SAVING LIVES
CHANGING LIVES

Malawi Household Food Security Bulletin

Mobile Vulnerability Analysis and Mapping (mVAM) on the Effects of COVID-19 in Malawi – *Round 1*

BACKGROUND

COVID-19 has upended the lives of people around the world. With the number of COVID -19 positive cases increasing daily, Malawi is already beginning experience the adverse economic effects of the regional and international travel and trade restrictions on its economy, which will likely lead to localized food insecurity primarily due to access constraints and limited labour opportunities, particularly in urban and peri-urban areas. While the country has enjoyed good crop production this year, realizing an 11.5% increase in maize compared to last season [1], COVID-19 is still likely to adversely impact food security in the coming months. It is in consideration of this that WFP has put in place remote household monitoring of food security to track changes in food security as influenced by COVID-19.

METHODOLOGY

The months of May/June 2020 marked the first round of remote household survey data collection in response to COVID-19 monitoring and seasonal trends in food security. The survey for this report was conducted using live telephone calls from the 16th of May to the 14th of June 2020, collecting information from some 2,520 households in all districts and major cities. Participating households were randomly selected from a national database of mobile subscribers.

The sample size was calculated based on the Integrated Food Security Phase Classification Technical Manual (Version 3.0) guideline of having at least 150 samples per strata. WFP increased the sample size per strata to 180 in order to include a safety buffer in case the call centre could not achieve the full sample in 30 days. Additional details on this methodology are available in Annex 1. The three regions of the country (ADM1) and the four cities (Mzuzu, Lilongwe, Blantyre and Zomba) were divided into 14 strata, with each stratum having an equal sample size of 180 households. Integrated stratification was conducted whereby each city (Lilongwe, Blantyre, Mzuzu, and Zomba) was a stratum on its own to track the effects of COVID-19 in each city separately, as cities are likely to be most affected and the impact/severity of COVID-19 might differ from city to city.

Districts were stratified by clustering those with similar livelihood activities together while maintaining a maximum of four districts per stratum. Participants were randomly selected from a national database of mobile subscribers. Respondents opted in to the mobile call survey and were asked questions on socio-demographics, food consumption, coping behaviour, market access, health condition, and assistance received.

As of 2016, 54 percent of households in Malawi had a mobile phone (MDHS 2015-16). As such, it is acknowledged that household-level mobile surveys contain a certain level of inherent bias. Due to biases, an attempt is made to capture patterns and trends. This first round of data collection provides the basis of a monitoring system that will track month-to-month changes. In terms of weights, the results are computed by applying a population weight at each respective district level (Admin 1) in order to debias the data.

[1] Ministry of Agriculture, March 2020. Second round Agricultural Production Estimate Survey (APES) report. Lilongwe. Malawi.

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The **Food Consumption Score (FCS)** is a composite score of diversity and frequency of food groups consumed over the past 7 days by household members, weighted by the relative nutritional importance. Based on the scores and the standard thresholds, households are grouped into three categories: Poor, Borderline, and Acceptable.

The **Reduced Coping Strategy (rCSI)** is an experience-based indicator measuring the behaviour of households over the past 7 days when they did not have enough food or money to purchase food.

KEY FINDINGS

Food Consumption Score (FCS)

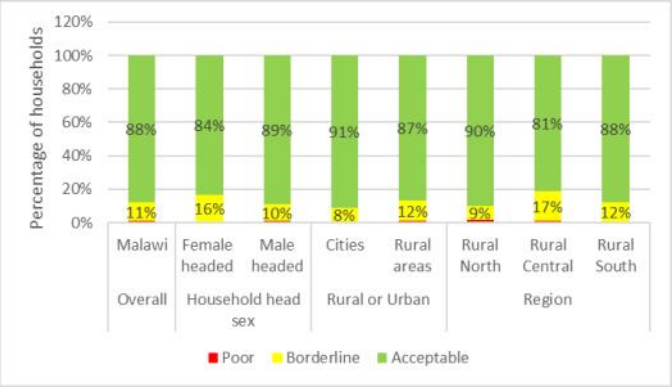
The Food Consumption Score (FCS) is a composite score of the diversity and frequency of food groups consumed over the past 7 days by household members, weighted by the relative nutritional importance. Based on the scores and the standard thresholds, households are grouped into three categories: *Poor*, *Borderline*, and *Acceptable*.

Findings from Round 1 of data collection showed that most households—some 88%—are currently classified as having *acceptable* food consumption**.** This is typical at this time of year, as Malawi is in the post-harvest period and is experiencing an above-average yield for not only maize but many other key food crops, allowing consumption of a diversified diet. Only 1% of households were classified as having *poor* food consumption, with an additional 11% classified as having *borderline* food consumption.

Slightly more households residing in urban areas (91%) were classified as having *acceptable* food consumption against 87% of households in rural areas (*Figure 1)*. While *acceptable* food consumption was pervasive across all three regions of Malawi, slightly more households in the Rural Northern Region were classified as having acceptable food consumption (some 90%) compared to the Rural Southern (88%) and Rural Central Region (81%). These observations will be monitored in subsequent reports to establish trends and provide a clear picture of food consumption patterns across the various regions.

Acceptable food consumption was very high amongst households residing in urban areas, ranging from 90%-95%. When looking at food security within rural Malawi, districts were grouped into strata. The groupings of Chitipa and Karonga; and Blantyre Rural, Chiradzulu, and Thyolo had the highest proportion of households (91%) with *acceptable* food consumption. This was followed by Mulanje, Phalombe and Zomba; and Machinga and Mangochi, with 90% of the households classified as having *acceptable* food consumption. The stratum with the least proportion of households having *acceptable* food consumption were Dowa, Kasungu, Mchinji and Ntchisi (75%); and Balaka, Mwanza and Neno (77%). No households residing in the Lilongwe Rural and Dedza; Machinga and Mangochi; Mulanje, Phalombe and Zomba; and Zomba City strata were classified as having *poor* food consumption (*Figure 1*).

Figure 1: Percentage of Households by Classification of Food Consumption Score



Reduced Coping Strategies (rCSI)

The Reduced Coping Strategies Index (rCSI) is an experience-based indicator measuring the behaviour of households over the past 7 days when they did not have enough food or money to purchase food. The rCSI is used to identify changes in household behaviour, especially in early stages of food crisis. Coping strategies are divided into three phases as per Table 1 below.

Table 1: Reduced Coping Strategy Index (rCSI) Acute Food Insecurity Thresholds

rCSI	Description
0 - 3	Phase 1: least severe including behaviours such as eating less preferred foods and/or reducing the number of meals eaten per day.
4 - 18	Phase 2: moderately severe including behaviours such as borrowing food from friends and relatives and/or adults skipping meals in order to provide children with food.
≥19	Phase 3: most severe including behaviours such as sending children to eat elsewhere and/or begging to make ends meet.

Photo page 1: WFP/Simon Diouf

Overall, 13% of surveyed households in the country reported that they relied on the most severe coping strategies (rCSI ≥19), meaning that these households were reducing their food portion to enable children to have food to eat in a day as well as going a full day without food [2]. In 2018 and 2019, the Malawi Vulnerability Assessment Committee collected nation-wide household-level data capturing consumption-based negative coping strategies. The results showed that some 20% of households in 2019 and 15% in 2018 were resorting to strategies classified as most severe in order to make ends meet. This means that, overall, the food security situation in 2020 is currently less severe as compared to the two previous years.

Further, the data illustrated that half of all surveyed households (51%) reported that they had used moderately severe behaviours (rCSI 4-18) such as borrowing food from friends and relatives and/or adults skipping meals in order to provide for children. An additional 36% of the households reported that they had employed at least one of the least severe behaviours of eating less preferred foods and/or reducing the number of meals (rCSI 0-3) (Table 2).

It is highly likely that this situation might worsen as the 2020/2021 lean season approaches in the coming months (Table 2). The survey results further illustrated that slightly more female-headed households (16%) were resorting to the use of more severe coping strategies compared to male-headed households (12%).

Table 2: Percentage of Households Employing Consumption-based Coping Strategies

		Percentage of Households Employing Consumption-based Coping Strategies		
		Phase 1	**Phase 2**	**Phase 3+**
Overall	**Malawi**	36%	51%	13%
Sex of Household Head	**Female-headed**	29%	55%	16%
	Male-headed	38%	50%	12%
Rural versus Urban	**Cities**	56%	37%	8%
	Rural Areas	31%	55%	14%
Region	**Rural North**	35%	56%	9%
	Rural Central	30%	51%	19%
	Rural South	27%	57%	16%

In this round, households in rural areas (14%) applied more severe strategies or a combination of several consumption-based coping strategies as compared to households residing in cities (8%). Further analysis will be conducted in subsequent reports when more data will be available to determine the coping strategies trends between rural and urban households. Most households in cities have greater income-generating opportunities, including petty businesses to supplement income sources. As a result, they tend to employ less severe consumption-based strategies as compared to the households in rural areas whose main income source is derived from the sale of agricultural produce.

When comparing coping across rural areas, households within the Rural Central (19%) and Rural Southern Areas (16%) generally employed more severe strategies than households in the Rural Northern Areas (9%). This is likely in part due to the fact that, despite a good harvest this year, there are some pockets of areas across the Southern and Central Regions that experienced poor harvests due to dry spells and/or a lack of farm inputs such as fertilizer.

[2] It was calculated at 20% the same time last year and 15.2% in 2018 for Severe (Phase 1).

Photo page 3: WFP/Badre Bahaji

The **Livelihood Coping Strategies Indicator (LCSI)** is derived from a series of questions regarding a household's experience with livelihood stress and asset depletion during the 30 days prior to the survey.

Coping is classified into broad categories:
Stress Strategies, Crisis Strategies, Emergency Strategies and Not coping/Food Secure

Livelihood Coping Strategies

The Livelihood Coping Strategies Indicator (LCSI) is derived from a series of questions regarding a household's experience with livelihood stress and asset depletion during the 30 days prior to the survey. Understanding the behaviours households engage in during crises provides valuable insights into the difficulty of their situation and how likely they will be to meet challenges in the future. Households were asked if anyone in their households had to engage in any of the ten negative livelihoods coping strategies because there was not enough food or money to buy food. The higher the LCSI value, the higher the degree of food insecurity.

Coping is classified into broad categories as per the below:

⇒ **Stress Strategies:** include behaviours such as borrowing money or spending savings and are indicative of a household's reduced ability to deal with future shocks due to a current reduction in resources or increase in debt.

⇒ **Crisis Strategies:** include behaviours such as selling productive asset and directly reducing future productivity, including human capital formation.

⇒ **Emergency Strategies:** including behaviours such as selling one's land, affect future productivity and are generally more irreversible or more dramatic in nature.

⇒ **Not coping/Food Secure:** households engaging in routine economic activities that do not involve any of these strategies are considered to be food secure.

On average, 16% of surveyed households around the country reported that they had employed emergency livelihood-based coping strategies within the last 30 days to access food, which is low and typical for the post-harvest period, as most households are consuming food from their own production. However, 33% of households were classified as using crisis and an additional 33% reported that they were resorting to stressed coping strategies.

Generally, male-headed households (17%) were employing slightly more emergency livelihood coping strategies than female-headed households (13%). Further, a high percentage of households residing in rural areas (18%) reported resorting to emergency coping strategies compared to households residing in urban areas (9%). In addition, more households within urban areas reported not utilizing any adverse livelihoods coping strategies (some 30%) compared to households within rural areas (approximately 14%) (Figure 2). The Rural Central Area had the highest proportion of households employing emergency livelihood coping strategies (25%) compared to the Rural Southern (15%) and Rural Northern Areas (16%).

Figure 2: Percentage of Households Employing Livelihood Coping Strategies

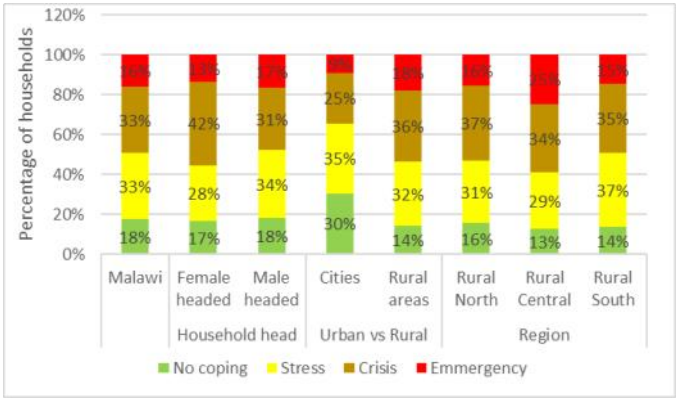


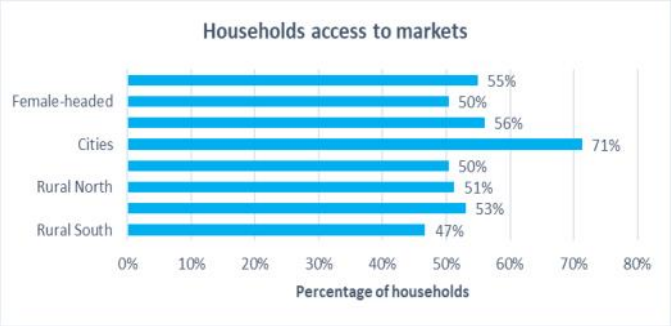
Photo page 4: WFP/Badre Bahaji

Market Access

During the survey, households were asked if at any point in the last 14 days they were unable to physically access markets or grocery stores for any reason. The objective was to determine if the restrictions due to COVID-19 had any impact on the households' access to food. Overall, 55% of the households in the country reported that they had unrestricted access to markets/ shops. The difference in market access between female-headed (50%) and male-headed households (56%) was not significantly different (Figure 3). Generally, the impact of COVID-19 on market access at the time of the survey had not been fully experienced, as a large percentage of markets were operating normally.

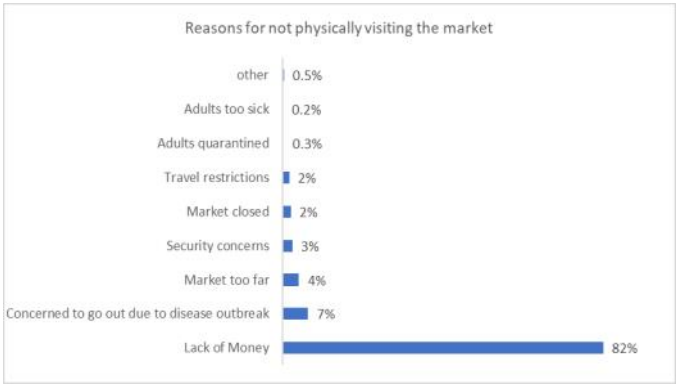
In urban areas, most urban-based households—some 70%—reported that they had not experienced change in access to markets/shops despite COVID-19 and any associated mitigating measures. For rural areas, about 50% of the households stated that they did not or were not able to access markets, likely due to a low dependency of markets during the post-harvest period, as most households are consuming food from their own production. Limited/low market access could also be attributed to the closure of some rural mobile markets by the local government or general restrictions due to the COVID-19 pandemic (Figure 3).

Figure 3: Percentage of Households Reporting Unlimited Access to Markets/Shops



Approximately 82% of surveyed households stated that a lack of money was the major reason why they did not have physical access to markets in the past 14 days, followed by 7% of the households who cited concerns of the disease outbreak, attributing it to COVID-19. Other reasons provided included markets being too far away (4%), security concerns (3%), market closures (2%), and travel restrictions (2%). A small percentage of households reported quarantine of adults (0.3%) and adults being sick (0.3%) as reasons why they did not access markets (Figure 4).

Figure 4: Reasons for Not Physically Accessing Markets



Humanitarian Assistance

The Round One data shows that a small percentage of interviewed households reported that they are receiving food assistance—10% in cities and 14% in rural areas. During this time of the year, given that Malawi is still within the post-harvest period, most households residing in rural areas are consuming food from their own production, while urban-based households typically rely predominately on markets for food access. Much as the Government has activated a COVID-19 response plan, a lot of responses were still on health measures while the crisis cash responses had not kicked off. It is also important to note that at the time of assessment, there was no reported or visible humanitarian crisis warranting a humanitarian response. As Malawi approaches the 2020/2021 Lean Season in the coming months, smallholder rural households may begin to run out of food from their own production and resort to markets and other means (piece-meal work, adverse coping strategies) for sourcing food. This trend is ubiquitous across rural areas for the entirety of the country.

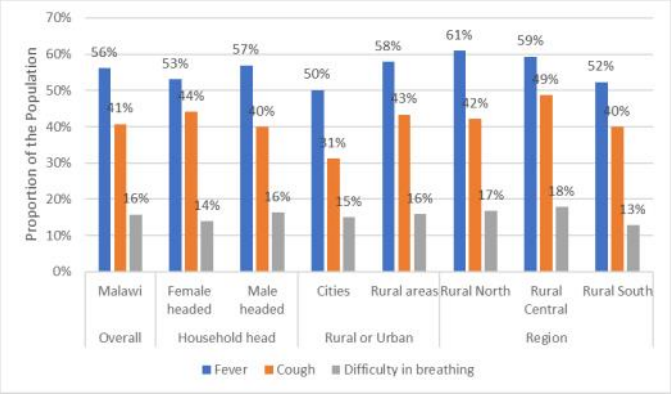
Photo page 5: WFP/Barbara Fang

Health-Related Indicators Related to COVID-19

Interviewed households were also asked whether at least one member of their household had suffered from a fever, cough, and/or had difficulty breathing in the past 14 days prior to the survey.

Fevers were reported as the most prevalent health problem that affected households (56%), followed by cough (41%), and difficulty breathing (16%). It is important to note that, although these are the primary symptoms of COVID-19, there are numerous reasons why a household member may have one or more of these symptoms and that a household's response may not be directly associated with the coronavirus disease. As observed in the 2016/2017 Integrated Household Survey that was conducted by the National Statistical Office (NSO), some 45% of households stated that they had been affected by fever during the last 14 days [3]. Further details on responses to these health-related questions are captured in Figure 5.

Figure 5: Percentage of Households with at least One-member Suffering from Fever, Cough, or Difficulty in Breathing in the past 14 days

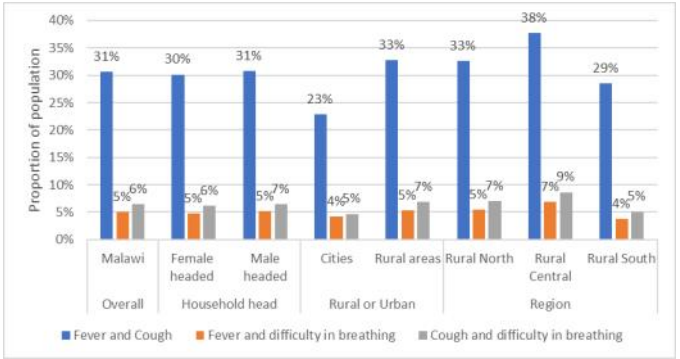


The analysis further reviewed the interaction between fever and cough; fever and difficulty breathing; and cough and difficulty breathing. There are numerous reasons why a household member may have the combined symptoms and that households' responses may not be directly associated with the coronavirus disease unless tested positive for the virus. Also significant is that the survey was conducted at the onset of winter season, a period characterized by high incidences of respiratory diseases. Overall, 31% of interviewed households in the country had a combined illness of fever and cough, with a slight difference between female-headed households (30%) and male-headed households (31%). Households residing in rural areas had a slightly higher prevalence of having a combined illness of fever and cough, with 33% of the

rural-based households affected compared to 23% of urban-based households. The higher rate of illnesses in rural areas could be attributed to poor hygiene practices compared to access within cities. Areas across the Rural Central Region had the highest proportion of households, some 38%, with a combined fever and cough compared to 33% in rural northern and 29% in rural southern areas (Figure 6).

The combined illness of fever and difficulty in breathing on average affected 5% of the households in the country. There was no difference based on the gender of the head of household. Finally, the combined illness of cough and difficulty in breathing affected 6% of the households in the country, with 6% of female-headed and 7% of male-headed households reporting that at least one family member was suffering from both symptoms. The results closely mirror the findings of the Demographic and Health Survey (DHS) 2015-16, which reported a 5.4% prevalence of Acute Respiratory Infection (ARI) among under-five children in the country. A certain percentage of these reported ARI would likely continue prevailing in adults.

Figure 6: Percentage of Households Suffering from the Combined Illnesses of Fever, Cough, and Difficulty in Breathing in the Past 14 Days



[3] National Statistical Office, November 2017. Integrated Household Survey 2016-17. Zomba. Malawi
[4]National Statistical Office, February 2017. Demographic and health 2015-16. Zomba. Malawi

Photo page 6: WFP/Badre Bahaji

The food security situation is **currently stable but could worsen as the lean season approaches** due to the evolution of COVID-19 which might lead the **Government to enact further or more severe mitigating measures** to curtail its spread.

Food security could further be compromised in part due to **market performance issues including inflows and outflows of commodities** as well as **maize price increases.**

CONCLUSIONS

The recent crop harvests have likely contributed to generally good household-level food consumption for households across the country, with almost all surveyed households being classified as having acceptable or borderline food consumption. This is an indication that households are consuming diversified food groups.

The percentage of households using severe Reduced Coping Strategies and emergency Livelihood Coping Strategies remains low, indicating a stable food security situation, because households can access food without resorting to adverse coping strategies. The situation might start to deteriorate in the coming months as the number of COVID-19 positive cases within the country continues to increase coupled with the onset of the 2020/2021 lean season.

A significant proportion of households in both cities and rural areas did not physically access markets likely due to a low dependency of markets during the post-harvest period, as most households are consuming food from their own production. The low access could also be attributed to the closure of some rural mobile markets by local governments or general restrictions due to the COVID-19 pandemic.

In summary, the food security situation is currently stable but could worsen as the lean season approaches due to the evolution of COVID-19 which might lead the Government to enact further or more severe mitigating measures to curtail its spread. Food security could further be compromised in part due to market performance issues including inflows and outflows of commodities as well as maize price increases. WFP will continue to monitor these factors rigorously and heighten this remote household food security monitoring as the season progresses towards lean period.

For more information please contact: Maribeth Black (maribeth.black@wfp.org), Head of VAM and M&E

WFP vam food security analysis

Annex: Sampling Methodology

⇒ The sample size was calculated based on the IPC guideline of a minimum of 150 per strata. The total sample size per strata is 180, as it includes a safety buffer of 30 in case the call center could not achieve the full sample in 30 days. Please find the IPC manual here and please refer to page 115, Table 28 for further details.

⇒ The sample was stratified at the ADM1 level to be able to report results at ADM1 level within 30 days of data collection.

⇒ The three regions in Malawi (ADM1) and the four cities of Mzuzu, Lilongwe, Blantyre and Zomba have been divided into 14 strata (ADM1 strata) and quotas have been provided at the ADM1 strata and district (ADM2) level. To compute ADM2 quotas we use Probability Proportional to Size (PPS) to make sure the results are representative at the ADM1 level.

⇒ All ADM1 strata quotas (daily, 10 days and monthly) and AMD2 caps (10 days and monthly) were reached for this sample.

⇒ In the subsequent rounds, WFP will switch to a panel approach after certain days of data collection, and these quotas will be updated to include the quotas for old/new respondents based on the methodology outlined.

Photo page 7: WFP/Badre Bahaji