2022 Liberia Population and Housing Census

Thematic Report on

Housing Conditions

June 2024

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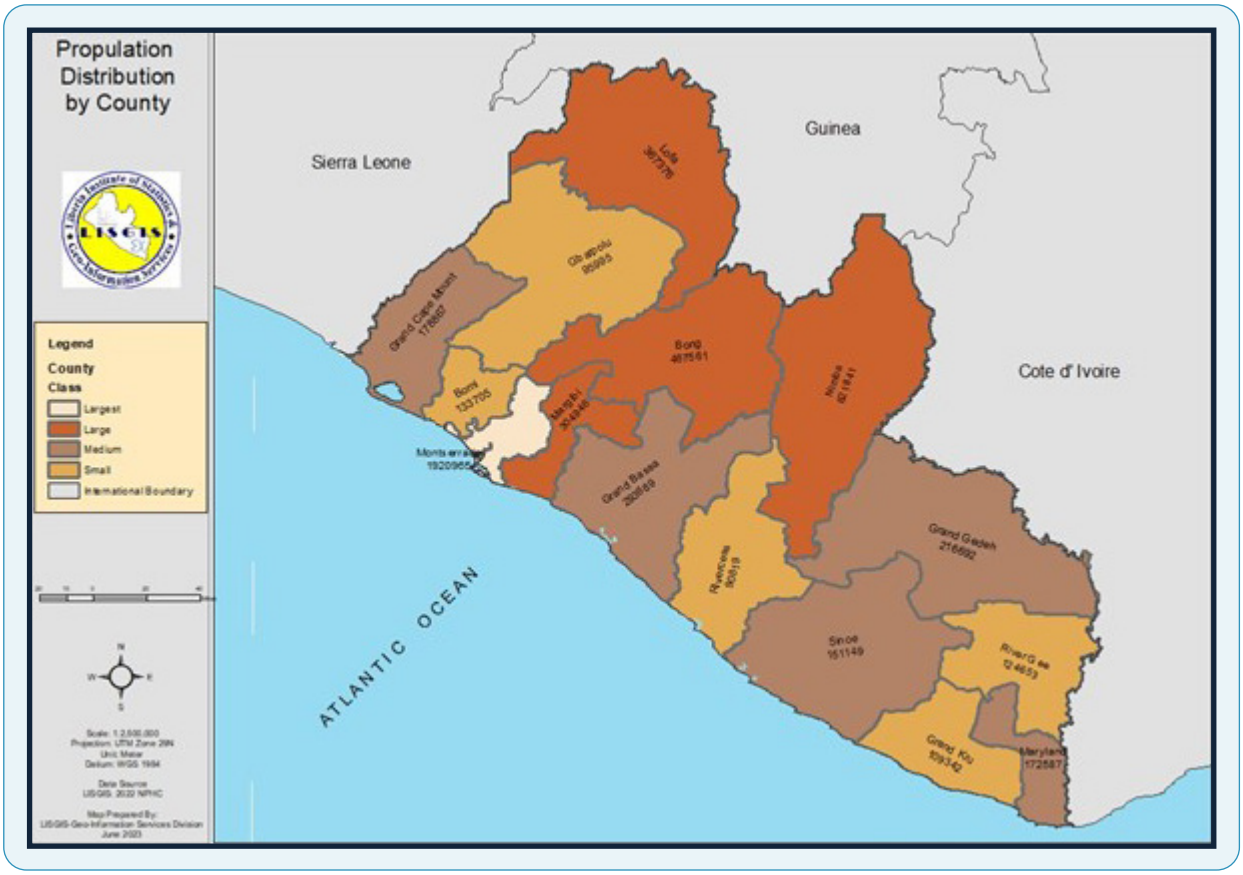
Administrative map of Liberia



Foreword

The 2022 National Population and Housing Census is the fifth and first digital census with the full deployment of ICT techniques and followed the UN Recommended Principles for the 2020 round of censuses. The basis for the conduct of the census is Article 39 of the 1986 Constitution of the Republic of Liberia. On October 10, 2022, the Government of Liberia initiated "an Act Authorizing the Executive Branch of Government to conduct the 2022 Liberia Population and Housing Census".

Hence, following the successful implementation of the 2022 Liberia Population and Housing Census, the Liberia Institute of Statistics & Geo-Information Services (LISGIS) produced 14 thematic reports. These reports summarized the country's demographic, social, and economic sectors. The publication of the thematic reports is consistent with the United Nations (UN) International Standards of releasing National Census results and thematic reports.

The 14 thematic reports form a primary source of socio-economic and demographic data at various levels and provide relevant information to foster national development, good governance, and resource distribution. The results presented in this thematic report will form a solid basis for the successes and challenges in the implementation of the Sustainable Development Goals (SDGs) as well as support the implementation of the development of the Africa Union Agenda 2063: The Africa We Want; Transforming Our World and other national and international programs.

I am pleased that the thematic reports helped to guide our national development plan. I would like to appreciate the support received from development partners and individuals during the entire process of writing the thematic report.

On behalf of the Census Commission and Board of Directors of LISGIS, I thank the Government of Liberia and our development partners for providing the required resources for conducting the census. Thanks also go to the national and international experts who worked very hard to complete these thematic reports.

Special appreciation for the success of the census goes to Hon. Samuel D. Tweah, Jr., former Chairman of the Census Commission, the Census Commission, the Steering Committee, the Census Secretariat, other national and international experts, census staff, and all respondents who provided the required information as well as all stakeholders for their commitment, motivation, and support to the National Population and Housing Census process.

I look forward to the continued support and guidance of development partners to engender sustainable development in our country.

Hon. Dehpue Y. Zuo
Deputy Minister for Economic Management
& Chairman of the Board
Ministry of Finance and Development Planning

Preface

The Liberia Institute of Statistics & Geo-Information Services (LISGIS) conducted the fifth and first fully digital census in November 2022. The 2022 National Population and Housing Census data was collected using Computer Assisted Personal Interviewing (CAPI) technology. Data were collected using tablets and later transmitted to LISGIS's server electronically.

The 14 thematic areas identified provide a comprehensive understanding of the population. These thematic areas are a) Population Distribution and Size b) Children, Adolescents, and Youth c) People with disabilities and older people d) Migration and Urbanization e) Labor force and Employment, f) Education, and Literacy g) Agricultural Population, h) Non-monetary poverty i) Housing conditions and facilities j) Mortality, k) Fertility, l) Marriages/Nuptiality, m) Gender Dimensions, and n) Population Projections. I would also like to thank the national and international experts for preparing the thematic reports.

Though the Government contributed immense resources to the 2022 National Census exercise, the requirements were enormous and beyond the capacity of the Government and LISGIS. It is with pleasure that we recognize and appreciate the support of the United Nations Population Fund (UNFPA), the Swedish Government, the World Bank, the United States Aid for International Development (USAID), the Irish Government, the Government of Ghana, Economic Community of West African States (ECOWAS) and the United Nations Children's Fund (UNICEF) and other partners whose timely and continuous interventions gave stimulus to the execution of the 2022 Liberia Population and Housing Census including the preparation of the reports.

Special gratitude goes to the general public for their cooperation and support. We are indebted to personnel and the management of LISGIS, national and international experts, supervisors, and enumerators for successfully conducting the 2022 National Population and Housing Census.

Richard F. Ngafuan
Director General
LISGIS

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List of abbreviations

GDP	Gross Domestic Product
LISGIS	Liberia Institute of Statistics and Geo-Information Services
MDG	Millennium Development Goals
NGOs	Non-governmental Organizations
NHA	National Housing Authority
NPHC	National Population and Housing Census

Executive summary

This analytical report presents the household characteristics and housing conditions of Liberia. The key indicators include household headship, sex composition, living arrangements, water and sanitation, sources of energy, furniture and household assets. These are summarized as follows:

Household headship among males and females was mainly concentrated in the age group 25-44; accounting for about 54.2 per cent of the households. The older age groups of 60 years and older had higher proportions of 12.3 per cent for both sexes and this varied from 11.0 per cent for males and 12.6 per cent for females. In the urban areas, this age group accounted for 10 per cent for both sexes. In the rural areas, both sexes constitute 15 per cent with males 14.2 per cent and females 16.8 per cent. The number of males headed households in urban areas reduced by 8.8 per cent from 2008 to 2022, while the female-headed households increased by the same percentage during the period. In the rural areas, male-headed households reduced by 7.5 per cent from 2008 to 2022 while the female-headed households also increased by the same percentage during the same period.

The total population of Liberia was 5,250,187 of which 98.6 per cent lived in regular households. By residence, 54.6 per cent of the regular households lived in the urban areas. The percentage of regular households in the urban areas dropped by 0.3 per cent from 2008 to 2022. The rural area had regular households increase by 0.7 per cent from 2008 to 2022.

From the total 1,187,272 households in Liberia, 13.8 per cent are single person households, 14.6 per cent are two-person households, and 15.8 per cent are three person's household. About 56 per cent of the total households have a family size of four or more household members.

About 36.1 per cent of households in Liberia resided in one room compared to 2008 where 34.1 of households were residing in one room. In addition, 59 per cent lived in two rooms, 74 per cent lived in three rooms and about 66 per cent dwell in four or more rooms. This situation is higher in the urban areas (37.5 per cent) compared to the rural areas (28.2 per cent). The majority (42.6 per cent) of the male-headed households in urban areas resided in only one room compared to the rural communities (27.5 per cent). Counties with highest percentage of households occupying one room are Bomi County with 52 per cent, followed by Montserrado County with 47 per cent, River Cess with 44.3 per cent, Maryland with 36.2 and Grand Bassa with 35.5 per cent. The county with the least percentage of its households occupying one room is Lofa with 12.5 per cent.

Pipe-borne or outdoor pump was the highest (46.7 per cent) source of drinking water in Liberia. There were equal percentages of households in urban and rural areas when it came to their main source of drinking water. The pipe-borne indoors or outdoors, public tabs, and closed protected wells accounted for about 69 per cent of total households compared to 60 per cent in 2008. Besides Grand Bassa, Grand Kru, River Cess and Sinoe, more than 40 per cent of households in the other counties got their water from the pipe or pump outside of their home.

Flush toilet coverage is about 40 per cent nationally. However, in rural areas, it accounted for 15 per cent. About a third of the households nationally relied on bushes for human waste disposal, 58 per cent in rural areas and almost 6 per cent in urban centres. Besides Montserrado, the county with the lowest percentage of households using the bush as human waste disposal was Mary Land (22 per cent). The largest percentage of county's household to use of bush was Bomi.

About 40 of the total households in Liberia took less than 20 minutes to access the nearest health facility while 30 per cent took one hour or more. About 21 per cent took 20–39 minutes to access the nearest health facility from their homes. About 51 per cent of the households in urban areas reported using less than 20 minutes to reach the nearest health facility while it was 25 per cent for households in rural areas.

More than half (54 per cent) of the households took less than 20 minutes to reach the nearest primary school. About 60 per cent of households in the urban areas accessed the nearest primary school in less than 40 minutes compared to 48 per cent for rural areas. Nine out of 15 counties had more than 50 per cent of the households' accessed schools in less than 20 minutes.

Sources of energy were numerous. The households in Liberia greatly depended on charcoal and wood for cooking fuel with charcoal accounting for 52.2 per cent and wood for about 45 per cent. Wood was the most used fuel for cooking in all counties except Montserrado whose households depended mostly on charcoal (87.1 per cent). About 55 per cent of households in the country used the battery light commonly referred to as Chinese light for lighting purposes in their homes. The next commonly used was the power source provided by the Government known as (LEC) accounting for 26 per cent of households. In the urban areas

Over six in 10 (63.3 per cent) households were living in owned housing units. The proportions of owned housing units in rural and urban areas were 77.7 and 43.1 per cent, respectively. Nationally, households with no repairs or minor repair needs accounted for 40 per cent compared to 55 per cent in 2008. About 43 per cent of the housing units in urban areas had no repair needs and 42 per cent had minor repair needs. Also, 36 per cent had no repair needs and 45 per cent had minor repairs in the rural areas.

The number of households with semi-permanent housing units in the country accounted for 45 per cent compared to 40.1 per cent in 2008. Those with temporary units were 35 per cent of the total households compared to 33 per cent in 2008, while only 21 per cent of households had permanent housing units compared to 29 in 2008.

Nationally, only 32 per cent of households used cement blocks as construction material for housing outer wall. Those households with mud and sticks or mud and bricks accounted for 46.3 per cent. Mud floors accounted for 50 per cent or more of the total households in all the counties except Montserrado County where it accounted for only 18 per cent of the total households. River Cess and Grand Kru had the highest proportions (over 90 per cent) of households residing in housing units whose floors were made of mud.

About 84 per cent of the total households in Liberia had mattresses in their homes. The highest percentage of households' ownership of mattress was in the urban communities (92.3 per cent), while it was about 73 per cent for the rural dwellings. Over half (53 per cent) had furniture and 47 per cent owned a radio. In Montserrado, the capital city, households with furniture accounted for 65 per cent, while 94 per cent owned mattresses, and 58 per cent owned radio. Generally, more than 70 per cent of households in all counties except Lofa had a mattress.

Ownership of household assets was diverse. About 63 per cent of the households owned mobile phones, 47 per cent owned radio, and about 23 per cent owned television while those owning computer was about 8 per cent. In the urban communities, 81 per cent of the households owned mobile phones compare to rural areas (42 per cent). Households' ownership of computer was higher in the urban dwellings (12 per cent) compared to the rural (3 per cent). About 5 per cent of the households owned a vehicle, 8 per cent owned a motorbike and about 2 per cent owned a tricycle (locally known as kerkeh).

The main economic activity in Liberia was agriculture. About 30 per cent of households in Liberia were engaged in agriculture activities compared to 49.5 per cent in 2008. This showed a 10 per cent reduction in agriculture households between 2008 and 2022. It was also observed that 76 per cent of agriculture households were engaged in crop production and 12 per cent were into aquaculture. Livestock and Poultry accounted for 8 per cent and 4 per cent, respectively.

Nationally, about 39 per cent of households were found to be in the very poor and poor situation. Information on households' ownership of information, communications and technology devices shows that about 63 per cent of the households owned a mobile phone, 47 per cent owned a radio, and about 23 per cent owned television while those who owned computer was about 8 per cent.

Chapter 1: Introduction

1.1 Background of the census

The population and housing censuses of any nation is the principal mechanism for collecting essential statistics on population dynamics and housing conditions that are required for socio-economic development and evidence-based decision making of policymakers. Basically, population and housing censuses collect information on people residing within the jurisdiction of a country in a specified reference period at the household level, group quarters, those that are considered as floating population including the homeless. In most countries, most of the population reside in housing units as a household or a family. The National Population and Housing Census (NPHC) is a principal source of statistics on housing and human settlement of the population. Usually, majority of the population live in housing unit in-group known as households or family. Therefore, monitoring the housing sector through development policies is important for responding to the growing needs of families. Household's access to housing units is increasingly becoming one of the developments policies to mitigate national and subnational housing needs.

Since the early 1960s, the need for socio-demographic indicators of the population in Liberia has been increasingly paramount for the Government social and economic development planning and policy initiative. The first population census of Liberia was conducted in 1962 thereafter two additional population censuses were conducted before the post crisis in 1974 and 1984. Although the Government of Liberia decided after the 1984 NPHC to conduct a population and housing census every 10 years, the interruption of the civil conflict could not permit the undertaking of the 1994 and 2004 censuses as previously planned within the framework of the World Round of Censuses.

The fourth round of the NPHC was conducted in 2008 by the Liberia Institute of Statistics and Geo-Information Services (LISGIS) under the legal framework known as the National Policy on Population for Social and Economic Development that was developed in 1988 and revised in 2005 (NPC, 2005). However, with the establishment of the LISGIS in 2005, the mandate for conducting the census was transferred to the LISGIS. Recently in December 2022, the fifth round of National Population and Housing Census (hereafter referred to as the 2022 NPHC) was conducted by the LISGIS.

1.2 Demographic, economic and social context

1.2.1 Demographic context

Liberia is a West African country with a total land area of 95,830 square kilometres (37,000 sq. miles). It is bordered by three countries and the Atlantic Ocean: Sierra Leone on the West, Cote D'Ivoire on the East, Guinea on the North and on the South by the Atlantic Ocean. As of 2022 the population of Liberia was 5,250,187 with male and female population of 2,644,027 and 2,606,160, respectively. It has a youthful population with population aged 0-14 years accounting for about 34 per cent of the total population and 2.8 per cent aged 65 years and over. Approximately 55 per cent (54.5 per cent) of the population live in the urban areas with 45.5 per cent in the rural areas. It has 15 administrative counties.

1.2.2 Economic context

Liberia is among the 10 poorest countries in Africa with a gross national income per capita of $630 in 2021[1]. Its Gross Domestic Product (GDP) per capita fell to an all-time low of $115 during the civil wars in the mid-1990s. However, after the crisis, the Liberian Government initiated housing programs that resulted in the construction of housing units in different parts of Liberia. From 2011 to 2012, the National Housing Authority (NHA) constructed thirty (30) housing estates in the following counties: Grand Bassa (10), housing units; Nimba (10); Lofa (10). Additionally, 153 housing units were constructed in Brewerville City, Montserrado County during the period 2015–2017, while 58 housing units were constructed in Ben Town estates in Marshall, Margibi County. Moreover, 125 housing units were also constructed in VOA, Brewerville to relocate the sea erosion victims from West Point in Monrovia (NHA, 2017). The construction of low housing units was based on the Government policy to provide housing to the population of Liberia.

1 World Bank (2022) Liberia Economic Update: Prospects for Inclusive and Sustainable Growth. Country Program Report.

The lack of access to decent, adequate and affordable housing on a sustained basis is a major challenge in Liberia. Generally, housing solutions being provided by both the NHA and private developers are sporadic, inadequate and largely unaffordable to the vast majority of the population. This is because Liberia is among the 10 poorest countries in Africa with a gross national income per capita of $630 in 2021 and 50.9 per cent of Liberians live below the national poverty line.[2] The housing problem of Liberia is further exacerbated by week policy and regulatory regime, inadequate access to housing finance, limited public and private sector investments, population growth (2.1 per cent)[3] and 53 per cent of the population is urbanized.[4] As a result in Monrovia alone, 70 per cent of the population lives in slums under devastating housing conditions.[5]

1.2.3 Social context

According to the United Nations Human Rights, "housing is the basis of stability and security for an individual or family. The centre of our social, emotional and sometimes economic lives, a home should be a sanctuary – a place to live in peace, security and dignity" (Human Rights Commission, 2020).

There have been a number of studies conducted on households in Liberia that cover housing. Studies conducted include the Liberia Demographic and Health Survey (LDHS 2007, 2013 and 2019-20) contained information on household population and housing characteristics (LISGIS et al., 2021). Another important source of information on household composition and housing condition is the 2016 Household Income and Expenditure Survey (LISGIS, 2017).

Over the years, several policy frameworks had been developed to deal with population needs including poverty, housing, among others. Water Supply and Sanitation Policy (2009) priority is the delivery of basic services to urban households is seen as a first step leading towards the development of higher level of services and shall take place before developing a higher level of service to those already served. These basic services are the provision of adequate safe water (25 litres/person/day), and sanitation (access to piped sewerage or on-site sanitation systems).

The first Poverty Reduction Strategy (PRS-1, 2008), and second PRS-2 known as the Agenda for Transformation (AfT, 2013) articulated the poor state of housing conditions in the country and emphasized the need for urgent action since it leads to homelessness and undermines the Government's efforts aimed at improving the quality of life of the population.

In 2018, the Pro-Poor Agenda for Prosperity and Development was developed to expand. Under the "Pro-poor Agenda for Prosperity and Development", the Government of Liberia (GoL) planned to improve the housing, high-quality water accessibility and sanitation conditions of the population to achieve some Sustainable Development Goal (SDG) 11.1 targets.

The key SDG targets include 11.1 and 6.1. The SDG 11.1 target aims to "ensure access for all adequate, safe and affordable housing and basic services and upgrade slums, by 2030". The GoL planned to improve human settlement by investing in the construction of 2000 affordable housing units and 80 rural housing units. Additionally, The SDG target 6.1, aims to achieve universal and equitable access to safe and affordable drinking water for all by 2030. The GoL target is that by 2023, 85 per cent of the population in Liberia should have access to basic water services; 5 per cent access to safely managed water points; 85 per cent access to basic sanitation; 60 per cent access to safely managed sanitation; 75 per cent of community open defecation free; 100 per cent district WASH plan approved; 100 per cent human capacity in WASH sector.

2 World Bank Group (2021). Poverty and Equality Brief 2021. https://databankfiles.worldbank.org/public/ddpext_download/poverty/987B9C90-CB9F-4D93-AE8C- 750588BF00QA/AM2020/Global_POVEQ_LBR.pdf Pg. 1.

3 The World Bank (2022). Population Growth (annual %), Liberia. https://data.worldbank.org/indicator/SP.POP.GROW?locations=LR Pg.

4 World Bank (2022). Liberia Urban population (% of total population). https://data.worldbank.org/indicator/%20SP.URB.TOTL.IN.ZS%20?locations=LR Pg. 1.

5 International Civil Society Centre (2020). Civil Society Innovation and Urban Inclusion 2020. https://icscentre.org/innovationreport/2020/wp-content/uploads/2020/12/ICSC_InnovationReport_201203_web_single.pdf Pg. 46.

1.3 Household, family and housing statistics

In the 2022 NPHC of Liberia, a household was defined as a person or group of related or unrelated persons living together in the same dwelling unit(s), acknowledge one adult male or female as the head of the household, share the same housekeeping arrangements, and are considered a single unit. A household may consist of a person or group of persons living under one roof and eating together. On the other hand, a family is usually considered as the basic unit of society and it is comprised of a father, mother and their children. A family may include adopted or foster children as well as relatives as this is common in the African setting.

Statistics on households are important to determine the national economic priorities for policy decision making given the demand for economic goods that are considered human basic needs. Without the needed statistics on households, planning, monitoring and evaluation of interventions cannot be realized. Economic policy planning and development can only be achieved with reliable statistics on the population. For example, the improvement of housing situation particularly in the urban slum communities where low-income earners dwell can be analysed for appropriate policy approaches with the availability of housing statistics. Therefore, the NPHC produces benchmark statistics on the current housing situation of a nation and is vital for developing national programs on housing and human settlements. It can be used as a valuable sampling frame for special housing and related surveys for international comparison and during the intercensal years (United Nations, 2017).

Population and housing censuses provide statistics that can be used to formulate policies and programs to improve housing conditions of the population as well as private sector investment in housing and other basic services needed by the households. Globally, the 2030 Agenda for Sustainable Development has been developed with 17 SDGs of which the following are directly related to human settlements development:

- SDG 6: Ensure availability and sustainable management of water and sanitation for all.
- SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all.
- SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.
- Target 11.1: By 2030, ensure access for all adequate, safe and affordable housing and basic services and upgrade slums.

1.4 Objectives of the report

The overall objective of this thematic report is to provide information household characteristics and housing conditions. The specific objectives are to:

- Provide information on household characteristics of the Liberian population; assess the household distribution and access to utilities.
- Determine the housing conditions and household welfare of the population; and
- Suggest policy recommendations.

1.5 Terms and definitions

A **house** is defined as a shelter, lodging, or dwelling for any living activities of human while a **Household** was defined as a person or group of related or unrelated persons living together in the same dwelling unit(s), acknowledge one adult male or female as the head of the household, share the same housekeeping arrangements, and are considered a single unit.

Improved source of drinking water referred to the one gathered from pipe-borne indoor or outdoor, and protected wells. Meanwhile, **safe human waste disposal** was considered as places flush toilets in households or out of households and covered pit latrines. **Essential Amenities** are assets that are the most basic needs of any household. These are furniture (chair, tables, and bed), mattress, radio and cell phone.

A **permanent housing unit**-- Dwelling constructed with durable materials such as concrete walls, cement floor, tile roof and floor, zinc roof, among others with a life span of at least 15 years. On the other hand, **a semi-permanent housing unit** are ones that were built with a mixture of permanent and temporary materials. **A temporary housing unit** – dwelling units built of inferior construction materials such as outer walls made of zinc or sticks and mud; roof with bamboo leaves; they often last for at most three.

1.6 Data source and analysis plan

The **data source** for this report was the 2022 Liberia NPHC. The questions on housing comprised of the structure and type of household, housing tenure, housing facilities, ownership of amenities, and access to community level infrastructure like health facilities and schools, and water supply. In addition, the main construction materials of the housing unit, sources of fuel for cooking, energy used for lighting and

involvement of household members in agriculture were also investigated.

The **data analysis plan** was anchored on the Habitat Agenda (Habitat, 2017) and the National Agenda of the Government (GoL, 2018) using cross-sectional approach to the households' composition and indicator of housing characteristics of the population. Generally, analysis was based on gender dimensions and by residence in household headship, ownership of household amenities and other allied socio-economic issues. Due to limited resources to conduct separate housing and population censuses especially in less developed countries, the United Nations Principles and Recommendations for Population and Housing Censuses notes that "…it is customary to conduct housing and population censuses simultaneously" (United Nations, 2017).

1.7 Data quality assessment

Data quality assessment (DQA) is the scientific and statistical evaluation of data to determine if those obtained from a source such as a census or survey are of the right type, quality and quantity to support their intended use. DQA is built on a fundamental premise: data quality, as a concept, is meaningful only when it relates to the intended use of the data. Data quality does not exist in a vacuum; it must be known in what context a data set is to be used to establish a relevant yardstick for judging whether the data set is adequate. Based on the above premise, an evaluation of the quality of housing data in the 2022 NPHC has been carried out by considering the following quality components.

Firstly, a geographic mapping exercise was conducted a year before the 2022 NPHC was conducted. This exercise focus on the various structure, whether single, detached, temporary, etc. to ascertain those building or structures that were used as dwelling or otherwise. Secondly, field staff of the NPHC conducted structures marking a day before actual census enumeration began to ensure that all residential and non-residential buildings were identified.

1.8 Data limitations and strengths

A number of comparisons were made for certain household aspects between the 2008 and 2022 censuses. The analysis in this report covers mainly the enumerated population that are mainly households and lack group quarters information on assets since those residing in living quarters were asked fewer questions compare to the household population. Moreover, the report dissected housing units by types of owners or provided. However, the analysis could not provide up-to-date information to monitor the current state of the Government policy plan on the construction of low-cost housing units outside of the census data collection period.

The strength of the data includes the provision of high-quality data on the current state of housing units available within the country along with the various characteristics of households and population.

1.9 Organization of the report

This thematic report is organized into six chapters. Chapter 1 gives the introduction including background on the NPHC, overview and importance of household characteristics and housing conditions, objectives, data limitations and methodology. The household characteristics are presented in Chapter 2 followed by household utilities in Chapter 3. Chapter 4 presents housing utilities while Chapter 5 focuses on household welfare. Chapter 6 covers conclusions of key findings, policy implications and proposed recommendations.

Chapter 2: Household characteristics

2.1 Introduction

The 2022 NPHC collected data on household characteristics including household members, sex, age and housing facilities. The types of residential units were also captured including those classified as institutional or floating population. This chapter analyses some indicators of households' characteristics that describe the size, composition, income and well-being of households. They can help us understand how people live, what their needs and preferences are, and how they cope with economic and social changes. However, most of these characteristics considered residential households and excludes the institutions and floating population.

2.2 Sex and age of household heads

Table 2.1 shows the distribution of households by age and sex. Household headship among both sexes was mainly concentrated in the combined age groups 25-44 and accounted for 54.2 per cent. The highest proportion for both sexes was in the age group 30-34 years with 15.0 per cent.

Male and female household heads in the age groups (25–44) and (30–34) accounted for 14.9 and 15.0 per cent, respectively. As expected, the proportion of household heads at younger ages for both sexes was found to be 0.1 per cent. Male and Female heads at early ages 13 to 19 years amounted to 2.1 per cent of the total heads of household. Similarly, low proportions were observed in rural and urban areas where the differential was small.

The older age groups of 60 years and above had higher proportions of 12.3 per cent for both sexes and this varied from 11.0 per cent for males and 12.6 per cent for females. In the urban areas, this age group accounts for 10 per cent for both sexes. Males and females constituted 9.7 per cent and 10.3 per cent, respectively. In the rural areas, both sexes constituted 15 per cent with male's 14.2 per cent and females 16.8 per cent.

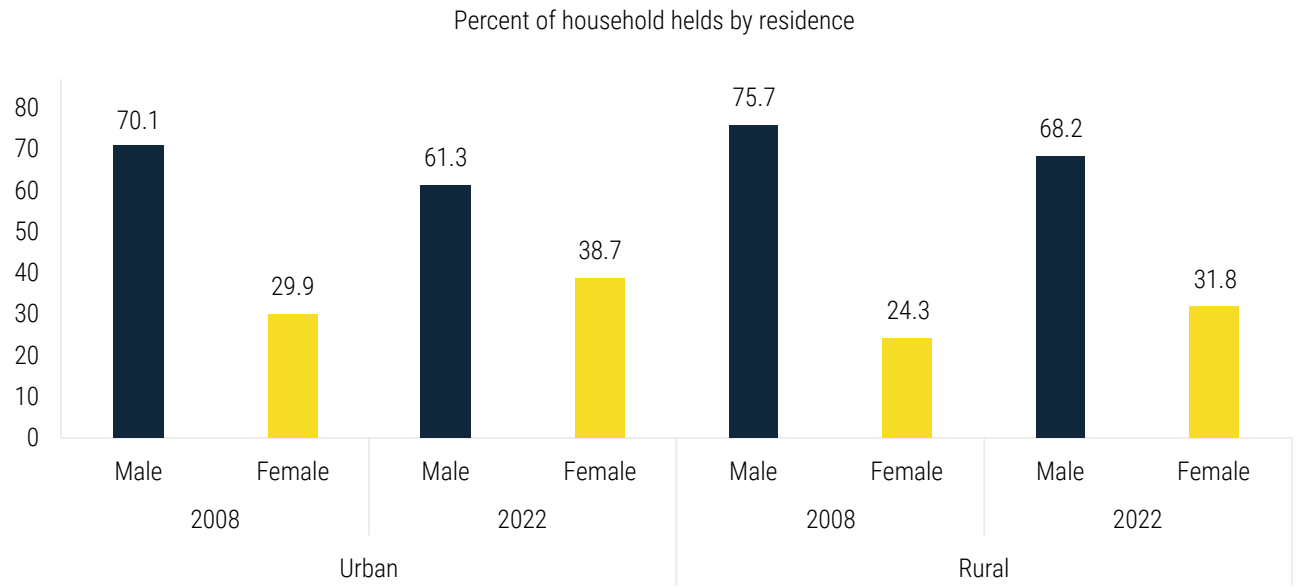
According to Figure 2.1, the number of male-headed households in urban areas reduced by 8.8 per cent from 2008 to 2022 while the female-headed households increased by the same percentage during the period under review. In the rural areas, male-headed households reduced by 7.5 per cent from 2008 to 2022 while the female-headed households also increased by the same percentage during the same period. Generally, the figure shows that male-headed households reduced while female-headed households increased regardless of the area of residence.

Table 2.1 Distribution of household heads by age, sex and residence

Age Group (Years)	Household Headship by sex and residence								
	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
13 - 14	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2
15 – 19	1.9	1.5	2.7	2.0	1.4	3.5	2.0	1.4	3.0
20 – 24	8.6	7.2	10.8	7.2	6.4	9.0	8.0	6.8	10.1
25 – 29	12.5	11.6	14.1	9.2	9.0	9.8	11.0	10.3	12.3
30 – 34	16.4	16.5	16.4	13.2	13.3	13.0	15.0	14.9	15.0

35 – 39	14.4	14.9	13.7	12.9	13.4	12.0	13.7	14.1	13.0
40 – 44	14.0	15.2	12.1	15.0	16	12.9	14.5	15.6	12.4
45 – 49	8.8	9.4	7.8	9.7	10.3	8.4	9.2	9.9	8.1
50 – 54	8.3	8.8	7.6	10.3	10.7	9.3	9.2	9.7	8.3
55 – 59	4.7	4.8	4.5	5.3	5.4	5.1	5.0	5.1	4.7
60 – 64	4.3	4.4	4.3	5.7	5.6	6.1	5.0	4.9	5.0
65 – 69	2.4	2.5	2.4	3.1	3.0	3.3	2.7	2.7	2.8
70 – 74	1.7	1.7	1.8	2.8	2.6	3.2	2.2	2.1	2.3
75 - 79	0.7	0.7	0.7	1.3	1.2	1.6	1.0	0.9	1.1
80+	0.9	0.8	1.1	2.1	1.8	2.6	1.4	1.3	1.7
Total (N)	**54.8**	**52.1**	**59.7**	**45.2**	**47.9**	**40.3**	**100**	**64.4**	**35.6**
Total (freq.)	**650,667**	**398,621**	**252,046**	**536,605**	**366,315**	**170,290**	**1,187,272**	**764,936**	**422,336**

Figure 2.1 Distribution of heads of households by sex and residence, 2008 and 2022



The heads of households were also distributed by sex and county. Table 2.2 shows that there were more male-headed households than the female ones nationally and across all the counties. At the national level, the male-headed households were 64 per cent while the female-headed households were 36 per cent.

When compared to the 2008 census, it was observed that the male-headed households reduced from 73 per cent to 64 per cent while the female-headed households increased from 27 per cent to 36 per cent.

The distribution of households by county was in line with the population distribution since the highest percentage was in Montserrado (38 per cent), followed by Nimba (11 per cent). The counties with the least proportion of households were Grand Kru and River Gee with each of them accounting for 2 per cent.

Table 2.2 Distribution of household heads by sex and county

County	Gender of households head			
	Male (%)	Female (%)	Total	Percent
Bomi	60	40	38591	3.3
Bong	64	36	110099	9.3
Gbarpolu	70	30	22411	1.9
Grand Bassa	72	28	69287	5.8
Grand Cape Mount	68	32	45170	3.8
Grand Gedeh	70	30	43663	3.7
Grand Kru	61	39	20604	1.7
Lofa	59	41	75260	6.3
Margibi	66	34	72276	6.1
Maryland	59	41	37214	3.1
Montserrado	63	37	449910	37.9
Nimba	66	34	127951	10.8
River Cess	72	28	21087	1.8
River Gee	60	40	23906	2
Sinoe	68	32	29843	2.5
Total (N)	**64**	**36**	**1,187,272**	**100**

2.3 Households headed by teens aged 13–17 years

Children of any nation are its future, a country, a movement, a person that does not value its youth and children does not deserve a future" (Hanson and Molima, 2019). Children Headed Households (CHHs) have been found to be associated with several drawbacks to children's sustainable growth and development (Norton, 2014). Indications are that in CHHs, children face daunting poverty which often push them into adopting negative lifestyles and making wrong and sometimes dangerous choices such as substance abuse. Their future has been emptied even before they become conscious of themselves. Some of these children just find themselves in these cultures while others are just forced into these uncalled-for behaviours.

Table 2.3 shows the number of teenagers, ages 13 to 17 years who were found to be heads of household. A total of 8,957 of them were found in this category with 53 per cent females and 47 per cent males. In the urban areas, 48 per cent males and 52 per cent female were found to be head of household. For the rural settings, 46 per cent male and 54 per cent female were found to be heads of households.

Table 2.3 Distribution of household heads by age 13-17 years by residence

Age group 13-17 Years	Gender of Households Heads by Residence								
	Urban			Rural			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Percent (%)	47.9	52.1	100.0	45.7	54.3	100.0	46.9	53.1	100.0
Total (freq.)	2,282	2,482	4,764	1,917	2,276	4,193	4,199	4,758	8,957

By county, CHHs situation was serious in Montserrado County with 31.1 of teenagers in this age group heading households. Nimba was the next county with about 13 per cent of teenagers in this age group as household heads.

Table 2.4 Distribution of household heads by age 13–17 years by county

County	Gender of Households Heads Age 13 - 17 years				
	Male	Percent	Female	Percent	Total
Bomi	203	4.8	315	6.6	5.8
Bong	364	8.7	485	10.2	9.5
Gbarpolu	83	2.0	105	2.2	2.1
Grand Bassa	316	7.5	270	5.7	6.5
Grand Cape Mount	224	5.3	180	3.8	4.5
Grand Gedeh	138	3.3	132	2.8	3.0
Grand Kru	23	0.5	63	1.3	1.0
Lofa	248	5.9	362	7.6	6.8
Margibi	351	8.4	325	6.8	7.5
Maryland	58	1.4	127	2.7	2.1
Montserrado	1442	34.3	1345	28.3	31.1
Nimba	537	12.8	619	13.0	12.9
River Cess	70	1.7	138	2.9	2.3
River Gee	52	1.2	134	2.8	2.1
Sinoe	90	2.1	158	3.3	2.8
Total (N)	**4,199**	**46.9**	**4,758**	**53.1**	**100**

2.4 Population by residential and non-residential households

The 2022 census classified the households into two: "residential households" and "institutions". The term "residential household" was applied to normal households as generally understood in censuses in sub-Saharan Africa. "Group quarters" refer to institutional populations like boarding schools, military camps, boarding houses, hotels or motels, persons living in 'bush school', hospitals and other medical establishments, and prisons. They also include persons with no fixed places of aboard.

The distribution of population by sex and type of living quarters is presented in Table 2.5. The total population of Liberia was 5,250,187 of which 98.6 per cent lived in regular households, while the rest (1.4 per cent) lived in other living quarters around the country.

By residence, 54.6 per cent of the regular households lived in the urban areas and 45.4 per cent lived in the rural areas. In the regular households in urban centres, male-headed households accounted for 49.0 per cent and female was 51.0 per cent compared to the rural where male-headed households was about 52 per cent and female-headed households was 48 per cent.

Table 2.5 Per cent distribution of households by type of living quarters, sex and residence

Type of Population	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Household	98.3	49	51	99.1	51.7	48.3	98.6	50.2	49.8
Educational	0.3	57.3	42.7	0.2	60.8	39.2	0.2	58.6	41.4
Health and related facilities[6]	0.4	41.2	58.8	0.1	52.9	47.1	0.3	43.9	56.1
Religious Institution/Convent[7]	0.2	56.9	43.1	0.2	55.9	44.1	0.2	56.4	43.6
Prison	0.1	92.7	7.3	0	75.4	24.6	0.1	90.5	9.5
Bush Society	0.0	72	28	0.1	47.6	52.4	0.0	54.4	45.6
Orphanage	0.1	50.7	49.3	0.1	56.2	43.8	0.1	53.1	46.9
Floating Population	0.2	77.9	22.1	0.1	62.4	37.6	0.1	73.4	26.6
Homeless Population	0.4	77.2	22.8	0.1	57.6	42.4	0.3	73.7	26.3
Others	0.1	70.0	30.0	0.1	71.4	28.6	0.1	70.5	29.5
Total (N)	**54.6**	**49.2**	**50.8**	**45.4**	**51.7**	**48.3**	**100**	**50.4**	**49.6**

According to Table 2.6 below, it was observed that in 2008, regular households were 98.5 of the total population compared to 98.6 per cent in 2022. The percentage of the regular household in the urban area dropped by 0.3 per cent from 2008 to 2022.

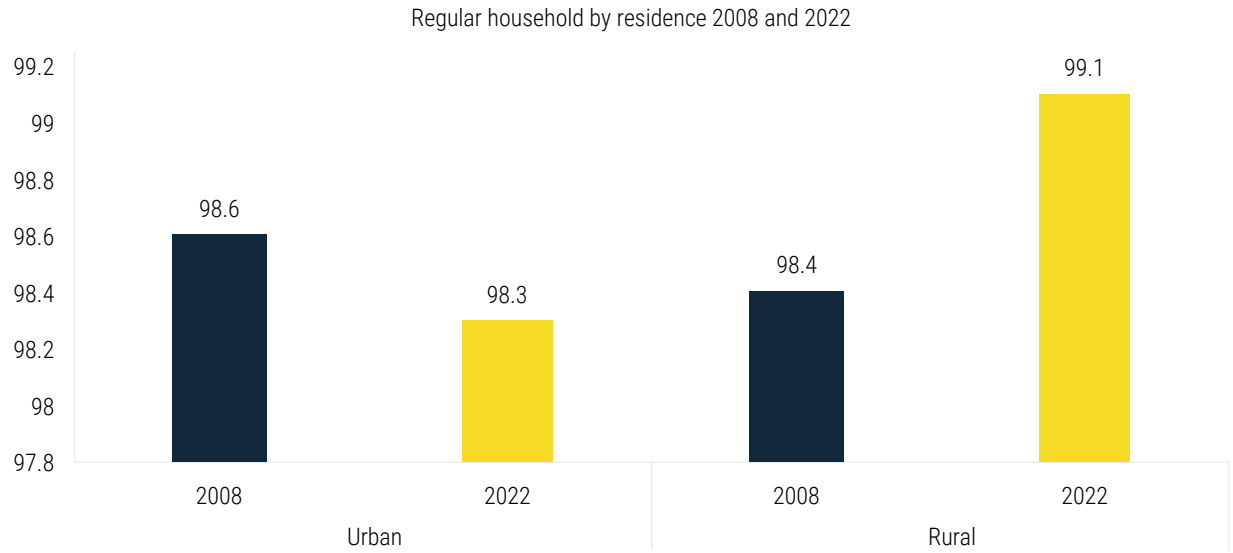
The rural area shows the inverse where regular households increased by 0.7 per cent from 2008 to 2022 as seen in Figure 2.2.

6 Health and related facilities include health facility, home for destitute, mental institution, nurses' home, and leper colony.
7 Religious institutions and convents

Table 2.6 Distribution of population by type of living quarters, sex and residence, 2008 and 2022

Type of living quarter	Urban		Rural		Total	
	2008	2022	2008	2022	2008	2022
Household	98.6	98.3	98.4	99.1	98.5	98.6
Educational	0.2	0.3	0.8	0.2	0.5	0.2
Prison	0	0.1	0	0	0	0.1
Bush Society	0	0	0.2	0.1	0.1	0.1
Orphanage	0.2	0.1	0.1	0.1	0.1	0.1
Floating Population	0.5	0.2	0.2	0.1	0.3	0.1
Others	0.4	1.1	0.3	0.4	0.3	0.8

Figure 2.2 Distribution of regular households by residence, 2008 and 2022



2.5 Household occupancy and size

2.5.1 Number of rooms occupied by households

The household was defined as a group of persons who make common provision of food, shelter and other essentials for living, is a fundamental socio-economic unit in human societies. Households are the centres of demographic, social and economic processes.

Decisions about childbearing, education, healthcare, consumption, labour force participation, migration and savings occur primarily at the household level. Understanding the trends and patterns of household size and composition can thus inform efforts towards the achievement of the 2030 Agenda for Sustainable Development.

The 2022 census collected data on household occupancy and the number of people constituting a household compared to the number of rooms. Table 2.7 shows distribution of households by number of rooms.

Table 2.7 revealed that out of the total of 1,187,272 households in Liberia, 13.8 per cent were one

person households, 14.6 per cent were two-person households, and 15.8 per cent were three person's household.

The table also shows that about 56 per cent of the total households had a family size of four or more household members. Moreover, more than half the households with one (64.7 per cent|) or two household size (55.6 per cent) resided in only one (1) room.

In general, it was observed that the percentage of four persons and over households who lived in one (21.0 per cent) and two rooms (26.0 per cent) was alarming and the Government needs to build more low-cost housing units for low-income earners.

Table 2.7 Percentage distribution of households by size and number of rooms

Household Size	Number of rooms occupied				
	1 Room	2 Rooms	3 Rooms	4+ Rooms	Total (freq.)
1 Person	64.7	16.7	9.3	9.3	164,033
2 Persons	55.6	24.4	10.8	9.2	173,695
3 Persons	46.1	26.6	16.2	11.0	187,320
4 Persons and Over	21.0	26.0	28.0	23.6	662,224
Total (National)	**36.1**	**24.6**	**21.0**	**18.3**	**1,187,272**

Table 2.8 shows distribution of households by number of rooms, sex of the head of household and by rural-urban residence.

The table shows that about 36.1 per cent of households in Liberia resided in one room as compared to 2008 where 34.1 of households were residing in one room. This situation was higher in the urban areas (42.6 per cent) compared to the rural (28.2 per cent).

Majority of the male-headed households in urban areas (42.6 per cent) resided in only one room compared to the rural communities with (27.5 per cent). The table also indicated that about only 18.3 per cent of all households in Liberia resided housing with four or more rooms.

Table 2.8 Distribution of households by number of rooms per household and residence

Number of rooms occupied	Percent of household by residence					
	Urban		Rural		Total (National)	
	2008	2022	2008	2022	2008	2022
1 Room	43.6	42.6	25	28.2	34.1	36.1
2 Rooms	16	22.5	22	27.1	19.1	24.6
3 Rooms	14.6	18.8	23	23.7	18.9	21
4+ Rooms	25.7	16.1	30.1	20.9	27.9	18.3

The census also collected information on the number of rooms' household occupied by county. From Table 2.9 below, about 36 per cent of the total households in Liberia lived in one room.

This situation was extremely serious in Bomi County with 52 per cent of its households occupying one room, followed by Montserrado County with 47 per cent, River Cess with 44.3 per cent, Maryland with 36.4 and Grand Bassa with 35.5 per cent.

The county with the least percentage of its households occupying one room was Lofa with 12.5 per cent.

Table 2.9 Distribution of households by number of rooms and county, 2008 and 2022

County	Number of Rooms Occupied							
	1 Room		2 Rooms		3 Rooms		4+ Rooms	
	2008	2022	2008	2022	2008	2022	2008	2022
Bomi	50.1	51.9	22.2	23.5	15.4	15.4	5.7	9.2
Bong	28.4	27.5	20.9	25.7	16.1	25.1	35.6	21.7
Gbarpolu	23.6	33.0	24.2	27.8	25.9	19.8	25.4	19.4
Grand Bassa	35.6	35.3	22.7	26.5	17.6	20.7	22.8	17.6
Grand Cape Mount	33.2	35.7	21.4	26.2	17.5	18.2	28.0	19.9
Grand Gedeh	11.2	24.5	15.8	31.1	28.9	27.2	44.1	17.2
Grand Kru	12.7	19.4	24.2	27.1	30.1	26.2	33.0	27.3
Lofa	19.9	12.5	23.0	22.1	31.7	30.7	24.8	34.8
Margibi	46.0	32.1	24.4	31.2	12.8	21.0	16.7	15.6
Maryland	16.5	36.2	17.2	23.8	28.2	20.8	37.8	19.3
Montserrado	49.2	46.9	16.0	22.8	13.1	17.5	21.7	12.7
Nimba	16.5	25.2	16.5	22.6	23.5	24.1	43.5	28.1
RiverCess	20.7	44.3	18.7	23.1	29.8	19.7	30.9	13.0
River Gee	6.9	27.3	21.3	29.0	32.2	24.1	39.6	19.7
Sinoe	10.9	26.6	17.9	29.8	27.6	23.0	43.5	20.6
Total (National)	**34.1**	**35.9**	**19.1**	**24.7**	**18.9**	**23.1**	**27.9**	**18.3**

2.6 Households by size and sex of household head

Table 2.10 presents the distribution of households by number of persons and county. At the national level, large household sizes (5 or more persons) accounted for 41 per cent of all the households.

The percentage was high in Grand Kru with 56 per cent of households containing five or more members, followed by Sinoe and River Gee with 51 per cent and 50 per cent, respectively. The medium-sized (i.e. two- to three-person) households accounted for 30.4 per cent. The one person households accounted for about 14 per cent.

Table 2.10 Percentage distribution of households' size and county

County	Percentage of Household Size					
	1 Person	2 Persons	3 Persons	4 Persons	5+ Persons	Total
Bomi	19.6	20	19	15.3	26.1	100
Bong	13.4	15.4	16.6	15.5	39.1	100
Gbarpolu	14.5	16.2	16	14.8	38.4	100
Grand Bassa	14.9	16	16.4	14.8	38	100
Grand Cape Mount	17.9	17.8	17.7	15	31.6	100
Grand Gedeh	8.7	12	14.8	15.1	49.4	100
Grand Kru	5.3	9.7	13.4	15.8	55.9	100
Lofa	8.3	11.3	15	16	49.3	100
Margibi	15	14.9	16.2	15.3	38.5	100
Maryland	11.8	11.4	14.6	16.1	46	100
Montserrado	16.5	15.7	15.7	14.5	37.6	100
Nimba	9.1	11.9	15	15.4	48.6	100
RiverCess	12.8	15.7	16.7	15.4	39.4	100
River Gee	9.3	12.1	14.3	14.1	50.2	100
Sinoe	10	10.9	13.9	14.6	50.5	100
Total (National)	**13.8**	**14.6**	**15.8**	**15**	**40.8**	**100**

Chapter 3: Households' utilities

3.1 Introduction

Household utilities are those basic needs the family use the most every day to keep their household functioning and content. Common utilities include electricity, natural gas, water, sewer, radio, Television, internet and phone.

Affordability entails households being able to pay for services without jeopardizing their ability to purchase other essential goods and services, such as food and medicine. There is no policy on the affordability of household utilities in Liberia, but rather a combination of different initiatives and challenges in the sectors of electricity, water and transport.

3.2 Household access to safe water

Access to water is a basic human right but some people are still unable to access these services due to their social status, disability or inability to afford the high costs. Climate change and an increase in unpredictable and extreme weather is a growing challenge. Long periods of drought affect clean water supplies while flooding can pollute clean water sources and cause outbreaks of disease.

3.2.1 Main source of drinking water

Table 3.1 shows the distribution of households by the main source of drinking water in the country. Pipe-borne or outdoor pump was the highest (46.7 per cent) source of drinking water, followed by river, lake or spring (12.6 per cent), and open well (12.3 per cent).

Table 3.1 Distribution of the main sources of drinking water by sex and residence

Main source of drinking water	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total (N)	Male	Female
Pipe or pump indoors	9.3	9.9	8.5	6.1	6.2	5.9	7.9	8.1	7.4
Pipe or pump Outdoors	47.3	46.3	48.8	45.9	44.4	49.1	46.7	45.4	49
Public taps	3.6	3.6	3.5	2.9	2.7	3.1	3.2	3.2	3.3
Closed well protected	15.4	15.3	15.6	5.3	5.3	5.4	10.8	10.5	11.5
Open well	13.2	12.9	13.5	11.3	11.3	11.3	12.3	12.2	12.6
River lake spring creek	0.4	0.5	0.4	27.4	28.9	24.2	12.6	14.1	10
Water vendors	1.3	1.3	1.2	0.1	0.1	0.1	0.7	0.7	0.7
Bottled water	0.9	1.1	0.7	0.1	0.1	0	0.5	0.6	0.4
Rainwater	8.3	8.8	7.6	0.4	0.4	0.3	4.8	4.8	4.7
Sachet water	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Other	0.1	0.1	0.1	0.4	0.4	0.4	0.3	0.3	0.2
Total (frequency)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

There were no differences in the main source of drinking water between the urban and rural areas. The pipe-borne or outdoor pump accounted for 46.3 per cent of the urban centres and 45.9 in the rural areas.

Generally, the pipe-borne indoors or outdoors, public tabs and closed protected wells were considered safe for drinking in the census.

The distribution of household's main source of drinking water by county and sex is shown in Table 3.2. The main source of drinking water for households nationally was the pipe-borne indoor or pump outdoors (46.7 per cent) of the total households. About 69 per cent of the total households consumed safe drinking water.

In addition, Grand Bassa, Grand Kru, River Cess and Sinoe, more than 40 per cent of households got their water from the pipe or pump outside of the home (Annex 7). Bomi and Maryland had the highest usage of pipe- borne or outdoor pump estimated at about 66 per cent for both counties, respectively. Counties that relied heavily on river, lake or spring as main source of drinking water were River Cess with 60 per cent followed by Grand Bassa with 44 per cent and Grand Kru at 40 per cent. Pipe or indoor pump was hardly used in the counties as it was only Montserrado, Lofa and Sinoe with 10 per cent each indicating the use of pipe or indoor pump for drinking.

Table 3.2 Distribution of household's main source of drinking water by sex

Main source of drinking water	Urban			Rural			Total (National)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Pipe or pump indoors	9.3	9.9	8.5	6.1	6.2	5.9	7.9	8.1	7.4
Pipe or pump Outdoors	47.3	46.3	48.8	45.9	44.4	49.1	46.7	45.4	49
Public taps	3.6	3.6	3.5	2.9	2.7	3.1	3.2	3.2	3.3
Closed well protected	15.4	15.3	15.6	5.3	5.3	5.4	10.8	10.5	11.5
Open well	13.2	12.9	13.5	11.3	11.3	11.3	12.3	12.2	12.6
River lake spring creek	0.4	0.5	0.4	27.4	28.9	24.2	12.6	14.1	10
Water vendors	1.3	1.3	1.2	0.1	0.1	0.1	0.7	0.7	0.7
Bottled water	0.9	1.1	0.7	0.1	0.1	0	0.5	0.6	0.4
Rainwater	8.3	8.8	7.6	0.4	0.4	0.3	4.8	4.8	4.7
Sachet water	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Other	0.1	0.1	0.1	0.4	0.4	0.4	0.3	0.3	0.2
Total (frequency)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

3.3 Human waste disposal system

Proper disposal of human waste is important to avoid pollution of water sources, the negative implications of someone else finding it, minimize the possibility of spreading disease, and maximize the rate of decomposition. Liberia still has some sanitation problems as evidenced by diseases associated with poor sanitation. Monrovia, the country's capital city, suffers from poor sewer systems as well as inadequate water supply. The Government with the support of development partners has been working together to address sanitation as well as environmental concerns in the country.

Table 3.3 shows the types of human waste disposal facilities in Liberia. The flush toilets and covered pit latrines were classified as safe waste disposal systems. Flush toilet coverage was about 40 per cent nationally and 15 per cent in rural areas.

About a third (34.9 per cent) of the households nationally relied on bushes for human waste disposal as indicated in Table 3.3 and **Figure 3.1**. A little over 58 per cent of these households resided in rural areas and 6 per cent in urban centres. The difference between male and female-headed households in terms of waste disposal systems was marginal for flush toilet in households only, open pit latrine inside and the beaches or riverside.

Generally, there was need for improvement of waste disposal systems to reduce a possible risk of water-borne diseases and illnesses that could result due to poor hygienic conditions.

Table 3.3 Distribution of household's main source of waste disposal by sex and residence

Main source of waste disposal	Gender of households heads								
	Urban			Rural			Total (National)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Flush toilet share only with hhs	34.9	35.8	33.4	6.9	7.1	6.5	22.3	22.1	22.6
Flush toilet shared with other HHS	25.6	25.1	26.3	8.5	8.3	9	17.9	17.1	19.3
Acovered pit latrine outside	19.5	19.1	20.2	12.7	12.5	13.2	16.4	16	17.3
Open pit Latrine	11	11	11	11.4	11.3	11.4	11.2	11.2	11.2
Bush	6	5.9	6.1	58.3	58.7	57.6	29.6	31.2	26.9
Beach/riverside	2.8	2.8	2.7	2.1	2	2.2	2.4	2.4	2.5
Other	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.2	0.2
Total (Freq.)	**650,667**	**398,621**	**252,046**	**536,605**	**366,315**	**170,290**	**1,187,272**	**764,936**	**422,336**

Figure 3.1 Percentage distribution of households by main source of human waste disposal

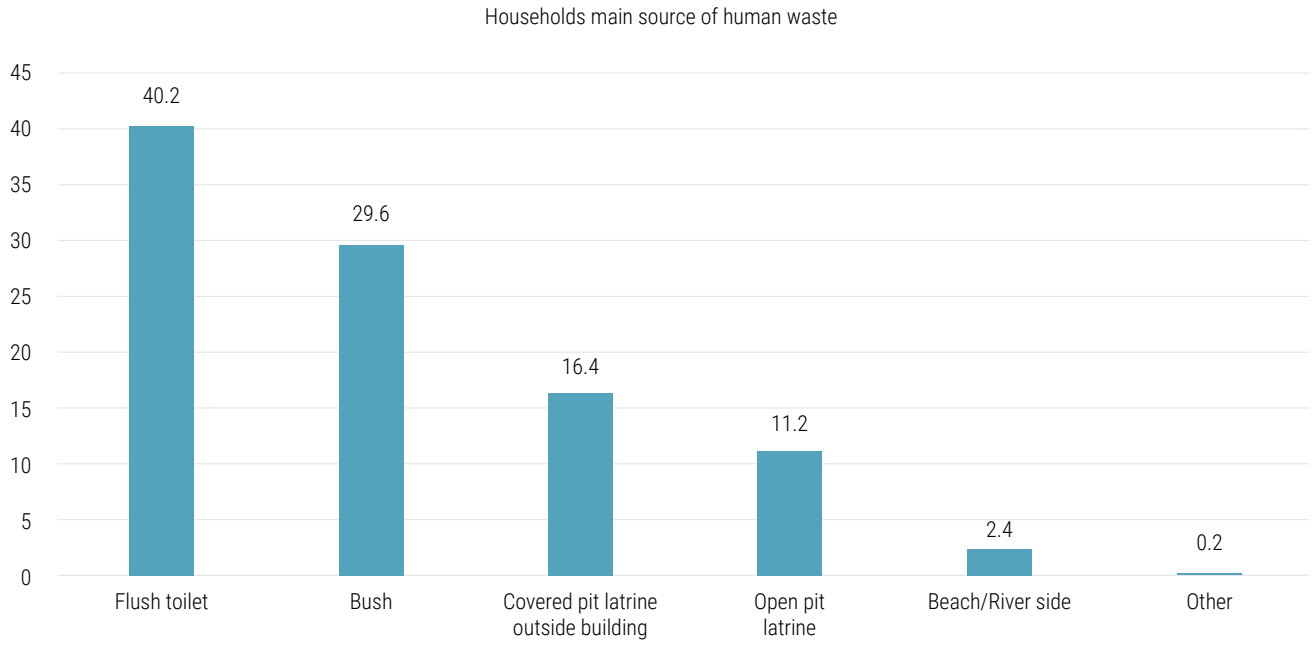


Table 3.4 presents the distribution of household heads by type of human waste disposal systems in the counties. The bush again was the main type of human waste disposal in all counties except for Montserrado which is more urbanized and accounted for only 7 per cent of the households. In some counties the major reliance on bush for human waste disposal accounted for more than 50 per cent. These counties included Grand Bassa with 58.7 per cent, Bomi with 58 per cent, Gbarpolu and Sinoe with 57 per cent each. Besides Montserrado, the county with the lowest percentage of households using the bush as human waste disposal was Maryland with 22 per cent. The large use of bush was in Bomi County.

Montserrado County, the seat of the country's capital city (Monrovia), recorded the highest use of flush for household members only at 40 per cent, and flush toilet outside with other household members at 26 per cent.

Table 3.4 Distribution of households by type of human waste disposal and county

County	Household's main human waste disposal system							
	Flush toilet for HH use only	Flush toilet shared with other HHs	Covered pit latrine outside building	Open pit latrine	Bush	Beach or Riverside	Other	Total
Bomi	8.2	12	11.7	8.6	58	1.6	0	100.0
Bong	10.5	13	17	10.2	47.9	1.3	0	100.0
Gbarpolu	5.1	6.7	14.2	12.7	57.3	4	0	100.0
Grand Bassa	9.1	10.3	12.9	7	58.6	2.1	0	100.0
Grand Cape Mount	10.6	14.6	19.4	13.1	40.2	2	0.2	100.0

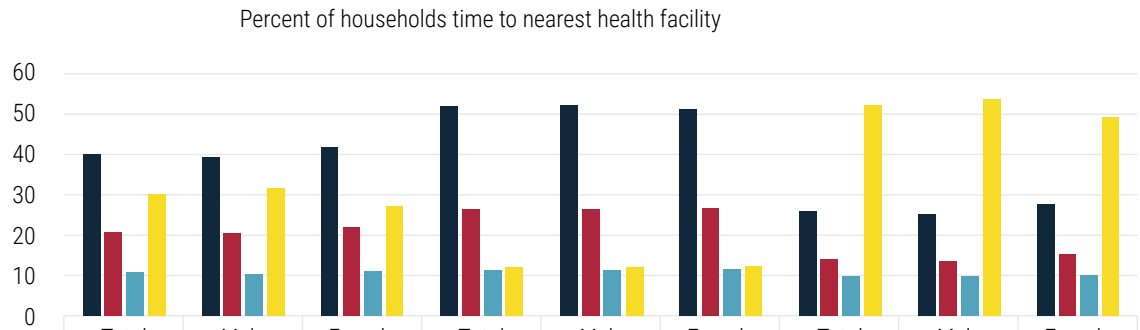
Grand Gedeh	9	11	24.1	18.9	36.4	0.5	0.2	100.0
Grand Kru	4.1	4.3	17.8	20.6	48.1	5	0.2	100.0
Lofa	7.4	10.3	20.1	19.2	40.4	2.7	0	100.0
Margibi	23.2	19.3	16.9	8.5	31.2	0.8	0.1	100.0
Maryland	9.2	10.6	32.1	21	22	4.7	0.5	100.0
Montserrado	40.1	25.6	14.6	9.1	6.9	3.3	0.4	100.0
Nimba	16.8	20.7	14.8	9.4	37.7	0.5	0.1	100.0
River Cess	3.7	4.7	6.2	5.8	76.3	3.3	0	100.0
River Gee	4.8	8.1	39.2	22.9	23.6	1.1	0.3	100.0
Sinoe	9.3	7	7.5	12.9	57.4	5.7	0.1	100.0
Total (National)	**22.2**	**17.9**	**16.4**	**11.1**	**29.6**	**2.4**	**0.2**	**100.0**

3.4 Time to the nearest health facility

The time taken to reach the nearest health facility walking, is an indicator of accessibility to health services. Access to healthcare means having "the timely use of personal health services to achieve the best health outcomes". Access to comprehensive, high-quality healthcare services is important for promoting and maintaining health, preventing and managing disease, reducing unnecessary disability and premature death, and achieving health equity for all.

Figure 3.2 indicates that, about 40 of the total households in Liberia took less than 20 minutes to access the nearest health facility while 30 per cent took one hour or more. About 21 per cent took 20–39 minutes to access the nearest health facility from their homes.

Figure 3.2 Per cent distribution of households' time to the nearest health facility by sex and residence



	Liberia			Urban			Rural		
Less than 20 mins	39.5	38.6	41.1	51.1	51.5	50.5	25.4	24.6	27.2
20 to 39 mins	20.5	19.9	21.6	26.1	26	26.3	13.7	13.2	14.8
40 to 59 mins	10.3	10.2	10.7	11.1	10.9	11.3	9.5	9.4	9.7
1 hour or over	29.7	31.3	26.6	11.7	11.6	11.9	51.4	52.9	48.4

In Table 3.5, Montserrado, the country's capital city, 54 per cent of households took less than 20 minutes followed by Sinoe with 43 per cent. In other counties, 50 per cent of households took an hour or more to access the nearest health centres. These counties included River Cess with 60 per cent, Gbarpolu and Grand Bassa with 51 per cent each.

Table 3.5 Distribution of households' time to reach the nearest health facility by county

County	Household's Time to the Nearest Health Facility				
	Less than 20 minutes	20 to 39 minutes	40 to 59 minutes	1 hour or over	Total (frequency)
Bomi	28.6	18.0	10.7	42.7	38,591
Bong	28.4	17.7	11.0	42.8	110,099
Gbarpolu	32.4	10.2	6.8	50.7	22,411
Grand Bassa	26.2	14.0	9.3	50.5	69,287
Grand Cape Mount	36.2	17.6	9.0	37.1	45,170
Grand Gedeh	30.8	21.2	11.6	36.3	43,663
Grand Kru	30.7	20.3	8.7	40.3	20,604
Lofa	33.1	16.2	11.2	39.5	75,260
Margibi	33.9	24.0	13.1	29.0	72,276
Maryland	30.8	22.0	16.3	30.9	37,214
Montserrado	54.1	24.1	9.4	12.4	449,910
Nimba	26.9	20.8	11.6	40.7	127,951
RiverCess	25.6	7.4	7.3	59.7	21,087
River Gee	33.9	18.2	10.8	37.1	23,906
Sinoe	42.8	16.7	8.3	32.2	29,843
Total (National)	**39.5**	**20.5**	**10.3**	**29.7**	**1,187,272**

Table 3.6 shows the distribution of households' time to reach the nearest health facility by sex and residence. There were sharp differentials observed between the urban and rural areas of the country. About 51 per cent of the households in urban areas reported that they took less than 20 minutes to reach the nearest health facility while it was 25 per cent of households in rural areas for the same time taken to the nearest health facility.

There were about the same percentages of male to female-headed households in the urban using the same time in all the categories of time taken to reach the nearest health facility. This reflected household distribution by sex of the household head.

Most of the residents in rural areas reported to take relatively longer time to reach the nearest health facility compared to the urban residents, which depicted the poor state for health delivery in rural areas. This implied that the country might be losing people on account of poor access to health services.

Table 3.6 Distribution of households' time to reach the nearest health facility by sex and residence

Walking time to the nearest health Facility	Urban			Rural			Total (N)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Less than 20 minutes	51.1	51.5	50.5	25.4	24.6	27.2	39.5	38.6	41.1
20 To 39 Minutes	26.1	26	26.3	13.7	13.2	14.8	20.5	19.9	21.6
40 To 59 Minutes	11.1	10.9	11.3	9.5	9.4	9.7	10.3	10.2	10.7
1 Hour or over	11.7	11.6	11.9	51.4	52.9	48.4	29.7	31.3	26.6
Total (freq)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

3.5 Time to the nearest primary school

Primary school is the first stage of compulsory education and generally covers the first six or seven years of school life. Primary education is the foremost and basic right of every child. Ensuring accessibility to all children is not only the duty of the Government but also of parents.

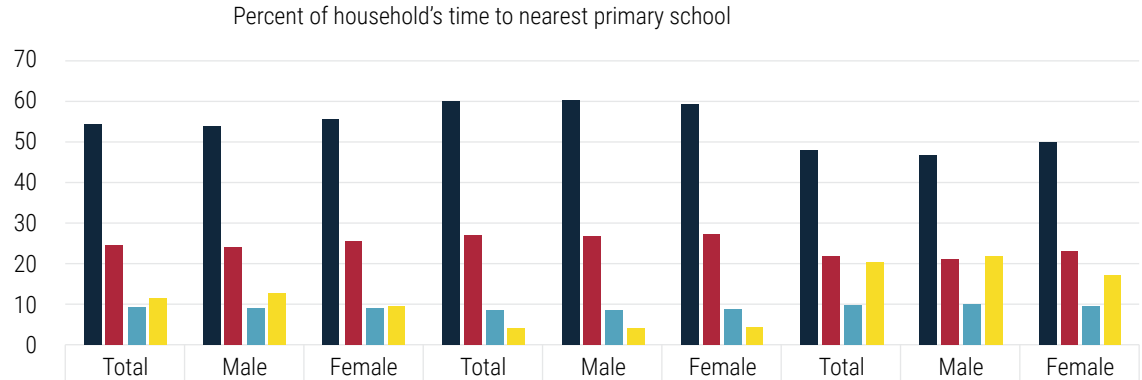
The main objective of primary education is to bring awareness among the children, open avenues of opportunities along with self-development and reduce inter-generational poverty. It is the first step in the making of welfare and society.

Primary education is an out-and-out pre-requisite for continuous development. It is important to note that proximity to the schools does not imply high-quality education. The emphasis should be, to ensure the availability of qualified teachers and teaching aids as well as adequate textbook by Government.

Figure 3.3 gives the per cent distribution of households in Liberia by the time taken to the nearest primary school. The figure shows that 54 per cent of the households took less than 20 minutes to reach the nearest primary school.

About 60 per cent of households in the urban area accessed the nearest primary school in less than 40 minutes as against 48 per cent in the rural areas.

Figure 3.3 Distribution of households' time to nearest primary school by sex and residence



	Liberia			Urban			Rural		
Less than 20 mins	54.2	53.6	55.2	59.5	59.9	58.9	47.7	46.7	49.8
20 to 39 mins	24.7	24.2	25.7	27.1	26.9	27.4	21.8	21.2	23.2
40 to 59 mins	9.4	9.4	9.4	8.9	8.7	9.1	10	10.1	9.8
1 hour or over	11.7	12.8	9.7	4.5	4.5	4.6	20.5	22	17.2

Table 3.7 below presents the percentage distribution of households in the counties by walking time to the nearest primary school. Access to primary school was good. Nine out of 15 counties had more than 50 per cent of their households accessing school in less than 20 minutes.

For instance, about 59 per cent of households in Gbarpolu, 62 per cent in Montserrado, 56 per cent in River Cess, 55 per cent in Nimba, 54 per cent in River Gee, 53 per cent in Sinoe and 52 per cent in both Lofa and Grand Cape Mount took less than 20 minutes to access the nearest primary school.

The county with the least percentage of household in this category is Grand Bassa with 36 per cent. The table shows that there were still substantial proportions of households in the counties reportedly taking, at least, one hour to get to the nearest primary school.

Table 3.7 Per cent distribution of households' time to the nearest primary school by county

County	Households time to nearest primary school				
	Less than 20 minutes	20 to 39 minutes	40 to 59 minutes	1 hour or over	Total
Bomi	49.2	25.7	8.7	16.4	100.0
Bong	47.3	23.2	10.7	18.8	100.0
Gbarpolu	58.9	17.5	5.9	17.6	100.0
Grand Bassa	35.8	19.3	11.5	33.4	100.0
Grand Cape Mount	52.2	24.7	8.9	14.2	100.0
Grand Gedeh	47.8	26.8	9.6	15.7	100.0
Grand Kru	46.2	32.8	9.1	11.9	100.0
Lofa	52.3	24.3	10.6	12.8	100.0
Margibi	42.3	30.2	12.9	14.6	100.0
Maryland	48.2	30.2	13.2	8.4	100.0
Montserrado	62.4	24.3	8.1	5.2	100.0
Nimba	55.1	28	9.4	7.5	100.0
River Cess	55.8	13.7	5.7	24.8	100.0
River Gee	54.1	23.2	10	12.8	100.0
Sinoe	53.1	21.7	9	16.1	100.0
Total (National)	**54.2**	**24.7**	**9.4**	**11.7**	**100.0**

3.6 Main source of fuel for cooking

Fuel for cooking affects the living environment of household members especially the excessive use of charcoal and wood has health implications, and it also contributes to environmental degradation.

The distribution of households by main source of fuel for cooking, sex of household head and by rural-urban residence is shown in Table 3.8. Households in Liberia greatly depended on charcoal (52.2 per cent) and wood (45 per cent) for cooking fuel and wood. The rural areas mostly depended on firewood (85 per cent) while the urban areas depended on charcoal (83 per cent).

Table 3.8 Distribution of households' main source of fuel for cooking by sex and residence

Fuel for cooking	Urban			Rural			Total (N)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Electricity	2.3	2.5	1.9	0.4	0.4	0.4	1.4	1.5	1.3
Cooking gas	1.6	1.7	1.3	0.2	0.2	0.1	1.0	1.0	0.9
Kerosene	0.4	0.4	0.3	0.1	0.1	0.2	0.3	0.3	0.3
Charcoal	83.3	83.4	83.2	14.3	14.2	14.5	52.2	50.3	55.5
Wood	11.7	11.1	12.8	84.7	84.8	84.6	44.7	46.3	41.7
Other	0.7	1.0	0.4	0.2	0.2	0.2	0.5	0.6	0.3
Total (freq)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

Table 3.9 shows the distribution of households by their main sources of fuel for cooking in the counties. Wood was the most used fuel for cooking in all counties except Montserrado whose households depended mostly on charcoal (87.1 per cent).

The use of electricity, gas and kerosene are minimal in all counties as can be seen from the table. The heavy dependence on wood and charcoal is a health and environmental threat with serious implication for the nation. Counties with high percentage of the use of wood as fuel for coking were River Cess with 87 per cent followed by Lofa with 82.3 per cent, Gbarpolu with about 81 per cent.

Table 3.9 Distribution of heads of household's main source of fuel for cooking by county

County	Household's Main Source of Fuel for Cooking						
	Electricity	Cooking Gas	Kerosene	Charcoal	Wood	Other	Total
Bomi	0.7	0.3	0.2	31.2	67.4	0.3	100.0
Bong	0.4	0.1	0.1	29.3	69.8	0.2	100.0
Gbarpolu	0.2	0.1	0.2	18.8	80.6	0.2	100.0
Grand Bassa	0.6	0.3	0.1	31.4	67.3	0.3	100.0
Grand Cape Mount	2.2	0.4	0.4	35.3	61.4	0.4	100.0
Grand Gedeh	0.8	0.3	0.2	29.7	68.5	0.4	100.0

Grand Kru	1.0	0.4	0.1	20.0	78.2	0.3	100.0
Lofa	0.5	0.1	0.1	16.7	82.3	0.2	100.0
Margibi	0.7	0.7	0.2	59.2	38.9	0.3	100.0
Maryland	1.4	0.6	0.1	40.6	57.0	0.2	100.0
Montserrado	2.5	2.1	0.4	87.1	7.0	0.9	100.0
Nimba	0.6	0.2	0.2	27.4	71.4	0.2	100.0
River Cess	0.0	0.1	0.0	13.1	86.5	0.2	100.0
River Gee	0.1	0.2	0.2	24.9	74.4	0.1	100.0
Sinoe	1.5	0.6	0.2	32.5	64.8	0.3	100.0
Total (National)	**1.4**	**1.0**	**0.3**	**52.2**	**44.7**	**0.5**	**100.0**

3.7 Household's main source of fuel for lighting

Lighting is a general term that refers to the process of illuminating a home, workplace, or street to make it liveable through different technologies such as light bulbs, kerosene lanterns or charcoal burners. The amount of light that can be obtained for a certain amount of energy varies depending on the fuel used.

Table 3.10 provides the type of fuel for lighting used in households by sex and residence. It shows that 55 per cent of households in the country used the battery light for lighting purposes commonly referred to as the Chinese light.

The next commonly used power source was provided by the Government known as (LEC) accounting for 26 per cent of households (Figure 3.4). In urban areas, 45 per cent used the LEC, and 39 per cent used the Chinese light. In rural areas, 74 per cent of the households used Chinese light as their main source of fuel for light.

The use of electricity (own generator, community power, solar panel and LEC) is mostly in the urban areas (57.6 per cent) while battery torch lights is the main source of lighting in the rural areas (73.6 per cent). Only 2 per cent of the households in rural areas used electricity provided by the Liberia Electricity Company. The major source of electricity generation in the rural areas was solar panels.

Table 3.10 Distribution of households' main source of fuel for lighting by sex by and residence

Main source of light	Household by sex and residence								
	Urban			Rural			Total (N)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Own generator	5.6	6.3	4.5	3.8	4	3.3	4.8	5.2	4
Lec-govt	45.0	45.6	44	2.2	2	2.5	25.7	24.8	27.3
Community	3.2	3.4	2.9	1	1	0.9	2.2	2.3	2.1
Solar panel	3.8	4	3.5	8	8.2	7.4	5.7	6	5.1
Kerosene	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3

Candle	1.4	1.3	1.5	1.5	1.5	1.6	1.4	1.4	1.5
Palm oil lamp	0.2	0.2	0.3	2.6	2.6	2.8	1.3	1.3	1.3
Wood	0.5	0.5	0.6	6.7	6.7	6.6	3.3	3.5	3
Chinese light	39.4	37.8	42	73.6	73.2	74.3	54.8	54.8	55.0
Other	0.6	0.6	0.5	0.3	0.3	0.3	0.5	0.5	0.4
Total (freq)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

Figure 3.4 Percentage distribution of households by source of lighting and residence

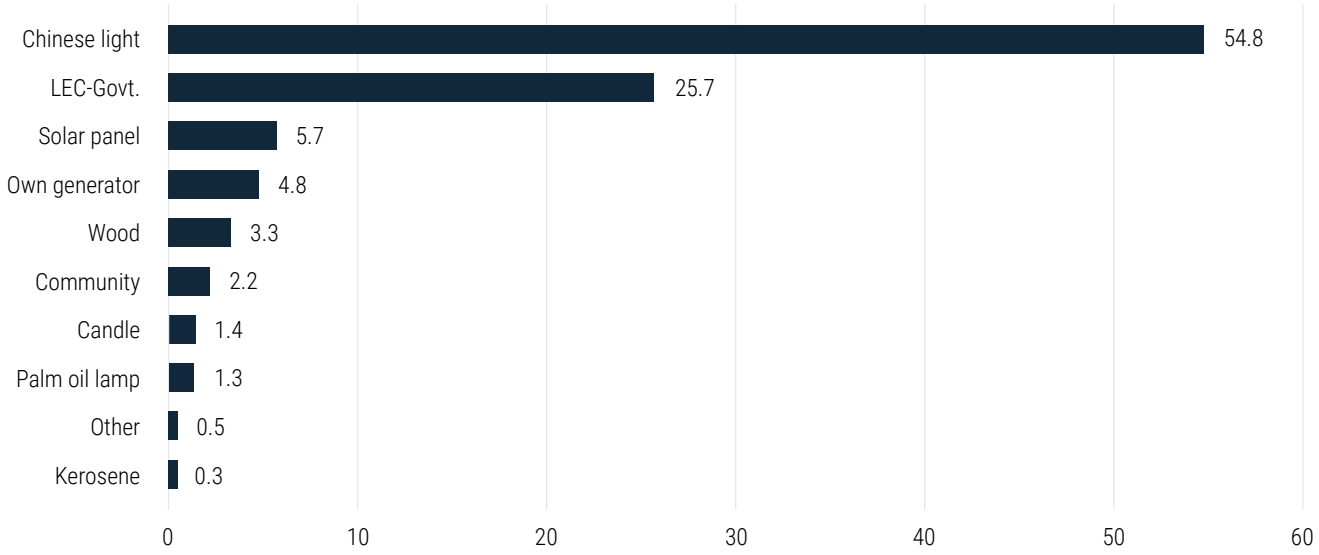


Table 3.11 also shows the distribution of household's main source of fuel for lighting by county. It indicated that except for Maryland County, more than 40 per cent of households in all other counties used the Chinese light as their main source of fuel for lighting in their homes.

Nimba and Bong ranked highest with 82 per cent each, followed by Gbarpolu with 79 per cent, Grand Kru with 74 per cent and Montserrado County with 73 per cent.

Table 3.11 Distribution of household's main source of fuel for light by county

County	Household's Main Source of Fuel for Light										
	Own generator	LEC/Govt.	Community	Solar panel	Kerosene	Candle	Palm oil lamp	Wood	Chinese light	Other	Total
Bomi	3	21.6	0.5	3.4	0.5	1.2	0.8	4.5	64.2	0.5	100.0
Bong	3.7	1.7	0.9	3.5	0.2	1.1	2	4.8	81.9	0.3	100.0
Gbarpolu	4.2	0.3	2.3	4.1	0.3	1.4	1.4	6.3	79.3	0.3	100.0
Grand Bassa	6.2	10.6	2.2	11.8	0.9	1.3	0.4	5.2	61	0.2	100.0
Grand Cape Mount	3.5	8.8	1.9	13.5	0.3	2.6	1.3	7.1	60.7	0.4	100.0
Grand Gedeh	4.5	0.5	1.8	20.2	0.2	3.2	12.6	8.9	47.5	0.5	100.0
Grand Kru	3.9	0.3	1.2	11.6	0.2	1	1.4	5.9	74.2	0.3	100.0
Lofa	5.7	9.4	4.1	4.8	0.2	1.3	0.9	4	68.6	1.1	100.0
Margibi	3.5	26	1	7.9	0.3	2.9	6.2	2.2	49.3	0.6	100.0
Maryland	5.8	57.5	3	1.4	0.2	1.2	0.1	0.4	29.9	0.4	100.0
Montserrado	3.1	7.7	0.5	7.6	0.3	1.6	1.6	4	73.2	0.4	100.0
Nimba	2.9	0	1	9.2	0.1	0.7	0.7	3.2	82	0.2	100.0
River Cess	6.6	1	6.7	12.3	1.2	3.1	4	9	54.7	1.3	100.0
River Gee	5	0.3	1.3	23.2	0.1	1.8	2	2.8	63	0.5	100.0
Sinoe	4.8	0.3	0.8	7.7	0.3	1.2	1.7	8	74.9	0.2	100.0

Chapter 4: Housing conditions

4.1 Introduction

This chapter presents results of the housing conditions for the LPHC. Shelter is a basic need, and every government strives to ensure that the population has access to adequate housing. The housing conditions reveal a lot about the welfare of the population. The 2022 census collected data on the living conditions of the population in terms of housing units' ownership, repair condition of the unit, and the type of materials used for construction.

4.2 Households' ownership status

Table 4.1 presents the distribution of households by ownership of housing unit in Liberia. More than half (63.3 per cent) of the households were living in owned housing units. Note that owned housing units included purchased, self-constructed, inherited and gifted housing units. There were, however, urban-rural disparities in the ownership status.

The proportions of owned housing units in rural and urban areas were 81.1 and 46.7 per cent respectively, compared to 84.5 and 55.3 per cent in 2008. This shows that more households owned their housing units in Liberia. Provision of public housing was limited, with Government housing units accounting for only 0.5 per cent compared to 0.8 in 2008. Also, the NHA accounted for 0.2 per cent compared to 0.4 per cent in 2008.

Table 4.1 Distribution of households by ownership status of housing unit by residence

Household ownership status	Household by residence					
	Urban		Rural		Total (N)	
	2008	2022	2008	2022	2008	2022
Owned	55.4	46.7	84.5	81.1	70.2	63.3
Mortgaged/NHA	1.7	0.2	0.6	0.2	1.2	0.2
Rented	31	44.7	18	8	20	28.1
Government (provided)	4.7	0.5	3.5	0.5	3.5	0.5
Private company (provided)	12.3	0.9	7.5	2.7	10	1.7
Private individual (provided)	13,8	2.2	9	3.1	6.5	2.6
Squatter	7.6	2.6	3.5	4.3	5.5	3.4
Other	4.2	0.3	1.9	0.2	3	0.3

Table 4.2 shows the ownership status of housing units in the counties. A high proportion of households in the counties lived in owned housing units. Counties with the highest percentage of owned housing units were found in Lofa (83 per cent), River Cess (77 per cent), Nimba (76 per cent), Bong (75 per cent), Grand Gedeh and Grand Kru (71 per cent each).

Table 4.2 Distribution of housing units' ownership status of housing unit by county

County	Owned	Mortgage NHA	Rented	Government (provided)	Private company (provided)	Private individual (provided)	Squatter	Other	Total
Bomi	69.7	0.1	15.2	0.8	3.4	2.6	7.6	0.6	100.0
Bong	78.3	0.1	16.6	0.4	0.3	1.7	2.5	0.2	100.0
Gbarpolu	74.4	0.3	14.9	0.5	0.2	2.2	7.5	0.1	100.0
Grand Bassa	71.2	0.1	17.2	0.7	4	2.9	3.8	0.2	100.0
Grand Cape Mount	73.4	0.3	17.7	0.3	1.8	2.5	3.8	0.1	100.0
Grand Gedeh	75.4	0.1	17.9	0.8	1.2	1.9	2.5	0.2	100.0
Grand Kru	74.7	0.1	15.1	0.8	1.9	5	2.2	0.2	100.0
Lofa	86.4	0.2	7.3	0.4	0.2	4.1	1.3	0.1	100.0
Margibi	58.1	0.2	23	1.1	9.6	2.8	5	0.3	100.0
Maryland	61.5	0.1	29.8	0.8	1	1.8	4.7	0.3	100.0
Montserrado	45.8	0.3	47.2	0.3	0.6	2.4	3	0.4	100.0
Nimba	78.7	0.2	13.5	0.5	2	2.8	2.3	0.1	100.0
River Cess	79.2	0.2	9.9	0.4	0.2	2.4	7.6	0.1	100.0
River Gee	73.1	0.1	19	0.7	0.6	1.9	4.3	0.3	100.0
Sinoe	66.1	0.1	19.5	0.6	4.9	3.3	4.9	0.7	100.0

4.3 Repair needs of housing units

Table 4.3 shows the distribution of households by current repair needs. Nationally, Households with no repairs or minor repair needs accounted for 83 per cent compared to 55.6 per cent in 2008. Some 50 per cent were said to have minor repair and reconstruction needs. About 43 per cent of the housing units in urban areas had no repairs and 42 per cent for minor repair needs compared to 36 per cent for no repair needs and 45 per cent for minor repairs in the rural areas.

Table 4.3 Per cent distribution of households' housing current repair needs by residence

Current repair needs	Households by residence								
	Urban			Rural			Total (N)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
No repairs	42.5	42.9	41.8	36	36.4	35	39.5	39.8	39.1
Minor repairs	42.3	42	42.8	45	44.5	46	43.5	43.2	44.1
Rehabilitation	9.5	9.4	9.6	11.9	11.9	12.1	10.6	10.6	10.6
Reconstruction	5.7	5.7	5.7	7.1	7.3	6.8	6.3	6.4	6.2
Total (frequency)	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

Table 4.4 shows the distribution of households' current repair needs by county. All the counties reported percentages ranging from 20 to 45 per cent of households having no repair needs. Sinoe County had the highest percentage (15 per cent) of the households which had rehabilitation needs and 9 per cent for reconstruction needs.

This is followed by Maryland County with 13 per cent of households with rehabilitation needs and 9 per cent for reconstruction needs. The high level of reconstruction for these two counties could be attributed to the inaccessibility of housing materials due to bad roads.

Table 4.4 Distribution of heads of households by current housing repair needs and county

County	Households current housing repair needs				
	No repairs	Minor repairs	Rehabilitation	Reconstruction	Total (freq.)
Bomi	28.4	50.6	13.1	7.9	38,591
Bong	33.5	49.3	12.3	4.9	110,099
Gbarpolu	37.5	42.1	13.5	6.8	22,411
Grand Bassa	44.1	39.1	10.2	6.7	69,287
Grand Cape Mount	42.1	41.4	10.1	6.5	45,170
Grand Gedeh	43.3	34.1	13.7	8.8	43,663
Grand Kru	42.5	40	11.7	5.8	20,604
Lofa	33.3	51	9.8	5.9	75,260
Margibi	45.1	40.4	8.8	5.7	72,276
Maryland	32.2	46.1	12.8	8.9	37,214
Montserrado	42.6	41.6	9.4	6.4	449,910
Nimba	38.4	46.6	10.5	4.4	127,951
River Cess	36.2	44.8	12.1	6.9	21,087
River Gee	20.1	57.9	12.8	9.3	23,906
Sinoe	44	32.1	14.7	9.2	29,843
Total (National)	**39.5**	**43.5**	**10.6**	**6.3**	**1,187,272**

4.4 Quality of housing by type of building materials used

4.4.1 Type of materials used for housings' outer walls

Table 4.5 shows the distribution of households by type of construction materials used for the outer walls by county. Nationally, only 32 per cent of households used cement blocks as the construction material for their housings' outer wall. Those households with mud and sticks or mud and bricks accounted for 46.3 per cent.

By residence, households whose outer walls are constructed with cement blocks accounted for 51 per cent in urban centres and 8.5 per cent in the rural areas. The rural households with the outer wall of their homes being constructed with mud and bricks or sticks, accounted for 77.4 per cent as compared to 20.1 per cent for households in urban centres.

All the counties, except Montserrado (4 per cent), Lofa (15 per cent), Nimba (15.5 per cent), and Margibi (21 per cent) had a substantial proportion of housing units constructed out of mud and bricks or sticks for outer walls. The counties with the highest proportions of mud and sticks were River Gee with 81.6 per cent followed by River Cess and Grand Kru with 79.7 per cent and 79.2 per cent, respectively.

Montserrado reported 9.3 per cent of the outer walls of the housing units constructed from mud and bricks or sticks and 61 per cent constructed from cement blocks as compared to 68 per cent in 2008. Montserrado County had relatively better outer wall materials because it is the seat of the capital city of Liberia with better economic opportunities for the residents.

Table 4.5 Per cent distribution of heads of households by type of outer wall and county

County	Main Construction Materials of Housing (Outer Walls)								
	Stone Concrete	Cement Blocks	Clay Bricks	Zinc or Iron	Wood or Board	Mud & Bricks	Mud & Stick	Reed Bamboo Grass or mat	Other
Bomi	6.6	16.8	7.4	1.3	0.8	16.2	49.8	1.1	0.0
Bong	6.9	11.7	7.7	0.9	0.5	28.2	43.9	0.1	0.1
Gbarpolu	6.4	2.5	2.5	1.3	0.6	17.9	68.2	0.6	0.0
Grand Bassa	6.2	22.2	3.3	2.4	0.9	11.8	51.8	1.3	0.2
Grand Cape Mount	7.5	17.8	8.1	3.3	1.4	24.6	35.2	2.0	0.1
Grand Gedeh	6.1	9.9	4.7	1.2	1.0	19.8	56.3	0.8	0.3
Grand Kru	4.5	4.4	1.1	0.6	1.4	7.5	79.2	1.3	0.1
Lofa	5.9	7.5	5.3	0.8	1.4	63.7	15	0.3	0.0
Margibi	8.4	35.2	12.8	7.1	0.8	13.7	21	0.8	0.1
Maryland	6.8	11	1.2	1.5	1	8	70.1	0.2	0.1
Montserrado	14.9	60.8	2.8	11.5	0.3	5.2	4.1	0.1	0.2
Nimba	8	11.7	11.4	0.9	0.8	51.3	15.5	0.2	0.2
River Cess	2.8	3.7	1.1	0.7	1	9.4	79.7	1.2	0.6
River Gee	5.3	2.6	0.8	0.2	0.5	8.2	81.6	0.7	0.1
Sinoe	7.6	11.5	2.5	1.9	2.6	10.8	62.1	0.6	0.3
Total (National)	**9.9**	**31.8**	**5.2**	**5.5**	**0.7**	**19.2**	**27.1**	**0.5**	**0.1**

4.4.2 Type of material used for housings' floor

Depending on household needs, preferences and budget, choice can be made from a variety of flooring materials use, such as tiles, carpet, wood, stone, laminate, vinyl, concrete and more. Each type has its unique benefits and drawbacks, and some may be more suitable for certain homes than others.

Table 4.6 presents the percentage distribution of households by type of construction materials of the floor of the housing units and county. Mud floors accounted for more than 50 per cent in all the counties except Montserrado County (9 per cent).

River Cess and Grand Kru had the highest proportions (over 90 per cent) of households whose floors were made of mud. In Montserrado County the households residing in housing units made of cemented floors were about 70 per cent.

This implies that poor-quality housing was predominantly rural based because Montserrado County is more urbanized.

Table 4.6 Percentage distribution of heads of households by type of floor material and county

County	Households Materials Used for Floor					
	Concrete or Cement	Tiles	Wood	Mud	Other	Total
Bomi	45.6	2.3	3.6	48.4	0.1	100.0
Bong	38	3.1	2.1	56.7	0.1	100.0
Gbarpolu	20.9	1.1	2.6	75.4	0.1	100.0
Grand Bassa	36.4	3.7	2.2	57.3	0.4	100.0
Grand Cape Mount	49.6	2.3	2.6	44.2	1.2	100.0
Grand Gedeh	36.2	2.8	2.7	57.9	0.4	100.0
Grand Kru	32	1.2	3.1	63.6	0.1	100.0
Lofa	31.2	1.5	3.9	63.2	0.2	100.0
Margibi	57.4	10.7	2.6	28.9	0.4	100.0
Maryland	56.9	3.8	2.1	36.7	0.5	100.0
Montserrado	66.2	23	1.1	8.8	0.8	100.0
Nimba	48.9	3.4	2.3	45.2	0.2	100.0
RiverCess	22.2	0.9	1.2	75.4	0.3	100.0
River Gee	39.4	1.0	1.8	57.6	0.3	100.0
Sinoe	32.8	2.1	2.6	62.0	0.5	100.0
Total (National)	**50.9**	**10.9**	**2**	**35.7**	**0.5**	**100.0**

Chapter 5: Household welfare

5.1 Introduction

This chapter provides information on the household's ownership of selected assets. The quality of housing unit and means of transport were used as indicators of welfare. Some key factors considered on households' amenities or assets from the census data are examined as follows:

- The availability of essential assets in the households such as furniture, mattresses and radios.
- Household access to information, communications and technology devices for use by household members.
- Household ownership of mobility assets, including motorbikes, vehicles or tricycles.

5.2 Ownership of essential household amenities

Household wealth is essential to determine the economic well-being of a country. Whenever the household has financial challenges, because of sickness, unemployment, etc., household amenities (assets) can be sold to mitigate or minimize any immediate needs. Amenities add comfort, convenience, value and desirability to your home.

We live in an interconnected world, and technology is used in everyday life all the time. More and more buyers are seeking homes with the latest smart upgrades. Integrated technology allows homeowners to control their home's appliances, temperature, sprinklers, lighting and home security through their smartphones.

The 2022 considered items such as mattresses, furniture, radios and cell phones as amenities that are essential for any home, The census provided information on households' essential amenities that include furniture, mattress, radio and mobile phone.

Table 5.1 shows the percentage distribution of household heads by essential amenities by residence. About 84 per cent of the households in Liberia had mattress in their homes, 53 per cent had furniture, while 47 per cent had radio and 63 per cent had a mobile phone. The highest percentage of households' ownership of mattress was in the urban communities (92.3 per cent), while about 73 per cent for the rural dwellers.

Table 5.1 Percentage distribution of household heads by essential amenities by residence

Essential amenities	Urban			Rural			Total (N)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Furniture	63.2	64.3	61.5	41.3	41.9	40	53.3	53.6	52.9
Mattress	92.9	93.4	91.9	72.9	74.3	69.9	83.8	84.3	83.1
Radio	55	59.6	47.9	37.7	41.7	29.1	47.2	51	40.3
Mobile phone	80.9	82	79.1	42.2	44.4	37.6	63.4	64	62.4

Table 5.2 shows that in Montserrado, the capital city, households with furniture accounted for 65 per cent, while 94 per cent owned mattresses, and 58 per cent owned radio and 84 per cent owned mobile phones.

Generally, more than 70 per cent of households in all counties except Lofa had mattress, which was considered one of the most needed for any household.

Table 5.2 Distribution of households' essential amenities by county

County	Household's essential amenities							
	Furniture		Mattress		Radio		Cell Phone	
Bomi	Yes	No	Yes	No	Yes	No	Yes	No
Bong	43.6	56.4	78.3	21.7	38.7	61.3	50.8	49.2
Gbarpolu	47.5	52.5	79.3	20.7	40.0	60.0	45.0	55.0
Grand Bassa	33.7	66.3	74.7	25.3	35.7	64.3	41.2	58.8
Grand Cape Mount	46.2	53.8	79.8	20.2	49.1	50.9	45.5	54.5
Grand Gedeh	46.1	53.9	74.3	25.7	42.9	57.1	47.5	52.5
Grand Kru	54.1	45.9	84.9	15.1	42.2	57.8	50.0	50.0
Lofa	50.5	49.5	72.4	27.6	24.0	76.0	46.4	53.6
Margibi	59.6	40.4	53.0	47.0	47.0	53.0	46.5	53.5
Maryland	53.9	46.1	86.3	13.7	52.8	47.2	63.6	36.4
Montserrado	48.3	51.7	75.9	24.1	22.7	77.3	64.4	35.6
Nimba	64.9	35.1	94.1	5.9	57.7	42.3	84.2	15.8
River Cess	31.5	68.5	82.6	17.4	39.6	60.4	52.4	47.6
River Gee	41.1	58.9	79.3	20.7	33.1	66.9	50.3	49.7
Sinoe	50.5	49.5	81.3	18.7	31.8	68.2	59.2	40.8

5.3 Access to information, communications and technological devices

Over the years, there has been an increase in households' access to information, communications and technology devices such as radio, television, mobile phones and computers (USAID, 2020). During the census, households were asked to provide response on the availability of ICT devices in their dwelling.

Table 5.3 provides information on households' ownership of ICT devices. About 63 per cent of the households owned a mobile phone, 47 per cent owned a radio, and about 23 per cent owned television while those who owned computer was about 8 per cent.

In the urban communities, 81 per cent of the households owned mobile phones compare to the rural areas (42 per cent). Moreover, households' ownership of computer was higher in the urban areas (12 per cent) compared to the rural areas with only (3 per cent).

The results indicated that households in the rural communities were deprived from ICT devices probably because they were low-income earners.

Table 5.3 Distribution of households' ownership of ICT devices by sex and residence

Ownership of ICT devices	Urban			Rural			Total (N)		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Television	36.5	38.5	33.3	6.2	6.6	5.4	22.8	23.2	22
Radio	55	59.6	47.9	37.7	41.7	29.1	47.2	51	40.3
Mobile phone	80.9	82	79.1	42.2	44.4	37.6	63.4	64	62.4
Computer	12.4	14.5	9.2	2.5	2.7	2.1	7.9	8.8	6.3

5.4 Ownership of mobility assets

Table 5.4 shows the distribution of households' ownership of mobility assets by sex and residence. About 5 per cent of the households owned a vehicle, 8 per cent owned a motorbike and about 2 per cent owned tricycle (locally known as kerkeh). Moreover, 7.4 per cent of the households own a vehicle in the urban areas compared to 1.4 per cent of households in the rural areas. Also, 10 per cent of households in the urban communities owned motorbikes compared to 6 per cent in the rural areas.

Table 5.4 Distribution of households' ownership of mobility assets by sex and residence

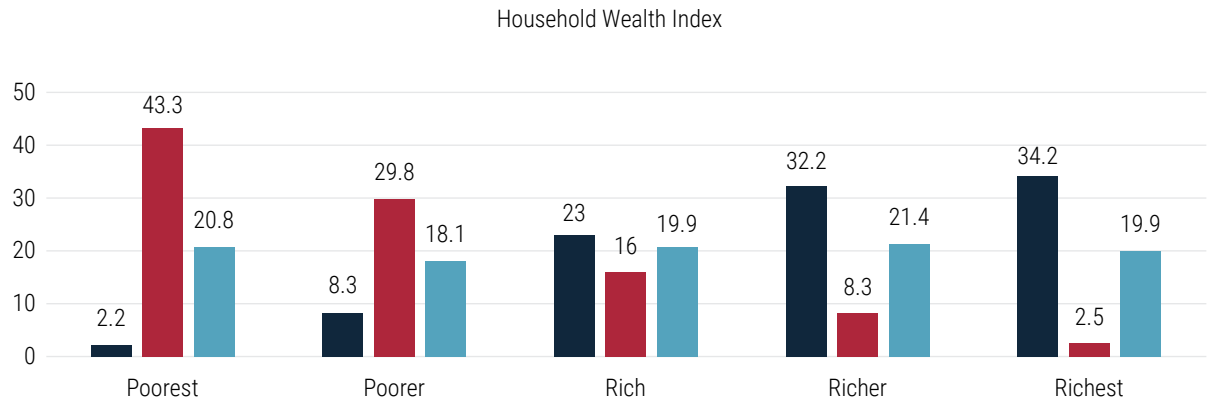
Mobility Assets	Urban			Rural			Total		
	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female
Motorcycle	9.6	11.9	6	5.5	6.6	3.1	7.7	9.4	4.8
Vehicle	7.4	8.9	4.9	1.3	1.4	0.9	4.6	5.3	3.3
Tricycle	2.7	3.0	2.1	0.9	0.9	0.9	1.9	2	1.6

5.5 Household wealth index

The wealth index is a **composite measure of a household's cumulative living standard**. The wealth index is calculated using easy-to-collect data on a household's ownership of selected assets, such as furniture, mattress, radio, cell phones, televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities were also taken into consideration. Wealth is a household characteristic that often has a large effect on health. The wealth index allows for the identification of problems particular to the poor, such as unequal access to healthcare, as well as those particular to the wealthy. The wealth index also allows governments to evaluate whether public health services, vaccination campaigns, education and other essential interventions are reaching the poorest.

Table A6 shows the wealth index for households in the country (**see Annexes**). Nationally, about 39 per cent of households were found to be in the very poor and poor situation. This is severe in the rural areas with 73 per cent of households falling in the category of very poor and poor (Figure 5.1). Except Montserrado, Margibi and Maryland Counties, more than half of the total households in the counties were in the category of very poor and poor conditions. River Cess came highest with 82.4 per cent of its households followed by Grand Bassa with 77.5 per cent, Grand Kru with about 71 per cent and Lofa with 67.4 per cent.

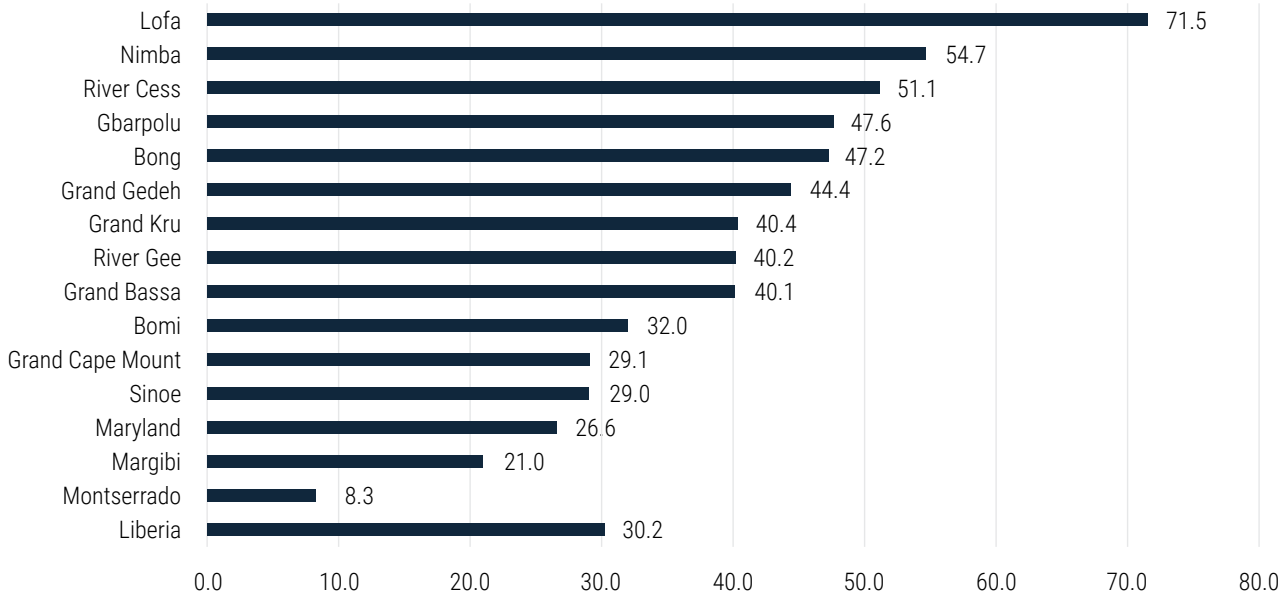
Figure 5.1 Percentage distribution of households by wealth quintile



5.6 Agricultural households

Figure 5.2 presents the per cent distribution of agriculture households by county. About 30 per cent of households in Liberia were engaged in agriculture compared to 49.5 per cent in 2008. This represented a 19.5 per cent reduction in agriculture households between 2008 and 2022. More than seven in every 10 households in Lofa were engaged in agricultural activities while more than five households in every 10 households in Nimba and River Cess were engaged in Agriculture activities.

Figure 5.2 Per cent distribution of agriculture households by county

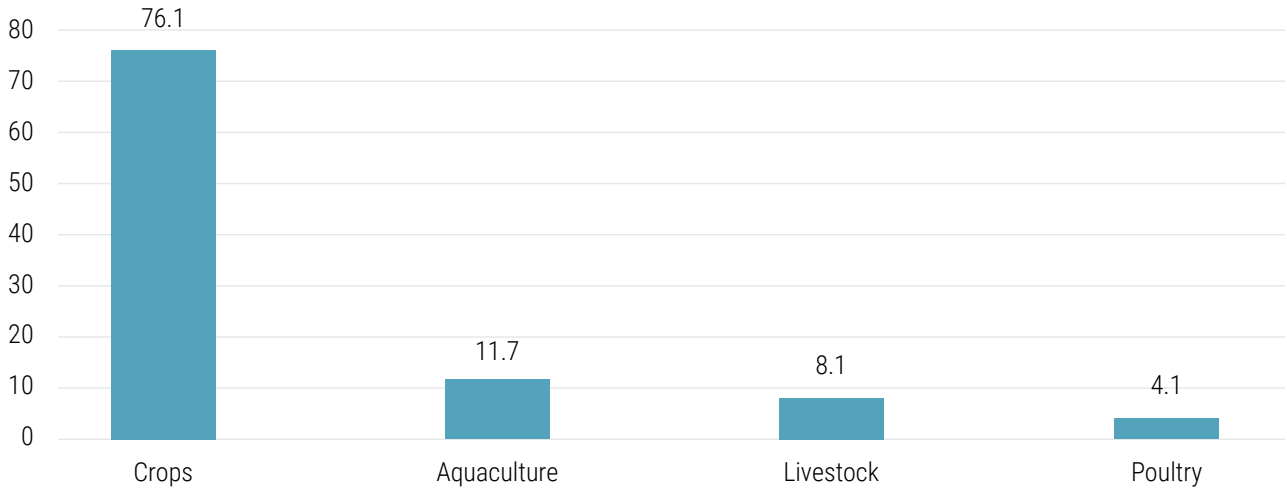


5.6.1 Agriculture households by type of agriculture activities and county

Figure 5.3 presents the percentage distribution of agriculture households by type of agricultural activity.

The chat shows that 76 per cent of agriculture households were engaged in crop production and about 12 per cent were into aquaculture. Livestock accounted for 8 per cent and Poultry 4 per cent.

Figure 5.3 Distribution of agriculture households by type of agriculture activity



5.7 Employment status

Employment is a **paid work agreement** between an employer and an employee. Generally, employed persons have better welfare compared to the unemployed because they receive wages and salaries.

The census collected data on persons who were employed comprising of paid employment, self-employment, contributing to family, household workers, part-time employment and unemployed persons comprising of those who were seeking employment and those who were not seeking employment.

Table 5.5 presents the distribution of households' members by employment status and county. The highest of households' members who were paid employees were found in Margibi County and this accounted for about 55 per cent of the total household members in the county as shown in Table 5.5 below. Bomi and Maryland came next with 54 per cent each.

Montserrado followed with 52 per cent. Nimba and Sinoe Counties both accounted for 51 per cent. The rest of the counties had less than 50 per cent of household members that are employed. Grand Cape Mount County had the highest number of household members (30 per cent) who served in the role as employers.

Montserrado and Sinoe came next with 28 per cent each, followed by Grand Gedeh with 27 per cent. The counties with the least number of household members that were employers were found in Lofa and River Cess with 19 per cent each.

Table 5.5 Distribution of households' members by employment status and county

County	Employment status of households members				
	Paid Employee	Employer	Own-account worker	Contributing family worker	Total (frequency)
Bomi	53.5	25.2	12.4	8.8	118,780
Bong	45.3	22.7	20.9	11.1	414,201
Gbarpolu	48.2	25.6	16.5	9.7	85,544
Grand Bassa	50.2	22.9	15.5	11.4	258,168
Grand Cape Mount	48.2	29.7	10.7	11.4	161,748
Grand Gedeh	44.9	27.4	11.1	16.6	199,106
Grand Kru	44.9	23.8	11	20.2	98,612
Lofa	39.9	18.6	20.4	21.1	330,431
Margibi	55	26.9	7.7	10.5	273,014
Maryland	53.6	26.5	9.1	10.7	156,198
Montserrado	52.2	27.5	8	12.4	1,737,390
Nimba	51.4	21.9	17.5	9.2	540,,223
River Cess	48.3	18.6	14.1	19	79,360
River Gee	48	25.8	8.7	17.4	112,369
Sinoe	51.2	28.3	7.8	12.8	85,544
Total (National)	**49.9**	**25.2**	**12.2**	**12.7**	**4,700,235**

5.8 Quality of housing

Households with permanent, semi-permanent and temporary housing units are discussed in Figure 5.4 below. The number of households with semi-permanent housing units in the country accounted for 45 per cent compared to 40.1 per cent in 2008.

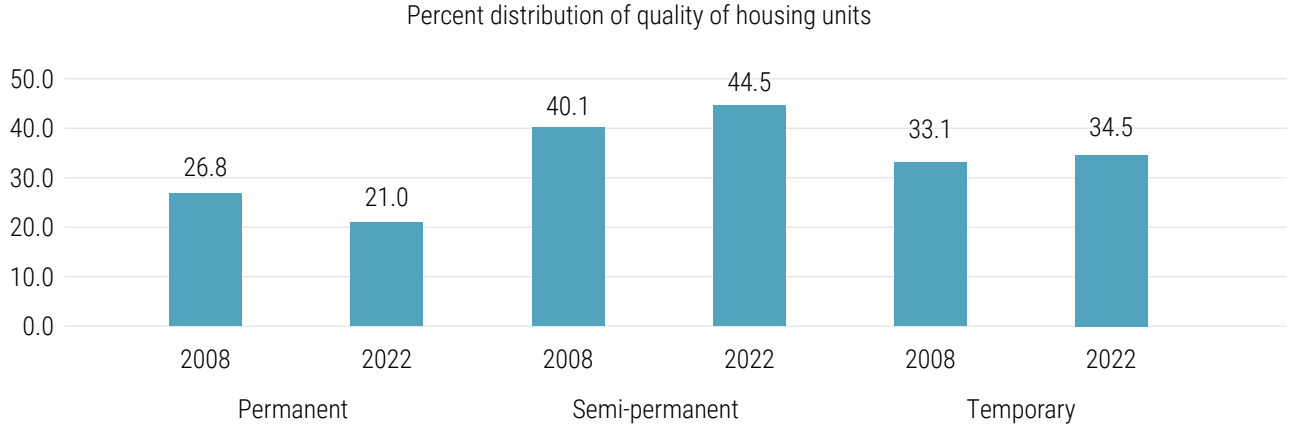
Those with temporary units were 35 per cent of the total households compared to 33 per cent in 2008 while only 21 per cent of households had permanent housing units compared to 29 per cent in 2008.

Table 5.6 Distribution of households by quality of housing unit and county

County	Household's housing quality			
	Permanent	Semi-permanent	Temporary	Total (Frequency)
Bomi	9.3	35.7	55	38,591
Bong	8.8	51.5	39.8	110,099
Gbarpolu	9.1	28.6	62.3	22,411
Grand Bassa	11	29.2	59.8	69,287
Grand Cape Mount	14	48.2	37.8	45,170
Grand Gedeh	8.5	36.4	55.1	43,663
Grand Kru	5.7	13.8	80.6	20,604
Lofa	7.5	49	43.5	75,260
Margibi	22.7	41	36.3	72,276
Maryland	9.9	17.4	72.7	37,214
Montserrado	38	33.9	28.1	449,910
Nimba	9.7	88.1	2.2	127,951
River Cess	4.2	16	79.7	21,087
River Gee	5.6	13.9	80.4	23,906
Sinoe	11.5	22.2	66.3	29,843
Total (National)	**21**	**44.5**	**34.5**	**1,187,272**

Grand Kru and River Gee Counties had the least percentage of households (6 per cent) with permanent units while Montserrado had the highest with 38 per cent followed by Margibi with 23 per cent (Table 5.7). For semi-permanent housing units, Nimba County leads with 88 per cent followed by Bong with 52 per cent.

Figure 5.4 Per cent distribution of households' housing quality



Chapter 6: Summary, policy implications and recommendations

6.1 Summary

The total population of Liberia was 5,250,187 of which 98.6 per cent lived in regular households. From the total 1,187,272 households in Liberia, 13.8 per cent are one person households, 14.6 per cent are two-person households, and 15.8 per cent are three person's household. About 56 per cent of the total households have a family size of four or more household members. Household Headship among males and females was mainly concentrated in the age group 25-44; accounting for about 54.2 per cent of the households.

Pipe-borne or outdoor pump was the highest source of drinking water in Liberia, and this accounted for 46.7 per cent of the total households. About a third of the households nationally rely on bushes for human waste disposal, 58 per cent in rural areas and almost 6 per cent in urban centres.

About 40 of the total households in Liberia take less than 20 minutes to access the nearest health facility while 30 per cent takes one hour or more. More than half of the total households in Liberia (52.2 per cent) greatly depend on charcoal and 45 for wood as cooking fuel. About 55 per cent of households in the country used the battery light commonly refer to as Chinese light for lighting purposes in their homes.

More than half of the households (59 per cent) were living in owned housing units. The proportions of owned housing units in rural and urban areas were 77.7 and 43.1 per cent. Nationally, only 32 per cent of households used cement blocks as the construction material for their housing outer wall. For essential amenities in households, about 84 per cent have mattress in their homes, 53 per cent have furniture, while 47 per cent have radio.

About 30 per cent of households in Liberia are engaged in agriculture compared to 49.5 per cent in 2008. Only 21 per cent of households had permanent housing units compared to 29 per cent in 2008.

6.2 Policy implications

The female-headed households in Liberia increased between 2008 and 2022. Replacing their spouses due to death or neglect puts them in a vulnerable position and calls for programs that may help them to be able to support their families, lead better lives and contribute to nation building.

The high dependence on charcoal and wood for fuel might have led to deforestation, which will negatively affect the food production capability of those who relied on agriculture for their livelihood. It will also affect the pattern of rain fall as well as the temperature levels of the country.

The high dependence on bushes as places for human waste is alarming and calls for programs that will help households. The use of the bushes may have a negative effect on the population especially during the raining season when human faeces could contaminate rivers and streams used by households for cooking or drinking.

The use of Chinese battery light in households for lighting in homes also needs to be addressed. The supply of electricity to every home is the responsibility of the Government and calls for immediate attention.

Housing needs are highly demanding by households despite the majority of population are low-income earners. Since 2011, the Government began to build housing units for families affected by sea erosions and other communities outside the capital of various counties. However, there is still a demand for more low-cost housing units.

Another aspect of major concern is the challenges households especially in the rural counties are experiencing due to deplorable roads during the rainy season. The limited access to all season roads is posing numerous challenges to rural dwellers that are mainly involved in agriculture activity.

6.3 Recommendations

This thematic report uncovered some gaps in terms of housing utilities and source of energy for light in homes, source of fuel for cooking, housing and high-quality human waste disposal, and the following policy recommendations are therefore proposed:

1. The Government, with the support of development partners, should focus on increased accessibility of the residents to utilities like electricity as well as water and sewerage for improved welfare and sanitation of the people.
2. The Government must offer budgetary support to utility companies, such as Water and Sewer Corporation (LWSC) and the Liberia Electricity Corporation (LEC) to increase their coverage.
3. The Government should formulate and implement a favourable private investment regulatory framework to enable private sectors invest in low-cost housing for the benefit of the poor in the country.
4. Community sanitation and hygiene programs should be enhanced so that the people will have better water and sanitation experiences. People should be encouraged to construct covered pit latrines, protect sources of drinking water and promote good family hygiene.
5. The high dependence on wood and charcoal posed a series of health risks to the people and environmental concerns for the nation as well as the international communities. Therefore, urgent actions should be taken to reverse the trend.
6. Steps must be taken to provide some assistance to low-income households by constructing more housing units for low-income earners.
7. Policy should be designed to cater for the special needs of counties highly affected by the road condition in the country.

Annexes

Table A1: Distribution of household heads by age, sex and residence

Age group (Years)	Urban			Rural			Liberia		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
13 - 14	829	453	376	686	374	312	1,515	827	688
15 - 19	12,659	5,883	6,776	10,921	4,963	5,958	23,580	10,846	12,734
20 - 24	55,992	28,836	27,156	38,649	23,280	15,369	94,641	52,116	42,525
25 - 29	81,481	46,055	35,426	49,633	32,947	16,686	131,114	79,002	52,112
30 - 34	106,828	65,605	41,223	70,876	48,726	22,150	177,704	114,331	63,373
35 - 39	93,696	59,201	34,495	69,462	48,993	20,469	163,158	108,194	54,964
40 - 44	91,099	60,656	30,443	80,545	58,604	21,941	171,644	119,260	52,384
45 - 49	57,276	37,540	19,736	52,185	37,861	14,324	109,461	75,401	34,060
50 - 54	54,328	35,068	19,260	55,036	39,156	15,880	109,364	74,224	35,140
55 - 59	30,693	19,253	11,440	28,401	19,800	8,601	59,094	9,053	20,041
60 - 64	28,102	17,369	10,733	30,761	20,449	10,312	58,863	3,818	21,045
65 - 69	15,822	9,824	5,998	16,545	10,871	5,674	32,367	20,695	11,672
70 - 74	11,153	6,713	4,440	14,858	9,418	5,440	26,011	16,131	9,880
75 - 79	4,740	2,851	1,889	7,015	4,350	2,665	11,755	7,201	4,554
80+	5,969	3,314	2,655	11,032	6,523	4,509	17,001	9,837	7,164
Total (frequency)	**650,667**	**398,621**	**252,046**	**536,605**	**366,315**	**170,290**	**1,187,272**	**764,936**	**422,336**

Table A2: Distribution of population by type of living quarters, sex and residence

Population Type	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Household	98.3	49	51	99.1	51.7	48.3	98.6	50.2	49.8
Educational	0.3	57.3	42.7	0.2	60.8	39.2	0.2	58.6	41.4
Prison	0.1	92.7	7.3	0	75.4	24.6	0.1	90.5	9.5
Bush Society	0	72	28	0.1	47.6	52.4	0	54.4	45.6
Orphanage	0.1	50.7	49.3	0.1	56.2	43.8	0.1	53.1	46.9
Floating Population	0.2	77.9	22.1	0.1	62.4	37.6	0.1	73.4	26.6
Others	1.1	60	40	0.5	58	42	0.8	59.4	40.6
Total	**2,864,062**	**1,409,929**	**1,454,133**	**2,386,125**	**1,234,098**	**1,152,027**	**5,250,187**	**2,644,027**	**2,606,160**

Table A3: Distribution of heads of household main source of drinking water by sex and residence

Main Source of drinking	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Pipe or Pump indoors	9.3	9.9	8.5	6.1	6.2	5.9	7.9	8.1	7.4
Pipe or Pump outdoors	47.3	46.3	48.8	45.9	44.4	49.1	46.7	45.4	49
Public Taps	3.6	3.6	3.5	2.9	2.7	3.1	3.2	3.2	3.3
Closed Well/ Protected	15.4	15.3	15.6	5.3	5.3	5.4	10.8	10.5	11.5
Open Well	13.2	12.9	13.5	11.3	11.3	11.3	12.3	12.2	12.6
River lake spring creek	0.4	0.5	0.4	27.4	28.9	24.2	12.6	14.1	10
Water Vendors	1.3	1.3	1.2	0.1	0.1	0.1	0.7	0.7	0.7
Bottled water	0.9	1.1	0.7	0.1	0.1	0	0.5	0.6	0.4
Rainwater	8.3	8.8	7.6	0.4	0.4	0.3	4.8	4.8	4.7
Sachet water	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2
Other	0.1	0.1	0.1	0.4	0.4	0.4	0.3	0.3	0.2
Total	**651,131**	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

Table A4: Distribution of heads of household main source of fuel for cooking by sex and residence

Fuel for Cooking	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Electricity	2.3	2.5	1.9	0.4	0.4	0.4	1.4	1.5	1.3
Cooking Gas	1.6	1.7	1.3	0.2	0.2	0.1	1	1	0.9
Kerosene	0.4	0.4	0.3	0.1	0.1	0.2	0.3	0.3	0.3
Charcoal	83.3	83.4	83.2	14.3	14.2	14.5	52.2	50.3	55.5
Wood	11.7	11.1	12.8	84.7	84.8	84.6	44.7	46.3	41.7
Other	0.7	1	0.4	0.2	0.2	0.2	0.5	0.6	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	651,131	399,038	252,093	536,141	365,898	170,243	1,187,272	764,936	422,336

Table A5: Distribution of households by ownership status of housing unit by residence

Ownership status of housing units	Households by residence								
	Urban			Rural			Total		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Owned	**47.7**	**48.5**	**46.5**	**78.6**	**78.8**	**78.1**	**61.7**	**63**	**59.2**
Mortgaged/ NHA	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2
Rented	44.7	43.2	47	8	7.5	8.9	28.1	26.1	31.6
Government (Provided)	0.5	0.6	0.4	0.5	0.5	0.4	0.5	0.5	0.4
Private Company (Provided)	0.9	1.2	0.5	2.7	3.2	1.6	1.7	2.1	1
Private Individual (Provided)	3	3	2.9	5.6	5.4	6	4.2	4.1	4.2
Squatter	2.6	2.9	2.2	4.3	4.2	4.5	3.4	3.5	3.1
Other	0.3	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	651,131	**399,038**	**252,093**	**536,141**	**365,898**	**170,243**	**1,187,272**	**764,936**	**422,336**

Table A6: Distribution of households by wealth, residence and county

Residence	Wealth Quintile					
	Poorest Households	Poor Households	Rich Households	Richer Households	Richest Households	Total (n)
Urban	2.2	8.3	23.0	32.2	34.2	650,621
Rural	43.3	29.8	16.0	8.3	2.5	536,563
Total	20.8	18.1	19.9	21.4	19.9	1,187,184
Bomi	31.2	27.4	19.9	14.3	7.2	38,583
Bong	37.3	23.8	19.7	15.5	3.7	110,091
Gbarpolu	46.1	31.3	13.3	7.8	1.4	22,409
Grand Bassa	43.8	19.0	15.5	15.7	6.1	69,280
Grand Cape Mount	26.8	24.9	23.9	17.0	7.3	45,165
Grand Gedeh	31.1	27.5	21.2	14.5	5.6	43,661
Grand Kru	37.6	33.3	18.9	8.2	2.0	20,605
Lofa	36.9	30.5	18.7	11.9	2.1	75,251
Margibi	16.3	15.8	25.1	27.6	15.1	72,276
Maryland	18.6	26.5	31.5	15.8	7.6	37,207
Montserrado	2.4	5.6	17.2	31.6	43.2	449,884
Nimba	24.9	28.6	26.8	14.8	5.0	127,950
River Cess	56.8	25.7	10.7	5.5	1.4	21,084
River Gee	29.1	31.1	26.0	11.7	2.0	23,897
Sinoe	37.3	28.9	16.1	12.0	5.7	29,841

Table A7: Distribution of household's main source of drinking water by county

County	Household's Main Source of Water Supply for Drinking											
	Pipe or Pump indoors	Pipe or Pump outdoors	Public Taps	Closed Well Protected	Open Well	River lake spring creek	Water Vendors	Bottled water	Rainwater	Sachet water	Other	Total
Bomi	5.4	65.9	2.5	3.8	3.9	17.7	0.1	0	0.5	0	0.2	38,591
Bong	5.2	48.5	2.1	11.4	16.3	15.6	0.1	0.1	0.5	0.1	0.2	110,099
Gbarpolu	5.5	44.3	5.2	4.3	6.1	34.2	0.1	0	0.3	0	0.2	22,411
Grand Bassa	5.1	25.8	1.9	11.2	9.9	44	0.1	0.2	1.1	0	0.7	69,287
Grand Cape Mount	8	56.8	6.3	4.3	9.4	13.3	0.1	0.9	0.4	0	0.5	45,170
Grand Gedeh	6.1	56.3	3.5	7.6	11.4	13.6	0.1	0.1	0.6	0.1	0.7	43,663
Grand Kru	5.3	32.2	11.2	3.9	7	39.7	0.1	0	0.2	0	0.3	20,604
Lofa	9.5	50.8	1.8	6.8	14.5	16.1	0.1	0	0.1	0.1	0.2	75,260
Margibi	7.8	49.4	1.8	13.8	13.2	11.3	0.2	0.3	1.8	0.1	0.2	72,276
Maryland	6.9	65.8	3.7	4.9	7	10.6	0.1	0.1	0.8	0	0.1	37,214
Montserrado	10	42.7	3.4	14.9	12.3	1.9	1.8	1.1	11.6	0.2	0.2	449,910
Nimba	6.3	54.4	3.8	9.7	18.4	6.2	0.1	0.3	0.3	0.1	0.3	127,951
River Cess	3	31.5	1.6	1.1	2.8	59.6	0.1	0	0.2	0	0.1	21,087
River Gee	6.5	55.3	2.9	6.6	9.1	18.8	0.1	0.1	0.4	0	0.2	23,906
Sinoe	10	35.4	2.7	6	10.7	32.5	0.3	0.1	0.7	1.2	0.5	29,843
Total	**7.9**	**46.7**	**3.2**	**10.8**	**12.3**	**12.6**	**0.7**	**0.5**	**4.8**	**0.2**	**0.3**	**1,187,272**