



Food and Agriculture
Organization of the
United Nations

Outlook on food shocks to the Kigali City Region Food Systems since 2018

Factsheet



Introduction

The Kigali City Region (KCR) is made up of the three city districts and six surrounding districts which supply the most food to the city. The KCR and its growing population are increasingly directly or indirectly affected by climate shocks and stresses and by the recent COVID-19 pandemic risks.

The KCR actors dealt with the challenges through the implementation of government programs summarized in Table 3 to help recover from the shocks caused by COVID-19. This study¹ sought to unravel the existing resilience capacities, the gaps, and provide recommendations moving forward.

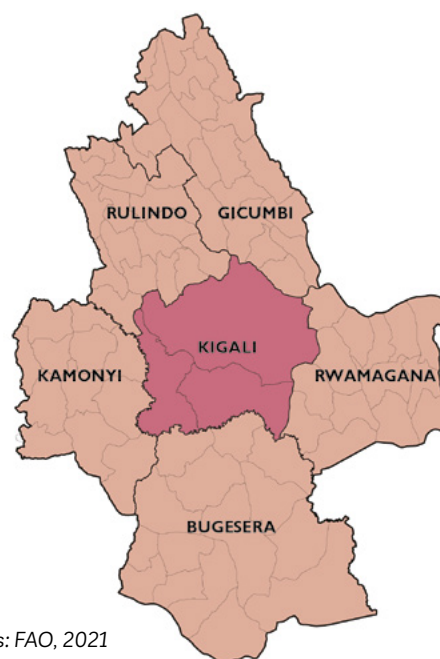
Description of the Kigali City Region Food Systems (KCRFS)

Kigali City is the capital city and the largest city in Rwanda. It is composed of three districts: Nyarugenge, Gasabo and Kicukiro. It is characterized by a mixture of high mountains with expanding settlements even in risk-prone areas like steep slopes and floodplains. Its total population was estimated at 1 132 686 (2015), with an urban growth rate of 3 percent and more than 50 percent of the population is under 25 years of age².

Main value chains in Kigali are based on staple foods like maize, bananas, sweet potatoes, cassava, Irish potatoes, rice, beans, meat, milk, vegetables, and fruit.

Main actors are suppliers of agro inputs, producers (mainly grouped in cooperatives), wholesalers, retailers, processors, supermarkets and consumers. The main markets in Kigali are Nyabugogo (Mutangana), Kimironko, Kicukiro (Ziniya), Kimisagara and Mulindi. Though there are few agricultural activities in town, Kigali City depends on supply from rural areas of surrounding districts: Kamonyi (for cassava), Rulindo (for sweet potatoes, beans, vegetables and fruit), Gicumbi (for milk), Rwamagana and Bugesera (for bananas, cassava and vegetables) and Musanze (for Irish potatoes).

Figure 1 CRFS Admin Boundaries



Sources: FAO, 2021

Snapshot of shocks and stresses which affected the Kigali City Region Food Systems

Table 1 summarizes key shocks and key impacts related to those shocks; whereas Table 2 indicates the shocks' period, key impacts (positive or negative), who

was affected and the level of impact, interventions to address the impacts, key actors and expected way forward.

1 FAO and EPRN interviewed 15 key actors in food systems and organized two focus group discussions on lessons learnt from the impacts of COVID-19, climate change and other shocks and stresses on urban/city region food systems. The collected information was complemented by a desk review.

2 FAO (2020), Assessing risk in times of climate change and COVID-19

Table 1: Analysis of shocks and impacts

Shock Impact	COVID-19	Plant pests and animal diseases	Floods and droughts	Geopolitics shocks	Russia/ Ukraine war
Income loss				mentos	
Home food delivery					
Job loss					
Restrictions on cross border trade					
Change in consumption habit					
Markets closure					
Closure of schools					
Drop in remittances					
E-commerce promoted					
New foodhub emerged					
Low yield					
Increased food prices					
Food loss					
Poor quality food					
High production costs					
Shortage of raw materials needed by food processing industries					
Community settlements damaged					
Damaged infrastructure					
Fuel price increase					
Limited fertilizers and commodities like wheat on market					
Reduce in fiscal revenues					

Impacts of a specific

Table 2: Details on each identified shock

Shock	Period	Impact (+ or -)	Who was affected and level of impact	Intervention	Actors	Expected way forward
COVID-19	2020	<ul style="list-style-type: none"> • Income loss; • Home food delivery; • Job loss; • Restrictions on cross border trade; • Change in consumption habit; • Markets closure; • Closure of schools; • Drop in remittances; • E-commerce promoted; • New foodhub emerged; • Low yield; • Increased food prices; and • Improved Home food delivery. 	<ul style="list-style-type: none"> • Casual workers (high); • Producers/processors (high); • Big traders (importers/exporters) (high); • Small traders/retailers (medium); and • Farmers (low). 	<ul style="list-style-type: none"> • Economic Recovery Fund; • Food relief program; • Temporary port at the border; • Road clearance; • Cash transfers; and • Public information. 	<ul style="list-style-type: none"> • GoR • CSOs • PSF • Police • WFP • Media Houses 	COVID-19 is ending and the country is entering recovery period.
Plant pests and animal diseases	Mostly in 2018 and 2019	<ul style="list-style-type: none"> • Low yield; • Food losses; and • Poor quality food. 	<ul style="list-style-type: none"> • Farmers (medium); • Traders (medium); and • Consumers (household level) (medium). 	<ul style="list-style-type: none"> • Zero grazing strategy; • Crop & livestock insurance; • Smart Nkunganire Program; • Extension services (training of farmers); and • Strengthened research on resistant crops. 	<ul style="list-style-type: none"> • GoR; and • Insurance companies 	Plant pests and animal diseases are expected to continue.
Floods and droughts	2020	<ul style="list-style-type: none"> • Low yield; • Shortage of raw materials needed by food processing industries; • Community settlements damaged; and • Damaged infrastructure. 	<ul style="list-style-type: none"> • Farmers (high); • Traders (medium); and • Communities/public (medium). 	<ul style="list-style-type: none"> • Relocation of citizens from high risks zones; and • Community service (Umuganda) 	<ul style="list-style-type: none"> • GoR; and • Communities. 	Due to current trends of climate change, the floods and droughts are expected to continue in the future. The community must be more trained on how to adapt and mitigate climate change.
Geopolitics shocks	2015, 2019, 2020	<ul style="list-style-type: none"> • Drop in remittances; and • High production costs 	<ul style="list-style-type: none"> • Traders (medium); and • Consumers (household level) (medium). 	<ul style="list-style-type: none"> • Made in Rwanda Policy; and • Common border posts. 	<ul style="list-style-type: none"> • GoR; and • PSF. 	Currently, the country opened borders with neighbouring countries, but persistent conflict in the eastern DRC may continue soon affecting free movement of foods.
Russia/Ukraine war	2021, 2022	<ul style="list-style-type: none"> • High production costs; • Fuel price increase; • Limited fertilizers and commodities like wheat on market; and • Reduce in fiscal revenues 	<ul style="list-style-type: none"> • Transporters (high); • Consumers (household level) (high); • Processors (medium); and • Government (medium). 	<ul style="list-style-type: none"> • Tax incentives to fuel importers. 	<ul style="list-style-type: none"> • GoR. 	This shock is obviously to continue soon and the country has to find alternative sources of commodities imported from Russia and Ukraine.

Analysis of the shocks

Table 1 and **Table 2** summarize the key shocks which affected the Kigali CRFS in the last five years. They are classified in five categories based on their nature and level of magnitude.

A first category of shocks is those related to **climate change**. They were of high intensity on all actors in food systems and in terms of the impacts they had and still have on food production and farming, distribution and retail. Just like everywhere in the world, Rwanda and the Kigali CRFS has been affected by climate change characterized mainly by floods, droughts and hill slides. These shocks were expected, are recurring and will likely continue in the coming years. Heavy rain caused flooding in Nyabugogo and Nyabarongo between Ruyenzi and Kigali in 2020. This resulted in serious disruptions to the transportation system where the road to the southern province was affected most causing challenges to the food supply to Kigali City and some food loss in the commodity stores in Nyabugogo. Regarding drought, the most affected areas were the Bugesera district and Kayonza, especially during 2019 to 2021 in the months of June, July and August. Some crops like maize and beans were affected in farms mostly on hillsides where irrigation was not possible or difficult. Floods and droughts also resulted in income loss. One interviewee mentioned that in 2020, the price for cabbage changed from 80Fr /kg to 20 Fr /kg in Gakenke District. Cabbages from Gakenke are usually sold to Nyabugogo Kigali Market.

A second category of shocks is those related to the **COVID-19 pandemic**. This crisis is of high intensity as it drastically impacted food production and the supply chain system from the field producers to the consumer (food production, processing, distribution, and demand). This shock resulted in situations which had not occurred before like business closures, social distancing and lockdowns which highly affected the making of food stuffs.

A third category is related to **international politics** whereby Rwanda is not directly involved but has been affected. The Ukraine-Russian war has made the level of inflation very high. This risk might be temporary, but it has been of high intensity by limiting access to necessities like wheat flour

and fertilizers for agricultural production. Due to the Ukraine-Russian war, the price of gasoline in KCR increased from 908 Rwf/ L before COVID-19 in March 2020 to 1460 Rwf/L in June 2022 (an increase of more than 60 percent in less than two years); and diesel increased from 883 Rwf/L before March 2020 to 1503 Rwf/L in June 2022. This affected the KCRFS mostly through the increase of food prices due to the increase in transport costs.

A fourth category of shock is related to **plant pests and animal diseases**. Farmers have experienced low yield especially due to plant pests (banana wilt) and animal diseases that occurred in 2018 and 2019 particularly in the Eastern province (most affected are cows and bananas). The most mentioned plant pests are falling armyworm in maize, bronze bug and red gum lerp psyllid in eucalyptus plantations, whereas for animal diseases, African swine fever and foot-and-mouth disease have been reported. This is of medium intensity because it did not affect all the actors in the Kigali CRFS. This shock resulted in low yield, food loss and reduced food quality (refer to Table 2 above) and will likely continue in the future due to trade in domestic animals whereby imported ones may transmit more diseases from abroad.

A last category is attributed to **geopolitical shocks** involving Rwanda. Border closure with neighbouring countries has happened more often over the past few years. It has affected the free movement of food and people and might happen again due to persistent regional conflicts. During an interview with a representative of the consumer association in Rwanda (ADECOR) and members of the KOAKIM farmers' cooperative; they indicated that they had experienced a sharp rise in food prices in the recent months which was exacerbated by the closure of borders of neighbouring countries such as Burundi (2015), and Uganda (February 2019). These border closures were due to reduced quantities of available foods on the market, and then Tanzania and Democratic Republic Congo closed their borders in early 2020 following the outbreak of COVID-19. This led to shortages and limited access to food commodities particularly fruit and some processed foodstuff like maize flour and milk.

Figure 2 Flood and hill slides in Rulindo district



Main interventions against shocks

In general, the identified interventions against the shocks have been initiated by the government. The process starts with consultation from village level (umudugudu) to national level which makes the process highly inclusive. Table 3 summarizes

key identified interventions against shocks, main period in terms of years, linked shocks, whether the intervention was there before the shock, impacts and potential areas of improvement going forward.

Table 3: Interventions against shocks

Intervention	Time	Linked shock	Did it exist before the shock?	Impacts	Area of improvement
Economic Recovery Fund	2021	COVID-19	No	The fund was designed to support the recovery of businesses hardly hit by COVID-19 so that they could survive, resume operations, and safeguard employment thereby cushioning the economic effects of the pandemic. The government pumped FRW 105 billion into the first phase of the Economic Recovery Fund to support businesses. A large portion of this (FRW 73 billion) was allocated to loan refinancing in 151 hotels, 69 learning institutions and 55 public transport operators. FRW 11.5 billion was allotted as working capital which supported 157 businesses in different sectors. FRW 6.7 billion supported existing micro businesses through 344 SACCO's. Conditions to access the fund included having been in business before COVID-19 and being officially registered with a valid tax identification number.	Participants in the focus group discussion indicated that the main flaw with this measure is the fact that the informal sector, like street vendors, are not covered by this support because they are not registered as formal traders, and this makes it difficult for them to provide the necessary documents.

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Intervention	Time	Linked shock	Did it exist before the shock?	Impacts	Area of improvement
Food Relief Programme	July 2021	COVID-19	Yes	The government of Rwanda rolled out a food relief program in July 2021 distributing rice, maize, and beans to 211 000 vulnerable households in areas under lockdown. Food was sourced from the National Strategic Grain Reserve managed by the Ministry of Agriculture and Animal Resources. Local village leaders have for instance been activated to compile lists of vulnerable people eligible to benefit from the food assistance programme.	
Public work every last Saturday of the month (Umuganda)	1990s	Droughts and floods.	Yes	In the KCR, like in the whole country, the last Saturday of the month is reserved for community service. This intervention helps to mitigate the impacts of drought and floods. Known as Umuganda, this home-grown initiative has provided the opportunity for people to engage in cleaning water drainage, planting trees as well as protecting the environment in their local area. Respondents explained that cleaning and maintaining infrastructure through Umuganda boosted transportations and access to food in different corners of the City of Kigali.	
Tax incentives for fuel importers	2021	COVID-19, Russia-Ukraine war	No	To avoid extreme price increase for fuel products, the government provides tax incentives to fuel importers to keep prices more reasonable.	It was observed that these incentives are provided to big traders, but other fuel users like motorbike riders increased the transport price to passengers in proportion to the rise of fuel prices as they do not get any incentives to close the gap.
Zero-grazing strategy	2018	Plant pests and animal diseases	No	The zero-grazing system is implemented in Rulindo and Nyagatare and it is characterized by keeping animals in a shed and feeding them by cutting and carrying forage and crop residues to them. The strategy helped to protect land from soil erosion and maximize production of organic manure which is an important source of input for increasing crops. The main challenge to this strategy is the limited size of the land owned by smallholders which sometimes affects crop farming and the amount of fodder produced, meaning that there is not sufficient to feed the animals they keep. Some participants in focus group discussions argued that leaving cows to be fed on open space would be easier and less costly.	
Agriculture insurance	2018	Droughts and floods	No	To protect and compensate farmers in case their produce is damaged by natural hazards, the government established an agriculture insurance scheme. An interviewee from Radiant Insurance Company stipulated they insure rice, chili, French beans, maize and Irish potatoes and livestock insurance covers dairy cows, pigs, and chickens with government subsidies covering 40 percent.	Modalities to ensure all crops and livestock should be envisaged.

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Intervention	Time	Linked shock	Did it exist before the shock?	Impacts	Area of improvement
Smart Nkunganire Program		Droughts and floods and Plant pests and animal diseases	No	The Smart Nkunganire Program is an innovative tool to link and empower all stakeholders involved in the Subsidy Program for fertilizers, improved seeds, pesticides, mechanization and small-scale irrigation technology (SSIT) as well as other items. Interviewed farmers in the Kamonyi district, said Smart Nkunganire enables them to receive messages from experts on best practices, as well as warnings or general notifications from different stakeholders. The platform is accessible to farmers and other stakeholders via a mobile app, Unstructured Supplementary Standard Data (USSD) short code, and web-based app. Key actors in this initiative are the Rwanda Agriculture Board, Bank of Kigali, Private Sector Federation, MTN Rwanda, private agro-dealers and farmers.	Limited access to connectivity in some remote areas, and limited capacities of farmers to access devices like mobile phones.
Made in Rwanda policy	2015	International conflicts and border closures	No	The government initiated the Made in Rwanda policy for imports substitutions and export promotion. This is a holistic roadmap aimed at increasing competitiveness by enhancing Rwanda's domestic market through value chain development. It resulted from the Made in Rwanda Campaign that started in 2015, as a core component of the Domestic Market Recapturing Strategy (DMRS). During interviews, identified challenges of this policy include the fact that Rwanda is landlocked which makes transport costs high. Also, there is a lack of packaging materials and inconsistent application of tax incentives and import duties.	The cost of production is still high (utilities' costs) which makes products expensive compared to imported ones. The Government of Rwanda should work on reducing these costs to make locally produced products competitive on markets.

Key attributes of the above-mentioned initiatives (Table 3) are collaboration and connectedness. This is done through citizens meetings, community work sessions (Umuganda) and performance contracts. There are fora and structures that facilitate the coordination. These are for instance the districts Joint

Action Development Forums (JADF) which are good information sharing platforms. In addition, there are some national level fora or structures like National Agriculture Sector Working Group that coordinate those policies and work with the local government on implementation



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This factsheet is developed by Seth KWIZERA, under the guidance from Thierry Giordano (CIRAD) and support from FAO CRFS team (Guido Santini, Carmen ZuletaFerrari, Roman Malec, Isabella Trapani, Jia Ni), as well as the Municipality of Kigali and FAO-Rwanda Office.