East Africa

mVAM Bulletin

(**m**obile **V**ulnerability **A**nalysis and **M**apping)

Regional Bureau for Eastern Africa

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WFP/Claire Nevill

Highlights

As face to face traditional assessments became not feasible in the current context of COVID 19 pandemic, WFP rapidly scaled up its mobile data collection capacity in the region[1] to continue monitoring the situation in the present dynamic and unpredictable environment.

- **Near real-time food security monitoring systems** have been established in Uganda, Somalia and Ethiopia, providing continuous updates of the vulnerability situation in these countries since May-June, while it is being set up in Kenya and South Sudan

- Mobile data collection is also conducted in lieu of cancelled key annual or seasonal face to face assessments, like the **Food Security Monitoring System (FSMS) in Ethiopia** or **Nutrition Survey in Rwanda**.

- Remote surveys have become a **critical source of information for Integrated food security Phase Classification (IPC) analysis** across the region. This is the case of the FSMS and IPC in Ethiopia, mVAM based surveys leading to IPC analysis in Uganda and the on-going IPC urban analysis in Kenya and Djibouti.

- WFP has also scaled up its **remote monitoring systems for price monitoring** as well as for **programme monitoring**, providing key information for an adequate and effective response.

[1] The East African region covered by the Regional Bureau in Nairobi includes Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan and Uganda

Context

WFP has been using mVAM (mobile Vulnerability Analysis and Mapping) since almost a decade in order conduct rapid assessments based on phone surveys, and over the years has also significantly developed the methodology.

COVID 19 pandemic and preventive measures established to contain the spread of the virus are leading to highly dynamic scenarios and negatively affecting livelihoods and populations' access to basic services. Various measures such as quarantine, lockdowns and business closures have caused an economic burden difficult to bear by households relying on informal livelihood sources, casual labourers and low-income earners with limited economic capacity.

In this context, a close monitoring of the situation is critical to provide periodic updates on the evolving the situation and for an evidence based response to address the deteriorating livelihoods and food security in a region already suffering the impact of extreme weather conditions, pests, displacement and insecurity. The need of assistance and information is coupled with the increased challenges to implement the traditional face to face surveys and alternative methods for data collection become essential.

WFP previous work and experience on remote monitoring has allowed to rapidly scale up and establish where needed, remote assessments and monitoring systems to provide the minimum required information for a well-informed decision making.

Near real-time food security monitoring

Leveraging the global expansion of cell phone coverage and advances in automated tools, WFP has developed near real-time food security monitoring systems that provide daily updates on food security and nutrition in countries facing food crises. Data is collected through phone surveys and includes key indicators considered in the Integrated food security Phase Classification (IPC), such as food consumption score (FCS), reduced coping strategies index (rCSI), household hunger scale (HHS), livelihood coping, water access (WASH), among other food security related metrics.

Data is collected on a continuous basis and routed through automated statistical engines that process, analyse and visualize it in near real-time. Compared to traditional on-the ground food security surveys and monitoring systems, these new food security monitoring systems provide a more flexible and efficient way to collect information: They are cheaper, faster and provide a representative snapshot of the food security situation at any given point in time.

By using advanced data visualisation tools, the resulting analysis can be transformed into user friendly visualisations and displayed on interactive dashboards. At any given point, the system provides a rolling average of the food security and nutrition situation over the past 30 days, thus capturing seasonality and providing a sense of trends in between rounds of analyses. Daily updated information will help decision makers to identify changes in the food security and nutrition situation more quickly and make more informed decisions. Results of this hunger monitoring system are continuously updated on WFP data visualization platform.

Near real-time food security monitoring in East Africa

In East Africa, near real-time continuous monitoring has been established in partnership with Geopoll in Ethiopia, Somalia and Uganda, and it is in the process of being set up in Kenya and South Sudan.

In **Ethiopia** and **Somalia**, the remote near real time monitoring system collects key information on household food security, demographics, water and sanitation, livelihood, remittances as well as access to markets and health across the country. Data is representative on a monthly basis for the 11 provinces of Ethiopia and 18 regions in Somalia.

In May, **Uganda** scaled up their remote monitoring system to a near-real time data collection that continuously provides representative information of urban areas, refugees, host communities as well as from the Karamoja region. A representative sample per group and area is interviewed every 30 days, following a sampling approach that allows getting updated snapshots of the situation every 10 days. The system has recently expanded to monitor the impact of the government social protection programme and WFP cash interventions.

Based on 9101 interviews, July results showed percentages of households with poor and border line food consumption ranging from 17 percent among urban residents to 44 percent among settlement-based (SB) refugees (Figure 1). The start of first season harvest together with the lifting of the COVID 19 lockdown seems to have had a positive impact in Karamoja and refugee settlements where percentage of households with below acceptable food consumption decreased between June and July. On the opposite, in urban areas and host communities households with poor and border line food consumption increased during the same time period.

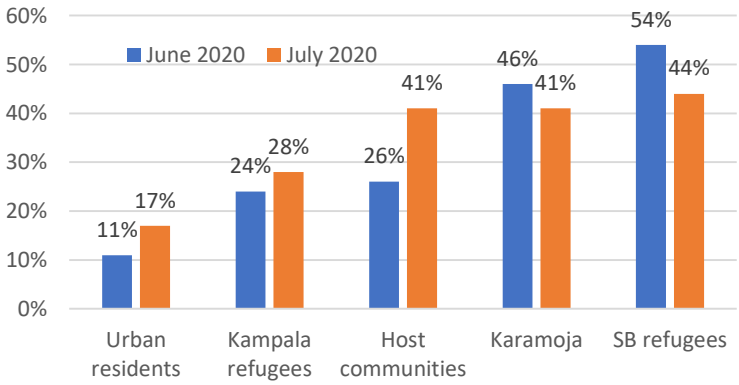


Figure 1. Households with poor and border line food consumption in June and July 2020 in Uganda

Urban assessments

In order to understand the impact of COVID-19 on livelihoods and food security in urban contexts and to identify the main drivers of food insecurity, WFP has carried out assessments through phone interviews (CATI[2]) in urban areas of Kenya and Uganda. Other urban assessments are taking place in Djibouti and are in preparatory phase in Ethiopia and South Sudan.

The urban assessment in **Kenya** was carried out in partnership with Geopoll during the first half of August in the informal and lower middle-class settlements in Nairobi, Mombasa and Kisumu.

Results showed that between 29 and 45 percent of households in the slums did not work in the 7 days prior the survey. Most households (82-88%) reported a reduction on the number of meals due to loss of income; high food prices also caused a reduction in the number of meals in 15% of the surveyed households in Nairobi, Mombasa (33%) and Kisumu (35%). About one fourth of households had poor or border line food consumption while more than half of them (57%-65%) relied on crisis or emergency livelihood based coping strategies.

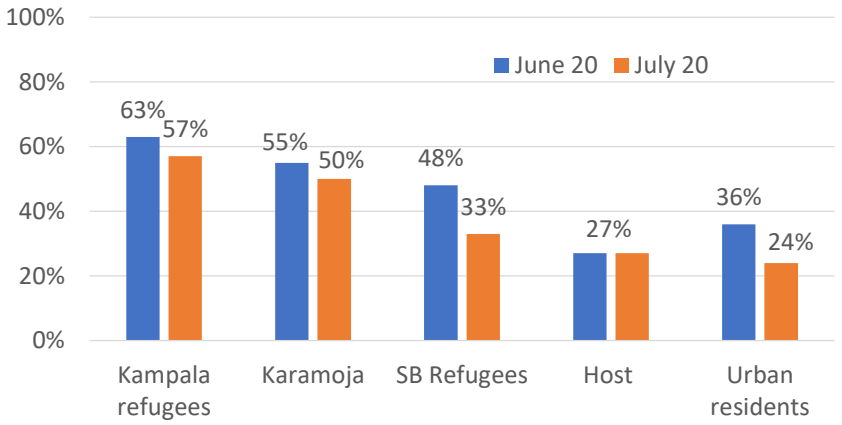


Figure 2. Medium and high food based coping strategies in Uganda in June and July 2020.
Source: WFP Uganda, mVAM, July 2020.

In **Uganda**, 13 urban centres across the country are monitored through the near-real time continuous system since May: Arua, Gulu, Hoima, Jinja, Kabarole, Kasese, Kampala, Mbale, Lira, Masaka, Mbarara, Mukono and Wakiso. July results showed that, despite some improvement between June and July, 56 percent of urban households were still engaged in crisis or emergency coping strategies and, as shown in Figure 2, 24 percent employed medium or high food based coping strategies. This improvement is accompanied by a certain recovery in livelihoods indicated by the reduction in the percentage of households whose main income earner worked less than 7 days (Figure 3).

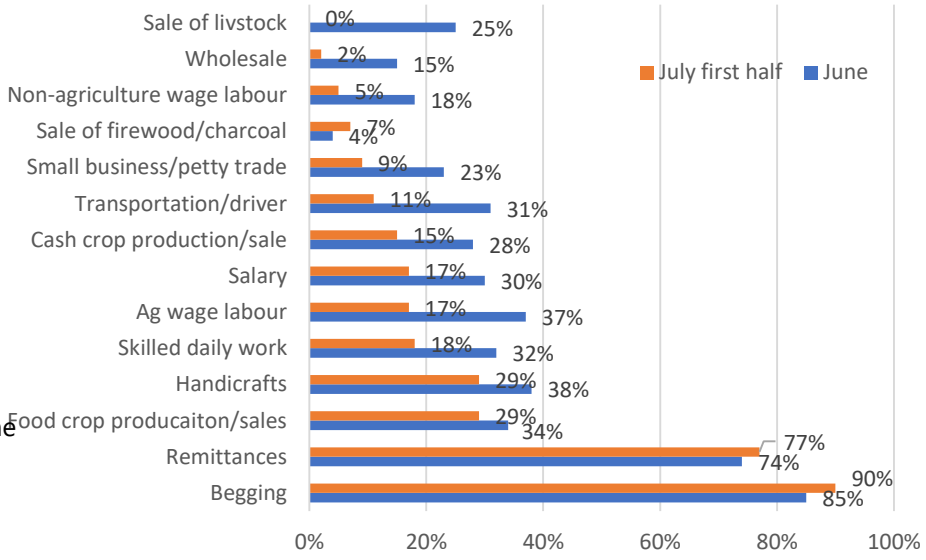


Figure 3. Proportion of urban households in Uganda whose main income earner worked less than 7 days in the last 30 days in June and July 2020. Source: WFP Uganda, mVAM, July 2020.

Data collection for the mobile urban food security assessment in **Djibouti** started on the 28th of August and will provide valuable information for the upcoming urban IPC analysis in country. Key information on demographics, livelihoods, shocks and income impact and food security will be gathered from households in Djibouti city and county towns of Arta, Ali Sabieh, Dikhil, Tadjourah and Obock. Preliminary results are expected in September.

Refugee profiling

In Uganda, the near real time monitoring system provides representative information on the food security and livelihood situation of refugees in Kampala and in thirteen refugee settlements. July results showed that, although food consumption is better among refugees in Kampala (28%) than in refugee settlements (44%), refugees in Kampala show the highest proportion of households employing medium/high food based coping strategies (57%) and crisis and emergency livelihood based coping strategies (97%), which increased between June and July as shown in Figure 4.

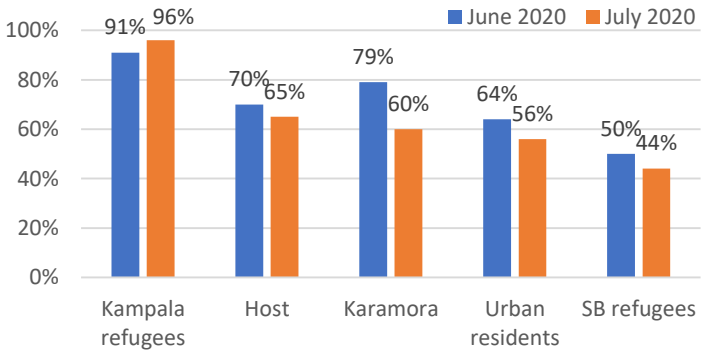


Figure 4: Livelihood based coping strategies in Uganda: June and July 2020

[2]Compter Assisted Telephone Interview

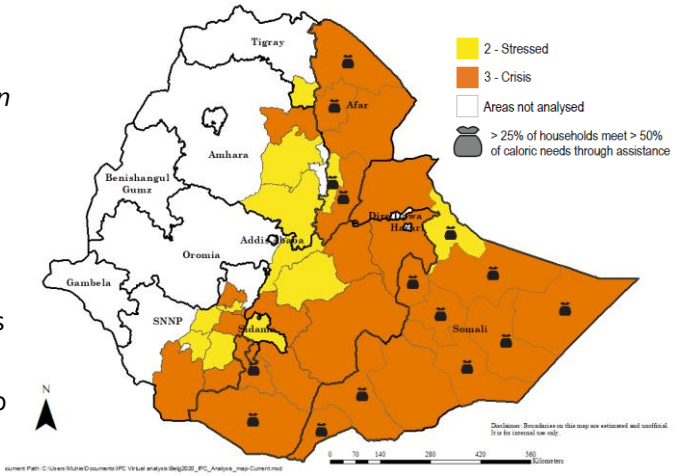
mVAM and IPC Analysis

In consultation with the IPC Global Support Unit, WFP has scaled up the mVAM to support IPC analysis in this challenging situation. In the region, the urban assessment in Kenya, the near-real time monitoring system in Uganda or the FSMS in Ethiopia constitute crucial sources of data for the IPC analysis in these countries. The urban assessment currently going on in Djibouti or the one in preparatory phase in South Sudan are also expected to significantly contribute to the upcoming IPC analysis in these countries.

Food Security Monitoring System and IPC in Ethiopia

Survey for the Food Security Monitoring System (FSMS) for the *belg season* was conducted remotely for the first time. One third of the interviewed households experienced food price increases while 14 percent had been negatively impacted by income losses, mainly due to reduced or lost remittances and limited casual employment in the farms or within urban areas. One fourth of the assessed households in all regions reported difficulties accessing food from the market or grocery for more than eight days in May and June 2020 while 28 percent experienced very big changes in availability of food in the local markets since COVID 19 pandemic.

FSMS contributed significantly to the recently concluded IPC analysis (Map 1). Analysis for rural population dependent on *Belg* pastoral and agro pastoral areas conducted in seven regions of Ethiopia indicates that, despite ongoing Humanitarian Food Assistance (HFA), an estimated 8.5 million people (21% of the 41 million people analysed) are acutely food insecure between July and September 2020. Of these, about 7.1 million were classified in IPC Phase 3 (Crisis) and about 1.4 million in IPC Phase 4 (Emergency). This number is projected to decrease to 6.7 million during Octo-Dec 2020 (due to harvest season) and again increase to 11.1 million during Jan-June 2021. Economic decline and inflation, population displacement and the desert locust invasion have been identified as the key drivers to food insecurity.

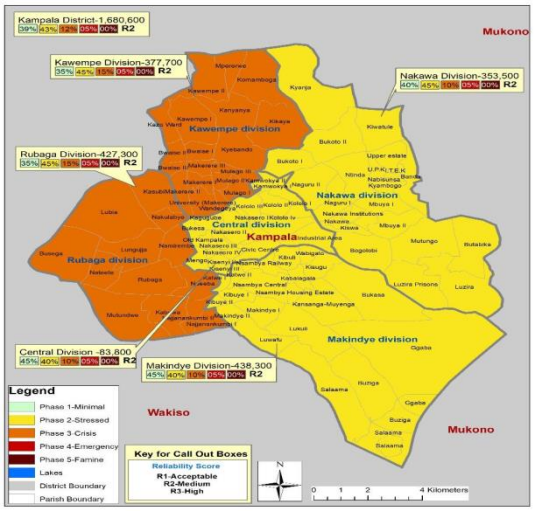


Map 1. Ethiopia IPC Belg analysis for July-september 2020. IPC Acute Food Insecurity Phase Classification.
Source: Ethiopia IPC TWG

Near real time continuous monitoring and IPC in Uganda

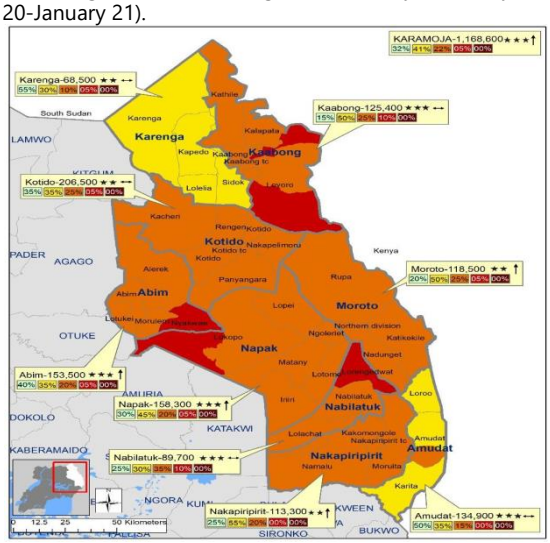
Uganda recently concluded most comprehensive IPC in the country to date, with IPC analysis covering Kampala and other urban areas, Karamoja region, and refugee settlements. The remote near real-time data collection system constituted a key source of information for urban areas while the Food Security and Nutrition Assessment (FSNA) survey conducted in January 2020 provided data for refugee and Karamoja areas.

Urban IPC: In **Kampala**, even with the food assistance provided in April and May, three of the five municipalities have been classified in IPC phase 2 while the other two have been in IPC phase 3 for the period June-August 2020. Overall, 17% of the population (292, 330 people) is acutely food insecure; while 43% of the population (730,170 people) is in Phase 2. Besides Kampala, the IPC analysis also covered 12 other main municipalities. Overall, a total of 540,000 people (19% of the analysed population) are acutely food insecure, while another 1.02 million people (35%) are in IPC Phase 2 with some risk of deteriorating into acute food insecurity, should the current situation persist. Key drivers of food insecurity identified are loss of employment, reduced remittances, movement restrictions and collapse of trade networks.



Map 2. Kampala IPC current food security situation (June-August 20). Source: Uganda IPC analysis for July 20-January 21).

Karamoja: From the current analysis, overall, 312,800 people (27% of the population) were found to be acutely food insecure while 476,200 people (41%) are in Phase 2. All districts have been classified in Phase 3, except Amudat and Karenga in Phase 2. IPC analysis for acute malnutrition showed 1 district at Critical phase, one in Serious and other seven in Alert phase. About 52,000 children are facing acute malnutrition. Key drivers of food insecurity included decrease in casual labour wages, harvest losses (unexpected high rainfall in November 2019 caused pre- and post-harvest losses), heavy rainfall in April and May 2020 (led to crop damage, water logging, flush floods and road network breakdown), loss of employment due to COVID-19 situation (reduced demand for agricultural and non-agricultural casual labour).



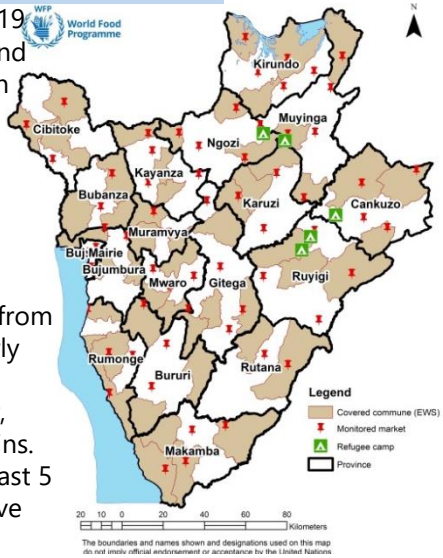
Map 3. Karamoja IPC current food security situation (June-August 20). Source: Uganda TWG

Refugees: Uganda hosts over 1.4 million refugees and asylum seekers of whom 1.34 million are in 13 rural-based refugee settlements and about 80,000 in Kampala. From the current IPC analysis all refugee settlements have been classified in IPC Phase 3 (Crisis). In total, about 460,000 people (or 31%) of the analysed population were found to be acutely food insecure, while 505,000 were under Phase 2. Key drivers of food insecurity included ration cuts from 100% to 70% of daily consumption (2100 Kcal/person per day), COVID-19 restrictions and other transient impacts, loss of casual employment opportunities, closure of schools depriving children of access to school meals and low access to agricultural land.

Market monitoring

The remote monitoring system of food prices, established in the region long before COVID-19 outbreak, has allowed a close monitoring of markets since the very beginning. The Market and Trade Update of June 2020 highlighted the sharp price increases from March through May in South Sudan and Somalia due to supply and demand disruptions caused by COVID-19 measures. Prices also increased in Ethiopia, Burundi and Djibouti, but decreased in Kenya, Uganda and Rwanda over the same period. Supply interruptions of livestock markets and reduced demand for meat following the closure of markets, hotels and restaurants, led to decrease in livestock prices in parts of Kenya and Karamoja (Uganda).

In Burundi prices and availability of key food commodities and fuel is collected every week from 198 key informants in 66 markets across the country (Map 4). Through phone interviews, early warning information on agricultural labour wages and opportunities, food availability and accessibility, stocks, weather events and their impact on crops or houses, health and security, etc. is also collected. Situation updates are shared in biweekly price and early warning bulletins. The last bulletin confirms overall prices of food commodities well above the average of the last 5 years by the end of July 2020. Household food accessibility is characterized by the progressive exhaustion of household's stocks (especially legumes) and the low purchasing power of households due to the impact on livelihoods.

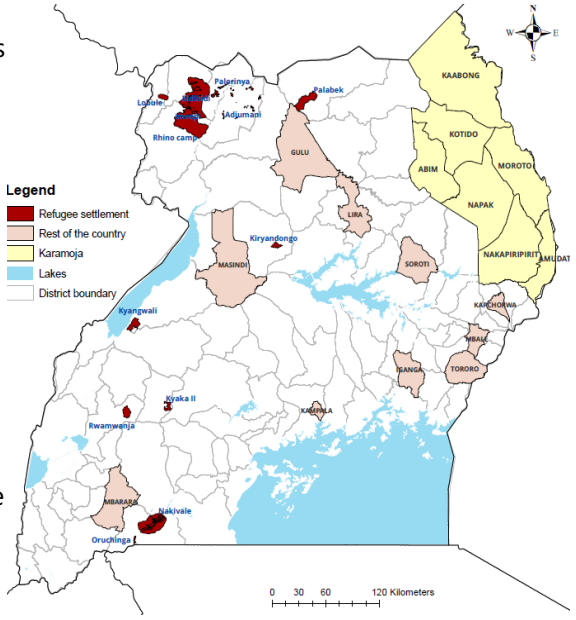


Map 4. mVAM coverage in Burundi

In **Ethiopia,** remote market monitoring has been scaled up and VAM has joined efforts with supply chain unit to monitor key food and non-food prices, supply and market access. The first WFP Ethiopia Market and Supply chain watch, issued in July, showed a modest increase in maize prices in some markets due to transport disruptions from surplus to deficit markets, possibly due to unrest in early July. Prices of other key staples (sorghum, teff and wheat) remained generally stable albeit high, with some items seeing minor increases as availability narrowed due to seasonality and COVID-19 concerns. The unrest in early July critically reduced supplies and the availability of fruits and vegetables across Ethiopia and of key staples (maize, sorghum and wheat) to a lesser extent in the majority of surveyed markets. Various supply chain factors in Somalia could impact future availability and prices of imported food items in Somali Region. The weakening of the Ethiopian Birr against the US Dollar and cash withdrawal limits appeared to have impacted trade dynamics in some Somali Region markets. Prices of shoats (a hybrid sheep/goat) in Somali Region decreased due to their low export demand in connection with the Hajj cancellation this year which could seriously impact pastoralists' livelihoods in Somali Region. Most surveyed markets reported low demand dynamics which could reflect households' deteriorating purchasing power due to lost or reduced livelihoods in light of COVID-19.

In **Rwanda,** remote data collection has been complementing the face-to-face market monitoring system since January 2018. Market information is collected from markets inside and around camps[3] once a week, on about 23 commodities[4]. Most of the beneficiaries in these areas purchase food thanks to WFP cash assistance, which is based on the price of the food basket[5]. Monthly bulletins report on the cost of the food basket and discuss the overall market performance in relation to beneficiaries' purchasing power. Market prices are displayed on the LWW (Light Weight Website) https://speakto.rwa.wfp.org/en as 2WC channel, and are uploaded to VAM Data Bridges (HQ) every month for reporting and visualization https://dataviz.vam.wfp.org/economic_explorer/prices

In **Uganda**, WFP increased the coverage and intensity of its remote market monitoring system to collect near real-time data on prices of key national staples in Karamoja, refugee areas and selected markets in the rest of the country (Map 5). In addition to maize, beans and sorghum, the price of goats is also monitored in Karamoja whereas monitoring in refugee settlement markets focuses on the price of the WFP General Food Assistance (GFA) food basket (maize grain, beans, vegetable oil and salt). Market monitor reports are shared every 2 weeks and nearly real time prices are publically available on https://dataviz.vam.wfp.org/economic_explorer/prices .
Market monitoring results for the second half of July showed that, after the declines observed from June to the first half of July 2020 in key markets across the country, the average price of maize grain and beans remained stable in July, while the price of Sorghum continues decreasing, although slightly. In Karamoja, the average price of Sorghum grain and beans continued declining in July whereas maize grain average price remained stable. In refugee settlements, the average price of beans increased by 8 percent during the month of July while the average price of maize grain, vegetable oil and salt remained stable. WFP cash transfer value covers the cost of the General Food Assistance (GFA) food basket in all the refugee settlements in the country except in Lobule, Adjumani, Palabek and Rhino Camp settlements where WFP covers the cost of the reduced (70%) GFA food basket. (Uganda Market Update, 15-31 July 2020; WFP VAM)



Map 5. mVAM market coverage in Uganda

[3]Gihembe, Nyabiheke, Kigeme, Mugombwa and Kiziba
[4]Cereals, tubers and roots, oil and salt, pulses, meat and vegetables
[5]Food basket: 12.3 kg of maize grain, 3.6 kg of beans, 0.90 kg of oil and 0.15 kg of iodized salt per person per month.

Nutrition analysis

In **Rwanda**, WFP and UNHCR, in collaboration with partners, conducted a remote Nutrition Survey (rNS) in lieu of the Standardized Expanded Nutrition Survey (SENS) conducted annually in the 6 refugee camps of the country. Key information on Infant and Young Child Feeding (IYCF), health, food security, Water Sanitation and Hygiene (WASH), mosquito net coverage and the impact of COVID-19 was collected at household level through phone interviews.

Other remote assessments carried out by WFP Rwanda, includes the Post-Harvest Handling & Nutrition survey - aimed to assess the impact and knowledge retention of trainings on post-harvest handling and nutrition- and the remote monitoring of the project **Smart Simplicity to Reduce Stunting in Rwanda**. Main results of this survey point out the effectiveness of the stunting free model in increasing stunting awareness and ownership among care-takers although closer attention should be given to engaging fathers, so they can play a more active role.

In **Kenya**, the urban assessment recently carried out in the informal settlements of Nairobi, Mombasa and Kisumu, showed that only 35 percent of 6-23 month children in Mombasa and Kisumu and 55 percent of those in Nairobi, consumed 5 or more food groups in the day prior the survey. Eggs, legumes and flesh foods are the least consumed food groups indicating a low consumption of protein, critical for children in this age range.

WFP/Kevin Ouma

Programme monitoring

To continue monitoring programme performance in this critical period, WFP has established remote programme monitoring systems either in house in most countries in the region or through a partnership with Geopoll, in the case of Ethiopia and Uganda. Despite the challenges to get data through phone interviews, efforts have been made to continue meeting the Minimum Monitoring Requirements while maintaining data quality. More detailed information and results of programme monitoring are provided in the WFP Regional Monitoring Bulletins of April and September.

For further information

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