



# SIERRA LEONE 2015 POPULATION AND HOUSING CENSUS

## THEMATIC REPORT ON POVERTY AND DURABLES

**STATISTICS SIERRA LEONE (SSL)  
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POPULATION AND HOUSING CENSUS**

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# CONTENTS

■ Acknowledgements	V
■ List of tables	viii
■ List of figures	viii
■ Abbreviations	viii
■ Executive Summary	01
■ CHAPTER 1: INTRODUCTION	03
■ 1.1 Background and context	03
■ 1.2 Definition of poverty concept and indicators	04
■ 1.3 Data sources	05
■ CHAPTER 2: METHODS OF ANALYSIS	06
■ 2.1 Introduction and background conceptual arguments	06
■ 2.2 The pre-eminence of multidimensional poverty analysis	06
■ 2.3 Analytical approach adopted and limitation	07
■ 2.4 Limitation of the Global MPI and country specific contexts	10
■ 2.5 Application of the MPI in our analysis	11
■ CHAPTER 3: DESCRIPTIVE ANALYSIS OF THE POVERTY VARIABLES	12
■ 3.1 Introduction	12
■ 3.2 Education: literacy and school attendance	12
■ 3.3 Health: child mortality and immunization	13
■ 3.4 Standard of Living 1: Electricity and cooking fuel	14
■ 3.5 Standard of Living 2: Overcrowding and flooring in dwellings	16
■ 3.6 Standard of Living 3: Sanitation and water	18
■ 3.7 Standard of Living 4: Ownership of durable assets and employment	18
■ CHAPTER 4: MULTIDIMENSIONAL POVERTY INDEX FOR SIERRA LEONE	21
■ 4.1 Introduction	21
■ 4.2 National poverty profile	21
■ 4.3 Rural poverty profile	22
■ 4.4 Urban poverty profile	23
■ 4.5 Regional poverty profile	25
■ 4.6 District poverty profile	



# CONTENTS

■	4.7 Breaking down the Multidimensional Poverty Incidence by socioeconomic characteristics	31
	4.7.1 Education Poverty	31
	4.7.2 Health Poverty	32
	4.7.3 Standard of Living Poverty	33
■	4.8 Comparing 2015 Census MPI with that of 2004 Census	36
■	4.9 Poverty across the age groups	37
■	CHAPTER 5: POLICY IMPLICATION	39
	5.1 Mapping poverty pockets across deprivation indicators	39
	CHAPTER 6: CONCLUSION AND RECOMMENDATION	42
■	Annex 1	43
■	Annex 2	45
■	REFERENCES	47



## LIST OF TABLES

■ Table 2.1 MPI Dimension, Indicators and Weights, 2015 Census	09
■ Table 2.2 Sierra Leone MPI Dimensions, Indicators and Weights, 2015 Census	11
■ Table 3.1 Child Mortality and Immunization, 2015 Census	13
■ Table 3.2 Source of Lighting, 2015 Census	15
■ Table 3.3 Source of Cooking Energy, rural/urban, 2015 Census	16
■ Table 3.4 Household Accommodation, national/rural/urban, 2015 Census	17
■ Table 3.5 Human Waste Disposal, national/urban/rural, 2015 Census	18
■ Table 3.6 Source of Water	18
■ Table 3.7 Ownership of Durable Assets at regional level, 2015 Census	19
■ Table 4.1 MPI, National Level, 2015 Census	21
■ Table 4.2 Contribution to National Deprivation (MPI)	22
■ Table 4.3 Multidimensional Poverty Incidence by rural-urban split	23
■ Table 4.4 Contribution to Deprivation	24
■ Table 4.5 Multidimensional Poverty by region	25
■ Table 4.6 Education Deprivation	31
■ Table 4.7 Child Mortality and Immunization	32
■ Table 4.8 Standard of Living Indicators	34
■ Table 4.9 Comparing 2015 MPI and 2004	36
■ Table 4.10 Child, Youth and Gender Poverty	38
■ Table 5.1 Mapping Poverty Pockets	40



## LIST OF FIGURES

■	Figure 2.1 The traditional UNHDI Dimensions and Indicators	08
■	Figure 2.2 Composition of the OPHI MPI dimensions and indicators	08
■	Figure 3.1 Literacy at national level	12
■	Figure 3.2 Literacy at regional level	13
■	Figure 3.3 Immunization at national level, 2015 Census	14
■	Figure 3.4 Immunization at regional level, 2015 Census	14
■	Figure 3.5 Source of Lighting at regional level, 2015 Census	15
■	Figure 3.6 Household Accommodation, national /rural/urban	17
■	Figure 3.7 Flooring of dwellings, national/rural/urban, 2015 Census	17
■	Figure 4.1 Multidimensional Poverty Indices across Indicators	26
■	Figure 4.2 Contribution to national Multidimensional Poverty Index	27
■	Figure 4.3 Multidimensional District Poverty	28
■	Figure 4.4 Leading Multidimensional Poverty Indicators by District, 2015	29
■	Figure 4.5 Most Contributing Indicators to national MPI by District, 2015	30
■	Figure 4.6 Relationship between Illiteracy and not going to School	32
■	Figure 4.7 Relationship between Child Mortality and Immunization	33
■	Figure 4.8 Relationship between child mortality and poor electricity	34
■	Figure 4.9: Relationship between child mortality and poor cooking fuel	35
■	Figure 4.10: Relationship between child mortality and poor sanitation	35



## LIST OF ABBREVIATIONS

HDI	Human Development Index
MDGs	Millennium Development Goals
MPI	Multidimensional Poverty Index
NPA/BKPS	National Power Authority/Bo Kenema Power Services
OPHI	Oxford Poverty and Human Development Initiative
SLIHS	Sierra Leone Integrated Household Survey
SSL	Statistics Sierra Leone
UNDP	United Nations Development Programme
UNHDR	United Nations Human Development Report
WB	The World Bank



# EXECUTIVE SUMMARY

## Background and Overview

This report seeks to guide public policy on improving lives by presenting an analysis of poverty and durable assets in Sierra Leone today. It determines the current status of deprivations in the country by employing a standard multidimensional poverty analytical approach. The multidimensional poverty index methodology used was developed by the Oxford Poverty and Human Development Initiative. We have estimated the multidimensional poverty index for Sierra Leone based on the following indicators of education, health and standard of living. For education, we use literacy and school attendance indicators; for health, we use child mortality and immunization; and for standard of living, we use access to electricity, cooking fuel, overcrowding in dwelling, flooring, water, sanitation, ownership of key assets and employment indicators.

**7 IN EVERY 10 PERSONS ARE DEPRIVED IN TERMS OF THEIR EDUCATION, HEALTH AND STANDARD OF LIVING.**



**68.3%** multidimensional poverty at national level

**30%** of 1.3 million households live in one room.

## Key Findings

The report finds that close to 7 in every 10 persons living in Sierra Leone are deprived in terms of their education, health and standard of living. The 2015 census data reveals that the current multidimensional poverty at national level is 68.3 per cent. That means the majority of people cannot read and write; are not attending school; are living in households with poor healthcare; don't have access to electricity and decent energy for cooking; live in overcrowded houses with poor construction material and water and sanitation conditions; have poor ownership of durable assets; and suffer from a lack of employment.

This finding compares favourably with the 77.5 per cent (close to 8 in 10 persons) multidimensional poverty index reported by the UN's 2016 Global Human Development Report for Sierra Leone; and 88.2 per cent (close to 9 in 10) based on the 2004 census data.

The rural areas report the highest multiple deprivation poverty of about 8 in every 10 persons, compared to urban areas where the rate is down to 4 and 5 persons in 10.

Regionally, the North is most multidimensionally impoverished, followed by the South, both with rates of between 7 and 8 in 10 persons. Next is the East at close to 7 in 10 persons. The Western region is least impoverished, with about 4 in 10 persons. At district level, Bonthe, Moyamba, Kambia, Koinadugu and Tonkolili Districts are the most (and closely) deprived among the 14 districts of the country, with rates of about 8 in 10 persons. These are closely followed by Port Loko, Pujehun, Bombali and Kono Districts, with rates of about 7 in 10. Between 6 and 7 out of 10 in deprivation are Kenema, Bo and Kailahun Districts. The Western Rural District follows at about 5 in 10, while Western Urban is below 4 in 10. These spatial results underline that poverty in Sierra Leone is largely a rural phenomenon.

The deprivation scores for six of the indicators: literacy, school attendance, child mortality, overcrowding, flooring, and access to water, reveal stark disparities across the 14 districts. The top five most deprived districts on each of these indicators are as follows: leading districts in literacy deprivation are Bonthe, Tonkolili, Moyamba, Koinadugu, and Bombali Districts; those leading in school attendance deprivation are Koinadugu, Bothne, Kambia, Moyamba, and Tonkolili Districts; leading in child mortality are Koinadugu, Kambia, Port Loko, Moyamba, and Tonkolili Districts; Pujehun, Western Urban, Western Rural, Keneman and Bo Districts lead on accommodation deprivation (overcrowding); for deprivation in good flooring material, Koinadugu, Pujehun, Bonthe, Moyamba and Kailahun Districts; and finally, leading districts in water deprivation are Bonthe, Moyamba, Koinadugu, Port Loko and Tonkolili Districts.

In terms of ranking of overall weights (frequency) of seriousness of deprivation, Koinadugu and Moyamba are discovered equally leading the rest of the 14 districts (at a frequency score of nine); followed by Tonkolili and Bonthe Districts (a score of eight); then Kambia, Port Loko and Pujehun Districts (a score of six); then Kailahun, Kenema, Bombali, Bo and Western Rural Districts (a score of five); and Western Urban (a score of four).

## **Key recommendations**

Future targeting of poverty resources should be informed by the relative deprivation of locations revealed in this report. Projects aiming to provide services such as electricity, water, sanitation and housing should give the highest priority to those districts which show the greatest need.

The Government is to be congratulated for exploring various sources of electricity as it is in acute supply across the country and must be scaled up. It is pursuing a power purchase agreement within the Mano River Union and planning for the Bumbuna Phase II among a range of other initiatives. These will be critical steps in substituting for environmentally damaging energy sources for cooking. There is a need to increase the supply of gas as an alternative means of cooking energy, to preserve the environment from excessive charcoal and wood harvesting.

Development programmes and enabling environments should also be scaled up to increase income generation for households and meet demand for basic services including good drinking water and better housing conditions. Literacy programmes, including non-formal schooling, should be strengthened, mindful of the positive knock-on effect this will have on improving other indicators such as generation of good behaviour and attitudes towards sanitary management and the environment in general.

More gainful employment is needed to increase the income capacity of households so that they can acquire basic assets as a store of value and means of enhancing the welfare of other indicators. Women should be more empowered in terms of child healthcare and in access to paid employment, to complement household income and allow them to be more active in household decision-making.

# CHAPTER 1: INTRODUCTION

## 1.1 Background and Context

Poverty analyses became prominent in Sierra Leone after the end of the civil war in 2002. Since then, the Government of Sierra Leone has regularly monitored household welfare within the framework of the country's poverty reduction strategy papers (PRSPs). The PRSPs became the national development plans, starting with the interim PRSP (2001-2004). The first comprehensive PRSP ran from 2005 to 2007, succeeded by the Agenda for Change, PRSP II (2008-2012), and followed by the Agenda for Prosperity, PRSP III (2013-2018), which is currently being implemented.

The first post-conflict 2004 National Housing and Population Census and the 2003/2004 Sierra Leone Integrated Household Survey (SLIHS) were instrumental in informing national poverty reduction programming. Several other pertinent surveys for monitoring welfare of Sierra Leoneans include the Multiple Indicator Cluster Surveys (MICS); the Core Welfare Indicator Questionnaire Survey (CWIQS); and the Demographic and Health Survey (DHS). The Government's leading statistical agency, Statistics Sierra Leone, conducts and helps coordinate much more sector specific surveys, and emergency related impact assessments, such as the high frequency and mobile survey undertaken with the World Bank to inform the preparation of the National Post Ebola Recovery Strategy.

Traditionally, the income/expenditure approach has been the major yardstick for measuring and determining levels and distribution of poverty in Sierra Leone, as it has across the world. Thus, in Sierra Leone, SLIHS has been the leading source of comprehensive reporting of government performance in reducing national and sub-national poverty. This survey is well configured to capture every income/expenditure implication of socioeconomic activities carried out by households in a twelve-month cycle. From the income/expenditure approach, poverty in Sierra Leone had reduced from 66.37 per cent in

2003/04, to about 53 per cent in 2011. The next SLIHS will determine current levels of poverty from this (income) approach.

Recently, however, viewing poverty from a multidimensional perspective has started to be seen as a more appropriate and exhaustive way to assess its effects and manifestations. It is argued that the qualitative welfare status of individuals and households in terms of levels of acquisition of education, access to good healthcare, their nutritional situation, water and sanitation condition, participation in decision making, to mention but a few, have been viewed as much more fundamental to determining poverty, in aggregate. Expenditure and income approach is certainly crucial in determining poverty but is far from adequate. As a result, some efforts were made to estimate a non-monetary poverty index, including attempts at constructing a multidimensional poverty index in Sierra Leone.<sup>1</sup>

The new national Population and Housing Census (2015) has now been completed and allowed a compilation of thematic and comprehensive reports. This report on poverty and durables helps to determine the current welfare status of the country and allows a comparison with the 2004 Census to discover whether multiple deprivations have been reduced across the country.

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<sup>1</sup> See Winnebah, A.R.F, et. al., 2006; Government of Sierra Leone's 2004 Population and Housing Census Analytical Report on Poverty.

## 1.2 Definition of Poverty Concept and Indicators

Poverty is a broad development concept which manifests itself in different forms. From an income/expenditure perspective, a person is deemed poor if he or she does not have sufficient access to economic resources to "...acquire enough commodities to meet basic material needs adequately" (Lipton 1997, p.127). From a basic needs approach, a person is perceived poor if he/she cannot acquire minimum basic needs such as food, clothing, shelter, water and sanitation, necessary to prevent ill health, undernourishment and the like (Bangura 2015; Shaffer 2008).

Fighting poverty falls within a broad human rights campaign, from which perspective "poverty can be described as the denial of a person's rights to a range of basic capabilities—such as the capability to be adequately nourished, to live in good health, and to take part in decision-making processes and in the social and cultural life of the community...a person living in poverty is one for whom a number of human rights remain unfulfilled—such as the rights to food, health, political participation and so on." <sup>2</sup> According to the United Nations Economic and Social Council, poverty is "a human condition characterised by sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights" (United Nations Economic & Social Council, 2001). These definitions give credence to the contemporary emphasis on the need to prioritise a multidimensional analytical approach to assessing poverty, as endorsed by 118 heads of state and government in Copenhagen (United Nations 1995).

In view of these multidimensional dimensions to human welfare, fundamental adjustments have been made to the reporting of the United Nations Human Development Index (HDI) published in its annual Global Human Development Report for each member state. As such, our report employs a multidimensional approach

to analysing the current levels of poverty in Sierra Leone, the detailed method of which is discussed in the next section. In summary, we look at three broad multidimensional poverty dimensions popularised in the literature, which are: education, health and standard of living <sup>3</sup>. These are applied in the context of Sierra Leone, and have been broken down into the following key indicators and their definitions.

### Education dimension

- **Literacy rate:** The percentage of the population aged 10 years and above that are literate (can read and write) in any language. The languages captured in the 2015 Census are English, French, Arabic and local languages.
- **School attendance:** The percentage of the population aged 3 years and above that have attended school.

### Health dimension

- **Child mortality:** The proportion of children that have died before the age of 5 years in all households.
- **Immunization:** The proportion of children aged less than 5 years that have been partially or fully immunized.

### Standards of living

- **Access to electricity:** The proportion of the population with access to electricity for lighting purposes and other uses, as opposed to those without.
- **Decent cooking fuel:** The proportion of the population with access to energy sources of cooking that are deemed environmentally friendly. These include electricity, gas or kerosene, as opposed to wood, charcoal and others.
- **Dwelling overcrowding:** The proportion of households with three or more people per room.

<sup>2</sup> Cited in Bangura (2015, p.31)

<sup>3</sup> Alkire, S., et. al., 2016. The Global Multidimensional Poverty Index (MPI): 5-Year Methodology Note; OPHI Briefing 37.



- **Flooring:** Proportion of households for which flooring material is earth, sand or dung, as opposed to better material such as concrete.
- **Sanitation situation:** Proportion of households with no access to improved sanitation facilities such as flush toilet or improved means of disposing refuse material, as opposed to those who do have access to these facilities.
- **Water situation:** Proportion of households that do not have access to safe drinking water within a 30-minute round trip.
- **Access to durable assets:** Proportion of households that possess at least one designated durable asset, such as electric iron, charcoal iron, generator, refrigerator/freezer, television, computer, radio, mobile phone, modern stove, own bed, own sofa, bicycle, motorcycle, car, truck or boat.
- **Employment:** Proportion of households where at least one member is gainfully employed in wage or self-employment activities.

### 1.3 Data sources

Data is mainly derived from the Sierra Leone 2015 Population and Housing Census and 2004 Population and Housing Census. Use is made of the various modules in these censuses, including population characteristics, education, health related, housing, durable asset and employment. The 2004 Census data is analysed to determine changes in poverty over time. The literature is widely reviewed, including national development strategies and reports of past census and surveys.

# CHAPTER 2: METHODS OF ANALYSIS

## 2.1 Introduction and Background Conceptual Arguments

We follow a multidimensional analysis of the poverty situation in Sierra Leone. This is to overcome the shortcoming of the traditional money metric approach to analysing poverty. The money metric (income/expenditure) method had predominated poverty research and policy in the last six or more decades based on the physiological thinking of deprivations.<sup>4</sup>

Household income and consumption were the main focus of these models, including aspects of the basic needs approach (Roder 2009; Shaffer 2008; World Bank 2005). A key feature of these models is the specification of poverty lines as benchmarks against which quality of life is measured and individuals (or households) are categorized as poor or non-poor, based on an estimated minimum basic needs requirement. One of the methods for deriving poverty lines is the food-energy intake (FEI) method. The FEI is the monetary valuation of a set of specified food needs that meet pre-determined average food energy requirements. It is expressed in kilo calories or joules as a unit of measurement. An aggregate (the absolute) poverty line is obtained by summing up the food energy requirement and expenditures on non-food needs such as health, goods and services, nutritional needs, education, water, sanitation, and so on. The traditional aggregate indices derived from this application are the headcount Foster-Greer-Thorbecke poverty estimators reduced to absolute poverty index, poverty gap index, extreme poverty index and others.

However, there are serious drawbacks that are associated with money metric (income/expenditure) approach. These drawbacks include the following:

- The predominance of informal economic activities in the developing world make estimates on actual household incomes difficult to obtain due to poor records

management.

- Household consumption expenditure analysis, instead of income, (as recommended by Deaton & Zaidi 2002), can be fraught with memory recall errors, hiding the true economic status of households.
- Where surveys are dominated by farmers, recognized as being good record keepers on annual goods production, (Sirven 2006), there is still an issue with correctly recalling the amount of goods and services consumed each day.
- The use of food energy intake in determining poverty lines has a problem. In estimating the minimum caloric requirement of individuals in the process, there is the serious task of differentiating the needs of children and adults in the households, which may differ. Furthermore, calorie requirement in this method more or less arbitrarily determines the desirable energy requirement for an individual, with the assumption that there is "standard (time-invariant) metabolic rates, weights, and heights for particular age and sex categories," which is not the case (Johnston & Sender 2008; p.60). That is, calorie requirements may be sensitive to activity levels, weight and time. An effort to mitigate the shortcoming of this, however, is the application of per adult equivalence.

## 2.2 The Pre-eminence of Multidimensional Poverty Analysis

To complement and overcome the money metric or income/expenditure method, nonfinancial methods have been utilised such as multidimensional poverty analysis. Asset analysis is one of those complementary, and arguably superior, poverty analytical approaches within multidimensional frameworks. Asset is multifaceted, and operationally includes not only "private productive and financial wealth," but also includes "social, geographic and market access positions that confer economic advantage" (Carter & Barrett 2008, p.13).

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<sup>4</sup> Bangura (2015), among others.



In multidimensional analysis, generally, several components of deprivation are compounded to explain poverty on the basis that, “when poverty is conceptualised as the occurrence of various cumulative deprivations, it should be measured through the “aggregation” of the different hardship factors experienced by the individuals” (Coromaldi & Zoli 2007, p.4). Indeed, instead of income, others have separately analysed poverty measures such as education, health, and nutrition indicators, perceived to be more appropriate in understanding long-period trends in deprivation than income indices (Mosley et al. 2008; Sahn & Stifel 2003; among others).

The global recognition of multidimensional poverty came to a head with its introduction in the presentation of UN Global HDI in its 2010 report. In this report, in addition to presenting the traditional HDI, a parallel calculation and presentation of the Multidimensional Poverty Index (MPI) was undertaken to better appreciate UN member countries’ development contexts. We now turn to details of the MPI methodology, as adopted to fit this report for Sierra Leone using the 2015 Census data.

### **2.3 Analytical approach adopted and limitation**

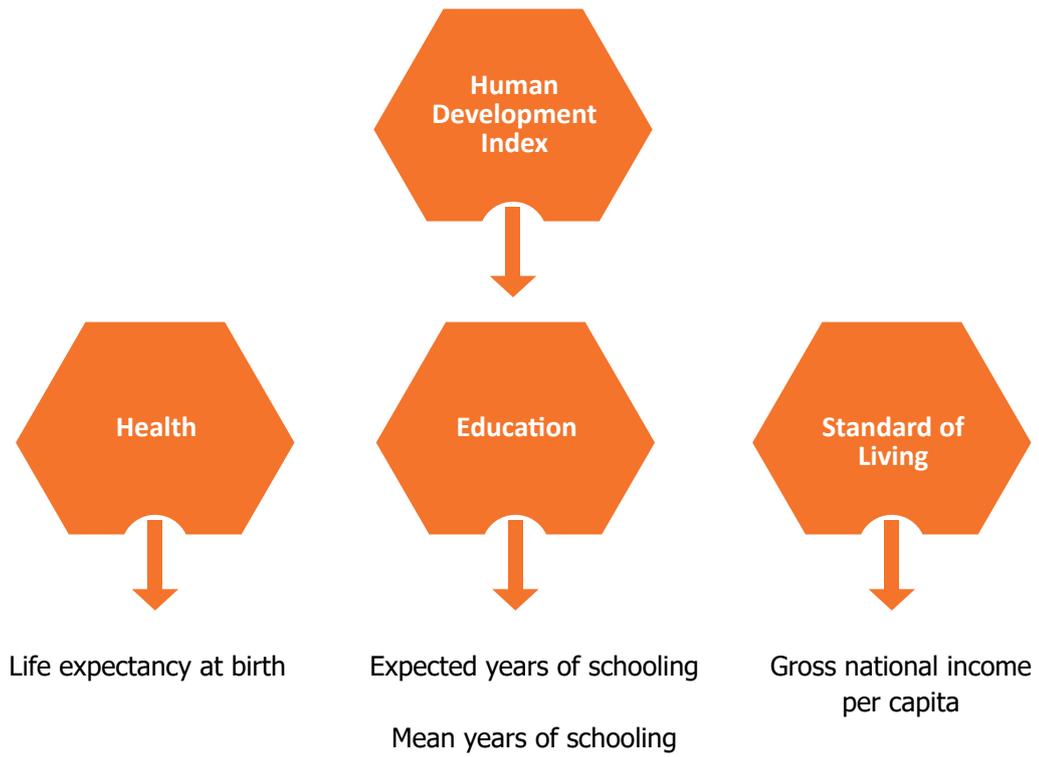
The multidimensional poverty index used for our analysis builds on the three broad dimensions of the UN’s HDI: health, education and standard of

living. Four indicators make up these dimensions (see figure 1). Health status is measured by life expectancy at birth; education by expected years of schooling and mean years of schooling; and living standard by gross national income per capita.

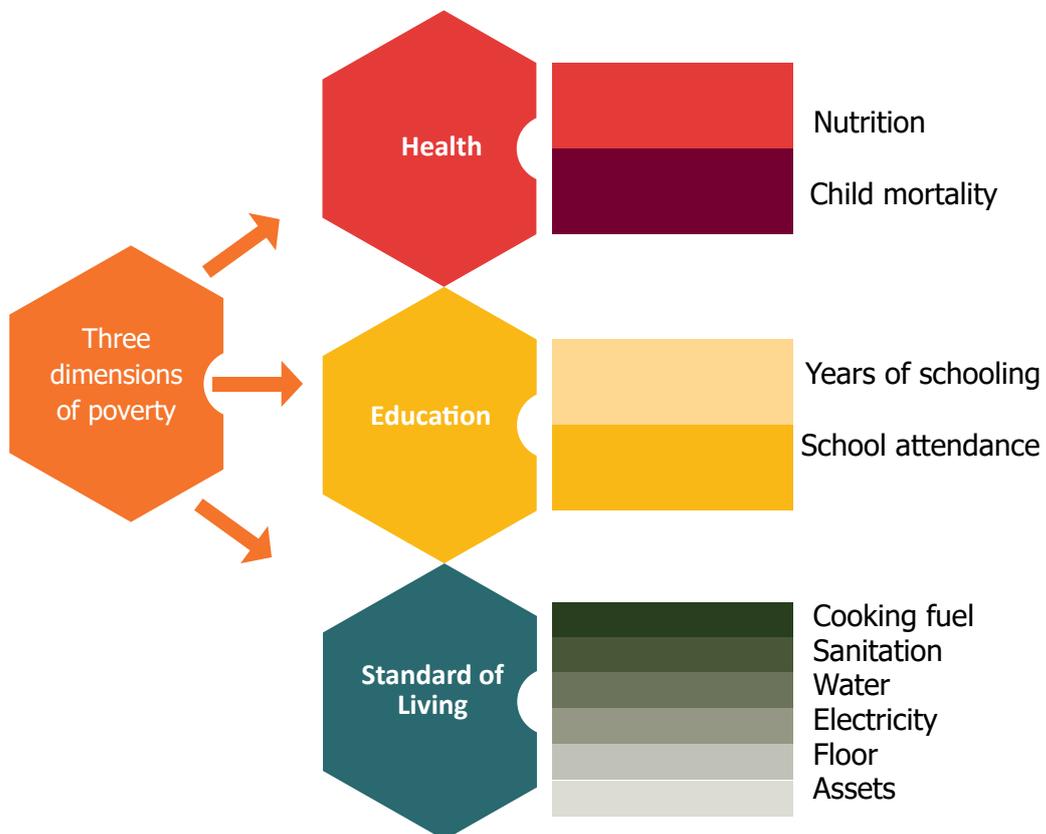
When this system of measuring human development was challenged as inadequate, efforts were mounted to complement and modify it. Experts at the Oxford Poverty and Human Development Initiative (OPHI) at the University of Oxford were leading proponents in the expansion of the HDI into the MPI measurement of poverty and human development. They work in close collaboration with the United Nations Development Programme (UNDP)’s Human Development Report Office.

The OPHI method has been mostly based on household level information derived from comprehensive national surveys and censuses. They expand the traditional HDI dimensions into ten indicators (Figure 2). The OPHI health dimension has two indicators: household nutritional status and child mortality; the educational dimension retains its two indicators but with some modification: years of schooling and school attendance; while standard of living is broadly expanded into six indicators: type of cooking fuel, sanitary condition, water supply situation, supply of electricity, material used for construction of floors in dwellings, and acquisition of durable assets.

**Figure 2.1 The traditional UN HDI dimensions and indicators**



**Figure 2.2 Composition of the OPHI MPI dimensions and indicators**



The MPI is derived from weighted indicator-based system as summarised in Table 2.1. The three dimensions—health, education and standard of living—are equally weighted with a one-third share each. The weight carried by each indicator in the OPHI system depends on the number of indicators within the three dimensions. Since health and education have two indicators each, those indicators have a weight of 1/6 each. And since standard of living has six indicators, each indicator has a weight of 1/18.

Table 2.1 shows how a household or household member is judged poor or not. For instance, for years of schooling, a household and its members are considered deprived or poor if no household member aged 10 years and above has completed five years of schooling; for child mortality, one is considered deprived or poor if any child has died in the household. In data processing and computer application, those cases determined as deprived or poor are assigned a value of one, those not, a zero.

The MPI captures both the incidence or headcount ratio (H), which is the proportion of the population that is multidimensionally poor, and the average intensity (A) of their poverty, measured by the average proportion of indicators in which poor people are deprived. Given three dimensions and ten indicators, a cut-off point for determining the incidence of poverty is 0.3333 (33.33 per cent of the weighted scale from 0 to 1). Individuals whose weighted scores across the three dimensions and ten indicators are 0.3333 and above, are poor; while those below are not poor. The summary multidimensional poverty index (M0) is calculated as (HxA).

The statistical software commonly used for the estimation of the MPI and its sub-components is the STATA package, which has been extensively updated to undertake this modelling.



Table 2.1 MPI dimensions, indicators, cut-off point and weights

Dimension	Indicator	Deprived if...	Related to...	Relative Weight
Education	Years of Schooling	No household member aged 10 years has completed five years of schooling.	MDG2	1/6
	Child School Attendance	Any school-aged child is not attending school up to the age they'd finished class 8	MDG2	1/6
Health	Child Mortality	Any child has died in the household	MDG4	1/6
	Nutrition	Any adult under 70 years of age or any child for whom there is nutritional information is malnourished	MDG1	1/6

Dimension	Indicator	Deprived if...	Related to...	Relative Weight
Living Standard	Electricity	The household has no electricity	MDG7	1/18
	Sanitation	The household sanitation facility is not improved (according to MDG guideline), or improved but shared with other households	MDG7	1/18
	Safe Drinking Water	The household does not have access to safe drinking water (according to MDG guidelines), or safe drinking water is at least a 30-minute walk from home round-trip	MDG7	1/18
	Flooring	The household has a dirt, sand, dung or other (unspecified) type of floor	MDG7	1/18
	Cooking Fuel	The household cooks with dung, wood, charcoal or other solid fuels	MDG7	1/18
	Assets Ownership	The household does not own more one radio, TV, telephone, bike, motorbike or refrigerator and does not own a car or truck	MDG7	1/18

Source: Statistics Sierra Leone, 2015 Population and Housing Census

This framework is developed and standardized to enable international MPI comparison, reporting each UN member country's MPI relative to the other, based largely on household level information. Based on this multidimensional poverty framework, the UN Human Development Report of 2016 records Sierra Leone as 77.5 per cent poor multidimensionally (close to 8 in 10 persons in multiple poverty), against 52.9 per cent (a little more than 5 in 10) income poverty headcount for 2011 and 66.4 per cent (about 7 in 10) income poverty for 2003/04. This suggests that an income/expenditure analysis taken in isolation can seriously misrepresent a country's welfare status.

## 2.4 Limitation of the Global MPI and Country Specific Contexts

While the global MPI has several advantages over the income/expenditure approach, it does not take into consideration country specific contexts. Its application at country level requires enormous contextualization and it may not always be possible to estimate all the indicators specified under its framework.

Therefore, different countries have tweaked the indicators to reflect their contexts, adopting some of the global indicators but also introducing new ones.<sup>5</sup> For example, the Government of Pakistan, in collaboration with the UNDP and OPHI, used fifteen indicators to measure the three standard dimensions on a 2014/2015 data set. The education dimension had three indicators: years of schooling, child school attendance and schooling quality; the health dimension had four: access to health facilities, immunization, ante-natal care, and assisted deliveries; the standard of living dimension had eight: water, sanitation, walls, overcrowding, electricity, cooking fuel, assets and land and livestock. Consequently, the Pakistan model involved different indicator weights from the standard OPHI weights.

<sup>5</sup> See, for instance, the Government of Pakistan Multidimensional Poverty Report (2015): [file:///C:/Users/CPM&E%201/Documents/SSL/MPI\\_Latest/MPI/Other%20countries/Multidimensional-Poverty-in-Pakistan.pdf](file:///C:/Users/CPM&E%201/Documents/SSL/MPI_Latest/MPI/Other%20countries/Multidimensional-Poverty-in-Pakistan.pdf).

## 2.5 Application of the MPI in our Analysis

To fit the Sierra Leone context, the OPHI multidimensional poverty analytical method to estimate MPI for Sierra Leone was adapted at national, regional, rural/urban and district levels. The three standard poverty dimensions remain: health, education and standard of living. However, twelve indicators represent these dimensions (see Table 2.2).

Education has two indicators: literacy and school attendance; health also has two: child mortality and immunization; and standard of living has eight indicators: electricity, cooking fuel, overcrowding, flooring, sanitation, water, durable assets, and employment. The relevant weights are presented in the table, with the cut-off poverty point (threshold) for determining deprived and non-deprived household being 0.3333 as applied by OPHI, Pakistan and others. Indicators are programmed such that household cases deemed deprived or poor are assigned a value of one; those not, zero.

The STATA statistical software is used to carry out the analysis, presenting MPI values at both national, sub-national levels and decomposed indicator analytical level.



Table 2.2 Sierra Leone MPI dimensions, indicators and weights, 2015 census

Dimension	Dimension	Indicator	Indicator	Deprived if:
Education	1/3	Literacy	1/6	No household member can read or write
		School attendance	1/6	At least one school-age household member did not attend school this year
Health	1/3	Immunization	1/6	The household has never had a child immunized
		Child mortality	1/6	At least one child has died in the household
Living Standards	1/3	Electricity	1/24	No household has access to electricity
		Cooking fuel	1/24	The household uses charcoal, fuel-wood, dung, crop residue, saw dust, other
		Overcrowding	1/24	Household contains 3 or more people per room
		Flooring	1/24	Household flooring material is earth, sand or dung
		Improved sanitation	1/24	Household does not have access to improved sanitation facilities
		Drinking water	1/24	No access to safe drinking water within a 30 minute round trip
		Assets	1/24	Household does not have more than one asset among electric iron, charcoal iron, generator, refrigerator/freezer, television, computer, radio, mobile phone, modern stove, own bed, own sofa, bicycle, motorcycle, car, truck and boat.
		Unemployment	1/24	At least one person in household is unemployed

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

# CHAPTER 3: DESCRIPTIVE ANALYSIS OF THE POVERTY VARIABLES

## 3.1 Introduction

The analysis of results is divided into two sections. This section presents a descriptive analysis of the poverty variables (indicators) used in the multidimensional poverty calculation. It enables an understanding of the basic characteristics of the variables used for an in-depth poverty analysis and provides an initial general impression of the level of deprivation of basic services in the country.

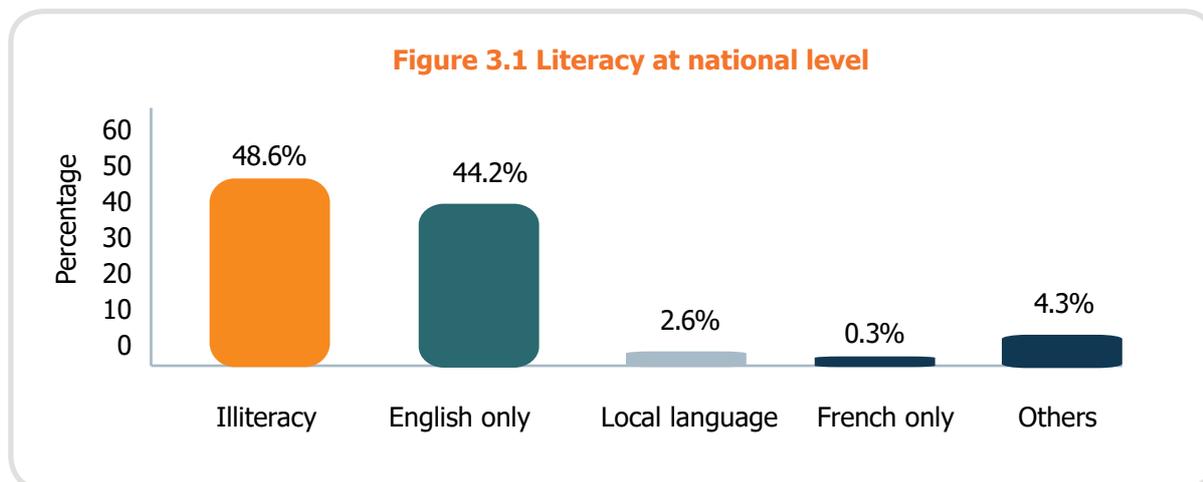
## 3.2 Education: Literacy and School Attendance

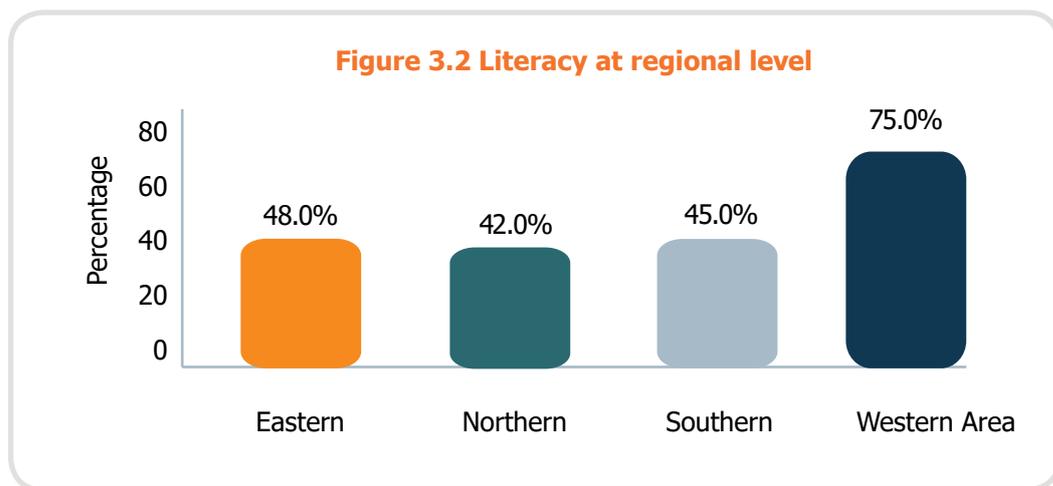
Nearly half (about 49 per cent) of the population aged 10 years and above are literate in any language, including English, French, and local languages such as Temne, Mende and Krio

(figure 3.1). About 44.2 per cent are literate in English Language; 2.6 per cent are literate in a local language, 0.3 per cent are literate in French, and about 4.3 per cent are literate in other languages including Arabic. Regionally (see Figure 3.2), illiteracy is highest in the Northern Region at a rate of 57.8 per cent, closely followed by the Southern and Eastern Regions scored at rates of 54.8 and 52.5 per cent, respectively. The Western Area, home to the capital Freetown, has the lowest illiteracy level at 25.5 per cent. – perhaps not surprising as the capital has better social services than the mostly rural provinces.

The 2015 Census further reveals that out of the 6,589,838 people aged 3 years and above, 55.4 per cent have attended school, versus 44.2 per cent who have never attended school. <sup>6</sup>

<sup>6</sup> Statistics Sierra Leone, 2016; 2015 Population and Housing Census: Summary of Final Results/Planning a Better Future, p.17: file:///C:/Users/CPM&E%201/Documents/MEST/Update/final-results\_-2015\_population\_and\_housing\_census.pdf.





### 3.3 Health: Child Mortality and Immunization

More than 46 per cent in the country belong to a household where at least one child (aged 0-5 years) has died before (Table 3.1). Regionally, this measure of healthcare deprivation is more pronounced in the North and South, where a rate of between 51.1 and 49.7 per cent is recorded, followed by the East at 43.9 per cent, and the West at 38.5 per cent, but the disparity is generally small.

Immunization at national level (Figure 3.3) shows tremendous efforts by the government. Out of 1,180,795 children aged 0-5 years, about 92.6 per cent have been fully or partially immunized and this high percentage can be seen across all regions (Figure 3.4).

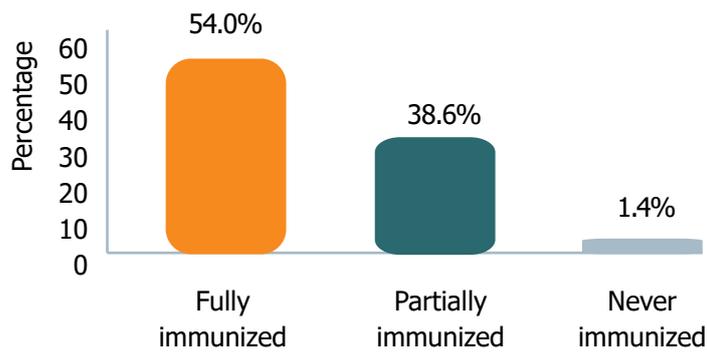


**Table 3.1 Child mortality and immunization, 2015 Census**

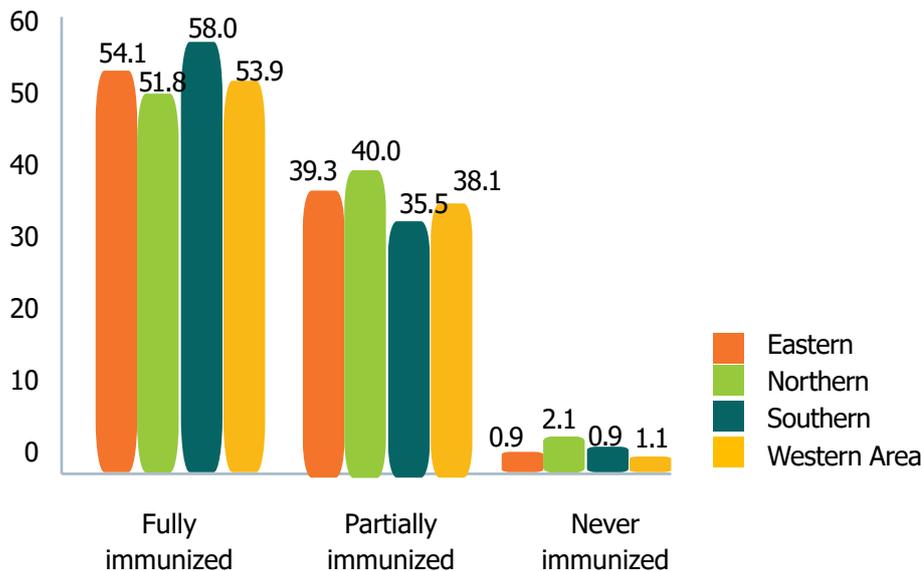
Regions	Total Valid Population	Population belonging to households where no child has died before		Population belonging to households where at least one child has died before	
		Obs	%	Obs	%
East	1,482,431	832,097	56.1	650,334	43.9
North	2,293,678	1,122,578	48.9	1,171,100	51.1
South	1,310,796	659,527	50.3	651,269	49.7
West	1,253,318	770,386	61.5	482,932	38.5
Total	6,340,223	3,384,588	53.4	2,955,635	46.6

Source: Statistics Sierra Leone, 2015 Population and Housing Census

**Figure 3.3 Immunization at national level, 2015 Census**



**Figure 3.4 Immunization at regional level, 2015 Census**



### 3.4 Standard of Living 1: Electricity and cooking fuel

More than three-quarters of households use battery or rechargeable light as the main source of lighting in their homes (Table 3.2). In contrast, less than 20 per cent use electricity from a power station and less than 6 per cent use other sources - wood, kerosene, generator, solar, gas and candle and others. There is a similar picture across the East, North and Southern regions but in the Western Area (Table 3.5), more than half households use electricity from a power station to power their homes, with battery use falling to just less than a half and other sources remaining low at about 5 per cent.



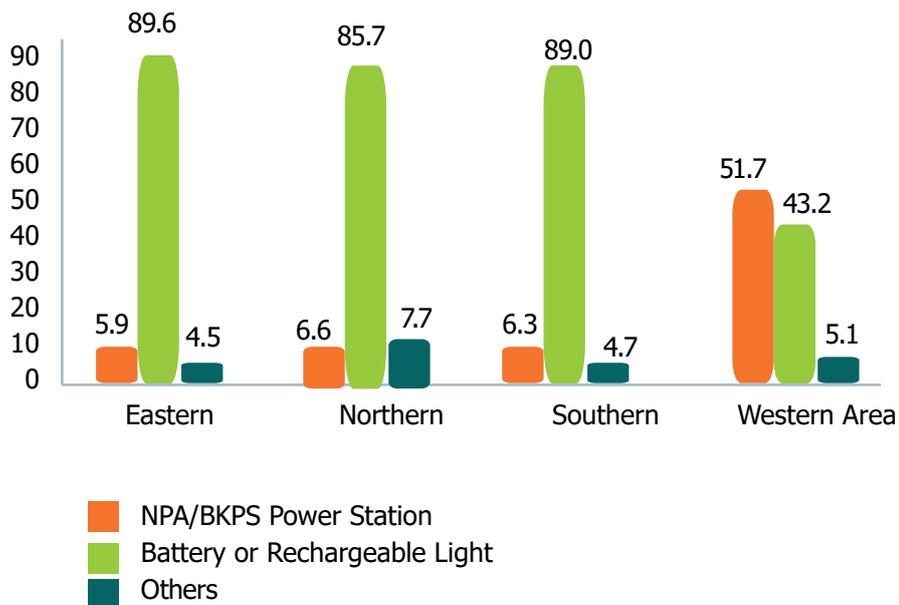
**Table 3.2 Source of lighting, Census 2015**

Source	Obs	%
NPA/BKPS Power Station	225,551	17.82
Gas	2,814	0.22
Kerosene	15,121	1.19
Generator	11,413	0.9
Battery or Rechargeable Light	967,298	76.44
Candle	2,466	0.19
Wood	20,096	1.59
Solar	10,090	0.8
Other	10,619	0.84
<b>Total</b>	<b>1,265,468</b>	<b>100</b>

Source: Statistics Sierra Leone, 2015 Population and Housing Census



**Figure 3.5 Source of lighting at regional level, 2015 Census**



Wood and charcoal are the most predominant sources of cooking energy in Sierra Leone (Table 3.3). Wood is used by the vast majority of rural households whilst charcoal is more popular in urban areas. Other sources of cooking energy are negligible across the country. The negative environmental implications of the extensive use of wood and charcoal cannot be overemphasized in terms of deforestation, global warming and related hazards.



**Table 3.3 Source of cooking energy, rural/urban, 2015 Census**

Source	Rural	Urban
Electricity	0.03	1.1
Gas	0.14	1.68
Kerosene	0.39	1.06
Charcoal	3.05	67.92
Wood	95.74	26.45
Crop Residue	0.17	0.08
Saw Dust	0.16	0.09
Solar	0.13	0.12
Animal Waste	0.05	0.04
Other	0.14	1.46
Total	100	100

Source: Statistics Sierra Leone, 2015 Population and Housing Census

### 3.5 Standard of Living 2: Overcrowding and flooring in dwellings

The Census shows a disturbingly high incidence of overcrowding in Sierra Leone's homes. Almost 30 per cent of 1.3 million households live in one room, representing a high exposure to transmission of diseases. Close to 26 per cent live in two rooms - all irrespective of the size of the household. The incidence of overcrowding is higher in urban areas where the relatively high cost of services prohibits a lot of households from acquiring standard housing accommodation and facilities. Low income levels in urban areas lead to nearly 4 in 10 households sharing just one room.

The majority of rural households use mud for flooring although nationally mud and cement are almost equally popular. Urban households favour tiled floors (Figure 3.7).





Table 3.4 Household accommodation, national/rural/urban, 2015 Census

	National	Rural	Urban
1 Room	29.2	22.5	37.5
2 Rooms	25.7	25.0	26.5
3 Rooms	18.2	20.4	15.5
4 Rooms	12.8	15.0	10.0
5-9 Rooms	13.6	16.6	9.8
10 & Above	0.6	0.5	0.7

Source: Statistics Sierra Leone, 2015 Population and Housing Census

Figure 3.6 Household accommodation, national/rural/urban, 2015 Census

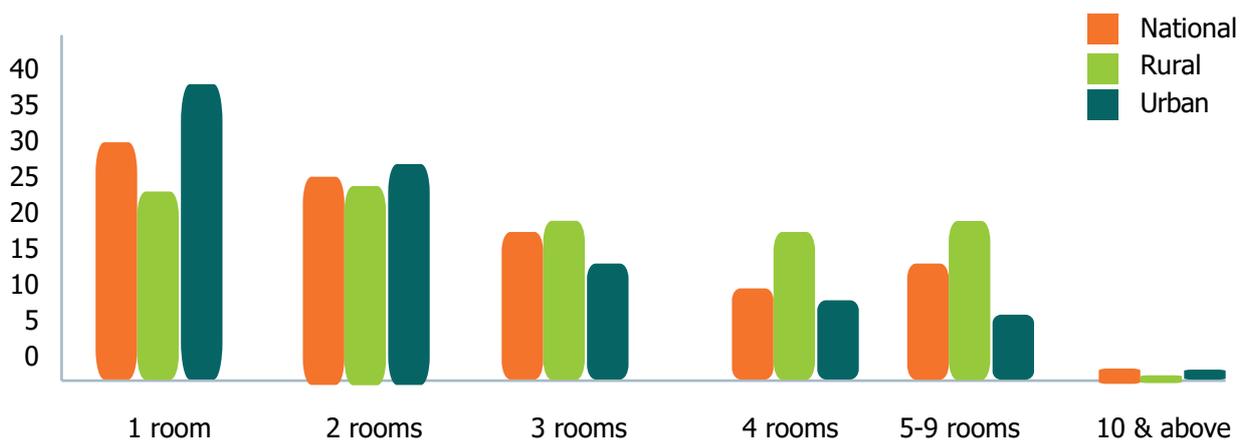
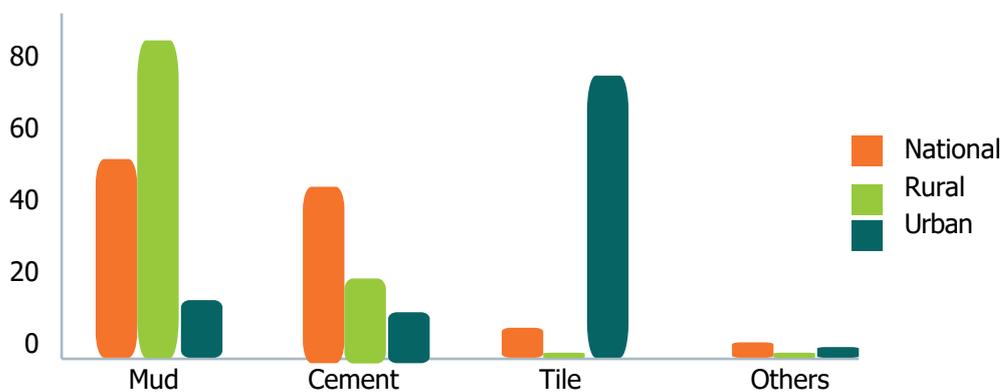


Figure 3.7 Flooring of dwellings, national/rural/urban, 2015 Census



### 3.6 Standard of Living 3: Sanitation and water

Nearly three-quarters of households in Sierra Leone use a pit latrine as a toilet, both in rural and urban areas. Very few use flush toilets - about 2 in 10 urban households and one in 10 in rural areas. Unsurprisingly, people in rural areas are significantly more likely to use bushes and rivers to dispose human waste.



Table 3.5 Human waste disposal, national/rural/urban, 2015 Census

	National	Rural	Urban
Pit Latrine	73.9%	73.53%	74.46%
Flushed	8.60%	1.37%	17.50%
Communal Bush/River Bed	12.90%	20.81%	3.13%
Ventilated Improved Pit	2.50%	1.96%	3.23%
Other facilities (bucket, etc)	2.10%	4.29%	4.91%

Source: Statistics Sierra Leone, 2015 Population and Housing Census

Urban dwellers have significantly greater access to water from pipes or protected sources (for example, boreholes) than rural areas and the national average for pipe-borne water is just over a third (Table 3.6). There is again a sharp contrast in the use of unprotected water sources between rural and urban areas.



Table 3.6 Source of water

	National	Rural	Urban
Pipe-borne water	36.30%	26.19%	48.22%
Other protected sources	35.70%	27.56%	38.85%
Unprotected water source	28.00%	45.49%	6.16%

Source: Statistics Sierra Leone, 2015 Population and Housing Census

### 3.7 Standard of Living 4: Ownership of durable assets and employment

Household data was collected on the ownership of certain durable assets (see Table 3.7). The most frequently owned items across the country are radios, beds and mobile phones. More than 8 in 10 households in the Western Area own these items, alongside 5 to 8 out of 10 households in other regions. More than half Western households own a charcoal iron and a television, but ownership of these items is significantly lower outside this region. Only about 3 in 10 Western households own a generator, refrigerator/freezer or sofa chair, but again this figure is much higher than in other regions. Less than 1 in 10 households own a car, motorcycle or bicycle. Ownership of an electric iron, computer or modern stove is also very low, with less than 2 in 10 of even Western households owning these items.



Table 3.7 Ownership of durable assets  
at regional level, 2015 Census

	East	North	South	West
Electric Iron	1.04	1.83	1.79	17.13
Charcoal iron	22.51	20.52	19.96	56.14
Generator	4.54	4.27	5.79	28.38
Television	7.51	8.21	8.96	54.30
Refrigerator Freezer	2.80	3.75	4.04	30.59
Computer	2.42	2.68	2.94	15.15
Radio	66.13	59.03	61.00	80.37
Modern Stove	4.93	3.22	3.24	15.56
Bed	82.49	74.94	85.03	87.08
Mobile Phone	56.61	52.85	53.66	90.46
Sofa Chair	14.16	6.56	10.89	28.55
Bicycle	6.37	7.48	5.82	7.11
Motorcycle	8.05	8.79	6.92	6.50
Car	1.36	1.70	1.71	9.79
Truck	0.32	0.37	0.40	1.29
Boat	0.59	2.19	6.36	1.28

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

More than 80 per cent of people nationally are self-employed – with more than 5 in 10 rural dwellers compared to about 3 in 10 people in towns and cities working for themselves (Table 3.8). Less than 1 in 10 people in both urban and residential areas are in paid employment. These outcomes could be due to a number of issues, such as low skills or low employment opportunities.



Table 3.8 Types of economic activities, rural/urban, 2015 Census

	National	Rural
Paid employee	2.23	9.69
Self-employed without employees	53.01	28.84
Self-employed	2.56	2.24
Unpaid family worker	4.41	0.97
Paid apprentice	0.18	0.52
Unpaid apprentice	0.68	0.89
Worked before but currently looking for	0.16	0.80
Looking for work for the first time	0.93	3.21
Household work	6.53	7.23
Not working & not looking for work	3.62	5.28
Full time student	24.26	37.45
Retired/pensioner	0.28	0.79
Others	0.81	1.58
Total	100.00	100.00

Source: Statistics Sierra Leone, 2015  
Population and Housing Census



# CHAPTER 4: MULTIDIMENSIONAL POVERTY INDEX FOR SIERRA LEONE

## 4.1 Introduction

We have carried out an in-depth analysis of the multidimensional poverty situation of the country based on the 2015 Census, both at national level and disaggregated by residential areas (rural-urban split), regions and districts. We have also broken it down into the various human development dimensions and indicators. Some comparison is made between the poverty situation in 2015 and 2004 based on these years' censuses, to determine the extent to which poverty has been reduced overtime.

## 4.2 National Poverty Profile

Combining deprivations from education, health and standard of living, Sierra Leone is found to be multidimensionally poor by 68.30 per cent (Table 4.1). The table shows that the biggest deprivations are access to decent cooking fuel and electricity. Almost every person in the country is deprived of decent cooking fuel and nearly 9 out of 10 individuals in the country live in households without electricity for lighting and other purposes.

The next biggest deprivation is poor sanitation; followed by possession of durable assets, where at least 6 out of every 10 persons are deprived of access to more than one asset, ranging from ownership of electric iron, to car and truck (as listed in Table 3.7 above). Use of poor flooring material for housing, such as earth, sand or dung is another huge problem, with severe health implications (discussed in later sections). This is followed by child mortality, with about half the population living in households where at least one child had died. Again, almost half the population live in overcrowded houses, with severe health implications, especially when there are outbreaks of highly contagious diseases such as Ebola, cholera or measles.



Table 4.1 MPI, national level, 2015 Census

Indicator	Level of Deprivation
<b>Education</b>	
Literacy deprivation	30.57%
Deprived of schooling	41.01%
<b>Health</b>	
Child mortality	48.04%
Deprived of immunization	1.66%
<b>Standard of Living</b>	
Deprived of electricity	88.97%
Poor cooking fuel	99.10%
Overcrowding	49.18%
Poor flooring material	58.42%
Poor sanitation	70.57%
Poor water situation	42.91%
Deprived of durable assets	63.75%
Deprived of employment	4.84%
<b>National Poverty</b>	<b>68.30%</b>

Indicators where deprivation is estimated at about 40 per cent are school attendance and access to portable water. Literacy, measured as at least one person able to read and write in the household, is not as discouraging, just over 30 per cent. The best results are child immunisation rates, which suggest that nearly every child is immunised, and economic empowerment, where less than 5 per cent of people appear to live in a household where no member is engaged in wage or self-employment.





Table 4.2 Contribution  
to national deprivation (MPI)

Indicator	Contribution
Education	34.30%
Literacy deprivation	14.80%
Deprived of schooling	19.50%
Health	21.90%
Child mortality	21.10%
Deprived of immunization	0.80%
Standard of Living	43.80%
Deprived of electricity	8.10%
Poor cooking fuel	8.40%
Overcrowding	4.30%
Poor flooring material	5.90%
Poor sanitation	6.50%
Poor water situation	4.30%
Deprived of durable assets	5.90%
Deprived of employment	0.40%
National Poverty	100.00%

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

Table 4.2 shows that child mortality is the highest contributor to poverty, estimated at 25 per cent, followed by lack of schooling and literacy at 14.8 and 19.5 per cent, respectively.

### 4.3 Rural Poverty Profile

Poverty in Sierra Leone is largely a rural phenomenon (Table 4.3). Nearly 8 out of every 10 people living outside urban areas are multidimensionally poor: they are deprived of education services, healthcare and a minimum standard of living. They are especially deprived of electricity, a good source of cooking energy, appropriate material for flooring of dwelling, and good sanitary condition; all at poverty incidence ranging from between 7 and more than 9 persons out of every 10. This is followed by deprivation in acquisition of durable assets, portable water, child healthcare, school attendance and rate of overcrowding in dwellings, at levels of incidence ranging from about 5 to close to 7 out of every 10 persons. Generally, literacy performance is relatively encouraging, as less than 4 out of 10 people are deprived in reading and writing; scores that are far better than other deprivation areas. Child immunisation and employment are the least deprived in these communities, with virtually every person belonging to a household having at least a child immunized and a member engaged in economic activities. It should be noted however that, whether members are able to derive sufficient income from their current activities to lift them out of income poverty, is subject to further analysis (see later sections).



Table 4.3 Multidimensional poverty incidence  
by rural-urban split

Indicator	Rural Deprivation	Urban Deprivation
Education		
Literacy deprivation	38.64%	12.64%
Deprived of schooling	48.42%	24.54%
Health		
Child mortality	49.66%	44.44%
Deprived of immunization	1.95%	1.02%
Standard of Living		
Deprived of electricity	98.71%	67.33%
Poor cooking fuel	99.54%	98.12%
Overcrowding	46.04%	56.16%
Poor flooring material	77.01%	17.12%
Poor sanitation	75.31%	60.05%
Poor water situation	53.53%	19.32%
Deprived of durable assets	67.92%	54.49%
Deprived of employment	2.13%	10.85%
National Poverty	78.90%	44.80%

Source: Statistics Sierra Leone, 2015 Population and Housing Census

## 4.4 Urban Poverty Profile

Multidimensional poverty incidence in the urban areas estimates at about 45 per cent—less than 5 out of every 10 persons, three less than the 8 out of 10 in rural areas (Table 4.3). However, urban areas are worse than the rural areas in terms of economic empowerment (employment). Between 1 and 2 persons out of 10 live in households where no one is employed in the urban setting; far less than 1 in 10 is recorded in rural settings. Urban areas are especially bad for overcrowding, with more than 5 out of every 10 persons living in a room with three others. It is almost equal to the rural areas in deprivation of decent cooking fuel, but urban areas are better than the rural sector in terms of access to electricity and good sanitary conditions. Deprivations are also not as different in child mortality and acquisition of durable assets from the rural areas. Urban areas do do better than the rural areas in literacy; flooring material and access to portable water. Thus, while poverty remains largely a rural phenomenon, urban services still need to be improved substantially, especially when deprivation intensity in the rural settings pushes people to move to urban areas.

It is worthy of special note from Table 4.4 that, the profile of the top most contributing dimensions/ indicators to multidimensional poverty are similar for rural and urban areas; schooling, child mortality and literacy. This is followed by deprivation in electricity and decent cooking energy for both residential areas. The next contributing indicators for rural areas of high significance are flooring, sanitation and inadequate durable assets; and for urban areas, dwelling overcrowding, sanitation and durable assets.



Table 4.4 Contribution to Deprivation

Indicator	Rural Contribution	Urban Contribution
<b>Education</b>	<b>35.60%</b>	<b>28.10%</b>
Literacy deprivation	15.80%	9.90%
Deprived of schooling	19.80%	18.20%
<b>Health</b>	<b>20.50%</b>	
Child mortality	19.70%	27.60%
Deprived of immunization	0.80%	0.80%
<b>Standard of Living</b>	<b>43.90%</b>	<b>43.40%</b>
Deprived of electricity	8.10%	8.10%
Poor cooking fuel	8.10%	9.50%
Overcrowding	3.90%	6.30%
Poor flooring material	6.70%	2.60%
Poor sanitation	6.40%	7.00%
Poor water situation	4.70%	2.50%
Deprived of durable assets	5.80%	6.20%
Deprived of employment	0.20%	1.20%
<b>National Poverty</b>	<b>100.00%</b>	<b>100.00%</b>

Although rural areas are more deprived, urban areas also need considerable attention, particularly with regards to the top three common indicators of poverty. Overcrowding in urban settings are a big problem and must be addressed. There has been an increased population growth in urban areas during and following the end of the war, driven by people moving in from rural areas. The failure of socioeconomic services to keep pace with this influx of people has led to an increase in poverty, an issue which will be discussed later in this report.

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

## 4.5 Regional Poverty Profile

Table 4.5 presents multidimensional poverty index by region. The predominately rural East, North and South regions account for the highest incidence of multidimensional poverty when compared to the West, where the capital of Freetown is situated. All three regions have incidence of poverty ranging from close to 7 persons in the East to between 7 and 8 persons in the North and South out of 10. In contrast, there are just 4 out of every 10 people living in poverty in the West. However, there are still plenty of concerns in the region, with more than 600,000 of the 1.5 million population multidimensionally deprived. Thus, poverty remains a general concern across the regions.



Table 4.5 Multidimensional poverty by region

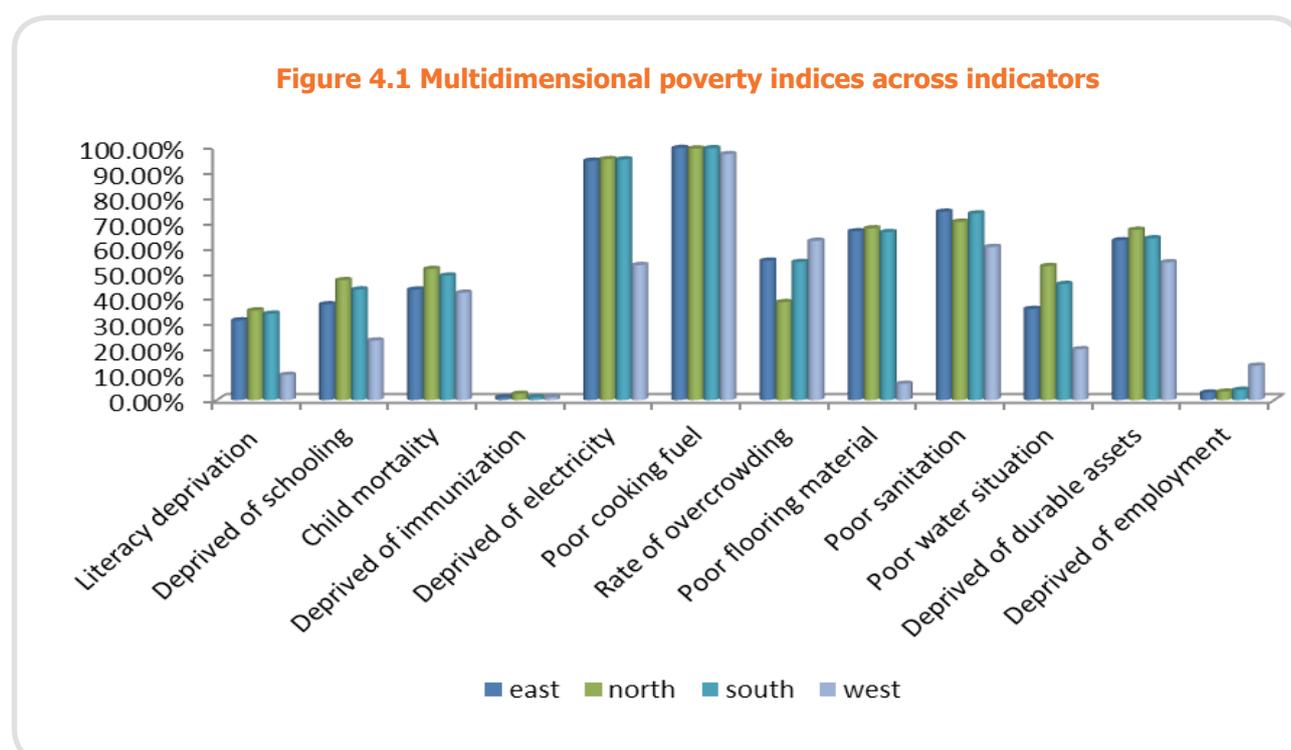
Indicator	East		North		South		West	
	Incidence	Contribution	Incidence	Contribution	Incidence	Contribution	Incidence	Contribution
<b>Education</b>								
Literacy deprivation	31.41%	15.60%	35.39%	15.10%	34.10%	15.30%	9.92%	8.50%
Deprived of schooling	37.80%	18.70%	47.34%	20.00%	43.68%	19.40%	23.51%	18.80%
<b>Health</b>								
Child mortality	43.64%	20.20%	51.76%	20.70%	49.16%	20.50%	42.36%	28.30%
Deprived of immunization	1.07%	0.50%	2.46%	1.10%	1.07%	0.50%	1.11%	0.90%
<b>Standard of Living</b>								
Deprived of electricity	94.51%	8.40%	95.15%	8.10%	95.03%	8.20%	53.31%	7.20%
Poor cooking fuel	99.56%	8.60%	99.34%	8.20%	99.46%	8.30%	97.14%	9.70%
Overcrowding	55.04%	5.00%	38.67%	3.40%	54.52%	4.70%	62.88%	7.40%
Poor flooring material	66.63%	6.50%	67.84%	6.20%	66.33%	6.30%	6.40%	1.10%
Poor sanitation	74.37%	6.80%	70.43%	6.10%	73.71%	6.60%	60.46%	7.50%
Poor water situation	35.98%	3.50%	52.93%	4.90%	45.82%	4.40%	20.05%	2.60%
Deprived of durable assets	63.07%	5.90%	67.25%	5.90%	63.88%	5.60%	54.41%	6.40%
Deprived of employment	2.93%	0.20%	3.28%	0.20%	4.00%	0.30%	13.57%	1.60%
<b>Total</b>	<b>67.50%</b>	<b>100.00%</b>	<b>75.70%</b>	<b>100.00%</b>	<b>73.00%</b>	<b>100.00%</b>	<b>40.80%</b>	<b>100.00%</b>

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

The North is most deprived in 7 out of the 12 indicators analysed (Figure 4.1). It should not be forgotten that this is the most populated region of the country (35.37 per cent of the national total), possibly the result of high fertility due to poor family planning. There is a need, therefore, to scale up family planning and prioritise the provision of services in this region.

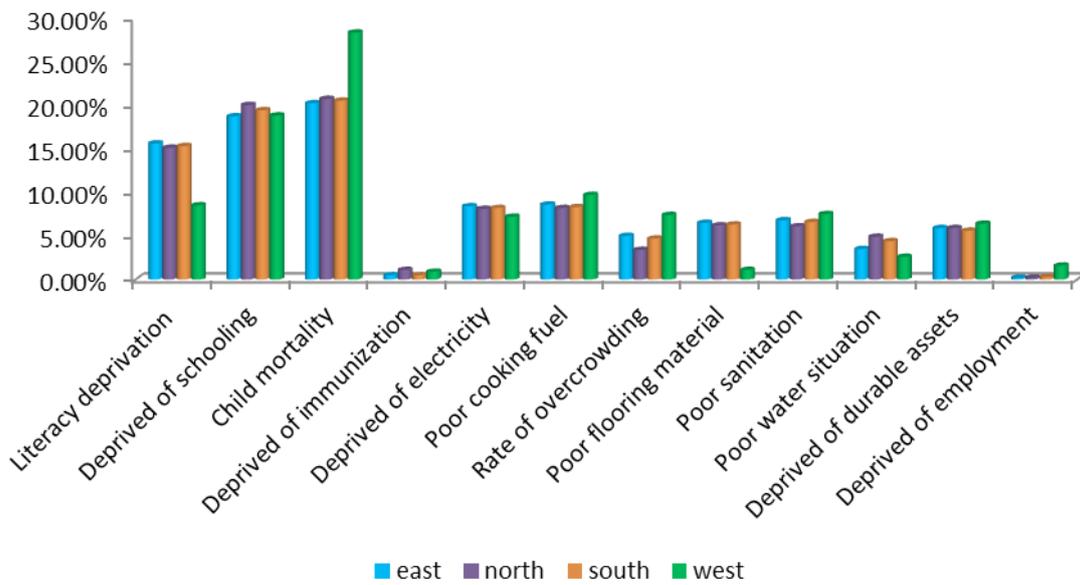
The Western region is the most deprived in overcrowding; this is not unexpected as urban populations are rising faster than housing services can cope with. It also has the highest rate of unemployment, although the rate is not as alarming as the other indicators.

The figure shows clearly that immunization and employment are the lowest contributors to multidimensional poverty in all four regions. The biggest deprivations centre on a lack of electricity and poor cooking fuel.

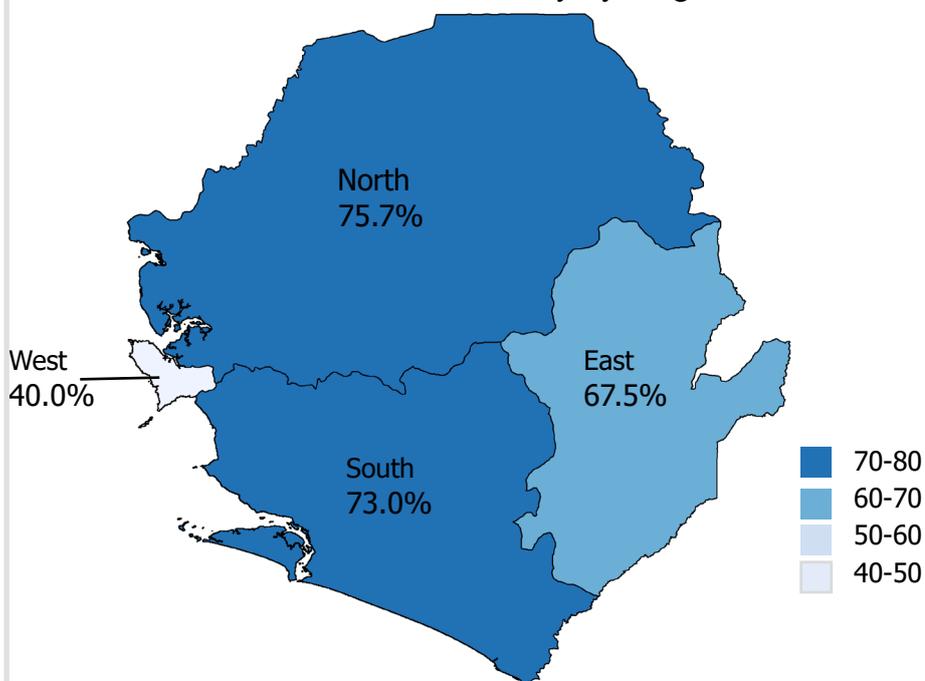


It is important to note that, while inadequate energy accounts for the highest rate of deprivation (incidence of poverty, see Table 4.5 and Figure 4.1), inadequate education and poor healthcare make the biggest contribution to multidimensional poverty (Figure 4.2), across all regions on average. Literacy is the third highest contributor, apart from in the West where the lack of decent cooking fuel is a bigger problem. The policy implication of these results will be discussed in a later section.

**Figure 4.2 Contribution to total national Multidimensional Poverty**

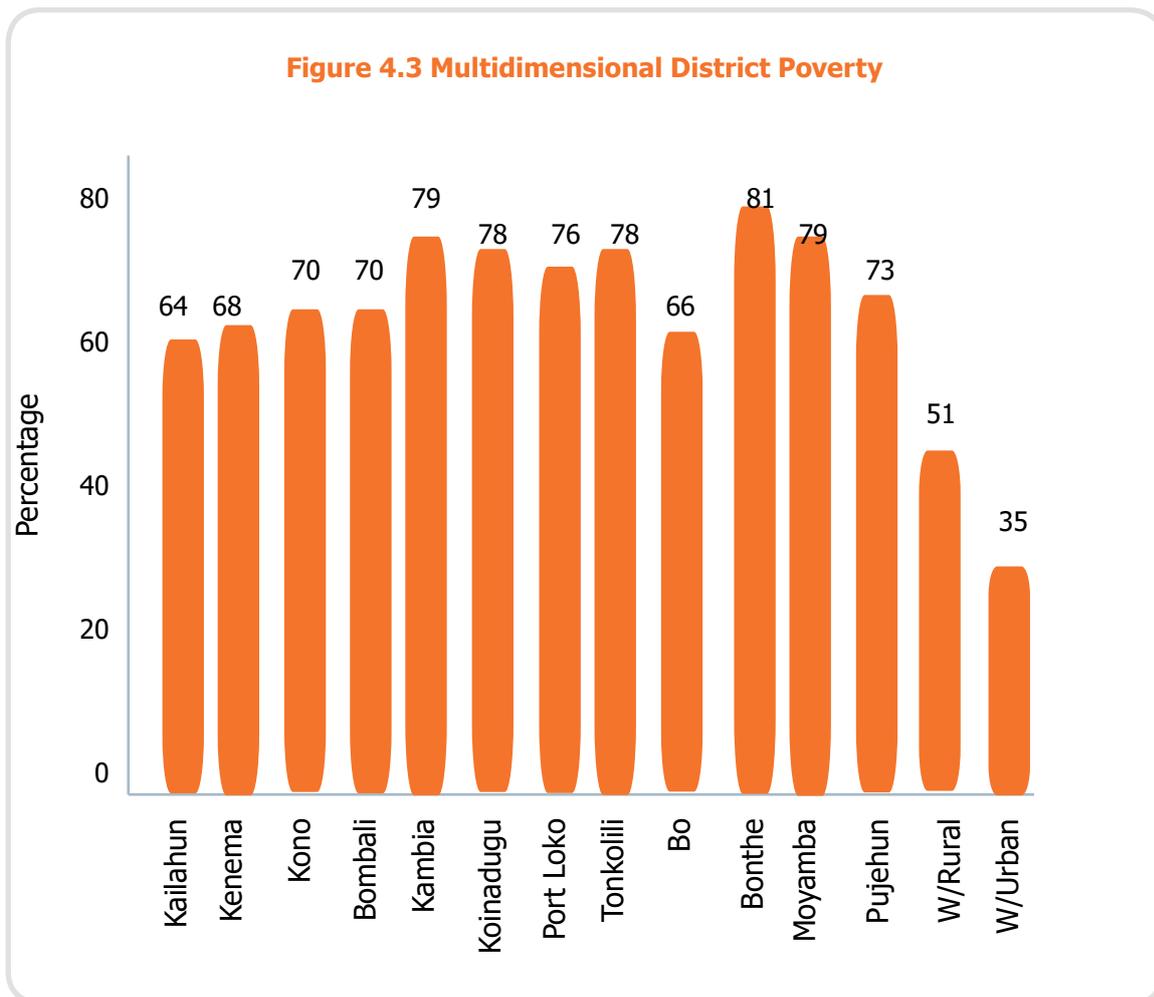


**Multidimensional poverty by region**



## 4.6 District Poverty Profile

More specifically, this analysis puts all 12 indicators together to locate geographic areas that are most multidimensionally deprived in the country. In summary, Bonthe, Moyamba, Kambia, Koinadugu and Tonkolili Districts are most closely deprived among the 14 districts of the country, at rates of about 8 in 10 persons (Figure 4.3). These are closely followed by Port Loko, Pujehun, Bombali and Kono Districts, at rates of about 7 in 10. Between 6 and 7 out of 10 in deprivation are Kenema, Bo and Kailahun Districts. The Western Rural District follows at about 5 in 10, while Western Urban is below 4 in 10. These results further suggest that poverty in Sierra Leone is highly concentrated in the rural areas.



From the analysis and presentation above, the three highest rates of deprivation are inadequate electricity, decent cooking energy and good sanitation; while the three most contributing indicators to national deprivation are poor school attendance, child mortality and literacy. On average, this is also true for both rural-urban splits and regional dimensions.

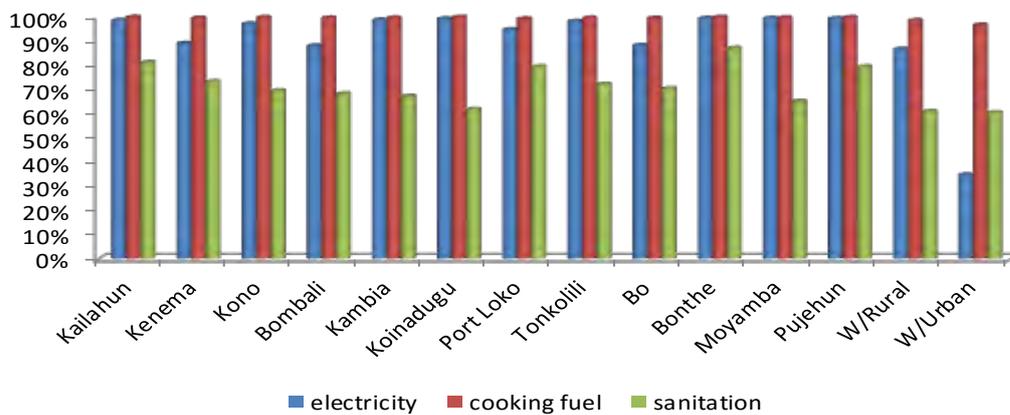
These six most deprived socioeconomic conditions were used to try to pinpoint which districts suffer most from these issues (Figures 4.4 and 4.5).

The results show that Kambia, Koinadugu, Bonthe, Moyamba, Pujehun, Kailahun, Tonkolili, Kono and Port Loko District are the highest deprived districts in electricity, at more or less the same rate at close to 10 out of 10 persons; closely followed by Kenema, Bombali, Bo and Western Rural Districts, at rates between 8 and 9 persons in 10. Western Urban is distinctly less deprived at below 4 in 10 persons. The situation is worst with the use of decent cooking fuel with all districts showing rates of close to 10 in 10 persons. The Western Urban rate is the only one to show even a slight drop but is still more than 9 in 10 persons.

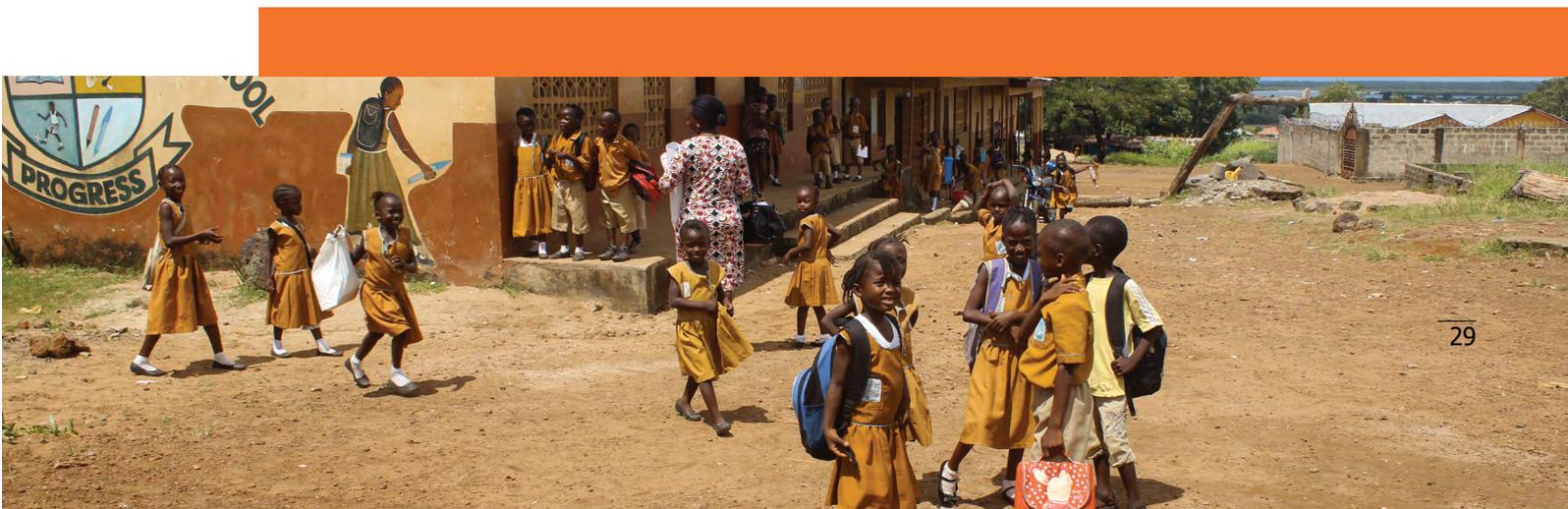
The sanitation situation is worst in Bonthe, Kailahun, Port Loko and Pujehun District, where more or less 8 to 9 persons in 10 are deprived; followed by Kenema, Tonkolili and Bo Districts, recording more than 7 in 10; while the rest record between 6 and 7 in 10.

In conclusions, there is little difference in deprivations for these three indicators across the 14 districts.

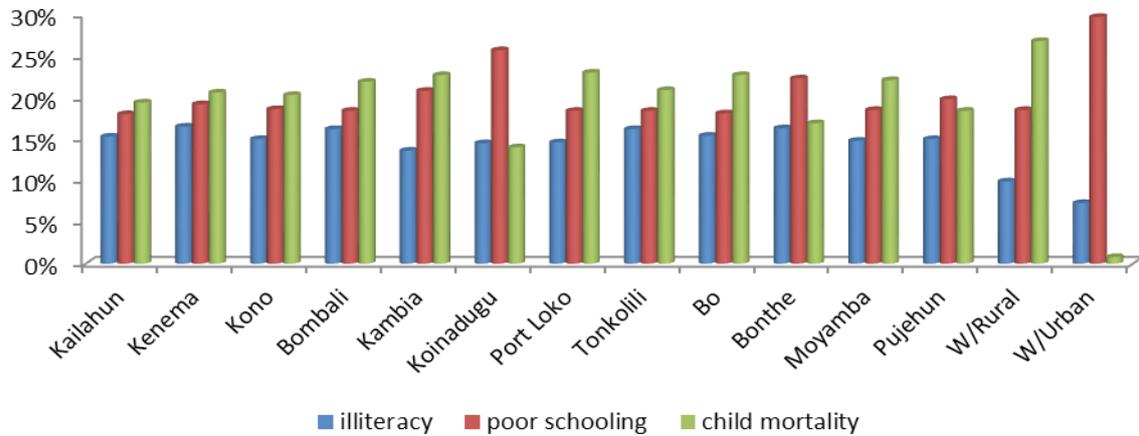
**Figure 4.4 Leading Multidimensional Poverty Indicators by District, 2015**



From Figure 4.5, the differentials in the contribution of illiteracy to national multidimensional poverty are very small among the provincial districts, with Kenema, Bombali, Tonkolili and Bonthe Districts leading at more than 16 per cent, followed by Kailahun, Kono, Bo and Pujehun, at 15 or more per cent. The least in the country are West Rural and Western Urban at about 10 and 7 per cent, respectively. Poor school attendance contributes to poverty in the Western Urban areas more than in the other districts, followed by Koinadugu District; the differential is not as sharp in the rest of the districts. The contribution of child mortality is lowest in the Western districts (Western Urban and Rural), and highest in the provincial districts, where differentials are not high.

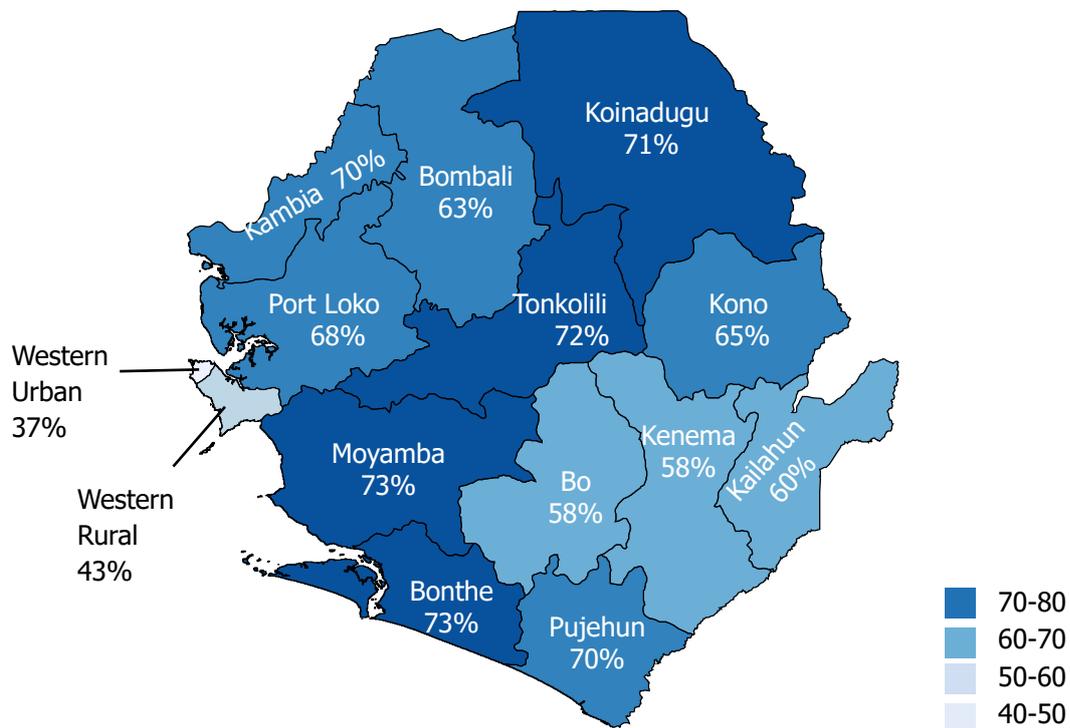


**Figure 4.5 Most contributing indicators to national MPI by District, 2015**



Annexes 1 and 2 present tables of the respective deprivations across districts in terms of incidence and contribution of each of the twelve indicators to total national deprivations.

**Multidimensional poverty by district**



## 4.7 Breaking down the Multidimensional Poverty Incidence by socioeconomic characteristics

The MPI was then disaggregated to reveal the proportion of the poor (deprived) and non-poor (not deprived) at the dimension level (education, health and standard of living) and their respective socioeconomic indicators across the 14 districts.

### 4.7.1 Education Poverty

Literacy and school attendance

Illiteracy is more pronounced in Bonthe, Moyamba, Tonkolili, Koinadugu and Bombali Districts at about 4 out of every 10 persons; followed by the rest at about 3 in 10, with the exception of Western Urban and Western Rural, accounting for the least at less than 1 and 2 in 10, respectively (Table 4.6). Looking at school attendance, there appears, not surprisingly, to be a strong correlation between illiteracy and not going to school. (see Figure 4.7).

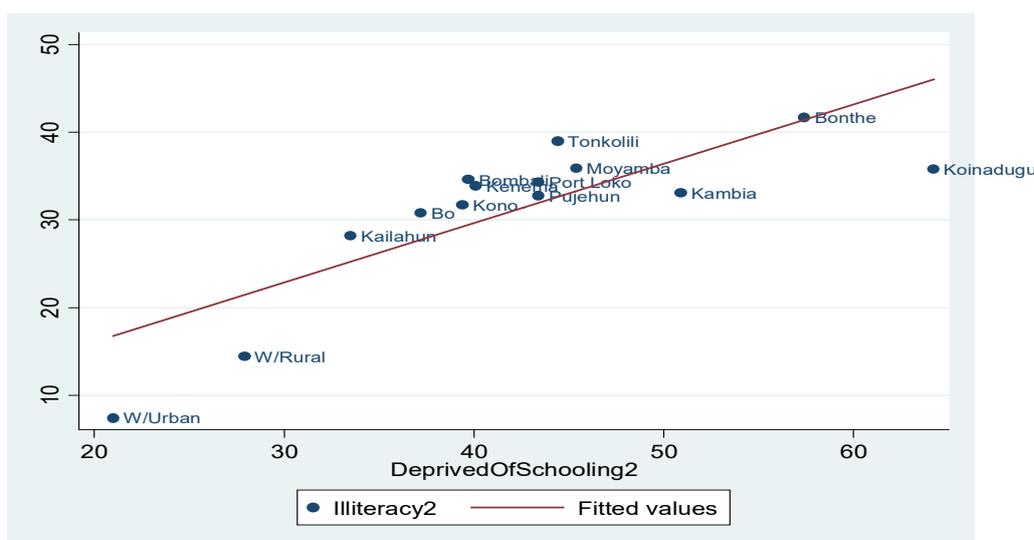


Table 4.6 Education deprivation

District	Deprived in literacy	Deprived in school attendance
Kailahun	28%	34%
Kenema	34%	40%
Kono	32%	39%
Bombali	35%	40%
Kambia	33%	51%
Koinadugu	36%	64%
Port Loko	34%	43%
Tonkolili	39%	44%
Bo	31%	37%
Bonthe	42%	57%
Moyamba	36%	45%
Pujehun	33%	43%
Western Rural	14%	28%
Western Urban	7%	21%

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

**Figure 4.6 Relationship between illiteracy and not going to schooling**



## 4.7.2 Health Poverty

### Child mortality and immunization

Again, while some districts have shown more deprivation in terms of child mortality, such as Koinadugu, Port Loko, Kambia and Moyamba, differentials across all districts are not as sharp (Table 4.7). The least deprivation comes from Kailahun, Bombali, Pujehun and Western Urban Districts, with about 4 persons out of 10 associated with households where at least one child has died. The highest rates, in Koinadugu, Port Loko, Kambia and Moyamba estimate at about 6 or more out of every 10 persons. Immunization programmes in the country seems to have benefitted all the districts adequately with far less disparities, with a negligible exception for Koinadugu District, which has a slight prominence in those not immunized—all districts have less than 1 in 10 persons associated with households where no child has been immunized. And an expected impression appears in the graph of Figure 4.7, generally showing that child mortality and deprived immunization go in the same direction.

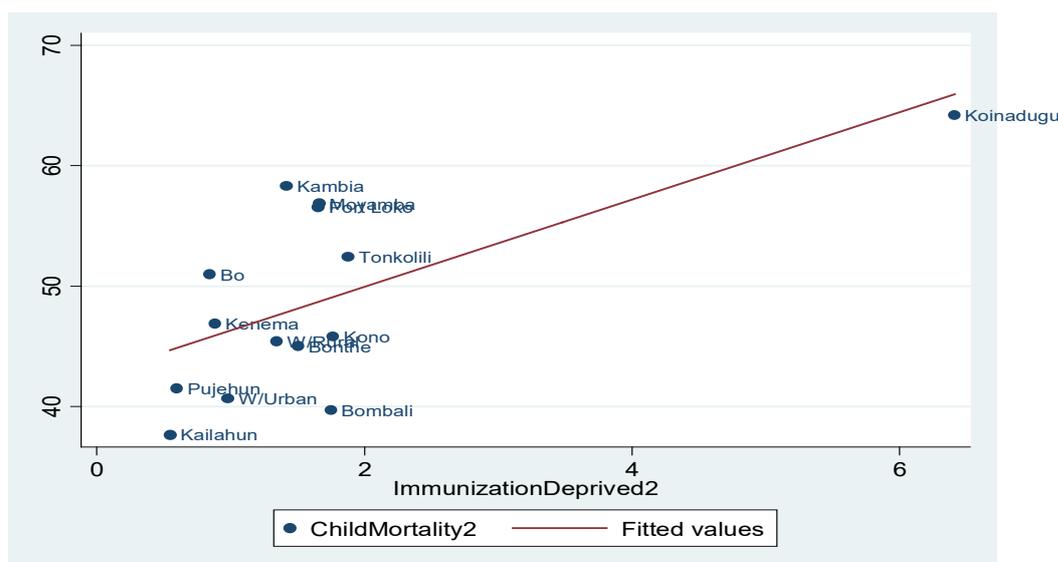


**Table 4.7 Child mortality and immunization**

District	Deprived in Child Healthcare	Deprived of immunization
Kailahun	38%	1%
Kenema	47%	1%
Kono	46%	2%
Bombali	40%	2%
Kambia	58%	1%
Koinadugu	64%	6%
Port Loko	57%	2%
Tonkolili	52%	2%
Bo	51%	1%
Bonthe	45%	2%
Moyamba	57%	2%
Pujehun	41%	1%
Western Rural	45%	1%
Western Urban	41%	1%

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

**Figure 4.7 Child mortality and immunization**



### 4.7.3 Standard of Living Poverty

#### Electricity and cooking fuel

It is clear that virtually every household in all districts is extremely poor in energy needs (Table 4.8). Western Urban is the only district with reasonable electricity supply but it is equally impoverished in terms of lack of decent cooking fuel. There is a positive correlation between child mortality and poor electricity supply and poor cooking fuel (Figures 4.8 and 4.9) as expected.

#### Overcrowding and poor flooring

The rate of overcrowding in dwellings and poor flooring is high across the districts with the Western Area again being the only exception.

#### Sanitation and water

This report has already shown that sanitation is of serious concern for all districts in the country. The expected correlation between poor sanitation and child mortality is confirmed in the scatter graph Figure 4.10. The districts of Bonthe, Moyamba, Koinadugu and Tonkolili suffer from the worst clean water supply. The situation is best in Western Urban, Western Rural, Kenema and Bo Districts.

#### Durable assets and employment

Deprivation of ownership of durables is also high and fairly distributed across districts. The least is the Western Urban, Western Rural and Bonthe Districts, scoring rates in excess of 50 per cent; and goes up to more than 70 per cent in Koinadugu and Tonkolili (Table 4.8). Employment deprivation is far less pronounced as is immunization deprivation. The West is the most deprived in employment, with the least being Koinadugu and Kailahun. However, all districts record rates at less than 20 per cent in deprivation of employment. It is worth mentioning again that being employed is one thing, deriving income that will lift one above the poverty line is another. Income poverty in the country still stands at more than 5 in 10; and close to 7 in 10 in the rural areas. This implies that knowledge and skills need to be developed to increase work force productivity.

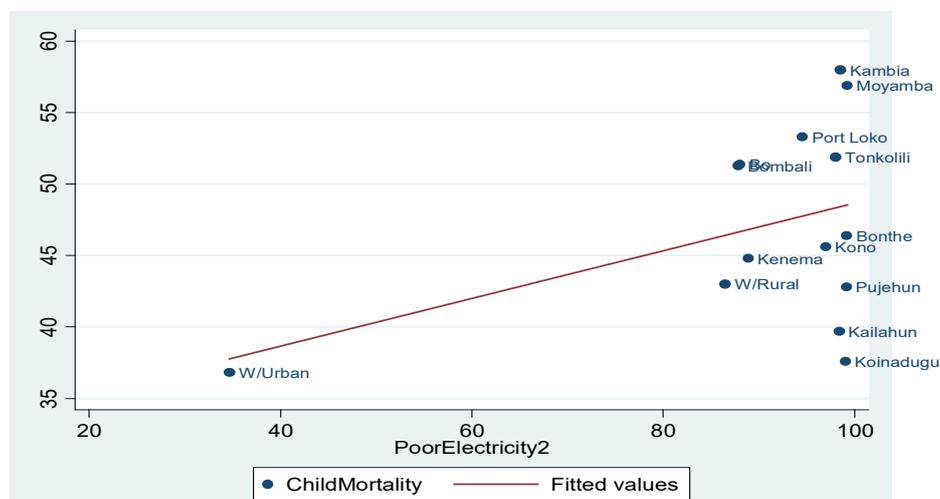


Table 4.8 Standard of living indicators

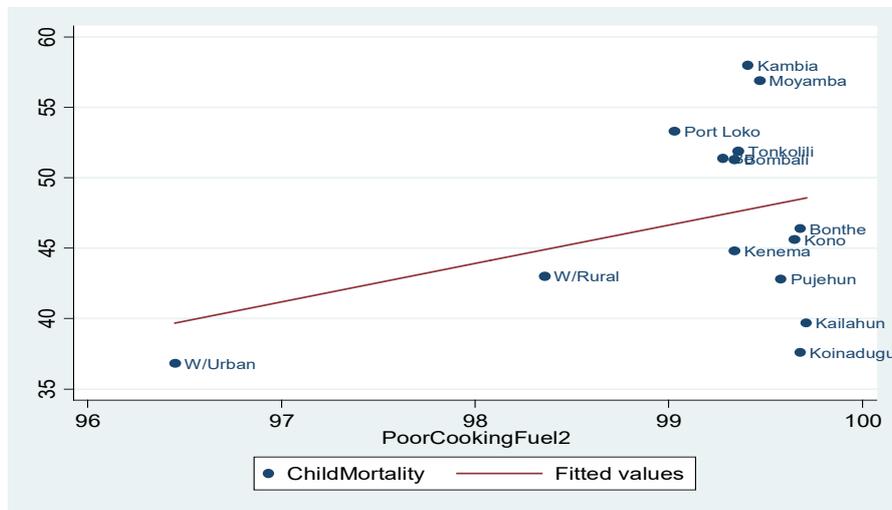
District	Deprived of electricity	Poor cooking fuel	Rate of over-crowding	Poor flooring material	Poor sanitation	Poor water situation	Deprived of durable assets	Deprived of employment
Kailahun	98.4%	99.7%	53.9%	73.9%	81.1%	38.4%	60.2%	1.6%
Kenema	88.9%	99.3%	59.9%	57.9%	73.1%	25.2%	62.4%	2.9%
Kono	97.0%	99.6%	50.8%	69.2%	69.3%	45.7%	66.6%	4.2%
Bombali	87.9%	99.3%	38.2%	62.5%	68.1%	37.9%	66.8%	4.0%
Kambia	98.5%	99.4%	32.5%	71.1%	67.1%	59.8%	60.7%	2.0%
Koinadugu	99.1%	99.7%	42.2%	76.8%	61.6%	60.8%	72.0%	1.4%
Port Loko	94.6%	99.0%	42.2%	60.8%	79.3%	49.8%	66.1%	4.8%
Tonkolili	98.0%	99.4%	37.0%	72.3%	71.9%	61.4%	70.4%	3.3%
Bo	88.0%	99.3%	56.7%	52.7%	70.2%	27.3%	63.7%	4.3%
Bonthe	99.2%	99.7%	49.4%	74.0%	86.9%	64.8%	57.9%	3.1%
Moyamba	99.2%	99.5%	43.3%	74.4%	65.0%	64.8%	67.1%	2.5%
Pujehun	99.2%	99.6%	65.1%	74.7%	79.3%	44.4%	64.7%	5.5%
Western Rural	86.5%	98.4%	61.1%	13.3%	60.8%	20.3%	55.3%	11.7%
Western Urban	34.7%	96.4%	63.9%	2.5%	60.3%	19.9%	53.9%	14.6%

Source: Statistics Sierra Leone, 2015 Population and Housing Census

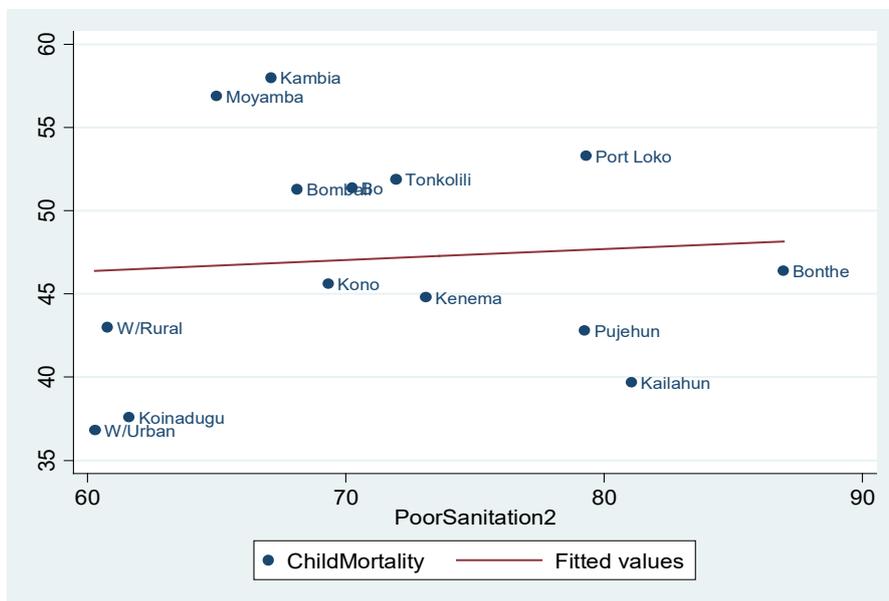
Figure 4.8 Relationship between child mortality and poor electricity



**Figure 4.9 Relationship between child mortality and poor cooking fuel**



**Figure 4.10 Relationship between child mortality and poor sanitation**



## 4.8 Comparing 2015 Census MPI with that of 2004 Census

### Overall MPI

The same method was used to calculate the MPI for 2004 Census as was used for 2015, to determine the extent to which multidimensional poverty has been reduced in the country. The only indicator missing is durable assets which was not recorded in the 2004 census. It was decided that the lack of one indicator would not bias the comparison significantly.

In 2004, Sierra Leone was just coming out of a civil war and as such, the country was in extreme poverty status (Table 4.9). Close to 90 per cent of the population was impoverished on multiple counts. The urban areas were nearly 75 per cent deprived, while the rural areas were more than 95 per cent deprived. The East and North were suffering the worse and almost every district was impoverished, even in the relatively affluent Western Urban Area, where the rates were lower but still nearly 60 per cent.

While the MPI for the country remains high at 68.3 per cent after the 2015 census, this constitutes an improvement from 2004 by 20 percentage points. Poverty dropped more considerably in urban than rural areas and the East and Western Areas reduced poverty levels more than in the South and North. However, across the board, all districts and regions experienced a reduction in multidimensional poverty. Kailahun District had the highest reduction; Bonthe District had the least.



Table 4.9 Comparing 2015 MPI and 2004

	2004 Census MPI	2015 Census MPI	Change
National	88.2%	68.3%	-20%
Rural	95.1%	78.90%	-16%
Urban	74.0%	44.80%	-29%
<b>East Region</b>	<b>92.5%</b>	<b>67.50%</b>	<b>-25%</b>
Kailahun	94.1%	63.9%	-30%
Kenema	91.9%	68.1%	-24%
Kono	91.9%	70.4%	-22%
<b>Northern Region</b>	<b>93.3%</b>	<b>75.7%</b>	<b>-18%</b>
Bombali	89.3%	69.7%	-20%
Kambia	94.0%	79.0%	-15%
Koinadugu	96.7%	78.2%	-19%
Port Loko	92.5%	76.0%	-17%
Tonkolili	95.0%	77.5%	-18%

	2004 Census MPI	2015 Census MPI	Change
<b>Southern Region</b>	<b>89.7%</b>	<b>73.0%</b>	<b>-17%</b>
Bo	86.1%	66.2%	-20%
Bonthe	92.6%	80.8%	-12%
Moyamba	91.6%	78.7%	-13%
Pujehun	94.1%	73.1%	-21%
<b>Western Region</b>	<b>62.9%</b>	<b>40.8%</b>	<b>-22%</b>
Western Rural	73.4%	51.3%	-22%
Western Urban	59.9%	34.9%	-25%

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

## 4.9 Poverty across the age groups

### Child Poverty, 0-5 years

Seven in every 10 children in Sierra Leone are multidimensionally poor (Table 4.10). The highest levels are in the rural areas, with 8 out of 10 children living in poverty – compared to about 5 in 10 urban children. The East, North and Southern Provinces all record 7 in 10 in poverty. The Western area records the lowest with only 4 in 10 children in poverty. All districts record close to 8 in 10, with the exception of Western Urban and Rural Districts, recording between 3 and 5 in 10 children in multidimensional poverty. The Bonthe District records the highest incidence of child poverty, slightly above 8 in 10. This may be partially attributed to the poor road connection between the Bonthe District (especially the island) and the rest of the country, in terms of supply of education, health, water energy and other socioeconomic services.

### Youth Poverty, 15-34 years

The results show that about 6 in 10 youths are multidimensionally poor in the country. The rural areas record the highest rates of nearly 8 in 10 in poverty. The urban areas are about 50 per cent lower in incidence, with 4 in 10 youths found to be impoverished. The East, North and Southern Provinces all record between 6 and 7 in 10 in multidimensional poverty. The Western area records the lowest at around 4 in 10. All districts record between 6 and 7 in 10, with the exception of the Western Urban District that records 4 in 10.

### Gender Poverty

Gender seems to play very little part in poverty levels across the country. This does not change when poverty levels of men and women are examined at regional or district levels. Men and women are equally as likely to be impoverished.



Table 4.10 Child, Youth and Gender Poverty

District	0-5 years	0-14 years	0-34 years	15-24 years	15-34 years	35+ years	Male	Female
National	70.7%	69.8%	68.0%	62.6%	64.2%	69.7%	68.2%	68.4%
Rural	79.8%	79.5%	78.6%	74.9%	76.5%	80.3%	78.4%	79.3%
Urban	47.0%	45.9%	44.6%	44.5%	42.2%	45.8%	44.3%	45.2%
<b>East Region</b>	<b>69.9%</b>	<b>68.6%</b>	<b>67.0%</b>	<b>61.0%</b>	<b>63.8%</b>	<b>69.7%</b>	<b>67.2%</b>	<b>67.8%</b>
Kailahun	65.8%	64.7%	63.4%	58.4%	60.5%	66.0%	63.0%	64.6%
Kenema	71.0%	69.5%	67.5%	58.9%	63.4%	70.6%	68.2%	68.0%
Kono	72.5%	71.2%	70.0%	65.9	67.4%	72.2%	70.0%	70.7%
<b>Northern Region</b>	<b>74.8%</b>	<b>76.7%</b>	<b>75.4%</b>	<b>70.9%</b>	<b>72.5%</b>	<b>77.2%</b>	<b>75.3%</b>	<b>76.1%</b>
Bombali	71.9%	71.4%	69.4%	63.2%	65.0%	71.1%	69.5%	69.9%
Kambia	79.7%	79.6%	78.7%	75.8%	76.8%	80.5%	78.2%	79.8%
Koinadugu	78.8%	79.1%	78.0%	73.9%	75.6%	78.9%	78.1%	78.3%
Port Loko	77.1%	76.7%	75.6%	71.4%	73.1%	77.5%	75.5%	76.3%
Tonkolili	78.4%	78.1%	77.0%	72.6%	74.5%	79.9%	76.7%	78.2%
<b>Southern Region</b>	<b>75.0%</b>	<b>74.1%</b>	<b>72.6%</b>	<b>66.6%</b>	<b>69.3%</b>	<b>74.7%</b>	<b>72.9%</b>	<b>73.1%</b>
Bo	69.5%	67.8%	65.7%	57.4%	61.4%	68.5%	66.3%	66.1%
Bonthe	82.2%	81.7%	80.4%	76.4%	77.5%	82.7%	80.4%	81.2%
Moyamba	79.5%	79.2%	78.4%	74.4%	76.5%	79.7%	78.7%	78.7%
Pujehun	74.1%	73.7%	72.8%	69.3%	70.8%	74.2%	72.6%	73.5%
<b>Western Region</b>	<b>43.0%</b>	<b>41.9%</b>	<b>40.9%</b>	<b>39.1%</b>	<b>39.3%</b>	<b>40.4%</b>	<b>40.4%</b>	<b>41.1%</b>
Western Rural	52.8%	52.4%	51.2%	48.2%	49.1%	51.9%	51.0%	51.6%
Western Urban	36.9%	35.6%	35.1%	34.5%	34.3%	34.1%	34.3%	35.4%

Source: Statistics Sierra Leone, 2015  
Population and Housing Census

## CHAPTER 5: POLICY IMPLICATION

To help derive tangible policy implications, poverty pockets must be mapped across all 12 indicators. This is critical in determining where there are a lack of services, so as to inform resource allocation and targeting.

### 5.1 Mapping Poverty Pockets across Deprivation Indicators

The matrix in Table 5.1 presents this map. This framework attempts to gauge the districts that are most deprived in each of the 12 indicators analysed. Four of these indicators present deprivations for which disparity is not sharp across the 14 districts, including the three most acutely depriving indicators. These are: inadequate electricity, decent source of cooking energy, sanitation, and ownership of durables. Here, there is need for targeting of resources to reach populations across the length and breadth of the country.

Employment is generally encouraging with deprivations at national and sub-national levels scoring below 1 in 10 persons, at least by the standard definition of employment used in the census; those that are engaged in either paid or self-employment that earn economic returns. If the standard definition of employment were structural employment, (matching jobs with required skills possessed by workers) the employment situation would look very different, given the predominance of informal activities and self-employment in Sierra Leone's economy. Structural employment is consistent with determining the rate at which the economy is going through structural transformation with advancement in human capital development; transforming from informal and into formal and value-adding activities. It will be important, with time, to attempt to estimate this type of employment to inform the broader economic policies of the state.

However, there are six indicators where stark disparities have been noted across the 14 districts. These are: literacy; school attendance; child mortality; overcrowding; flooring; and access to water. Here, differential targeting of resources is critical to minimising sub-national

and national multidimensional poverty, cognizant of the fact that the twelve indicators analysed are interrelated. Deprivation in one can impact and produce deprivation in the other. Thus, special attention should be paid to areas where certain populations or district are more deprived.

The top five most deprived districts in each of these indicators are as follows (see Table 19): In terms of literacy deprivation, the most pronounced districts in scores are Bonthe, Tonkolili, Moyamba, Koinadugu, and Bombali Districts. Leading districts that are most deprived in school attendance are Koinadugu, Bonthe, Kambia, Moyamba, and Tonkolili Districts. Those leading in child healthcare deprivation as measured by mortality rate are: Koinadugu, Kambia, Port Loko, Moyamba, and Tonkolili Districts. Leading districts in accommodation deprivation (overcrowding) are: Pujehun, Western Urban, Western Rural, Keneman and Bo Districts. Those leading in deprivation of good flooring material are: Koinadugu, Pujehun, Bonthe, Moyamba; and Kaila Hun Districts. And those leading in water deprivation are: Bonthe; Moyamba; Koinadugu; Port Loko; and Tonkolili Districts. These groupings will help in distributing and targeting assistance, projects and programmes by development actors, including government and non-governmental organizations.

The frequency in which a district is considered to be among those most deprived across the indicators has been estimated (Table 5.1). Koinadugu and Moyamba Districts both lead in multidimensional poverty in the country, showing up on nine out of the 10 indicators applied in differentiating the districts' average deprivation burden (at a factor of nine). This is followed by Tonkolili and Bonthe Districts (a factor of eight); then Kambia, Port Loko and Pujehun Districts (a factor of six); then Kailahun, Kenema, Bombali, Bo and Western Rural Districts (a factor of five); and Western Urban, the least (a factor of four).



Table 5.1 Mapping poverty pockets and language of literacy

District	Literacy deprivation	Deprived of schooling	Child mortality	Deprived of immunization	Deprived of Electricity	Poor cooking fuel
Kailahun	-	-	-	-	98%	100%
Kenema	-	-	-	-	89%	99%
Kono	-	-	-	-	97%	100%
Bombali	35%	-	-	-	88%	99%
Kambia		51%	58%	-	99%	99%
Koinadugu	36%	64%	64%	-	99%	100%
Port Loko		-	57%	-	95%	99%
Tonkolili	39%	44%	52%	-	98%	99%
Bo	-	-		-	88%	99%
Bonthe	42%	57%		-	99%	100%
Moyamba	36%	45%	57%	-	99%	99%
Pujehun	-	-	-	-	99%	100%
Western Rural	-	-	-	-	86%	98%
Western Urban	-	-	-	-	-	96%





Table 5.1 Mapping poverty pockets and language of literacy (continued)

District	Rate of overcrowding	Poor flooring material	Poor sanitation	Poor water situation	Deprived of durable assets	Deprived of employment	Frequency of Deprivation
Kailahun	-	74%	81%	-	60%	-	5
Kenema	60%	-	73%	-	62%	-	5
Kono	-	-	69%	-	67%	-	4
Bombali	-	-	68%	-	67%	-	5
Kambia	-	-	67%	-	61%	-	6
Koinadugu	-	77%	62%	61%	72%	-	9
Port Loko	-	-	79%	50%	66%	-	6
Tonkolili	-	-	72%	61%	70%	-	8
Bo	57%	-	70%	-	64%	-	5
Bonthe	-	74%	87%	65%	58%	-	8
Moyamba	-	74%	65%	65%	67%	-	9
Pujehun	65%	75%	79%	-	65%	-	6
Western Rural	61%	-	61%	-	55%	-	5
Western Urban	64%	-	60%	-	54%	-	4

Source: Statistics Sierra Leone, 2015  
Population and Housing Census



## CHAPTER 6: CONCLUSION AND RECOMMENDATION

Although the country's multidimensional poverty remains very high, laudable efforts have been made in reducing it since the end of the civil war in 2004. This analysis reveals the policy importance of ensuring regular MPI estimation, rather than relying on single poverty measures such as an income/expenditure headcount index. Income poverty remains a crucial measure of the welfare of households in the country, but is inadequate in telling the whole story. Poverty manifests itself in too many ways. Regular multidimensional poverty estimation is required to better inform development policy.

Key recommendations going forward include the need to ensure proper targeting of poverty resources. Allocation of these resources should be well informed by the relative deprivation of locations across various sectors. Districts that are most deprived in certain services should be given the highest priority when implementing projects relating to the provision of those services.

Electricity is in acute supply in the country, thus Government should scale up efforts in this direction. The report writers commend the Government for exploring various sources of electricity provision, including the pursuit of the power purchase agreement it is undertaking within the sub-region and the planning for the Bumbuna Phase II, among a range of other proposals. This will be critical in the substitution of environmentally-damaging energy sources for cooking. There is also a need to increase the supply of gas as an alternative means of cooking energy, to preserve the environment from excessive charcoal and wood harvesting.

Programmes and an enabling environment should be scaled up to increase income generation for households, to help meet demand for basic services including good drinking water and better housing conditions.

Literacy programmes, including non-formal schooling should be heightened, mindful of the positive knock-on effect this will have on improving other indicators such as generation of

good behaviour and attitudes towards sanitary management and the environment in general.

More gainful employment is needed to increase income capacity of households, to acquire basic assets as a store of value and means of enhancing welfare on other indicators. Additional employment can be created through increasing the supply of electricity to boost business and industrialization in the country.

Mothers and women in general should be more empowered towards child healthcare by strengthening and increasing coverage of the free healthcare initiative for pregnant and lactating mothers. Government can also increase the participation of women in gainful employment to complement household income and be more active in household decision making.

Attention should be paid to the welfare of children under the age of five by providing affordable education, health, housing and other basic facilities. From the gender perspective, both men and women should be given adequate consideration in terms of health, education, housing, water, sanitation, energy and other services, paying special attention to the needs of women. Youths should be provided with formal education to increase their participation in the labour market. Enhancing access to formal employment opportunities should be critically improved for youths, with special focus on skills development in the process, while considering "cash for work" and other poverty-reducing models for the engagement of young people in productive activities.



## Annex 1 District MPI by Poverty Indicator

Indicator	Kailahun	Kenema	Kono	Bombali	Kambia	Koinadugu	Port Loko
<b>Education</b>							
Literacy deprivation	20.29%	24.96%	23.93%	27.27%	27.28%	30.55%	28.77%
Deprived of schooling	33.61%	38.22%	38.29%	39.41%	51.30%	65.17%	43.49%
<b>Health</b>							
Child mortality	38.98%	47.45%	46.75%	53.12%	59.95%	37.71%	56.53%
<b>Housing</b>							
Rate of overcrowding	50.20%	54.80%	46.36%	34.39%	29.12%	39.46%	37.61%
Poor flooring material	71.84%	50.99%	66.24%	57.08%	67.86%	75.24%	55.83%
<b>Water and Sanitation</b>							
Poor sanitation	80.49%	71.19%	68.87%	66.31%	64.76%	62.66%	78.08%
Poor water situation	37.80%	22.71%	44.41%	36.02%	57.94%	59.60%	47.56%
<b>Durable Asset</b>							
Deprived of durable assets	59.43%	60.11%	65.25%	65.19%	60.20%	71.49%	64.82%
<b>Economic Empowerment</b>							
Deprived of employment	1.99%	3.95%	4.97%	4.93%	2.67%	1.79%	5.88%
<b>Total</b>	<b>60%</b>	<b>58%</b>	<b>65%</b>	<b>63%</b>	<b>70%</b>	<b>71%</b>	<b>68%</b>

Source: Statistics Sierra Leone, 2015  
Population and Housing Census



## Annex 1 District MPI by Poverty Indicator (continued)

Indicator	Tonkolili	Bo	Bonthe	Moyamba	Pujehun	W/Rural	W/Urban
<b>Education</b>							
Literacy deprivation	32.08%	22.17%	34.18%	30.36%	24.82%	10.35%	4.56%
Deprived of schooling	45.93%	34.98%	55.13%	44.35%	44.38%	25.41%	17.80%
<b>Health</b>							
Child mortality	52.94%	51.49%	46.41%	58.52%	43.45%	45.28%	39.47%
<b>Housing</b>							
Rate of overcrowding	33.09%	51.64%	45.78%	39.43%	62.89%	53.59%	54.94%
Poor flooring material	69.34%	44.62%	69.07%	70.35%	71.93%	11.90%	2.01%
<b>Water and Sanitation</b>							
Poor sanitation	72.23%	65.36%	84.70%	63.58%	78.14%	57.11%	55.18%
Poor water situation	60.03%	24.05%	60.66%	61.79%	42.35%	19.62%	18.53%
<b>Durable Asset</b>							
Deprived of durable assets	69.49%	60.88%	57.98%	65.52%	64.45%	54.64%	53.32%
<b>Economic Empowerment</b>							
Deprived of employment	3.97%	5.87%	4.54%	3.04%	6.51%	12.52%	15.40%
<b>Total</b>	<b>72%</b>	<b>58%</b>	<b>73%</b>	<b>73%</b>	<b>70%</b>	<b>43%</b>	<b>37%</b>

Source: Statistics Sierra Leone, 2015  
Population and Housing Census



## Annex 2 Contribution to District MPI by Poverty Indicator

Indicator	Kailahum	Kenema	Kono	Bombali	Kambia	Koinadugu	Port Loko
<b>Education</b>	<b>11%</b>	<b>14%</b>	<b>13%</b>	<b>14%</b>	<b>15%</b>	<b>18%</b>	<b>14%</b>
Literacy deprivation	4.40%	5.70%	5.00%	5.90%	5.30%	5.90%	5.60%
Deprived of schooling	7.00%	8.10%	7.70%	8.10%	9.40%	11.60%	8.10%
<b>Health</b>	<b>17%</b>	<b>21%</b>	<b>19%</b>	<b>21%</b>	<b>23%</b>	<b>14%</b>	<b>22%</b>
Child mortality	17.40%	20.80%	18.80%	21.40%	22.60%	14.20%	21.50%
<b>Housing</b>	<b>22.90%</b>	<b>20.40%</b>	<b>20.10%</b>	<b>17.30%</b>	<b>17.20%</b>	<b>20.10%</b>	<b>16.80%</b>
Rate of overcrowding	9.60%	9.70%	7.90%	6.10%	5.30%	7.10%	6.50%
Poor flooring material	13.30%	10.70%	12.20%	11.20%	11.90%	13.00%	10.30%
<b>Water and Sanitation</b>	<b>22.00%</b>	<b>17.50%</b>	<b>20.50%</b>	<b>18.70%</b>	<b>21.40%</b>	<b>21.30%</b>	<b>21.30%</b>
Poor sanitation	14.20%	12.50%	11.80%	11.40%	11.20%	10.50%	12.60%
Poor water situation	7.80%	5.00%	8.70%	7.30%	10.20%	10.80%	8.70%
<b>Durable Asset</b>	<b>25.40%</b>	<b>25.80%</b>	<b>25.90%</b>	<b>26.50%</b>	<b>23.10%</b>	<b>26.30%</b>	<b>24.60%</b>
Deprived of durable assets	25.40%	25.80%	25.90%	26.50%	23.10%	26.30%	24.60%
<b>Economic Empowerment</b>	<b>0.90%</b>	<b>1.70%</b>	<b>2.00%</b>	<b>2.10%</b>	<b>1.10%</b>	<b>0.70%</b>	<b>2.20%</b>
Deprived of employment	0.90%	1.70%	2.00%	2.10%	1.10%	0.70%	2.20%
<b>Total</b>	<b>100.00%</b>						



## Annex 2 Contribution to District MPI by Poverty Indicator (continued)

Indicator	Tonkolili	Bo	Bonthe	Moyam- ba	Pujehun	W/Rural	W/Urban
<b>Education</b>	<b>14%</b>	<b>13%</b>	<b>16%</b>	<b>14%</b>	<b>13%</b>	<b>9%</b>	<b>7%</b>
Literacy deprivation	6.00%	5.20%	6.50%	5.70%	4.80%	2.90%	1.40%
Deprived of schooling	8.20%	7.50%	9.80%	8.10%	8.10%	6.50%	5.10%
<b>Health</b>	<b>19%</b>	<b>23%</b>	<b>17%</b>	<b>21%</b>	<b>17%</b>	<b>25%</b>	<b>25%</b>
Child mortality	19.40%	22.60%	16.90%	21.10%	16.80%	25.20%	25.40%
<b>Housing</b>	<b>17.50%</b>	<b>18.80%</b>	<b>19.60%</b>	<b>18.70%</b>	<b>22.90%</b>	<b>14.20%</b>	<b>12.00%</b>
Rate of overcrowding	5.60%	9.10%	7.70%	6.60%	10.50%	10.80%	11.30%
Poor flooring material	11.90%	9.70%	11.90%	12.10%	12.40%	3.40%	0.70%
<b>Water and Sanitation</b>	<b>22.10%</b>	<b>17.70%</b>	<b>24.30%</b>	<b>21.40%</b>	<b>20.60%</b>	<b>16.00%</b>	<b>16.20%</b>
Poor sanitation	11.60%	12.20%	13.60%	10.70%	12.90%	11.40%	11.40%
Poor water situation	10.50%	5.50%	10.70%	10.70%	7.70%	4.60%	4.80%
<b>Durable Asset</b>	<b>25.20%</b>	<b>25.50%</b>	<b>21.20%</b>	<b>23.90%</b>	<b>24.20%</b>	<b>27.60%</b>	<b>28.70%</b>
Deprived of durable assets	25.20%	25.50%	21.20%	23.90%	24.20%	27.60%	28.70%
<b>Economic Empowerment</b>	<b>1.50%</b>	<b>2.60%</b>	<b>1.60%</b>	<b>1.10%</b>	<b>2.60%</b>	<b>7.70%</b>	<b>11.20%</b>
Deprived of employment	1.50%	2.60%	1.60%	1.10%	2.60%	7.70%	11.20%
<b>Total</b>	<b>100.00%</b>						

Source: Statistics Sierra Leone, 2015 Population and Housing Census

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