



# **State of Food Security in Sierra Leone 2015**

## **Comprehensive Food Security and Vulnerability Analysis**

Data collected September - October 2015







## Preface

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Sierra Leone's socio-economic situation has changed significantly since the last CFSVA was conducted in 2010. The transformation is largely due to the impact of Ebola, which negatively affected 50.9 percent of the nation's households. The disease severely affected the agricultural sector which experienced two years of low productivity, exacerbating the nutritional vulnerability of the rural population.

The *State of Food Security in Sierra Leone 2015* is the culmination of the collaborative efforts of the Ministry of Agriculture, Forestry and Food Security (MAFFS), the Food and Agriculture Organization (FAO) and the World Food Programme (WFP), who together conducted the *Comprehensive Food Security and Vulnerability Analysis* (CFSVA). This report has enabled the Government and development partners to examine the food security situation of the population at the chiefdom level for the first time in Sierra Leone, providing insight and trend analysis based on more than 34,000 household surveys. The analysis also considers multi-sectoral data and indicators contributing to the food security status of households across Sierra Leone.

Incomes amongst rural people were significantly reduced during the Ebola outbreak. Movement and trade restrictions, which coincided with the harvest season, resulted in high post-harvest losses. Further, a lack of access to food led farming households to frequently eat the seeds that they had intended for the planting season. With over 75 percent of the rural population relying on farming as their primary livelihood, low production rates seriously aggravated their food insecurity.

Investments in smallholder farmers, increased productivity for staples such as rice, and the expansion of sustainable domestic marketplaces have been previously identified as catalysts for elevating the state of rural agriculture in Sierra Leone. The CFSVA provides a framework to guide the Government and development partners to target, plan and coordinate effective recovery efforts in areas hit hardest by the outbreak and implement the 2015-2018 United Nations Development Framework (UNDAF).

The 2015 CFSVA was possible through the cooperation and technical inputs of multiple partners and organisations in Sierra Leone. Generous support from the European Union, the World Bank, the African Development Bank, the UN Resident Coordinator's Office and others made it possible to deliver this important benchmark on the state of food security in Sierra Leone.

We are grateful to all the enumerators, supervisors, district and regional coordinators for their hard work and commitment to make the assessment a success. Special thanks is also extended to the more than 34,000 households for giving the time and information required for the CFSVA. We are also indebted to the NGOs that contributed both in-kind as well as in cash, enabling us to bridge the resource gap and demonstrate the concept of ownership amongst the stakeholders.



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## Acronyms

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<b>ACODI</b>	Agency for Community Development Initiatives
<b>AfDB</b>	African Development Bank
<b>A4P</b>	Agenda for Prosperity
<b>BECE</b>	Basic Education Certificate Examination
<b>CARI</b>	Consolidated Approach for Reporting Indicators of Food Security
<b>CAWEC</b>	Community Action for the Welfare of Children
<b>CFSVA</b>	Comprehensive Food Security and Vulnerability Analysis
<b>CI</b>	Cooperazione Internazionale
<b>CIDO</b>	Community International Development Organization
<b>CPI</b>	Consumer Price Index
<b>CSI</b>	Coping Strategy Index
<b>DHS</b>	Demographic and Health Survey
<b>EA</b>	Enumeration Area
<b>EFSA</b>	Emergency Food Security Assessment
<b>EU</b>	European Union
<b>EVD</b>	Ebola Virus Disease
<b>FAO</b>	Food and Agricultural Organization
<b>FBO</b>	Farm Based Organisation
<b>FCS</b>	Food Consumption Score
<b>FSI</b>	Food Security Index
<b>GDP</b>	Gross Domestic Product
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>HA</b>	Hectare
<b>HDDS</b>	Household Dietary Diversity Score
<b>HDI</b>	Human Development Index
<b>HH</b>	Household
<b>HIV</b>	Human Immunodeficiency Virus
<b>ICADEP</b>	Inclusive Comprehensive Agriculture Development Programme
<b>IEZ</b>	Inshore Exclusion Zone
<b>IMC</b>	International Medical Corps
<b>IMF</b>	International Monetary Fund
<b>IOM</b>	International Organization for Migration
<b>IUU</b>	Illegal, Unreported and Unregulated
<b>JSS</b>	Junior Secondary School
<b>LE</b>	Sierra Leonean Leone
<b>MDGs</b>	Millennium Development Goals
<b>MND</b>	Micronutrient Deficiency Diseases
<b>MICS</b>	Multiple Indicator Cluster Survey
<b>MAFFS</b>	Ministry of Agriculture, Forestry and Food Security
<b>MEST</b>	Ministry of Education, Science and Technology
<b>MFMR</b>	Ministry of Fisheries and Marine Resources
<b>MND</b>	Micronutrient Deficiency
<b>MOHS</b>	Ministry of Health and Sanitation
<b>MSWGCA</b>	Ministry of Social Welfare, Gender and Children's Affairs
<b>MWR</b>	Ministry of Water Resources
<b>MW</b>	Mega Watt
<b>NERS</b>	National Ebola Recovery Strategy
<b>NGO</b>	Non-Governmental Organisation
<b>ODK</b>	Open Data Kit
<b>P4P</b>	Purchase for Progress
<b>PCA</b>	Principal Component Analysis

<b>PLW</b>	Pregnant and Lactating Women
<b>RCSI</b>	Reduced Coping Strategy Index
<b>SDGs</b>	Sustainable Development Goals
<b>SME</b>	Small and Medium Sized Enterprise
<b>SPSS</b>	Statistical Package for Social Sciences
<b>SSS</b>	Senior Secondary School
<b>SSL</b>	Statistics Sierra Leone
<b>SUN</b>	Scaling Up Nutrition
<b>UN</b>	United Nations
<b>UNCLOS</b>	UN Convention on the Law of the Sea
<b>UNDP</b>	United Nations Development Programme
<b>UNDAF</b>	United Nations Development Assistance Framework
<b>UNICEF</b>	United Nations Children's Fund
<b>UNWOMEN</b>	United Nations Entity for Gender Equality and the Empowerment of Women
<b>VAM</b>	Vulnerability Analysis and Mapping
<b>WASCE</b>	West African Schools Certificate Examination
<b>WB</b>	World Bank
<b>WFP</b>	World Food Programme
<b>WHH</b>	Welthungerhilfe
<b>WHO</b>	World Health Organization
<b>WI</b>	Wealth Index
<b>WVI</b>	World Vision International

# Executive Summary

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## *Overview, scope and method*

The 2015 Comprehensive Food Security and Vulnerability Analysis (CFSVA) was conducted at a time when the Ebola Virus Disease (EVD) epidemic started to recede in Sierra Leone. Data was collected using smart phones between September and October 2015, at the end of the “lean season” when the rains are heavy and frequent, roads become inaccessible (limiting people’s ability to access markets) and food stocks become depleted. The 2015 CFSVA surveyed a total of 34,328 households across all of Sierra Leone’s 149 chiefdoms and 18 urban wards, making it the largest ever food security assessment of its kind in the country. At the request of the Government, the survey disaggregates its results to the chiefdom level, the smallest administrative unit in Sierra Leone. This micro-level analysis enables the Government and its development partners to invest in pinpointed programming. The aim is to successfully target the most vulnerable in order to drive economic recovery as the country continues to implement the National Ebola Recovery Strategy (NERS). The results thus provide an unprecedented insight into the state of food security in Sierra Leone.

Western Area “Urban Slums” are considered as an additional “district” in the 2010 CFSVA to provide an insight into vulnerability and food insecurity within the capital Freetown. In line with this, Western Area “Urban Slums” are treated as a separate district in the 2015 CFSVA, thus allowing for trend analysis between the two surveys.

## *How many people are food insecure?*

The 2015 CFSVA found that 49.8 percent of households (3,186,187 people) are food insecure, i.e. their food consumption score is unacceptable, meaning they consume limited or insufficient food to maintain a healthy and active life. This represents nearly a 5 percent increase in food insecurity since 2010, when the total was 45.0 percent (2,586,040 people). A total of 8.6 percent of households (608,505 people) can be categorised as severely food insecure, an increase of 6.5 percent (373,539 people) from 2010.<sup>1</sup>

Food insecure households consume a diet insufficiently diverse for good health and wellbeing, with 56.8 percent of households consuming four or less food groups on a weekly basis, and 13.9 percent of households consuming two food groups or less on a weekly basis. A significant percentage (36.9 percent) of the population reported that they had not consumed food rich in protein during the last one week, whilst the majority (67.7 percent) of households reported that they had not eaten foods rich in iron.

## *Where do the food insecure live?*

Food insecurity is found throughout Sierra Leone. However, food insecurity is much higher in rural areas (59.7 percent) compared to urban areas (25.1 percent). At the chiefdom level, out of the 149 chiefdoms and 18 urban wards, 110 chiefdoms have food insecurity levels of over 50.0 percent and 57.0 have food insecurity levels below 50.0 percent. Compared to the results of the 2010 CFSVA, it was found that levels of food insecurity had at least doubled in the districts of Bombali, Bonthé, Kailahun and Kenema, likely to reflect the impact of two exogenous shocks: the EVD outbreak and the flooding that occurred in September 2015.

## *Who are the food insecure?*

The 2015 CFSVA examined households’ livelihood activities and the impact that different livelihoods had in determining their levels of food insecurity. In terms of population, the highest numbers of food insecure people were engaged in farming, including: production of vegetables and fruit (63.1 percent),

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<sup>1</sup> Population figures are based on the Sierra Leone 2015 Population and Housing Census.

food crops (62.3 percent) and cash crops (63.1 percent). Households suffering extreme food insecurity were found to be engaged in highly vulnerable livelihood activities, including: gathering and selling of wild/bush food (32.2 percent), begging (29.5 percent), wood cutting/charcoal production (20.6 percent) and selling palm oil (17.0 percent). In contrast, households engaged in salaried work and wage labour were more likely to be food secure (37 percent).

### *What are the drivers of food insecurity in Sierra Leone?*

**EVD related shocks:** Beyond the direct human cost of EVD, the epidemic had deep socio-economic impacts, with 53.3 percent of households reporting that they experienced one or more types of shock during the last year. To offset the impact of shocks, 60.3 percent of households employed a negative coping strategy, with the most commonly cited being a reduction in non-food expenditure (33.0 percent). Over half (52.9 percent) of households reported that they had experienced a decrease in their income levels as a result of the EVD epidemic.

**Low agricultural productivity:** The majority of households in rural areas (77.3 percent) cited agriculture as their main livelihood, characterised by traditional and environmentally degrading farming techniques, extremely low application of agro inputs, low yields, low incomes and high rates of poverty. Farming in Sierra Leone is dominated by the use of hand tools, with almost all farming households dependent on manual cultivation, greatly constraining potential production. Only 4.6 percent of farmers partially utilise irrigation infrastructure to grow their crops, and just 10.3 percent of households use improved seeds. The average crop land holding for rice was 0.94 hectares (ha) per household and 0.25 ha for cassava. Findings show how the impacts of EVD reduced local food production, with the 2014-15 rice harvest declining by 15 percent compared to 2013-14, whilst cassava production declined by 26.0 percent. Only 4.0 percent of farmers produce enough rice to meet the needs of their family for the whole year, demonstrating that nearly all farmers are producing below subsistence levels.

**Poverty and a lack of resilience:** On average, the 2015 CFSVA found that households spend 59.0 percent of their expenditure on food, with the remaining 41.0 percent spent on non-food items and services. In terms of food consumption scores (FCS), on average 19.9 percent of households are “poor”, 33.5 percent are “borderline” and 46.5 percent have “acceptable” FCS. Those in the borderline group are at risk of falling into the poor group in the event of any shock.

**Poor infrastructure (road and market accessibility):** Market access was shown to be a barrier to both food access and availability. Poor road infrastructure is reflected by almost half (47.7 percent) of communities reporting that roads serving their communities became impassable at some point in the year. In terms of market access, on average a household travels 7.7 miles to the nearest functioning market, significantly increasing the cost of purchasing food from the market for buyers. Long distances to reach markets also increases transportation costs for farming households selling their harvest, increasing the price of locally produced food commodities and reducing the competitiveness of locally produced food against imported products.

**Lack of access to safe water:** A lack of access to safe and clean water was found to be widespread in Sierra Leone, with 38.3 percent of households reliant on an unimproved water source for their drinking water. Around 31.0 percent of households fetch their water from a river or stream for drinking, posing a serious health risk and impacting upon an individual’s ability to absorb and retain nutrients, as river or stream water can carry water borne diseases and lead to diarrhoea.

**Gender inequality:** It was found that 21.2 percent of households are female-headed, and that this is higher in urban (26.8 percent) compared to rural areas (19.0 percent). Among farming households, two-fifths (42.0 percent) of women reported that they had access to land. In urban areas, far more women

(47.4 percent) were found to be engaged in petty trading activities than men (15.4 percent), representing a highly vulnerable livelihood characterised by low profit margins and high poverty.

**Lack of education opportunities and low participation in existing programmes:** Overall, 9.9 percent of boys and 10.0 percent of girls of school going age did not go to school during 2014-15. A concerning proportion (16.3 percent) of students dropped out of school during 2014-15, reflecting the impact of school closures during the EVD outbreak. A lack of access to education in Sierra Leone is a chronic issue, demonstrated by 18.4 percent of boys and 16.6 percent of girls never having been enrolled in school. Out of the children enrolled in school, 24.0 percent of children received a meal at school. Commonly cited reasons for low participation in education included a lack of money to pay for school fees and other costs (34.4 percent), fear of EVD (27.7 percent), and the closest functioning school being too far away to reach (8.7 percent).

**Lack of income generation diversification among farming households:** On average, 85.0 percent of households derive their income from one livelihood. With such a large proportion coming from a sole income source, vulnerability in the event of a shock increases. The proportion of households accruing their income from one source is higher in urban (89.0 percent) compared to rural areas (84.0 percent). A very low proportion of households are engaged in livestock production in Sierra Leone. On average, only 29.4 percent of households in rural areas keep livestock, including chickens. The livestock sector was heavily affected by the EVD outbreak, with the production of milk, already characterised by low levels of production prior to the outbreak, reducing by 40.5 percent between 2013-14 and 2014-15.

### **Recommendations**

The major underlying reasons for the high prevalence of food and nutrition insecurity in Sierra Leone are: (i) Low agricultural productivity; (ii) Low incomes; (iii) Limited infrastructure, and; (iv) Poor access to social services, such as education, health, water and sanitation. The Ebola outbreak further exacerbated the situation.

To build a more resilient, food secure and prosperous Sierra Leone, the 2015 CFSVA emphasises how the Government and development partners should approach the food security challenge via the agricultural sector, leveraging both development assistance and private sector investment to overcome impediments to growth. Challenges include: (i) Limited use of productive inputs such as improved seeds and farming technology; (ii) High pre- and post-harvest losses; (iii) Lack of processing and storage facilities; (iv) Poor access to markets; (v) Limited involvement in the fisheries and livestock sectors, and; (vi) High levels of rural-urban migration.

In April 2016, the Government and development partners met for a two-day workshop to validate the results of the CFSVA and to formulate evidence-based recommendations to improve the food and nutrition situation in Sierra Leone. The recommendations include:

#### **Strategy 1: Boost and transform the agricultural sector from subsistence to commercial production**

1. Promote and improve access to inputs, namely improved seeds and planting materials, agrochemicals, appropriate farming machinery (e.g. power tillers, rotavators, and extension services) and financial services, including the promotion of private sector participation and investment in the supply of agricultural inputs.
2. Enhance capabilities of farmers in improved production techniques, notably use of climate adaptive techniques and technologies, and business and marketing practices and skills.
3. Promote investments and participation in sustainable fish farming and livestock production.

4. Create markets and market opportunities for smallholder farmers to increase demand for local produce by strengthening linkages with Government institutions (e.g. school feeding programmes, army, police, etc.), food processing companies and private sector traders.
5. Improve physical access to markets, particularly in riverine areas, through feeder roads, bridge rehabilitation and augmented transport capacity to link high production areas to markets.
6. Examine opportunities to increase cash crop production, based on success in neighbouring countries with cashews and other low maintenance crops, to assist the poorest farmers.
7. Enhance understanding of cross-border trade in terms of volume, protocols and regulations, particularly for staple cereals and the impact on local food availability.
8. Enhance capabilities of farmers and other actors, especially women, in value addition for agricultural, fisheries and forestry products using the Purchase for Progress (P4P) model. This would involve skills development in food processing and post-harvest management and provision of appropriate equipment such as hermetic storage and drying facilities.
9. Incentivise and create further job opportunities in the agricultural sector, particularly for youth.

*Strategy 2: Expand social protection programmes and diversify livelihoods to reduce vulnerability and improve household access to food*

1. The results of the CFSVA should be used to inform the review and implementation of the *National Social Protection Policy*, particularly to ensure that the most vulnerable and the areas with highest levels of food insecurity are targeted with livelihood and safety net activities (e.g. seed protection, food/cash for work programmes and cash-based transfers).<sup>2</sup>
2. Promote livelihoods diversification through seasonal non-farm income generating activities for rural farming households.
3. Encourage public and private sector investments in rural areas to expand farm and non-farm employment opportunities, particularly for youth and vulnerable women.
4. Strengthen early warning systems to monitor and prepare for shocks to food and nutrition.
5. Enhance skills of petty traders in areas such as financial literacy and business management and improve access to financial services, particularly for women.

*Strategy 3: Adopt a preventative approach to address the under-nutrition situation in the country*

1. Given the various causes of under-nutrition, a multi-sector approach focused on prevention should be considered under the framework of the Scaling Up Nutrition (SUN) movement.
2. Encourage national dialogue on food fortification to improve consumption of micronutrient-rich food products, particularly for women and children.
3. Increase access to improved water and sanitation facilities and foster hygiene promotion, especially in rural areas.
4. Ensure that nutrition and dietary diversity are considered in the planning and implementation of agriculture, education and livelihood programmes.

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<sup>2</sup> The Ministry of Social Welfare, Gender and Children's Affairs is responsible for oversight of the implementation of the 2011 *National Social Protection Policy*.

*Strategy 4: Improve primary and secondary education and provide vocational training opportunities*

1. Improve access to quality primary and secondary schooling in rural communities in areas with the highest levels of out-of-school and non-enrolled children.
2. Promote incentives for teaching in rural areas to ensure equity of qualified teachers in both urban and rural areas.
3. Use the results of the CFSVA to inform and target education sector priorities, including school feeding activities, and reinforce community mobilisation efforts to improve enrolment and attendance rates.

*Strategy 5: Strengthen the policy and institutional framework to support agricultural sector growth*

1. Strengthen linkages between national coordination platforms that support: (i) Social protection; (ii) Food security and nutrition, and; (iii) Programmes that impact food security in order to promote synergies and complementary actions.
2. Expand the scope and terms of reference of the Food Security Working Group to support and monitor the recommendations of the 2015 CFSVA.
3. Ensure that the results of the CFSVA are used to support evidence-based planning and implementation of these actions.
4. Review the national food balance sheet with a view to developing a comprehensive policy framework for rice in Sierra Leone, considering: (i) Medium- and long-term growth targets for increased national production; (ii) Trade and tariffs strategy to expand market access and commodity diversification in rural areas, and; (iii) Investments in smallholder farmers by creating stronger linkages with the private sector.
5. Ensure that investments in the agricultural sector are spread across staples, cash crop, fruits and vegetables, fisheries and livestock to diversify livelihoods and reduce vulnerability to shocks.
6. Review the Government of Sierra Leone *2009 Private Sector Strategy* to see where adjustments can be made to stimulate increased private sector investment in agriculture, especially for the supply of quality inputs.

## Introduction

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The *Comprehensive Food Security and Vulnerability Analysis* was conducted between September and October 2015, at a time when Sierra Leone was emerging from an Ebola Virus Disease (EVD) outbreak that claimed the lives of 3,955 people and left 4,749 survivors and 8,345 orphans. EVD crippled the economy, increased food insecurity and reversed upward trends in health and nutrition. The critical measures adopted to curb the spread of the outbreak had a deep socio-economic impact and greatly eroded the food security and resilience of vulnerable households. Although EVD spread to Sierra Leone after initial outbreaks in neighbouring Guinea and Liberia, the country registered the highest number of cases and the largest contraction in terms of Gross Domestic Product (GDP) growth.

The 2015 CFSVA was designed and implemented for two main reasons:

1. To investigate how the overall, chronic (long-term) food security and nutrition situation had changed in Sierra Leone since the last survey was conducted in 2010;
2. To augment the understanding of the acute (short-term) impacts of EVD in Sierra Leone, and provide an empirical basis to optimally guide the socio-economic interventions of the Government and its development partners. These interventions will support improvements in food security and nutrition, enabling the recovery of affected populations.

The previous CFSVA undertaken - *The State of Food Security and Nutrition in Sierra Leone 2010* - surveyed 4,896 households and provided an analysis of the food and nutrition situation at the district level. As a result of the EVD outbreak, the scheduled 2014 follow up CFSVA was put on hold due to restrictions on movement and public gatherings at that time. To provide an insight into the immediate impacts of EVD on food security, the Ministry of Agriculture, Forestry and Food Security (MAFFS), WFP and development partners conducted an *Emergency Food Security Assessment* (EFSA) in June 2014. The EFSA showed a steep deterioration in the food security situation, and demonstrated how districts that previously showed acceptable levels of food security in 2010 were now experiencing acute food shortages as a result of the impacts of EVD.

The 2015 CFSVA is distinct from previous surveys undertaken in Sierra Leone in terms of scope and coverage, as well as the unprecedented collaboration between Government ministries, United Nations (UN) agencies, non-governmental organisations (NGOs) and donors. Close partnership was cultivated throughout the survey design and implementation phases, as well as during the validation of the results of the assessment. Surveying over 30,000 households, its coverage makes it the largest food security assessment undertaken in Sierra Leone. Its broad scope considers the political, socio-economic and agro-ecological context, as well as information on food supplies, markets, livelihoods, coping strategies, nutrition, health and education. The analysis identifies the root causes of food insecurity and provides an in-depth profile of food insecure people.

Another critical difference that sets the CFSVA apart from previous surveys is its rich analysis of food security indicators at the chiefdom level. In Sierra Leone there are 149 chiefdoms and 18 urban wards, by which the chiefdom is the third-level administrative unit following national and district administration. By providing chiefdom-level food security and nutrition analysis, the 2015 CFSVA allows for recovery and development interventions to be more sharply pinpointed by revealing which localities are most vulnerable. This includes pockets of food insecurity located inside districts with more favourable food security indicators, which may otherwise be overlooked by a district-level analysis. The level of analysis of the 2015 CFSVA provides an invaluable empirical tool for policy makers, enabling the Government and development partners to prioritise the allocation of resources to the most vulnerable populations, intended to strengthen and accelerate Sierra Leone's recovery from the EVD outbreak. The findings will be used to reflect on lessons learned from the country's progress towards achieving the

Millennium Development Goals (MDGs), which expired at the end of 2015, and the path forward to meet the targets set forth in the Sustainable Development Goals (SDGs).

Enumerators were trained in the use of smart phones which were used to conduct the questionnaire and store the feedback provided by respondents. This enabled the results of the survey to be uploaded as soon as they were completed, eliminating the need for time-consuming data entry processes and enhancing the accuracy and integrity of data.

The CFSVA demanded substantial resources and required the participation of members of the Government, non-governmental organisations (NGO), and donors who contributed toward making it a success by providing technical, physical and financial assistance, fostering broad ownership and ensuring high quality results.

The report was also used as a platform to gather chiefdom-level baseline data for a number of other programmes and projects. By integrating the collection of these indicators and working in close collaboration with development partners, this approach contributed toward greater standardisation of baseline data to measure and compare impact, economy and time effectiveness. Data collection for five other assessments was integrated into the CFSVA, an approach that whilst broadening the scope of the exercise, also made the actual implementation an even more challenging endeavour. It was agreed to integrate the assessments indicated below into the CFSVA 2015, with the respective implementing agency responsible for writing up their own reports to present their findings:

1. ICADEP baseline
2. World Bank project baseline
3. FAO/African Development Bank *Comprehensive Ebola Impact Assessment*
4. MAFFS Livestock programme baseline
5. FAO Value chain study

All partners provided their inputs to the survey design by incorporating indicators and questions concerning their own sector of specialisation. The CFSVA technical support group integrated the inputs into the questionnaire, which provided the main tool for this assessment. The final tools were presented to stakeholders for their review and approval prior to pre-testing and roll out of the actual assessment.

## Objectives

The Sierra Leone 2015 CFSVA will:

- Update the profiles of food insecure and vulnerable people and their livelihoods;
- Assess the impact of EVD on people's livelihoods;
- Compare levels of food insecurity between the 2010 and 2015 CFSVA;
- Identify the underlying causes and risk factors which result in food insecurity, the potential impact of these on the most vulnerable, and the seasonal patterns of food insecurity;
- Identify the medium- to long-term response options to address food insecurity;
- Provide recommendations for partners by identifying sectors and areas for interventions to address food insecurity and vulnerability.

## Partnership

The MAFFS requested the 2015 CFSVA. MAFFS emphasised its desire to undertake a chiefdom-level analysis in order to provide food security baseline data at the smallest administrative level in Sierra Leone, which had never previously been carried out. The 2015 CFSVA was a joint activity of the MAFFS, FAO and WFP, which provided the technical lead.

Considering the unprecedented size and coverage, it would not have been possible for only one agency to conduct the 2015 CFSVA. Therefore, MAFFS made a request to international donors to contribute to the process financially. WFP managed the project, with support from FAO and generous contributions from the European Union (EU), the World Bank, the African Development Bank (AfDB), FAO and 13 NGOs. A list of the NGOs that contributed to the CFSVA is provided in Appendix 2.

# 1 Sierra Leone Overview

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## 1.1 Climate and topography

Sierra Leone is located in western Africa on the Atlantic Coast, with the country's coastline extending 340 kilometres (km). It has four distinct geographical regions, composed of the coastal Guinean mangroves, the wooded hill country, an upland plateau and the eastern mountains. Large plateaus interspersed with high mountains characterise Sierra Leone; one such mountain is Mount Bintumani, which rises to 1,948 meters (6,391 ft.), making it one of the tallest in West Africa.

The country covers a total land area of 72,325 km<sup>2</sup>, with nearly 75.0 percent of land arable, thus suitable for crop cultivation. Approximately 56.0 percent of land is less than 150 meters above sea level. Upland and lowland ecologies make up 78.0 percent and 22.0 percent respectively of total arable land area. The uplands are composed of forest, savannah woodlands and grasslands while the lowlands comprise 690,000 hectares (ha) of inland valley swamps (IVS), 145,000 ha of 'bolilands' (or large, saucer-shaped basins), 130,000 ha of riverine grasslands and 200,000 ha of mangrove swamps.<sup>3</sup> Widespread deforestation and environmental degradation have dramatically transformed the landscape of Sierra Leone, with only 3.0 percent of primary forest cover remaining and fragile and highly bio-diverse mangrove swamp ecosystems critically under threat.

Sierra Leone has a tropical climate with two pronounced seasons: an intense rainy season from May to October and a dry season from November to April. The rainy season also coincides with the "lean season", when access to locally produced food is greatly reduced. Rainfall is highest in the coastal areas, with annual precipitation between 3,000-5,000 millimetres (mm) annually. This decreases inland and in the east of the country, where the average rainfall is 2,000-2,500 mm per annum. The dry season is characterised by dry weather with high humidity, with the exception of a short period of dry weather with low humidity (*harmattan*) when cool, dry winds blow in from the Sahara Desert, resulting in night time temperatures falling to as low as 16°C. The temperature varies from around 16°C to 33°C during the year. The soils are generally poor, lateritic (rich in iron oxide) and prone to heavy leaching. IVS are more fertile and provide the optimum area in terms of water management and environmental sustainability for agricultural production.

## 1.2 Economy

Sierra Leone is a least economically developed country with a GDP per capita of US\$675, ranking 167 out of 186 countries in terms of GDP per capita.<sup>4</sup> In the 2015 Human Development Index (HDI), a composite statistic of life expectancy, education, and income per capita indicators that are used to rank countries into four tiers of human development, Sierra Leone ranked 181 out of 188 countries.<sup>5</sup> Prior to the EVD crisis, Sierra Leone had one of the highest economic growth rates in the world, with post-civil war economic growth gaining pace after two substantial iron ore mines that started production in 2012, accelerating real GDP growth from an average of 5.7 percent per annum during 2010-11 to 15.2 percent and 20.1 percent in 2012 and 2013 respectively.<sup>6</sup> However, as a result of two exogenous economic shocks in 2014 (a huge drop in iron ore commodity prices and the EVD outbreak), real GDP growth slowed to 4.6 percent that year and further decreased to negative 21.5 percent in 2015. <sup>7</sup> Inflation has been

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<sup>3</sup>Asamoah Larbi, *Sierra Leone Country Pasture/Forage Resource Profile*, August 2012, accessible <http://www.fao.org/ag/agp/agpc/doc/counprof/Sierraleone/Sierraleone.htm>

<sup>4</sup> International Monetary Fund, *World Economic Outlook Database*, October 2015

<sup>5</sup> UNDP, *Human Development Report*, 2015, accessible

[http://hdr.undp.org/sites/default/files/2015\\_human\\_development\\_report.pdf](http://hdr.undp.org/sites/default/files/2015_human_development_report.pdf)

<sup>6</sup> International Monetary Fund, *World Economic Outlook Database*, October 2015

<sup>7</sup> IMF *World Economic Outlook*, April 2016

upwardly revised from 8.8 percent to 10.0 percent for 2014 and is projected at 8.3 percent for 2016.<sup>8</sup> Between September and October 2015 when the CFSVA data was collected, the national monthly consumer price index (CPI) increased from 254.11 percent to 256.50, resulting in a 0.94 percent increase in inflation.<sup>9</sup> The rising inflation rate was due in part to an increase in the price of food items, which is a trend that is forecasted to continue. Both the EVD crisis and the global reduction in iron ore commodity prices thus posed a great threat to macroeconomic stability, human development and poverty reduction.

Revenue shortfalls, mainly due to the contraction of iron ore mining and the EVD epidemic, contributed to the deterioration of the fiscal balance, with a projected deficit of 4.8 percent of GDP in 2015.<sup>10</sup> Both the current account balance and foreign reserve accumulation benefited from increased inflows related to EVD transfers, with the current account deficit narrowing to 13.8 percent of GDP, notwithstanding the loss of iron ore export receipts. Between mid-2014 and end-2015, the Leone depreciated 22 percent against the US dollar.<sup>11</sup> Considering these different trends, Sierra Leone faces a challenging immediate and medium-term outlook. As noted by the International Monetary Fund (IMF), the fiscal situation calls for enhanced revenue mobilisation and expenditure restraint while safeguarding social programs, especially on post-EVD recovery.<sup>12</sup>

### 1.3 Agriculture, forestry and fisheries

Agriculture, forestry and fisheries are the mainstay of the economy in terms of employment, engaging 61.1 percent of the labour force that are mostly working in subsistence agriculture.<sup>13</sup> The *2014 Labour Force Survey* showed that 90.7 percent of people who work in the agricultural and fisheries sector are self-employed, with 8.5 percent engaged in unpaid labour and just 0.8 percent working in wage employment.<sup>14</sup> Agricultural production is constrained by a number of factors including: (i) The near absence of any mechanisation of production; (ii) Labour shortages at the household level; (iii) Low quality seeds; (iv) Unavailability of agricultural inputs (fertiliser, insecticide, fungicide, tools, etc.); (v) High post-harvest losses, and; (vi) Infertile soils resulting in very low agricultural yields. While the agriculture, forestry and fisheries sector continued to account for more than half of GDP in 2014, its contribution has been declining, from 58.2 percent in 2009 to 50.5 percent in 2014.<sup>15</sup> This decrease does not reflect a reduction in output, but rather a structural change in the composition of the economy toward the industrial sector, specifically iron ore mining.

Sierra Leone's staple crops are rice and cassava. Important cash crops include cocoa, coffee, oil palm and cashew nut, which are produced both for local consumption and for export. Whilst the exportation of cash crops had been steadily increasing prior to the EVD outbreak, its potential contribution toward GDP is constrained by the absence of value adding processes in Sierra Leone. As a result of "slash and burn" cultivation methods, today only 3.0 percent of primary forest remains. Deforestation and land degradation have resulted in declining soil fertility, reducing yields and undermining the propensity for the next generation to achieve the objective of national food security. Unauthorised land usage and deforestation of the Western Area Peninsula Forest Reserve adjacent to the capital Freetown threatens to significantly lower the water table during the dry season which could cause water shortages.

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<sup>8</sup> African Development Bank, OECD, UNDP, *Sierra Leone Economic Outlook*, 2015

<sup>9</sup> Statistics Sierra Leone, *Consumer Price Index October 2015 Press Release*

<sup>10</sup> International Monetary Fund, *Press Release Number 15/413*, September 15 2015

<sup>11</sup> International Monetary Fund, *Press Release Number 16/237*, July 8 2016

<sup>12</sup> International Monetary Fund, *Press Release Number 15/413*, September 15 2015

<sup>13</sup> International Labour Organization (ILO) *et al*, *Sierra Leone 2014 Labour Force Survey Report*, September 22 2015

<sup>14</sup> *Ibid*

<sup>15</sup> African Development Bank, OECD, UNDP, *Sierra Leone Economic Outlook*, 2015

Deforestation of the Western Area Peninsula Forest Reserve adjacent to Freetown also increases vulnerability to flooding during the rainy season due to increased water run-off.

Sierra Leone's coastal waters provide an invaluable source of food rich in proteins, as well as employment to populations living along the coast. Fisheries production is composed of artisanal and industrial fishing, which combined are estimated to contribute up to 10.0 percent to GDP. As a result of illegal deep-sea fishing, Sierra Leone is prevented from realising the full potential of its marine resources. Although the *Sierra Leone Fisheries Law* does not permit any fishing vessel to fish within 35 nautical miles of the Inshore Exclusion Zone (IEZ), foreign sea vessels continue to enter the IEZ to exploit the country's rich marine resources. These activities are defined in the *UN Convention on the Law of the Sea* (UNCLOS) as illegal, unreported and unregulated or IUU fishing. In Sierra Leone, it is estimated that illegal fishing accounts for 50-60 percent of stock catch,<sup>16</sup> translating to an estimated loss of national income of \$29 million annually.<sup>17</sup>

## 1.4 Services

The service sector is composed of different sub-sectors, including trade and tourism, transport and communication, finance, insurance and real estate, administration of public services, health and education. The sector provides employment for 33.4 percent of people of working age, with 77.6 percent engaged in non-agricultural self-employment, 19.6 percent in wage labour and 8.5 percent working in an unpaid capacity.<sup>18</sup> The majority of self-employed workers in the service sector are engaged in petty trading activities. Service sector workers are more prevalent in urban centres, such as the capital Freetown, as well as in the district capitals including Makeni, Kenema and Bo. The service sector provides the highest share of wage employment, implying that Government policies designed to stimulate its growth could be an effective approach to reduce urban poverty.

As a result of the EVD outbreak, the tourist sector – a high-potential and labour absorptive industry – contracted, as visitors feared the epidemic and a majority of international flights serving Sierra Leone were suspended.

## 1.5 Mining and industry

Sierra Leone is richly endowed with minerals, including: diamonds, rutile, bauxite, gold, iron ore, kimberlite and limonite amongst others. The Sierra Leone diamond fields cover an area of approximately 4,785 km<sup>2</sup>, predominantly in the south-eastern and eastern parts of the country.

During the country's protracted civil war, Sierra Leone gained notoriety for the exportation of "blood diamonds" after the Revolutionary United Front (RUF) seized control of the country's diamond fields in Kono District. The development and application of legislation such as the Kimberly Process has contributed toward the formalisation of the export of diamonds in the post-war period.

Huge increases in the production of iron-ore, mostly driven by operations previously managed by African Minerals in the Sula Mountains, Tonkolili District (the largest iron ore deposit in Africa) and London Mining in Marampa, Port Loko District, contributed toward a structural shift in the Sierra Leone economy towards mining and quarrying, which grew from contributing just 3.0 percent to GDP in 2009 to 20.2 percent in 2014.<sup>19</sup> However, as a result of plummeting global iron ore commodity prices, both mining companies went into administration resulting in production declining and real GDP growth

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<sup>16</sup> Marine Resources Assessment Group Ltd., *Review of Impacts of Illegal, Unreported and Unregulated Fishing on Developing Countries*, 2005, May 2011

<sup>17</sup> Mark Rowe, "Fishy Business", *Geographical*, August 2013

<sup>18</sup> International Labour Organization (ILO) et al, *Sierra Leone 2014 Labour Force Survey Report*, September 22<sup>nd</sup> 2015

<sup>19</sup> African Development Bank, OECD, UNDP, *Sierra Leone Economic Outlook*, 2015

slowing. Although much attention has been paid to mining and extractive industries in terms of their contribution toward Sierra Leone’s impressive GDP growth rate, in 2015 this sector provided only 1.4 percent of all jobs, similar to the share provided by construction (1.2 percent).<sup>20</sup> Thus recent high economic growth is likely to only have had a limited impact in terms of poverty reduction.

Table 1: GDP by sector, 2009 vs. 2014 (% of GDP at current prices)

Sector	2009	2014
Agriculture, forestry, fishing and hunting	58.2	50.5
<i>of which fishing</i>	8.1	10.5
Mining and quarrying	3.0	20.2
Manufacturing	2.2	1.6
Electricity, gas and water	0.2	0.3
Construction	1.4	0.9
Wholesale & retail trade, vehicle repair, household goods, restaurants and hotels	9.4	7.7
<i>of which hotels &amp; restaurants</i>	0.4	0.3
Transport, storage and communication	6.7	3.8
Finance, real estate and business services	7.6	2.4
Public administration and defence	3.7	4.4
Other services	7.5	8.2
GDP at basic prices/factor cost	100	100

Source: African Development Bank, OECD, UNDP, *Sierra Leone Economic Outlook*, 2015

## 1.6 Energy

Expanding access to energy is one of the key targets outlined in the *Presidential Recovery Priorities*. Poor access to electricity is recognised as a major impediment to long-term economic growth in Sierra Leone. Addressing this constraint is a focus of Sierra Leone’s *Agenda for Prosperity*, which includes the goal of “cheap, affordable energy for all”. However, the national electrification rate remained below 10.0 percent in 2011, with the vast majority of rural areas lacking access to electricity and the country’s four major cities consuming 90.0 percent of available electricity. Biomass from fuel wood and charcoal still accounts for more than 85.0 percent of total energy use,<sup>21</sup> placing unsustainable pressure on the country’s natural resource base, which has already been heavily depleted.

Sierra Leone’s installed power generation capacity stands at only 90 Mega Watts (MW) per annum, far outstripped by estimated national demand of 300-500 MW. The largest contributor to power generation is the Bumbuna Hydroelectric Dam, which produces 62.0 percent of overall national power.<sup>22</sup> However, hydroelectric power is seasonal and greatly reduces during the six-month long dry season, leading to even more frequent power outages. As a result of the unreliable and expensive national energy provision, it is estimated that 33,000 generators are being used across Sierra Leone.<sup>23</sup> Expensive to use, running generators dramatically contributes to environmental degradation and reduced air quality. In addition, generator usage increases the costs of production for small and medium sized enterprises (SMEs), reducing the price competitiveness of goods and services produced in Sierra Leone.

## 1.7 Health and sanitation

The rapid spread of the EVD epidemic highlighted weaknesses in Sierra Leone’s health system, whilst the tragic deaths of 328 health workers from EVD poses a longer-term human resource challenge in a

<sup>20</sup>International Labour Organization (ILO) *et al*, *Sierra Leone 2014 Labour Force Survey Report*, September 22<sup>nd</sup> 2015

<sup>21</sup> Sierra Leone Ministry of Energy, *Expression of Interest to Participate in the Scaling Up Renewable Energy in Low Income Countries Programme (SREP)*, 2014

<sup>22</sup>*Ibid*, Sierra Leone Ministry of Energy, SREP, 2014

<sup>23</sup> *Ibid*, Sierra Leone Ministry of Energy, SREP, 2014

country where physician to patient ratios were only 3 per 100,000 prior to the outbreak, one of the lowest in Africa.<sup>24</sup>

Sierra Leone has the lowest life expectancy in the world (45 years), the highest maternal mortality rate (1,165 per 100,000 live births) and among the highest infant and child mortality rates at 92 per 1,000 births for infants and 70 per 1,000 children under five.<sup>25</sup> HIV prevalence is estimated at 1.5 percent, with around 60,000 people living with HIV.<sup>26</sup> Malaria poses a critical public health challenge and accounts for 17.0 percent of deaths.<sup>27</sup>

Access to safe water poses a critical health risk for Sierra Leoneans, particularly affecting those living in rural areas, with 11.0 percent of the urban population and 52.5 percent of the rural population without access to an improved water source. Those with access to an improved water source in rural areas are served almost exclusively by protected wells. The 52.5 percent of the rural population without access to an improved water source rely on surface water (25.2 percent), unprotected springs (17.1 percent) and unprotected wells (9.9 percent), resulting in a high prevalence of diarrhoea, one of the leading causes of death among children.<sup>28</sup> In urban areas, people living in congested urban slums are vulnerable to seasonal cholera outbreaks, which coincide with flooding during the intense seasonal rains between May and October. During the last cholera outbreak in 2012 around 12,000 people were infected, resulting in 274 deaths.<sup>29</sup>

## 1.8 Education

Sierra Leone's education sector continues to suffer from the effects of the civil war, when many schools were destroyed or damaged (an estimated 1,270 schools destroyed), and 67.0 percent of all school aged children were forced out of school as a direct result of the conflict, significantly interrupting their education.<sup>30</sup> The country implements a three-tier education system, consisting of six years of primary school, three years of junior secondary school (JSS) and four years of senior secondary school (SSS). After completing the JSS level, students sit a Basic Education Certificate Examination (BECE) to determine whether they progress to the SSS level. During the final year of SSS, students sit the West African Schools Certificate Examination (WASCE), where Sierra Leonean students compete directly with other students in Anglophone West Africa.

Primary school participation survival rate to the last grade is high at 92.5 percent,<sup>31</sup> demonstrating the commendable progress made by the Government and development partners in promoting equitable access to education. However attainment dramatically reduces at the secondary level, where net attendance ratios are 39.9 percent and 33.2 percent for boys and girls respectively. Low levels of education attainment are an economic phenomenon, with 37.0 percent of children from the poorest quintile out of primary school compared to only 7.0 percent of the richest quintile. Household income status becomes an even more important factor which impacts enrolment at the secondary level, with 53.0 percent of children from the poorest wealth quintile out of school compared to just 15.0 percent

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<sup>24</sup> World Health Organization, World Health Statistics, 2006

<sup>25</sup> Government of Sierra Leone, *Demographic and Health Survey*, 2013

<sup>26</sup> Government of Sierra Leone, *Sierra Leone National Aids Response Progress Report*, 2014

<sup>27</sup> Centre for Disease Control, *Sierra Leone Fact Sheet*, December 2013

<sup>28</sup> Government of Sierra Leone, *Demographic and Health Survey*, 2013

<sup>29</sup> World Health Organization, *Cholera in Sierra Leone: the case study of an outbreak*, September 2012

<sup>30</sup> Bureau of International Labour Affairs, U.S. Department of Labor, *Findings on the Worst Forms of Child Labor*, 2002

<sup>31</sup> UNICEF, Multiple Indicator Cluster Surveys (MICS), 2011

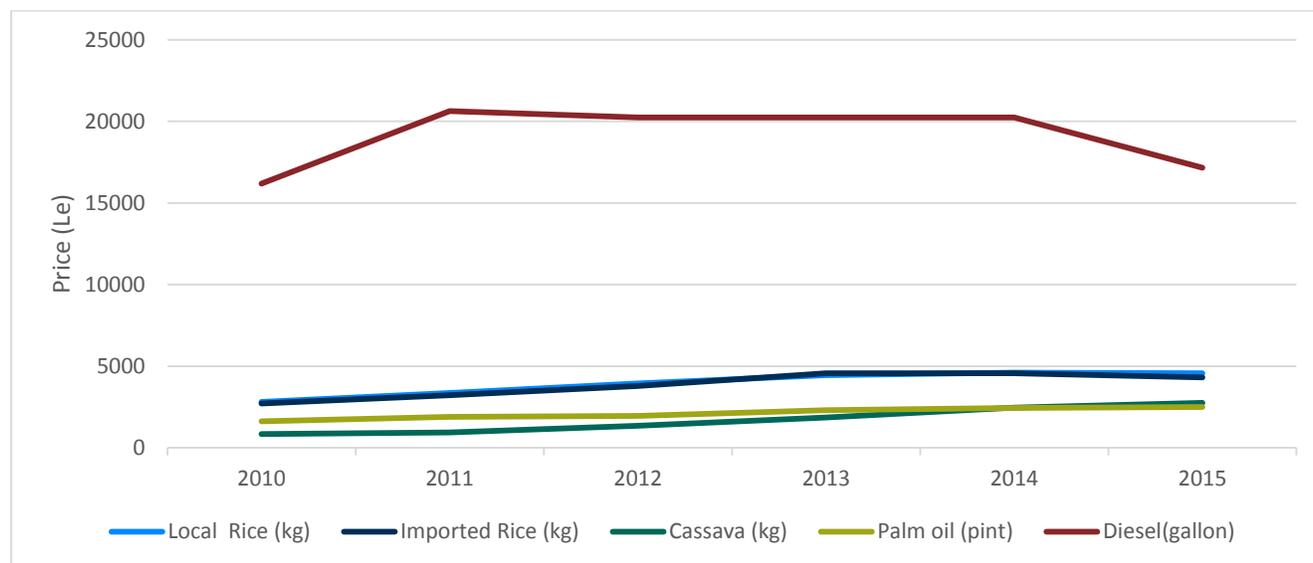
from the richest wealth quintile.<sup>32</sup> Disparities in educational attainment by gender result in higher rates of illiteracy among women (63.0 percent) compared to men (41.0 percent).<sup>33</sup>

## 1.9 Market dependency and price stability

Sierra Leone is a net importer of milled rice and refined petroleum, with its dependency on these two key commodities making poor households highly vulnerable to international price fluctuations. With household expenditure on food alone representing 59.0 percent of total household expenditure, price hikes can have a detrimental impact on the ability of poor households to cover the costs of other vital services, such as health and education.

The price of staple rice, both imported and locally produced, has been steadily increasing between 2010 and 2015, with the price of local rice per kilogram (kg) rising by 38.0 percent and the price of imported rice rising by 37.0 percent. During the same timeframe, the price of cassava dramatically increased by 327 percent per kg. Palm oil prices per litre also increased by 34.0 percent. Price increases for staple food items and oil are assumed to place a great strain on vulnerable households. Following global trends, the price of diesel fuel, predominantly used for generator usage, sharply declined from an average price of 20,250 Leones (Le) per gallon in 2014 to 17,156 Le per gallon in 2015.

Figure 1: Prices of key commodities (in Leones)

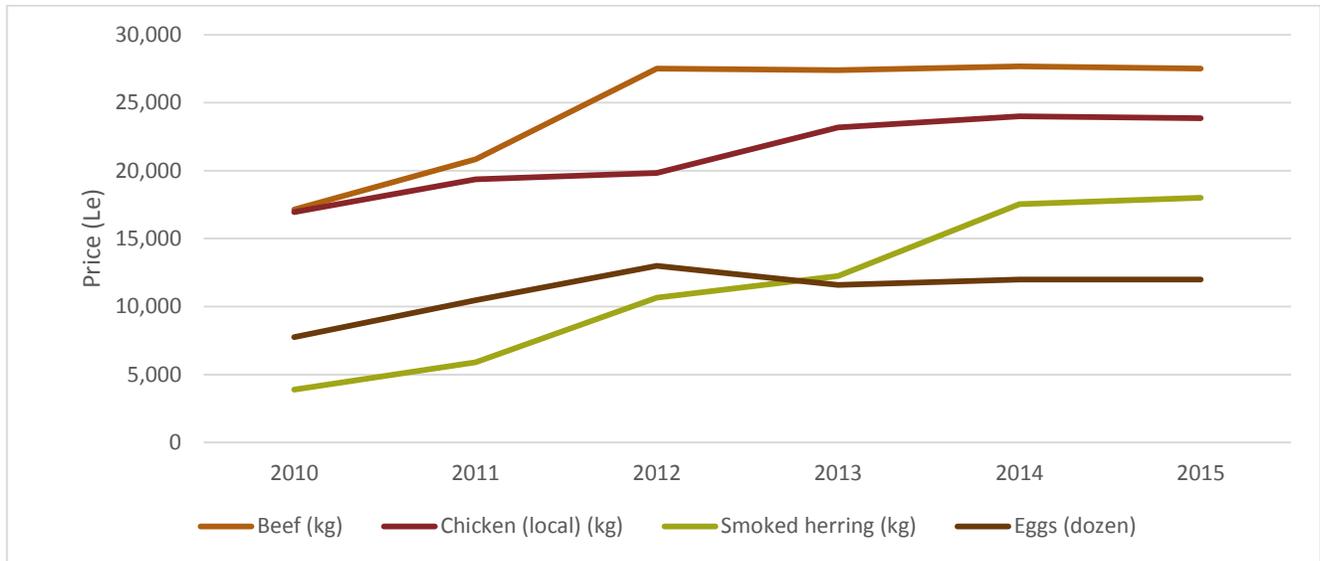


Regarding protein rich food, the price of smoked herring, a locally produced commodity, increased by over 300 percent between 2010 and 2015, thus becoming increasingly inaccessible for households with limited purchasing power. The price of locally-produced beef almost doubled between 2010 and 2012, before stabilising at around 27,500 Le per kg in 2012. Locally-reared chicken prices also increased by approximately 150 percent between 2010 and 2013. In addition, imported eggs almost doubled in price between 2010 and 2012, before reducing in price and stabilising in 2015. The overall trend of rapidly increasing prices of protein rich foods compared to income levels will undoubtedly have had a negative impact on the food consumption patterns of vulnerable households.

<sup>32</sup> FHI 360 and the Education Policy and Data Center, *Sierra Leone National Educational Profile 2014*, accessible [http://www.epdc.org/sites/default/files/documents/EPDC%20NEP\\_Sierra%20Leone.pdf](http://www.epdc.org/sites/default/files/documents/EPDC%20NEP_Sierra%20Leone.pdf)

<sup>33</sup> UNESCO Institute for Statistics, *September 2015*

Figure 2: Average prices of protein food products (in Leones)



## 2 General Household Information

### 2.1 Household statistics

#### 2.1.1 Gender of the household's head

Overall, in Sierra Leone 21.2 percent of households are female-headed, with 26.8 percent of these households located in urban areas and 19.0 percent in rural. By district, the highest percentages of female-headed households are in Bonthe (26.9 percent) and Bo (26.7 percent), followed by Kailahun (25.0 percent) and Kenema (24.1 percent). The lowest percentage of female-headed households are in Tonkolili (13.7 percent), followed by Kambia (15.0 percent) and Port Loko (17.1 percent).

#### 2.1.2 Age of the household's head

The average age of the household's head in Sierra Leone is 45.5 years, with no significant difference between urban and rural areas. Similarly, all districts showed a range of average age from 40.0 to 48.1 years. On the other hand, the lowest age of household head ranged from 11.0 to 21.0 years, with variations between the districts. In Bonthe and Moyamba districts the youngest household head is 11.0 years, compared to 21.0 in Western Rural. The oldest household head is 99.0 years old (see Annex 1 for details). Polygamy is common in Sierra Leone although more prevalent in rural areas compared to urban localities. The average number of spouses per household head is 1.3 in rural and 1.1 in urban areas. The highest number of spouses was recorded in Port Loko (1.5) and Koinadugu (1.4) districts (see Annex 2 for details).

Table 2: Population 15 years and above having received some education (%)

District	Male with some education	Female with some education	Total with some education
Kailahun	32.3%	20.9%	53.2%
Kenema	34.1%	24.9%	59.0%
Kono	27.9%	21.7%	49.6%
Bombali	24.9%	18.8%	43.7%
Kambia	27.8%	14.6%	42.4%
Koinadugu	25.2%	16.2%	41.4%
Port Loko	24.0%	14.0%	38.0%
Tonkolili	28.9%	20.0%	48.8%
Bo	32.5%	26.0%	58.5%
Bonthe	27.0%	17.8%	44.8%
Moyamba	28.5%	20.5%	49.0%
Pujehun	26.7%	16.5%	43.3%
Western Area Rural	36.9%	29.7%	66.6%
Western Area Urban	43.1%	41.7%	84.9%
Urban Slums <sup>34</sup>	37.2%	31.9%	69.1%
Rural	27.1%	17.4%	44.5%
Urban <sup>35</sup>	40.6%	37.6%	78.3%
Average	31.1%	23.4%	54.4%

<sup>34</sup> Western Area "Urban Slums" are considered as an additional "district" in the 2010 CFSVA to provide an insight into vulnerability and food insecurity within the capital Freetown. In line with this, Western Area "Urban Slums" were treated as a separate district in the 2015 CSFVA, thus allowing for trend analysis between the two surveys.

<sup>35</sup> The definition of "urban" in Sierra Leone is based upon either i.) Population above 2,000 people; and, or ii.) Availability of the following social infrastructure (hospital, police station, secondary school and market place).

### 2.1.3 Literacy level of the household's head

Nationally 54.4 percent of adults (15 years and above) have received some formal education, ranging from attending some primary grades up to university level.

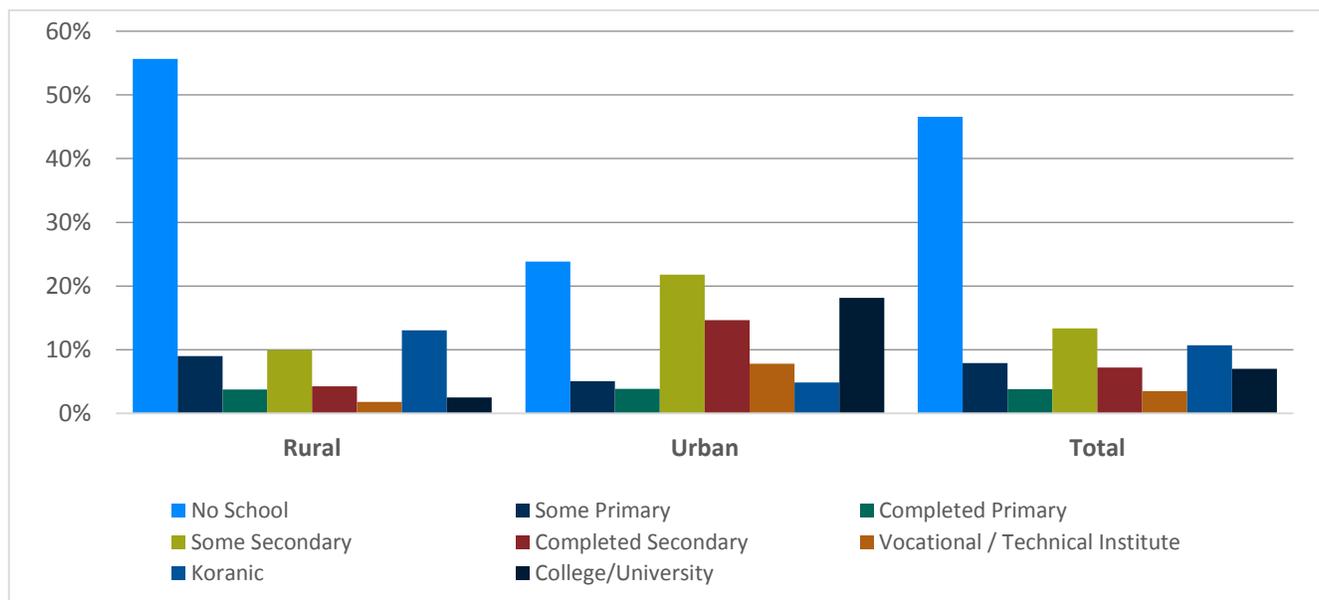
In urban areas, this percentage is significantly higher (78.3 percent) compared to rural areas (44.5 percent). At the district level, the highest percentage of people with some education were found in Western Area Urban (89.1 percent), followed by Urban Slums (69.1 percent), Western Rural (66.6 percent), Kenema (59.0 percent) and Bo (58.5 percent). Nationally, the average gender parity of adults receiving some education was found to be in favour of males (31.1 percent) compared to females (23.4 percent).

### 2.1.4 Education level of the household's head

The level of educational attainment of the household's head is a key determinant of earnings, health, education of children and social status. The majority of household heads are illiterate, especially in rural areas where 55.7 percent never attended school. Overall, 46.5 percent of surveyed household heads have no education, while 7.9 percent had attended some levels of primary school. In urban areas, the situation is comparatively better, where 23.8 percent of household heads have no education, 14.7 percent had completed secondary education and 18.1 percent are college/university graduates.

The highest percentage of illiterate household heads live in Port Loko (65.2 percent), followed by Koinadugu (62.2 percent) and Kono (58.9 percent) districts (see Annex 3 for details).

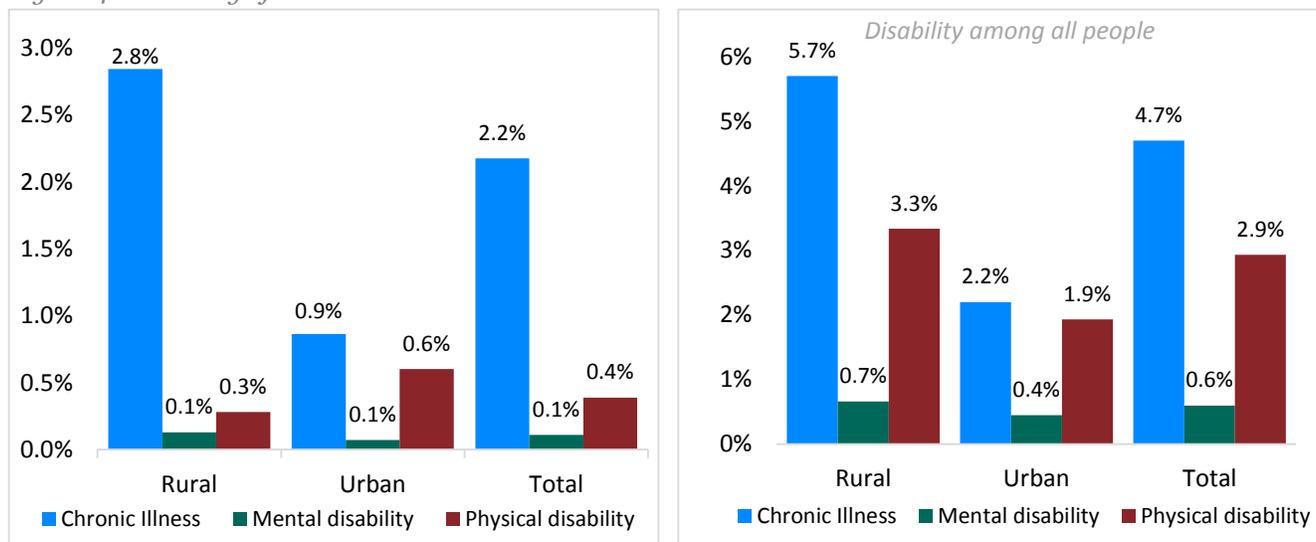
Figure 3: Education level of household's head



### 2.1.5 Disability of the household's head

The disability of a household's head makes households highly vulnerable and can constrain them to meet their basic needs. On average, 2.7 percent of household heads were living with one of three types of disability: chronic illness, mental disability or physical disability. The most common form of disability is chronic illness, accounting for 2.2 percent (see Annex 4 for details).

Figure 4: Disability of household's head



The overall disability rate among the population is 8.4 percent, with chronic illness accounting for 4.5 percent, physical disability for 2.9 percent and mental disability for 0.6 percent. The overall disability rate is higher in rural (9.7 percent) than urban (4.6 percent) areas. Similarly, the overall rate of chronic illness is higher in rural (5.7 percent) compared to urban areas (2.2 percent).

### 2.1.6 Household size

On average, Sierra Leonean households are composed of 5.4 members, with urban households almost the same size (5.2) as rural ones (5.4).

Table 3: Average household size and gender composition

District	Male members	Female members	Total members
Kailahun	2.6	2.8	5.4
Kenema	2.8	3.0	5.8
Kono	3.0	3.2	6.1
Bombali	2.7	3.0	5.7
Kambia	2.9	3.0	5.8
Koinadugu	2.5	2.7	5.1
Port Loko	2.8	3.1	5.9
Tonkolili	2.8	2.9	5.8
Bo	2.9	3.2	6.1
Bonthe	2.2	2.4	4.6
Moyamba	2.5	2.6	5.1
Pujehun	2.5	2.8	5.3
Western Area Rural	2.1	1.9	3.9
Western Area Urban	2.1	2.3	4.3
Urban Slums	2.1	2.3	4.5
<b>Rural</b>	<b>2.6</b>	<b>2.8</b>	<b>5.4</b>
<b>Urban</b>	<b>2.5</b>	<b>2.8</b>	<b>5.2</b>
<b>Average</b>	<b>2.6</b>	<b>2.8</b>	<b>5.4</b>

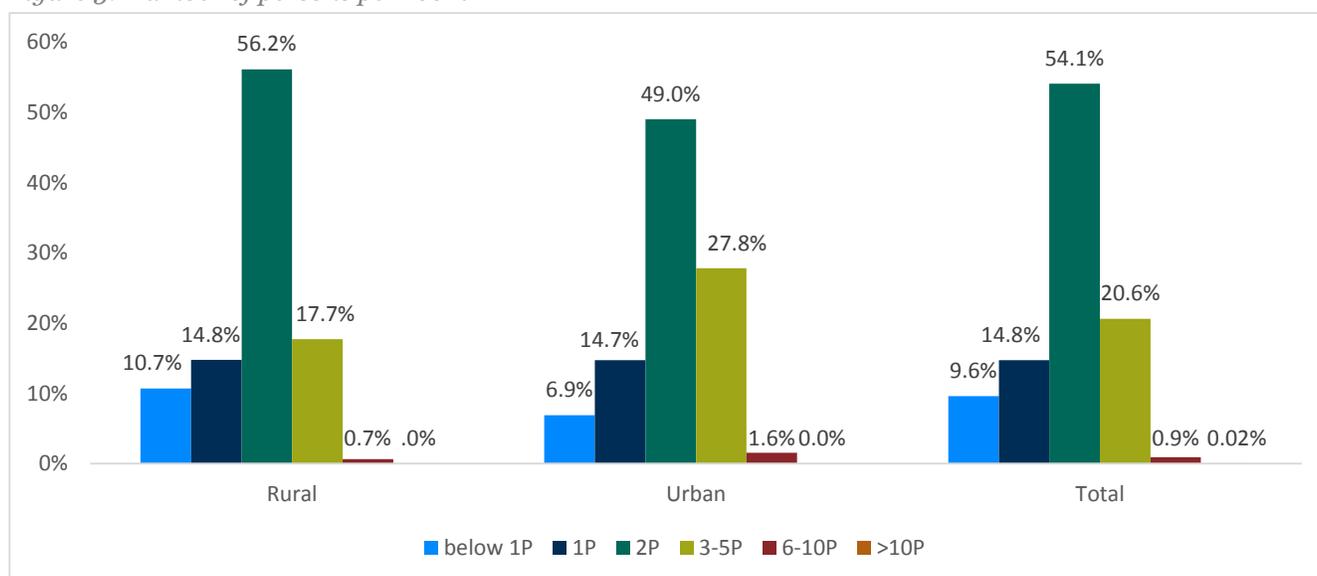
The largest families are in Kono and Bo (6.1 members each), followed by Port Loko (5.9 members). The smallest average family size is in Western Area Rural (3.9 members), followed by Western Area Urban (4.3 members).

## 2.1.7 Housing

The majority of households in Sierra Leone have a one-room house for two people (54.1 percent). A significant number of households are living with three to five people per room (20.6 percent). The percentage of households with three to five people living in one room is higher in urban (27.8 percent) compared to rural (17.7 percent) areas. This implies that as a result of the higher cost of living in urban areas, many people simply cannot afford an adequate number of rooms to house their family. Around 1.0 percent of households have more than six people living in one room.

Whilst poverty undoubtedly contributes to households not being able to afford to rent more rooms, in other cases families simply do not have access to enough land to construct a house of a size that meets their family's needs. Considering that the average household size is 5.4 people, approximately one-fifth of households are residing in one-room houses. Among the districts, the highest proportions of households with three to five members sharing one room were reported in Kono (29.0 percent), Kenema (26.7 percent) and Western Urban (26.0 percent) (see Annex 5 for details).

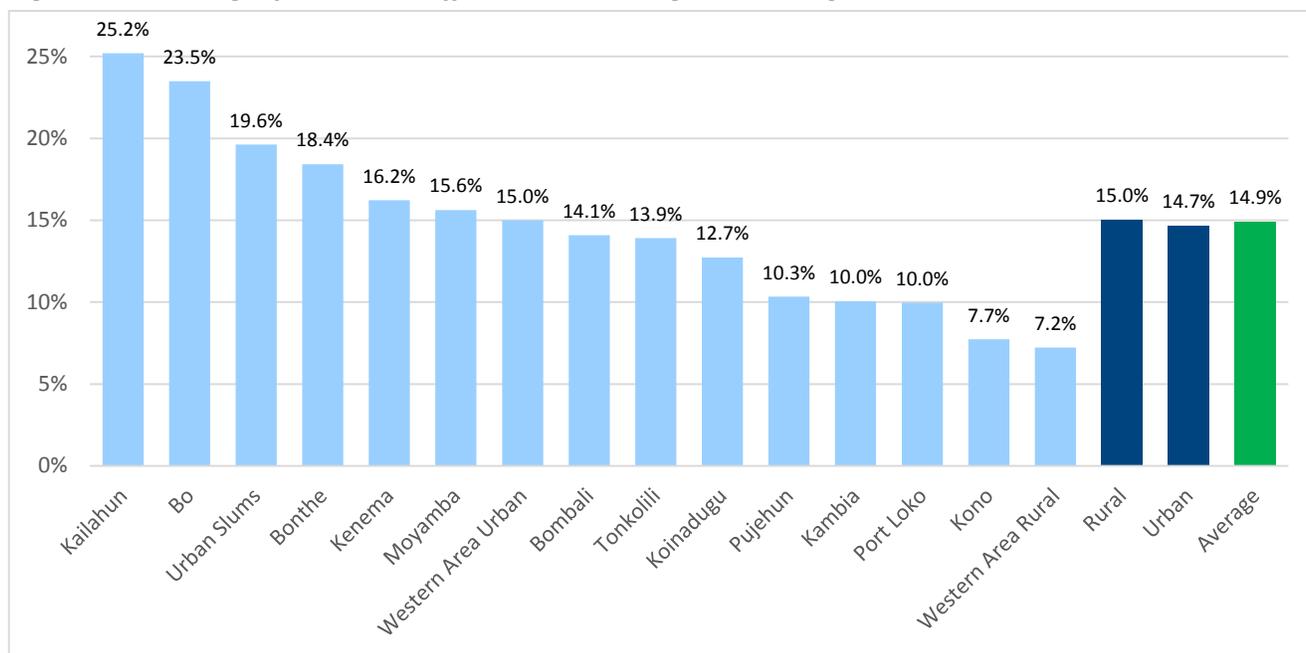
Figure 5: Number of persons per room



## 2.1.8 Membership of organisations

In order to accrue various socio-economic benefits from collective action, many households choose to play a role within different associations/organisations. About 15.0 percent of households have an active member in some kind of association/organisation, with no significant difference between urban and rural areas. The highest percentages of households with organisational affiliations are in Kailahun (25.2 percent), Bo (23.5 percent), Urban Slums (19.6 percent) and Bonthe (18.4 percent).

Figure 6: Percentage of households affiliated with an organisation, by district



The main types of association that households participate in are: Farmer Based Organisation (FBO), Farmer Field School (FFS), trade unions, cooperative societies and grower societies. The most popular type of association which households are members of are FBOs (44.2 percent), especially in rural areas where most agricultural activities occur, with 54.5 percent of households who are active members of an organisation participating in an FBO (see Annex 6 for details).

Trade union membership is more common in urban areas compared to rural, accounting for 27.2 percent of households that are members of an association overall. When looking in detail at the different types of organisation in the “others” category, accounting for 27.8 percent of overall household membership, the diversity of civil society organisations in Sierra Leone is demonstrated, including: youth associations, village saving committees/schemes, teachers unions, “*osusu*”,<sup>36</sup> timber unions, petty traders associations, religious groups and motor bike riders unions, etc. The percentage of households who were active in “other” organisations is much higher in urban areas (52.3 percent) compared to rural (18.4 percent).

## 2.1 Migration

Migration can be:

1. Short-term (temporary), when the migrant<sup>37</sup> intends to return home (e.g. when a crisis, such as the EVD epidemic, is over); or

<sup>36</sup> “Osusu” is a form of microfinance capital accumulation found in West Africa, where members pay money to a *thrift collector* usually on a daily, weekly or monthly basis. Thereafter, the thrift collector (who is usually paid a contribution) will pay each member the total amount collected across all participants, paying one member at a time.

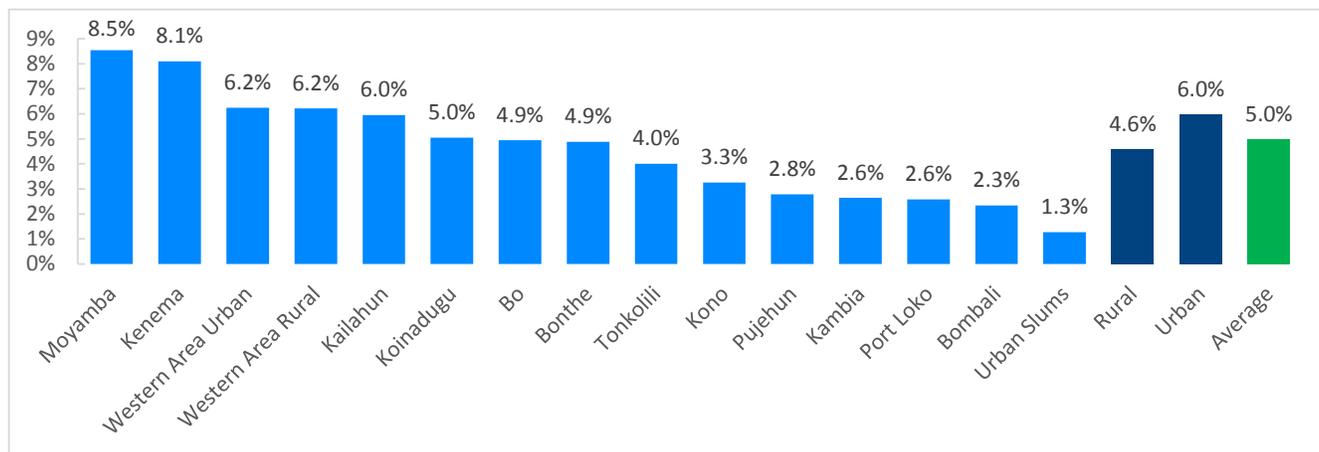
<sup>37</sup> The International Organization for Migration (IOM) defines a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of (1) the person’s legal status; (2) whether the movement is voluntary or involuntary; (3) what the causes for the movement are; or (4) what the length of stay is.

2. Long-term, when the migrant moves to another part of the country and does not know when he/she will return home. The majority of long-term migrants are people moving from rural to urban areas in search of better livelihood or educational prospects.

### 2.2.1 Short-term migration

In total, 5.0 percent of households reported short-term migration of one of the household members. The percentage was higher in urban (6.0 percent) compared to rural areas (4.6 percent). Among the districts, the highest percentage of migration was reported in Moyamba (8.5 percent), Kenema (8.1 percent) and Western Area Urban and Western Area Rural (6.2 percent in each).

Figure 7: Migration for at least two months during previous year, by district



Nationally, the main reason for migration is the pursuit of education (28.2 percent). The second most common reason is to seek non-agriculture work (19.2 percent). During the EVD crisis, many farmers abandoned their agriculture work due to restrictions on public gatherings, which constrained group working. The main reason cited for short-term migration in urban areas is to seek employment (30.0 percent), while in rural areas the most common justification is the pursuit of education (36.1 percent), as often secondary schools are not located in rural communities (for district level results, see Annex 7).

The average number of households engaging in migration is highest in Moyamba (2.8 percent), followed by Port Loko (1.9 percent).

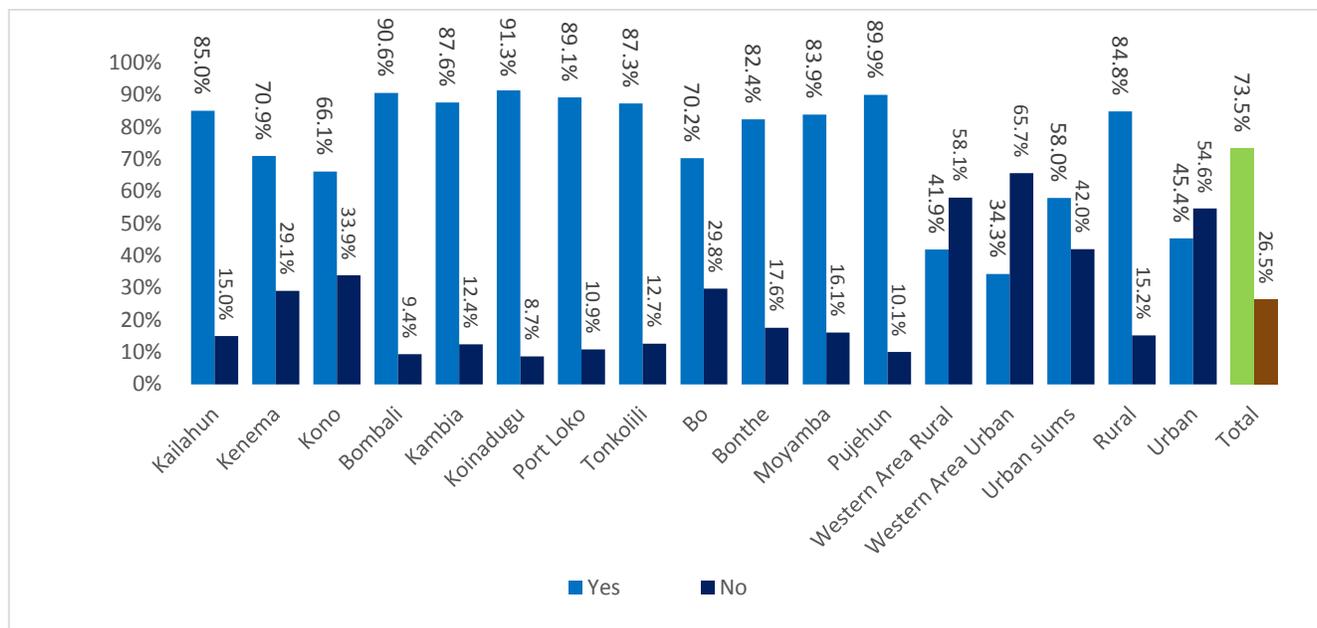
### 2.2.2 Long-term migration

Overall 26.5 percent of households had migrated to their current location. The percentage is much higher in urban (54.6 percent) compared to rural (15.2 percent) areas. This trend demonstrates the rural-urban transition in Sierra Leone, which is placing a high demand on resources. Among the districts, the rate of migration is higher in Kono (33.8 percent), followed by Bo (29.8 percent) and Kenema (29.1 percent).

Among migrants, 63.7 percent moved from one district to another, 19.6 percent migrated from one chiefdom to another within the same district, and 14.8 percent relocated within the same chiefdom. About 8.3 percent shifted from one town to another, whilst 3.6 percent migrated from another area (presumably from another country). On average, 70.3 percent of migrants moved to their current location from rural areas, while 29.7 percent moved from small urban towns to larger ones (see Annex 8 for details).

The main reason for long-term migration is to search for better employment (35.9 percent), followed by marriage (22.7 percent) and better earning opportunities (17.6 percent) (see Annex 9 for details).

Figure 8: Household head currently residing in their place of birth, by district



## 2.3 Livelihoods

Livelihoods are activities that households engage in to meet their basic needs. In Sierra Leone, the predominant livelihood activity is agriculture, with the majority of rural households directly or indirectly relying on agricultural activities to meet their food and non-food needs.

### 2.3.1 Type of livelihoods

The majority of households in rural areas (77.3 percent) cited food crop production as their main livelihood. In urban localities, the most common source of income is petty trading (37.6 percent), which was also cited as the second most important livelihood for rural households (16.0 percent). In urban areas, the second main livelihood is salaried work and wage labour (27.3 percent).

Table 4: Major livelihoods

Area	Agriculture	Livestock	Fishing	Mining	Unskilled Labour	Skilled Labour	Handicrafts	Palm Oil/ Wine	Wood Cutting / Coal
Rural	77.3%	5.9%	3.5%	6.0%	11.0%	4.9%	1.9%	6.3%	3.0%
Urban	6.3%	0.6%	1.0%	2.4%	6.0%	11.4%	3.7%	0.8%	0.5%
Average	56.9%	4.4%	2.7%	5.0%	9.6%	6.7%	2.4%	4.7%	2.3%

Area	Petty Trading	Trading, Seller	Remittances	Salaries /Wages	Aid / Gift	Hunting / Selling Bush Meat	Begging	Other
Rural	16.0%	6.3%	0.7%	3.6%	2.3%	0.3%	0.4%	4.0%
Urban	37.6%	21.5%	0.8%	27.3%	8.8%	0.1%	0.2%	7.5%
Average	22.2%	10.7%	0.7%	10.4%	4.2%	0.3%	0.4%	5.0%

More urban households (11.4 percent) are engaged in skilled labour activities compared to their rural counterparts (4.9 percent). Unskilled labour as a livelihood option is more concentrated in rural areas

(11.0 percent) than urban (6.0 percent), mainly due to most agriculture sector labour opportunities being unskilled in nature. Formal trading, i.e. business activities which are conducted by legally registered companies, was the third most commonly cited livelihood activity in urban areas (21.5 percent), and less prevalent among rural households (6.3 percent) (see Annex 10 for details).

### **2.3.2 Gender and livelihoods**

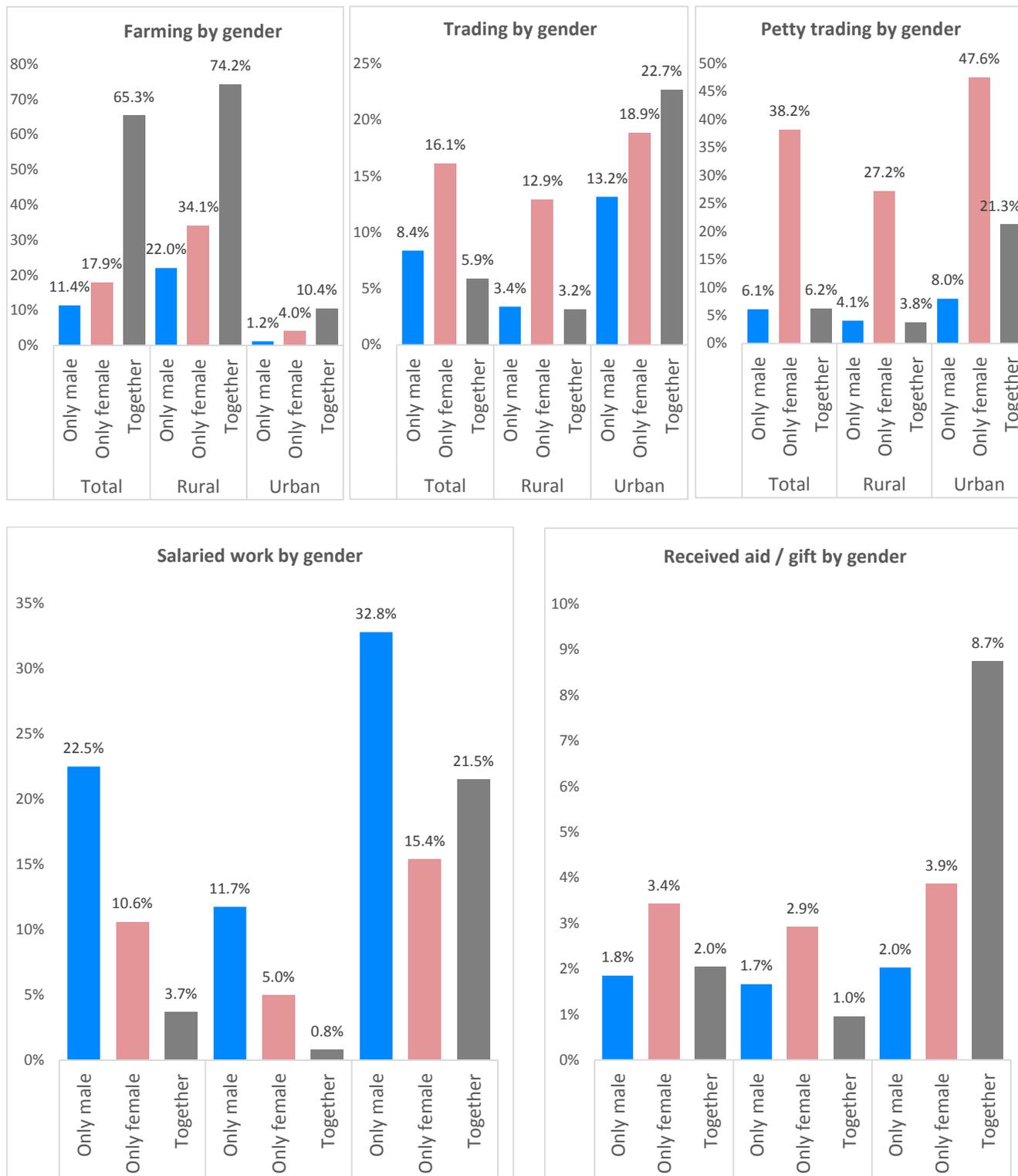
Within households in Sierra Leone, women are highly active in income-generating activities. This is especially the case in female-headed households (21.2 percent), where women are often the sole income earners. In order to better understand the dynamics of the role that women perform within the household and national economy, the 2015 CFSVA disaggregated livelihood choices by gender.

In terms of participation in agricultural livelihoods, the majority of households reported that both women and men worked together to tend to their farms (82.6 percent). Individual participation in agricultural livelihoods was more common among women (10.8 percent) than men (6.6 percent). Far more women (47.4 percent) reported their involvement in petty trading compared to men (15.4 percent). The percentage of women engaged in petty trading in urban areas is higher than men (53.1 percent of women compared to 17.3 percent of men). Petty trading in rural areas is also predominantly a female income-generating activity (27.2 percent of women compared to 4.1 percent of men).

These results show that petty trading is predominantly a female livelihood option in Sierra Leone, especially in urban areas such as the capital Freetown. Facing extremely high competition and low profit margins, many women involved in petty trading are highly vulnerable (see Annex 11 for details).

A sizable number of women are involved in salaried work and wage labour (14.3 percent), although the proportion is significantly lower than men (61.9 percent). The percentage of women engaged in salaried work and wage labour is higher in urban (14.5 percent) compared to rural areas (13.3 percent). Receiving a more stable salary and often better working conditions, women engaged in salaried employment are largely less vulnerable. Whilst the proportion of women engaged in salaried employment is encouraging, interventions to further expand salaried employment opportunities for women would contribute toward reducing the vulnerability of women in Sierra Leone.

Figure 9: Participation in income generating activities, disaggregated by gender



### 3 Food Security

Food security exists when people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. When measured at the household level such as for the 2015 CFSVA, the application of this concept is applied to the family as a whole. When households lack access to sufficient and nutritious food they are considered to be food insecure.

Food insecurity can take three forms:

1. **Chronic food insecurity**, which is a long-term or persistent inability to meet minimum food consumption requirements. Food insecurity lasting for at least six months per year can be considered chronic.
2. **Transitory food insecurity**, which is a short-term or temporary inability to meet minimum food consumption requirements, indicating a capacity to recover. Short periods of food insecurity related to sporadic crises can be considered transitory.
3. **Cyclical food insecurity** occurs when there are habitual seasonal variations of the food security situation. If seasonal food insecurity is present for a total of at least six months a year, it can be considered chronic; if it lasts for a total of less than six months a year, it can be considered transitory.

#### 3.1 The status of food security in Sierra Leone

Food security is measured through the Consolidated Approach for Reporting Indicators of Food Security (CARI), a methodology for analysing and reporting the level of food insecurity within a population. Taking into account the household’s food consumption (measured through the FCS), their coping capacity (measured through the Coping Strategy Index) and their share of monthly expenses devoted to food, households are classified into one of four food security categories. Results are presented within the CARI food security console, which gives a clear snapshot of the prevalence of food security indicators in a systematic and transparent way to establish the population’s overall food security prevalence, the Food Security Index (FSI).

Table 5: Consolidated approach for reporting indicators of food security (CARI) console

Food secure	Able to meet essential food and non-food needs without engaging in irreversible coping strategies	<b>Food secure</b>
Marginally food secure	Has minimally adequate food consumption without engaging in irreversible coping strategies; unable to afford some essential non-food expenditures	
Moderately food insecure	Has significant food consumption gaps, OR marginally able to meet minimum food needs only with irreversible coping strategies	<b>Food insecure</b>
Severely food insecure	Has extreme food consumption gaps, OR has extreme loss of livelihood assets will lead to food consumption gaps, or worse	

Table 6: CARI console for Sierra Leone, 2015

Domain		Indicator	Food Secure	Marginally Food Secure	Moderately food insecure	Severely food insecure
Current Status	Food Consumption	Food Consumption Score	<i>Acceptable</i> 46.5%	N/A	<i>Borderline</i> 33.5%	<i>Poor</i> 19.9%
Coping Capacity	Economic Vulnerability	Food Expenditure Share	<i>Share &lt;50%</i> 17.2%	<i>50%-65%</i> 29.3%	<i>65%-75%</i> 23.4%	<i>Share &gt;75%</i> 30.1%
	Asset Depletion	Livelihood Coping Strategy Categories	38.8%	<i>Stress</i> 18.9%	<i>Crisis</i> 25.7%	<i>Emergency</i> 16.6%
<b>Food Security Index</b>			<b>11.2%</b>	<b>39.0%</b>	<b>41.2%</b>	<b>8.6%</b>

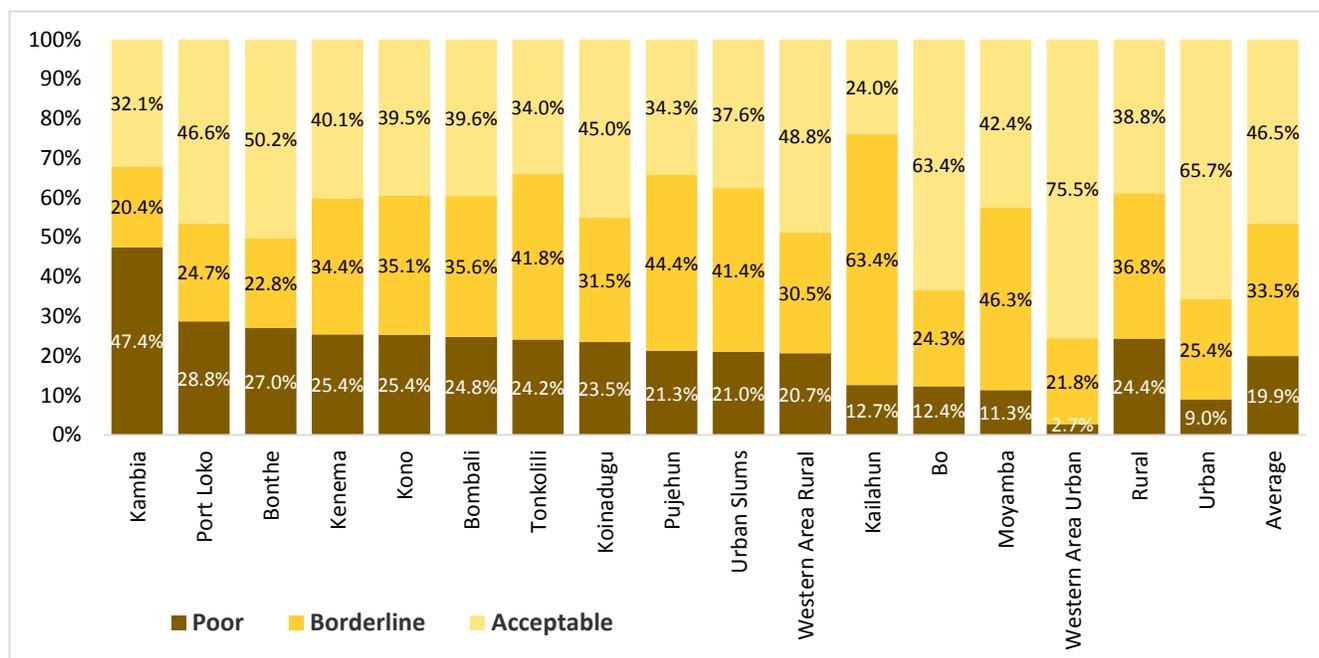
### 3.2 Household food consumption

A household's food consumption, which contributes to defining the household's food security situation, is measured through the Food Consumption Score (FCS), an indicator that measures a household's food intake over the seven day period prior to being interviewed as part of the survey. The FCS looks into the frequency that different food groups are consumed triangulated with their relative nutritional importance. Based on their FCS, households are classified into three groups: Poor, Borderline and Acceptable. These are the standard FCS cut-off points used globally.

Food Consumption Profile	Food Consumption Score
Poor	1-21
Borderline	>21-35
Acceptable	>35

According to the food consumption groups (FCG) based on the above cut-off points, in Sierra Leone an average of 19.9 percent of households have poor food consumption, 33.5 percent have borderline food consumption and 46.5 percent have acceptable food consumption. This means that the majority of households do not have an acceptable food intake, and the food security situation of those households characterised by borderline food consumption might easily deteriorate in the event of a shock.

Figure 10: Household food consumption score



In rural areas, 24.4 percent of the households have a poor FCS, while 36.8 percent are considered borderline. This means that the majority of rural households (60.2 percent) are highly vulnerable in terms of their food consumption. Among the districts, the highest percentage of households with poor FCS are found in Kambia (47.4 percent), followed by Port Loko (28.8 percent) and Bonthe (27.0 percent). Households with borderline food consumption are most common in Kailahun (63.4 percent), followed by Moyamba (46.3 percent) and Pujehun (44.4 percent).

The highest percentage of households with acceptable FCS are based in Western Area Urban (75.5 percent), followed by Bo (63.4 percent) and Western Area Rural (48.8 percent).

### 3.2.1 Rice consumption

Overall, only 4.0 percent of farmers produce enough rice to meet the needs of their family for the whole year. The highest percentages of farmers (21.0 percent) are able to meet their rice needs for six months, while 16.0 percent can meet their needs for five months. Around 66.0 percent of farmers consume their own production for six or less than six months of the year.

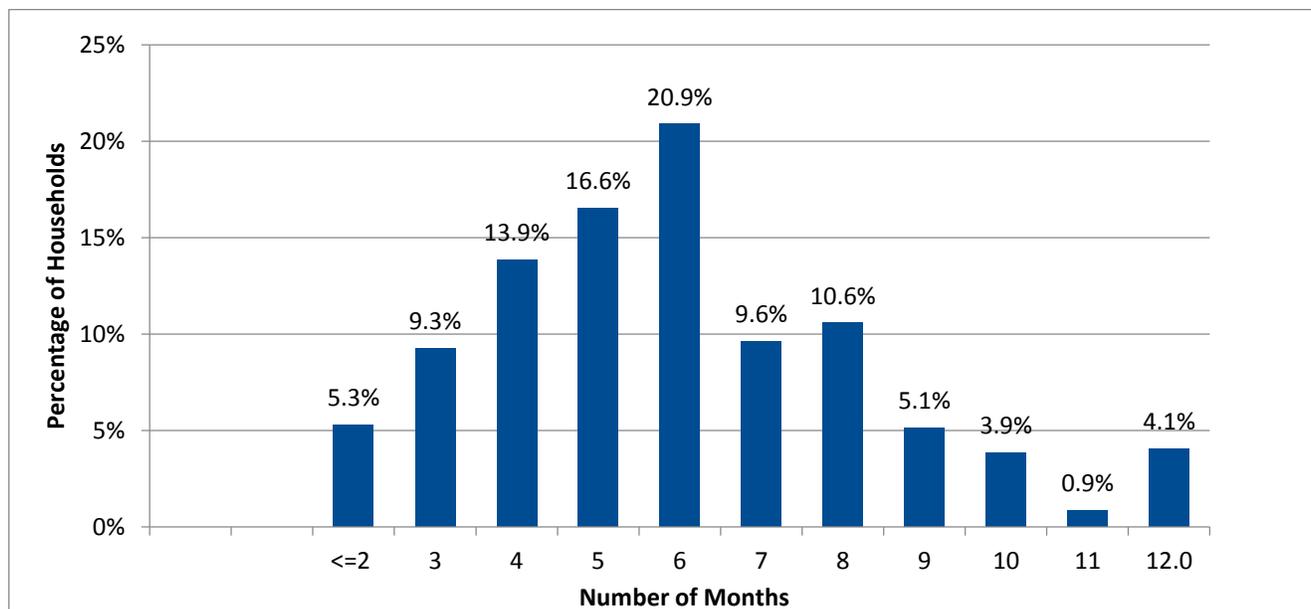
These findings imply that surplus producing farmers in Sierra Leone must be limited to among the 4.0 percent currently able to meet their own consumption needs year-round. This makes farming households especially vulnerable during the “lean season”, when access to food is reduced, or during times when global prices of food commodities increase, making imported food more expensive.

**LOCAL RICE PRODUCTION**

OVERALL, ONLY 4.0 PERCENT OF FARMERS PRODUCE ENOUGH RICE TO MEET THE NEEDS OF THEIR FAMILY FOR THE WHOLE YEAR. THE HIGHEST PERCENTAGES OF FARMERS (21.0 PERCENT) ARE ABLE TO MEET THEIR RICE NEEDS FOR SIX MONTHS.

AROUND 66.0 PERCENT OF FARMERS CONSUME THEIR OWN PRODUCTION FOR SIX OR LESS THAN SIX MONTHS OF THE YEAR.

Figure 11: Number of months households are self-sufficient in rice



However, it should be noted that the 2014-15 agricultural season is quite exceptional as rice production declined by 15.0 percent, mostly as a result of the EVD outbreak. In normal years it can be expected that the percentage of farmers producing sufficient rice to meet their own needs or produce a marketable surplus will be higher (for district level analysis, see Annex 12).

### 3.3 Household economic vulnerability

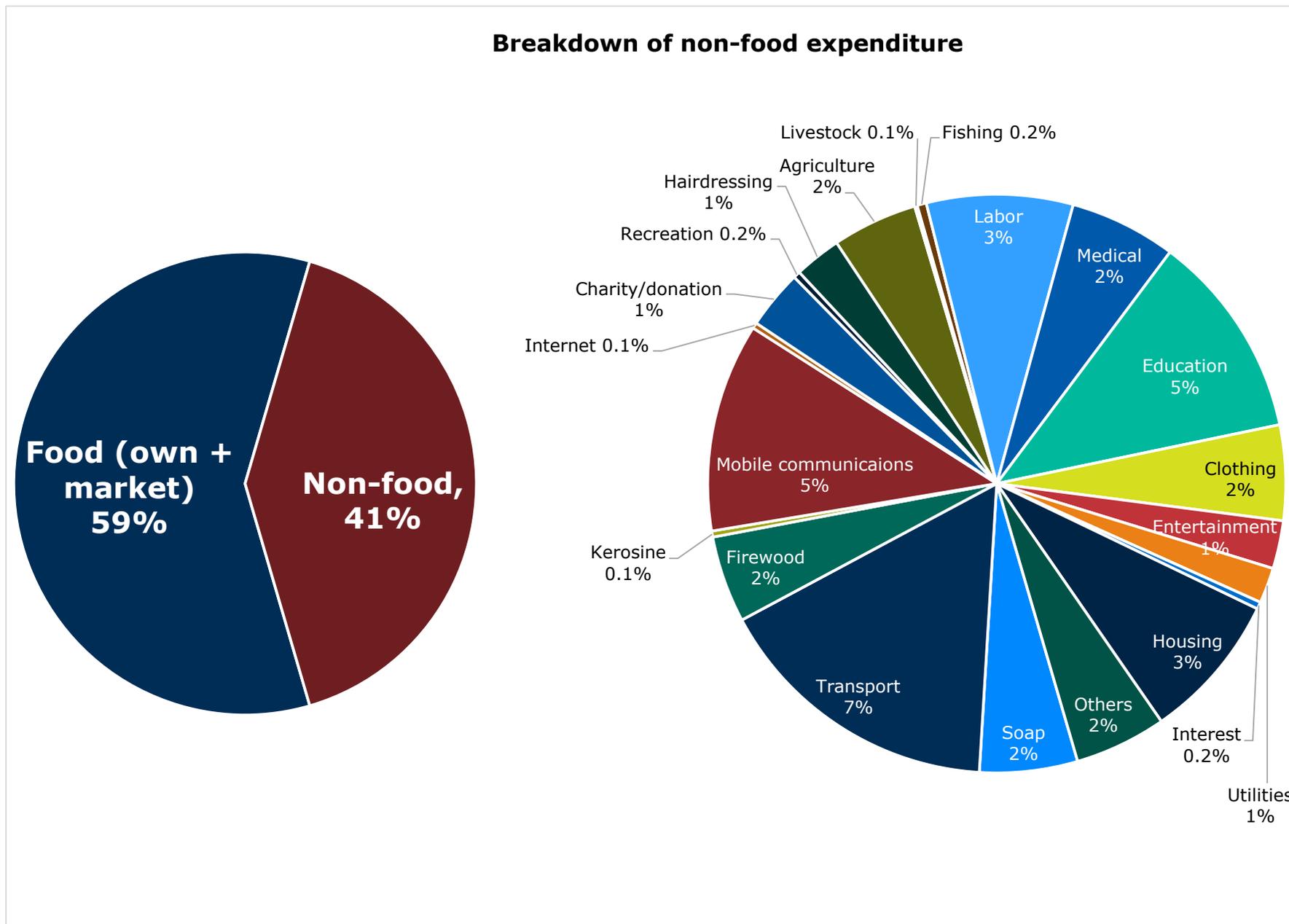
#### 3.3.1 Food expenses

Food expenditure is another significant indicator of household food security. Due to low incomes, the share of food expenditure as a proportion of total expenditure is higher for poor households that are forced to choose between spending on food or non-food items.

In Sierra Leone, households spend 59.0 percent of their total expenditure on food, with the remaining 41.0 percent devoted to non-food. The lower the household's income, the higher the percentage of expenditure on food. The share of expenditures devoted to food categorises the households into four groups:

1. Very poor (those who spend more than 75.0 percent of their budget on food);
2. Poor (those who spend between 65.0 and 75.0 percent of their budget on food);
3. Borderline (those who spend between 50.0 and 65.0 percent of their budget on food); and
4. Acceptable (those who spend less than 50.0 percent of their budget on food).

Figure 12: Share of household expenditures on food and non-food items



Among non-food expenditure, household expenditure is highest on transport (6.6 percent), followed by telecommunications (4.8 percent) and education (4.7 percent). Household spending on health is low (2.4 percent), followed by agriculture (2.0 percent) and livestock (0.1 percent).

On average, 30.1 percent of households nationally can be categorised as “very poor” in terms of their spending on food, while 23.4 percent can be described as “poor”. This means that over half (53.5 percent) of households surveyed are vulnerable in terms of their expenditure on food.

**EXPENDITURE ON FOOD**

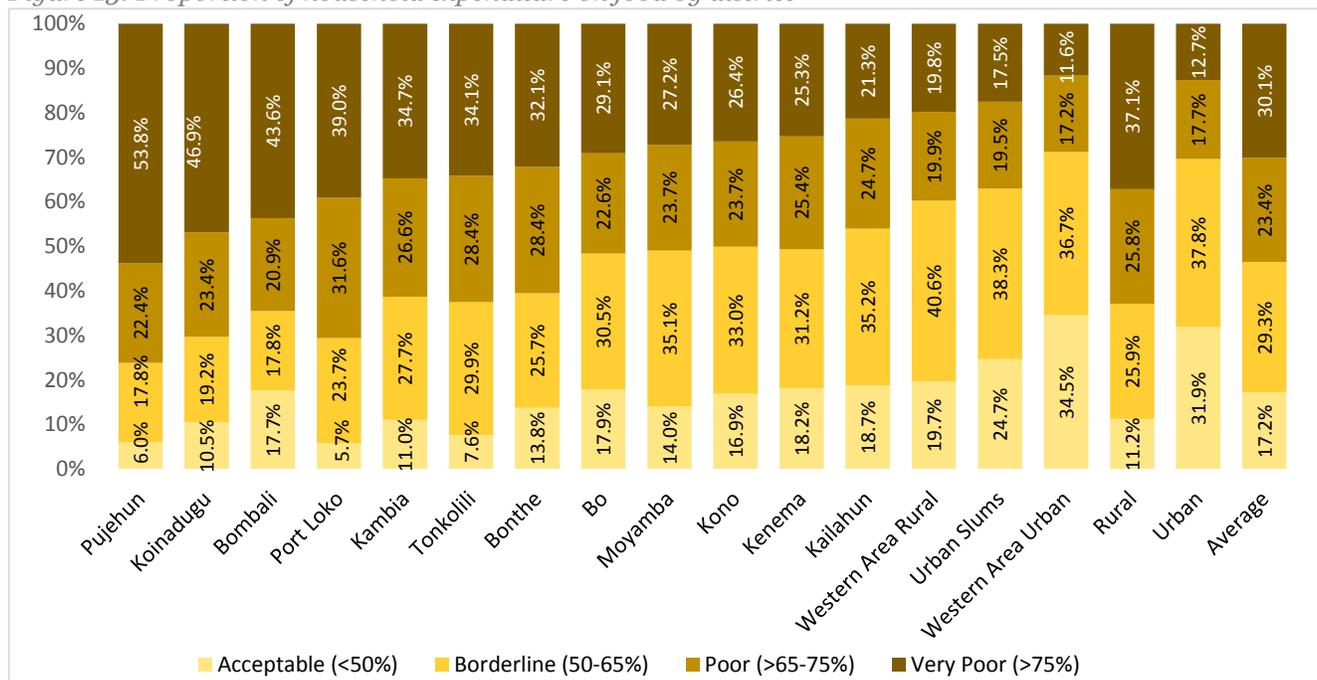
ON AVERAGE, 63.0 PERCENT OF RURAL HOUSEHOLDS SPEND MORE THAN 65.0 PERCENT OF THEIR BUDGET ON FOOD, A SIGN OF HIGH VULNERABILITY TO FOOD INSECURITY.

In rural areas, poverty levels are even more pronounced, with 63.0 percent of households in the poor or very poor groups. This proportion is alarming and requires a concerted response to increase rural household incomes.

Among the districts, the highest percentages of households with very poor food access are located in Pujehun (53.8 percent), Koinadugu (46.9 percent), Bombali (43.6 percent) and Port Loko (39 percent). When combining the poor and very poor groups, the highest percentages of households are located in Pujehun (76.2 percent), Port Loko (70.6 percent) and Koinadugu (70.3 percent). On the contrary, the highest percentage of households in the “acceptable” group is in Western Area Urban (34.5 percent).

The highest percentage of households in the borderline group, which is highly vulnerable to shocks, is found in Western Area Rural (40.6 percent) and the Urban Slums (38.3 percent).

Figure 13: Proportion of household expenditure on food by district



### 3.3.2 Difficulty getting food

In order to understand overall levels of food intake, the 2015 CFSVA explored the availability of food at the household level over a twelve month period. Households were asked to indicate the months during which they could not access enough food to meet the basic needs of their family. Overall, 92.0 percent

of households in rural and urban areas have difficulties in accessing food at some point in the year, with the majority (77.0 percent) experiencing difficulties between one and three months of the year.

In rural areas, the highest percentage of households reported finding it difficult to access food during two months of the year (34.9 percent), followed by three months (25.3 percent) and one month (19.3 percent). In total, 5.4 percent of households cited facing no problems accessing sufficient food during the whole year. In urban areas, the highest percentage of households reported difficulties accessing food for one month (29.2 percent), followed by two months (24.2 percent) and three months (17.7 percent), while 16.4 percent cited not facing any problems accessing food all year round. Across rural and urban areas, the highest percentage of households reported difficulty in accessing food for two months (32.0 percent), followed by three months (23.1 percent).

Over the course of the year, July, August and September are the months during which households mostly experience difficulties in accessing food, which coincides with the peak of the rainy season when production of local food is at its lowest (“lean season”). In both rural and urban areas, August is the month during which households face the most difficulties to access food (75.6 percent), with a higher proportion in rural areas (85.1 percent) compared to urban (52.0 percent). July follows as the second hardest month of the year, when 46.7 percent of urban households face difficulty, and 52.9 percent of rural.

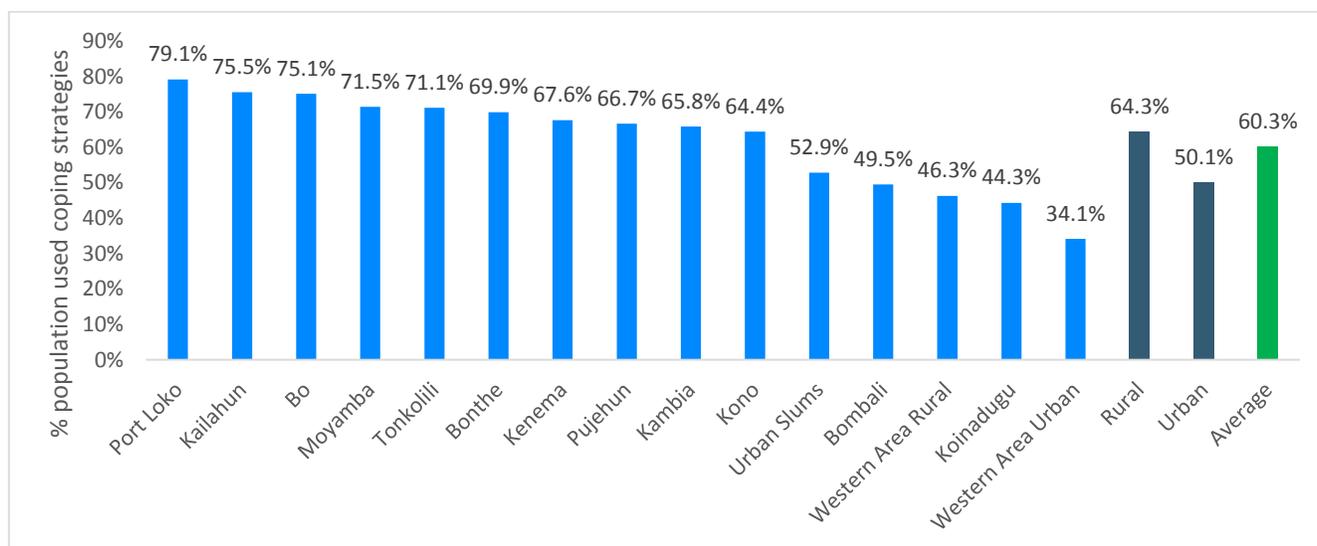
**FOOD ACCESS**  
 OVERALL, 92.0 PERCENT OF HOUSEHOLDS IN RURAL AND URBAN AREAS FACE DIFFICULTIES ACCESSING FOOD AT SOME POINT IN THE YEAR.

Given different rainfall patterns within Sierra Leone, certain districts face more challenges in accessing food in September. Households engaged in livelihoods such as gathering and selling of wild food, salt extraction, unskilled labour, sand and stone collection, petty trading, and fruit and vegetable farming were among the most vulnerable groups in terms of their ability to access food (see Annex 13 for district-wide details).

### 3.4 Coping strategies

When a household is under stress, it employs strategies to mitigate the effect of the threat or the shock. Such behaviours are called coping strategies. When shocks frequently affect a household, the number and duration of coping strategies employed increases. However, under normal conditions, most households do not rely on coping strategies to survive.

Figure 14: Coping strategies adopted during the 30 days prior the survey



On average, 60.3 percent of households had adopted one or more types of coping strategies in the past 30 days. In rural areas, the percentage of such households is higher (64.3 percent) compared to urban (50.1 percent). The districts with the highest percentages of households who adopted a coping strategy were Port Loko (79.1 percent), followed by Kailahun (75.5 percent), Bo (75.1 percent) and Moyamba (71.5 percent).

### 3.4.1 Non-food strategies

A household's ability to minimise risks and respond to and/or absorb shocks contributes to maintaining its food security status. Overall, 33.0 percent of households reported reducing non-food spending, with a higher percentage in rural areas (36.0 percent). This means that when households experienced a shock they tended to divert the monetary resources they had available to food, either as a result of an increase in market prices or a reduction in their income level. In both cases, the impact was that the household became increasingly vulnerable to food insecurity.

Table 7: Livelihood coping strategies adopted during the 30 days prior to the survey

District	Sold household assets	Reduced non-food expenses	Sold productive assets or means of transport	Spent savings	Borrow money/ food from a formal lender	Sold house or land	Withdrew children from school	Sold last female animal	Beg	Sold more animals (non-productive) than usual
Kailahun	17.6%	48.9%	11.6%	53.6%	60.9%	4.0%	7.9%	12.8%	25.3%	15.2%
Kenema	22.1%	42.9%	12.8%	32.2%	39.6%	1.8%	5.4%	3.0%	11.8%	2.9%
Kono	16.1%	38.1%	3.6%	33.6%	26.7%	0.7%	6.6%	5.9%	11.6%	4.5%
Bombali	8.1%	31.7%	4.7%	27.2%	15.4%	3.0%	4.9%	4.7%	3.9%	5.2%
Kambia	4.8%	36.3%	2.6%	44.2%	26.9%	0.9%	5.4%	2.4%	3.7%	2.8%
Koinadugu	4.3%	25.3%	3.4%	20.7%	11.2%	0.5%	2.5%	4.8%	1.7%	6.9%
Port Loko	12.5%	45.0%	6.4%	53.3%	46.9%	2.2%	9.6%	15.2%	12.4%	13.4%
Tonkolili	12.0%	37.6%	5.5%	47.0%	33.1%	1.0%	4.7%	2.7%	15.6%	2.1%
Bo	9.6%	35.5%	6.2%	57.1%	46.4%	1.5%	4.2%	3.6%	27.0%	3.9%
Bonthe	8.5%	34.3%	2.5%	52.8%	39.4%	0.5%	2.8%	3.6%	13.9%	3.4%
Moyamba	8.3%	32.0%	5.1%	42.2%	24.6%	1.0%	7.8%	4.0%	19.9%	4.0%
Pujehun	6.0%	28.0%	3.4%	35.6%	41.4%	1.1%	2.4%	0.6%	21.9%	0.9%
Western Rural	5.4%	16.5%	4.8%	8.3%	6.5%	1.2%	25.7%	2.7%	9.4%	2.3%
Western Urban	5.6%	16.9%	2.1%	21.3%	5.7%	0.5%	1.1%	0.2%	2.1%	0.4%
Urban slums	14.0%	46.5%	8.3%	49.7%	45.9%	-	3.2%	-	35.7%	-
Rural	10.8%	35.9%	6.1%	37.8%	32.6%	1.7%	6.8%	5.8%	13.7%	6.1%
Urban	9.2%	25.9%	4.0%	33.4%	19.3%	0.6%	2.0%	1.0%	8.0%	1.0%
Average	10.4%	33.0%	5.5%	36.5%	28.8%	1.4%	5.4%	4.4%	12.1%	4.6%

In response to a shock, reducing non-food item expenditure varied across districts. The highest percentage was found in Kailahun (48.9 percent), followed by the Urban Slums (46.5 percent), Port Loko (45.0 percent) and Kenema (42.9 percent). The spending of savings was the second most

commonly cited coping strategy (36.5 percent of households), with the proportion higher in rural (37.8 percent) compared to urban areas (33.4 percent). Across the districts, the highest percentage of households who spent their savings as a coping strategy were found in Bo (57.1 percent), followed by Kailahun (53.6 percent), Port Loko (53.3 percent) and Bonthe (52.8 percent). Begging was also a commonly used coping strategy in the event of a shock, adopted by 12.1 percent of households.

### 3.4.2 Food strategies

Households that have faced a shock are more likely to have poor food consumption than households that have not experienced a shock. The Reduced Coping Strategy Index (RCSI) is a WFP indicator that examines five detrimental alimentary behaviours adopted during the seven days prior to the survey, comprised of:

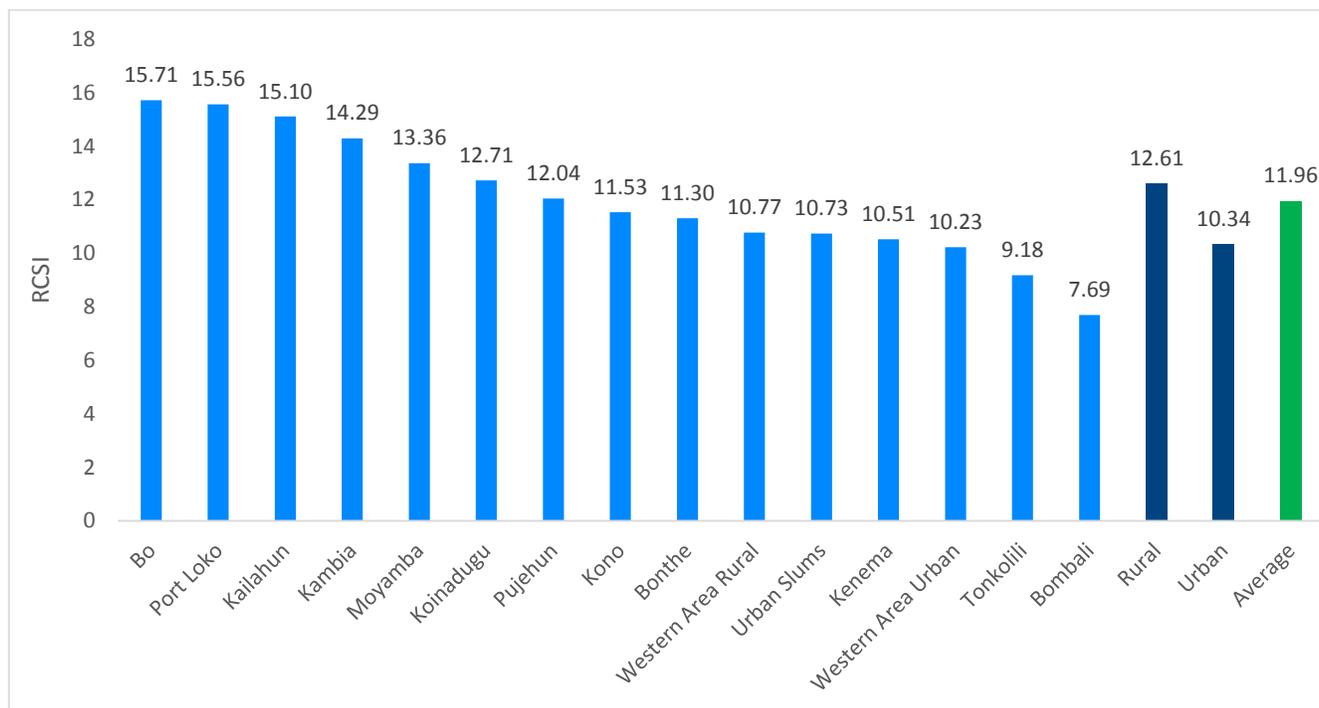
- 1) Consumption of less preferred and less expensive food;
- 2) Borrowing of food;
- 3) Reduction of portion size;
- 4) Restriction of adults' consumption in favour of children; and
- 5) Reduction in the number of meals per day.

There is no standard cut off point for the RCSI but the higher the score, the more frequent and severe these strategies are, therefore the more vulnerable the household is.

According to the 2015 CFSVA, the national RCSI is 11.96, which is higher in rural areas (12.61) compared to urban (10.34).

Among the districts, the highest RCSI was found in Bo (15.71), followed by Port Loko (15.56) and Kailahun (15.10). In Pujehun, Koinadugu, Moyamba, Kambia, Kailahun, Port Loko and Bo, the RCSI is higher than the national average. The lowest RCSI was reported in Bombali (7.69) followed by Tonkolili (9.18), Western Area Urban (10.23) and Kenema (10.51).

Figure 15: Reduced coping strategy index, by district



### 3.5 Distribution of food security

According to the 2015 CFSVA, 49.8 percent of Sierra Leone’s population is food insecure. Among the food insecure, 8.6 percent of households are severely food insecure and 41.2 percent are moderately food insecure. In rural areas, the level of food insecurity is much higher, with 59.7 percent of the population food insecure (11.4 percent severely and 48.4 percent moderately).

Table 8: Food security groups

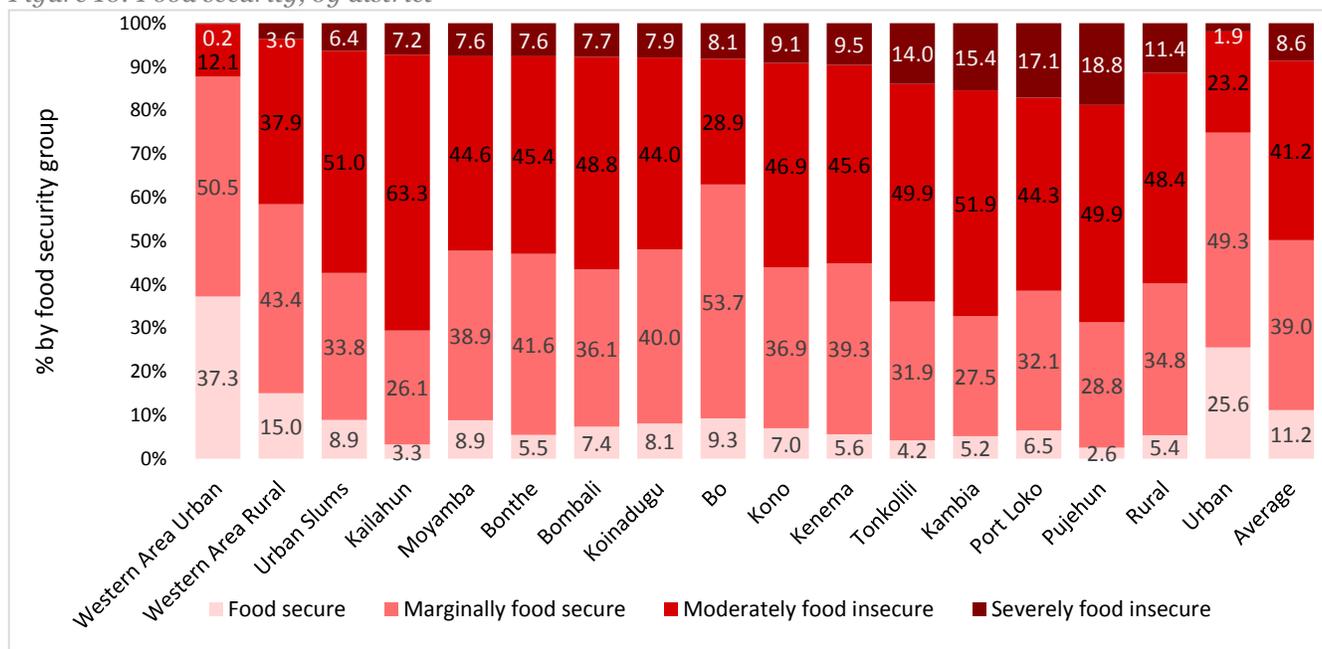
Food Security Groups	Prevalence	Number of people affected <sup>a</sup>
Severely food insecure	8.6%	608,505
Moderately food insecure	41.2%	2,915,164
<b>Severe &amp; moderately food insecure</b>	<b>49.8%</b>	<b>3,530,745</b>
Marginally food secure	39.0%	2,759,500
Food secure	11.2%	792,472
<b>Marginally &amp; food secure</b>	<b>50.2%</b>	<b>3,544,896</b>

<sup>a</sup> Statistics Sierra Leone, 2015 Population and Housing Census

#### 3.5.1 Distribution of food security at district level

Food insecurity is spread across all of Sierra Leone’s districts, although with different prevalence. Although the prevalence of food insecurity is <40 percent in Western Area Urban and Bo districts, there are still a high number of food insecure households within both of these districts. Among the districts, the percentage of severely food insecure households is highest in Pujehun (18.8 percent), Port Loko (17.1 percent), Kambia (15.4 percent) and Tonkolili (14.0 percent). The districts with the highest rates of moderately food insecure households are Kailahun (63.3 percent), Kambia (51.9 percent) and the Urban Slums (51.0 percent).

Figure 16: Food security, by district



Overall, food insecurity is higher in Kailahun (70.5 percent), Pujehun (68.7 percent), Kambia (67.3 percent), Tonkolili (63.9 percent) and Port Loko (61.4 percent). Conversely, districts with the highest percentage of food secure households are Western Area Urban (87.7 percent), followed by Bo (62.9 percent) and Western Area Rural (58.5 percent).

### 3.5.2 Distribution of food security at chiefdom level

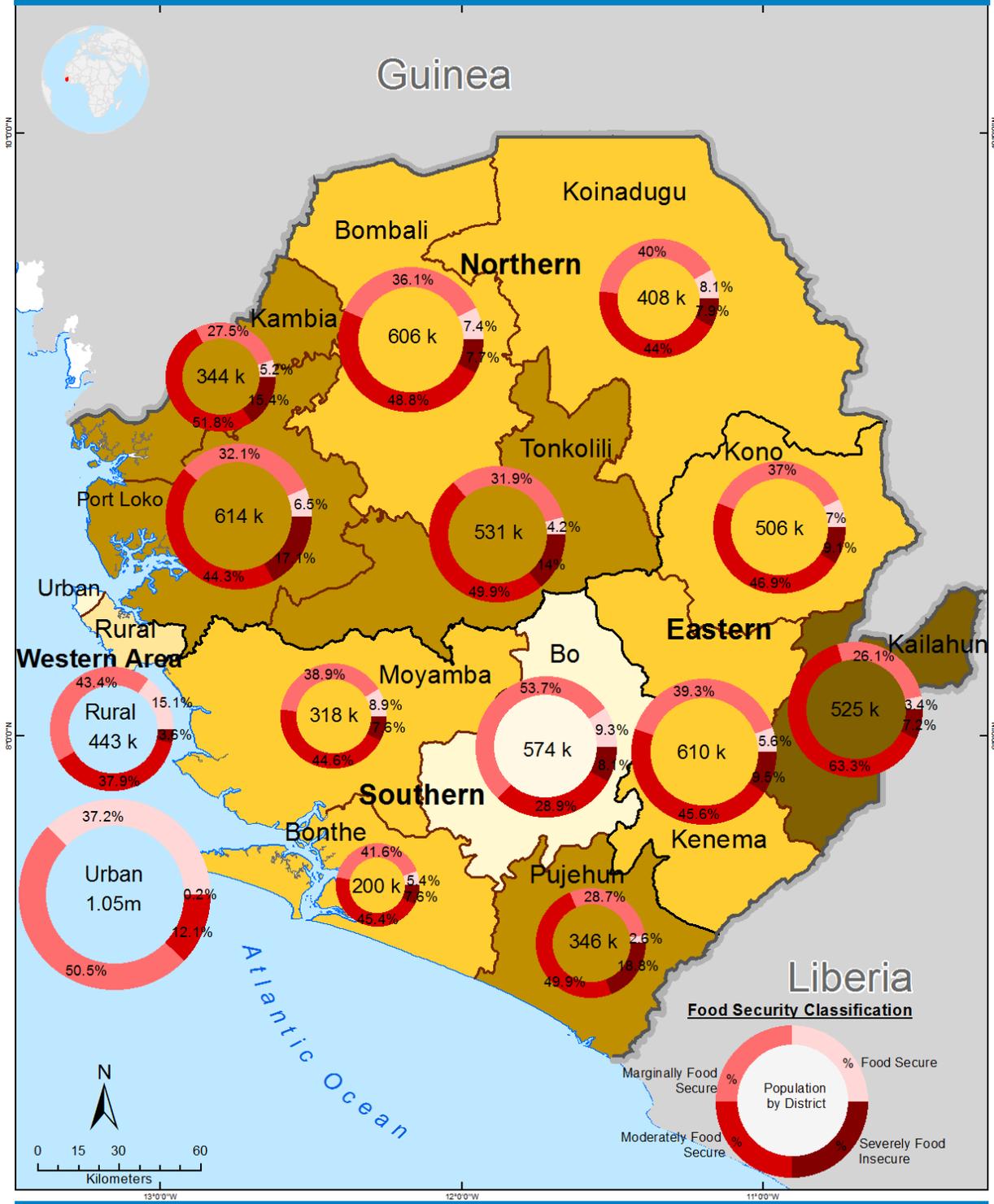
For the first time, the CFSVA undertakes a food security analysis at the *chiefdom* level. In total, 110 chiefdoms/wards (65.0 percent) have levels of food insecurity above the national average of 50.0 percent. Out of the 149 chiefdoms and 18 urban wards, in 44 chiefdoms more than 70.0 percent of households are food insecure. The districts with the highest proportion of chiefdoms with food insecurity levels over 70.0 percent are Port Loko (6 out of 11 chiefdoms) and Bombali and Kailahun (6 out of 14 chiefdoms in each).

Table 9: Number of chiefdoms by food insecurity rank

Ranking	Percentage of households with moderate and severe food insecurity	No of Chiefdoms
1	>70	44
2	>60-70	29
3	>50-60	37
4	>40-50	18
5	<=40	39

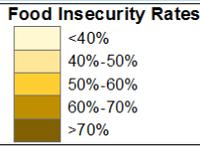
Table 10: Number of chiefdoms by district by food insecurity rank

District	>70% food insecurity	60% - 70% food insecurity	50% - 60% food insecurity	40%=50 % food insecurity	<40% food insecurity	Total
	1	2	3	4	5	
Bo	3	3	4	2	4	16
Bombali	6	2	2	1	3	14
Bonthe	1	3	4	1	3	12
Kailahun	6	4	3	1	0	14
Kambia	4	0	1	1	1	7
Kenema	5	3	3	3	3	17
Koinadugu	1	1	6	0	3	11
Kono	4	4	2	2	3	15
Moyamba	2	2	5	2	3	14
Port Loko	6	0	1	1	3	11
Pujehun	4	3	5	0	0	12
Tonkolili	2	4	0	2	3	11
Urban Slums	0	0	1	0	0	1
Western Area Rural	0	0	0	2	2	4
Western Area Urban	0	0	0	0	8	8
<b>Total</b>	<b>44</b>	<b>29</b>	<b>37</b>	<b>18</b>	<b>39</b>	<b>167</b>



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 Contact: abdoulaye.ndiaye@wfp.org  
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Map Reference: CFSVA 2015, Sierra Leone, Country Office, February 2016, Census 2015\_A4P

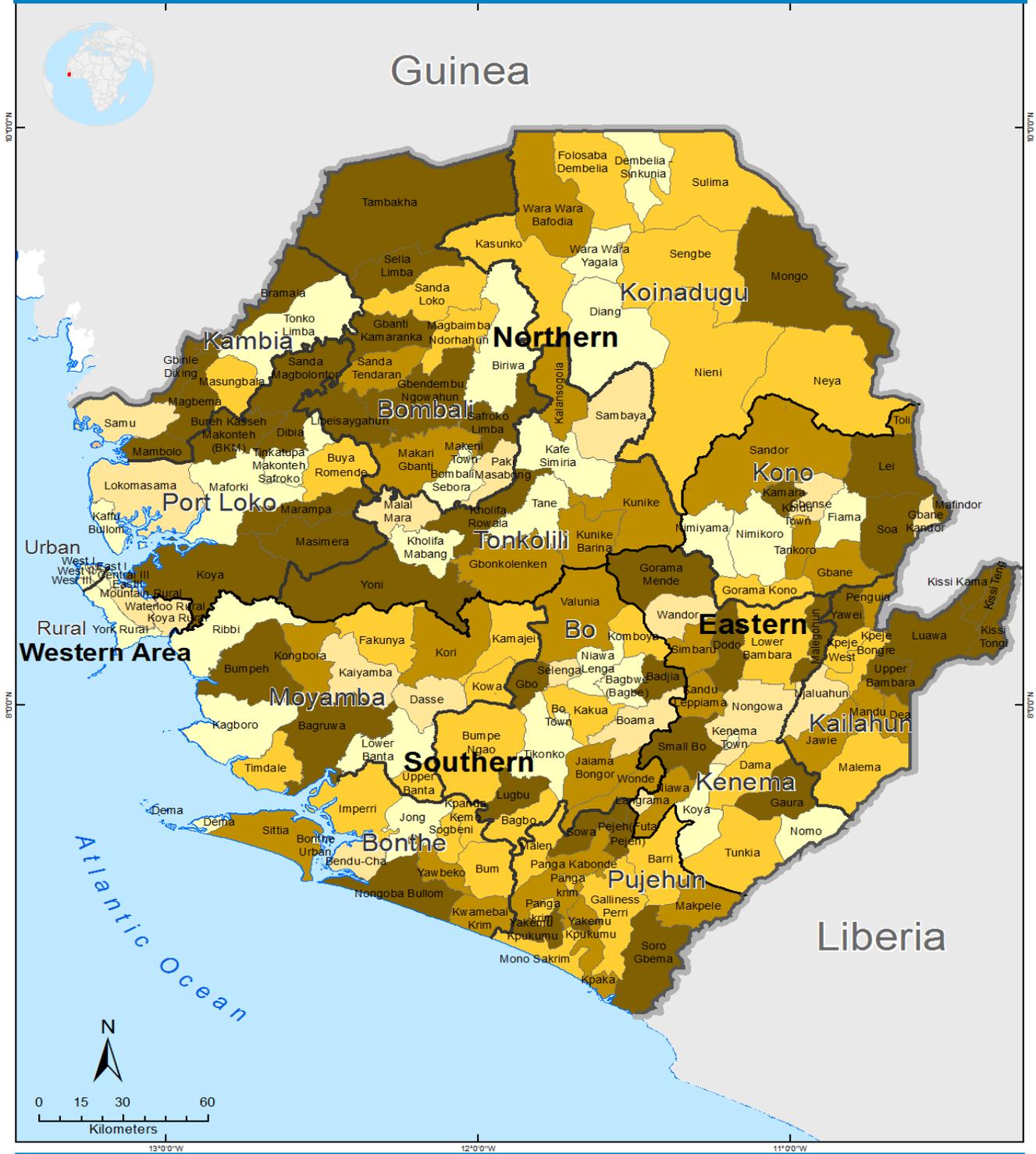


- International Boundary
- Province Boundary
- District Boundary

Data sources: WFP UNGIWG, GeoNames, GAUL

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### 3.6 Food diversity

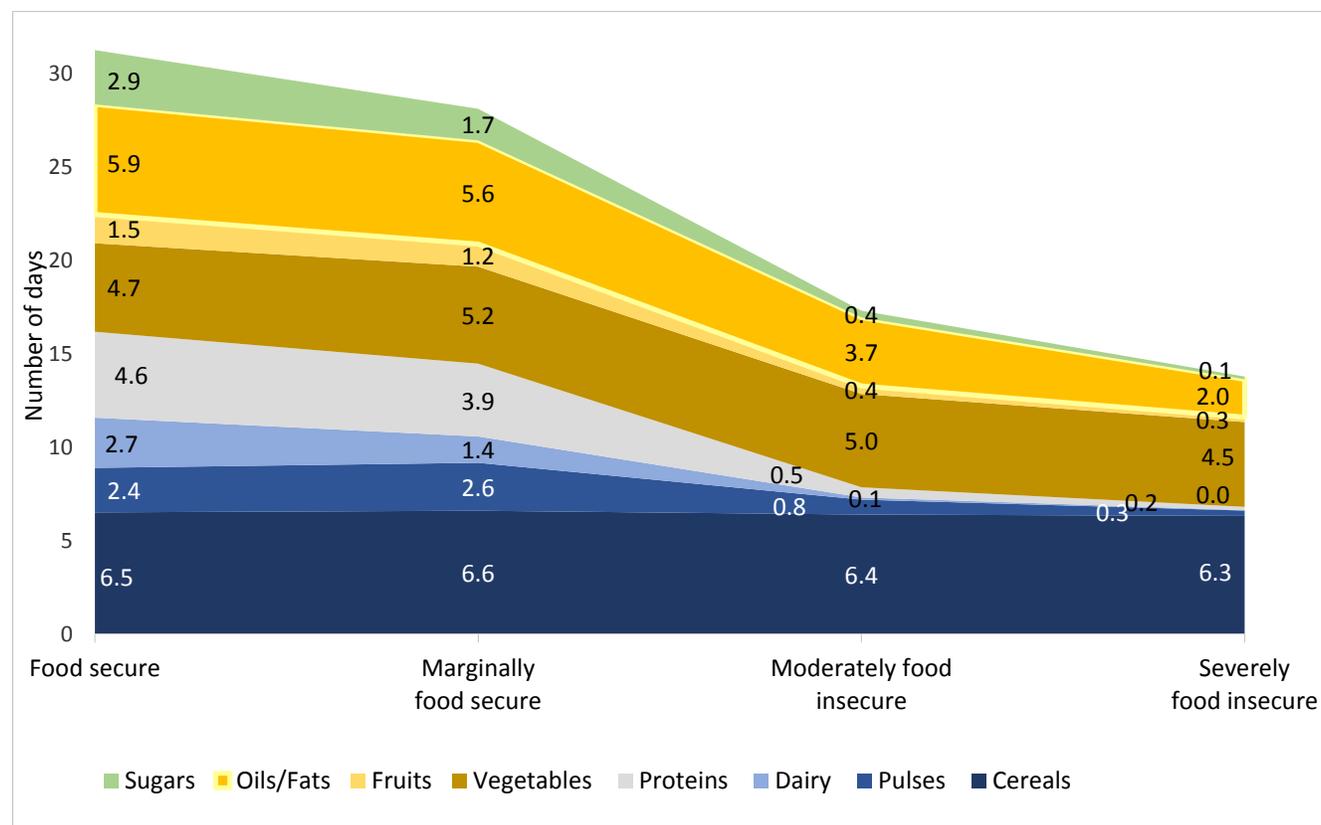
Consumption of a diverse range of food types is very important in order to maintain a balanced diet and ensure good health. As such, it is recommended that people eat food from eight food groups every week, namely:

1. Cereals
2. Pulses
3. Dairy (milk and milk products, etc.)
4. Protein rich foods (meat, fish, eggs, etc.)
5. Vegetables
6. Fruit
7. Oils/fats
8. Sugar

The more types of food from different food groups people eat on a weekly basis, the more they are food and nutritionally secure.

Households in Sierra Leone eat cereals (e.g. rice and cassava) and vegetables (e.g. cassava leaves and potatoes leaves) on a daily basis irrespective of their level of food insecurity or poverty. Rice is the staple food and consumed by rich and poor households alike almost every day. Consumption of other food groups is not as common and mostly depends on the purchasing power of the household. Considering predominantly low income levels and increasing market prices, many households cannot afford to regularly consume a diverse diet. This has implications for nutritional wellbeing, especially among vulnerable groups such as pregnant and lactating women (PLW) and children under five years old.

Figure 17: Food diversity by food security group (food eaten in seven days)



By analysing the food diversity of the various food groups, it was found that within a given week food secure households consume all eight food groups by varying degrees. Besides cereals and vegetables, on average per week households consume pulses 2.4 days a week, dairy 2.7 days, meat 4.6 days, fruits 1.5 days, oil 5.9 days and sugar 2.9 days. When analysing the food diversity of the marginally food secure group, the consumption of dairy declines from 2.7 to 1.4 days a week, proteins from 4.6 to 3.9 days a week and fruits from 1.5 to 1.2 days a week. Similarly, the moderately food insecure group further reduce their consumption of key food groups, such as pulses, dairy, proteins and fruits. The severely food insecure group mostly eat cereals and vegetables (e.g. cassava leaves and potato leaves) every day, whereas they fail to consume all other remaining food groups as part of their regular diet besides using oil for cooking.

**MICRONUTRIENT DEFICIENCIES**

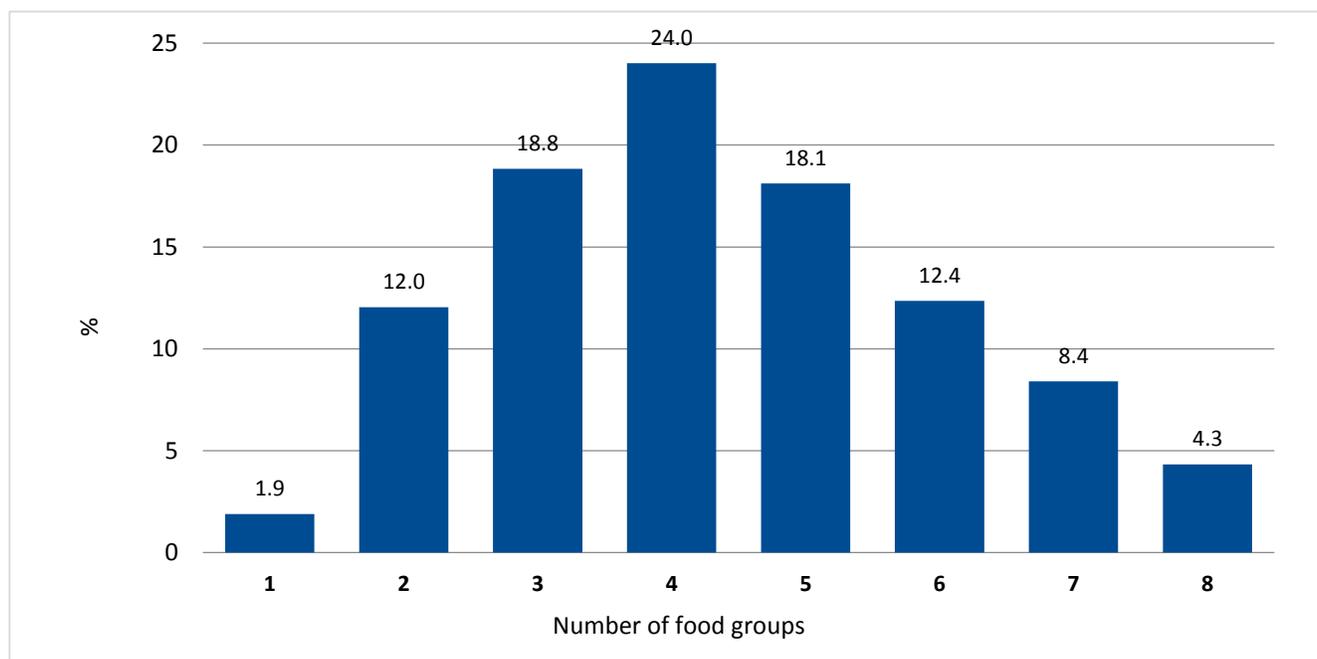
MORE THAN TWO THIRDS OF SIERRA LEONEAN HOUSEHOLDS CONSUME A DIET WHICH LACKS SUFFICIENT AMOUNTS OF IRON. THIS IS A MAJOR CONCERN FOR PREGNANT AND LACTATING WOMEN'S HEALTH.

### 3.6.1 Household dietary diversity scale

The household dietary diversity scale (HDDS) is another important indicator that contributes to defining the household food security profile. It measures the number of food groups consumed by households in the 24 hours prior to the survey.

In Sierra Leone, 13.9 percent of households consume two food groups or less on a weekly basis, while 56.8 percent consume foods from four food groups or less.

Figure 18: Household Dietary Diversity Scale



Consumption of such an undiversified diet contributes to high levels of vulnerability to malnutrition. In total, 43.0 percent of households consume foods from more than four groups, with the percentage of households consuming foods from more than five groups declining as the number of groups increase. The four food groups most commonly consumed by households are cereals, vegetables, oil for cooking and some sugar (see Annex 14 for more details).

### 3.6.2 Consumption of food rich in vitamin A and iron

Micronutrient deficiency diseases (MNDs) – iron deficiency and vitamin A deficiency - are common in Sierra Leone. Poverty, lack of access to a variety of micronutrient rich foods, cooking methods that do not conserve micronutrients, lack of knowledge of optimal dietary practices, and high incidence of infectious diseases are several of the factors which lead to MNDs.

Table 11: Consumption of foods rich in vitamin A and iron in last seven days

District	Vitamin A			Protein			Iron		
	Never consumed	Consumed sometimes	Consumed at least daily	Never consumed	Consumed sometimes	Consumed at least daily	Never consumed	Consumed sometimes	Consumed at least daily
Kailahun	0.7%	61.5%	37.8%	41.1%	44.5%	14.4%	76.5%	17.9%	5.6%
Kenema	2.8%	62.3%	34.8%	41.0%	36.9%	22.0%	76.8%	12.8%	10.4%
Kono	1.7%	62.3%	36.0%	40.6%	41.8%	17.6%	79.3%	15.3%	5.4%
Bombali	12.8%	64.1%	23.1%	40.3%	41.5%	18.2%	77.7%	16.1%	6.2%
Kambia	4.0%	84.5%	11.5%	64.1%	21.8%	14.1%	88.8%	6.4%	4.8%
Koinadugu	3.7%	63.6%	32.8%	38.0%	30.2%	31.8%	70.5%	12.5%	17.0%
Port Loko	3.7%	61.4%	34.9%	42.6%	26.1%	31.3%	66.2%	18.3%	15.5%
Tonkolili	5.6%	73.0%	21.4%	34.0%	38.6%	27.4%	66.8%	10.0%	23.3%
Bo	2.1%	44.7%	53.2%	27.3%	28.8%	43.9%	52.4%	17.1%	30.5%
Bonthe	1.4%	60.3%	38.3%	36.6%	26.3%	37.2%	46.1%	26.4%	27.5%
Moyamba	2.0%	55.0%	42.9%	60.7%	23.8%	15.5%	82.1%	8.9%	9.0%
Pujehun	8.8%	64.6%	26.7%	53.2%	32.0%	14.8%	74.8%	14.2%	11.0%
Western Area Rural	1.1%	45.0%	53.9%	35.0%	35.0%	30.0%	74.6%	16.2%	9.1%
Western Area Urban	1.8%	33.6%	64.6%	11.1%	28.8%	60.0%	44.1%	32.4%	23.5%
Urban slums	3.2%	23.7%	73.1%	13.4%	43.3%	43.3%	41.4%	28.0%	30.6%
Rural	4.0%	64.0%	32.0%	45.0%	33.7%	21.4%	74.6%	13.6%	11.8%
Urban	3.0%	40.8%	56.2%	16.9%	31.7%	51.4%	50.6%	25.9%	23.5%
<b>Average</b>	<b>3.7%</b>	<b>57.3%</b>	<b>38.9%</b>	<b>36.9%</b>	<b>33.1%</b>	<b>30.0%</b>	<b>67.7%</b>	<b>17.1%</b>	<b>15.1%</b>

Overall, 3.7 percent of households did not consume foods rich in vitamin A in the seven days before the survey, and 67.7 percent did not consume foods rich in iron. Households in urban areas were more likely to consume foods rich in vitamin A and iron (56.2 percent consuming food rich in vitamin A everyday; 23.5 percent consuming food rich in iron every day) compared to households in rural areas (32.0 percent consuming food rich in vitamin A everyday; 11.8 percent consuming food rich in iron every day). The highest proportion of households that consumed vitamin A rich foods on a daily basis live in the Urban Slums (73.1 percent), followed by Western Area Urban (64.6 percent) and Western Area Rural (53.9

percent). The households reporting the highest levels of consumption of iron rich foods on a daily basis are in Urban Slums (30.6 percent), Bo (30.5 percent) and Bonthe (27.5 percent). Over two-thirds of households in all districts, with the exception of Bonthe and Bo, responded to the questionnaire that they never consume foods rich in iron. However, to an extent this may demonstrate a lack of understanding of sources of iron.

The high proportion of households never consuming iron rich foods is a cause for great concern across all districts, implying that iron deficiency (anaemia) is likely, with concerning health implications, especially for pregnant women and children.

### 3.7 Sources of food

Sierra Leoneans access food from a variety of different sources including: market purchase, own production, fishing, hunting/gathering, loan, gift, aid and exchange of labour for food, etc.

In both urban and rural areas, the market is the main source of the staple food: rice (in 82.6 percent of cases in urban areas and 76.6 percent in rural). A household's own production accounts for just 15.1 percent of rice consumption in urban and rural areas, with this figure higher in rural areas (20.7 percent), where rice production is more prevalent.

The high percentage of households purchasing rice from the market demonstrates a broader dependency on imported rice. This makes households highly vulnerable to price fluctuations and, in the event of an increase in global prices, can result in households reducing other non-food expenditures.

It should be noted that the 2015 CFSVA was carried out from September to October 2015, which is during the rainy season when farmers are not harvesting their rice and thus their levels of market purchases are higher and their levels of consumption of own production lower. This is further demonstrated by the fact that market purchase of rice among rural and urban households was found to be quite similar, despite the fact that rice is mostly produced in rural areas.

Table 12: Sources of cereals

Area	Own production (crops, animal)	Gathering	Loan	Market purchase (cash)	Market purchase (credit)	Begging	Exchange labour or items	Gift from family relatives or friends	Food assistance
Rural	20.7%	0.1%	0.3%	76.7%	1.1%	0.1%	0.1%	0.8%	0.1%
Urban	1.0%	-	0.1%	97.4%	0.8%	0.1%	-	0.6%	-
<b>Average</b>	<b>15.1%</b>	<b>-</b>	<b>0.2%</b>	<b>82.6%</b>	<b>1.0%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.7%</b>	<b>0.1%</b>

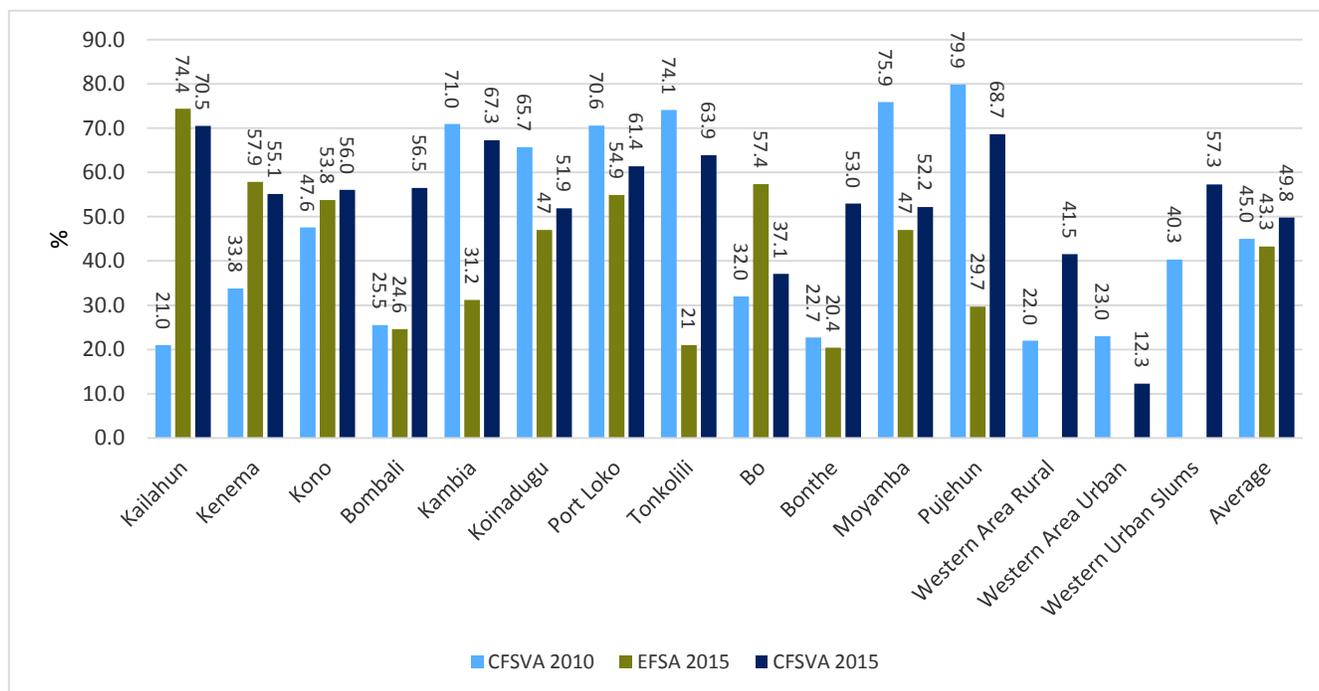
### 3.8 Trends in food security

#### 3.8.1 Chronic food insecurity

The prevalence of food insecurity has increased by almost 5 percent since 2010. In 2010, 45.0 percent of the population suffered from food insecurity. Today, the prevalence has increased to 49.8 percent, translating into 576,432 additional food insecure people. Although there is no data showing the state of food security in Sierra Leone immediately before the EVD outbreak, rapid economic growth and improvements in other socio-economic indicators may suggest that the impact of the outbreak on food security is even greater than is reflected in the 4.8 percent increase between 2010 and 2015.

When comparing the situation in districts that were already highly food insecure in 2010, notably Kambia, Port Loko, Tonkolili and Pujehun, levels have remained very high in 2015. This implies that food insecurity in these areas is the result of chronic, structural factors affecting the food production systems that constrain the ability of farmers to produce enough food. The main factors include, but are not limited to: insufficient demand for agricultural produce, traditional agricultural methods that result in low yields, high costs of production or low yields as a result of low soil fertility, and poor access to market. This has important implications in terms of designing appropriate policies or projects to address the underlying causes of chronic food insecurity in these districts.

Figure 19: Trends in food security, 2010 - 2015 (%)



### 3.8.2 Transitory food insecurity and EVD

Comparing the 2015 and 2010 CFSVA results also show a pronounced increase in transitory food insecurity, in other words reflecting an acute, short-term reduction in access to food in certain districts as a direct impact of the EVD outbreak. Indeed, a number of districts that were food secure in 2010 now show extremely high levels of food insecurity. This is especially the case for districts that were first affected by the EVD outbreak, including Kailahun (increasing from 21.0 percent in 2010 to 70.5 percent in 2015), Kenema (increasing from 33.8 percent in 2010 to 55.1 percent in 2015) and Bombali (increasing from 25.5 percent in 2010 to 56.5 percent in 2015).

There are a number of reasons as to why food insecurity increased so markedly in Kailahun and Kenema. These districts were the first affected by the EVD outbreak in May 2014, resulting in the enforcement of stringent restrictions on movement in and out of these districts in an attempt to halt the spread of the virus.<sup>38</sup> Fear and uncertainty characterised the initial stage of the outbreak as well as a considerable time lag in terms of providing food and non-food assistance to affected communities. As a result, Kailahun and Kenema districts were largely cut off from the rest of the country for an extended period of time, with little besides medical supplies and personnel moving in and out. This situation affected the

<sup>38</sup> The Government of Sierra Leone declared a national emergency in Kailahun District on 12 June 2014.

agricultural production and trade of food commodities, and was further exacerbated by the closure of borders with neighbouring Liberia and Guinea which halted cross-border trade of food.

The second main reason for the steep increase of food insecurity in Kailahun and Kenema relates to the restrictions on export and movements that EVD had on households engaged in cash crop production (31.3 percent of households in Kailahun and 15.0 percent of households in Kenema). Given that the cocoa harvest period coincided with the emergence of the EVD outbreak, farmers were unable to sell their production to traders, affecting household's access to food.

Table 13: Comparison between moderate/severe food insecurity in 2010 and 2015

District	% of HHs severely food insecure	% of HHs severely food insecure	% of HHs moderately food insecure	% of HHs moderately food insecure	% of HHs food insecure (severe + moderate)	% of HHs food insecure (severe + moderate)	Total food insecure population	Total food insecure population
	2010	2015	2010	2015	2010	2015	2010	2015
Port Loko	5.00%	17.10%	65.60%	44.30%	70.60%	61.40%	355,471	377,035
Tonkolili	22.50%	14.00%	51.60%	49.90%	74.10%	63.90%	291,211	339,166
Pujehun	6.80%	18.80%	73.10%	49.90%	79.90%	68.70%	245,053	237,411
Kambia	4.30%	15.40%	66.70%	51.90%	71.00%	67.30%	219,340	231,301
Western Area Urban	6.30%	0.20%	16.70%	12.10%	23.00%	12.30%	203,659	129,187
Kenema	1.90%	9.50%	31.90%	45.60%	33.80%	55.10%	200,254	336,040
Koinadugu	13.40%	7.90%	52.30%	44.00%	65.70%	51.90%	199,261	211,802
Bo	0.90%	8.10%	31.10%	28.90%	32.00%	37.00%	190,870	212,454
Moyamba	17.90%	7.60%	58.00%	44.60%	75.90%	52.20%	188,519	166,029
Bombali	2.10%	7.70%	23.40%	48.80%	25.50%	56.50%	132,322	342,493
Kono	7.90%	9.10%	39.70%	46.90%	47.60%	56.00%	102,319	283,230
Kailahun	3.70%	7.20%	17.30%	63.30%	21.00%	70.50%	88,470	370,387
Western Area Rural	1.30%	3.60%	20.70%	37.90%	22.00%	41.50%	53,116	183,825
Bonthe	1.10%	7.60%	21.60%	45.40%	22.70%	53.00%	34,517	106,387
Urban Slums	6.00%	6.40%	34.30%	37.90%	40.30%	44.30%	24,142	26,820
<b>Average</b>	<b>6.50%</b>	<b>8.60%</b>	<b>38.50%</b>	<b>41.20%</b>	<b>45.00%</b>	<b>49.80%</b>	<b>2,586,040</b>	<b>3,553,568</b>

Restrictions on movement also played a significant role in the deterioration of food security in Bombali, where 63.1 percent of the population are engaged in food production activities. As a result of movement restrictions between districts, farmers were unable to transport their marketable surpluses to the capital or other urban centres, greatly reducing their incomes at a critical time in the agricultural calendar.

### 3.8.3 Cyclical food insecurity

Cyclical food insecurity occurs when there are habitual seasonal variations of the food security situation. Although Bonthe was relatively unaffected by the EVD outbreak, registering only one case, the food security situation greatly worsened from 22.7 percent in 2010 to 53.0 percent in 2015. This deterioration may be explained by two reasons. The first is the knock on effects of the EVD outbreak in other districts, which reduced trade and subsequently the availability of food, especially as local authorities in Bonthe worked hard to curb the spread of EVD into their district. The second is the impact of the flooding in

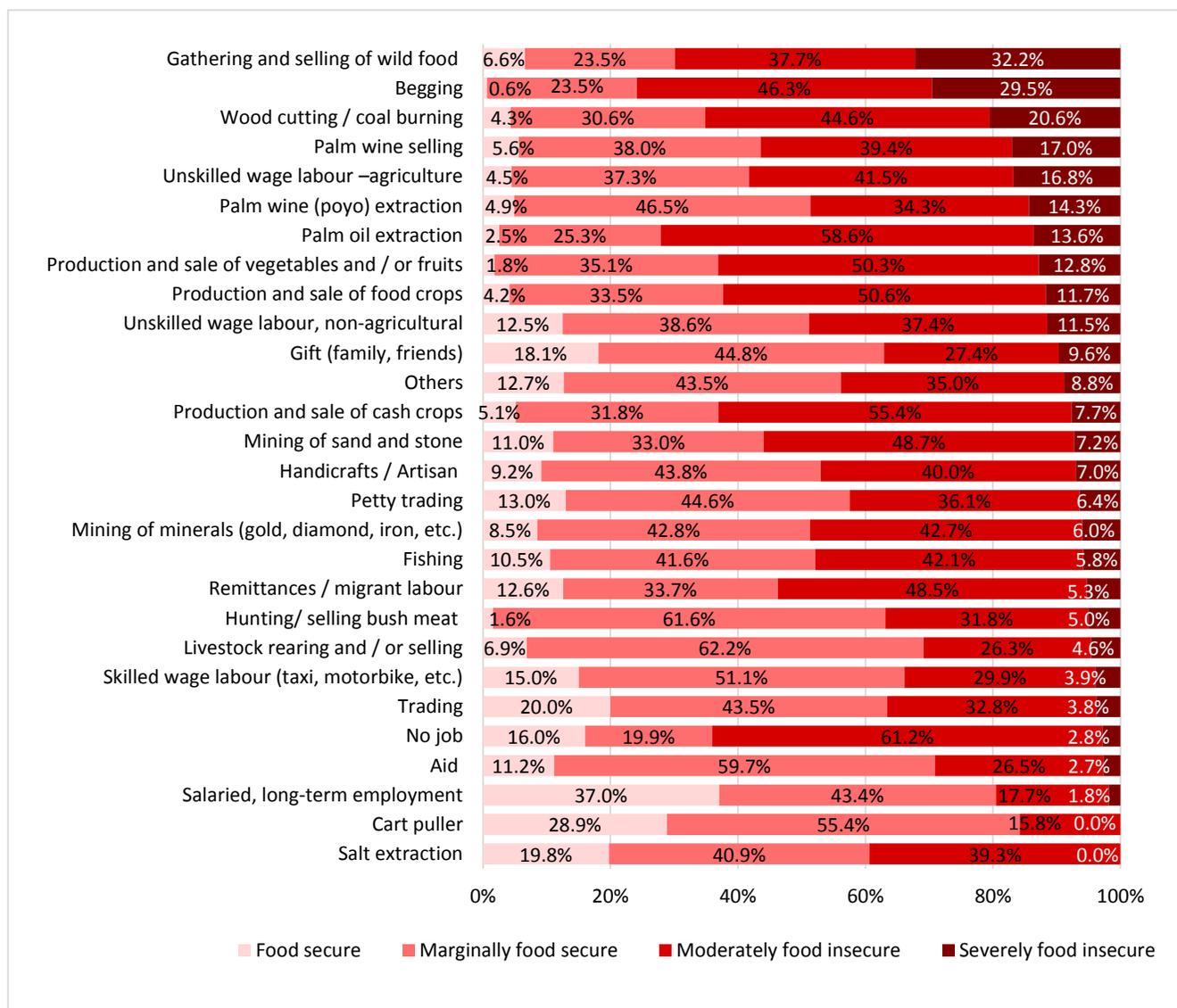
September 2015, which affected 1,013 households in Nongoba-Bullon and Kwamebai-Krim chiefdoms, flooding farms, damaging crops and destroying other household assets. Due to the low lying topography of Bonthe district, which includes many rivers and tributaries, the district is highly susceptible to seasonal flooding, as are neighbouring Pujehun and Bo districts. Thus the deterioration in the food security situation can be considered as cyclical in nature.

### 3.9 Profile of food insecure households

#### 3.9.1 Food security by livelihoods

The livelihood strategy employed by a household plays a significant role in determining their level of food security and socio-economic status.

Figure 20: Food insecurity by livelihood type



The 2015 CFSVA examined how different livelihood activities affect food security. In terms of population, the highest number of food insecure people are employed in the farming sector, either growing vegetables and fruit (63.1 percent), food crops (62.3 percent) or cash crops (63.1 percent).

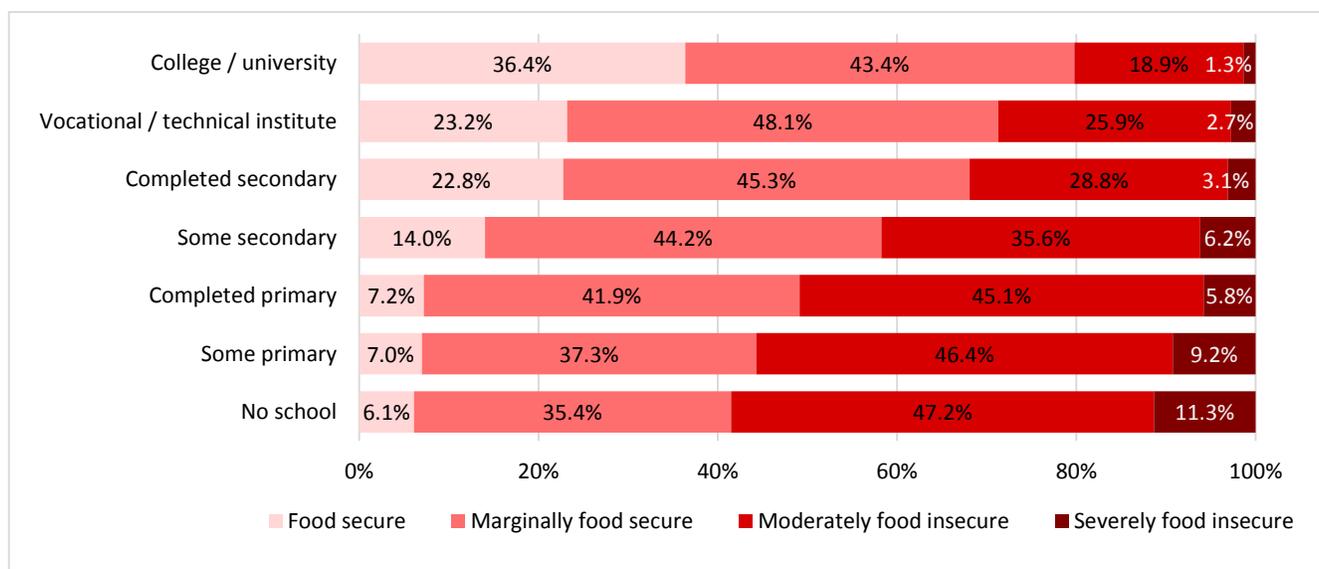
Households suffering extreme food insecurity are engaged in livelihoods that generate very limited income, including the gathering and sale of wild/bush food (32.2 percent), begging (29.5 percent), wood cutting/charcoal production (20.6 percent) and the sale of palm oil (17.0 percent).

Food insecurity is highest among households adopting begging as their main livelihood activity (75.9 percent), followed by those who live primarily on palm oil extraction (72.1 percent) and gathering and selling wild food (69.9 percent). In contrast, households engaged in salaried work and wage labour are more likely to be food secure (37.0 percent).

### 3.9.2 Food security by education level of the household’s head

To gain an understanding of how education and food security are interrelated in Sierra Leone, the 2015 CFSVA explored how the educational level of the household head impacted the household’s level of food security.

Figure 21: Food security by education level of the household head



Across both rural and urban areas, households headed by an individual with no previous education were found to have the highest rate of food insecurity (58.5 percent). The level of educational attainment of the household head is negatively correlated with food insecurity: the higher the level of education, the lower the level of food insecurity. Indeed, among households headed by a university or college degree holder, the prevalence of food insecurity is low. Households headed by a vocational qualification holder are the second lowest food insecure group.

### 3.9.3 Food security by livelihood zones

Sierra Leone is divided into ten different livelihood zones:

- Livelihood Zone 1: Tonkolili: *Food crops and gold*
- Livelihood Zone 2: Bombali: *Food crops, peppers, tobacco and livestock*
- Livelihood Zone 3: Western Rice: *Root crops, cereals and trade belt*
- Livelihood Zone 4: Coastal: *Food crops and fishing*
- Livelihood Zone 5: Kailahun-Kenema-Kono: *Cash crops, food crops and trade*
- Livelihood Zone 6: Kono-Kenema-Bo: *Rice, tree crops and timber*

Livelihood Zone 7: Koinadugu: *Livestock, food crops and trade*

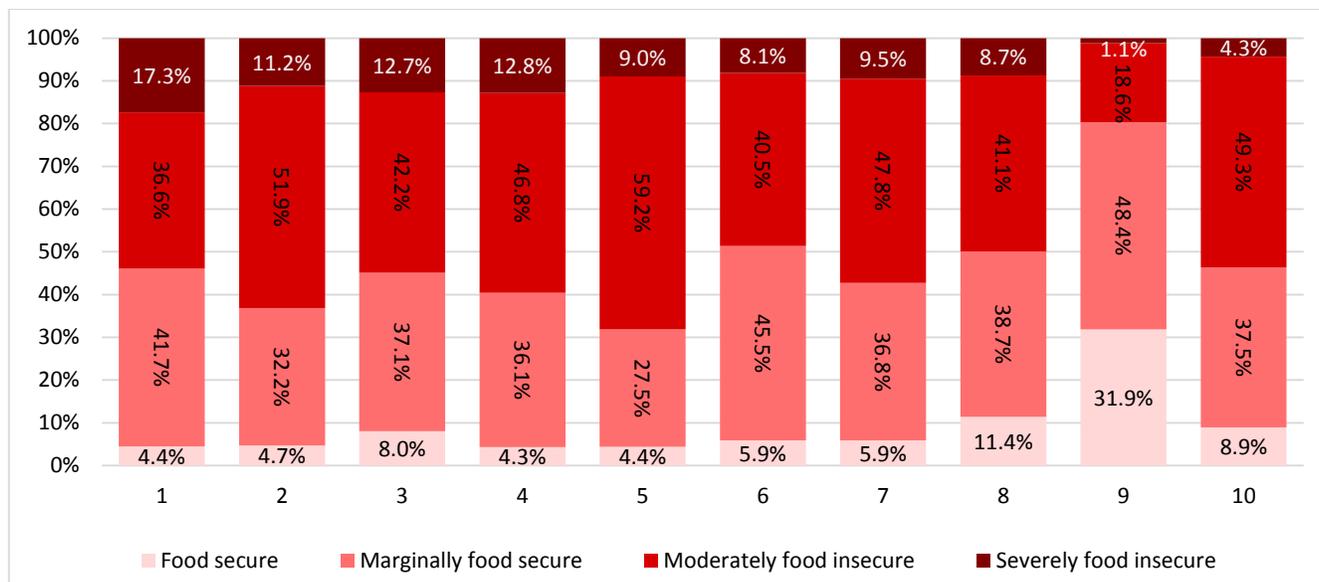
Livelihood Zone 8: Follofaba Dembelia and Wara Yagala chiefdoms, Koinadugu: *Vegetables*

Livelihood Zone 9: Freetown Peri-Urban

Livelihood Zone 10: Rice Bowl Areas

The highest prevalence of severely food insecure households was found in livelihood zones dominated by food crop production, specifically zone 1 (17.3 percent), zone 4 (12.8 percent), zone 3 (12.7 percent) and zone 2 (11.2 percent).

Figure 22: Food security prevalence by livelihood zone



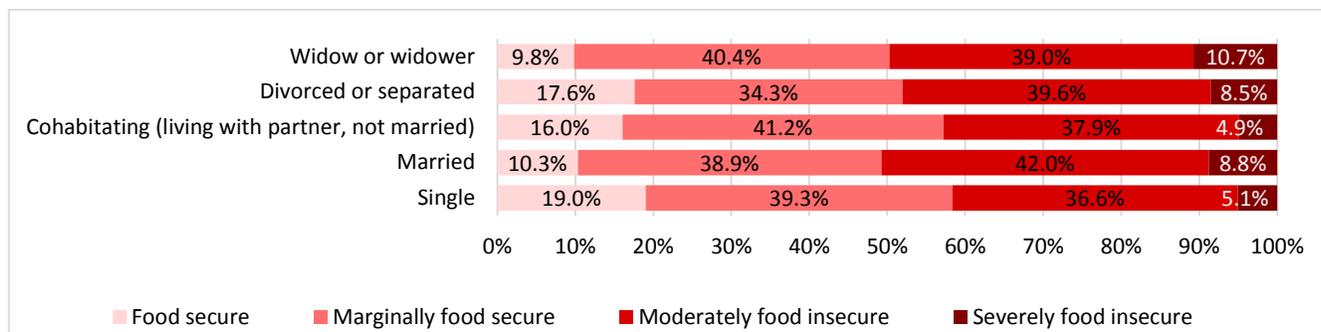
The overall food insecurity (both severe and moderate) is highest in zone 5 (68.2 percent), followed by zone 2 (63.1 percent), zone 4 (59.6 percent) and zone 7 (57.3 percent).

### 3.9.4 Food security by various vulnerable groups

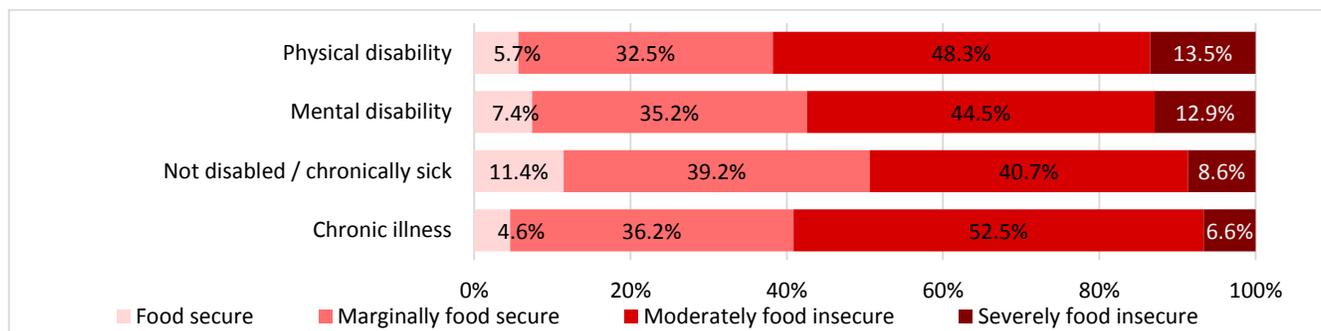
Food insecurity impacts various groups differently and with different levels of intensity. In the case of disaggregation by the *gender of the household's head*, the prevalence of severe food insecurity is higher in female-headed households compared to male-headed households. Vice versa, the food secure group has a higher percentage of male-headed households compared to female-headed households. However, the percentage of food secure households was found to be marginally higher among female-headed households (50.1 percent) compared to male-headed households (48.8 percent).

Figure 23: Food security by vulnerable groups

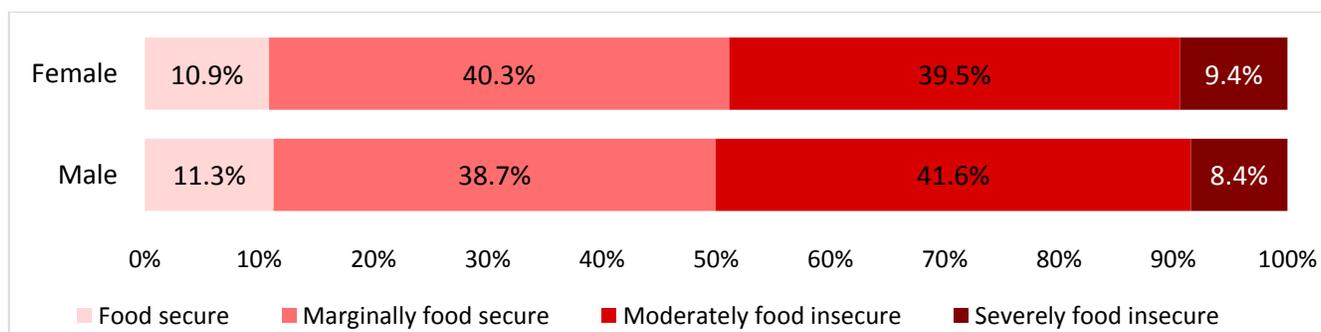
*Food security by marital status*



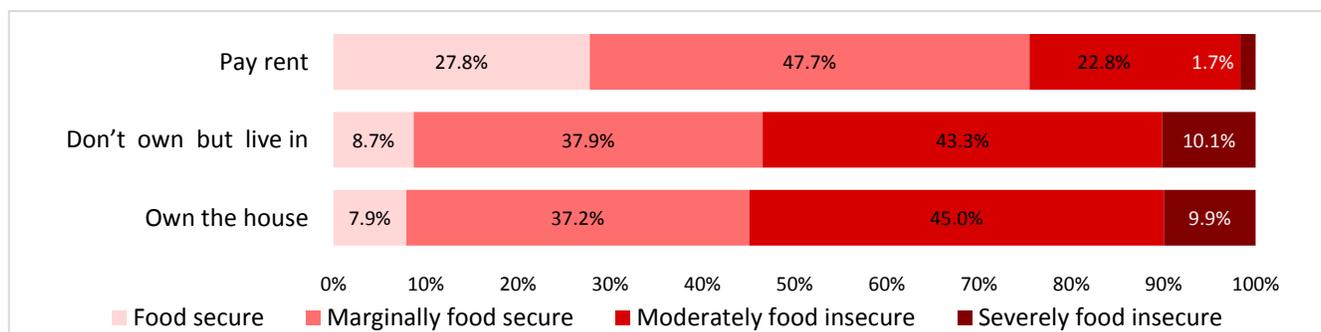
*Food security by disability of the household head*



*Food security by the gender of the household's head*



*Food security by house ownership*



In the case of marital status, households headed by widows/widowers are more likely to be food insecure (10.7%). The married and divorced groups have almost the same level of severe food insecurity. Single people were found to be the most food secure (19.0 percent), followed by divorced (17.6 percent) and cohabitating (16.0 percent) household heads.

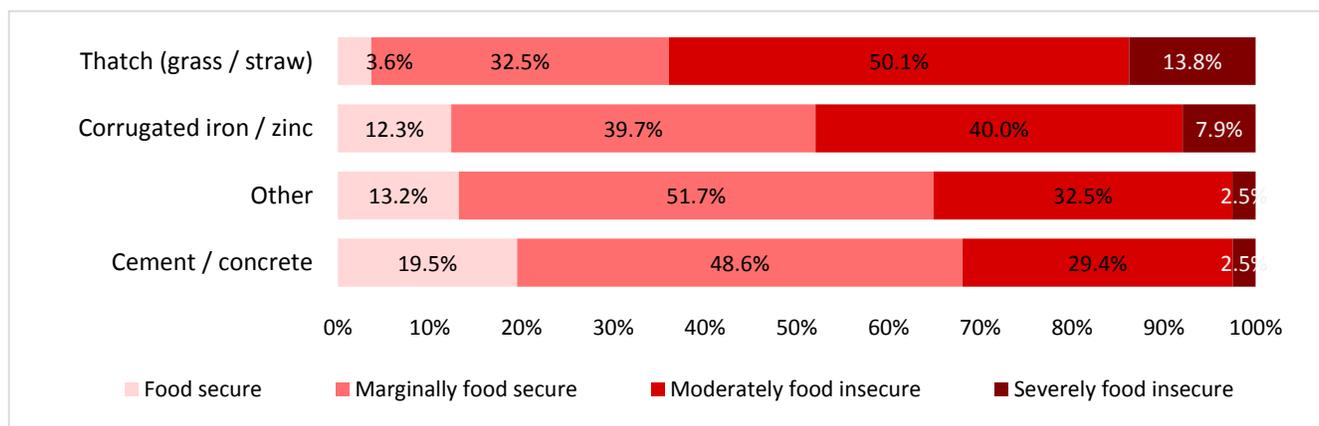
The *disability of the household's head* also has an impact on food security: those households headed by a person living with a disability have a higher rate of food insecurity compared to those without (between 57.0 – 62.0 percent compared to 49.4 percent). In particular, levels of food insecurity were higher in households headed by someone with a physical disability (61.8 percent), followed by a chronic illness (59.2 percent) and a mental illness (57.4 percent).

The 2015 CFSVA also looked at the relationship between *household ownership* and food security, which produced surprising results. It was found that those who own their houses (54.9 percent) were far more likely to be food insecure compared to those who rent their house (24.5 percent). This reflects the fact that rural dwellers are more likely to be food insecure but own their houses, compared to those living in urban areas who are more food secure but who are more likely to rent.

### 3.9.5 Food security by house structure

People residing in more temporarily constructed dwellings (e.g. houses with thatch [grass/straw] roofs) show a high prevalence of food insecurity (63.9 percent). This is in contrast to those living in cement structures, who show less food insecurity prevalence (31.9 percent).

Figure 24: Food security by household structure

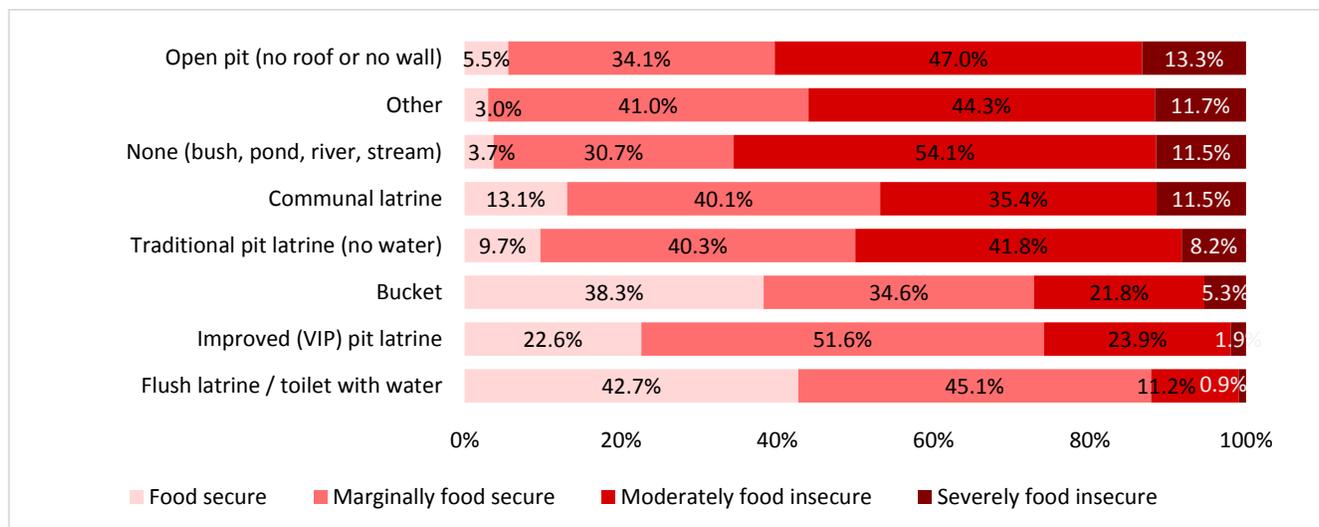


### 3.9.6 Food security by access to water and sanitation

There is a positive correlation between dwellings with improved household sanitation facilities and food security. The better the sanitation facility, the more acceptable the level of household food security. Demonstrating this are households that have a flush latrine, which are among the most food secure (87.8 percent). It is likely that improved sanitation facilities also reflect higher income levels.

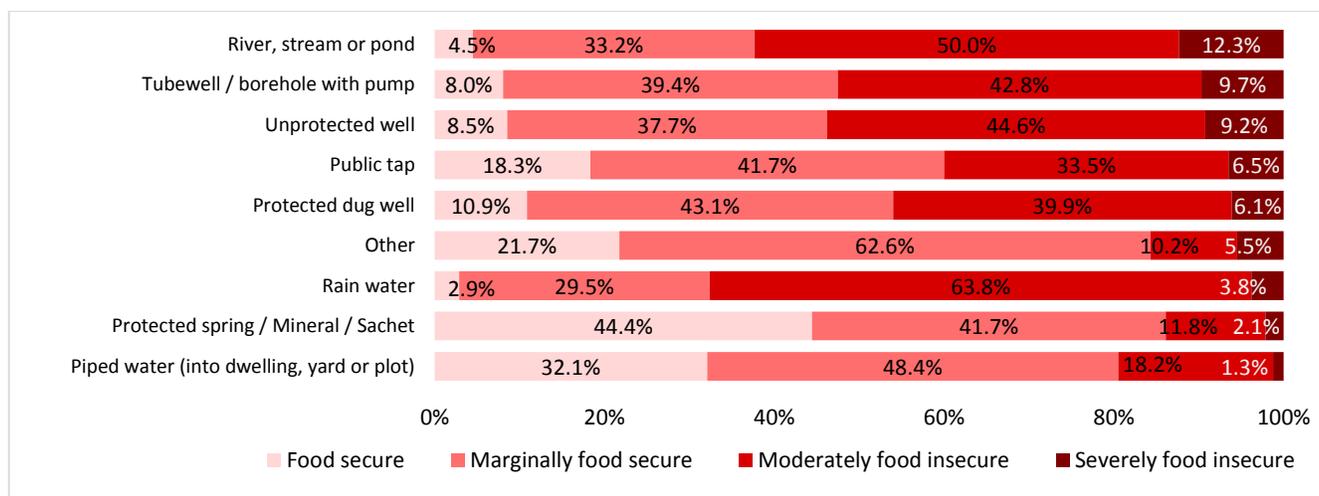
Conversely, those households with no latrine facility show higher levels of food insecurity (65.6 percent), followed by those with an open pit latrine (60.3 percent) and other types (56.0 percent). Higher levels of food insecurity among households without access to an improved latrine may be due to the health risks associated with open defecation, resulting in the increased morbidity that affects poor households.

Figure 25: Food security prevalence by house sanitation



Findings of the 2015 CFSVA also indicate a positive correlation between households with access to a potable water source and food security. Sierra Leone is characterised by highly inadequate water infrastructure, especially in rural areas, with many poor households relying on unimproved water sources for their drinking water.<sup>39</sup> Drinking untreated water causes numerous health issues including bacterial and parasitic infections that increase morbidity, compromise the physical and cognitive development of children, and result in absenteeism among labourers, compromising their ability to earn.

Figure 26: Food security by sources of water



The source of household drinking water is significantly correlated with the level of food security. Overall, households with access to an improved water facility are more likely to be food secure, including those using protected spring and bottled/packet water (86.1 percent). However, households dependent on getting their water from an unimproved water source (e.g. river/stream/pond) are at a much higher risk

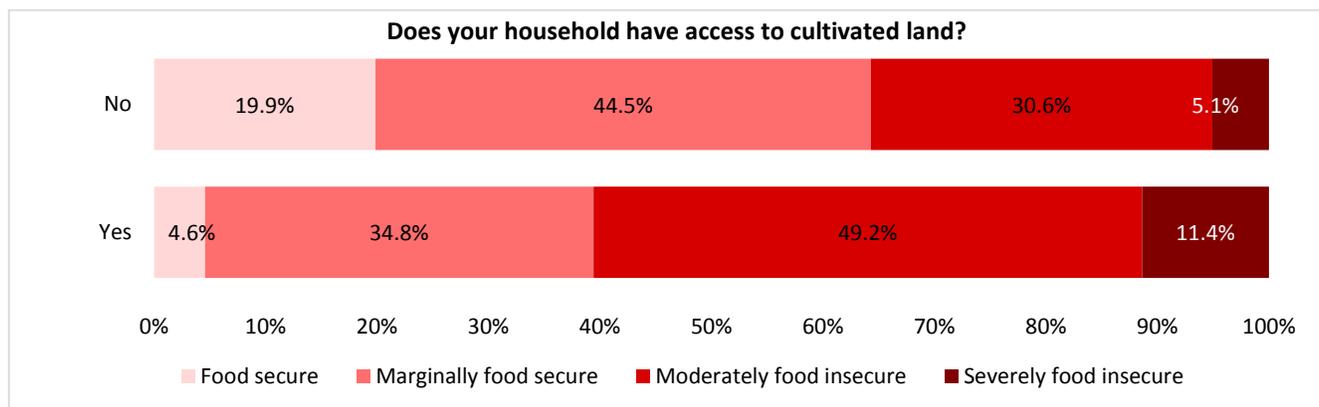
<sup>39</sup> The Ministry of Water Resources exercises policy oversight of the two main water utility companies, the Guma Valley Water Company which provides access to potable water in Freetown, and the Sierra Leone Water Company, which is responsible for water supply services in the regional areas. The Local Government Act of 2004 established a decentralization policy which transferred the responsibility for water supply in areas outside of Freetown from the central government to local councils.

of food insecurity (62.3 percent). Similarly, households utilising rainwater as their source of drinking water have the highest proportion of food insecure people (67.6 percent). The findings suggest that the development of water and sanitation infrastructure may have a positive impact on food and nutritional security.

### 3.9.7 Food security among farming and non-farming households

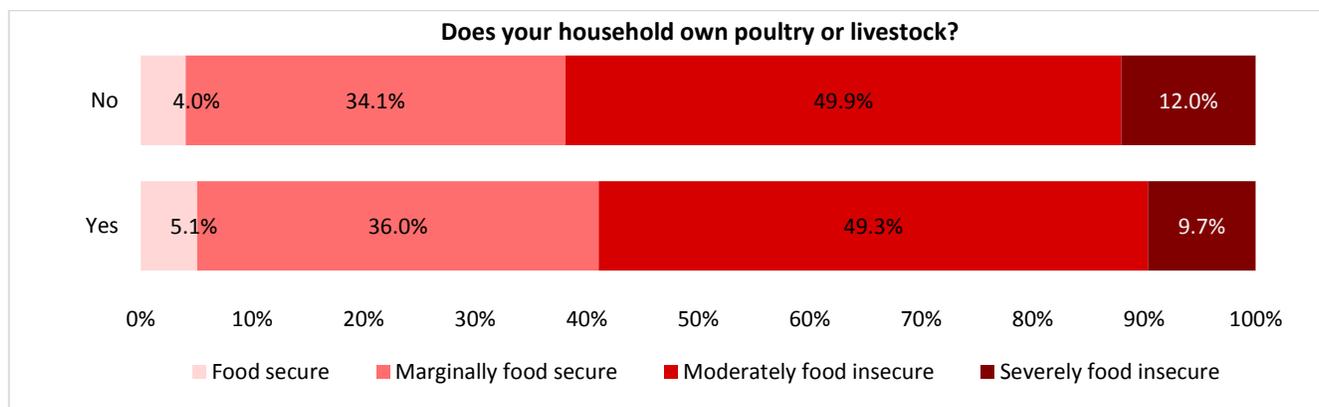
The 2015 CFSVA examined the relationship between the level of food security and land cultivation. In general, households engaged in farming are more food insecure (60.6 percent) compared to those engaged in non-farm activities (35.7 percent). This implies that most households engaged in farming are conducting their activities at or below subsistence levels, and thus cannot meet their basic food needs.

Figure 27: Level of food security, by access to cultivated land



### 3.9.8 Food security by livestock ownership

Figure 28: Level of food security, by livestock ownership



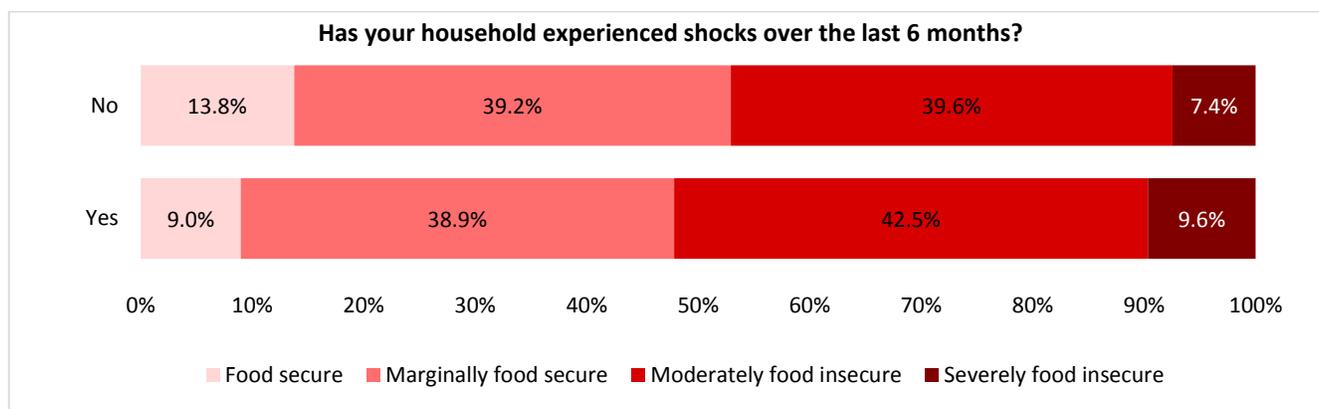
Although livestock is not reared by the majority of farming households, the 2015 CFSVA shows that food insecurity is marginally lower among households who keep livestock (59.0 percent) compared to those who do not (61.9 percent).

Explanatory factors include the direct food benefits that livestock farming provides including meat, milk and other dairy products, which are important for the nutritional wellbeing of children and pregnant and lactating women.

### 3.9.9 Food security by shocks and coping strategies

Shocks have a negative impact on food insecurity at the household level. In the event of a shock, households become highly vulnerable and many become food insecure, at least in the short-term. Others continue to experience food insecurity in the long-term, depending on the nature of the shock and the depth of its impact. The 2015 CFSVA looked into the impact of shocks on food security in general. It was found that food insecurity was higher among households that had experienced a shock (52.1 percent) compared to those that had not experienced any shock (47.0 percent).

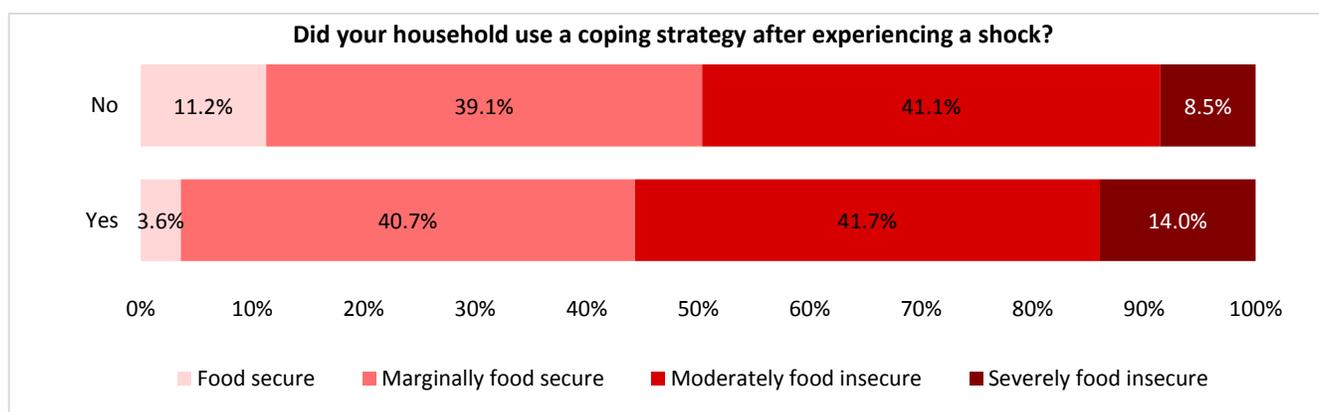
Figure 29: Level of food security, by household exposure to shocks



Households in Sierra Leone experienced a number of different shocks between 2014 and 2015. However for most households the EVD epidemic was the most significant shock (50.9 percent of households overall who reported a shock), and it severely affected their quality of life and their livelihoods. Whilst only a minority of households had reported or confirmed EVD cases, the indirect impacts caused by trade and movement restrictions were considerable. Households reported that EVD was the most significant shock in terms of its impact on food security. In total, 54.1 percent of households reported that EVD had reduced their access to food. Agriculture was the most affected sector by EVD outbreak-related shocks, with 71.0 percent of households experiencing a shock.

Other shocks significantly impacting household food security are drought/irregular rain (53.0 percent), floods (46.7 percent), market price fluctuations (53.1 percent), theft of crops or livestock (50.7 percent) and the death of a household member engaged in income generating activities (49.5 percent) (see Annex 15 for details).

Figure 30: Level of food security, by use of coping strategy after exposure to a shock



When a household is put under stress as a result of a shock they often adopt a range of different coping strategies to survive.

Among households that adopted a coping strategy when they experienced a shock, the prevalence of food insecurity is higher compared to those who did not resort to such strategies. This is because households with higher incomes or more assets are less likely to resort to negative coping strategies that impact on food insecurity (e.g. reducing food expenditure), as they have the resources to maintain normal levels of food consumption.

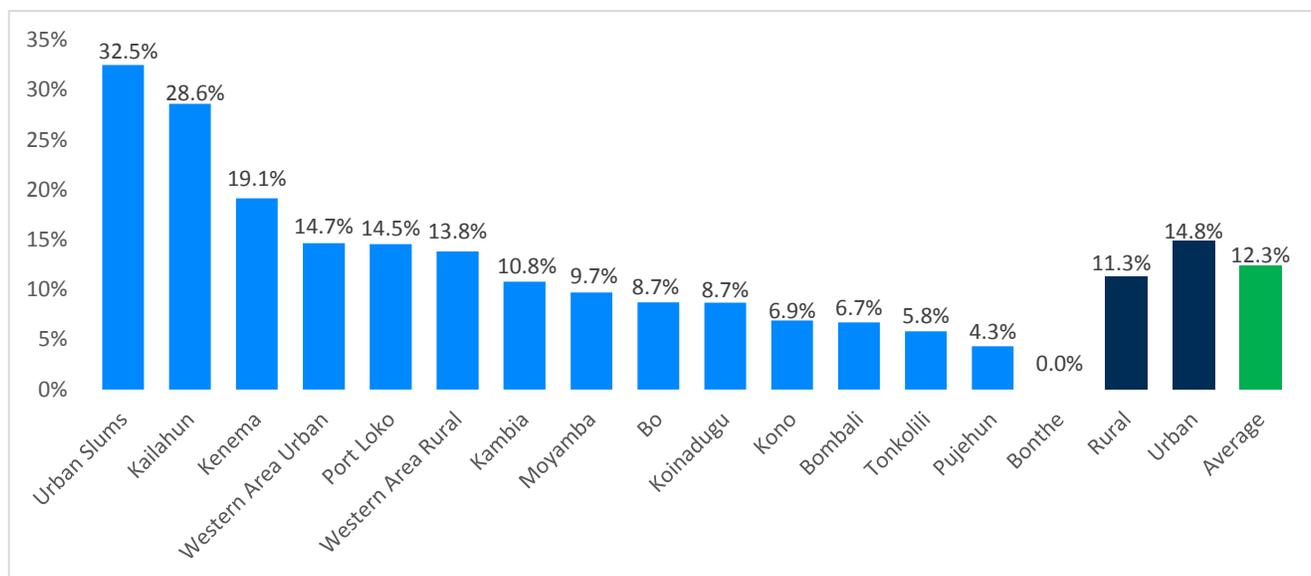
The highest percentages of food insecure households are those who had sold their land (72.8 percent), followed by households who sold their last female animal (69.0 percent) and those who had withdrawn their children from school (65.6 percent) (see Annex 16 for details).

### 3.10 Food assistance

During the year prior to the survey, a significant number of households received food or non-food support from a variety of different sources. Overall, 12.3 percent of households received support, with more urban households (14.8 percent) receiving support than rural (11.3 percent).

Among the districts, the highest percentages of households receiving support live in the Urban Slums (32.5 percent), followed by those living in Kailahun (28.6 percent) and Kenema (19.1 percent).

Figure 31: Percentage of households that received support in 2014-2015<sup>40</sup>



#### 3.10.1 Type of assistance

The most common type of assistance provided was food (received by 44.3 percent), followed by cash (received by 42.2 percent). Agricultural inputs were distributed to 5.2 percent, household items to 3.8 percent and training support to 2.0 percent of households.

Rural households received more food assistance than urban (50.8 percent vs. 32.4 percent). However, urban households received more assistance in cash (57.1 percent) than rural (34.4 percent). Food

<sup>40</sup> Data collected between 1 September and 10 November 2015

assistance was received by the majority of households in Western Area Rural (93.2 percent), followed by Kailahun (70.0 percent), Kono (59.0 percent) and Moyamba (55.6 percent).

The type of assistance provided to households that had migrated varies significantly across the districts. A majority of households in most districts had received cash, with the highest percentage of recipients found in Bo (83.2 percent) and households in the Urban Slums (60.6 percent). Other types of assistance received by households included agricultural inputs, building materials and skills training.

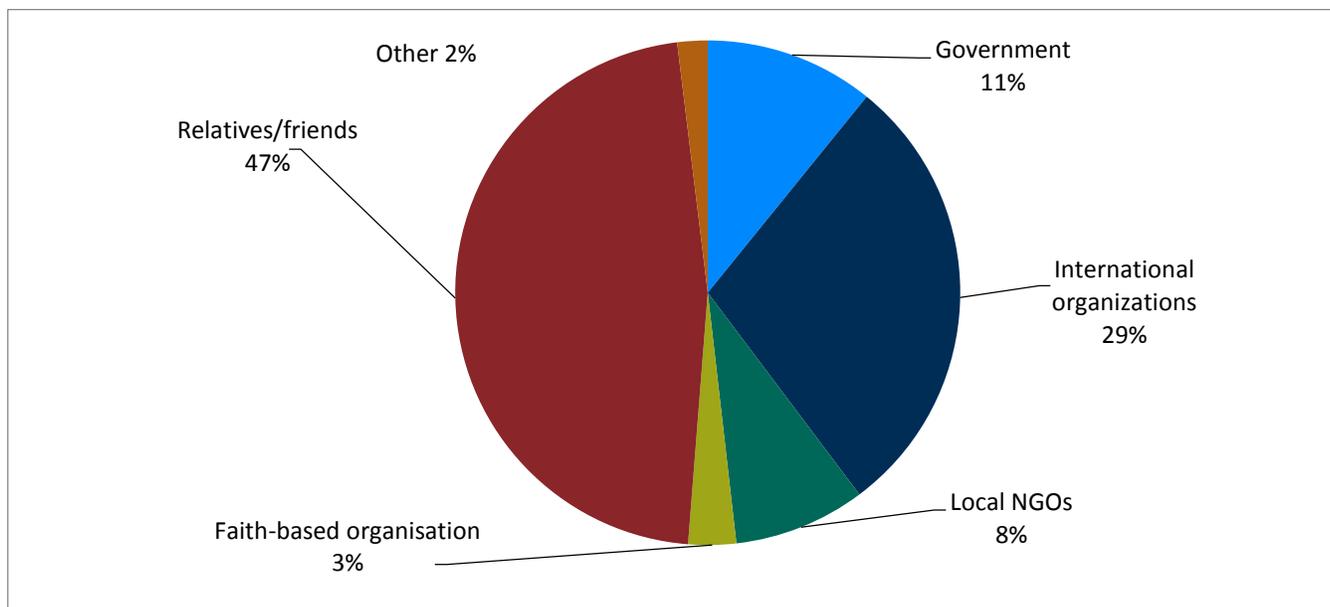
Table 14: Support provided to households

District	Building materials	Money	Land access/ titles	Agricultural inputs	Skills training	Credit	Household items	Food
Kailahun	0.3%	20.9%	2.9%	2.9%	0.6%	1.4%	1.1%	70.0%
Kenema	1.1%	39.3%	0.2%	5.1%	0.2%	-	2.9%	51.2%
Kono	0.2%	32.2%	-	2.8%	1.4%	1.3%	3.0%	59.0%
Bombali	0.7%	32.3%	-	27.8%	6.0%	0.9%	3.4%	28.9%
Kambia	1.9%	32.7%	-	13.0%	-	1.8%	2.1%	48.6%
Koinadugu	1.7%	55.6%	-	6.4%	3.0%	1.0%	3.2%	29.2%
Port Loko	-	20.2%	-	3.9%	0.3%	0.2%	5.1%	70.4%
Tonkolili	1.3%	48.4%	-	21.4%	1.3%	3.2%	6.1%	18.3%
Bo	0.7%	83.2%	-	1.0%	-	1.0%	2.3%	11.8%
Bonthe	-	-	-	-	-	-	-	-
Moyamba	-	37.8%	-	2.7%	0.6%	0.1%	3.2%	55.6%
Pujehun	-	44.6%	-	7.8%	-	4.4%	8.6%	34.5%
Western Area Rural	-	3.3%	-	1.2%	2.3%	-	-	93.2%
Western Area Urban	1.8%	67.4%	-	-	2.9%	0.3%	6.1%	21.5%
Urban Slums	1.4%	60.6%	-	-	19.7%	-	14.1%	4.2%
Rural	0.9%	34.4%	0.8%	7.7%	1.2%	1.0%	3.2%	50.8%
Urban	1.2%	57.1%	-	0.7%	3.5%	0.3%	4.8%	32.4%
<b>Average</b>	<b>1.0%</b>	<b>42.4%</b>	<b>0.5%</b>	<b>5.2%</b>	<b>2.0%</b>	<b>0.8%</b>	<b>3.8%</b>	<b>44.3%</b>

### 3.10.2 Sources of assistance

Households reported that they received support from a number of different sources. The main source of support which respondents cited that they had received assistance from was relatives and friends (47.0 percent), followed by international organisations (29.0 percent).

Figure 32: Sources of household support



Respondents reported that the source of assistance was the government (11.0 percent), whilst 8.0 percent stated they received support from local NGOs. In urban areas, 60.9 percent of households cited that they had received assistance from relatives and friends, compared to 38.7 percent in rural areas. Respondents indicated that international organisations provided a higher proportion of support to households in rural areas (34.4 percent) compared to urban (19.3 percent).

Across the districts, Port Loko (54.3 percent), Kailahun (51.6 percent), Moyamba (49.9 percent) and Kono (46.7 percent) received the most support from international organisations. The highest proportions of recipient households receiving support from NGOs were in the Urban Slums (27.7 percent) and Kailahun (20.6 percent) (see Annex 17 for details).

## 4 Food availability

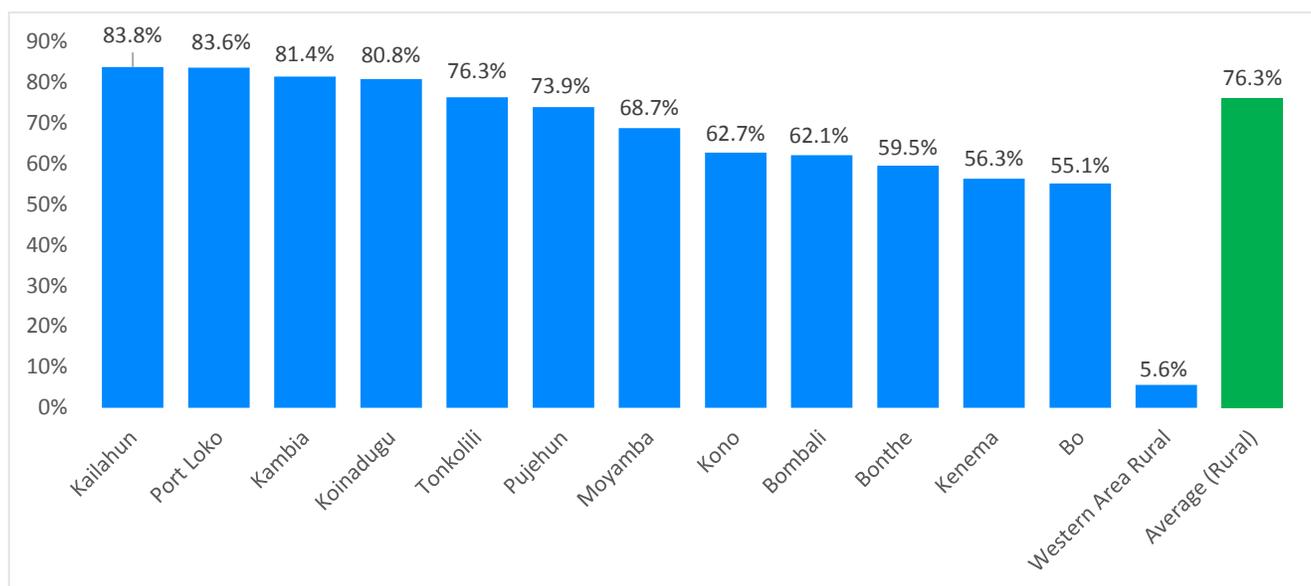
### 4.1 Agriculture

Agriculture is the main livelihood for the majority of rural Sierra Leonean households. Yet for most rural households, low agricultural production is a key limiting factor to assuring food availability and thus food security. The 2015 CFSVA explored the factors contributing to low agricultural production in order to develop recommendations to address these deficiencies. The aim is to support the broader objective of national food security and, in the short-term, to boost agriculture production as Sierra Leone emerges from the EVD outbreak.

#### 4.1.1 Land cultivation and ownership

In Sierra Leone, 76.3 percent of rural households are engaged in farming activities. Urban households are also involved in farming activities to diversify their livelihoods, often establishing backyard and kitchen gardens in brown and green belt areas, although on a smaller scale (8.0 percent).

Figure 33: Percentage of rural households engaged in agricultural production, by farming area



Among the districts, the highest percentage of households engaged in farming activities are in Kailahun (83.8 percent), Port Loko (83.6 percent), Kambia (81.4 percent) and Koinadugu (80.8 percent). The lowest percentage of households involved in farming are in Western Area Rural, where households are mainly engaged in wage labour in the service sector as well as various other income generating activities. Although Kailahun, Port Loko and Kambia have among the highest proportion of households employed in the farming sector, they also have among the highest levels of food insecurity.

### AGRICULTURAL EMPLOYMENT

KAILAHUN, PORT LOKO AND KAMBIA HAVE THE HIGHEST PROPORTION OF HOUSEHOLDS EMPLOYED IN THE FARMING SECTOR, HOWEVER THESE HOUSEHOLDS HAVE AMONGST THE HIGHEST LEVELS OF FOOD INSECURITY. THE LOWEST PERCENTAGE OF HOUSEHOLDS ENGAGED IN FARMING ARE IN WESTERN AREA RURAL.

Land ownership is a critical factor for agricultural production, enabling farmers to plan on a long- or short-term basis to develop land to cultivate various crops. In Sierra Leone, the majority of farmers own the land that they cultivate (74.4 percent). The proportion of farming households who own their land is highest in Pujehun (87.2 percent), followed by Kailahun (85.4 percent), Kenema and Kono (82.4 percent each). Again, food security and more secure forms of land tenure do not necessarily show a positive correlation, as Pujehun, Kailahun and Kenema are also characterised by high levels of food insecurity.

The second most common land ownership type among households that are engaged in farming activities is communal land (16.8 percent). The use of communal land is quite complex and requires effective planning at the community level between farmers and local power structures to ensure that land is optimally utilised.

Farmers cultivating community land often only have very limited rights to the land, and thus may not take as much interest in long-term planning, such as measures to maintain soil fertility to foster long-term productivity which achieves higher yields. This often results in the adoption of highly environmentally degrading land use practices, such as “slash and burn” and shifting cultivation practices, which further reduce soil fertility and contribute to increasing the vulnerability of households to environmental shocks. The use of communal land is highest in Tonkolili (30.2 percent). The third most common type of land use arrangement among farming households is leasing (8.8 percent) (see Annex 18 for details).

#### 4.1.2 Land holding

The 2015 CFSVA found that the average crop landholding for rice was 0.94 ha per household. Landholding size showed variation at the district level, with the highest rice crop holding reported in Moyamba (1.31 ha), followed by Bo (1.12 ha), Kambia (1.07 ha) and Kono (1.05 ha).

Table 15: Land holding by crop in 2014-15 (ha), in farming area

District	Rice	Cassava	Palm oil	Cocoa	Groundnut	Vegetable	Cashew nut trees	Other fruits trees	Total cropped area
Kailahun	0.78	0.12	0.20	0.70	0.04	0.04	-	3.8	1.88
Kenema	0.89	0.17	0.68	0.45	0.10	0.02	-	8.3	2.30
Kono	1.05	0.16	0.03	0.51	0.10	0.07	2.0	26.8	1.93
Bombali	0.61	0.19	0.03	-	0.25	0.03	0.7	1.2	1.11
Kambia	1.07	0.13	0.04	-	0.20	0.14	1.0	1.9	1.58
Koinadugu	0.98	0.13	0.01	-	0.37	0.02	-	0.2	1.51
Port Loko	1.00	0.29	0.08	-	0.34	0.08	1.5	1.2	1.79
Tonkolili	0.85	0.22	0.22	0.01	0.21	0.06	0.1	3.9	1.58
Bo	1.12	0.30	0.18	0.07	0.11	0.05	-	4.9	1.82
Bonthe	0.58	0.69	0.33	0.01	0.08	0.14	0.3	2.3	1.84
Moyamba	1.31	0.76	0.03	-	0.33	0.11	-	1.6	2.55
Pujehun	0.92	0.41	0.19	0.06	0.12	0.04	0.1	0.6	1.74
Western Area Rural	0.18	0.09	0.01	-	0.09	0.10	-	-	0.47
<b>Average (Rural)</b>	<b>0.94</b>	<b>0.25</b>	<b>0.16</b>	<b>0.17</b>	<b>0.20</b>	<b>0.06</b>	<b>0.5</b>	<b>4.7</b>	<b>1.78</b>

Average cassava field sizes are smaller than those for rice (0.25 ha), demonstrating the national preference for rice production and the fact that cassava is more commonly grown as a contingency crop to cover household needs if the rice crop fails. At the district level, the cultivation area allocated for cassava varies considerably, with the largest areas reported in Moyamba (0.76 ha), followed by Bonthe (0.69 ha) and Bo (0.30 ha). For cash crops, the national average palm oil plantations are 0.16 ha, cocoa 0.17 ha, groundnut 0.20 ha and vegetables 0.06 ha. Cocoa production is a more widespread income generating activity in the eastern province districts of Kailahun, Kenema and Kono, where climatic conditions are conducive for its cultivation.

#### 4.1.3 Involvement of women and youth in farming

Women in Sierra Leone are not only involved in agricultural cultivation activities but also play an important role in decision making regarding farming practices at the household level. Over 42.0 percent of women reported that they had access to land, with the highest percentage of respondents in Port Loko (58.0 percent), followed by Koinadugu (57.4 percent) and Moyamba (48.9 percent).<sup>41</sup>

One out of five women (20.0 percent) are landowners, with the highest percentage being in Koinadugu (38.8 percent), followed by Pujehun (27.6 percent) and Kailahun (24.3 percent).

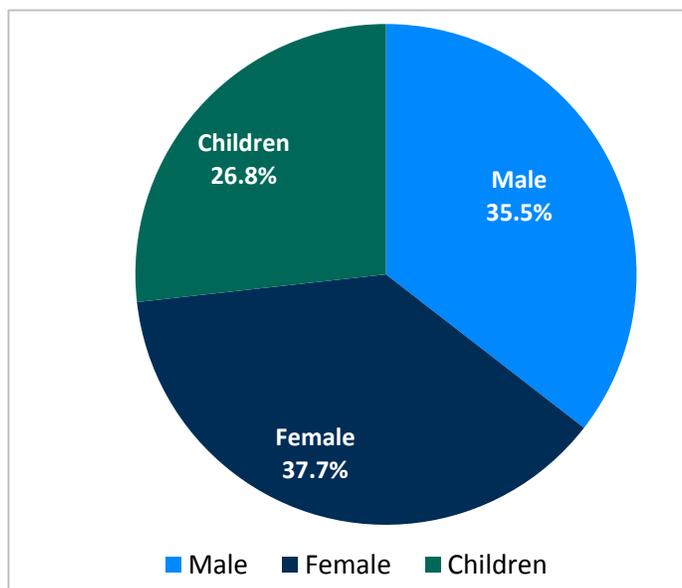
In addition to family farming, which involves collaboration between household members, youth in Sierra Leone also play an active role in the agriculture sector. Youth farming as a separate venture is quite significant (14.1 percent), with high proportions found in Koinadugu (27.0 percent) and Bonthe (20.9 percent).

Table 16: Gender and youth working in agricultural production, in farming areas

District	Women's access to land	Women who own land	Youth (18-35 years old) with separate farms
Kailahun	38.6%	24.3%	10.1%
Kenema	24.4%	14.2%	6.8%
Kono	32.8%	14.1%	9.1%
Bombali	33.2%	9.4%	13.0%
Kambia	45.0%	16.4%	11.1%
Koinadugu	57.4%	38.8%	27.0%
Port Loko	58.0%	20.7%	19.2%
Tonkolili	33.9%	14.8%	16.0%
Bo	28.5%	12.8%	3.0%
Bonthe	29.7%	8.2%	20.9%
Moyamba	48.9%	18.8%	9.4%
Pujehun	42.9%	27.6%	9.9%
Western Area Rural	2.9%	2.0%	1.2%
<b>Average (Rural)</b>	<b>42.0%</b>	<b>20.0%</b>	<b>14.1%</b>

<sup>41</sup> If women had the same access as men to productive assets, agricultural output in 34 developing countries could rise by an estimated average of up to 4 percent. This could reduce the number of undernourished people in those countries by as much as 17 percent, translating to up to 150 million fewer hungry people. Source: UN-Women Factsheet *Economic Empowerment of Women*.

Figure 34: Employment of women, men and children in farming activities



The 2015 CFSVA also investigated the gender composition of farm workers and the role played by children, to provide insight into another dimension of agricultural production in Sierra Leone.

The results show that slightly more women (37.7 percent) were engaged in farm work compared to men (35.5 percent). The highest percentages of women farm workers were found in Bonthe (41.6 percent), followed by Kambia (40.3 percent) and Port Loko (39.5 percent) (see Annex 19 for details). Children below 18 years of age are also involved in farming, mostly in support of family members including their parents. The percentage of children involved in farming on average is 26.8 percent.

Agricultural livelihoods in most developing countries usually involve the participation of the entire family, who work together to cultivate their farms. The division of labour between family members is usually based upon the nature of the work and its suitability by gender and age, as well as prevailing cultural norms and practices. Due to income constraints at the household level, the majority of farming households cannot afford to hire agricultural labourers owing to the low economic returns of farming activities, thus making family members the integral source of labour. The economic constraint could be overcome through greater mechanisation (either animal or machinery) of farming activities in order to increase the productivity of family members engaged in farming activities, thus freeing up time to engage in other income generating activities.

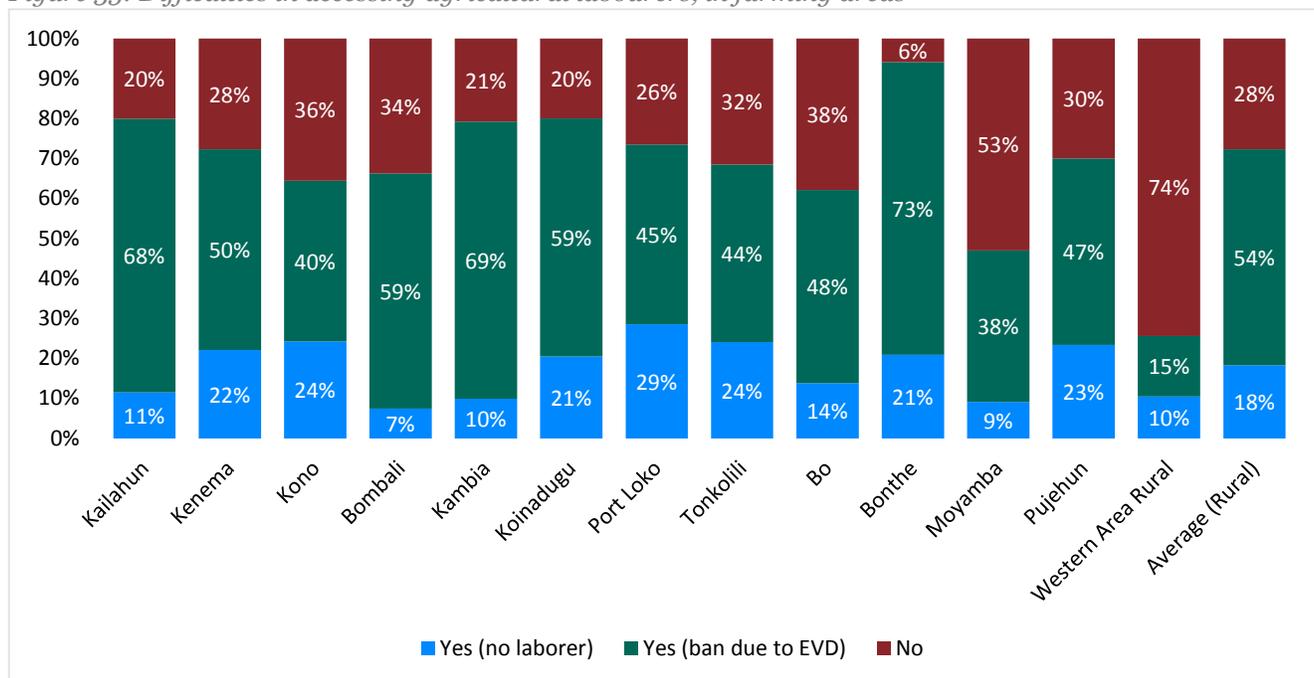
#### 4.1.4 Availability of labourers for farming

An important reason for low agricultural production is the fact that farming households lack access to sufficient agricultural labourers to cultivate larger areas of land. The majority of farmers reported that they are unable to find enough casual labourers (72.0 percent), especially at crucial points of the agricultural cycle such as during the harvest period. The main reasons for the lack of casual labourers is a general unavailability (according to 18.0 percent of respondents), whilst 54.0 percent explained how restrictions on movement and group work during the EVD outbreak prevented farming households from employing agricultural labourers.

#### AGRICULTURAL LABOUR

THE EVD OUTBREAK PREVENTED MANY FARMING HOUSEHOLDS FROM EMPLOYING AGRICULTURAL LABOURERS. THIS IS AN IMPORTANT EXPLANATORY FACTOR FOR THE SIGNIFICANT REDUCTION IN PRODUCTION OF ALL CROPS DURING 2014-15.

Figure 35: Difficulties in accessing agricultural labourers, in farming areas



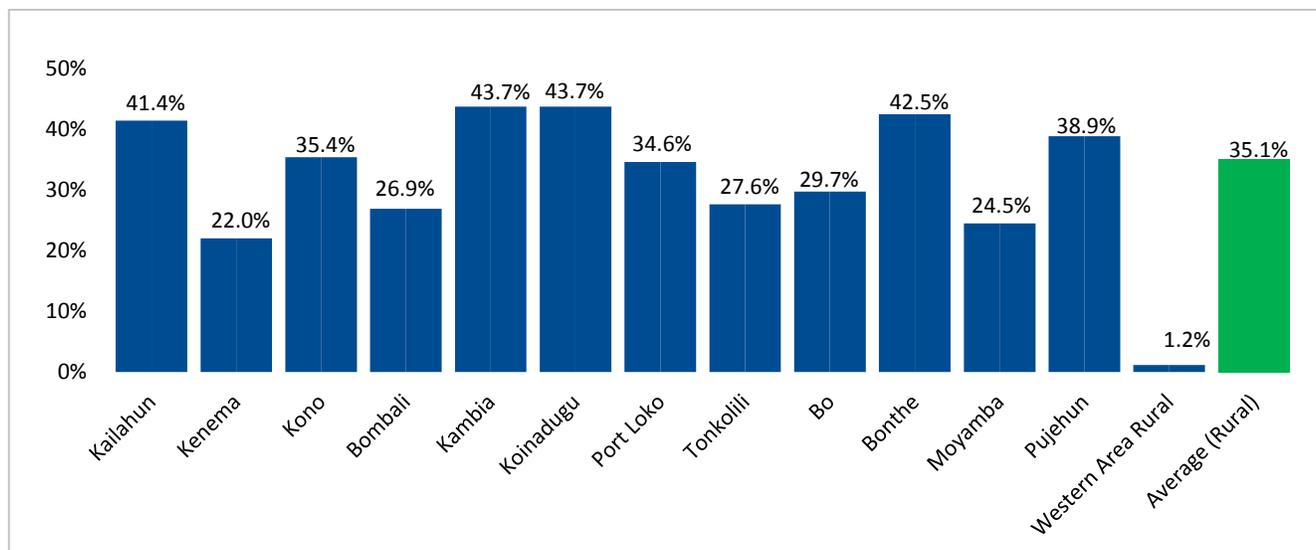
Among the districts, the highest percentage of farmers who experienced difficulties in contracting farm labourers were found in Bonthe (94.0 percent), followed by Koinadugu (80.0 percent) and Kailahun and Kambia (79.0 percent in each). Indeed, farmers in all districts cited this as a significant constraint, with the exception of Western Area Rural (25.0 percent).

#### 4.1.5 Uncultivated land

On average, 35.1 percent of farmers left part of their available land uncultivated during the 2014-15 cropping season, with the highest percentages found in Kambia and Koinadugu (43.7 percent in each) and Bonthe (42.5 percent).

The main reasons reported by households were the EVD outbreak (67.0 percent), a lack of available agricultural labourers (51.4 percent) and a lack of sufficient inputs (50.5 percent). Among the districts, the highest proportions of farmers reporting EVD as the main cause for leaving land uncultivated were in Bombali (87.0 percent), Kambia (83.8 percent) and Kailahun (83.1 percent). The highest percentage of farmers reporting a lack of agricultural labourers was in Bo (64 percent), followed by Koinadugu (60.7 percent) and Tonkolili (60.3 percent). Regarding a lack of necessary agricultural inputs, the highest proportion of households reporting this as a constraint was in Kambia (78.7 percent), followed by Tonkolili (62.9 percent) and Moyamba (62.5 percent) (see Annex 20 for details).

Figure 36: Land left uncultivated, in farming areas



#### 4.1.6 Constraints to increasing agricultural production

Farmers reported a number of reasons constraining them from achieving higher agricultural productivity including the unavailability of improved seeds (45.5 percent), lack of access to credit/money (38.8 percent), natural disasters/EVD (37.7 percent), insufficient household labourers (31.5 percent), pest/crop diseases (27.3 percent), lack of tools (24.9 percent) and the unavailability of fertiliser (19.2 percent).

Among the districts, the highest percentage of farmers reporting unavailability of improved seeds are in Bombali (61.3 percent). The highest proportion of farming households citing a lack of access to credit/money as a constraint to expanding agricultural production are in Bonthe (51.4 percent), those by natural disasters/EVD in Kailahun (51.2 percent), those experiencing insufficient labourers in Koinadugu (47.6 percent) and those having a lack access to fertiliser in Port Loko (56.9 percent) (see Annex 21 for details).

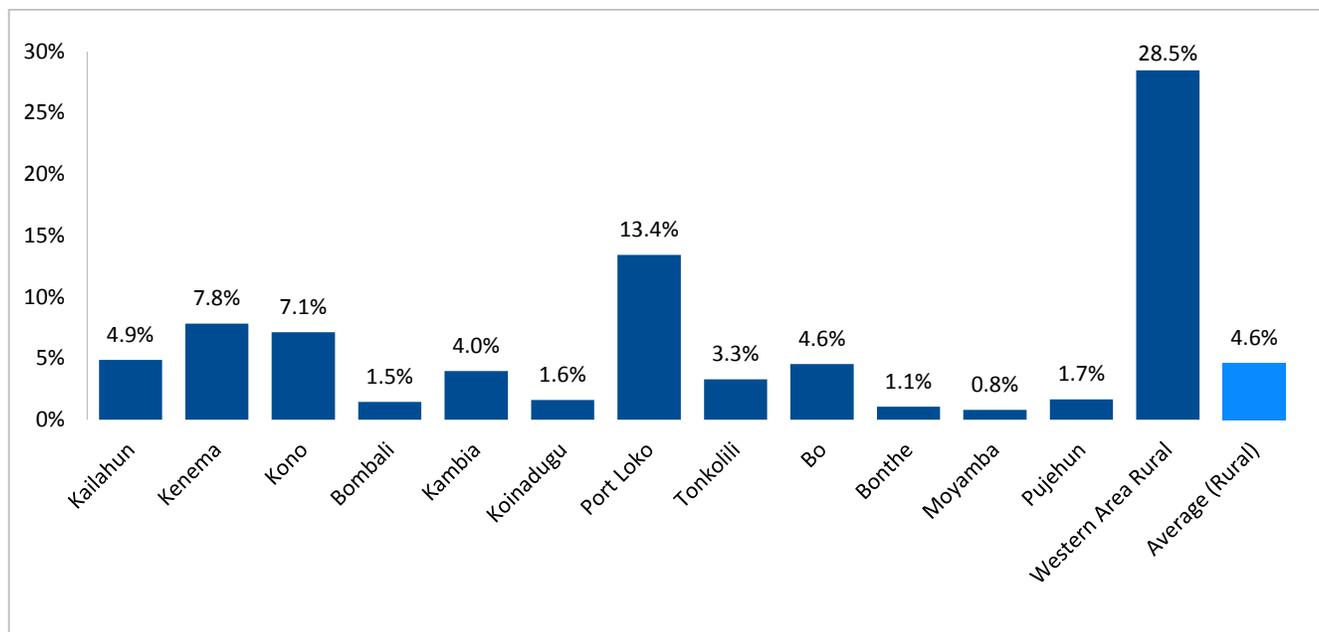
**AGRICULTURAL PRODUCTION**  
UNAVAILABILITY OF IMPROVED SEEDS, LACK OF ACCESS TO CREDIT, NATURAL DISASTERS, EVD, INSUFFICIENT LABOURERS, CROP DISEASES AND LACK OF TOOLS AND FERTILISER ARE THE MAIN CONSTRAINTS TO INCREASING AGRICULTURAL PRODUCTION.

#### 4.1.7 Use of irrigation

The use of irrigation in crop production is very low in Sierra Leone. Adequate irrigation is an essential contributory factor to achieving higher yields and cropping intensity, especially in upland and boliland environments.

Overall, only 4.6 percent of farmers use irrigation to enhance the growth of their agricultural crops. The percentage of farmers using irrigation was highest in Western Area Rural (28.5 percent), followed by Port Loko (13.4 percent), Kenema (7.6 percent) and Kono (7.1 percent).

Figure 37: Use of irrigation facilities, in farming areas



#### 4.1.8 Access to farming inputs

The level to which agricultural inputs are used in farming systems is also an important determinant of productivity and the scale of production achieved by farmers.

Table 17: Inputs used in agricultural production, in farming areas

District	Chemical fertilisers	Natural/organic fertilisers	Pesticides/herbicides	Local seed	Improved seed varieties	Improved practices
Kailahun	0.9%	9.3%	0.6%	64.8%	13.1%	7.6%
Kenema	2.5%	8.9%	1.4%	75.2%	10.6%	7.3%
Kono	3.5%	5.3%	2.3%	82.6%	7.5%	6.0%
Bombali	5.9%	12.2%	0.4%	73.4%	7.4%	3.3%
Kambia	4.8%	3.4%	1.4%	85.3%	13.7%	3.7%
Koinadugu	0.7%	7.4%	3.1%	89.4%	1.1%	0.5%
Port Loko	18.6%	18.5%	7.7%	50.3%	17.7%	1.9%
Tonkolili	2.9%	6.7%	2.2%	74.8%	8.5%	5.3%
Bo	2.1%	14.1%	1.0%	61.2%	10.1%	5.1%
Bonthe	1.7%	20.8%	0.4%	60.2%	18.2%	3.0%
Moyamba	1.2%	2.3%	0.1%	91.0%	8.7%	3.1%
Pujehun	0.8%	10.2%	0.6%	54.2%	18.3%	3.9%
Western Area Rural	23.1%	34.4%	10.1%	47.1%	15.9%	7.5%
<b>Average (Rural)</b>	<b>3.8%</b>	<b>9.7%</b>	<b>2.0%</b>	<b>73.9%</b>	<b>10.3%</b>	<b>4.2%</b>

The use of agricultural inputs in Sierra Leone is far below requirements. Only 3.8 percent of farmers apply chemical fertiliser, which is especially inadequate considering the general low fertility of soils in

Sierra Leone. It should be noted that high market prices of chemical fertilisers reduce access among farmers, especially among the poorest.

The application of organic fertiliser is also low at an average of 9.7 percent nationally. This can be partially explained by the low levels of farming households engaged in livestock rearing and the relative absence of composting of agricultural and food waste.

Only 10.3 percent of farmers use improved seeds, with the largest percentages found in Pujehun (18.3 percent), Bonthe (18.2 percent) and Port Loko (17.7 percent). Adoption of improved agricultural practices is still at an early stage in Sierra Leone and will take more time to be realised.

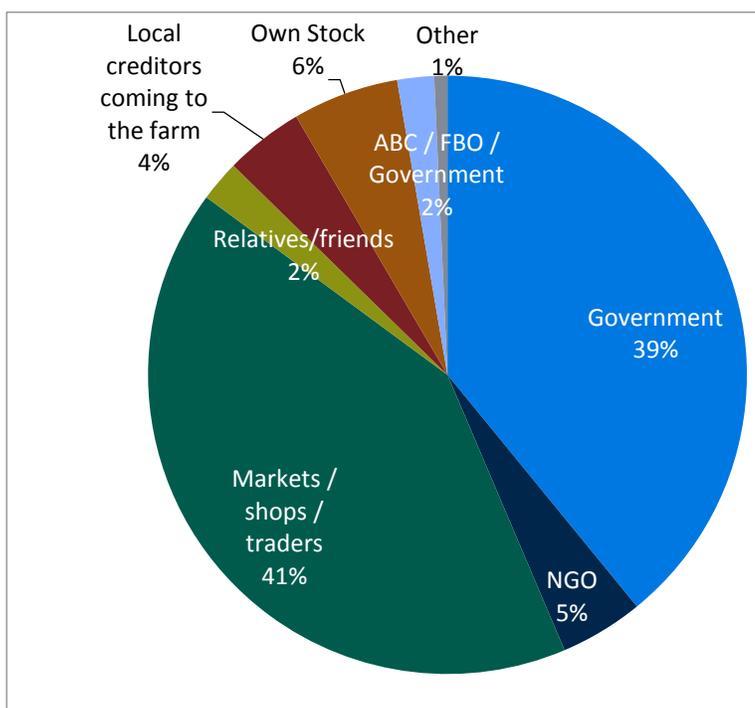
#### 4.1.9 Source of fertiliser

The 2015 CFSVA looked into the source of fertiliser used by farmers during the 2014-15 cropping season. On average, the highest percentage of farmers (41.0 percent) purchased fertiliser from markets, 39.0 percent received it from the Government, 5.0 percent from NGOs/UN and 6.0 percent used their own stock.

Local creditors who visited farmers to sell fertiliser accounted for 4.0 percent of purchases. Agricultural Business Centres (ABCs) and FBOs also provided fertiliser to some of their members, contributing towards 2.0 percent of total provision.

The highest percentages of farmers receiving fertiliser from the Government were found in Kenema (82.5 percent), Port Loko (64.8 percent) and Kono (38.3 percent).

Figure 38: Source of fertiliser, in farming areas



#### 4.1.10 Tools used in farming

The type of tools used in farming determines the size of the landholding that a household can cultivate, and thus their level of production. Sierra Leone lags behind other African countries in terms of the usage of more sophisticated agricultural tools.<sup>42</sup> The use of hand tools dominates farming in Sierra Leone with almost all farmers using hand tools, even for highly labour intensive activities such as ploughing and land preparation. A dependence on hand tools limits the capacity to which farmers can cultivate larger portions of available land. Animal traction, which is common in traditional farming systems, is practiced by less than 1.0 percent of farmers in Sierra Leone. Mechanised farming is also very rare in the country, with hand tractors (power tillers) used by only 0.4 percent of farmers and 4-wheel tractors by only 0.2 percent of farmers (see Annex 22 for details). A lack of specialised tools for labour intensive agricultural

<sup>42</sup> World Bank, *World Development Indicators: Agricultural Machinery*  
<http://data.worldbank.org/indicator/AG.AGR.TRAC.NO>

tasks also contributes towards the adoption of highly environmentally degrading “slash and burn” land preparation methods.

#### 4.1.11 Food storage facilities

Inadequate storage facilities contribute to the extremely high post-harvest losses that typify agricultural production in Sierra Leone. It also compels farmers to quickly sell their surpluses rather than store agricultural products for sale when commodity prices increase or when their food access is reduced. Farmers have extremely limited capacity to store food, especially cereals. In addition, the types of storage facilities that exist are not conducive for proper storage to sufficiently minimise post-harvest losses, leaving harvested crops susceptible to insect infestation, rodents and fungus, destroying crops and reducing the incomes of farming households. Inappropriate storage of seeds also results in reducing germination and thus decreases potential future production.

The majority of farmers in Sierra Leone (69.1 percent) store food in baskets and bags. Around 11.0 percent use indoor open spaces for storage. Nearly 6.0 percent use mini-stores in lockable houses or other structures, 3.2 percent use outside stores such as huts, and 2.2 percent use communal stores. Open storage is most common in Bo, Moyamba and Koinadugu. Increasing the adoption of hermetic<sup>43</sup> storage equipment at household and ABC level could contribute toward significantly reducing pre- and post-harvest losses, increasing overall food production and food security. Hermetic storage is especially important for seed rice, as it increases seed germination and thus has the potential to increase overall agricultural production (district-level details, see Annex 23).

#### 4.1.12 Sale of rice

While only 4.0 percent of farmers grow enough rice to meet their household needs for the whole year, the percentage of farmers selling a portion of their rice harvest is quite high at 38.6 percent. In certain districts, the percentage of rice-selling farmers is much higher, such as in Kambia (66.4 percent), Koinadugu (61.0 percent), Western Area Rural (59.6 percent) and Pujehun (46.2 percent). The lowest percentages of farmers selling rice were found in Kailahun (15.3 percent), Bonthe (19.9 percent) and Moyamba (23.7 percent).

**SUBSISTENCE FARMING**

ALTHOUGH A MAJORITY OF FARMERS PRODUCE AT OR BELOW SUBSISTENCE, OVER ONE-THIRD OF THESE FARMERS SELL A PORTION OF THEIR RICE TO MEET OTHER NEEDS.

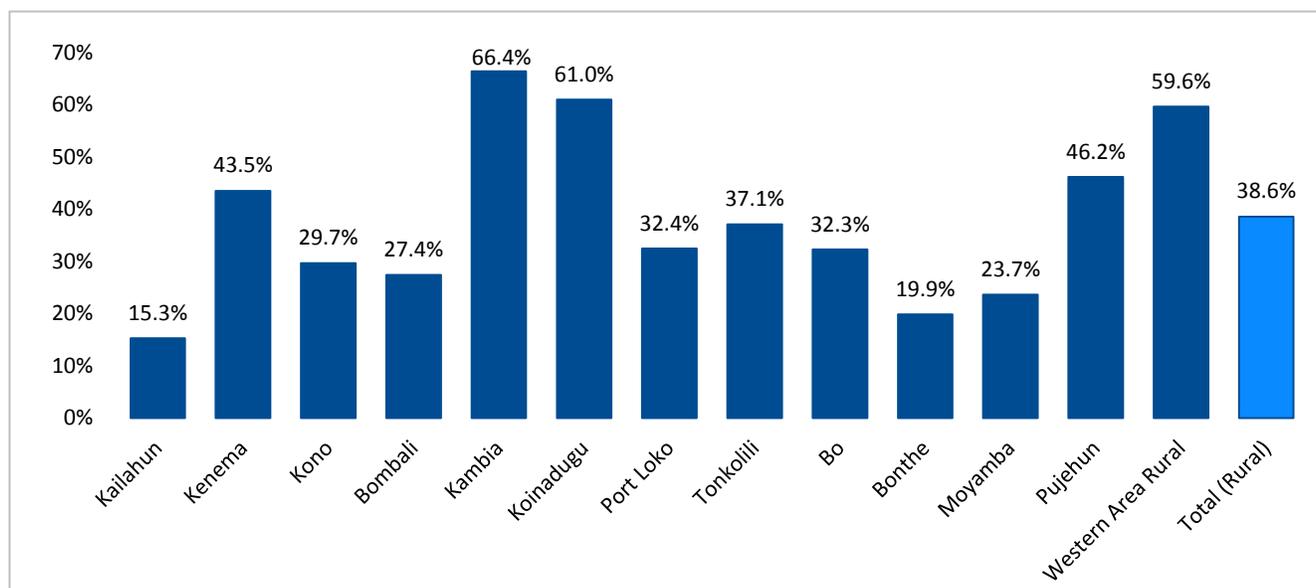
As the vast majority (96.0 percent) of farming households are producing at or below subsistence levels, this contributes to the broader national dependence on imported rice and other foodstuffs, with knock on macroeconomic effects in terms of Sierra Leone’s balance of payments. Furthermore, the subsidisation of imported rice serves as a disincentive to farming households to produce surpluses, as higher costs of production by smallholder farmers reduces their price competitiveness compared to imported rice. This situation is exacerbated by cross-border trade of locally produced rice to neighbouring Guinea and Liberia, which affects availability of rice in Sierra Leone.

Over 96.0 percent of farmers reported that they sell a portion of their rice harvest to generate income, irrespective of whether they experience a shock, in order to pay for foodstuffs or non-food items. In the event that a farming household experiences a shock, farmers sold a portion of their rice in order to meet other pressing needs, including to pay for education, medicine, to repay debt or as a result of the migration of a family member.

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<sup>43</sup> Hermetic storage containers do not allow oxygen and water from the atmosphere to reach the internally stored grain, with the build-up of carbon dioxide eventually reaching a level of toxicity where it is impossible for insects and moulds to survive.

Figure 39: Sale of rice during 2014-15, in farming areas



## 4.2 Livestock

Livestock rearing is very important to enable households to meet their needs for animal protein and other food nutrients essential for good nutrition. Beyond contributing toward household food requirements, livestock rearing forms an integral component of traditional farming systems, providing animal traction to increase the size of the area under cultivation as well as facilitating the productive utilisation of non-consumable parts of crops for animal feed. Livestock is also a typical means of transportation in rural areas and a source of organic fertiliser.

Table 18: Households rearing livestock (including poultry), in farming areas

District	Own any farm animal	Cattle/oxen	Goat	Sheep	Pig	Chickens/ducks/geese/turkey/guinea fowl	Horse/donkey	Other
Kailahun	29.7%	0.4%	16.4%	4.9%	0.3%	23.1%	-	6.0%
Kenema	18.6%	-	6.2%	4.0%	0.2%	15.2%	-	0.7%
Kono	25.4%	1.2%	14.5%	9.3%	0.5%	17.3%	0.2%	1.3%
Bombali	20.9%	0.5%	8.9%	5.9%	-	16.2%	-	1.3%
Kambia	46.7%	0.7%	25.8%	16.0%	0.2%	38.1%	0.5%	5.5%
Koinadugu	39.3%	20.6%	26.4%	24.5%	0.5%	25.3%	0.1%	2.9%
Port Loko	44.8%	3.6%	28.6%	18.7%	0.4%	39.4%	0.1%	10.3%
Tonkolili	32.5%	2.3%	18.6%	12.9%	0.1%	25.6%	0.1%	2.4%
Bo	14.9%	0.2%	5.1%	2.7%	0.2%	11.5%	0.1%	0.7%
Bonthe	14.2%	-	6.3%	2.5%	0.1%	11.7%	-	0.7%
Moyamba	34.1%	0.7%	20.8%	7.1%	0.7%	27.6%	0.2%	1.7%
Pujehun	19.8%	0.3%	5.1%	2.9%	0.2%	16.2%	-	4.4%
Western Area Rural	4.2%	0.3%	0.4%	0.6%	0.3%	3.0%	-	-
<b>Average (Rural)</b>	<b>29.4%</b>	<b>3.4%</b>	<b>16.3%</b>	<b>10.2%</b>	<b>0.3%</b>	<b>22.8%</b>	<b>0.1%</b>	<b>3.9%</b>

## 4.2.1 Livestock rearing

In Sierra Leone, the average household's livestock holding is very low, especially considering that the majority of households are engaged in farming activities. The livestock sector thus presents a potential area for growth to increase the income levels of farming households. On average, only 29.4 percent of households in rural areas keep livestock, including chickens, with the highest percentages of livestock farmers found in Kambia (46.7 percent), Port Loko (44.8 percent) and Koinadugu (39.3 percent).

Rearing of cattle and oxen, which are the main source of dairy products, is very low with only 3.4 percent of households engaged in dairy production. It should be noted that cattle rearing is a much more common livelihood activity in Koinadugu district, where 20.6 percent of households raise cattle, particularly among Fula people who traditionally keep cattle. The rearing of goats and sheep is relatively more common, but still far below potential levels. Chicken, ducks and other birds are kept by 22.8 percent of households engaged in rearing of livestock.

Livestock holding not only represents an important source of food, it also provides an invaluable asset which can be used as a coping strategy in the event of a shock.

The livestock population was decimated during Sierra Leone's extended civil war and remains low. The average cattle/oxen holding per farming and livestock rearing households is only 0.14 nationwide. At 2.23 per household, goat holding is comparatively higher, whilst the average number of sheep kept per household is 1.07 and chicken/birds is 6.18.

Compared to pre-EVD levels in 2013-14, the average livestock holding per household has declined. The average cattle/oxen holding per household declined by 1.5 percent, goats by 28.9 percent, sheep by 43.0 percent and chickens by 28.6 percent. The decline in overall livestock holdings among farming households during the EVD outbreak exacerbated their food insecurity, reduced their resilience and increased their vulnerability to future shocks. As shown in Annex 16, a commonly used coping strategy was the sale of the last female animal or killing and consumption of livestock.

Table 19: Average household livestock holding, by district, comparing 2013-14 to 2014-15

District	Cattle/Oxen		Goat		Sheep		Pig		Chicken/birds	
	2014-15	Variation	2014-15	Variation	2014-15	Variation	2014-15	Variation	2014-15	Variation
Kailahun	0.02	-2.7	1.64	-7.0	0.15	-58.1	0.05	-43.8	4.46	-28.0
Kenema	-	-	0.54	-65.4	0.20	-73.6	0.05	-30.0	2.85	-59.1
Kono	0.05	-0.4	1.81	-33.1	0.88	-52.3	0.05	-58.8	3.63	-40.4
Bombali	0.04	-	0.98	-56.8	0.45	-59.3	-	-100.0	2.84	-56.6
Kambia	0.02	-5.6	1.54	-41.7	0.49	-65.1	0.02	-55.0	8.27	-23.2
Koinadugu	0.66	-0.7	5.48	-15.2	3.74	-34.9	-	-100	8.34	-09.5
Port Loko	0.10	-4.8	1.61	-39.5	0.69	-48.2	0.01	-78.5	6.24	-29.3
Tonkolili	0.11	-	1.97	-26.1	0.99	-34.4	0.02	-49.2	5.20	-23.0
Bo	0.01	-	1.10	-44.3	0.41	-38.8	-	-100.0	6.59	-36.3
Bonthe	-	-	1.79	-2.7	0.50	-4.7	0.05	-23.5	9.30	+3.0
Moyamba	0.02	-30.4	2.07	-43.6	0.36	-66.3	0.06	-66.0	5.37	-47.9
Pujehun	0.02	-7.9	1.07	-36.0	0.49	-43.0	0.01	-81.3	5.62	-48.9
Western Area Rural	0.06	-	0.09	-87.7	0.04	-95.8	0.19	-73.7	1.92	-79.5
<b>Average (Rural)</b>	<b>0.14</b>	<b>-1.5</b>	<b>2.23</b>	<b>-28.9</b>	<b>1.07</b>	<b>-43.0</b>	<b>0.03</b>	<b>-59.9</b>	<b>6.18</b>	<b>-28.6</b>

## 4.2.2 Livestock products

The 2015 CFSVA also estimated levels of livestock products, especially milk, produced during 2014-15. The average production per farming household was 73.8 pints nationwide. It was observed that the production of milk is sizeable only in a few districts in Sierra Leone. The districts with the highest quantity of milk production per household per year are Koinadugu (198.0 pints), Tonkolili (40.1 pints) and Port Loko (28.0 pints). The rest of the districts recorded low or insignificant levels of milk production.

The production of eggs was recorded at 25.4 per household per year compared to 30.7 in 2013-14, before the EVD outbreak. This may represent a knock on effect of the breakdown in the provision of livestock extension services, such as vaccination of chickens, as a result of movement restrictions during EVD. The highest egg production was in Kambia (35.6 per household per year), followed by Bonthe and Port Loko. Reduced availability of eggs, an important protein source, also bears implications for nutritional security.

Table 20: Livestock product production, in farming areas

District	Milks produced (pint) 2014-15	Milk produced (pint) 2013-14	Variation over previous year	No. eggs produced 2014-15	No. eggs produced 2013-14	Variation over previous year
Kailahun	0.1	0.5	-79.6	22.2	19.4	14.3
Kenema	-	-	-	10.7	15.9	-32.6
Kono	2.0	4.1	-52.3	3.5	3.0	19.8
Bombali	6.0	23.0	-73.9	2.6	2.9	-9.6
Kambia	1.0	9.5	-89.8	35.6	39.3	-9.3
Koinadugu	197.9	355.7	-44.4	26.1	29.4	-11.2
Port Loko	28.0	42.0	-33.3	28.4	26.0	9.1
Tonkolili	40.1	195.4	-79.5	13.6	13.2	2.7
Bo	1.5	1.7	-9.0	9.9	16.9	-41.2
Bonthe	-	-	-	30.9	16.9	83.3
Moyamba	2.2	5.6	-60.4	9.1	7.1	28.9
Pujehun	-	-	-	10.8	12.4	-12.8
Western Area Rural	-	-	-	-	-	-
<b>Average (Rural)</b>	<b>73.8</b>	<b>124.0</b>	<b>-40.5</b>	<b>25.4</b>	<b>30.7</b>	<b>-17.2</b>

Overall, the production of livestock products declined during 2014-15 compared to 2013-14, demonstrating the impact of the EVD outbreak. Milk production declined by 40.5 percent in the country, with the highest decline at the district level observed in Kambia (89.8 percent), Kailahun (79.6 percent), Tonkolili (79.5 percent) and Bombali (73.9 percent).

Similarly, egg production declined by 17.2 percent between 2013-14 and 2014-15. At the district level, whilst egg production increased in some districts, this was offset by larger decreases in other districts.

## 4.3 Fisheries

With its rich coastal waters and extensive network of rivers, Sierra Leonean households have traditionally practiced fishing across the country. This is reflected by both dried and fresh fish being used in many Sierra Leonean recipes, making it a common part of the local diet while also providing an important source of protein.

However, the 2015 CFSVA found that only a minority (3.0 percent) of households reported that they were engaged in fishing as an income generating activity, with the highest proportion of households deriving their income from fishing found in the riverine/coastal districts of Bonthe (18.3 percent), Pujehun (12.8 percent) and Western Area Rural (6.2 percent).

## 5 Food Accessibility

### 5.1 Household income

#### 5.1.1 Wealth index

The wealth index is a composite index measuring the assets, services and facilities available at the household level. The index is constructed through principal component analysis (PCA). Firstly, indicators common to urban and rural areas are used to create respective common factor scores (18 values) for each set of assets/services/facilities. Secondly, the area specific factor scores are combined to generate a national level wealth index. Finally, the index is divided into five different quintiles (lowest to highest) to determine the level of wealth of each household. Households falling into the lowest wealth quintile are considered to be the poorest in terms of their assets/services and facilities, while those in the highest quintile are better off.

**POVERTY RATE**

SINCE 2010, POVERTY INCREASED IN BOTH URBAN AND RURAL AREAS. URBAN SLUMS HOST THE HIGHEST CONCENTRATION OF POOR HOUSEHOLDS (39.0 PERCENT). THE POVERTY RATE IS TWICE AS HIGH AMONG RURAL HOUSEHOLDS COMPARED TO URBAN.

In Sierra Leone, the poorest wealth group constitutes 10.0 percent of households in urban areas, whilst the level is twice as high in rural areas (20.0 percent). Analysis of the lowest two groups demonstrates a similar trend, with 20.0 percent of urban households in the lowest two groups and this ratio twice as high in rural areas (40.0 percent). This means that the poverty rate is twice as high among rural households compared to urban.

Among the districts, the highest percentage of households falling into the lowest wealth index quintile were found in the Urban Slums (39.0 percent), followed by Bombali (31.0 percent), Koinadugu (26.0 percent) and Pujehun (22.0 percent). The district with the lowest proportion of households in the lowest quintile is Western Area Urban.

When comparing the wealth index between the 2015 and 2010 CFSVAs, there has been a dramatic increase in urban dwellers who fall into the lowest wealth quintile, which rose from 2.0 percent to 10.0 percent, a five-fold increase. In rural areas, the proportion of households in the lowest wealth quintile group also increased, but less markedly, from 20.0 percent to 26.0 percent.

Across the districts, the highest reductions in the proportion of households in the lowest wealth quintile were recorded in Bonthe (decreasing from 36.0 percent in 2010 to 13.0 percent in 2015), Moyamba (decreasing from 40.0 percent in 2010 to 16.0 percent in 2015), Kambia (decreasing from 25.0 percent in 2010 to 14.0 percent in 2015) and Port Loko (decreasing from 26.0 percent in 2010 to 16.0 percent in 2015). The highest increase in the proportion of households in the lowest wealth quintile was recorded in Bo (increasing from 8.0 percent in 2010 to 16.0 percent in 2015).

Figure 40: Wealth index (CFSVA 2015)

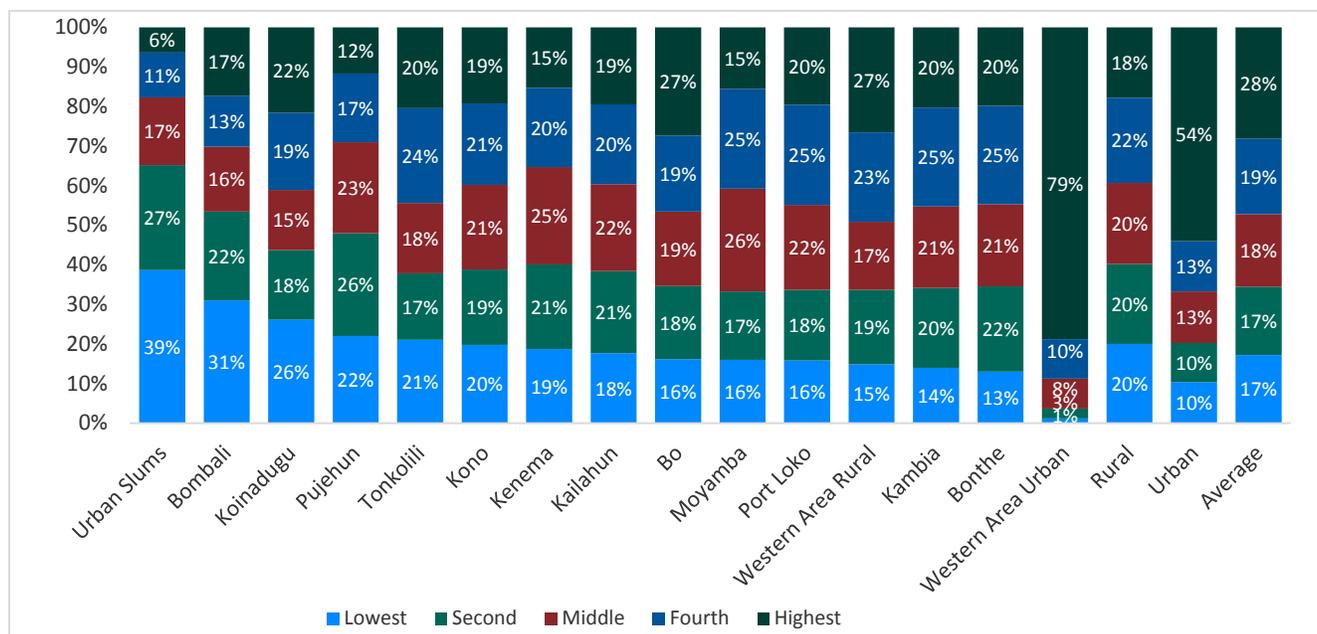
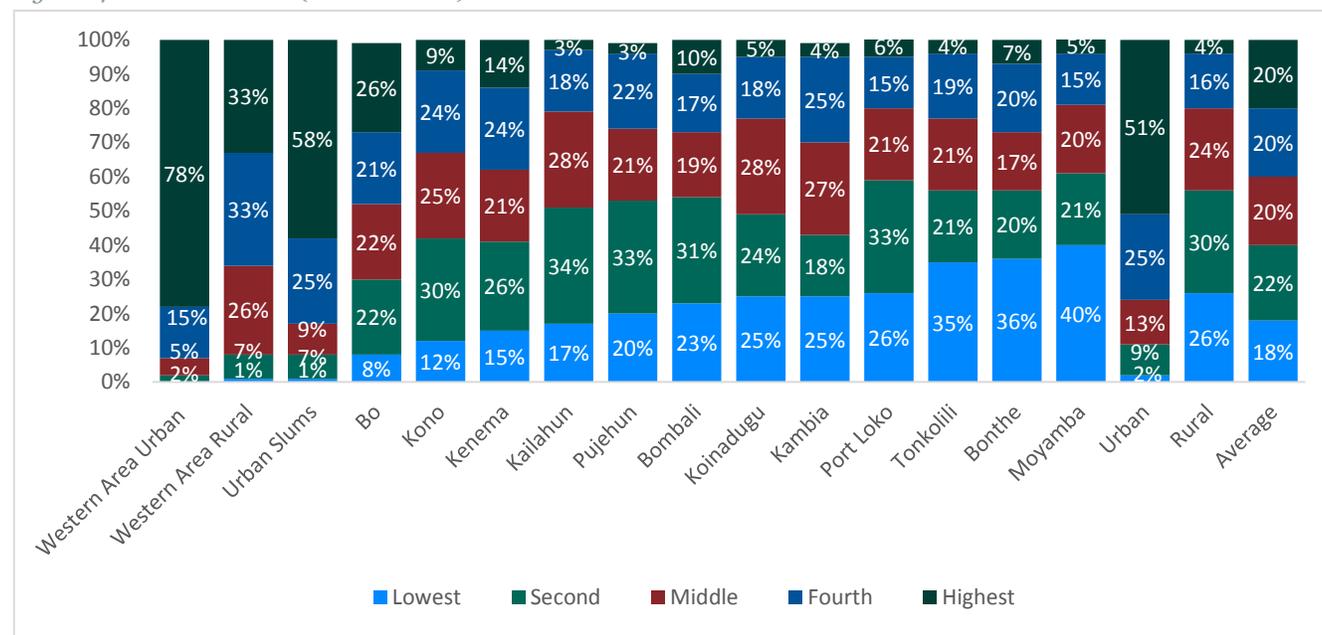


Figure 41: Wealth index (CFSVA 2010)



### 5.1.2 Income from multiple livelihoods

Households often adopt one or more livelihood option in order to generate enough income to meet their food and other basic needs. Some households only have one source of income, others have two and/or three, whilst some accrue income from more than three sources. In some instances, especially among households who are engaged in low income generating activities or livelihoods which are susceptible to external shocks (e.g. cash crop production), households engage in multiple, diversified livelihoods as a shock mitigation strategy to insulate themselves from food insecurity.

To gain a better understanding of the diversified livelihood options being adopted by households in Sierra Leone, households were asked to mention three sources of income by order of priority in terms of income (meaning the first source should have the highest income among the three).

In Sierra Leone, on average 85.0 percent of households derive their income from one livelihood. With such a large proportion coming from a sole income source, vulnerability in the event of a shock increases. The proportion of households accruing their income from one source is higher in urban areas (89.0 percent) compared to rural (84.0 percent). Among the districts, the highest proportion of income accrued from one livelihood option was reported in Moyamba (91.0 percent), followed by Western Area Urban (90.0 percent), Bo and Bombali (89.0 percent each) and Western Area Rural (88.0 percent).

Figure 42: Average household income and share contributed by primary livelihood activity source

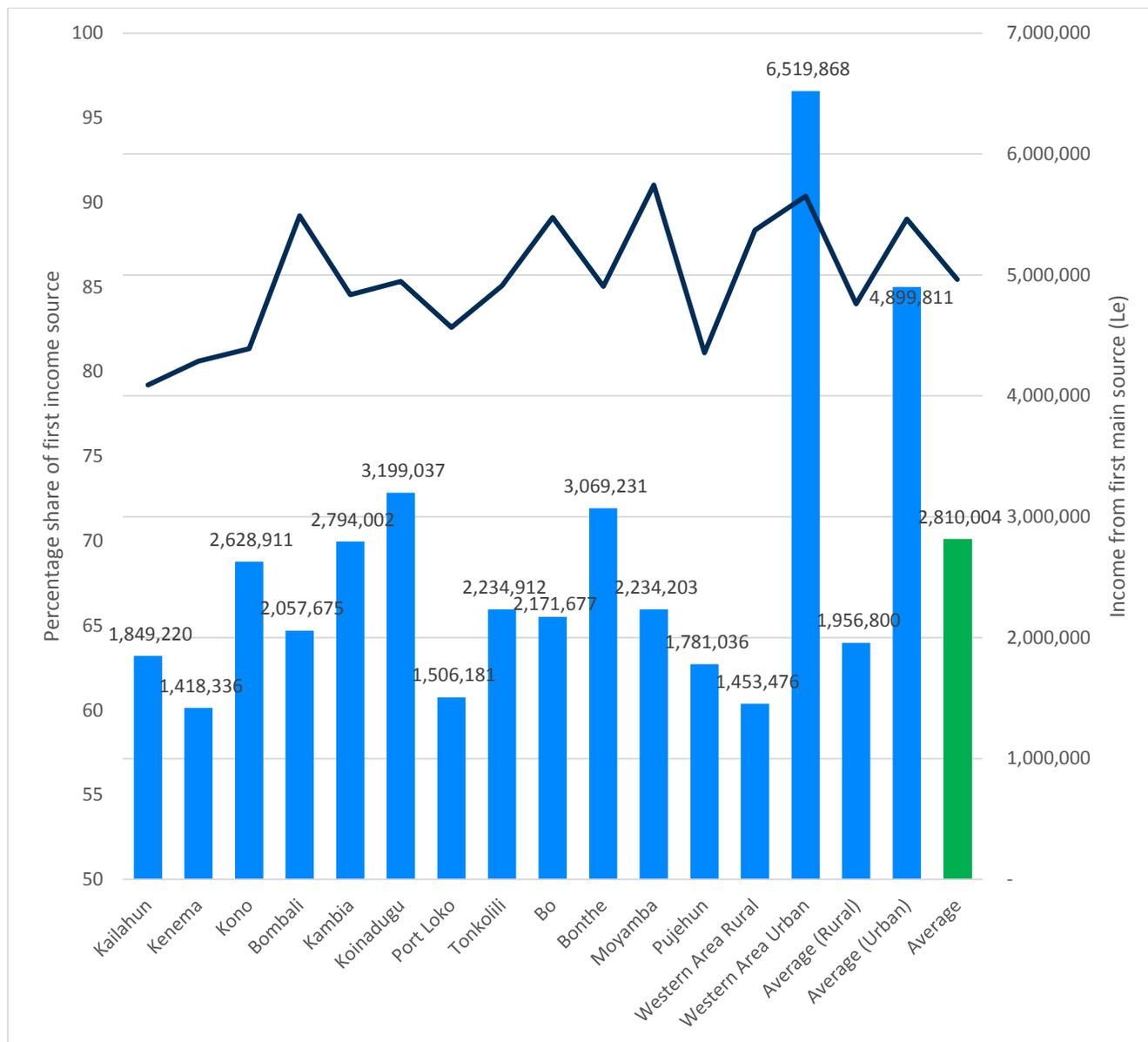


Figure 43 shows average income levels in Leones (Le) and the percentage of this earned from the primary income source by district. For example, average income in Kailahun district is Le 1,849,220 with 79 percent earned from one income source.

Annual household income is higher in urban areas (Le 4,899,811) compared to rural (Le 1,956,800). Western Area Urban (Le 6,519,868) has the highest annual household income among all the districts. As urban areas are the major business centres, where economic opportunities are more numerous and diverse, income levels tend to be higher. Freetown is the main hub of business and the supply centre to other areas within the country. As already shown, Freetown also has the highest percentage of salaried workers who have a more stable source of income.

Among the districts, the lowest annual household income was recorded in Kenema (Le 1,418,336), followed by Western Area Rural (Le 1,453,476), Port Loko (Le1,506,181) and Pujehun (Le 1,781,036). According to the wealth index, more than 28.0 percent of petty traders are in the lowest two wealth quintiles, while unskilled labourers are above 37.0 percent in these quintiles.

### **5.1.3 Impact of EVD on livelihoods**

The EVD outbreak severely affected the livelihoods of households in both rural and urban areas. According to the CFSVA results, on average 68.4 percent of household livelihoods were affected by EVD nationwide. The livelihoods of people living in rural areas (69.3 percent) were marginally more negatively affected compared to those residing in urban areas (65.9 percent). All districts were affected, but the highest percentages of households whose livelihoods were affected by EVD were found in Pujehun (90.8 percent), Kailahun (86.2 percent) and Kono (80.3 percent).

Most affected by EVD were households engaged in farming, with 61.0 percent in rural areas who work in the production and sale of food crops reporting negative EVD-related impacts. In urban areas, households most affected by EVD were those engaged in the fisheries sector (58.7 percent). As a result of the global reduction in iron ore prices, people working in the mining sector were also heavily affected due to the closure of mining activities and the loss of their jobs (see Annex 24 for details). It should also be noted that EVD affected the tourism sector, with the suspension of a majority of international flights to and from Sierra Leone during the epidemic, and fear among visitors about the associated risks of EVD, greatly reducing the number of tourists. This reduced the profitability of businesses engaged in the tourism sector, and also resulted in job losses.

Figure 43: Impact of EVD on livelihoods, by district

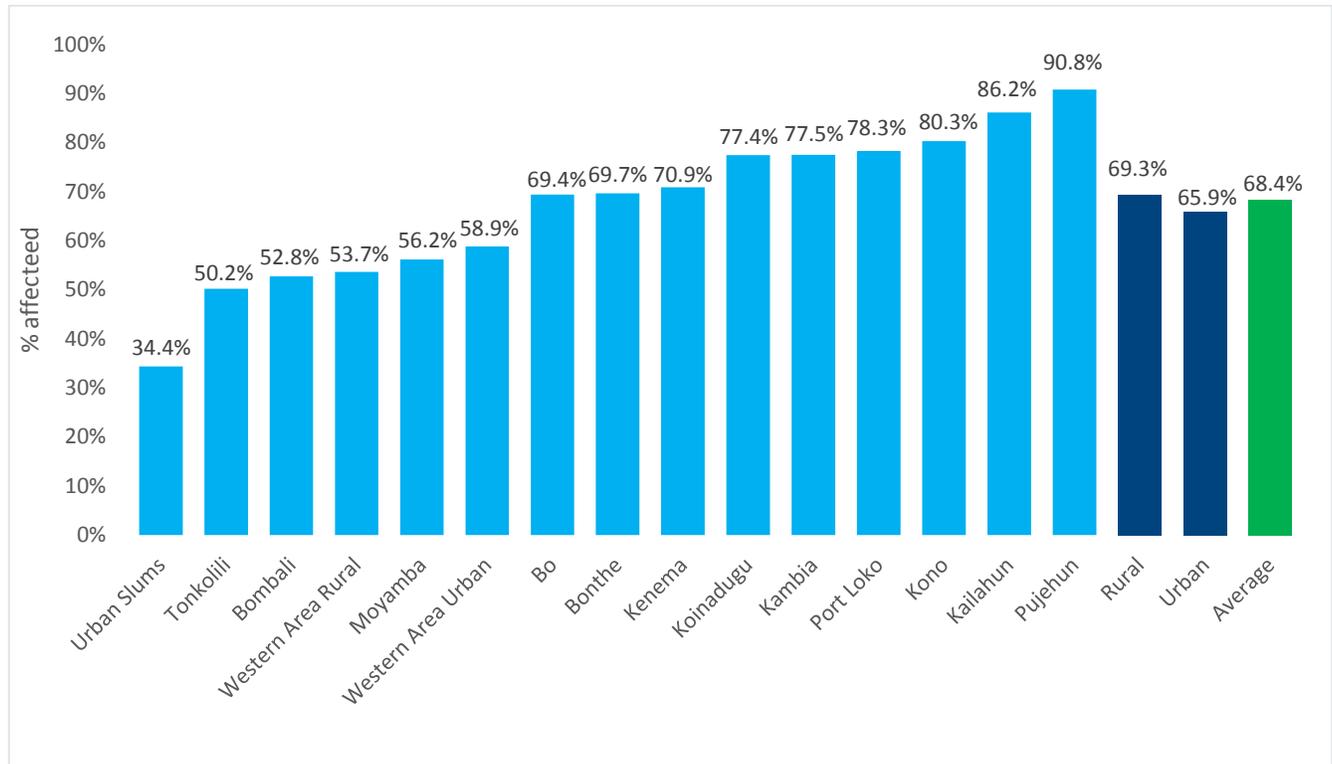
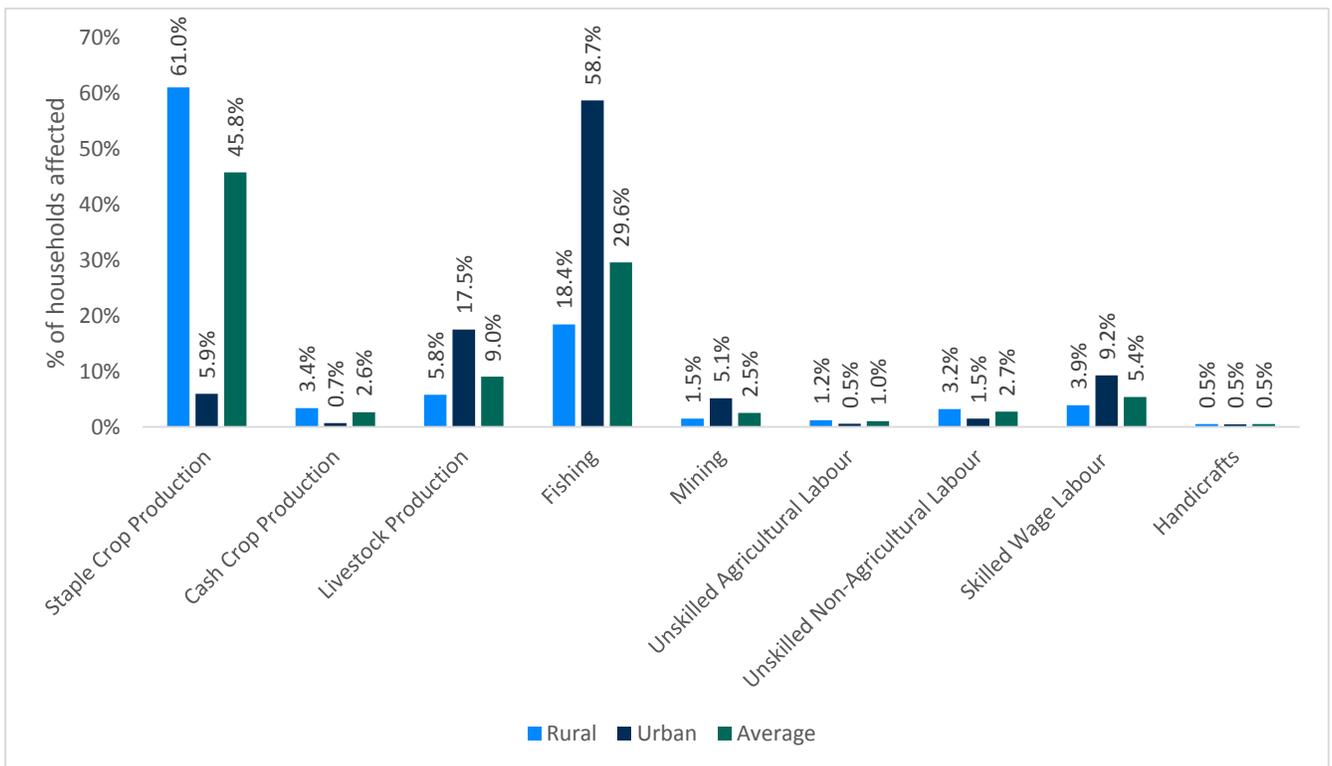


Figure 44: Livelihoods affected by EVD



#### **5.1.4 Impact on agricultural production**

The EVD outbreak had a significant impact on the agriculture sector, which was further constrained by movement restrictions and limitations on public gatherings, preventing group work among farmers. Reduced opportunities for group working had a dampening impact on agricultural production, since in Sierra Leone there is limited adoption of mechanisation practices meaning that collective cultivation between friends, relatives and labourers at certain points of the agricultural cycle, such as land preparation and harvesting, is critical for production.

Another important factor contributing to reduced agricultural production was the fact that the height of the epidemic - between October and November 2014 - and the subsequent quarantining of entire communities and individual households as a public health measure to prevent the spread of the virus, coincided with the harvest period. As a result of movement restrictions, families were unable to harvest their produce, resulting in crops simply rotting in the fields. In some cases where farmers were able to access their farms, reduced availability of agricultural labourers, combined with the fact that the workload required exceeded the capacity of the family unit alone, led to farming households unable to complete the entire harvest, reducing agricultural production.

Reduced availability of food also led to many farming households resorting to consuming seed rice as a coping strategy, with knock on effects for production during the next planting season. EVD also resulted in reduced outreach of MAFFS and development partner agricultural extension services, as resources and personnel were redirected to ensure the collective effort needed to curtail the spread of the virus. This resulted in reducing the availability of key agricultural inputs such as fertiliser, improved seeds, tools, pesticides, etc., reducing yields and subsequently production overall.

Restrictions on periodic markets, which are the most common place to trade agriculture products, prevented many farmers from being able to sell their crops at market. This especially impacted farming households engaged in production of perishable foodstuffs for sale such as fruit and vegetables, with commodities decaying before they could reach markets. For farming households engaged in cash crop production that are reliant on onward sale to agricultural traders, such as cocoa, coffee and cashew nuts, movement restrictions sometimes led to the periodic breakdown of trade and post-harvest losses, exacerbating food insecurity and vulnerability.

To measure the impact of EVD on agricultural production, the 2015 CFSVA compared the total area of land under production in 2013-14 (pre-EVD) to 2014-15 (during EVD). The results showed that the land allocated for rice cultivation had increased by 3.0 percent during 2014-15, whilst the area allocated for cassava cultivation had similarly increased by 7.0 percent. However, despite allocating more land for cultivation, agricultural production significantly declined.

At the district level, the land allocated for rice crop cultivation actually declined in some districts between 2013-14 and 2014-15 including in Bombali (-13.0 percent), Moyamba (-4.0 percent) and Koinadugu and Tonkolili (-2.0 percent each). The districts where the proportion of land assigned to rice cultivation increased were Kono, Kailahun, Port Loko, Pujehun and Western Area Rural.

Table 21: Variation in area/production in 2014-15 compared to 2013-14 (%)

District	Rice		Cassava		Palm oil		Cocoa		Groundnut		Vegetable	
	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production	Area	Production
Kailahun	9%	-5%	8%	-20%	3%	5%	3%	-14%	-1%	-13%	-12%	-7%
Kenema	5%	-21%	32%	-26%	18%	-2%	-	-19%	54%	52%	22%	-10%
Kono	17%	-21%	20%	-15%	-2%	-10%	2%	-16%	21%	13%	21%	4%
Bombali	-13%	-33%	19%	-27%	7%	-1%	-79%	-15%	-9%	-18%	10%	-22%
Kambia	-1%	-23%	12%	-14%	-5%	-9%	-97%	-98%	5%	5%	9%	-35%
Koinadugu	-2%	-4%	-15%	-14%	-21%	-7%	-65%	-64%	-11%	-11%	9%	-
Port Loko	7%	-14%	27%	-11%	4%	-14%	-73%	-89%	39%	23%	12%	-5%
Tonkolili	-2%	1%	12%	8%	51%	-2%	-22%	-3%	17%	3%	6%	3%
Bo	6%	-38%	23%	-35%	-1%	-10%	-2%	-9%	47%	6%	10%	-1%
Bonthe	6%	-7%	12%	-24%	84%	-9%	-57%	-42%	45%	18%	-45%	-81%
Moyamba	-4%	-40%	-10%	-54%	-47%	-36%	-1%	-51%	-23%	-64%	-18%	-58%
Pujehun	9%	10%	1%	-4%	4%	7%	-3%	6%	12%	16%	14%	-5%
Western Area Rural	73%	-21%	74%	19%	-	35%	-	-	23%	-2%	20%	-17%
<b>Total (Rural)</b>	<b>3%</b>	<b>-15%</b>	<b>7%</b>	<b>-26%</b>	<b>38%</b>	<b>-5%</b>	<b>-1%</b>	<b>-16%</b>	<b>4%</b>	<b>-13%</b>	<b>-3%</b>	<b>-28%</b>

#### LAND CULTIVATION

DESPITE ALLOCATING MORE LAND FOR RICE CULTIVATION DURING 2014-15, RICE PRODUCTION NATIONWIDE DECLINED BY 15.0 PERCENT COMPARED TO 2013-14.

THE HIGHEST DECLINE WAS REPORTED IN MOYAMBA (40.0 PERCENT) FOLLOWED BY BO, BOMBALI, KAMBIA, KENEMA AND KONO, RESPECTIVELY.

AS CAN BE SEEN BY COMPARING REDUCTIONS IN LAND UNDER CULTIVATION FOR RICE AND PRODUCTION LEVELS WITH CUMULATIVE EVD CASES (SEE TABLE 23), BOMBALI DISTRICT REGISTERED AMONG THE HIGHEST CONTRACTIONS IN RICE CULTIVATION AND PRODUCTION AS WELL AS A HIGH PROPORTION OF OVERALL CUMULATIVE EVD CASES.

POSSIBLE EXPLANATIONS FOR THE REDUCTION IN LAND CULTIVATION INCLUDE EXTENDED PERIODS OF MOVEMENT RESTRICTIONS AFFECTING BOMBALI DISTRICT WHICH IMPEDED TRADE AND RESULTED IN HOUSEHOLDS EMPLOYING NEGATIVE COPING STRATEGIES, SUCH AS EATING OF SEED RICE FOR THE NEXT PLANTING SEASON.

Similarly, the production of cassava showed an estimated national decline of 26.0 percent. The highest reductions in cassava production were reported in Moyamba (54.0 percent), followed by Bo (35.0 percent), Bombali (27.0 percent), Kenema (26.0 percent) and Bonthe (24.0 percent).

Production of palm oil was also shown to have declined by 5.0 percent across the country. In some districts the decline was well above the national average, such as in Moyamba (36.0 percent) and Port Loko (14.0 percent). Cocoa production, an important cash crop and a source of export earnings that had shown promising growth prior to the EVD outbreak, also witnessed a national decline in production of 16.0 percent. Similarly, at the national level, groundnut production declined by 13.0 percent, whilst vegetable production reduced by 28.0 percent.

## 5.1.5 Impact of EVD on incomes

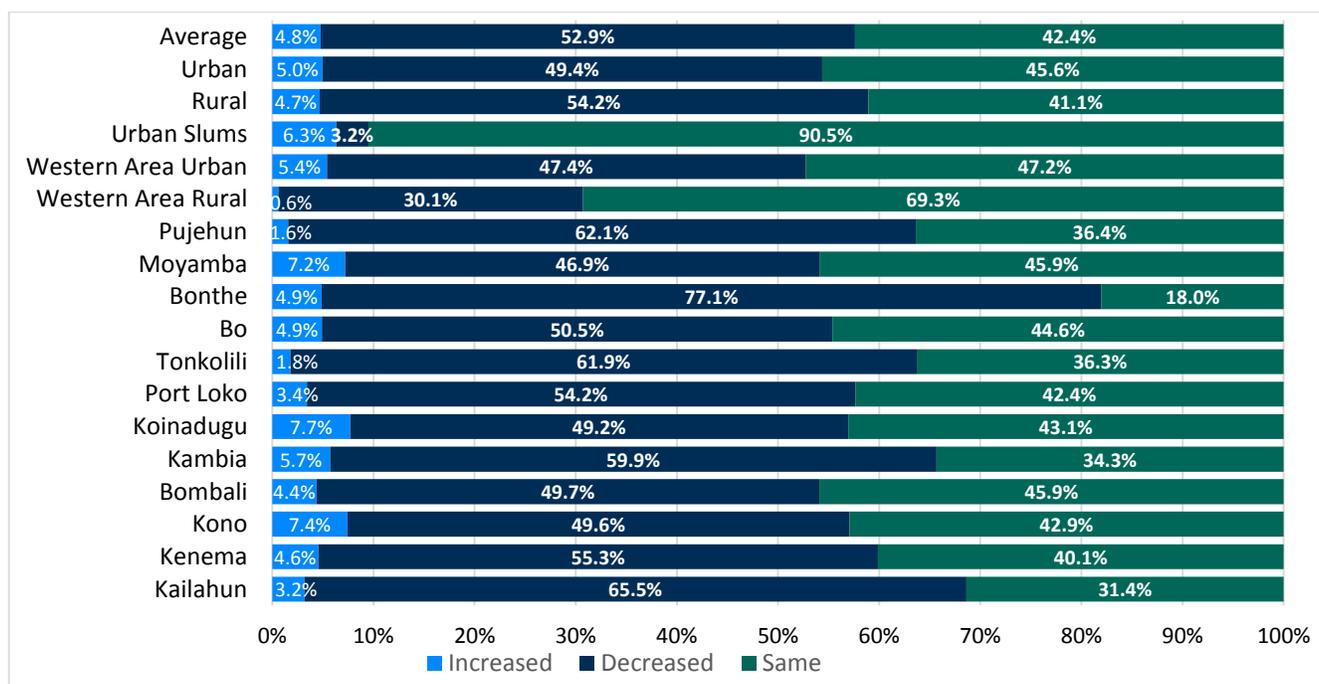
Table 22: Cumulative confirmed EVD cases, by district<sup>44</sup>

District	Cumulative Cases
Kailahun	565
Kenema	503
Kono	253
Bombali	1,050
Kambia	259
Koinadugu	109
Port Loko	1,484
Tonkolili	458
Bo	314
Bonthe	5
Moyamba	209
Pujehun	31
Western Area (urban and rural)	3,464
<b>Total</b>	<b>8,704</b>

Households were asked to compare their total income earned during 2015 with the level they accrued during 2014 from their various livelihood activities. On average, 52.9 percent of households experienced a decrease in their income in 2015 compared to 2014. Reductions in income were more common in rural areas (54.2 percent) compared to urban (49.4 percent). Among the districts, the highest percentage of households reporting a decrease in incomes were found in Kailahun (65.5 percent), Pujehun (62.1 percent) and Tonkolili (61.9 percent). Although Bonthe registered the highest decrease in income (77.1 percent), the district only recorded five EVD cases, and

thus this income effect may be a result of the intense flooding that caused damage to houses and livelihoods in September 2015, or as a result of the measures implemented by local authorities to prevent movement in and out of this district to prevent the spread of EVD. All districts reported an overall decline in incomes. However, in some districts it should be noted that the impact on certain livelihoods, such as salaried work and wage labour, were not affected to the same extent.

Figure 45: Changes in income level between 2014 and 2015



<sup>44</sup> Accessible on WHO: <http://apps.who.int/gho/data/view.ebola-sitrep.ebola-summary-latest?lang=en>

## 5.2 Markets

The ability of a household to access markets is a key component of the food security equation. Distance from, and the cost of travelling to, the nearest market can have a significant impact on food access, especially for poor, vulnerable households at times when they purchase food from the market to meet their basic needs. Similarly, poor market access can reduce food availability, as far distances to markets increase the costs of production and reduce the profitability and incentive for farmers to produce surpluses.

### 5.2.1 Road access to communities and markets

Whether a community is accessible by vehicle is a critical determinant of a household's ability to access food and social services, and thus a key factor contributing to overall food security and vulnerability status. Furthermore, road access to a community is crucial for market access, not only in terms of purchasing food, but also for farmers looking to sell marketable surpluses. As such, physical infrastructure is a key determinant of food access and food availability.

For most districts (with the exception of Bonthe and Pujehun) over 80.0 percent of households reported that their community was directly accessible by vehicle. Bonthe had the lowest proportion of communities with direct road access (64.0 percent) followed by Pujehun (74.7 percent), reflecting the riverine topography of these two districts. Respondents from Bonthe, which is comprised of a number of islands, indicated that a major source of transportation to their community is boat (14.9 percent), surpassed only by respondents from Pujehun (18.0 percent).

Table 23: Distance of the community from the nearest road accessible by road transport

District	In Minutes		In Miles	
	Mean	Maximum	Mean	Maximum
Kailahun	125	680	3.98	18
Kenema	104	320	4.20	26
Kono	119	360	4.40	13
Bombali	248	1,000	9.29	38
Kambia	313	720	16.15	36
Koinadugu	133	420	5.71	18
Port Loko	63	180	3.12	10
Tonkolili	157	650	5.34	12
Bo	102	320	3.95	10
Bonthe	470	1,400	41.57	150
Moyamba	113	500	4.58	16
Pujehun	178	420	14.06	48
Western Area Rural	35	60	1.5	3
Western Area Urban	17	25	0.81	1
<b>Average</b>	<b>180</b>	<b>1,400</b>	<b>10.43</b>	<b>150</b>

For riverine communities, the lack of road access poses a serious challenge to their ability to access food and essential social services, especially during the heavy rains when water levels rise and localised flooding is common, making it difficult for people to move in and out.

As the majority of communities in Sierra Leone are served by dirt roads, road conditions can deteriorate dramatically during the rainy season, making access very difficult, even for four-wheel drive vehicles. At the height of the rainy season, when local food production levels are at their lowest ("lean season"),

access to food is further constrained by poor road conditions, making it very difficult to transport food into communities to make up for shortfalls in local production. Furthermore, the food that is transported into communities can be expensive due to high transportation costs and low supply, making it inaccessible for poor households, thus increasing their food insecurity and vulnerability.

On average, the 2015 CFSVA found that almost half (47.7 percent) of communities reported that roads serving their communities became impassable at some point of the year, thus impeding the ability of households to access markets to buy and sell foodstuffs as well preventing uninterrupted access to essential social services. This reflects the pressing need to rehabilitate feeder roads as a measure to increase food availability by improving the ability of farmers to bring their harvest to market. Poor road conditions were most common in Koinadugu (75.2 percent), where challenging mountainous and rocky conditions make road rehabilitation and development difficult. Commonly cited as Sierra Leone’s “breadbasket” district, poor road conditions in Koinadugu also impede the ability of smallholder farmers to market their produce, and may prove to be a disincentive for producing surpluses. Furthermore, this could potentially reduce food availability locally and nationally, as food from areas of surplus cannot be transported to areas of deficit at a cost-effective rate.

Road access also poses a challenge to the majority of households in the eastern districts of Kailahun (67.2 percent), Pujehun (60.7 percent) and Kenema (58.8 percent) for approximately three months per year, which could partially explain the seasonal food unavailability in food insecure chiefdoms in these districts. Such poor road conditions and interrupted access result in transportation costs increasing, impacting households in terms of raising prices as well as reducing potential profit margins for agricultural produce. At the macro level, barriers faced by farmers bringing their rice to markets reduces availability, thus increasing demand for imported rice.

Table 24: Distance from nearest functional market

District	in Minutes		in Miles	
	Mean	Maximum	Mean	Maximum
Kailahun	57.58	320	5.35	30
Kenema	97.70	340	9.25	34
Kono	61.30	260	5.75	26
Bombali	78.90	380	7.42	38
Kambia	111.65	420	10.54	40
Koinadugu	113.64	400	10.64	40
Port Loko	85.49	340	7.89	34
Tonkolili	89.57	360	8.57	30
Bo	95.39	360	8.99	35
Bonthe	95.67	300	9.02	30
Moyamba	69.01	240	6.43	24
Pujehun	97.68	360	9.36	38
Western Area Rural	31.81	150	2.59	13
Western Area Urban	16.57	60	1.50	5
<b>Average</b>	<b>82.71</b>	<b>420</b>	<b>7.77</b>	<b>40</b>

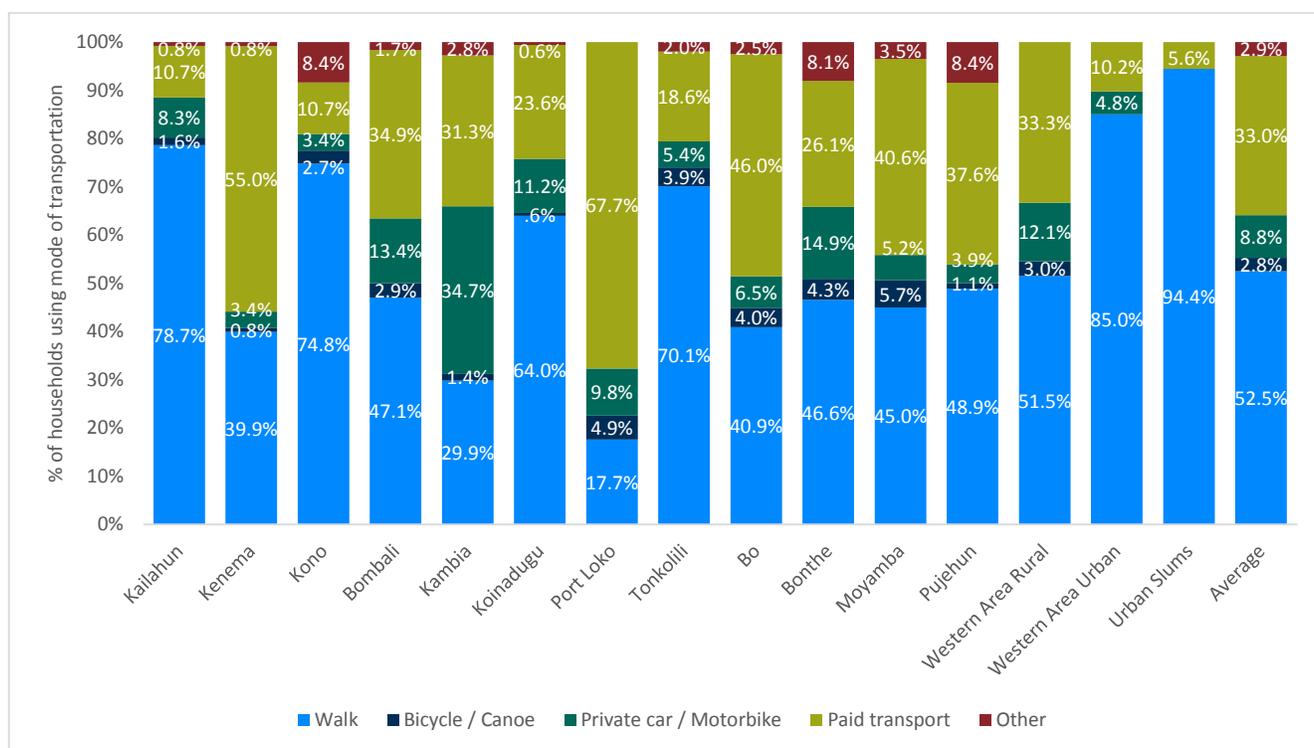
The 2015 CFSVA showed that households in Western Area Urban have the best market access, with households in Western Area Urban located on average around 15 minutes from the nearest functional market, whilst households in Western Area Rural reported travelling around 30 minutes. This reflects the fact that these urban localities are the hub of commerce and trade for foodstuffs produced across the country, whilst higher population densities invariably result in a higher concentration of market activity.

In rural areas, households in Koinadugu and Kambia districts reported having to travel around one hour and 50 minutes to reach the nearest functioning market. This low market penetration likely has a dampening impact on potential local food production levels, as farmers have less incentive to grow a surplus due to the high cost in terms of time and transportation to bring items to the market to sell. Overall in rural areas, an average household can travel almost eight miles, or around one and a half hours to reach the nearest market, thus implying that problems to access markets for both food purchase and sale is a constraint facing the majority of households in Sierra Leone. Rehabilitating feeder roads that are in poor condition would make an important contribution toward enhancing food access. The situation was marginally better in Kailahun and Moyamba districts, where distance to the nearest market was approximately one hour.

The means of transportation to the nearest market also has important implications in terms of the time and cost incurred by households to purchase or sell food or other commodities. Considering the far distances that most households have to travel to reach the nearest functional markets, transport costs may have a significant impact on determining a household's ability to access food, as well as contributing to overall food availability, since far distances and high transportation costs deter farming households from taking their produce to market to sell.

Nationally, the most common means of traveling to the nearest market was by foot, especially in Western Area Urban (85.0 percent) and the Urban Slums (94.4 percent). In urban areas, people predominantly walk to markets as a result of the shorter distances to the nearest market compared to their rural counterparts. In rural areas, walking to the nearest market was again the most common means of travelling to markets, however, in rural areas the decision to walk to markets is mostly as a consequence of a lack of access to other more convenient and cost effective modes of transport to travel longer distances. Across the districts, the highest proportion of households who walk to markets are found in Kailahun (78.7 percent), Kono (74.8 percent), Tonkolili (70.1 percent) and Koinadugu (64.0 percent) districts. Considering that households in these districts indicated that they have to travel 5-10 miles one way to the nearest market, this can be seen to pose a significant burden in terms of time and energy.

*Figure 46: Means of transportation to the nearest market*



Such vast distances traveling to markets to access food may pose a serious problem to households headed by the elderly or disabled, who are simply unable to access food at times of household shortage. The fact that people choose to walk to markets may also reflect low income levels and household poverty, with families unable to afford other faster and more convenient means of transport. Alternatively, the high proportion of households electing to walk to markets may partly reflect the fact that private transportation is extremely underdeveloped in these areas, and thus they have no other choice than to walk. Kambia district had the lowest proportion of people walking to markets (29.9 percent), and the highest percentage of people utilising a private vehicle or paid transport (66.0 percent combined).

For those utilising paid transport to travel to the nearest market, the 2015 CFSVA also asked households to specify how much it costs to travel one way to the nearest market. The cost of travelling to the market has important implications in terms of a household’s ability to access food or generate income.

In urban areas, the cost of traveling to the market was the lowest, representing the much shorter distances that urban dwellers have to travel to the nearest market in comparison to their rural counterparts, as well as the fact that private transport options are more developed and more competitive in urban areas. In rural areas, the cost of transportation is far higher, ranging from a low of around Le 5,000 (approximately US\$0.80) in Kailahun, to a high of around Le 8,500 (approximately US\$1.41) in Koinadugu. It should be noted that for households located in presumably more remote and hard-to-reach areas, the maximum cost of transportation in the districts ranges between Le 20,000 - 30,000 (US\$3.33 – US\$5.00), a significant cost for a poor, rural household. The high transportation costs in rural areas is a key explanatory factor as to why the majority of rural households walk long distances to markets, as they simply lack the purchasing power to travel by other means.

Table 25: Cost to travel one way to the nearest market (Le)

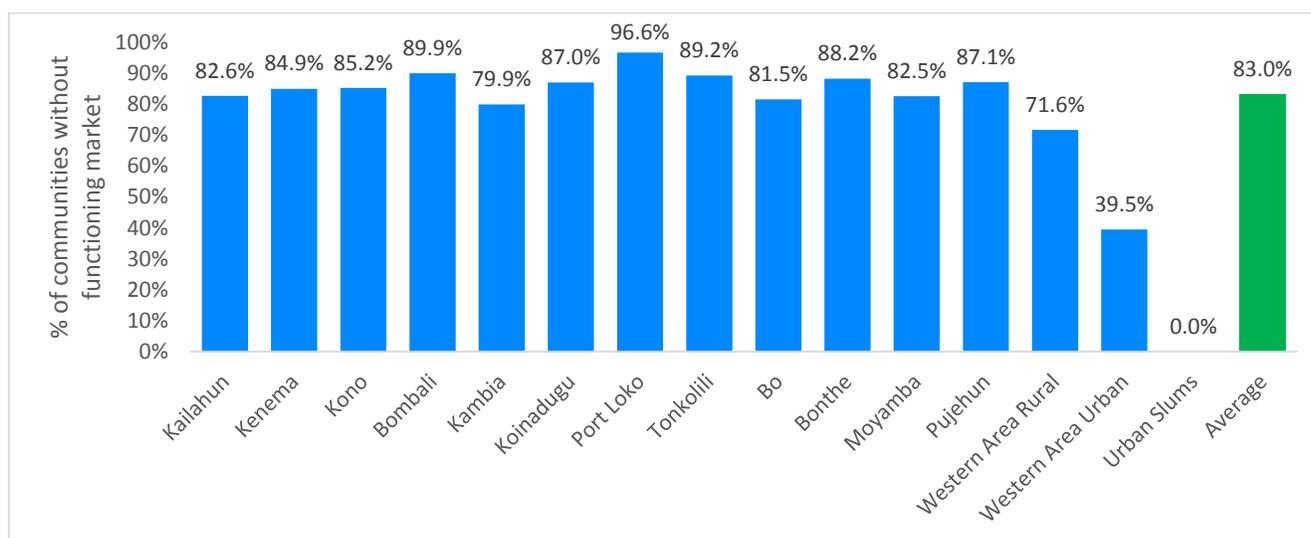
District	Mean	Maximum
Kailahun	4,909	25,000
Kenema	6,716	25,000
Kono	4,866	20,000
Bombali	6,405	25,000
Kambia	7,229	25,000
Koinadugu	8,522	30,000
Port Loko	6,953	25,000
Tonkolili	6,917	25,000
Bo	6,908	24,000
Bonthe	7,702	25,000
Moyamba	5,559	20,000
Pujehun	7,539	30,000
Western Area Rural	1,815	8,000
Western Area Urban	1,020	2,000
Urban Slums	111	1,000
<b>Average (Le)</b>	<b>6,106</b>	<b>30,000</b>

Considering the very low household incomes in Sierra Leone, high transportation costs related to accessing food unquestionably have a negative impact on household purchasing power. This results in inadequate access to diversified food (low FCS), as limited financial resources that could be used to purchase food are instead allocated to traveling to markets. Indeed, the high costs of transport are consistent with the findings of Chapter Three on non-food expenditure, which found that transportation costs were the highest non-food household cost, accounting for 6.6 percent of average expenditure.

### 5.2.2 Access to functional markets

A household's proximity to a functioning market is also a key determinant of their ability to access food, as well as contributing toward food availability, as markets provide the primary outlet for farming households to sell any surplus that they have produced.

Figure 47: Absence of functional market in the community/village



To gain a better understanding of market access, households were asked whether there was a functional market in their community. Nationally, only 17.0 percent of respondents indicated that there was a functional market directly in their communities. Markets are much more common in urban localities (Western Area Urban, 60.5 percent and Urban Slums, 100.0 percent) than rural. High market penetration in the Urban Slums reflect how these are thriving business areas characterised by a high proportion of households engaged in petty trading. In the districts, the highest proportion of functioning

markets located directly *within* communities are in Kambia (20.1 percent), Bo (18.5 percent), Moyamba (17.5 percent) and Kailahun (17.4 percent). At just 3.4 percent, Port Loko had by far the lowest proportion of functioning markets located within communities, which may partially explain the high levels of food insecurity, as households are unable to access markets to purchase food after they have exhausted their own produce. Meanwhile, the inability of farmers to easily bring their food to market may act as a disincentive to produce larger surpluses, thus constraining national production of food commodities overall and exacerbating levels of food insecurity.

Households were also asked to specify the distance in minutes and miles when travelling by foot to the nearest market to provide further insight into their ability to access markets to purchase and sell food commodities. Distance to the nearest market has important implications in particular for female household members, who, in accordance with the cultural gender division of labour, have the bulk of the responsibility for buying and selling foodstuffs. If the distance to markets is far, then this can have a significant impact on the ability of women and other household members to engage in other income generating activities, such as tending to the upkeep of their own farms, thus directly competing with other domestic and income generating activities. If the responsibility to travel to markets is borne by children and distances are significant, this may also negatively impact upon school attendance, and thus reduce their future income-earning potential. Furthermore, lengthy distances between farms and markets result in significantly increasing the cost of transporting produce to markets, reducing profit margins, increasing costs and reducing the competitiveness of local rice compared to imported rice.

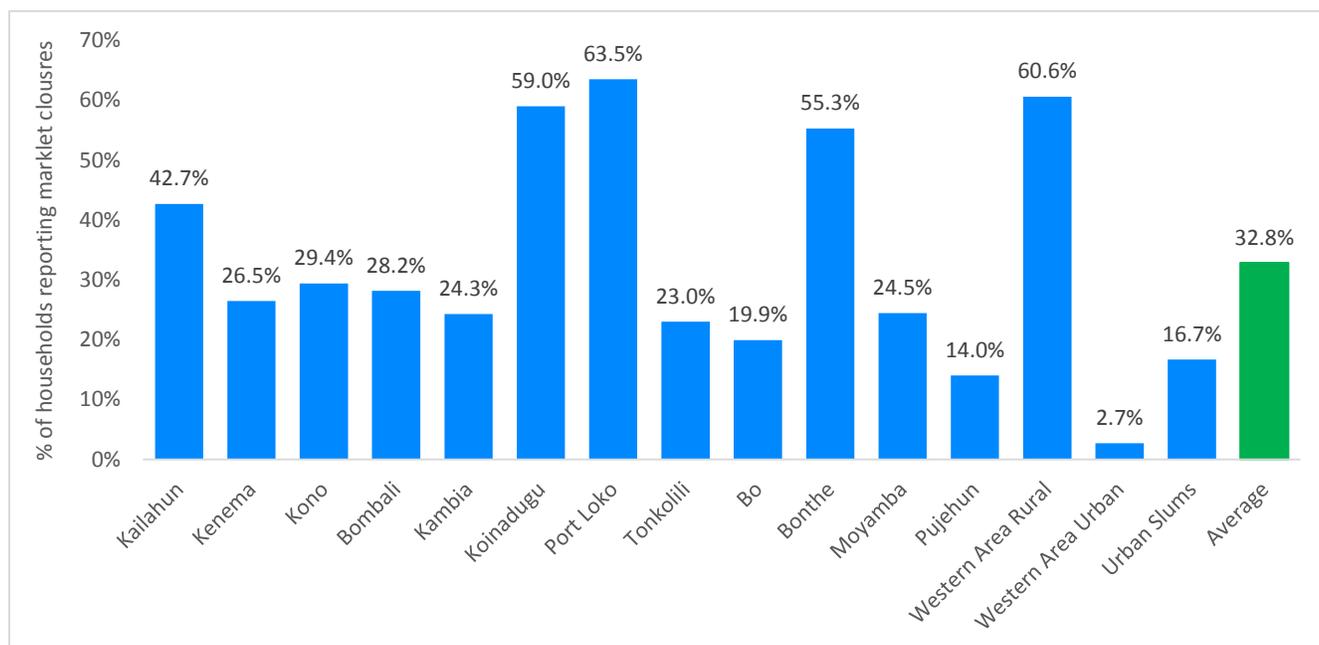
The frequency that markets are held is also an important determinant of food access and availability. For farming households looking to sell part of their produce, if markets are held very infrequently this may result in reducing potential incomes as such households lack appropriate facilities to effectively store their produce. Irregular local markets may result in farm produce deteriorating during the time lag between harvesting crops and the holding of the nearest market.

Table 26: Regularity of the nearest market

District	Daily	Weekly / periodic	Both daily and periodic
Kailahun	56.1%	36.0%	7.9%
Kenema	50.4%	37.4%	12.2%
Kono	40.5%	49.6%	9.9%
Bombali	55.0%	36.1%	8.8%
Kambia	43.1%	56.3%	0.7%
Koinadugu	24.2%	67.1%	8.7%
Port Loko	49.2%	17.7%	33.1%
Tonkolili	71.6%	12.3%	16.2%
Bo	56.2%	38.0%	5.8%
Bonthe	21.7%	73.9%	4.3%
Moyamba	37.6%	56.3%	6.1%
Pujehun	42.1%	54.5%	3.4%
Western Area Rural	100.0%	-	-
Western Area Urban	99.3%	-	0.7%
Urban Slums	100.0%	-	-
<b>Average</b>	<b>51.3%</b>	<b>39.0%</b>	<b>9.7%</b>

In urban areas, a majority of respondents reported that markets were held on a daily basis, again reflecting the greater concentration of market activities in urban localities and the increased ability of urban households to access food. With the exception of Tonkolili, where 71.6 percent of households indicated that the nearest market occurred every day, the majority of districts are characterised by periodic markets. Daily markets were least common in Bonthe (21.7 percent), potentially a contributory factor to high levels of food insecurity, and reflective of the fact that populations are very dispersed in this district as a result of its riverine topography. In addition, due to seasonal flooding in Bonthe and the fact that many households are engaged in fishing, whole communities can relocate on an annual basis, thus potentially disrupting the establishment of more permanent and regular markets. Only 24.2 percent of respondents from Koinadugu indicated that markets were held on a daily basis. Considering higher agricultural production levels in this area, more regular trading than currently occurs could be expected.

Figure 48: Closure of periodic markets during the EVD crisis, by district



During the EVD outbreak, in an effort to curb the spread of the disease the Government enacted widespread restrictions on movement, which consequently had an impact on trading. The intensity of these restrictions varied between districts, with some local authorities applying more strict restrictions than others.

To gain an insight into the impact of EVD-related restrictions on the running of local markets, the 2015 CFSVA asked respondents whether existing periodic markets near their communities had been closed. Restrictions seemed to have had the least impact on markets in Western Area Urban, with only 2.7 percent of respondents stating that periodic markets had been closed. On the contrary, periodic markets in neighbouring Western Area Rural were much more heavily affected, with 60.6 percent of respondents reporting that periodic markets had been closed.

Across the districts, results showed significant variation in terms of the impact of EVD on the running of periodic markets. Most affected was Port Loko (63.5 percent), which had the highest EVD caseload of any district outside of Freetown. Respondents in Koinadugu (59.0 percent) and Bonthe (55.3 percent) districts also indicated that the majority of periodic markets near their communities had been affected,

despite the fact that both of these districts registered much lower EVD caseloads. This possibly demonstrates the impact of movement restrictions implemented by local authorities to stem the spread of the epidemic into these districts. Significant market disruption was reported by households in Kailahun (42.7 percent), possibly reflecting restrictions by local authorities in an effort to stop the re-emergence of EVD in the district after the epidemic had been brought under control and EVD had spread to other areas.

Table 27: Availability of local and imported rice in markets

District	Availability of Imported Rice				Availability of Local Rice			
	Always	Most of the time	Once in a while	Never	Always	Most of the time	Once in a while	Never
Kailahun	87.7%	4.7%	6.3%	1.2%	42.7%	48.6%	8.7%	-
Kenema	96.2%	3.8%	-	-	45.8%	46.2%	8.0%	-
Kono	70.9%	12.3%	11.1%	5.7%	42.5%	40.6%	16.9%	-
Bombali	95.8%	4.2%	-	-	81.1%	8.8%	9.2%	0.8%
Kambia	91.0%	8.3%	0.7%	-	74.3%	22.2%	2.8%	0.7%
Koinadugu	53.4%	20.5%	24.8%	1.2%	52.8%	22.4%	24.8%	-
Port Loko	95.1%	4.5%	0.4%	-	41.7%	33.1%	25.2%	-
Tonkolili	93.1%	3.9%	2.9%	-	61.8%	26.0%	12.3%	-
Bo	95.7%	2.2%	1.1%	1.1%	56.2%	30.4%	12.3%	1.1%
Bonthe	96.3%	2.5%	1.2%	-	16.8%	11.8%	67.7%	3.7%
Moyamba	89.5%	10.0%	-	0.4%	37.1%	38.9%	23.6%	0.4%
Pujehun	97.8%	0.6%	1.7%	-	6.2%	37.1%	56.2%	0.6%
Western Area Rural	98.5%	1.5%	-	-	50.0%	27.3%	22.7%	-
Western Area Urban	97.3%	2.7%	-	-	95.2%	4.1%	0.7%	-
Urban slums	11.1%	88.9%	-	-	11.1%	88.9%	-	-
<b>Average</b>	<b>89.2%</b>	<b>6.4%</b>	<b>3.6%</b>	<b>0.8%</b>	<b>49.4%</b>	<b>30.5%</b>	<b>19.6%</b>	<b>0.5%</b>

The 2015 CFSVA also asked households about the availability and source of rice for sale within their local markets. Overall, around 90.0 percent of households across rural and urban districts indicated that imported rice was always available in their nearest markets, again reflecting the national dependence on imported rice. An exception to this was in Koinadugu district, where respondents reported that imported rice was always available in markets only 53.4 percent of the time. The availability of local rice was found to be highest in markets in Kambia (74.3 percent) and Bombali (81.1 percent), which is consistent with the fact that these are high rice production areas. In certain districts, respondents indicated that local rice was available once in a while in their nearest markets, including in Bonthe (67.7 percent) and Pujehun (56.2 percent).

## 6 Food Utilisation

### 6.1 Access to sanitation

The 2015 CFSVA found that 15.6 percent of households have access to improved sanitation facilities. Access to sanitation also has significant urban-rural disparities. In urban areas, 43.9 percent of households have access to improved sanitation compared to just 4.3 percent in rural areas. Traditional pit latrines are the most common form of sanitation in both urban and rural areas, while approximately 25.0 percent of households have no latrine at all. In ten out of 13 districts, less than 10.0 percent of households have access to improved sanitation, with more than one-third of households in Bonthe (57.7 percent), Kailahun (48.1 percent) and Pujehun (39.9 percent) defecating in the open, which has significant negative health implications.

Table 28: Type of toilet facility by urban/rural and by district

District	Flush latrine with water	Improved pit latrine	Traditional pit latrine (no water)	(Partly) open pit (no roof or no wall)	Communal latrine	None (bush, pond, river, stream)	Bucket	Other
Kailahun	0.3%	2.2%	35.5%	8.6%	4.1%	48.1%	0.4%	0.7%
Kenema	0.8%	2.9%	73.3%	10.7%	2.1%	10.1%	0.1%	-
Kono	1.4%	7.3%	55.0%	25.8%	2.7%	7.6%	-	0.2%
Bombali	3.4%	11.5%	44.0%	25.8%	1.5%	13.7%	0.1%	-
Kambia	0.7%	4.2%	40.2%	35.7%	3.9%	15.2%	-	0.1%
Koinadugu	0.3%	6.4%	39.0%	40.7%	0.1%	13.2%	-	0.4%
Port Loko	0.8%	4.8%	61.6%	16.7%	2.2%	13.7%	0.1%	-
Tonkolili	0.9%	4.3%	70.6%	13.2%	0.6%	10.3%	-	-
Bo	5.4%	13.4%	36.8%	5.3%	2.0%	36.5%	0.1%	0.5%
Bonthe	0.8%	4.3%	30.6%	4.6%	1.4%	57.7%	0.6%	-
Moyamba	0.9%	2.8%	57.7%	10.2%	1.1%	26.8%	0.1%	0.3%
Pujehun	0.7%	1.9%	44.1%	4.9%	8.1%	39.9%	-	0.4%
Western Area Rural	2.8%	15.0%	61.3%	16.6%	1.3%	2.4%	0.4%	0.2%
Western Area Urban	24.8%	32.2%	34.8%	2.0%	2.9%	2.1%	1.1%	-
Urban Slums	3.8%	14.6%	33.1%	43.3%	5.1%	-	-	-
Rural	0.6%	3.7%	48.3%	19.8%	2.6%	24.8%	0.1%	0.3%
Urban	17.4%	26.5%	47.5%	4.3%	1.9%	1.8%	0.7%	0.1%
<b>Average</b>	<b>5.4%</b>	<b>10.2%</b>	<b>48.0%</b>	<b>15.3%</b>	<b>2.4%</b>	<b>18.2%</b>	<b>0.3%</b>	<b>0.2%</b>

### 6.2 Access to safe drinking water

The 2015 CFSVA found that access to safe drinking water is also a major challenge in Sierra Leone. Up to 38.3 percent of households are still reliant on an unimproved water source for their drinking water, of which 31.0 percent fetch their water from a river or stream. In rural areas, the proportion of households obtaining their water from an unprotected source is even higher at 50.4 percent, with the

poorest access to safe drinking water reported in Moyamba (53.9 percent), Tonkolili (57.5 percent), Bonthe (60.7 percent) and Kambia (64.5 percent).

Table 29: Source of drinking water, by district

District	Piped water (into dwelling, yard or plot)	Public tap	Tube well/borehole with pump	Protected dug well	Protected spring/mineral/Sachet	Rain water	Unprotected well	River, stream or pond
Kailahun	0.6%	9.3%	34.8%	10.4%	0.7%	0.2%	9.8%	34.1%
Kenema	5.3%	24.7%	22.6%	27.8%	0.6%	0.1%	4.5%	14.4%
Kono	3.5%	13.4%	16.2%	27.2%	1.0%	0.4%	2.5%	35.7%
Bombali	2.7%	3.3%	28.3%	21.0%	0.9%	0.2%	4.6%	36.5%
Kambia	0.3%	5.5%	8.7%	19.2%	0.9%	0.7%	13.1%	51.4%
Koinadugu	3.3%	2.3%	18.2%	24.7%	0.4%	1.4%	2.7%	47.1%
Port Loko	0.3%	10.4%	23.5%	14.9%	0.7%	2.0%	4.7%	43.5%
Tonkolili	1.0%	1.8%	18.5%	20.4%	0.7%	0.1%	4.8%	52.7%
Bo	0.5%	6.8%	26.0%	21.7%	1.0%	-	17.6%	26.3%
Bonthe	1.9%	1.6%	14.2%	21.2%	0.4%	-	12.9%	47.8%
Moyamba	0.3%	7.0%	20.2%	17.9%	0.8%	0.1%	6.5%	47.4%
Pujehun	0.1%	15.8%	27.8%	13.6%	-	0.5%	4.9%	37.2%
Western Area Rural	8.9%	20.0%	10.4%	17.1%	1.0%	-	36.5%	6.1%
Western Area Urban	23.3%	40.6%	8.9%	14.4%	11.2%	0.2%	0.3%	1.3%
Urban Slums	35.7%	63.1%	0.6%	-	0.6%	-	-	-
<b>Rural</b>	<b>1.7%</b>	<b>8.9%</b>	<b>23.3%</b>	<b>15.1%</b>	<b>0.5%</b>	<b>0.5%</b>	<b>7.5%</b>	<b>42.4%</b>
<b>Urban</b>	<b>15.3%</b>	<b>28.3%</b>	<b>10.7%</b>	<b>30.1%</b>	<b>6.6%</b>	<b>0.2%</b>	<b>6.1%</b>	<b>2.0%</b>
<b>Average</b>	<b>5.6%</b>	<b>14.5%</b>	<b>19.7%</b>	<b>19.4%</b>	<b>2.2%</b>	<b>0.4%</b>	<b>7.1%</b>	<b>30.8%</b>

Overall, 61.8 percent of households have access to improved drinking water sources, of which only 5.6 percent is piped into the user's dwelling. The use of mineral water in bottles or sachets is very low at 2.2 percent nationally, and is predominantly used by urban households.

### 6.3 Children's access to health

Mothers/caretakers were asked about illness of children under five in the two weeks preceding the survey. Overall, 21.7 percent had a fever and 2.8 percent complained of a cough, taken as an indicator of an acute respiratory infection. Far fewer children, 1.2 percent, had diarrhoea during the recall period, and only 0.2 percent reported that their child was sick with measles (see Table 31). The majority of children (71.4 percent) had no illness in the two weeks preceding the interview. The districts with the highest prevalence of child illness were Bonthe (41.3 percent), Kenema (38.6 percent), Bo (34.3 percent), Kailahun (33.3 percent), the Urban Slums (33.0 percent) and Western Area Urban (33.0 percent), all with more than one-third of children sick with at least one illness during the recall period.

Table 30: Illness of children under five during the two weeks prior to the survey, by district

District	Not sick	Fever	Repeated coughs/ breathing difficulties	Diarrhoea	Measles	Other
Kailahun	66.7%	27.4%	2.8%	1.6%	0.4%	1.2%
Kenema	61.4%	24.4%	5.7%	1.6%	0.1%	6.7%
Kono	69.3%	23.5%	3.5%	0.1%	-	3.6%
Bombali	78.2%	18.7%	0.9%	1.0%	0.2%	1.1%
Kambia	87.5%	8.2%	2.1%	-	0.5%	1.7%
Koinadugu	90.5%	7.2%	1.1%	0.5%	-	0.7%
Port Loko	73.3%	20.1%	2.2%	1.2%	0.2%	3.1%
Tonkolili	73.0%	19.6%	2.4%	2.9%	-	2.1%
Bo	65.7%	26.8%	1.8%	1.4%	0.5%	3.8%
Bonthe	58.7%	35.8%	3.6%	0.4%	1.4%	0.1%
Moyamba	69.8%	25.0%	2.5%	0.2%	0.5%	2.1%
Pujehun	80.5%	18.7%	-	-	0.2%	0.6%
Western Area Rural	67.6%	30.4%	1.3%	-	0.7%	-
Western Area Urban	67.0%	24.2%	4.0%	1.9%	-	3.0%
Urban Slums	66.9%	24.8%	5.9%	2.4%	-	-
<b>Rural</b>	<b>74.0%</b>	<b>20.4%</b>	<b>2.5%</b>	<b>1.0%</b>	<b>0.3%</b>	<b>1.8%</b>
<b>Urban</b>	<b>64.1%</b>	<b>25.4%</b>	<b>3.5%</b>	<b>1.7%</b>	<b>-</b>	<b>5.3%</b>
<b>Average</b>	<b>71.4%</b>	<b>21.7%</b>	<b>2.8%</b>	<b>1.2%</b>	<b>0.2%</b>	<b>2.7%</b>

## 7 Education

### 7.1 Children out-of-school

Table 31: Children 6-15 years old out-of-school

District	Male	Female
Kailahun	8.7	8.7
Kenema	6.7	5.6
Kono	14.7	13.2
Bombali	4.3	4.4
Kambia	4.9	5.3
Koinadugu	5.1	5.2
Port Loko	8.2	7.4
Tonkolili	3.2	4.2
Bo	11.6	10.1
Bonthe	16.0	15.6
Moyamba	3.4	3.9
Pujehun	3.2	3.0
Western Area Rural	21.5	20.4
Western Area Urban	8.3	6.1
Urban Slums	2.4	7.1
Rural	9.1	9.0
Urban	10.3	10.2
<b>Average</b>	<b>9.9</b>	<b>10.0</b>

As a public health measure to curtail the spread of EVD, all schools in Sierra Leone were closed between June 2014 and April 2015. To allow children to continue learning at home during the EVD crisis, the Ministry of Education, Science and Technology (MEST) ran daily emergency radio education programmes.

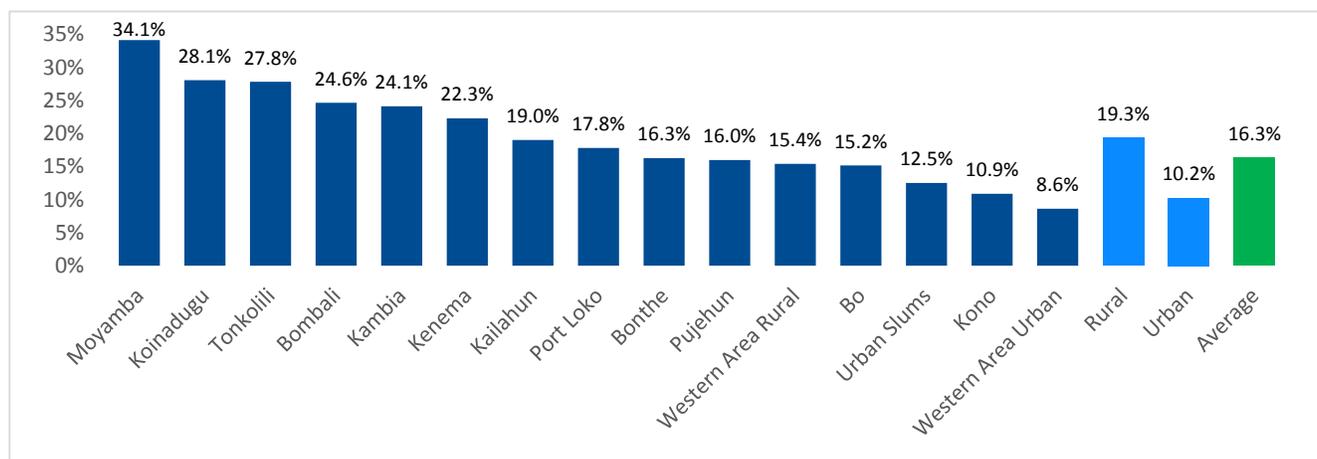
To gain an insight into the state of education in Sierra Leone, the 2015 CFSVA asked respondents questions about the education of children living in their household. It was found that 9.9 percent of boys and 10.0 percent of girls of school going age did not go to school during 2014-15.<sup>45</sup> The percentage of out-of-school children was higher in

urban compared to rural areas. Among the districts, Western Area Rural had the highest percentage of out-of-school children (21.5 percent boys and 20.4 percent girls). Bonthe had the second highest percentage (16.0 percent boys and 15.6 percent girls), followed by Kono (14.7 percent boys and 13.2 percent girls). Out-of-school children are often engaged in supporting household income-generating activities, and are thus extremely vulnerable to occupational hazards and potential abuse.

### 7.2 Children dropping out of school

“Dropping out of school” refers to a situation when a child of school going age who had been enrolled in school stops attending classes for a variety of reasons. The 2015 CFSVA found that 16.3 percent of students dropped out of school during 2014-15. The percentage of students dropping out is higher in rural (19.3 percent) compared to urban (10.2 percent) areas.

Figure 49: Children dropping out of school after completing primary level, by district

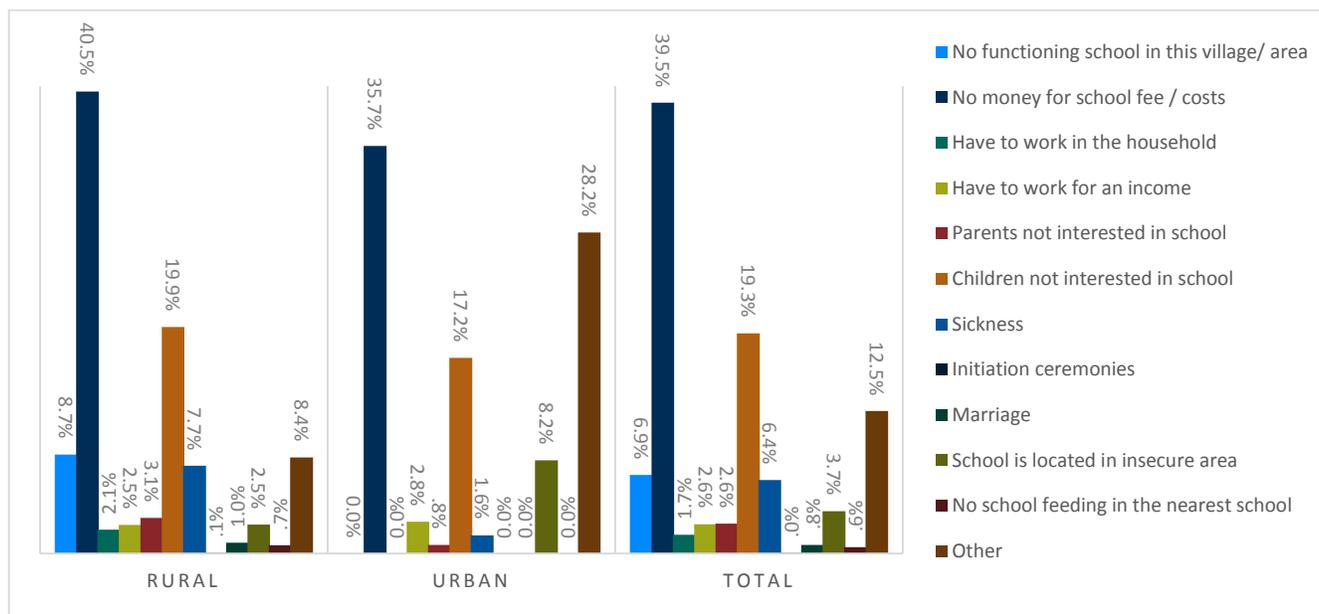


<sup>45</sup> In Sierra Leone, children are considered to be of school going age between 6 – 18 years old.

## 7.2.1 Reasons for dropping out of school

Children drop out of school for a number of reasons in Sierra Leone. The main reason reported was a lack of money for school fees and other costs (39.5 percent). Financial constraints were more commonly cited by parents in rural (40.5 percent) compared to urban areas (35.7 percent). Poverty thus seriously undermines the ability of children from poor households to realise their academic potential.

Figure 50: Reasons for children dropping out of school



The second major reason given for children dropping out of school was a lack of interest in school (19.3 percent), cited by households in both urban and rural areas (17.2 percent and 19.9 percent respectively). This may represent an underlying problem needing further exploration to ascertain whether this is a result of the quality of teaching staff or school facilities, or other limitations faced by schoolchildren. A high percentage of respondents in urban areas (28.2 percent) cited EVD as a major reason for children dropping out of school. EVD had serious impacts on social behaviour, particularly as some schools were used as makeshift EVD isolation centres (see Annex 24 for details).

## 7.3 Children enrolled in school

On average, the 2015 CFSVA showed that 18.4 percent of boys and 16.6 percent of girls have never been enrolled in school, differing from children who have dropped out of school. The percentage of children who have never been enrolled in school is much higher in rural areas, at 21.9 percent of boys and 20.5 percent of girls. In urban areas, 6.5 percent of boys and 6.0 percent of girls were never enrolled in school.

The highest percentage of boys not enrolled in school was in Bonthe (33.7 percent) followed by Koinadugu (28.1 percent) and Western Area Rural (22.9 percent). The highest percentage of girls not enrolled in school was found in Koinadugu (29.7 percent), followed by Kambia (27.4 percent) and Bonthe (22.3 percent) (see Annex 26 for details).

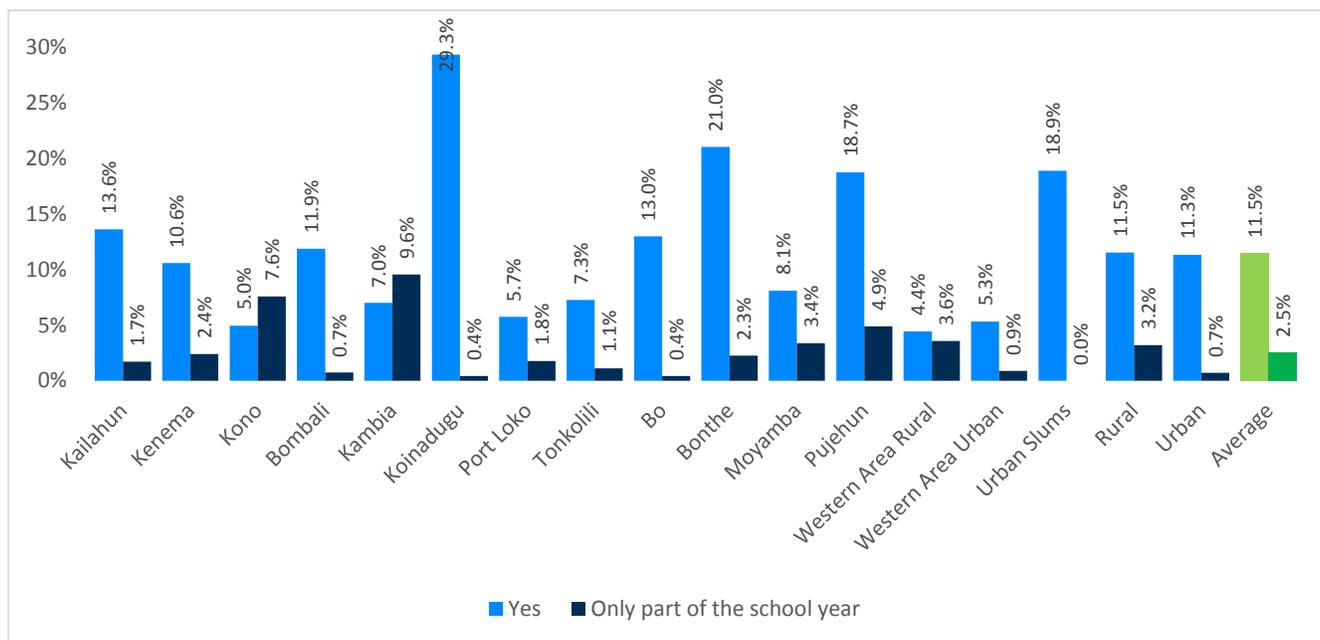
The main reason given for not enrolling children in school was a lack of money to pay for school fees and other costs (34.4 percent). The second most cited reason was a fear of EVD (27.7 percent). The third most common reason reported was the non-availability of a school in the respondent's area, and the closest functioning school being too far away to reach.

In urban areas, the most commonly cited reason for children not being enrolled in school was a fear of EVD (63.4 percent). In rural areas, poverty was the main reason for non-enrolment of children (37.3 percent). Children who never receive an education face significant constraints in accessing better paid employment opportunities when they enter the labour force, and they are highly vulnerable to becoming engaged in child labour activities. The lack of education can contribute to an inter-generational cycle of food insecurity (see Annex 27 for results by district).

## 7.4 Access to school meals

The provision of a school meal plays a significant role in attracting children to attend school. Not only does school feeding reduce the financial barriers to entry faced by poor families to send their children to school, it has also been shown to contribute to improving children’s nutrition, attention and attendance, resulting in enhanced learning outcomes. To find out more about whether schoolchildren were receiving a school meal, and if so, how regularly, the 2015 CFSVA asked respondents whether their children had received a school meal during the 2014-15 academic year. It should be noted that results are affected by the closure of schools during the EVD outbreak.

Figure 51: School meals received by children attending Government, Government-assisted and private schools, by district



On average, 24.0 percent of children enrolled in Government, Government-assisted or private primary school received a school meal, with 11.5 percent receiving a meal on a regular basis, compared to 2.5 percent who received a meal on an occasional basis.<sup>46</sup> Both urban and rural areas have almost the same ratio of children receiving a regular meal. Among the districts, Koinadugu reported the highest percentage of children receiving a regular school meal (29.3 percent), followed by Bonthe (21.0 percent), the Urban Slums (18.8 percent) and Pujehun (18.7 percent). By reducing food security barriers to entry faced by poor households sending their children to school, school feeding can provide a vital social safety

<sup>46</sup> Catholic Relief Services (CRS) are supporting the Ministry of Education, Science and Technology (MEST) to provide school feeding to primary schoolchildren enrolled in grades 1-6 of Government and Government-assisted primary schools in Koinadugu District. WFP is supporting MEST to provide targeted assistance to primary schoolchildren enrolled in grades 1-6 of Government and Government-assisted primary schools in the most food insecure chiefdoms in 11 districts.

net to reduce the vulnerability of children not enrolling in or dropping out-of-school, enabling children to realise their academic potential. As many children do not eat breakfast before they go to school, school feeding also contributes toward enhancing children’s attention and thus improving their academic attainment.

Table 32: Presence of a functioning primary school in the village, by district

District	Presence	Absence
Kailahun	55.3%	44.7%
Kenema	66.0%	34.0%
Kono	59.5%	40.5%
Bombali	52.3%	47.7%
Kambia	77.8%	22.2%
Koinadugu	73.3%	26.7%
Port Loko	48.1%	51.9%
Tonkolili	72.5%	27.5%
Bo	69.9%	30.1%
Bonthe	62.7%	37.3%
Moyamba	72.1%	27.9%
Pujehun	60.1%	39.9%
Western Area Rural	91.0%	9.0%
Western Area Urban	85.0%	15.0%
Urban Slums	100.0%	-
<b>Average</b>	<b>65.2%</b>	<b>34.8%</b>

The 2015 CFSVA asked households to verify whether there was a functioning primary school in their community. As can be deduced from the reasons given for children dropping out of school, 8.7 percent of respondents indicated that this was because the nearest school was too far away. This data may also be useful for education sector partners in identifying which districts have the highest need for interventions to construct more schools, in order to contribute toward achieving higher enrolment and attendance rates.

In urban areas, the majority of respondents confirmed that there was a school located in their immediate vicinity. This was highest in the Urban Slums (100.0 percent), Western Area Rural (91.0 percent) and Western Area Urban (85.0 percent). Outside of these areas, the highest proportion of households who reported having a school in their community were in Kambia (77.8 percent), Koinadugu (73.3 percent) and Tonkolili (72.5 percent). This corresponds with the information regarding percentages of out-of-school children aged 6-15 years old presented in section 7.2, with the proportions of out-of-school children lower in these districts, thus suggesting a positive correlation between school availability and enrolment. The districts with the lowest proportion of schools within communities were Port Loko (48.1 percent) and Bombali (52.3 percent). However, in these districts there does not seem to be a strong correlation between school availability and enrolment ratios.

Households were also asked to state the walking distance to the nearest functioning school in minutes and miles. Bonthe district, which was shown in section 7.2 to have the second highest number of out-of-school children (15.8 percent), was also reported as having the greatest distance between households and schools (54.00 minutes). Although households in Pujehun reported the second highest distance between households and schools (45.08 minutes), this seems to have far less impact on the ratio of out-of-school children (3.2 percent), which is far below the national average of 9.9 percent.

Table 33: Distance to the nearest functioning primary school, by district

District	In Minutes		In Miles	
	Mean	Maximum	Mean	Maximum
Kailahun	25.29	90.00	1.93	8.00
Kenema	35.28	120.00	2.64	10.00
Kono	34.76	120.00	2.96	12.00
Bombali	32.43	100.00	2.50	10.00
Kambia	30.88	60.00	2.12	6.00
Koinadugu	42.37	80.00	3.30	8.00
Port Loko	30.69	90.00	2.18	9.00
Tonkolili	40.52	120.00	3.05	11.00
Bo	37.70	90.00	2.87	9.00
Bonthe	54.00	180.00	4.65	15.00
Moyamba	38.67	120.00	3.29	10.00
Pujehun	45.08	130.00	3.20	12.00
Western Area Rural	8.83	10.00	0.83	1.00
Western Area Urban	9.82	23.00	0.95	3.00
Average	35.11	180.00	2.72	15.00

To gain an insight into whether there is any correlation between food security and dropout rates after primary school, the 2015 CFSVA analysed the proportion of children dropping out of school by food security group. As can be seen from the table below, households with children dropping out of school have higher levels of food insecurity compared to those with no dropout, with higher proportions of children failing to transition from primary level to JSS from households classified as “moderately” or “severely” food insecure.

An explanation for this may be low household incomes, as there is a positive correlation between food insecurity and poverty, meaning that poor families simply cannot afford the cost of keeping their children in school after completing primary level.

Table 34: Food security and children dropping out after primary level

Educational status	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Dropped out of school after primary level	8.7%	36.7%	43.7%	10.9%
Still in school after primary level	13.6%	43.4%	36.1%	6.9%

## 8 Other Determinants of Food Security

The major underlying reasons for the high prevalence of food insecurity in Sierra Leone are low agricultural productivity, poor incomes, limited infrastructure and poor access to social services, such as education, health, water and sanitation. However, shocks experienced by households have further exacerbated this situation.

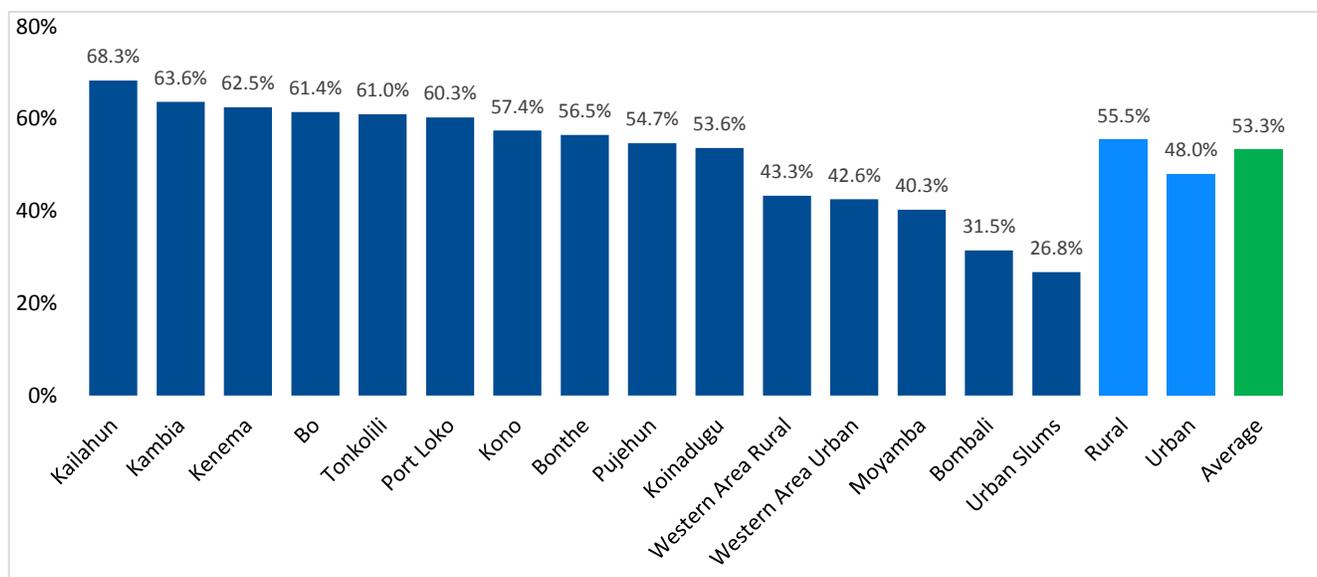
Shocks are defined as events that have negative consequences for individuals, households or communities. They can be of a natural, economic, political or social nature. Shocks can lead to increased vulnerability and a decrease in food security at the household level. In Sierra Leone, households commonly experience a variety of shocks, especially during the country's intense rainy season when many areas experience flooding, damaging or destroying households, farms and other assets.

Overall, 53.3 percent of households experienced one or more shocks during the past year. The percentage of households experiencing shocks was higher in rural (55.5 percent) compared to urban areas (48.0 percent). Among the districts, the highest percentages of households that reported experiencing shocks were in Kailahun (68.3 percent), Kambia (63.6 percent), Kenema (62.5 percent), Bo (61.4 percent) and Tonkolili (61.0 percent). Conversely, the lowest percentage of households experiencing a shock was reported in the Urban Slums (26.8 percent).

**NEGATIVE IMPACT OF SHOCKS**

IN SIERRA LEONE, HOUSEHOLDS EXPERIENCE A VARIETY OF SHOCKS, WHICH RANGE FROM NATURAL, ECONOMIC, POLITICAL AND SOCIAL. OVER HALF OF HOUSEHOLDS REPORTED THAT EVD HAD A MAJOR NEGATIVE IMPACT ON THEIR LIVES. THE SECOND MOST CITED SHOCK WAS DAMAGE TO CROPS, FOLLOWED BY DEATH OF A HOUSEHOLD MEMBER.

Figure 52: Percentage of households that experienced one or more shocks in the last 12 months



### 8.1 Types of shocks

The majority of Sierra Leonean households have been affected by the EVD outbreak. In total, more than half of households (50.9 percent) reported EVD as having a major negative impact, with this proportion slightly higher in urban (52.6 percent) compared to rural areas (50.4 percent).

In addition, households in all of the districts in Sierra Leone were affected by EVD. However in terms of the proportions of households affected, Kailahun experienced the most widespread impact (78.2 percent), followed by Kambia (71.0 percent) and Port Loko (55.9 percent).

Table 35: Shocks experienced by households

Shock	Rural	Urban	Average	Shock	Rural	Urban	Average
Drought / irregular rains	1.0%	1.2%	1.1%	Price fluctuations	8.0%	9.7%	8.5%
Floods	5.6%	4.4%	5.3%	Insecurity	0.9%	1.6%	1.1%
Crops damaged by insects, disease, animals	23.9%	1.8%	18.2%	Death of a working household member	12.4%	14.7%	13.0%
Lack of household labour	13.7%	3.4%	11.0%	Death of other household member	14.9%	26.4%	17.9%
Lack of agricultural inputs	13.0%	0.6%	9.8%	Theft of money or valuables	3.0%	4.5%	3.4%
Household member temporarily ill or injured	8.5%	10.8%	9.1%	Theft of crops or livestock	1.2%	0.4%	1.0%
Household member chronically ill	4.2%	5.9%	4.6%	High level of livestock diseases	1.1%	0.4%	0.9%
Unusually high level of human disease - EVD	50.4%	52.6%	50.9%	Household member imprisoned	0.3%	0.8%	0.5%
Lack or loss of employment	3.6%	8.9%	5.0%	Fire	0.5%	0.4%	0.4%
High costs of agricultural inputs	9.3%	0.7%	7.1%	Other	5.2%	9.1%	6.2%
Political problems	0.4%	1.0%	0.6%				

The second most commonly cited type of shock reported was damage to crops (23.9 percent of households in rural areas), followed by death of a household member (17.9 percent overall). When the death was of an earning household member or head of household, this had an impact on the earning capacity of the affected household.

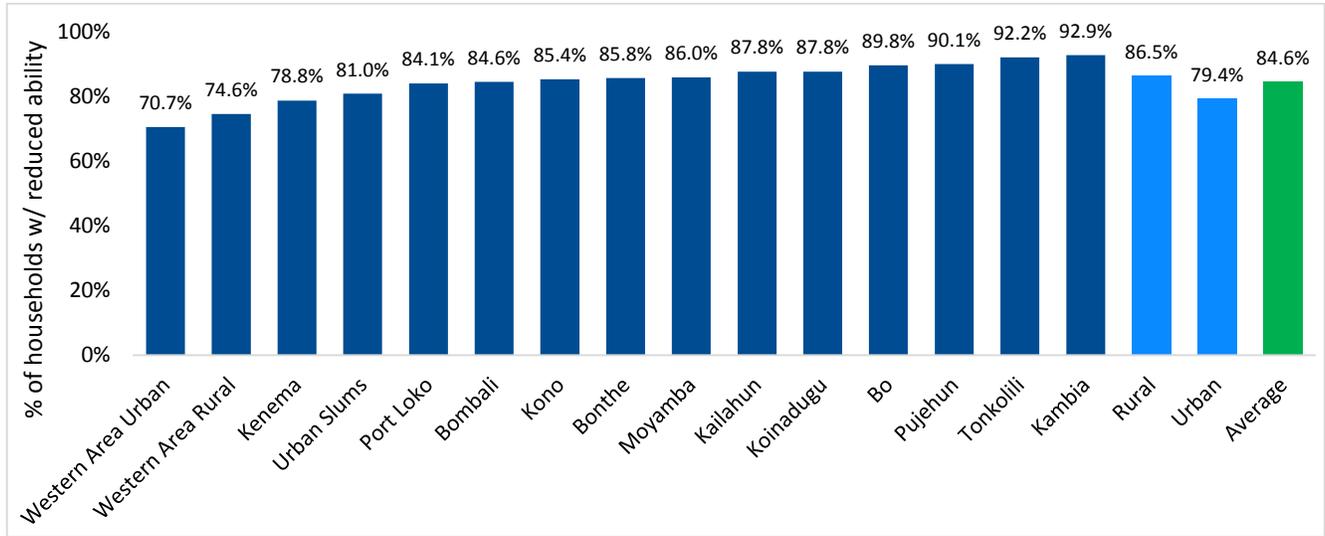
In the Urban Slums, flooding was reported as the most common shock, affecting 85.7 percent of households that reported a shock. The majority of slums are situated in low-lying coastal areas, subject to flooding and soil erosion. Many households are even located on makeshift banking areas made out of sandbags, which protrude into the Atlantic Ocean.

Other significant shocks reported in rural areas are a lack of agricultural labourers (13.7 percent) and agriculture inputs (13.0 percent), as well as temporary illness or chronic sickness (12.7 percent in total) and price increases (8.0 percent). Loss or lack of employment was cited as a much more common shock among urban households (8.9 percent) compared to rural (3.6 percent).

## 8.2 Decline in ability to produce and purchase

Households that had experienced shocks were asked whether it resulted in reducing their ability to purchase or produce goods or services. In total, around 85.0 percent of households reported a decline in their production of goods and services as a result of experiencing a shock. This proportion of households was found to be higher in rural (86.5 percent) compared to urban areas (79.4 percent).

Figure 53: Shocks that decrease the ability to produce, by district



## 9 Needs, Priorities and Recommendations

### 9.1 Needs and priorities

In order to achieve national food and nutritional security in Sierra Leone, households have different needs and priorities that should be addressed by the Government and its development partners through policies and interventions to enable Sierra Leoneans to improve their livelihoods and social status.

The 2015 CFSVA asked households to express what are their most pressing needs and priorities. The majority (67.7 percent) of households in both urban and rural areas cited access to microcredit as their main priority, with the proportion higher in rural localities (68.7 percent) compared to urban (59.9 percent). The second major need was improved access to food (61.7 percent), followed by access to health services (46.9 percent), improved drinking water (46.6 percent), access to schools (41.9 percent) and increased availability of improved seeds (40.1 percent).

Table 36: Households' needs and priorities, by district

District	Microcredit /loans	Seeds	Fertiliser	Work/ employment	Food	Access to health care	Access to schools	Drinking water
Kailahun	72.3%	29.8%	11.8%	13.7%	63.0%	54.3%	49.1%	57.9%
Kenema	62.6%	38.7%	11.6%	12.5%	70.1%	49.2%	40.2%	35.2%
Kono	58.5%	38.3%	15.3%	15.3%	57.7%	46.2%	48.2%	48.2%
Bombali	74.6%	53.4%	24.1%	13.0%	59.6%	41.5%	38.0%	37.5%
Kambia	69.8%	58.4%	35.1%	12.7%	58.4%	26.2%	19.0%	45.0%
Koinadugu	57.9%	51.7%	19.4%	15.0%	44.2%	62.3%	45.3%	58.9%
Port Loko	68.1%	50.3%	32.9%	20.5%	69.0%	35.2%	43.9%	38.0%
Tonkolili	58.1%	49.7%	28.1%	24.2%	63.9%	60.5%	51.8%	62.4%
Bo	78.7%	42.5%	18.7%	16.8%	63.2%	42.1%	47.5%	44.7%
Bonthe	79.0%	31.0%	12.1%	13.4%	66.7%	44.6%	45.3%	48.6%
Moyamba	71.3%	44.5%	26.9%	14.4%	62.0%	59.9%	46.2%	53.1%
Pujehun	79.2%	37.4%	14.9%	17.1%	70.2%	38.0%	39.1%	44.6%
Western Area Rural	58.6%	9.3%	4.0%	56.2%	64.0%	34.4%	27.2%	28.9%
Western Area Urban	41.8%	-	0.1%	49.6%	39.4%	45.9%	18.0%	37.2%
Urban Slums	86.7%	1.4%	-	11.2%	95.8%	52.4%	11.2%	35.7%
<b>Rural</b>	<b>68.7%</b>	<b>44.4%</b>	<b>20.8%</b>	<b>16.0%</b>	<b>62.2%</b>	<b>48.4%</b>	<b>43.2%</b>	<b>48.0%</b>
<b>Urban</b>	<b>59.9%</b>	<b>7.4%</b>	<b>3.6%</b>	<b>35.2%</b>	<b>57.5%</b>	<b>36.2%</b>	<b>32.0%</b>	<b>35.9%</b>
<b>Average</b>	<b>67.7%</b>	<b>40.1%</b>	<b>18.7%</b>	<b>18.2%</b>	<b>61.7%</b>	<b>46.9%</b>	<b>41.9%</b>	<b>46.6%</b>

Addressing the needs expressed by households outlined in the table above is crucial to strengthen their livelihoods, reduce their vulnerability, improve their food security and propel pro-poor growth.

## 9.2 Recommendations

With the agricultural sector contributing 50.5 percent to national GDP in 2014 and employing 61.1 percent of the labour force, an integrated investment approach, which leverages both development assistance and private sector resources, is critical to address the key constraints faced by the agriculture sector. Challenges include: (i) Limited use of productive inputs such as improved seeds and farming technology; (ii) High pre- and post-harvest losses; (iii) Lack of processing and storage facilities; (iv) Poor access to markets; (v) Unfulfilled potential of households engaging in fisheries; (vi) Livestock production, and; (vii) High levels of rural-urban migration.

### *Strategy 1: Boost and transform the agricultural sector from subsistence to commercial production*

1. Promote and improve access to inputs, namely improved seeds and planting materials, agrochemicals, appropriate farming machinery (e.g. power tillers, rotavators, and extension services) and financial services, including the promotion of private sector participation and investment in the supply of agricultural inputs.
2. Enhance capabilities of farmers in improved production techniques, notably use of climate adaptive techniques and technologies, and business and marketing practices and skills.
3. Promote investments and participation in sustainable fish farming and livestock production.
4. Create markets and market opportunities for smallholder farmers to increase demand for local produce by strengthening linkages with Government institutions (e.g. school feeding programmes, army, police, etc.), food processing companies and private sector traders.
5. Improve physical access to markets, particularly in riverine areas, through feeder roads, bridge rehabilitation and augmented transport capacity to link high production areas to markets.
6. Examine opportunities to increase cash crop production, based on successes in neighbouring countries with cashews and other low maintenance crops, to assist the poorest farmers.
7. Enhance understanding of cross-border trade in terms of volume, protocols and regulations, particularly for staple cereals and the impact on local food availability.
8. Enhance capabilities of farmers and other actors, especially women, in value addition for agricultural, fisheries and forestry products using the Purchase for Progress (P4P) model. This would involve skills development in food processing and post-harvest management and provision of appropriate equipment such as hermetic storage and drying facilities.
9. Incentivise and create further job opportunities in the agricultural sector, particularly for youth.

### *Strategy 2: Expand social protection programmes and diversify livelihoods to reduce vulnerability and improve household access to food*

1. The results of the CFSVA should be used to inform the review and implementation of the *National Social Protection Policy*, particularly to ensure that the most vulnerable and the areas with highest levels of food insecurity are targeted with livelihoods and safety net activities (e.g. seed protection, food/cash for work programmes and cash-based transfers).
2. Promote livelihoods diversification through seasonal non-farm income generating activities for rural farming households.
3. Encourage public and private sector investments in rural areas to expand farm and non-farm employment opportunities, particularly for youth and vulnerable women.

4. Strengthen early warning systems to monitor and prepare for shocks to food and nutrition.
5. Enhance skills of petty traders in areas such as financial literacy and business management and improve access to financial services, particularly for women.

*Strategy 3: Adopt a preventative approach to address the under-nutrition situation in the country*

1. Given the various causes of under-nutrition, a multi-sector approach focused on prevention should be considered under the framework of the Scaling Up Nutrition (SUN) movement.
2. Encourage national dialogue on food fortification to improve consumption of micronutrient-rich food products, particularly for women and children.
3. Increase access to improved water and sanitation facilities and foster hygiene promotion, especially in rural areas.
4. Ensure that nutrition and dietary diversity are considered in the planning and implementation of agriculture, education and livelihood programmes.

*Strategy 4: Improve primary and secondary education and provide vocational training opportunities*

1. Improve access to quality primary and secondary schooling in rural communities in areas with the highest levels of out-of-school and non-enrolled children.
2. Promote incentives for teaching in rural areas to ensure equity of qualified teachers in both urban and rural areas.
3. Use the results of the CFSVA to inform and target education sector priorities, including school feeding activities, and reinforce community mobilisation efforts to improve enrolment and attendance rates.

*Strategy 5: Strengthen the policy and institutional framework to support agricultural sector growth*

1. Strengthen linkages between national coordination platforms that support: i. Social protection; ii. Food security and nutrition, and; iii. Programmes that impact food security in order to promote synergies and complementary actions.
2. Expand the scope and terms of reference of the Food Security Working Group to support and monitor the recommendations of the 2015 CFSVA.
3. Ensure that the results of the CFSVA are used to support evidence-based planning and implementation of these actions.
4. Review the national food balance sheet with a view to developing a comprehensive policy framework for rice in Sierra Leone, considering (i) medium- and long-term growth targets for increased national production; (ii) trade and tariffs strategy to expand market access and commodity diversification in rural areas, and; (iii) investments in smallholder farmers by creating stronger linkages with the private sector.
5. Ensure that investments in the agricultural sector are spread across staples, cash crop, fruits and vegetables, fisheries and livestock to diversify livelihoods and reduce vulnerability to shocks.
6. Review the Government of Sierra Leone *2009 Private Sector Strategy* to see where adjustments can be made to stimulate increased private sector investment in agriculture, especially for the supply of quality inputs.

## Appendix 1: Methodology

Undertaking the CFSVA had initially been planned for late 2014. However, due to the EVD outbreak the mission was suspended. With the decline in the number of new EVD cases, and most Sierra Leoneans resuming their regular livelihoods, the CFSVA was re-planned in order to understand the current food security and vulnerability situation as well as the impact of EVD.

The 2015 CFSVA is representative at the chiefdom level to provide a more in depth understanding of the food security and vulnerability situation in Sierra Leone, as well as to provide baseline data at this administrative level to track progress of recovery and development interventions. Achieving reliable data about households at the chiefdom level is crucial for planning development activities that effectively target the most vulnerable and thus optimise the allocation of scarce resources. However, up until the 2015 CFSVA there had not been any baseline data collected at the chiefdom level in Sierra Leone in order to measure the impact at a more micro-level.

The survey required more field staff, resources, rigorous planning and supervision. In order to save time and resources and to avoid duplication, five assessments with FAO, MAFFS, AfDB, and World Bank, both baseline and impact level, were merged into the 2015 CFSVA.

### 1.1 Coverage

#### 1.1.1 Overall coverage

The 2015 CFSVA covered all 14 districts and also added the slum areas of Western Urban as a separate “district” to provide specific information on the food security and nutrition status of slum dwellers. The data was collected at the chiefdom level, where all 149 chiefdoms and 18 urban wards were given equal representation. A total of 34,328 households across 2,860 enumeration areas (EA) were interviewed.

##### *2015 CFSVA Coverage*

	Target	Completed	Completion Rate (%)
Districts	14+1	14+1	100.0%
Chiefdoms	149+18=167	149+18=167	100.0%
Enumeration Area	2,980	2,860	96.0%
Households	35,760	34,328	96.0%

#### 1.1.2 Coverage by rural / urban

Both rural and urban areas within each district and chiefdom were selected to be interviewed in order to produce representative results. The rural coverage was 87.7 percent, while urban was 12.3 percent. The districts with a higher percentage of urban areas were: Western Urban (100.0 percent), Urban Slums (100.0 percent), Bonthe (13.6 percent), Kono (10.6 percent) and Bombali (9.7 percent). Conversely, a higher rural share was covered in Western Area Rural (100.0 percent), Pujehun (100.0 percent), Kailahun (96.7 percent), Moyamba (94.4 percent) and Kambia (94.5 percent). A significant proportion of the urban areas surveyed in low populated cities are characterised by semi-urban settlements with mixed styles of living, thus influencing some of the results.

## Coverage by Area

District	Rural	Urban	Total
Kailahun	96.7%	3.3%	100.0%
Kenema	93.2%	6.8%	100.0%
Kono	89.4%	10.6%	100.0%
Bombali	90.3%	9.7%	100.0%
Kambia	94.5%	5.5%	100.0%
Koinadugu	90.5%	9.5%	100.0%
Port Loko	92.9%	7.1%	100.0%
Tonkolili	93.2%	6.8%	100.0%
Bo	90.7%	9.3%	100.0%
Bonthe	86.4%	13.6%	100.0%
Moyamba	94.4%	5.6%	100.0%
Pujehun	100.0%	0.0%	100.0%
Western Area Rural	100.0%	0.0%	100.0%
Western Area Urban	0.0%	100.0%	100.0%
Urban Slums	0.0%	100.0%	100.0%
<b>Average</b>	<b>87.7%</b>	<b>12.3%</b>	<b>100.0%</b>

### 3.1 Instruments for primary data collection

The CFSVA 2015 used both qualitative as well as quantitative tools to collect data. Three survey tools were used in the assessment:

1. Household questionnaire (quantitative)
2. Community questionnaire (qualitative)
3. Traders / market tool
4. The Open Data Kit (ODK)

The household and community questionnaire tools were used by the CFSVA survey team. The market / trader survey was completed by MAFFS monitoring and evaluation (M&E) staff in their respective districts. The ODK was used for data collection with smart phones.

### 4.1 Sampling

The *Sierra Leone Census 2004* data was used for sampling purposes, i.e. a two-stage stratified cluster sampling technique. The sampling is based on the urban, rural and livelihood zones (LZ). The projected population is used for the distribution of sample size among units. Enumeration Areas (EAs) provided by Statistics Sierra Leone (SSL) were used as a national sampling frame for the selection of communities.

Each chiefdom is considered as a unit of analysis or cluster for the CFSVA. The first stage stratification is the random selection of EAs within each chiefdom. During the second stage, households are randomly selected for interview within each selected EA. The EAs are distributed on the basis of a probability proportional to size (PPS) technique among rural - urban and LZs. This allowed for equal representation among rural and urban and LZs.

The following formula was used for the calculation of 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)

K = Design effect (required for two-stage cluster sampling)

d = Minimum desired precision or maximum tolerance error

#### 4.1 Assumptions

- Z = 1.96 (95 percent degree of confidence)
- Prevalence of food insecurity per last CFSVA = 45 percent
- A design effect of 1.5 has been applied based on various studies
- The level of precision is 10 percent per common practice
- 10 percent added for refusal or absence.

Based on the above parameters, a minimum sample size per chiefdom or urban ward was calculated as 216 households. As practiced in the 2010 CSFVA, 12 households per selected EA were interviewed. The number of districts in Sierra Leone is 12 excluding Western Area. Therefore, including the three clusters from Western Area: i) Rural; ii) Urban, and; iii) Urban Slums, resulted in the total number of districts / strata being 15.

In Sierra Leone, there are 149 chiefdoms in total. However, if including the 18 wards which make up Western Area (rural, urban and slums), the total number of chiefdoms/blocks is 167. The above mentioned formula is used for the calculation of the sample size per chiefdom. Each chiefdom is considered to be a cluster. In order to manage the large number of clusters, the sample size has been adjusted.

Per formula, 216 households per chiefdom were randomly selected keeping in accordance with the rural/urban and LZs parameters. Using the same approach, 18 EAs per chiefdom with 12 households per EA were selected. This resulted in a total sample size of 3,006 EAs and 36,072 households across the whole country. After cleaning the data, 1,432 questionnaires were removed from the overall sample as a result of errors or anomalies identified in the dataset to ensure the integrity of information collected.

#### 5.1 Management

The 2015 CFSVA was supervised by WFP's international Vulnerability Analysis and Mapping (VAM) officer. MAFFS, FAO, WFP and NGO partners worked in close collaboration and all performed an active role in the management and execution of the assessment. A taskforce and technical group comprised of representatives from MAFFS, MoHS, WFP, FAO, SSL and donors provided supervision at the top level to ensure the effective day-to-day implementation of the CFSVA. A technical support group (TSG) was constituted to review the questionnaire and look at the methodology and implementation strategy. The TSG was comprised of representatives from WFP, FAO, SSL and MAFFS. The TSG was also actively involved in the coordination and supervision of training and field activities.

## 6.1 Staff

Considering the need for a large number of competent field staff with previous experience implementing assessments and technical expertise, the TSG agreed to identify and recruit experienced staff members from SSL's agricultural department who were working in the respective districts and provinces. In addition to the MAFFS and SSL staff, NGOs also provided support to the CFSVA. A total of 13 NGOs contributed to the CFSVA by making financial contributions which made the assessment possible, as well as providing staff to supervise and implement the questionnaire.

In order to start the work in all districts simultaneously, the TSG assigned one team consisting of one supervisor and three enumerators to cover two chiefdoms. A total of 84 teams were formed, incorporating a total staff force of 336 (84 supervisors and 252 enumerators) to complete the data collection task in 40 working days. In addition, 14 district coordinators/monitors were assigned (one per district) in order to monitor the overall quality of the exercise and provide technical guidance to supervisors and field staff accordingly.

At the management level, three regional coordinators were assigned (one for western and northern region, one for eastern region and one for southern region), to be responsible for the overall coordination of field operations as well as to oversee the performance of the district coordinators.

## 7.1 Training

In order to provide the requisite technical training to staff to enable effective interactions with respondents when conducting the smart phone-based questionnaire, trainings were arranged at two locations: in Bo City for eastern and southern regions, and in Makeni City for northern and western regions. Trainings in both locations were held for five days each. The first training in Bo was held during the last week of August 2015, while the second in Makeni was undertaken in the first week of September 2015.

## 8.1 Timeline

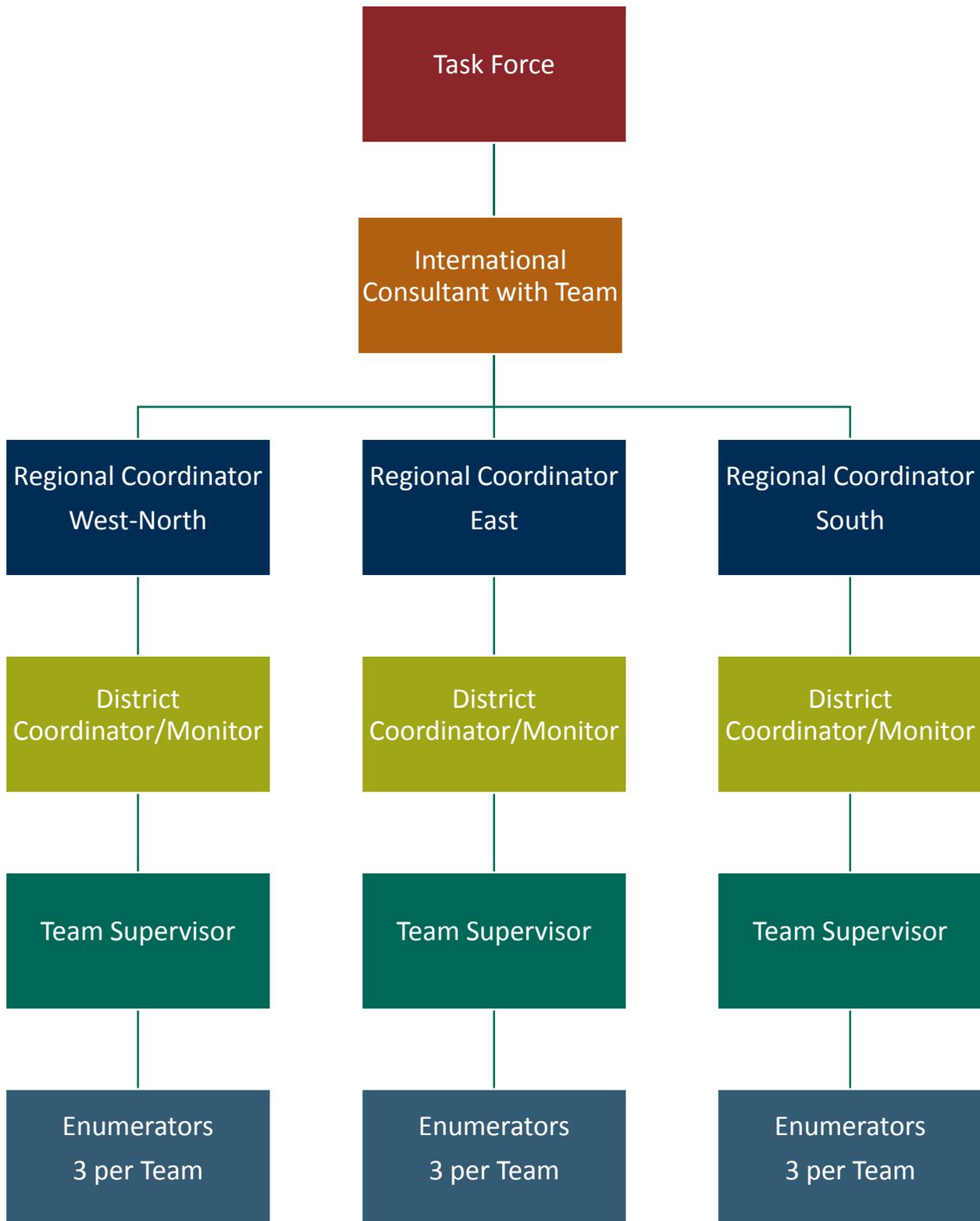
The field work started on 1 September 2015 in the eastern and southern regions, followed by the northern and western regions in which the field work started on 6 September 2015. Most of the field work was completed by the end of October 2015. However, in two to three districts, as a result of accessibility issues, a few areas were surveyed in early November 2015.

## 9.1 Data processing and analysis

Data analysis was conducted using the Statistical Package for Social Science (SPSS). Data merging, cleaning and analysis took two months. A validation workshop was held on 4 February 2016, where initial results of the CFSVA were presented to experts and planners from different agencies including the Government, UN, NGOs, donors and academia. More than 90 experts and planners attended and made suggestions and recommendations during working group exercises to further enhance the analysis of the data gathered during the 2015 CFSVA.

## Appendix 2: Implementation Team Organisational Chart

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## Appendix 3: CFSVA Team

<b>Overall Supervision</b>	Joseph Sam Sesay, Former Minister, MAFFS
	Mohamed King Koroma, SSL
	Gabriel Rugalema, FAO
	Peter Scott-Bowden, WFP
	Kinday Samba, WFP
<b>Team Leader</b>	Sahib Haq, WFP
<b>Concept, Planning and Design</b>	Joseph Koroma, MAFFS
	Mohamed A. Sheriff, MAFFS
	David Mwesigwa, FAO
	Francis Tommy, SSL
	Sahib Haq, WFP
<b>Field Supervision and Management</b>	Musa Gamanga, WVI
	Harding Wuyango, FAO
	Ballah Musa Kandeh, WFP
<b>Software and Data Transfer</b>	Mohammad Nasir Uddin Khan, WFP
	Allison Dumbuya, WFP
<b>Data Processing and Analysis</b>	Sahib Haq, WFP
<b>Report Writing and Editing</b>	Sahib Haq, WFP
	William Hopkins, WFP
	Jordan Sisson, WFP
	Caroline Thomas, UN Resident Coordinator's Office
<b>Report Support</b>	Ballah Musa Kandeh, WFP
<b>Photo Credit</b>	Francis Boima, WFP

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FAO Sierra Leone

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## Appendix 4: Contribution of Non-Governmental Organisations to the CFSVA

Name of NGO	Numbers covered	Unit
Agency for Community Development Initiatives (ACODI)	2	Chiefdoms
CARE International (CI)	2	Chiefdoms
Catholic Relief Services (CRS)	10	Chiefdoms
Community Action for the Welfare of Children (CAWeC)	1	Chiefdoms
Community Integrated and Development Organization (CIDO)	6	Chiefdoms
Conservation Alliance SL	4	Chiefdoms
Cooperazione Internazionale (COOPI)	2	Chiefdoms
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH	8	Chiefdoms
International Medical Corps (IMC)	6	Enumerators
Oxfam	4	Chiefdoms
Trocaire	2	Chiefdoms
Welthungerhilfe (WHH)	8	Chiefdoms
World Vision (WV)	16	Chiefdoms

## Annex 1: Age of household's head, by district

Age of household's head, by district			
District	Mean	Minimum	Maximum
Kailahun	46.2	12.0	96.0
Kenema	45.5	12.0	97.0
Kono	46.1	12.0	96.0
Bombali	46.4	16.0	99.0
Kambia	46.8	19.0	92.0
Koinadugu	45.6	16.0	99.0
Port Loko	46.9	18.0	99.0
Tonkolili	45.0	12.0	90.0
Bo	47.8	17.0	99.0
Bonthe	43.5	11.0	98.0
Moyamba	45.6	11.0	99.0
Pujehun	48.1	18.0	98.0
Western Area Rural	40.0	21.0	92.0
Western Area Urban	43.4	19.0	85.0
Urban Slums	40.7	17.0	79.0
<b>Rural</b>			
Rural	45.7	11.0	99.0
<b>Urban</b>			
Urban	45.0	11.0	99.0
<b>Average</b>	<b>45.5</b>	<b>11.0</b>	<b>99.0</b>

## Annex 2: Mean number of spouses of head of household, by district

Mean number of spouses of head of household, by district	
District	Mean
Kailahun	1.2
Kenema	1.2
Kono	1.2
Bombali	1.3
Kambia	1.3
Koinadugu	1.4
Port Loko	1.5
Tonkolili	1.2
Bo	1.2
Bonthe	1.2
Moyamba	1.3
Pujehun	1.3
Western Area Rural	1.2
Western Area Urban	1.0
Urban Slums	1.0
<b>Rural</b>	
Rural	1.3
<b>Urban</b>	
Urban	1.1
<b>Average</b>	<b>1.2</b>

### Annex 3: Level of education attained by head of household, by district

Level of education attained by head of household (%)								
District	No school	Some primary	Completed primary	Some secondary	Completed secondary	Vocational /technical institute	Other	College/ university
Kailahun	47.2	12.3	3.6	16.1	3.7	1.6	12.9	2.6
Kenema	42.4	11.8	4.1	14.2	5.1	3.0	16.1	3.5
Kono	58.9	10.8	3.5	14.5	4.3	1.4	3.6	2.9
Bombali	58.4	10.5	2.8	10.7	3.6	2.0	4.9	7.2
Kambia	55.7	4.3	1.4	7.9	3.8	1.3	21.6	4.0
Koinadugu	62.2	3.9	3.3	4.6	3.4	0.7	17.8	4.1
Port Loko	65.2	5.2	1.6	8.3	2.5	1.7	12.9	2.6
Tonkolili	51.4	8.5	8.4	9.2	6.2	1.8	10.4	4.2
Bo	49.1	9.4	3.4	14.5	6.9	3.0	6.4	7.4
Bonthe	53.4	8.5	4.1	11.2	4.5	2.9	11.1	4.3
Moyamba	50.7	10.8	5.5	13.5	4.5	2.7	9.1	3.3
Pujehun	51.1	6.1	2.6	7.5	2.4	1.4	27.5	1.3
Western Area Rural	33.0	4.1	4.7	14.2	22.9	8.1	3.2	9.8
Western Area Urban	14.2	4.3	4.2	24.1	18.2	10.5	3.2	21.3
Urban Slums	7.0	5.1	0.6	27.4	24.8	10.2	7.6	17.2
Rural	55.7	9.0	3.8	10.0	4.2	1.8	13.0	2.5
Urban	23.8	5.1	3.9	21.8	14.7	7.8	4.9	18.1
<b>Average</b>	<b>46.5</b>	<b>7.9</b>	<b>3.8</b>	<b>13.3</b>	<b>7.2</b>	<b>3.5</b>	<b>10.7</b>	<b>7.0</b>

## Annex 4: Disability of household head, by district

Disability of household head (%)				
District	Chronic illness	Mental disability	Physical disability	Not disabled/ chronically sick
Kailahun	5.3	0.0	1.1	93.6
Kenema	6.3	0.3	1.0	92.3
Kono	0.1	0.0	0.7	99.3
Bombali	4.6	0.0	0.3	95.2
Kambia	0.0	0.0	0.0	100.0
Koinadugu	0.0	0.2	0.0	99.8
Port Loko	6.6	0.3	0.2	92.9
Tonkolili	0.0	0.0	0.9	99.1
Bo	0.5	0.0	0.0	99.5
Bonthe	0.6	0.0	0.6	98.9
Moyamba	0.0	0.7	0.0	99.3
Pujehun	2.1	0.0	0.4	97.5
Western Area Rural	0.0	0.0	0.0	100.0
Western Area Urban	0.0	0.0	0.0	100.0
Urban Slums	0.0	0.0	0.0	0.0
Rural	2.8	0.1	0.3	96.7
Urban	0.9	0.1	0.6	98.5
<b>Average</b>	<b>2.2</b>	<b>0.1</b>	<b>0.4</b>	<b>97.3</b>

## Annex 5: Number of people living in one room, by district

Number of people living in one room (%)						
District	below 1	1	2	3-5	6-10	above 10
Kailahun	5.5	10.7	58.2	24.2	1.3	0.0
Kenema	7.6	11.6	52.6	26.7	1.5	0.0
Kono	3.4	7.7	57.6	29.0	2.3	0.0
Bombali	11.8	15.9	51.6	19.6	1.0	0.1
Kambia	15.2	16.6	56.4	11.6	0.2	0.0
Koinadugu	9.1	14.5	55.9	19.8	0.7	0.0
Port Loko	13.5	12.4	53.6	19.5	0.9	0.0
Tonkolili	14.8	18.4	54.4	12.2	0.2	0.1
Bo	12.5	11.7	54.2	21.0	0.6	0.0
Bonthe	9.7	21.1	55.7	13.0	0.5	0.0
Moyamba	17.0	20.8	51.7	10.2	0.3	0.0
Pujehun	11.6	13.7	55.2	19.1	0.4	0.0
Western Area Rural	5.2	22.2	51.7	20.4	0.5	0.0
Western Area Urban	5.4	16.8	50.6	26.0	1.2	0.0
Urban Slums	0.0	21.0	73.2	5.7	0.0	0.0
Rural	10.7	14.8	56.2	17.7	0.7	0.0
Urban	6.9	14.7	49.0	27.8	1.6	0.0
<b>Average</b>	<b>9.6</b>	<b>14.8</b>	<b>54.1</b>	<b>20.6</b>	<b>0.9</b>	<b>0.0</b>

## Annex 6: Association with agricultural organisation, by district

Association with agricultural organisation, by district (%)					
District	Farmer based organisation (FBO)	Farmers field school	Cooperative society	Grower society	Other
Kailahun	47.7	5.0	36.1	11.5	13.4
Kenema	58.3	18.2	17.8	8.6	14.8
Kono	30.0	11.0	26.6	3.0	31.2
Bombali	71.8	27.9	5.1	2.0	5.7
Kambia	88.4	9.9	1.9	2.9	6.9
Koinadugu	37.5	32.6	5.9	6.2	27.7
Port Loko	45.3	7.0	28.4	4.2	28.7
Tonkolili	63.6	6.5	10.5	5.7	16.6
Bo	36.5	4.5	23.6	7.5	40.9
Bonthe	66.6	17.8	4.8	9.4	9.7
Moyamba	37.2	7.4	23.3	5.0	43.4
Pujehun	43.6	17.6	6.2	0.5	40.0
Western Area Rural	6.7	1.0	77.1	0.0	7.6
Western Area Urban	16.8	0.0	4.7	0.0	57.4
Urban Slums	0.0	0.0	32.3	9.7	0.0
<b>Rural</b>	<b>54.5</b>	<b>14.2</b>	<b>19.0</b>	<b>6.8</b>	<b>18.4</b>
<b>Urban</b>	<b>17.4</b>	<b>1.8</b>	<b>13.5</b>	<b>2.1</b>	<b>52.3</b>
<b>Average</b>	<b>44.2</b>	<b>10.7</b>	<b>17.4</b>	<b>5.5</b>	<b>27.8</b>

## Annex 7: Reasons for migration within Sierra Leone, by district

Reasons for migration within Sierra Leone (%)								
District	To do agricultural work	To do non-agricultural work	Divorce / separation	Education / studies	To relieve strain on household	EVD crisis	Health treatment	Family reunion / marriage
Kailahun	9.7	5.2	0.6	44.9	10.0	2.4	15.8	11.2
Kenema	2.3	9.1	0.7	41.0	2.8	12.6	21.7	9.6
Kono	1.7	10.8	4.7	30.4	6.7	12.5	12.8	20.4
Bombali	6.0	40.1	5.7	25.7	9.2	0.0	6.2	7.1
Kambia	0.0	35.5	0.0	43.0	4.8	0.0	8.1	8.6
Koinadugu	0.8	12.1	0.0	59.5	8.9	0.0	5.0	13.9
Port Loko	4.5	7.0	0.0	40.1	20.8	13.2	14.5	0.0
Tonkolili	5.6	23.1	1.8	34.0	3.8	2.5	19.5	9.7
Bo	8.2	13.8	1.4	16.7	15.9	0.2	9.6	34.1
Bonthe	8.7	3.8	0.0	30.1	22.8	8.5	12.6	13.6
Moyamba	0.3	3.8	0.0	11.8	75.2	0.2	5.8	2.9
Pujehun	7.9	5.8	0.0	43.8	7.5	2.7	13.2	19.2
Western Area Rural	31.4	24.1	10.6	5.9	7.6	1.3	11.9	7.2
Western Area Urban	0.0	45.1	0.0	3.0	5.6	30.5	7.9	7.9
Urban Slums	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Rural</b>	<b>6.0</b>	<b>13.9</b>	<b>1.7</b>	<b>36.1</b>	<b>12.7</b>	<b>4.4</b>	<b>14.1</b>	<b>11.1</b>
<b>Urban</b>	<b>1.9</b>	<b>30.0</b>	<b>0.3</b>	<b>12.0</b>	<b>16.7</b>	<b>19.6</b>	<b>7.5</b>	<b>11.9</b>
<b>Average</b>	<b>4.7</b>	<b>19.2</b>	<b>1.2</b>	<b>28.2</b>	<b>14.0</b>	<b>9.4</b>	<b>11.9</b>	<b>11.3</b>

## Annex 8: Type of internal migration by household head, by district

Type of internal migration by household head (%)					
District	From another town outside the chiefdom	From the same chiefdom	From another chiefdom in the same district	From another district	Other
Kailahun	9.8	29.5	24.0	32.0	4.7
Kenema	4.2	9.8	28.0	55.0	3.0
Kono	4.3	14.1	27.0	49.7	4.9
Bombali	17.3	27.1	23.3	31.3	1.1
Kambia	14.9	26.0	28.4	27.3	3.4
Koinadugu	16.7	41.3	23.6	11.9	6.6
Port Loko	12.8	23.1	26.8	37.3	0.0
Tonkolili	10.4	30.7	28.9	26.0	4.0
Bo	2.3	8.7	21.5	65.5	2.0
Bonthe	14.9	20.6	32.0	31.5	1.1
Moyamba	6.1	18.2	25.9	48.9	0.9
Pujehun	7.2	23.7	20.1	44.2	4.8
Western Area Rural	24.1	4.6	15.4	54.0	1.9
Western Area Urban	6.2	12.3	12.1	65.4	4.1
Urban Slums	7.6	0.0	3.0	72.7	16.7
Rural	13.2	22.8	21.4	40.2	2.4
Urban	4.9	9.3	18.3	63.1	4.4
<b>Average</b>	<b>8.3</b>	<b>14.8</b>	<b>19.6</b>	<b>53.7</b>	<b>3.6</b>

## Annex 9: Reasons for long term migration, by district

Reasons for long term migration (%)												
District	Better access to agricultural land	Better access to roads	Better access to health centres and / or schools	Less exposure to natural hazards / disasters	Marriage	Better access to river or water sources	Better job opportunities	Better access to electricity	Better access to markets	To earn more money	EVD crisis	Other
Kailahun	3.3	0.3	2.2	0.7	45.5	0.0	19.1	0.0	3.6	16.1	0.0	9.2
Kenema	3.4	0.1	9.1	0.0	24.7	0.0	27.6	0.0	4.6	13.1	0.0	17.2
Kono	2.3	0.0	3.2	0.2	22.6	0.0	31.5	0.0	1.1	30.6	0.1	8.5
Bombali	7.6	0.0	3.2	0.0	41.1	0.0	31.7	1.1	2.4	2.8	0.0	10.1
Kambia	11.8	0.6	0.4	1.4	37.4	1.7	28.4	0.0	2.8	7.6	0.0	7.8
Koinadugu	14.6	0.4	5.0	0.0	33.6	0.0	12.6	0.0	7.1	15.0	0.0	11.8
Port Loko	9.5	0.0	1.2	0.5	41.8	0.0	25.9	0.5	3.4	6.1	0.5	10.5
Tonkolili	23.7	0.0	1.8	0.3	20.8	0.0	28.7	0.0	8.0	6.8	0.0	10.0
Bo	1.1	0.0	1.6	0.2	40.8	0.0	30.0	0.0	6.3	11.6	0.0	8.5
Bonthe	3.4	0.0	2.5	0.0	23.0	2.9	44.2	0.0	3.7	10.7	0.0	9.6
Moyamba	5.3	0.6	3.2	0.6	42.4	0.8	24.9	0.0	3.1	11.0	0.1	7.9
Pujehun	3.7	0.0	1.4	0.8	41.8	0.3	23.2	0.0	1.7	16.8	1.7	8.6
Western Area Rural	0.9	0.3	0.6	0.1	9.4	0.0	35.5	0.1	10.0	39.1	0.3	3.6
Western Area Urban	0.0	0.6	7.6	0.8	11.3	0.5	48.5	0.4	2.9	17.4	0.0	10.1
Urban Slums	0.0	0.0	18.5	0.0	4.6	0.0	24.6	0.0	29.2	18.5	0.0	4.6
Rural	7.5	0.2	1.2	0.4	31.2	0.3	25.7	0.1	4.1	21.0	0.2	8.0
Urban	0.0	0.4	7.7	0.5	16.8	0.3	42.9	0.3	4.9	15.3	0.0	11.0
<b>Average</b>	<b>3.1</b>	<b>0.3</b>	<b>5.1</b>	<b>0.4</b>	<b>22.7</b>	<b>0.3</b>	<b>35.9</b>	<b>0.2</b>	<b>4.6</b>	<b>17.6</b>	<b>0.1</b>	<b>9.8</b>

## Annex 10: Livelihood activities, by district

Livelihood activities by district (%)														
District	No job	Production and sale of food crops	Production and sale of cash crops	Livestock rearing and/or selling	Salt extraction	Fishing	Mining of minerals (gold, diamond, iron, bauxite)	Unskilled wage labour -agriculture	Unskilled wage labour -non-agriculture	Skilled wage labour (including taxi, poda driver/bike riding)	Handicrafts/artisan (tailoring, weaving carving, pottery, painter, etc.)	Palm oil extraction	Wood cutting/coal burning	Petty trading
Kailahun	0.0	66.4	31.3	2.0	0.0	1.0	3.1	13.5	4.5	3.4	3.0	7.6	0.3	14.0
Kenema	0.8	45.4	15.0	1.7	0.2	1.3	11.7	3.2	6.9	5.7	3.3	4.2	2.9	25.9
Kono	0.0	44.5	21.4	2.0	0.1	0.2	15.4	5.8	5.1	6.4	2.2	6.5	2.6	20.9
Bombali	0.3	63.1	2.4	2.9	0.0	0.3	0.8	6.0	4.0	4.2	1.6	0.9	3.8	13.3
Kambia	0.0	76.0	5.4	8.4	0.0	4.9	0.1	2.5	1.4	4.6	1.8	1.7	1.0	20.7
Koinadugu	0.0	72.2	1.2	25.7	0.0	0.3	3.8	7.6	3.7	3.5	1.9	2.3	0.7	17.7
Port Loko	0.0	67.4	2.5	4.3	0.4	3.3	0.6	3.3	2.7	9.6	2.1	5.4	6.3	16.9
Tonkolili	0.0	67.3	2.9	2.9	0.0	1.3	9.3	3.8	10.7	6.2	1.9	6.3	4.4	22.2
Bo	0.1	35.9	9.5	1.4	0.0	0.3	5.4	5.5	2.4	3.8	2.2	5.2	3.3	24.1
Bonthe	0.0	48.6	2.7	1.5	0.1	27.4	0.3	2.8	4.7	3.6	1.6	9.0	1.3	12.4
Moyamba	1.7	62.5	1.9	3.0	0.3	2.9	0.3	2.8	3.2	6.2	1.2	1.7	4.1	12.5
Pujehun	0.4	64.3	11.7	2.5	0.0	12.9	4.0	10.0	4.0	4.0	2.6	9.2	0.6	14.5
Western Area Rural	0.2	2.5	0.5	0.4	0.7	6.2	0.3	2.1	6.1	10.3	1.7	0.5	2.8	40.8
Western Area Urban	0.1	0.0	0.0	0.0	0.1	0.8	0.0	0.3	4.6	14.5	2.8	0.1	0.1	36.1
Urban Slums	0.6	0.0	0.0	0.0	0.0	5.7	0.0	0.0	3.8	17.2	17.8	0.0	0.0	32.5
Rural	0.3	64.8	10.5	5.9	0.1	3.5	5.2	6.4	4.5	4.9	1.9	5.2	3.0	16.0
Urban	0.3	4.9	1.0	0.6	0.1	1.0	1.7	0.5	4.8	11.4	3.7	0.4	0.5	37.6
<b>Average</b>	<b>0.3</b>	<b>47.6</b>	<b>7.7</b>	<b>4.4</b>	<b>0.1</b>	<b>2.7</b>	<b>4.2</b>	<b>4.7</b>	<b>4.6</b>	<b>6.7</b>	<b>2.4</b>	<b>3.8</b>	<b>2.3</b>	<b>22.2</b>

District	Trading, seller, commercial Activity	Remittances/migrating labour	Salaries, wages (employees, longer-term)	Mining of sand and stone	Aid (Government, local NGO, international NGO)	Gift (family, friends)	Hunting and selling bush meat (i.e. cutting grass)	Gathering and selling of wild food	Extraction of palm wine (poyo)	Palm wine selling	Production and sale of vegetables and/or fruits	Begging	Cart puller/push cart	Other
Kailahun	9.7	0.5	3.6	0.2	0.1	1.6	0.2	0.3	0.2	0.1	2.9	0.3	0.0	2.6
Kenema	6.1	0.8	6.3	0.4	0.0	4.8	0.7	1.4	0.3	0.4	1.7	0.5	0.0	4.1
Kono	10.4	0.2	3.6	0.7	0.2	3.1	0.2	0.2	0.5	0.9	2.8	0.6	0.0	5.4
Bombali	9.7	0.3	4.3	0.3	2.6	2.8	0.0	1.7	0.5	2.1	1.5	0.2	0.0	4.0
Kambia	7.9	0.4	6.6	0.0	0.1	2.0	0.1	0.1	0.1	0.5	1.9	0.1	0.0	7.5
Koinadugu	7.5	0.5	4.0	0.2	0.5	1.0	0.9	0.3	0.6	0.4	0.5	0.2	0.0	2.2
Port Loko	10.1	0.6	3.4	0.3	0.4	3.5	0.2	0.2	0.2	0.2	3.9	0.8	0.1	9.0
Tonkolili	10.3	2.7	5.7	0.1	0.7	0.7	0.2	0.3	0.8	1.5	0.9	0.1	0.0	3.4
Bo	5.9	0.1	13.3	0.9	0.1	3.4	0.1	0.2	0.2	0.2	1.7	0.7	0.0	8.5
Bonthe	6.7	0.0	9.0	0.0	0.3	1.5	0.1	0.1	0.1	0.4	3.0	0.2	0.0	3.4
Moyamba	7.0	0.3	4.1	0.2	1.4	3.5	0.2	0.2	0.3	1.0	2.0	0.2	0.0	4.0
Pujehun	3.0	2.0	3.1	0.3	0.1	3.1	0.1	0.1	0.1	0.2	0.9	0.3	0.0	2.3
Western Area Rural	9.6	0.2	16.3	9.6	1.3	1.7	0.1	0.4	0.6	2.1	1.1	1.2	0.0	2.2
Western Area Urban	25.3	0.9	35.1	0.8	0.2	9.3	0.2	0.2	0.0	0.1	0.0	0.0	1.4	5.0
Urban Slums	18.5	0.0	10.8	0.6	1.9	2.5	0.0	0.6	0.0	0.0	0.6	1.3	0.0	43.9
<b>Rural</b>	<b>6.3</b>	<b>0.7</b>	<b>3.6</b>	<b>0.8</b>	<b>0.3</b>	<b>2.0</b>	<b>0.3</b>	<b>0.6</b>	<b>0.4</b>	<b>0.8</b>	<b>2.0</b>	<b>0.4</b>	<b>0.0</b>	<b>4.0</b>
<b>Urban</b>	<b>21.5</b>	<b>0.8</b>	<b>27.3</b>	<b>0.6</b>	<b>1.2</b>	<b>7.6</b>	<b>0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.2</b>	<b>0.7</b>	<b>7.5</b>
<b>Average</b>	<b>10.7</b>	<b>0.7</b>	<b>10.4</b>	<b>0.7</b>	<b>0.5</b>	<b>3.6</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.6</b>	<b>1.6</b>	<b>0.4</b>	<b>0.2</b>	<b>5.0</b>

## Annex 11: All livelihoods activities, by district and gender

Livelihood activities by district and gender (%)															
District	Gender	No job	Production and sale of food crops	Production and sale of cash crops	Livestock rearing and / or selling	Salt extraction	Fishing	Mining of minerals (gold, diamond, iron, bauxite)	Unskilled wage labour – agriculture	Unskilled wage labour – non-agriculture	Skilled wage labour (taxi/bike riding, etc.)	Artisan (tailoring, weaving carving, pottery etc.)	Palm oil extraction	Wood cutting/coal burning	Petty trading
Kailahun	Male	0.0	6.3	11.2	70.7	0.0	100.0	82.2	14.7	49.7	98.5	79.4	18.8	14.7	8.4
	Female	100.0	6.5	5.6	0.0	0.0	0.0	5.6	9.1	20.1	0.0	12.5	3.8	0.0	55.1
	Both	0.0	87.2	83.2	29.3	0.0	0.0	12.2	76.2	30.2	1.5	8.1	77.4	85.3	36.5
Kenema	Male	9.2	7.9	12.6	17.1	0.0	35.6	70.4	15.2	71.3	86.3	87.1	17.2	11.4	8.3
	Female	32.4	3.8	11.8	9.5	100.0	44.5	2.7	24.3	1.0	2.9	2.1	1.7	22.9	78.1
	Both	58.4	88.3	75.6	73.4	0.0	19.9	27.0	60.5	27.7	10.8	10.8	81.1	65.7	13.6
Kono	Male	0.0	7.1	5.3	35.0	10.7	74.7	84.5	27.8	51.8	91.4	68.6	20.2	16.9	7.2
	Female	0.0	6.1	4.5	15.8	0.0	0.0	4.1	5.9	14.8	1.1	13.7	2.9	16.2	59.8
	Both	100.0	86.8	90.2	49.2	89.3	25.3	11.4	66.3	33.4	7.5	17.7	76.9	66.9	33.0
Bombali	Male	64.6	3.1	19.8	9.8	0.0	18.1	68.8	23.7	43.7	76.1	72.9	4.8	22.1	20.9
	Female	12.9	5.4	23.1	12.4	0.0	0.0	0.0	7.3	8.9	0.0	12.3	0.0	5.1	43.3
	Both	22.5	91.6	57.2	77.8	100.0	81.9	31.2	68.9	47.4	23.9	14.8	95.2	72.8	35.8
Kambia	Male	0.0	5.2	8.7	33.9	0.0	22.3	33.5	33.5	88.9	95.3	93.1	36.6	11.5	3.7
	Female	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.8	73.1
	Both	0.0	91.1	91.3	66.1	0.0	77.7	66.5	66.5	11.1	4.7	6.9	63.4	65.7	23.2
Koinadugu	Male	0.0	2.3	0.0	0.4	0.0	0.0	21.9	13.2	11.7	49.3	37.4	4.8	31.9	3.1
	Female	0.0	4.5	0.0	3.5	0.0	0.0	11.6	6.8	4.9	0.0	7.1	2.0	18.1	19.2
	Both	0.0	93.2	100.0	96.1	0.0	100.0	66.5	80.0	83.4	50.7	55.5	93.2	50.0	77.6
Port Loko	Male	0.0	11.7	3.0	20.8	0.0	70.9	23.5	21.6	42.1	91.8	81.7	2.9	20.8	7.7
	Female	0.0	3.8	0.0	0.0	0.0	2.4	14.5	2.1	25.6	2.3	7.3	7.9	0.8	39.4
	Both	0.0	84.5	97.0	79.2	100.0	26.7	62.0	76.3	32.4	5.9	11.1	89.2	78.4	52.8
Tonkolili	Male	0.0	6.0	12.4	5.2	0.0	39.1	42.8	25.6	16.1	61.4	72.2	7.3	10.9	7.7
	Female	0.0	2.5	4.3	4.9	0.0	0.0	0.3	0.0	2.9	0.0	0.0	0.0	4.4	31.9

	Both	100.0	91.5	83.3	89.9	0.0	60.9	56.9	74.4	81.0	38.6	27.8	92.7	84.7	60.4	
Bo	Male	76.0	7.7	14.2	0.0	0.0	84.2	61.1	41.9	51.5	72.3	62.2	11.5	45.1	10.7	
	Female	24.0	4.9	6.4	0.0	0.0	0.0	0.5	11.8	6.7	0.0	8.4	2.3	5.8	52.5	
	Both	0.0	87.4	79.5	100.0	0.0	15.8	38.4	46.3	41.8	27.7	29.4	86.1	49.1	36.8	
Bonthe	Male	0.0	7.2	42.6	10.4	0.0	36.0	0.0	21.9	61.9	97.4	72.4	6.1	0.0	8.0	
	Female	0.0	3.1	1.7	0.0	0.0	2.7	0.0	8.8	25.8	1.0	2.5	3.4	0.0	44.0	
	Both	0.0	89.8	55.7	89.6	100.0	61.3	100.0	69.3	12.3	1.7	25.1	90.5	100.0	48.0	
Moyamba	Male	59.9	5.1	13.5	10.9	100.0	71.2	100.0	79.9	79.5	95.7	82.2	52.4	16.9	20.7	
	Female	33.2	3.9	3.7	12.2	0.0	5.1	0.0	5.2	6.1	0.3	10.2	10.2	12.0	47.7	
	Both	6.9	91.1	82.8	76.9	0.0	23.7	0.0	14.9	14.4	3.9	7.6	37.5	71.1	31.6	
Pujehun	Male	11.1	9.1	2.9	35.5	0.0	31.7	86.8	17.7	32.9	80.9	63.6	3.2	25.4	12.1	
	Female	11.1	5.6	2.6	19.1	0.0	3.9	0.0	2.0	7.1	0.0	17.2	0.0	19.7	33.7	
	Both	77.8	85.4	94.6	45.3	0.0	64.4	13.2	80.3	60.0	19.1	19.2	96.8	54.9	54.2	
Western Area Rural	Male	0.0	15.1	37.0	0.0	11.1	94.2	100.0	1.6	59.2	90.1	76.3	100.0	38.2	14.3	
	Female	0.0	27.5	0.0	17.7	66.6	0.0	0.0	43.8	4.4	0.0	0.0	0.0	6.9	43.4	
	Both	100.0	57.5	63.0	82.3	22.3	5.8	0.0	54.6	36.4	9.9	23.7	0.0	54.9	42.3	
Western Area Urban	Male	0.0	0.0	0.0	100.0	100.0	20.6	0.0	37.5	76.3	91.8	41.1	0.0	47.1	30.0	
	Female	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	0.8	50.8	28.2	0.0	39.5	
	Both	0.0	100.0	0.0	0.0	0.0	79.4	0.0	62.5	7.8	7.4	8.1	71.8	52.9	30.5	
Urban Slums	Male	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	100.0	100.0	12.5	0.0	0.0	0.0	
	Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.5	0.0	0.0	80.0	
	Both	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	
Rural	Male	24.6	6.0	10.0	4.5	20.7	46.9	65.4	25.5	47.3	81.8	68.4	11.9	21.3	12.6	
	Female	29.1	4.1	6.9	4.5	42.9	2.2	2.4	8.8	9.2	0.4	6.2	2.7	8.1	39.0	
	Both	46.3	89.9	83.1	90.9	36.4	51.0	32.2	65.7	43.5	17.8	25.4	85.5	70.6	48.4	
Urban	Male	50.9	9.5	31.0	40.7	29.6	43.8	79.4	14.3	74.1	89.6	60.6	23.0	54.4	17.3	
	Female	41.6	20.1	10.0	11.5	44.5	5.7	6.3	18.0	9.9	1.0	27.6	15.3	27.3	53.1	
	Both	7.5	70.4	59.1	47.8	25.9	50.5	14.3	67.6	16.1	9.4	11.8	61.7	18.3	29.7	
<b>Average</b>	<b>Male</b>	<b>32.3</b>	<b>6.1</b>	<b>10.8</b>	<b>6.0</b>	<b>24.7</b>	<b>46.4</b>	<b>67.4</b>	<b>25.1</b>	<b>58.1</b>	<b>86.3</b>	<b>64.1</b>	<b>12.3</b>	<b>23.4</b>	<b>15.4</b>	
	<b>Female</b>	<b>32.7</b>	<b>4.5</b>	<b>7.0</b>	<b>4.8</b>	<b>43.6</b>	<b>2.7</b>	<b>3.0</b>	<b>9.1</b>	<b>9.4</b>	<b>0.7</b>	<b>17.9</b>	<b>3.2</b>	<b>9.4</b>	<b>47.4</b>	
	<b>Both</b>	<b>34.9</b>	<b>89.3</b>	<b>82.1</b>	<b>89.1</b>	<b>31.7</b>	<b>50.9</b>	<b>29.6</b>	<b>65.8</b>	<b>32.5</b>	<b>13.0</b>	<b>17.9</b>	<b>84.5</b>	<b>67.2</b>	<b>37.2</b>	

District	Gender	Trading, seller, commercial activity	Remittances/migrating labour	Salaried work (employees, longer-term)	Mining of sand and stone	Aid (Government, local / international)	Gift (family, friends)	Hunting and selling bush meat (i.e. cutting grass)	Gathering and selling of wild food (bush plums, baobab, etc.)	Extraction of palm wine (poyo)	Palm wine selling	Production and sale of vegetables and / or fruits	Begging	Cart puller / push cart	Others
Kailahun	Male	19.3	14.3	83.2	71.3	60.9	15.2	0.0	0.0	71.7	16.8	0.0	13.3	0.0	52.4
	Female	21.2	0.0	8.9	0.0	0.0	45.9	0.0	0.0	14.0	0.0	42.3	29.3	0.0	24.4
	Both	59.5	85.7	7.9	28.7	39.1	38.9	100.0	0.0	14.2	83.2	57.7	57.4	0.0	23.2
Kenema	Male	52.8	39.4	72.7	7.9	0.0	9.5	72.7	4.3	84.9	0.0	6.4	0.0	0.0	44.7
	Female	22.2	30.4	21.6	92.1	0.0	20.7	0.0	26.6	0.0	69.9	44.7	19.9	0.0	19.8
	Both	25.0	30.2	5.7	0.0	100.0	69.8	27.3	69.1	15.1	30.1	48.9	80.1	0.0	35.4
Kono	Male	23.4	69.8	90.6	74.1	0.0	11.1	0.0	0.0	91.4	60.3	12.9	82.4	0.0	53.9
	Female	38.1	0.0	8.7	0.0	0.0	27.8	0.0	100.0	0.0	14.4	26.4	0.0	0.0	29.9
	Both	38.5	30.2	0.7	25.9	100.0	61.1	100.0	0.0	8.6	25.3	60.6	17.6	100.0	16.2
Bombali	Male	18.5	10.7	45.3	100.0	38.1	19.1	0.0	100.0	100.0	46.6	4.3	46.1	0.0	45.9
	Female	32.9	25.9	11.1	0.0	13.3	26.5	0.0	0.0	0.0	24.3	7.9	53.9	0.0	15.8
	Both	48.6	63.4	43.6	0.0	48.6	54.4	0.0	0.0	0.0	29.1	87.7	0.0	0.0	38.3
Kambia	Male	6.6	21.8	77.0	0.0	0.0	8.2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0
	Female	43.0	28.2	20.9	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	2.6
	Both	50.4	50.0	2.1	0.0	0.0	91.8	0.0	0.0	0.0	100.0	0.0	0.0	0.0	78.5
Koinadugu	Male	9.1	0.0	35.5	0.0	0.0	8.6	0.0	0.0	100.0	0.0	0.0	40.0	0.0	34.9
	Female	11.3	22.5	8.2	0.0	0.0	36.4	0.0	0.0	0.0	0.0	0.0	60.0	0.0	15.8
	Both	79.6	77.5	56.3	100.0	100.0	55.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	49.3
Port Loko	Male	15.2	62.1	70.6	45.5	38.6	1.6	46.5	0.0	75.7	0.0	0.0	16.9	0.0	30.0
	Female	29.8	0.0	17.7	0.0	0.0	7.6	0.0	26.9	0.0	0.0	6.1	13.2	0.0	5.7
	Both	55.0	37.9	11.7	54.5	61.4	90.9	53.5	73.1	24.3	100.0	93.9	69.9	100.0	64.4
Tonkolili	Male	7.7	3.3	74.7	0.0	0.0	5.9	100.0	0.0	92.3	55.9	0.0	0.0	0.0	40.3
	Female	10.7	16.5	5.0	0.0	0.0	56.3	0.0	0.0	0.0	12.0	12.1	0.0	0.0	4.9
	Both	81.6	80.2	20.3	100.0	100.0	37.8	0.0	100.0	7.7	32.1	87.9	0.0	0.0	54.8

Bo	Male	30.3	0.0	67.7	39.9	0.0	5.4	0.0	0.0	100.0	49.8	0.0	25.2	0.0	59.1
	Female	28.1	0.0	21.8	6.9	0.0	15.7	0.0	45.9	0.0	0.0	35.6	54.5	0.0	15.5
	Both	41.6	100.0	10.6	53.3	100.0	79.0	100.0	54.1	0.0	50.2	64.4	20.3	0.0	25.4
Bonthe	Male	27.9	0.0	77.4	100.0	52.1	30.7	0.0	100.0	100.0	57.6	11.0	0.0	0.0	76.7
	Female	29.4	0.0	16.5	0.0	0.0	37.3	0.0	0.0	0.0	27.2	5.7	0.0	0.0	6.5
	Both	42.7	100.0	6.1	0.0	47.9	32.1	100.0	0.0	0.0	15.3	83.3	100.0	100.0	16.8
Moyamba	Male	20.1	29.0	74.9	51.6	82.6	21.9	41.6	0.0	63.1	58.3	0.0	77.2	0.0	60.6
	Female	34.8	18.3	11.3	0.0	12.3	8.6	0.0	14.1	0.0	35.2	31.8	0.0	0.0	20.5
	Both	45.1	52.7	13.8	48.4	5.1	69.5	58.4	85.9	36.9	6.5	68.2	22.8	0.0	18.9
Pujehun	Male	30.3	13.1	51.3	65.9	41.3	34.9	0.0	0.0	100.0	100.0	36.7	32.0	0.0	41.7
	Female	35.2	13.2	30.5	0.0	0.0	17.8	0.0	0.0	0.0	0.0	0.0	24.8	0.0	18.9
	Both	34.5	73.8	18.2	34.1	58.7	47.3	100.0	100.0	0.0	0.0	63.3	43.2	0.0	39.4
Western Area Rural	Male	17.8	100.0	62.1	42.5	65.2	20.6	0.0	42.5	100.0	44.8	0.0	78.5	0.0	61.4
	Female	26.8	0.0	13.9	3.4	20.2	29.2	0.0	0.0	0.0	0.0	18.4	0.0	0.0	7.1
	Both	55.4	0.0	24.0	54.2	14.6	50.2	0.0	57.5	0.0	55.2	81.6	21.5	0.0	31.4
Western Area Urban	Male	40.0	36.8	56.7	46.6	87.9	26.1	0.0	100.0	0.0	100.0	0.0	0.0	100.0	77.7
	Female	26.7	36.2	12.7	0.0	12.1	27.5	0.0	0.0	.00	0.0	0.0	0.0	0.0	5.3
	Both	33.3	27.0	30.6	53.4	0.0	46.4	100.0	0.0	0.0	0.0	0.0	100.0	0.0	17.0
Urban Slums	Male	27.3	0.0	86.7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.7
	Female	13.6	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	3.0
	Both	59.1	0.0	0.0	0.0	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	46.3
<b>Average (Rural)</b>	<b>Male</b>	<b>15.1</b>	<b>13.7</b>	<b>68.2</b>	<b>45.2</b>	<b>55.4</b>	<b>17.2</b>	<b>47.3</b>	<b>7.3</b>	<b>87.5</b>	<b>46.3</b>	<b>3.9</b>	<b>38.0</b>	<b>0.0</b>	<b>38.0</b>
	<b>Female</b>	<b>26.5</b>	<b>17.5</b>	<b>13.3</b>	<b>3.2</b>	<b>6.7</b>	<b>21.9</b>	<b>0.0</b>	<b>27.9</b>	<b>1.1</b>	<b>14.7</b>	<b>21.4</b>	<b>25.4</b>	<b>0.0</b>	<b>10.6</b>
	<b>Both</b>	<b>58.4</b>	<b>68.8</b>	<b>18.4</b>	<b>51.6</b>	<b>37.9</b>	<b>60.8</b>	<b>52.7</b>	<b>64.8</b>	<b>11.5</b>	<b>39.0</b>	<b>74.7</b>	<b>36.6</b>	<b>100.0</b>	<b>51.4</b>
<b>Average (Urban)</b>	<b>Male</b>	<b>35.1</b>	<b>41.9</b>	<b>60.0</b>	<b>61.8</b>	<b>33.1</b>	<b>17.2</b>	<b>4.2</b>	<b>36.0</b>	<b>100.0</b>	<b>66.5</b>	<b>2.2</b>	<b>60.7</b>	<b>100.0</b>	<b>64.6</b>
	<b>Female</b>	<b>26.0</b>	<b>26.3</b>	<b>14.5</b>	<b>20.0</b>	<b>11.7</b>	<b>23.4</b>	<b>0.0</b>	<b>20.3</b>	<b>0.0</b>	<b>15.0</b>	<b>52.2</b>	<b>18.3</b>	<b>0.0</b>	<b>12.3</b>
	<b>Both</b>	<b>39.0</b>	<b>31.8</b>	<b>25.4</b>	<b>18.2</b>	<b>55.2</b>	<b>59.4</b>	<b>95.8</b>	<b>43.8</b>	<b>0.0</b>	<b>18.5</b>	<b>45.5</b>	<b>21.0</b>	<b>0.0</b>	<b>23.1</b>

## Annex 12: Number of months rice consumed from own production, by district

Number of months rice consumed from own production, by district (%)													
District	0	1	2	3	4	5	6	7	8	9	10	11	12
Kailahun	2.5	0.2	2.2	4.5	7.2	10.7	23.3	15.1	20.1	6.4	3.9	0.9	3.0
Kenema	0.8	0.8	2.0	10.2	20.3	22.1	20.3	10.7	8.2	2.3	0.8	0.1	1.2
Kono	3.2	2.6	4.6	6.0	10.6	15.2	20.0	13.4	12.7	7.1	2.5	0.3	1.9
Bombali	1.7	1.8	5.2	13.0	17.3	18.6	23.5	8.2	4.4	2.4	2.3	0.2	1.4
Kambia	1.3	0.3	4.0	8.1	16.2	17.0	24.4	9.8	8.8	2.6	5.0	0.2	2.4
Koinadugu	0.7	0.1	0.5	5.5	10.3	10.7	8.9	5.5	9.8	13.1	11.8	4.7	18.5
Port Loko	1.4	1.1	4.4	10.6	14.0	18.2	26.8	12.6	8.1	1.6	0.8	0.0	0.4
Tonkolili	0.7	0.7	3.3	11.6	14.5	19.2	16.5	10.4	12.6	4.5	2.2	0.1	3.8
Bo	0.6	1.2	2.8	6.4	11.9	23.1	26.7	6.4	8.0	5.1	7.0	0.2	0.4
Bonthe	4.2	2.7	9.4	19.7	21.8	14.4	11.1	3.5	7.3	3.4	1.3	0.2	1.0
Moyamba	0.9	1.8	3.5	10.9	15.4	11.7	23.4	9.5	17.4	4.3	0.7	0.0	0.4
Pujehun	0.6	0.5	2.0	23.5	14.7	18.3	26.3	6.7	3.8	1.1	0.3	0.0	2.1
Western Area Rural	0.0	0.0	62.9	20.3	5.6	0.0	5.6	0.0	0.0	0.0	0.0	0.0	5.6
<b>Average (Rural)</b>	<b>1.4</b>	<b>0.9</b>	<b>3.0</b>	<b>9.3</b>	<b>13.9</b>	<b>16.6</b>	<b>20.9</b>	<b>9.6</b>	<b>10.6</b>	<b>5.1</b>	<b>3.9</b>	<b>0.9</b>	<b>4.1</b>

## Annex 13: Number of months household experiences difficulty accessing food, by district

Number of months household experiences difficulty accessing food, by district (%)													
District	0	1	2	3	4	5	6	7	8	9	10	11	12
Kailahun	2.2	7.7	38.3	31.0	14.4	4.5	1.5	0.4	0.1	0.1	0.0	0.0	0.0
Kenema	7.4	20.0	31.9	20.3	4.2	3.4	4.0	2.3	1.2	1.1	1.7	0.8	1.7
Kono	4.6	18.3	33.0	29.9	8.5	3.2	1.7	0.4	0.0	0.2	0.0	0.0	0.1
Bombali	7.0	29.9	29.3	30.0	2.8	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.3
Kambia	2.5	19.2	41.0	30.8	5.0	0.9	0.2	0.0	0.0	0.0	0.1	0.0	0.3
Koinadugu	7.9	26.7	31.3	20.1	10.5	1.6	0.9	0.4	0.2	0.1	0.1	0.1	0.1
Port Loko	0.3	7.8	32.0	31.7	20.8	6.2	0.6	0.6	0.0	0.0	0.0	0.0	0.0
Tonkolili	5.0	16.0	43.1	23.0	6.2	4.2	1.1	0.3	0.2	0.1	0.0	0.0	0.9
Bo	3.0	33.7	30.6	21.7	6.4	2.4	1.1	0.7	0.2	0.1	0.0	0.0	0.1
Bonthe	6.2	18.8	30.7	20.4	13.7	7.7	1.7	0.3	0.1	0.1	0.1	0.1	0.0
Moyamba	14.3	21.9	38.4	17.7	4.1	1.3	0.4	0.1	0.1	0.0	0.0	0.0	1.6
Pujehun	1.6	22.5	37.4	25.3	5.1	3.2	1.9	1.8	0.8	0.1	0.0	0.0	0.3
Western Area Rural	8.4	15.8	15.1	15.3	11.5	8.0	7.1	4.9	3.0	1.8	1.8	1.2	6.2
Western Area Urban	27.0	29.2	21.6	15.2	3.3	1.2	0.9	0.4	0.5	0.4	0.2	0.0	0.1
Urban Slums	1.9	32.3	52.5	12.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Rural</b>	<b>5.4</b>	<b>19.3</b>	<b>34.9</b>	<b>25.3</b>	<b>8.7</b>	<b>3.1</b>	<b>1.4</b>	<b>0.7</b>	<b>0.3</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.5</b>
<b>Urban</b>	<b>16.4</b>	<b>29.2</b>	<b>24.7</b>	<b>17.7</b>	<b>4.0</b>	<b>2.1</b>	<b>1.7</b>	<b>1.1</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.3</b>	<b>0.8</b>
<b>Average</b>	<b>8.5</b>	<b>22.1</b>	<b>32.0</b>	<b>23.1</b>	<b>7.4</b>	<b>2.8</b>	<b>1.5</b>	<b>0.8</b>	<b>0.4</b>	<b>0.3</b>	<b>0.3</b>	<b>0.1</b>	<b>0.6</b>

## Annex 14: Household food diversity scale, by district

Households food diversity scale (%)								
District	Number of food groups eaten							
	1	2	3	4	5	6	7	8
Kailahun	0.0	5.5	24.5	32.9	16.5	12.8	6.7	1.2
Kenema	1.3	17.7	19.1	24.1	18.2	9.0	5.9	4.8
Kono	0.0	10.2	18.9	23.8	21.6	13.1	8.2	4.2
Bombali	2.0	9.8	27.4	31.6	20.0	6.6	2.1	0.5
Kambia	0.0	44.4	21.4	22.5	7.0	3.2	1.3	0.1
Koinadugu	0.0	13.6	24.3	22.2	19.9	12.9	5.7	1.3
Port Loko	0.0	22.9	12.5	23.7	19.1	15.1	4.9	1.8
Tonkolili	0.0	17.6	14.0	43.0	15.0	5.9	2.2	2.3
Bo	0.0	2.7	22.7	17.5	21.2	17.9	11.7	6.2
Bonthe	0.1	20.5	15.6	32.1	13.9	8.7	5.8	3.2
Moyamba	0.0	7.3	36.6	33.8	13.1	5.1	2.5	1.5
Pujehun	0.1	15.4	30.0	22.9	18.2	8.0	3.7	1.6
Western Area Rural	0.2	12.9	14.1	17.8	17.2	18.3	12.2	7.4
Western Area Urban	0.0	0.3	4.0	12.7	23.0	22.7	24.1	13.2
Urban Slums	0.0	0.0	6.4	10.8	24.8	24.8	21.7	11.5
<b>Rural</b>	<b>0.3</b>	<b>15.7</b>	<b>23.8</b>	<b>27.3</b>	<b>17.0</b>	<b>9.3</b>	<b>4.6</b>	<b>2.1</b>
<b>Urban</b>	<b>0.3</b>	<b>3.8</b>	<b>7.6</b>	<b>17.3</b>	<b>21.9</b>	<b>20.7</b>	<b>18.3</b>	<b>10.1</b>
<b>Average</b>	<b>0.3</b>	<b>12.2</b>	<b>19.1</b>	<b>24.4</b>	<b>18.4</b>	<b>12.6</b>	<b>8.5</b>	<b>4.4</b>

## Annex 15: Main shocks experienced by households

Main shocks experienced by households (%)					
Main Shock	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure	Total Food Insecure
High costs of agricultural inputs	0.8	27.8	54.3	17.1	71.4
Lack of household labour	9.2	26.7	54.5	9.5	64.0
Crops damaged by insects, disease, animals	3.3	34.7	51.9	10.1	62.0
Lack of agric. inputs (seeds, fertiliser, etc.)	2.4	40.7	43.5	13.5	57.0
EVD	9.8	36.1	44.4	9.7	54.1
Price fluctuations	10.8	36.1	45.9	7.2	53.1
Fire	3.1	43.9	42.7	10.4	53.1
Drought/irregular rains	7.4	39.5	44.3	8.7	53.0
Theft of crops or livestock	0.4	48.9	42.0	8.6	50.7
Death of other household member	11.2	48.1	33.9	6.7	40.7
Death of a working household member	7.5	43.0	36.4	13.1	49.5
Household member temporarily ill or injured	4.0	47.2	38.8	9.9	48.8
Floods	16.2	37.1	37.9	8.8	46.7
Household member detained or imprisoned	0.0	54.0	40.9	5.1	46.0
Household member chronically ill	11.2	43.9	35.3	9.7	45.0
Theft of money / valuables	12.3	42.9	35.0	9.8	44.8
Political problems	16.6	39.1	35.5	8.8	44.3
Other	14.9	42.2	33.7	9.2	42.9
Lack or loss of employment	19.5	43.0	34.2	3.3	37.5
Severely high level of livestock diseases	0.0	71.6	26.0	2.4	28.4

## Annex 16: Livelihood coping strategies and food security

Livelihood coping strategies and food security (%)				
Coping Strategies	Classification of Food Security			
	Food secure	Marginally food secure	Moderately food insecure	Severely food insecure
Sold household assets / goods	2.1	40.3	40.9	16.7
Reduced non-food expenses on health and education	0.0	40.0	45.0	14.9
Sold productive assets or means of transport	0.0	39.4	42.0	18.6
Spent savings	4.9	41.2	40.9	13.0
Borrowed money / food from a formal lender / bank	1.8	40.9	42.4	14.9
Sold house or land	0.0	27.2	38.4	34.4
Withdrew children from school	0.0	34.4	44.6	21.0
Sold last female animals	0.0	31.0	43.7	25.3
Begging	0.0	35.8	38.3	25.9
Sold more animals	0.8	33.6	45.8	19.9

## Annex 17: Source of loan taken by head of household, by district

Source of loan taken by head of household, by district (%)						
District	Government	International organisations	Local NGOs	Religious based organisation	Relatives/friends	Other (specify)
Kailahun	5.4	51.6	20.6	6.3	14.4	1.7
Kenema	5.7	38.6	7.5	2.0	44.4	1.8
Kono	11.4	46.7	7.0	0.1	31.2	3.6
Bombali	16.6	30.9	14.6	1.6	34.0	2.3
Kambia	7.7	31.8	5.7	2.9	50.0	1.8
Koinadugu	4.8	22.0	0.7	5.2	64.4	2.8
Port Loko	7.3	54.3	6.5	0.0	30.1	1.8
Tonkolili	31.3	19.3	12.8	0.0	34.3	2.3
Bo	2.7	2.3	1.1	0.5	92.3	1.1
Bonthe	0.0	0.0	0.0	0.0	0.0	0.0
Moyamba	3.7	49.9	0.9	1.1	43.2	1.2
Pujehun	6.2	8.5	2.4	1.6	72.4	8.9
Western Area Rural	57.5	25.5	3.4	0.5	12.8	0.3
Western Area Urban	14.6	2.4	2.5	4.7	73.7	2.1
Urban Slums	0.0	0.0	27.7	1.5	70.8	0.0
Rural	11.9	34.4	9.6	3.2	38.7	2.2
Urban	9.0	19.3	6.4	2.8	60.9	1.5
<b>Average</b>	<b>10.8</b>	<b>28.9</b>	<b>8.4</b>	<b>3.1</b>	<b>46.8</b>	<b>1.9</b>

## Annex 18: Agricultural land ownership arrangement, by district

Agricultural land ownership arrangement, by district (%)			
District	Own	Leased	Communal
Kailahun	85.4	7.2	7.4
Kenema	82.4	3.6	14.0
Kono	82.4	7.5	10.2
Bombali	65.9	10.8	23.3
Kambia	70.9	13.7	15.3
Koinadugu	73.6	1.6	24.7
Port Loko	77.8	7.1	15.1
Tonkolili	59.4	10.5	30.2
Bo	72.4	12.2	15.4
Bonthe	77.5	9.8	12.6
Moyamba	52.9	32.9	14.2
Pujehun	87.2	4.1	8.7
Western Area Rural	41.2	18.2	40.6
<b>Average (Rural)</b>	<b>74.4</b>	<b>8.8</b>	<b>16.8</b>

## Annex 19: Participation in farming by gender and age, by district

Participation in farming by gender and age (%)						
District	Male (18 years & above)	Female (18 years & above)	Children (under 18 year-old)	Male (18 years & above)	Female (18 years & above)	Children (under 18 year-old)
	2014-15			2013-14		
Kailahun	33.4	36.0	30.6	33.5	35.8	30.7
Kenema	35.1	37.7	27.2	36.0	37.4	26.5
Kono	38.2	36.1	25.7	37.5	36.9	25.7
Bombali	36.3	38.6	25.1	35.3	38.9	25.8
Kambia	36.5	40.3	23.2	35.7	39.9	24.5
Koinadugu	32.4	36.7	30.9	32.5	36.6	30.9
Port Loko	36.1	39.5	24.4	36.1	39.7	24.2
Tonkolili	35.5	36.9	27.6	34.8	37.0	28.1
Bo	37.3	37.7	25.0	37.7	37.7	24.6
Bonthe	40.4	41.6	18.1	38.9	44.1	17.0
Moyamba	40.1	38.1	21.8	38.5	38.3	23.2
Pujehun	34.9	36.5	28.6	34.0	36.6	29.4
Western Area Rural	41.9	36.1	22.0	37.6	50.2	12.2
<b>Average (Rural)</b>	<b>35.5</b>	<b>37.7</b>	<b>26.8</b>	<b>35.2</b>	<b>37.8</b>	<b>27.0</b>

## Annex 20: Reasons for leaving some agricultural land uncultivated, by district

Reasons for leaving some agricultural land uncultivated (%)											
District	To replenish soil fertility / fallow	Lack or not enough labour in the community	Access to more land than required for annual farming	Lack or not enough tools and equipment	Lack or not enough inputs (seeds, fertiliser, pesticide, etc.)	Lack of marketing opportunity for agricultural products	EVD outbreak	Other	No reason	One reason only	Total
Kailahun	5.6	59.4	4.0	16.2	39.4	23.9	83.1	12.3	2.3	1.5	100.0
Kenema	6.5	51.0	20.4	23.9	42.9	6.4	47.6	5.4	2.8	1.1	100.0
Kono	13.2	43.0	17.0	27.4	46.0	2.8	37.4	24.7	3.7	1.3	100.0
Bombali	4.3	47.6	3.8	18.6	51.4	15.1	87.0	3.8	1.7	2.6	100.0
Kambia	10.3	54.2	7.4	21.1	78.7	10.4	83.8	2.6	1.9	2.8	100.0
Koinadugu	15.6	60.7	16.0	32.1	39.8	13.0	80.9	5.0	1.6	0.5	100.0
Port Loko	16.2	41.1	7.0	21.8	53.1	17.0	62.3	12.6	3.1	1.1	100.0
Tonkolili	8.2	60.3	13.5	23.6	62.9	11.8	49.9	9.1	1.9	1.1	100.0
Bo	4.0	64.0	19.8	23.5	22.1	7.2	34.3	12.2	1.1	0.3	100.0
Bonthe	5.6	47.8	10.0	19.4	59.6	11.8	73.8	9.8	1.7	0.8	100.0
Moyamba	3.6	37.6	6.9	18.1	62.5	7.2	41.8	18.6	4.3	0.3	100.0
Pujehun	13.4	41.1	14.0	29.4	52.4	10.4	75.9	12.4	1.8	0.9	100.0
Western Area Rural	12.0%	50.0	21.8	18.0	53.9	27.8	32.1	20.1	6.0	6.0	100.0
<b>Average (Rural)</b>	<b>9.7</b>	<b>51.4</b>	<b>12.4</b>	<b>24.7</b>	<b>50.5</b>	<b>12.5</b>	<b>67.0</b>	<b>9.8</b>	<b>2.3</b>	<b>1.2</b>	<b>100.0</b>

Annex 21: Factors constraining farming households from increasing production, by district

Factors constraining farming households from increasing production (%)											
District	Lack of seeds	Lack of tools	Lack of fertiliser/pesticide	Lack of household labour	Lack of training/technical advice	Low soil fertility	Pests and diseases	Heavy rains	No marketing opportunities	Lack of cash/money	Lack of land
Kailahun	29.9	16.0	9.7	39.6	4.2	3.9	26.0	12.9	14.5	47.6	2.0
Kenema	37.0	23.9	10.4	30.3	2.6	7.3	41.9	17.4	0.6	31.0	1.3
Kono	42.7	25.4	14.3	25.1	3.6	17.5	29.7	5.0	1.7	36.7	2.4
Bombali	61.3	27.7	17.9	23.1	1.7	13.9	10.9	4.4	7.5	38.9	0.8
Kambia	56.5	22.9	46.8	16.7	2.0	11.5	33.1	3.3	1.4	41.1	1.4
Koinadugu	42.5	42.1	8.0	47.6	1.7	9.3	28.8	7.6	9.4	24.2	0.8
Port Loko	46.0	15.3	56.9	30.2	15.0	22.3	18.3	5.1	1.9	43.9	1.8
Tonkolili	41.4	27.1	21.4	46.4	1.6	21.4	29.4	1.2	1.2	42.2	1.5
Bo	38.5	22.1	12.5	28.0	4.9	9.7	16.9	0.9	6.4	29.8	0.9
Bonthe	47.7	17.2	9.7	22.9	2.4	11.9	32.0	23.8	4.5	51.4	5.6
Moyamba	50.6	10.0	12.5	19.0	1.5	7.1	35.2	2.4	15.9	49.5	1.3
Pujehun	56.4	32.1	6.6	22.1	2.3	13.8	25.5	14.3	5.1	43.5	2.2
Western Rural	55.4	47.0	7.9	22.4	0.0	9.6	0.4	3.0	1.7	51.2	6.7
<b>Average (Rural)</b>	<b>45.5</b>	<b>24.9</b>	<b>19.2</b>	<b>31.5</b>	<b>3.7</b>	<b>12.2</b>	<b>27.3</b>	<b>7.6</b>	<b>6.0</b>	<b>38.8</b>	<b>1.5</b>
District	Late / insufficient rain	EVD outbreak	Household engaged in other activity	Theft of crops	Lack of access to credit	Ill health/sickness	Don't need / want to work	Lack of storage facilities	Other	No reason	Only one reason
Kailahun	0.3	51.2	2.9	2.6	4.2	3.2	0.1	0.5	2.0	7.2	4.0
Kenema	0.5	34.6	2.2	3.6	1.3	1.4	0.2	0.8	3.9	14.1	10.8
Kono	0.8	27.5	3.6	4.0	1.6	3.7	0.4	1.3	8.9	13.6	9.6
Bombali	0.2	43.5	0.9	0.1	3.3	0.7	0.1	5.6	1.7	12.4	4.2
Kambia	0.6	39.3	0.4	0.7	1.8	0.9	0.1	1.8	0.6	4.9	5.8
Koinadugu	0.3	46.1	6.8	0.3	1.7	3.0	0.2	0.7	3.8	4.2	1.1
Port Loko	2.2	17.2	0.7	0.7	1.6	1.1	0.1	0.6	1.5	4.8	4.8
Tonkolili	0.4	38.1	0.7	0.1	2.4	1.5	0.1	0.7	2.0	5.7	5.4
Bo	0.2	37.7	1.8	0.6	2.1	4.6	4.1	1.9	7.1	22.5	3.7
Bonthe	0.2	26.5	2.4	2.3	1.7	1.6	1.4	0.8	2.0	7.2	4.2
Moyamba	0.6	43.1	2.1	0.3	1.8	3.6	0.0	8.6	2.7	11.7	4.7
Pujehun	1.0	36.7	1.3	0.4	1.1	1.5	0.3	0.6	4.0	9.8	1.2
Western Rural	0.0	37.5	4.2	0.0	10.9	5.8	1.2	3.4	0.0	5.0	0.0
<b>Average (Rural)</b>	<b>0.6</b>	<b>37.7</b>	<b>2.3</b>	<b>1.3</b>	<b>2.1</b>	<b>2.3</b>	<b>0.6</b>	<b>1.9</b>	<b>3.0</b>	<b>9.1</b>	<b>4.7</b>

## Annex 22: Tools used in cultivation, by district

Tools used in cultivation (%)					
District	Hand tools	Animal traction	Hand tractor/power tiller	Four wheel tractor	Total
Kailahun	100.0	0.0	0.0	0.0	100.0
Kenema	100.0	0.7	0.0	0.0	100.0
Kono	100.0	1.0	0.3	0.3	100.0
Bombali	99.9	0.0	1.1	0.5	100.0
Kambia	100.0	0.2	0.0	0.0	100.0
Koinadugu	99.6	5.3	0.5	0.0	100.0
Port Loko	99.9	0.0	0.8	0.4	100.0
Tonkolili	100.0	0.0	0.5	0.4	100.0
Bo	100.0	0.0	0.0	0.0	100.0
Bonthe	98.6	0.1	2.3	1.1	100.0
Moyamba	100.0	0.0	0.0	0.1	100.0
Pujehun	99.9	0.0	0.0	0.1	100.0
Western Area Rural	100.0	0.0	0.0	0.0	100.0
<b>Average (Rural)</b>	<b>99.9</b>	<b>0.8</b>	<b>0.4</b>	<b>0.2</b>	<b>100.0</b>

## Annex 23: Storage of harvest in the last agricultural season, by district

Storage of harvest in the last agricultural season, by district (%)									
District	Indoors – in basket / bags	Indoors – open storage	In outside storage hut in boxes	Communal storage	Lockable house / Mini-store	Stack storage	Seed bank	Other	Total
Kailahun	69.8	11.6	2.3	2.8	5.4	0.9	4.9	2.4	100.0
Kenema	66.3	7.0	6.5	2.3	11.1	3.0	1.7	2.2	100.0
Kono	74.8	7.4	2.6	3.2	2.9	3.5	0.9	4.7	100.0
Bombali	80.3	10.4	1.3	4.2	1.2	0.2	0.0	2.3	100.0
Kambia	85.5	9.3	0.6	2.9	0.3	0.8	0.0	0.5	100.0
Koinadugu	80.5	13.6	1.2	0.5	2.1	0.1	0.2	1.8	100.0
Port Loko	80.2	4.0	4.0	1.4	7.7	0.3	0.1	2.4	100.0
Tonkolili	77.7	5.7	2.7	1.8	5.8	3.3	0.5	2.6	100.0
Bo	34.4	25.3	6.0	2.1	15.2	4.2	2.1	10.7	100.0
Bonthe	60.1	6.8	0.5	0.6	3.0	19.1	7.9	2.0	100.0
Moyamba	49.4	18.4	1.6	1.3	7.7	2.1	0.7	18.8	100.0
Pujehun	52.3	6.2	7.9	2.1	4.5	3.8	19.5	3.5	100.0
Western Area Rural	34.8	9.6	0.0	0.0	31.3	2.5	0.0	21.7	100.0
<b>Average (Rural)</b>	<b>69.6</b>	<b>10.7</b>	<b>3.2</b>	<b>2.2</b>	<b>5.7</b>	<b>2.5</b>	<b>2.5</b>	<b>3.5</b>	<b>100.0</b>

## Annex 24: Livelihoods affected by EVD, by district

Livelihoods affected by EVD (%)										
District	Production and sale of food crops	Production and sale of cash crops	Livestock rearing and/or selling	Salt extraction	Fishing	Mining of minerals	Unskilled wage labour – agriculture	Unskilled wage labour – non-agriculture	Skilled wage labour	Handicrafts / artisan
Kailahun	60.1	0.2	7.0	3.0	14.8	2.5	3.0	5.0	3.8	0.6
Kenema	37.6	0.5	2.8	0.8	45.8	3.5	1.5	2.8	4.0	0.6
Kono	39.3	0.1	10.3	0.8	29.6	7.0	0.6	5.4	5.4	1.5
Bombali	73.9	0.4	4.3	0.3	13.9	0.5	0.5	2.2	3.8	0.2
Kambia	71.7	2.6	1.1	1.1	15.8	0.9	0.0	2.7	3.9	0.1
Koinadugu	73.3	0.5	0.8	0.1	21.5	1.9	0.1	1.1	0.6	0.1
Port Loko	42.7	15.5	8.2	1.1	16.8	1.2	0.8	2.7	10.8	0.3
Tonkolili	66.6	0.3	2.2	0.9	25.3	0.5	0.3	1.9	2.1	0.0
Bo	32.7	0.2	34.8	0.7	18.5	1.1	3.2	4.1	4.6	0.1
Bonthe	41.7	22.0	2.3	0.8	26.4	2.3	1.4	0.6	2.2	0.3
Moyamba	72.3	1.1	0.0	0.9	17.9	0.4	0.1	1.6	5.0	0.8
Pujehun	48.6	5.9	11.2	2.2	20.8	1.5	0.9	3.2	4.9	0.7
Western Area Rural	6.5	3.6	19.6	0.4	53.0	6.1	1.6	5.6	2.0	1.4
Western Area Urban	0.1	0.8	11.8	0.1	68.0	4.0	0.1	0.4	14.0	0.7
Urban Slums	0.0	7.4	53.7	0.0	37.0	0.0	0.0	1.9	0.0	0.0
<b>Rural</b>	<b>61.0</b>	<b>3.4</b>	<b>5.8</b>	<b>1.1</b>	<b>18.4</b>	<b>1.5</b>	<b>1.2</b>	<b>3.2</b>	<b>3.9</b>	<b>0.5</b>
<b>Urban</b>	<b>5.9</b>	<b>0.7</b>	<b>17.5</b>	<b>0.4</b>	<b>58.7</b>	<b>5.1</b>	<b>0.5</b>	<b>1.5</b>	<b>9.2</b>	<b>0.5</b>
<b>Average</b>	<b>45.8</b>	<b>2.6</b>	<b>9.0</b>	<b>0.9</b>	<b>29.6</b>	<b>2.5</b>	<b>1.0</b>	<b>2.7</b>	<b>5.4</b>	<b>0.5</b>

## Annex 25: Reasons for dropping out of school after primary level, by district

Reasons for dropping out of school after primary level (%)												
District	No functioning school in this village/ area	No money for school fee / costs	Have to work in the family	Have to work for an income	Parents not interested in school	Children not interested in school	Sickness	Initiation ceremonies	Marriage	School is located in insecure area	No school feeding in the nearest school	Other
Kailahun	5.5	47.2	1.7	4.9	2.8	14.7	15.0	0.0	0.7	0.7	0.0	4.6
Kenema	22.0	55.4	0.0	3.4	1.0	10.9	0.0	0.0	1.0	0.9	0.0	2.8
Kono	7.5	38.6	0.0	6.0	0.0	31.9	7.4	0.0	0.0	0.0	0.0	9.8
Bombali	4.5	32.9	0.0	1.5	4.6	14.0	1.8	0.0	2.2	30.8	0.0	4.8
Kambia	15.4	28.7	4.7	6.6	9.0	12.3	8.5	0.0	0.0	0.0	6.6	8.5
Koinadugu	2.0	47.1	4.5	0.0	2.2	24.2	3.0	0.0	1.0	1.0	0.0	16.0
Port Loko	4.2	45.9	8.0	0.0	6.0	23.4	0.0	0.0	2.0	0.0	0.0	13.1
Tonkolili	10.3	36.0	0.0	0.0	0.0	32.0	5.5	0.0	0.0	0.0	0.0	6.9
Bo	7.1	22.2	0.9	2.0	0.6	20.4	14.5	0.0	0.0	0.0	1.4	17.7
Bonthe	12.8	30.1	4.1	1.5	3.9	18.6	9.6	1.5	0.0	0.0	3.0	9.8
Moyamba	3.0	17.9	0.0	0.0	2.4	46.7	15.0	0.0	2.0	1.1	0.0	0.0
Pujehun	0.0	39.8	11.1	0.0	5.4	21.6	12.0	0.0	3.4	6.7	0.0	0.0
Western Area Rural	0.0	68.3	0.0	6.2	6.2	11.4	8.0	0.0	0.0	0.0	0.0	0.0
Western Area Urban	0.0	37.0	0.0	1.9	0.8	11.6	1.6	0.0	0.0	0.0	0.0	44.0
Urban Slums	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rural	8.7	40.5	2.1	2.5	3.1	19.9	7.7	0.1	1.0	2.5	0.7	8.4
Urban	0.0	35.7	0.0	2.8	0.8	17.2	1.6	0.0	0.0	8.2	0.0	28.2
<b>Total</b>	<b>6.9</b>	<b>39.5</b>	<b>1.7</b>	<b>2.6</b>	<b>2.6</b>	<b>19.3</b>	<b>6.4</b>	<b>0.0</b>	<b>0.8</b>	<b>3.7</b>	<b>0.6</b>	<b>12.5</b>

## Annex 26: Children not enrolled in school

Children not enrolled in school (%)								
District	Male ever gone to school	Male never gone to school	Male gone to school this year	Male not gone to school this year	Female ever gone to school	Female never gone to school	Female gone to school this year	Female not gone to school this year
Kailahun	84.4	15.6	91.3	8.7	88.3	11.7	91.3	8.7
Kenema	84.5	15.5	93.3	6.7	87.2	12.8	94.4	5.6
Kono	84.9	15.1	85.3	14.7	82.9	17.1	86.8	13.2
Bombali	80.9	19.1	95.7	4.3	82.3	17.7	95.6	4.4
Kambia	77.2	22.8	95.1	4.9	72.6	27.4	94.7	5.3
Koinadugu	71.9	28.1	94.9	5.1	70.3	29.7	94.8	5.2
Port Loko	78.8	21.2	91.8	8.2	79.1	20.9	92.6	7.4
Tonkolili	85.4	14.6	96.8	3.2	85.4	14.6	95.8	4.2
Bo	84.6	15.4	88.4	11.6	87.6	12.4	89.9	10.1
Bonthe	66.3	33.7	84.0	16.0	77.7	22.3	84.4	15.6
Moyamba	82.5	17.5	96.6	3.4	84.5	15.5	96.1	3.9
Pujehun	72.4	27.6	96.8	3.2	81.0	19.0	97.0	3.0
Western Area Rural	77.1	22.9	78.5	21.5	78.7	21.3	79.6	20.4
Western Area Urban	91.7	8.3	68.2	31.8	93.9	6.1	66.0	34.0
Urban Slums	97.6	2.4	100.0	0.0	92.9	7.1	100.0	0.0
Rural	78.1	21.9	90.9	9.1	79.5	20.5	91.0	9.0
Urban	93.5	6.5	87.7	12.3	94.0	6.0	87.8	12.2
<b>Average</b>	<b>81.6</b>	<b>18.4</b>	<b>90.1</b>	<b>9.9</b>	<b>83.4</b>	<b>16.6</b>	<b>90.0</b>	<b>10.0</b>

## Annex 27: Reasons for children aged 6-15 years not enrolled in school

Reasons for children aged 6-15 years not enrolled in school (%)												
District	No functioning school in this village / area	No money for school fee / costs	Have to work in the family	Have to work for an income	Parents not interested in school	Children not interested in school	Sickness	Initiation ceremonies	Marriage	School is located in insecure area	No school feeding in the nearest school	EVD fear & other
Kailahun	17.2	37.9	1.4	2.1	5.8	13.0	6.1	0.0	0.2	2.6	0.8	22.5
Kenema	18.0	39.4	1.0	1.4	12.1	12.8	5.5	0.2	0.1	1.0	0.3	18.8
Kono	26.8	36.3	2.2	1.5	5.3	7.8	4.6	0.0	0.2	4.7	0.9	25.0
Bombali	22.0	41.3	1.8	1.3	8.6	13.4	2.7	0.0	1.3	1.8	1.1	12.7
Kambia	22.1	45.7	2.2	1.7	7.7	8.2	7.7	0.7	0.8	3.2	0.4	13.9
Koinadugu	43.8	31.1	2.5	0.9	7.6	9.7	2.4	0.1	0.4	0.7	0.2	7.2
Port Loko	22.0	43.7	2.8	0.9	5.9	10.1	2.8	0.3	0.7	5.5	1.7	16.4
Tonkolili	28.1	44.1	5.0	0.8	1.5	9.6	2.5	0.0	0.7	1.0	0.6	11.0
Bo	11.8	31.8	4.6	0.7	3.0	9.5	3.8	0.0	0.2	0.2	0.3	43.5
Bonthe	21.6	22.1	1.5	2.8	15.9	9.2	2.9	0.0	0.6	1.8	0.9	36.6
Moyamba	26.9	20.4	0.5	0.3	6.2	11.4	4.2	0.0	0.6	1.4	0.7	32.6
Pujehun	29.2	35.0	0.9	0.8	9.3	7.9	4.6	0.0	0.4	2.9	1.3	15.1
Western Area Rural	2.3	56.9	2.9	1.6	3.7	4.9	12.7	1.0	0.6	1.8	2.0	22.1
Western Area Urban	2.8	15.6	0.9	0.1	1.2	1.4	1.5	0.0	0.0	0.7	0.0	80.7
Urban Slums	0.0	0.0	0.0	0.0	57.1	14.3	14.3	0.0	0.0	0.0	0.0	14.3
Rural	24.7	37.3	2.4	1.2	7.2	9.8	4.4	0.2	0.5	2.3	0.8	19.9
Urban	3.8	23.0	0.9	0.5	2.8	5.7	2.9	0.0	0.1	0.6	0.2	63.4
<b>Average</b>	<b>20.9</b>	<b>34.7</b>	<b>2.2</b>	<b>1.1</b>	<b>6.4</b>	<b>9.1</b>	<b>4.1</b>	<b>0.1</b>	<b>0.4</b>	<b>2.0</b>	<b>0.7</b>	<b>27.7</b>

## Annex 28: Food insecurity by chiefdom

District	Chiefdom	Food Insecure	Rank	Level
Port Loko	Marampa	99.5%	1	1
Pujehun	Soro Gbema	97.2%	2	1
Pujehun	Pejeh Futa Peje	96.9%	3	1
Kono	Lei	96.3%	4	1
Port Loko	Koya	96.3%	5	1
Kambia	Mambolo	95.8%	6	1
Kailahun	Kissi Teng	91.5%	7	1
Kono	Soa	90.8%	8	1
Kailahun	Kissi Kama	90.4%	9	1
Kambia	Gbinle Dixing	90.3%	10	1
Moyamba	Bagruwa	89.6%	11	1
Port Loko	Masimera	89.4%	12	1
Kenema	Gaura	88.8%	13	1
Kenema	Gorama Mende	88.7%	14	1
Kambia	Bramaia	88.0%	15	1
Moyamba	Bumpeh	88.0%	16	1
Port Loko	Bureh Kasseh Ma	88.0%	17	1
Kenema	Small Bo	87.9%	18	1
Kailahun	Yawei	87.5%	19	1
Bombali	Gbanti Kamarank	85.9%	20	1
Kailahun	Kissi Tongi	84.1%	21	1
Kenema	Dodo	83.0%	22	1
Tonkolili	Yoni	82.9%	23	1
Kambia	Magbema	81.9%	24	1
Koinadugu	Mongo	80.4%	25	1
Bonthe	Nongoba Bullom	80.0%	26	1
Bombali	Safroko Limba	79.8%	27	1
Kailahun	Upper Bambara	78.8%	28	1
Kono	Mafindor	78.4%	29	1
Kenema	Malegohun	77.5%	30	1
Pujehun	Yakemu Kpukumu	77.2%	31	1
Bombali	Tambakha	77.1%	32	1
Port Loko	Dibia	76.4%	33	1
Pujehun	Sowa	76.0%	34	1
Kono	Kamara	75.8%	35	1
Bo	Lugbu	74.2%	36	1
Kailahun	Luawa	73.1%	37	1
Bo	Gbo	72.3%	38	1
Port Loko	Sanda Magbolont	71.3%	39	1
Bombali	Sella Limba	71.1%	40	1
Tonkolili	Kholifa Rowala	70.6%	41	1
Bombali	Libeisaygahun	70.6%	42	1
Bo	Badjia	70.2%	43	1
Bombali	Gbendembu Ngowa	70.1%	44	1
Bonthe	Kwamebai Krim	69.8%	45	2
Tonkolili	Gbonkolenken	69.8%	46	2
Tonkolili	Kalansogoia	69.1%	47	2
Kailahun	Penguia	69.0%	48	2

District	Chiefdom	Food Insecure	Rank	Level
Kono	Toli	68.9%	49	2
Bonthe	Yawbeko	68.7%	50	2
Tonkolili	Kunike	67.8%	51	2
Kono	Sandor	67.4%	52	2
Tonkolili	Kunike Barina	67.3%	53	2
Pujehun	Panga Kabonde	67.0%	54	2
Kailahun	Dea	66.8%	55	2
Kenema	Kandu Leppiama	66.7%	56	2
Kailahun	Jawie	66.2%	57	2
Bo	Jaiama Bongor	66.2%	58	2
Pujehun	Kpaka	65.9%	59	2
Bo	Wonde	65.8%	60	2
Bombali	Makari Gbanti	65.6%	61	2
Kailahun	Mandu	65.4%	62	2
Pujehun	Makpele	65.0%	63	2
Bonthe	Sittia	64.9%	64	2
Bo	Valunia	64.4%	65	2
Koinadugu	Wara Bafod	63.9%	66	2
Kono	Gbane	63.7%	67	2
Kenema	Niawa	63.4%	68	2
Moyamba	Kongbora	63.3%	69	2
Kono	Tankoro	63.2%	70	2
Kenema	Simbaru	63.0%	71	2
Moyamba	Kori	60.5%	72	2
Bombali	Sanda Tendaran	60.3%	73	2
Moyamba	Kamajei	59.9%	74	3
Kenema	Lower Bambara	59.7%	75	3
Kenema	Dama	59.7%	76	3
Koinadugu	Kasunko	59.4%	77	3
Pujehun	Mono Sakrim	59.4%	78	3
Bo	Bagbo	59.3%	79	3
Koinadugu	Folosaba Dembel	59.0%	80	3
Bombali	Magbaimba Ndorh	58.1%	81	3
Pujehun	Barri	58.1%	82	3
Koinadugu	Neya	57.9%	83	3
Urban slums	Western Area slums	57.3%	84	3
Moyamba	Kowa	57.1%	85	3
Bonthe	Kpanda Kemo	56.9%	86	3
Koinadugu	Sulima	56.7%	87	3
Koinadugu	Nieni	56.2%	88	3
Kenema	Tunkia	56.0%	89	3
Pujehun	Galliness Perri	56.0%	90	3
Port Loko	Buya Romende	56.0%	91	3
Bo	Komboya	55.8%	92	3
Kailahun	Kpeje Bongre	55.6%	93	3
Pujehun	Panga krim	55.3%	94	3
Bo	Bumpe Ngao	55.2%	95	3
Kono	Gorama Kono	54.9%	96	3
Bonthe	Sogbeni	54.9%	97	3
Bonthe	Bum	54.6%	98	3
Moyamba	Timdale	54.4%	99	3

District	Chiefdom	Food Insecure	Rank	Level
Kono	Koidu Town	54.1%	100	3
Kailahun	Malema	53.0%	101	3
Koinadugu	Sengbe	52.3%	102	3
Bonthe	Imperrri	51.8%	103	3
Bombali	Sanda Loko	51.6%	104	3
Pujehun	Malen	51.4%	105	3
Kambia	Masungbala	51.2%	106	3
Moyamba	Upper Banta	51.0%	107	3
Bo	Kakua	50.5%	108	3
Moyamba	Fakunya	50.3%	109	3
Kailahun	Kpeje West	50.2%	110	3
Tonkolili	Malal Mara	50.0%	111	4
Kenema	Langrama	48.8%	112	4
Bombali	Paki Masabong	48.6%	113	4
Kono	Gbane Kandor	48.4%	114	4
Moyamba	Dasse	48.1%	115	4
Tonkolili	Sambaya	47.9%	116	4
Kailahun	Njaluahun	47.3%	117	4
Bonthe	Bendu-Cha	47.0%	118	4
Kambia	Samu	45.6%	119	4
Western Area Rural	Koya Rural	45.4%	120	4
Western Area Rural	Waterloo Rural	44.4%	121	4
Kenema	Wandor	43.6%	122	4
Bo	Boama	43.5%	123	4
Kenema	Nongowa	43.1%	124	4
Moyamba	Kaiyamba	42.6%	125	4
Bo	Selenga	42.5%	126	4
Kono	Gbense	41.6%	127	4
Port Loko	Lokomasama	40.3%	128	4
Koinadugu	Wara Yagal	39.5%	129	5
Bonthe	Dema	38.3%	130	5
Western Area Rural	York Rural	38.1%	131	5
Bombali	Makeni Town	37.4%	132	5
Kenema	Nomo	37.3%	133	5
Bonthe	Jong	35.8%	134	5
Kambia	Tonko Limba	35.6%	135	5
Tonkolili	Kafe Simiria	34.4%	136	5
Kenema	Koya	34.3%	137	5
Bo	Niawa Lenga	34.3%	138	5
Koinadugu	Diang	33.8%	139	5
Kono	Fiama	33.6%	140	5
Bonthe	Bonthe Urban	32.8%	141	5
Port Loko	Kaffu Bullom	31.9%	142	5
Kono	Nimiyama	31.7%	143	5
Moyamba	Kagboro	31.6%	144	5
Western Area Rural	Mountain Rural	31.0%	145	5
Kenema	Kenema Town	30.6%	146	5
Koinadugu	Dembelia - Sink	30.5%	147	5
Kono	Nimikoro	29.3%	148	5
Moyamba	Lower Banta	29.0%	149	5

District	Chiefdom	Food Insecure	Rank	Level
Bombali	Bombali Seborá	28.7%	150	5
Tonkolili	Tane	24.8%	151	5
Bombali	Biriwa	23.5%	152	5
Tonkolili	Kholifa Mabang	23.3%	153	5
Moyamba	Ribbi	22.4%	154	5
Port Loko	Maforki	21.8%	155	5
Bo	Bagbwe(Bagbe)	21.6%	156	5
Bo	Tikonko	19.9%	157	5
Western Area Urban	West I	17.5%	158	5
Port Loko	TMS	17.4%	159	5
Western Area Urban	West III	17.1%	160	5
Western Area Urban	West II	13.0%	161	5
Western Area Urban	Central II	12.6%	162	5
Western Area Urban	East II	11.9%	163	5
Western Area Urban	East III	11.0%	164	5
Western Area Urban	East I	10.7%	165	5
Bo	Bo Town	10.1%	166	5
Western Urban	Central I	5.8%	167	5



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