

# URBAN-RURAL LINKAGES AND GLOBAL PANDEMIC DISRUPTIONS IN AFRICA

Impacts on Mobility, Spatial Interaction and Food Systems in Cameroon, Kenya, Niger State (Nigeria), Senegal and Zimbabwe



## SUMMARY RESEARCH REPORT

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# ABSTRACT

Although most development literature often portrayed urban and rural areas as separate geographic entities, the two territories are, in reality, two ends of a continuum of human settlements. Although cities in sub-Saharan Africa are urbanizing at a very high rate, most urban dwellers live in a dual system of multi-spatial households, one in the city and another in the rural home. As such, urban-rural linkages have always been an important part of urbanization processes in sub-Saharan Africa. However, as urbanization increases in the region, boundaries between urban and rural areas are increasingly becoming blurred, while interdependencies and interconnections between the two regions are becoming even greater. The changing physical, social, economic and environmental interconnection between urban and rural areas is increasingly attracting renewed attention in research, territorial planning and policy agenda for

national, regional and local governments in sub-Saharan Africa. Sustainable Development Goal 11 seeks to make cities and human settlements inclusive, safe, resilient and sustainable with Target 11.a seeking to support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning. Urban-rural linkages occurs within reciprocal and repetitive flow of people, money, food, goods and environmental services between urban and rural areas. Based on results from a broader survey, this report presents some emerging perspectives of urban-rural linkages in Cameroon, Kenya, Nigeria, Senegal and Zimbabwe in terms of flows of people, money and food between the two territories. In addition, it also highlights the impact of Covid-19 lockdown measures on these spatial linkages.



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## 1. INTRODUCTION

### 1.1 Background and Context

Urban-rural linkages have always been an important part of urbanization processes in sub-Saharan Africa. There is no doubt that many urban households maintain strong links with their rural homes and relatives. Furthermore, urban-rural linkages are important in enhancing territorial development, food and income sources, livelihood sources and strategies, poverty reduction and sustainable development. Despite the fact that the boundaries between urban and rural areas are blurred, the two areas are inter-connected through physical, social, economic and environmental linkages that are continuously changing in time and space. As such, the physical, social, economic and environmental interconnection between urban and rural areas is increasingly attracting renewed attention in research, territorial planning and policy agenda for national, regional and local governments in sub-Saharan Africa. The spatial and functional linkages between urban and rural areas include flows of people, of food, of money and other social transactions between the two territories.

However, during the coronavirus (Covid-19) pandemic, these spatial and functional linkages between urban and rural areas were greatly affected due to lockdown measures that were enforced to control the spread of Covid-19. Lockdown measures led to the disruption of transportation and flow of food, people, goods, services, resources and capital between and within geographical territories. In particular, Covid-19 exposed the interconnected vulnerabilities between food production, distribution and consumption within the context of city-region food systems. National and local food supply chains between rural and urban areas were disrupted due to mobility restrictions. This is because cities and urban centres largely depend on food supplies from their surrounding rural areas. Specifically, most urban food retailers and household-level consumers could not meet their fresh food demands from the rural food-producing areas. As such, it became evident that urban-rural linkages must be considered more carefully in the short, intermediate and long-term responses to future global pandemics.

*Mother with baby farming in the highlands of Kenya © Annie Spratt*

This report highlights selected aspects of urban-rural linkages in Cameroon, Kenya, Nigeria, Senegal and Zimbabwe in terms of flows of people, money and food between the two territories. In addition, it also highlights the impact of Covid-19 lockdown measures on these spatial linkages. This is based on the fact that urban-rural linkages are largely dependent on spatial mobility between urban and rural areas, which was disrupted by the lockdown measures. The highlights are extracted from results of a wider study on “The impact of Covid-19 on the flow and transportation of food, people and goods in the urban-rural nexus in Africa: A study of Cameroon, Kenya, Nigeria, Senegal and Zimbabwe”.

The study is aligned to the general thematic areas of the UN-Habitat’s Urban-Rural Linkages Programme, including:

- » urban and territorial planning;
- » strengthening small and intermediate towns;
- » spatial flows of people, products, services and information;
- » fostering food systems;
- » reducing environmental impacts in urban-rural convergences;
- » developing legislation and governance structures;
- » promoting inclusive financial investments and transportation between urban and rural areas; and
- » fostering partnerships.

Many development practitioners have, until recently, viewed urban and rural areas as two mutually exclusive territories. However, this does not reflect the realities of the spatial and sectoral linkages between urban and rural areas, including multi-spatial livelihoods, which have both urban and rural components. As such, interactions between urban and rural areas play an important role in the processes of urban and rural transformation and sustainable development. It is therefore essential that spatial development policies and programmes reflect the “urban” part of rural development and the “rural” part of urban development. In other words, sustainable urban development strategies need to consider urban-rural linkages and context. This will enhance more inclusive and resilient cities and human settlements, especially in sub-Saharan Africa.

## 1.2 The Study Areas and Methodology

The study areas in Cameroon, Kenya, Nigeria (Niger State), Senegal and Zimbabwe were purposively selected to represent a transportation corridor with spatial and functional urban-rural linkages between a city and a rural area. Specifically, the transport corridors were between:

Using a standardized questionnaire and simple random sampling procedure, the study collected relevant information from a total of 184 rural smallholder farming households, 200 rural food retailers, 157 urban food retailers, 218 urban informal food vendors, and 221 urban households (Table 1).

1. Yaoundé city and Akono agricultural production rural area in Cameroon, along Yaoundé-Ngoumou-Akono road;
2. Nairobi city and Magumu and Kinale rural areas in Kenya, along the Nairobi-Naivasha-Nakuru Highway;
3. Minna city and Gwada and Beji agrarian rural areas in Nigeria's Niger State;
4. Dakar city and Lompoul-Potou rural area in Senegal, along Dakar-Saint Louis Highway; and
5. Harare city and Mutoko and Murewa rural market-gardening and grain cultivation districts in Zimbabwe, Harare-Nyamapanda Highway.

In addition, purposive sampling was used to secure key informant interviews from food transporters, market officials, supermarket officials, public transport operators and government officials.

Quantitative data emanating from the standardized questionnaires was subjected to frequency distribution analysis and presented in tables and graphs, while the qualitative data was subjected to content analysis.

**Table 1: Target Populations and Sample Sizes by Country**

TARGET POPULATION	CAMEROON	KENYA	NIGERIA (NIGER STATE)	SENEGAL	ZIMBABWE
Rural smallholder farmers	30	35	59	30	30
Rural food retailers	30	36	73	31	30
Urban food retailers	30	37	30	30	30
Urban informal food vendors	90	36	32	30	30
Urban households	90	39	32	30	30

## 2. SOCIAL INTERACTIONS BETWEEN URBAN AND RURAL HOUSEHOLDS

### 2.1 Visits Between Urban Households and Rural-Based Family

Social interactions or reciprocity between urban and rural areas can be determined within the context of regular visits that occur between urban-based and rural-based family members.

Essentially, these visits are meant to maintain and foster kinship and family ties. Urban households in Yaoundé, Nairobi, Minna, Dakar and Harare are composed of both migrants from the rural areas and those born in the respective cities (Figure 1).

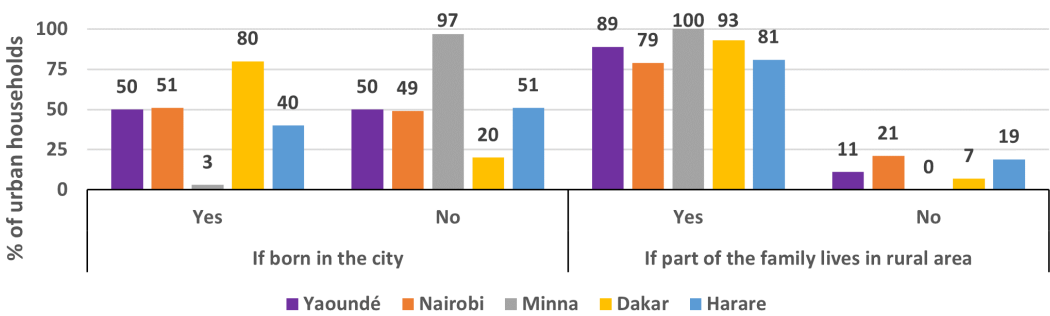


Figure 1: Urban Households Migration History

Majority of the respondents in Dakar were born in the city, while those in Minna and Harare were migrants to the city. In fact, Minna has the highest proportion (97%) of migrants to the city. Yaoundé and Nairobi had an equal share of respondents who were migrants and those born in the city. Those who migrated to the city from other areas did so for various reasons such as education opportunities, employment and business opportunities, marriage and

family ties. In addition, the large majority of the urban households in all the cities have part of family members living in the rural home or area.

Urban households in Yaoundé, Nairobi, Minna, Dakar and Harare maintain closer ties with their rural homes and rural family members in terms of reciprocal visits (Figure 2).

Majority of the urban households in Yaoundé (49%), Nairobi (61%), Minna (72%), Dakar (37%) and Harare (53%) visit their rural homes yearly on a regular basis. Likewise, most of the households in Yaoundé (38%), Nairobi (42%), Minna (72%) and Harare (57%) are regularly

visited by their rural family members in a year, except in Dakar, where such rural-to-urban visits tend to be rare in frequency. This implies that urban households maintain close ties with their rural-based family.

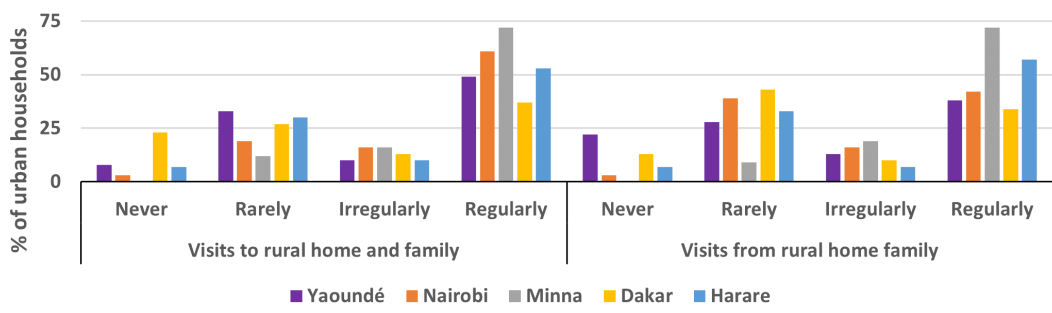


Figure 2: Frequency of Visits Between Urban Households and Rural-Based Family

## 2.2 Visits Between Smallholder Farming Households and City-Based Family

The rural smallholder farming households in Cameroon, Kenya, Nigeria (Niger State), Senegal and Zimbabwe were also asked about ties with their city-based family members

living in Yaoundé, Nairobi, Minna, Dakar and Harare, respectively. The smallholder farmers had varying proportions of households with family members living in the cities (Figure 3).

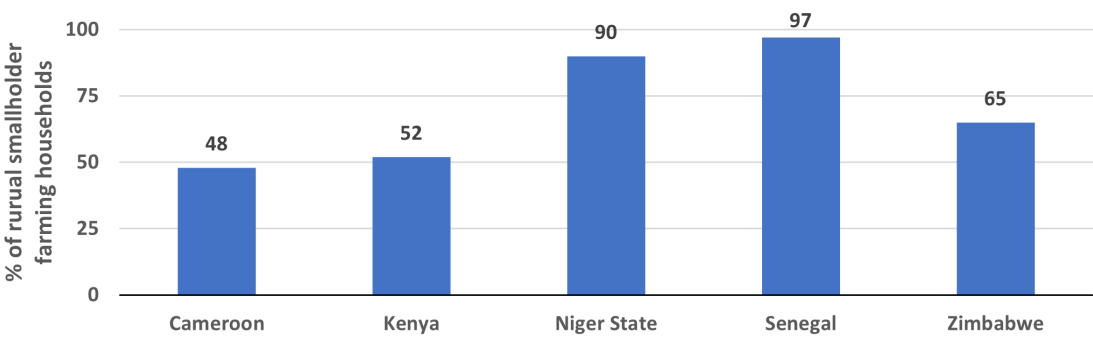


Figure 3: Rural Smallholder Farming Households with City-Based Family



In Cameroon, 48% of the smallholder farming households had family members living in Yaoundé; in Kenya, 52% of the households had family members living in Nairobi; in Nigeria (Niger State), 90% of the households had family members living in Minna; in Senegal, 97% of the households had family members living in Dakar; and in Zimbabwe, 65% of the households had family members in Harare. As such, rural smallholder farming households in Nigeria (Niger State) and Senegal have the highest proportions with city-based family

compared to other countries. Figure 4 shows that majority of the smallholder farming households in Kenya (36%), Nigeria (Niger State) (89%) and Senegal (30%), visit on a regular basis, their city-based family members in Nairobi, Minna and Dakar, respectively, in a year. However, in Cameroon, most of the households (51%) never visit their city-based family in Yaoundé, while in Zimbabwe, 44% of the households rarely visit their city-based family in Harare.

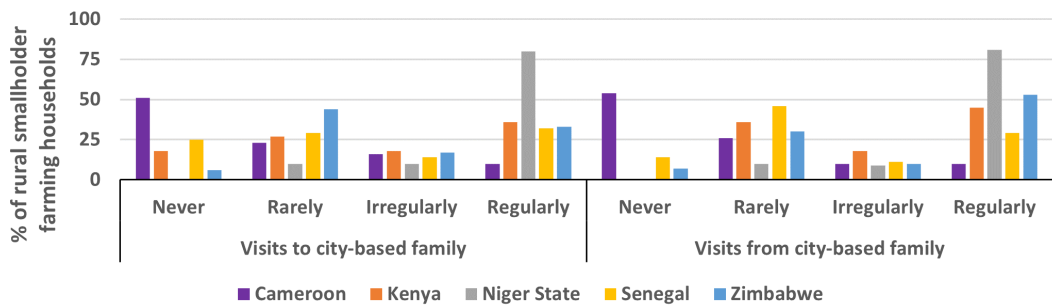


Figure 4: Frequency of Visits Between Rural Smallholder Farming Households and City-Based Family

On the other hand, majority of the smallholder farming households in Kenya (45%), Nigeria (Niger State) (81%) and Zimbabwe (53%) are visited by their city-based family on a regular basis in a year. However, 54% of the households in Cameroon are never visited by their city-based family in Yaoundé, while in Senegal,

43% of the households are rarely visited by their city-based family in Dakar. In particular, Niger State has the highest proportion of rural smallholder farming households visiting their city-based family, as well as having the highest proportion of visits from city-based family.

## 3. REMITTANCES BETWEEN URBAN AND RURAL HOUSEHOLDS

### 3.1 Cash Remittances from Urban Households to Rural-Based Family

Urban households in Yaoundé, Nairobi, Minna, Dakar and Harare send cash remittances to their rural-based family members in varying frequencies (Figure 5). More than half of the households in Nairobi (58%), Minna (53%) and Harare (57%) send money to their rural-based family members regularly in a year.

However, the frequency reduces to rarely for most of the households in Yaoundé (51%), while majority of the households in Dakar (40%) indicated that they never send money back home. This implies that cash remittances from urban households to their rural-based family members is much stronger in Nairobi, Minna and Harare than it is in Yaoundé and Dakar.

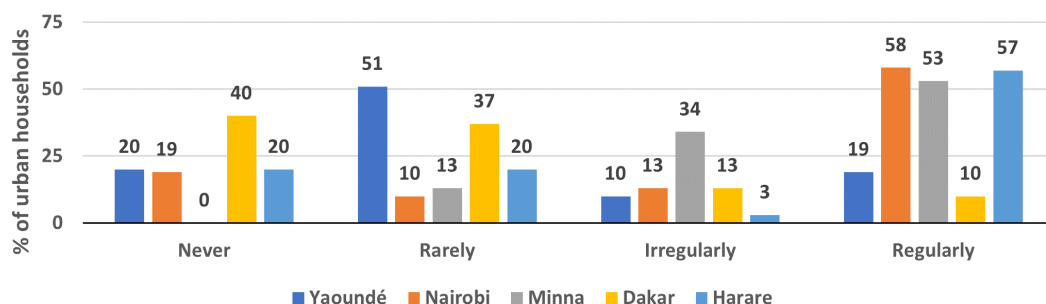


Figure 5: Frequency of Cash Remittances from Urban Households to Rural-Based Family

### 3.2 Food Remittances from Rural Homes and Rural-Based Family to Urban Households

Urban households in Yaoundé, Nairobi, Minna, Dakar and Harare also receive food remittances from their rural-based family in varying frequencies (Figure 6). However, it is evident that only 31% of the households in Yaoundé, 39% in Nairobi, 22% in Minna, 23% in Dakar and 30% in Harare noted that they receive food remittances from their rural-based family on a regular basis.

Majority of the households in Yaoundé (38%), Minna (47%), Dakar (34%) and Harare (37%) reported that they rarely receive food supplies from their rural-based family in a year. It is only in Nairobi that majority of the households (39%) regularly receive food remittances from rural-based family.

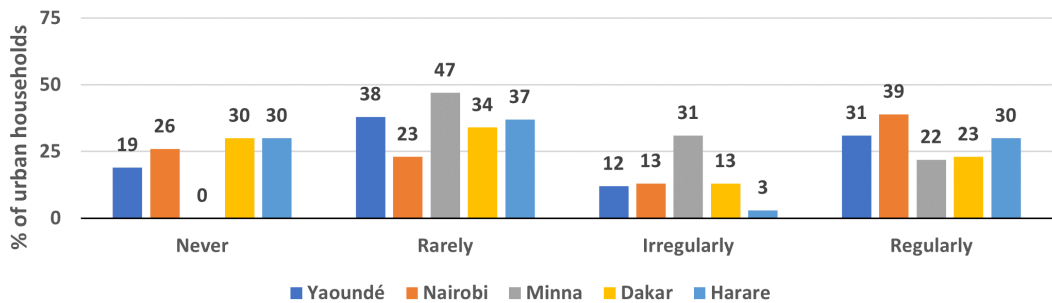


Figure 6: Frequency of Food Remittances from Rural-Based Family to Urban Households

In addition, the study sought to understand if urban household in Yaoundé, Nairobi, Minna, Dakar and Harare source food products from the rural areas when returning back to the city after visiting their rural homes. Results presented in Figure 7 indicates that most of

the households in Yaoundé (50%), Nairobi (69%), Dakar (61%) and Harare (78%) source food products from the rural areas. However, slightly more households in Minna (53%) indicated that they do not source food from the rural areas.

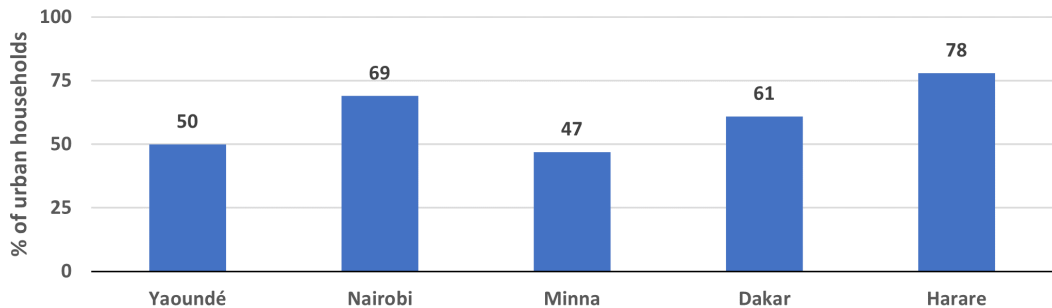


Figure 7: Urban Households Sourcing Food from Rural Areas

Figure 8 shows that the food sourced from the rural areas are largely given at home in Minna (33%), from own farm in Nairobi (50%) and from roadside food vendors in Yaoundé (30%), Dakar (44%) and Harare (57%). Food given at home comes from the farms that the rural-based family members cultivate. In some instances, urban households practice rural farming for food and income and therefore

have their own farms that they cultivate. Some urban households prefer to buy cheap food products from the rural markets, especially during market days, and bring the food back to the city for their household consumption. On the other hand, there are those who prefer to buy food products from various markets along the way of their journey back to the city.

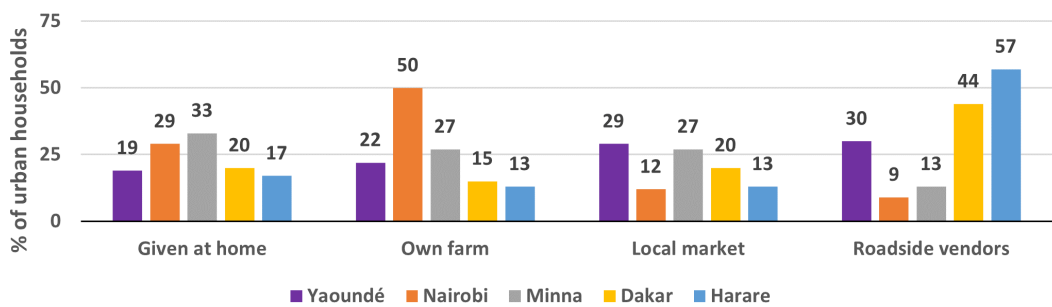


Figure 8: Sources of Food from Rural Areas to Urban Households

In all the cities, food from the rural areas is important in varying degrees to the majority of the households (Figure 9). In particular, 49% of the households in Yaoundé, 44% in Nairobi, 86% in Minna, 34% in Dakar and 31% in Harare noted that food from the rural areas is very important to their households. As such, sourcing of food from the rural areas is an important livelihood strategy, especially for the urban poor households.

In Harare noted that food from the rural areas is very important to their households. As such, sourcing of food from the rural areas is an important livelihood strategy, especially for the urban poor households.

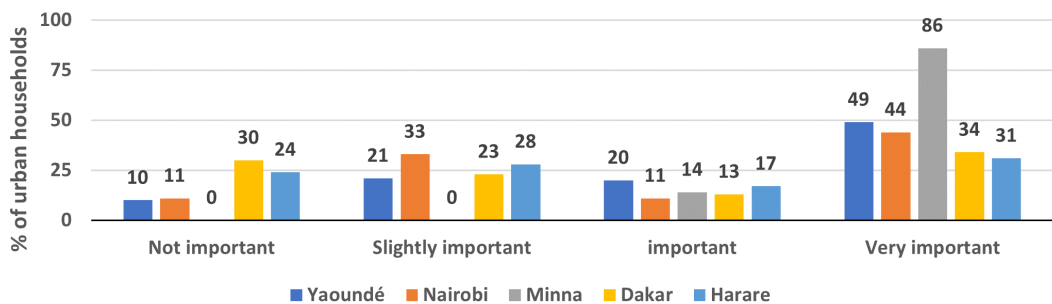


Figure 9: Importance of Rural Sources of Food to Urban Households

The importance of rural sources of food for urban households is further illustrated by the responses from rural smallholder farming households when asked about the frequency of their city-based family reliance on farm food (Figure 10).

Majority of the rural smallholder farming households in Cameroon (30%), Kenya (45%) and Niger State (48%) noted that their city-based family regularly rely on the food they cultivate.

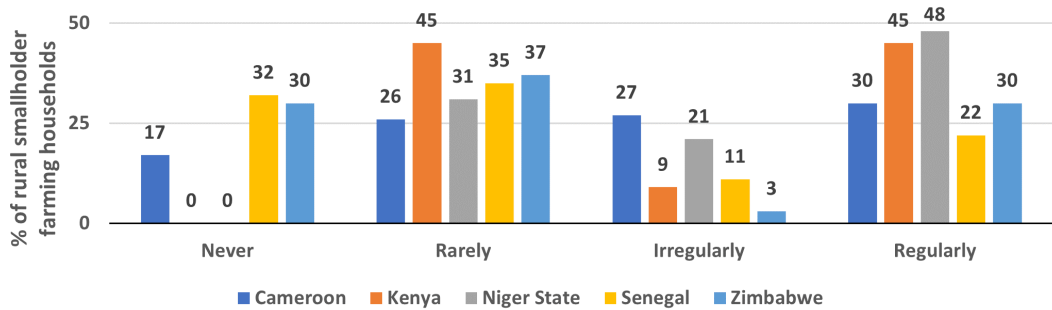


Figure 10: Frequency of City-Based Family Reliance on Farm Food

Even then, urban households in Yaoundé, Nairobi, Minna, Dakar and Harare have various sources of food within their cities. They source their food supplies from neighbourhood shops and stores, supermarkets, designated local authority markets, and neighbourhood informal food vendors (Figure 11). Most of these food supplies are sourced from various rural areas in Cameroon, Kenya, Niger State,

Senegal and Zimbabwe. Neighbourhood stores are utilized more in Harare, while supermarkets are least patronized in Yaoundé and Dakar. On the other hand, designated local authority markets are most frequented in Yaoundé, while neighbourhood informal food vendors are commonly used in Yaoundé and Dakar.

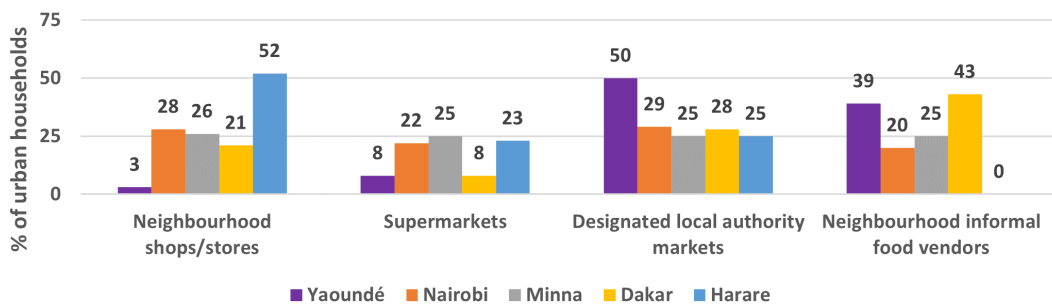


Figure 11: Urban Households Sources of Food in the City



## 4. FLOWS OF FOOD BETWEEN RURAL AND URBAN MARKETS

Most of the farm food that is consumed by urban households is produced in the rural agricultural areas. The food products are sold in markets located in small and intermediate urban centres that foster the transfer of agricultural produce from rural to urban areas. Food transporters and wholesalers facilitate the flow of food products directly from the farmers or from the rural markets to various markets in the cities. The food flows between the rural areas of Cameroon, Kenya, Niger State, Senegal and Zimbabwe and their corresponding cities of Yaoundé, Nairobi, Minna, Dakar and Harare, respectively, is illustrated in **Figure 12**.

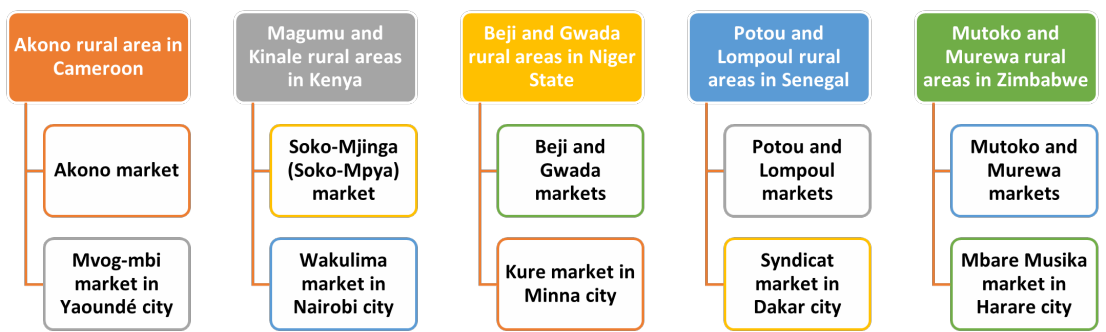


Figure 12: Flow of Agricultural Produce from Rural to Urban Areas

Majority of the rural food retailers operating from the rural markets in Kenya, Niger State, Senegal and Zimbabwe source their food products directly from the farmers (**Figure 13**). Specifically, **70%** of the rural food retailers in Kenya’s Soko Mjinga market, **68%** in Niger State’s Beji and Gwada markets, **80%** in Senegal’s Potou and Lompoul markets, and **63%** in Zimbabwe’s Mutoko and Murewa markets source their food products from farmers. However, the main source of food products for rural food retailers in Cameroon is other market centres.

Bida market place, Nigeria © Omotayo



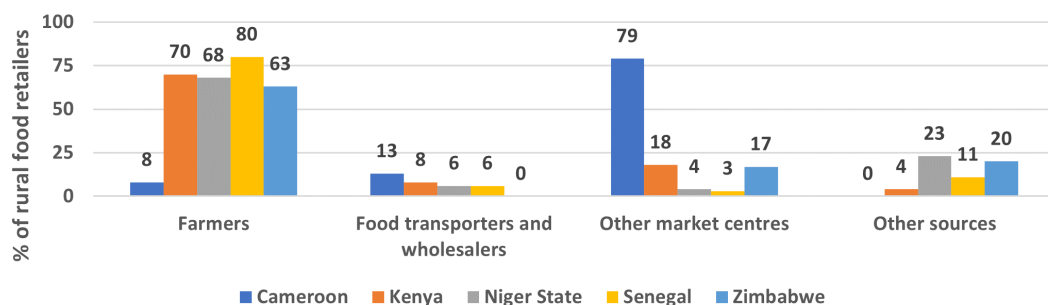


Figure 13: Rural Food Retailers Sources of Food Products

On the other hand, most of the urban food retailers in Nairobi's Wakulima market (46%), Minna's Kure market (80%) and Harare's Mbare Musika market (68%) purchase their

food products from farmers, while those in Yaoundé's Mvog-mbi market (61%) and Dakar's Syndicat market (70%) largely depend on food transporters and wholesalers (Figure 14).

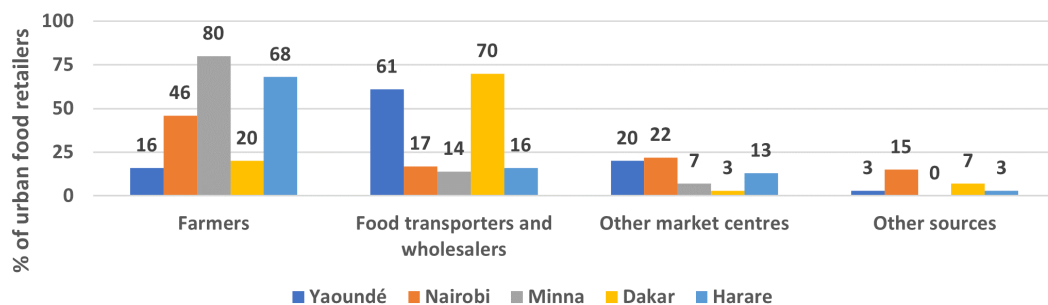


Figure 14: Urban Food Retailers Sources of Food Products

The food products sold in Yaoundé’s Mvogmbi market, Nairobi’s Wakulima market, Minna’s Kure market, Dakar’s Syndicat market, and Harare’s Mbare Musika market find their way to the various informal food vendors in the cities’ residential neighbourhoods (Figure 15). For example, 80% of the informal food vendors

in Yaoundé, 45% in Nairobi and 75% in Minna largely depend on these major food markets in their cities. On the other hand, the main source of food products for informal food vendors in Dakar is food transporters and wholesalers, while those in Harare depend mostly on farmers.

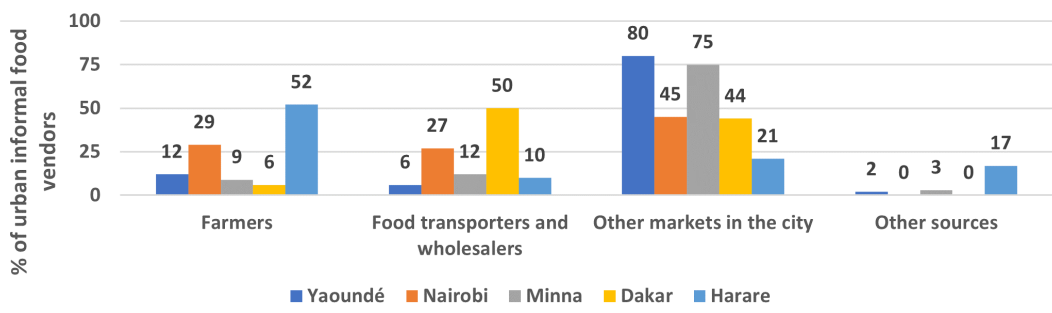


Figure 15: Urban Informal Food Vendors Sources of Food Products



Food transporters in Niger State © 2022 Report



Food transporter in Senegal © 2022 Report



Food transporters in Kenya © 2022 Report



Food transporter in Senegal © 2022 Report

The food crops produced in Akono area in Cameroon include green vegetables, tomatoes, onion, pepper, fruits (banana, mangoes), cassava, plantain, potatoes, maize, beans, groundnuts, peanuts, rice, yam, sugarcane, cocoa, palm oil, celery and macabo. Some of these food products are purchased from Akono market and sold at Mvog-mbi market in Yaoundé city.

Akono market is both a wholesale and retail market which operates every Tuesday, Wednesday and Saturday, while Mvog-mbi market operates on a daily basis. The food products sold in Mvog-mbi market include a variety of fruits, green vegetables, tomatoes, pepper, cabbage, onions, garlic, plantain, yam, potatoes, maize, beans, rice, palm oil and fish.



*Cassava plantation in Akono © 2022 Report*



*Akono Market © 2022 Report*



*Mvog-mbi market in Yaoundé © 2022 Report*



*Informal food vending in Yaoundé @ 2022 Report*



The food crops produced in Magumu and Kinale areas in Kenya include cabbages, kale, spinach, onions, tomatoes, potatoes, potatoes, arrow roots, green peas, carrots, fruits (oranges, mangoes, avocado, bananas), broccoli and maize. Some of these food products are purchased from Soko Mjinga market and sold at Wakulima market in Nairobi city.

Soko Mjinga market operates daily with Tuesday and Friday designated as special market days, while Wakulima market is the oldest and largest wholesale and retail food market in Nairobi. Wakulima market sells a wide variety of fruits, tomatoes, potatoes, onions, carrots, kale, spinach, cabbage, African indigenous vegetables maize, peas, arrowroots, cauliflower and coriander.



*Maize harvest in Magumu rural area © 2022 Report*



*Food purchased from Soko Mjinga market © 2022 Report*



*Onions and carrots at Wakulima market in Nairobi city © Peter Wendt, Unsplash*



*Informal food vending in Nairobi © Sam Owuor*

The food crops produced in Beji and Gwada areas in Niger State include green vegetables, cabbage, spinach, tomatoes, onions, pepper, maize, guinea corn, millet, soya beans, rice, groundnuts, yam, cassava, sugarcane, fruits (banana, mangoes) and okra. Some of these food products are purchased from Beji and Gwada markets and sold at Kure market in Minna city.

Beji and Gwada markets are wholesale and retail markets. Beji operates on Monday and Wednesday, while Gwada operates on Thursday and Sunday. Kure market is a wholesale and retail market that operates once a week – on Saturday. The food products sold in the market include maize, guinea corn, millet, beans, rice, yam, tomatoes, pepper, sugarcane, fruits (banana, mangoes, guava) and fish.



*Cassava plantation in Beji © 2022 Report*



*Gwada market © 2022 Report*



*Kure market in Minna city © 2022 Report*



*Informal food vending in Minna @ 2022 Report*



The major food crops produced in Potou and Lompoul rural areas in Senegal are onions, peppers, carrots, cabbage, potatoes, tomatoes and salads. These food products are purchased from Potou and Lompoul markets and later sold at Syndicat market in Dakar. Potou and Lompoul markets serve the rural production

areas of Potou and Lompoul, which specializes in the production of market gardening crops in the Niayes area. Syndicat market is the largest fruit market in Dakar, and as such, specializes in the sale of fruits, besides other agricultural products from Senegal's rural areas.



*Cabbage farm in Potou © 2022 Report*



*Lompoul market © Unsplash*



*Informal food vending in Dakar © 2022 Report*



*Farmers at Niayes © FAO*



The food crops produced in Mutoko and Murewa areas in Zimbabwe include green vegetables, tomatoes, cucumber, pepper, carrots, peas, fruits (watermelon, oranges, banana), sugarcane, potatoes, groundnuts, peanuts, butternut, sunflower, carrots, soya beans, maize and sorghum. Some of these food products are purchased from both Mutoko and Murewa markets and sold at Mbare Musika market in Harare city.

Mbare Musika market is the oldest and largest fruits and vegetables market in Harare. In addition, the market serves as a wholesale and retail food market. The market, which operates every day, sells a diversity of food products such as fruits (watermelon, apples), potatoes, garlic, carrots, green pepper, green peas, butternut, garlic, cucumber, onions, beans, peas, popcorn, dried coconut, dried nuts, sorghum and ginger.



*Kale farm in Mutoko © 2022 Report*



*Murewa market © 2022 Report*



*Mbare Musika market © 2022 Report*



*Murewa local market © Dzikamai Zingwe*



## 5. URBAN-RURAL LINKAGES AND COVID-19 LOCKDOWN MEASURES

### 5.1 Covid-19 Lockdown Measures

During the Covid-19 outbreak, the governments of Cameroon, Kenya, Nigeria, Senegal and Zimbabwe put in place movement restriction measures as one of the ways to control the spatial spread of the pandemic. Total, partial or selective lockdowns became common movement restriction measure that was adopted in a number of countries. The impact of lockdown measures on urban-rural linkages was further exacerbated through restrictions on social and public gatherings, market trading hours, carrying capacity in public service vehicles, and physical and social distancing in public places. Furthermore, national curfews restricted movement of persons during certain hours of the night thus affecting spatial movement between urban and rural areas.

Generally, lockdown measures restricted movement of persons (either by road, rail or air) and public transport and commuter services into and out of areas that were considered Covid-19 hotspots and had high numbers and incidences of infection cases. For example, the government of Cameroon declared a state

of emergency and put in place measures that restricted inter- and intra-urban travel. The government of Kenya restricted movement into and out of Nairobi Metropolitan Area, Mombasa County, Mandera County, Kilifi County and Kwale County. Lockdown was also enforced in city neighbourhoods of Eastleigh in Nairobi and Old Town in Mombasa.

In Nigeria, total lockdown measures were enforced in the major cities of Lagos, Ogun, Abuja and Minna. All the borders linking these cities to the rest of the country were shut, including a ban on non-essential inter- and intra-state passenger (air, road and train) travels. Whereas movement within the restricted areas in Kenya was allowed, movement within the restricted areas in Nigeria was limited and controlled. In Senegal, lockdown measures restricted movement between regions as well as suspension of national formalities related to pilgrimages to holy places of Islam and Christianity for the year 2020. In Zimbabwe, total lockdown measures were enforced throughout the country for the first three months of Covid-19.

However, during the lockdown and curfew periods, the governments of Cameroon, Kenya, Nigeria, Senegal and Zimbabwe made provisions for continued flow of essential goods, services and food between urban and rural areas. Essential service providers and food and farm produce distributors and transporters, as determined by each country,

were allowed to operate in strict compliance to laid down guidelines. As such, transportation of essential goods and food was allowed between urban and rural areas provided that those involved obtained travel permits, authorization letters and adhered to the laid down health measures.

### 5.2 Impact of Lockdown on Urban-to-Rural Visits

More than half of the households in Yaoundé, Nairobi, Minna, Dakar and Harare reported that lockdown measures affected their regular visits and traveling to their rural homes (Figure 16). Generally, total or partial lockdowns prevented people from moving from one area

to another. In addition, lockdown measures largely affected the movement into and out of the cities. This reduced or temporarily stopped the movements and visits of city dwellers to their rural homes.

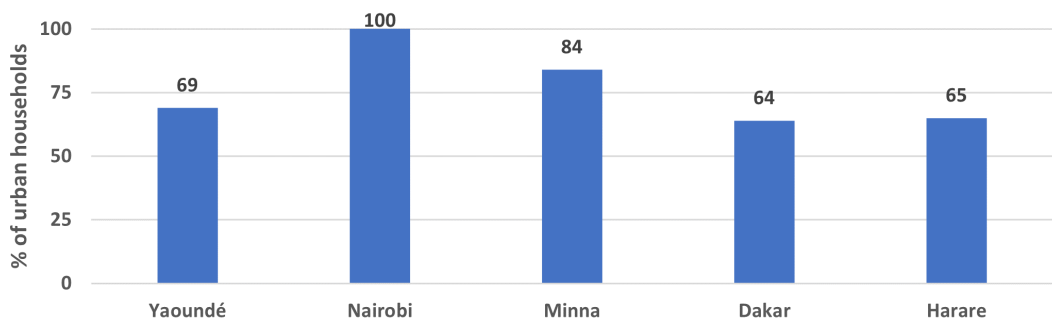


Figure 16: Impact of Lockdown on Urban-to-Rural Visits

Even when there was a window of travelling, the transport costs were high and the logistics to travel were, more often than not, inconveniencing.

Furthermore, city dwellers were advised not to travel to their rural homes for fear of spreading coronavirus in the rural areas.

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*I used to visit my village after every two weeks but during Covid-19, I was not able to visit my relatives at the village because of restrictions on movement (Nigeria (Niger State): Transcribed Interview, 2022)*

*My family was supposed to attend a funeral in the village. However, we failed to secure the require paperwork for the whole family in time for the funeral. We will visit after the lockdown to give our condolences (Zimbabwe: Transcribed Interview, 2022)*

*I refrained from traveling to my rural home due to increased travel cost by both public vehicles or own vehicle (...) I also avoided the risk of contracting Covid-19 and spreading it to my kin at the rural home (Kenya: Transcribed Interview, 2022)*

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### 5.3 Impact of Lockdown on Urban Households Access to and Availability of Food

More than half of the households in Nairobi, Minna, Dakar and Harare reported an impact on access to food (Figure 17). However, only 10% of the households in Nairobi reported that Covid-19 lockdown measures affected their access to food.

On the other hand, regular availability of food was largely affected in Minna, Dakar and Harare, compared to relatively lower proportion of households in Yaoundé and Nairobi.

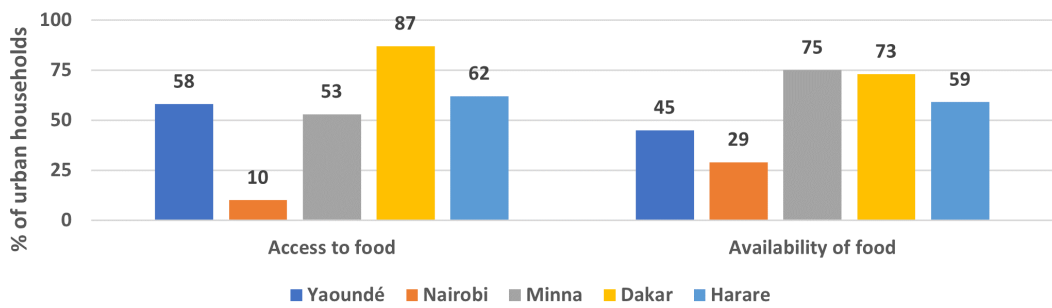


Figure 17: Impact of Lockdown on Urban Households Access to and Availability of Food

Access to food and regular availability of food was generally affected due to closure of food supply markets, reduced food supplies at food retailing points and markets, reduced market and supermarket operation hours, movement restrictions that affected access to food markets and food vendors, and in some cases increased food prices because of limited supplies.

In addition, food supply chain within the cities were disrupted due to logistics in transportation of food from the rural areas during lockdown periods and curfew hours. This affected the normal food supply to the cities and, as such, impacting on access to food both physically and economically.



*The lack of food from the village due to the restriction of movement forced me to buy food in the markets despite the scarcity and high cost of food in the market (Cameroon: Transcribed Interview, 2022)*

*Due to restrictions on movement, I couldn't go to the village to pick food from my storage, I was left stranded (Nigeria (Niger State): Transcribed Interview, 2022)*

*The expensive food products and financial constraints that faced us limited our regular availability of food (Kenya: Transcribed Interview, 2022)*



### 5.4 Impact of Lockdown on Food Supply from Rural Smallholder Farmers

More than half of the rural smallholder farmers in the study countries indicated that Covid-19 lockdown measures affected their cost of production, as well as sales of farm produce (Figure 18). However, Cameroon had a very low proportion of farmers who reported an impact on the cost of production. The impact on cost of production and on sales of farm produce affected the supply of farm produce from the smallholder farmers to the rural food supply markets and to the city consumers.

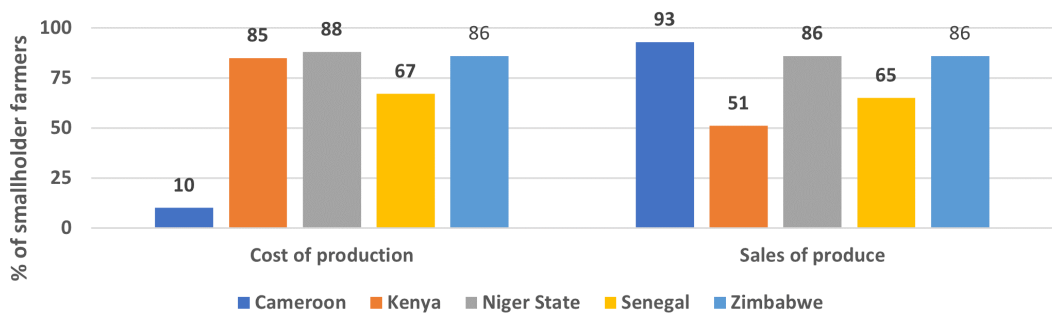


Figure 18: Impact of Lockdown on Food Supply from Rural Smallholder Farmers

Majority of the farmers reported a general increase on their cost of production that was largely attributed to high costs of transport and farm inputs such as seeds, fertilizers, pesticides and herbicides from the local suppliers.

*I stopped the production of perishable goods and started producing non-perishable like millets (Nigeria (Niger State): Transcribed Interview, 2022)*



Majority of the farmers also reported that sales of their farm produce had reduced due to decreased production, limited transport and logistical delays in transporting farm produce to the operational markets, closure of some markets and reduced market operation hours, and decreased customer base. Sales of farm produce are highly dependent not only on production, but also on availability of ready market and means of transport.

Covid-19 lockdown meant that there was restriction of movement to facilitate movement of farm produce thus limiting food supply. In addition, due to lack of storage facilities, most of the farmers were forced to sell their perishable farm produce at very low throw-away prices to dispose them quickly and to avoid losses.



*Last year (2021), we were forced to sell our crops at extremely low prices. Imagine selling a bag of onions for 700 francs [instead of CFA5,000] and a bag of potatoes for 1,000 francs or slightly more [instead of CFA7,500]. We even had to throw some of these food products in the fields because they perished in our hands without the possibility of selling them. Really, we are too tired and we are asking for help from the state (Senegal: Transcribed Interview, 2022)*

*Because of the closure of the market I have to sale it to my neighbours at a cheap price (...) Lack of transportation to convey my farm products for sale made me to reduce to price of the commodities for the few available buyers. For instance, one Kworia (100 tubers) of yam was sold for N100,000 prior to COVID-19 but the price dropped to N40,000 during Covid-19 (Nigeria (Niger State): Transcribed Interview, 2022)*



## 5.5 Impact on Lockdown on Food Supply Markets

Due to the lockdown measures, both the rural and urban food supply markets witnessed a general decline in market operating hours, volume of food supplied to the market, volume of food sold in the market, and volume of buyers using the market. In particular, the urban-based supermarkets experienced an

inconsistent supply of fresh farm produce from their suppliers. In addition, the rural and urban food retailers operating in these markets experienced a reduction on their business operating hours, increased cost of business, and reduced sales and customer base.



*Mbare Musika market traded from 6:00am to 6:00pm before the Covid-19 pandemic. However, after the national lockdown, the market operated from 8.00am to 3.00pm. This negatively affected the volume of the farm produce traded both at the wholesale and retail market (Zimbabwe: Transcribed Interview, 2022)*

*People usually come from different parts of the country to Gwada market to buy goods but during Covid-19 the numbers of customers that come to the market reduced due to restriction on inter-state travel (Nigeria (Niger State): Transcribed Interview, 2022)*



## 5.6 Impact of Lockdown on Food and Public Transport Operators

Food transport operators in the rural markets noted that lockdown measures resulted in a general decline in the number of trips per week and the volume of food products transported. This was attributed to reduced supply of food by farmers as well as reduced demand by food retailers.

However, food transporters were facilitated and allowed to operate with special permits. On the other hand, public service transport operators experienced a general decline in the number of trips per day and the number of passengers per trip.



## 6. CONCLUSION

The results have shown that urban households in the cities of Yaoundé, Nairobi, Minna, Dakar and Harare maintain mutual and reciprocal household-level links with their rural-based family and homes. Regular visits occur between the urban dwellers and their rural-based family members not only for social and economic reasons, but also to maintain and foster kinship and family relations. In addition, urban dwellers send cash remittances to their rural-based family for various reasons. Furthermore, as part of the complex socio-economic ties, there is flow of food from the rural homes and rural-based family to the urban households that is important for the urban households' food and nutrition security. However, the frequency of household-level visits and cash and food flows varies from household to household and is more likely to be influenced by factors such as distance from the rural area, purpose of cash and food flow, and type of kinship ties.

Besides the household-level flows of people, cash and food, the study results bring into fold urban-rural linkages that is manifested through city-region flow of food.

For example, food produced by the rural smallholder farming households find their way to the various rural food supply markets located in the small and intermediate urban centres. These rural food supply markets act as food collection and distribution centres, where food transporters buy fresh farm produce, and later sell the same to the retail and wholesale food markets in the cities of Yaoundé, Nairobi, Minna, Dakar and Harare. In turn, the various urban informal food vendors located in the cities' residential neighbourhoods get their food products from these city markets. As such, small and intermediate urban centres are an integral part of facilitating urban-rural linkages.

However, the study findings show that Covid-19 lockdown measures had varying degrees of unintended negative effects on urban-rural linkages, particularly in terms of the flow of people and food between urban and rural areas. Furthermore, the negative impacts on rural food producing smallholder farmers, on rural and urban food supply markets, and on food transporters meant that there was limited supply of farm produce to urban consumers in the cities.

Food supply and distribution chains were largely disrupted and therefore affecting access to and availability of food in both rural and urban areas, leading to increased food prices. The fact that flow of food between rural areas and urban markets had to be sustained through provision of permits to food transporters underlines inexorable relationship between rural and urban territories in terms of agricultural food production and urban food consumption in the two respective sectors of the economy and settlement types.

Lastly, sustainable Development Goal 11 seeks to make cities and human settlements inclusive, safe, resilient and sustainable with Target 11.a seeking to support positive economic, social and environmental links

between urban, peri-urban and rural areas by strengthening national and regional development planning. As such, sustainable urbanization needs to be underpinned by mutually supportive and beneficial urban-rural linkages to foster inclusive development process. Policies that foster sustainable urbanization needs to incorporate the rural dimensions of urbanization. Enhancing the role of small and intermediate urban centres through integrated planning will contribute to urban and territorial development; poverty reduction; economic recovery; achievement of Sustainable Development Goals; equitable and geographically balanced economic and social development; and promote a more inclusive urban growth and development in the urban hierarchy.

## URBAN-RURAL LINKAGES AND GLOBAL PANDEMIC DISRUPTIONS IN AFRICA

**Impacts on Mobility, Spatial Interaction and Food Systems in Cameroon, Kenya, Niger State (Nigeria), Senegal and Zimbabwe**

Many development practitioners have, until recently, viewed urban and rural areas as two mutually exclusive territories. However, this does not reflect the realities of the spatial and sectoral linkages between urban and rural areas. The two territories are two ends of a continuum of human settlements which are spatially and functionally interconnected and interdependent through physical, social, economic and environmental linkages that are continuously changing in time and space. During the coronavirus (Covid-19) pandemic, the spatial and functional linkages between urban and rural areas were greatly affected due to lockdown measures that were enforced to control the spread of Covid-19. Lockdown measures led to the disruption of transportation and flow of food, people, goods, services, resources and capital between urban and rural areas.

Food supply and distribution chains were largely disrupted and therefore affecting access to and availability of food in both rural and urban areas. In particular, Covid-19 exposed the interconnected vulnerabilities between food production, distribution and consumption within the context of city-region food systems. As such, it became evident that urban-rural linkages must be considered more carefully in the short, intermediate and long-term responses to future global pandemics. This calls for renewed territorial planning and policy agenda for national, regional and local governments, especially in sub-Saharan Africa. Sustainable urban development strategies need to consider urban-rural linkages and context in order to enhance more inclusive and resilient cities and human settlements.



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