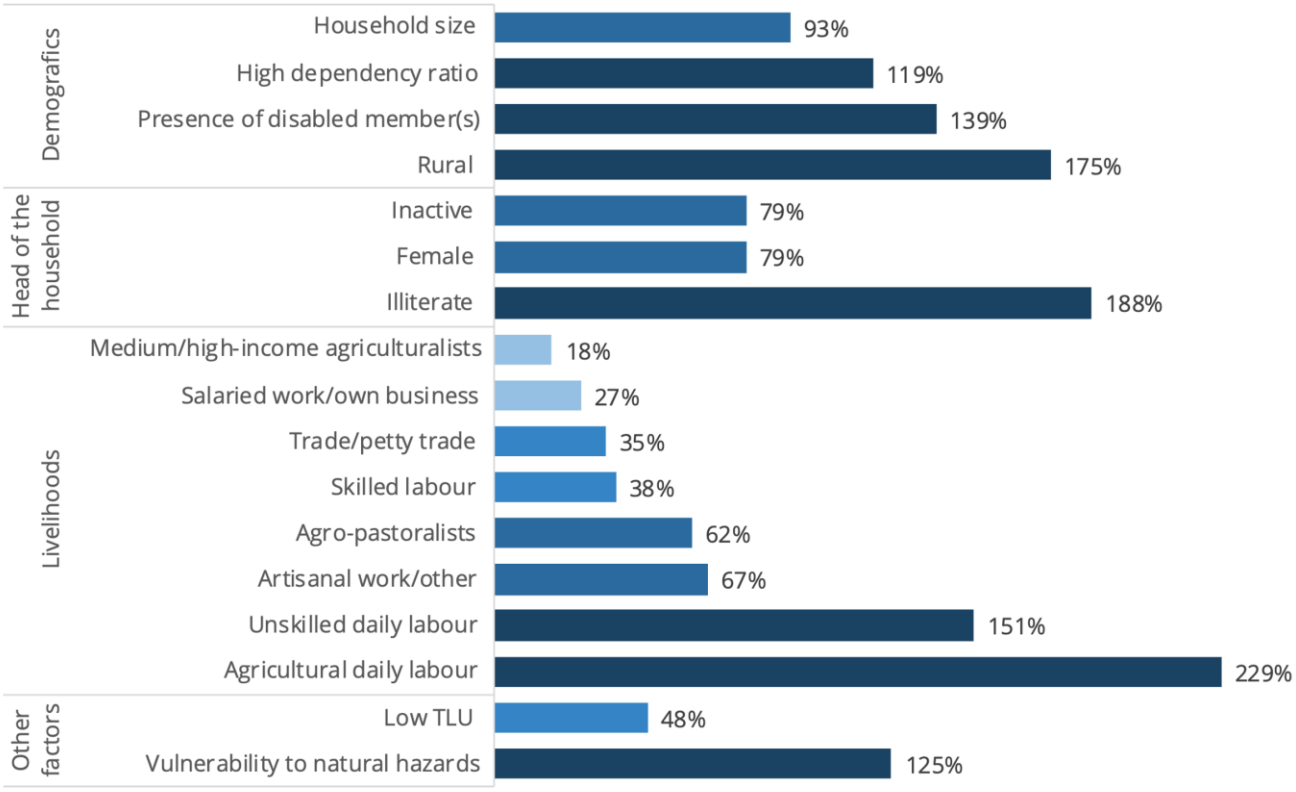
Source: estimates based on 2024 CFSVA data for food security and NISR (2022) for MPI

9.2 What factors drive food insecurity?

This section presents the results of a multivariate analysis using logistic regression to better understand the relationships between food insecurity and various factors. Unlike simple cross-tabulations, logistic regression examines the effects of multiple variables (e.g., livelihood type, household size, gender of the head) on the probability of food insecurity, accounting for interactions between factors. For example, a household's food security status is influenced by factors like livelihood, household size, livestock ownership, and the education level of the head. This analysis isolates the effect of each factor while controlling for others, providing a clearer understanding of what drives food insecurity. The regression model also incorporates district-level features not directly measured in the household survey[90].

[90] This is done by including dummy variables for each district arbitrarily selecting one (Nyarugenge in this case) as a reference category.

Figure 9.4: Changes in the probability[91] of being food insecure associated with key household characteristics



Note: The figure shows odds ratios from a logistic regression model of food insecurity (moderately of severely food insecure). Only statistically significant values (p<0.1) are reported. The reference category for livelihood groups is "low-income agriculturalists". The reference category for HHH sex is "male". Estimates based on 2024 CFSVA data.

The multivariate analysis reveals that agricultural daily labourers and unskilled labourers are the most vulnerable to food insecurity. As shown in Figure 9.4, agricultural daily labourers (229 %) and unskilled labourers (151 %) are much more likely to be food insecure compared to low-income agriculturalists. This means that, all else being equal, a household relying on agricultural daily labour is over twice as likely to be food insecure, and one relying on unskilled labour is 50 percent more likely. Conversely, medium/high-income agricultural households are 82 percent less likely to be food insecure, and those in salaried or business jobs have 27 percent lower odds of food insecurity. Agro-pastoralists also face relatively lower food insecurity odds (62 %) due to more stable, diversified livelihoods.

The multivariate analysis shows that household composition (size, dependency ratio, disability) and rural location are key factors associated with food insecurity. Larger households are less likely to experience food insecurity, while households with at least one member living with a disability face a 39 percent higher risk. Rural households are 75 percent more likely to be food insecure than urban ones. These findings highlight the need to consider household dynamics and location when addressing food insecurity.

[91] The Figure shows the ratio of odds of being food insecure. For instance, for the variable *HHH Sex,* the figure shows the odds of being food insecure if the head of household is a man over the odds of being food insecure if the head of the household is a woman. Odds ratios lower than one (or 100 percent) indicate a reduced probability of being food insecure if the head of household is a man.

The multivariate analysis reveals that households headed by women and illiterate individuals are more likely to be food insecure. Male-headed households are 21 percent less likely to be food insecure, while those with an illiterate head are 88 percent more likely. Illiteracy likely limits access to better job opportunities, increasing food insecurity risk. Age and marital status of the head do not significantly affect food insecurity. Interestingly, households with inactive heads (e.g., retirees) are 21 percent less likely to be food insecure, likely due to support from social protection and networks.

To summarize, key factors linked to food insecurity include:

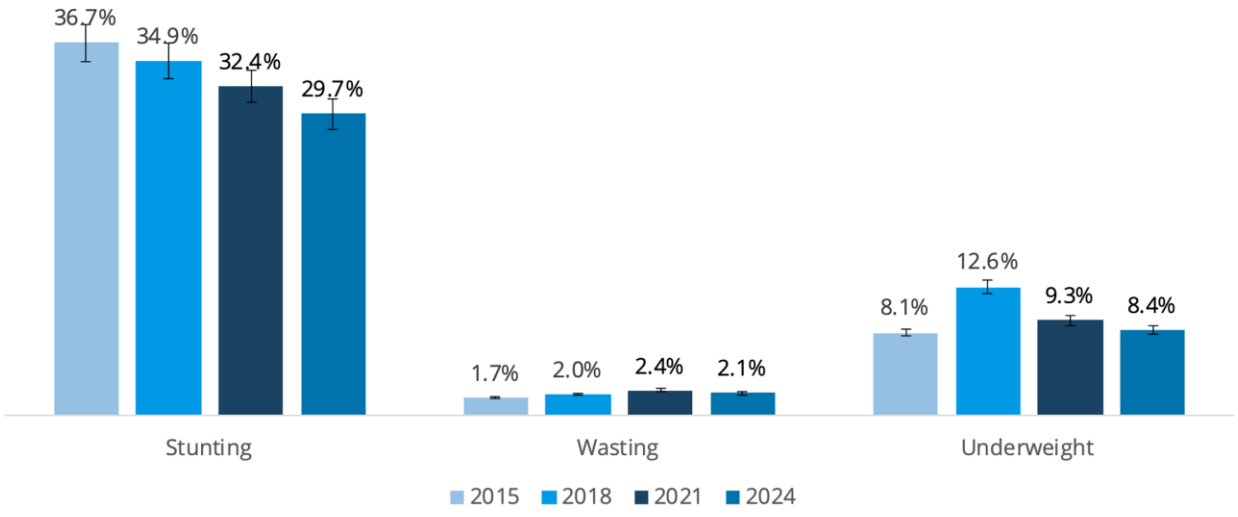
- Exposure to shocks and natural hazard
- Dependence on daily labour
- Female, illiterate, or inactive heads
- Rural location
- Smaller households with more dependents or members with disabilities.

10 Nutrition

10.1 Malnutrition among children

In 2024, malnutrition among children in Rwanda remains a concern, though some indicators show improvement. Stunting affects 29.7 percent of children under five, reflecting long-term nutritional deficits. Wasting is lower at 2.1 percent, indicating fewer children face acute malnutrition. Additionally, 8.4 percent of children are underweight, reflecting both acute and chronic malnutrition. While progress has been made, stunting remains a critical issue, highlighting the need for continued nutrition and health interventions.

Figure 10.1: Prevalence of children malnutrition from 2015 to 2024

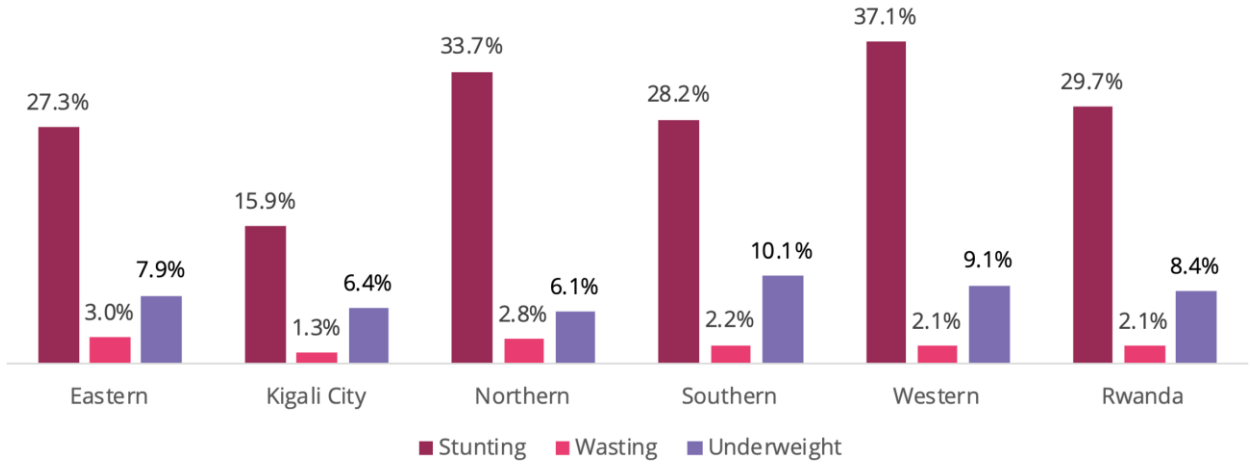


Source: estimates based on 2024 CFSVA data

The 2024 findings show a gradual decline in child malnutrition, particularly stunting, which decreased from 37 percent in 2015 to 30 percent in 2024, reflecting progress in nutrition, maternal health, and healthcare access (see Figure 10.1). The prevalence of underweight children also dropped from 13 percent in 2018 to 8 percent in 2024, indicating effective interventions. Wasting, though still minimal, fluctuated slightly, rising from 1.7 percent in 2015 to 2.4 percent in 2021, before decreasing to 2.1 percent in 2024. While significant progress has been made in reducing chronic malnutrition, ongoing efforts are needed to transform food systems and improve healthcare to address both chronic and acute malnutrition.

Child malnutrition rates vary significantly across Rwanda's provinces. The Western and Northern Provinces have high stunting rates (37 % and 34 %, respectively), indicating chronic malnutrition is still widespread. The Northern Province also has the highest wasting rate (2.8 %), while Kigali City reports a much lower rate (1.3 %). The Southern Province has the highest underweight prevalence (10.1 %), followed by the Western Province (9.1 %), while the Northern Province has the lowest at 6.1 percent. This suggests that while children in the Northern Province may face chronic nutrient shortages, they receive enough calories to maintain weight. In contrast, the Southern Province shows lower stunting but higher underweight rates, likely due to more volatile food access and short-term shortages. Addressing these regional variations requires tailored interventions for both chronic and acute malnutrition.

Figure 10.2: Prevalence of children malnutrition by province

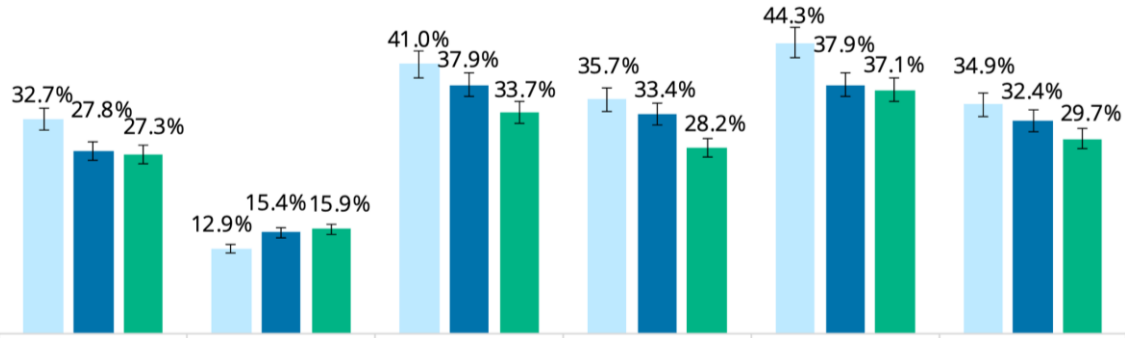


Source: estimates based on 2024 CFSVA data

10.1.1 Child Stunting

While Kigali City has lower stunting rates than other provinces, it is the only region where stunting increased, rising from 13 percent in 2018 to 16 percent in 2024. This may be due to a focus on rural areas for government interventions, where food insecurity is more prevalent. As a result, stunting rates dropped significantly in the Northern and Southern Provinces. Additionally, COVID-19 disrupted economic activities in urban areas such as Kigali, particularly affecting low-income households' ability to access nutritious diets. Unlike rural areas with agriculture-based resilience, urban populations rely more on salaries for their income, making them more vulnerable to economic shocks. This highlights the need for targeted interventions in urban areas alongside rural-focused efforts.

Figure 10.3: Trends in stunting rates by province

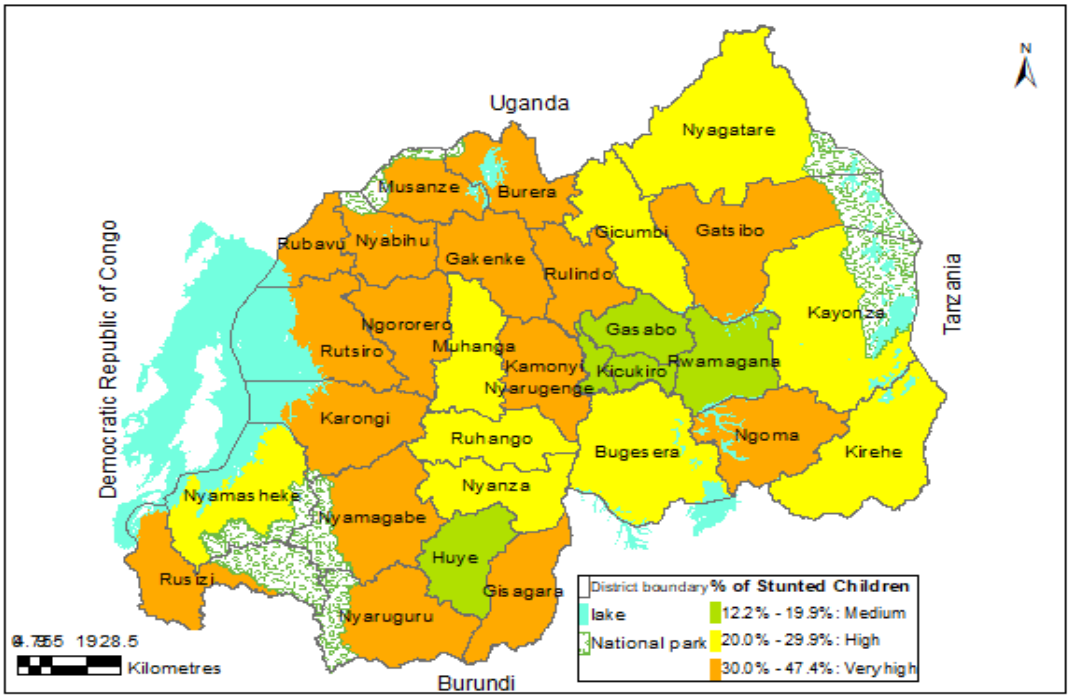


	Eastern	Kigali City	Northern	Southern	Western	Rwanda
2018	32.7%	12.9%	41.0%	35.7%	44.3%	34.9%
2021	27.8%	15.4%	37.9%	33.4%	37.9%	32.4%
2024	27.3%	15.9%	33.7%	28.2%	37.1%	29.7%

Source: estimates based on 2024 CFSVA data

Despite these improvements since 2018, several districts still record stunting rates above the 30 percent cut-off point.[92] Stunting rates are particularly high in Nyabihu (47 %) and Rubavu (43 %) in the Western Province, as well as Burera (44 %) in the Northern Province (see Figure 10.4).

Map 10.1: Stunting prevalence per district (2024)

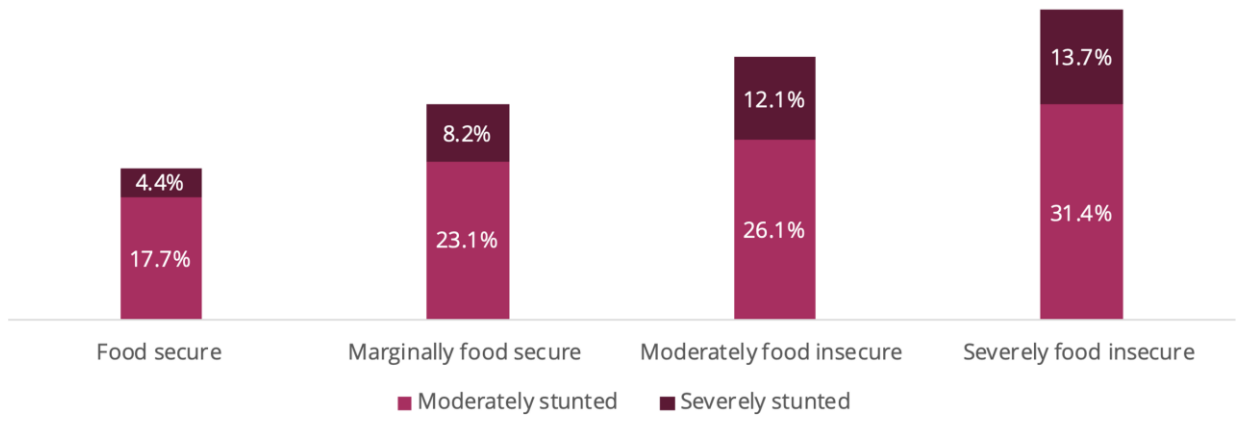


Source: estimates based on 2024 CFSVA data

[92] Thresholds were established through the WHO-UNICEF Technical Advisory Group on Nutrition Monitoring (TEAM) and released in 2018. See: de Onis et al., 2018. Prevalence thresholds for wasting, overweight and stunting in children under 5 years. *Public Health Nutrition, (22), 1.*

Among food secure households, 22 percent of children are stunted, with 18 percent moderately stunted and 4 percent severely stunted (Figure 10.4). This percentage rises substantially among severely food insecure households, where nearly half (45 %) of children suffer from stunting, and severe stunting alone affects 14 percent of children. This trend highlights how insufficient access to food directly impacts children's growth and nutritional status, underlining the need for targeted interventions to address both food insecurity and child malnutrition comprehensively.

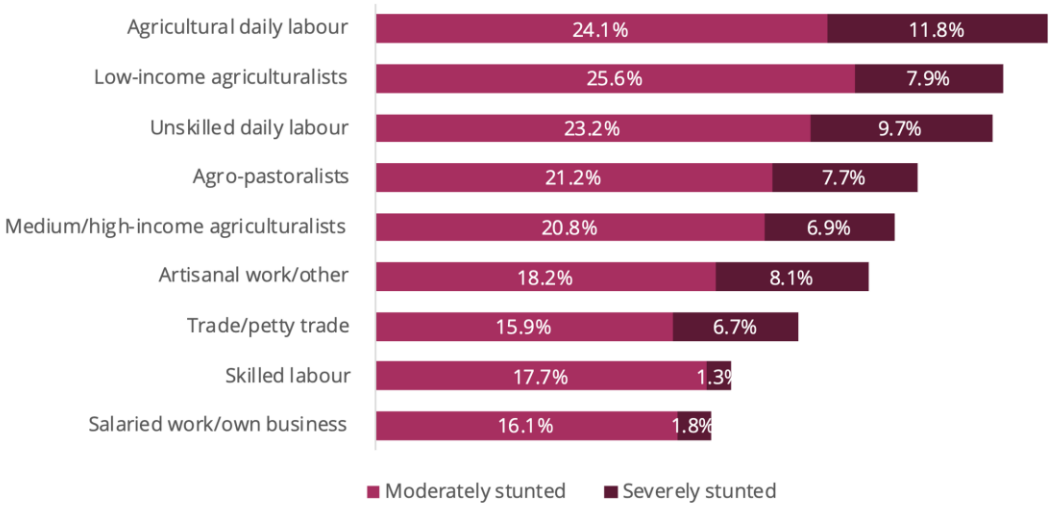
Figure 10.4: Stunting rates by food security categories



Source: estimates based on 2024 CFSVA data

Households relying on agricultural livelihoods and unskilled daily labour show higher stunting rates, with unskilled daily labourers and low-income agriculturalists having the highest rates (see Figure 10.5). Although medium/high-income agriculturalists have a low prevalence of food insecurity (5 %), their stunting rate is still high at 28 percent, indicating that income and food security alone do not fully prevent chronic undernutrition. Factors such as access to healthcare, clean water, sanitation, and nutrition education are crucial in addressing stunting. Urban areas have lower stunting rates (20 %) compared to rural areas (34 %), highlighting the impact of location on chronic malnutrition.

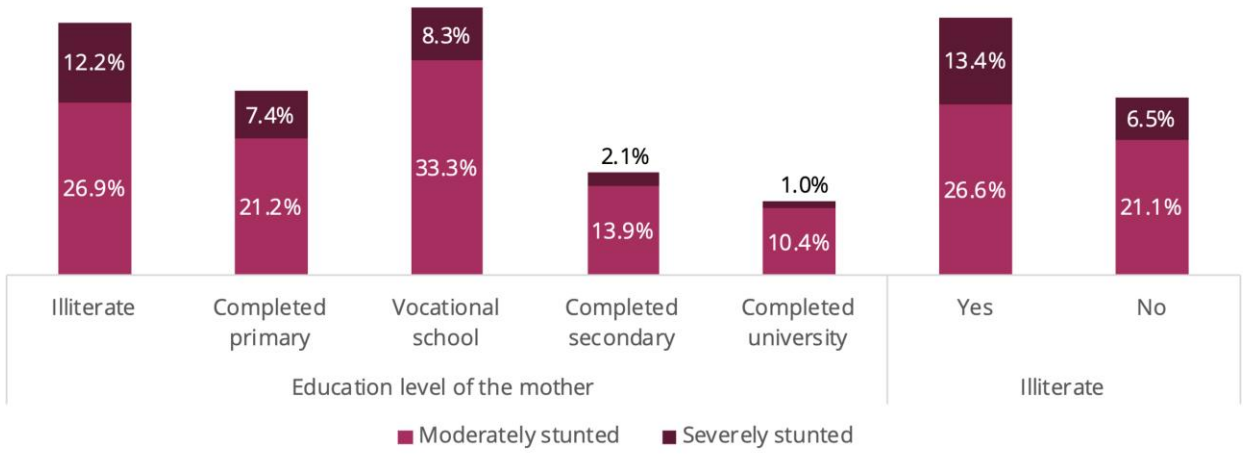
Figure 10.5: Stunting rates by livelihood group



Source: estimates based on 2024 CFSVA data

Stunting in Rwanda is strongly linked to maternal education and literacy. Children of mothers with higher education levels show significantly lower stunting rates. For example, children whose mothers completed university education have a stunting rate of 12 percent, well below the global average, while those with mothers who have no formal education experience a much higher rate of 39 percent. Stunting decreases as maternal education rises, reflecting the positive impact of education on health practices and resources. Similarly, children of literate mothers have a stunting rate of 28 percent, compared to 40 percent for children of illiterate mothers.

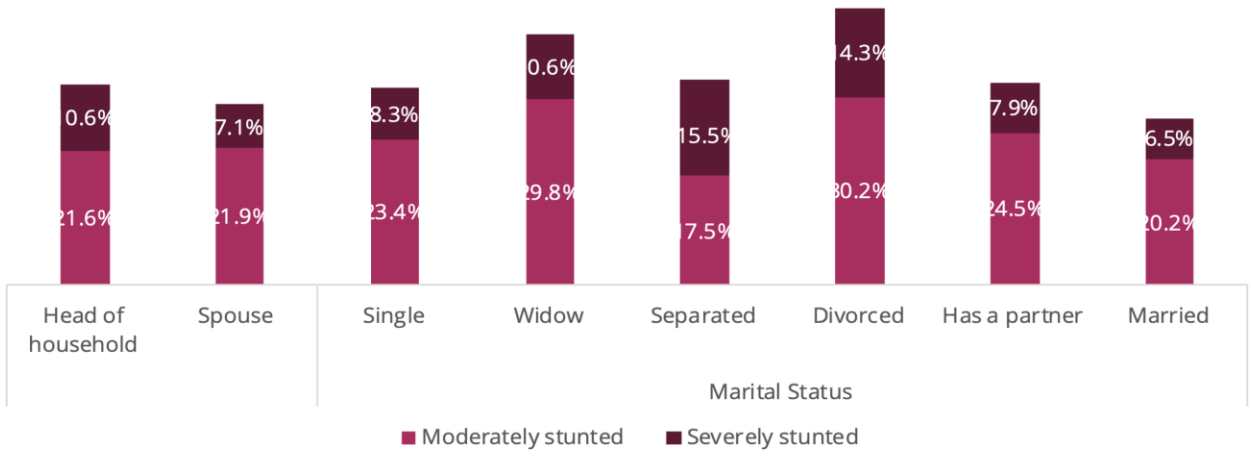
Figure 10.6: Stunting rates by mother's education



Source: estimates based on 2024 CFSVA data

Marital status and the mother's role within the household are linked to child stunting rates. Children of divorced (44 %) and widowed (40 %) mothers have higher stunting prevalence, likely due to economic and social challenges that affect nutrition and care. Similarly, children in female-headed households have a higher stunting rate (32 %) compared to those in male-headed households (29 %), suggesting the added burdens faced by single mothers. These patterns highlight the need for policies supporting maternal stability and economic empowerment to improve child nutrition in vulnerable households.

Figure 10.7: Stunting rates by mother's marital status

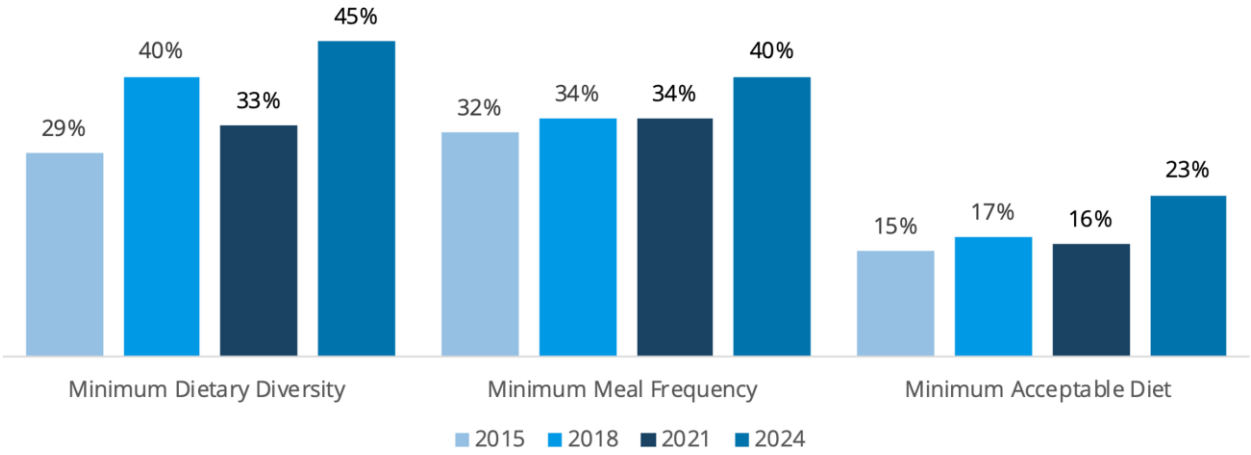


Source: estimates based on 2024 CFSVA data

10.1.2 Minimum Acceptable Diet for children

Between 2021 and 2024, the Minimum Dietary Diversity (MDD) for children aged 6-23 months improved from 33 percent to 45 percent (Figure 10.8). This indicator measures the proportion of children consuming foods from at least five of eight standard food groups within a 24-hour period. The increase suggests more diverse diets, which are essential for providing the micronutrients needed for healthy growth and development, reducing the risk of deficiencies.

Figure 10.8: Prevalence of children meeting the Minimum Acceptable Diet



Source: estimates based on 2024 CFSVA data

The Minimum Meal Frequency (MMF) indicator increased from 34 percent in 2021 to 40 percent in 2024, reflecting progress in the frequency of feedings for small children (Figure 10.9). MMF measures how often a child is fed daily based on age and breastfeeding status[93]. The increase suggests better adherence to feeding guidelines, which help meet children's energy and nutrient needs, supporting their growth and development.

The share of children meeting the Minimum Acceptable Diet (MAD) increased from 16 percent in 2021 to 23 percent in 2024 (Figure 10.9). MAD combines dietary diversity (MDD) and meal frequency (MMF), reflecting the overall adequacy of children's diets.[94] The improvement indicates enhancements in both diet quality and feeding frequency, but the relatively low percentage shows that many children still lack adequate nutrition, indicating a need for continued efforts to improve complementary feeding practices.

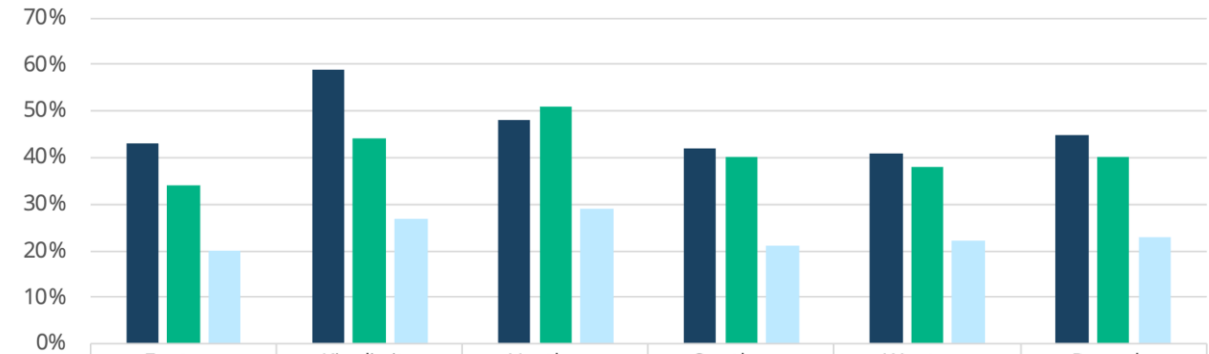
The 2024 CFSVA data reveals significant regional disparities in children's dietary diversity, meal frequency, and overall diet adequacy in Rwanda. The Northern Province (29 %) and Kigali City (27 %) have the highest proportions of children meeting the Minimum Acceptable Diet, indicating better dietary standards. In contrast, the Western, Southern, and Eastern provinces fall below the national average (23

[93] Breastfed children aged 6-8 months should have at least two feedings of solid or semi-solid food daily, while non-breastfed children require three.

[94] A new approach for calculating the minimum acceptable diet (MAD) has been proposed in 2021 which includes breast milk as a separate food group, thereby increasing the total number of food groups from seven to eight and increasing the cut-off from four to five groups.

%), highlighting a greater risk of nutritionally inadequate diets. These findings emphasize the need for targeted interventions in regions with lower performance to address gaps in children's nutrition.

Figure 10.9: Minimum Acceptable Diet for children, by province

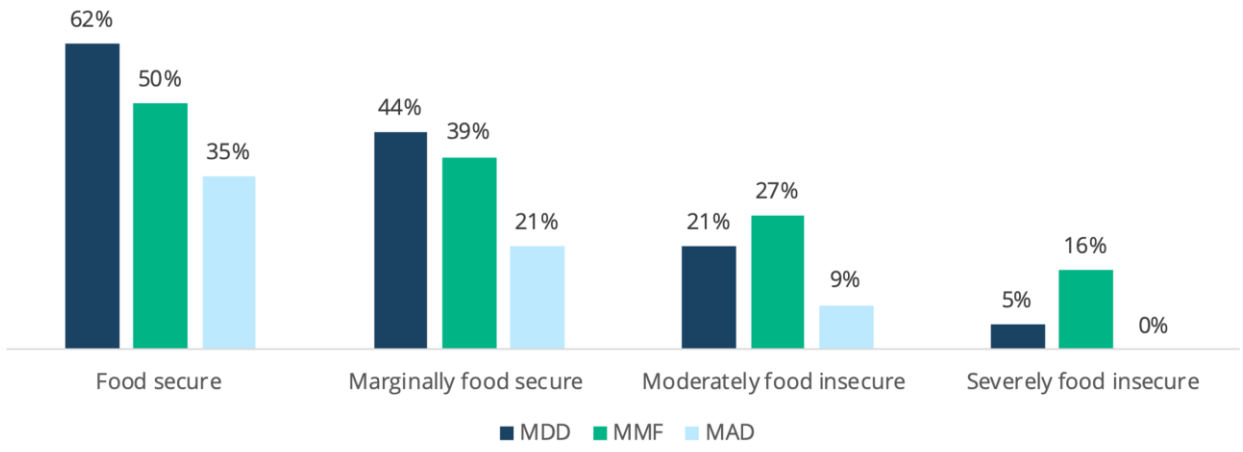


	Eastern	Kigali city	Northern	Southern	Western	Rwanda
MDD	43%	59%	48%	42%	41%	45%
MMF	34%	44%	51%	40%	38%	40%
MAD	20%	27%	29%	21%	22%	23%

Source: estimates based on 2024 CFSVA data

The 2024 CFSVA data shows a clear link between food security and children's ability to meet the Minimum Acceptable Diet (MAD) standard (Figure 10.10). In food-secure households, 35 percent of children meet MAD, with higher rates of Minimum Dietary Diversity (62 %) and Minimum Meal Frequency (50 %). In moderately food-insecure households, only 9 percent of children meet MAD, with significant declines in dietary diversity (21 %) and meal frequency (27 %). Severely food-insecure households exhibit the worst outcomes, with no children meeting MAD, and very low rates for dietary diversity (5 %) and meal frequency (16 %). This highlights the need for interventions to improve child nutrition in food-insecure households.

Figure 10.10: Percentage of children meeting the Minimum Acceptable Diet, by Food Security category



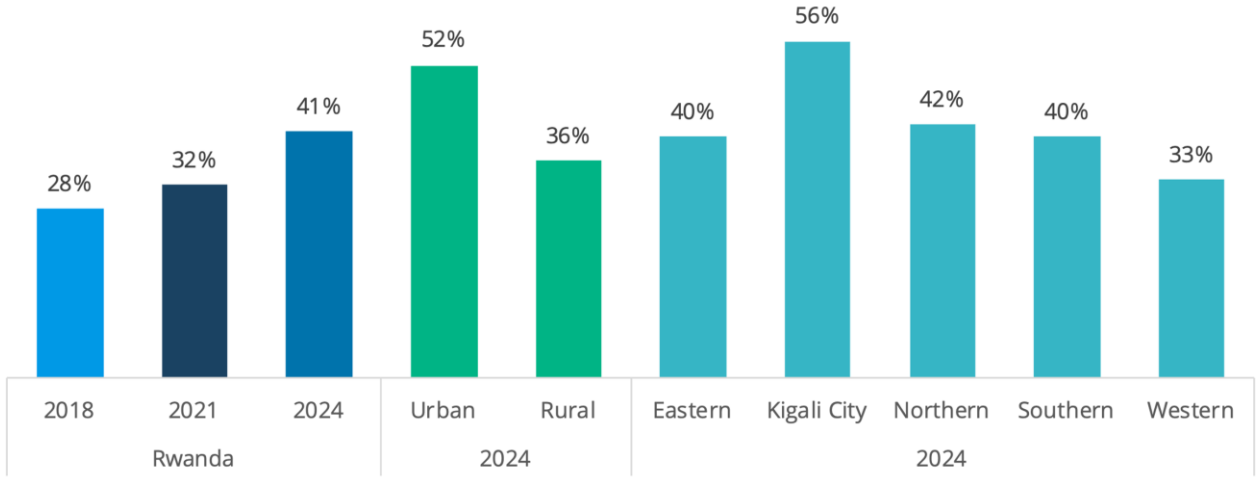
Source: estimates based on 2024 CFSVA data

10.2 Women's nutritional status

10.2.1 Women Minimum Diet Diversity

The dietary diversity of women in Rwanda has improved, but regional inequalities persist. The MDD-W indicator, measuring the proportion of women consuming at least five out of ten food groups, increased from 28 percent in 2018 to 41 percent in 2024 (Figure 10.11). While this shows progress in dietary diversity, significant gaps remain between urban and rural areas. In 2024, 52 percent of women in urban areas met the MDD-W standard, compared to just 36 percent in rural areas. Kigali City had the highest rate (56 %), while the Western Province had the lowest (33 %). These disparities highlight the need for targeted nutritional interventions to ensure equitable access to nutritious diets across regions.

Figure 10.11: Prevalence of women (aged 15-49) eating 5 or more food groups (MDD-W)



Source: estimates based on 2024 CFSVA data

Cereals (98 %) and pulses (83 %) are staple foods in women's diets across Rwanda, while the consumption of nutrient-rich foods like meat, eggs, and vitamin A-rich vegetables remains limited (see Figure 10.13). In Kigali City, 37 percent of women consume meat, 24 percent drink milk, and 11 percent eat eggs, all surpassing national averages. Half of women in Kigali consume vitamin A-rich vegetables, well above the national average of 32 percent. In contrast, the Western Province has significantly lower consumption, with only 22 percent eating meat, 11 percent consuming milk, and just 3 percent eating eggs. These disparities highlight the need for targeted nutritional interventions in rural and food-insecure areas to improve the quality of diets consumed by women.

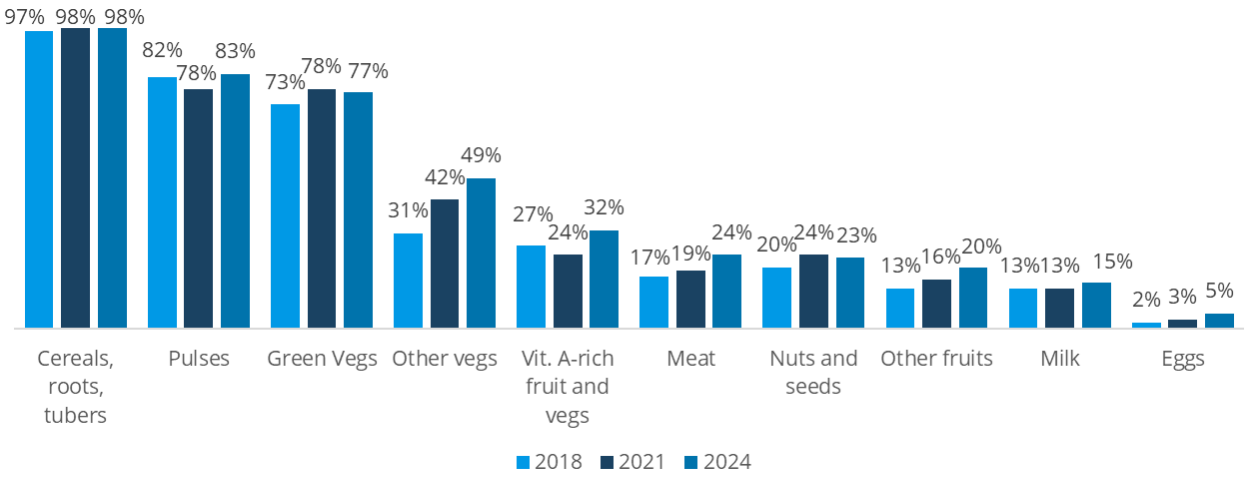
Table 10.1: Food groups consumed by women (aged 15-49) in the last 24 hours, by province

Food groups	Eastern	Kigali city	Northern	Southern	Western	Rwanda
Cereals, roots, tubers	98%	100%	97%	97%	99%	98%
Pulses	85%	89%	85%	83%	78%	83%
Nuts and seeds	22%	28%	23%	22%	23%	23%
Milk	19%	24%	13%	12%	11%	15%
Meat	28%	37%	18%	21%	22%	24%
Eggs	6%	11%	6%	3%	3%	5%
Green Vegs	75%	76%	83%	76%	76%	77%
Other vegs	48%	48%	57%	50%	45%	49%
Vit. A-rich fruit and vegs	24%	50%	37%	33%	26%	32%
Other fruits	22%	26%	19%	20%	17%	20%

Source: estimates based on 2024 CFSVA data

Despite regional disparities, the CFSVA data show improvements in women's dietary diversity in Rwanda, with increased consumption of various food groups. The proportion of women eating eggs more than doubled from 2 percent in 2018 to 5 percent in 2024 (Figure 10.12), and there was a notable increase in the consumption of fruits, vegetables, and meat. However, milk consumption remained low and stable. While the consumption of cereals, roots, and tubers remained high, with a slight increase from 97 percent in 2018 to 98 percent in 2021 and 2024, these staples still form the foundation of women's diets. These findings highlight Rwanda's progress in improving dietary diversity, though targeted interventions are needed to address gaps, especially in dairy and nutrient-dense food groups such as eggs, meat, and vitamin A-rich vegetables.

Figure 10.12: Changes in food groups consumption among women

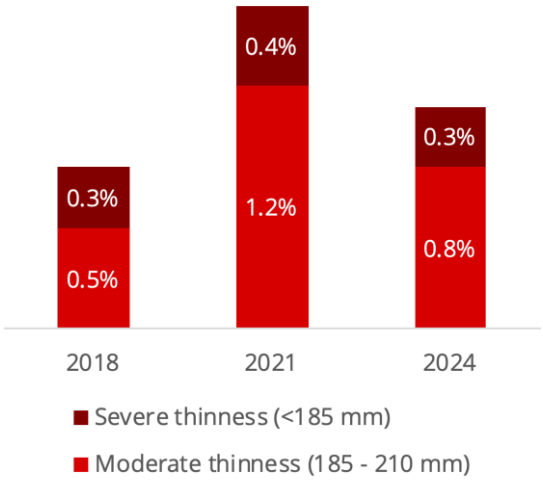


Source: estimates based on 2021, 2021 and 2024 CFSVA data

10.2.2 Wasting in Women

The 2024 data on women's nutritional status, screened through Mid-Upper Arm Circumference (MUAC), show very low rates of acute malnutrition across Rwanda. In 2024, 99 percent of women had a MUAC greater than 210 mm, up from 98 percent in 2021 (Figure 10.13). Moderate malnutrition (MUAC between 185-210 mm) decreased from 1.2 percent in 2021 to 0.8 percent in 2024, though still higher than 0.5 percent in 2018. Severe malnutrition (MUAC < 185 mm) remained low at 0.3 percent, indicating overall stability. These trends highlight the effectiveness of nutrition interventions but also the need for continued efforts to improve women's nutritional outcomes.

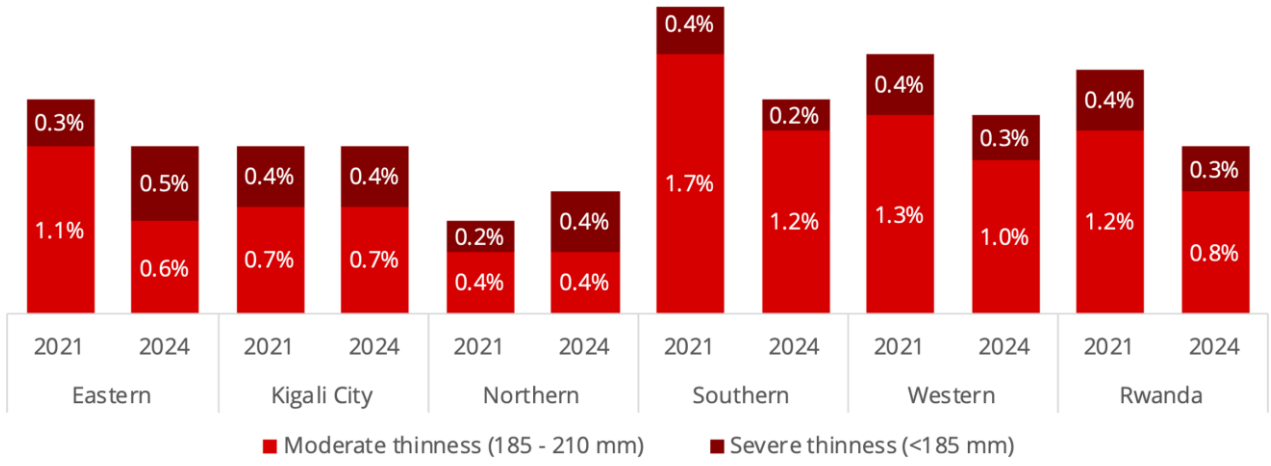
Figure 10.13: Wasting among women



Source: estimates based on 2024 CFSVA data

Acute malnutrition rates among women are low across all provinces, with the Northern Province having the lowest proportion (0.8 %). Kigali City maintains a stable and favourable nutritional status, with just 1 percent of women in the lower MUAC categories (Figure 10.14). The Southern (1.4 %) and Western provinces (1.3 %) have the highest prevalence, though the positive trend suggests improvements in food security and nutrition. Severe wasting remains low in all regions, with figures ranging from 0.2 percent in the Southern Province to 0.5 percent in the Eastern Province. The Eastern Province showed a slight increase in severe malnutrition from 0.3 percent to 0.5 percent, despite improvements in healthy MUAC. This highlights the need for continued monitoring and targeted interventions, particularly in regions with higher moderate malnutrition.

Figure 10.14: Changes in women's wasting, by province

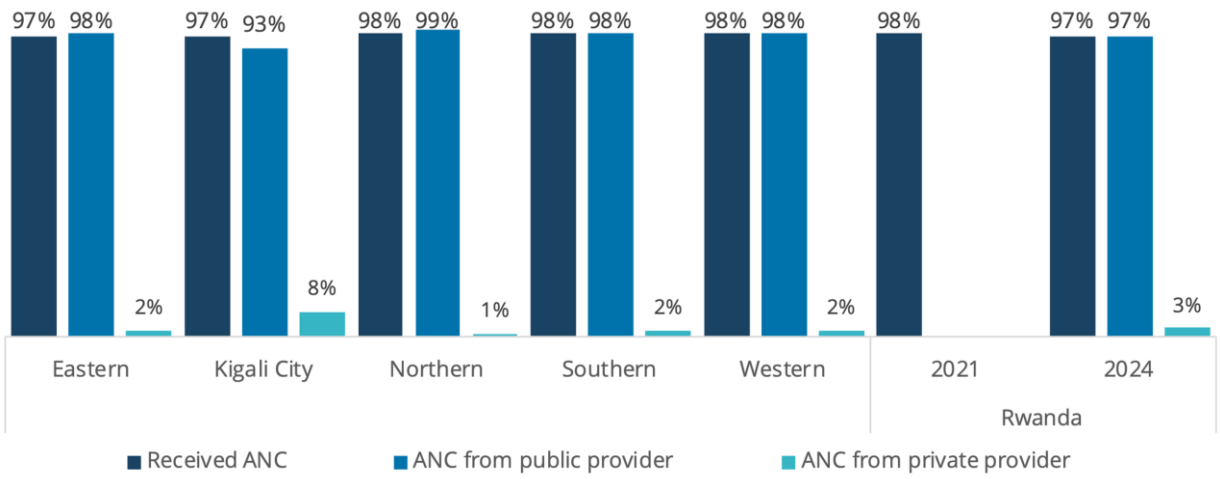


Source: estimates based on 2024 CFSVA data

10.2.3 Pregnancy and antenatal care

In 2024, 97 percent of pregnant women in Rwanda reported receiving antenatal care (ANC), a stable figure compared to 98 percent in 2021. This high coverage reflects strong access to maternal health services, particularly through public providers, with 98 percent of women receiving ANC at public health facilities (Figure 10.15). Rural areas show even higher reliance on public services (99 %), while urban areas, especially Kigali City, engage more with private providers (8 %). Despite these urban-rural differences, there are no significant variations across provinces, with 97 to 98 percent of women having access to ANC. The data emphasize the importance of robust public healthcare infrastructure.

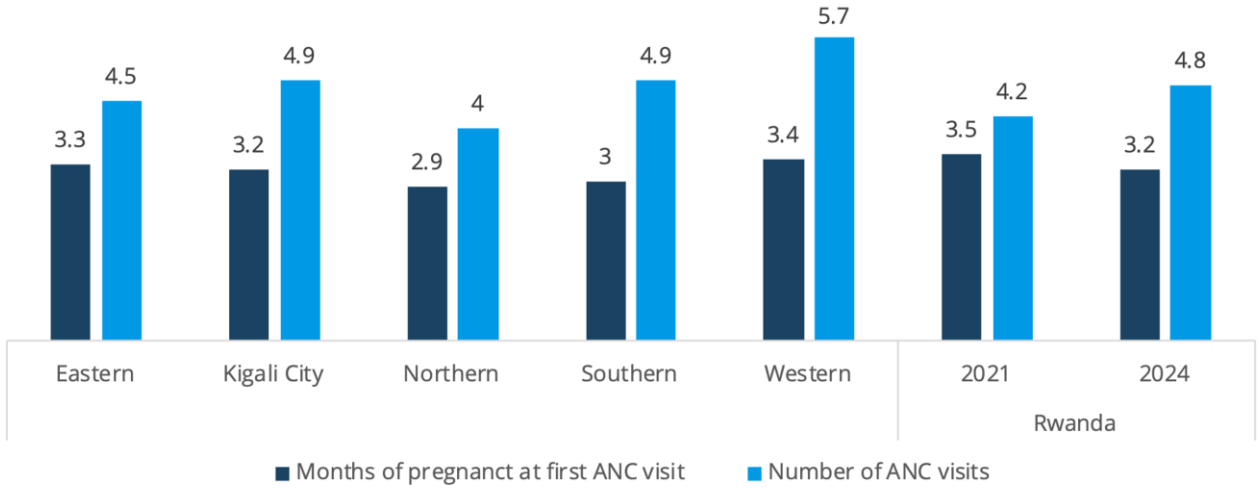
Figure 10.15: Antenatal care received by pregnant women, by province



Source: estimates based on 2024 CFSVA data

In 2024, the average timing for a woman's first antenatal care (ANC) visit improved to 3.2 months, down from 3.5 months in 2021 (Figure 10.16). The average number of visits also increased from 4.2 in 2021 to 4.8 in 2024, reflecting greater awareness and utilisation of early maternal healthcare. The Northern Province has the earliest start at 2.9 months but the fewest visits (4.0), suggesting the need for improved follow-up care. In contrast, the Western Province has a later start at 3.4 months but the highest number of visits (5.7), indicating better adherence to multiple visits once care is initiated. These findings highlight progress in early ANC engagement but underscore the need for consistent care, especially in regions with lower follow-up rates.

Figure 10.16: Timing and frequency of antenatal care visits, by province



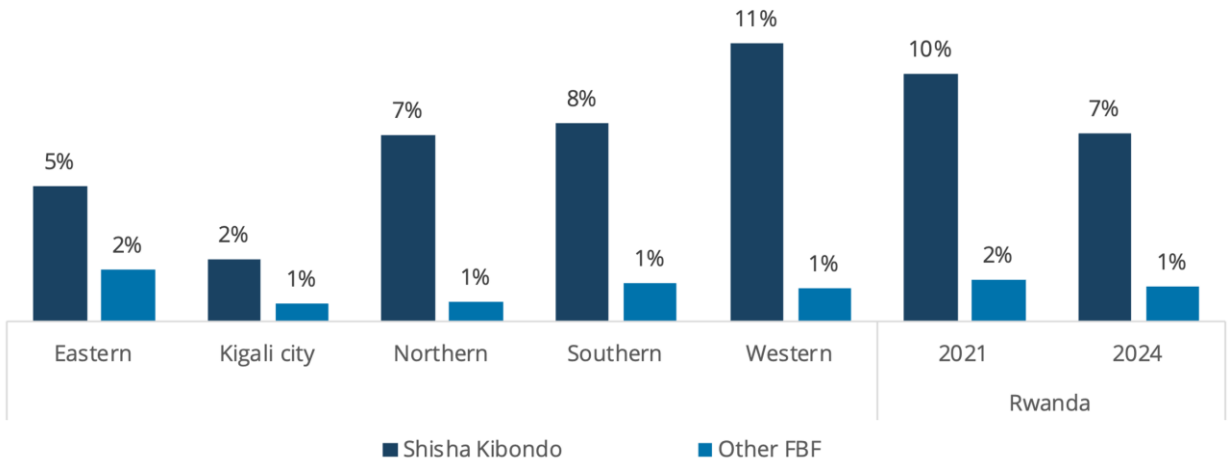
Source: estimates based on 2024 CFSVA data

The use of fortified foods among pregnant women and PBWG in Rwanda shows regional disparities and a decline from 2021 to 2024. Nationally, the percentage of women receiving Shisha Kibondo, a specialized fortified blend for maternal nutrition, decreased from 10 percent in 2021 to 7 percent in 2024 (see Figure 10.17). The use of other fortified blended foods (FBF), such as Nootri-mama, Nootri family, and Sosoma remained low, declining slightly from 2 percent to 1 percent over the same period. These declines may be attributed to the rollout of the new "Imibereho Social Registry System" in early 2024,

which replaced the previous targeting system for social protection programs. The Western Province recorded the highest percentage of women consuming Shisha Kibondo at 11 percent, while Kigali City reported the lowest at 2 percent. The use of Shisha Kibondo is strictly linked to the enrolment in Government programs, which is highest in the Western Province (14 %) and lowest in Kigali City (2 %). At the country level, only 1 percent of women who were not enrolled in programs reported consuming fortified blended flours compared to 57 percent of those enrolled. These figures highlight the importance of government programs in supporting PBWG' nutrition, but also point to a concerning drop in access to fortified foods, which are vital for maternal and child health.

The significant reduction from 2021 levels, particularly in the utilization of other FBFs, highlights the need for renewed focus on enhancing the distribution and accessibility of these nutritional supplements.

Figure 10.17: Proportion of PLW consuming fortified food, by province



Source: estimates based on 2024 CFSVA data

11 Social Protection

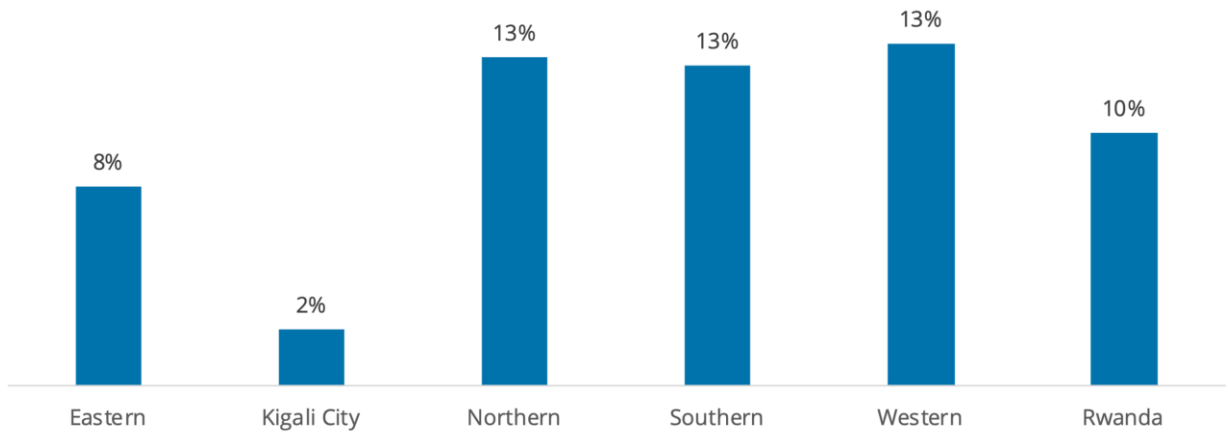
The Ministry of Local Government (MINALOC) oversees the national social protection sector, with the Social Protection Sector Working Group coordinating inter-ministerial and inter-agency collaboration. Key agencies include the Local Administrative Entities Development Agency (LODA), the National Rehabilitation Service (NRS), the National Council for Persons with Disabilities (NCPD), the National Child Development Agency (NCDA), and the Rwanda Demobilization and Reintegration Commission (RDRC), along with development partners and non-governmental organizations (NGOs). At the district level, the Joint Action Development Forum (JADF) coordinates social protection efforts, while sector administration manages implementation and coordination at the sector, cell, and village levels to ensure effective service delivery.

The Vision 2020 Umurenge Programme (VUP), established in 2008 by MINALOC, is Rwanda's main social protection initiative, supporting national targets in the NST2 Vision 2050. Initially part of the Economic Development and Poverty Reduction Strategy (EDPRS), VUP includes three components: Safety Net, Livelihoods Enhancement, and Sensitization. The Safety Net provides direct support to extremely poor and labour-constrained households, including nutrition-sensitive aid for households with pregnant women or infants, as well as public works for employment. Livelihoods Enhancement offers asset transfers, vocational training, and financial services to promote self-sufficiency. Sensitization educates

beneficiaries on health, agriculture, and rights. VUP operates in 30 districts and 416 sectors, targeting households in the lowest Ubudehe categories and providing financial services to categories 1 to 3.

The One Cup of Milk per Child and Girinka (One Cow per Family) programs are key initiatives in Rwanda focused on improving nutrition and economic well-being. The One Cup of Milk per Child program provides daily milk servings to primary school students, improving nutrition, cognitive development, and school performance, while supporting local dairy farmers by creating demand for milk. *The Girinka Program*, launched in 2006, aims to reduce poverty and enhance nutrition in rural areas by providing a cow to eligible households. The cow provides milk for consumption and manure for soil fertility, while surplus milk can be sold for income. The program also fosters community support, as recipients pass the first female calf to another family.

Figure 11.1: Share of households benefitting from financial assistance packages by the government

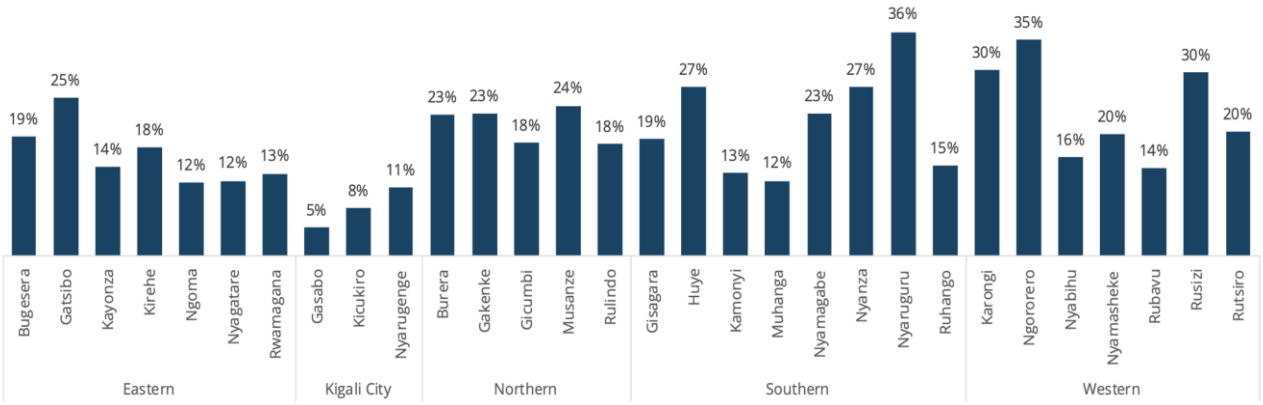


Source: estimates based on 2024 CFSVA data

In 2024, 9.9 percent of households reported receiving government financial assistance, corresponding to approximately 610,000 households – a slight decrease from 14 percent in 2021[95]. The lowest prevalence was in Kigali City (2.2 %), while the highest was in the Western (13.4 %), Northern (12.9 %), and Southern (12.6 %) provinces. Nearly 6 percent of households received support from various VUP schemes, a 40 percent drop from 2021. Around 2 percent benefitted from the *Girinka Program*, and 1 percent from the One Cup of Milk per Child programme.

[95] The decline is attributed to the introduction of the "Imibereho Social Registry System" in February, which replaced the previous "Ubudehe categorization" for targeting beneficiaries of social protection programs. The lower percentage of beneficiary households in 2024 compared to 2021 is likely due to the new system being in its early stages, which impacted its implementation for programs such as VUP, Community-Based Health Insurance, and One Cow per Family.

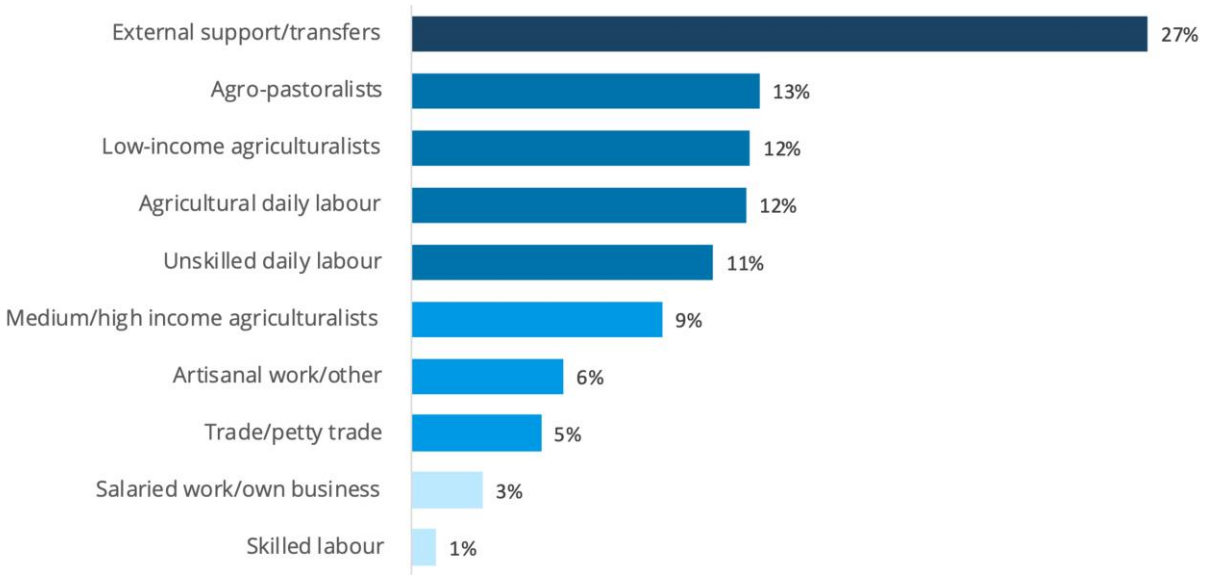
Figure 11.2: Prevalence of households covered through social protection programmes in the last 12 months



Source: estimates based on 2024 CFSVA data

Households engaged in agricultural livelihoods receive more government support, with low-income agriculturalists, agro-pastoralists, and agricultural daily labourers having assistance rates around 12 percent. Unskilled daily labourers also have relatively high coverage (11 %). In contrast, skilled labourers (1 %) and those in salaried work or owning a business (3 %) receive less assistance (see Figure 11.3). This indicates that agriculture-based livelihoods, which are more vulnerable to food insecurity, are more likely to benefit from financial support compared to other groups.

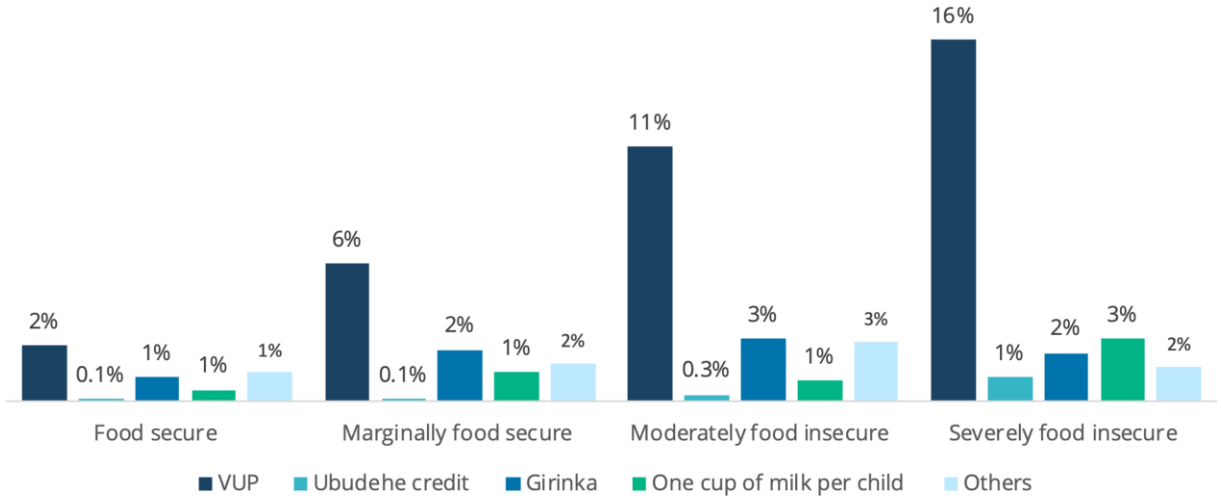
Figure 11.3: Households benefitting from government's financial assistance, by livelihood group



Source: estimates based on 2024 CFSVA data

Government financial assistance is more likely to reach vulnerable households, with assistance increasing from 5 percent in food secure households to 24 percent in severely insecure ones. VUP packages assist 6 percent of households overall, rising to 11 percent among moderately food insecure and 16 percent among severely insecure households. Similarly, Ubudehe credit schemes benefit 0.1 percent of food secure households compared to 1 percent of severely insecure ones (see Figure 11.4).

Figure 11.4: Share of assisted households across food security categories

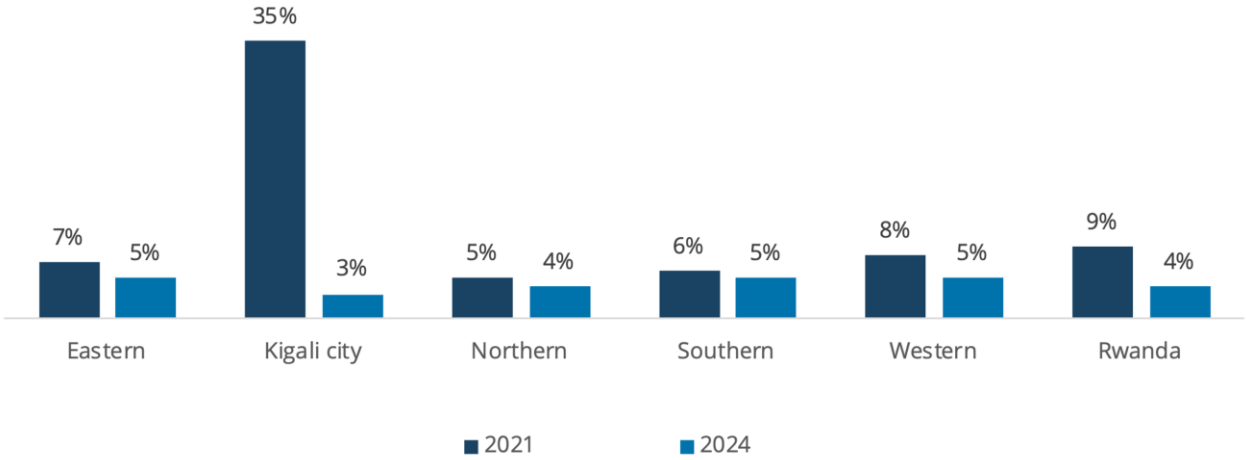


Source: estimates based on 2024 CFSVA data

12 Food Assistance

The CFSVA 2024 data reveal a significant overall decline in proportion of households receiving in-kind food assistance across Rwanda. Nationally, the percentage of households benefiting from in-kind food assistance dropped from 9 percent in 2021 to just 4 percent in 2024 (Figure 12.1). The most pronounced reduction occurred in Kigali City, where assistance plummeted from 35 percent to 3 percent, as COVID-19 related assistance was discontinued. In other provinces, the decrease was less notable. By far, the main type of assistance was free food distributions (59%), followed by food for PBWG (13%) and food for school children (10%).

Figure 12.1: Prevalence of households receiving in-kind food assistance, by province

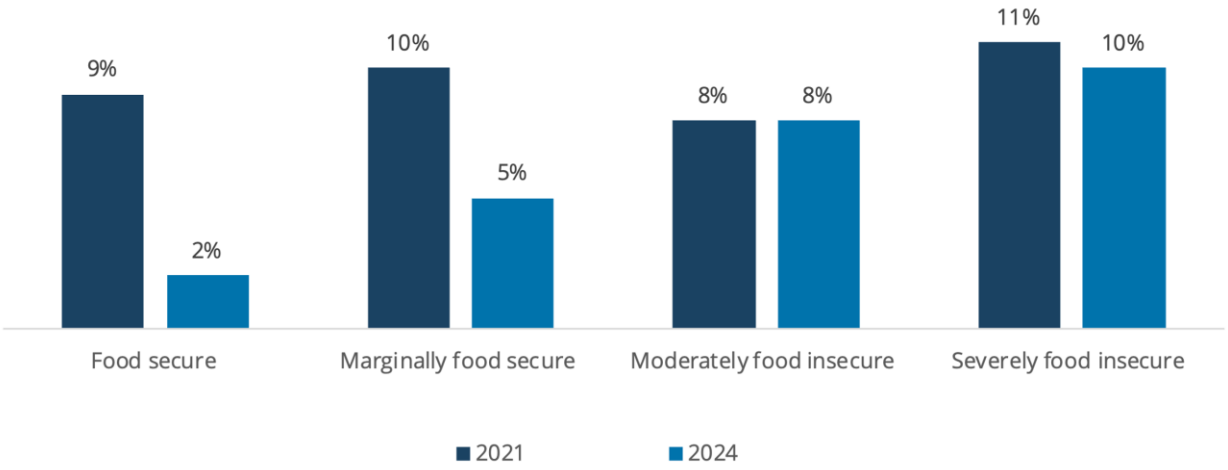


Source: estimates based on 2024 CFSVA data

The decline in assistance from 2021 mainly affected food-secure households, while assistance levels remained stable for moderately and severely food-insecure households. (Figure 12.2). In 2024, 8 percent of moderately food-insecure households received assistance, while severely food-insecure households saw a slight decrease from 11 percent to 10 percent. Assistance coverage increases with food

insecurity severity, from 2 percent in food-secure households to 10 percent in severely food-insecure ones, highlighting the focus on supporting those in greatest need.

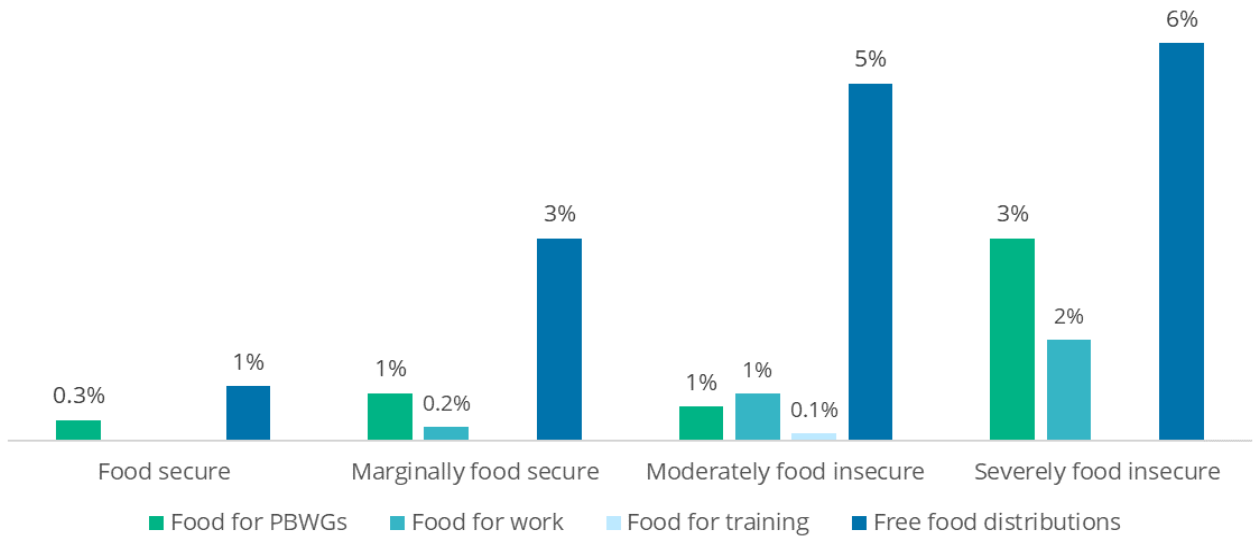
Figure 12.2: Households receiving food assistance in the previous 12 months, by food security status



Source: estimates based on 2024 CFSVA data

The distribution of food assistance across levels of food security reveals assistance programs are correctly targeting the severely insecure households. Free food distributions are relatively uncommon among food-secure households at less than one percent, whereas their prevalence increases significantly to 5 percent among moderately food-insecure and 6 percent among severely food-insecure households (Figure 12.3). Food for PBWG is particularly significant for severely food-insecure households, with 3.0 percent accessing this type of assistance, compared to just 0.3 percent of food-secure households. Food for Work programs also become more relevant as food insecurity worsens, with 1.5 percent of severely food-insecure households participating. This trend highlights that as food insecurity deepens, households increasingly rely on more forms of support, such as food for PBWG and free food distributions.

Figure 12.3: Share of households assisted by specific food programs, by food security status



Source: estimates based on 2024 CFSVA data.

13 Conclusions and Recommendations

The 2024 CFSVA highlights notable improvements in food security. The CFSVA offers a detailed assessment of Rwanda's food security, tracking trends, regional disparities, and underlying causes of food insecurity. Conducted by the MINAGRI, the NISR, and the WFP, the survey covered 9,000 households across 30 districts. Adopting the CARI, the study finds that food-secure households increased from 79 percent in 2021 to 83 percent in 2024. At the same time, severely food-insecure households dropped from 2 percent in 2021 to 1 percent in 2024, while moderately food-insecure households fell from 19 percent to 16 percent.

Food insecurity in Rwanda shows significant regional disparities, with the Western and Southern Provinces facing the highest levels of food insecurity, while Kigali City records the best outcomes. Kigali City has 56 percent of households classified as food secure and nearly no severe food insecurity (0.1 %). In contrast, the Western Province has the highest prevalence of food insecurity, with 26 percent of households affected, including 2 percent classified as severely food insecure. Furthermore, regional disparities have been compounded by divergent trends since 2018. The study finds steady recovery in the Eastern, Northern, and Western Provinces, while the Southern Province experienced a worsening trend. Kigali City, despite improvements since 2021, has yet to return to its pre-pandemic food security levels.

Shocks remain a major driver of food insecurity, with the Southern Province facing the highest exposure in 2024, as 40 percent of households reported being affected by negative events in the past year. This persistent vulnerability to environmental shocks has driven higher reliance on both consumption- and livelihood-based coping strategies, exacerbating asset depletion and hindering recovery. At the national level, approximately 27 percent of households still resort to harmful coping

mechanisms in 2024. Modest improvement is also recorded concerning economic vulnerability, with households spending less than 65 percent of their monthly budget on food rising from 74 percent in 2021 to 78 percent in 2024. These findings highlight the critical role of effective disaster preparedness and resilience-building measures to mitigate the long-term effects of shocks on food security.

Structural disparities significantly influence food insecurity in rural districts, such as Nyamasheke in the Western Province and Nyamagabe in the Southern Province, hosting the highest numbers of food-insecure households. On average, households in rural areas have 75 percent higher odds of being food insecure. Infrastructural issues, such as inadequate electricity supply and insufficient health services, exacerbate food insecurity in these areas. For instance, in Nyamagabe, where 35 percent of households are food insecure, reliance on firewood for cooking (95 % of households) limits dietary diversity and contributes to health challenges. Rural households face higher barriers to accessing markets, healthcare, and diverse food options, amplifying vulnerabilities.

The 2024 CFSVA findings also underscore the significant influence of livelihood groups on food security outcomes as households relying on daily labour are the most vulnerable to food insecurity. Similarly, low-income agriculturalists experience elevated food insecurity, with nearly one-quarter of such households affected. In contrast, households engaged in stable livelihoods, such as salaried work, business ownership, or skilled labour, exhibit much lower food insecurity rates, often below 5 percent. These findings reflect the crucial role of consistent and diversified income sources in ensuring food access and stability. Promoting livelihood diversification and fostering transitions from low-return agricultural activities to more stable, higher-income opportunities will be essential to enhancing food security across vulnerable populations.

Households led by women, illiterate heads, or individuals with disabilities face disproportionately higher risks of food insecurity. Female-headed households are significantly more likely to be food insecure compared to their male-headed counterparts. Similarly, households with illiterate heads experience heightened vulnerabilities, as limited education restricts access to stable and well-paying livelihoods. Smaller household sizes and higher dependency ratios also emerge as significant predictors of food insecurity, with smaller families having fewer working-age members to contribute to income, while higher dependency burdens strain already limited resources. These findings emphasize the need for targeted interventions, such as literacy programs, gender-responsive policies, and social protection measures for households with dependents or members living with disabilities, to mitigate these demographic challenges and enhance food security.

To further enhance food security in Rwanda, the government and development partners should focus on consolidating the positive trends while addressing persistent disparities between Kigali City and other provinces. Challenges persist, particularly in rural areas and provinces such as the Western and Southern Provinces, which continue to experience higher rates of food insecurity. To build on these positive trends and align with national priorities outlined in Vision 2050, the NST2, and PSTA5, the following recommendations aim to address structural and immediate barriers to food security, while enhancing resilience and reducing regional disparities.

13.1 Strengthen agricultural productivity and resilience

Strengthening agricultural productivity and resilience is essential to reduce dependence on rain-fed agriculture and mitigate the effects of climatic shocks. While the agricultural sector remains critical to Rwanda's food security, food insecurity remains concentrated in rural areas and specific districts, largely in the Western and Southern Provinces, underscoring the need for targeted interventions to address disparities.

Building on the PSTA5's focus on modern, climate-resilient agriculture, expanding irrigation and promoting climate-smart agriculture are essential to mitigate Rwanda's reliance on rain-fed farming, particularly in the Southern and Eastern Provinces. With only 10 percent of cropland currently irrigated, scaling up irrigation infrastructure aligns with Vision 2050's objective of improving agricultural productivity and climate resilience. Promoting the use of improved seeds and fertilizers, as prioritized in PSTA5, can further enhance yields, particularly for staple crops such as maize and beans, which showed significant production growth in 2024. To address the environmental vulnerabilities highlighted in the CFSVA, particularly in the Southern Province, implementing measures under the revised Environment and Climate Change Policy will be critical. These include community-based adaptation programs, sustainable land management, and reforestation initiatives that also align with Rwanda's commitments under the NDCs.

1.1 **Expand irrigation and climate-smart agriculture. S**caling up irrigation infrastructure and promoting climate-resilient farming practices is critical to reducing reliance on rain-fed agriculture, especially in the Eastern and Southern Provinces.

1.2 **Increase access to affordable inputs.** Subsidize fertilizers, improved seeds, and other agricultural inputs to enhance productivity, particularly for smallholder farmers in regions with high food insecurity, including the Western and Southern Provinces.

1.3 **Promote crop diversification.** Encourage diversification beyond staples such as cassava and maize to include nutrient-rich crops, such as vegetables, fruits, and legumes, to improve dietary diversity and market opportunities.

1.4 **Develop agro-processing and storage facilities.** Establish more storage and processing centres to reduce post-harvest losses and link farmers to value chains, boosting incomes and food availability.

13.2 Enhance rural infrastructure and services

The overlapping distribution of food insecurity and multidimension deprivation underscores that addressing regional disparities in infrastructure and services is a key priority. Food insecurity in Rwanda varies significantly across regions, with the Western and Southern Provinces recording the highest levels of food insecurity, while Kigali City consistently showing better outcomes**.** Food security outcomes are in line with previous findings on non-monetary poverty, showcasing the importance of macro and *meso* factors, such as access to social services and infrastructure. The significant rural-urban divide in food security underscores the need to prioritize investments in rural infrastructure, as emphasized in NST2. Improved road networks, electricity, and water systems can boost market access, reduce post-harvest losses, and enable agricultural diversification, particularly in the Western and Southern Provinces, which have the highest food insecurity rates. These efforts support Vision 2050's urbanization and infrastructure goals while directly addressing the barriers identified in the CFSVA.

To complement infrastructure investments, improving access to health and education services in rural areas, as outlined in NST2, can reduce vulnerabilities. Addressing public health challenges, such as malaria in the Eastern Province, and expanding nutrition-sensitive programs, such as fortified food distributions for PBWG, align with the National Family and Nutrition Policy's focus on improving early childhood nutrition and reducing stunting.

1.5 **Improve rural infrastructure.** Invest in roads, electricity, and water supply in food-insecure regions, particularly in the Western and Southern Provinces, to improve market access and reduce post-harvest losses.

1.6 **Expand access to health and education.** Address disparities in health and education infrastructures in rural areas to reduce vulnerability among food-insecure households, particularly by combating malaria and improving child nutrition in the Eastern Province.

13.3 Scaling targeted social and nutrition-sensitive programs

Expanding targeted social protection programs is critical for vulnerable groups. Key factors influencing food insecurity include livelihood type, household demographics, and rural-urban differences. Larger households with higher dependency ratios and households living with a disability are more likely to experience food insecurity. Households led by women and those with illiterate heads also face heightened vulnerabilities, reflecting the challenges of limited educational attainment and gender disparities. Households with inactive heads, such as retirees, are less vulnerable to food insecurity, likely due to access to pensions and social protection programs.

To build on the progress in reducing food insecurity and in alignment with the National Family and Nutrition Policy and NST2's commitment to reducing stunting and malnutrition, Rwanda must continue investing in nutrition-sensitive interventions that target vulnerable groups, particularly women and children. Integrating these initiatives into DPEM ensures localized implementation and contributes to achieving SDG2 targets. However, assistance should be more carefully concentrated in districts with the highest prevalence of food insecure and deprived households.

1.7 **Scale up targeted social assistance.** Expand social assistance for the most vulnerable groups, including agricultural labourers, unskilled workers, and households with disabled members, to reduce economic vulnerability and increase their resilience against shocks.

1.8 **Support female-headed households and households with illiterate heads of households.** Introduce tailored programs, such as literacy training to empower vulnerable groups that are disproportionately affected by food insecurity. This could be done through vocational programs for income-generation, community-based literacy initiatives and social support networks.

1.9 **Enhance school feeding programs.** Expand the reach and nutritional quality of school feeding initiatives to ensure consistent access to nutritious meals for children, with a particular focus on food-insecure areas.

1.10 **Expand nutrition-sensitive interventions.** Scale up programs targeting women and children, such as Shisha Kibondo and fortified food distribution, particularly in provinces with high malnutrition rates.

13.4 Promote livelihood diversification and income stability

Promoting livelihood diversification is crucial to reduce reliance on low-return daily labour. The CFSVA findings highlight the vulnerability of households relying on precarious livelihoods, such as agricultural daily labourers and unskilled workers. Promoting off-farm employment opportunities in sectors such as construction, manufacturing, and services can reduce dependence on low-return agricultural labour. Expanding access to microfinance and cooperative models will empower smallholder farmers and agro-pastoralists to invest in productive assets and diversify their livelihoods. These efforts align with NST2's focus on job creation and economic transformation, as well as PSTA5's vision of integrating smallholders into commercial value chains.

1.11 **Create off-farm employment opportunities.** Design initiatives to create employment opportunities in non-agricultural sectors such as construction, manufacturing, and services, especially in rural areas, to alleviate reliance on low-return agricultural labour. This effort should prioritize investments by the government and foster collaboration with the private sector to ensure sustainable growth and development in these industries.

1.12 **Facilitate access to financial services.** Expand microfinance and cooperative models to support small businesses and agro-pastoralists in food-insecure regions, enabling investment in productive assets and livelihoods.

1.13 **Promote local food systems.** Support farm-to-market initiatives to connect local producers to urban markets, fostering equitable access to nutritious food and creating market opportunities for rural farmers.

13.5 Strengthen Early Warning Systems and disaster preparedness

Strengthening early warning systems and disaster preparedness will mitigate the impact of shocks, which remain a major driver of food insecurity. Regional trends reveal that while the Eastern, Northern, and Western Provinces have fully recovered from 2021 setbacks, the Southern Province experienced persistent levels of food insecurity. The persistent exposure of rural households to climatic shocks highlights the need to enhance early warning systems and disaster preparedness. Strengthening localized weather monitoring and community-based disaster mitigation aligns with the Environment and Climate Change Policy's focus on adaptation and resilience-building. These measures also address NST2's cross-cutting priority of building resilience across sectors and safeguarding livelihoods against shocks.

1.14 **Enhance early warning systems.** Develop localized systems to monitor weather patterns and market conditions to help farmers and communities prepare for shocks such as droughts, floods, and price hikes.

1.15 **Build community resilience to shocks.** Increase investment in disaster preparedness and mitigation measures, particularly in regions prone to climatic shocks like the Southern Province, to protect livelihoods and prevent food insecurity spikes.

13.6 Address regional disparities

Bridging regional disparities is critical to achieving equitable food security outcomes. Targeted interventions in underperforming districts such as Nyamasheke, Nyamagabe, and Rutsiro can maximize the impact of social protection and agricultural programs. Investments in infrastructure, healthcare, and education in these districts will not only reduce food insecurity but also foster balanced development, narrowing the gap between Kigali City and other provinces. These recommendations support Vision 2050's emphasis on equity and sustainability while addressing the structural drivers of food insecurity.

1.16 **Focus on underperforming districts.** Concentrate efforts in districts like Nyamasheke, Nyamagabe, and Rutsiro, which host the highest numbers of food-insecure households, to maximize the impact of interventions.

1.17 **Foster balanced development.** Implement policies that reduce regional inequalities by prioritizing infrastructure, education, and healthcare in underdeveloped areas, thereby narrowing the gap between Kigali City and other provinces.

By implementing these strategic actions, Rwanda can sustain its progress in reducing food insecurity, enhance resilience to shocks, and ensure that all regions and populations benefit equitably from the country's development agenda. These recommendations offer a roadmap for aligning food security interventions with national priorities, contributing to Rwanda's vision of inclusive and sustainable transformation by 2050.