EMERGENCY FOOD SECURITY MONITORING SYSTEM
MEASURING THE IMPACT OF COVID-19 ON FOOD SECURITY AND VULNERABILITY IN SIERRA LEONE

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Preface

The COVID-19 outbreak is posing an unprecedented context that has greatly tested the resolve and resilience of the global population. Whilst Sierra Leone may not have recorded a high COVID-19 caseload, the impact on economic and social activities has evidently been profound, triggering the not too distant memories of the 2014-15 Ebola Virus Disease outbreak.

The Food Security Monitoring System (FSMS) forms a critical component of the national Early Warning System (EWS), and has been routinely implemented on a bi-annual basis since 2018 by the Ministry of Agriculture and Forestry, with technical assistance lead by the United Nations World Food Programme (WFP) Vulnerability Analysis and Mapping (VAM) unit. The FSMS has provided quality and essential food security and vulnerability data to guide the design and geographical targeting of agriculture and livelihood initiatives to safeguard the wellbeing of those most in need to advance Sustainable Development Goal (SDG) 2: Zero Hunger.

Despite a challenging context, the June 2020 Emergency Food Security Monitoring System (E-FSMS) again provides critical and timely data to enhance our understanding of the impact of COVID-19 on vulnerability and food security. Concerningly, the E-FSMS again shows an increase in the proportion of food insecure Sierra Leoneans, from 47 percent in January 2020 to 63 percent in June 2020, demonstrating the considerable impact of COVID-19 on households that rely on fragile livelihoods. COVID-19 and containment measures including a series of lockdowns have particularly impacted on urban dwellers, many of who are petty traders living a hand to mouth existence. Smallholder farmers have also been seriously affected, shown by increasing food insecurity and vulnerability in rural districts. We hope that the findings and recommendations will support the design of responsive programmes to protect the lives and livelihoods of the most vulnerable and facilitate early recovery.

We would like to convey our appreciation and recognition to the time provided by the 3,124 household respondents who made this E-FSMS possible, in addition to the MAF and Statistics Sierra Leone enumerators who collected the data. The E-FSMS would also not have been possible without the generous support of the Government and people of Japan. Gratitude is also given to the United Nations Food and Agriculture Organisation and International Food for Agricultural Development who also contributed toward the E-FSMS.

Mr Dennis K Vandi

Hon. Minister of Agriculture and Forestry

Housainou Taal

Representative & Country Director
United Nations World Food Programme

Nyabenyi Tito Tipo

Representative
Food and Agriculture Organisation

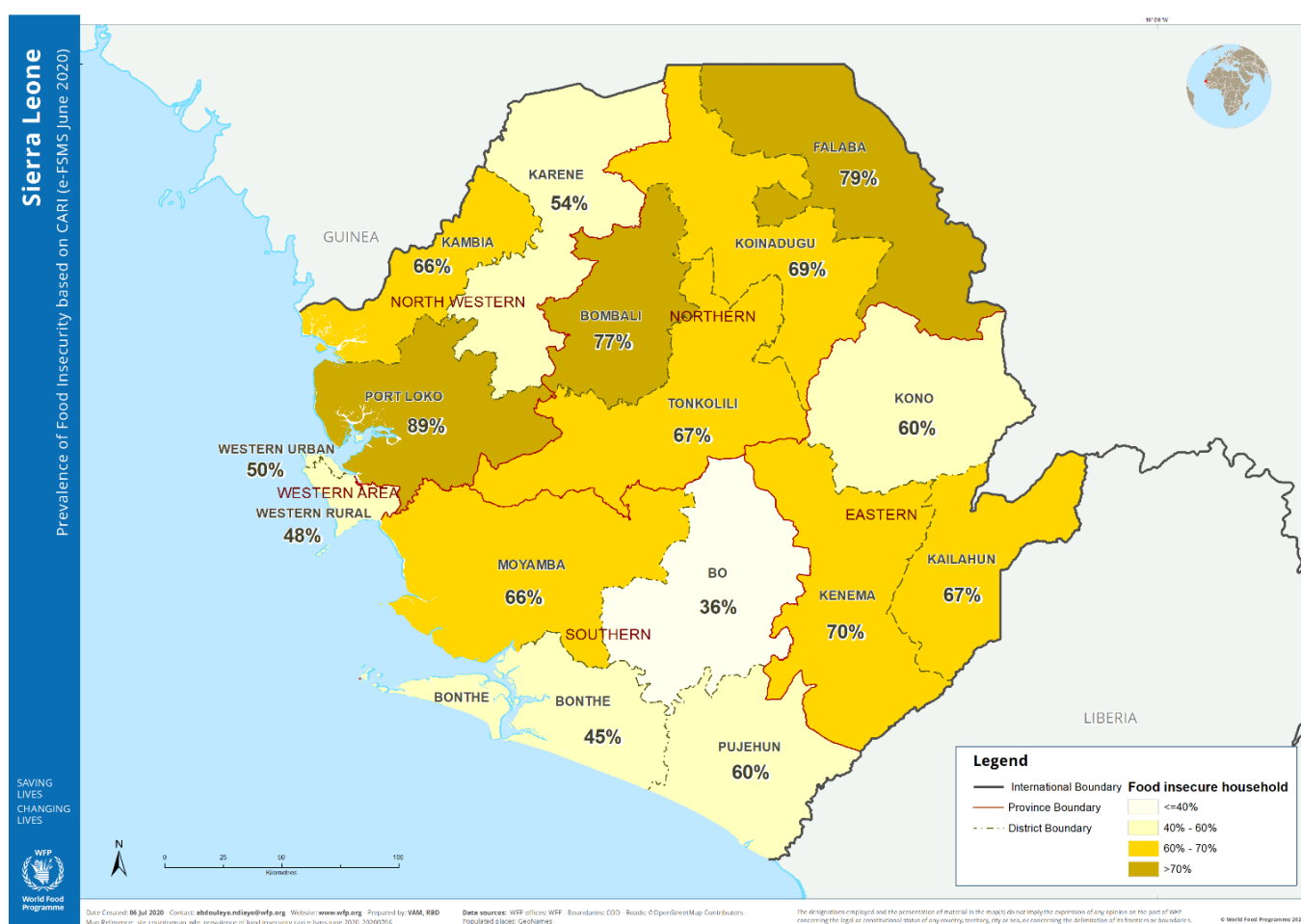# Contents

EXECUTIVE SUMMARY

The Emergency Food Security Monitoring System (E-FSMS) assessment was undertaken to analyse the impacts that the COVID-19 pandemic has had on the food security and vulnerability of households in Sierra Leone at the national and district levels since the last FSMS in January 2020, to provide empirical information for planning, decision making and programming to protect the most vulnerable. The E-FSMS will also inform the upcoming Cadre Harmonise, a tool that classifies the severity of food and nutrition insecurity and allow comparisons between Sierra Leone and other countries in the West and Central African region, due to take place between September and October 2020.

Who is food insecure and where do they live?

The food insecure are households who have lost purchasing power due to livelihood related impacts of the COVID-19 shock, which has compromised their ability to cope. They are adopting extreme, livelihood-based coping strategies, while spending more than 65 percent share of their total expenditure on food, as well as having poor and borderline food consumption patterns or poor dietary diversity. The highest proportion of households with these characteristics are in Port Loko, Falaba, Bombali, Kenema, Koinadugu, Tonkolili, Moyamba, Kono and Western Urban districts. In absolute terms, the highest number of food insecure people are found in Western Area Urban.

Food insecure people in the population

Approximately 5.1 million people (63 percent) in Sierra Leone are food insecure. This represents a 15.3 percent increase compared to January 2020 when approximately 3.9 million people (47.7 percent) were found to be food insecure. This represents a significant increase even when compared to the last FSMS conducted during the lean season in August 2019, when 53 percent of the population was found to be food insecure.

June 2020 Emergency Food Security Monitoring System, Sierra Leone

Underlying causes of their food insecurity and vulnerability

Several underlying factors are reported to be causing high food insecurity levels in Sierra Leone. Households were asked about the main difficulties experienced 30 days prior to the day of data collection for this assessment, and according to 44 percent, the COVID-19 pandemic is the primary driver of their food insecurity, due to measures including lockdown restrictions and inter-district movement restrictions. The second most common justification reported are price fluctuations, followed by temporary and chronic illness of a breadwinner.

Respondents cited a combination of issues as constraining agricultural production, including lack of inputs, high cost of inputs, irregular rains and crop damage caused by pest are of major concern for farming.

Recommended interventions

Pre-existing household food insecurity and vulnerability have been exacerbated by the COVID-19 outbreak, particularly lockdown and movement restrictions. The June E-FSMS found that an alarming 71 percent of households have poor and borderline food consumption patterns, with poor households simply lacking the money to buy sufficient food to live a healthy life, whilst inflation and fluctuation in food prices are adversely impacting on food security, nutrition and the general wellbeing of vulnerable people.

To enhance access to food it is recommended that in-kind food assistance be provided during the lean season (July – September) targeting severely food insecure households in rural areas, whilst food assistance in the form of cash transfers be provided to the most vulnerable in urban locations to maintain food consumption and boost local economies.

Lockdown restrictions and fear of contracting COVID-19 have undoubtedly reduced health seeking behaviour including routine immunizations and growth monitoring check-ups, whilst the economic downturn has reduced the ability of households, particularly women and children, to consume nutritious foods, as reflected by a deterioration in household Food Consumption Scores (FCS). Consequently, it is recommended that malnourished Pregnant and Lactating Women (PLWs) and children 6-59 months receive specialized nutritious foods to prevent a further deterioration in their status.

Farming households and petty traders reported that their livelihoods have been seriously affected by the COVID-19 outbreak, with many lacking enough inputs for farming and capital for petty trading. Considering this, it is recommended that financial institutions, especially rural banks and development partners, support smallholder farmers and petty traders with agricultural and business loans and grants.

To ensure that widespread food insecurity does not pose a barrier to children from poor households from advancing their education, school feeding activities should be scaled up to provide an effective social safety net.

INTRODUCTION

Household food security exists when all members always have physical and economic access to enough safe and nutritious food that meets their dietary needs and food preferences for an active and health life[i]. In contrast, food insecurity is a situation of uncertainty or limited availability and access to nutritionally adequate, safe and socially acceptable diets, often underscored by poverty, population growth and environmental and climate related issues that affect food production and distribution.

In Sierra Leone, domestic production by smallholder farmers, most of whom practice below subsistence agriculture, is insufficient to feed the country's population of 8 million people. Consequently, Sierra Leone imports about 80 percent of food consumed. Prior to the COVID-19 outbreak, it was projected that 425,000 tonnes of cereal would likely be imported during the 2019/2020 marketing year[ii], with these needs likely to have further increased given the negative impact of COVID-19 and land border closures on food supply chains.

Given this situation, in Sierra Leone most households, including those engaged in farming, rely on market purchases to meet their food needs. In recent years, food prices have continued to rise and fluctuate as the value of the local currency (Leones) declines. Fears of COVID-19 have negatively impacted on agriculture and livelihood activities, exacerbating an already challenging economic situation. Ministry of Agriculture and Forestry (MAF) and WFP price monitoring show how the prices of the staples rice and cassava prices rose by 8 percent and 17 percent respectively during the first quarter of 2020[iii]. COVID-19 impacts followed climate shocks in 2019, specifically heavy and erratic rainfall patterns that reduced agricultural production due to seed failure and crop damage, reducing food availability and access and causing upward pressure on food prices.

On 24 March 2020, His Excellency President Julius Maada Bio declared a 12-month national state of public health emergency for a period of 12 months. On 27 March 2020, Sierra Leone closed its land borders with neighbouring Guinea and Liberia, decreasing regional trade and the inflow of agricultural goods. On 31 March 2020, Sierra Leone registered its index case of COVID-19. On 10 April 2020, the Government instituted an inter-district ban which impeded the flow of agricultural trade. Measures to contain the spread of COVID-19 have had negative indirect impacts. Economic and farming activities have been reduced by a series of 3-day lockdowns and reduced business hours. As of 19 August, Sierra Leone has confirmed 1,959 cases of COVID-19.

It is against this background that MAF with support from the World Food Programme (WFP), the Food and Agriculture Organization (FAO), the International Fund for Agriculture Development (IFAD) and the Food Security Working Group (FSWG) decided to implement the E-FSMS assessment to better understand the impact of COVID-19 on food security and vulnerability. It is hoped that the E-FSMS will also provide key empirical data that decision makers can use to design, plan and target emergency and recovery initiatives to safeguard the food security of the most vulnerable at this unprecedented time.

SCOPE

The E-FSMS targeted a planned 3,456 household interviews nationwide, achieving 3,124 households. For comparability purposes, the E-FSMS used the same Enumeration Areas (EAs)/villages covered during the January 2020 FSMS and three earlier rounds of the FSMS. The sample frame was provided by Statistics Sierra Leone, with each district having 18 EAs/villages with 12 households targeted per EA. On average, the E-FSMS targeted 216 household interviews per district.

The districts of Karene and Falaba, created during the de-amalgamation of districts in 2017, were combined with Port Loko, Bombali and Koinadugu, districts; as the de-amalgamation occurred after the sample frame was constructed. The data for these two districts was extracted from the overall dataset and analysed separately.

OBJECTIVES AND METHODOLOGY

The main purpose of the E-FSMS was to analyse the impacts that the COVID-19 pandemic has had on food security and vulnerability in households at the national and district levels. To measure impact, data was compared to the results of the January 2020 FSMS. E-FSMS data was also utilized to inform the upcoming Cadre Harmonise (CH), a tool that classifies the severity of food and nutrition insecurity and allow comparisons between Sierra Leone and other countries in the West and Central African region, due to take place between September and October 2020.

The formula below was used to calculate required sample size at district level.

$$n = z^2 \times \frac{p(1-p)}{d^2} \times k$$

Where:

N =   Required minimum sample size
Z =   Z-score corresponding to the degree of confidence
P =   Estimated prevalence of the outcome being measured (food insecurity and/or malnutrition)
K =   Design effect (required for two-stage cluster sampling)
d =   Minimum desired precision or maximum tolerance error

Assuming that:

- ✓ Z=1.96 (95 percent degree of confidence)
- ✓ Prevalence of food insecurity per Jan. 2020 FSMS =48 percent
- ✓ A design effect of 2 has been applied based on various studies
- ✓ The level of precision is 10 percent per common practice
- ✓ 10 percent added for refusal or absence.

For accuracy and time saving purposes, data was collected digitally by 65 enumerators using smart phones, subsequently uploaded onto the Open Data Kit (ODK) platform/server in real time; with geospatial data technologies incorporated to allow for advanced analyses and graphic visualization of results in charts and maps.

Enumerators applied a combination of remote and face-to-face interviews while strictly observing COVID-19 Infection Prevention Control (IPC) measures, including the use of facemasks and social distancing. Mobile phone interviews were used to engage with respondents in urban areas (including Freetown, Kenema, Makeni and district administrative headquarter towns) where community transmission of COVID-19 is more prevalent. To ensure that the data collection methodology did not exclude the most vulnerable in rural areas, many of whom lack mobile phones or access to power infrastructure, data was collected using face to face interviews with strict adherence to COVID-19 IPC measures.

The data collection took place between 1 - 12 June 2020 after a 2-day training session for enumerators on interview techniques, guidelines, the questionnaire and food security indicators, all of which had been used for previous food security studies for comparability purposes to enable the tracking of food security and vulnerability at the district-levels over time, including:

> i) Food consumption;
> ii) Household expenditure on food;
> iii) Coping strategies;

The enumeration team was comprised of district-level statisticians from MAF and staff from Statistics Sierra Leone. Data processing, cleaning and analysis took place between 15 - 25 June 2020. Data processing and analysis was jointly undertaken by MAF Planning, Monitoring and Evaluation and Statistics Department (PEMSD) and WFP Vulnerability Analysis and Mapping (VAM) sub-unit using the Statistical Packages for Social Scientists (SPSS) and Microsoft Excel, with food security indicators analysed at district and national levels, with the overall food security analysis conducted using the Consolidated Approach in Reporting Indicators to food security (CARI) technique.

Data analysis was followed by a technical validation of the preliminary findings by stakeholders (MAF, WFP, FAO, IFAD, FSWG technical team), post-valuation of the data at community level and report writing.

FOOD SECURITY SITUATION

At national level, the June 2020 E-FSMS found that approximately 5.1 million Sierra Leoneans (63 percent) are moderately and severely food insecure. This represents an increase of 1.2 million people since the January 2020 FSMS (approximately 3.9 million, 47.7 percent)[iv].

At district level, the highest proportion of food insecure households are in Port Loko (89 percent), Falaba (79 percent), Bombali (77 percent), Kenema (70 percent), Koinadugu (69 percent), Tonkolili (67 percent), Moyamba (66 percent) and Kono (60 percent) districts. In absolute terms, the highest number of food insecure households are found in Western Area Urban.

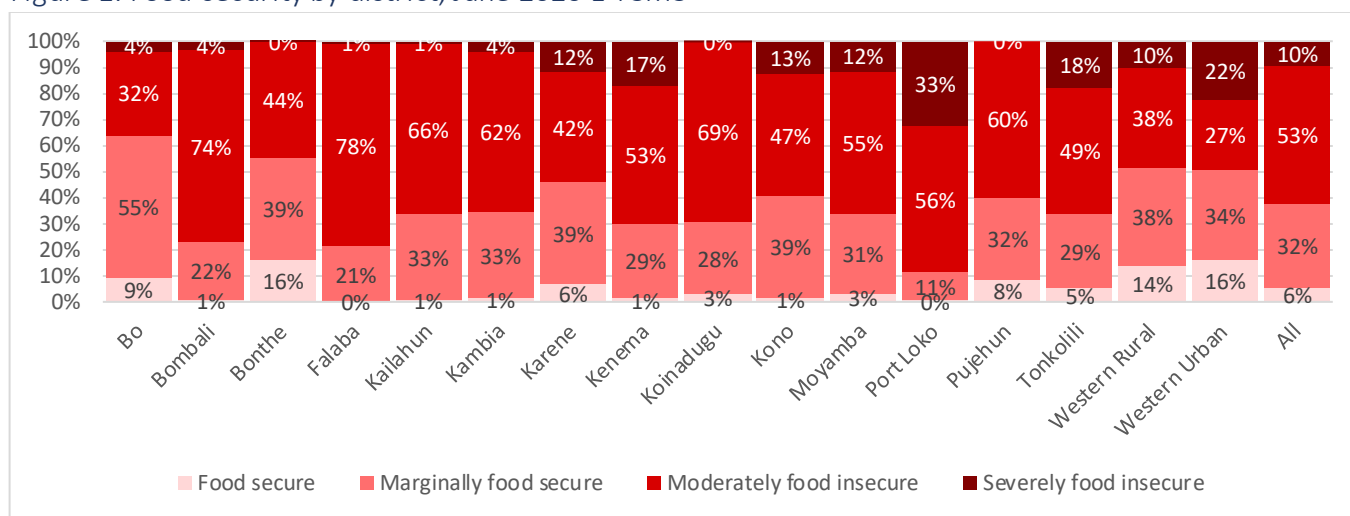Figure 1: Food security by district, June 2020 E-FSMS

Figure 2. Food insecurity by district and population, June 2020

District	Severely food insecure population	Moderately food insecure population	Total food Insecure population
Bo	25,944	214,966	240,910
Bombali	17,692	361,426	379,118
Bonthe	1,141	102,688	103,829
Falaba	2,868	184,999	187,867
Kailahun	6,780	400,031	406,812
Kambia	15,629	248,114	263,743
Karene	39,846	139,460	179,306