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# BASIC REPORT

**2015/16  
KENYA INTEGRATED  
HOUSEHOLD  
BUDGET SURVEY  
(KIHBS)**

# BASIC REPORT



**Based on 2015/16**  
**Kenya Integrated Household Budget Survey**  
**(KIHBS)**

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## FOREWORD

The Government of Kenya's long-term blue print, Vision 2030, aims at transforming Kenya into "a newly-industrialized, middle income country providing a high quality of life to all its citizens in a clean and secure environment". The Social Pillar of Vision 2030, "Enhanced Equity and Wealth Creation Opportunities for the Poor", underscores the Government's commitment to eliminate poverty. This Vision is given more impetus by Sustainable Development Goals (SDGs) and the decentralized system of Government. The planning, monitoring and evaluation of programmes at the national and county levels, the SDGs and other international targets require quality statistics. This report is therefore a major milestone as it provides socioeconomic information that is crucial for implementing development initiatives under the devolved governance framework. Moreover, it coincides with the formulation of the third Medium Term Plan (MTP III) 2018-2022, and the second generation of County Integrated Development Plans (CIDPs).

The Kenya Integrated Household Budget Survey (KIHBS) was designed to collect key information for computation of updated poverty and inequality indicators, to update the labour force indicators, derive the consumer price index, and revise the national accounts information. The survey aimed at providing data on key socio-economic aspects of the Kenyan population which include: education, health, energy, housing, water and sanitation. This data is critical to the national and county governments and private sector for the purpose of guiding investment and national development policy decisions. The basic report provides a reflection of the socio-economic status of the Kenyan population.

The survey was funded through the Kenya Statistics Programme for Results (KSPforR) project of The Government of Kenya and The World Bank. Key to the success of the overall implementation of the survey were the Steering, Technical Committees, and The Secretariat.

The Government wishes to extend sincere appreciation to The World Bank and the UNICEF for the technical support and capacity building provided. Special thanks to the Kenya National Bureau of Statistics for spearheading the whole process of data collection and analysis.

Further, gratitude is extended to the research assistants who devoted themselves to this exercise and contributed to successful implementation of KIHBS. I also recognise the cooperation from Kenyans who participated in this exercise by providing the requisite information.

I congratulate the core technical team for their excellent work and extend my special gratitude to Mr. Zachary Mwangi, Director General KNBS, for his leadership role in the 2015/16 Kenya Integrated Household Budget Survey.



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The Kenya Government is committed to improving the standards of living of all Kenyans through sound macroeconomic management and by ensuring access to quality public goods and services. In this regard, the Government, through the Kenya National Bureau of Statistics is committed to continually produce quality statistics within the National Statistical System (NSS) to inform evidence-based decision making.

The basic report was prepared with substantive contributions from many institutional and individual stakeholders. I would like to express my appreciation to all those who contributed in various ways including planning, data collection, analysis and the eventual drafting and finalization of this report. Specifically, I wish to express my gratitude to all Kenyans across the 47 counties for participating in this enormous exercise by providing their invaluable time and information.

My sincere appreciation goes to our key stakeholders who participated in the consultative meetings convened to guide the design of the survey instruments. Further, I wish to express my gratitude to 323 field personnel involved in field data collection, 75 KNBS staff who supervised and coordinated data collection activities; and the households who contributed to this report as respondents for the 2015/16 KIHBS, on which this report is based.

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## **ACRONYMS AND ABBREVIATIONS**

<b>ARI</b>	Acute Respiratory Infection
<b>ASAL</b>	Arid and Semi-Arid Lands
<b>CAPI</b>	Computer Assisted Personal Interviews
<b>CHSP</b>	Continuous Household Survey Programme
<b>CIDPs</b>	County Integrated Development Plans
<b>CoK</b>	Constitution of Kenya
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>CPE</b>	Certificate of Primary Education
<b>CPI</b>	Consumer Price Index
<b>CSO</b>	County Statistics Officer
<b>CSPro</b>	Census and Survey Processing System
<b>CT- OVC</b>	Cash Transfer for Orphans and Vulnerable Children
<b>EAC</b>	East African Community
<b>EAs</b>	Enumeration Areas
<b>FGDs</b>	Focus Group Discussions
<b>GDP</b>	Gross Domestic Product
<b>GoK</b>	Government of Kenya
<b>HBS</b>	Household Budget Survey
<b>HSNP</b>	Hunger Safety Net Programme
<b>ICT</b>	Information and Communication Technology
<b>KIHBS</b>	Kenya Integrated Household Budget Survey
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>KPHC</b>	Kenya Population and Housing Census
<b>KSh</b>	Kenya Shilling
<b>KCE</b>	Kenya Certificate of Education
<b>KCPE</b>	Kenya Certificate of Primary Education
<b>KCSE</b>	Kenya Certificate of Secondary Education
<b>KSPforR</b>	Kenya Statistics Programme-for-Results
<b>LPG</b>	Liquefied Petroleum Gas
<b>MCH</b>	Maternal and Child Health Care
<b>MDG</b>	Millennium Development Goals
<b>MTP</b>	Medium Term Plan
<b>NASSEP V</b>	The fifth National Sample Survey and Evaluation Programme
<b>NCHS</b>	National Centre for Health Statistics
<b>NHIF</b>	National Health Insurance Fund
<b>NSNP</b>	National Safety Net Programme
<b>NSS</b>	National Statistical System
<b>OPCT</b>	Older Persons Cash Transfer
<b>ORT</b>	Oral Rehydration Therapy
<b>ORS</b>	Oral Rehydration Salt/Solution

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<b>PAPI</b>	Paper Assisted Personal Interviews
<b>PWSD-CT</b>	Persons With Severe Disabilities Cash Transfer
<b>RHBS</b>	Rural Household Budget Survey
<b>SACCOs</b>	Savings and Credit Co-operative Societies
<b>SDGs</b>	Sustainable Development Goals
<b>SIM</b>	Subscriber Identification/Identity Module (SIM)
<b>SNA</b>	System of National Accounts
<b>SYSRS</b>	Systematic Random Sampling
<b>TB</b>	Tuberculosis
<b>TBA</b>	Traditional Birth Attendant
<b>TTBA</b>	Trained Traditional Birth Attendant
<b>UHBS</b>	Urban Household Budget Surveys
<b>UNICEF</b>	United Nations Children's Fund
<b>VFP</b>	Visual FoxPro
<b>WHO</b>	World Health Organization
<b>WMS</b>	Welfare Monitoring Survey

## EXECUTIVE SUMMARY

The 2015/16 Kenya Integrated Household Budget Survey (KIHBS) was conducted over a 12-month period to obtain up-to-date data on a range of socioeconomic indicators used to monitor the implementation of development initiatives. The Survey collected data on household characteristics, housing conditions, education, general health characteristics, nutrition, household income and credit, household transfers, information communication technology, domestic tourism, shocks to household welfare and access to justice. The findings are presented at national, county, rural and urban domains.

### Household Characteristics

The findings of the 2015/16 KIHBS basic characteristics of the population show that the sex ratio is 97.5. About 70 per cent of households were headed by males and the reported average household size was 4 members. The age dependency ratio declined to 81.6 per cent in 2015/16 KIHBS as compared to 84.0 per cent recorded in 2005/06 KIHBS. Majority (54.4%) of the population aged 18 years and above are in monogamous unions. At the national level, 8.4 per cent of children were orphans.

### Housing Conditions and amenities

Information regarding housing conditions and ownership, access to water, energy, sanitation and waste disposal was collected in the 2015/16 KIHBS. Bungalow was the most common dwelling type of housing occupied by 55.4 per cent of the households. About 60 per cent of households reported that they owned the dwellings that they resided in. The findings show that 72.6 per cent of households use improved drinking water sources. The statistics show that six out ten households had access to improved human waste disposal methods. Overall, 41.4 per cent of households were connected to electricity from the main grid.

### Education

Findings on education are presented for; pre-primary, primary, secondary, middle level college and university levels; and informal education, *Madrassa/Duksi*. Nationally, 89.4 per cent of the population aged three years and above had ever attended school. The overall Gross Attendance (GAR) for pre-primary, primary and secondary levels was 94.4 per cent, 107.2 per cent and 66.2 per cent, respectively. The population aged 3 years and above that did not have any educational qualification was 49.7 per cent. Most of the population aged 3 years and above that had not attended school cited not being allowed to attend by parent(s) as the reason for non-attendance. The proportion of the population aged 15-24 years that was literate, based on respondents' self-assessment, was 88.3 per cent.

### General Health Characteristics

General health characteristics discussed in the report comprise: morbidity by sex, health seeking behaviour, utilization of health care services and facilities, disability and engagement in economic activities and health insurance coverage. Information on child survival such as place of delivery, assistance during delivery, immunization and incidences of diarrhoea is also presented. The results show that two out of ten individuals reported a sickness or injury over the four weeks preceding the survey. Majority of the individuals (55.5 %) with a sickness or injury visited a health worker at a health facility for diagnosis. Disabilities were reported by 2.8 per cent of the population. Slightly more than a third of persons with disabilities reported having difficulty in engaging in economic activities. Slightly more than one fifth (21.3%) of the population reported that they had a health insurance cover.

Regarding child deliveries, the findings reveal that three out of ten children were delivered at home. Slightly more than a third of children were fully immunized against measles. The incidence of diarrhoea in children declined from 10.7 per cent in 2005/06 KIHBS to 8.5 per cent in 2015/16 KIHBS.

### Nutrition

This refers to information relating to breastfeeding, feeding patterns, and health status of children aged below five years at the time of the survey. The data shows that at national level, 29.9 per cent of the children were

moderately stunted. A higher proportion (32.4%) of children in the rural areas were moderately stunted compared to those in urban areas (24.5%). Overall, 13.0 per cent of children were moderately wasted while 6.7 per cent were moderately underweight. The statistics further indicate that 98.8 per cent of children aged 0-59 months were ever breast fed. The mean length of breastfeeding nationally stood at 16.8 months. Porridge was the most common type of first supplement given to majority (35.9%) of children aged 0-23 months. The survey findings show that eight out of ten children participated in community-based nutritional programmes.

### **Household Income and Credit**

Household income is the aggregate earnings of all household members. It includes all forms of income arising from employment, household enterprises, agricultural produce, rent, pension and financial investment. The discussion in this report focuses on income from rent, pension, financial investment and other related incomes. Information is also provided on access and sources of credit. At national level, 7.2 per cent of households reported having received income from rent, pension, financial investment and other related incomes within the 12 months preceding the survey. A third of the households sought credit and over 90 per cent successfully acquired credit.

### **Household Transfers**

Transfers constitute income, in cash or in kind, that the household receives without working for it and it augments household income by improving its welfare. Three out of ten households reported having received cash transfers within the 12 months preceding the survey period. The average amount received per household from cash transfers was KSh. 27,097. Majority of households received cash transfers through a family member. Money transfer agents were the preferred mode of transmitting money for most beneficiaries of transfers received from outside Kenya. Over half of the households gave out transfers in kind.

### **Information and Communication Technology**

The 2015/16 KIHBS collected information on ICT equipment use and ownership. Findings show that three in every four individuals aged 18 years and above owned a mobile phone with an average number of 1.3 SIM cards per person. The most commonly used ICT equipment is the radio and mobile phone, reported by 79.3 per cent and 68.5 per cent of individuals aged 3 years and above, respectively. The highest proportion (50.3%) of those that did not own a mobile phone cited its high cost as the reason. Urban areas had the highest proportion of population with ownership of a mobile phone. Nairobi City County had the highest proportion of population with a mobile phone while Turkana County had the lowest.

The population aged 3 years and above that reported using internet over the last three months preceding the survey was 16.6 per cent. Three in every ten households had internet connectivity and use of internet in mobility was reported as the most common place of use of internet. The internet was used mainly for social networking. No need to use the internet was the most predominant reason for not using the internet reported by 30.1 per cent of those who did not use it.

**Domestic Tourism**

Domestic tourism comprises activities of residents travelling to and staying at least over a night in places outside their usual environment within the country, for not more than 12 months, for leisure, business or other purposes. At national level, 13.4 per cent of individuals reported that they travelled within Kenya in the 3 months preceding the survey. Visiting friends and relatives was reported by the highest proportion (71.1%) of individuals taking trips. Majority of those who took a trip (66.4%) reported that they sponsored themselves. Transport costs accounted for the largest share (38.4%) of expenditure on domestic tourism. Majority of those who did not take a trip reported high cost as a reason.

**Shocks to Household Welfare**

A shock is an event that may trigger a decline in the well-being of an individual, a community, a region, or even a nation. The report presents information on shocks which occurred during the five-year period preceding the survey and had a negative impact on households' economic status or welfare. Three in every five households reported having experienced at least one shock within the five years preceding the survey. A large rise in food prices was reported by the highest proportion (30.1 per cent) of households as a first severe shock. Most households reported that they spent their savings to cope with the shock(s).

**Justice**

The survey sought information from household members on their experiences regarding grievances/disputes, resolution mechanisms, status of grievance/dispute resolution and costs incurred. Majority of households (26.2%) experienced grievances related to succession and inheritance. Approximately seven out of ten households that experienced grievances reported that they were resolved by parties from whom they sought interventions. Lawyers on average received the highest amount of money (KSh 59,849) paid to a primary organization for grievance resolution through a formal channel. Courts accounted for the highest informal costs averaging KSh 6,260 in grievance resolution.

# CHAPTER I

## 1. INTRODUCTION AND SURVEY METHODOLOGY

### 1.1 Introduction

Good quality data and statistics are an essential input to inform policy-making and decision-taking. The demand for socio-economic and demographic data emanates from multiple stakeholders, including; government, private sector, research institutions, development partners and the media. Against the backdrop of an increasingly integrated, interconnected, data-driven and growing economy, users of statistics in Kenya are on the rise and they require good quality data that is easily accessible, high-frequency, relevant, accurate and timely.

Quality data and statistics are crucial for monitoring the country's medium and long-term development plans (Vision 2030 and MTPs) and achievements made in various international commitments such as Sustainable Development Goals (SDGs). Moreover, the devolved system of government established by the Constitution of Kenya, 2010 has generated enormous demand for county specific statistics.

The 2013-2017 Strategic Plan of the Kenya National Bureau of Statistics (KNBS) was developed and is being implemented to meet the increasing demands for quality data. Under this Strategy, the 2015/16 Kenya Integrated Household Budget Survey was designed to capture a wide range of socio-economic indicators, such as; demographic, education, health, household consumption, expenditure patterns and sources of household income.

The first Household Budget Survey (HBS) in Kenya, namely the Rural Household Budget Survey (RHBS) was conducted in 1981/82. This was followed by the Urban Household Budget Surveys (UHBS) of 1983/84 and 1993/94. In the continuity of collecting the household budget data, the Bureau undertook the Welfare Monitoring Survey (WMS) series in 1992, 1994 and 1997, which gave way to the Kenya Integrated Household Budget Survey (KIHBS) that was conducted in 2005/06 as the first integrated year-long survey. The 2015/16 KIHBS is therefore the second Integrated HBS to be undertaken in Kenya and the first such survey under the devolved system of government. This survey was financed by the Government of Kenya through the World Bank supported Kenya Statistics Programme-for-Results (KSPforR) project.

### 1.2 Objectives of the 2015/16 KIHBS

The 2015/16 KIHBS was undertaken to provide integrated household survey data on a wide range of indicators to assess the progress made in improving the living standards of the population at both national and county level. This survey was also conducted to inform and provide benchmark indicators to inform the third Medium Term Plan (MTP III) and monitor Kenya's progress towards achievement of the Sustainable Development Goals (SDGs).

Specifically, the Survey was designed to generate data towards meeting multiple statistical production objectives, including:

- a. Updating the poverty and inequality indicators at national and county levels
- b. Informing monetary, non-monetary and multi-dimensional indicators and socio-economic profiles of living standards

- c. Updating labour force indicators
- d. Updating consumption baskets to produce new Consumer Price Index (CPI) series
- e. Provide data to update the household sector input-output structure of the System of National Accounts (SNA) and;
- f. Provide ancillary data collected using Computer Assisted Personal Interviews (CAPI) to test the scope of implementing Continuous Household Survey Programme (CHSP).

### 1.3 Sample Design and selection

The 2015/16 KIHBS was a population-based survey designed to provide estimates for various indicators representative at the national level, each of the 47 counties, and place of residence (rural and urban areas).

The 2015/16 KIHBS sample was drawn from the fifth National Sample Survey and Evaluation Programme (NASSEP V) household sampling frame. This is the frame that the Bureau currently operates to conduct household-based surveys in Kenya. The frame consists of 5,360 clusters split into four equal sub-samples. The clusters in the frame were drawn from approximately 96,000 enumeration areas (EAs) of the 2009 Kenya Population and Housing Census. The frame is stratified into urban and rural areas within each of 47 counties resulting in 92 sampling strata with Nairobi city and Mombasa counties being wholly urban. The sample size was determined independently for each county, resulting in a national sample of 24,000 households. This sample was further distributed to the urban and rural strata as shown in Table 1.1.

The sampling for the survey was done in three stages. In the first stage, a total of 2,400 clusters (988 in urban and 1,412 in rural areas) were sampled from NASSEP V sampling frame while the second stage involved selection of 16 households from each of the clusters. The third stage involved the sub-sampling of 10 households (from the 16 households) for the main KIHBS with the remaining 6 earmarked for the Continuous Household Survey Programme (CHSP). Further, five households from each cluster were randomly selected among the 10 KIHBS households for the administration of diaries.

To capture seasonality, the 2015/16 KIHBS sample was divided into four quarters (a consecutive 3-month period). Each of the 2,400 clusters were randomly assigned into a quarter to generate nationally representative quarterly samples of approximately 600 clusters that can be analysed independently.

Table 1.1: Sample Allocation for 2015/16 KIHBS

County Code	County	Number of Clusters			Number of Households		
		Rural	Urban	Total	Rural	Urban	Total
1	Mombasa .....	0	52	52	0	520	520
2	Kwale .....	32	20	52	320	200	520
3	Kilifi .....	28	24	52	280	240	520
4	Tana River .....	32	16	48	320	160	480
5	Lamu .....	24	20	44	240	200	440
6	Taita/Taveta .....	32	16	48	320	160	480
7	Garissa .....	32	20	52	320	200	520
8	Wajir .....	28	20	48	280	200	480
9	Mandera .....	32	16	48	320	160	480
10	Marsabit .....	28	16	44	280	160	440
11	Isiolo .....	24	20	44	240	200	440
12	Meru .....	40	16	56	400	160	560
13	Tharaka-Nithi .....	32	16	48	320	160	480
14	Embu .....	32	16	48	320	160	480
15	Kitui .....	36	16	52	360	160	520
16	Machakos .....	24	28	52	240	280	520
17	Makueni .....	36	16	52	360	160	520
18	Nyandarua .....	32	16	48	320	160	480
19	Nyeri .....	32	20	52	320	200	520
20	Kirinyaga .....	32	20	52	320	200	520
21	Murang'a .....	36	16	52	360	160	520
22	Kiambu .....	24	34	58	240	340	580
23	Turkana .....	32	16	48	320	160	480
24	West Pokot .....	36	12	48	360	120	480
25	Samburu .....	28	16	44	280	160	440
26	Trans Nzoia .....	32	20	52	320	200	520
27	Uasin Gishu .....	28	26	54	280	260	540
28	Elgeyo / Marakwet .....	32	16	48	320	160	480
29	Nandi .....	36	16	52	360	160	520
30	Baringo .....	32	16	48	320	160	480
31	Laikipia .....	32	20	52	320	200	520
32	Nakuru .....	28	30	58	280	300	580
33	Narok .....	36	12	48	360	120	480
34	Kajiado .....	24	24	48	240	240	480
35	Kericho .....	28	24	52	280	240	520
36	Bomet .....	36	16	52	360	160	520
37	Kakamega .....	36	16	52	360	160	520
38	Vihiga .....	28	20	48	280	200	480
39	Bungoma .....	36	16	52	360	160	520
40	Busia .....	36	16	52	360	160	520
41	Siaya .....	32	20	52	320	200	520
42	Kisumu .....	24	30	54	240	300	540
43	Homa Bay .....	32	20	52	320	200	520
44	Migori .....	28	24	52	280	240	520
45	Kisii .....	36	20	56	360	200	560
46	Nyamira .....	36	16	52	360	160	520
47	Nairobi City .....	0	72	72	0	720	720
<b>Total</b>		<b>1,412</b>	<b>988</b>	<b>2,400</b>	<b>14,120</b>	<b>9,880</b>	<b>24,000</b>

### 1.4 Data Weighting

The weighting of the 2015/16 KIHBS was based on the selection probabilities in each domain. The design weights were adjusted using the survey response to give the final weights. This was necessitated by the survey data being not self-weighting since the sample allocation was not proportional to the size of the strata. Additionally, some of the sampled households did not respond to the interviews while others could not be accessed. The resulting data has therefore been weighted to be representative at the national level as well as at county level.

The sampling weights  $W$  are calculated simply as the inverse of the product of these selection probabilities. The probability ( $P$ ) of selecting a 2015/16 KIHBS household is the product of four factors, :

$$P = \prod_{i=1}^4 P_i$$

Where;

$P_1$  = the probability of selecting the EA for the NASSEP V master sample among all the EAs in the 2009 Population and Housing Census;

$P_2$  = the probability of selecting the EA segment to form a cluster among all segments in the EA;

$P_3$  = the probability of selecting the cluster for the 2015/16 KIHBS, among all the clusters in the NASSEP V master sample; and

$P_4$  = the probability of selecting the household among all the households listed in the cluster.

In the process of weighting, the sample required adjustments to cater for non-proportional distribution of clusters and non-response to provide estimates that are representative to the target population. The cluster weights were computed as the product of sample cluster design weight, household and cluster response adjustment factors as follows:

$$W_{ij} = D_{ij} \frac{S_{ij} C_j}{I_{ij} c_j}$$

Where;

$W_{ij}$  = overall final cluster weight for cluster  $i$  in stratum  $j$ ,

$W_{ij}$  = sample cluster design weight obtained from inverse of cluster selection probabilities for cluster  $i$  in stratum  $j$ ;

$S_{ij}$  = number of listed households in cluster  $i$  in stratum  $j$ ;

$I_{ij}$  = number of responding households in cluster  $i$  in stratum  $j$ ;

$C_j$  = number of clusters in stratum  $j$ ; and

$c_j$  = number of clusters selected from stratum  $j$ .

The weights were calibrated so that the aggregate matches the projected population (as at mid of 2016).

### 1.5 Survey Instruments

The 2015/16 KIHBS used a set of seven instruments; three main questionnaires, two diaries, one market questionnaire and one community questionnaire. The three main questionnaires and diaries were administered to the households while the market and community questionnaires were administered at cluster level. The seven questionnaires are:

- a. The household members' information questionnaire; used to collect information on demographics, education, labour, health, fertility and mortality, child health and nutrition, Information and Communication Technology (ICT) services and domestic tourism at individual level.
- b. The household level information questionnaire; used to collect information relating to housing, water, sanitation and energy use, agricultural holdings, activities and outputs, livestock, household economic enterprises, transfers, income, credit, and recent shocks to household welfare, food security, justice, credit and ICT at the household level.
- c. Household consumption expenditure information questionnaire; used to collect information relating to purchases and consumption of food, non-food and services in the household. The information obtained through this questionnaire instrument included expenses incurred by the households on foods, house rent, health care, education, household goods, insurance among other things.

Two types of household diaries were given to the households for recording of food items purchased and consumed over a seven-day period and were administered to five diary households in each sampled cluster. The diary households were trained on how to complete the two diaries. Interviewers visited the five diary households every day to ensure that entries to the diaries are recorded and assist recording cases where household members faced challenges in completing the diaries.

- d. Household purchases diary; used to keep a record of food items purchased by members of the household
- e. Household consumption expenditure diary; used to record food items consumed by the household members
- f. Market questionnaire; administered by supervisors to interview the business operators at a market place where most of the interviewed households reported making regular purchases. This questionnaire was used to collect prices of all goods and services available in the market to provide information required to standardize units of measurement of commodities and purchases as well as to provide additional cluster-level data to compute average purchase prices for consumption items.
- g. Community questionnaire; administered through Focus Group Discussions (FGDs) comprising at least five knowledgeable community members who were selected with the assistance of the local administration in each cluster. This questionnaire was administered by supervisors and was used to collect information about the community in which the sampled households reside. Such information included basic physical infrastructure, access to and quality of public services, economic activities, agriculture, community welfare, security and safety.

Comprehensive interview manuals were prepared to guide personnel during survey training and implementation.

### 1.6 Management of the survey

The Bureau managed the implementation of the survey and was responsible for coordination of all aspects of the survey including design, data collection, processing and analysis. A steering committee comprising KNBS Directors was responsible for policy direction and overseeing of the overall implementation of the survey. The steering committee constituted a secretariat comprising three KNBS Technical Managers who were responsible for the day-to-day administrative, logistical and technical operations of the survey.

Prior to the main survey, a pilot survey was undertaken with the aim of testing various aspects of the survey including data collection instruments, methodology and field logistics. The pilot survey data collection was conducted in six counties between April and May 2015 counties.

### 1.7 Recruitment and training

All personnel involved in the 2015/16 KIHBS were recruited based on rigorous testing and merit-based procedures. Survey personnel were interviewed, tested for technical skills and hired from all counties to constitute a regionally balanced team. A total of 323 survey personnel with relevant qualification were recruited. These included 258 field data collection personnel, 36 field reserves, 23 data entry personnel and 6 data entry reserves.

Three hands-on training phases (training of trainers, training of data collection personnel, and training of data entry and CAPI personnel) was undertaken prior to fieldwork. The trainees acquired in-depth knowledge of all the data collection instruments and manuals and acquired skills to enable them to participate in the field data collection. The training also included a pre-test in non-KIHBS sampled clusters in Nakuru County.

### 1.8 Field logistics and implementation

Field data collection for the 2015/16 KIHBS took place over a period of 12 months from September 2015 to August 2016 and it was organized into 24 cycles of 14 days each. Clusters were equally and randomly allocated to the four quarters of the year which were based on the expected seasons in Kenya. The teams ensured that they completed data collection in the assigned clusters before embarking on clusters assigned for the next quarter.

The field data collection personnel were divided into 50 teams comprising 6 persons, including: 1 supervisor, 2 interviewers, 1 field data entry clerk, 1 field editor and 1 driver. In each cycle, a team covered 20 households for the KIHBS main questionnaire and 12 households for the CHSP questionnaire. Each interviewer in a team was allocated a cluster in each cycle. Diaries were administered to 5 pre-selected households in each of the sampled clusters. The diaries were filled for 7 days with each household getting a total of 6 diaries- 3 for purchases and 3 for consumption. During the fieldwork, team supervisors, assisted by the field editors administered a community questionnaire through focus group discussions. The supervisor also administered a market questionnaire in markets where interviewed households reported making most of their purchases.

### 1.9 Survey response rates

The survey achieved high sample response rates. Nationally, 91.3 per cent of the sampled households participated and completed questionnaires. As shown in Table 1.2, from 23,852 households that were sampled for the survey, a total of 21,773 households were successfully interviewed. The response rate for rural households was higher (93.6%) compared to that for urban households (88.0%). Part of the non-response was due to non-coverage of 13 clusters, spread across different counties, occasioned by either insecurity or non-availability of households due to movement of populations in nomadic areas

**Table 1.2: Response rates**

Result	Residence		Total
	Urban	Rural	
Households selected	9,870	13,982	23,852
Households interviewed	8,681	13,092	21,773
Household response rate	88	93.6	91.3

### 1.10 Data processing

The 2015/16 KIHBS data was captured using the Census and Survey Processing System (CSPro) software. The software was programmed with inbuilt checks on consistency and to ensure out of range values are not entered. The data entry adopted a double entry approach for all questionnaires with first entry done in the field (in all the 47 county offices by 50 clerks using Laptops). The data transmission involved data uploaded to the cloud server after every session of data entry. The same data was downloaded daily from the cloud server to the local server located at the KNBS headquarters. A team of 22 clerks based at the KNBS data processing centre conducted a second independent data entry as soon as the questionnaires were received from the field. The two sets of entered data were compared for differences and corrections done to resolve the variations resulting in clean datasets that were used during analysis.

Internet connectivity was provided through 3G modems loaded with data bundles to enable transmission of data to the cloud servers. Data backup was done using external hard disks and local servers at the headquarters. Power banks were used to recharge the tablets while generators in some remote located areas were also used to provide power for the laptops and charge tablets. Data security was achieved through several methods including data encryption, secure file transfer and passwords.

### 1.11 Comparison between 2005/06 KIHBS and 2015/16 KIHBS

The 2005/06 KIHBS and 2015/16 KIHBS both collected nationally representative household survey data over a 12-month period. Table 1.3 shows the comparison of various survey parameters between the two surveys.

**Table 1.3: Comparison between 2005/06 KIHBS and 2015/16 KIHBS**

Parameters	2005/06 KIHBS	2015/16 KIHBS
Sample design		
Survey Domains	National, 69 Districts, Rural/Urban	National, 47 Counties, Rural/Urban
Sampling Frame	NASSEP IV (1,800 Clusters)	NASSEP V (5,360 Clusters)
<i>Sample Size &amp; Allocation</i>		
National	13,430 Households (1,343 Clusters)	24,000 Households (2,400 Clusters)
Rural	8,610 Households (861 Clusters)	14,120 Households (1,412 Clusters)
Urban	4,820 Households (482 Clusters)	9,880 Households (988 Clusters)
Data Collection		
Field data collection teams	44 (100 Survey personnel)	50 (323 Survey personnel)
Data collection dates	May, 2005 - April 2006	September 2015 - August 2016
<i>Consumption module recall periods (days)</i>		
Food Consumption	7	7
Non -food Expenditures	30	30
Durables	365	365
Recall	7	7
<i>Data collection logistics</i>		
Cycles	17	24
Days	21	14
Data Processing		
Data Processing	Single Entry	Double Entry
Data Entry Software	FoxPro	CSPPro
Data transmission	USBs	Cloud Server

### 1.12 Outline of the report

This report provides information discussed in 12 chapters. The first chapter presents the introduction and survey methodology. Chapter two describes the household characteristics while chapter three outlines the housing conditions and amenities. Chapter four focuses on education, chapter five on general health characteristics and chapter six on nutritional status. Chapter seven discusses household income and credit while chapter eight focusses on household transfers. Access to and ownership of ICT at the individual and household level is presented in chapter nine. Chapter ten discusses household domestic tourism while chapter 11 presents highlights of shocks to household welfare. Finally, chapter 12 discusses household experiences regarding access to justice based on the survey findings.

Map 1.1: Map of Kenya by County



# CHAPTER 2

## 2. HOUSEHOLD CHARACTERISTICS

### 2.1 Introduction

The demographic characteristics of a household determine the socio-economic status of household members and provide information necessary for development planning, and resource allocation. This chapter presents basic characteristics of household members from the KIHBS 2015/16. The characteristics include; population distribution, age, sex, place of residence, marital status, household size and household headship, relationship to household head, age dependency ratios and orphanhood.

### 2.2 Population Distribution and Sex Ratio

Table 2.1 presents the distribution of population by sex, residence and county. Overall, the proportion of females was higher (50.6%) compared to that of males (49.4%). The survey results show that more males (50.4%) live in urban areas compared to females (49.6%). On the other hand, more females (51.2%) compared to males (48.8%) reside in rural areas. In general, about two thirds of the population was living in the rural areas.

The distribution of population by sex in the counties largely mirrored the national one. However, the proportion of males in Mombasa, Kwale, Garissa, Wajir, Mandera, Marsabit, Meru, Embu, Kiambu, Trans Nzoia, Kajiado, Bomet and Kisumu Counties was higher than that of females.

The sex-ratio, defined as the number of males per 100 females in a population, was 97.5 at the national level. The sex-ratio in urban areas was higher compared to that in rural areas. Generally, 33 counties had a sex-ratio of less than 100, implying presence of more females than males. Counties with high sex-ratios were Meru and Kisumu at 110.2 and 110.0 respectively, while Busia had the least sex-ratio of 82.0

### 2.3 Population Distribution by Sex and Age-Group

As shown in Table 2.2, more than half of Kenya's population was in the 0-19 years age group. The largest proportion of the population was in the 5-9 years age group, which accounted for 14.4 per cent of the total population followed by those in the 0-4 years age group. The proportion of population thins out with age with those in the 65-69 years age group accounting for 1.4 per cent of the total population, in conformity with the population structure in developing countries. The findings further show that more than half (56.4%) the population in rural areas and 44.5 per cent of population in urban areas fall in the 0-19 years age group.

At the national level, the 15-19 year and the 45-49 years age groups registered high sex-ratios of 108 and 106, respectively, while the 70 years and above age group recorded the lowest sex-ratio of 80.

Table 2.1: Population Distribution by Sex, Residence and County

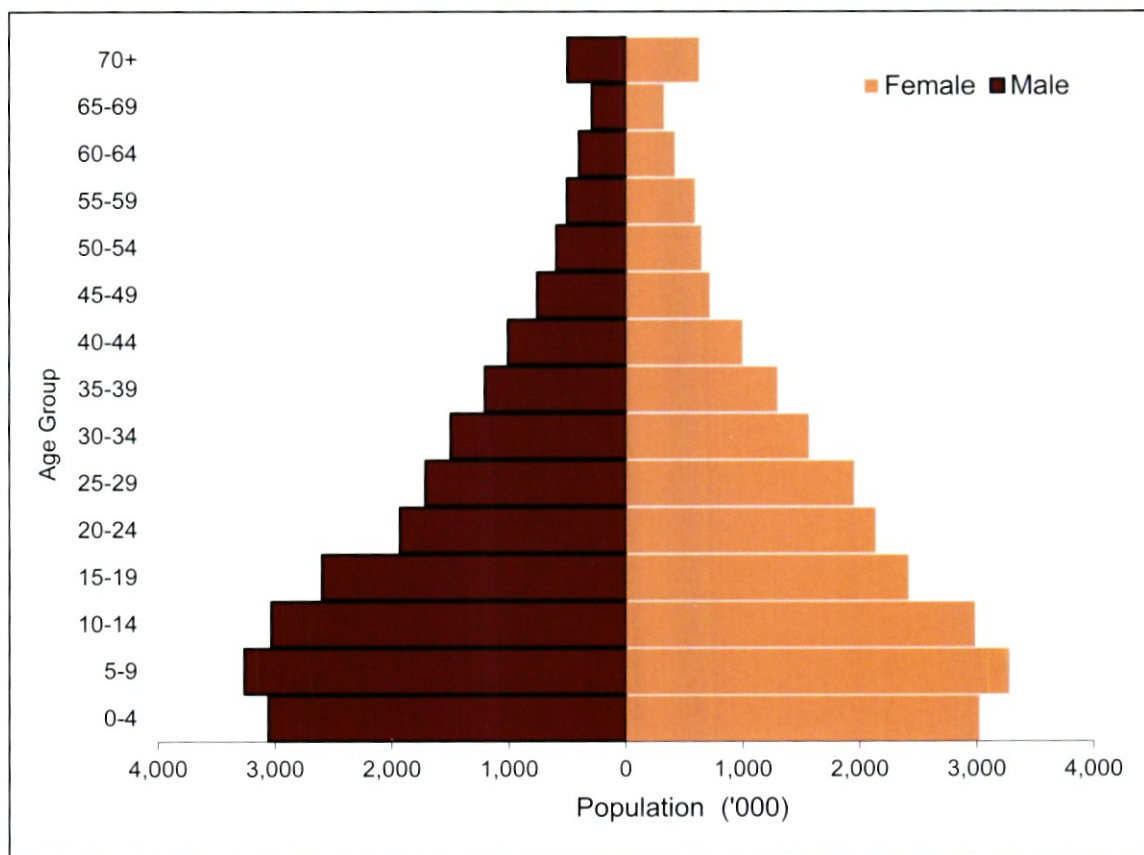
Residence/ County	Male		Female		Sex ratio	Number of individuals ('000)
	Number of individuals ('000)	Per cent	Number of individuals ('000)	Per cent		
National.....	22,393	49.4	22,977	50.6	97.5	45,371
Rural.....	14,212	48.8	14,914	51.2	95.3	29,127
Urban.....	8,181	50.4	8,063	49.6	101.5	16,245
<b>County</b>						
Mombasa.....	601	50.8	584	49.2	103.0	1,185
Kwale.....	413	50.4	407	49.6	101.5	820
Kilifi.....	657	46.9	743	53.1	88.4	1,400
Tana River.....	150	49.5	153	50.5	98.2	304
Lamu.....	63	49.4	65	50.6	97.8	128
Taita / Taveta.....	177	49.3	182	50.7	97.2	358
Garissa.....	220	50.9	212	49.1	103.8	432
Wajir.....	239	52.1	220	47.9	108.8	459
Mandera.....	366	51.4	346	48.6	105.8	711
Marsabit.....	164	51.9	152	48.1	108.1	316
Isiolo.....	78	49.9	78	50.1	99.8	156
Meru.....	771	52.4	700	47.6	110.2	1,471
Tharaka-Nithi.....	194	49.0	202	51.0	96.3	396
Embu.....	281	50.2	279	49.8	100.7	560
Kitui.....	522	47.5	576	52.5	90.6	1,098
Machakos.....	593	49.8	598	50.2	99.2	1,191
Makueni.....	473	49.3	486	50.7	97.2	959
Nyandarua.....	342	49.8	344	50.2	99.4	686
Nyeri.....	388	48.6	410	51.4	94.6	798
Kirinyaga.....	284	46.7	324	53.3	87.8	608
Muranga.....	515	47.5	570	52.5	90.4	1,085
Kiambu.....	955	51.1	913	48.9	104.6	1,868
Turkana.....	514	47.4	570	52.6	90.2	1,084
West Pokot.....	323	49.7	326	50.3	99.0	649
Samburu.....	142	50.0	142	50.0	99.8	284
Trans Nzoia.....	532	51.2	506	48.8	105.1	1,038
Uasin Gishu.....	560	49.4	573	50.6	97.7	1,133
Elgeyo / Marakwet...	230	49.0	239	51.0	96.2	469
Nandi.....	472	49.5	482	50.5	98.1	954
Baringo.....	341	48.4	363	51.6	93.9	704
Laikipia.....	253	49.8	254	50.2	99.6	507
Nakuru.....	972	47.9	1,059	52.1	91.8	2,031
Narok.....	531	49.3	546	50.7	97.2	1,078
Kajiado.....	442	50.8	429	49.2	103.1	871
Kericho.....	472	49.9	473	50.1	99.7	945
Bomet.....	466	50.8	450	49.2	103.4	916
Kakamega.....	911	48.6	965	51.4	94.4	1,876
Vihiga.....	313	49.9	314	50.1	99.7	627
Bungoma.....	744	47.9	810	52.1	91.9	1,553
Busia.....	379	45.1	462	54.9	82.0	840
Siaya.....	466	47.3	519	52.7	89.9	985
Kisumu.....	593	52.4	539	47.6	110.0	1,132
Homa Bay.....	512	47.8	560	52.2	91.4	1,072
Migori.....	533	47.4	593	52.6	90.0	1,126
Kisii.....	670	49.8	676	50.2	99.1	1,347
Nyamira.....	339	48.5	360	51.5	94.0	699
Nairobi City.....	2,237	50.1	2,226	49.9	100.5	4,463

Table 2.2: Population Distribution by Sex, Sex Ratio, Age-Group and Residence

Residence	Age Group (Years)	Male	Female	Number of individuals ('000)	Proportion	Sex Ratio
<b>National</b>	<b>Total.....</b>	<b>49.4</b>	<b>50.6</b>	<b>45,371</b>	<b>100</b>	<b>97.5</b>
	0 - 04.....	50.3	49.7	6,081	13.4	101.1
	05-09.....	49.9	50.1	6,539	14.4	99.7
	01-10.....	50.4	49.6	6,017	13.3	101.6
	15 - 19.....	51.8	48.2	5,016	11.1	107.5
	20 - 24.....	47.5	52.5	4,069	9.0	90.3
	25 - 29.....	46.8	53.2	3,667	8.1	88.0
	30 - 34.....	49.0	51.0	3,063	6.8	96.1
	35 - 39.....	48.3	51.7	2,503	5.5	93.3
	40 - 44.....	50.4	49.6	2,006	4.4	101.6
	45 - 49.....	51.6	48.4	1,476	3.3	106.4
	50 - 54.....	48.2	51.8	1,241	2.7	92.9
	55 - 59.....	46.1	53.9	1,094	2.4	85.6
	60 - 64.....	48.7	51.3	820	1.8	94.8
	65 - 69.....	47.0	53.0	615	1.4	88.8
	70+.....	44.4	55.6	1,122	2.5	80.0
Not Stated.....	52.6	47.4	41	0.1	110.8	
<b>Rural</b>	<b>Total.....</b>	<b>48.8</b>	<b>51.2</b>	<b>29,127</b>	<b>100</b>	<b>95.3</b>
	0 - 04.....	50.7	49.3	3,991	13.7	103.0
	05-09.....	49.9	50.1	4,591	15.8	99.7
	01-10.....	50.0	50.0	4,353	14.9	99.8
	15 - 19.....	52.5	47.5	3,491	12.0	110.7
	20 - 24.....	49.3	50.7	2,120	7.3	97.2
	25 - 29.....	43.9	56.1	1,807	6.2	78.1
	30 - 34.....	47.0	53.0	1,571	5.4	88.7
	35 - 39.....	45.8	54.2	1,436	4.9	84.5
	40 - 44.....	47.3	52.7	1,236	4.2	89.9
	45 - 49.....	48.4	51.6	925	3.2	93.9
	50 - 54.....	46.4	53.6	807	2.8	86.5
	55 - 59.....	41.0	59.0	783	2.7	69.5
	60 - 64.....	46.7	53.3	620	2.1	87.7
	65 - 69.....	46.4	53.6	474	1.6	86.4
	70+.....	44.9	55.1	903	3.1	81.4
Not Stated.....	49.7	50.3	19	0.1	98.7	
<b>Urban</b>	<b>Total.....</b>	<b>50.4</b>	<b>49.6</b>	<b>16,245</b>	<b>100</b>	<b>101.5</b>
	0 - 04.....	49.4	50.6	2,090	12.9	97.5
	05-09.....	49.9	50.1	1,948	12.0	99.7
	01-10.....	51.6	48.4	1,663	10.2	106.4
	15 - 19.....	50.2	49.8	1,525	9.4	100.6
	20 - 24.....	45.5	54.5	1,949	12.0	83.4
	25 - 29.....	49.7	50.3	1,860	11.4	98.6
	30 - 34.....	51.1	48.9	1,492	9.2	104.6
	35 - 39.....	51.6	48.4	1,068	6.6	106.5
	40 - 44.....	55.3	44.7	771	4.7	123.7
	45 - 49.....	56.8	43.2	551	3.4	131.6
	50 - 54.....	51.5	48.5	434	2.7	106.0
	55 - 59.....	59.0	41.0	311	1.9	144.0
	60 - 64.....	54.8	45.2	200	1.2	121.0
	65 - 69.....	49.3	50.7	141	0.9	97.2
	70+.....	42.6	57.4	220	1.4	74.3
Not Stated.....	54.9	45.1	23	0.1	121.9	

Figure 2.1 is a population pyramid showing the distribution of population by age-group. The pyramid shows that the bulk of Kenya's population was in the 0-34 years age group, depicting a generally youthful population.

**Figure 2.1: Population Pyramid Kenya, 2016**



## 2.4 Household Composition

### Household Size

Household size is defined as the number of persons living together in a household. Table 2.3 presents the percentage distribution of households by size, residence and county. Nationally, the average household size was estimated at 4.0 members in 2015/16 KIHBS, which was a decline from 5.1 members reported in 2005/06 KIHBS. Households with 1-2 members accounted for 31.6 per cent of all households.

The average household size in rural areas was higher at 4.5 members compared to 3.3 members in urban areas. Wajir, Mandera and Garissa Counties recorded high average household sizes of 6.6, 6.4 and 5.5 members, respectively. Smaller household sizes were registered in Nyeri, Nairobi City and Mombasa counties.

Table 2.3: Percentage Distribution of Households by Size, Residence and County

Residence/ County	1-2 Persons	3-4 persons	5-6 persons	7+ persons	Number of Households ('000)	Mean Household size
<b>National.....</b>	<b>31.6</b>	<b>30.9</b>	<b>22.8</b>	<b>15</b>	<b>11,415</b>	<b>4.0</b>
<b>Rural.....</b>	<b>23.0</b>	<b>30.0</b>	<b>26.7</b>	<b>20</b>	<b>6,442</b>	<b>4.5</b>
<b>Urban.....</b>	<b>42.7</b>	<b>32.2</b>	<b>17.7</b>	<b>7</b>	<b>4,972</b>	<b>3.3</b>
<b>County</b>						
Mombasa.....	49.2	30.1	14.2	7	397	3.0
Kwale.....	25.9	23.6	25.9	25	174	4.7
Kilifi.....	32.2	25.5	19.7	23	326	4.3
Tana River.....	14.5	29.5	23.1	33	56	5.4
Lamu.....	24.9	32.7	23.0	19	30	4.3
Taita / Taveta.....	38.2	30.3	22.8	9	102	3.5
Garissa.....	16.5	24.4	21.9	37	78	5.5
Wajir.....	5.6	17.9	27.6	49	69	6.6
Mandera.....	6.7	15.9	32.6	45	111	6.4
Marsabit.....	17.4	23.3	29.9	29	62	5.1
Isiolo.....	25.1	23.8	27.2	24	34	4.6
Meru.....	31.1	35.1	23.1	11	393	3.7
Tharaka-Nithi.....	33.2	33.6	22.7	11	107	3.7
Embu.....	38.8	34.5	19.7	7	164	3.4
Kitui.....	23.7	26.4	26.2	24	236	4.6
Machakos.....	34.3	30.5	26.1	9	328	3.6
Makueni.....	26.3	32.8	26.5	14	233	4.1
Nyandarua.....	36.1	32.9	20.7	10	191	3.6
Nyeri.....	45.3	37.7	13.3	4	271	2.9
Kirinyaga.....	36.4	45.6	16.3	2	198	3.1
Murang'a.....	37.0	36.9	21.3	5	323	3.4
Kiambu.....	41.8	35.7	19.0	3	600	3.1
Turkana.....	26.5	29.1	23.8	21	246	4.4
West Pokot.....	16.0	24.4	25.7	34	119	5.4
Samburu.....	21.5	28.5	30.7	19	61	4.6
Trans Nzoia.....	21.0	27.4	24.8	27	210	4.9
Uasin Gishu.....	28.9	27.7	24.5	19	270	4.2
Elgeyo / Marakwet...	23.3	26.8	24.2	26	99	4.7
Nandi.....	18.2	29.1	31.9	21	202	4.7
Baringo.....	25.5	27.5	23.7	23	152	4.6
Laikipia.....	30.4	36.1	23.7	10	135	3.7
Nakuru.....	36.4	33.5	19.9	10	578	3.5
Narok.....	23.4	24.4	26.3	26	223	4.8
Kajiado.....	38.1	32.5	20.6	9	250	3.5
Kericho.....	22.0	31.3	28.8	18	211	4.5
Bomet.....	16.7	25.7	30.2	27	179	5.1
Kakamega.....	20.3	27.4	30.5	22	392	4.8
Vihiga.....	22.5	30.7	29.8	17	144	4.3
Bungoma.....	19.7	27.7	27.3	25	321	4.8
Busia.....	21.6	27.2	25.9	25	177	4.7
Siaya.....	30.7	29.9	25.1	14	246	4.0
Kisumu.....	30.3	32.1	23.2	14	284	4.0
Homa Bay.....	19.7	25.5	31.4	23	224	4.8
Migori.....	20.4	27.4	25.8	26	233	4.8
Kisii.....	21.3	29.4	28.6	21	291	4.6
Nyamira.....	29.1	34.1	24.1	13	179	3.9
Nairobi City.....	46.6	33.9	16.1	3	1,503	3.0

### Household Headship

Table 2.4 presents the percentage distribution of households by sex of household head, residence and county. Nationally, about 7 in 10 households were headed by males. Male-headed households were higher in both rural and urban areas at 64.0 per cent and 72.2 per cent, respectively. Garissa County recorded the lowest proportion (20.3%) of female-headed households while Turkana registered the highest proportion (52.1%). Other counties with notably high proportions of female-headed households were Migori, Makueni and Kitui.

Overall, slightly more than half (52.4%) of household heads were aged between 25-44 years as presented in Table 2.5. The highest proportion of 14.7 per cent of household heads was in the 30-34 years age group. Nationally, households headed by persons aged 65 years and above accounted for 11.6 per cent of households. In the rural areas, those aged 30-44 years accounted for 36.7 per cent of household heads compared to 42.3 per cent in urban areas.

Table 2.4: Percentage Distribution of Households by Sex of Household Head, Residence and County

Residence	Male	Female	Number of Households ('000)
<b>National</b> .....	67.6	32.4	11,415
<b>Rural</b> .....	64.1	35.9	6,442
<b>Urban</b> .....	72.2	27.8	4,972
<b>County</b>			
Mombasa.....	75.0	25.0	397
Kwale.....	70.3	29.7	174
Kilifi.....	62.9	37.1	326
Tana River.....	62.0	38.0	56
Lamu.....	67.0	33.0	30
Taita / Taveta.....	68.3	31.7	102
Garissa.....	79.7	20.3	78
Wajir.....	66.4	33.6	69
Mandera.....	54.2	45.8	111
Marsabit.....	67.0	33.0	62
Isiolo.....	59.1	40.9	34
Meru.....	68.0	32.0	393
Tharaka-Nithi.....	64.8	35.2	107
Embu.....	69.0	31.0	164
Kitui.....	53.6	46.4	236
Machakos.....	63.6	36.4	328
Makueni.....	54.0	46.0	233
Nyandarua.....	66.1	33.9	191
Nyeri.....	61.9	38.1	271
Kirinyaga.....	70.4	29.6	198
Murang'a.....	60.4	39.6	323
Kiambu.....	75.0	25.0	600
Turkana.....	47.9	52.1	246
West Pokot.....	73.2	26.8	119
Samburu.....	64.9	35.1	61
Trans Nzoia.....	76.1	23.9	210
Uasin Gishu.....	71.6	28.4	270
Elgeyo / Marakwet...	73.5	26.5	99
Nandi.....	73.2	26.8	202
Baringo.....	68.4	31.6	152
Laikipia.....	59.9	40.1	135
Nakuru.....	70.0	30.0	578
Narok.....	75.5	24.5	223
Kajiado.....	67.3	32.7	250
Kericho.....	72.6	27.4	211
Bomet.....	73.6	26.4	179
Kakamega.....	65.3	34.7	392
Vihiga.....	58.7	41.3	144
Bungoma.....	66.3	33.7	321
Busia.....	64.3	35.7	177
Siaya.....	54.3	45.7	246
Kisumu.....	68.8	31.2	284
Homa Bay.....	62.9	37.1	224
Migori.....	53.9	46.1	233
Kisii.....	67.7	32.3	291
Nyamira.....	63.4	36.6	179
Nairobi City.....	76.0	24.0	1,503

Table 2.5: Percentage Distribution of Households by Sex of Household Head, Age-Group and Residence

Residence	Age Group	Per cent	Number of Households ('000)	Male		Female	
				Per cent	Number of Households ('000)	Per cent	Number of Households ('000)
National	<b>Total.....</b>	<b>100.0</b>	<b>11,415</b>	<b>67.6</b>	<b>7,716</b>	<b>32.4</b>	<b>3,699</b>
	0-14.....	0.0	2	86.8	2	13.2	0*
	15-19.....	0.7	79	64.8	51	35.2	28
	20-24.....	7.0	794	66.2	525	33.8	268
	25-29.....	13.3	1,517	72.9	1,106	27.1	410
	30-34.....	14.7	1,676	72.9	1,222	27.1	454
	35-39.....	13.0	1,486	70.3	1,044	29.7	442
	40-44.....	11.4	1,306	70.2	917	29.8	389
	45-49.....	8.8	1,003	69.6	698	30.4	305
	50-54.....	7.6	863	65.1	562	34.9	301
	55-59.....	6.6	748	63.9	478	36.1	270
	60-64.....	5.3	600	62.9	377	37.1	223
	65+.....	11.6	1,325	54.4	720	45.6	604
Not stated....	0.2	17	72.3	13	27.7	5	
Rural	<b>Total.....</b>	<b>100.0</b>	<b>6,442</b>	<b>64.0</b>	<b>4,126</b>	<b>36.0</b>	<b>2,316</b>
	0-14.....	0.0	2	84.1	2	15.9	0*
	15-19.....	0.5	33	52.2	17	47.8	16
	20-24.....	4.2	271	61.0	165	39.0	106
	25-29.....	9.2	590	66.5	392	33.5	198
	30-34.....	12.1	781	71.1	556	28.9	225
	35-39.....	12.6	809	68.2	552	31.8	257
	40-44.....	12.0	774	68.1	527	31.9	247
	45-49.....	9.5	609	68.1	415	31.9	194
	50-54.....	8.4	542	63.9	346	36.1	196
	55-59.....	8.1	519	58.6	304	41.4	215
	60-64.....	7.0	448	60.9	273	39.1	175
	65+.....	16.4	1,055	54.1	570	45.9	485
Not stated....	0.1	10	71.3	7	28.7	3	
Urban	<b>Total.....</b>	<b>100.0</b>	<b>4,972</b>	<b>72.2</b>	<b>3,589</b>	<b>27.8</b>	<b>1,383</b>
	0-14.....	0.0	0	100.0	0	0.0	0*
	15-19.....	0.9	46	73.7	34	26.3	12
	20-24.....	10.5	523	68.9	360	31.1	163
	25-29.....	18.6	927	77.1	715	22.9	213
	30-34.....	18.0	894	74.5	666	25.5	228
	35-39.....	13.6	676	72.7	492	27.3	185
	40-44.....	10.7	533	73.3	390	26.7	142
	45-49.....	7.9	393	71.8	283	28.2	111
	50-54.....	6.5	321	67.1	215	32.9	105
	55-59.....	4.6	229	76.1	174	23.9	55
	60-64.....	3.1	152	68.7	104	31.3	47
	65+.....	5.4	270	55.7	150	44.3	120
Not stated....	0.2	8	73.6	6	26.4	2	

\*Less than a thousand

## 2.5 Dependency Ratios

Table 2.6 presents information on three population based dependency ratios, namely; total (age) dependency ratio, child dependency ratio and old-age dependency ratio as discussed in the following subsequent section

### Total (Age) Dependency Ratio

Age dependency ratio is defined as the proportion of population that is dependent (age 0-14 and 65+ years) on the working age population (age 15-64 years). It is a measure of the economic burden of the productive population (15 to 64 years). A higher age dependency ratio implies a greater burden, especially in countries with a very young or aging population. As shown in Table 2.6, the proportion of population aged below 15 years was 41.0 per cent, a marginal decline from 41.9 per cent recorded in 2005/06 KIHBS. Those aged 15-64 increased from 54.2 per cent in 2005/06 KIHBS to 55.0 per cent in 2015/16.

Overall, the age dependency ratio stood at 81.6 in 2015/16 KIHBS, a decline from 84.0 per cent recorded in the 2005/06 KIHBS. The ratio was significantly higher in rural areas (96.7) compared to urban areas (59.7). Counties with high age dependency ratios were Wajir (139.8), Mandera (137.2), Samburu (125.0) and Garissa (124.2). Nairobi City had the lowest age dependency ratio of 48.4.

### Child Dependency Ratio

Child dependency ratio is the number of children aged below 15 years relative to the total number of persons aged 15-64 years. The findings from the Survey show that child dependency ratio was 74.7 at the national level. Rural areas recorded a higher dependency ratio of 87.4 compared to that of 56.2 for urban. Wajir, Mandera, Samburu and Garissa Counties had high child dependency ratios of 131.7, 129.1, 118.7 and 118.4, respectively.

### Old-age Dependency Ratio

Old-age dependency ratio is the population aged 65 years and above relative to the total number of persons aged 15-64 years. Nationally, old-age dependency ratio was 6.9. The ratio was higher in rural areas (9.3) compared to urban areas (3.6). The low old-age dependency ratio in urban areas is mainly attributed to urban-rural migration after retirement.

Table 2.6: Percentage Distribution of Population by Broad Age-Group, Age Dependency Ratio, Residence and county

Residence/ County	Broad Age-Group (Years)				Age Dependency ratio	Child-Dependency Ratio	Old-Age Dependency Ratio	Number of individuals ('000)
	0-14	15-64	65+	Not Stated				
National.....	41.1	55.0	3.8	0.1	81.6	74.7	6.9	45,371
Rural.....	44.4	50.8	4.7	0.1	96.7	87.4	9.3	29,127
Urban.....	35.1	62.5	2.2	0.1	59.7	56.2	3.5	16,245
<b>County</b>								
Mombasa.....	32.1	66.2	1.7	0.1	51.0	48.5	2.6	1,185
Kwale.....	45.5	51.2	3.3	0.0	95.4	88.9	6.4	820
Kilifi.....	43.6	52.2	3.0	1.2	89.3	83.5	5.7	1,400
Tana River.....	47.2	49.0	3.8	0.0	103.9	96.3	7.8	304
Lamu.....	42.5	53.2	4.3	0.0	87.8	79.9	8.1	128
Taita / Taveta.....	37.2	57.6	5.2	0.0	73.7	64.6	9.0	358
Garissa.....	52.7	44.5	2.6	0.2	124.2	118.4	5.8	432
Wajir.....	54.9	41.7	3.4	0.0	139.8	131.7	8.2	459
Mandera.....	54.5	42.2	3.4	0.0	137.2	129.1	8.1	711
Marsabit.....	49.6	46.6	3.8	0.0	114.7	106.4	8.2	316
Isiolo.....	44.8	51.8	3.5	0.0	93.2	86.5	6.8	156
Meru.....	36.2	59.2	4.6	0.0	69.0	61.1	7.8	1,471
Tharaka-Nithi.....	37.4	56.4	6.2	0.0	77.4	66.3	11.0	396
Embu.....	34.2	59.1	6.6	0.1	68.9	57.9	11.2	560
Kitui.....	42.9	50.6	6.4	0.1	97.3	84.8	12.6	1,098
Machakos.....	33.6	61.2	5.2	0.0	63.4	54.9	8.5	1,191
Makueni.....	39.0	56.0	5.0	0.0	78.5	69.6	8.9	959
Nyandarua.....	38.8	55.5	5.5	0.2	79.7	69.9	9.9	686
Nyeri.....	31.0	61.0	8.0	0.0	63.9	50.8	13.1	798
Kirinyaga.....	33.2	59.4	7.2	0.3	67.9	55.9	12.1	608
Murang'a.....	35.2	56.4	8.3	0.1	77.3	62.4	14.7	1,085
Kiambu.....	32.5	63.8	3.5	0.2	56.5	50.9	5.5	1,868
Turkana.....	50.0	45.7	4.2	0.1	118.8	109.4	9.2	1,084
West Pokot.....	50.9	46.4	2.7	0.0	115.3	109.7	5.8	649
Samburu.....	52.7	44.4	2.9	0.0	125.0	118.7	6.5	284
Trans Nzoia.....	43.4	53.0	3.6	0.0	88.8	81.9	6.8	1,038
Uasin Gishu.....	40.3	56.0	3.6	0.1	78.6	72.0	6.4	1,133
Elgeyo / Marakwet....	42.3	53.3	4.1	0.2	87.2	79.4	7.7	469
Nandi.....	40.8	56.5	2.7	0.0	77.0	72.2	4.8	954
Baringo.....	43.9	50.7	5.4	0.0	97.4	86.6	10.7	704
Laikipia.....	41.6	54.7	3.6	0.2	82.6	76.1	6.6	507
Nakuru.....	42.3	53.9	3.8	0.0	85.5	78.5	7.1	2,031
Narok.....	50.0	47.8	2.2	0.0	109.3	104.6	4.6	1,078
Kajiado.....	38.7	58.9	2.3	0.0	69.7	65.7	3.9	871
Kericho.....	40.7	56.2	3.2	0.0	78.0	72.4	5.7	945
Bomet.....	46.7	51.0	2.4	0.0	96.2	91.6	4.7	916
Kakamega.....	44.6	51.2	4.1	0.0	95.2	87.1	8.0	1,876
Vihiga.....	41.5	51.4	7.1	0.0	94.4	80.7	13.8	627
Bungoma.....	47.7	49.0	3.3	0.0	104.0	97.3	6.7	1,553
Busia.....	45.7	49.1	5.1	0.0	103.5	93.1	10.4	840
Siaya.....	43.7	50.5	5.8	0.0	97.9	86.5	11.5	985
Kisumu.....	42.1	54.6	3.1	0.2	82.9	77.1	5.7	1,132
Homa Bay.....	49.8	47.3	2.9	0.0	111.5	105.3	6.1	1,072
Migori.....	46.5	49.6	3.9	0.0	101.8	93.8	7.9	1,126
Kisii.....	42.0	54.1	3.8	0.0	84.7	77.6	7.0	1,347
Nyamira.....	41.2	55.1	3.7	0.0	81.5	74.8	6.7	699
Nairobi City.....	31.4	67.4	1.1	0.1	48.3	46.6	1.6	4,463

## 2.6 Marital Status

Table 2.7a provides the distribution of the population aged 18 years and above by marital status, residence and county. Nationally, 54.4 per cent of the adult population was in monogamous unions, 27.0 per cent were never married and 6.9 per cent were widows/widowers. Those separated and divorced accounted for 5.0 per cent of the population.

The proportion of the population in monogamous unions was higher in urban areas at 56.6 per cent compared to 52.8 per cent in rural areas. In contrast, polygamous unions were more prevalent among rural dwellers (8.4%) than urban (3.1%).

At the county level, the highest proportion of population in monogamous unions was recorded in Kirinyaga (63.3%) followed by Nakuru (62.6%) and Nyandarua (61.8%). Mandera County had the lowest proportion of population in monogamous unions at 33.3 per cent.

Table 2.7a: Percentage Distribution of Population aged 18 Years and Above by Marital Status, Residence and County

Residence/ County	Married Monogamous	Married Polygamous	Living together	Separated	Divorced	Widow/ Widower	Never Married	Number of individuals ('000)
National.....	54.4	6.2	0.6	4.0	1.0	6.9	27.0	23,462
Rural.....	52.8	8.4	0.2	3.5	0.9	8.7	25.5	13,878
Urban.....	56.6	3.1	1.1	4.7	1.1	4.3	29.2	9,584
<b>County</b>								
Mombasa.....	49.4	1.3	7.9	4.6	1.6	3.8	31.4	754
Kwale.....	54.7	7.7	0.6	2.3	6.6	7.1	21.0	389
Kilifi.....	56.9	5.6	0.8	2.1	4.0	5.9	24.7	665
Tana River.....	52.4	11.1	0.2	1.3	2.3	7.2	25.4	135
Lamu.....	58.0	4.2	0.0	1.4	8.1	6.5	21.7	65
Taita / Taveta.....	55.9	0.9	0.4	3.2	2.1	8.4	29.1	202
Garissa.....	55.2	13.1	0.0	0.5	3.8	5.3	22.1	172
Wajir.....	58.1	12.8	0.0	0.9	1.6	6.5	20.0	174
Mandera.....	33.3	35.0	0.0	0.0	3.0	4.1	24.7	273
Marsabit.....	51.5	12.6	0.0	1.7	1.6	9.5	23.1	136
Isiolo.....	51.1	10.9	0.0	3.1	2.0	6.4	26.6	73
Meru.....	51.7	5.2	0.5	5.0	1.3	6.6	29.8	835
Tharaka-Nithi.....	53.5	3.7	0.5	4.9	3.3	8.9	25.2	220
Embu.....	59.9	1.4	0.0	4.8	1.2	8.1	24.5	329
Kitui.....	51.4	7.1	0.0	3.1	0.6	9.7	28.0	539
Machakos.....	48.9	4.2	2.6	4.0	0.5	8.3	31.5	702
Makueni.....	52.9	2.6	0.0	4.7	0.6	7.8	31.5	500
Nyandarua.....	61.8	1.3	0.0	5.8	0.3	8.6	22.3	361
Nyeri.....	56.0	1.3	0.4	10.1	1.0	8.2	22.9	499
Kirinyaga.....	63.3	1.2	0.5	8.1	0.5	7.8	18.6	365
Murang'a.....	60.2	1.4	0.0	4.7	1.0	9.4	23.3	622
Kiambu.....	59.5	1.0	0.0	6.6	0.3	5.0	27.6	1,142
Turkana.....	38.1	20.3	0.0	5.3	1.1	13.7	21.4	469
West Pokot.....	39.9	25.0	0.0	0.8	0.5	6.2	27.6	272
Samburu.....	52.2	15.6	0.0	1.7	1.4	6.0	23.1	115
Trans Nzoia.....	53.5	6.0	0.0	4.6	0.3	4.8	30.8	512
Uasin Gishu.....	50.5	2.2	2.9	2.9	0.3	5.4	35.7	596
Elgeyo / Marakwet...	49.9	7.1	0.3	3.9	0.7	7.2	30.9	234
Nandi.....	53.9	3.3	0.0	3.1	0.7	6.0	33.0	489
Baringo.....	50.3	7.0	0.0	2.1	0.2	8.2	32.3	340
Laikipia.....	55.9	6.4	0.0	2.4	3.5	6.7	25.1	257
Nakuru.....	62.6	3.4	0.5	5.0	0.6	5.6	22.3	1,047
Narok.....	53.1	16.9	0.0	1.5	1.1	3.9	23.6	462
Kajiado.....	55.7	6.7	0.0	2.9	1.2	5.4	28.2	481
Kericho.....	58.6	1.6	0.0	3.8	0.2	5.1	30.7	494
Bomet.....	58.4	5.5	0.0	2.0	0.1	4.9	29.3	418
Kakamega.....	53.7	8.9	0.5	4.1	0.2	8.3	24.4	861
Vihiga.....	52.6	4.6	0.1	7.7	0.1	10.9	24.0	318
Bungoma.....	54.2	12.6	0.0	3.4	0.5	5.4	23.8	680
Busia.....	47.8	14.8	0.0	2.4	0.4	10.5	24.1	384
Siaya.....	51.2	9.4	0.1	2.3	0.4	15.0	21.5	467
Kisumu.....	50.5	11.8	0.3	3.4	0.3	9.2	24.6	576
Homa Bay.....	50.9	15.7	0.2	2.3	0.2	10.9	19.8	447
Migori.....	43.7	11.7	0.0	1.9	0.1	14.4	28.2	487
Kisii.....	57.7	3.1	0.0	2.9	0.3	7.4	28.5	670
Nyamira.....	58.2	6.4	0.0	4.3	0.8	6.2	24.2	358
Nairobi City.....	58.8	1.4	0.1	4.8	0.8	3.3	31.0	2,874

Table 2.7b shows the distribution of population aged 15 years and above by marital status, residence and county. At the national level, 47.9 per cent of the population aged 15 years and above were in monogamous unions while 35.6 per cent were never married. In urban areas, 51.8 per cent of the population were in monogamous unions compared to 45.6 per cent in rural areas. Nationally, widows/widowers accounted for 6.1 per cent of the population. Turkana, Siaya and Migori Counties recorded a higher proportion of widows/widowers of above 10 per cent of their respective population. The proportion of the population reported as separated or divorced was 3.5 and 0.9 per cent, respectively.

Table 2.7b: Percentage Distribution of Population aged 15 Years and Above by Marital Status, Residence and County

Residence/ County	Married Monogamous	Polygamous married	Living-together	Separated	Divorced	Widow/Widower	Never Married	Number of individuals ('000)
National.....	47.9	5.5	0.5	3.5	0.9	6.1	35.6	26,693
Rural.....	45.6	7.3	0.1	3.0	0.8	7.5	35.7	16,173
Urban.....	51.8	2.9	1.0	4.3	1.0	3.9	35.1	10,520
<b>County</b>								
Mombasa.....	46.3	1.2	7.4	4.3	1.5	3.5	35.7	804
Kwale.....	48.3	6.8	0.6	2.1	5.7	6.1	30.4	447
Kilifi.....	49.1	4.8	0.7	1.8	3.8	5.1	34.6	773
Tana River.....	44.6	9.4	0.2	1.3	2.0	6.0	36.5	160
Lamu.....	51.4	3.8	0.0	1.2	7.2	5.8	30.6	74
Taita / Taveta.....	50.3	0.8	0.4	2.9	1.8	7.5	36.2	225
Garissa.....	47.1	11.1	0.0	0.4	3.2	4.5	33.7	203
Wajir.....	49.3	10.8	0.0	0.8	1.5	5.5	32.1	207
Mandera.....	28.2	29.7	0.0	0.0	2.6	3.4	36.0	324
Marsabit.....	44.5	10.9	0.0	1.5	1.4	8.1	33.6	159
Isiolo.....	43.7	9.3	0.0	2.6	1.7	5.4	37.2	86
Meru.....	46.4	4.6	0.4	4.4	1.1	5.9	37.2	938
Tharaka-Nithi.....	47.4	3.3	0.4	4.4	2.9	7.9	33.7	248
Embu.....	53.8	1.2	0.0	4.3	1.1	7.3	32.3	368
Kitui.....	44.2	6.2	0.1	2.7	0.5	8.4	38.0	626
Machakos.....	43.5	3.7	2.3	3.6	0.5	7.4	39.1	791
Makueni.....	45.3	2.2	0.0	4.0	0.5	6.6	41.4	585
Nyandarua.....	53.4	1.2	0.0	5.0	0.3	7.4	32.8	419
Nyeri.....	50.9	1.2	0.4	9.1	0.9	7.5	30.0	551
Kirinyaga.....	57.1	1.0	0.4	7.3	0.4	7.1	26.6	405
Murang'a.....	53.5	1.2	0.0	4.1	0.9	8.3	31.9	702
Kiambu.....	54.8	1.0	0.0	6.0	0.3	4.5	33.4	1,257
Turkana.....	33.7	17.6	0.0	4.7	1.0	11.9	31.0	541
West Pokot.....	34.3	21.3	0.0	0.7	0.4	5.3	38.0	319
Samburu.....	45.3	13.5	0.0	1.5	1.2	5.1	33.4	134
Trans Nzoia.....	46.7	5.4	0.0	4.0	0.3	4.2	39.4	587
Uasin Gishu.....	44.6	2.0	2.6	2.6	0.2	4.8	43.2	675
Elgeyo / Marakwet...	43.5	6.1	0.3	3.4	0.6	6.2	39.9	269
Nandi.....	46.8	3.0	0.0	2.7	0.6	5.2	41.8	565
Baringo.....	43.5	6.0	0.0	1.8	0.2	7.1	41.4	395
Laikipia.....	48.7	5.6	0.0	2.1	3.1	5.8	34.7	295
Nakuru.....	55.9	3.0	0.4	4.5	0.5	5.0	30.6	1,172
Narok.....	45.7	14.5	0.0	1.3	0.9	3.3	34.3	539
Kajiado.....	50.3	6.0	0.0	2.6	1.1	4.9	35.2	533
Kericho.....	51.6	1.5	0.0	3.4	0.1	4.5	38.9	561
Bomet.....	50.3	5.4	0.0	1.7	0.0	4.2	38.4	489
Kakamega.....	45.0	7.7	0.4	3.4	0.2	6.9	36.6	1,038
Vihiga.....	45.6	4.0	0.1	6.7	0.0	9.4	34.1	367
Bungoma.....	45.5	10.7	0.0	2.8	0.4	4.5	36.0	812
Busia.....	41.0	12.4	0.0	2.1	0.4	8.8	35.4	456
Siaya.....	43.7	7.9	0.1	1.9	0.3	12.6	33.4	555
Kisumu.....	45.1	10.5	0.2	3.1	0.2	8.1	32.7	653
Homa Bay.....	42.6	13.1	0.2	1.9	0.2	9.0	32.9	538
Migori.....	35.8	9.6	0.0	1.5	0.1	11.6	41.3	602
Kisii.....	49.6	2.7	0.0	2.5	0.2	6.4	38.5	780
Nyamira.....	51.0	5.6	0.0	3.7	0.7	5.4	33.6	411
Nairobi City.....	55.5	1.3	0.1	4.5	0.7	3.2	34.8	3055

## 2.7 Orphanhood

The definition of an orphan adopted in this report refers to a child under 18 years who has lost one or both parents. The percentage distribution of children aged 0-17 years by orphanhood, living arrangement, residence and county is presented in Table 2.8. Nationally, the results show that 8.4 per cent of the children were orphans. Children living with both parents accounted for 58.3 per cent of total children. Overall, 21.2 per cent of children were living with the mother only although the father was alive while those residing with mother and father was deceased were 4.1 per cent. The findings show that there were more orphans in rural areas (8.7%) than in urban areas (7.7%). Counties with high proportion of orphans were Migori (21.4%), Siaya (16.0%), Homa Bay (15.0%) and Turkana (12.6%) while Bomet County had the lowest proportion at 4.6 per cent.

Table 2.9 presents the distribution of children aged 0-14 years by orphanhood, living arrangement, residence and county. Overall, 6.8 per cent of children below 15 years were orphans. The proportion of orphans aged 0-14 years was higher in rural areas than in urban areas. Counties with high proportion of orphans were Migori (18.7%), Siaya (12.7%), Homa Bay (12.5%) and Kisumu (12.1%).

Analysis by living arrangement shows that more than half (60.0%) of the children aged below 15 years reside with both parents. The proportion of children living with both parents was higher among urban residents (65.6%) compared to that among the rural (57.5%). The proportion of those living with mothers but fathers are alive was 21.6 per cent. Further, the proportion of children living with neither of the parents, suggesting that they live with a "guardian" or on their own was 8.6 per cent.

Table 2.8: Percentage Distribution of Children (under 18 Years) by Orphanhood, Living Arrangement, Residence and County

Residence/ County	Living with both	Living with mother but not with father		Living with Father but not with mother		Both alive	Not living with either father or mother	
		Father alive	Father deceased	Mother alive	Mother deceased		Only Father alive	Only mother alive
National.....	58.2	21.2	4.1	2.1	0.9	9.0	1.0	1.3
Rural.....	56.2	22.0	4.4	2.1	0.9	9.9	1.1	1.2
Urban.....	62.9	19.2	3.6	2.1	0.8	7.1	0.8	1.3
<b>County</b>								
Mombasa.....	62.4	15.9	2.8	5.4	1.7	8.5	0.6	1.9
Kwale.....	54.5	23.5	3.1	6.7	1.5	7.7	1.6	1.0
Kilifi.....	49.4	30.9	3.5	4.1	0.1	8.7	1.2	1.6
Tana River.....	56.1	22.7	4.6	4.1	0.8	8.2	0.9	1.5
Lamu.....	66.1	16.6	2.0	2.4	1.0	9.1	1.8	0.6
Taita / Taveta.....	53.4	25.8	2.2	2.5	0.6	11.7	0.6	0.4
Garissa.....	83.0	3.8	3.3	0.7	0.9	6.8	0.6	0.9
Wajir.....	84.7	3.7	4.2	1.1	0.0	5.3	0.3	0.7
Mandera.....	77.0	5.4	5.2	1.2	0.7	8.6	0.7	1.0
Marsabit.....	71.9	10.7	6.1	0.7	0.8	7.4	0.6	1.1
Isiolo.....	71.0	13.7	5.4	0.6	0.3	7.3	0.3	0.6
Meru.....	56.6	21.9	4.9	3.1	1.7	9.0	1.2	0.5
Tharaka-Nithi.....	57.4	20.9	5.7	1.7	0.4	8.6	0.9	0.6
Embu.....	61.8	17.8	4.0	1.4	0.1	5.2	0.6	0.1
Kitui.....	45.6	34.3	2.2	2.0	0.1	9.1	0.7	0.3
Machakos.....	46.0	29.6	3.2	1.3	1.0	13.2	0.2	0.6
Makueni.....	40.6	37.0	2.8	1.2	0.7	13.2	0.5	1.0
Nyandarua.....	62.6	21.3	3.0	0.3	0.2	7.6	0.9	0.5
Nyeri.....	53.0	30.1	2.0	0.9	1.2	8.9	3.1	0.0
Kirinyaga.....	59.1	19.5	3.1	1.5	1.3	8.0	2.2	0.1
Murang'a.....	48.2	32.0	3.7	1.0	0.9	8.6	0.6	1.5
Kiambu.....	70.5	18.4	1.8	0.8	0.5	3.4	1.0	1.6
Turkana.....	49.0	24.4	9.6	0.7	0.4	12.8	0.2	1.2
West Pokot.....	68.8	13.3	2.8	1.7	1.0	9.5	0.9	1.2
Samburu.....	58.6	24.2	6.3	1.4	0.2	8.1	0.2	0.6
Trans Nzoia.....	59.3	15.4	3.0	2.4	0.7	12.2	0.7	2.9
Uasin Gishu.....	58.7	23.0	2.8	2.1	0.4	10.0	0.9	0.4
Elgeyo / Marakwet.....	63.7	17.8	5.0	1.1	0.6	8.5	1.2	0.2
Nandi.....	59.0	20.5	4.0	2.3	0.8	10.7	0.5	1.1
Baringo.....	54.4	23.4	4.1	3.0	1.2	10.0	1.8	0.8
Laikipia.....	54.0	31.5	4.9	1.3	0.0	5.9	0.8	0.1
Nakuru.....	65.2	20.9	3.0	0.9	1.0	4.0	1.9	1.0
Narok.....	66.4	17.0	4.6	1.1	1.2	8.0	0.4	0.4
Kajiado.....	60.4	25.8	1.5	1.6	0.0	6.1	0.4	1.0
Kericho.....	66.1	19.4	4.2	1.3	0.9	5.3	0.8	0.2
Bomet.....	71.2	17.2	2.9	1.5	1.0	4.6	0.3	0.4
Kakamega.....	46.5	22.6	3.6	4.8	0.8	16.6	1.5	2.4
Vihiga.....	40.6	24.2	2.0	4.7	1.5	17.9	1.1	4.1
Bungoma.....	53.6	20.5	3.9	2.0	0.5	16.8	0.7	1.7
Busia.....	54.8	17.6	4.0	3.3	0.5	13.4	2.6	2.3
Siaya.....	45.5	24.1	5.8	2.0	1.8	10.3	1.6	3.3
Kisumu.....	54.1	18.0	4.6	3.7	1.1	9.5	2.1	2.5
Homa Bay.....	60.5	20.0	6.9	0.4	1.6	3.8	2.5	1.8
Migori.....	44.0	22.5	9.3	3.2	1.7	6.5	2.4	4.0
Kisii.....	54.2	22.6	5.9	1.0	2.2	11.0	1.0	0.8
Nyamira.....	50.9	29.0	5.0	1.0	0.4	9.5	1.1	0.7
Nairobi City.....	72.2	14.1	3.9	1.6	0.5	5.5	0.0	0.5

**Table 2.8: Percentage Distribution of Children (under 18 Years) by Orphanhood, Living Arrangement, Residence and County Cont'd**

Residence/ County	Both Father & mother deceased	Missing Information on father/ mother	Orphanhood	Number of individuals ('000)
<b>National.....</b>	<b>0.9</b>	<b>1.2</b>	<b>8.4</b>	<b>21,868</b>
<b>Rural.....</b>	<b>0.9</b>	<b>1.2</b>	<b>8.7</b>	<b>15,230</b>
<b>Urban.....</b>	<b>1.1</b>	<b>1.1</b>	<b>7.7</b>	<b>6,638</b>
<b>County</b>		0.0		
Mombasa.....	0.3	0.5	7.3	431
Kwale.....	0.5	0.0	7.7	431
Kilifi.....	0.3	0.3	6.7	719
Tana River.....	1.1	0.0	8.9	169
Lamu.....	0.4	0.0	5.8	63
Taita / Taveta.....	0.6	2.2	5.0	156
Garissa.....	0.1	0.1	5.8	259
Wajir.....	0.1	0.0	5.3	284
Mandera.....	0.3	0.0	7.9	438
Marsabit.....	0.8	0.0	9.4	180
Isiolo.....	0.8	0.1	7.4	82
Meru.....	0.8	0.2	9.2	636
Tharaka-Nithi.....	0.7	2.8	8.3	176
Embu.....	0.8	8.1	6.5	230
Kitui.....	1.6	4.1	5.5	558
Machakos.....	0.4	4.5	6.0	489
Makueni.....	1.1	1.9	7.0	459
Nyandarua.....	0.2	3.6	5.9	323
Nyeri.....	0.4	0.4	7.1	299
Kirinyaga.....	0.2	4.9	7.4	242
Murang'a.....	0.4	3.2	7.7	462
Kiambu.....	0.0	2.0	5.0	721
Turkana.....	1.2	0.5	12.6	614
West Pokot.....	0.2	0.4	6.1	377
Samburu.....	0.2	0.4	7.5	169
Trans Nzoia.....	1.2	2.1	8.6	525
Uasin Gishu.....	0.5	1.2	5.7	536
Elgeyo / Marakwet...	0.5	1.3	7.5	234
Nandi.....	0.5	0.6	6.9	465
Baringo.....	0.6	0.6	8.7	363
Laikipia.....	0.2	1.3	6.2	249
Nakuru.....	0.8	1.3	7.9	984
Narok.....	0.6	0.3	7.2	616
Kajiado.....	2.6	0.6	5.5	390
Kericho.....	0.2	1.5	6.4	451
Bomet.....	0.0	0.7	4.6	498
Kakamega.....	0.8	0.4	9.2	1,015
Vihiga.....	1.4	2.5	10.2	309
Bungoma.....	0.2	0.3	7.1	874
Busia.....	0.7	0.8	10.2	457
Siaya.....	3.3	1.8	16.0	519
Kisumu.....	4.0	0.3	14.3	554
Homa Bay.....	2.2	0.2	15.0	625
Migori.....	3.9	2.3	21.4	639
Kisii.....	0.9	0.4	10.9	676
Nyamira.....	0.3	1.9	8.0	341
Nairobi City.....	1.1	0.5	6.0	1,583

Table 2.9: Percentage Distribution of Children (0-14 years) by Orphanhood, Living arrangement, Residence and County

Residence/County	Living with both	Living with mother but not with Father		Living with Father but not with Mother		Both alive	Not living with either parent	
		Father alive	Father deceased	Mother alive	Mother deceased		Only Father alive	Only Mother alive
<b>National.....</b>	<b>60.0</b>	<b>21.6</b>	<b>3.4</b>	<b>2.0</b>	<b>0.7</b>	<b>8.6</b>	<b>0.9</b>	<b>1.0</b>
<b>Rural.....</b>	<b>57.5</b>	<b>22.6</b>	<b>3.6</b>	<b>2.0</b>	<b>0.7</b>	<b>9.7</b>	<b>1.0</b>	<b>1.0</b>
<b>Urban.....</b>	<b>65.6</b>	<b>19.5</b>	<b>3.0</b>	<b>1.9</b>	<b>0.6</b>	<b>6.1</b>	<b>0.6</b>	<b>0.9</b>
<b>County</b>								
Mombasa.....	66.1	16.0	2.1	4.5	1.5	7.3	0.2	1.5
Kwale.....	56.5	24.8	2.6	5.9	1.5	6.8	1.2	0.5
Kilifi.....	52.2	31.9	1.9	3.6	0.1	8.1	0.9	0.8
Tana River.....	59.6	24.6	3.3	3.5	0.7	5.1	1.0	1.5
Lamu.....	69.0	17.9	1.3	1.2	0.0	8.7	1.4	0.5
Taita / Taveta.....	55.8	26.0	1.4	2.2	0.3	11.1	0.7	0.5
Garissa.....	84.8	3.2	3.0	0.6	0.8	6.5	0.6	0.5
Wajir.....	86.5	3.5	3.4	1.1	0.0	4.6	0.3	0.5
Mandera.....	77.7	5.3	5.2	1.0	0.6	8.5	0.5	0.9
Marsabit.....	74.0	10.6	5.6	0.5	0.5	6.9	0.6	0.8
Isiolo.....	73.4	14.3	4.2	0.5	0.2	5.7	0.3	0.5
Meru.....	57.5	23.3	4.5	3.0	1.2	8.3	0.9	0.3
Tharaka-Nithi.....	59.2	21.7	3.3	1.2	0.5	9.2	1.1	0.6
Embu.....	63.5	17.9	3.4	1.3	0.2	4.6	0.4	0.0
Kitui.....	46.9	34.8	1.6	2.1	0.1	8.7	0.4	0.1
Machakos.....	47.2	30.8	2.4	1.6	0.8	12.3	0.0	0.5
Makueni.....	40.7	38.6	1.4	1.1	0.5	13.4	0.5	0.9
Nyandarua.....	64.8	21.8	2.3	0.3	0.3	6.3	0.7	0.2
Nyeri.....	52.6	30.7	1.7	1.1	1.0	9.7	2.7	0.0
Kirinyaga.....	59.4	21.4	2.2	1.8	0.5	8.0	1.8	0.1
Murang'a.....	49.0	31.9	3.4	1.1	1.0	8.1	0.4	1.6
Kiambu.....	72.6	18.5	1.5	0.8	0.4	2.2	0.8	1.3
Turkana.....	50.6	24.5	8.8	0.8	0.4	12.2	0.3	0.8
West Pokot.....	69.8	13.9	2.6	1.7	0.7	8.8	0.9	1.1
Samburu.....	59.6	24.7	5.9	1.1	0.1	7.8	0.0	0.4
Trans Nzoia.....	60.3	15.4	2.5	2.7	0.8	12.3	0.6	2.1
Uasin Gishu.....	60.0	24.0	2.3	1.7	0.5	9.7	0.4	0.1
Elgeyo / Marakwet..	64.1	18.7	4.4	1.1	0.4	8.5	1.1	0.2
Nandi.....	60.3	20.9	3.2	2.2	0.6	10.6	0.5	0.9
Baringo.....	57.2	24.4	3.2	2.5	0.6	9.1	1.8	0.5
Laikipia.....	56.2	31.7	4.6	0.8	0.0	4.7	0.8	0.0
Nakuru.....	65.9	21.4	2.7	0.8	0.8	3.9	2.0	0.4
Narok.....	69.5	17.4	3.3	1.0	0.8	7.0	0.4	0.2
Kajiado.....	63.0	25.6	1.3	1.4	0.0	5.9	0.1	0.5
Kericho.....	66.6	20.5	2.9	1.2	0.8	5.3	0.9	0.2
Bomet.....	71.9	18.0	2.1	1.6	1.0	4.0	0.3	0.2
Kakamega.....	47.9	23.9	2.9	4.7	0.5	17.0	0.8	1.6
Vihiga.....	41.4	25.2	2.1	4.3	1.2	17.5	1.0	4.0
Bungoma.....	54.8	20.5	3.5	1.7	0.5	16.3	0.6	1.6
Busia.....	56.8	17.8	3.3	3.4	0.4	12.8	2.5	2.0
Siaya.....	47.8	25.2	4.6	1.8	1.5	10.5	1.4	3.1
Kisumu.....	56.5	18.1	3.7	3.7	1.0	9.1	1.6	2.3
Homa Bay.....	63.2	20.4	6.0	0.4	1.0	3.3	2.2	1.6
Migori.....	46.7	22.6	9.0	3.3	1.8	6.1	1.9	3.1
Kisii.....	55.0	22.5	5.2	1.1	1.6	11.7	1.2	0.5
Nyamira.....	50.7	31.1	3.8	0.8	0.2	9.5	1.3	0.7
Nairobi City.....	73.8	14.7	3.2	1.3	0.3	4.8	0.0	0.4

**Table 2.9: Percentage Distribution of Children (0-14 years) by Orphanhood, Living arrangement, Residence and County...**  
**Cont'd**

Residence/County	Both Father & mother deceased	Missing information on father/ mother	Orphan	Number of individuals ('000)
<b>National.....</b>	<b>0.7</b>	<b>1.1</b>	<b>6.8</b>	<b>18,636</b>
<b>Rural.....</b>	<b>0.6</b>	<b>1.2</b>	<b>7.1</b>	<b>12,935</b>
<b>Urban.....</b>	<b>0.8</b>	<b>1.1</b>	<b>6.0</b>	<b>5,702</b>
<b>County</b>				
Mombasa.....	0.3	0.4	5.6	380
Kwale.....	0.2	0.0	6.0	373
Kilifi.....	0.1	0.3	3.8	610
Tana River.....	0.6	0.0	7.1	143
Lamu.....	0.1	0.0	3.3	54
Taita / Taveta.....	0.5	1.4	3.8	133
Garissa.....	0.0	0.1	4.9	228
Wajir.....	0.1	0.0	4.3	252
Mandera.....	0.3	0.0	7.5	387
Marsabit.....	0.5	0.0	8.0	157
Isiolo.....	0.6	0.1	5.8	70
Meru.....	0.9	0.2	7.9	533
Tharaka-Nithi.....	0.4	2.7	5.9	148
Embu.....	0.2	8.6	4.8	192
Kitui.....	1.0	4.3	3.8	470
Machakos.....	0.2	4.3	4.3	401
Makueni.....	0.9	2.0	5.0	374
Nyandarua.....	0.2	3.1	4.5	266
Nyeri.....	0.2	0.2	5.8	248
Kirinyaga.....	0.2	4.3	5.4	202
Murang'a.....	0.4	3.1	7.2	382
Kiambu.....	0.0	1.8	4.0	607
Turkana.....	1.0	0.6	11.3	542
West Pokot.....	0.1	0.4	5.4	330
Samburu.....	0.0	0.4	6.4	150
Trans Nzoia.....	0.9	2.4	7.0	450
Uasin Gishu.....	0.2	1.0	4.0	457
Elgeyo / Marakwet...	0.3	1.0	6.4	199
Nandi.....	0.3	0.6	5.5	389
Baringo.....	0.0	0.8	6.3	309
Laikipia.....	0.2	1.0	5.7	211
Nakuru.....	0.7	1.3	6.8	859
Narok.....	0.2	0.3	4.9	539
Kajiado.....	1.6	0.6	3.5	337
Kericho.....	0.2	1.5	5.2	384
Bomet.....	0.0	0.8	3.6	428
Kakamega.....	0.3	0.4	6.2	837
Vihiga.....	1.1	2.2	9.4	260
Bungoma.....	0.0	0.4	6.3	741
Busia.....	0.3	0.8	8.5	384
Siaya.....	1.7	1.9	12.5	430
Kisumu.....	3.5	0.3	12.1	477
Homa Bay.....	1.7	0.3	12.5	533
Migori.....	2.8	2.8	18.7	524
Kisii.....	0.7	0.4	9.3	566
Nyamira.....	0.2	1.7	6.4	288
Nairobi City.....	0.9	0.6	4.8	1,402

# CHAPTER 3

## 3. HOUSING CONDITIONS AND AMENITIES

### 3.1 Introduction

This chapter focuses on housing conditions and ownership, access to water, energy, sanitation and waste disposal. The findings presented are important in assessing the impact of government policies and development initiatives. Further, the information will be key in monitoring progress towards achievement of Sustainable Development Goals<sup>1</sup> (SDGs).

### 3.2 Housing

#### Type of Housing

Table 3.1 presents the distribution of households by type of housing unit, residence and county. Bungalow, defined as a stand-alone dwelling without upper floors or rooms, was the most widespread dwelling type (55.4%), followed by the *Landhi*<sup>2</sup> (15.9%), Flat (9.3%), *Manyatta*/Traditional house (8.4%), and *Swahili* (7.9%). The survey results show that the proportion of households with Maisonette type of dwelling was 0.9 per cent. Flats were more common in urban areas than in rural areas. One out of every five households in urban areas were residing in Flats compared to the negligible proportion recorded among households in rural areas. The most common type of dwelling in rural areas was Bungalow (75.5 %) while in urban areas it was the *Landhi* and Bungalow, each at 29.2 per cent.

Analysis across counties shows that the proportion of households living in Flats was highest in Nairobi City at 46.3 per cent followed by Kajiado at 20.1 per cent. *Swahili* type of dwelling was preferred by most households in Mombasa County. The *Landhi* type of housing was common among households in Nakuru (46.1%), Uasin Gishu (39.1%), Nairobi City (36.9%) and Kisumu (32.0%) Counties.

<sup>1</sup> Sustainable Development Goals (SDGs) 1, 6, 7 and 11-Goal 1 End poverty in all its forms, Goal 6 Ensure availability and sustainability management of water and sanitation for all, Goal 7 Ensure access to available, reliable sustainable energy for all and Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable

<sup>2</sup>*Landhi*- This is a one-row structure with two or more living rooms, usually with external doors each.

Table 3.1: Percentage Distribution of Households by Type of Housing Unit, Residence and County

Residence/ County	Bungalow	Flat	Maisonnette	Swahili	Shanty	Manyatta/ Traditional House	Landbi	Other	Not stated	Number of Households (‘000)
National.....	55.4	9.3	0.9	7.9	1.3	8.4	15.9	0.8	0.2	11,415
Rural.....	75.5	0.6	0.3	2.9	0.5	13.7	5.6	0.7	0.1	6,442
Urban.....	29.2	20.5	1.6	14.5	2.3	1.5	29.2	0.8	0.3	4,972
County										
Mombasa.....	10.6	12.6	0.4	69.3	1.7	0.0	4.0	1.3	0.0	397
Kwale.....	49.4	0.5	0.1	37.5	2.0	7.1	3.4	0.0	0.0	174
Kilifi.....	67.9	1.9	0.8	21.4	3.3	2.1	2.5	0.0	0.2	326
Tana River.....	53.8	0.0	0.0	1.0	0.0	32.2	13.0	0.0	0.1	56
Lamu.....	46.1	8.7	4.2	18.9	0.3	20.7	1.0	0.0	0.0	30
Taita / Taveta.....	69.0	1.4	0.1	28.5	0.1	0.8	0.0	0.0	0.0	102
Garissa.....	45.9	0.3	0.8	8.7	0.0	41.9	1.0	0.7	0.7	78
Wajir.....	10.5	0.0	0.8	17.7	6.3	64.5	0.0	0.0	0.2	69
Mandera.....	16.1	0.0	0.0	1.3	4.5	78.1	0.0	0.0	0.0	111
Marsabit.....	27.5	0.0	0.0	0.0	0.0	61.4	11.1	0.0	0.0	62
Isiolo.....	80.5	0.7	0.4	0.0	1.8	15.7	1.0	0.0	0.0	34
Meru.....	74.5	2.0	0.1	0.2	0.0	4.2	18.5	0.5	0.0	393
Tharaka-Nithi.....	88.9	0.8	0.0	1.0	2.6	1.4	4.6	0.4	0.2	107
Embu.....	82.1	3.0	0.9	6.5	0.2	0.7	6.4	0.0	0.2	164
Kitui.....	73.9	8.1	0.2	0.0	0.2	15.2	1.9	0.3	0.2	236
Machakos.....	54.2	5.5	0.7	35.0	1.0	0.6	2.9	0.0	0.1	328
Makueni.....	74.6	1.5	0.0	7.1	1.3	3.2	12.3	0.0	0.0	233
Nyandarua.....	87.9	3.8	0.6	0.0	0.0	0.7	6.4	0.7	0.0	191
Nyeri.....	68.4	1.8	0.4	0.0	0.0	0.0	28.1	1.4	0.0	271
Kirinyaga.....	74.9	2.3	0.3	0.0	0.1	0.0	22.2	0.2	0.0	198
Murang'a.....	86.2	3.6	1.1	6.2	0.1	0.0	2.7	0.2	0.0	323
Kiambu.....	44.8	15.9	1.5	6.8	2.2	0.3	27.7	0.9	0.0	600
Turkana.....	25.9	0.0	0.4	3.9	1.4	60.4	7.0	1.1	0.0	246
West Pokot.....	42.6	0.0	1.1	0.2	0.0	51.0	4.8	0.3	0.1	119
Samburu.....	4.9	1.1	0.3	30.7	0.4	61.1	0.4	1.1	0.0	61
Trans Nzoia.....	69.3	1.4	0.1	4.8	0.7	3.3	20.1	0.1	0.0	210
Uasin Gishu.....	54.2	1.1	0.9	1.7	0.4	1.8	39.1	0.7	0.2	270
Elgeyo / Marakwet.....	75.1	2.2	0.8	0.5	0.1	20.8	0.0	0.0	0.5	99
Nandi.....	83.7	0.5	0.4	1.9	0.3	4.2	9.0	0.0	0.0	202
Baringo.....	54.7	0.4	0.0	1.8	1.0	22.1	19.9	0.0	0.2	152
Laikipia.....	69.6	2.2	0.1	11.9	0.8	15.2	0.0	0.0	0.2	135
Nakuru.....	47.6	3.4	0.0	0.0	0.0	2.4	46.1	0.1	0.4	578
Narok.....	20.2	0.4	0.2	5.7	0.7	34.4	21.6	15.9	0.8	223
Kajiado.....	57.6	20.1	3.3	8.7	0.4	9.5	0.0	0.0	0.4	250
Kericho.....	73.0	3.0	0.3	1.9	0.3	6.2	15.3	0.0	0.0	211
Bomet.....	80.9	1.0	0.1	3.7	0.3	13.0	0.2	0.3	0.3	179
Kakamega.....	78.3	0.1	0.0	2.3	0.5	9.7	9.1	0.0	0.0	392
Vihiga.....	98.0	0.5	0.0	1.3	0.0	0.3	0.0	0.0	0.0	144
Bungoma.....	84.4	0.6	0.3	2.5	0.0	5.2	5.5	0.1	1.4	321
Busia.....	65.5	0.4	0.5	3.8	0.1	23.8	4.7	1.1	0.0	177
Siaya.....	86.1	0.1	0.0	2.0	0.3	7.3	3.9	0.0	0.3	246
Kisumu.....	56.3	0.4	1.5	7.5	0.6	1.3	32.0	0.5	0.0	284
Homa Bay.....	84.6	0.0	0.0	7.2	0.1	3.5	4.2	0.0	0.4	224
Migori.....	80.8	0.3	0.0	3.2	0.0	5.3	9.6	0.9	0.0	233
Kisii.....	84.5	4.9	0.6	9.0	0.0	0.5	0.0	0.0	0.3	291
Nyamira.....	78.9	5.6	0.6	5.5	0.0	0.9	8.3	0.0	0.2	179
Nairobi City.....	5.8	46.3	3.1	0.8	5.2	0.0	36.9	1.3	0.6	1,503

### Tenure Status of Main Dwelling Unit

In this report, tenure refers to the proprietary status under which a dwelling is occupied by households. The survey sought to ascertain whether the household owned the dwelling, rented it or were squatting. As shown in Table 3.2, almost six in every ten households owned the dwelling units they lived in while slightly more than a third resided in rented/leased units. Over 85 per cent of households in rural areas and 26.1 per cent in urban areas were residing in their own dwellings. The results show that about seven in every ten households in urban areas lived in rented dwellings compared to about one in every ten households in rural areas. As expected, a high proportion of households in Nairobi City (86.4%) and Mombasa (82.2%) lived in rented dwellings. Other counties that had high proportions of households renting or leasing dwellings were Kajiado (59.5%), Kiambu (51.6%), Nakuru (46.3%), Uasin Gishu (44.0%) and Kisumu (42.2%).

Table 3.2: Percentage Distribution of Households by Housing Tenure and Residence/County

Residence/ County	Owner Occupier	Pays Rent/ Lease	Pays no rent		Not Stated	Number of Households ('000)
			Has consent of Owner	Squatting		
National.....	59.5	35.4	4.8	0.2	0.2	11,415
Rural.....	85.2	9.7	4.8	0.2	0.1	6,442
Urban.....	26.1	68.6	4.8	0.1	0.4	4,972
<b>County</b>						
Mombasa.....	11.7	82.2	6.1	0.0	0.0	397
Kwale.....	76.4	20.0	3.5	0.0	0.0	174
Kilifi.....	65.6	30.2	3.2	0.8	0.2	326
Tana River.....	76.1	20.0	3.5	0.3	0.1	56
Lamu.....	63.1	24.9	12.0	0.0	0.0	30
Taita / Taveta.....	62.2	26.9	11.0	0.0	0.0	102
Garissa.....	68.1	20.3	10.9	0.0	0.7	78
Wajir.....	94.6	3.4	1.8	0.1	0.2	69
Mandera.....	90.0	7.3	2.4	0.3	0.0	111
Marsabit.....	84.4	11.3	4.2	0.0	0.0	62
Isiolo.....	61.6	33.4	4.4	0.6	0.0	34
Meru.....	74.4	20.9	4.4	0.4	0.0	393
Tharaka-Nithi.....	83.5	14.6	1.5	0.1	0.2	107
Embu.....	80.4	16.5	2.6	0.3	0.2	164
Kitui.....	81.2	12.6	5.9	0.0	0.2	236
Machakos.....	57.4	41.0	1.3	0.2	0.1	328
Makueni.....	82.8	13.8	3.3	0.0	0.0	233
Nyandarua.....	70.1	24.2	5.6	0.0	0.0	191
Nyeri.....	63.2	32.0	4.5	0.2	0.0	271
Kirinyaga.....	71.2	25.5	3.3	0.0	0.0	198
Murang'a.....	81.4	13.1	5.5	0.0	0.0	323
Kiambu.....	44.8	51.6	3.5	0.2	0.0	600
Turkana.....	77.0	14.7	7.2	1.1	0.0	246
West Pokot.....	85.4	10.0	3.3	1.1	0.2	119
Samburu.....	78.0	18.1	3.3	0.6	0.0	61
Trans Nzoia.....	63.0	27.3	9.0	0.8	0.0	210
Uasin Gishu.....	50.1	44.0	5.7	0.0	0.2	270
Elgeyo / Marakwet...	77.7	12.8	9.0	0.0	0.5	99
Nandi.....	77.8	15.1	7.0	0.0	0.0	202
Baringo.....	71.1	23.7	5.0	0.0	0.2	152
Laikipia.....	58.0	37.1	4.4	0.3	0.2	135
Nakuru.....	45.1	46.3	8.1	0.0	0.4	578
Narok.....	62.1	31.5	5.1	0.3	1.0	223
Kajiado.....	34.9	59.5	5.1	0.0	0.4	250
Kericho.....	70.8	16.8	12.1	0.3	0.0	211
Bomet.....	82.5	5.0	12.1	0.0	0.3	179
Kakamega.....	86.7	11.1	2.0	0.2	0.0	392
Vihiga.....	88.0	8.0	3.3	0.6	0.0	144
Bungoma.....	80.2	15.4	3.0	0.0	1.4	321
Busia.....	88.1	11.0	0.9	0.0	0.0	177
Siaya.....	77.4	21.0	1.4	0.0	0.3	246
Kisumu.....	54.5	42.2	3.4	0.0	0.0	284
Homa Bay.....	85.0	14.4	0.2	0.0	0.4	224
Migori.....	84.6	12.7	2.7	0.0	0.0	233
Kisii.....	81.2	17.2	1.2	0.0	0.3	291
Nyamira.....	73.7	15.6	10.2	0.3	0.2	179
Nairobi City.....	8.1	86.4	4.9	0.0	0.6	1,503

### Mode of Acquisition of Owner Occupier Dwellings

Table 3.3 presents the distribution of households residing in their own dwellings by mode of acquisition. Owner-occupier dwellings are further categorised into modes of acquisition, namely; purchased, constructed, inherited, gift or bartered. At the national level, majority (88.6%) of owner-occupier dwellings are constructed by the households themselves. The results show that 5.0 per cent of owner-occupied dwellings were purchased, 2.8 per cent were inherited and 2.3 per cent were received as gifts. The findings further show that 90.4 per cent of rural and 91.0 per cent of urban households constructed the dwelling units that they live in.

Overall, acquisition of dwellings by cash was more prevalent than purchase through loans. Cash purchase was the preferred mode of acquiring dwelling units for 2.6 per cent and 5.1 per cent of households in rural and urban areas, respectively. On the other hand, 0.7 per cent of owner occupier households in rural areas and 2.0 per cent in urban areas purchased their dwelling through loans. Analysis across the counties show that majority of owner occupier households constructed their dwelling. Wajir County had the highest (39.4%) proportion of households residing in dwelling units that were purchased while Nairobi City reported the highest proportion of households (28.2%) occupying dwellings that were acquired through inheritance.

### Landlords of Rented Dwellings

Rental units were categorised by type of ownership entity; national government, county government, parastatal, company or individual. As shown in Table 3.4, majority of households paid rent to individuals with 73.0 per cent paying directly to owners and 19.6 per cent paying through agents. The findings show that the Public Sector provided a small proportion (2.6%) of dwellings to the households for renting purposes.

### Habitable Rooms

A habitable room is one that is used mainly for living purposes or entertaining guests and excludes stores, kitchen, bathrooms and granaries. A kitchen (or store, and garage), under normal circumstances, is not considered as a habitable room. However, if the household uses the kitchen (or store, and garage), for eating and/or sleeping purposes or entertaining guest, then it is considered as a habitable room. The distribution of households by number of habitable rooms in the main dwelling by place of residence and county is presented in Table 3.5. At the national level, 40 per cent of the households lived in one-roomed dwelling units while 26.6 per cent and 20.6 per cent resided in two-roomed and three-roomed dwellings, respectively. A similar scenario was observed in the 2005/06 KIHBS where 35.1 per cent of households resided in one-roomed, 27.6 per cent in two-roomed and 22.4 per cent in three-roomed dwelling units.

More than half of the households in urban areas lived in one-roomed dwelling units compared to 27.6 per cent of their counterparts in rural areas. Further, 31.3 per cent and 26.2 per cent of the rural households occupied two-roomed and three-roomed dwelling units, respectively, compared to 20.5 per cent and 13.4 per cent of their counterparts in urban areas. At county level, more than two-thirds of households in Mandera, Marsabit, Mombasa and Nairobi City resided in one-roomed dwelling units while more than half of the households in Homa Bay lived in two-roomed dwelling units. Counties that recorded high proportions of households living in three-roomed dwelling units were; Kirinyaga (43.2 %), Murang'a (50.2 %) and Kisii (50.7 %).

Table 3.3 Percentage Distribution of Owner-Occupier Dwellings by Mode of Acquisition and Residence/County

Residence/ County	% Owning Dwelling	Number of Households (‘000)	Households Owning the Dwelling										Number of Households (‘000)
			Purchased			Constructed			Inherited	Gift	Bartered	Other	
			Cash	Loan	Cash & Loan	Cash	Loan	Cash & Loan					
National.....	59.4	11,415	3.1	0.9	1.0	83.5	2.8	2.3	2.8	2.3	0.1	1.2	6,784
Rural.....	85.1	6,442	2.6	0.7	0.9	86.0	2.5	2.0	1.9	2.1	0.1	1.3	5,485
Urban.....	26.1	4,972	5.1	2.0	1.6	73.3	4.5	3.3	6.5	3.2	0.0	0.5	1,299
<b>County</b>													
Mombasa.....	11.7	397	5.5	8.9	3.3	65.8	3.0	7.0	6.6	0.0	0.0	0.0	46
Kwale.....	76.4	174	1.3	0.0	0.2	86.9	5.4	0.8	2.3	3.2	0.0	0.0	133
Kilifi.....	65.2	326	3.9	0.3	1.6	83.3	3.6	1.5	0.7	4.5	0.2	0.6	213
Tana River.....	76.1	56	4.5	1.6	0.1	81.8	2.1	2.3	1.8	2.5	0.0	3.4	43
Lamu.....	63.1	30	3.8	0.4	1.6	75.2	2.2	2.4	9.5	4.9	0.0	0.0	19
Taita / Taveta.....	62.2	102	1.5	0.0	0.0	88.9	5.5	0.4	3.3	0.4	0.0	0.0	63
Garissa.....	68.1	78	6.8	0.0	0.0	81.2	0.2	0.3	0.3	0.6	0.0	10.6	53
Wajir.....	93.8	69	39.5	0.2	0.0	56.8	0.7	0.0	1.2	1.7	0.0	0.0	65
Mandera.....	90.0	111	2.5	0.0	0.0	93.4	0.0	0.0	1.6	0.9	0.0	1.6	100
Marsabit.....	84.4	62	1.0	0.6	0.0	95.5	0.7	0.3	1.1	0.8	0.0	0.0	53
Isiolo.....	61.6	34	8.7	0.0	1.6	82.5	0.0	0.9	1.5	4.8	0.0	0.0	21
Meru.....	74.4	393	2.2	0.0	3.7	89.1	2.4	1.0	1.0	0.5	0.0	0.0	293
Tharaka-Nithi.....	83.5	107	0.9	0.7	1.0	87.4	2.8	3.1	1.4	2.7	0.0	0.0	89
Embu.....	80.4	164	5.8	1.1	1.7	75.5	5.4	2.0	5.4	1.9	0.0	1.1	132
Kitui.....	81.1	236	2.3	0.0	2.6	80.2	3.3	5.7	1.7	3.8	0.2	0.2	192
Machakos.....	57.4	328	0.0	0.8	1.7	87.4	5.7	2.2	1.4	0.4	0.0	0.3	188
Makueni.....	82.8	233	1.2	0.5	1.1	88.9	2.8	0.9	3.0	1.6	0.0	0.0	193
Nyandarua.....	70.1	191	4.4	0.1	0.0	88.0	2.9	0.3	2.6	1.7	0.0	0.0	134
Nyeri.....	63.2	271	6.2	5.4	6.9	68.5	2.3	3.8	4.1	2.9	0.0	0.0	171
Kirinyaga.....	71.2	198	3.2	0.5	1.8	78.3	6.8	3.7	1.1	4.6	0.0	0.0	141
Murang’a.....	81.4	323	0.4	1.0	1.2	81.6	3.4	6.8	2.5	3.2	0.0	0.0	263
Kiambu.....	44.8	600	3.0	1.1	0.0	82.3	2.7	0.5	7.7	2.6	0.0	0.0	269
Turkana.....	77.0	246	2.6	0.4	0.0	52.7	0.0	1.6	16.2	8.0	0.1	18.4	189
West Pokot.....	84.9	119	0.2	0.3	0.1	96.0	0.7	0.0	0.4	2.1	0.0	0.2	101
Samburu.....	78.0	61	1.9	0.2	0.0	73.0	1.5	0.2	1.3	0.0	0.8	21.2	48
Trans Nzoia.....	63.0	210	1.0	0.3	3.1	83.1	5.2	1.4	1.2	3.5	0.0	1.2	132
Uasin Gishu.....	50.1	270	3.7	1.4	0.3	81.1	3.5	0.4	5.7	3.9	0.0	0.0	135
Elgeyo / Marakwet.....	77.7	99	3.7	0.2	0.0	94.6	0.6	0.1	0.6	0.0	0.0	0.2	77
Nandi.....	77.8	202	2.3	1.2	0.4	92.9	1.7	0.6	0.9	0.0	0.0	0.0	157
Baringo.....	71.1	152	0.6	0.5	0.3	89.4	5.7	0.6	2.2	0.4	0.0	0.3	108
Laikipia.....	58.0	135	7.9	1.3	0.2	70.1	2.4	0.4	0.5	1.1	0.0	16.1	78
Nakuru.....	45.1	578	8.4	3.7	0.0	77.8	4.9	0.4	2.9	1.3	0.0	0.7	261
Narok.....	62.1	223	2.6	0.2	0.5	93.0	0.8	0.2	0.9	0.8	0.0	0.9	138
Kajiado.....	34.7	250	1.8	0.2	0.8	80.0	4.2	10.0	1.7	1.4	0.0	0.0	87
Kericho.....	70.8	211	0.4	0.4	0.0	90.9	2.9	0.4	2.5	2.3	0.2	0.0	149
Bomet.....	82.5	179	7.2	0.4	0.0	89.2	0.7	0.0	1.8	0.7	0.0	0.0	148
Kakamega.....	86.4	392	3.0	1.1	0.2	91.7	2.5	0.6	0.4	0.3	0.3	0.0	339
Vihiga.....	88.0	144	2.1	0.8	2.1	80.5	4.0	2.3	1.4	6.7	0.0	0.2	127
Bungoma.....	80.2	321	1.7	0.5	0.0	91.1	0.9	1.2	0.4	3.8	0.0	0.5	258
Busia.....	88.1	177	0.6	0.0	0.3	95.3	0.8	1.7	1.1	0.1	0.0	0.0	156
Siaya.....	77.4	246	1.8	0.6	1.1	78.3	6.1	2.9	0.6	8.7	0.0	0.0	190
Kisumu.....	54.5	284	1.9	0.2	0.1	87.5	4.7	4.1	0.6	0.8	0.0	0.0	155
Homa Bay.....	85.0	224	1.4	0.0	0.0	96.2	1.2	0.0	0.0	1.2	0.0	0.0	191
Migori.....	84.6	233	0.1	0.6	0.8	93.6	1.8	0.0	0.3	2.9	0.0	0.0	197
Kisii.....	81.2	291	1.2	1.6	0.6	76.1	1.4	13.3	3.2	0.9	0.5	1.1	236
Nyamira.....	73.7	179	0.7	0.4	1.6	88.4	3.2	5.5	0.1	0.2	0.0	0.0	132
Nairobi City.....	8.1	1,503	11.2	4.3	2.3	43.5	1.9	6.9	28.2	1.6	0.0	0.0	122

Table 3.4: Percentage distribution of Households in rented dwellings by whom the rent is paid to, and Residence/County

Residence/ County	% Renting	Number of Households ('000)	Government		Para-statal	Company		Individual		Other	Not Stated	Number of Households ('000)
			National	County		Directly	Through Agent	Directly	Through Agent			
National.....	35.4	11,415	0.4	1.7	0.5	1.1	3.2	73.0	19.6	0.5	0.1	4,037
Rural.....	9.7	6,442	0.6	0.0	0.2	1.8	1.0	90.6	4.1	1.6	0.1	625
Urban.....	68.6	4,972	0.4	2.0	0.6	0.9	3.6	69.7	22.5	0.3	0.1	3,412
<b>County</b>												
Mombasa.....	82.2	397	0.2	1.3	0.0	2.3	4.8	68.6	22.9	0.0	0.0	326
Kwale.....	20.0	174	0.0	0.0	0.0	0.0	1.1	91.8	5.9	1.1	0.0	35
Kilifi.....	30.2	326	0.0	0.0	0.0	0.0	2.0	81.5	14.5	0.3	1.7	99
Tana River.....	20.0	56	0.0	0.0	0.0	0.0	0.0	95.3	4.7	0.0	0.0	11
Lamu.....	24.9	30	0.0	0.0	0.0	1.0	1.3	92.5	5.2	0.0	0.0	7
Taita / Taveta.....	26.9	102	2.6	2.2	0.0	0.5	1.6	81.1	12.1	0.0	0.0	27
Garissa.....	20.3	78	3.6	0.0	0.0	0.0	0.0	83.0	13.4	0.0	0.0	16
Wajir.....	3.4	69	0.0	0.0	0.0	0.0	0.0	92.9	3.0	4.0	0.0	2
Mandera.....	7.3	111	0.0	0.0	0.0	0.0	0.0	95.6	4.4	0.0	0.0	8
Marsabit.....	11.3	62	0.0	2.2	0.0	0.0	3.7	90.2	1.4	1.8	0.8	7
Isiolo.....	33.4	34	0.8	0.0	1.4	0.7	2.7	89.7	2.8	2.1	0.0	11
Meru.....	20.9	393	0.0	0.4	0.0	1.5	1.2	87.9	6.6	2.4	0.0	82
Tharaka-Nithi.....	14.6	107	0.0	0.0	0.0	1.8	5.3	83.3	7.8	1.8	0.0	16
Embu.....	16.5	164	0.0	0.0	0.0	0.0	1.3	92.2	6.5	0.0	0.0	27
Kitui.....	12.6	236	0.0	0.0	0.0	0.0	0.0	94.1	5.9	0.0	0.0	30
Machakos.....	41.0	328	0.0	0.0	0.0	0.0	1.6	76.2	22.1	0.0	0.0	134
Makueni.....	13.8	233	0.0	0.0	0.0	0.0	0.0	90.3	9.7	0.0	0.0	32
Nyandarua.....	24.2	191	1.1	0.0	0.0	0.0	0.7	84.2	13.2	0.0	0.8	46
Nyeri.....	32.0	271	0.0	0.3	0.0	0.0	0.0	76.2	20.6	2.9	0.0	87
Kirinyaga.....	25.5	198	0.0	0.0	0.0	0.8	0.0	96.8	1.6	0.7	0.0	51
Murang'a.....	13.1	323	0.0	0.0	0.0	1.0	0.0	84.5	14.5	0.0	0.0	42
Kiambu.....	51.6	600	0.0	0.0	0.0	0.7	11.8	69.4	17.9	0.3	0.0	310
Turkana.....	14.7	246	7.5	0.0	0.0	7.6	15.3	59.8	9.8	0.0	0.0	36
West Pokot.....	10.0	119	4.0	0.0	0.0	0.0	0.0	81.1	1.1	5.1	8.6	12
Samburu.....	18.1	61	0.0	0.0	0.0	0.2	0.0	75.2	23.6	1.0	0.0	11
Trans Nzoia.....	27.3	210	0.3	0.4	1.8	0.6	0.3	89.5	7.1	0.0	0.0	57
Uasin Gishu.....	44.0	270	0.6	0.0	0.0	1.8	4.9	84.7	7.6	0.3	0.0	119
Elgeyo / Marakwet...	12.8	99	0.0	4.1	0.0	1.8	0.0	84.7	6.9	2.5	0.0	13
Nandi.....	15.1	202	0.6	2.8	0.0	1.5	4.2	85.3	3.3	1.5	0.8	31
Baringo.....	23.7	152	0.0	0.0	0.0	4.2	2.0	77.2	3.6	12.5	0.5	36
Laikipia.....	37.1	135	5.1	0.3	0.0	1.2	3.4	64.1	25.9	0.0	0.0	50
Nakuru.....	46.3	578	0.0	8.2	0.5	3.4	1.8	57.7	28.3	0.0	0.0	268
Narok.....	31.5	223	0.0	0.0	0.0	0.3	0.0	89.4	10.3	0.0	0.0	70
Kajiado.....	59.5	250	0.9	1.4	0.0	1.4	4.4	74.2	16.9	0.8	0.0	149
Kericho.....	16.8	211	0.0	0.0	0.0	0.0	1.6	75.4	23.1	0.0	0.0	35
Bomet.....	5.0	179	0.0	0.0	0.0	3.8	0.0	92.3	1.0	2.9	0.0	9
Kakamega.....	11.1	392	1.1	4.3	0.0	7.4	1.1	72.6	13.3	0.2	0.0	44
Vihiga.....	8.0	144	0.0	5.9	0.0	0.0	0.0	83.3	5.7	5.1	0.0	12
Bungoma.....	15.4	321	1.3	0.0	0.0	0.0	6.6	84.4	3.7	4.0	0.0	49
Busia.....	11.0	177	1.6	0.0	0.0	0.0	0.0	89.2	9.3	0.0	0.0	19
Siaya.....	21.0	246	0.0	0.0	0.0	0.0	0.8	94.3	4.9	0.0	0.0	52
Kisumu.....	42.2	284	0.5	1.1	0.0	0.6	0.4	92.6	4.3	0.5	0.0	120
Homa Bay.....	14.4	224	0.0	0.0	0.9	1.1	0.0	94.1	1.7	2.1	0.0	32
Migori.....	12.7	233	0.0	0.0	0.0	0.0	0.8	92.9	6.3	0.0	0.0	30
Kisii.....	17.2	291	0.0	0.0	0.0	0.0	0.0	96.0	4.0	0.0	0.0	50
Nyamira.....	15.6	179	7.8	0.0	0.0	0.0	0.0	80.1	12.0	0.0	0.0	28
Nairobi City.....	86.4	1,503	0.1	2.5	1.4	0.6	2.8	62.8	29.8	0.0	0.0	1,298

**Table 3.5: Percentage Distribution of Households by Number of Habitable Rooms in Main Dwelling and By Residence/ County**

Residence/ County	Number of Rooms						Not stated	Mean Number of Habitable Rooms Per Household	Number of Households ('000)	Number of Persons per Habitable Room
	1	2	3	4	5	6+				
<b>National.....</b>	<b>40.0</b>	<b>26.6</b>	<b>20.6</b>	<b>8.1</b>	<b>2.6</b>	<b>1.7</b>	<b>0.3</b>	<b>2.1</b>	<b>11,415</b>	<b>2.3</b>
<b>Rural.....</b>	<b>27.6</b>	<b>31.3</b>	<b>26.2</b>	<b>9.7</b>	<b>2.9</b>	<b>2.0</b>	<b>0.2</b>	<b>2.4</b>	<b>6,442</b>	<b>2.4</b>
<b>Urban.....</b>	<b>56.0</b>	<b>20.5</b>	<b>13.4</b>	<b>6.1</b>	<b>2.2</b>	<b>1.3</b>	<b>0.4</b>	<b>1.8</b>	<b>4,972</b>	<b>2.1</b>
<b>County</b>										
Mombasa.....	69.2	16.7	8.6	3.9	1.2	0.5	0.0	1.5	397	2.1
Kwale.....	31.2	31.8	19.5	9.5	3.4	4.5	0.0	2.4	174	2.3
Kilifi.....	47.0	22.9	17.1	10.0	1.0	0.6	1.4	2.0	326	2.5
Tana River.....	44.8	22.0	21.7	9.6	1.1	0.7	0.1	2.0	56	3.3
Lamu.....	23.4	30.4	24.0	16.3	2.8	3.2	0.0	2.5	30	1.9
Taita / Taveta.....	26.3	24.3	21.4	14.0	10.8	3.2	0.0	2.7	102	1.5
Garissa.....	72.6	16.8	7.8	1.0	0.4	0.3	1.1	1.4	78	4.5
Wajir.....	75.1	17.5	3.7	2.4	0.3	0.5	0.5	1.4	69	5.4
Mandera.....	88.8	6.5	3.8	0.0	0.6	0.2	0.0	1.2	111	5.8
Marsabit.....	77.5	12.0	5.5	4.2	0.6	0.2	0.0	1.4	62	4.3
Isiolo.....	54.0	29.6	9.4	4.4	1.3	1.2	0.0	1.7	34	3.0
Meru.....	33.1	30.0	21.1	11.1	3.5	1.0	0.3	2.3	393	2.0
Tharaka-Nithi.....	41.6	27.7	17.7	10.1	1.4	1.1	0.4	2.1	107	2.2
Embu.....	16.8	21.9	37.2	13.0	6.5	4.3	0.2	2.8	164	1.4
Kitui.....	39.8	35.4	15.6	4.4	2.3	2.3	0.2	2.0	236	2.8
Machakos.....	37.5	20.5	21.0	11.9	6.0	2.9	0.1	2.4	328	1.9
Makueni.....	20.6	23.2	31.3	14.9	5.3	4.6	0.0	2.8	233	1.7
Nyandarua.....	18.5	21.4	40.9	12.8	4.6	1.8	0.0	2.7	191	1.5
Nyeri.....	25.7	18.3	31.6	16.8	3.4	4.2	0.0	2.7	271	1.4
Kirinyaga.....	13.8	22.9	43.2	15.9	3.8	0.4	0.0	2.7	198	1.2
Murang'a.....	12.3	19.5	50.2	12.8	3.2	2.1	0.0	2.8	323	1.3
Kiambu.....	38.5	18.1	24.5	12.7	3.7	2.5	0.0	2.3	600	1.6
Turkana.....	94.5	4.8	0.5	0.2	0.0	0.0	0.0	1.1	246	4.2
West Pokot.....	62.7	27.3	6.2	2.3	0.8	0.5	0.1	1.5	119	4.1
Samburu.....	53.7	37.2	6.2	2.0	0.6	0.4	0.0	1.6	61	3.3
Trans Nzoia.....	24.0	37.0	24.7	8.2	2.6	3.6	0.0	2.4	210	2.4
Uasin Gishu.....	33.9	33.5	22.9	6.1	1.8	1.6	0.2	2.1	270	2.1
Elgeyo / Marakwet..	34.2	35.4	20.2	7.0	1.1	1.5	0.5	2.1	99	2.6
Nandi.....	32.1	38.6	15.1	8.4	4.0	1.9	0.0	2.2	202	2.6
Baringo.....	46.3	35.3	11.9	3.5	2.1	0.7	0.2	1.8	152	3.1
Laikipia.....	35.9	28.6	23.0	7.4	2.7	2.2	0.2	2.2	135	2.1
Nakuru.....	46.9	32.8	13.4	4.3	2.0	0.2	0.4	1.8	578	2.2
Narok.....	38.7	30.5	20.0	7.3	1.4	1.1	1.0	2.1	223	2.7
Kajiado.....	52.9	26.4	14.4	3.4	1.0	1.0	0.8	1.8	250	2.3
Kericho.....	30.7	51.3	10.9	4.1	2.0	0.9	0.0	2.0	211	2.6
Bomet.....	27.2	60.7	9.1	2.0	0.5	0.1	0.3	1.9	179	3.0
Kakamega.....	16.7	45.0	23.6	8.6	3.6	2.6	0.0	2.5	392	2.2
Vihiga.....	4.1	16.7	24.1	39.4	9.6	6.1	0.0	3.5	144	1.3
Bungoma.....	22.5	34.3	26.4	10.8	2.5	1.9	1.6	2.5	321	2.4
Busia.....	36.6	38.5	18.3	4.7	1.0	1.0	0.0	2.0	177	2.8
Siaya.....	23.8	37.1	29.1	6.2	2.6	0.9	0.3	2.3	246	2.1
Kisumu.....	31.7	34.9	23.3	7.2	2.3	0.6	0.0	2.2	284	2.1
Homa Bay.....	31.8	55.0	9.1	2.1	0.2	1.2	0.6	1.9	224	2.9
Migori.....	18.0	39.0	32.1	8.1	1.6	1.1	0.1	2.4	233	2.3
Kisii.....	11.0	15.5	50.7	12.1	5.9	4.4	0.3	3.0	291	1.6
Nyamira.....	16.6	22.6	40.9	11.1	4.8	3.8	0.2	2.8	179	1.6
Nairobi City.....	69.5	13.4	9.8	4.3	1.2	1.1	0.7	1.6	1,503	2.3

### Main Wall Material

The proportion of households by predominant wall material of main dwelling, residence and county is presented in Table 3.6. The survey results indicate that about one third of the households live in dwelling units with walls made of bamboo with mud and cow dung. The results further show that about two thirds of dwellings in urban areas were made of stone with cement, cement blocks, bricks and cement finish walls. In rural areas, six in every ten households have dwelling units with walls made of wood planks or shingles and bamboo with mud or cow dung.

A high proportion of households in Mombasa (67.0%) and Machakos (65.5%) Counties resided in dwelling units with walls made of cement.

### Main roofing Material

At the national level, 81.7 per cent of households had dwelling units with roofs made of corrugated iron sheets while 8.5 per cent had roofs made of grass/*makuti* as indicated in Table 3.7. The proportion of households living in dwelling units made of corrugated iron sheet roofs was 83.2 per cent in rural areas and 79.6 per cent in urban areas. As expected, grass roofed dwelling units were common in rural areas than in urban areas, while concrete was common in urban areas. Nairobi City County had more than one third of households living in dwellings made of concrete roofs. A relatively higher proportion of households in Samburu, Laikipia, Narok and Kajiado Counties resided in dwellings with roofs made of cow dung.

### Main Floor Material

Table 3.8 presents the distribution of households by predominant flooring material of the main dwelling unit by residence and county. Nationally, the proportion of households with cement as the main flooring material increased to 47.3 per cent in 2015/16 KIHBS from 38.2 per cent in 2005/06 KIHBS. The proportion of households living in dwelling units made of earth or sand floors halved from 59.2 per cent in 2005/06 KIHBS to 29.6 per cent in 2015/16. Further, the results show that 68.9 per cent of households in urban areas had floors of the main dwelling unit made of cement compared to 30.7 per cent of their counterparts in rural areas. In contrast, 43.2 per cent of the households in rural areas had their main dwelling unit floors made of earth or sand compared to 12.0 per cent of the urban. At county level, Nairobi City, Machakos, Kiambu and Mombasa had high proportions of households with floors of the main dwelling units made of cement while Turkana, Wajir, Mandera and Marsabit had low proportions.

Table 3.6: Percentage Distribution of Households by Main Wall Material of the Main Dwelling and Residence/ County

Residence/ County	Stone with lime/ cement	Bricks	Cement blocks	Cement finish	Wood/ Planks/ Shingles	*Adobe (Covered and unco- vered)	Corru- gated iron sheets	<sup>b</sup> Bamboo with mud, cow dung	Stone with mud	<sup>c</sup> Cane, palm trunks, grass reeds	<sup>d</sup> Plywood, cardboard, reused wood and others not specified	Not Stated	Number of Households ( <sup>'000</sup> )
National.....	16.7	8.1	1.6	15.8	8.6	2.2	8.3	32.0	0.9	3.2	2.4	0.3	11,415
Rural.....	8.1	8.0	1.1	6.2	12.9	3.0	3.9	47.3	1.1	5.0	3.2	0.2	6,442
Urban.....	27.8	8.1	2.2	28.3	3.1	1.2	14.0	12.0	0.7	0.9	1.4	0.4	4,972
<b>County</b>													
Mombasa.....	22.1	1.0	0.5	67.0	0.0	0.0	1.4	5.4	1.8	0.4	0.3	0.0	397
Kwale.....	24.4	3.5	0.0	14.4	0.0	2.6	0.0	52.9	1.1	0.9	0.2	0.0	174
Kilifi.....	27.5	2.6	1.1	20.4	0.0	3.0	0.7	36.0	3.9	0.4	3.3	0.9	326
Tana River.....	2.6	0.4	19.7	0.5	0.0	1.3	0.3	60.3	0.2	14.2	0.4	0.1	56
Lamu.....	42.1	1.5	0.4	2.0	0.1	0.0	0.4	52.5	0.3	0.6	0.0	0.0	30
Taita / Taveta..	16.5	2.2	2.0	0.0	0.1	49.9	0.1	28.4	0.8	0.0	0.0	0.0	102
Garissa.....	7.6	1.6	20.2	4.3	0.0	0.0	4.4	15.3	3.4	40.3	2.1	0.7	78
Wajir.....	5.2	0.0	0.9	9.7	0.0	0.0	0.4	18.4	0.3	62.0	2.7	0.2	69
Mandera.....	8.1	2.7	3.6	2.1	0.0	0.0	0.2	0.3	0.0	80.9	2.2	0.0	111
Marsabit.....	9.7	0.1	6.7	11.8	4.0	0.0	1.0	15.6	0.9	14.8	35.3	0.0	62
Isiolo.....	2.3	11.5	6.6	1.6	23.9	0.0	0.9	30.2	1.2	15.3	6.4	0.0	34
Meru.....	19.8	0.7	0.5	3.1	65.5	0.9	1.2	4.9	0.0	0.3	3.2	0.0	393
Tharaka-Nithi..	15.5	2.1	0.1	0.7	36.6	6.8	0.4	34.2	0.6	1.2	1.5	0.2	107
Embu.....	12.6	20.2	1.1	11.0	22.8	5.7	4.1	19.5	1.6	0.3	0.8	0.2	164
Kitui.....	1.5	25.8	3.0	33.1	0.0	12.2	0.0	23.5	0.3	0.3	0.0	0.2	236
Machakos.....	8.6	10.7	0.0	65.5	0.0	6.0	7.3	1.1	0.3	0.0	0.4	0.1	328
Makueni.....	2.9	71.3	0.7	9.3	0.2	1.5	1.3	9.4	3.3	0.0	0.2	0.0	233
Nyandarua.....	16.1	0.3	1.6	7.3	47.7	0.3	4.1	21.0	0.9	0.0	0.6	0.0	191
Nyeri.....	28.7	0.0	0.3	0.4	61.3	3.2	2.0	3.6	0.5	0.0	0.0	0.0	271
Kirinyaga.....	22.3	2.2	0.6	10.7	35.8	0.0	2.1	24.0	0.2	0.0	2.2	0.0	198
Murang'a.....	31.2	0.8	1.8	1.3	11.5	13.7	19.5	13.9	0.0	0.0	6.3	0.0	323
Kiambu.....	23.1	28.5	0.2	9.1	10.9	0.3	24.7	1.2	0.6	0.0	1.4	0.0	600
Turkana.....	2.2	0.7	2.3	6.2	0.1	0.3	4.9	25.5	2.7	52.1	2.9	0.0	246
West Pokot.....	1.0	6.2	1.2	6.0	0.1	0.9	0.3	78.9	0.0	0.1	5.2	0.1	119
Samburu.....	7.9	0.4	5.0	9.7	20.1	0.0	1.2	20.0	0.8	30.1	4.7	0.0	61
Trans Nzoia.....	5.0	14.9	1.2	8.9	0.3	9.0	0.6	57.7	1.2	0.8	0.3	0.0	210
Uasin Gishu.....	11.2	12.2	2.6	10.1	4.8	0.0	8.1	47.6	1.2	0.5	1.7	0.2	270
Elgeyo / Marakwet	1.2	8.1	0.8	4.4	0.2	0.0	3.4	55.0	4.9	0.3	21.2	0.5	99
Nandi.....	3.8	13.4	0.8	2.1	4.3	0.9	1.1	71.5	0.2	0.0	1.9	0.0	202
Baringo.....	12.8	0.3	0.0	0.2	29.8	2.2	12.3	36.8	0.2	1.6	3.6	0.2	152
Laikipia.....	13.9	0.0	12.1	2.6	14.8	0.5	2.9	19.6	0.2	8.9	24.5	0.2	135
Nakuru.....	39.9	1.1	0.5	11.4	4.6	1.0	3.6	28.2	1.8	0.2	7.2	0.4	578
Narok.....	23.9	2.2	0.0	0.5	8.8	2.6	6.9	53.9	0.0	0.2	0.3	0.8	223
Kajiado.....	45.8	0.4	0.2	2.1	0.0	0.1	33.0	12.0	0.0	0.1	5.8	0.5	250
Kericho.....	15.1	9.0	1.4	3.2	9.0	0.0	5.5	45.8	0.7	0.4	9.7	0.0	211
Bomet.....	2.5	2.9	6.1	4.9	21.8	0.0	1.3	59.2	0.3	0.1	0.1	0.7	179
Kakamega.....	2.8	4.4	0.4	11.3	0.0	0.0	0.8	78.5	0.6	1.2	0.0	0.0	392
Vihiga.....	0.6	10.0	1.1	10.0	0.0	0.0	0.6	77.2	0.5	0.0	0.0	0.0	144
Bungoma.....	1.4	12.0	1.3	5.4	0.4	1.1	0.1	74.0	2.6	0.4	0.0	1.4	321
Busia.....	6.9	8.7	1.3	4.9	0.0	1.0	0.3	76.9	0.0	0.0	0.0	0.0	177
Siaya.....	3.2	4.4	3.9	19.8	0.0	1.0	1.2	64.7	0.8	0.0	0.5	0.3	246
Kisumu.....	7.3	5.3	6.0	28.2	0.0	0.2	6.1	46.2	0.3	0.4	0.0	0.0	284
Homa Bay.....	4.4	8.8	0.8	6.1	0.0	0.8	0.8	77.2	0.8	0.0	0.0	0.4	224
Migori.....	4.2	6.0	4.1	6.7	0.0	0.1	4.8	71.5	2.5	0.0	0.0	0.0	233
Kisii.....	4.6	28.7	0.5	2.0	0.0	0.3	0.0	63.6	0.0	0.0	0.1	0.3	291
Nyamira.....	12.1	22.4	1.2	4.7	0.1	0.0	0.9	57.1	0.8	0.0	0.3	0.2	179
Nairobi City..	28.8	0.0	0.2	36.8	0.1	0.6	28.6	3.2	0.1	0.0	1.0	0.6	1,503

<sup>a</sup>- includes both covered and uncovered adobe; <sup>b</sup>-includes mud/cow dung/bamboo with mud; <sup>c</sup>-includes cane/palm/trunks/grass reeds;

<sup>d</sup>-includes plywood/cardboard/reused wood and no walls.

Table 3.7 Percentage Distribution of Households by Main Roofing Material of Main Dwelling and Residence/County

Residence/ County	Grass/ Makuti	Cow Dung / Mud	Corrugated Iron Sheets	Tin Cans	Asbestos Sheet	Concrete	Tiles	Other	Not Stated	Number of Households('000)
National.....	8.5	0.9	81.7	0.1	0.8	6.7	0.5	0.7	0.3	11,415
Rural.....	13.6	1.3	83.2	0.1	0.3	0.2	0.1	0.8	0.2	6,442
Urban.....	1.8	0.2	79.6	0.0	1.3	15.1	1.0	0.5	0.4	4,972
<b>County</b>										
Mombasa.....	1.6	0.0	84.5	0.3	0.8	12.1	0.4	0.2	0.0	397
Kwale.....	34.5	0.5	64.3	0.0	0.2	0.5	0.1	0.0	0.0	174
Kilifi.....	25.8	0.0	70.5	0.2	0.1	1.4	0.6	0.1	1.2	326
Tana River.....	41.2	0.0	58.6	0.0	0.1	0.0	0.0	0.0	0.1	56
Lamu.....	33.2	0.2	54.4	0.0	0.0	12.2	0.0	0.0	0.0	30
Taita / Taveta.....	6.2	0.0	91.5	0.0	1.3	0.9	0.0	0.0	0.0	102
Garissa.....	42.6	0.4	51.6	0.0	4.3	0.3	0.0	0.0	0.7	78
Wajir.....	61.9	0.7	36.1	0.0	0.1	0.0	0.0	1.0	0.2	69
Mandera.....	71.9	0.0	21.1	0.0	2.1	0.4	0.0	4.4	0.0	111
Marsabit.....	29.1	0.0	38.3	0.8	0.0	0.0	0.0	31.8	0.0	62
Isiolo.....	15.0	1.3	77.0	0.0	2.1	0.2	0.0	4.4	0.0	34
Meru.....	0.0	0.0	97.5	0.3	0.9	0.7	0.5	0.0	0.0	393
Tharaka-Nithi.....	1.5	0.8	96.6	0.0	0.0	0.7	0.2	0.0	0.2	107
Embu.....	2.4	0.0	93.0	0.0	1.4	2.1	0.2	0.6	0.2	164
Kitui.....	4.5	0.4	94.5	0.0	0.0	0.3	0.0	0.0	0.2	236
Machakos.....	0.4	0.0	95.5	0.0	0.1	3.0	0.9	0.0	0.1	328
Makueni.....	3.5	0.0	96.0	0.0	0.0	0.4	0.0	0.0	0.0	233
Nyandarua.....	0.0	0.9	97.9	0.0	0.9	0.1	0.2	0.0	0.0	191
Nyeri.....	0.0	0.0	98.8	0.5	0.6	0.2	0.0	0.0	0.0	271
Kirinyaga.....	0.0	1.1	98.0	0.0	0.0	0.9	0.0	0.0	0.0	198
Murang'a.....	0.2	0.4	95.5	0.4	1.3	2.2	0.0	0.0	0.0	323
Kiambu.....	0.1	0.0	85.5	0.0	0.7	13.1	0.4	0.2	0.0	600
Turkana.....	59.8	0.1	27.1	0.5	3.4	0.2	0.0	8.9	0.0	246
West Pokot.....	53.1	0.2	46.2	0.0	0.3	0.0	0.0	0.1	0.1	119
Samburu.....	30.9	21.2	36.3	0.3	0.2	0.3	0.0	10.9	0.0	61
Trans Nzoia.....	3.3	0.0	93.8	0.1	0.7	0.4	0.1	1.6	0.0	210
Uasin Gishu.....	3.2	0.4	94.3	0.0	0.4	0.4	1.1	0.0	0.2	270
Elgeyo / Marakwet...	24.2	0.3	74.2	0.0	0.4	0.4	0.0	0.0	0.5	99
Nandi.....	4.3	1.9	92.8	0.0	0.5	0.3	0.2	0.0	0.0	202
Baringo.....	18.3	0.6	80.2	0.0	0.2	0.2	0.3	0.0	0.2	152
Laikipia.....	5.3	8.5	81.2	0.2	0.8	1.3	0.4	2.0	0.2	135
Nakuru.....	1.6	0.6	92.8	0.0	2.0	1.7	0.9	0.0	0.4	578
Narok.....	15.2	6.1	75.4	0.0	0.3	0.0	0.0	2.2	0.8	223
Kajiado.....	0.5	8.8	71.1	0.0	0.0	17.3	1.8	0.0	0.5	250
Kericho.....	6.5	2.5	89.0	0.3	0.8	0.6	0.0	0.3	0.0	211
Bomet.....	11.3	0.1	87.0	0.0	0.0	0.7	0.6	0.0	0.3	179
Kakamega.....	10.4	0.6	88.3	0.3	0.1	0.0	0.3	0.0	0.0	392
Vihiga.....	0.3	0.3	98.8	0.0	0.2	0.5	0.1	0.0	0.0	144
Bungoma.....	7.8	0.6	88.7	0.0	1.1	0.3	0.0	0.0	1.4	321
Busia.....	23.9	0.7	74.1	0.0	1.1	0.0	0.0	0.3	0.0	177
Siaya.....	8.5	0.2	89.4	0.0	1.6	0.0	0.0	0.0	0.3	246
Kisumu.....	3.0	0.6	94.7	0.0	0.2	0.0	1.5	0.0	0.0	284
Homa Bay.....	8.7	1.5	89.1	0.0	0.2	0.0	0.0	0.0	0.4	224
Migori.....	5.5	0.0	92.6	0.0	1.5	0.0	0.4	0.0	0.0	233
Kisii.....	3.2	0.0	94.2	0.0	0.0	2.2	0.0	0.0	0.3	291
Nyamira.....	1.6	0.0	97.1	0.0	0.4	0.7	0.0	0.0	0.2	179
Nairobi City.....	0.0	0.1	61.4	0.0	1.0	35.1	1.5	0.3	0.6	1,503

Table 3.8: Percentage Distribution of Households by Main Floor Material of Main Dwelling and Residence/ County

Residence/ County	Tiles	Cement	Wood Planks/ Shingles	Cow Dung / Mud	Earth/ Sand	Carpet	Other	Not Stated	Number of Households ('000)
<b>National.....</b>	<b>3.8</b>	<b>47.3</b>	<b>0.2</b>	<b>15.2</b>	<b>29.6</b>	<b>3.2</b>	<b>0.4</b>	<b>0.3</b>	<b>11,415</b>
<b>Rural.....</b>	<b>1.1</b>	<b>30.7</b>	<b>0.2</b>	<b>23.7</b>	<b>43.2</b>	<b>0.6</b>	<b>0.3</b>	<b>0.2</b>	<b>6,442</b>
<b>Urban.....</b>	<b>7.4</b>	<b>68.9</b>	<b>0.1</b>	<b>4.1</b>	<b>12.0</b>	<b>6.6</b>	<b>0.6</b>	<b>0.4</b>	<b>4,972</b>
<b>County</b>									
Mombasa.....	9.3	64.5	0.0	0.0	8.1	16.8	1.3	0.0	397
Kwale.....	4.7	28.0	0.0	0.0	63.0	3.3	0.9	0.0	174
Kilifi.....	1.6	38.9	0.0	0.0	47.5	10.7	0.0	1.3	326
Tana River.....	2.4	25.8	0.0	0.0	68.9	2.6	0.3	0.1	56
Lamu.....	0.6	47.7	0.0	0.3	49.5	1.9	0.0	0.0	30
Taita / Taveta.....	2.7	55.7	0.0	0.0	41.6	0.0	0.0	0.0	102
Garissa.....	1.1	38.0	0.0	0.0	58.4	0.5	1.3	0.7	78
Wajir.....	0.6	15.5	0.0	0.0	83.2	0.6	0.0	0.2	69
Mandera.....	0.3	16.1	0.4	0.0	83.1	0.0	0.1	0.0	111
Marsabit.....	1.9	20.4	0.0	0.9	73.5	3.3	0.0	0.0	62
Isiolo.....	0.3	39.2	0.5	0.4	55.0	4.7	0.0	0.0	34
Meru.....	1.9	47.3	0.0	1.8	46.5	2.1	0.4	0.0	393
Tharaka-Nithi.....	0.8	34.6	0.5	0.2	62.0	1.7	0.0	0.2	107
Embu.....	4.1	44.1	0.7	0.1	49.2	1.5	0.0	0.2	164
Kitui.....	0.8	40.4	0.0	0.0	58.6	0.0	0.0	0.2	236
Machakos.....	2.9	73.9	0.1	0.2	21.8	0.8	0.2	0.1	328
Makueni.....	2.3	58.2	0.2	0.2	39.2	0.0	0.0	0.0	233
Nyandarua.....	2.5	39.8	1.0	0.4	55.1	0.3	0.9	0.0	191
Nyeri.....	0.9	52.8	0.8	0.4	44.5	0.2	0.4	0.0	271
Kirinyaga.....	2.6	45.2	0.4	0.0	50.1	1.6	0.1	0.0	198
Murang'a.....	1.5	48.0	0.0	0.7	49.4	0.0	0.4	0.0	323
Kiambu.....	10.3	69.0	0.0	0.0	13.6	7.0	0.2	0.0	600
Turkana.....	0.5	15.4	0.2	0.0	79.6	4.2	0.0	0.0	246
West Pokot.....	0.4	23.1	0.0	41.2	35.0	0.1	0.0	0.1	119
Samburu.....	0.4	28.4	0.3	0.3	70.3	0.4	0.0	0.0	61
Trans Nzoia.....	2.9	40.3	0.4	29.6	25.9	0.0	0.8	0.0	210
Uasin Gishu.....	3.5	47.2	0.1	34.6	5.9	7.4	1.1	0.2	270
Elgeyo / Marakwet...	0.1	28.5	0.2	6.0	63.6	0.8	0.4	0.5	99
Nandi.....	3.2	33.1	0.2	57.5	3.9	1.6	0.5	0.0	202
Baringo.....	0.4	40.2	1.7	1.7	55.8	0.0	0.0	0.2	152
Laikipia.....	3.2	43.2	0.1	0.3	53.0	0.0	0.0	0.2	135
Nakuru.....	4.0	52.4	0.0	5.8	33.3	4.1	0.0	0.4	578
Narok.....	2.6	31.7	0.3	27.3	34.9	2.3	0.2	0.8	223
Kajiado.....	20.2	59.2	0.6	0.3	18.6	0.2	0.5	0.4	250
Kericho.....	0.7	43.9	0.7	41.4	11.3	1.7	0.3	0.0	211
Bomet.....	0.8	29.8	0.7	66.4	1.4	0.4	0.2	0.3	179
Kakamega.....	1.8	23.6	0.0	72.2	1.9	0.2	0.4	0.0	392
Vihiga.....	1.0	29.7	0.0	65.1	3.8	0.1	0.3	0.0	144
Bungoma.....	1.0	21.0	0.0	71.8	3.2	1.2	0.4	1.4	321
Busia.....	0.9	25.8	0.0	65.7	6.6	0.6	0.2	0.0	177
Siaya.....	0.5	43.7	0.0	39.8	15.7	0.2	0.0	0.3	246
Kisumu.....	4.6	50.6	0.0	16.0	26.7	1.9	0.3	0.0	284
Homa Bay.....	0.9	29.4	0.3	31.4	37.2	0.0	0.5	0.4	224
Migori.....	1.3	33.5	0.0	52.7	12.2	0.0	0.2	0.0	233
Kisii.....	1.0	37.1	0.0	9.7	51.9	0.0	0.0	0.3	291
Nyamira.....	1.1	33.9	0.0	0.0	64.3	0.5	0.0	0.2	179
Nairobi City.....	8.1	77.6	0.0	0.0	5.2	7.6	1.0	0.6	1,503

### 3.3 Water

#### Source of drinking water

Table 3.9 shows the distribution of households by main source of drinking water, residence and county. Households are considered to use improved drinking water if it is obtained from the following sources: piped water, borehole with pump, protected spring, protected well, rain water and bottled water. In this survey, no tests were undertaken to ascertain the water quality. The survey results show that 72.6 per cent of households have access to improved drinking water sources. This is an improvement from the 58.9 per cent reported in 2005/06 KIHBS. In rural areas, 61.8 per cent of the households have access to improved sources of drinking water compared to 86.7 per cent of the households in urban areas. Analysis by county shows that Nairobi City had the highest proportion of households accessing drinking water from improved sources at 97.1 per cent followed by Kiambu at 93.2 per cent. Annex Table 3A presents information on main source of drinking water by individuals.

#### Methods Used to Make Water Safer for Drinking

Table 3.10 shows the distribution of households by the method they use to make water safer for drinking. Nationally, 22.0 per cent of households boil water to make it safer for drinking while 19.6 per cent add bleach/chlorine. A relatively high proportion of households do not use effective methods of making water safer for drinking. Nationally, majority of households (59%) do not use any method to make water safe for drinking. Bomet and West Pokot Counties recorded the highest proportion of households that took no action to make drinking water safe for drinking. Annex Table 3B shows the same information but for individuals.

#### Time Taken to Fetch Water

Table 3.11 presents findings on the time taken by households to fetch drinking water, by residence and county. Overall, 24.0 per cent of the households had water in their premises while 63.4 per cent spent less than thirty minutes to fetch water. In the rural areas, 13.6 per cent of the households had water within their premises compared to 37.5 per cent of households in urban areas. Counties that recorded relatively high proportions of households that spent thirty minutes or more to fetch water were Kitui, Turkana, West Pokot and Samburu.

#### Distribution of households by Volume of Water Used

The percentage distribution of households by volume of water used in litres in a month is shown in Table 3.12. Majority of the households (38.2%) used between 1001 and 2000 litres of water in a month, followed by 25.2 per cent using 2001 and 3000 litres. In urban areas, 41.5 per cent of households used between 1001 and 2000 litres while 24.8 per cent reported using 1000 litres or less. In the rural areas 35.7 per cent of the households used between 1001 and 2000 litres of water while 28.7 per cent reported using between 2001 and 3000 litres. This same pattern is replicated in the volume of water used by individuals as shown in Annex Table 3C.

Table 3.9: Percentage Distribution of Households by Main Source of Drinking Water and Residence/County

Residence/ County	Improved Water Sources							
	Piped			Tubewell/ borehole with pump	Protected well	Protected spring	Rain water collection	Bottled water
	Into dwelling	Into plot/ yard	public tap/ stand pipe					
National.....	9.8	20.6	13.9	6.6	6.4	9.2	4.6	1.5
Rural.....	2.7	14.2	7.9	8.2	8.6	13.5	6.5	0.2
Urban.....	18.9	28.8	21.7	4.6	3.5	3.7	2.2	3.3
<b>County</b>								
Mombasa.....	11.0	5.2	54.4	0.2	4.0	0.0	0.0	7.8
Kwale.....	6.0	4.9	24.9	21.3	2.2	0.0	0.1	1.2
Kilifi.....	14.6	9.5	50.7	0.0	1.4	0.0	1.0	1.2
Tana River.....	0.3	22.5	20.2	18.1	5.4	0.0	0.0	0.7
Lamu.....	16.6	5.2	31.7	4.9	2.6	0.0	9.4	4.6
Taita / Taveta.....	9.1	27.9	39.7	1.4	1.0	0.7	0.0	0.1
Garissa.....	4.8	36.1	12.4	6.4	0.1	0.0	0.0	0.0
Wajir.....	1.9	3.2	2.2	22.1	15.0	0.3	0.0	0.0
Mandera.....	0.2	0.8	8.1	22.5	0.0	0.0	1.0	0.2
Marsabit.....	1.6	4.1	22.1	9.2	1.1	0.6	3.2	1.0
Isiolo.....	7.5	40.7	10.2	11.9	3.2	1.2	0.0	0.3
Meru.....	6.1	54.6	3.7	2.5	0.1	1.5	1.4	0.3
Tharaka-Nithi.....	5.3	35.7	9.3	3.2	2.1	1.6	1.1	1.0
Embu.....	7.7	47.2	3.0	2.4	2.2	0.0	2.9	0.5
Kitui.....	1.8	8.1	16.3	11.5	4.2	4.0	4.6	2.7
Machakos.....	2.4	8.7	17.3	10.6	4.4	2.2	16.8	6.0
Makueni.....	0.3	4.0	20.1	7.7	7.9	1.4	10.4	1.3
Nyandarua.....	14.4	17.1	0.2	2.0	24.3	1.5	22.2	0.2
Nyeri.....	10.1	55.2	2.3	0.0	0.6	0.0	14.5	0.0
Kirinyaga.....	6.6	44.7	0.2	0.0	9.0	0.0	1.4	1.8
Murang'a.....	2.9	32.6	4.9	0.3	10.2	1.3	15.2	0.4
Kiambu.....	16.3	42.9	9.7	5.8	14.7	0.0	3.1	0.7
Turkana.....	4.5	7.4	33.1	17.5	0.8	0.0	0.0	0.0
West Pokot.....	5.7	6.3	4.4	11.7	4.2	4.3	0.1	0.5
Samburu.....	2.2	15.7	9.8	11.0	2.5	0.0	0.4	0.4
Trans Nzoia.....	5.5	14.1	5.5	3.3	25.4	23.1	2.6	0.3
Uasin Gishu.....	11.8	28.1	9.6	0.6	13.1	3.7	2.2	0.2
Elgeyo / Marakwet...	0.9	28.4	3.9	0.1	10.0	0.4	0.5	0.0
Nandi.....	5.2	8.1	5.5	0.3	15.3	9.7	0.3	0.4
Baringo.....	1.3	17.5	5.0	5.2	8.6	3.7	6.6	0.5
Laikipia.....	8.7	34.2	5.8	5.7	4.8	0.2	4.4	0.4
Nakuru.....	7.0	34.3	8.2	3.9	4.3	0.0	10.8	3.8
Narok.....	3.1	1.4	7.4	1.4	2.3	7.8	8.1	3.0
Kajiado.....	21.1	20.4	1.8	26.2	0.9	4.8	2.6	9.5
Kericho.....	12.7	13.0	9.1	7.1	7.4	14.7	2.2	0.2
Bomet.....	8.9	6.4	0.9	0.0	0.6	0.6	10.0	0.4
Kakamega.....	3.1	4.0	4.5	12.5	15.2	50.4	0.2	0.0
Vihiga.....	0.0	3.5	1.8	1.5	4.4	73.9	3.1	0.1
Bungoma.....	3.3	4.0	5.3	12.3	8.1	42.5	0.2	0.0
Busia.....	1.2	3.0	1.6	40.9	6.3	20.7	0.3	0.9
Siaya.....	0.1	1.2	21.2	10.8	12.6	2.7	8.3	0.2
Kisumu.....	5.0	17.9	21.6	8.5	15.4	1.2	10.3	0.0
Homa Bay.....	0.3	0.5	2.9	6.8	9.6	6.7	7.1	0.0
Migori.....	0.2	2.1	6.5	13.5	12.5	5.9	19.9	0.3
Kisii.....	0.4	2.7	0.4	2.3	1.4	79.5	1.7	1.0
Nyamira.....	1.5	12.3	0.3	0.0	0.0	66.7	2.8	0.0
Nairobi City.....	32.2	33.1	25.9	3.3	0.7	0.0	0.0	1.9

Table 3.9: Percentage Distribution of Households by Main Source of Drinking Water and Residence/County...Cont'd

Residence/ County	Unimproved Water Sources					Other	Not Stated	Number of Households ('000)	
	Unprotected well	Unprotected spring	Vendors						Surface water - river, stream, pond, dam, lake, canal, irrigation channel
			Tanker/ truck	Cart with small tank/ drum/ buckets	Bicycles with buckets				
National.....	3.5	5.0	0.8	2.2	0.7	13.8	1.0	0.3	11,415
Rural.....	5.3	7.9	0.5	0.7	0.6	21.8	1.4	0.2	6,442
Urban.....	1.2	1.3	1.2	4.1	0.9	3.5	0.6	0.4	4,972
<b>County</b>									
Mombasa.....	0.0	0.0	0.4	16.6	0.0	0.0	0.2	0.2	397
Kwale.....	11.8	6.3	0.1	2.0	0.6	18.6	0.1	0.0	174
Kilifi.....	2.2	5.0	4.1	1.8	0.4	5.3	2.0	0.8	326
Tana River.....	3.1	0.0	0.4	0.0	0.0	25.7	3.4	0.1	56
Lamu.....	20.7	0.2	0.0	0.0	0.3	2.9	0.9	0.0	30
Taita / Taveta.....	0.2	0.7	2.0	0.5	0.5	16.1	0.0	0.0	102
Garissa.....	31.6	0.0	3.4	0.3	0.0	4.2	0.0	0.7	78
Wajir.....	23.0	0.0	0.8	4.1	0.0	26.9	0.2	0.2	69
Mandera.....	4.1	0.0	19.7	12.3	0.0	30.5	0.6	0.0	111
Marsabit.....	19.0	2.0	1.7	5.3	2.7	25.9	0.4	0.0	62
Isiolo.....	4.6	0.0	0.3	0.6	0.0	8.7	10.7	0.0	34
Meru.....	1.3	6.1	0.3	3.1	0.0	7.0	12.1	0.0	393
Tharaka-Nithi.....	1.5	4.5	0.0	0.1	0.0	34.2	0.2	0.2	107
Embu.....	7.5	1.4	1.4	3.2	0.0	19.5	0.7	0.2	164
Kitui.....	2.5	0.2	0.0	4.9	0.1	38.9	0.2	0.2	236
Machakos.....	3.7	4.3	2.7	9.7	0.9	10.2	0.0	0.1	328
Makueni.....	3.7	6.2	1.8	0.7	1.7	32.5	0.0	0.2	233
Nyandarua.....	3.1	2.5	0.0	1.5	0.0	9.2	1.8	0.0	191
Nyeri.....	0.2	0.2	1.4	0.0	0.5	12.2	2.8	0.0	271
Kirinyaga.....	0.9	0.2	0.0	1.5	0.0	25.3	8.3	0.0	198
Murang'a.....	2.9	12.0	0.0	0.4	0.6	15.9	0.5	0.0	323
Kiambu.....	0.8	0.5	0.5	0.1	0.3	4.7	0.1	0.0	600
Turkana.....	8.3	1.0	0.3	0.0	0.0	26.8	0.2	0.0	246
West Pokot.....	5.4	21.6	0.1	0.0	0.7	34.8	0.0	0.1	119
Samburu.....	11.5	0.4	1.3	0.0	0.0	44.8	0.0	0.0	61
Trans Nzoia.....	3.7	8.6	0.0	0.0	1.3	6.4	0.2	0.0	210
Uasin Gishu.....	19.4	2.8	0.2	1.0	0.1	6.1	0.6	0.2	270
Elgeyo / Marakwet...	4.9	0.2	0.0	0.0	0.0	48.5	1.8	0.5	99
Nandi.....	8.7	38.1	0.0	0.0	0.0	8.1	0.2	0.0	202
Baringo.....	1.4	13.6	0.1	0.4	1.5	33.2	1.3	0.2	152
Laikipia.....	1.7	0.0	0.0	0.1	0.5	32.0	1.2	0.2	135
Nakuru.....	6.9	0.3	0.5	1.8	5.0	12.7	0.3	0.4	578
Narok.....	1.1	10.1	2.5	6.9	3.8	37.4	2.8	1.0	223
Kajiado.....	0.2	0.3	1.8	2.8	2.5	4.7	0.0	0.4	250
Kericho.....	6.3	20.6	0.0	0.0	0.0	5.8	0.9	0.0	211
Bomet.....	3.0	23.4	0.0	0.2	0.1	44.9	0.2	0.3	179
Kakamega.....	0.9	4.8	0.3	0.0	0.7	3.4	0.0	0.0	392
Vihiga.....	1.1	4.5	0.0	0.0	1.6	4.4	0.0	0.0	144
Bungoma.....	2.0	8.6	0.0	0.3	1.8	9.8	0.3	1.4	321
Busia.....	2.6	5.3	0.0	0.1	0.5	16.5	0.0	0.0	177
Siaya.....	2.4	4.7	0.4	0.6	0.2	34.1	0.2	0.3	246
Kisumu.....	1.3	0.5	0.0	2.1	0.2	15.9	0.2	0.0	284
Homa Bay.....	7.9	25.3	0.1	0.3	0.4	29.5	2.3	0.4	224
Migori.....	3.8	1.8	0.0	4.7	0.4	28.4	0.0	0.0	233
Kisii.....	0.2	5.9	0.0	0.0	0.0	4.1	0.0	0.3	291
Nyamira.....	0.2	12.0	0.0	0.3	0.0	3.7	0.0	0.2	179
Nairobi City.....	0.0	0.0	0.6	1.5	0.0	0.0	0.0	0.7	1,503

Table 3.10: Percentage Distribution of Households by Method Used to Make Water Safer to Drink and Residence/County

Residence/ County	Boil	Add bleach/ chlorine ( <i>waterguard</i> , <i>aquaguard</i> , etc)	Use water filter (ceramic, sand, composite, etc)	Solar disinfection	Sieve through a cloth	Let it stand and settle	Nothing	Other	Number of Households ('000)
National.....	22.0	19.6	0.8	0.9	0.0	0.4	59.0	0.1	11,415
Rural.....	18.0	20.4	1.1	1.0	0.0	0.5	62.3	0.1	6,442
Urban.....	27.1	18.6	0.3	0.7	0.0	0.3	54.7	0.1	4,972
<b>County</b>									
Mombasa.....	5.6	25.1	0.2	0.0	0.0	0.0	62.5	0.2	397
Kwale.....	2.6	15.3	1.1	0.4	0.0	3.8	83.6	0.0	174
Kilifi.....	2.4	6.7	0.0	0.0	0.0	0.0	89.0	0.0	326
Tana River.....	4.7	15.9	0.0	0.7	0.0	1.3	78.0	0.6	56
Lamu.....	6.3	9.6	2.0	1.3	0.0	0.0	78.9	0.0	30
Taita / Taveta.....	14.8	10.1	0.2	0.0	0.0	0.4	76.0	0.0	102
Garissa.....	10.9	6.9	0.7	0.3	0.0	0.3	81.7	0.0	78
Wajir.....	3.7	29.2	0.4	0.0	0.0	0.1	67.9	0.2	69
Mandera.....	2.2	12.7	0.0	0.3	0.0	0.0	85.4	0.8	111
Marsabit.....	5.9	7.4	0.5	0.7	0.0	7.8	80.4	0.0	62
Isiolo.....	4.5	7.7	0.0	1.1	0.0	2.0	88.9	0.0	34
Meru.....	43.7	3.4	0.0	0.0	0.0	1.5	52.2	0.1	393
Tharaka-Nithi.....	35.9	5.6	0.0	0.0	0.2	1.7	64.9	0.0	107
Embu.....	19.8	22.5	0.0	1.5	0.0	0.0	64.3	0.0	164
Kitui.....	8.3	15.6	0.0	0.9	0.0	0.6	73.2	0.0	236
Machakos.....	9.3	20.9	0.4	0.4	0.0	0.1	66.3	0.0	328
Makueni.....	18.8	20.8	0.0	0.4	0.0	0.2	62.0	0.3	233
Nyandarua.....	38.5	3.9	0.3	0.1	0.0	0.2	58.6	0.1	191
Nyeri.....	36.3	5.1	0.0	0.0	0.0	0.1	62.1	0.0	271
Kirinyaga.....	26.0	13.8	0.0	0.1	0.0	0.1	60.8	0.0	198
Murang'a.....	16.0	9.3	0.0	0.0	0.0	0.3	74.4	0.0	323
Kiambu.....	26.4	7.2	0.3	0.2	0.0	0.0	67.3	0.0	600
Turkana.....	3.5	8.0	0.0	0.1	0.0	0.9	89.0	0.1	246
West Pokot.....	4.3	6.3	0.0	0.2	0.0	2.9	90.4	0.0	119
Samburu.....	9.0	3.2	0.0	1.3	0.0	0.4	87.7	0.0	61
Trans Nzoia.....	21.1	30.9	1.8	0.8	0.0	0.2	49.4	0.0	210
Uasin Gishu.....	44.1	13.2	0.1	0.9	0.0	0.3	44.7	0.0	270
Elgeyo / Marakwet...	30.0	2.2	0.1	0.1	0.0	0.1	68.4	0.3	99
Nandi.....	35.7	10.8	0.6	2.1	0.1	0.1	52.5	0.8	202
Baringo.....	20.9	3.5	0.1	0.0	0.0	0.0	75.5	0.0	152
Laikipia.....	37.4	2.7	0.0	0.0	0.0	0.0	60.0	0.2	135
Nakuru.....	21.0	3.7	0.0	0.4	0.1	0.0	71.8	0.0	578
Narok.....	13.4	13.3	0.0	0.1	0.0	0.0	74.0	0.0	223
Kajiado.....	21.2	4.5	0.2	0.0	0.0	0.0	61.7	0.0	250
Kericho.....	10.8	3.7	0.9	0.3	0.0	0.6	84.5	0.2	211
Bomet.....	2.5	3.7	0.0	1.1	0.0	0.2	91.7	0.0	179
Kakamega.....	6.3	54.8	3.1	4.1	0.0	0.2	35.4	0.8	392
Vihiga.....	21.5	25.1	3.3	3.7	0.0	0.8	48.5	0.0	144
Bungoma.....	6.6	45.4	3.0	7.4	0.0	0.0	39.3	0.2	321
Busia.....	4.2	83.1	1.3	1.9	0.0	0.1	10.9	0.0	177
Siaya.....	19.0	58.8	2.8	1.3	0.0	0.5	26.7	0.0	246
Kisumu.....	32.5	53.7	6.6	0.3	0.0	1.1	24.6	0.0	284
Homa Bay.....	17.1	72.3	5.0	0.5	0.0	0.0	19.6	0.0	224
Migori.....	17.0	66.7	1.3	0.8	0.3	0.0	26.3	0.0	233
Kisii.....	16.7	10.1	1.3	0.4	0.0	0.5	79.1	0.0	291
Nyamira.....	35.9	7.8	0.0	0.9	0.0	0.3	58.7	0.0	179
Nairobi City.....	43.4	16.4	0.0	1.1	0.0	0.3	45.0	0.2	1,503

Table 3.11: Percentage Distribution of Households by Time Taken to Fetch Drinking Water and Residence/ County

Residence/ County	Zero (In premises)	less than 30 minutes	30 minutes or longer	Not Stated	Number of Households ('000)
<b>National.....</b>	<b>24.0</b>	<b>63.4</b>	<b>11.6</b>	<b>0.9</b>	<b>11,415</b>
<b>Rural.....</b>	<b>13.6</b>	<b>68.5</b>	<b>17.5</b>	<b>0.4</b>	<b>6,442</b>
<b>Urban.....</b>	<b>37.5</b>	<b>56.9</b>	<b>4.1</b>	<b>1.5</b>	<b>4,972</b>
<b>County</b>					
Mombasa.....	32.4	56.4	6.0	5.2	397
Kwale.....	13.2	69.0	17.6	0.2	174
Kilifi.....	28.3	63.0	6.0	2.6	326
Tana River.....	2.4	86.5	11.0	0.1	56
Lamu.....	30.0	59.3	10.2	0.5	30
Taita / Taveta.....	10.8	76.2	12.9	0.0	102
Garissa.....	15.9	77.8	5.3	1.0	78
Wajir.....	23.5	43.9	31.6	1.0	69
Mandera.....	16.2	57.9	25.0	0.8	111
Marsabit.....	15.1	70.1	14.5	0.3	62
Isiolo.....	19.9	69.1	11.1	0.0	34
Meru.....	24.0	66.2	9.8	0.0	393
Tharaka-Nithi.....	22.3	54.4	22.5	0.7	107
Embu.....	12.3	67.6	19.9	0.2	164
Kitui.....	6.8	35.1	57.6	0.5	236
Machakos.....	33.3	50.0	15.7	0.9	328
Makueni.....	15.9	49.6	34.0	0.5	233
Nyandarua.....	18.5	77.3	4.2	0.1	191
Nyeri.....	23.2	75.9	1.0	0.0	271
Kirinyaga.....	14.5	81.5	3.9	0.0	198
Murang'a.....	26.4	67.5	6.1	0.0	323
Kiambu.....	52.7	45.5	1.0	0.9	600
Turkana.....	12.3	44.1	43.5	0.0	246
West Pokot.....	7.3	58.3	33.1	1.4	119
Samburu.....	8.9	50.4	40.7	0.0	61
Trans Nzoia.....	11.8	82.9	5.3	0.0	210
Uasin Gishu.....	31.8	65.3	2.8	0.2	270
Elgeyo / Marakwet..	6.7	89.8	2.4	1.1	99
Nandi.....	22.1	76.1	1.6	0.2	202
Baringo.....	17.0	51.6	30.9	0.5	152
Laikipia.....	12.4	72.9	14.5	0.2	135
Nakuru.....	21.8	72.5	5.3	0.4	578
Narok.....	28.5	45.5	25.0	1.0	223
Kajiado.....	37.6	51.8	7.6	2.9	250
Kericho.....	19.7	69.0	11.3	0.0	211
Bomet.....	24.7	67.6	7.1	0.5	179
Kakamega.....	11.1	85.8	3.1	0.0	392
Vihiga.....	4.4	89.4	6.2	0.1	144
Bungoma.....	6.8	64.5	27.2	1.5	321
Busia.....	8.4	81.0	10.6	0.0	177
Siaya.....	5.2	83.6	10.8	0.3	246
Kisumu.....	24.3	72.9	2.8	0.0	284
Homa Bay.....	12.4	69.1	18.1	0.4	224
Migori.....	18.6	56.1	25.3	0.0	233
Kisii.....	5.5	76.3	17.8	0.5	291
Nyamira.....	7.0	74.0	18.8	0.2	179
Nairobi City.....	46.5	50.9	0.4	2.2	1,503

Table 3.12: Percentage Distribution of Households by Volume of Water used by Residence/County

Residence/ County	Volume of water in Litres					Number of Households ('000)
	0-1000	1001-2000	2001-3000	3001+	Not Stated	
<b>National.....</b>	<b>19.8</b>	<b>38.2</b>	<b>25.2</b>	<b>16.1</b>	<b>0.7</b>	<b>11,415</b>
<b>Rural.....</b>	<b>15.9</b>	<b>35.7</b>	<b>28.7</b>	<b>19.1</b>	<b>0.5</b>	<b>6,442</b>
<b>Urban.....</b>	<b>24.7</b>	<b>41.5</b>	<b>20.6</b>	<b>12.2</b>	<b>1.0</b>	<b>4,972</b>
<b>County</b>						
Mombasa.....	28.0	39.9	20.8	10.8	0.4	397
Kwale.....	12.6	27.1	34.7	25.6	0.0	174
Kilifi.....	12.1	25.8	25.1	26.2	10.7	326
Tana River.....	25.4	35.7	21.7	17.2	0.1	56
Lamu.....	6.6	34.0	31.6	27.8	0.0	30
Taita / Taveta.....	14.0	40.1	27.0	18.9	0.0	102
Garissa.....	25.4	44.8	14.3	14.6	1.0	78
Wajir.....	14.0	37.0	31.5	15.8	1.7	69
Mandera.....	4.4	43.0	34.5	18.2	0.0	111
Marsabit.....	33.6	48.5	13.6	4.3	0.0	62
Isiolo.....	29.7	22.7	24.0	23.6	0.0	34
Meru.....	19.3	27.9	35.5	17.3	0.0	393
Tharaka-Nithi.....	16.7	32.5	29.3	20.7	0.9	107
Embu.....	19.5	34.2	22.1	23.9	0.2	164
Kitui.....	15.6	23.1	26.7	34.3	0.2	236
Machakos.....	28.7	38.6	24.2	8.4	0.1	328
Makueni.....	23.3	35.3	24.7	16.7	0.2	233
Nyandarua.....	25.8	38.9	25.6	9.7	0.0	191
Nyeri.....	12.1	28.6	34.2	24.9	0.2	271
Kirinyaga.....	24.8	34.8	25.1	15.3	0.0	198
Murang'a.....	15.3	25.2	28.4	31.1	0.0	323
Kiambu.....	21.3	41.1	26.3	11.1	0.2	600
Turkana.....	19.3	39.7	7.5	32.9	0.5	246
West Pokot.....	19.7	49.6	21.7	6.6	2.3	119
Samburu.....	60.8	31.7	5.2	2.3	0.0	61
Trans Nzoia.....	9.8	25.6	36.7	27.9	0.0	210
Uasin Gishu.....	26.9	34.3	26.2	12.4	0.2	270
Elgeyo / Marakwet.....	14.5	56.9	23.6	3.6	1.3	99
Nandi.....	10.8	42.5	33.9	12.7	0.1	202
Baringo.....	27.3	43.2	20.6	8.7	0.2	152
Laikipia.....	25.7	50.1	15.2	8.8	0.2	135
Nakuru.....	24.6	46.5	21.7	6.7	0.4	578
Narok.....	27.7	43.8	18.8	8.7	1.0	223
Kajiado.....	42.6	32.1	11.0	12.2	2.1	250
Kericho.....	41.3	39.6	13.9	5.3	0.0	211
Bomet.....	14.6	48.1	34.6	1.9	0.8	179
Kakamega.....	3.6	17.0	33.8	45.6	0.0	392
Vihiga.....	7.3	23.0	44.2	25.4	0.0	144
Bungoma.....	21.4	30.6	28.6	18.0	1.4	321
Busia.....	11.1	46.1	29.3	13.5	0.0	177
Siaya.....	15.9	47.1	30.1	6.5	0.3	246
Kisumu.....	10.1	42.2	32.7	14.8	0.2	284
Homa Bay.....	9.3	40.5	35.2	14.6	0.4	224
Migori.....	14.8	33.7	43.8	7.7	0.0	233
Kisii.....	9.9	24.8	15.1	49.7	0.5	291
Nyamira.....	10.8	39.2	39.5	10.4	0.2	179
Nairobi City.....	23.1	53.3	15.8	6.9	0.9	1,503

### 3.4 Sanitation and waste disposal

#### Human waste disposal

Safe human waste disposal is crucial for human health and well-being of people as it reduces the spread of disease causing germs. Human waste disposal facilities that are considered improved/adequate include; connection to main sewer, septic tanks, ventilated improved pit latrine, pit latrine with slab and composting toilets. Unimproved human waste disposal methods include flushing to other areas, using uncovered pit latrines or bucket toilets and open defecation. The analysis did not factor the issue of sharing of sanitation facilities as a measure of adequacy.

Table 3.13 presents the distribution of households by type of toilet facility mainly used by household members by residence and county. Survey results indicate that 65.2 per cent of the households have access to improved methods of human waste disposal. About half of the households (50.8%) in rural areas used unimproved sanitation compared to 13.2 per cent of their counterparts in urban areas. The most common method of waste disposal in the country was pit latrine with slab, reported by slightly one third of the households. Results from the survey show that 8.4 per cent of households had no toilet facilities. Lack of toilet facilities was more pronounced among households in rural areas (13.9%) than those in urban (1.4%). Analysis by individuals shows that 59.3 per cent have access to improved sanitation facilities, which is 5.9 percentage points lower than that for households (see Annex Table 3D).

#### Shared Toilets

Sharing of toilets among households exposes users to increased risks of contracting infectious diseases. The survey findings indicate that 53.6 per cent of households shared toilets with other households as presented in Table 3.14. Sharing of toilets is common in urban areas (65.9%) than in rural areas (42.6%).

#### Hand washing

Washing of hands with soap and clean running water is an important control measure for reducing the spread of disease causing germs. Nearly 80 per cent of households in the country have no place for hand washing in or near the toilet as shown in Table 3.15. The proportion of households with a place for washing hands is higher in urban areas (30.2%) than in rural areas (13.2%). Across counties, Kisii, Wajir, West Pokot and Makeni had less than 5.0 per cent of households each with a place for washing hands.

#### Solid waste disposal

Management of domestic waste disposal is an important aspect in keeping a clean environment. The survey collected information on disposal of solid waste generated from the households. Table 3.16 gives the percentage distribution of households by type of waste disposal methods by residence and county. Nationally, 63.7 per cent of the households disposed off their waste by either dumping it in their compounds or burning it in open ground. Results show that 3.7 per cent of households had their solid waste collected by county governments while 13.6 per cent had it collected by private entities. The solid waste for more than ten per cent of households in Laikipia, Uasin Gishu, Kiambu and Machakos Counties was collected by respective county governments. Waste collection by community associations is most common in Nairobi City County (39.1%).

Table 3.13: Percentage Distribution of Households by Type of Main Toilet Facility and Residence /County

Residence/ County	Improved Sanitation Services					
	Flush to Piped Sewer System	Flush to Septic Tank	Flush to Pit (Latrine)	Ventilated Improved Pit Latrine (VIP)	Pit Latrine with Slab	Composting Toilet
National.....	10.6	5.7	2.6	11.8	34.3	0.2
Rural.....	0.2	1.4	1.4	10.8	34.8	0.2
Urban.....	24.0	11.2	4.2	13.1	33.7	0.1
<b>County</b>						
Mombasa.....	7.7	32.4	20.4	11.4	14.4	0.0
Kwale.....	5.2	3.1	6.4	5.2	13.8	0.0
Kilifi.....	0.0	23.6	16.9	1.1	28.4	0.0
Tana River.....	0.3	3.6	15.9	0.0	40.8	0.0
Lamu.....	0.0	8.3	21.6	6.3	33.8	0.0
Taita / Taveta.....	0.8	15.0	0.5	15.7	66.8	0.0
Garissa.....	0.3	1.4	18.9	9.8	14.7	0.0
Wajir.....	0.6	1.5	0.5	1.3	0.7	1.6
Mandera.....	0.0	0.0	0.2	7.4	33.3	0.0
Marsabit.....	0.0	0.0	0.7	4.0	21.3	0.0
Isiolo.....	8.7	0.0	0.1	26.5	35.4	0.0
Meru.....	0.7	3.1	1.7	20.2	20.2	2.8
Tharaka-Nithi.....	0.2	2.6	0.9	14.6	78.0	0.0
Embu.....	1.6	5.6	0.4	13.1	77.7	0.0
Kitui.....	0.1	1.7	0.2	12.2	42.4	0.2
Machakos.....	4.5	6.2	0.2	28.4	44.2	0.0
Makueni.....	0.0	0.3	1.2	14.0	72.5	0.0
Nyandarua.....	1.6	0.7	0.7	11.1	67.0	0.7
Nyeri.....	2.1	3.5	5.2	18.7	25.7	0.0
Kirinyaga.....	0.3	7.7	1.0	12.5	65.5	0.0
Murang'a.....	3.1	1.4	2.2	13.8	45.1	0.0
Kiambu.....	10.9	12.6	3.8	6.4	56.6	0.0
Turkana.....	0.3	1.4	1.3	7.8	21.1	0.0
West Pokot.....	0.2	0.0	0.0	12.5	14.6	0.0
Samburu.....	0.0	1.1	0.1	11.4	18.9	0.0
Trans Nzoia.....	2.1	3.1	0.1	23.0	7.8	0.0
Uasin Gishu.....	9.5	2.6	0.8	26.3	44.0	0.0
Elgeyo / Marakwet...	0.2	0.9	0.8	15.0	56.0	0.0
Nandi.....	1.7	1.7	0.3	22.7	44.6	0.0
Baringo.....	0.0	0.9	0.2	11.7	58.5	0.0
Laikipia.....	9.8	3.9	1.4	1.6	25.6	0.0
Nakuru.....	10.6	7.6	2.2	18.4	23.3	0.0
Narok.....	0.4	0.5	0.3	10.1	30.2	0.6
Kajiado.....	1.0	26.4	1.2	36.3	19.4	0.0
Kericho.....	3.0	1.1	0.0	7.2	67.4	0.3
Bomet.....	0.7	1.3	0.2	4.2	24.2	0.0
Kakamega.....	1.6	0.7	0.4	14.4	14.8	0.5
Vihiga.....	0.0	0.5	0.4	16.2	26.1	0.0
Bungoma.....	1.7	1.6	0.4	4.7	30.9	0.0
Busia.....	0.0	0.8	0.7	12.3	47.8	0.0
Siaya.....	0.0	0.3	0.0	7.0	36.4	0.0
Kisumu.....	5.0	2.0	1.2	14.2	73.9	0.0
Homa Bay.....	0.0	0.6	1.7	0.0	22.8	0.0
Migori.....	0.5	0.2	0.2	11.0	26.0	0.0
Kisii.....	0.4	2.1	2.0	17.0	19.8	0.0
Nyamira.....	0.0	1.0	0.4	8.7	30.3	0.0
Nairobi City.....	60.4	6.0	1.0	2.7	21.6	0.2

Table 3.13: Percentage Distribution of Households by Type of Main Toilet Facility and Residence /County ...Cont'd

Residence/ County	Unimproved Sanitation Services						Other	Not Stated	Number of Households ('000)
	Flush to Some where else	Flush to Unknown place / Not Sure/ Don't Know where	Pit Latrine without Slab/ Open Pit	Bucket Toilet	Hanging Toilet/ Hanging Latrine	No facility/ Bush/Field			
National.....	0.2	0.4	25.1	0.3	0.1	8.4	0.1	0.3	11,415
Rural.....	0.0	0.0	36.8	0.0	0.1	13.9	0.2	0.2	6,442
Urban.....	0.5	0.8	9.9	0.6	0.0	1.4	0.1	0.5	4,972
<b>County</b>									
Mombasa.....	0.0	0.0	12.3	0.0	0.0	0.3	0.8	0.2	397
Kwale.....	0.0	0.0	22.8	0.0	0.0	43.3	0.2	0.0	174
Kilifi.....	0.0	0.0	13.4	0.0	0.0	14.7	0.2	1.7	326
Tana River.....	0.0	0.0	4.7	0.0	0.0	34.4	0.1	0.1	56
Lamu.....	0.0	0.0	20.5	0.0	0.0	9.4	0.0	0.0	30
Taita / Taveta.....	0.0	0.0	0.2	0.0	0.0	0.8	0.3	0.0	102
Garissa.....	0.2	0.0	11.0	0.0	0.0	43.0	0.0	0.7	78
Wajir.....	0.1	0.0	28.9	12.8	0.1	50.8	0.8	0.2	69
Mandera.....	0.0	0.0	9.1	0.0	0.0	50.1	0.0	0.0	111
Marsabit.....	0.0	0.0	22.5	0.0	0.0	51.5	0.0	0.0	62
Isiolo.....	0.0	0.0	6.7	0.0	0.7	21.6	0.2	0.0	34
Meru.....	0.0	0.0	50.4	0.0	0.8	0.2	0.0	0.0	393
Tharaka-Nithi.....	0.0	0.0	2.9	0.0	0.0	0.4	0.3	0.2	107
Embu.....	0.0	0.0	0.6	0.0	0.0	0.8	0.0	0.2	164
Kitui.....	0.0	0.0	29.3	0.0	0.0	13.7	0.0	0.2	236
Machakos.....	0.1	0.2	15.0	0.0	0.0	1.0	0.1	0.1	328
Makueni.....	0.0	0.0	10.2	0.0	0.0	1.7	0.0	0.2	233
Nyandarua.....	0.2	0.0	17.8	0.0	0.0	0.2	0.0	0.0	191
Nyeri.....	0.2	0.1	44.4	0.0	0.0	0.0	0.0	0.0	271
Kirinyaga.....	0.6	0.0	12.3	0.0	0.0	0.2	0.0	0.0	198
Murang'a.....	0.0	0.0	33.5	0.0	0.0	0.7	0.2	0.0	323
Kiambu.....	0.0	0.2	9.4	0.0	0.0	0.2	0.0	0.0	600
Turkana.....	1.1	1.1	3.0	0.0	0.0	62.8	0.0	0.0	246
West Pokot.....	0.0	0.0	19.3	0.0	0.6	52.5	0.1	0.1	119
Samburu.....	0.0	0.0	3.4	0.0	0.0	65.1	0.0	0.0	61
Trans Nzoia.....	0.2	0.6	61.4	0.0	0.0	1.6	0.0	0.0	210
Uasin Gishu.....	0.0	0.0	15.3	0.0	0.0	1.4	0.0	0.2	270
Elgeyo / Marakwet...	0.0	0.0	14.6	0.0	0.0	12.0	0.1	0.5	99
Nandi.....	0.0	0.0	26.6	0.0	0.2	2.0	0.3	0.0	202
Baringo.....	0.0	0.0	0.3	0.0	0.0	27.7	0.4	0.2	152
Laikipia.....	0.0	2.7	39.3	0.0	0.2	15.4	0.0	0.2	135
Nakuru.....	0.0	0.0	36.8	0.0	0.0	0.7	0.0	0.4	578
Narok.....	0.0	0.0	26.1	0.0	0.0	30.8	0.0	1.0	223
Kajiado.....	0.0	0.0	3.4	0.0	0.0	11.8	0.0	0.4	250
Kericho.....	0.0	0.0	16.2	0.0	0.0	4.9	0.0	0.0	211
Bomet.....	0.0	0.0	63.2	0.0	0.2	5.6	0.0	0.3	179
Kakamega.....	0.2	0.0	66.9	0.0	0.2	0.2	0.0	0.0	392
Vihiga.....	0.0	0.0	56.4	0.0	0.0	0.5	0.0	0.0	144
Bungoma.....	0.0	0.0	52.1	0.0	0.0	7.0	0.2	1.4	321
Busia.....	0.0	0.0	37.0	0.0	0.0	1.3	0.0	0.0	177
Siaya.....	0.0	0.0	49.7	0.0	0.0	4.1	2.1	0.3	246
Kisumu.....	0.0	0.0	0.8	0.0	0.0	2.9	0.0	0.0	284
Homa Bay.....	0.0	0.0	56.8	0.0	0.0	17.7	0.0	0.4	224
Migori.....	0.1	0.0	39.4	0.0	0.0	22.6	0.0	0.0	233
Kisii.....	0.0	0.1	58.3	0.0	0.0	0.0	0.0	0.3	291
Nyamira.....	4.0	0.2	54.9	0.0	0.0	0.3	0.0	0.2	179
Nairobi City.....	0.9	2.0	2.8	1.6	0.0	0.0	0.0	0.7	1,503

**Table 3.14: Percentage Distribution of Households by Sharing of Toilet Facility with Other Households and Residence/ County**

Residence/ County	Proportion of households with toilet facility	Number of households ('000)	Households With Toilet facility			Number of households ('000)
			Shared Toilet	Not Shared	Not stated	
National.....	91.1	11,415	53.7	46.3	0.0	10,404
Rural.....	85.8	6,442	42.6	57.4	0.0	5,526
Urban.....	98.1	4,972	66.2	33.8	0.0	4,878
<b>County</b>						
Mombasa.....	98.7	397	75.8	24.2	0.0	392
Kwale.....	56.5	174	58.0	42.0	0.0	98
Kilifi.....	83.4	326	70.0	30.0	0.0	272
Tana River.....	65.4	56	61.5	38.5	0.0	37
Lamu.....	90.6	30	34.7	65.3	0.0	27
Taita / Taveta.....	98.9	102	38.3	61.7	0.0	101
Garissa.....	56.2	78	67.4	32.6	0.0	44
Wajir.....	48.2	69	65.4	34.6	0.0	33
Mandera.....	49.9	111	60.0	40.0	0.0	55
Marsabit.....	48.5	62	51.5	48.5	0.0	30
Isiolo.....	78.2	34	68.2	31.6	0.2	26
Meru.....	99.8	393	43.6	56.4	0.0	393
Tharaka-Nithi.....	99.1	107	45.5	54.5	0.0	106
Embu.....	99.0	164	35.8	64.2	0.0	163
Kitui.....	86.1	236	39.9	60.1	0.0	203
Machakos.....	98.7	328	62.9	37.1	0.0	323
Makueni.....	98.2	233	37.3	62.7	0.0	229
Nyandarua.....	99.8	191	37.8	62.2	0.0	191
Nyeri.....	100.0	271	50.1	49.9	0.0	271
Kirinyaga.....	99.8	198	51.5	48.5	0.0	198
Murang'a.....	99.0	323	41.2	58.8	0.0	320
Kiambu.....	99.8	600	58.0	42.0	0.0	599
Turkana.....	37.2	246	64.2	35.8	0.0	91
West Pokot.....	47.3	119	33.6	64.7	1.7	56
Samburu.....	34.9	61	66.1	33.9	0.0	21
Trans Nzoia.....	98.4	210	41.2	58.8	0.0	207
Uasin Gishu.....	98.4	270	49.7	50.3	0.0	265
Elgeyo / Marakwet...	87.4	99	29.0	71.0	0.0	87
Nandi.....	97.7	202	38.0	62.0	0.0	197
Baringo.....	71.7	152	47.7	52.3	0.0	109
Laikipia.....	84.5	135	47.6	52.4	0.0	114
Nakuru.....	98.9	578	52.3	47.7	0.0	572
Narok.....	68.3	223	59.4	40.6	0.0	152
Kajiado.....	87.8	250	52.0	48.0	0.0	219
Kericho.....	95.1	211	48.7	51.3	0.0	200
Bomet.....	94.1	179	51.7	48.3	0.0	168
Kakamega.....	99.8	392	46.9	53.1	0.0	391
Vihiga.....	99.5	144	44.8	55.2	0.0	144
Bungoma.....	91.3	321	42.7	57.3	0.0	294
Busia.....	98.7	177	53.7	46.3	0.0	175
Siaya.....	93.5	246	67.0	33.0	0.0	230
Kisumu.....	97.1	284	65.7	34.3	0.0	276
Homa Bay.....	81.9	224	65.3	34.7	0.0	184
Migori.....	77.4	233	50.7	49.3	0.0	180
Kisii.....	99.7	291	36.2	63.8	0.0	290
Nyamira.....	99.5	179	36.6	63.4	0.0	178
Nairobi City.....	99.3	1,503	68.8	31.2	0.0	1,492

**Table 3.15: Percentage Distribution of Households by Availability of Place for Washing Hands near the Toilet Facility and Residence/County**

Residence/ County	Place to wash hands	No place to wash hands	Not stated	Number of Households ('000)
<b>National.....</b>	<b>21.2</b>	<b>78.4</b>	<b>0.4</b>	<b>10,453</b>
<b>Rural.....</b>	<b>13.2</b>	<b>86.5</b>	<b>0.3</b>	<b>5,548</b>
<b>Urban.....</b>	<b>30.2</b>	<b>69.2</b>	<b>0.5</b>	<b>4,905</b>
<b>County</b>				
Mombasa.....	18.6	81.2	0.2	395
Kwale.....	12.8	87.2	0.0	99
Kilifi.....	17.2	81.0	1.8	278
Tana River.....	17.7	82.2	0.1	37
Lamu.....	21.8	78.2	0.0	27
Taita / Taveta.....	37.6	62.4	0.0	101
Garissa.....	6.3	92.4	1.3	45
Wajir.....	3.1	96.5	0.4	34
Mandera.....	14.3	85.7	0.0	55
Marsabit.....	14.6	85.4	0.0	30
Isiolo.....	47.9	52.1	0.0	26
Meru.....	35.0	65.0	0.0	393
Tharaka-Nithi.....	13.8	86.0	0.2	106
Embu.....	15.4	84.4	0.2	163
Kitui.....	11.1	88.6	0.2	204
Machakos.....	16.2	83.1	0.7	324
Makueni.....	4.6	95.2	0.2	229
Nyandarua.....	12.1	87.9	0.0	191
Nyeri.....	20.1	79.9	0.0	271
Kirinyaga.....	20.6	79.4	0.0	198
Murang'a.....	8.8	91.2	0.0	321
Kiambu.....	41.1	58.9	0.0	599
Turkana.....	18.7	81.3	0.0	91
West Pokot.....	3.4	94.0	2.6	57
Samburu.....	6.8	93.2	0.0	21
Trans Nzoia.....	7.2	92.8	0.0	207
Uasin Gishu.....	14.3	85.6	0.2	266
Elgeyo / Marakwet...	9.9	89.6	0.5	87
Nandi.....	10.6	89.4	0.0	198
Baringo.....	7.2	92.6	0.2	110
Laikipia.....	23.2	76.6	0.2	115
Nakuru.....	18.6	81.0	0.4	574
Narok.....	7.5	91.1	1.4	154
Kajiado.....	30.8	68.2	1.0	220
Kericho.....	15.8	84.2	0.0	200
Bomet.....	8.4	91.3	0.4	169
Kakamega.....	8.1	91.2	0.7	391
Vihiga.....	15.7	84.3	0.0	144
Bungoma.....	21.2	77.3	1.5	299
Busia.....	23.5	76.5	0.0	175
Siaya.....	22.8	76.9	0.3	236
Kisumu.....	18.9	81.1	0.0	276
Homa Bay.....	17.5	82.0	0.5	185
Migori.....	5.2	94.8	0.0	180
Kisii.....	2.7	97.0	0.3	291
Nyamira.....	5.0	94.8	0.2	178
Nairobi City.....	43.6	55.6	0.7	1,503

Table 3.16: Percentage Distribution of Households by Type of Waste Disposal Method and Residence/ County

Residence/ County	Collected by County Government	Collected by Community Association	Collected by Private Company	Dumped in the compound	Dumped in the Street/ Vacant Plot/ Drain	Dumped in the Latrine	Burnt in Open	Buried	Other	Not Stated	Number of Households ('000)
National.....	3.7	5.8	7.8	30.8	10.5	1.2	32.9	2.5	4.4	0.3	11,415
Rural.....	0.3	0.4	0.9	42.1	6.1	1.5	40.4	3.2	4.8	0.2	6,442
Urban.....	8.2	12.9	16.8	16.0	16.2	0.8	23.2	1.5	4.0	0.5	4,972
<b>County</b>											
Mombasa.....	4.1	2.5	22.2	22.6	21.7	0.0	6.0	0.0	20.8	0.2	397
Kwale.....	4.1	0.5	0.0	38.5	9.0	0.0	41.6	0.7	5.5	0.0	174
Kilifi.....	3.1	6.4	0.3	11.3	17.0	0.7	57.6	0.9	1.1	1.7	326
Tana River.....	0.2	0.3	0.0	12.5	31.5	0.2	51.0	1.7	2.4	0.1	56
Lamu.....	4.7	0.5	0.3	13.7	28.1	0.0	46.4	0.8	5.5	0.0	30
Taita / Taveta.....	4.3	1.0	0.0	8.0	0.6	0.2	84.7	0.0	0.9	0.2	102
Garissa.....	2.6	0.7	0.2	52.5	21.7	0.6	20.7	0.1	0.2	0.7	78
Wajir.....	2.7	1.1	1.8	15.8	9.0	0.4	58.6	10.2	0.0	0.3	69
Mandera.....	5.8	0.4	0.2	5.7	27.7	0.0	59.5	0.7	0.0	0.0	111
Marsabit.....	1.1	0.0	0.0	18.5	1.6	0.0	78.8	0.0	0.0	0.0	62
Isiolo.....	5.3	0.0	3.3	30.6	13.1	0.0	44.0	3.2	0.5	0.0	34
Meru.....	3.8	0.5	0.3	31.0	4.0	1.2	39.1	1.3	18.9	0.0	393
Tharaka-Nithi.....	1.5	0.0	0.0	9.2	36.3	1.3	48.9	2.5	0.2	0.2	107
Embu.....	2.4	0.8	1.0	44.5	7.8	19.0	23.5	0.3	0.5	0.2	164
Kitui.....	2.3	0.0	0.1	76.2	8.9	0.0	12.2	0.1	0.0	0.2	236
Machakos.....	10.6	0.0	0.2	39.1	14.3	0.3	12.9	0.0	22.4	0.1	328
Makueni.....	3.7	0.0	1.6	74.7	5.9	0.3	8.6	0.5	4.3	0.4	233
Nyandarua.....	5.1	0.0	1.9	27.0	2.9	1.2	56.7	5.1	0.1	0.0	191
Nyeri.....	1.5	0.0	0.0	7.1	4.2	2.1	83.7	1.3	0.0	0.0	271
Kirinyaga.....	1.9	0.3	2.6	51.8	4.1	0.4	21.3	0.1	17.6	0.0	198
Murang'a.....	3.0	0.3	0.3	75.3	4.0	6.8	9.6	0.7	0.0	0.0	323
Kiambu.....	11.7	3.0	14.3	30.5	6.3	0.0	33.2	1.1	0.0	0.0	600
Turkana.....	0.9	0.4	0.0	59.1	18.7	0.0	16.0	0.9	4.2	0.0	246
West Pokot.....	2.6	0.7	0.0	77.3	2.6	0.9	6.0	2.3	7.4	0.3	119
Samburu.....	6.2	0.0	0.0	66.5	2.1	0.2	24.5	0.5	0.0	0.0	61
Trans Nzoia.....	2.1	2.1	0.5	13.0	12.9	0.0	59.8	7.1	2.5	0.0	210
Uasin Gishu.....	11.9	0.2	4.0	45.9	7.6	0.7	14.6	12.8	2.1	0.2	270
Elgeyo / Marakwet.....	1.5	0.3	0.0	2.8	3.4	0.6	90.5	0.5	0.0	0.5	99
Nandi.....	1.9	0.5	0.0	56.4	0.6	0.3	39.6	0.6	0.0	0.0	202
Baringo.....	3.9	0.0	0.0	13.5	0.4	0.3	80.3	0.7	0.8	0.2	152
Laikipia.....	16.1	0.8	0.4	25.7	2.0	0.2	53.5	0.1	0.9	0.2	135
Nakuru.....	9.9	0.2	17.9	21.6	5.9	0.2	38.6	3.4	2.1	0.4	578
Narok.....	1.7	0.0	0.3	41.3	13.6	0.0	34.0	5.7	2.4	1.0	223
Kajiado.....	4.7	0.0	35.2	10.3	4.4	3.6	39.7	1.7	0.0	0.4	250
Kericho.....	6.0	2.8	8.2	12.7	25.0	1.5	39.1	4.1	0.6	0.0	211
Bomet.....	0.8	0.2	7.8	8.5	0.4	0.4	63.7	17.5	0.2	0.3	179
Kakamega.....	0.6	0.0	1.5	47.9	1.7	0.2	46.8	0.2	0.9	0.3	392
Vihiga.....	2.0	0.0	0.3	46.5	0.5	0.0	48.2	2.1	0.4	0.0	144
Bungoma.....	0.3	0.1	0.0	21.1	2.9	2.5	41.0	1.5	29.2	1.4	321
Busia.....	0.3	0.4	0.0	53.7	9.8	0.0	22.4	0.8	12.6	0.0	177
Siaya.....	0.1	0.0	0.3	65.2	2.4	4.1	25.1	2.1	0.3	0.3	246
Kisumu.....	0.3	1.2	4.3	8.0	15.1	2.2	52.8	15.0	1.0	0.0	284
Homa Bay.....	0.0	0.0	0.0	5.3	31.0	0.0	47.9	3.8	11.7	0.4	224
Migori.....	0.6	0.1	0.1	40.1	25.7	1.1	26.0	5.6	0.8	0.0	233
Kisii.....	0.4	0.0	0.3	60.8	9.9	2.0	20.1	5.9	0.0	0.6	291
Nyamira.....	0.5	0.0	0.0	57.6	6.6	2.0	32.9	0.3	0.0	0.2	179
Nairobi City.....	2.0	39.1	29.4	4.0	16.3	0.3	7.2	0.3	0.6	0.7	1,503

### 3.5 Sources of Energy

#### Main Source of Lighting

The percentage distribution of households by main source of lighting and by county is presented in Table 3.17. Nationally, the proportion of households using lighting in form of electricity generated from the main grid was 41.4 per cent. Further, the results indicate that slightly more than a third of the households used paraffin as the main source of lighting, a decline compared to 76.4 per cent households in the 2005/06 KIHBS. There was a notable increase in the use of solar power for lighting from 1.6 per cent in 2005/06 KIHBS to 14.1 per cent in 2015/16 KIHBS.

The proportion of households in urban areas using light from electricity was 73.0 per cent compared to 17.1 per cent in rural households. The proportion of rural households relying on paraffin (lantern, tin or pressure lamps) for lighting declined from 86.4 per cent in 2005/06 KIHBS to 48.6 per cent in 2015/16 KIHBS.

Analysis by counties shows that less than one out of every ten households in Turkana, West Pokot, Wajir, Bomet and Homa Bay were using lighting from electricity. Counties that registered high proportions of households using electricity for lighting were Nairobi City, Kiambu, Mombasa and Kajiado. Usage of paraffin as a source of lighting was common in Busia, Homa Bay, Siaya and Bungoma Counties, while wood fuel was predominant among households in Samburu and Turkana counties. Majority of households in Wajir, Mandera and Garissa Counties reported battery lamp/torch as their main source of lighting.

#### Cooking fuel

The type of cooking fuel used has an influence on the levels of indoor air pollution that may lead to Acute Respiratory Infections (ARIs). Ensuring access to clean fuel is one of the targets of Sustainable Development Goal (SDG 7) on energy. Clean sources of energy include; electricity, Liquefied Petroleum Gas (LPG), and Biogas. The survey sought to establish the main type of energy used for cooking by the households.

Table 3.18 presents the distribution of households by main source of cooking fuel by residence and county. The results show that more than half of households relied on firewood for cooking while more than a quarter used charcoal and kerosene. Liquefied Petroleum Gas (LPG) was used by 13.4 per cent of the households as the main source of energy for cooking, an improvement from 3.5 per cent recorded in the 2005/06 KIHBS and 5.0 per cent in the 2009 Kenya Population and Housing Census (KPHC). Overall, the proportion of households using paraffin was 14.0 per cent. Firewood remained the predominant type of fuel used for cooking in the rural areas (84.3%). About three in every ten households in urban areas used either LPG or electricity. Only 3.0 per cent of households in rural areas reported using clean sources of energy for cooking.

Across the counties, Wajir, Bomet, West Pokot and Vihiga had high proportions of households using wood as the main cooking fuel. Nairobi City, Kiambu and Kajiado reported high proportions of households using LPG for cooking. High proportions of households using kerosene were in Nairobi City and Mombasa Counties.

Table 3.17: Percentage Distribution of Households by Main Source of Lighting Fuel and Residence/ County

Residence/ County	Electricity connection from Mains	Generator	Solar Energy	Paraffin Lantern	Paraffin Tin lamp	Paraffin Pressure Lamp	Fuel wood	Gas lamp	Battery Lamp/ Torch	Candles	Biogas	Other	Not Stated	Number of Households ('000)
National.....	41.4	0.5	14.1	15.7	19.3	0.2	1.6	0.0	4.8	0.9	0.0	1.1	0.3	11,415
Rural.....	17.1	0.5	21.7	20.6	27.7	0.3	2.7	0.0	7.3	0.3	0.0	1.4	0.2	6,442
Urban.....	73.0	0.4	4.2	9.2	8.5	0.1	0.2	0.0	1.5	1.7	0.0	0.6	0.5	4,972
<b>County</b>														
Mombasa.....	78.4	0.0	0.9	8.7	10.0	0.1	0.1	0.0	0.3	0.9	0.0	0.3	0.2	397
Kwale.....	20.1	0.2	11.1	17.6	41.8	0.3	0.1	0.2	6.8	1.2	0.0	0.6	0.0	174
Kilifi.....	34.8	0.0	8.5	14.4	38.1	0.9	0.0	0.0	0.6	0.7	0.0	0.4	1.6	326
Tana River.....	16.9	0.2	14.8	18.7	19.7	0.3	0.4	0.0	27.7	0.0	0.0	1.2	0.1	56
Lamu.....	24.9	0.6	38.6	18.5	8.7	0.0	1.4	0.0	3.7	1.4	0.0	2.2	0.0	30
Taita / Taveta.....	36.0	1.4	12.6	27.1	19.7	0.0	0.0	0.0	2.9	0.1	0.0	0.2	0.0	102
Garissa.....	28.8	0.0	0.5	0.9	0.5	0.0	0.0	0.0	63.6	0.0	0.0	5.0	0.7	78
Wajir.....	8.7	0.0	5.9	0.1	0.0	0.1	0.1	0.0	84.0	0.1	0.0	0.9	0.2	69
Mandera.....	13.3	0.2	3.8	0.2	0.0	0.0	0.3	0.6	77.2	0.0	0.0	4.4	0.0	111
Marsabit.....	17.9	0.7	8.2	6.7	0.9	0.0	21.7	0.0	42.9	0.9	0.0	0.1	0.0	62
Isiolo.....	38.1	0.2	12.7	5.5	15.2	0.0	0.8	0.2	26.0	0.0	0.0	1.4	0.0	34
Meru.....	32.1	0.4	15.4	10.0	29.7	0.6	0.0	0.0	10.1	0.1	0.0	1.7	0.0	393
Tharaka-Nithi.....	17.4	0.9	19.3	12.8	33.7	0.8	0.9	0.0	12.4	0.9	0.0	0.8	0.2	107
Embu.....	27.3	0.2	17.4	20.6	23.9	0.3	0.3	0.0	5.6	0.9	0.0	3.3	0.2	164
Kitui.....	18.2	0.0	17.0	33.4	18.7	0.0	0.2	0.0	11.1	0.7	0.0	0.5	0.2	236
Machakos.....	41.7	0.1	16.3	30.5	7.5	0.0	0.0	0.0	1.0	2.6	0.0	0.2	0.1	328
Makueni.....	17.0	0.5	24.5	37.4	14.1	0.0	0.2	0.0	5.2	0.2	0.0	0.7	0.2	233
Nyandarua.....	26.7	0.0	28.4	25.0	14.4	0.9	0.0	0.0	3.8	0.7	0.0	0.1	0.0	191
Nyeri.....	57.1	0.0	7.1	19.2	13.7	0.2	0.0	0.0	1.4	0.9	0.0	0.4	0.0	271
Kirinyaga.....	43.7	0.0	8.5	14.0	31.2	0.0	0.0	0.0	0.9	1.1	0.0	0.6	0.0	198
Murang'a.....	41.0	0.0	7.0	27.5	20.4	0.0	0.0	0.0	0.4	1.3	0.0	2.3	0.0	323
Kiambu.....	80.0	0.0	1.4	8.1	9.0	0.0	0.0	0.0	0.1	1.1	0.0	0.3	0.0	600
Turkana.....	6.5	5.9	5.2	3.8	5.0	0.7	38.7	0.0	20.7	0.7	0.0	12.4	0.5	246
West Pokot.....	6.9	1.2	10.0	21.1	10.4	1.1	17.6	0.6	26.0	0.0	0.0	4.9	0.1	119
Samburu.....	17.9	0.0	8.1	10.0	15.0	0.0	39.3	0.0	4.1	0.3	0.0	5.3	0.0	61
Trans Nzoia.....	30.7	0.1	12.9	19.3	29.1	0.5	0.0	0.0	1.1	0.2	0.0	6.0	0.0	210
Uasin Gishu.....	49.9	0.3	23.4	14.3	8.6	0.0	0.0	0.0	0.9	2.2	0.2	0.0	0.2	270
Elgeyo / Marakwet.....	20.7	0.1	40.9	15.2	6.6	0.5	6.3	0.3	7.2	0.9	0.0	0.8	0.5	99
Nandi.....	18.1	1.2	38.2	16.6	23.7	0.8	0.0	0.0	0.8	0.7	0.0	0.0	0.0	202
Baringo.....	25.5	0.2	21.5	27.1	4.8	1.0	10.1	0.0	7.9	0.7	0.0	1.0	0.2	152
Laikipia.....	40.2	0.4	17.3	18.5	15.2	0.0	0.4	0.0	1.3	0.1	0.0	6.3	0.2	135
Nakuru.....	55.4	0.3	17.4	16.5	7.6	0.0	0.5	0.0	1.1	0.7	0.0	0.1	0.4	578
Narok.....	21.6	2.0	37.0	7.8	22.5	0.0	0.8	0.0	5.0	1.8	0.0	0.3	1.2	223
Kajiado.....	68.3	0.7	4.7	6.5	17.7	0.0	0.0	0.0	1.1	0.5	0.0	0.0	0.4	250
Kericho.....	28.3	1.4	35.5	16.2	15.5	0.3	0.1	0.3	0.5	0.7	0.0	1.3	0.0	211
Bomet.....	9.2	3.1	62.6	16.7	3.7	0.3	0.0	0.2	2.7	0.4	0.0	0.4	0.7	179
Kakamega.....	15.1	0.6	21.9	12.7	47.6	0.5	0.0	0.0	0.9	0.3	0.1	0.4	0.0	392
Vihiga.....	25.4	0.0	11.9	11.6	49.6	0.1	0.0	0.0	0.9	0.4	0.0	0.0	0.0	144
Bungoma.....	10.8	1.1	18.8	17.5	48.1	0.4	0.0	0.0	1.0	0.0	0.0	0.7	1.4	321
Busia.....	11.0	0.3	15.3	15.0	57.1	0.0	0.0	0.0	0.3	0.1	0.0	1.0	0.0	177
Siaya.....	10.2	0.0	21.8	23.8	41.8	0.5	0.0	0.0	0.7	0.9	0.0	0.0	0.3	246
Kisumu.....	42.1	0.0	11.8	24.9	18.8	0.6	0.2	0.0	0.5	0.2	0.0	0.8	0.0	284
Homa Bay.....	9.7	0.4	18.6	22.4	44.6	0.0	0.0	0.0	2.7	0.5	0.0	0.7	0.4	224
Migori.....	10.2	0.0	29.7	12.8	46.2	0.2	0.0	0.0	0.7	0.2	0.0	0.0	0.0	233
Kisii.....	29.5	0.3	12.3	37.9	18.5	0.5	0.0	0.0	0.6	0.1	0.0	0.0	0.3	291
Nyamira.....	26.2	0.0	14.4	23.5	33.0	0.3	0.0	0.0	1.9	0.3	0.0	0.2	0.2	179
Nairobi City.....	90.7	0.0	0.2	4.6	1.4	0.0	0.0	0.0	0.0	2.4	0.0	0.0	0.7	1,503

Table 3.18: Percentage Distribution of Households by Main Source of Cooking Fuel and Residence/ County

County/ Residence	Firewood	Electricity	Liquified Petroleum Gas (LPG)	Biogas	Kerosene	Charcoal	Straw Shrubs Grass	Animal Dung	Agricultural Crop Residue	Other	Number of Households ('000)
National.....	54.6	1.0	13.4	0.2	14.0	14.6	0.0	0.1	0.2	1.6	11,415
Rural.....	84.3	0.3	2.5	0.2	2.3	8.9	0.0	0.0	0.3	0.9	6,442
Urban.....	16.1	2.0	27.6	0.2	29.0	21.9	0.0	0.1	0.0	2.4	4,972
<b>County</b>											
Mombasa.....	2.7	1.2	18.4	0.2	43.3	23.4	0.0	0.3	0.0	10.2	397
Kwale.....	71.7	0.1	6.6	0.0	7.7	12.2	0.0	0.0	0.0	1.7	174
Kilifi.....	50.2	1.0	7.6	0.4	7.9	29.5	0.0	0.0	0.0	1.7	326
Tana River.....	51.7	0.0	1.1	0.4	0.2	43.1	0.0	0.0	0.0	3.3	56
Lamu.....	58.4	1.1	5.3	0.2	2.4	31.5	0.0	0.0	0.0	1.2	30
Taita / Taveta.....	56.6	0.0	10.8	0.2	10.8	21.1	0.0	0.0	0.0	0.5	102
Garissa.....	57.1	0.4	0.5	0.0	0.3	36.1	0.0	0.0	0.0	4.8	78
Wajir.....	97.0	0.1	0.1	0.1	0.0	2.1	0.0	0.0	0.1	0.3	69
Mandera.....	81.8	0.4	0.0	0.0	0.0	17.2	0.0	0.0	0.3	0.3	111
Marsabit.....	81.9	2.3	1.2	0.0	1.4	11.0	0.8	0.0	0.0	1.5	62
Isiolo.....	52.4	0.0	8.9	0.0	1.9	36.2	0.0	0.0	0.0	0.6	34
Meru.....	74.1	0.5	7.6	0.2	5.8	9.8	0.0	0.0	0.0	1.9	393
Tharaka-Nithi.....	85.0	0.1	4.9	0.0	2.6	6.7	0.0	0.0	0.0	0.4	107
Embu.....	77.3	0.7	6.9	0.2	6.7	5.9	0.0	0.3	0.0	1.8	164
Kitui.....	79.5	1.2	5.1	0.0	2.5	9.0	0.0	0.0	0.0	2.3	236
Machakos.....	50.0	0.3	15.4	0.0	24.4	6.5	0.0	0.2	0.0	3.0	328
Makueni.....	77.9	0.0	2.9	0.2	7.3	10.6	0.0	0.0	0.0	1.0	233
Nyandarua.....	69.5	0.2	8.4	0.7	3.3	17.6	0.0	0.0	0.0	0.0	191
Nyeri.....	62.9	0.1	9.4	0.6	9.8	16.2	0.0	0.0	0.0	0.9	271
Kirinyaga.....	67.8	0.1	12.6	0.0	9.2	8.9	0.0	0.0	0.0	1.2	198
Murang'a.....	80.6	0.0	5.7	0.3	8.1	2.4	0.0	0.0	0.0	2.7	323
Kiambu.....	23.5	1.9	35.6	0.5	21.7	15.1	0.0	0.0	0.0	1.8	600
Turkana.....	72.1	0.0	2.5	0.0	0.2	19.4	0.0	0.0	0.0	4.8	246
West Pokot.....	89.9	0.2	1.2	0.1	0.4	7.6	0.3	0.0	0.0	0.2	119
Samburu.....	72.1	0.0	3.7	0.2	0.4	23.3	0.0	0.0	0.0	0.3	61
Trans Nzoia.....	65.8	0.0	6.4	0.5	4.9	17.7	0.0	0.0	4.0	0.8	210
Uasin Gishu.....	44.0	0.4	9.6	0.1	13.7	27.3	0.2	0.0	4.0	0.6	270
Elgeyo / Marakwet..	86.6	0.1	0.7	0.1	0.3	9.7	0.3	0.0	0.0	1.8	99
Nandi.....	86.6	0.3	4.1	0.0	1.9	5.0	0.2	0.0	0.1	1.9	202
Baringo.....	73.5	0.4	3.5	0.0	1.2	17.0	0.3	0.0	0.0	4.0	152
Laikipia.....	52.6	0.3	14.1	0.2	5.0	26.6	0.0	0.0	0.0	1.1	135
Nakuru.....	42.6	1.4	13.2	0.2	10.8	30.7	0.1	0.0	0.0	0.6	578
Narok.....	57.1	0.7	6.0	0.0	4.9	29.6	0.0	0.0	0.0	0.8	223
Kajiado.....	23.2	0.2	35.3	0.3	20.2	17.9	0.0	0.0	0.0	2.4	250
Kericho.....	78.2	0.1	6.3	0.0	1.5	13.7	0.0	0.0	0.0	0.3	211
Bomet.....	93.5	0.0	2.1	0.0	1.4	2.1	0.0	0.0	0.0	0.4	179
Kakamega.....	85.0	0.0	2.1	0.0	3.4	9.4	0.0	0.0	0.0	0.1	392
Vihiga.....	89.0	0.0	3.6	0.0	3.8	3.0	0.0	0.0	0.0	0.5	144
Bungoma.....	82.2	0.0	4.7	0.0	3.2	7.4	0.0	0.0	0.0	1.1	321
Busia.....	83.1	0.4	2.6	0.0	2.0	11.1	0.0	0.0	0.0	0.8	177
Siaya.....	71.7	0.6	2.3	0.4	4.0	19.6	0.0	0.0	0.0	1.1	246
Kisumu.....	32.5	0.5	7.6	0.0	19.7	38.0	0.3	1.2	0.0	0.3	284
Homa Bay.....	76.4	0.2	3.3	0.0	0.7	17.1	0.2	0.0	0.6	1.0	224
Migori.....	82.1	0.2	4.0	0.0	2.0	11.3	0.0	0.0	0.0	0.5	233
Kisii.....	76.3	1.0	6.8	0.0	4.3	10.3	0.0	0.0	0.0	1.1	291
Nyamira.....	77.6	0.0	9.3	0.1	3.6	8.2	0.0	0.0	0.0	1.1	179
Nairobi City.....	1.4	4.6	40.0	0.2	47.0	5.3	0.0	0.0	0.0	0.6	1,503

### **Primary Type of Cooking Appliance**

The percentage distribution of households by primary type of cooking appliance, residence and county is presented in Table 3.19. Nationally, 46.4 per cent of the households use traditional stone fire as a primary cooking appliance. Usage of traditional stone fire is typically a rural phenomenon as depicted by 71.7 per cent of households in rural areas and 13.7 per cent in households in urban areas relying on this mode of appliance. The findings further show that 13.9 per cent of households use kerosene stove and 13.3 per cent use gas cooker. Analysis by rural and urban dichotomy indicates that the usage of gas cooker is higher in urban areas, which relates to the usage of LPG. Utilization of improved traditional stone fire is higher among households in West Pokot and Nandi Counties.

Table 3.19: Percentage Distribution of Households by Primary type of Cooking Appliance and Residence/County

County/ Residence	Traditional Stone Fire	Improved Traditional Stone Fire	Ordinary Jiko	Improved Jiko	Kerosene Stove	Gas Cooker	Electric Cooker	Electric/ Gas Cooker	Other	Not Stated	Number of Households ('000)
National.....	46.4	8.2	9.1	6.2	13.9	13.3	0.3	0.4	1.8	0.3	11,415
Rural.....	71.7	12.8	5.7	3.7	2.2	2.4	0.1	0.1	0.9	0.2	6,442
Urban.....	13.7	2.3	13.5	9.3	29.0	27.5	0.6	0.8	2.9	0.5	4,972
<b>County</b>											
Mombasa.....	2.7	0.0	19.1	7.5	41.0	19.0	0.2	0.1	10.1	0.3	397
Kwale.....	71.5	0.6	7.2	3.9	8.4	6.6	0.1	0.0	1.7	0.0	174
Kilifi.....	51.2	0.6	5.0	24.4	7.7	7.2	0.4	0.6	1.7	1.1	326
Tana River.....	50.0	1.7	21.7	21.4	0.2	1.0	0.0	0.1	3.7	0.1	56
Lamu.....	55.4	3.6	17.4	14.6	2.5	4.7	0.0	0.7	1.1	0.0	30
Taita / Taveta.....	44.9	11.2	12.6	9.0	10.8	11.0	0.0	0.0	0.5	0.0	102
Garissa.....	52.9	4.6	7.2	28.9	0.0	0.2	0.0	0.3	5.1	0.7	78
Wajir.....	86.0	2.1	10.5	0.9	0.1	0.1	0.0	0.0	0.2	0.2	69
Mandera.....	78.5	2.4	16.1	3.0	0.0	0.0	0.0	0.0	0.0	0.0	111
Marsabit.....	80.6	2.8	12.6	0.3	1.4	1.2	0.0	0.0	1.1	0.0	62
Isiolo.....	51.5	0.4	36.2	1.0	1.7	8.7	0.0	0.2	0.3	0.0	34
Meru.....	53.8	21.1	6.3	3.3	5.6	7.5	0.0	0.1	2.4	0.0	393
Tharaka-Nithi.....	79.0	4.2	5.9	2.6	2.6	4.6	0.0	0.3	0.6	0.2	107
Embu.....	57.5	18.4	4.6	3.1	6.7	7.5	0.2	0.0	1.8	0.2	164
Kitui.....	76.4	3.9	4.6	4.8	2.5	5.1	0.0	0.2	2.3	0.2	236
Machakos.....	48.1	1.7	4.9	1.6	24.6	15.3	0.0	0.6	3.0	0.1	328
Makueni.....	72.8	6.6	3.3	6.2	7.2	2.7	0.0	0.1	1.0	0.0	233
Nyandarua.....	68.8	2.4	14.4	3.2	2.8	8.1	0.0	0.2	0.1	0.0	191
Nyeri.....	47.7	15.8	2.6	13.9	9.0	10.0	0.0	0.0	0.9	0.0	271
Kirinyaga.....	63.2	4.5	8.1	0.8	9.4	12.4	0.1	0.4	1.2	0.0	198
Murang'a.....	62.9	15.6	1.9	2.8	8.1	6.0	0.0	0.0	2.3	0.4	323
Kiambu.....	20.7	3.1	9.9	5.8	21.2	36.0	0.3	1.1	2.0	0.0	600
Turkana.....	68.3	0.0	18.1	5.0	0.2	2.5	0.0	0.0	4.8	1.1	246
West Pokot.....	33.2	56.7	2.8	5.3	0.2	1.1	0.0	0.1	0.2	0.3	119
Samburu.....	71.2	1.7	9.9	13.1	0.4	3.7	0.0	0.0	0.0	0.0	61
Trans Nzoia.....	43.4	23.2	9.1	13.6	4.6	5.7	0.0	0.2	0.2	0.0	210
Uasin Gishu.....	11.0	37.4	18.0	10.6	12.5	9.9	0.0	0.0	0.5	0.2	270
Elgeyo / Marakwet...	76.4	11.0	8.5	0.6	0.3	0.9	0.0	0.0	1.8	0.5	99
Nandi.....	29.3	57.1	4.6	1.2	1.6	3.9	0.0	0.1	2.1	0.0	202
Baringo.....	70.8	2.8	15.4	1.9	1.0	3.7	0.2	0.0	4.1	0.2	152
Laikipia.....	51.8	0.9	10.8	16.1	5.0	13.8	0.0	0.2	1.2	0.2	135
Nakuru.....	31.9	10.5	28.7	2.3	11.1	12.9	0.6	0.5	1.1	0.4	578
Narok.....	29.7	28.5	3.7	25.1	4.9	5.9	0.0	0.4	1.0	1.0	223
Kajiado.....	22.4	0.0	9.0	9.8	20.3	35.4	0.4	0.0	2.4	0.4	250
Kericho.....	48.9	26.7	8.3	7.4	1.8	6.1	0.2	0.0	0.5	0.0	211
Bomet.....	85.7	8.0	1.9	0.5	1.0	1.8	0.0	0.3	0.5	0.3	179
Kakamega.....	78.9	6.9	6.0	2.5	3.2	1.9	0.0	0.4	0.1	0.0	392
Vihiga.....	83.4	4.2	2.8	1.3	3.9	3.6	0.0	0.3	0.4	0.0	144
Bungoma.....	80.5	1.7	6.0	1.8	2.9	4.6	0.0	0.1	0.9	1.4	321
Busia.....	82.6	1.0	8.7	3.1	1.8	2.7	0.2	0.0	0.0	0.0	177
Siaya.....	69.2	3.0	16.9	3.6	3.1	2.5	0.0	0.3	1.1	0.3	246
Kisumu.....	30.5	3.2	10.8	27.3	19.4	7.7	0.5	0.5	0.1	0.0	284
Homa Bay.....	72.8	2.9	10.8	8.1	0.7	2.6	0.0	0.5	1.0	0.6	224
Migori.....	82.4	0.3	7.8	3.9	1.9	3.5	0.0	0.2	0.1	0.0	233
Kisii.....	70.6	5.5	9.5	2.0	4.5	6.2	0.0	0.4	1.0	0.3	291
Nyamira.....	70.5	6.3	8.3	0.6	3.6	9.4	0.0	0.0	1.2	0.2	179
Nairobi City.....	0.9	0.4	3.3	2.1	47.9	39.6	1.5	1.5	2.3	0.6	1,503

Annex Table 3A: Percentage Distribution of Population (Individuals) by Main Source of Drinking Water and Residence / County

Residence/ County	Improved Water Sources							
	Piped			Tubewell/ borehole with pump	Protected well	Protected spring	Rain water collection	Bottled water
	Into dwelling	Into plot/ yard	public tap/ stand pipe					
<b>National.....</b>	<b>8.2</b>	<b>16.8</b>	<b>13.1</b>	<b>7.4</b>	<b>6.9</b>	<b>11.0</b>	<b>4.4</b>	<b>1.0</b>
<b>Rural.....</b>	<b>2.1</b>	<b>11.5</b>	<b>8.4</b>	<b>9.0</b>	<b>8.6</b>	<b>14.4</b>	<b>5.4</b>	<b>0.1</b>
<b>Urban.....</b>	<b>19.2</b>	<b>26.3</b>	<b>21.4</b>	<b>4.5</b>	<b>3.8</b>	<b>4.8</b>	<b>2.5</b>	<b>2.7</b>
<b>County</b>								
Mombasa.....	14.1	5.4	52.8	0.1	3.5	0.0	0.0	7.3
Kwale.....	4.1	6.0	25.5	16.6	2.4	0.0	0.0	0.6
Kilifi.....	12.7	8.9	52.3	0.0	1.8	0.0	0.8	0.6
Tana River.....	0.4	22.3	19.7	17.6	5.6	0.0	0.0	0.4
Lamu.....	16.5	5.0	31.2	3.8	2.7	0.0	12.3	3.3
Taita / Taveta.....	8.4	26.0	40.8	2.2	1.1	0.9	0.0	0.1
Garissa.....	4.1	33.9	11.7	7.4	0.2	0.0	0.0	0.0
Wajir.....	4.2	2.9	2.6	23.8	15.6	0.3	0.0	0.0
Mandera.....	0.3	0.8	9.6	23.8	0.0	0.0	1.0	0.1
Marsabit.....	0.5	3.6	21.8	8.4	0.7	0.6	2.8	0.4
Isiolo.....	6.8	39.5	10.5	14.0	4.3	1.7	0.0	0.4
Meru.....	5.2	50.9	4.6	3.0	0.1	1.1	1.7	0.1
Tharaka-Nithi.....	5.2	31.1	9.4	3.3	1.5	1.4	1.2	0.6
Embu.....	7.3	47.8	3.0	1.7	1.6	0.0	4.2	0.8
Kitui.....	1.5	6.0	17.8	14.2	4.4	3.9	3.0	1.3
Machakos.....	1.9	8.2	15.9	11.9	4.5	2.7	18.2	5.4
Makueni.....	0.4	2.7	20.4	9.4	8.8	1.0	9.4	0.6
Nyandarua.....	13.3	15.9	0.3	2.7	25.8	2.5	19.1	0.1
Nyeri.....	9.9	56.2	2.5	0.0	0.6	0.0	13.7	0.0
Kirinyaga.....	6.8	45.2	0.4	0.0	10.9	0.0	1.3	1.1
Murang'a.....	2.0	33.1	3.4	0.1	10.6	1.7	15.8	0.3
Kiambu.....	14.8	44.2	11.6	5.7	14.1	0.0	2.5	0.5
Turkana.....	3.4	5.4	37.6	14.8	0.9	0.0	0.0	0.0
West Pokot.....	4.9	7.0	3.4	13.0	4.5	3.7	0.0	0.1
Samburu.....	0.9	11.4	11.5	10.5	2.7	0.0	0.6	0.3
Trans Nzoia.....	4.3	10.8	7.3	2.9	27.3	23.1	1.2	0.3
Uasin Gishu.....	10.5	22.9	6.6	0.8	15.0	5.1	2.2	0.1
Elgeyo / Marakwet...	0.7	29.8	3.7	0.1	8.6	0.8	0.7	0.0
Nandi.....	4.2	8.3	4.7	0.2	16.7	9.3	0.2	0.3
Baringo.....	1.1	15.3	4.6	5.7	8.7	3.2	5.5	0.2
Laikipia.....	7.8	24.9	7.2	7.1	4.8	0.2	3.5	0.3
Nakuru.....	6.1	29.8	8.5	4.0	5.5	0.0	10.6	2.7
Narok.....	1.4	0.9	5.1	1.6	2.4	6.6	7.0	1.6
Kajiado.....	19.0	17.3	2.9	28.3	0.7	4.8	2.9	9.0
Kericho.....	9.6	9.3	9.1	7.5	8.5	15.7	2.8	0.2
Bomet.....	5.2	5.1	0.8	0.0	0.3	0.6	10.2	0.1
Kakamega.....	2.9	2.9	2.8	12.4	15.8	53.5	0.2	0.0
Vihiga.....	0.0	3.0	0.9	1.8	4.4	76.0	3.1	0.1
Bungoma.....	2.8	3.4	5.2	13.7	7.7	42.6	0.3	0.0
Busia.....	0.9	2.1	1.3	39.3	7.1	21.8	0.1	0.2
Siaya.....	0.1	1.0	20.0	11.9	12.1	3.5	7.7	0.0
Kisumu.....	5.8	14.9	19.2	8.7	14.9	1.6	11.2	0.0
Homa Bay.....	0.3	0.3	2.8	6.1	9.0	8.1	6.3	0.0
Migori.....	0.2	1.4	7.0	14.5	12.5	5.4	19.0	0.1
Kisii.....	0.5	2.6	0.4	1.3	1.4	81.3	2.0	0.7
Nyamira.....	1.1	6.6	0.2	0.0	0.0	71.2	1.7	0.0
Nairobi City.....	35.7	30.5	25.6	3.4	0.6	0.0	0.0	1.3

Annex Table 3A: Percentage Distribution of Population (individuals) by Main Source of Drinking Water and Residence / County...cont'd

Residence/ County	Unimproved Water Sources						Other	Not Stated	Number of Individuals ('000)
	Unprotected well	Unprotected spring	Vendors			Surface water - river, stream, pond, dam, lake, canal, irrigation channel			
			Tanker truck	Cart with small tank/ drum/ buckets	Bicycles with buckets				
National.....	4.3	6.2	0.9	1.6	0.5	16.5	1.0	0.2	45,371
Rural.....	5.8	8.7	0.4	0.5	0.4	23.3	1.3	0.1	29,127
Urban.....	1.7	1.6	1.8	3.7	0.8	4.4	0.5	0.3	16,245
<b>County</b>									
Mombasa.....	0.0	0.0	0.4	16.0	0.0	0.0	0.2	0.2	1,185
Kwale.....	13.6	6.5	0.2	1.0	0.2	23.2	0.0	0.0	820
Kilifi.....	2.8	6.5	3.1	0.9	0.2	6.4	2.1	0.9	1,400
Tana River.....	3.0	0.0	0.2	0.0	0.0	27.6	3.1	0.1	304
Lamu.....	19.8	0.3	0.0	0.0	0.1	4.1	0.9	0.0	128
Taita / Taveta.....	0.1	0.5	1.3	0.6	0.5	17.5	0.0	0.0	358
Garissa.....	34.7	0.0	3.4	0.1	0.0	4.3	0.0	0.1	432
Wajir.....	21.5	0.0	0.8	3.3	0.0	24.7	0.1	0.2	459
Mandera.....	3.8	0.0	20.3	11.4	0.0	28.2	0.7	0.0	711
Marsabit.....	22.2	1.8	2.0	5.4	1.9	27.8	0.2	0.0	316
Isiolo.....	5.1	0.0	2.0	0.4	0.0	9.0	8.1	0.0	156
Meru.....	1.4	6.5	2.0	3.0	0.0	6.9	15.4	0.0	1,471
Tharaka-Nithi.....	1.9	3.3	2.0	0.0	0.0	40.8	0.2	0.1	396
Embu.....	8.8	1.9	2.0	2.1	0.0	18.7	0.8	0.1	560
Kitui.....	2.5	0.2	2.0	2.2	0.0	42.7	0.1	0.1	1,098
Machakos.....	4.2	4.7	2.0	4.6	0.6	13.2	0.0	0.0	1,191
Makueni.....	3.4	7.3	2.0	0.4	0.6	33.9	0.0	0.2	959
Nyandarua.....	4.1	3.5	2.0	1.0	0.0	10.3	1.4	0.0	686
Nyeri.....	0.3	0.1	2.0	0.0	0.5	13.5	2.0	0.0	798
Kirinyaga.....	0.8	0.4	2.0	0.8	0.0	23.3	8.9	0.0	608
Murang'a.....	2.5	12.8	2.0	0.5	0.4	16.6	0.3	0.0	1,085
Kiambu.....	0.7	0.7	2.0	0.1	0.4	4.4	0.1	0.0	1,868
Turkana.....	7.5	1.1	2.0	0.0	0.0	28.9	0.1	0.0	1,084
West Pokot.....	4.9	22.5	2.0	0.0	0.5	35.3	0.0	0.1	649
Samburu.....	12.0	0.2	2.0	0.0	0.0	49.2	0.0	0.0	284
Trans Nzoia.....	3.9	10.2	2.0	0.0	0.9	7.7	0.1	0.0	1,038
Uasin Gishu.....	24.7	2.8	2.0	1.3	0.0	7.6	0.3	0.0	1,133
Elgeyo / Marakwet...	5.4	0.2	2.0	0.0	0.0	48.0	1.4	0.7	469
Nandi.....	8.4	38.5	2.0	0.0	0.0	9.2	0.1	0.0	954
Baringo.....	1.4	13.4	2.0	0.3	0.8	38.6	1.2	0.0	704
Laikipia.....	2.0	0.0	2.0	0.1	0.3	40.7	0.9	0.2	507
Nakuru.....	10.1	0.4	2.0	1.6	4.2	15.5	0.1	0.4	2,031
Narok.....	1.1	13.5	2.0	4.4	2.1	47.4	2.0	0.7	1,078
Kajiado.....	0.3	0.5	2.0	2.7	1.6	6.2	0.0	0.5	871
Kericho.....	7.1	22.7	2.0	0.0	0.0	6.4	1.0	0.0	945
Bomet.....	2.6	24.0	2.0	0.1	0.0	50.7	0.1	0.2	916
Kakamega.....	0.6	5.3	2.0	0.0	0.5	3.0	0.0	0.0	1,876
Vihiga.....	0.8	4.9	2.0	0.0	1.2	3.7	0.0	0.0	627
Bungoma.....	2.9	8.8	2.0	0.3	1.4	10.4	0.1	0.4	1,553
Busia.....	3.4	6.1	2.0	0.1	0.3	17.2	0.0	0.0	840
Siaya.....	2.4	3.3	2.0	0.3	0.2	37.1	0.2	0.1	985
Kisumu.....	1.9	0.7	2.0	1.4	0.3	18.9	0.3	0.0	1,132
Homa Bay.....	7.7	27.8	2.0	0.2	0.4	28.6	1.7	0.4	1,072
Migori.....	3.5	2.3	2.0	3.2	0.6	30.3	0.0	0.0	1,126
Kisii.....	0.2	6.4	2.0	0.0	0.0	3.0	0.0	0.1	1,347
Nyamira.....	0.3	14.1	2.0	0.2	0.0	4.5	0.0	0.2	699
Nairobi City.....	0.0	0.0	2.0	1.5	0.0	0.0	0.0	0.4	4,463

Annex Table 3B: Percentage Distribution of Individuals by Method Used to Make Water Safer to Drink and Residence/ County

Residence/ County	Boil	Add bleach/ chlorine ( <i>waterguard</i> , <i>aquaguard</i> , etc)	Use water filter (ceramic, sand, composite)	Solar disinfection	Sieve through a cloth	Let it stand and settle	Nothing	Other	Number of Individuals('000)
National.....	20.7	21.5	1.0	1.2	0.0	0.5	58.8	0.1	45,371
Rural.....	16.9	21.9	1.3	1.3	0.0	0.5	62.1	0.1	29,127
Urban.....	27.4	20.9	0.5	1.0	0.0	0.4	52.9	0.1	16,245
<b>County</b>									
Mombasa.....	6.3	27.4	0.2	0.0	0.0	0.0	60.5	0.3	1,185
Kwale.....	2.1	16.7	1.4	0.4	0.0	3.9	83.1	0.0	820
Kilifi.....	2.1	6.6	0.0	0.0	0.0	0.0	90.9	0.0	1,400
Tana River.....	5.0	15.7	0.0	0.6	0.0	1.1	78.5	0.4	304
Lamu.....	4.5	10.2	2.0	1.7	0.0	0.0	80.9	0.0	128
Taita / Taveta.....	16.8	9.8	0.4	0.0	0.0	0.7	74.3	0.0	358
Garissa.....	11.4	7.1	1.3	0.2	0.0	0.3	81.6	0.0	432
Wajir.....	6.3	29.9	0.4	0.0	0.0	0.0	64.9	0.1	459
Mandera.....	2.6	13.9	0.0	0.3	0.0	0.0	84.7	0.6	711
Marsabit.....	6.3	7.9	0.5	0.9	0.0	7.1	81.9	0.0	316
Isiolo.....	3.6	9.0	0.0	1.3	0.0	2.3	88.2	0.0	156
Meru.....	44.0	2.7	0.0	0.0	0.0	1.7	53.6	0.1	1,471
Tharaka-Nithi.....	37.0	8.0	0.0	0.0	0.3	1.7	65.0	0.0	396
Embu.....	19.2	26.6	0.0	2.4	0.0	0.0	61.5	0.0	560
Kitui.....	6.6	14.1	0.0	0.8	0.0	0.3	77.8	0.0	1,098
Machakos.....	10.1	22.4	0.6	0.5	0.0	0.1	64.6	0.0	1,191
Makueni.....	18.4	21.7	0.0	0.2	0.0	0.4	63.7	0.1	959
Nyandarua.....	38.8	5.1	0.2	0.2	0.0	0.4	57.2	0.1	686
Nyeri.....	36.5	4.6	0.0	0.0	0.0	0.1	62.7	0.0	798
Kirinyaga.....	25.9	14.8	0.0	0.1	0.0	0.1	60.3	0.0	608
Murang'a.....	15.3	10.3	0.1	0.0	0.0	0.1	74.5	0.0	1,085
Kiambu.....	29.7	7.7	0.3	0.2	0.0	0.0	64.1	0.0	1,868
Turkana.....	3.8	8.4	0.0	0.3	0.0	1.3	87.7	0.1	1,084
West Pokot.....	4.7	5.5	0.0	0.2	0.0	2.7	92.0	0.0	649
Samburu.....	6.6	2.9	0.0	0.7	0.0	0.3	90.6	0.0	284
Trans Nzoia.....	22.4	30.6	2.3	0.5	0.0	0.1	48.8	0.0	1,038
Uasin Gishu.....	51.1	13.7	0.0	1.3	0.0	0.4	37.8	0.0	1,133
Elgeyo / Marakwet...	31.9	2.3	0.1	0.0	0.0	0.1	66.9	0.2	469
Nandi.....	37.5	10.7	0.5	1.9	0.0	0.1	51.3	0.7	954
Baringo.....	22.0	4.0	0.1	0.0	0.0	0.0	74.7	0.0	704
Laikipia.....	35.3	2.4	0.0	0.0	0.0	0.0	62.6	0.3	507
Nakuru.....	20.6	3.6	0.0	0.5	0.1	0.0	73.6	0.0	2,031
Narok.....	13.2	14.9	0.0	0.1	0.0	0.0	75.3	0.0	1,078
Kajiado.....	22.7	5.3	0.5	0.0	0.0	0.0	60.0	0.0	871
Kericho.....	9.7	4.4	1.1	0.1	0.0	0.8	85.1	0.3	945
Bomet.....	2.1	3.2	0.0	1.1	0.0	0.2	93.0	0.0	916
Kakamega.....	6.0	54.4	3.0	5.1	0.0	0.1	36.2	0.6	1,876
Vihiga.....	19.9	25.9	3.8	4.0	0.0	0.8	48.8	0.0	627
Bungoma.....	6.0	48.5	3.5	9.8	0.0	0.0	35.1	0.1	1,553
Busia.....	2.6	85.0	0.8	2.1	0.0	0.1	10.6	0.0	840
Siaya.....	18.1	62.3	3.1	1.5	0.0	0.7	24.8	0.0	985
Kisumu.....	32.2	60.4	7.6	0.1	0.0	1.6	22.0	0.0	1,132
Homa Bay.....	16.4	71.2	6.0	0.4	0.0	0.0	20.1	0.0	1,072
Migori.....	17.6	69.4	2.1	0.8	0.2	0.0	25.3	0.0	1,126
Kisii.....	12.8	8.7	1.3	0.8	0.0	0.5	81.8	0.0	1,347
Nyamira.....	38.2	5.8	0.0	0.3	0.0	0.3	58.8	0.0	699
Nairobi City.....	45.5	17.6	0.0	1.8	0.0	0.2	41.9	0.2	4,463

Annex Table 3C: Percentage Distribution of Individuals by Volume of Water used by Residence/County

Residence/ County	Volume of water in Litres					Number of Individuals ('000)
	0-1000	1001-2000	2001-3000	3001+	Not Stated	
<b>National.....</b>	<b>11.0</b>	<b>34.3</b>	<b>31.6</b>	<b>22.5</b>	<b>0.7</b>	<b>45,371</b>
<b>Rural.....</b>	<b>9.5</b>	<b>32.4</b>	<b>33.5</b>	<b>24.1</b>	<b>0.5</b>	<b>29,127</b>
<b>Urban.....</b>	<b>13.7</b>	<b>37.7</b>	<b>28.2</b>	<b>19.5</b>	<b>0.9</b>	<b>16,245</b>
<b>County</b>						
Mombasa.....	17.0	32.0	31.0	19.8	0.2	1,185
Kwale.....	3.3	20.1	39.1	37.5	0.0	820
Kilifi.....	4.5	18.2	31.2	34.3	11.9	1,400
Tana River.....	18.1	32.6	23.6	25.4	0.1	304
Lamu.....	3.4	25.9	36.5	34.2	0.0	128
Taita / Taveta.....	5.6	32.6	31.5	30.2	0.0	358
Garissa.....	17.9	43.3	18.0	20.2	0.6	432
Wajir.....	9.3	34.3	36.0	18.6	1.7	459
Mandera.....	3.3	38.2	35.7	22.7	0.0	711
Marsabit.....	27.5	50.0	16.9	5.6	0.0	316
Isiolo.....	23.4	19.6	24.6	32.4	0.0	156
Meru.....	12.9	23.4	43.1	20.6	0.0	1,471
Tharaka-Nithi.....	8.4	30.8	33.2	26.7	0.9	396
Embu.....	9.2	35.3	27.1	28.3	0.1	560
Kitui.....	5.9	19.3	32.5	42.1	0.1	1,098
Machakos.....	15.0	39.0	33.1	12.8	0.0	1,191
Makueni.....	13.9	34.7	30.1	21.1	0.2	959
Nyandarua.....	15.1	37.9	34.3	12.7	0.0	686
Nyeri.....	4.8	23.8	38.7	32.4	0.3	798
Kirinyaga.....	15.4	35.3	29.4	19.9	0.0	608
Murang'a.....	7.4	20.5	32.7	39.5	0.0	1,085
Kiambu.....	10.2	40.8	34.5	14.2	0.2	1,868
Turkana.....	11.7	43.5	8.8	35.5	0.5	1,084
West Pokot.....	12.9	48.1	27.8	9.1	2.0	649
Samburu.....	51.8	39.4	6.6	2.2	0.0	284
Trans Nzoia.....	5.1	16.4	39.9	38.6	0.0	1,038
Uasin Gishu.....	15.4	31.7	34.5	18.4	0.0	1,133
Elgeyo / Marakwet...	6.1	56.3	31.2	5.2	1.3	469
Nandi.....	4.3	38.6	40.8	16.3	0.0	954
Baringo.....	15.4	45.3	25.9	13.4	0.0	704
Laikipia.....	21.1	48.3	19.0	11.3	0.2	507
Nakuru.....	12.5	48.4	29.5	9.2	0.4	2,031
Narok.....	18.8	44.6	23.8	12.1	0.7	1,078
Kajiado.....	30.3	35.2	14.7	18.4	1.3	871
Kericho.....	33.8	40.9	17.7	7.7	0.0	945
Bomet.....	6.2	46.4	43.7	2.8	0.8	916
Kakamega.....	1.6	7.8	31.0	59.6	0.0	1,876
Vihiga.....	3.0	16.3	47.5	33.3	0.0	627
Bungoma.....	13.6	26.2	35.4	24.4	0.4	1,553
Busia.....	4.1	37.9	37.5	20.6	0.0	840
Siaya.....	6.4	41.6	41.8	10.1	0.1	985
Kisumu.....	4.1	29.7	43.2	22.8	0.1	1,132
Homa Bay.....	3.3	31.5	42.6	22.1	0.4	1,072
Migori.....	7.2	28.0	53.8	10.9	0.0	1,126
Kisii.....	4.3	19.3	15.4	60.6	0.3	1,347
Nyamira.....	4.9	32.6	47.9	14.4	0.2	699
Nairobi City.....	13.5	52.2	22.1	11.6	0.6	4,463

Annex Table 3D: Percentage Distribution of Individuals by Type of Main Toilet Facility and Residence /Country

Residence/ County	Improved Sanitation Services					
	Flush to Piped Sewer System	Flush to Septic Tank	Flush to Pit (Latrine)	Ventilated Improved Pit Latrine (VIP)	Pit Latrine with Slab	Composting Toilet
<b>National</b> .....	<b>8.0</b>	<b>4.6</b>	<b>2.2</b>	<b>11.0</b>	<b>33.3</b>	<b>0.2</b>
<b>Rural</b> .....	<b>0.1</b>	<b>1.1</b>	<b>1.3</b>	<b>9.9</b>	<b>32.7</b>	<b>0.3</b>
<b>Urban</b> .....	<b>22.1</b>	<b>10.9</b>	<b>3.8</b>	<b>12.9</b>	<b>34.3</b>	<b>0.1</b>
<b>County</b>						
Mombasa.....	8.1	36.1	16.0	11.8	13.8	0.0
Kwale.....	2.7	3.3	5.1	4.3	14.3	0.0
Kilifi.....	0.0	19.7	14.1	1.6	28.8	0.0
Tana River.....	0.6	3.1	17.0	0.0	38.9	0.0
Lamu.....	0.0	7.3	22.8	5.5	36.6	0.0
Taita / Taveta.....	0.8	12.2	0.7	12.7	72.3	0.0
Garissa.....	0.2	1.4	17.9	8.0	14.5	0.0
Wajir.....	0.5	1.7	0.8	2.4	0.7	1.4
Mandera.....	0.0	0.0	0.1	8.3	35.8	0.0
Marsabit.....	0.0	0.0	0.1	4.8	21.0	0.0
Isiolo.....	7.0	0.0	0.2	26.0	32.3	0.0
Meru.....	0.6	2.5	1.7	16.3	17.6	3.6
Tharaka-Nithi.....	0.2	2.1	1.1	13.5	79.1	0.0
Embu.....	1.4	4.9	0.3	13.3	78.7	0.0
Kitui.....	0.1	0.9	0.2	10.9	38.2	0.2
Machakos.....	2.9	5.1	0.1	25.4	45.2	0.0
Makueni.....	0.0	0.2	1.0	12.1	73.0	0.0
Nyandarua.....	1.3	0.4	0.8	9.3	69.6	1.1
Nyeri.....	1.8	3.1	4.1	18.3	24.0	0.0
Kirinyaga.....	0.3	7.2	0.9	12.6	64.9	0.0
Murang'a.....	1.6	0.8	1.5	13.2	47.7	0.0
Kiambu.....	8.2	10.7	4.5	6.3	58.8	0.0
Turkana.....	0.3	1.2	0.8	6.6	21.5	0.0
West Pokot.....	0.1	0.0	0.0	12.0	14.5	0.0
Samburu.....	0.0	0.5	0.0	8.7	14.5	0.0
Trans Nzoia.....	1.8	2.5	0.2	21.6	6.4	0.0
Uasin Gishu.....	7.8	2.2	0.3	24.9	44.6	0.0
Elgeyo / Marakwet...	0.2	0.8	1.2	12.9	55.0	0.0
Nandi.....	1.3	1.7	0.3	21.5	45.2	0.0
Baringo.....	0.0	0.7	0.2	10.6	57.3	0.0
Laikipia.....	8.4	2.6	1.1	1.6	21.3	0.0
Nakuru.....	9.9	7.2	1.6	14.2	24.2	0.0
Narok.....	0.4	0.4	0.3	5.4	22.8	0.7
Kajiado.....	1.3	23.7	1.3	33.2	19.9	0.0
Kericho.....	2.6	1.0	0.0	6.4	67.0	0.4
Bomet.....	0.2	0.4	0.4	4.0	21.8	0.0
Kakamega.....	1.4	0.5	0.2	14.1	13.4	0.6
Vihiga.....	0.0	0.4	0.3	16.5	24.6	0.0
Bungoma.....	1.4	0.9	0.9	4.2	29.1	0.0
Busia.....	0.0	0.5	0.2	12.4	48.6	0.0
Siaya.....	0.0	0.4	0.0	5.9	37.3	0.0
Kisumu.....	5.0	2.2	0.7	15.9	73.4	0.0
Homa Bay.....	0.0	0.7	1.7	0.0	21.7	0.0
Migori.....	0.2	0.2	0.1	10.0	23.3	0.0
Kisii.....	0.3	1.3	2.6	20.0	14.6	0.0
Nyamira.....	0.0	0.6	0.5	9.5	28.2	0.0
Nairobi City.....	60.9	6.6	1.1	2.8	21.5	0.1

Annex Table 3D: Percentage Distribution of Individuals by Type of Main Toilet Facility and Residence /County... Cont'd

Residence/ County	Unimproved Sanitation Services						Other	Not Stated	Number of Individuals ('000)
	Flush to Somewhere else	Flush to Unknown place / Not Sure/ Don't Know where	Pit Latrine without Slab/ Open Pit	Bucket Toilet	Hanging Toilet/ Hanging Latrine	No facility/ Bush/Field			
National.....	0.1	0.2	29.2	0.3	0.1	10.6	0.1	0.2	45,371
Rural.....	0.0	0.0	38.7	0.0	0.1	15.6	0.1	0.1	29,127
Urban.....	0.3	0.5	12.2	0.7	0.0	1.7	0.0	0.4	16,245
<b>County</b>									
Mombasa.....	0.0	0.0	13.2	0.0	0.0	0.4	0.5	0.2	1,185
Kwale.....	0.0	0.0	22.6	0.0	0.0	47.5	0.2	0.0	820
Kilifi.....	0.0	0.0	16.9	0.0	0.0	16.9	0.2	1.8	1,400
Tana River.....	0.0	0.0	5.1	0.0	0.0	35.2	0.1	0.1	304
Lamu.....	0.0	0.0	17.8	0.0	0.0	10.0	0.0	0.0	128
Taita / Taveta.....	0.0	0.0	0.3	0.0	0.0	0.9	0.1	0.0	358
Garissa.....	0.2	0.0	11.0	0.0	0.0	46.4	0.0	0.1	432
Wajir.....	0.1	0.0	29.9	14.8	0.2	46.5	0.8	0.2	459
Mandera.....	0.0	0.0	9.6	0.0	0.0	46.3	0.0	0.0	711
Marsabit.....	0.0	0.0	21.9	0.0	0.0	52.2	0.0	0.0	316
Isiolo.....	0.0	0.0	8.3	0.0	1.1	24.8	0.2	0.0	156
Meru.....	0.0	0.0	56.8	0.0	0.9	0.1	0.0	0.0	1,471
Tharaka-Nithi.....	0.0	0.0	3.0	0.0	0.0	0.3	0.5	0.1	396
Embu.....	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.1	560
Kitui.....	0.0	0.0	34.1	0.0	0.0	15.2	0.0	0.1	1,098
Machakos.....	0.1	0.2	19.7	0.0	0.0	1.1	0.1	0.0	1,191
Makueni.....	0.0	0.0	12.7	0.0	0.0	0.9	0.0	0.2	959
Nyandarua.....	0.2	0.0	17.1	0.0	0.0	0.3	0.0	0.0	686
Nyeri.....	0.2	0.1	48.2	0.0	0.0	0.0	0.0	0.0	798
Kirinyaga.....	0.6	0.0	13.5	0.0	0.0	0.1	0.0	0.0	608
Murang'a.....	0.0	0.0	34.8	0.0	0.0	0.5	0.1	0.0	1,085
Kiambu.....	0.0	0.2	11.0	0.0	0.0	0.2	0.0	0.0	1,868
Turkana.....	1.1	1.1	4.3	0.0	0.0	64.9	0.0	0.0	1,084
West Pokot.....	0.0	0.0	21.7	0.0	0.5	51.2	0.0	0.1	649
Samburu.....	0.0	0.0	2.7	0.0	0.0	73.6	0.0	0.0	284
Trans Nzoia.....	0.2	0.6	66.2	0.0	0.0	0.9	0.0	0.0	1,038
Uasin Gishu.....	0.0	0.0	18.8	0.0	0.0	1.2	0.0	0.0	1,133
Elgeyo / Marakwet...	0.0	0.0	17.5	0.0	0.0	11.5	0.1	0.7	469
Nandi.....	0.0	0.0	27.4	0.0	0.2	2.2	0.1	0.0	954
Baringo.....	0.0	0.0	0.1	0.0	0.0	30.9	0.1	0.0	704
Laikipia.....	0.0	2.7	42.3	0.0	0.3	21.1	0.0	0.2	507
Nakuru.....	0.0	0.0	42.0	0.0	0.0	0.5	0.0	0.4	2,031
Narok.....	0.0	0.0	29.4	0.0	0.0	39.8	0.0	0.7	1,078
Kajiado.....	0.0	0.0	2.8	0.0	0.0	17.4	0.0	0.5	871
Kericho.....	0.0	0.0	18.3	0.0	0.0	4.4	0.0	0.0	945
Bomet.....	0.0	0.0	67.6	0.0	0.2	5.4	0.0	0.2	916
Kakamega.....	0.2	0.0	69.1	0.0	0.4	0.1	0.0	0.0	1,876
Vihiga.....	0.0	0.0	58.1	0.0	0.0	0.1	0.0	0.0	627
Bungoma.....	0.0	0.0	58.6	0.0	0.0	4.4	0.1	0.4	1,553
Busia.....	0.0	0.0	37.0	0.0	0.0	1.2	0.0	0.0	840
Siaya.....	0.0	0.0	50.7	0.0	0.0	4.0	1.6	0.1	985
Kisumu.....	0.0	0.0	0.6	0.0	0.0	2.2	0.0	0.0	1,132
Homa Bay.....	0.0	0.0	59.9	0.0	0.0	15.6	0.0	0.4	1,072
Migori.....	0.1	0.0	44.2	0.0	0.0	21.9	0.0	0.0	1,126
Kisii.....	0.0	0.1	60.8	0.0	0.0	0.0	0.0	0.1	1,347
Nyamira.....	4.0	0.2	59.5	0.0	0.0	0.1	0.0	0.2	699
Nairobi City.....	0.9	2.0	3.2	1.2	0.0	0.0	0.0	0.4	4,463

# CHAPTER 4

## 4. EDUCATION

### 4.1 Introduction

Education is a fundamental human right and is enshrined in the Constitution of Kenya in recognition of the important role it plays in uplifting the welfare of the citizens. It enhances employment opportunities, promotes gender equality and enables realization of social development such as improved health and survival rates of children. Education and training play a critical role in socio-economic development which is key towards achievement of Vision 2030 and the Sustainable Development Goals (SDGs). Globalization and sustainable economic development call for investment in quality education to equip people with competencies and skills for enhanced productivity and competitiveness.

The Kenya Integrated Household Budget Survey (KIHBS) 2015/16 collected data on formal education for all individuals aged three years and above. Formal education is categorized into pre-primary, primary, secondary, middle level college (including vocational training) and university. Information on informal education was collected for persons attending *Madrassa/Duksi*. Some of the education indicators discussed in this chapter include; school attendance status, highest grade reached or completed and certification, type of school attended, reasons for not attending school, availability of school feeding programme, Gross Attendance Ratio (GAR) and Net Attendance Ratio (NAR); and literacy. Literacy was assessed by asking respondents their ability to read or write in at least one language. However, no writing or reading test was administered to respondents.

### 4.2 School Attendance

The distribution of the population aged three years and above by status of school attendance and by residence and county is presented in Table 4.1. Overall, 89.4 per cent of persons aged three years and above were reported to have ever attended school. The proportion of population in urban areas that had ever attended school was 94.3 per cent while that in rural areas was 86.6 per cent. Nairobi City and Kisumu Counties registered the highest proportion that had ever attended school at 97.5 per cent each, while low proportions of school attendance were reported in Garissa, Marsabit, Mandera, Wajir, Turkana and Samburu.

Table 4.2 presents the distribution of the population aged 3-24 years by status of school attendance and sex. There were no notable disparities between the proportion of males and females who had ever attended school. For those of pre-primary school going age (3-5 years), 67.6 per cent of males and 70.9 per cent of females reported to have attended school. The proportion of primary school going age (6-13 years) population, secondary school going age (14-17 years) population and university/college going age (18-24 years) population reported to have attended school was above 95.0 per cent regardless of sex.

Table 4.1: Percentage Distribution of Population 3 years and Above by School Attendance Status, Residence and County

Residence/ County	Ever Attended	Never Attended	Not Stated	Number of Individuals ('000)
National.....	89.4	10.4	0.3	41,751
<b>Rural.....</b>	<b>86.6</b>	<b>13.1</b>	<b>0.3</b>	<b>26,795</b>
<b>Urban.....</b>	<b>94.3</b>	<b>5.4</b>	<b>0.3</b>	<b>14,956</b>
<b>County</b>				
Mombasa.....	95.1	4.9	0.1	1,095
Kwale.....	82.3	17.6	0.1	736
Kilifi.....	87.5	11.8	0.7	1,251
Tana River.....	77.9	21.7	0.5	276
Lamu.....	89.1	10.8	0.1	117
Taita / Taveta.....	95.1	4.9	0.0	333
Garissa.....	37.6	62.2	0.1	398
Wajir.....	48.6	50.6	0.8	405
Mandera.....	47.8	51.9	0.3	648
Marsabit.....	46.1	53.7	0.2	285
Isiolo.....	67.3	32.5	0.2	142
Meru.....	91.4	8.3	0.3	1,372
Tharaka-Nithi.....	91.7	8.3	0.0	369
Embu.....	91.8	7.8	0.4	525
Kitui.....	88.5	11.3	0.3	1,013
Machakos.....	94.7	5.1	0.2	1,098
Makueni.....	94.2	5.8	0.1	892
Nyandarua.....	94.2	5.0	0.7	645
Nyeri.....	96.9	2.9	0.2	752
Kirinyaga.....	95.3	4.4	0.3	571
Murang'a.....	93.5	6.5	0.0	1,016
Kiambu.....	96.3	3.7	0.0	1,748
Turkana.....	51.7	48.0	0.3	968
West Pokot.....	74.2	25.5	0.3	577
Samburu.....	55.0	44.7	0.3	252
Trans Nzoia.....	91.9	8.1	0.0	961
Uasin Gishu.....	94.2	5.6	0.2	1,039
Elgeyo / Marakwet...	90.9	9.0	0.1	427
Nandi.....	95.5	4.1	0.3	879
Baringo.....	89.3	10.7	0.0	644
Laikipia.....	79.6	20.2	0.1	466
Nakuru.....	94.0	5.9	0.1	1,870
Narok.....	80.5	19.2	0.3	965
Kajiado.....	86.8	12.8	0.4	798
Kericho.....	94.2	5.8	0.1	880
Bomet.....	93.3	6.3	0.4	846
Kakamega.....	92.0	7.7	0.3	1,727
Vihiga.....	94.6	5.3	0.1	587
Bungoma.....	93.3	5.8	0.9	1,419
Busia.....	89.9	10.1	0.0	774
Siaya.....	93.3	6.5	0.2	907
Kisumu.....	97.5	2.3	0.2	1,049
Homa Bay.....	91.6	8.1	0.3	970
Migori.....	94.5	5.3	0.3	1,037
Kisii.....	95.8	4.2	0.1	1,260
Nyamira.....	94.7	5.3	0.1	656
Nairobi City.....	97.5	1.8	0.7	4,107

**Table 4.2: Percentage Distribution of Population, 3-24 years by School Attendance Status, Age group and Sex**

Residence/Age Group	Ever Attended		Never Attended		Not Stated		Number of Individuals (000')	
	Male	Female	Male	Female	Male	Female	Male	Female
National.....	92.0	91.8	7.6	7.8	0.4	0.4	12,066	12,077
Rural.....	90.6	90.0	9.0	9.6	0.4	0.4	8,183	8,050
Urban.....	94.8	95.4	4.7	4.1	0.5	0.5	3,882	4,027
<b>Age-Group (Years)</b>								
3-5	67.6	70.9	30.4	26.8	2.0	2.3	1,910	1,895
6-13	95.6	95.0	4.3	4.8	0.0	0.0	5,099	5,104
14-17	97.6	96.9	2.3	3.0	0.0	0.0	2,200	2,080
18-24	97.5	95.9	2.4	4.1	0.1	0.0	2,856	2,998

School attendance status for persons aged three years and above is presented in Table 4.3. Nationally, 49.7 per cent of the population were attending school at the time of the survey. The proportion of persons living in urban areas and attending school was 41.6 per cent compared to 54.7 per cent of those in rural areas.

The distribution of population that was attending school by broad age cohorts (based on the official school going ages for pre-primary, primary, secondary and tertiary levels) is presented in Table 4.4. Nationally, 99.2 per cent of children in the 3-5 years age cohort were attending school. The proportion of children aged 6-13 years and 14-17 years attending school was 99.1 per cent and 90 per cent, respectively. Mombasa County reported the lowest proportion (81.7%) of children aged 14-17 years attending school while Bungoma County reported the highest proportion (98.5%). Overall, the proportion of persons in the official university/college going age attending school was 38.2 per cent. Garissa County had the highest proportion of population aged 15-24 years attending university/college whereas Mombasa County (27.9%) had the lowest proportion.

The distribution of population aged 3 years and above attending school by level, sex, age group and residence is presented in Table 4.5. The majority (58.9%) of the target population were attending primary school followed by those attending pre-primary school level (19.3%). The proportion attending university accounted for 3.3 per cent of all persons attending school. The lowest proportion of population currently attending school were registered at Madrasa/Duksu and post primary vocational levels.

**Table 4.3: Percentage Distribution of Population 3 Years and Above who have ever attended school by Current School Attendance Status, Residence and County**

Residence / County	Currently Attending	Not Currently Attending	Not Stated	Number of Individuals (000')
<b>National.....</b>	<b>49.7</b>	<b>50.2</b>	<b>0.0</b>	<b>37,307</b>
<b>Rural.....</b>	<b>54.7</b>	<b>45.3</b>	<b>0.0</b>	<b>23,205</b>
<b>Urban.....</b>	<b>41.6</b>	<b>58.4</b>	<b>0.0</b>	<b>14,101</b>
<b>County</b>				
Mombasa.....	35.8	64.2	0.0	1,041
Kwale.....	54.0	46.0	0.0	606
Kilifi.....	54.3	45.7	0.0	1,094
Tana River.....	58.2	41.8	0.0	215
Lamu.....	48.8	51.1	0.0	105
Taita / Taveta.....	44.4	55.6	0.0	316
Garissa.....	75.6	24.4	0.0	150
Wajir.....	77.8	22.2	0.0	197
Mandera.....	81.1	18.9	0.0	310
Marsabit.....	70.7	29.3	0.0	131
Isiolo.....	61.4	38.3	0.2	96
Meru.....	44.1	55.9	0.0	1,254
Tharaka-Nithi.....	47.5	52.5	0.0	338
Embu.....	42.3	57.7	0.0	482
Kitui.....	56.4	43.6	0.0	896
Machakos.....	41.3	58.7	0.0	1,040
Makueni.....	49.6	50.4	0.0	840
Nyandarua.....	48.4	51.6	0.0	608
Nyeri.....	38.8	61.2	0.0	728
Kirinyaga.....	39.1	60.9	0.0	545
Murang'a.....	42.3	57.7	0.0	950
Kiambu.....	39.4	60.6	0.0	1,684
Turkana.....	69.1	30.9	0.0	500
West Pokot.....	66.7	33.3	0.0	428
Samburu.....	72.7	27.1	0.2	138
Trans Nzoia.....	52.9	47.1	0.0	883
Uasin Gishu.....	51.4	48.6	0.0	980
Elgeyo / Marakwet..	55.2	44.8	0.0	388
Nandi.....	51.8	48.2	0.0	840
Baringo.....	54.9	45.1	0.0	576
Laikipia.....	51.8	48.2	0.0	371
Nakuru.....	48.3	51.7	0.0	1,758
Narok.....	59.6	40.4	0.0	777
Kajiado.....	46.8	53.2	0.0	693
Kericho.....	50.3	49.7	0.0	829
Bomet.....	56.3	43.7	0.0	789
Kakamega.....	55.9	44.1	0.0	1,589
Vihiga.....	50.3	49.7	0.0	555
Bungoma.....	57.2	42.8	0.0	1,324
Busia.....	57.4	42.6	0.0	696
Siaya.....	51.8	48.2	0.0	846
Kisumu.....	50.2	49.8	0.0	1,024
Homa Bay.....	59.0	41.0	0.0	888
Migori.....	60.6	39.4	0.0	980
Kisii.....	54.6	45.4	0.0	1,206
Nyamira.....	53.4	46.6	0.0	621
Nairobi City.....	35.2	64.6	0.2	4,004

Table 4.4: Percentage Distribution of Population 3-24 years by Current School Attendance Status, Residence and County

Residence/ County	3-5 Years			6-13 Years		
	Currently Attending	Not Currently Attending	Number of Individuals ('000)	Currently Attending	Not Currently Attending	Number of Individuals ('000)
<b>National.....</b>	<b>99.2</b>	<b>0.8</b>	<b>2,635</b>	<b>99.1</b>	<b>0.9</b>	<b>9,724</b>
<b>Rural.....</b>	99.3	0.7	1,670	99.1	0.9	6,870
<b>Urban.....</b>	99.1	0.9	965	99.0	1.0	2,854
<b>County</b>						
Mombasa.....	98.7	1.3	56	99.7	0.3	210
Kwale.....	100.0	0.0	42	97.5	2.5	195
Kilifi.....	96.5	3.5	92	98.4	1.6	315
Tana River.....	100.0	0.0	17	96.9	3.1	72
Lamu.....	96.4	3.6	7	97.1	2.9	30
Taita / Taveta.....	100.0	0.0	21	99.9	0.1	74
Garissa.....	100.0	0.0	4	98.6	1.4	59
Wajir.....	100.0	0.0	10	98.2	1.8	95
Mandera.....	100.0	0.0	11	99.5	0.5	153
Marsabit.....	100.0	0.0	11	97.8	2.2	55
Isiolo.....	98.7	1.3	9	99.0	1.0	32
Meru.....	98.7	1.3	69	96.9	3.1	301
Tharaka-Nithi.....	100.0	0.0	18	99.1	0.9	83
Embu.....	100.0	0.0	22	100.0	0.0	112
Kitui.....	99.2	0.8	60	100.0	0.0	275
Machakos.....	99.0	1.0	46	99.4	0.6	209
Makueni.....	99.4	0.6	48	99.9	0.1	210
Nyandarua.....	97.6	2.4	36	99.3	0.7	162
Nyeri.....	100.0	0.0	41	100.0	0.0	133
Kirinyaga.....	100.0	0.0	31	98.3	1.7	119
Murang'a.....	98.5	1.5	56	98.5	1.5	216
Kiambu.....	100.0	0.0	101	100.0	0.0	316
Turkana.....	98.6	1.4	59	96.1	3.9	187
West Pokot.....	97.0	3.0	40	96.9	3.1	147
Samburu.....	98.7	1.3	20	100.0	0.0	57
Trans Nzoia.....	100.0	0.0	56	99.6	0.4	240
Uasin Gishu.....	100.0	0.0	74	99.8	0.2	240
Elgeyo / Marakwet...	97.8	2.2	31	99.9	0.1	104
Nandi.....	99.3	0.7	65	99.8	0.2	207
Baringo.....	100.0	0.0	47	100.0	0.0	159
Laikipia.....	97.9	2.1	18	99.6	0.4	110
Nakuru.....	99.6	0.4	126	99.8	0.2	494
Narok.....	100.0	0.0	66	99.6	0.4	267
Kajiado.....	100.0	0.0	48	99.0	1.0	170
Kericho.....	98.5	1.5	50	99.8	0.2	227
Bomet.....	99.8	0.2	58	100.0	0.0	249
Kakamega.....	98.5	1.5	120	99.6	0.4	449
Vihiga.....	100.0	0.0	32	98.7	1.3	158
Bungoma.....	99.6	0.4	97	99.7	0.3	395
Busia.....	99.0	1.0	47	99.6	0.4	216
Siaya.....	99.5	0.5	63	99.2	0.8	238
Kisumu.....	100.0	0.0	87	98.2	1.8	271
Homa Bay.....	99.7	0.3	82	99.6	0.4	290
Migori.....	100.0	0.0	77	100.0	0.0	302
Kisii.....	99.2	0.8	107	99.7	0.3	328
Nyamira.....	100.0	0.0	49	99.8	0.2	166
Nairobi City.....	98.6	1.4	305	97.3	2.7	629

**Table 4.4: Percentage Distribution of Population 3-24 years by Current School Attendance Status, Residence and County... (Cont'd)**

Residency/ County	14-17 Years			18-24 Years		
	Currently Attending	Not Currently Attending	Number of Individuals('000)	Currently Attending	Not Currently Attending	Number of Individuals('000)
<b>National.....</b>	<b>90.2</b>	<b>9.8</b>	<b>4,163</b>	<b>38.2</b>	<b>61.8</b>	<b>5,659</b>
<b>Rural.....</b>	<b>91.1</b>	<b>8.9</b>	<b>2,969</b>	<b>43.0</b>	<b>57.0</b>	<b>3,149</b>
<b>Urban.....</b>	<b>88.0</b>	<b>12.0</b>	<b>1,194</b>	<b>32.3</b>	<b>67.7</b>	<b>2,510</b>
<b>County</b>						
Mombasa.....	81.7	18.3	59	27.9	72.1	184
Kwale.....	84.6	15.4	78	33.4	66.6	78
Kilifi.....	90.2	9.8	140	32.0	68.0	179
Tana River.....	85.6	14.4	28	40.5	59.5	33
Lamu.....	84.7	15.3	11	37.2	62.8	13
Taita / Taveta.....	90.5	9.5	33	33.1	66.9	44
Garissa.....	92.6	7.4	35	65.4	34.6	28
Wajir.....	90.9	9.1	38	52.8	47.2	23
Mandera.....	92.6	7.4	63	59.5	40.5	46
Marsabit.....	88.7	11.3	20	43.4	56.6	21
Isiolo.....	87.0	13.0	13	41.2	58.8	14
Meru.....	84.0	16.0	136	38.1	61.9	189
Tharaka-Nithi.....	92.1	7.9	39	47.0	53.0	48
Embu.....	91.9	8.1	49	36.8	63.2	61
Kitui.....	90.6	9.4	114	49.1	50.9	124
Machakos.....	94.3	5.7	115	37.4	62.6	175
Makueni.....	91.5	8.5	112	43.5	56.5	120
Nyandarua.....	90.2	9.8	76	37.9	62.1	72
Nyeri.....	95.1	4.9	70	54.3	45.7	75
Kirinyaga.....	90.4	9.6	50	29.5	70.5	62
Murang'a.....	82.9	17.1	100	37.7	62.3	105
Kiambu.....	85.7	14.3	168	34.5	65.5	233
Turkana.....	87.6	12.4	64	49.6	50.4	84
West Pokot.....	94.6	5.4	64	50.4	49.6	77
Samburu.....	92.8	7.2	18	41.6	58.4	17
Trans Nzoia.....	87.7	12.3	110	44.1	55.9	149
Uasin Gishu.....	92.1	7.9	108	46.0	54.0	160
Elgeyo / Marakwet...	95.9	4.1	45	46.0	54.0	71
Nandi.....	89.1	10.9	102	47.6	52.4	133
Baringo.....	89.2	10.8	73	42.9	57.1	87
Laikipia.....	91.2	8.8	44	43.6	56.4	52
Nakuru.....	86.5	13.5	165	32.3	67.7	239
Narok.....	87.4	12.6	94	35.0	65.0	120
Kajiado.....	88.5	11.5	70	30.5	69.5	108
Kericho.....	95.5	4.5	89	35.9	64.1	120
Bomet.....	93.1	6.9	90	42.4	57.6	110
Kakamega.....	92.7	7.3	228	44.6	55.4	225
Vihiga.....	90.3	9.7	64	46.5	53.5	68
Bungoma.....	98.5	1.5	186	37.2	62.8	181
Busia.....	90.5	9.5	99	40.4	59.6	112
Siaya.....	88.1	11.9	113	34.5	65.5	109
Kisumu.....	88.3	11.7	100	37.5	62.5	161
Homa Bay.....	89.7	10.3	112	42.5	57.5	119
Migori.....	92.6	7.4	149	43.2	56.8	154
Kisii.....	94.6	5.4	138	45.6	54.4	181
Nyamira.....	93.9	6.1	74	50.0	50.0	82
Nairobi City.....	86.7	13.3	219	26.4	73.6	813

**Table 4.5: Percentage Distribution of Population 3 Years and Above by Current School Attendance Status, Level, Age Group and Residence**

Residence/ Age Group	Pre-primary	Primary	Post primary vocational	Secondary	College (Middle Level)	University*	Madrassa/ Duksi	Other	Number of Individuals ('000)
National.....	19.3	58.9	0.5	15.3	2.6	3.3	0.2	0.0	18,558
Rural.....	19.2	62.0	0.5	14.9	1.7	1.5	0.2	0.0	12,695
Urban.....	19.5	52.3	0.5	16.1	4.3	7.0	0.2	0.0	5,862
<b>Sex</b>									
Male.....	19.1	58.5	0.5	15.6	2.2	3.9	0.2	0.0	9,498
Female.....	19.5	59.4	0.4	15.0	3.0	2.6	0.2	0.0	9,060
<b>Age Group (Years)</b>									
3 - 5.....	92.4	7.3	0.0	0.0	0.0	0.0	0.3	0.0	2,613
6 - 9.....	22.6	77.1	0.0	0.0	0.0	0.0	0.3	0.0	4,907
10 - 14.....	0.9	94.9	0.0	4.1	0.1	0.0	0.1	0.0	5,704
15 - 19.....	0.1	39.0	1.4	55.9	1.6	2.0	0.0	0.0	3,823
20 - 24.....	0.0	4.9	1.9	38.5	24.3	30.2	0.1	0.2	1,121
25 +.....	0.0	2.5	5.1	12.9	42.1	36.5	0.1	0.8	389

\*Includes both undergraduate and postgraduate

### 4.3 Gross Attendance Ratio

Gross Attendance Ratio (GAR) is the total number of persons attending school regardless of their age, expressed as a percentage of the official school age population for a specific level of education. Table 4.6 presents the GAR by sex, schooling level and county. Overall GAR for primary school was 107.2 per cent while that of urban and rural areas was 104.7 per cent and 108.2 per cent, respectively. Garissa, Mandera and Wajir Counties recorded low pre-primary school GARs of 12.3 per cent, 33.4 per cent and 37.1 per cent, respectively.

The GAR for primary school was higher for males (109.0%) compared to that for females (105.4 %). Generally, rural areas registered higher pre-primary and primary school GARs compared to urban areas. At county level, Makueni had the highest primary school GAR of 131 per cent for females, followed by Embu at 125.6 per cent. On the other hand, Nandi and, Elgeyo/ Marakwet Counties recorded high primary school GARs for males at 129.5 per cent and 128.2 per cent, respectively.

Table 4.6: Gross Attendance Ratio by Level, Residence and County

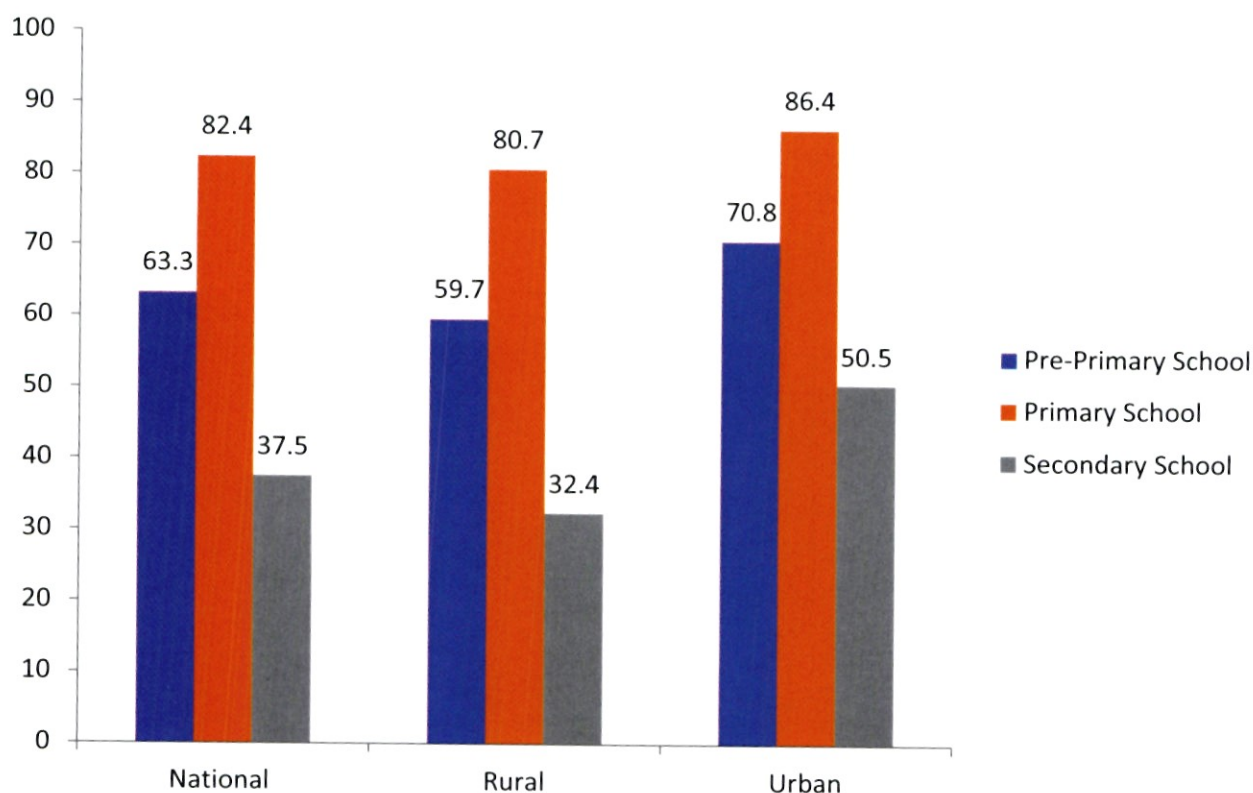
Residence/ County	Pre Primary School			Primary School			Secondary School		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
National.....	95.4	93.5	94.4	109.0	105.4	107.2	67.2	65.2	66.2
Rural.....	97.2	92.9	95.1	109.8	106.5	108.2	62.9	60.2	61.6
Urban.....	91.6	94.8	93.1	106.9	102.6	104.7	78.8	77.1	77.9
<b>County</b>									
Mombasa.....	104.9	128.9	116.6	100.6	91.6	95.3	92.5	97.7	94.9
Kwale.....	149.5	132.5	140.9	102.2	92.2	97.5	33.0	37.8	34.9
Kilifi.....	134.2	121.4	127.1	110.8	101.5	105.9	45.5	43.0	44.3
Tana River.....	111.8	89.1	98.6	93.3	88.7	91.0	62.3	66.8	63.9
Lamu.....	103.1	134.2	117.3	102.8	90.5	96.3	65.9	61.5	63.5
Taita / Taveta.....	107.0	124.2	114.8	113.5	105.4	109.4	66.9	80.5	74.3
Garissa.....	12.5	12.0	12.3	64.8	52.9	59.1	52.4	35.6	43.9
Wajir.....	45.5	27.6	37.1	82.0	68.8	75.8	43.0	42.4	42.8
Mandera.....	31.4	35.6	33.4	88.4	69.1	78.8	69.3	37.4	56.7
Marsabit.....	57.7	47.1	52.2	66.7	72.5	69.2	39.9	39.1	39.5
Isiolo.....	78.5	92.9	85.2	94.4	90.1	92.3	58.6	43.2	50.9
Meru.....	80.0	117.8	91.8	115.4	111.6	113.5	70.7	59.5	65.7
Tharaka-Nithi.....	89.9	88.8	89.4	126.2	117.9	121.8	89.7	55.9	72.4
Embu.....	76.6	60.4	69.5	113.9	125.6	119.0	67.8	64.3	66.0
Kitui.....	114.5	91.1	103.1	114.0	116.4	115.2	79.8	63.3	72.2
Machakos.....	67.0	76.4	71.0	127.4	116.0	121.1	74.3	88.0	81.1
Makueni.....	71.4	72.3	71.9	123.7	131.0	127.2	75.8	67.7	71.7
Nyandarua.....	110.2	81.4	95.4	107.8	112.6	110.1	81.7	81.1	81.4
Nyeri.....	85.9	74.6	80.1	118.0	120.1	119.0	97.7	85.0	91.8
Kirinyaga.....	84.4	79.1	82.0	113.8	106.9	110.0	70.4	98.9	85.1
Murang'a.....	71.0	61.8	66.4	108.2	116.8	112.5	75.1	77.8	76.4
Kiambu.....	106.2	74.8	92.9	105.4	113.5	109.2	76.2	74.5	75.3
Turkana.....	78.5	83.9	81.4	82.7	58.2	70.4	40.8	23.7	32.9
West Pokot.....	91.9	100.3	96.3	118.1	91.8	103.7	48.5	59.7	53.9
Samburu.....	87.2	107.5	96.4	86.0	65.4	75.3	33.5	30.7	32.1
Trans Nzoia.....	77.8	89.8	84.1	120.9	112.5	116.7	67.1	58.4	63.4
Uasin Gishu.....	102.1	105.7	103.7	113.2	115.8	114.5	74.8	77.5	76.3
Elgeyo / Marakwet..	92.0	104.9	97.6	128.2	118.3	122.6	65.1	66.0	65.6
Nandi.....	123.8	112.1	117.6	129.5	112.5	121.2	45.2	83.7	64.0
Baringo.....	107.6	96.8	102.0	124.8	108.5	115.8	52.9	68.4	60.2
Laikipia.....	70.1	115.6	89.0	103.5	84.8	94.2	73.1	65.7	69.3
Nakuru.....	87.7	113.2	99.6	109.7	105.3	107.3	86.7	59.0	71.1
Narok.....	99.3	81.6	90.6	99.0	108.7	104.0	46.5	29.7	37.6
Kajiado.....	88.7	107.3	96.6	103.5	101.0	102.4	63.8	61.9	62.9
Kericho.....	88.2	92.9	90.4	118.7	117.1	117.9	71.4	63.6	67.6
Bomet.....	83.9	84.9	84.4	119.4	115.2	117.4	73.5	61.3	68.0
Kakamega.....	101.3	80.0	89.4	122.9	115.2	119.0	52.8	76.8	63.1
Vihiga.....	85.0	97.1	90.9	114.0	111.5	112.9	77.2	73.2	75.3
Bungoma.....	97.7	105.4	101.5	116.8	109.8	113.2	67.0	64.9	66.0
Busia.....	109.7	118.8	114.8	124.3	110.7	116.7	53.9	53.5	53.7
Siaya.....	129.7	102.8	114.4	108.4	113.3	110.7	61.9	50.5	56.0
Kisumu.....	128.6	95.1	111.9	109.1	108.8	109.0	61.6	75.3	67.3
Homa Bay.....	118.7	110.9	115.1	103.9	110.1	107.0	68.8	49.3	58.2
Migori.....	169.5	127.4	144.7	106.6	114.5	110.6	71.5	49.5	60.3
Kisii.....	126.9	96.9	110.8	106.0	114.3	109.8	90.3	80.1	85.7
Nyamira.....	120.7	117.3	118.9	112.2	105.4	108.7	92.9	73.4	83.5
Nairobi City.....	74.5	86.4	80.8	100.5	102.2	101.3	81.3	94.0	88.4

#### 4.4 Net Attendance Ratio

Net Attendance Ratio (NAR) is defined as the total number of persons in the official school age group<sup>2</sup> attending a specific level to the total population in that age group. As shown in Figure 4.1 and Table 4.7, national NAR for pre-primary, primary and secondary school was 63.5, 82.4 and 37.5 per cent, respectively.

The results show that urban areas had higher NARs for all levels compared to rural areas. Most counties had high primary school NARs, except ASAL counties which recorded NARs way below the national average. Garissa County had the lowest NAR for pre-primary and primary school at 4.4 per cent and 37.8 per cent, respectively. Turkana recorded the lowest NAR for secondary school at 9.3 per cent. Nationally, the NAR for pre-primary, primary and secondary school was higher among females than males.

**Figure 4.1: Net Attendance Ratio by Level**



<sup>2</sup> In Kenya, the official school age groups are 3-5 years for pre-primary, 6-13 years for primary school and 14-17 years for secondary school level.

Table 4.7: Net Attendance Ratio by Level and Residence/ County

Residence/ County	Pre-Primary School			Primary School			Secondary School		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
National.....	62.5	65.0	63.5	81.7	83.0	82.4	35.4	39.8	37.5
Rural.....	59.0	60.5	59.9	80.0	81.4	80.7	30.6	34.5	32.4
Urban.....	68.3	73.3	70.8	85.9	86.9	86.4	48.3	52.6	50.5
<b>County</b>									
Mombasa.....	73.5	81.0	77.6	85.3	87.0	86.3	57.7	55.9	56.8
Kwale.....	53.3	65.2	60.2	65.9	68.2	67.0	15.4	15.7	15.5
Kilifi.....	61.1	66.0	64.7	69.3	76.1	72.9	22.7	17.7	20.4
Tana River.....	56.0	53.3	54.6	68.8	69.4	69.1	33.9	15.2	27.0
Lamu.....	64.1	62.0	62.8	79.3	71.4	75.1	22.6	36.4	30.1
Taita / Taveta.....	76.0	81.3	78.4	88.5	85.0	86.7	34.2	51.6	43.6
Garissa.....	1.9	6.8	4.4	41.8	33.5	37.8	15.3	19.0	17.2
Wajir.....	10.5	4.9	8.5	53.0	53.2	53.1	16.9	25.3	20.3
Mandera.....	12.0	8.5	10.5	62.0	54.5	58.2	31.8	17.0	25.9
Marsabit.....	29.7	32.1	30.4	50.8	56.3	53.2	24.0	23.4	23.7
Isiolo.....	53.7	56.2	54.3	74.7	69.4	72.2	33.0	28.7	30.9
Meru.....	65.3	71.2	66.8	86.9	88.0	87.4	32.6	33.0	32.8
Tharaka-Nithi.....	66.1	52.4	60.2	91.0	89.1	90.0	29.2	36.6	33.0
Embu.....	65.5	45.0	57.0	93.6	94.9	94.2	47.7	40.6	44.0
Kitui.....	70.9	60.2	66.0	85.0	90.9	87.9	30.3	32.7	31.4
Machakos.....	58.6	64.9	61.3	95.3	95.3	95.3	41.3	58.2	49.6
Makueni.....	51.5	64.4	58.3	92.2	97.1	94.6	37.0	41.7	39.4
Nyandarua.....	73.9	67.6	70.6	88.4	91.3	89.8	46.6	52.0	49.1
Nyeri.....	69.4	69.6	69.5	93.4	98.9	95.9	55.7	64.8	59.9
Kirinyaga.....	82.1	61.3	71.6	95.3	94.0	94.6	55.3	68.4	62.1
Murang'a.....	64.4	51.9	58.2	94.0	92.8	93.4	52.1	54.8	53.4
Kiambu.....	79.2	63.5	72.5	88.6	94.4	91.3	62.5	58.7	60.5
Turkana.....	46.1	45.6	45.4	53.7	41.3	47.5	14.2	3.6	9.3
West Pokot.....	55.2	58.8	54.7	70.7	65.5	67.9	16.7	26.6	21.5
Samburu.....	57.7	59.2	58.4	65.7	48.3	56.6	13.1	20.3	16.5
Trans Nzoia.....	47.8	56.4	52.9	84.8	85.4	85.1	31.9	25.3	29.1
Uasin Gishu.....	72.2	81.2	76.8	85.7	88.7	87.1	33.3	44.9	39.6
Elgeyo / Marakwet...	67.3	65.8	71.5	85.6	89.8	88.0	23.2	31.3	27.2
Nandi.....	82.9	76.9	79.6	84.8	84.3	84.5	14.6	39.7	26.9
Baringo.....	76.7	66.4	70.5	85.9	80.5	82.9	20.0	34.5	26.9
Laikipia.....	45.2	51.4	48.3	79.3	72.4	75.9	39.6	45.5	42.6
Nakuru.....	69.6	83.1	75.9	92.6	90.2	91.3	39.9	42.1	41.2
Narok.....	44.5	48.9	47.7	71.0	81.0	76.1	20.7	21.2	20.9
Kajiado.....	57.9	65.8	61.3	82.1	78.7	80.6	44.2	47.1	45.6
Kericho.....	65.7	70.4	67.9	91.9	92.5	92.2	38.1	38.1	38.1
Bomet.....	56.3	60.9	59.3	90.6	89.5	90.1	30.7	30.4	30.5
Kakamega.....	58.6	66.1	62.8	83.5	90.5	87.1	29.6	43.4	35.5
Vihiga.....	68.0	54.2	61.4	92.9	85.9	89.7	43.2	41.4	42.3
Bungoma.....	58.3	61.5	59.5	80.8	83.2	82.1	37.5	43.8	40.5
Busia.....	61.9	59.6	60.5	83.0	78.1	80.3	23.9	21.9	22.9
Siaya.....	68.5	72.0	70.2	79.9	83.3	81.5	33.5	29.9	31.6
Kisumu.....	81.6	83.4	83.5	84.7	92.3	88.1	32.2	46.4	38.1
Homa Bay.....	67.4	67.4	67.4	76.5	82.6	79.5	30.1	29.4	29.7
Migori.....	72.7	77.8	76.6	74.2	80.3	77.3	34.6	30.9	32.7
Kisii.....	78.7	81.7	80.1	84.0	92.6	87.9	41.6	53.1	46.9
Nyamira.....	80.6	84.9	83.0	86.7	87.3	87.0	51.0	47.3	49.2
Nairobi City.....	68.6	78.8	74.0	90.1	91.1	90.6	62.4	67.0	65.0

#### 4.5 Highest Education Level Reached

Table 4.8 presents the distribution of population aged 3 years and above by the highest education level reached. Nationally, 54.1 per cent of the population had reached primary school while 22.4 per cent had reached secondary school. Only 3.2 per cent of the population had reached university.

Table 4.9 shows the distribution of population 3 years and above by age and the highest level of education reached. The findings show that a higher proportion of the younger generation is attaining secondary and university education compared to the older generation.

Table 4.8: Percentage Distribution of Population 3 Years and Above by Highest Level Reached, Residence and County

Residence/County	Pre-primary	Primary	Post primary vocational	Secondary	College (Middle Level)	University*	Madrassa/Duksi	Other	Not Stated	Number of Individuals ('000)
<b>National.....</b>	<b>10.0</b>	<b>54.1</b>	<b>0.8</b>	<b>22.4</b>	<b>5.7</b>	<b>3.2</b>	<b>0.2</b>	<b>0.1</b>	<b>3.4</b>	<b>37,307</b>
<b>Rural.....</b>	<b>10.9</b>	<b>60.7</b>	<b>0.9</b>	<b>18.7</b>	<b>3.4</b>	<b>1.3</b>	<b>0.2</b>	<b>0.2</b>	<b>3.9</b>	<b>23,205</b>
<b>Urban.....</b>	<b>8.6</b>	<b>43.4</b>	<b>0.8</b>	<b>28.5</b>	<b>9.6</b>	<b>6.3</b>	<b>0.2</b>	<b>0.1</b>	<b>2.6</b>	<b>14,101</b>
<b>County</b>										
Mombasa.....	8.4	42.6	0.6	34.0	9.5	2.9	0.3	0.0	1.7	1,041
Kwale.....	14.5	58.5	1.2	13.4	3.8	0.7	1.2	0.1	6.6	606
Kilifi.....	15.1	54.5	1.7	14.8	6.3	1.5	0.0	0.4	5.6	1,094
Tana River.....	13.7	53.8	0.3	18.5	0.8	0.8	6.2	0.0	5.9	215
Lamu.....	14.1	59.6	0.7	15.1	2.6	1.2	3.9	0.1	2.6	105
Taita / Taveta.....	8.7	55.9	4.1	20.7	5.6	1.7	0.0	0.4	2.9	316
Garissa.....	7.7	62.8	0.4	17.5	2.9	1.5	4.9	0.0	2.3	150
Wajir.....	16.0	52.2	0.1	11.6	1.7	0.7	10.5	1.0	6.3	197
Mandera.....	10.7	57.5	0.0	16.7	1.1	1.7	1.9	0.2	10.2	310
Marsabit.....	16.3	56.6	0.4	17.0	4.2	1.7	0.4	0.0	3.5	131
Isiolo.....	17.1	48.7	0.7	21.7	5.1	3.3	0.6	0.0	2.9	96
Meru.....	7.7	63.0	1.9	17.8	4.6	2.0	0.0	0.0	3.1	1,254
Tharaka-Nithi.....	9.2	59.4	3.5	18.0	5.0	1.3	0.0	0.0	3.5	338
Embu.....	5.1	62.5	1.3	22.3	4.7	1.6	0.0	0.2	2.4	482
Kitui.....	8.1	63.7	2.6	18.7	2.5	1.4	0.0	0.0	3.0	896
Machakos.....	5.1	54.3	1.3	30.2	3.8	3.7	0.1	0.0	1.6	1,040
Makueni.....	7.2	62.3	2.4	21.8	2.5	1.4	0.0	0.2	2.2	840
Nyandarua.....	7.8	61.7	0.6	21.9	4.1	1.1	0.0	0.5	2.5	608
Nyeri.....	5.9	52.6	1.5	28.7	6.7	2.9	0.0	0.0	1.7	728
Kirinyaga.....	6.4	57.4	0.9	26.7	4.5	1.8	0.0	0.2	2.1	545
Murang'a.....	5.4	59.8	0.2	25.7	4.1	1.6	0.0	0.4	2.8	950
Kiambu.....	7.8	45.1	0.5	30.5	8.5	5.9	0.0	0.0	1.7	1,684
Turkana.....	19.2	52.3	0.2	11.6	2.9	3.1	1.8	0.2	8.9	500
West Pokot.....	15.1	59.3	0.3	13.2	3.9	1.3	0.0	0.1	6.8	428
Samburu.....	22.5	51.6	0.5	13.7	3.1	2.2	0.0	0.4	6.0	138
Trans Nzoia.....	9.8	57.9	0.2	21.6	4.3	3.2	0.0	0.0	2.9	883
Uasin Gishu.....	9.9	53.2	0.2	22.7	7.0	3.4	0.0	0.0	3.6	980
Elgeyo / Marakwet...	10.4	58.1	0.6	20.1	4.5	3.0	0.0	0.1	3.2	388
Nandi.....	10.9	58.6	0.7	18.4	4.8	2.7	0.0	0.0	3.9	840
Baringo.....	10.9	56.6	0.4	21.3	5.5	2.4	0.1	0.0	2.9	576
Laikipia.....	10.8	52.8	0.0	24.5	6.0	2.6	0.0	0.0	3.3	371
Nakuru.....	9.9	55.6	0.1	23.1	5.2	3.5	0.0	0.0	2.6	1,758
Narok.....	14.8	58.7	0.3	14.9	4.0	2.1	0.0	0.0	5.2	777
Kajiado.....	9.6	45.7	0.2	25.0	8.6	6.9	0.5	0.0	3.6	693
Kericho.....	8.0	57.9	0.7	21.9	5.9	2.4	0.0	0.0	3.1	829
Bomet.....	9.9	64.1	0.9	16.1	3.9	1.5	0.0	0.0	3.4	789
Kakamega.....	9.4	60.3	0.7	19.6	3.4	2.0	0.0	0.1	4.6	1,589
Vihiga.....	8.9	60.0	0.9	21.2	4.6	1.6	0.1	0.5	2.3	555
Bungoma.....	12.5	59.1	0.8	19.1	3.2	1.6	0.0	0.1	3.8	1,324
Busia.....	13.5	64.3	0.2	15.5	2.1	1.1	0.0	0.2	3.3	696
Siaya.....	12.4	64.5	0.4	16.8	1.6	1.1	0.0	0.6	2.5	846
Kisumu.....	11.1	53.9	0.6	21.0	6.3	2.7	0.0	0.0	4.4	1,024
Homa Bay.....	15.9	62.6	0.1	13.9	1.8	1.2	0.0	1.3	3.2	888
Migori.....	13.5	59.2	0.6	17.3	3.0	1.7	0.0	0.1	4.7	980
Kisii.....	12.1	48.5	0.5	27.2	5.7	2.4	0.0	0.0	3.5	1,206
Nyamira.....	10.8	49.3	0.6	28.6	4.5	2.9	0.0	0.0	3.3	621
Nairobi City.....	7.2	33.8	1.1	31.0	14.2	9.5	0.0	0.1	3.0	4,004

\*Includes both undergraduate and postgraduate

**Table 4.9: Percentage Distribution of Population 3 Years and Above by Age Group and Highest Level Reached**

Residence/ Age Group	Pre-primary	Primary	Post primary vocational	Secondary	College (Middle-level)	University*	Madrasa/Duksi	Other	Not Stated	Number of Individuals ('000)
National.....	10.0	54.1	0.8	22.4	5.7	3.2	0.2	0.1	3.4	37,307
Rural.....	10.9	60.7	0.9	18.7	3.4	1.3	0.2	0.2	3.9	23,205
Urban.....	8.6	43.4	0.8	28.5	9.6	6.3	0.2	0.1	2.6	14,101
<b>Sex</b>										
Male.....	10.1	52.8	0.9	22.9	5.9	3.7	0.2	0.1	3.3	18,813
Female.....	9.9	55.5	0.7	21.8	5.6	2.6	0.2	0.1	3.5	18,493
<b>Age Group (Years)</b>										
3 - 5.....	58.7	1.4	0.0	0.0	0.0	0.0	0.1	0.7	39.1	2,635
6 - 9.....	40.1	56.5	0.0	0.0	0.0	0.0	0.3	0.2	3.0	4,931
10 - 14.....	2.4	96.0	0.0	1.1	0.0	0.0	0.1	0.1	0.2	5,806
15 - 19.....	0.3	53.8	0.7	43.8	0.5	0.6	0.1	0.0	0.1	4,885
20 - 24.....	0.1	31.4	1.6	46.7	9.6	10.3	0.1	0.0	0.1	3,923
25 - 29.....	0.2	41.4	1.5	34.0	14.9	7.4	0.2	0.0	0.3	3,446
30 - 34.....	0.4	51.5	1.4	26.6	13.9	5.7	0.3	0.0	0.2	2,833
35 - 39.....	0.3	54.2	1.5	28.1	11.1	4.2	0.2	0.0	0.4	2,321
40 - 44.....	0.3	52.6	1.5	30.4	10.0	4.5	0.2	0.0	0.4	1,809
45 - 49.....	0.0	56.4	1.4	28.7	8.6	4.1	0.4	0.1	0.4	1,321
50 - 54.....	0.3	51.6	1.8	31.2	9.0	4.7	0.5	0.2	0.5	1,074
55 - 59.....	0.6	56.5	0.7	29.9	8.3	2.6	0.2	0.2	1.1	840
60 - 64.....	0.4	67.7	0.8	18.6	8.4	2.5	0.2	0.3	1.1	582
65 +.....	0.8	73.9	0.9	11.6	6.5	1.8	0.8	0.8	2.9	900

\*Includes both undergraduate and postgraduate

Table 4.10 presents the percentage distribution of population 3 years and above who have ever attended school by the highest level reached, sex, residence and county. The proportion of males who had reached primary school level was 52.8 per cent while that of females was 55.5 per cent. Except for primary school level, the proportion of males who had reached other levels of education were comparatively higher than females. For instance, out of all persons reported to have attended school, 10.1 per cent of males and 9.9 per cent females had reached pre-primary school level. There was marked disparity between the proportion of persons who had reached university education level, with those in urban areas being substantially higher than those in rural areas.

**Table 4.10: Percentage Distribution of Population 3 Years and above who had ever Attended School by Highest Level Reached, Sex, Residence and County**

Residence/ County	Pre-primary		Primary		Post primary vocational		Secondary		College (Middle-level)		University*		Madrasa / Duksi		Other		Not Stated		Number of Individuals ('000)	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
National.....	10.1	9.9	52.8	55.5	0.9	0.7	22.9	21.8	5.9	5.6	3.7	2.6	0.2	0.2	0.1	0.1	3.3	3.5	18,813	18,493
Ru- ral.....	11.0	10.8	59.3	62.0	1.0	0.8	19.3	18.0	3.4	3.3	1.6	1.0	0.2	0.2	0.2	0.2	4.0	3.8	11,621	11,584
Urban.....	8.7	8.4	42.2	44.5	0.8	0.7	28.6	28.3	9.8	9.4	7.3	5.3	0.2	0.3	0.0	0.1	2.2	3.0	7,192	6,909
<b>County</b>																				
Mombasa.....	8.4	8.5	36.7	48.7	0.8	0.4	40.1	27.6	10.3	8.8	2.9	2.9	0.2	0.5	0.0	0.0	0.7	2.7	529	512
Kwale.....	12.9	16.4	58.1	58.9	1.4	0.8	15.2	11.2	3.9	3.6	0.7	0.7	1.1	1.4	0.1	0.1	6.5	6.8	331	274
Kilifi.....	15.2	15.1	53.3	55.8	1.5	2.0	16.7	12.9	7.1	5.4	2.0	0.8	0.0	0.0	0.5	0.3	3.7	7.6	550	545
Tana River.....	13.3	14.2	51.2	56.8	0.4	0.3	21.4	15.1	1.0	0.6	1.5	0.1	5.8	6.6	0.0	0.0	5.5	6.4	116	99
Lamu.....	12.9	15.4	58.1	61.2	0.8	0.6	16.9	13.2	2.9	2.3	1.8	0.5	3.8	4.1	0.0	0.2	2.8	2.5	53	52
Taita / Taveta.....	9.2	8.2	52.4	59.4	5.5	2.7	22.3	19.1	5.3	5.8	2.2	1.3	0.0	0.0	0.3	0.6	2.9	2.9	160	156
Garissa.....	6.3	9.7	59.6	67.4	0.7	0.0	20.1	13.6	3.3	2.3	2.5	0.0	5.2	4.4	0.0	0.0	2.2	2.6	89	61
Wajir.....	16.3	15.5	52.0	52.5	0.0	0.2	11.4	11.8	1.7	1.9	1.0	0.2	11.2	9.6	0.5	1.6	6.0	6.7	118	79
Mandera.....	9.8	12.1	56.2	59.6	0.0	0.0	20.7	10.5	1.0	1.1	2.1	1.1	1.9	2.0	0.3	0.0	8.1	13.4	189	121
Marsabit.....	14.8	18.3	52.8	61.8	0.2	0.7	21.5	10.9	4.0	4.3	2.6	0.5	0.6	0.0	0.0	0.0	3.5	3.5	76	55
Isiolo.....	17.2	17.1	47.2	50.4	0.4	1.0	23.3	20.0	5.3	4.8	3.9	2.5	0.6	0.5	0.0	0.0	2.2	3.7	50	46
Meru.....	7.5	7.8	62.7	63.3	2.5	1.3	16.6	19.1	4.0	5.2	2.6	1.3	0.0	0.0	0.0	0.0	4.0	1.9	669	585
Tharaka-Nithi.....	9.5	8.9	56.8	61.9	3.8	3.3	20.2	15.8	4.3	5.8	1.3	1.3	0.0	0.0	0.0	0.0	4.0	2.9	171	167
Embu.....	4.6	5.7	63.6	61.2	1.4	1.2	21.4	23.2	4.1	5.4	1.7	1.5	0.0	0.0	0.1	0.3	3.2	1.5	250	232
Kitui.....	8.4	7.8	61.1	66.2	1.9	3.3	20.9	16.5	1.7	3.3	2.3	0.5	0.0	0.0	0.1	0.0	3.7	2.4	447	449
Machakos.....	5.3	4.8	54.1	54.4	1.0	1.6	29.0	31.5	3.1	4.4	5.6	1.8	0.0	0.1	0.0	0.0	1.9	1.2	519	521
Makueni.....	7.4	7.0	64.2	60.5	2.3	2.5	19.7	23.9	2.3	2.8	1.8	1.0	0.0	0.0	0.0	0.3	2.3	2.1	409	430
Nyandarua.....	7.9	7.6	57.7	65.7	0.8	0.3	24.6	19.2	4.1	4.0	1.2	0.8	0.0	0.0	0.5	0.4	3.1	1.9	307	301
Nyeri.....	7.1	4.8	52.3	52.9	1.9	1.1	27.5	29.8	6.4	7.0	3.4	2.4	0.0	0.0	0.0	0.0	1.4	2.1	357	372
Kirinyaga.....	7.1	5.8	57.3	57.5	0.4	1.3	24.4	28.8	5.6	3.5	2.7	1.0	0.0	0.0	0.2	0.2	2.4	1.9	258	287
Murang'a.....	5.3	5.6	59.6	60.0	0.3	0.2	25.2	26.2	4.4	3.9	2.2	0.9	0.0	0.0	0.2	0.5	2.8	2.8	462	487
Kiambu.....	9.3	6.2	44.1	46.2	0.3	0.6	30.3	30.7	7.2	9.8	6.3	5.4	0.0	0.0	0.1	0.0	2.3	1.1	870	814
Turkana.....	15.9	23.3	52.6	51.8	0.2	0.1	13.8	8.8	4.0	1.6	4.3	1.5	0.6	3.3	0.4	0.0	8.2	9.7	279	221
West Pokot.....	13.3	17.0	58.2	60.4	0.4	0.2	14.5	11.7	4.5	3.4	2.0	0.5	0.0	0.0	0.0	0.3	7.0	6.5	220	207
Samburu.....	19.6	26.0	50.8	52.4	0.8	0.2	15.6	11.3	2.7	3.5	3.6	0.8	0.0	0.0	0.7	0.0	6.2	5.8	75	63
Trans Nzoia.....	8.5	11.3	58.2	57.5	0.1	0.3	22.1	21.0	4.2	4.5	4.0	2.4	0.0	0.1	0.0	0.1	2.9	3.0	459	424
Uasin Gishu.....	10.2	9.7	53.0	53.4	0.3	0.1	21.4	23.9	6.3	7.6	3.8	3.0	0.0	0.0	0.0	0.0	5.0	2.3	480	499
Elgeyo / Marakwet.....	10.2	10.6	55.1	61.1	0.4	0.7	22.1	18.1	4.7	4.2	3.2	2.7	0.0	0.0	0.2	0.1	4.0	2.5	191	197
Nandi.....	11.9	10.0	59.4	57.9	0.9	0.6	16.1	20.6	5.5	4.1	2.5	2.9	0.0	0.0	0.0	0.0	3.7	4.0	422	418
Baringo.....	10.4	11.5	55.2	57.9	0.5	0.2	23.1	19.5	5.0	5.9	2.5	2.4	0.1	0.1	0.0	0.0	3.3	2.5	283	293
Laikipia.....	9.9	11.7	55.5	50.0	0.0	0.0	24.1	25.0	5.3	6.7	2.6	2.5	0.0	0.0	0.0	0.1	2.5	4.1	189	182
Nakuru.....	8.0	11.5	55.5	55.7	0.3	0.0	23.8	22.5	5.3	5.1	4.1	3.0	0.0	0.0	0.0	0.0	3.0	2.3	836	921
Narok.....	16.5	13.0	55.1	62.3	0.2	0.4	16.9	12.8	4.0	4.1	1.8	2.3	0.0	0.0	0.0	0.1	5.5	5.0	397	380
Kajiado.....	9.9	9.2	47.6	43.7	0.1	0.3	22.5	27.6	8.3	9.0	7.0	6.8	0.4	0.5	0.0	0.0	4.2	2.9	357	336
Kericho.....	8.7	7.2	55.2	60.7	1.0	0.4	23.2	20.6	5.7	6.1	3.6	1.2	0.0	0.0	0.0	0.0	2.6	3.7	422	407
Bomet.....	9.8	10.1	61.0	67.5	1.1	0.8	18.3	13.9	5.2	2.5	1.7	1.4	0.0	0.0	0.0	0.0	3.0	3.9	407	382
Kakamega.....	9.8	9.0	61.3	59.2	0.7	0.6	18.4	20.7	2.9	3.9	2.6	1.6	0.0	0.0	0.1	0.0	4.2	4.9	782	806
Vihiga.....	9.5	8.4	58.7	61.2	1.0	0.9	19.5	22.8	6.1	3.1	2.0	1.0	0.2	0.1	0.5	0.4	2.5	2.1	278	277
Bungoma.....	12.7	12.3	55.9	62.0	1.1	0.5	20.9	17.4	3.4	2.9	2.0	1.2	0.0	0.0	0.1	0.1	3.9	3.7	636	687
Busia.....	13.3	13.6	64.3	64.3	0.2	0.1	16.3	14.8	2.5	1.8	1.1	0.9	0.0	0.0	0.3	0.1	2.1	4.3	328	368
Siaya.....	13.7	11.2	63.1	65.9	0.6	0.3	17.2	16.3	1.6	1.6	1.4	0.9	0.0	0.0	0.3	0.8	2.1	2.9	410	436
Kisumu.....	12.6	9.4	49.7	58.6	0.5	0.8	23.0	18.7	7.0	5.5	3.1	2.1	0.0	0.0	0.0	0.0	4.1	4.8	542	482
Homa Bay.....	17.2	14.7	57.4	67.6	0.0	0.2	16.3	11.7	2.1	1.5	1.5	0.9	0.0	0.0	1.5	1.0	3.9	2.5	432	456
Migori.....	12.9	14.0	55.2	62.8	1.2	0.1	19.8	15.1	3.2	2.8	2.7	0.7	0.0	0.0	0.1	0.0	4.9	4.5	466	514
Kisii.....	12.8	11.3	45.5	51.6	0.6	0.5	28.1	26.2	7.1	4.4	2.4	2.4	0.0	0.0	0.0	0.0	3.5	3.6	603	604
Nyamira.....	10.0	11.6	48.0	50.5	0.8	0.4	27.8	29.4	5.9	3.2	4.0	1.8	0.0	0.0	0.1	0.0	3.3	3.2	301	320
Nairobi City.....	7.4	7.0	33.3	34.3	1.4	0.8	30.6	31.4	14.9	13.5	10.8	8.3	0.0	0.0	0.0	0.2	1.6	4.4	2,036	1,968

\*Includes both undergraduate and postgraduate

#### 4.6 Educational Attainment

The distribution of population aged 3 years and above by educational qualification attained is presented in Table 4.11. Approximately 49.7 per cent of the population did not have any educational qualification, majority of whom were in rural areas. Only 1.9 per cent of the population had attained university degree. The proportion of urban population with KCE/KCSE qualification was 20.3 per cent compared to 9.1 per cent in rural areas. However, there were no major disparities in the proportion of the population with CPE/KCPE qualification in both rural and urban areas. The proportion of urban population with degrees was 4.9 per cent compared to 1.7 per cent of rural population. At county level, Nairobi City recorded the highest proportion of population with KCE/KCSE, certificate, diploma and degree qualifications.

**Table 4.11: Percentage Distribution of Population by Highest Educational Qualification, Residence and County**

Residence/ County	None	CPE/ KCPE	KAPE	KJSE	KCE/ KCSE	KACE/ EAACE	Certificate	Diploma	Degree*	Basic/post literacy certificate	Other	Not Stated	Number of Individuals ('000)
National.....	49.7	25.3	0.2	0.2	13.4	0.2	2.9	2.6	1.9	0.1	0.1	3.5	37,307
Rural.....	57.5	24.9	0.2	0.2	9.1	0.1	2.1	1.1	1.7	0.0	0.1	3.9	23,205
Urban.....	37.0	25.9	0.2	0.2	20.3	0.4	4.3	4.9	4.0	0.1	0.1	2.7	14,101
<b>County</b>													
Mombasa...	34.1	29.1	0.0	0.2	22.1	1.1	5.3	4.5	1.6	0.4	0.0	1.7	1,041
Kwale.....	59.0	22.4	0.0	0.1	6.9	0.0	3.2	1.3	0.6	0.1	0.0	6.3	606
Kilifi.....	56.6	20.2	0.3	0.1	8.9	0.3	3.5	2.8	1.0	0.1	0.2	5.8	1,094
Tana River...	64.9	19.7	0.3	0.0	6.5	0.1	0.3	0.5	0.7	0.0	1.1	5.9	215
Lamu.....	63.2	24.2	0.0	0.1	6.3	0.1	1.7	0.9	0.8	0.1	0.0	2.5	105
Taita / Taveta	44.1	30.9	0.3	0.1	11.7	0.3	5.1	3.3	1.1	0.2	0.1	2.9	316
Garissa.....	63.5	21.1	0.0	0.0	7.1	0.0	1.8	1.7	0.7	0.3	0.7	3.0	150
Wajir.....	74.2	13.7	0.0	0.0	3.5	0.0	0.2	1.1	0.4	0.4	0.3	6.1	197
Mandera.....	61.3	17.4	0.0	0.1	8.1	0.0	0.4	0.9	1.0	0.1	0.3	10.4	310
Marsabit.....	62.6	18.9	0.0	0.0	9.6	0.0	2.2	1.7	1.2	0.0	0.0	3.8	131
Isiolo.....	54.2	21.6	0.0	0.1	13.6	0.3	2.0	2.9	2.1	0.1	0.1	3.0	96
Meru.....	53.9	25.9	0.1	0.1	10.9	0.1	3.5	1.3	0.8	0.2	0.0	3.1	1,254
Tharaka-Nithi	53.7	27.3	0.3	0.5	6.7	0.4	4.9	1.6	0.7	0.0	0.3	3.5	338
Embu.....	48.4	29.8	0.0	0.4	12.8	0.4	3.3	1.5	0.9	0.1	0.0	2.5	482
Kitui.....	57.2	27.4	0.3	0.0	7.6	0.0	2.3	1.2	1.0	0.1	0.0	3.0	896
Machakos...	40.1	32.4	0.0	0.1	19.9	0.0	1.8	2.6	1.5	0.0	0.0	1.6	1,040
Makueni.....	50.1	31.1	0.0	0.6	11.2	0.2	2.4	1.4	0.7	0.1	0.1	2.1	840
Nyandarua...	46.5	35.9	0.0	0.5	10.1	0.3	1.9	1.8	0.6	0.1	0.0	2.5	608
Nyeri.....	38.5	34.1	1.0	0.4	15.1	0.1	4.6	2.4	1.7	0.0	0.3	1.7	728
Kirinyaga.....	49.0	28.0	0.6	0.2	13.8	0.5	2.8	1.6	1.4	0.1	0.0	2.2	545
Murang'a.....	44.6	32.5	0.2	0.2	14.9	0.4	2.2	1.8	0.3	0.2	0.1	2.8	950
Kiambu.....	36.1	28.7	0.2	0.0	21.8	0.3	4.1	4.2	2.9	0.0	0.0	1.6	1,684
Turkana.....	68.6	12.6	0.0	0.0	4.5	0.0	1.2	1.7	2.3	0.0	0.6	8.6	500
West Pokot...	66.6	16.3	0.0	0.0	6.1	0.0	2.9	0.7	0.6	0.1	0.0	6.6	428
Samburu.....	65.8	15.3	0.0	0.0	7.9	0.2	2.2	1.2	1.5	0.0	0.2	5.6	138
Trans Nzoia...	56.4	22.6	0.1	0.1	12.0	0.2	2.3	1.6	1.6	0.0	0.1	3.0	883
Uasin Gishu...	49.0	24.8	0.3	0.0	15.7	0.2	2.3	2.2	1.6	0.1	0.0	3.8	980
Elgeyo / Marakwet	54.8	24.7	0.0	0.1	12.4	0.0	2.3	1.3	1.3	0.0	0.0	3.2	388
Nandi.....	55.9	23.7	0.3	0.1	10.6	0.1	2.3	1.5	1.5	0.1	0.0	3.9	840
Baringo.....	52.7	24.9	0.1	0.1	13.0	0.1	2.5	2.1	1.6	0.0	0.1	2.9	576
Laikipia.....	45.3	29.4	0.5	0.4	14.2	0.2	2.0	2.8	1.8	0.0	0.0	3.2	371
Nakuru.....	47.2	28.5	0.1	0.1	14.3	0.1	2.3	2.6	2.2	0.0	0.0	2.6	1,758
Narok.....	65.3	15.7	0.0	0.2	9.4	0.0	2.1	1.0	1.1	0.1	0.0	5.1	777
Kajiado.....	41.4	24.8	0.5	0.2	14.5	1.9	3.9	4.5	4.8	0.0	0.0	3.5	693
Kericho.....	55.4	21.0	0.0	0.1	13.3	0.3	3.3	2.2	1.2	0.0	0.0	3.1	829
Bomet.....	58.6	23.7	0.2	0.2	8.6	0.0	2.9	0.9	0.9	0.2	0.1	3.7	789
Kakamega...	56.4	25.6	0.0	0.2	9.2	0.2	1.9	0.6	1.1	0.1	0.0	4.6	1,589
Vihiga.....	55.2	26.2	0.4	0.5	8.9	0.2	3.0	1.9	0.9	0.0	0.2	2.3	555
Bungoma.....	59.3	23.5	0.4	0.1	8.6	0.0	1.8	1.2	1.0	0.0	0.0	4.0	1,324
Busia.....	66.4	21.1	0.3	0.1	6.4	0.1	1.2	0.6	0.7	0.1	0.1	3.0	696
Siaya.....	59.4	27.0	0.7	0.4	6.9	0.0	1.6	0.4	0.6	0.0	0.1	2.9	846
Kisumu.....	49.2	26.6	0.1	0.1	12.0	0.2	2.3	3.3	1.7	0.0	0.0	4.4	1,024
Homa Bay...	67.2	22.0	0.0	0.1	5.1	0.1	0.5	0.9	0.8	0.0	0.0	3.3	888
Migori.....	59.8	23.4	0.3	0.3	8.5	0.2	0.8	1.3	0.7	0.0	0.0	4.6	980
Kisii.....	48.2	26.2	0.1	0.3	15.2	0.0	1.5	3.7	1.2	0.0	0.0	3.6	1,206
Nyamira.....	48.1	27.1	0.2	0.4	15.2	0.0	2.6	1.8	1.3	0.0	0.0	3.3	621
Nairobi City...	27.3	22.8	0.4	0.2	25.3	0.3	6.5	7.2	6.8	0.0	0.0	3.2	4,004

\* Includes both undergraduate and post graduate degrees

#### 4.7 Reasons for Not Attending School

Survey respondents were asked to give at most two reasons why they never attended school. The analysis is therefore based on multiple response answers and may therefore not necessarily add up to 100. Table 4.12 presents the distribution of population aged 6-17 years that never attended by reason for non-attendance. The highest proportion (23.1%) of persons aged 6-13 years that did not attend school indicated that they were too young to attend school while 19.2 per cent reported that parent(s) did not let them to go to school. The highest proportion of primary and secondary school going age children (35.7%) that did not attend school in urban areas cited the reason for not going as school costs. The reasons for not attending school cited by most of those aged 14-17 years, was school costs.

**Table 4.12: Distribution of Population 6-17 Years who Never Attended School by Reason**

Residence/ Age-Group	Too Young to Attend	School costs	Poor quality of Schools	Own Illness	Own Disability	Family illness	Family Disability	Not interested	Parents did not let me	Had to work or Help at home	School too Far from home	School conflict with beliefs
National.....	23.1	18.7	1.5	2.7	3.0	0.1	0.8	11.7	19.2	11.6	4	0.4
Rural.....	22.5	14.7	1.8	2.6	2.4	0.0	1.0	12.0	22.0	13.7	4.9	0.5
Urban.....	25.4	35.7	0.3	3.1	5.3	0.2	0.2	10.3	7.4	2.6	0.4	0.0
Age-Group (Years)												
06-13.....	35.5	10.4	2.0	2.5	3.0	0.1	1.0	6.4	21.5	11.2	4.9	0.5
14-17.....	0.2	34.1	0.6	3.1	2.8	0.1	0.5	21.4	15.0	12.3	2.4	0.1

**Table 4.12: Distribution of Population 6-17 Years who Never Attended School by Reason ...Cont'd**

Residence/ Age-Group	Insecurity	Completed School	Marriage	Pregnancy	School did not admit individual	Social/ religious pressures	Orphaned	Too Old To Attend School	Other reasons	Number of Individuals ('000)
National.....	0.2	2.1	0.5	1.8	0.1	3.9	0.6	0.1	3.5	1,066
Rural.....	0.1	1.4	0.5	1.8	0.1	3.9	0.6	0.1	4.0	862
Urban.....	0.9	5.2	0.5	1.4	0.0	4.1	0.4	0.0	1.4	203
Age-Group (Years)										
06-13.....	0.1	0.1	0.0	0.1	0.0	4.4	0.4	0.0	3.7	691
14-17.....	0.5	5.9	1.3	4.9	0.2	3.1	0.9	0.2	3.0	374

#### 4.8 Type of School Attended

The proportion of population aged 3 years and above attending school were further categorised by the type of school attended and level as presented in Table 4.13. The results show that 89.3 per cent of the target population attended day school, with 90.1 per cent and 87.5 per cent being in rural and urban areas, respectively. The proportion of those in primary boarding schools was 28.8 per cent while that in secondary boarding schools was 39.1 per cent.

**Table 4.13: Percentage Distribution of Population 3 Years and Above Attending School by Level and Type**

Residence	Day School	Boarding	Not Stated	Number of Individuals ('000)
National.....	89.3	10.7	0.1	18,558
Rural.....	90.1	9.9	0.0	12,695
Urban.....	87.5	12.4	0.1	5,862
Schooling Level				
Pre-primary.....	96.4	3.6	0.0	3,577
Primary.....	71.0	28.8	0.1	10,935
Post-primary vocational.....	60.7	39.1	0.1	89
Secondary.....	60.1	39.7	0.1	2,835
Midde level college.....	57.1	42.8	0.2	474
University/ Undergraduate.....	77.5	22.5	0.0	535
University/Post graduate.....	97.1	2.9	0.0	69
Madrassa/Duksi.....	47.7	52.3	0.0	34
Other.....	89.3	10.7	0.1	7

#### 4.9 School Feeding Programme

Regarding school feeding programmes, 17.1 per cent of public schools had some form of school feeding programme compared to 22.5 per cent of private institutions as shown in Table 4.14. In public schools, a smaller proportion (16.2%) of rural day schools had school feeding programmes compared to urban day schools (20.4%). On the other hand, in private schools, a higher proportion of urban day schools (23.3%) had school feeding programmes compared with rural day schools (21.5%). School feeding programmes were more common in the arid and semi-arid counties compared to the non-arid areas. The proportion of population in public schools with school feeding programmes was high in Turkana (96.9%), Isiolo (89.6%), and Samburu (87.7%) Counties.

Table 4.14: Percentage Distribution of Population 6-13 Years by Type of School, Feeding Programme Residence and County

Residence/ County	Type of school						Number of Individuals ('000)	School Feeding Programme						Number of Individuals ('000)
	Public			Private				Public			Private			
	Day	Boarding	Not Stated	Day	Boarding	Not Stated		Yes	No	Not Stated	Yes	No	Not Stated	
National.....	73.6	1.4	0.0	23.3	1.6	0.1	9,637	13.3	61.8	0.0	5.8	19.1	0.0	9,637
Rural.....	82.2	1.2	0.0	15.1	1.5	0.0	6,811	14.1	69.3	0.0	3.7	12.9	0.0	6,811
Urban.....	52.8	1.9	0.0	43.1	2.0	0.2	2,826	11.4	43.4	0.0	11.0	34.1	0.1	2,826
<b>County</b>														
Mombasa.....	32.4	0.7	0.0	64.8	2.1	0.0	209	3.0	30.2	0.0	26.2	40.4	0.2	209
Kwale.....	80.9	0.8	0.2	17.8	0.3	0.0	190	6.1	75.8	0.0	7.8	10.3	0.0	190
Kilifi.....	63.7	2.1	0.0	33.8	0.3	0.1	309	16.1	49.7	0.0	7.9	26.3	0.0	309
Tana River.....	77.4	0.1	0.0	22.5	0.0	0.0	70	55.9	21.6	0.0	4.9	17.6	0.0	70
Lamu.....	80.4	0.0	0.0	19.2	0.4	0.0	29	8.0	72.3	0.0	0.4	19.3	0.0	29
Taita / Taveta.....	80.4	3.1	0.0	14.1	2.4	0.0	74	15.6	67.9	0.0	0.2	16.3	0.0	74
Garissa.....	73.9	3.2	0.0	22.1	0.8	0.0	58	50.9	26.2	0.0	6.9	16.0	0.0	58
Wajir.....	80.7	1.9	0.0	17.4	0.0	0.0	93	43.2	39.1	0.3	3.5	13.5	0.4	93
Mandera.....	81.7	0.4	0.0	17.7	0.2	0.0	152	58.6	23.5	0.0	2.4	15.5	0.0	152
Marsabit.....	67.7	0.0	0.0	31.8	0.5	0.0	54	47.1	20.6	0.0	16.8	15.5	0.0	54
Isiolo.....	79.4	2.5	0.0	17.8	0.3	0.0	32	72.4	9.4	0.0	14.6	3.6	0.0	32
Meru.....	70.1	1.8	0.0	24.4	3.7	0.0	292	9.7	62.2	0.0	2.2	25.9	0.0	292
Tharaka-Nithi.....	86.4	5.1	0.0	6.3	2.2	0.0	83	31.1	60.3	0.0	5.0	3.6	0.0	83
Embu.....	78.5	2.8	0.0	18.7	0.0	0.0	112	28.5	52.8	0.0	5.1	13.6	0.0	112
Kitui.....	94.1	1.1	0.0	4.4	0.4	0.0	275	22.2	73.0	0.0	0.7	4.1	0.0	275
Machakos.....	79.4	1.8	0.0	17.9	0.9	0.0	207	17.7	63.5	0.0	5.0	13.8	0.0	207
Makueni.....	93.5	1.9	0.0	3.5	1.1	0.0	210	13.0	82.3	0.0	0.6	4.1	0.0	210
Nyandarua.....	80.8	1.7	0.3	13.6	3.6	0.0	161	3.9	78.9	0.0	5.0	12.2	0.0	161
Nyeri.....	77.3	0.4	0.0	20.1	2.2	0.0	133	7.4	70.3	0.0	3.2	19.1	0.0	133
Kirinyaga.....	76.3	0.8	0.0	20.6	2.3	0.0	117	1.2	75.9	0.0	2.1	20.8	0.0	117
Murang'a.....	87.1	0.1	0.0	11.5	1.3	0.0	213	4.9	82.3	0.0	0.8	12.0	0.0	213
Kiambu.....	53.7	2.3	0.0	42.1	1.9	0.0	316	11.7	44.3	0.0	13.6	30.4	0.0	316
Turkana.....	80.7	1.6	0.0	16.1	1.6	0.0	180	79.2	3.2	0.0	12.5	5.1	0.0	180
West Pokot.....	78.4	7.2	0.0	13.4	1.0	0.0	142	28.2	57.4	0.0	2.7	11.7	0.0	142
Samburu.....	88.5	2.2	0.0	7.4	1.9	0.0	57	78.7	11.9	0.0	5.4	4.0	0.0	57
Trans Nzoia.....	70.1	0.6	0.0	25.7	3.6	0.0	239	5.1	65.6	0.0	5.5	23.8	0.0	239
Uasin Gishu.....	69.1	5.0	0.0	24.2	1.7	0.0	239	3.0	70.5	0.6	3.7	22.0	0.2	239
Elgeyo / Marakwet..	85.4	3.6	0.0	10.1	0.9	0.0	104	33.3	55.7	0.0	7.9	3.1	0.0	104
Nandi.....	72.3	2.1	0.0	22.9	2.7	0.0	206	0.9	73.4	0.0	0.6	25.1	0.0	206
Baringo.....	86.2	2.0	0.0	8.7	3.1	0.0	159	35.3	52.9	0.0	4.0	7.8	0.0	159
Laikipia.....	79.8	1.4	0.0	17.3	1.5	0.0	110	49.4	31.8	0.0	12.9	5.9	0.0	110
Nakuru.....	82.6	0.0	0.0	15.9	1.5	0.0	494	8.7	74.0	0.0	2.8	14.5	0.0	494
Narok.....	76.7	2.2	0.0	17.1	4.0	0.0	266	11.4	67.5	0.0	11.5	9.6	0.0	266
Kajiado.....	54.6	2.3	0.1	40.4	2.0	0.6	168	7.3	50.2	0.0	14.0	27.8	0.7	168
Kericho.....	74.2	1.8	0.0	22.2	1.8	0.0	227	17.0	60.0	0.0	16.9	7.0	0.0	227
Bomet.....	84.3	1.0	0.1	12.1	2.5	0.0	249	14.3	70.7	0.4	12.3	2.3	0.0	249
Kakamega.....	85.2	0.5	0.0	13.4	0.9	0.0	447	1.4	84.4	0.0	0.2	14.0	0.0	447
Vihiga.....	89.7	0.4	0.0	9.2	0.2	0.5	156	1.7	88.9	0.0	0.2	9.2	0.0	156
Bungoma.....	79.0	0.7	0.0	20.0	0.3	0.0	394	6.6	73.1	0.0	7.2	13.1	0.0	394
Busia.....	80.4	0.1	0.4	18.8	0.3	0.0	215	4.1	76.6	0.6	5.6	13.4	0.0	215
Siaya.....	86.9	0.8	0.0	12.1	0.2	0.0	236	4.5	83.2	0.0	2.7	9.6	0.0	236
Kisumu.....	77.4	0.6	0.0	21.1	0.9	0.0	266	3.4	74.6	0.0	3.1	18.9	0.0	266
Homa Bay.....	71.1	0.2	0.0	28.6	0.1	0.0	288	0.4	70.9	0.0	1.2	27.5	0.0	288
Migori.....	79.8	0.3	0.0	19.7	0.2	0.0	302	0.9	79.2	0.0	0.3	19.6	0.0	302
Kisii.....	70.6	1.1	0.0	23.1	5.2	0.0	327	1.2	70.5	0.0	1.8	26.5	0.0	327
Nyamira.....	64.9	1.8	0.0	30.9	2.4	0.0	166	2.3	64.4	0.0	1.1	32.2	0.0	166
Nairobi City.....	30.5	1.4	0.0	65.4	2.7	0.0	611	8.7	23.2	0.0	10.4	57.7	0.0	611

#### 4.10 Literacy

The analysis of literacy is based on respondents' self-assessment as no reading and writing tests were administered during the data collection. Further it was assumed that anybody with secondary level of schooling and above could read and write. The percentage distribution of population aged 15 years and above by ability to read and write is presented in Table 4.15. Nationally, the proportion of literate population was 84.8 per cent with a higher proportion in urban areas (93.2%) compared to their rural counterparts (78.8%).

Table 4.16 presents the distribution of population aged 15-24 years by ability to read and write. Nationally, 94.4 per cent of the youth could read a simple sentence in at least one language. A higher proportion of the population in urban areas (97.8%) reported that they could read compared to their rural counterparts (92.3%). Nairobi City County recorded the lowest proportion of population that could not read at 3.4 per cent.

Table 4.15: Percentage Distribution of Population aged 15 Years and above by Ability to Read and Write, Residence and County

Residence/ County	National				Male				Female			
	Literate	Illiterate	Not stated	Number of Individuals ('000)	Literate	Illiterate	Not stated	Number of Individuals ('000)	Literate	Illiterate	Not stated	Number of Individuals ('000)
National.....	84.5	14.1	1.4	26,693	89.0	9.8	1.2	13,016	80.2	18.2	1.6	13,677
Rural.....	78.8	19.5	1.6	16,173	84.6	14.0	1.4	7,710	73.6	24.5	1.9	8,463
Urban.....	93.2	5.8	1.0	10,520	95.4	3.7	0.9	5,306	90.9	8.0	1.1	5,214
<b>County</b>												
Mombasa.....	94.7	4.5	0.8	804	96.1	3.1	0.7	428	93.2	6.0	0.9	377
Kwale.....	67.7	31.3	1.0	447	79.9	18.9	1.2	221	55.7	43.5	0.8	226
Kilifi.....	80.1	17.3	2.6	773	90.7	7.2	2.0	369	70.4	26.4	3.2	404
Tana River.....	68.6	29.1	2.4	160	78.8	19.6	1.7	81	58.2	38.7	3.1	80
Lamu.....	82.2	15.8	2.0	74	87.3	11.1	1.6	36	77.3	20.3	2.4	38
Taita / Taveta.....	88.5	11.1	0.4	225	92.1	7.6	0.3	112	85.0	14.5	0.5	113
Garissa.....	41.7	56.8	1.4	203	53.6	45.7	0.8	100	30.3	67.6	2.1	104
Wajir.....	35.8	57.5	6.7	207	45.2	47.9	6.9	106	25.9	67.6	6.5	101
Mandera.....	47.0	52.0	1.0	324	62.6	36.8	0.7	172	29.2	69.3	1.5	151
Marsabit.....	37.8	61.2	1.0	159	47.3	51.9	0.8	81	27.9	70.8	1.2	78
Isiolo.....	60.1	39.6	0.4	86	64.6	35.2	0.2	41	55.9	43.6	0.5	45
Meru.....	78.3	19.6	2.1	938	80.7	16.6	2.7	480	75.7	22.7	1.6	458
Tharaka-Nithi.....	81.3	16.7	2.0	248	86.9	11.5	1.6	122	75.9	21.7	2.4	125
Embu.....	86.1	12.5	1.4	368	90.1	8.8	1.1	177	82.2	16.0	1.8	190
Kitui.....	83.0	16.9	0.2	626	89.5	10.4	0.1	285	77.5	22.3	0.2	341
Machakos.....	92.4	7.3	0.3	791	95.4	4.3	0.3	391	89.4	10.3	0.3	400
Makueni.....	82.3	17.1	0.6	585	85.5	14.1	0.4	278	79.3	19.8	0.8	307
Nyandarua.....	90.7	8.1	1.2	419	94.3	5.2	0.4	204	87.3	10.8	1.9	215
Nyeri.....	92.7	4.6	2.7	551	95.1	3.0	1.9	257	90.6	6.0	3.4	294
Kirinyaga.....	89.1	9.9	1.0	405	94.8	4.8	0.4	182	84.4	14.1	1.5	222
Murang'a.....	86.9	10.8	2.3	702	91.7	5.8	2.5	326	82.7	15.2	2.1	376
Kiambu.....	94.0	5.6	0.4	1,257	95.8	3.9	0.2	627	92.1	7.3	0.5	630
Turkana.....	39.6	59.1	1.3	541	57.1	42.3	0.6	244	25.2	72.8	1.9	297
West Pokot.....	61.5	36.9	1.6	319	68.5	29.8	1.7	163	54.2	44.3	1.6	156
Samburu.....	40.3	59.7	0.0	134	46.5	53.5	-	67	34.1	65.9	0.0	67
Trans Nzoia.....	90.7	8.3	1.0	587	93.7	5.5	0.8	304	87.5	11.2	1.2	284
Uasin Gishu.....	84.8	11.2	4.0	675	86.9	9.3	3.8	317	83.0	12.9	4.1	358
Elgeyo / Marakwet.....	84.6	14.9	0.5	269	87.3	12.3	0.4	134	81.9	17.5	0.7	135
Nandi.....	91.9	7.5	0.6	565	94.2	5.6	0.2	274	89.7	9.3	1.0	291
Baringo.....	83.6	15.1	1.3	395	87.7	12.0	0.4	197	79.6	18.2	2.2	198
Laikipia.....	77.6	21.3	1.1	295	84.3	15.1	0.5	138	71.6	26.7	1.6	157
Nakuru.....	91.5	6.9	1.5	1,172	95.1	3.7	1.1	561	88.2	9.9	1.9	611
Narok.....	69.3	28.3	2.4	539	76.4	20.2	3.4	268	62.3	36.3	1.4	271
Kajiado.....	83.4	15.8	0.8	533	86.7	12.3	1.0	251	80.5	19.0	0.6	282
Kericho.....	86.4	12.2	1.4	561	91.5	7.1	1.4	276	81.4	17.2	1.4	285
Bomet.....	78.9	14.3	6.9	489	84.5	11.5	4.0	250	73.0	17.2	9.8	239
Kakamega.....	80.6	17.8	1.7	1,038	84.6	13.8	1.6	493	76.9	21.3	1.7	545
Vihiga.....	88.5	10.0	1.5	367	91.3	7.9	0.8	171	86.0	11.9	2.1	196
Bungoma.....	88.0	10.6	1.4	812	91.5	7.3	1.2	387	84.9	13.6	1.6	425
Busia.....	83.0	16.2	0.8	456	91.0	8.1	0.9	210	76.1	23.2	0.7	246
Siaya.....	88.7	11.1	0.2	555	93.5	6.1	0.4	249	84.9	15.1	0.0	306
Kisumu.....	93.9	5.3	0.8	653	96.9	2.5	0.7	333	90.8	8.3	0.9	319
Homa Bay.....	86.4	12.8	0.8	538	92.4	7.3	0.3	244	81.4	17.4	1.2	294
Migori.....	87.6	10.8	1.5	602	95.8	2.9	1.3	275	80.8	17.6	1.7	327
Kisii.....	90.8	8.6	0.6	780	93.7	5.8	0.5	373	88.1	11.1	0.8	407
Nyamira.....	85.1	12.1	2.8	411	89.9	7.7	2.4	197	80.7	16.1	3.2	214
Nairobi City.....	98.3	0.9	0.8	3,055	98.7	0.5	0.7	1,563	97.9	1.3	0.8	1,491

Table 4.16: Percentage Distribution of Population aged 15-24 years by Ability to Read, Residence and County

Residence/ County	National				Male			Female				Number of Individuals (000)
	Literate	Illiterate	Not stated	Number of Individuals (000)	Literate	Illiterate	Not stated	Number of Individuals (000)	Literate	Illiterate	Not stated	
National.....	94.4	4.7	0.9	9,085	94.8	4.2	1.0	4,530	94.0	5.1	0.9	4,555
Rural.....	92.3	6.5	1.1	5,611	93.1	5.8	1.0	2,879	91.5	7.3	1.2	2,732
Urban.....	97.8	1.6	0.6	3,474	97.9	1.3	0.8	1,651	97.7	1.8	0.4	1,823
<b>County</b>												
Mombasa.....	99.1	0.9	0.0	236	99.3	0.7	0.0	112	98.9	1.1	0.0	124
Kwale.....	86.7	13.1	0.2	141	92.6	7.0	0.4	71	80.8	19.2	0.0	70
Kilifi.....	93.3	4.1	2.6	293	93.6	4.3	2.1	151	93.0	3.9	3.1	142
Tana River.....	86.9	12.1	1.0	63	91.0	7.4	1.6	34	82.1	17.7	0.2	29
Lamu.....	96.2	3.5	0.3	22	96.5	2.9	0.6	11	96.0	4.0	0.0	11
Taita / Taveta...	96.7	2.4	0.9	67	96.5	2.5	1.0	33	97.0	2.2	0.8	34
Garissa.....	74.3	25.0	0.7	71	81.3	18.7	0.0	36	67.0	31.5	1.5	35
Wajir.....	62.2	31.0	6.8	73	70.4	21.0	8.6	38	53.4	41.8	4.8	35
Mandera.....	74.4	24.3	1.3	123	87.2	11.8	1.0	70	57.1	41.2	1.6	52
Marsabit.....	63.2	35.3	1.5	56	66.2	33.1	0.8	31	59.5	38.1	2.5	24
Isiolo.....	79.4	20.6	0.0	30	76.4	23.6	0.0	14	81.9	18.1	0.0	17
Meru.....	92.6	5.8	1.6	295	91.8	5.3	3.0	161	93.6	6.4	0.0	134
Tharaka-Nithi...	97.0	2.4	0.6	76	96.6	2.8	0.6	43	97.5	1.8	0.7	34
Embu.....	98.4	1.2	0.4	99	96.8	2.4	0.9	48	100.0	0.0	0.0	51
Kitui.....	98.1	1.9	0.0	212	97.2	2.8	0.0	111	99.0	1.0	0.0	101
Machakos.....	99.4	0.4	0.2	263	99.7	0.0	0.3	133	99.2	0.8	0.0	131
Makueni.....	96.1	3.5	0.4	206	94.4	4.9	0.7	108	98.1	1.9	0.0	98
Nyandarua.....	99.4	0.4	0.3	130	99.2	0.3	0.5	74	99.6	0.4	0.0	56
Nyeri.....	98.0	1.2	0.8	126	98.2	1.8	0.0	62	97.9	0.5	1.6	64
Kirinyaga.....	95.8	1.6	2.5	102	97.3	2.1	0.6	40	94.9	1.3	3.8	62
Murang'a.....	97.4	1.7	1.0	186	97.9	1.0	1.0	100	96.7	2.4	1.0	85
Kiambu.....	99.7	0.3	0.0	348	99.4	0.6	0.0	165	100.0	0.0	0.0	183
Turkana.....	66.9	31.9	1.2	182	79.6	19.5	0.9	94	53.3	45.1	1.6	88
West Pokot.....	83.5	15.3	1.1	137	85.9	12.4	1.6	72	80.9	18.5	0.6	66
Samburu.....	53.8	46.2	0.0	53	55.5	44.5	0.0	26	52.1	47.9	0.0	26
Trans Nzoia.....	97.2	1.2	1.6	225	96.8	1.4	1.8	117	97.6	1.0	1.4	108
Uasin Gishu.....	91.6	1.7	6.7	239	89.6	2.7	7.7	112	93.4	0.8	5.9	127
Elgeyo / Marakwet...	96.2	3.8	0.0	106	96.2	3.8	0.0	54	96.3	3.7	0.0	53
Nandi.....	98.8	0.5	0.7	209	98.6	1.1	0.4	97	99.0	0.0	1.0	112
Baringo.....	94.2	5.8	0.0	144	91.9	8.1	0.0	77	96.9	3.1	0.0	67
Laikipia.....	89.3	8.8	1.9	96	90.8	8.4	0.8	49	87.7	9.1	3.2	47
Nakuru.....	98.9	0.2	0.9	363	98.9	0.0	1.1	173	99.0	0.3	0.7	191
Narok.....	85.9	12.9	1.2	211	88.1	10.3	1.6	97	84.0	15.0	0.9	115
Kajiado.....	91.7	7.6	0.8	173	90.8	7.7	1.5	78	92.4	7.5	0.1	94
Kericho.....	97.1	2.2	0.8	188	96.9	2.0	1.0	92	97.2	2.3	0.5	95
Bomet.....	92.4	4.8	2.8	182	93.4	5.4	1.2	102	91.0	4.1	4.8	80
Kakamega...	94.4	4.9	0.7	403	93.4	5.8	0.8	198	95.4	4.1	0.5	205
Vihiga.....	98.2	1.1	0.6	117	97.6	2.1	0.2	64	98.9	0.0	1.1	53
Bungoma...	96.9	2.6	0.5	314	95.3	4.3	0.5	162	98.7	0.8	0.5	151
Busia.....	97.2	2.8	0.0	185	97.2	2.8	0.0	87	97.1	2.9	0.0	98
Siaya.....	97.4	2.3	0.4	198	96.1	3.1	0.7	95	98.5	1.5	0.0	102
Kisumu.....	98.6	0.6	0.8	238	98.7	0.6	0.7	123	98.5	0.6	0.9	115
Homa Bay...	96.4	3.6	0.0	211	96.5	3.5	0.0	98	96.4	3.6	0.0	113
Migori.....	98.7	0.7	0.6	269	98.8	0.0	1.2	138	98.6	1.4	0.0	131
Kisii.....	97.9	1.4	0.7	292	97.8	2.1	0.2	155	98.1	0.6	1.3	138
Nyamira.....	97.9	1.9	0.2	135	98.5	1.5	0.0	72	97.3	2.2	0.5	64
Nairobi City.....	99.6	0.2	0.3	996	100.0	0.0	0.0	450	99.2	0.3	0.5	546

# CHAPTER 5

## 5. GENERAL HEALTH CHARACTERISTICS

### 5.1 Introduction

Access to basic health services is a fundamental human right highlighted in the Constitution of Kenya. Information on basic health care is crucial in the design of requisite policy interventions as well as monitoring existing programmes and internationally agreed milestones such as Sustainable Development Goals (SDGs). This chapter presents key indicators on general health such as morbidity, health seeking behaviour, utilization of health care services and facilities, disability and engagement in economic activities and health insurance coverage. It also presents information on child, maternal and survival related indicators such as place of delivery, assistance during delivery, immunization and incidences of diarrhoea.

### 5.2 Morbidity

The 2015/16 Kenya Integrated Household Budget Survey (KIHBS) collected information on sickness and injury experienced by household members during the four weeks preceding the survey. Table 5.1 presents the distribution of the population who reported sickness or injury by sex, residence and county. Overall, 21.5 per cent of the population were reported to have been sick or injured during the reference period. The prevalence of illness was higher for females (23.8%) than for males (19.1%). The proportion of population that reported sickness or injury in rural areas was higher at 22.2 per cent compared to 20.2 per cent in urban areas. The counties with high proportion of population that reported sickness or injury were Migori (41.8%), Kakamega (40.0%) and Tharaka Nithi (35.0%).

Table 5.2 presents the percentage distribution of population reported to have been sick or injured in the four weeks preceding the survey by type of sickness/injury, residence and county. Overall, 37.0 per cent of the population that were sick were suffering from fever/malaria, with rural areas recording a higher proportion of 39.2 per cent compared to 32.8 per cent in urban areas. A high proportion of the population that reported incidences of fever/ Malaria were in Migori (74.4%), Homa Bay (66.3%), Vihiga (62.8%), Siaya (60.2%), Mandera (54.5%) and Busia (53.3%) Counties. Other sicknesses reported by a high proportion of population were flu and headache. Baringo County recorded the highest prevalence of flu at 38.8 per cent followed by Mandera and Nandi Counties at 37.4 per cent and 34.4 per cent, respectively. Upper respiratory infections were more common among the population in Nyamira, Meru and Makueni Counties.

Table 5.1: Percentage Distribution of the Population by Incidence of Sickness/Injury by Sex, Residence and County

Residence/ County	Male		Female		National	
	Sick/ Injured	Number of Individuals (‘000)	Sick/ Injured	Number of Individuals (‘000)	Sick/ Injured	Number of Individuals (‘000)
National.....	19.1	22,393	23.8	22,978	21.5	45,371
Rural.....	19.5	14,212	24.7	14,915	22.2	29,127
Urban.....	18.2	8,181	22.3	8,064	20.2	16,245
<b>County</b>						
Mombasa.....	13.7	601	16.8	584	15.3	1,185
Kwale.....	24.1	413	25.6	407	24.9	820
Kilifi.....	23.4	657	30.9	743	27.4	1,400
Tana River.....	15.1	150	18.4	153	16.8	304
Lamu.....	23.9	63	26.1	65	25.0	128
Taita / Taveta.....	27.3	177	32.1	182	29.7	358
Garissa.....	8.6	220	8.8	212	8.7	432
Wajir.....	6.5	239	6.8	220	6.6	459
Mandera.....	12.8	366	21.0	346	16.8	711
Marsabit.....	6.1	164	9.3	152	7.6	316
Isiolo.....	8.9	78	11.1	78	10.0	156
Meru.....	21.9	771	29.4	700	25.5	1,471
Tharaka- Nithi.....	28.4	194	41.4	202	35.0	396
Embu.....	21.1	281	26.4	279	23.8	560
Kitui.....	18.4	522	24.9	576	21.8	1,098
Machakos.....	15.8	593	21.5	598	18.7	1,191
Makueni.....	25.0	473	30.9	486	28.0	959
Nyandarua.....	10.5	342	21.8	344	16.2	686
Nyeri.....	19.7	388	27.2	410	23.5	798
Kirinyaga.....	20.6	284	31.9	324	26.6	608
Murang’a.....	16.9	515	22.2	570	19.7	1,085
Kiambu.....	17.4	955	19.3	913	18.4	1,868
Turkana.....	21.6	514	24.3	570	23.0	1,084
West Pokot.....	13.8	323	16.2	326	15.0	649
Samburu.....	11.1	142	11.7	142	11.4	284
Trans Nzoia.....	19.5	532	20.1	506	19.8	1,038
Uasin Gishu.....	15.2	560	16.7	573	16.0	1,133
Elgeyo / Marakwet...	10.1	230	11.6	239	10.8	469
Nandi.....	23.5	472	26.7	482	25.1	954
Baringo.....	26.2	341	31.4	363	28.9	704
Laikipia.....	14.4	253	13.6	254	14.0	507
Nakuru.....	12.4	972	12.7	1,059	12.6	2,031
Narok.....	10.7	531	13.1	546	11.9	1,078
Kajiado.....	13.2	442	17.5	429	15.3	871
Kericho.....	14.8	472	21.1	473	17.9	945
Bomet.....	9.3	466	14.0	450	11.6	916
Kakamega.....	37.1	911	42.8	965	40.0	1,876
Vihiga.....	22.6	313	30.6	314	26.6	627
Bungoma.....	24.0	744	29.8	810	27.0	1,553
Busia.....	11.5	379	17.2	462	14.6	840
Siaya.....	29.4	466	36.7	519	33.2	985
Kisumu.....	25.5	593	27.8	539	26.6	1,132
Homa Bay.....	24.0	512	27.2	560	25.7	1,072
Migori.....	39.1	533	44.2	593	41.8	1,126
Kisii.....	12.4	670	18.5	676	15.5	1,347
Nyamira.....	17.9	339	22.0	360	20.0	699
Nairobi City.....	16.3	2,237	22.0	2,226	19.2	4,463

Table 5.2: Percentage Distribution of the Population that reported Being Sick/Injured by Type of Sickness/Injury, Residence / County

Residence/ County	Fever/ Malaria	Stomach problems	Diarrh- oea	Vomiting	Upper respir- atory Infection	Lower Respir- atory Infection	Flu	Asthma	Head-ache	Skin Problem	Dental Problem
National.....	37.0	2.3	7.3	1.0	7.4	3.0	16.5	1.2	8.1	2.3	1.5
Rural.....	39.2	2.0	6.9	1.0	7.9	2.3	14.6	1.4	8.6	2.6	1.4
Urban.....	32.8	2.8	8.0	0.9	6.3	4.4	20.2	1.0	7.0	1.6	1.8
<b>County</b>											
Mombasa.....	45.9	2.3	8.4	2.2	0.4	2.7	14.3	1.7	6.4	2.8	1.6
Kwale.....	46.9	3.9	3.2	0.5	7.7	1.1	15.4	4.0	13.8	3.2	0.5
Kilifi.....	25.5	3.3	10.2	0.8	9.4	3.8	25.0	2.9	10.9	3.1	2.3
Tana River.....	52.6	3.8	8.8	6.5	3.0	6.2	5.9	2.6	4.4	3.4	1.2
Lamu.....	23.2	3.5	6.2	1.0	3.6	1.3	20.5	3.4	5.5	1.7	1.2
Taita / Taveta.....	23.2	2.6	7.7	0.8	6.7	1.2	25.7	0.9	8.5	2.7	2.6
Garissa.....	29.8	3.0	3.3	3.0	2.0	1.1	27.6	1.1	8.0	0.3	2.2
Wajir.....	25.4	5.4	6.8	3.4	17.3	1.4	9.5	1.5	4.5	0.5	0.4
Mandera.....	54.5	2.1	4.7	2.6	6.7	4.4	37.4	0.7	9.7	0.4	2.8
Marsabit.....	31.0	0.7	10.3	1.5	9.9	1.1	5.2	3.0	2.7	0.1	1.4
Isiolo.....	48.3	4.1	9.3	0.5	7.5	9.4	8.0	0.2	0.7	2.3	1.5
Meru.....	25.4	1.0	10.4	1.1	22.5	2.6	16.7	0.5	7.1	4.3	2.1
Tharaka-Nithi.....	41.9	2.2	11.3	2.4	8.8	1.1	14.2	0.5	15.0	4.6	2.5
Embu.....	23.7	2.2	7.9	1.0	4.2	1.0	17.7	2.2	11.4	1.0	1.4
Kitui.....	36.7	3.1	9.0	1.5	13.9	2.6	4.1	1.3	10.9	4.8	2.1
Machakos.....	37.1	1.9	9.8	0.5	5.7	0.8	12.1	1.2	7.6	1.2	2.0
Makueni.....	36.8	0.9	8.8	0.2	22.2	4.2	11.3	0.6	8.8	1.5	1.6
Nyandarua.....	7.8	2.3	4.3	1.8	19.3	0.0	22.1	1.9	3.0	1.2	2.9
Nyeri.....	9.1	1.4	7.1	0.1	9.7	1.9	30.1	1.6	3.8	1.0	2.1
Kirinyaga.....	28.1	1.7	7.2	0.6	11.7	8.9	9.6	1.6	2.9	1.3	1.2
Murang'a.....	11.3	0.8	5.1	0.8	6.1	3.4	22.0	1.5	5.6	5.1	2.3
Kiambu.....	12.1	4.0	7.1	0.2	1.7	16.0	18.7	1.2	4.2	2.3	2.7
Turkana.....	40.1	3.9	4.8	0.2	1.0	4.5	16.9	0.0	7.8	2.7	0.5
West Pokot.....	51.6	2.6	3.3	1.6	7.1	0.0	5.6	0.0	16.4	0.8	1.2
Samburu.....	39.1	3.3	7.5	1.2	20.5	5.2	1.3	0.1	0.0	2.3	1.2
Trans Nzoia.....	45.7	3.0	4.9	0.8	1.3	0.0	17.5	1.7	5.5	1.3	1.0
Uasin Gishu.....	22.5	2.4	5.1	1.6	6.7	1.0	24.9	0.7	7.1	3.0	2.8
Elgeyo / Marakwet...	22.6	2.9	6.4	4.3	3.8	6.7	13.7	0.0	6.5	2.7	0.0
Nandi.....	23.2	0.7	4.0	0.0	1.8	0.2	34.4	1.4	17.7	3.0	1.7
Baringo.....	19.2	2.7	4.7	0.8	10.3	0.5	38.8	1.2	6.4	5.9	0.7
Laikipia.....	19.9	5.8	10.6	1.1	8.1	3.2	6.8	0.9	5.3	2.7	1.6
Nakuru.....	25.1	1.3	11.8	1.1	12.3	1.5	19.6	0.5	5.3	0.3	1.2
Narok.....	34.5	0.1	7.0	1.0	15.7	1.0	6.1	0.0	2.1	1.7	0.7
Kajiado.....	20.7	2.2	8.3	0.5	7.4	2.5	27.6	1.6	3.0	0.5	0.7
Kericho.....	21.3	1.8	6.4	0.4	4.0	2.8	29.6	0.9	8.3	2.9	1.5
Bomet.....	27.6	2.0	3.6	1.0	3.3	0.9	24.8	1.6	3.9	2.8	2.8
Kakamega.....	41.8	1.2	9.1	0.1	5.5	3.1	13.1	1.6	13.7	2.7	1.3
Vihiga.....	62.8	3.1	2.3	1.1	7.3	1.0	2.5	0.3	3.1	0.8	1.2
Bungoma.....	51.5	2.7	9.2	1.0	4.0	1.1	22.1	1.6	8.7	2.1	0.9
Busia.....	53.3	2.9	7.2	1.4	2.7	0.5	5.0	2.3	8.3	5.0	0.0
Siaya.....	60.2	2.4	3.9	0.6	2.1	1.1	4.2	2.4	11.7	1.1	1.6
Kisumu.....	51.0	3.8	7.1	4.5	8.4	4.8	9.6	0.9	18.2	2.3	3.0
Homa Bay.....	66.3	2.3	4.6	0.9	3.6	0.1	9.1	1.5	8.9	0.8	0.5
Migori.....	74.4	1.4	3.0	0.9	4.1	1.5	2.0	0.6	1.8	1.4	1.5
Kisii.....	46.2	2.0	10.4	0.6	4.0	0.3	4.3	0.8	5.8	0.1	0.3
Nyamira.....	39.6	0.5	8.0	0.5	26.6	0.8	1.3	0.8	5.2	4.0	0.4
Nairobi City.....	26.8	2.9	9.4	0.5	4.4	6.3	24.9	0.5	5.1	2.0	1.5

Table 5.2: Percentage Distribution of the Population that reported Being Sick/Injured by Type of Sickness/Injury, Residence / County... Cont'd

Residence/ County	Eye Problem	Ear/ Nose/ Throat	Back-ache	TB	Heart Problem	Blood Pressure	Pain while passing Urine	Diabetes	Mental Disorder	STIs	Burn	Fracture
National.....	2.0	1.5	3.2	0.3	0.3	2.8	0.2	1.1	0.4	0.0	0.3	1.4
Rural.....	1.8	1.4	3.8	0.3	0.4	2.9	0.2	1.3	0.4	0.0	0.3	1.2
Urban.....	2.5	1.8	2.1	0.3	0.2	2.8	0.2	1.1	0.3	0.0	0.4	1.7
<b>County</b>												
Mombasa.....	1.6	1.5	0.8	0.4	1.3	2.6	0.4	0.7	0.6	0.0	0.0	0.6
Kwale.....	1.0	0.9	3.5	0.2	0.1	1.0	1.0	0.7	0.4	0.0	1.5	0.1
Kilifi.....	1.1	1.4	2.2	0.3	0.3	3.1	0.4	1.3	0.0	0.2	0.3	1.1
Tana River.....	1.1	2.1	0.9	0.0	0.8	3.0	0.4	0.0	0.0	0.0	1.1	2.8
Lamu.....	2.7	1.0	2.3	0.0	0.0	4.2	0.4	2.2	0.3	0.0	0.3	1.7
Taita / Taveta.....	1.5	0.7	2.2	0.0	0.1	6.5	0.3	0.8	0.4	0.0	0.3	0.7
Garissa.....	2.0	2.2	0.3	0.0	0.0	2.2	0.2	1.9	0.4	0.0	0.9	1.4
Wajir.....	1.9	1.6	0.4	1.4	5.0	0.2	0.3	2.0	0.4	0.0	0.7	4.8
Mandera.....	1.6	1.6	4.6	0.2	0.3	0.4	1.2	0.4	0.8	0.9	0.0	0.4
Marsabit.....	3.4	0.9	4.9	0.0	1.5	4.3	1.2	0.7	0.2	0.0	1.1	0.8
Isiolo.....	0.0	0.8	1.9	0.3	0.6	2.1	0.0	0.9	0.0	0.0	1.4	1.2
Meru.....	3.2	1.3	2.8	0.3	0.8	2.3	0.6	0.6	0.4	0.0	0.0	2.2
Tharaka-Nithi.....	2.7	1.1	7.4	0.4	0.4	2.9	0.9	0.5	0.8	0.0	0.7	1.1
Embu.....	0.7	1.5	7.7	0.0	0.1	3.2	0.0	1.7	0.5	0.0	0.0	0.5
Kitui.....	1.8	3.6	5.1	0.6	3.0	2.4	0.8	1.2	0.4	0.0	0.4	1.1
Machakos.....	3.2	4.5	3.0	0.4	1.1	4.7	0.0	2.1	0.3	0.0	0.8	1.6
Makueni.....	1.8	1.7	1.8	0.0	0.0	2.2	0.1	1.2	0.3	0.0	0.0	0.8
Nyandarua.....	3.3	1.1	0.7	0.0	0.0	7.5	0.0	2.8	0.5	0.0	0.4	1.9
Nyeri.....	1.1	1.6	4.6	0.0	0.5	12.7	0.7	3.3	1.3	0.0	0.0	3.3
Kirinyaga.....	1.0	2.7	5.6	0.0	0.3	7.3	0.3	0.6	0.6	0.0	0.0	0.2
Murang'a.....	2.2	1.5	7.1	1.0	0.0	7.8	0.1	1.6	0.0	0.2	0.3	3.2
Kiambu.....	2.2	1.6	2.0	0.0	0.0	5.4	0.0	3.0	0.4	0.0	0.3	0.6
Turkana.....	3.3	1.0	1.6	1.3	0.0	0.8	1.1	0.0	0.0	0.0	0.3	1.0
West Pokot.....	1.1	1.1	4.3	0.5	0.6	0.1	0.0	0.4	0.0	0.0	0.5	2.5
Samburu.....	2.0	3.2	0.7	0.0	0.4	0.1	0.5	0.8	0.0	0.0	1.5	4.5
Trans Nzoia.....	0.2	2.3	3.3	0.0	0.2	1.0	0.0	0.2	0.3	0.0	0.5	0.7
Uasin Gishu.....	3.6	2.5	4.5	0.6	0.5	4.1	0.6	1.3	0.0	0.0	0.4	1.1
Elgeyo / Marakwet...	1.8	1.4	4.0	0.5	0.3	0.0	0.7	0.0	1.7	0.0	0.2	1.6
Nandi.....	1.0	0.6	1.9	0.4	0.0	0.8	0.0	1.1	0.4	0.0	0.2	0.0
Baringo.....	1.5	0.7	2.9	0.0	0.3	1.7	0.0	0.2	0.2	0.0	0.6	1.9
Laikipia.....	3.0	0.5	4.3	0.4	0.0	3.6	0.0	3.3	0.3	0.0	0.5	2.5
Nakuru.....	1.8	2.1	1.6	0.0	0.2	3.4	0.0	1.7	0.8	0.0	0.4	1.5
Narok.....	1.9	0.9	0.5	0.0	0.0	0.4	0.0	0.3	0.7	0.0	1.2	3.7
Kajiado.....	4.0	3.0	1.9	1.3	0.0	5.7	0.0	1.0	0.3	0.0	0.1	3.0
Kericho.....	0.6	2.1	2.8	0.2	0.3	2.7	0.5	0.8	0.2	0.0	0.2	1.2
Bomet.....	4.0	2.1	3.8	0.0	0.6	2.2	0.0	0.5	1.3	0.0	0.0	1.7
Kakamega.....	1.0	0.6	3.3	0.0	0.1	2.6	0.0	0.4	0.3	0.0	0.2	0.7
Vihiga.....	1.1	0.7	1.1	0.2	0.0	2.3	0.0	0.5	0.6	0.0	0.4	1.6
Bungoma.....	1.6	2.3	3.4	0.0	0.5	1.4	0.0	0.3	0.0	0.0	0.0	0.9
Busia.....	3.2	3.3	2.1	0.2	0.4	2.4	0.3	1.2	0.2	0.0	0.5	0.8
Siaya.....	1.6	0.1	4.0	0.5	0.6	2.5	0.4	0.7	0.0	0.0	0.3	1.3
Kisumu.....	9.1	2.2	6.2	0.0	0.0	0.8	0.4	0.2	0.7	0.2	0.0	0.4
Homa Bay.....	1.8	0.2	1.4	0.2	0.1	0.5	0.2	0.5	0.3	0.0	0.4	0.8
Migori.....	1.6	0.7	4.3	0.3	0.2	0.6	0.1	0.2	0.0	0.0	0.3	0.7
Kisii.....	2.0	0.8	9.3	0.0	0.0	3.4	0.3	2.0	0.8	0.0	0.7	0.9
Nyamira.....	1.6	0.8	4.7	0.0	0.5	2.0	0.0	1.3	2.0	0.0	0.7	1.3
Nairobi City.....	1.7	1.9	1.2	0.5	0.0	3.1	0.0	2.5	0.4	0.0	0.2	3.5

Table 5.2: Percentage Distribution of the Population that reported Being Sick/Injured by Type of Sickness/Injury, Residence / County... Cont'd

Residence/ County	Wound / cut	Poiso- ning	Pregnacy Related	Cancer	Other long term illness	HIV /Aids	Typhoid	Other	Number of Individuals ('000)
National.....	3.4	0.1	0.4	0.2	1.7	0.4	2.8	8.9	9,742
Rural.....	3.1	0.0	0.4	0.2	1.9	0.4	2.7	9.3	6,455
Urban.....	3.8	0.1	0.4	0.3	1.3	0.3	2.7	8.0	3,287
<b>County</b>									
Mombasa.....	3.1	0.8	0.0	0.6	0.7	0.0	1.1	5.3	181
Kwale.....	3.1	0.0	0.1	0.0	1.1	0.0	0.9	0.8	204
Kilifi.....	11.5	0.0	0.0	0.0	2.3	0.0	0.9	5.5	383
Tana River.....	0.8	0.0	0.5	0.0	7.0	0.2	3.7	5.7	51
Lamu.....	5.4	0.0	1.4	0.0	0.4	0.0	0.3	15.8	32
Taita / Taveta.....	3.9	0.0	1.3	0.2	4.0	0.8	0.2	11.4	106
Garissa.....	3.3	0.0	1.1	0.0	1.0	0.0	5.5	10.0	38
Wajir.....	1.5	0.4	0.0	0.0	8.0	0.0	2.7	5.2	30
Mandera.....	4.2	0.0	3.1	0.0	3.3	0.0	1.9	6.0	120
Marsabit.....	1.7	0.0	3.4	0.0	0.0	1.5	1.0	17.7	24
Isiolo.....	3.5	0.0	0.5	0.3	3.9	0.0	2.1	2.0	16
Meru.....	3.6	0.0	0.0	0.5	1.2	0.8	4.3	17.0	375
Tharaka-Nithi.....	2.9	0.0	0.2	0.0	0.7	0.0	3.4	7.5	139
Embu.....	3.5	0.2	0.0	0.2	2.4	0.0	2.6	20.6	133
Kitui.....	2.7	0.2	0.3	0.1	2.8	0.4	3.0	7.1	240
Machakos.....	1.9	0.0	0.2	0.6	1.6	0.9	2.2	17.2	222
Makueni.....	2.1	0.0	0.4	0.0	2.9	0.2	0.8	15.8	268
Nyandarua.....	3.1	0.0	1.3	0.0	3.4	0.0	2.6	14.1	111
Nyeri.....	4.7	0.0	0.4	0.3	1.5	1.2	0.9	7.7	188
Kirinyaga.....	0.7	0.0	0.3	0.0	1.7	0.0	2.7	16.2	162
Murang'a.....	6.7	0.3	1.1	0.2	3.8	0.0	1.7	8.8	214
Kiambu.....	1.1	0.0	0.2	0.0	0.2	0.0	4.3	13.8	343
Turkana.....	0.8	0.0	1.4	0.0	2.2	0.1	2.6	10.3	250
West Pokot.....	2.5	0.0	1.0	0.0	0.0	0.2	11.0	14.7	98
Samburu.....	5.5	0.0	0.0	0.0	0.0	0.0	0.0	8.1	32
Trans Nzoia.....	2.8	0.0	0.2	0.2	1.7	0.2	8.4	14.6	205
Uasin Gishu.....	3.6	0.0	0.2	0.0	0.7	0.5	4.3	5.0	181
Elgeyo / Marakwet...	4.3	0.0	0.8	0.7	0.3	0.0	4.3	15.3	51
Nandi.....	3.9	0.0	0.3	0.2	1.0	0.5	4.4	10.8	239
Baringo.....	2.1	0.0	0.2	0.7	0.3	0.2	4.7	8.4	203
Laikipia.....	1.3	0.0	0.1	0.0	4.1	0.9	3.3	13.8	71
Nakuru.....	2.8	0.0	0.0	0.4	1.1	0.0	2.0	8.9	255
Narok.....	3.1	0.4	0.3	0.1	2.9	0.1	4.8	15.5	129
Kajiado.....	1.9	0.0	1.8	0.0	1.1	1.5	2.4	5.9	133
Kericho.....	2.6	0.0	0.8	0.0	2.3	0.6	2.7	9.1	169
Bomet.....	1.7	0.0	0.4	0.4	1.5	0.0	2.6	7.9	106
Kakamega.....	2.2	0.0	0.0	0.1	0.9	0.7	1.6	7.3	751
Vihiga.....	3.3	0.0	0.1	0.3	3.7	0.3	1.5	6.6	167
Bungoma.....	2.8	0.2	0.1	0.0	0.6	0.1	5.4	7.0	420
Busia.....	3.4	0.0	0.0	0.1	0.6	0.4	1.6	7.9	123
Siaya.....	2.6	0.0	0.0	0.2	0.2	0.2	0.8	9.6	328
Kisumu.....	2.7	0.0	0.5	0.3	2.6	0.6	3.4	5.6	301
Homa Bay.....	2.1	0.0	0.6	0.0	2.1	0.3	2.1	5.2	275
Migori.....	2.9	0.2	0.4	0.4	1.8	0.6	3.1	4.8	470
Kisii.....	4.4	0.0	0.6	0.0	4.7	0.8	1.7	2.3	208
Nyamira.....	7.0	0.0	0.2	0.0	8.5	1.3	0.5	0.4	140
Nairobi City.....	4.7	0.0	0.3	0.6	0.3	0.2	3.6	7.3	856

The distribution of population that reported sickness/injury by age group, residence and county is presented in Table 5.3. Nationally, children aged 0-5 years accounted for 22.4 per cent of those reported to have been sick or injured.

Analysis across counties shows that Nairobi City, Mombasa, and Kiambu had high incidences of sickness/injury among the 18-35 years age group. High proportions of those who reported sickness/injury amongst the 36-70 years age group were in, Nyeri (37.5%), Murang'a (35.9%), Meru (35.4%) and Kirinyaga (34.4%) Counties.

The percentage distribution of the population that reported sickness/injury by cause is presented in Table 5.4. Overall, 5.0 per cent of the population that were sick experienced work-related sickness/injury during the reference period. Urban areas registered higher proportions of those with work related illness compared to their rural counterparts. Nyeri and Kilifi Counties reported a higher proportion of population (17.1% and 14.8%, respectively) who suffered work related sickness/injury.

Table 5.3: Percentage Distribution of the Population that reported Sickness/Injury by Age Group, Residence and County

Residence/ County	0-5 years	6-17 years	18-35 years	35-70 years	Over 70 years	Number of Individuals ('000)
National.....	22.4	24.9	22.7	24.9	5.1	9,742
Rural.....	21.7	27.4	18.2	26.4	6.2	6,455
Urban.....	23.8	19.8	31.5	21.8	3.0	3,287
<b>County</b>						
Mombasa.....	21.4	20.1	33.5	24.2	0.8	181
Kwale.....	26.8	30.2	19.9	22.0	1.1	204
Kilifi.....	23.4	26.6	22.6	22.0	5.3	383
Tana River.....	24.8	27.5	15.8	25.8	6.0	51
Lamu.....	26.1	24.4	16.7	28.1	4.7	32
Taita / Taveta.....	21.7	19.3	20.8	30.8	7.4	106
Garissa.....	30.1	30.2	17.7	17.4	4.6	38
Wajir.....	28.2	21.5	15.6	29.8	4.9	30
Mandera.....	28.3	26.0	20.6	21.1	3.9	120
Marsabit.....	26.1	13.2	19.8	32.2	8.7	24
Isiolo.....	32.5	18.7	24.3	22.9	1.5	16
Meru.....	20.2	16.6	21.1	35.4	6.6	375
Tharaka-Nithi.....	16.9	21.1	20.9	32.9	8.0	139
Embu.....	17.0	25.1	17.2	31.4	9.3	133
Kitui.....	19.6	29.4	18.3	25.0	7.7	240
Machakos.....	17.3	20.9	25.2	28.2	8.4	222
Makueni.....	18.8	25.7	17.8	31.7	6.0	268
Nyandarua.....	17.6	23.1	18.7	30.9	9.6	111
Nyeri.....	16.1	15.2	20.9	37.5	10.3	188
Kirinyaga.....	16.8	22.5	19.2	34.4	7.1	162
Murang'a.....	15.0	23.4	12.7	35.9	13.0	214
Kiambu.....	21.8	18.6	30.7	23.7	5.2	343
Turkana.....	21.1	23.2	24.1	27.8	3.7	250
West Pokot.....	29.6	25.9	21.7	19.6	3.1	98
Samburu.....	30.2	30.0	21.0	15.7	3.1	32
Trans Nzoia.....	22.6	26.0	23.8	21.1	6.5	205
Uasin Gishu.....	27.3	15.9	27.7	24.4	4.7	181
Elgeyo / Marakwet...	26.6	26.2	20.9	19.8	6.5	51
Nandi.....	22.6	28.2	24.0	23.2	2.1	239
Baringo.....	23.4	30.5	18.5	23.3	4.4	203
Laikipia.....	22.2	19.3	19.0	31.0	8.5	71
Nakuru.....	21.1	23.3	21.6	28.4	5.6	255
Narok.....	31.7	21.4	21.8	21.1	4.0	129
Kajiado.....	23.6	17.9	32.8	22.2	3.5	133
Kericho.....	21.2	23.9	27.2	23.0	4.8	169
Bomet.....	29.3	27.1	20.7	20.8	2.1	106
Kakamega.....	20.4	32.4	18.5	24.1	4.6	751
Vihiga.....	19.1	31.0	14.1	28.9	6.9	167
Bungoma.....	24.9	29.4	18.5	22.7	4.6	420
Busia.....	29.9	30.2	16.2	19.0	4.7	123
Siaya.....	22.3	28.5	18.2	21.9	9.1	328
Kisumu.....	27.5	29.1	22.8	17.0	3.5	301
Homa Bay.....	28.5	34.4	16.5	16.6	4.0	275
Migori.....	19.3	36.8	17.5	22.5	3.9	470
Kisii.....	21.2	17.6	22.1	31.1	7.9	208
Nyamira.....	21.8	29.2	19.3	25.2	4.4	140
Nairobi City.....	25.0	13.6	41.4	19.4	0.5	856

Table 5.4: Percentage Distribution of the Population that reported being Sick/Injured by Cause, Residence / County

Residence / County	Work-related	Gender based violence related	Neither	Not Stated	Number of Individuals ('000)
National.....	5.0	1.7	92.8	0.4	9,742
<b>Rural.....</b>	<b>4.4</b>	<b>1.4</b>	<b>93.7</b>	<b>0.4</b>	<b>6,455</b>
<b>Urban.....</b>	<b>6.2</b>	<b>2.4</b>	<b>91.1</b>	<b>0.3</b>	<b>3,287</b>
<b>County</b>					
Mombasa.....	7.2	4.7	88.2	0.0	181
Kwale.....	3.3	0.8	95.5	0.3	204
Kilifi.....	14.8	0.7	83.7	0.8	383
Tana River.....	6.3	1.0	92.5	0.2	51
Lamu.....	0.9	1.0	98.1	0.0	32
Taita / Taveta.....	10.4	0.2	87.9	1.5	106
Garissa.....	5.0	0.9	94.1	0.0	38
Wajir.....	2.7	3.9	93.1	0.3	30
Mandera.....	0.2	0.0	95.4	4.4	120
Marsabit.....	1.5	2.4	96.1	0.0	24
Isiolo.....	4.2	0.3	95.5	0.0	16
Meru.....	0.9	0.2	98.7	0.1	375
Tharaka-Nithi.....	4.2	0.4	94.7	0.7	139
Embu.....	1.8	2.4	95.8	0.0	133
Kitui.....	5.7	0.7	93.6	0.0	240
Machakos.....	6.1	1.9	91.0	1.1	222
Makueni.....	4.1	0.4	95.1	0.4	268
Nyandarua.....	3.2	27.6	69.2	0.0	111
Nyeri.....	17.1	0.3	82.5	0.0	188
Kirinyaga.....	0.9	0.0	99.1	0.0	162
Murang'a.....	1.8	0.5	97.8	0.0	214
Kiambu.....	3.8	4.0	91.9	0.4	343
Turkana.....	6.7	3.1	87.8	2.3	250
West Pokot.....	7.9	1.0	91.1	0.0	98
Samburu.....	3.8	6.0	90.1	0.0	32
Trans Nzoia.....	1.1	2.3	96.6	0.0	205
Uasin Gishu.....	4.0	0.6	95.4	0.0	181
Elgeyo / Marakwet...	1.6	0.2	97.7	0.5	51
Nandi.....	7.9	3.0	88.2	0.9	239
Baringo.....	7.1	1.7	91.2	0.0	203
Laikipia.....	5.9	0.3	93.9	0.0	71
Nakuru.....	2.7	0.8	96.5	0.0	255
Narok.....	11.7	1.4	86.9	0.0	129
Kajiado.....	3.8	6.3	89.1	0.9	133
Kericho.....	8.2	1.1	90.7	0.0	169
Bomet.....	3.1	0.8	95.7	0.4	106
Kakamega.....	4.4	0.8	94.7	0.1	751
Vihiga.....	3.5	2.7	93.8	0.0	167
Bungoma.....	1.2	0.5	97.2	1.1	420
Busia.....	1.7	0.0	98.3	0.0	123
Siaya.....	3.8	1.1	94.3	0.9	328
Kisumu.....	9.6	5.1	85.0	0.4	301
Homa Bay.....	2.2	0.1	97.6	0.0	275
Migori.....	1.7	0.2	98.1	0.0	470
Kisii.....	4.1	0.8	94.3	0.9	208
Nyamira.....	2.6	0.3	97.1	0.0	140
Nairobi City.....	7.2	2.1	90.7	0.0	856

### 5.3 Diagnosis of Sickness/Injury

Information on the population reported being sick/injured by who diagnosed the sickness/injury, residence and county is presented in Table 5.5. Nationally, 28.3 per cent of the population with sickness/injury visited health workers at a health facility for diagnosis of their sickness/injury. Further, diagnosis by a traditional healer and herbalist was reported by 31.4 per cent and 26.3 per cent, respectively, of the population with sickness/injury. The results show that a higher proportion of the urban population had their illnesses diagnosed by health worker compared to their rural counterparts. Counties with high proportions of population that reported diagnosis by a health worker were Embu, Isiolo, Wajir, Uasin Gishu and Mombasa.

The percentage distribution of population that reported sickness/injury by number of work/school days lost due to illness is presented in Table 5.6. The findings show that 23.9 per cent of the population that were sick lost 1-2 days of work/school while 15.5 per cent lost 3-4 days. Approximately a third (32.9%) of the population that reported illness did not miss any day of work/school due to illness. Nearly one third (31.3%) of the population in Marsabit County reported as sick lost between one to two weeks of work/school due to the illness.

Table 5.7 presents the distribution of population reported to have been sick or injured by type of health provider visited. Overall, 73.4 per cent of those who reported illness visited public health facilities (government hospitals, health centres and dispensaries). Rural areas had higher proportions (78.2%) of those that visited public health facilities compared to those in urban areas (64.2%).

Elgeyo/Marakwet County had the highest proportion (88.9 %) of those with illness/injury visiting public health facilities. Other counties with high proportions of the sick/injured utilising government health facilities were Migori (87.4%), Siaya (85.9%), Kakamega (85.7%) and Busia (85.6%). On the other hand, Mombasa County had the least proportion (38%) of the population who reported sickness/injury visiting public health facilities for treatment and the highest proportion (53.6%) of those seeking treatment from private hospitals/clinics. Visits to community health workers were prevalent among the sick in Mandera, Elgeyo/Marakwet and Siaya while visits to mission/faith based health facilities were mainly reported by individuals in Marsabit and Samburu Counties.

Table 5.5: Percentage Distribution of Population by Who Diagnosed the Illness/Injury, Residence and County

Residence/ County	Health worker at Health Facility	Traditional healer	Non-Household member (not medical)	Self	Herbalist	Faith healer	Household member	Other	Not Stated	Number of Individuals ('000)
National.....	28.3	31.4	0.2	0.5	26.3	0.5	0.1	12.1	0.7	9,742
Rural.....	23.7	35.9	0.2	0.4	26.0	0.5	0.1	12.5	0.7	6,455
Urban.....	37.3	22.7	0.2	0.6	26.7	0.4	0.1	11.2	0.7	3,287
<b>County</b>										
Mombasa.....	51.2	12.0	0.4	0.0	25.3	1.5	0.0	9.1	0.4	181
Kwale.....	19.2	46.9	0.5	0.0	24.0	0.0	0.0	8.4	1.0	204
Kilifi.....	18.5	49.8	0.0	0.0	26.9	0.6	0.2	3.3	0.7	383
Tana River.....	45.4	30.9	0.2	0.3	11.5	0.7	0.5	9.6	1.0	51
Lamu.....	37.3	31.5	0.6	0.5	20.6	0.9	0.0	8.6	0.0	32
Taita / Taveta.....	16.5	48.4	0.0	0.1	24.4	0.0	0.8	8.3	1.6	106
Garissa.....	48.8	3.2	0.0	1.4	16.3	0.0	0.4	28.9	1.0	38
Wajir.....	61.9	22.0	0.0	0.3	2.6	0.3	0.9	2.9	9.1	30
Mandera.....	36.6	30.6	0.3	0.0	14.1	0.7	0.7	17.0	0.0	120
Marsabit.....	43.5	38.7	2.3	1.1	12.0	2.4	0.0	0.0	0.0	24
Isiolo.....	67.3	9.5	0.0	0.0	15.7	0.0	0.0	7.5	0.0	16
Meru.....	16.8	54.7	0.0	0.2	27.0	1.1	0.0	0.1	0.0	375
Tharaka-Nithi.....	15.7	54.4	0.3	0.2	24.1	0.0	0.1	5.2	0.0	139
Embu.....	68.6	10.3	0.0	0.6	13.8	0.2	0.0	6.5	0.0	133
Kitui.....	15.2	44.2	0.0	0.5	22.1	0.3	0.2	17.0	0.3	240
Machakos.....	34.7	30.5	0.0	0.1	28.9	0.2	0.0	5.3	0.3	222
Makueni.....	21.0	33.6	0.3	0.6	30.8	0.0	0.0	11.7	2.0	268
Nyandarua.....	35.0	48.1	0.0	0.6	12.5	0.0	0.0	3.9	0.0	111
Nyeri.....	20.1	25.4	0.5	0.0	43.1	0.0	0.0	10.5	0.3	188
Kirinyaga.....	19.7	38.6	0.0	0.0	35.2	0.0	0.0	6.4	0.2	162
Muranga.....	30.4	32.4	0.0	0.4	24.2	0.0	0.0	12.7	0.0	214
Kiambu.....	41.5	6.6	0.0	0.0	38.0	0.3	0.0	12.7	0.9	343
Turkana.....	35.5	39.4	0.1	5.5	7.8	4.0	0.1	5.8	1.8	250
West Pokot.....	8.0	75.5	0.4	0.0	5.9	0.5	0.0	8.0	1.8	98
Samburu.....	25.7	32.5	1.6	2.0	21.4	1.1	0.0	15.1	0.5	32
Trans Nzoia.....	33.4	31.8	0.2	1.4	20.7	0.0	0.2	12.3	0.0	205
Uasin Gishu.....	52.5	24.2	0.0	0.0	14.0	0.8	0.2	7.9	0.4	181
Elgeyo / Marakwet.....	16.6	23.3	0.5	0.0	23.1	0.0	0.0	36.4	0.1	51
Nandi.....	21.4	8.7	0.6	0.0	39.4	0.2	0.0	29.8	0.0	239
Baringo.....	32.0	36.4	0.6	0.0	15.1	1.0	0.0	14.9	0.0	203
Laikipia.....	29.4	22.7	0.0	0.1	39.7	0.0	0.0	7.8	0.2	71
Nakuru.....	23.2	11.9	0.0	0.0	44.6	0.4	0.0	19.5	0.5	255
Narok.....	38.9	39.7	0.7	0.0	14.5	0.0	0.0	4.5	1.7	129
Kajiado.....	32.3	5.0	0.0	1.0	38.4	0.0	0.0	18.4	4.9	133
Kericho.....	17.3	41.6	0.0	0.4	24.9	0.9	0.0	14.6	0.3	169
Bomet.....	7.8	43.3	1.0	0.0	29.7	0.7	0.0	15.7	1.8	106
Kakamega.....	27.2	8.4	0.0	0.5	46.2	0.1	0.0	17.1	0.7	751
Vihiga.....	11.2	52.8	0.0	0.0	18.6	0.7	0.2	15.3	1.3	167
Bungoma.....	22.1	13.7	0.0	0.0	37.0	0.3	0.0	24.1	2.9	420
Busia.....	13.8	32.2	0.0	0.0	32.9	0.0	0.0	21.1	0.0	123
Siaya.....	23.6	58.8	0.0	0.4	15.7	0.0	0.0	1.3	0.1	328
Kisumu.....	14.9	56.9	0.8	1.1	15.2	1.3	0.4	9.3	0.1	301
Homa Bay.....	15.5	23.9	0.0	0.3	21.6	0.0	0.0	38.0	0.6	275
Migori.....	18.0	57.4	0.2	0.1	17.9	0.3	0.0	6.0	0.0	470
Kisii.....	46.5	19.8	0.3	0.6	19.6	0.5	0.0	11.5	1.3	208
Nyamira.....	30.1	42.8	0.0	0.4	10.6	0.6	0.0	15.6	0.0	140
Nairobi City.....	48.6	16.3	0.3	1.0	25.0	0.5	0.0	8.1	0.3	856

**Table 5.6: Percentage Distribution of the Population (3-60 years) that Reported Sickness/Injury by Number of Work/School Days Missed Due to Illness, Residence and County**

Residence/County	Number of Days						Not Stated	Number of Individuals ('000)
	0	1-2	3-4	5-6	7-14	15+		
National.....	32.9	23.9	15.5	4.5	14.3	4.0	4.8	8,558
Rural.....	28.4	24.9	17.2	4.6	15.3	4.6	5.0	5,698
Urban.....	41.9	21.9	12.3	4.3	12.3	2.8	4.5	2,860
<b>County</b>								
Mombasa.....	36.6	18.7	10.9	3.3	11.1	1.7	17.8	161
Kwale.....	20.5	22.1	24.1	8.5	19.0	2.1	3.6	172
Kilifi.....	25.7	23.9	20.4	3.9	14.4	6.3	5.5	319
Tana River.....	28.5	20.5	13.5	3.8	24.9	5.0	3.9	44
Lamu.....	30.2	17.3	15.9	5.7	22.1	6.4	2.4	27
Taita / Taveta.....	51.4	16.9	7.4	2.1	15.8	4.7	1.8	94
Garissa.....	39.5	10.7	5.5	4.9	23.3	7.4	8.7	31
Wajir.....	23.7	10.5	6.1	3.9	9.1	3.9	42.8	24
Mandera.....	15.4	20.7	21.8	9.0	16.3	7.2	9.5	103
Marsabit.....	23.8	15.7	8.9	4.2	31.3	3.4	12.8	20
Isiolo.....	30.9	27.0	15.7	6.3	8.6	2.2	9.4	12
Meru.....	28.5	23.7	13.9	4.2	18.0	7.9	3.8	333
Tharaka-Nithi.....	16.1	31.0	15.1	6.5	20.0	5.5	5.7	126
Embu.....	36.7	18.8	14.4	3.9	16.5	8.9	0.8	123
Kitui.....	31.7	21.7	13.8	3.7	16.5	6.5	6.1	212
Machakos.....	26.8	23.5	15.7	5.3	16.4	3.5	8.9	202
Makueni.....	40.4	18.6	12.6	3.8	12.9	5.9	5.9	244
Nyandarua.....	29.2	21.4	19.3	8.8	12.3	2.8	6.2	99
Nyeri.....	26.3	25.7	15.1	5.9	13.5	9.1	4.4	176
Kirinyaga.....	47.0	16.2	9.3	5.7	12.6	4.9	4.5	147
Murang'a.....	21.0	42.9	10.1	2.6	10.6	6.8	6.1	195
Kiambu.....	48.1	21.3	10.3	2.8	9.5	2.1	6.0	302
Turkana.....	38.9	19.7	12.4	7.5	9.5	4.7	7.4	218
West Pokot.....	12.0	32.4	27.4	8.5	11.1	2.6	6.0	78
Samburu.....	18.5	19.4	35.6	7.2	9.6	3.3	6.4	26
Trans Nzoia.....	32.9	19.4	15.5	5.2	17.3	6.2	3.6	180
Uasin Gishu.....	26.2	25.6	15.0	5.3	17.9	4.1	5.8	150
Elgeyo / Marakwet..	26.0	27.5	19.0	6.3	12.8	5.1	3.3	43
Nandi.....	49.2	30.6	8.3	1.1	8.5	1.2	1.2	212
Baringo.....	30.3	29.4	14.4	3.9	15.1	5.8	1.0	175
Laikipia.....	44.6	16.8	10.4	6.8	9.9	5.0	6.6	61
Nakuru.....	37.3	23.1	12.6	8.7	9.7	1.2	7.5	221
Narok.....	35.2	12.7	22.1	0.9	16.1	7.4	5.7	105
Kajiado.....	24.2	27.7	14.6	3.7	17.3	3.3	9.2	116
Kericho.....	33.2	19.2	17.3	2.3	15.8	3.1	9.0	153
Bomet.....	28.6	25.0	18.1	14.6	7.4	1.8	4.6	87
Kakamega.....	28.9	26.9	20.4	3.5	15.3	2.6	2.4	672
Vihiga.....	30.6	16.6	22.8	6.3	13.4	6.4	3.8	152
Bungoma.....	33.4	15.0	14.7	1.9	26.1	1.7	7.1	368
Busia.....	45.0	17.8	12.6	2.9	13.6	1.4	6.5	101
Siaya.....	17.5	30.5	20.8	2.1	18.2	4.1	6.8	296
Kisumu.....	28.0	47.1	12.4	1.7	5.7	1.3	3.9	259
Homa Bay.....	41.0	23.5	15.7	4.7	10.8	3.2	1.2	236
Migori.....	23.4	27.9	25.6	8.8	10.2	1.6	2.5	429
Kisii.....	9.1	31.3	26.2	6.1	14.2	6.0	7.2	187
Nyamira.....	13.5	19.4	22.2	3.7	27.2	11.9	2.0	126
Nairobi City.....	58.7	18.6	5.9	3.0	12.2	1.6	0.0	740

**Table 5.7: Percentage Distribution of the Population that reported Sickness/Injury by Type of Health Provider, Residence and County**

Residence/ County	Gover-nment hospital	Gover-nment health centre	Government dispensary	Faith Based (church, Mission) Hospital / Clinic	Fhok/ Fpack Health	Private hospital / clinic	Nursing/ Maternity Home	Pharmacy/ chemist
<b>National.....</b>	<b>20.3</b>	<b>18.4</b>	<b>34.7</b>	<b>4.1</b>	<b>0.3</b>	<b>21.4</b>	<b>0.2</b>	<b>0.5</b>
<b>Rural.....</b>	<b>17.4</b>	<b>20.0</b>	<b>40.8</b>	<b>4.1</b>	<b>0.3</b>	<b>16.2</b>	<b>0.1</b>	<b>0.5</b>
<b>Urban.....</b>	<b>26.0</b>	<b>15.4</b>	<b>22.8</b>	<b>3.9</b>	<b>0.2</b>	<b>31.4</b>	<b>0.3</b>	<b>0.6</b>
<b>County</b>								
Mombasa.....	14.3	13.6	10.1	2.3	0.0	53.6	0.0	2.7
Kwale.....	19.8	8.7	49.5	0.7	0.3	21.3	0.0	0.0
Kilifi.....	13.2	15.0	36.5	1.8	0.0	27.6	0.3	1.0
Tana River.....	38.2	11.9	32.1	1.7	0.0	17.8	0.0	0.2
Lamu.....	22.4	7.6	50.4	1.2	1.5	19.0	0.0	0.0
Taita / Taveta.....	26.0	13.9	43.6	6.0	0.0	11.4	0.3	0.0
Garissa.....	11.7	18.4	32.6	0.0	0.0	36.7	0.0	0.0
Wajir.....	41.5	11.8	13.0	0.0	0.0	37.5	0.0	0.0
Mandera.....	24.1	16.9	35.0	0.0	0.0	25.3	0.8	0.3
Marsabit.....	34.9	5.9	24.1	18.3	0.0	16.2	4.4	0.0
Isiolo.....	24.7	4.8	36.8	10.9	0.0	27.0	0.0	0.3
Meru.....	13.6	15.3	16.6	9.6	0.9	46.6	0.0	0.2
Tharaka-Nithi.....	10.7	16.8	39.4	11.6	1.1	27.8	0.0	1.5
Embu.....	28.1	7.7	37.8	1.6	0.0	27.2	0.4	0.8
Kitui.....	16.2	28.4	39.0	5.6	0.0	12.1	0.0	0.0
Machakos.....	28.4	15.0	26.7	4.0	0.0	27.0	0.4	0.0
Makueni.....	19.1	12.6	48.6	3.1	0.1	13.3	0.2	0.6
Nyandarua.....	19.7	40.8	22.6	6.2	0.0	16.1	0.0	0.0
Nyeri.....	22.0	21.3	36.6	3.9	0.0	19.8	0.0	0.0
Kirinyaga.....	20.7	12.4	38.5	6.1	1.2	24.2	0.0	0.0
Murang'a.....	24.8	31.4	27.5	3.8	0.0	13.9	1.0	0.7
Kiambu.....	22.3	23.6	21.4	5.5	0.0	28.2	0.0	0.0
Turkana.....	25.6	23.7	28.3	6.9	0.3	2.4	0.4	0.1
West Pokot.....	11.7	21.3	38.4	8.6	0.0	11.2	0.1	1.9
Samburu.....	27.3	12.7	33.9	16.8	0.0	12.4	0.0	0.0
Trans Nzoia.....	33.2	7.9	28.6	1.8	0.0	26.6	0.1	0.0
Uasin Gishu.....	40.9	17.0	24.5	3.0	0.2	15.9	0.0	0.0
Elgeyo / Marakwet...	13.7	22.0	53.2	8.8	0.6	3.7	0.0	0.0
Nandi.....	20.8	9.5	34.1	0.4	0.0	19.0	0.0	0.2
Baringo.....	18.3	13.7	52.9	4.4	0.1	13.7	0.0	0.0
Laikipia.....	34.3	24.7	19.0	5.9	0.0	23.0	0.0	0.3
Nakuru.....	26.9	13.6	27.0	4.5	0.0	28.9	0.0	0.0
Narok.....	17.6	23.2	18.8	11.7	0.3	31.2	0.0	0.1
Kajiado.....	28.4	10.4	14.6	12.6	0.0	33.0	1.5	0.0
Kericho.....	15.5	18.2	38.2	1.4	0.4	22.7	0.0	0.6
Bomet.....	11.5	32.5	31.1	4.1	0.9	23.6	0.2	0.0
Kakamega.....	8.2	12.6	64.9	3.4	0.0	9.7	0.4	0.6
Vihiga.....	10.0	22.2	38.7	8.8	2.0	16.6	0.0	0.8
Bungoma.....	20.1	16.8	44.3	1.1	0.0	14.5	0.0	0.6
Busia.....	21.1	23.5	41.0	0.4	0.0	15.3	0.9	0.0
Siaya.....	20.9	22.0	43.0	2.5	0.0	9.3	0.0	2.9
Kisumu.....	22.6	31.7	24.2	3.1	0.3	17.5	0.0	0.5
Homa Bay.....	12.8	22.2	37.2	2.6	0.6	26.0	0.3	0.0
Migori.....	17.3	31.0	39.1	3.6	1.6	8.1	0.0	0.3
Kisii.....	51.3	16.9	12.5	1.6	0.0	7.1	0.0	0.0
Nyamira.....	26.2	29.4	23.1	4.9	1.4	15.7	1.2	0.0
Nairobi City.....	21.8	14.2	22.5	2.9	0.3	39.5	0.3	0.7

**Table 5.7: Percentage Distribution of the Population that reported Sickness/injury by Type of Health Provider, Residence and County... Cont'd**

Residence/ County	Community health worker	Shop/ Kiosk	Traditional healer	Faith healer	Herbalist	Other	Number of Individuals ('000)
<b>National.....</b>	<b>0.3</b>	<b>2.1</b>	<b>0.3</b>	<b>0.0</b>	<b>0.5</b>	<b>0.4</b>	<b>8,165</b>
<b>Rural.....</b>	<b>0.3</b>	<b>2.7</b>	<b>0.3</b>	<b>0.0</b>	<b>0.5</b>	<b>0.1</b>	<b>5,371</b>
<b>Urban.....</b>	<b>0.3</b>	<b>1.0</b>	<b>0.2</b>	<b>0.0</b>	<b>0.4</b>	<b>0.9</b>	<b>2,793</b>
<b>County</b>							
Mombasa.....	0.0	3.9	0.5	0.0	0.9	0.0	144
Kwale.....	0.0	3.4	0.4	0.0	0.5	0.0	159
Kilifi.....	0.1	9.6	0.3	0.0	1.1	0.0	315
Tana River.....	0.0	0.0	0.2	0.0	0.9	0.2	37
Lamu.....	0.0	0.2	0.0	0.2	0.5	0.0	25
Taita / Taveta.....	0.4	3.8	0.0	0.0	0.2	0.0	78
Garissa.....	0.0	0.0	0.0	0.6	0.0	0.0	24
Wajir.....	0.0	0.0	0.0	0.3	0.0	0.0	24
Mandera.....	2.5	0.0	1.7	0.2	0.0	0.0	84
Marsabit.....	0.0	0.0	0.9	0.0	0.8	0.0	21
Isiolo.....	0.0	0.4	0.0	0.0	0.0	0.0	14
Meru.....	0.0	0.2	0.0	0.0	0.0	0.0	261
Tharaka-Nithi.....	0.0	0.9	0.0	0.0	0.0	0.3	116
Embu.....	0.0	0.0	0.0	0.0	0.3	0.0	102
Kitui.....	0.0	2.3	0.0	0.0	0.0	0.0	194
Machakos.....	0.0	0.0	0.0	0.0	1.2	0.0	152
Makueni.....	0.0	5.1	0.0	0.0	0.2	0.0	234
Nyandarua.....	0.0	2.2	0.0	0.0	0.0	0.0	103
Nyeri.....	0.0	0.0	0.0	0.0	0.0	0.0	185
Kirinyaga.....	0.0	0.0	0.0	0.0	0.0	0.2	139
Murang'a.....	0.0	1.4	0.0	0.0	0.0	0.4	193
Kiambu.....	0.0	0.0	0.0	0.0	0.5	0.0	322
Turkana.....	0.0	1.6	0.0	0.0	0.0	12.4	187
West Pokot.....	0.0	9.7	0.2	0.0	0.8	0.0	89
Samburu.....	0.0	0.0	0.9	0.0	1.1	0.0	27
Trans Nzoia.....	0.0	2.3	0.3	0.0	0.6	0.0	163
Uasin Gishu.....	0.0	0.0	0.0	0.0	0.6	0.0	149
Elgeyo / Marakwet...	1.7	0.3	0.1	0.0	0.0	0.0	45
Nandi.....	0.0	17.2	0.6	0.0	0.0	0.0	214
Baringo.....	0.1	3.1	1.9	0.0	1.7	0.0	190
Laikipia.....	0.0	0.0	0.0	0.0	0.0	0.0	55
Nakuru.....	0.0	0.0	0.0	0.0	0.0	0.0	225
Narok.....	0.0	0.7	0.8	0.0	0.0	0.6	116
Kajiado.....	0.0	1.4	0.0	0.0	0.0	0.0	116
Kericho.....	0.2	3.7	0.0	0.0	1.0	0.4	147
Bomet.....	0.0	0.0	0.0	0.0	1.0	0.0	91
Kakamega.....	0.3	1.0	0.0	0.1	0.7	0.2	710
Vihiga.....	1.1	2.7	1.1	0.2	0.2	0.3	142
Bungoma.....	0.4	3.1	0.1	0.4	0.3	0.5	281
Busia.....	0.5	1.3	0.0	0.0	0.0	0.0	83
Siaya.....	1.3	0.3	0.1	0.0	0.8	0.5	301
Kisumu.....	0.5	0.0	0.5	0.2	2.1	0.0	243
Homa Bay.....	0.4	0.2	0.2	0.0	0.0	0.2	222
Migori.....	0.0	0.2	0.5	0.0	0.3	0.0	395
Kisii.....	0.4	7.7	1.2	0.0	1.5	0.0	169
Nyamira.....	0.0	0.1	2.2	0.0	0.6	0.0	106
Nairobi City.....	0.7	0.3	0.3	0.0	0.6	0.0	772

Table 5.8 presents the proportion of population that sought curative and preventive care services. Overall, 18.0 per cent and 4.2 per cent of Kenyans sought curative and preventive care services, respectively, with minor variations between rural and urban areas. Kakamega, Migori and Siaya Counties recorded higher proportions of population seeking curative services while Migori and Kakamega had higher proportions of those seeking preventive care services.

Table 5.9 shows the percentage distribution of population that received free medical services 12 months preceding the survey by type of service and county. There were significant variations in the proportion of population that received free medical services across the different services provided as well as across counties. Majority of the population (37.6%) received Maternal and Child Health Care (MCH) services. The percentage of the population that received free MCH services was higher in urban than rural areas. The proportion of the population that received free malarial services was 17.9 per cent and ranged from nil in Narok and Nyeri to a high of 73.2 per cent in Tharaka-Nithi County. A relatively higher proportion of population in Siaya, Murang'a and Migori Counties received free HIV/AIDS services.

**Table 5.8: Percentage Distribution of the Population by Type of Health Care Service Sought, Residence and County**

Residence/ County	Curative	Promotive / Preventive	Number of Individuals ('000)
National.....	18.0	4.2	45,371
<b>Rural.....</b>	<b>18.4</b>	<b>4.3</b>	<b>29,127</b>
<b>Urban.....</b>	<b>17.2</b>	<b>3.9</b>	<b>16,245</b>
<b>County</b>			
Mombasa.....	12.1	4.9	1,185
Kwale.....	19.3	6.4	820
Kilifi.....	22.6	6.3	1,400
Tana River.....	12.2	0.9	304
Lamu.....	19.2	3.1	128
Taita / Taveta.....	21.8	4.8	358
Garissa.....	5.5	0.9	432
Wajir.....	5.2	0.8	459
Mandera.....	11.8	1.2	711
Marsabit.....	6.5	1.2	316
Isiolo.....	9.2	1.9	156
Meru.....	17.7	3.7	1,471
Tharaka-Nithi.....	29.3	3.9	396
Embu.....	18.2	4.1	560
Kitui.....	17.7	2.8	1,098
Machakos.....	12.8	6.1	1,191
Makueni.....	24.4	3.2	959
Nyandarua.....	15.0	2.1	686
Nyeri.....	23.2	7.0	798
Kirinyaga.....	22.9	4.0	608
Murang'a.....	17.8	3.3	1,085
Kiambu.....	17.3	1.6	1,868
Turkana.....	17.3	4.3	1,084
West Pokot.....	13.7	2.5	649
Samburu.....	9.4	3.2	284
Trans Nzoia.....	15.7	3.5	1,038
Uasin Gishu.....	13.2	4.9	1,133
Elgeyo / Marakwet...	9.5	1.2	469
Nandi.....	22.4	3.3	954
Baringo.....	27.0	6.9	704
Laikipia.....	10.9	1.7	507
Nakuru.....	11.1	1.9	2,031
Narok.....	10.8	0.9	1,078
Kajiado.....	13.3	1.8	871
Kericho.....	15.5	5.5	945
Bomet.....	9.9	0.2	916
Kakamega.....	37.9	11.5	1,876
Vihiga.....	22.6	4.1	627
Bungoma.....	18.1	2.9	1,553
Busia.....	9.9	2.2	840
Siaya.....	30.6	7.3	985
Kisumu.....	21.4	7.6	1,132
Homa Bay.....	20.7	2.7	1,072
Migori.....	35.1	11.3	1,126
Kisii.....	12.6	8.6	1,347
Nyamira.....	15.2	4.8	699
Nairobi City.....	17.3	2.4	4,463

**Table 5.9: Percentage Distribution of the Population that Received Free Medical Services by Type of Service, Residence and County**

Residence/ County	Nutrition Feeding	Maternal & Child Health Care (MCH)	HIV/AIDS	Tuberculosis Treatment	Malaria	Other	Not Stated	Number of Individuals ('000)
National.....	0.8	37.6	3.9	0.4	17.9	39.2	0.2	5,654
Rural.....	0.9	34.8	4.2	0.3	19.2	40.4	0.2	4,127
Urban.....	0.6	45.1	3.1	0.7	14.4	35.9	0.2	1,526
<b>County</b>								
Mombasa.....	0.0	73.1	6.1	1.0	2.9	16.9	0.0	143
Kwale.....	0.4	28.8	0.7	1.1	60.8	8.3	0.0	106
Kilifi.....	0.3	26.5	0.7	0.5	7.1	65.0	0.0	254
Tana River.....	1.9	85.3	0.8	0.0	9.3	2.7	0.0	19
Lamu.....	0.1	25.4	0.7	0.1	18.2	55.5	0.0	26
Taita / Taveta.....	0.0	33.4	0.8	0.0	14.5	51.2	0.0	100
Garissa.....	6.4	26.6	0.0	0.0	39.8	27.1	0.0	24
Wajir.....	0.0	22.8	0.0	26.3	34.3	16.6	0.0	1
Mandera.....	3.9	2.3	0.0	0.0	57.6	36.2	0.0	46
Marsabit.....	0.0	95.6	1.8	1.0	0.3	1.2	0.0	20
Isiolo.....	0.2	12.1	0.6	0.2	11.2	75.7	0.0	24
Meru.....	0.3	26.5	2.6	0.3	3.5	66.6	0.2	137
Tharaka-Nithi.....	0.2	12.5	0.0	0.0	73.2	9.5	4.6	91
Embu.....	2.1	43.0	4.0	0.0	24.1	26.8	0.0	20
Kitui.....	0.0	49.5	0.8	0.8	21.5	27.5	0.0	49
Machakos.....	0.0	55.6	0.8	0.2	17.5	24.5	1.3	96
Makueni.....	0.2	23.0	0.2	0.4	40.2	35.9	0.0	167
Nyandarua.....	0.0	43.4	6.2	0.0	3.9	43.6	2.8	13
Nyeri.....	0.0	70.6	4.1	0.0	0.0	21.8	3.4	19
Kirinyaga.....	0.0	54.7	2.6	0.0	10.5	32.2	0.0	62
Murang'a.....	4.1	39.7	18.9	12.7	6.9	17.7	0.0	48
Kiambu.....	0.0	39.7	0.0	0.0	6.1	54.2	0.0	26
Turkana.....	0.3	16.1	0.0	0.2	10.8	72.6	0.0	322
West Pokot.....	1.2	43.7	0.1	0.0	6.0	47.5	1.4	114
Samburu.....	0.9	19.2	0.0	0.0	9.5	69.9	0.5	63
Trans Nzoia.....	0.4	58.7	0.2	0.0	14.0	26.5	0.2	148
Uasin Gishu.....	3.3	58.8	10.7	0.0	6.5	20.8	0.0	82
Elgeyo / Marakwet...	0.9	11.1	0.0	0.9	8.0	79.0	0.0	29
Nandi.....	1.0	75.8	1.3	0.0	2.3	17.8	1.9	128
Baringo.....	3.9	71.2	0.0	0.0	6.3	18.7	0.0	106
Laikipia.....	0.0	18.5	1.3	0.0	0.9	79.3	0.0	49
Nakuru.....	0.4	48.3	2.5	0.4	3.7	44.8	0.0	193
Narok.....	0.0	56.5	0.7	0.0	0.0	42.8	0.0	198
Kajiado.....	0.0	50.2	9.7	0.0	24.6	15.5	0.0	21
Kericho.....	0.6	17.4	0.6	0.0	4.7	76.6	0.0	162
Bomet.....	0.3	5.1	1.2	0.6	71.0	21.9	0.0	68
Kakamega.....	0.5	34.3	8.5	0.0	25.2	31.3	0.2	647
Vihiga.....	0.0	61.2	2.7	0.2	29.5	6.4	0.0	117
Bungoma.....	0.0	24.8	9.9	0.2	3.3	61.8	0.0	311
Busia.....	0.0	28.4	5.1	0.3	23.9	42.4	0.0	86
Siaya.....	2.2	35.7	27.8	0.7	26.9	6.6	0.0	111
Kisumu.....	2.4	42.2	2.8	0.3	30.6	21.6	0.0	190
Homa Bay.....	1.0	6.7	0.7	0.1	25.8	65.7	0.0	270
Migori.....	1.0	44.9	15.8	0.8	35.4	2.1	0.0	220
Kisii.....	0.2	36.2	0.6	0.0	1.6	61.4	0.0	145
Nyamira.....	4.8	79.2	1.3	0.2	11.4	3.0	0.0	141
Nairobi City.....	1.0	42.7	0.0	2.1	18.5	35.8	0.0	240

#### 5.4 Disability

Information on persons with disability by type of disability and county are summarized in Table 5.10. Nationally, the proportion of persons with disability was 2.8 per cent with rural areas having a higher proportion of 3.3 per cent compared to 2.0 per cent for urban areas. Meru County had the highest proportion of 8.5 per cent of persons with disability. Other counties with significant proportions of persons with disability were Vihiga (6.3%), Kirinyaga (5.8%) and Siaya (5.3%). Visual disability was prevalent in Meru (4.9%), Kirinyaga (3.0%), and Vihiga (2.9%) Counties. The proportion of population with hearing disability was highest in Meru County (2.4%). A relatively higher proportion of population with physical disability was recorded in Nyamira, Siaya, Migori and Tharaka-Nithi Counties

Table 5.11 presents the percentage distribution of persons with disability by difficulty in engaging in economic activity and by county. At the national level, slightly over a half (54.7%) of persons with disability reported to have had difficulties in engaging in economic activity with a higher proportion reported in rural areas compared to urban areas. Vihiga County had the highest proportion of persons with disability that reported difficulty in engaging in economic activity followed by Migori, Nyamira and Isiolo Counties.

Table 5.10: Proportion of the Population with Disability by Type, Residence and County

Residence/ County	Visual	Hearing	Speech	Physical	Mental	Self-care	Others	Any Disability	No Disability	Number of Individuals ('000)
National.....	1.0	0.5	0.2	1.0	0.4	0.1	0.1	2.8	97.0	45,371
Rural.....	1.2	0.6	0.2	1.1	0.5	0.1	0.1	3.3	96.7	29,127
Urban.....	0.6	0.2	0.1	0.8	0.3	0.1	0.1	2.0	97.7	16,245
<b>County</b>										
Mombasa.....	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.5	99.3	1,185
Kwale.....	1.3	0.7	0.6	1.3	0.8	0.1	0.1	4.1	95.9	820
Kilifi.....	0.6	0.5	0.3	1.5	0.2	0.0	0.0	2.7	96.8	1,400
Tana River.....	1.0	0.3	0.2	1.4	0.7	0.0	0.1	2.8	96.6	304
Lamu.....	0.5	1.2	0.1	0.9	0.4	0.0	0.0	2.9	97.1	128
Taita / Taveta.....	0.5	0.2	0.5	1.6	0.7	0.1	0.1	3.0	96.8	358
Garissa.....	0.2	0.1	0.1	0.3	0.2	0.0	0.0	0.9	98.7	432
Wajir.....	0.6	0.2	0.1	0.5	0.1	0.1	0.0	1.5	98.0	459
Mandera.....	1.0	0.8	0.3	1.3	0.7	0.3	0.1	3.7	97.6	711
Marsabit.....	1.3	1.0	0.0	1.2	0.1	0.1	0.1	3.6	96.4	316
Isiolo.....	0.9	0.3	0.0	0.3	0.3	0.0	0.0	1.7	98.3	156
Meru.....	4.9	2.4	0.5	1.3	0.3	0.1	0.1	8.5	91.8	1,471
Tharaka-Nithi.....	0.9	0.6	0.1	2.1	0.9	0.1	0.0	4.4	95.3	396
Embu.....	1.6	0.8	0.3	1.1	0.8	0.0	0.0	4.0	95.8	560
Kitui.....	2.4	0.5	0.3	1.2	0.7	0.0	0.0	4.6	95.4	1,098
Machakos.....	1.1	0.5	0.4	1.9	0.4	0.0	0.0	3.9	96.4	1,191
Makueni.....	1.1	0.4	0.1	1.8	0.6	0.1	0.2	3.9	95.9	959
Nyandarua.....	0.2	0.6	0.2	0.7	0.3	0.0	0.0	1.7	98.3	686
Nyeri.....	0.2	0.2	0.2	0.7	1.0	0.0	0.1	2.1	97.9	798
Kirinyaga.....	3.0	0.5	0.2	1.8	0.0	0.2	0.3	5.8	93.2	608
Murang'a.....	0.6	0.1	0.5	1.5	0.8	0.1	0.1	3.3	96.3	1,085
Kiambu.....	0.1	0.1	0.3	0.3	0.3	0.1	0.0	1.1	98.9	1,868
Turkana.....	1.0	0.6	0.2	1.6	0.2	0.2	0.6	4.0	95.3	1,084
West Pokot.....	0.7	0.7	0.0	0.8	0.1	0.0	0.0	2.2	97.6	649
Samburu.....	0.8	0.4	0.0	0.4	0.4	0.0	0.1	1.9	98.0	284
Trans Nzoia.....	0.3	0.4	0.0	0.6	0.7	0.0	0.0	2.1	97.9	1,038
Uasin Gishu.....	2.5	0.6	0.0	0.5	0.1	0.0	0.0	3.6	96.4	1,133
Elgeyo / Marakwet.....	0.5	0.5	0.1	0.5	0.5	0.1	0.0	2.0	97.7	469
Nandi.....	0.5	0.1	0.0	0.3	0.2	0.0	0.0	1.1	98.9	954
Baringo.....	1.2	0.5	0.4	1.2	0.6	0.0	0.0	3.2	96.8	704
Laikipia.....	0.9	0.0	0.1	0.5	0.2	0.0	0.0	1.6	98.4	507
Nakuru.....	0.6	0.4	0.0	0.7	0.2	0.0	0.0	1.9	97.7	2,031
Narok.....	0.5	0.2	0.2	0.7	0.3	0.1	0.0	1.9	97.7	1,078
Kajiado.....	0.2	0.1	0.2	0.2	0.2	0.0	0.0	0.7	98.8	871
Kericho.....	0.6	0.4	0.1	0.8	0.0	0.1	0.3	2.1	97.5	945
Bomet.....	0.1	0.1	0.0	0.3	0.1	0.0	0.0	0.7	99.0	916
Kakamega.....	0.8	0.5	0.3	0.6	0.3	0.0	0.0	2.1	97.9	1,876
Vihiga.....	2.9	0.6	0.4	1.7	1.0	0.2	0.0	6.3	93.7	627
Bungoma.....	0.4	0.1	0.1	0.8	0.7	0.1	0.1	2.1	97.9	1,553
Busia.....	1.3	0.6	0.4	1.2	0.2	0.4	0.1	3.3	96.7	840
Siaya.....	1.1	0.8	0.1	2.4	0.7	0.2	0.4	5.3	94.7	985
Kisumu.....	0.5	0.5	0.1	1.3	0.5	0.0	0.1	2.7	97.3	1,132
Homa Bay.....	0.6	0.6	0.1	1.5	0.2	0.0	0.1	2.9	97.1	1,072
Migori.....	1.7	1.2	0.4	2.4	0.4	0.1	0.0	5.1	94.9	1,126
Kisii.....	0.8	0.2	0.2	0.9	0.2	0.4	0.0	2.4	97.6	1,347
Nyamira.....	1.9	0.2	0.1	2.6	0.6	0.2	0.1	5.2	94.8	699
Nairobi City.....	0.4	0.1	0.1	0.5	0.2	0.0	0.0	1.2	98.2	4,463

**Table 5.11: Percentage Distribution of Persons with Disability that had Difficulty in Engaging in Economic Activity by Residence and County**

Residence/ County	Yes	No	Don't Know	Not Stated	Number of Individuals ('000)
<b>National.....</b>	<b>54.7</b>	<b>38.7</b>	<b>4.0</b>	<b>2.6</b>	<b>1,267</b>
<b>Rural.....</b>	<b>55.4</b>	<b>38.3</b>	<b>3.9</b>	<b>2.4</b>	<b>947</b>
<b>Urban.....</b>	<b>52.7</b>	<b>40.1</b>	<b>4.1</b>	<b>3.1</b>	<b>320</b>
<b>County</b>					
Mombasa.....	32.7	58.1	0.0	9.2	6
Kwale.....	51.8	44.9	3.3	0.0	33
Kilifi.....	47.2	46.3	3.5	3.0	37
Tana River.....	77.6	17.4	3.0	2.0	8
Lamu.....	53.1	23.8	0.0	23.1	4
Taita / Taveta.....	68.6	30.2	0.0	1.2	11
Garissa.....	63.1	32.1	4.8	0.0	4
Wajir.....	38.1	15.1	39.6	7.2	7
Mandera.....	42.4	18.6	35.7	3.3	26
Marsabit.....	70.6	25.7	0.0	3.7	12
Isiolo.....	78.4	19.3	0.0	2.3	3
Meru.....	37.6	53.7	5.0	3.7	125
Tharaka-Nithi.....	76.9	14.5	8.6	0.0	17
Embu.....	53.8	35.4	10.8	0.0	23
Kitui.....	62.3	35.0	2.7	0.0	51
Machakos.....	51.8	41.2	7.0	0.0	46
Makueni.....	53.2	42.0	0.0	4.8	38
Nyandarua.....	49.1	27.5	11.0	12.4	11
Nyeri.....	62.7	31.7	0.0	5.6	17
Kirinyaga.....	29.9	65.1	1.1	3.9	36
Murang'a.....	56.9	29.9	0.0	13.2	36
Kiambu.....	71.3	15.8	0.0	12.9	21
Turkana.....	72.2	18.5	8.3	1.0	43
West Pokot.....	54.8	36.3	8.9	0.0	14
Samburu.....	71.9	19.1	3.7	5.3	5
Trans Nzoia.....	65.7	33.2	1.1	0.0	22
Uasin Gishu.....	30.0	53.1	7.1	9.8	40
Elgeyo / Marakwet...	66.8	33.2	0.0		9
Nandi.....	48.5	51.5	0.0	0.0	11
Baringo.....	67.1	30.2	0.0	2.7	22
Laikipia.....	44.8	50.7	4.5	0.0	8
Nakuru.....	30.7	67.8	0.0	1.5	38
Narok.....	56.0	39.1	4.9	0.0	20
Kajiado.....	78.2	21.8	0.0	0.0	6
Kericho.....	72.8	19.9	0.0	7.3	20
Bomet.....	20.5	54.9	7.0	17.6	6
Kakamega.....	52.4	39.9	7.7	0.0	40
Vihiga.....	92.8	7.2	0.0	0.0	39
Bungoma.....	35.2	58.0	6.8	0.0	32
Busia.....	70.6	29.4	0.0	0.0	28
Siaya.....	32.9	58.7	0.0	8.4	52
Kisumu.....	59.5	29.2	0.0	11.3	30
Homa Bay.....	74.0	26.0	0.0	0.0	31
Migori.....	83.8	16.2	0.0	0.0	57
Kisii.....	63.6	32.0	0.0	4.4	32
Nyamira.....	79.9	20.1	0.0	0.0	36
Nairobi City.....	33.7	66.3	0.0	0.0	52

### 5.5 Health Insurance Cover

The percentage distribution of the population with health insurance cover by type of insurance provider is presented in Table 5.12. In general, 19.0 per cent of the population had some form of health insurance cover. Urban areas had a higher proportion (29.2%) of population with health insurance cover compared rural areas (13.3%). The National Hospital Insurance Fund (NHIF) was the leading health insurance provider reported by 93.9 per cent of the population. Employer contributory insurance coverage was reported by 6.2 per cent of the population. Nairobi City County had the highest proportion (40.7%) of population with health insurance cover followed by Embu and Nyeri Counties with 32.7 and 32.2 per cent, respectively. Counties with low proportion of population with health insurance cover were Wajir (0.2%), Mandera (1.3%), Marsabit (1.7%) and West Pokot (2.9%).

### 5.6 Child Health

The place of birth of a child and type of assistance received during delivery is of primary importance for the survival of the child and mother. After delivery, children are susceptible to infectious diseases if not immunized as recommended. This section analyses the findings of the 2015/16 KIHBS on child health and specifically; place and assistance during delivery, immunization against measles, and diarrhoea.

#### Place of delivery

In the 2015/16 KIHBS, women were asked the place where children aged 5 years and below were delivered. Table 5.13 shows the percentage distribution of children by place of delivery, residence and county. Nationally, 31.3 per cent of the children were delivered at home, an improvement from the 53.9 per cent of children recorded in the 2005/06 KIHBS. The proportion of children born in health facilities (hospitals, health centres, dispensary/clinics) improved significantly to 65.3 per cent in 2015/16 KIHBS compared to 39.1 per cent reported in the 2005/06 KIHBS. In rural areas, the proportion of children born at home was 40.7 per cent compared to 13.3 per cent in urban areas. The county with the lowest proportion of children born at home was Kirinyaga at 3.8 per cent while Wajir, Mandera, Samburu and Marsabit had over 70 per cent of the children born at home. Kirinyaga, Nyeri and Kisii Counties recorded over 90 per cent of children born in a health facility.

#### Assistance during delivery

Assistance during delivery by trained medical personnel is crucial in ensuring safe delivery. In the absence of such personnel, pregnant women often rely on themselves or get assistance from traditional birth attendants, friends, and relatives among others. Table 5.14 presents the distribution of births by persons who assisted in delivery, residence and county. Overall, the proportion of births assisted by trained medical personnel (doctors, mid wife/nurses) improved from 39.0 per cent in 2005/06 KIHBS to 70.2 per cent in 2015/16 KIHBS. The proportion of children born with the assistance of trained medical personnel in urban areas was 87.5 per cent compared to 61.1 per cent in rural areas.

Counties with over 90 per cent of the deliveries assisted by trained health personnel included; Mombasa, Nyeri, Kirinyaga, Murang'a, Kisii and Nairobi City. In contrast, Wajir and Mandera Counties had less than 30 per cent of the children born with the assistance of trained medical personnel. Turkana County had the highest proportion of self-assisted births at 34.5 per cent. The proportion of children delivered with the assistance of a traditional birth attendant (TBA and TTBA) in rural areas was 25.6 per cent compared to 7.8 per cent in urban areas. Wajir, Mandera and Samburu Counties had over 60 per cent of the births assisted by a traditional birth attendant.

Table 5.12: Percentage Distribution of the Population with Health Insurance Cover by Type of Health Insurance Provider

Residence /County	Insurance	Number of Individuals ('000)	Source of Health Insurance						Number of Individuals ('000)
			NHIF	Private-Contributory	Private-Non-Contributory	Employer-Contributory	Employer-Non-Contributory	Other	
<b>National</b> .....	<b>19.0</b>	<b>45,371</b>	<b>93.9</b>	<b>4.2</b>	<b>1.0</b>	<b>6.2</b>	<b>1.0</b>	<b>1.7</b>	<b>8,636</b>
<b>Rural</b> .....	<b>13.3</b>	<b>29,127</b>	<b>92.2</b>	<b>5.8</b>	<b>1.1</b>	<b>2.5</b>	<b>0.5</b>	<b>1.9</b>	<b>3,887</b>
<b>Urban</b> .....	<b>29.2</b>	<b>16,245</b>	<b>95.3</b>	<b>2.8</b>	<b>1.0</b>	<b>9.2</b>	<b>1.3</b>	<b>1.5</b>	<b>4,749</b>
<b>County</b>									
Mombasa.....	18.1	1,185	96.8	3.7	3.9	4.3	2.3	1.4	214
Kwale.....	9.2	820	95.9	10.1	1.2	0.3	2.1	0.0	76
Kilifi.....	17.8	1,400	95.9	1.3	1.0	10.5	0.5	0.0	249
Tana River.....	3.1	304	97.7	17.6	0.0	3.9	1.4	0.4	9
Lamu.....	7.9	128	97.5	2.4	0.3	2.4	0.8	0.0	10
Taita / Taveta.....	23.4	358	87.0	0.9	0.8	4.8	0.9	8.3	84
Garissa.....	2.7	432	89.5	0.0	0.9	15.4	0.0	0.0	12
Wajir.....	0.2	459	90.8	21.4	0.0	0.0	0.0	0.0	1
Mandera.....	1.3	711	91.3	2.5	0.0	3.1	0.0	0.0	9
Marsabit.....	1.7	316	85.6	0.0	0.0	26.1	0.0	0.0	5
Isiolo.....	7.7	156	100.0	6.9	0.0	0.0	6.6	0.0	12
Meru.....	17.4	1,471	91.1	6.4	0.0	0.7	0.0	4.6	256
Tharaka-Nithi.....	15.7	396	93.6	2.9	3.9	2.4	0.3	0.0	62
Embu.....	32.7	560	94.5	2.9	0.7	3.3	0.1	4.5	183
Kitui.....	8.6	1,098	86.1	1.5	5.9	8.0	1.3	0.0	94
Machakos.....	18.5	1,191	99.1	0.5	4.6	1.8	0.9	0.0	220
Makueni.....	13.5	959	97.9	2.5	0.7	8.4	2.0	0.0	129
Nyandarua.....	18.0	686	95.6	2.4	0.0	2.5	0.0	0.0	124
Nyeri.....	32.2	798	81.6	13.4	7.0	0.0	0.0	0.2	257
Kirinyaga.....	29.1	608	77.5	26.4	0.5	1.8	0.6	0.3	177
Murang'a.....	23.1	1,085	81.0	18.1	0.0	0.4	3.4	3.8	250
Kiambu.....	25.6	1,868	97.1	2.0	0.0	10.8	0.0	0.0	479
Turkana.....	5.0	1,084	45.8	3.4	3.0	1.0	0.0	54.0	54
West Pokot.....	2.9	649	99.6	0.0	4.4	0.9	0.0	0.0	19
Samburu.....	6.4	284	94.3	0.0	2.7	4.0	0.0	0.0	18
Trans Nzoia.....	10.9	1,038	98.0	14.3	4.9	0.3	0.7	0.0	113
Uasin Gishu.....	25.2	1,133	95.1	1.8	1.5	10.1	2.3	0.7	286
Elgeyo / Marakwet...	20.8	469	97.6	3.2	1.8	1.6	0.0	0.0	97
Nandi.....	18.6	954	95.4	3.2	0.5	2.1	0.2	0.7	177
Baringo.....	20.4	704	96.3	7.1	0.0	4.0	0.0	1.4	144
Laikipia.....	21.5	507	98.4	0.4	0.3	1.5	0.0	0.0	109
Nakuru.....	22.8	2,031	96.1	5.4	0.5	2.8	0.6	1.6	464
Narok.....	9.2	1,078	90.7	2.3	0.0	2.8	0.0	0.0	100
Kajiado.....	28.4	871	96.5	3.1	0.0	2.3	7.5	0.0	247
Kericho.....	23.9	945	96.2	2.2	0.0	14.4	1.3	0.0	226
Bomet.....	25.5	916	97.9	2.4	0.0	0.3	0.6	0.0	234
Kakamega.....	14.8	1,876	97.6	0.6	0.2	1.2	1.5	1.1	278
Vihiga.....	14.3	627	94.8	3.1	1.8	1.0	2.7	0.0	89
Bungoma.....	6.5	1,553	71.7	0.4	0.0	2.2	0.0	27.6	101
Busia.....	6.1	840	96.4	1.7	4.9	5.5	2.3	0.0	51
Siaya.....	7.6	985	85.5	11.8	9.4	9.0	0.0	0.0	75
Kisumu.....	27.1	1,132	93.1	1.9	0.2	11.0	0.2	5.7	307
Homa Bay.....	11.3	1,072	97.8	1.6	1.4	6.0	0.0	3.0	122
Migori.....	13.7	1,126	97.1	1.4	0.0	2.9	0.2	0.0	155
Kisii.....	22.1	1,347	97.2	3.2	0.0	0.0	0.0	0.4	298
Nyamira.....	20.1	699	89.5	14.4	0.1	5.1	1.5	0.0	140
Nairobi City.....	40.7	4,463	96.3	1.4	0.3	12.9	0.7	0.6	1,818

Table 5.13: Proportion of Children aged 0-59 Months by Place of Delivery, Residence and County

Residence/County	Hospital	Health Centre	Clinic/Dispensary	Maternity Home	At Home	Other	Not Stated	Number of Individuals ('000)
National.....	47.2	12.6	5.5	1.9	31.3	0.6	0.9	6,081
Rural.....	35.2	15.0	6.8	0.9	40.7	0.7	0.8	3,991
Urban.....	70.2	8.1	3.1	3.9	13.3	0.4	1.0	2,090
<b>County</b>								
Mombasa.....	61.5	20.9	3.9	2.0	9.9	0.9	0.9	135
Kwale.....	38.0	13.9	18.3	0.0	29.4	0.4	0.0	130
Kilifi.....	23.6	22.6	11.5	0.3	35.3	1.8	5.0	222
Tana River.....	28.8	3.0	13.3	0.0	53.3	0.0	1.5	48
Lamu.....	47.1	1.9	5.5	0.3	44.8	0.5	0.0	18
Taita / Taveta.....	51.2	9.1	18.2	0.5	20.3	0.6	0.0	41
Garissa.....	33.5	7.9	1.5	0.5	54.0	0.0	2.5	63
Wajir.....	14.0	1.5	2.7	1.6	77.6	0.0	2.5	92
Mandera.....	12.1	7.2	6.6	2.1	70.8	0.0	1.2	117
Marsabit.....	19.9	5.9	3.2	0.0	70.1	0.0	0.9	53
Isiolo.....	33.4	7.4	2.6	1.7	54.8	0.1	0.0	23
Meru.....	61.9	20.0	3.2	1.2	12.6	0.2	0.8	168
Tharaka-Nithi.....	59.5	10.7	2.7	0.0	21.5	3.7	1.7	45
Embu.....	61.1	15.3	1.4	0.3	20.2	0.0	1.7	57
Kitui.....	42.3	12.4	5.2	1.7	37.6	0.8	0.0	134
Machakos.....	65.0	6.0	1.7	2.4	23.9	0.4	0.6	136
Makueni.....	48.0	10.4	2.4	3.1	33.6	1.8	0.7	110
Nyandarua.....	49.4	32.4	4.4	0.5	12.6	0.0	0.6	74
Nyeri.....	67.4	21.6	3.2	0.5	6.2	1.0	0.0	82
Kirinyaga.....	74.2	12.0	7.1	1.4	3.8	0.3	1.1	56
Murang'a.....	60.7	23.1	3.6	3.5	8.7	0.5	0.0	117
Kiambu.....	77.3	4.7	0.0	4.2	13.5	0.4	0.0	197
Turkana.....	21.1	8.9	0.6	0.6	68.0	0.9	0.0	191
West Pokot.....	18.9	9.1	3.0	0.1	67.2	0.3	1.3	113
Samburu.....	16.4	4.5	5.1	0.6	72.8	0.0	0.5	54
Trans Nzoia.....	41.6	1.8	4.4	0.2	51.4	0.5	0.2	133
Uasin Gishu.....	57.3	12.5	5.3	1.1	21.0	0.0	2.7	151
Elgeyo / Marakwet...	41.9	21.1	5.9	1.0	29.1	0.0	1.0	67
Nandi.....	48.0	10.9	1.5	0.0	38.9	0.0	0.7	122
Baringo.....	42.5	11.5	4.6	0.6	40.5	0.0	0.3	98
Laikipia.....	39.8	9.9	5.3	4.0	40.3	0.0	0.8	66
Nakuru.....	48.7	5.9	7.9	3.2	33.5	0.0	0.7	270
Narok.....	23.0	9.9	4.5	0.4	61.8	0.0	0.4	200
Kajiado.....	67.1	4.1	0.7	3.7	22.9	0.0	1.6	119
Kericho.....	46.0	11.9	7.2	1.1	32.0	0.6	1.1	109
Bomet.....	28.7	27.7	8.4	0.0	35.0	0.0	0.1	131
Kakamega.....	43.0	9.7	8.4	1.1	35.8	1.4	0.6	262
Vihiga.....	42.9	22.0	6.9	1.1	24.8	0.3	2.0	68
Bungoma.....	32.0	10.5	3.3	1.0	50.3	1.6	1.4	237
Busia.....	32.8	21.1	5.4	0.0	39.3	1.4	0.0	110
Siaya.....	53.5	16.6	12.8	0.9	13.0	1.2	1.9	133
Kisumu.....	54.0	28.0	5.2	0.3	11.7	0.4	0.4	152
Homa Bay.....	25.3	32.6	8.6	0.0	31.5	1.8	0.3	177
Migori.....	34.7	25.9	15.3	0.3	21.9	1.2	0.6	154
Kisii.....	78.7	10.6	3.5	0.0	6.5	0.5	0.2	161
Nyamira.....	45.9	19.1	16.8	1.5	15.9	0.3	0.6	80
Nairobi City.....	79.2	1.6	1.7	8.3	8.8	0.0	0.4	600

Table 5.14: Proportion of Children by who assisted at Birth, Residence and County

Residence/County	Doctor	Midwife/ Nurse	Traditional Birth Attendant (TBA)	Trained Traditional Birth Attendant (TTBA)	Self	Other	Not stated	Number of Individuals (’000)
National.....	20.3	49.9	14.7	4.7	4.9	4.4	1.1	6,081
Rural.....	11.7	49.4	19.8	5.8	6.4	6.0	1.0	3,991
Urban.....	36.6	50.9	5.2	2.6	2.0	1.4	1.3	2,090
<b>County</b>								
Mombasa.....	42.8	48.1	2.6	3.0	1.0	1.6	0.9	135
Kwale.....	21.6	47.7	12.4	0.2	9.4	8.7	0.0	130
Kilifi.....	13.4	43.2	22.1	13.1	1.7	1.6	5.0	222
Tana River.....	4.3	42.0	25.9	23.4	0.5	2.3	1.5	48
Lamu.....	17.0	39.4	8.7	30.1	1.8	2.9	0.0	18
Taita / Taveta.....	24.4	54.9	4.5	4.3	4.4	6.5	1.0	41
Garissa.....	12.7	39.9	10.7	31.9	1.0	1.3	2.5	63
Wajir.....	4.2	19.8	60.3	6.1	6.2	0.7	2.8	92
Mandera.....	0.0	26.2	65.5	7.1	0.0	0.0	1.2	117
Marsabit.....	0.0	31.0	50.1	6.8	4.6	6.5	0.9	53
Isiolo.....	2.4	48.4	28.6	12.9	3.9	3.8	0.0	23
Meru.....	22.0	64.3	6.8	0.5	1.9	3.4	1.0	168
Tharaka-Nithi.....	21.5	52.2	3.1	2.5	6.7	12.3	1.7	45
Embu.....	24.5	52.4	10.8	1.5	2.9	6.2	1.7	57
Kitui.....	23.5	44.6	22.9	2.1	4.8	2.1	0.0	134
Machakos.....	55.9	20.9	13.0	4.9	2.7	2.0	0.6	136
Makueni.....	25.5	39.3	15.7	4.9	1.5	11.2	1.9	110
Nyandarua.....	33.7	53.3	0.0	0.5	4.1	7.8	0.6	74
Nyeri.....	17.9	74.8	0.0	0.0	0.0	7.2	0.0	82
Kirinyaga.....	28.4	66.0	1.8	0.0	0.0	2.0	1.8	56
Murang’a.....	32.0	59.2	0.4	0.0	4.2	4.2	0.0	117
Kiambu.....	37.6	49.0	1.4	0.5	5.6	3.6	2.3	197
Turkana.....	2.2	28.3	22.9	2.1	34.5	10.1	0.0	191
West Pokot.....	2.2	31.1	25.6	18.8	1.0	19.9	1.3	113
Samburu.....	4.6	26.1	64.2	0.6	4.0	0.0	0.5	54
Trans Nzoia.....	3.8	46.0	24.1	6.4	9.7	9.7	0.3	133
Uasin Gishu.....	14.2	61.0	9.4	8.2	0.5	4.0	2.7	151
Elgeyo / Marakwet...	24.4	59.4	9.9	3.1	1.2	0.6	1.3	67
Nandi.....	5.9	55.2	23.7	6.7	0.9	6.9	0.7	122
Baringo.....	8.8	51.5	33.4	5.1	0.4	0.4	0.3	98
Laikipia.....	18.8	43.4	26.2	0.2	6.6	4.0	0.8	66
Nakuru.....	30.6	38.8	8.0	0.6	6.4	14.8	0.7	270
Narok.....	2.0	59.7	33.9	1.3	2.6	0.0	0.4	200
Kajiado.....	45.9	28.6	19.1	0.9	2.2	1.7	1.6	119
Kericho.....	37.0	33.7	22.4	4.9	0.8	0.0	1.1	109
Bomet.....	15.8	50.0	2.1	7.8	18.2	6.0	0.1	131
Kakamega.....	1.2	73.5	8.3	5.5	5.7	5.2	0.6	262
Vihiga.....	11.1	59.9	4.1	6.9	5.7	8.6	3.8	68
Bungoma.....	12.7	43.6	10.5	14.9	8.8	8.1	1.4	237
Busia.....	6.1	52.8	17.6	7.8	9.8	5.6	0.3	110
Siaya.....	9.5	71.9	6.9	0.4	5.7	2.6	2.9	133
Kisumu.....	15.7	71.8	6.5	4.7	0.5	0.4	0.4	152
Homa Bay.....	1.5	64.4	22.2	1.4	8.2	1.7	0.6	177
Migori.....	4.2	70.1	15.1	2.4	4.4	2.9	0.8	154
Kisii.....	6.9	86.1	3.8	0.2	1.3	1.6	0.2	161
Nyamira.....	6.8	77.0	7.7	1.5	5.3	1.0	0.6	80
Nairobi City.....	55.3	39.7	1.6	2.1	0.9	0.0	0.4	600

### 5.7 Immunization

The 2015/16 KIHBS collected data on measles immunization for children below 5 years at; 9 months (Measles I) and at 18 months (Measles II). Information was collected from vaccination cards where they were available while mother's recall was used where the card was not available. Tables 5.15 presents information on the proportion of children immunized (from vaccination cards) against Measles by county and age group, respectively. The analysis focused on children aged 12-23 months (or one year). At national level, 37.7 per cent of the children aged 12-23 months were fully immunized against measles at 9 months while 9.7 per cent were fully immunized against measles at 18 months.

### 5.8 Diarrhoea Prevalence

Diarrhoea is a major cause of morbidity and mortality among young children. Poor hygiene and inadequate sanitation contribute to the spread of diarrhoeal diseases. To effectively manage dehydration caused by diarrhoea, households are advised to give children re-hydration therapy with commercially packaged Oral Re-Hydration Salts (ORS) and Zinc, with increased intake of fluids. The 2015/16 KIHBS collected information on diarrhoea incidences among children aged less than five years during the two weeks preceding the survey.

Nationally, the incidence of diarrhoea was 8.5 per cent compared to 10.7 per cent recorded during the 2005/06 KIHBS as shown in Table 5.16. The incidence of diarrhoea was 8.2 per cent in rural and 9.2 per cent in urban areas. Children aged 12-23 months had the highest incidence of diarrhoea at 14.5 per cent followed by those aged 6-11 months at 13.3 per cent. The county with the highest incidence of diarrhoea was Siaya.

The proportion of children given food, fluids and supplements during recent episodes of diarrhoea is shown in Tables 5.17, 5.18 and 5.19. At national level, 22.5 per cent of the children suffering from diarrhoea were not given any food as shown in Table 5.17. More children in urban areas (23.4%) were given nothing during recent diarrhoea episodes as compared to their rural counterparts (21.9%).

Giving fluids to children when they have diarrhoea is recommended to avoid dehydration. Table 5.18 shows the type of fluid given during diarrhoea and the frequency compared to normal times. At the national level, 4.2 per cent of the children suffering from diarrhoea were not given any fluids. In urban areas 2.9 per cent of the children were not given any fluids compared to 4.9 per cent of the children in rural areas. The most common fluid given at the national level was porridge at 39.4 per cent.

Increased fluid intake is recommended for children with diarrhoea. This should also be supplemented with sugar, salt and zinc solution as part of the rehydration therapy. Nationally, 46.9 per cent of children with diarrhoea were given the recommended diarrhoea management therapy which included ORT/ORS/Zinc solutions as shown in Table 5.19. More children in urban areas, (50.6%) were given the recommended therapy than those in rural in areas (44.8%).

The counties with the highest proportion of children not given any additional supplement during diarrhoea included Kiambu (85.4%), Kajiado (65.4%), Isiolo (93.9%) and Murang'a (69.8%). The highest usage of ORS/ORT/Zinc packet solution were recorded in the following counties: Nyeri (81.3%), Mandera (88.5%), Turkana (79.4%), Kilifi (78.3%), Taita Taveta (77.0%), Wajir (72.8%) and Machakos (76.7%).

Table 5.15: Proportion of Children aged 0-59 Months Immunized Against Measles by Residence and County

Residence/Sex/ Age group / County	Vaccination Card				Measles Vaccination				Number of Individuals ('000)
	Yes, Seen	Yes, Not Seen	No	Not Stated	Measles I (At 9 months Card)	Measles II (At 18 months Card)	Measles II (Mother/ Guardian memory)	Either (card or memory)	
National.....	51.1	40.8	6.5	1.6	37.7	9.7	39.7	77.4	6,081
Rural.....	54.7	36.6	7.2	1.6	40.8	9.1	36.2	77.0	3,991
Urban.....	44.2	49.0	5.2	1.6	31.7	10.8	46.3	78.0	2,090
<b>Sex</b>									
Male.....	52.6	39.8	5.9	1.7	38.7	10.6	38.5	77.2	3,057
Female.....	49.5	41.9	7.1	1.5	36.7	8.8	40.9	77.6	3,024
<b>Age group</b>									
< 6 months.....	59.1	25.3	12.2	3.4	1.7	0.9	4.4	6.1	555
6-11 months.....	64.8	30.7	3.9	0.6	22.1	2.3	15.0	37.1	572
12-23 months.....	61.5	34.1	3.3	1.2	55.4	12.8	33.6	89.0	1,194
24-35 months.....	50.8	42.3	5.6	1.2	45.5	16.8	44.5	90.0	1,163
36-48 months.....	42.8	48.7	7.3	1.2	38.7	10.4	52.5	91.2	1,260
48-59 months.....	40.6	49.0	8.1	2.3	35.7	7.0	54.3	90.0	1,336
<b>County</b>									
Mombasa.....	42.7	49.7	7.2	0.5	34.3	16.2	48.8	83.1	135
Kwale.....	72.5	21.8	5.0	0.6	55.5	12.1	23.6	79.1	130
Kilifi.....	61.5	18.9	1.6	18.0	44.2	5.8	22.1	66.3	222
Tana River.....	35.3	54.6	8.6	1.5	22.8	3.9	53.2	76.0	48
Lamu.....	50.2	44.2	5.6	0.0	37.3	4.0	41.9	79.2	18
Taita / Taveta.....	65.1	30.8	3.3	0.8	48.9	13.2	29.2	78.1	41
Garissa.....	10.7	38.1	48.5	2.7	2.6	0.0	59.7	62.3	63
Wajir.....	15.9	54.7	24.5	5.0	12.4	1.0	61.8	74.2	92
Mandera.....	13.9	72.0	12.3	1.9	9.8	0.6	69.3	79.1	117
Marsabit.....	49.8	39.0	10.3	0.9	30.2	7.6	38.2	68.4	53
Isiolo.....	41.7	49.3	9.0	0.0	27.6	15.1	50.6	78.2	23
Meru.....	68.2	28.5	3.3	0.0	51.3	12.1	23.5	74.8	168
Tharaka-Nithi.....	76.9	20.7	2.4	0.0	53.8	9.9	20.9	74.7	45
Embu.....	67.0	26.3	6.7	0.0	53.1	21.6	30.5	83.6	57
Kitui.....	63.4	34.7	1.9	0.0	47.6	15.8	24.3	71.9	134
Machakos.....	62.9	23.7	11.2	2.2	51.6	20.7	20.0	71.6	136
Makueni.....	71.9	23.5	2.7	1.9	56.1	17.5	18.7	74.8	110
Nyandarua.....	47.0	39.9	11.7	1.3	37.8	13.0	38.5	76.3	74
Nyeri.....	43.1	42.9	14.0	0.0	34.2	14.2	52.2	86.4	82
Kirinyaga.....	54.2	41.3	4.5	0.0	41.4	11.5	42.2	83.6	56
Murang'a.....	50.7	44.1	5.1	0.0	41.8	14.9	46.0	87.8	117
Kiambu.....	46.1	49.5	3.8	0.6	34.4	25.1	44.0	78.4	197
Turkana.....	62.8	19.8	16.0	1.4	38.4	6.9	27.0	65.4	191
West Pokot.....	58.3	24.8	10.8	6.0	37.2	23.2	23.0	60.2	113
Samburu.....	18.3	64.2	16.6	0.8	16.6	3.2	64.8	81.4	54
Trans Nzoia.....	57.1	39.4	3.3	0.1	39.5	1.3	38.9	78.4	133
Uasin Gishu.....	47.5	46.1	1.8	4.5	35.0	1.9	39.0	74.0	151
Elgeyo / Marakwet.....	44.6	51.3	3.1	1.0	28.3	2.9	49.8	78.1	67
Nandi.....	52.3	45.0	2.1	0.7	41.6	3.8	43.3	84.9	122
Baringo.....	57.4	38.7	3.9	0.0	39.7	14.3	38.8	78.5	98
Laikipia.....	54.8	40.6	3.8	0.8	45.6	10.7	41.4	87.0	66
Nakuru.....	44.1	52.4	3.2	0.3	30.6	7.1	48.1	78.7	270
Narok.....	57.1	36.2	6.3	0.4	55.8	26.0	35.8	91.6	200
Kajiado.....	18.1	69.5	10.4	2.0	11.2	2.4	62.9	74.1	119
Kericho.....	53.2	46.1	0.0	0.6	45.7	5.0	35.9	81.6	109
Bomet.....	60.0	37.3	0.6	2.1	40.6	2.4	33.3	73.9	131
Kakamega.....	68.5	27.5	3.7	0.3	48.2	7.9	25.6	73.8	262
Vihiga.....	73.6	23.6	2.0	0.8	57.3	8.1	21.8	79.1	68
Bungoma.....	42.1	42.3	15.1	0.5	29.5	2.4	48.9	78.4	237
Busia.....	61.0	29.3	9.8	0.0	48.7	7.8	37.7	86.4	110
Siaya.....	28.6	63.5	5.5	2.4	27.3	10.5	56.1	83.4	133
Kisumu.....	40.6	55.4	3.6	0.4	26.1	3.8	55.1	81.2	152
Homa Bay.....	51.7	32.1	15.7	0.5	30.3	1.8	40.5	70.8	177
Migori.....	47.6	52.1	0.1	0.2	30.8	1.6	47.5	78.3	154
Kisii.....	77.4	19.5	2.5	0.6	62.9	19.7	18.9	81.8	161
Nyamira.....	59.9	37.4	2.8	0.0	49.7	8.6	38.3	88.0	80
Nairobi City.....	41.1	55.5	2.9	0.4	28.6	10.4	49.1	77.7	600

Table 5.16: Proportion of Children that had Diarrhoea by Age-Group, Residence and County

Residence/Sex/ Age group / Country	Yes	No	Not Stated	Number of Individuals ('000)
<b>National</b> .....	8.5	90.5	0.9	6,081
<b>Rural</b> .....	8.2	91.0	0.8	3,991
<b>Urban</b> .....	9.2	89.6	1.2	2,090
<b>Sex</b>				
Male.....	9.1	90.0	0.9	3,057
Female.....	8.0	91.1	0.9	3,024
<b>Age group</b>				
< 6 months.....	6.9	91.6	1.6	555
6-11 months.....	13.3	86.5	0.2	572
12-23 months.....	14.5	85.2	0.4	1,194
24-35 months.....	8.8	90.3	1.0	1,163
36-48 months.....	5.5	93.6	0.9	1,260
48-59 months.....	4.6	93.9	1.5	1,336
<b>County</b>				
Mombasa.....	7.8	91.2	0.9	135
Kwale.....	11.8	88.2	0.0	130
Kilifi.....	15.0	78.6	6.4	222
Tana River.....	10.6	87.8	1.5	48
Lamu.....	14.0	86.0	0.0	18
Taita / Taveta.....	8.4	91.6	0.0	41
Garissa.....	4.1	93.3	2.5	63
Wajir.....	2.1	94.4	3.5	92
Mandera.....	3.0	95.9	1.2	117
Marsabit.....	4.1	95.0	0.9	53
Isiolo.....	1.8	98.2	0.0	23
Meru.....	5.5	94.5	0.0	168
Tharaka-Nithi.....	14.7	81.2	4.1	45
Embu.....	10.4	89.6	0.0	57
Kitui.....	16.1	83.9	0.0	134
Machakos.....	5.7	92.9	1.4	136
Makueni.....	6.0	93.3	0.7	110
Nyandarua.....	5.5	92.5	2.0	74
Nyeri.....	4.2	95.8	0.0	82
Kirinyaga.....	14.7	85.3	0.0	56
Murang'a.....	5.8	94.2	0.0	117
Kiambu.....	4.8	95.2	0.0	197
Turkana.....	8.7	89.0	2.3	191
West Pokot.....	9.4	89.4	1.2	113
Samburu.....	4.1	95.4	0.5	54
Trans Nzoia.....	7.7	92.1	0.2	133
Uasin Gishu.....	11.2	86.1	2.7	151
Elgeyo / Marakwet... ..	4.1	94.1	1.8	67
Nandi.....	2.5	96.8	0.7	122
Baringo.....	14.7	85.3	0.0	98
Laikipia.....	9.1	90.1	0.8	66
Nakuru.....	6.2	93.5	0.3	270
Narok.....	13.5	86.1	0.4	200
Kajiado.....	7.0	90.4	2.6	119
Kericho.....	4.5	94.8	0.6	109
Bomet.....	1.2	98.7	0.1	131
Kakamega.....	8.8	91.0	0.3	262
Vihiga.....	10.3	88.9	0.8	68
Bungoma.....	16.8	83.0	0.2	237
Busia.....	3.7	96.3	0.0	110
Siaya.....	18.2	80.4	1.4	133
Kisumu.....	15.9	82.9	1.2	152
Homa Bay.....	3.6	96.2	0.2	177
Migori.....	7.3	92.5	0.2	154
Kisii.....	2.9	96.9	0.2	161
Nyamira.....	9.0	91.0	0.0	80
Nairobi City.....	9.2	90.4	0.4	600

**Table 5.17: Percentage Distribution of Type of Food Given to Children during Diarrhoea by Residence, County and Age-Group**

Residence/Sex/ Age group / County	Type of Food Given						How Much Food was Given					Number of Individuals ('000)
	Nothing	Commercial Infant/Formula/Yoghurt	Other Solid	Fruits	Other	Not Stated	Much Less	Some what Less	About the Same	More	Not Stated	
<b>National</b> .....	22.5	5.4	54.5	10.9	3.9	2.8	28.5	25.3	27.2	9.3	9.8	519
<b>Rural</b> .....	21.9	5.8	59.4	7.3	3.8	1.9	31.0	24.8	27.7	7.4	9.1	328
<b>Urban</b> .....	23.4	4.9	46.3	17.2	4.0	4.2	24.2	26.2	26.3	12.4	11.0	192
<b>Sex</b>												
Male.....	23.3	5.0	51.5	13.8	3.0	3.4	28.4	25.6	23.4	11.4	11.3	278
Female.....	21.4	5.9	58.1	7.7	4.8	2.0	28.7	24.9	31.4	6.8	8.1	241
<b>Age group</b>												
< 6 months.....	75.6	10.6	3.0	4.3	3.0	3.6	12.8	6.8	28.9	4.3	47.1	38
6-11 months.....	25.7	7.6	46.1	9.5	4.4	6.7	30.3	30.8	23.1	5.6	10.2	76
12-23 months.....	20.9	4.5	58.8	12.6	1.8	1.3	35.9	24.8	24.0	9.8	5.5	173
24-35 months.....	10.8	4.9	66.4	11.1	6.6	0.2	29.0	24.6	37.1	5.9	3.4	102
36-48 months.....	13.1	4.6	62.3	15.1	1.6	3.3	22.9	28.6	29.3	14.6	4.6	70
48-59 months.....	19.6	3.9	56.6	7.2	7.7	5.0	20.9	28.6	20.9	14.9	14.6	61
<b>County</b>												
Mombasa.....	22.9	10.5	66.7	0.0	0.0	0.0	11.3	24.2	40.5	12.5	11.4	11
Kwale.....	37.2	3.4	51.6	7.8	0.0	0.0	3.6	15.9	45.2	12.3	23.0	15
Kilifi.....	34.6	6.2	46.1	3.6	9.5	0.0	31.2	24.0	19.4	1.9	23.5	33
Tana River.....	21.8	3.3	56.6	0.7	16.4	1.2	6.2	6.8	66.4	12.9	7.8	5
Lamu.....	22.4	17.5	60.1	0.0	0.0	0.0	24.6	7.1	47.6	8.9	11.8	2
Taita / Taveta.....	13.7	9.9	68.3	3.8	0.0	4.3	26.0	29.4	31.0	0.0	13.7	3
Garissa.....	16.1	0.0	83.9	0.0	0.0	0.0	37.7	0.0	62.3	0.0	0.0	3
Wajir.....	58.0	1.0	31.2	3.7	0.0	6.1	76.9	0.0	6.1	0.0	17.1	2
Mandera.....	81.0	0.0	19.0	0.0	0.0	0.0	33.2	0.0	29.7	0.9	36.3	3
Marsabit.....	75.2	4.7	20.1	0.0	0.0	0.0	52.8	47.2	0.0	0.0	0.0	2
Isiolo.....	12.5	0.0	26.8	23.5	37.3	0.0	76.5	0.0	23.5	0.0	0.0	0
Meru.....	3.5	11.4	56.3	28.8	0.0	0.0	41.7	24.4	15.2	4.1	14.6	9
Tharaka-Nithi.....	26.9	0.0	49.0	19.5	4.6	0.0	13.1	38.9	20.9	17.4	9.6	7
Embu.....	12.1	5.5	69.0	8.0	0.0	5.4	35.5	18.1	33.5	2.6	10.4	6
Kitui.....	7.0	4.7	83.9	4.4	0.0	0.0	68.1	19.4	12.5	0.0	0.0	22
Machakos.....	55.3	0.0	30.2	3.0	4.4	7.2	25.6	34.2	0.0	0.0	40.2	8
Makueni.....	38.4	6.8	40.4	0.0	7.3	7.2	9.1	12.3	40.7	7.2	30.7	7
Nyandarua.....	0.0	0.0	36.5	55.0	8.5	0.0	5.1	21.2	2.7	63.5	7.5	4
Nyeri.....	21.2	54.3	5.7	18.9	0.0	0.0	18.9	54.3	5.7	0.0	21.2	3
Kirinyaga.....	53.7	0.0	33.9	6.5	5.8	0.0	37.1	2.8	49.9	0.0	10.2	8
Murang'a.....	5.4	0.0	94.6	0.0	0.0	0.0	24.1	56.8	19.1	0.0	0.0	7
Kiambu.....	31.3	0.0	11.2	57.5	0.0	0.0	83.4	0.0	0.0	16.6	0.0	10
Turkana.....	4.9	0.8	61.5	14.8	2.1	15.8	24.4	38.5	23.3	13.8	0.0	17
West Pokot.....	27.0	27.3	38.9	2.1	0.0	4.8	43.5	16.4	23.2	11.8	5.1	11
Samburu.....	28.0	0.0	61.3	10.7	0.0	0.0	19.1	47.7	21.3	11.9	0.0	2
Trans Nzoia.....	2.0	0.0	90.1	3.2	4.8	0.0	45.2	28.9	24.0	0.0	2.0	10
Uasin Gishu.....	27.3	5.7	54.7	8.6	3.7	0.0	61.7	15.2	19.8	0.0	3.4	17
Elgeyo / Marakwet... .....	0.0	16.5	71.2	0.0	0.0	12.3	69.8	0.0	30.2	0.0	0.0	3
Nandi.....	15.2	0.0	52.7	32.1	0.0	0.0	0.0	37.5	62.5	0.0	0.0	3
Baringo.....	12.2	10.0	62.6	2.0	9.9	3.3	32.2	31.9	11.0	18.3	6.6	14
Laikipia.....	20.3	7.0	32.2	39.4	1.2	0.0	13.8	29.5	40.1	15.8	0.8	6
Nakuru.....	21.5	5.1	52.5	18.2	2.6	0.0	7.5	14.6	66.1	11.8	0.0	17
Narok.....	34.6	3.4	45.5	2.6	9.9	4.1	26.6	27.3	22.4	4.1	19.6	27
Kajiado.....	59.7	0.0	25.9	14.3	0.0	0.0	0.0	0.0	36.1	28.4	35.5	8
Kericho.....	7.8	0.0	71.7	20.5	0.0	0.0	7.8	54.4	37.8	0.0	0.0	5
Bomet.....	49.7	31.3	19.0	0.0	0.0	0.0	8.4	0.0	91.6	0.0	0.0	2
Kakamega.....	6.0	18.3	69.0	2.8	3.9	0.0	33.8	22.4	39.7	4.2	0.0	23
Vihiga.....	43.1	0.0	42.7	6.3	5.0	2.9	38.3	9.0	25.6	4.4	22.7	7
Bungoma.....	16.9	5.8	55.4	13.9	3.3	4.9	20.4	35.6	30.2	3.6	10.2	40
Busia.....	38.2	0.0	51.7	10.1	0.0	0.0	0.0	21.8	78.2	0.0	0.0	4
Siaya.....	25.2	5.2	63.4	0.0	6.2	0.0	33.0	25.9	24.5	6.0	10.6	24
Kisumu.....	18.7	2.2	70.0	2.2	4.4	2.4	13.4	47.7	27.6	4.2	7.0	24
Homa Bay.....	44.4	0.0	49.1	0.0	6.5	0.0	30.7	28.3	32.3	0.0	8.7	6
Migori.....	24.5	0.0	75.5	0.0	0.0	0.0	13.1	5.3	44.6	31.3	5.7	11
Kisii.....	13.2	0.0	81.3	5.5	0.0	0.0	54.4	27.0	14.7	0.0	3.8	5
Nyamira.....	34.1	0.0	61.3	4.6	0.0	0.0	22.8	35.0	12.7	9.7	19.8	7
Nairobi City.....	9.8	3.4	42.6	31.1	4.2	8.9	24.3	28.4	15.8	26.8	4.7	55

**Table 5.18: Percentage Distribution of Type of Fluid Given to Children During Diarrhoea by Residence, County and Age-Group**

Residence/Sex/ Age group / County	Type of Fluid Given							How Much Fluid Given					Number of individuals ('000)
	Nothing	Breastmilk	Porridge	Water Alone	Milk Other than Breastmilk	Other	Not Stated	Much Less	Some What Less	About the Same	More	Not stated	
National.....	4.2	16.3	39.4	15.5	10.7	4.2	9.7	11.3	12.5	20.5	23.0	32.7	519
Rural.....	4.9	16.5	38.5	12.9	12.0	5.7	9.3	12.1	13.2	20.4	22.0	32.3	328
Urban.....	2.9	16.0	40.9	20.0	8.3	1.6	10.3	10.1	11.2	20.6	24.8	33.3	192
<b>Sex</b>													
Male.....	3.9	15.0	37.6	17.5	9.0	4.7	12.3	11.1	11.5	22.0	23.7	31.7	278
Female.....	4.5	17.8	41.5	13.3	12.6	3.6	6.7	11.6	13.6	18.6	22.3	33.9	241
<b>Age group</b>													
< 6 months.....	11.1	47.0	25.7	1.2	1.1	0.7	13.2	6.3	13.8	23.4	6.2	50.3	38
6-11 months.....	2.4	32.2	38.9	6.3	7.1	3.3	9.9	12.4	17.0	18.0	16.1	36.5	76
12-23 months.....	4.0	20.9	39.2	15.7	11.6	2.1	6.5	11.1	13.0	21.1	26.0	28.8	173
24-35 months.....	1.0	5.3	41.7	20.6	16.4	9.5	5.4	10.8	9.8	24.1	26.6	28.8	102
36-48 months.....	5.9	1.4	42.1	17.8	11.2	3.8	17.8	12.9	7.5	20.4	25.6	33.6	70
48-59 months.....	5.9	0.0	42.1	24.3	8.5	5.0	14.2	12.9	14.7	14.0	25.0	33.3	61
<b>County</b>													
Mombasa.....	0.0	5.5	30.3	51.6	12.5	0.0	0.0	0.0	16.9	35.2	29.9	18.0	11
Kwale.....	0.0	41.0	45.9	11.4	0.0	0.0	1.7	0.0	11.1	54.8	26.1	8.0	15
Kilifi.....	3.9	23.2	34.7	33.7	0.8	1.9	1.8	6.2	9.6	25.2	33.1	25.9	33
Tana River.....	5.8	20.9	18.2	10.6	11.5	0.0	32.9	0.7	2.4	23.2	16.4	57.3	5
Lamu.....	0.0	10.5	51.8	15.5	12.0	1.7	8.4	30.2	0.0	22.5	15.3	31.9	2
Taita / Taveta.....	3.7	13.8	39.8	20.3	22.3	0.0	0.0	26.0	18.8	34.2	10.0	11.0	3
Garissa.....	0.0	16.1	8.5	42.8	10.3	22.2	0.0	5.0	0.0	61.4	13.1	20.4	3
Wajir.....	2.4	19.7	0.0	3.1	30.3	0.0	44.5	28.3	6.1	14.6	0.0	51.0	2
Mandera.....	0.0	29.7	0.0	9.5	24.6	36.3	0.0	18.1	24.6	47.8	8.6	0.9	3
Marsabit.....	1.4	8.8	13.4	49.5	13.4	0.0	13.5	0.0	1.4	0.0	97.5	1.1	2
Isiolo.....	6.2	37.3	26.8	0.0	0.0	0.0	29.7	0.0	0.0	37.3	0.0	62.7	0
Meru.....	0.0	20.2	34.1	7.6	4.1	0.0	34.1	4.1	11.4	0.0	8.4	76.2	9
Tharaka-Nithi.....	11.9	5.7	62.9	17.5	2.1	0.0	0.0	7.8	18.1	27.5	30.5	16.0	7
Embu.....	5.0	14.6	43.4	15.4	5.0	8.5	8.0	29.5	7.5	18.4	13.5	31.2	6
Kitui.....	4.8	11.2	57.2	3.2	17.9	1.5	4.2	16.6	13.5	4.6	51.2	14.0	22
Machakos.....	0.0	23.3	65.1	0.0	4.4	0.0	7.2	20.4	42.8	13.5	15.1	8.2	8
Makueni.....	0.0	22.3	32.2	37.4	0.0	0.0	8.1	0.0	0.0	0.0	59.4	40.6	7
Nyandarua.....	0.0	0.0	0.0	25.6	8.9	5.1	60.4	5.1	0.0	0.0	22.9	71.9	4
Nyeri.....	0.0	21.2	0.0	73.2	5.7	0.0	0.0	0.0	8.1	13.0	78.8	0.0	3
Kirinyaga.....	0.0	22.5	17.1	16.3	0.0	5.8	38.2	16.2	2.0	10.9	2.8	68.0	8
Murang'a.....	0.0	5.4	53.4	16.6	11.5	13.2	0.0	0.0	24.7	19.1	50.7	5.5	7
Kiambu.....	0.0	0.0	0.0	68.7	14.6	0.0	16.6	16.6	0.0	0.0	83.4	0.0	10
Turkana.....	0.0	28.6	28.7	4.4	12.3	6.0	19.9	3.6	1.9	10.0	2.1	82.4	17
West Pokot.....	2.7	16.3	18.0	30.6	8.3	2.2	21.8	6.1	7.9	15.6	6.5	64.0	11
Samburu.....	10.4	18.6	12.4	8.4	20.5	0.0	29.7	0.0	25.7	10.5	16.6	47.2	2
Trans Nzoia.....	3.6	10.0	24.6	26.2	15.4	4.8	15.5	7.9	32.1	29.3	15.2	15.5	10
Uasin Gishu.....	11.2	37.3	26.6	0.0	14.8	3.9	6.2	9.4	11.2	8.3	18.9	52.2	17
Elgeyo / Marakwet... Nandi.....	0.0	14.6	0.0	0.0	57.9	0.0	27.5	1.9	0.0	16.0	29.2	52.9	3
Baringo.....	0.0	12.2	22.1	15.2	15.5	0.0	35.1	0.0	0.0	27.4	22.1	50.5	3
Laikipia.....	1.8	14.6	24.7	2.9	34.6	1.9	19.5	15.8	14.1	8.7	27.2	34.2	14
Nakuru.....	1.2	0.0	15.5	25.6	8.7	0.8	48.1	0.0	0.0	11.0	6.9	82.1	6
Narok.....	14.0	0.0	42.4	34.0	0.0	0.0	9.5	7.5	2.6	54.8	6.8	28.3	17
Kajiado.....	9.3	9.0	27.2	8.8	28.8	14.2	2.7	24.3	14.6	26.9	7.9	26.3	27
Kericho.....	35.5	19.3	14.4	22.7	0.0	0.0	8.0	0.0	0.0	22.0	3.2	74.8	8
Bomet.....	0.0	7.8	61.6	4.5	26.1	0.0	0.0	0.0	22.8	24.9	17.3	35.0	5
Kakamega.....	27.2	0.0	30.9	31.3	10.5	0.0	0.0	0.0	0.0	69.1	0.0	30.9	2
Vihiga.....	12.1	20.7	48.3	4.4	8.1	0.0	6.4	29.7	4.7	21.8	0.0	43.8	23
Bungoma.....	7.7	35.2	30.0	4.4	10.6	9.9	2.2	18.5	19.3	25.1	14.3	22.8	7
Busia.....	0.0	23.0	40.4	1.4	13.6	20.8	0.7	8.2	20.0	20.2	28.5	23.2	40
Siaya.....	11.2	10.3	67.1	8.7	2.7	0.0	0.0	0.0	21.8	49.1	21.7	7.4	4
Kisumu.....	5.4	1.6	67.8	17.4	4.2	0.0	3.7	12.8	18.0	24.6	20.1	24.6	24
Homa Bay.....	0.8	11.5	78.4	2.1	5.1	2.1	0.0	14.6	4.4	4.3	56.9	19.8	24
Migori.....	12.3	19.9	56.4	0.0	0.0	11.4	0.0	30.7	28.1	20.9	0.0	20.3	6
Kisii.....	0.0	16.6	67.6	6.3	9.5	0.0	0.0	10.9	13.0	34.7	14.3	27.0	11
Nyamira.....	3.8	10.4	29.9	24.9	20.5	0.0	10.5	0.0	0.0	0.0	19.3	80.7	5
Nairobi City.....	2.5	23.6	29.2	44.7	0.0	0.0	0.0	16.9	37.2	15.2	30.7	0.0	7
Nairobi City.....	0.0	13.9	42.6	33.6	10.4	0.0	19.5	12.0	14.8	17.4	16.6	39.2	55

**Table 5.19: Percentage Distribution of Children by Additional Supplement Given During Diarrhoea by Age Group, Residence and County**

Residence/Sex/ Age group / County	ORS/ ORT/ Zinc Solution	Sugar Salt Solution	Other Home Made Solutions	None	Not Stated	Number of individuals ('000)
<b>National</b> .....	46.9	7.9	5.8	38.0	1.4	519
<b>Rural</b> .....	44.8	8.3	5.4	40.5	1.0	328
<b>Urban</b> .....	50.6	7.2	6.4	33.7	2.1	192
<b>Sex</b>						
Male.....	47.8	8.4	4.8	37.3	1.7	278
Female.....	45.9	7.4	6.8	38.8	1.0	241
<b>Age group</b>						
< 6 months.....	38.5	5.8	1.4	49.7	4.6	38
6-11 months.....	52.8	5.7	3.8	36.7	1.1	76
12-23 months.....	44.4	5.5	9.4	39.5	1.1	173
24-35 months.....	50.6	8.0	5.1	36.3	0.0	102
36-48 months.....	46.7	13.4	5.8	33.8	0.3	70
48-59 months.....	46.0	12.5	1.8	35.5	4.2	61
<b>County</b>						
Mombasa.....	54.0	15.9	0.0	30.1	0.0	11
Kwale.....	48.4	0.0	9.2	42.4	0.0	15
Kilifi.....	78.3	0.0	0.8	20.8	0.0	33
Tana River.....	35.8	2.2	0.0	62.0	0.0	5
Lamu.....	50.3	0.0	0.0	49.7	0.0	2
Taita / Taveta.....	77.0	6.6	0.0	16.4	0.0	3
Garissa.....	42.8	9.4	0.0	47.8	0.0	3
Wajir.....	72.8	0.0	0.0	27.2	0.0	2
Mandera.....	88.5	0.0	0.0	11.5	0.0	3
Marsabit.....	38.9	28.2	0.0	32.9	0.0	2
Isiolo.....	6.2	0.0	0.0	93.8	0.0	0
Meru.....	53.5	0.0	4.1	42.4	0.0	9
Tharaka-Nithi.....	52.8	7.0	4.8	30.5	4.8	7
Embu.....	62.8	0.0	0.0	26.8	10.4	6
Kitui.....	38.3	8.1	4.2	49.4	0.0	22
Machakos.....	76.7	0.0	0.0	16.1	7.2	8
Makueni.....	24.0	20.9	0.0	55.1	0.0	7
Nyandarua.....	16.9	24.3	7.5	51.3	0.0	4
Nyeri.....	81.3	13.0	0.0	5.7	0.0	3
Kirinyaga.....	58.4	0.0	0.0	41.6	0.0	8
Muranga.....	30.2	0.0	0.0	69.8	0.0	7
Kiambu.....	14.6	0.0	0.0	85.4	0.0	10
Turkana.....	79.4	3.5	6.0	11.1	0.0	17
West Pokot.....	40.4	10.8	0.5	42.9	5.4	11
Samburu.....	19.9	32.2	10.2	37.7	0.0	2
Trans Nzoia.....	50.2	23.8	0.0	26.0	0.0	10
Uasin Gishu.....	50.5	3.5	10.6	35.4	0.0	17
Elgeyo / Marakwet.....	67.3	0.0	0.0	32.7	0.0	3
Nandi.....	27.9	15.5	19.9	36.7	0.0	3
Baringo.....	40.3	5.4	9.4	44.8	0.0	14
Laikipia.....	17.5	13.9	11.2	57.4	0.0	6
Nakuru.....	67.7	0.0	0.0	32.3	0.0	17
Narok.....	43.1	5.6	12.6	38.8	0.0	27
Kajiado.....	34.6	0.0	0.0	65.4	0.0	8
Kericho.....	42.3	0.0	23.8	33.8	0.0	5
Bomet.....	68.7	0.0	0.0	31.3	0.0	2
Kakamega.....	42.1	7.9	0.0	50.0	0.0	23
Vihiga.....	21.6	13.8	14.4	50.2	0.0	7
Bungoma.....	30.9	16.6	1.8	48.5	2.1	40
Busia.....	38.8	11.4	0.0	49.8	0.0	4
Siaya.....	36.3	20.0	7.6	32.0	4.1	24
Kisumu.....	47.6	18.9	2.4	29.0	2.1	24
Homa Bay.....	56.3	0.0	5.7	38.0	0.0	6
Migori.....	30.6	0.0	17.3	52.1	0.0	11
Kisii.....	20.5	15.9	0.0	59.7	3.8	5
Nyamira.....	33.1	1.6	18.5	46.8	0.0	7
Nairobi City.....	48.2	7.3	15.0	24.8	4.7	55

# CHAPTER 6:

## 6. NUTRITION

### 6.1 Introduction

The Kenyan Constitution stipulates that every Kenyan has the right to basic nutrition, right to adequate amounts of food of acceptable quality as well as clean and safe water in adequate quantities. Nutrition is the intake of food, measured in relation to dietary needs. The nutritional status of a population is one of the most useful indicators of a population's overall welfare. Therefore, child growth is recognized as an important indicator of nutritional status and health.

Sustainable Development Goals (SDGs) number two seeks to end hunger, achieve food security and improve nutrition. In the national framework for monitoring and reporting SDGs, the Government has committed to monitor and report on three indicators on nutrition. These are prevalence of undernourishment; stunting; wasting and underweight. The 2015/16 KIHBS provides data for monitoring nutritional status of children and progress made towards realization of SDGs targets.

The survey collected information on breastfeeding, feeding patterns and health status of children aged 0-59 months at the time of the survey. Anthropometric measures were also taken for all household members aged above 6 months. These measurements included recumbent length (measured while lying down for children below 24 months) and standing height for all persons aged 2 years and above.

### 6.2 Nutritional Status of children

The assessment of the nutritional status of children was measured using the three anthropometric indicators namely; height for age, weight for age and weight for height. These indicators are interpreted based on the concept that in a well-nourished population, the distribution of children's weight and height at a given age will follow a predictable pattern. Nutritional status is determined based on the extent to which the indicators deviate from the median WHO/ NCHS reference population growth standards. The reference population generated by the World Health Organisation (WHO) and National Centre for Health Statistics (NCHS) is used to compare the nutrition status of individuals and of any given population over time or to compare subgroups within a population.

Table 6.1 shows the nutritional status of children as measured by stunting, wasting and underweight by sex, age, residence and county. The data reveals that boys are more prone to stunting, wasting and being underweight than girls.

#### Stunting

Stunting is height for age index which measures linear growth. Stunting is the result of long-term nutritional deprivation and often results in delayed mental development. High level of stunting is linked to poor socio-economic conditions and early exposure to adverse conditions such as illness and/or inappropriate feeding practices. A child whose z-score is below minus two standard deviations from the median of the reference population in terms of height-for-age is considered short for his/ her age or stunted. If the child's z-score is below minus three standard deviations (-3 SD) from the median of the reference population, the child is considered severely stunted.

The data shows that at national level, 29.9 per cent of the children were moderately stunted (short for their age) while 11.4 per cent were severely stunted (-3SD). Most of the children in rural areas were moderately stunted compared to children in urban areas. The proportion of the children who were severely stunted in

rural and urban areas were 12.2 per cent and 9.6 per cent, respectively.

The survey results indicate that 32.8 per cent of male children were moderately stunted with 12.5 per cent of them being severely stunted. The prevalence of stunting among female children was lower than that for males. Stunting was more pronounced in the 24-35 months age category with 37.0 per cent of the children being moderately stunted.

### **Wasting**

Wasting in children is defined as low weight for height and is a strong predictor of mortality among children under five years. A child is considered severely wasted if his/her z-score is more than minus three standard deviations below (-3SD) the median of the reference population. Wasting impairs the functioning of the immune system and can lead to increased severity and duration of and susceptibility to infectious diseases and an increased risk of death. A child whose z-score is below minus two standard deviations (-2 SD) from the median of the reference population, is considered to have low weight for his/her height, or moderately wasted.

Overall, 13.0 per cent of the children were reported to be moderately wasted while 2.5 per cent were severely wasted. The proportion of children who were severely wasted in rural areas was slightly higher than in urban areas. Further, the information presented in Table 6.1 shows that the 36-47 months age group had the highest proportion of moderately wasted children at 14.1 per cent.

### **Underweight**

Underweight (low weight for age) is a composite index of weight for height and height for age. The proportion of underweight children reflects both conditions of chronic and acute under-nutrition and is a pointer to the extent of nutritional problems.

Overall, 6.7 per cent of the children were underweight, with 2.6 per cent being severely underweight. The proportion of underweight children in rural areas was 6.8 per cent with 2.8 per cent being severely underweight. In urban areas, 6.3 per cent of children were underweight with 2.4 per cent being severely underweight.

A higher proportion of male children were underweight compared to their female counterparts. Nationally, 7.2 per cent and 3.0 per cent of male children were moderately and severely underweight, respectively. On the other hand, 6.1 per cent and 2.3 per cent of female children were moderately and severely underweight, respectively. The highest proportion of the moderately underweight children was recorded in the 12-23 months age group.

**Table 6.1: Proportion of Undernourished Children (6-59 Months) by Residence, Age, Sex and County**

Residence / county	Height-for-Age		Weight-for-Age		Weight-for-Height		Number of Children ('000)
	Percentage below -2SD	Percentage below -3SD	Percentage below -2SD	Percentage below -3SD	Percentage below -2SD	Percentage below -3SD	
<b>National</b> .....	29.9	11.4	13.0	2.5	6.7	2.6	4,839
<b>Rural</b> .....	32.4	12.2	14.5	2.8	6.8	2.8	3,297
<b>Urban</b> .....	24.5	9.6	9.8	2.1	6.3	2.4	1,542
<b>Sex</b>							
Male.....	32.8	12.5	13.7	3.0	7.2	3.0	2,447
Female.....	26.9	10.2	12.3	2.1	6.1	2.3	2,392
<b>Age</b>							
6-11 months.....	14.6	5.5	8.3	1.1	8.5	3.8	417
12-23 months.....	30.8	12.8	11.8	3.3	9.0	3.5	1,056
24-35 months.....	37.0	13.5	13.4	2.3	5.7	2.6	1,039
36-48 months.....	32.5	13.3	14.1	2.6	6.1	2.4	1,136
48-59 months.....	25.7	8.5	14.4	2.4	5.3	1.8	1,191
<b>County</b>							
Mombasa.....	26.6	11.9	10.4	2.5	9.7	2.6	95
Kwale.....	35.5	13.9	10.2	2.5	3.4	0.4	109
Kilifi.....	29.9	10.8	17.4	1.4	4.8	1.3	175
Tana River.....	24.6	11.4	14.7	6.0	8.2	1.6	39
Lamu.....	30.9	10.5	17.7	4.3	8.8	1.5	14
Taita / Taveta.....	24.8	10.4	12.1	0.8	7.1	1.9	35
Garissa.....	8.3	5.0	13.9	4.7	27.6	16.6	50
Wajir.....	24.7	8.3	16.1	1.8	11.6	2.6	72
Mandera.....	47.6	18.5	43.8	5.8	17.2	6.2	102
Marsabit.....	33.0	16.1	30.9	11.5	25.0	11.5	44
Isiolo.....	22.8	10.5	18.4	5.3	30.0	11.5	19
Meru.....	36.0	15.3	13.5	4.3	4.7	0.7	144
Tharaka-Nithi.....	39.7	14.3	15.5	3.8	6.3	0.6	36
Embu.....	33.0	8.5	16.8	5.3	3.5	0.4	50
Kitui.....	29.3	10.4	12.9	1.1	6.3	1.4	112
Machakos.....	39.8	16.9	7.5	1.7	2.7	0.0	98
Makueni.....	28.9	6.6	9.4	1.8	3.2	0.8	94
Nyandarua.....	39.2	13.3	10.3	2.6	9.9	4.7	63
Nyeri.....	27.6	8.0	4.1	1.0	6.0	2.4	68
Kirinyaga.....	28.3	13.2	7.1	0.6	0.7	0.7	38
Murang'a.....	20.1	3.0	3.8	1.0	5.0	3.2	94
Kiambu.....	26.0	8.2	8.7	5.7	4.0	2.6	149
Turkana.....	25.3	7.8	25.5	4.7	27.4	15.9	150
West Pokot.....	41.2	14.8	32.8	7.8	15.4	7.1	92
Samburu.....	33.1	14.9	32.1	11.9	25.3	12.2	47
Trans Nzoia.....	37.0	10.5	14.7	2.0	1.7	0.7	114
Uasin Gishu.....	28.0	8.1	12.6	2.1	4.4	1.2	116
Elgeyo / Marakwet...	32.2	11.7	17.8	1.2	5.3	0.9	47
Nandi.....	31.1	12.4	10.4	2.2	6.3	1.1	108
Baringo.....	30.0	9.9	21.6	4.8	8.1	1.6	82
Laikipia.....	33.1	18.2	20.6	11.5	6.2	2.7	46
Nakuru.....	33.4	9.0	11.1	1.8	1.4	0.4	216
Narok.....	39.4	18.4	17.1	2.2	4.3	1.5	162
Kajiado.....	25.0	13.5	9.8	1.0	4.8	1.1	73
Kericho.....	32.3	11.0	12.0	2.4	4.0	1.2	91
Bomet.....	33.0	15.2	13.7	2.9	7.2	3.6	102
Kakamega.....	27.6	11.1	8.7	0.7	2.0	0.7	219
Vihiga.....	22.4	5.8	6.1	0.0	2.6	0.6	62
Bungoma.....	33.3	13.6	8.2	1.8	2.7	0.9	188
Busia.....	29.5	10.7	9.1	0.2	3.7	0.7	99
Siaya.....	30.4	8.1	7.1	0.2	3.1	0.6	117
Kisumu.....	23.9	6.0	5.2	0.5	5.5	2.2	114
Homa Bay.....	32.1	13.4	10.1	2.6	4.4	3.0	149
Migori.....	26.5	11.5	7.6	1.1	8.0	2.8	121
Kisii.....	27.6	13.6	11.0	0.7	6.8	4.1	139
Nyamira.....	23.2	5.5	5.6	0.9	3.5	2.7	72
Nairobi City.....	21.4	11.8	10.2	1.6	5.6	1.8	410

### 6.3 Infant Feeding Patterns

Improper breastfeeding, supplementary feeding and weaning practices are major causes of under nutrition and malnutrition among children. A baby should be exclusively breastfed for the first six months. After six months, it is recommended that a child be introduced to supplementary feeding and continue breast feeding until the second year of life. Early introduction of food (supplementation), especially in unhygienic conditions, can result in infections, while delayed or poor supplementation on the other hand inhibits normal growth.

**Ever Breastfed:** The percentage distribution of children aged 0-59 months by breastfeeding status is shown in Table 6.2. Nationally, 98.8 per cent of all children aged 0-59 months were ever breastfed. There was no significant difference between children in rural and urban areas reported to have ever been breastfed. Most of the counties reported high proportions of children who have ever been breastfed.

#### **Initiation of Breastfeeding:**

Early initiation of breastfeeding is important for both the mother and the child. Mothers milk contain colostrum, which is highly nutritious and contains antibodies that provide natural immunity to the infant. It is recommended that children be breastfed immediately after birth (within one hour) and continue to be exclusively breastfed for the first six months. As shown in Table 6.2, seven out of ten of children (71.9 %) at the national level were breastfed within one hour of birth while 92.8 children were breastfed within one day after birth. A similar pattern is exhibited in the rural and urban areas.

Table 6.2: Percentage Distribution of Children aged 0-59 Months by Breastfeeding Status, Age, Sex Residence and County

Residence / county	Ever breastfed	Number of children aged 0-59 Months ('000)	Breastfed within 1 hour of Birth	Breastfed within 1 day of Birth	Number of children ever breastfed ('000)
National.....	98.8	6,081	71.9	92.8	6,008
Rural.....	99.0	3,991	72.0	93.7	3,950
Urban.....	98.5	2,090	71.5	91.0	2,059
<b>Sex</b>					
Male.....	98.7	3,057	71.8	92.7	3,019
Female.....	98.9	3,024	72.0	93.0	2,990
<b>Age group</b>					
< 6 months.....	99.3	555	68.3	90.2	551
6-11 months.....	99.7	572	72.7	93.6	571
12-23 months.....	99.4	1,194	71.7	92.6	1,187
24-35 months.....	98.8	1,163	72.5	93.1	1,149
36-48 months.....	98.8	1,260	71.7	93.0	1,245
48-59 months.....	97.7	1,336	72.7	93.4	1,305
<b>County</b>					
Mombasa.....	95.1	135	52.3	84.6	128
Kwale.....	100.0	130	82.6	95.7	130
Kilifi.....	95.0	222	36.3	93.3	211
Tana River.....	97.2	48	93.1	99.9	47
Lamu.....	99.2	18	73.3	87.5	17
Taita / Taveta.....	98.9	41	70.4	95.1	41
Garissa.....	97.4	63	89.8	99.5	62
Wajir.....	97.3	92	84.8	95.1	90
Mandera.....	98.5	117	97.6	99.3	115
Marsabit.....	99.1	53	93.8	99.8	52
Isiolo.....	99.8	23	76.5	98.5	23
Meru.....	98.7	168	81.3	93.0	166
Tharaka-Nithi.....	98.8	45	70.1	91.2	44
Embu.....	99.1	57	58.3	94.3	57
Kitui.....	100.0	134	60.4	97.3	134
Machakos.....	99.4	136	58.6	86.1	135
Makueni.....	98.8	110	74.9	97.3	109
Nyandarua.....	98.9	74	76.8	92.3	73
Nyeri.....	99.6	82	82.6	95.8	82
Kirinyaga.....	98.9	56	64.6	93.3	56
Murang'a.....	100.0	117	86.5	95.3	117
Kiambu.....	98.8	197	73.3	93.3	194
Turkana.....	99.4	191	69.2	85.6	190
West Pokot.....	98.0	113	89.6	97.3	111
Samburu.....	99.1	54	96.9	100.0	54
Trans Nzoia.....	99.2	133	66.5	86.8	132
Uasin Gishu.....	97.3	151	83.4	91.5	147
Elgeyo / Marakwet... ..	98.9	67	87.2	94.4	66
Nandi.....	99.2	122	71.5	96.7	121
Baringo.....	99.7	98	86.4	96.6	97
Laikipia.....	99.2	66	89.7	95.7	65
Nakuru.....	99.3	270	64.7	90.6	268
Narok.....	99.5	200	88.4	96.9	199
Kajiado.....	98.4	119	86.7	96.1	117
Kericho.....	99.4	109	73.4	88.9	108
Bomet.....	99.7	131	89.2	97.4	131
Kakamega.....	99.0	262	76.5	93.7	260
Vihiga.....	97.7	68	54.6	85.0	67
Bungoma.....	99.1	237	36.3	83.5	235
Busia.....	99.6	110	66.4	87.8	110
Siaya.....	96.8	133	51.0	93.5	129
Kisumu.....	99.4	152	85.4	98.0	151
Homa Bay.....	99.4	177	86.4	98.3	176
Migori.....	99.4	154	62.8	98.7	153
Kisii.....	99.6	161	47.6	97.8	161
Nyamira.....	98.0	80	59.2	91.7	79
Nairobi City.....	99.6	600	73.4	87.2	598

#### 6.4 Duration of Breastfeeding.

Nationally, 35.5 per cent of the children aged 0-59 months were still breastfeeding at the time of the survey. The mean length of breastfeeding nationally stood at 16.8 months. No significant variation was noted in the length of breastfeeding between male and female children.

#### 6.5 Types of Supplementary Foods

The best practise recommends the introduction of solid or semi-solid food to infants around 6 months because by that age breast milk alone is no longer sufficient to maintain a child's optimal growth. In the transition to supplementary feeding, children aged 6 months should be fed small quantities of solid and semi-solid foods throughout the day while continuing to breastfeed up to 2 years of age.

Table 6.4 presents the percentage distribution of children aged 0-35 months by the first food supplement given, by residence age sex and county. Porridge was reported as the common first food supplement given to 35.9 per cent of the children. Milk other than breast milk was the second most preferred food supplement with 29.3 per cent of the children being given after birth. There was notable variation in rural and urban practices with a higher proportion of children in rural areas being given milk other than breast milk, porridge and water compared to urban areas. The proportion of children given commercial infant food formula as the first food supplement was higher in urban areas (8.3%) compared to rural areas (1.9%).

Table 6.3: Mean and Median duration of breastfeeding of children aged 0-59 months by Age, Sex Residence and County

Residence / County	Still Breast Feeding	Length of Breastfeeding (Months)		Number of Children (000)
		Mean	Median	
<b>National</b> .....	35.5	16.8	17.0	6,008
<b>Rural</b> .....	34.7	17.2	17.0	3,950
<b>Urban</b> .....	36.9	16.1	16.0	2,059
<b>Sex</b>				
Male.....	36.0	16.9	17.0	3,019
Female.....	34.9	16.7	17.0	2,990
<b>Age group</b>				
< 6 months.....	99.7	2.7	3.0	551
6-11 months.....	96.4	8.5	8.0	571
12-23 months.....	68.4	16.0	16.0	1,187
24-35 months.....	14.5	20.0	19.0	1,149
36-48 months.....	2.8	20.6	20.0	1,245
48-59 months.....	1.4	20.8	19.0	1,305
<b>County</b>				
Mombasa.....	39.5	15.9	18.0	128
Kwale.....	38.0	15.5	16.0	130
Kilifi.....	36.4	16.3	18.0	211
Tana River.....	34.0	18.8	20.0	47
Lamu.....	34.8	16.1	18.0	17
Taita / Taveta.....	36.0	17.0	18.0	41
Garissa.....	35.6	17.7	19.0	62
Wajir.....	33.0	13.9	12.0	90
Mandera.....	27.6	15.6	14.0	115
Marsabit.....	45.9	18.9	18.0	52
Isiolo.....	42.9	18.0	18.0	23
Meru.....	43.9	19.2	18.0	166
Tharaka-Nithi.....	49.3	21.0	22.0	44
Embu.....	39.7	19.0	18.0	57
Kitui.....	43.3	18.3	18.0	134
Machakos.....	58.0	17.3	18.0	135
Makueni.....	36.4	16.1	15.0	109
Nyandarua.....	25.3	18.3	18.0	73
Nyeri.....	28.6	16.1	16.0	82
Kirinyaga.....	41.6	17.2	18.0	56
Murang'a.....	29.8	17.9	18.0	117
Kiambu.....	34.7	16.6	18.0	194
Turkana.....	37.9	18.9	18.0	190
West Pokot.....	33.9	15.6	16.0	111
Samburu.....	33.1	14.6	14.0	54
Trans Nzoia.....	28.5	18.6	16.0	132
Uasin Gishu.....	37.9	15.5	17.0	147
Elgeyo / Marakwet.....	30.4	15.1	15.0	66
Nandi.....	36.1	17.6	18.0	121
Baringo.....	35.5	17.0	17.0	97
Laikipia.....	35.3	21.8	18.0	65
Nakuru.....	34.5	16.8	17.0	268
Narok.....	33.7	17.4	17.0	199
Kajiado.....	36.8	15.1	15.0	117
Kericho.....	35.5	17.9	18.0	108
Bomet.....	33.4	17.4	18.0	131
Kakamega.....	33.5	15.6	13.0	260
Vihiga.....	35.1	19.2	18.0	67
Bungoma.....	34.0	17.3	18.0	235
Busia.....	29.8	17.9	18.0	110
Siaya.....	36.0	14.6	12.0	129
Kisumu.....	31.6	16.0	17.0	151
Homa Bay.....	28.9	17.7	18.0	176
Migori.....	37.1	15.6	15.0	153
Kisii.....	31.7	15.4	16.0	161
Nyamira.....	32.0	16.3	18.0	79
Nairobi City.....	35.6	15.8	16.0	598

**Table 6.4: Percentage Distribution of Children aged 0-35 Months by first food supplement given after birth by residence, Age, Sex and County**

Residence/ County	Milk Other than Breast	Commercial Infant Food Formula	Porridge	Fortified Porridge	Semi-solids	Water	Don't Know/ Not Stated	Number of children (000)
<b>National</b> .....	29.3	4.2	35.9	4.9	4.6	5.5	15.7	3,458
<b>Rural</b> .....	32.1	1.9	36.4	5.0	4.4	5.8	14.4	2,239
<b>Urban</b> .....	24.1	8.3	35.1	4.8	5.0	4.8	17.9	1,219
<b>Sex</b>								
Male.....	28.9	4.2	36.2	5.4	4.4	5.3	15.4	1,759
Female.....	29.6	4.1	35.7	4.4	4.7	5.6	15.9	1,699
<b>Age group</b>								
< 6 months.....	10.2	0.7	10.2	1.0	0.5	2.9	74.5	551
6-11 months.....	32.4	3.9	38.8	4.9	4.5	6.7	8.8	571
12-23 months.....	31.4	6.4	41.6	6.2	5.5	5.4	3.4	1,187
24-35 months.....	34.6	3.7	41.0	5.5	5.6	6.1	3.6	1,149
<b>County</b>								
Mombasa.....	22.1	1.7	50.8	3.2	4.3	0.0	17.9	85
Kwale.....	14.8	4.3	61.9	3.8	0.0	2.2	13.0	80
Kilifi.....	17.7	3.6	59.4	2.2	0.9	2.7	13.4	125
Tana River.....	62.6	0.7	17.8	0.4	6.1	0.1	12.2	27
Lamu.....	35.5	10.6	26.2	6.0	3.4	6.3	12.0	10
Taita / Taveta.....	23.1	0.0	49.1	8.0	0.6	3.4	15.9	24
Garissa.....	55.6	0.9	0.7	2.4	4.1	29.4	7.1	33
Wajir.....	51.1	3.2	3.3	1.2	0.8	26.1	14.2	52
Mandera.....	82.7	1.0	0.8	0.0	0.6	1.5	13.4	63
Marsabit.....	75.3	0.0	0.9	1.7	1.8	0.0	20.3	31
Isiolo.....	51.2	0.0	17.7	2.4	11.5	1.2	16.0	13
Meru.....	11.2	0.1	40.9	12.6	11.7	3.2	20.3	97
Tharaka-Nithi.....	4.7	5.1	51.9	3.8	8.2	12.5	13.9	27
Embu.....	11.6	0.2	59.5	1.9	5.3	8.2	13.2	33
Kitui.....	50.3	0.6	15.3	3.6	2.7	13.4	14.1	82
Machakos.....	34.6	2.0	16.8	0.5	3.0	16.9	26.2	91
Makueni.....	31.3	0.5	17.3	9.5	1.0	28.1	12.3	66
Nyandarua.....	7.3	7.3	61.1	0.9	6.5	1.4	15.6	38
Nyeri.....	17.0	3.0	54.5	1.0	9.3	1.0	14.2	44
Kirinyaga.....	0.6	1.7	65.6	4.6	7.9	2.0	17.6	34
Murang'a.....	0.5	3.0	37.2	4.2	38.9	0.0	16.2	65
Kiambu.....	5.4	6.2	30.7	0.6	21.7	0.0	35.5	112
Turkana.....	44.3	4.0	20.6	0.9	0.5	5.4	24.3	111
West Pokot.....	64.5	0.8	15.6	0.9	0.8	0.0	17.5	69
Samburu.....	84.0	0.9	2.2	0.0	0.7	1.8	10.3	31
Trans Nzoia.....	16.9	1.7	37.8	3.0	11.7	17.0	12.1	74
Uasin Gishu.....	35.8	2.4	40.4	1.4	2.0	2.5	15.5	88
Elgeyo / Marakwet..	46.1	0.0	40.4	0.3	0.7	1.1	11.4	40
Nandi.....	14.3	1.4	64.3	9.0	0.0	1.5	9.5	74
Baringo.....	71.3	2.2	5.3	1.5	0.7	4.9	14.1	57
Laikipia.....	39.0	2.6	36.7	2.1	2.9	1.4	15.3	39
Nakuru.....	14.0	3.0	54.1	4.9	6.5	4.3	13.2	153
Narok.....	39.6	3.6	22.9	11.1	2.3	0.3	20.2	109
Kajiado.....	39.6	0.3	21.4	4.3	11.3	0.0	23.1	71
Kericho.....	32.0	2.5	33.9	1.0	3.4	7.3	19.9	63
Bomet.....	39.8	4.8	45.9	0.9	0.8	0.3	7.6	70
Kakamega.....	13.7	3.1	37.2	28.8	0.0	2.0	15.2	142
Vihiga.....	13.8	8.8	32.1	16.8	3.2	15.0	10.2	37
Bungoma.....	22.8	0.9	52.7	0.7	3.6	1.7	17.6	131
Busia.....	32.0	2.0	50.3	0.6	1.9	4.7	8.5	63
Siaya.....	31.1	1.8	35.2	7.9	1.1	12.8	10.1	76
Kisumu.....	56.1	0.9	13.4	7.2	0.0	2.6	19.8	76
Homa Bay.....	37.8	1.1	38.2	3.7	0.4	4.2	14.5	98
Migori.....	32.5	2.7	37.8	4.5	4.5	1.2	16.8	88
Kisii.....	32.6	0.6	46.3	1.1	2.4	10.7	6.3	84
Nyamira.....	2.1	0.3	49.4	7.2	2.1	29.1	9.8	41
Nairobi City.....	16.5	21.0	36.0	5.4	4.8	3.7	12.7	342

## 6.6 Participation in Community Nutrition and Growth Monitoring Programmes

Community-based nutrition programmes provide a crucial contact between the population and trained health workers. The programmes are expected to create awareness increase on good nutrition practises in the community and to minimise incidences of child malnutrition. Table 6.5 presents the percentage distribution of children aged 0-59 months who participated in community nutrition programmes by residence, sex, age and county. Overall, 31.6 per cent of the children participated in the programmes, with a higher proportion of children in rural areas (29.7%) attending compared to those in urban areas (35.2%).

Growth Monitoring is the process of following the growth rate of a child in comparison to a recommended standard by periodic, frequent anthropometric measurements to assess growth adequacy and identify early faltering. Growth monitoring of young children is recognised as an effective means of detecting growth-related issues, thereby providing a critical opportunity for taking preventive or corrective action needed. Table 6.6 presents the proportion of children aged 0-59 months that participated in growth monitoring programme by age, residence and county. Nationally, 82.4 per cent of children participated in growth monitoring programmes, with no much variation in participation among children in urban and rural areas. The highest proportion of children (85.5%) participating in growth monitoring were in the 6-11 years age group.

**Table 6.5: Percentage of children aged 0-59 months by participation in Community Nutrition Programmes by Residence, Sex, Age, and County**

Residence/County	Participated in Community Nutrition Programmes	Did Not Participate in Community Nutrition Programmes	Don't Know / Not Stated	Number of Children ('000)
<b>National</b> .....	31.6	67.1	1.3	6,081
<b>Rural</b> .....	29.7	69.2	1.2	3,991
<b>Urban</b> .....	35.2	63.1	1.7	2,090
<b>Sex</b>				
Male.....	30.2	68.5	1.3	3,057
Female.....	33.0	65.7	1.4	3,024
<b>Age group</b>				
< 6 months.....	22.5	75.7	1.9	555
6-11 months.....	30.5	69.2	0.3	572
12-23 months.....	34.3	64.9	0.8	1,194
24-35 months.....	32.9	65.9	1.2	1,163
36-48 months.....	32.6	65.9	1.5	1,260
48-59 months.....	31.3	66.7	2.0	1,336
<b>County</b>				
Mombasa.....	37.4	60.3	2.3	135
Kwale.....	62.9	37.1	0.0	130
Kilifi.....	24.2	69.4	6.4	222
Tana River.....	6.6	91.9	1.5	48
Lamu.....	22.3	77.7	0.0	18
Taita / Taveta.....	9.0	90.3	0.6	41
Garissa.....	26.4	71.0	2.5	63
Wajir.....	5.6	91.0	3.5	92
Mandera.....	11.8	87.0	1.2	117
Marsabit.....	30.9	66.9	2.2	53
Isiolo.....	44.2	55.8	0.0	23
Meru.....	2.3	96.7	1.0	168
Tharaka-Nithi.....	52.1	43.3	4.6	45
Embu.....	56.9	43.1	0.0	57
Kitui.....	6.8	93.2	0.0	134
Machakos.....	1.8	96.8	1.4	136
Makueni.....	51.9	47.4	0.7	110
Nyandarua.....	68.6	27.9	3.5	74
Nyeri.....	56.8	43.2	0.0	82
Kirinyaga.....	5.5	91.8	2.7	56
Murang'a.....	4.0	96.0	0.0	117
Kiambu.....	56.7	43.3	0.0	197
Turkana.....	17.2	80.3	2.5	191
West Pokot.....	39.5	59.0	1.5	113
Samburu.....	38.3	61.2	0.5	54
Trans Nzoia.....	4.3	95.4	0.2	133
Uasin Gishu.....	19.5	77.8	2.7	151
Elgeyo / Marakwet.....	59.4	38.6	2.0	67
Nandi.....	13.2	86.1	0.7	122
Baringo.....	35.8	63.9	0.3	98
Laikipia.....	17.1	80.8	2.1	66
Nakuru.....	4.1	95.2	0.7	270
Narok.....	63.8	35.9	0.4	200
Kajiado.....	1.2	95.8	3.0	119
Kericho.....	59.0	39.9	1.1	109
Bomet.....	56.5	42.8	0.8	131
Kakamega.....	38.5	60.1	1.5	262
Vihiga.....	3.5	93.3	3.3	68
Bungoma.....	44.8	54.6	0.6	237
Busia.....	15.4	84.1	0.5	110
Siaya.....	13.7	84.8	1.5	133
Kisumu.....	6.0	91.9	2.1	152
Homa Bay.....	40.2	59.2	0.6	177
Migori.....	45.3	54.1	0.6	154
Kisii.....	31.1	68.7	0.2	161
Nyamira.....	54.0	46.0	0.0	80
Nairobi City.....	52.2	46.8	1.1	600

**Table 6.6: Percentage Distribution of children aged 0-59 months by participation in Growth Monitoring Programmes by Age, Residence and County**

Residence/County	Participated in Growth Monitoring Clinics	Did Not Participate in Growth Monitoring Clinics	Not Stated	Number of Children ('000)
<b>National</b> .....	82.4	16.4	1.2	6,081
<b>Rural</b> .....	82.7	16.2	1.2	3,991
<b>Urban</b> .....	81.8	16.8	1.4	2,090
<b>Sex</b>				
Male.....	82.1	16.7	1.2	3,057
Female.....	82.6	16.1	1.3	3,024
<b>Age group</b>				
< 6 months.....	68.6	29.6	1.8	555
6-11 months.....	85.5	14.2	0.3	572
12-23 months.....	85.1	14.3	0.6	1,194
24-35 months.....	83.2	15.5	1.3	1,163
36-48 months.....	84.0	14.7	1.2	1,260
48-59 months.....	82.0	16.0	2.0	1,336
<b>County</b>				
Mombasa.....	76.1	22.2	1.6	135
Kwale.....	97.4	2.6	0.0	130
Kilifi.....	90.5	3.1	6.4	222
Tana River.....	43.2	55.3	1.5	48
Lamu.....	99.1	0.9	0.0	18
Taita / Taveta.....	98.0	2.0	0.0	41
Garissa.....	58.5	38.9	2.5	63
Wajir.....	4.4	91.5	4.2	92
Mandera.....	61.8	37.1	1.2	117
Marsabit.....	83.6	14.9	1.5	53
Isiolo.....	91.8	8.2	0.0	23
Meru.....	97.9	1.1	1.0	168
Tharaka-Nithi.....	94.7	0.7	4.6	45
Embu.....	67.3	32.7	0.0	57
Kitui.....	96.1	3.9	0.0	134
Machakos.....	84.2	14.5	1.4	136
Makueni.....	92.1	7.2	0.7	110
Nyandarua.....	83.3	13.2	3.5	74
Nyeri.....	98.2	1.8	0.0	82
Kirinyaga.....	90.3	7.1	2.7	56
Murang'a.....	95.9	4.1	0.0	117
Kiambu.....	71.7	28.3	0.0	197
Turkana.....	41.0	56.7	2.3	191
West Pokot.....	28.2	70.0	1.8	113
Samburu.....	76.7	22.8	0.5	54
Trans Nzoia.....	98.0	1.8	0.2	133
Uasin Gishu.....	62.4	34.6	3.0	151
Elgeyo / Marakwet.....	72.4	25.7	1.9	67
Nandi.....	95.5	3.8	0.7	122
Baringo.....	92.7	7.1	0.3	98
Laikipia.....	46.5	51.5	2.1	66
Nakuru.....	93.8	5.5	0.7	270
Narok.....	92.6	7.0	0.4	200
Kajiado.....	39.7	57.7	2.6	119
Kericho.....	94.1	4.7	1.1	109
Bomet.....	87.4	11.9	0.8	131
Kakamega.....	92.8	6.5	0.7	262
Vihiga.....	94.1	4.0	1.9	68
Bungoma.....	88.2	10.6	1.2	237
Busia.....	94.1	5.8	0.1	110
Siaya.....	80.7	17.1	2.2	133
Kisumu.....	86.3	11.9	1.9	152
Homa Bay.....	85.5	13.6	0.9	177
Migori.....	96.8	2.5	0.6	154
Kisii.....	83.5	16.2	0.2	161
Nyamira.....	94.2	5.8	0.0	80
Nairobi City.....	91.1	8.5	0.4	600

# CHAPTER 7

## 7. HOUSEHOLD INCOME AND CREDIT

### 7.1 Introduction

Household income is the aggregate earnings of all household members. It includes all forms of income arising from employment, household enterprises, agricultural produce, rent, pension and financial investment. The discussion in this chapter focuses on income from rent, pension, financial investment and other related incomes, hereafter referred to as other income. Information is also provided on access and sources of credit.

#### Income from Rent, Pension and Financial Investment.

Information was sought from household members on other income received within 12 months preceding the survey. The other income was further divided into; i) Regular income such as; interest, pension dividends and alimony and ii) Non-regular income which includes one off payments and windfalls like gratuity payments or winning a lottery.

Table 7.1 presents the proportion of households that received other income by household headship and residence. Overall, 7.2 per cent of households received other income. A higher proportion of male headed households received other income compared to female headed ones. This pattern was replicated across male and female headed households in both rural and urban areas.

**Table 7.1: Proportion of Households that Received Other Income by Household Headship and Residence.**

Residence/ Household Headship	Proportion of households that received other income (%)	Number of households ('000)
<b>National.....</b>	<b>7.2</b>	<b>11,415</b>
Male headed.....	8.3	7,716
Female headed.....	4.9	3,699
<b>Rural.....</b>	<b>7.1</b>	<b>6,442</b>
Male headed.....	8.3	4,126
Female headed.....	5.0	2,316
<b>Urban.....</b>	<b>7.4</b>	<b>4,972</b>
Male headed.....	8.4	3,589
Female headed.....	4.8	1,383

Table 7.2 shows the proportion of households that received regular and non-regular other income by type, household headship and residence. Overall, 41.9 per cent of households received income from financial investment, which includes interest and dividends, followed by 32.2 per cent from rental income. The proportion of households that received financial investment income in urban areas was more than double that in rural areas. There was no major disparity among the households that received rental and pension income in both rural and urban areas. The proportion of households that received other income on non-regular basis was 24.0 per cent with a higher percentage in the rural areas.

**Table 7.2: Proportion of Households that Received Regular and Non-Regular Other Income by Type, Household Headship/Residence.**

Residence/ Household headship	Regular Income				Non-regular income	Number of Households ('000)
	Savings, interest and investment income	Pension	Rental income	Other type		
<b>National.....</b>	<b>41.9</b>	<b>17.4</b>	<b>32.2</b>	<b>3.4</b>	<b>24.0</b>	<b>825</b>
Male headed.....	44.8	18.3	32.5	3.5	21.4	642
Female headed.....	31.7	14.1	31.1	3.2	33.3	183
<b>Rural.....</b>	<b>27.5</b>	<b>19.0</b>	<b>31.4</b>	<b>3.9</b>	<b>33.3</b>	<b>457</b>
Male headed.....	29.1	21.4	32.9	4.2	29.7	340
Female headed.....	22.8	12.0	27.2	3.0	43.7	116
<b>Urban.....</b>	<b>59.9</b>	<b>15.3</b>	<b>33.2</b>	<b>2.8</b>	<b>12.5</b>	<b>368</b>
Male headed.....	62.6	14.8	32.1	2.6	12.0	301
Female headed.....	47.4	17.7	37.8	3.4	15.1	66

Table 7.3 present information on monthly average amount in Kenya Shillings (KSh) received in other income by type. Nationally, households that received investment income on average received KSh 1,265, per month; those that got rental and pension income on average received KSh 12,284 and KSh 2,106, respectively per month. The average monthly rental income received by households in urban areas was higher (KSh 19,976) compared to that in rural areas (KSh 6,088). Female headed households received lower amounts of regular income in all categories except for rental income in rural areas.

**Table 7.3: Monthly Average of Other Income Received by Households by Type, Residence and Headship.**

Residence/ Household headship	Regular Income (in KSh)				Non-regular income (in KSh)
	Saving, interest and investment income	Pension	Rental	Other type	
<b>National.....</b>	<b>1,265</b>	<b>2,106</b>	<b>12,284</b>	<b>925</b>	<b>486</b>
Male headed.....	1,430	2,285	13,174	993	423
Female headed.....	687	1,480	9,155	688	707
<b>Rural.....</b>	<b>662</b>	<b>2,027</b>	<b>6,088</b>	<b>1,165</b>	<b>691</b>
Male headed.....	766	2,140	5,532	1,405	600
Female headed.....	359	1,696	7,715	464	956
<b>Urban.....</b>	<b>2,014</b>	<b>2,205</b>	<b>19,976</b>	<b>627</b>	<b>232</b>
Male headed.....	2,179	2,448	21,804	527	224
Female headed.....	1,262	1,102	11,677	1,078	271

## 7.2 Access to Credit

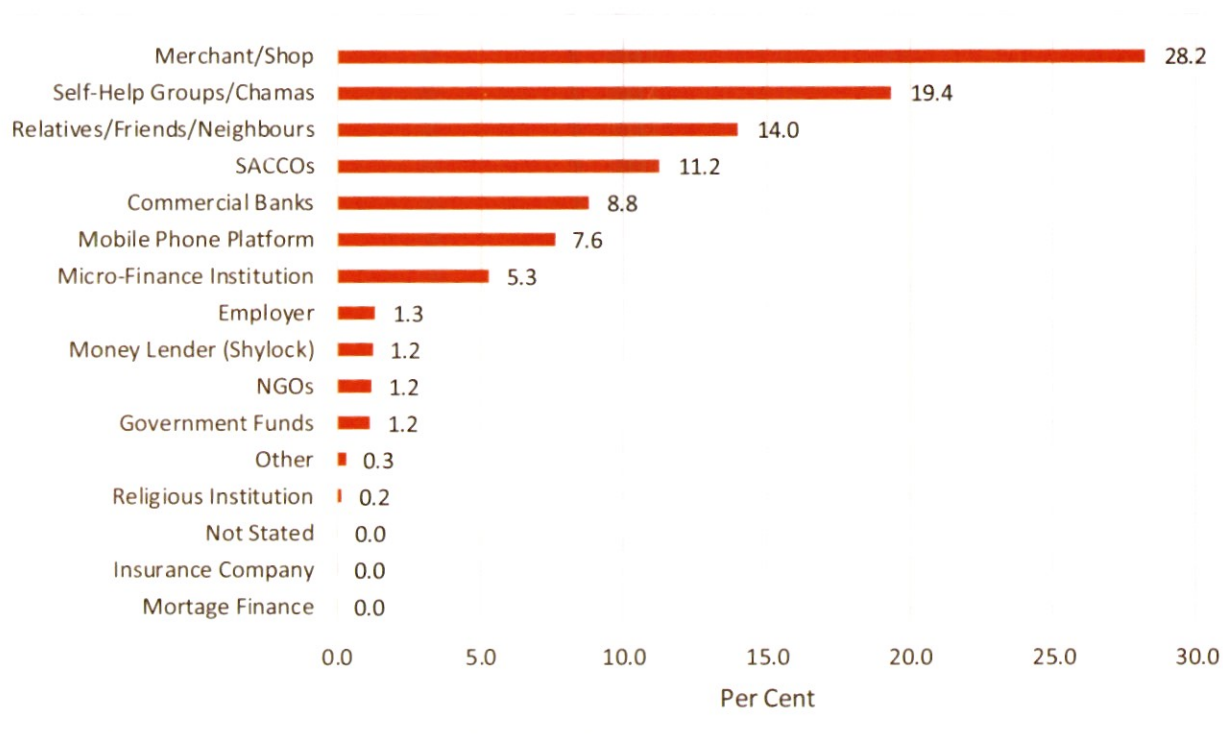
Credit refers to money or goods advanced to a household member(s) by an individual, organization or a financial institution either in kind or cash, with an arrangement to repay later, usually at a cost. In this survey, all sources of credit to households were considered including informal ones such as friends, relatives or local money lenders or shylocks. Table 7.4 presents the proportion of households with at least a member who sought or accessed credit by household headship, residence and county. Approximately one third (33.7%) of households sought credit in the 12 months preceding the survey and had a high success rate of 90.1 per cent. There was no major disparity in the proportion of male and female headed households and rural and urban households that sought and successfully acquired credit. Over 60 per cent of households in Nyamira, Migori, Wajir and Vihiga Counties sought credit. Counties with low proportions of households that sought credit were Busia (5.5%), Mandera (6.0%) and Samburu (7.0%). Marsabit County had the lowest proportion of households that successfully acquired credit.

Table 7.4: Proportion of Households that Sought with at least a Member Who Accessed Credit by Household Headship, Residence and County

Residence/County/ Household Headship	Proportion of households that sought credit (%)	Number of Households ('000)	Proportion of households that sought and accessed credit (%)	Number of Households that sought credit ('000)
National.....	33.7	11,415	90.1	3,847
Male-Headed.....	34.6	7,716	89.8	2,668
Female-Headed.....	31.9	3,699	90.7	1,179
Rural	34.2	6,442	89.7	2,200
Male-Headed.....	35.5	4,126	89.7	1,464
Female-Headed.....	31.8	2,316	89.6	737
Urban	33.1	4,972	90.6	1,647
Male-Headed.....	33.6	3,589	90.0	1,205
Female-Headed.....	32.0	1,383	92.4	442
County				
Mombasa.....	22.0	397	96.2	87
Kwale.....	32.9	174	97.8	57
Kilifi.....	27.1	326	47.2	88
Tana River.....	16.2	56	71.4	9
Lamu.....	35.7	30	67.2	11
Taita / Taveta.....	36.1	102	91.0	37
Garissa.....	11.4	78	43.1	9
Wajir.....	62.4	69	91.1	43
Mandera.....	6.0	111	89.3	7
Marabit.....	11.1	62	33.9	7
Isiolo.....	11.2	34	57.4	4
Meru.....	23.2	393	73.8	91
Tharaka-Nithi.....	54.3	107	69.6	58
Embu.....	43.7	164	98.9	72
Kitui.....	51.2	236	98.0	121
Machakos.....	38.5	328	96.9	126
Makueni.....	50.1	233	99.2	117
Nyandarua.....	18.2	191	88.9	35
Nyeri.....	43.1	271	97.8	117
Kitinyaga.....	34.8	198	98.5	69
Muranga.....	34.4	323	97.5	111
Kiambu.....	31.5	600	94.4	189
Turkana.....	17.1	246	84.3	42
West Pokot.....	38.8	119	93.3	46
Samburu.....	7.0	61	95.7	4
Trans Nzoia.....	30.4	210	94.1	64
Uasin Gishu.....	22.0	270	91.6	59
Elgeyo / Marakwet.....	43.1	99	98.7	43
Nandi.....	24.2	202	97.2	49
Baringo.....	44.4	152	98.6	68
Lakipia.....	15.5	135	92.9	21
Nakuru.....	30.4	578	89.7	176
Narok.....	20.6	223	66.6	46
Kajiado.....	31.1	250	97.6	78
Kericho.....	54.4	211	84.7	115
Bomet.....	19.5	179	83.8	35
Kakamega.....	27.1	392	86.6	106
Vihiga.....	60.6	144	97.2	87
Bungoma.....	32.8	321	58.0	105
Busia.....	5.5	177	62.2	10
Siaya.....	36.2	246	95.0	89
Kisumu.....	33.2	284	90.4	94
Homa Bay.....	42.0	224	97.7	94
Migori.....	64.2	233	98.1	150
Kisii.....	59.7	291	92.5	173
Nyamira.....	66.1	179	98.5	118
Narobi City.....	33.9	1,503	89.2	510

Figure 7.1 shows the preferred source of credit. Results show that merchants or shops were the most common (28.2%) source of credit followed by self-help groups/*chamas* (19.4%); and relatives, friends and neighbours (14.0%). Among the formal sources, Savings and Credit Co-operative Societies (SACCOs) were the most popular (11.2%) followed by commercial banks (8.8%)

**Figure 7.1: The preferred Source of Credit**



Nationally, most (39.3%) of the loans were obtained for subsistence needs and school fees (20.9%) as shown in Table 7.5. Analysis by sources show that loans from merchants or shops and mobile phone platforms were used for subsistence needs. A higher proportion of credit from commercial banks (32.5%) and micro finance institutions (36.5%) was used for business or investment. Most (37.4%) of the loans from SACCOs were used on school fees.

Table 7.6 presents the percentage distribution of credit by source type of collateral required. Nationally, majority (42.7%) of the loans did not require any form of collateral. Nearly one in every five loans required shares as a form of collateral while 14.5 per cent required individual or guarantors as collateral. Shares as collateral were required mainly to obtain loans from self-help groups or *chamas*. Individuals or guarantors were required as collateral when obtaining credit from Government funds.

Table 7.5: The percentage distribution of credit by source and main purpose.

Source of credit	Purpose of Credit							
	Subsistence Needs	Medical Expense	School Fees (Education)	Ceremony/Weddings	Purchase of Lands	Purchase of Agricultural Inputs	Business/Investment	Purchase of Agricultural Machinery
National.....	39.3	3.8	20.9	1.2	2.8	5.4	16.1	0.2
Commercial Banks.....	10.6	2.2	24.8	0.1	9.7	5.3	32.5	0.4
Micro-Finance Inst.....	6.6	2.8	28.8	0.4	3.6	5.1	36.5	0.3
Mortgage Finance.....	0.0	0.0	15.3	0.0	0.0	0.0	38.3	0.0
Government Funds.....	6.3	0.2	55.5	0.0	0.0	9.2	21.5	0.0
Insurance Company.....	0.0	0.0	79.9	0.0	0.0	0.0	20.1	0.0
Saccos.....	7.5	2.5	37.4	1.5	9.1	6.8	16.0	0.2
Religious Inst.....	31.4	10.1	27.2	0.0	0.0	1.7	9.1	2.1
NGO.....	5.5	1.4	5.9	0.0	0.3	73.8	3.8	4.8
Employer.....	42.1	2.5	26.9	1.9	3.4	6.0	1.1	0.0
Merchant/Shop.....	92.8	0.6	0.9	0.4	0.0	0.2	2.7	0.0
Shylock.....	43.2	3.8	15.5	0.1	0.0	2.0	23.3	0.0
Relative/Friend/Neighbour.....	53.4	9.7	15.4	2.9	0.2	4.2	9.2	0.0
Mobile Platform.....	72.3	2.0	7.0	0.5	0.0	1.4	11.3	0.0
Self-Help Groups/Chamas.....	25.2	5.1	28.7	1.6	0.9	5.7	20.8	0.2
Other.....	32.8	6.3	19.2	0.0	0.0	16.8	5.3	0.0
Not Stated.....	32.4	0.0	0.0	0.0	0.0	0.0	10.0	0.0

Table 7.5: The percentage distribution of credit by source and main purpose...Cont'd

Source of credit	Purpose of Credit					Number of Loans ('000)
	Purchase/Construction of Dwelling	Purchase of Motor vehicles/cycles	Purchase of Livestock	Other	Not Stated	
National.....	4.6	1.0	1.3	3.2	0.1	7,605
Commercial Banks.....	8.3	2.3	1.3	2.4	0.1	670
Micro-Finance Inst.....	7.5	2.2	3.3	2.9	0.0	404
Mortgage Finance.....	0.0	0.0	0.0	46.4	0.0	0*
Government Funds.....	2.4	0.0	1.6	3.2	0.0	88
Insurance Company.....	0.0	0.0	0.0	0.0	0.0	1
Saccos.....	12.1	2.0	1.9	3.0	0.0	855
Religious Inst.....	12.2	0.0	0.0	6.3	0.0	14
NGO.....	2.4	0.0	0.0	2.0	0.0	91
Employer.....	7.1	1.0	0.5	7.4	0.0	102
Merchant/Shop.....	0.3	0.1	0.0	1.8	0.3	2,145
Shylock.....	1.3	0.4	1.6	8.8	0.0	94
Relative/Friend/Neighbour.....	1.5	0.2	0.2	3.2	0.0	1,064
Mobile Platform.....	0.4	0.0	0.4	4.7	0.0	578
Self-Help Groups/Chamas.....	4.5	1.2	2.4	3.7	0.0	1,471
Other.....	0.0	2.7	7.8	9.2	0.0	24
Not Stated.....	0.0	0.0	0.0	0.0	57.6	3

\*Less than 1,000

Table 7.6: Percentage Distribution of credit by source and collateral required

Source of Credit	Collateral required													Number of loans ('000)
	Land Title	House	Motor Vehicle/ Cycle	Individual/ Guarantor	Livestock	Shares	Household Goods	Salary	Income	Business Stock	None	Other	Not Stated	
National.....	1.1	0.2	0.6	14.5	3.0	19.0	3.0	6.5	2.2	1.4	42.7	2.0	3.8	7,605
Commercial Banks.....	4.8	0.7	3.2	18.4	5.2	2.2	6.1	29.2	7.7	5.6	10.5	3.6	2.8	670
Micro-Finance Inst.....	3.4	1.2	0.9	32.0	10.6	16.7	14.3	4.8	2.3	4.1	5.3	1.8	2.6	404
Mortgage Finance.....	0.0	0.0	0.0	38.3	0.0	0.0	46.4	0.0	0.0	0.0	0.0	15.3	0.0	0*
Government Funds.....	1.1	0.0	0.0	48.4	2.8	4.7	2.9	1.0	0.0	2.4	29.6	2.8	4.2	88
Insurance Company.....	0.0	0.0	0.0	0.0	0.0	20.1	55.7	24.2	0.0	0.0	0.0	0.0	0.0	1
Saccos.....	0.9	0.0	0.2	26.9	3.1	39.8	1.7	13.2	3.9	0.8	4.2	1.4	3.8	855
Religious Inst.....	0.0	0.0	1.9	19.9	0.0	16.5	0.0	8.4	0.0	0.0	53.3	0.0	0.0	14
NGO.....	3.0	0.0	0.5	8.8	12.0	28.6	6.6	0.0	1.1	0.0	35.6	3.8	0.0	91
Employer.....	0.0	0.0	0.0	3.3	0.0	3.6	0.0	53.1	13.7	0.0	25.9	0.0	0.4	102
Merchant/Shop.....	0.1	0.0	0.0	4.3	0.7	0.1	0.5	0.2	1.8	0.1	82.0	0.3	9.9	2,145
Shylock.....	1.1	0.0	0.0	24.5	3.3	5.6	4.3	2.1	0.0	2.1	47.8	4.8	4.4	94
Relative/Friend/Neighbour.....	0.4	0.0	0.1	6.3	0.4	0.4	1.2	0.7	0.6	1.4	86.0	1.5	0.8	1,064
Mobile Platform.....	0.4	0.0	0.0	0.7	0.0	10.0	0.3	0.2	0.1	0.3	79.4	6.6	2.0	578
Self-Help Groups/Chamas.....	0.3	0.2	0.6	16.0	3.8	46.7	2.7	0.8	0.3	0.6	23.3	1.8	3.0	1,471
Other.....	0.0	0.0	0.0	16.5	0.8	15.5	0.0	0.0	2.7	0.0	62.7	0.0	1.9	24
Not Stated.....	0.0	0.0	0.0	10.0	0.0	0.0	0.0	11.3	0.0	0.0	32.4	0.0	46.3	3

# CHAPTER 8

## 8. HOUSEHOLD TRANSFERS

### 8.1 Introduction

A transfer is the provision of support or gift either in form of a good, service, financial asset or other assets by an individual, household or institution to another entity without any corresponding economic return. Transfers constitute income that the household receives without working for it and augments household income by improving its welfare. Transfers can either be in form of cash or in kind and households can either receive or give out to other entities. This chapter presents information on transfers that households received or gave out over the last 12 months preceding the survey. It covers information on the source of cash transfers, amount of cash transfers received by expenditure, cash transfers received outside Kenya, transfers received from national and county government programmes; and in kind transfers.

### 8.2 Cash Transfers

Cash transfers include assistance in form of currency or transferable deposits such as cheque and money orders. The proportion of households that received cash transfers by source, household headship, residence and county is presented in Table 8.1. Overall, 33.5 per cent of the households received cash transfers. A higher proportion of households in rural areas (40.2%) received cash transfers compared to those in urban areas (24.8%). More female headed households received cash transfers compared to male headed households in both rural and urban areas. At county level, more than half of the households in Kakamega Kisii, Kitui, Mandera, Nyamira, Samburu, Trans Nzoia, Turkana and Vihiga counties received cash transfers

**Table 8.1: Proportion of Households that Received Cash Transfers by Source, Household Headship, Residence and County**

Residence/ Household headship / County	Households receiving Transfers (%)	Number of households ('000)
National.....	33.5	11,415
Male-Headed.....	23.1	7,716
Female-Headed.....	55.2	3,699
Rural	40.2	6,442
Male-Headed.....	28.5	4,126
Female-Headed.....	61.0	2,316
Urban	24.8	4,972
Male-Headed.....	16.8	3,589
Female-Headed.....	45.6	1,383
<b>County</b>		
Mombasa.....	18.6	397
Kwale.....	25.3	174
Kilifi.....	36.8	326
Tana River.....	37.5	56
Lamu.....	46.7	30
Taita / Taveta.....	48.0	102
Garissa.....	6.4	78
Wajir.....	36.2	69
Mandera.....	54.1	111
Marsabit.....	38.7	62
Isiolo.....	32.4	34
Meru.....	27.0	393
Tharaka-Nithi.....	27.1	107
Embu.....	24.4	164
Kitui.....	48.7	236
Machakos.....	43.9	328
Makueni.....	49.4	233
Nyandarua.....	24.6	191
Nyeri.....	34.3	271
Kirinyaga.....	46.5	198
Murang'a.....	34.1	323
Kiambu.....	17.0	600
Turkana.....	64.2	246
West Pokot.....	22.7	119
Samburu.....	59.0	61
Trans Nzoia.....	63.3	210
Uasin Gishu.....	30.4	270
Elgeyo / Marakwet...	12.1	99
Nandi.....	22.8	202
Baringo.....	34.9	152
Laikipia.....	30.4	135
Nakuru.....	30.1	578
Narok.....	19.7	223
Kajiado.....	18.0	250
Kericho.....	20.4	211
Bomet.....	6.1	179
Kakamega.....	66.6	392
Vihiga.....	65.3	144
Bungoma.....	44.9	321
Busia.....	31.6	177
Siaya.....	50.4	246
Kisumu.....	28.2	284
Homa Bay.....	42.0	224
Migori.....	48.1	233
Kisii.....	58.1	291
Nyamira.....	66.5	179
Nairobi City.....	14.8	1,503

Table 8.2 presents the average amount of cash transfers received by households from various sources within 12 months preceding the survey. Overall, each household received on average KSh 27,097 through cash transfers. Cash transfers to households from national and county governments averaged KSh 1,922 and KSh 473, respectively. Female headed households in both urban and rural areas received more cash transfers from individuals than male headed households. Cash received from outside Kenya was higher among households in Uasin Gishu, Samburu and Garissa Counties.

**Table 8.2: Average Cash Transfers (in KSh) Received by Households by Source in the last 12 Months preceding the Survey, Residence, Household Headship and County**

Residence/ Household headship / County	Inside Kenya					Inside Kenya	Outside Kenya	Total	Number of households that received transfers ('000)
	Individual	Non Profit Institution	National Government	County Government	Corporate Sector				
<b>National.....</b>	<b>23,327</b>	<b>668</b>	<b>1,922</b>	<b>473</b>	<b>482</b>	<b>26,871</b>	<b>1,706</b>	<b>27,097</b>	<b>3,821</b>
Male-Headed.....	22,831	834	1,857	481	471	26,474	1,320	26,019	1,779
Female-Headed.....	23,760	522	1,979	466	490	27,217	2,041	28,037	2,042
<b>Rural</b>	<b>16,927</b>	<b>439</b>	<b>1,819</b>	<b>338</b>	<b>203</b>	<b>19,725</b>	<b>865</b>	<b>19,871</b>	<b>2,589</b>
Male-Headed.....	15,860	588	1,586	336	186	18,555	789	18,437	1,177
Female-Headed.....	17,816	315	2,013	340	218	20,701	929	21,066	1,412
<b>Urban</b>	<b>36,780</b>	<b>1,148</b>	<b>2,140</b>	<b>756</b>	<b>1,067</b>	<b>41,891</b>	<b>3,472</b>	<b>42,286</b>	<b>1,232</b>
Male-Headed.....	36,456	1,315	2,388	764	1,030	41,953	2,359	40,839	602
Female-Headed.....	37,089	988	1,904	748	1,102	41,831	4,536	43,671	630
<b>County</b>									
Mombasa.....	29,996	0	613	2,791	2,969	36,369	3,881	39,062	74
Kwale.....	10,628	1,159	2,031	2,043	1,236	17,097	1,375	16,233	44
Kilifi.....	36,106	0	1,074	629	0	37,808	1,786	38,036	120
Tana River.....	18,680	12	3,455	1,693	0	23,840	0	15,409	21
Lamu.....	12,858	366	1,794	187	719	15,923	2,734	18,630	14
Taita / Taveta.....	28,476	530	2,404	427	591	32,427	64	31,839	49
Garissa.....	69,043	0	5,798	0	0	74,840	10,350	79,149	5
Wajir.....	897	106	5,977	1,610	0	8,590	889	5,137	25
Mandera.....	17,529	472	6,179	28	528	24,736	101	20,986	60
Marsabit.....	3,826	3,129	22,024	122	505	29,606	106	29,072	24
Isiolo.....	15,822	358	273	0	0	16,453	0	14,914	11
Meru.....	16,969	428	2,410	344	264	20,415	2,862	22,429	106
Tharaka-Nithi.....	14,106	1,545	1,739	516	0	17,906	0	17,061	29
Embu.....	21,703	643	1,095	664	0	24,106	531	24,253	40
Kitui.....	26,686	1,958	2,115	91	153	31,003	434	31,018	115
Machakos.....	50,989	1,088	1,353	37	0	53,467	1,669	53,885	144
Makueni.....	31,251	0	63	0	0	31,314	0	28,728	115
Nyandarua.....	13,861	251	986	1,658	124	16,880	591	17,071	47
Nyeri.....	40,964	635	1,554	217	0	43,370	0	43,328	93
Kirinyaga.....	12,424	46	635	112	0	13,217	56	12,823	92
Murang'a.....	22,319	17	451	0	311	23,098	35	22,969	110
Kiambu.....	74,748	1,290	4,752	1,974	963	83,727	1,716	85,038	102
Turkana.....	179	223	4,694	245	109	5,451	68	4,976	158
West Pokot.....	3,451	1,511	3,989	5,067	0	14,018	0	10,197	27
Samburu.....	352	43	2,289	144	0	2,828	11,024	11,868	36
Trans Nzoia.....	23,835	221	927	134	726	25,843	572	25,352	133
Uasin Gishu.....	32,699	1,210	3,986	879	0	38,774	30,756	66,914	82
Elgeyo / Marakwet...	16,532	0	6,313	1,242	0	24,086	0	20,873	12
Nandi.....	17,846	596	1,382	139	0	19,962	1,185	16,149	46
Baringo.....	10,126	1,389	3,164	244	1,288	16,212	3,267	19,405	53
Laikipia.....	17,217	670	683	0	521	19,092	231	19,077	41
Nakuru.....	35,729	108	2,520	506	24	38,887	0	38,556	174
Narok.....	16,225	689	475	331	50	17,770	39	12,705	44
Kajiado.....	28,983	103	428	1,587	7,702	38,804	780	38,735	45
Kericho.....	15,146	753	3,633	464	1,763	21,758	9,605	30,349	43
Bomet.....	5,364	320	2,635	883	0	9,201	0	3,473	11
Kakamega.....	18,180	318	974	207	292	19,971	782	19,568	261
Vihiga.....	17,213	1,270	1,859	471	224	21,036	296	21,213	94
Bungoma.....	8,513	58	723	23	187	9,504	387	9,275	144
Busia.....	24,273	370	1,293	49	0	25,986	498	22,810	56
Siaya.....	16,294	856	487	0	0	17,636	571	18,048	124
Kisumu.....	17,899	2,539	1,342	2,989	0	24,769	34	22,810	80
Homa Bay.....	9,884	697	1,653	229	0	12,462	0	11,630	94
Migori.....	19,261	843	1,797	59	0	21,960	177	22,137	112
Kisii.....	12,284	79	708	0	546	13,616	147	13,715	169
Nyamira.....	14,351	36	1,482	89	0	15,959	3,380	19,316	119
Nairobi City.....	41,056	2,283	1,755	152	2,010	47,256	2,048	41,794	223

The share of the cash transfers received from within Kenya by expenditure items is shown in Table 8.3. Most of the cash transfers received from within Kenya by households was spent on education (44.6%) followed by food (33.5%). The expenditure on education accounted for more than half of the cash transfers in male-headed households. However, a higher proportion of transfers received by female headed households in rural areas was spent on food. More than 50 per cent of the transfers received by households in Kajiado County went towards investment or business.

Table 8.3: Share of the Cash Transfers Received from Within Kenya by Expenditure Items, Residence/County

Residence/ Household Headship / County	Food	Education/ School fees	Health	Investment / Business	Other	Total cash transfers received (KSh million)
<b>National</b> .....	<b>33.5</b>	<b>44.6</b>	<b>6.9</b>	<b>4.5</b>	<b>10.5</b>	<b>97,768</b>
Male-Headed.....	29.0	50.7	5.8	5.0	9.5	45,059
Female-Headed.....	37.4	39.4	7.8	4.1	11.3	52,709
<b>Rural</b>	<b>38.9</b>	<b>38.2</b>	<b>7.0</b>	<b>4.2</b>	<b>11.7</b>	<b>49,726</b>
Male-Headed.....	35.2	39.7	7.6	5.0	12.5	21,504
Female-Headed.....	41.8	37.0	6.6	3.6	11.0	28,222
<b>Urban</b>	<b>27.9</b>	<b>51.2</b>	<b>6.7</b>	<b>4.9</b>	<b>9.3</b>	<b>48,042</b>
Male-Headed.....	23.3	60.7	4.2	5.0	6.8	23,554
Female-Headed.....	32.2	42.1	9.2	4.8	11.7	24,487
<b>County</b>						
Mombasa.....	20.3	45.5	13.8	1.4	18.9	2,574
Kwale.....	36.6	45.0	5.6	5.7	7.2	718
Kilifi.....	51.8	31.6	3.0	2.8	10.8	3,946
Tana River.....	44.0	49.7	3.2	0.0	3.1	467
Lamu.....	50.0	25.0	8.2	12.8	3.9	233
Taita / Taveta.....	42.0	34.8	9.9	1.3	11.9	1,588
Garissa.....	50.0	13.5	18.0	0.1	18.5	387
Wajir.....	59.4	20.7	6.6	6.1	7.2	195
Mandera.....	72.7	16.7	6.4	0.3	3.8	1,193
Marsabit.....	60.8	17.0	4.0	2.9	15.2	718
Isiolo.....	48.6	27.1	14.1	1.2	9.0	175
Meru.....	46.5	36.2	7.6	0.9	8.7	2,020
Tharaka-Nithi.....	21.3	36.6	22.1	4.5	15.5	563
Embu.....	36.1	39.6	6.8	2.5	15.1	959
Kitui.....	43.2	16.3	31.3	4.6	4.7	3,412
Machakos.....	46.6	38.7	1.9	2.9	9.9	7,580
Makueni.....	55.8	18.0	2.8	7.8	15.7	3,491
Nyandarua.....	27.7	47.8	12.6	2.8	9.1	780
Nyeri.....	32.1	29.6	24.9	1.4	12.0	4,026
Kirinyaga.....	25.9	44.4	8.1	1.8	19.8	1,196
Murang'a.....	40.6	30.0	9.4	3.0	17.0	2,404
Kiambu.....	30.4	55.5	1.5	0.4	12.1	8,393
Turkana.....	59.3	10.9	1.8	2.6	25.5	530
West Pokot.....	10.9	70.8	0.5	0.0	17.8	437
Samburu.....	33.6	40.2	6.5	10.0	9.6	100
Trans Nzoia.....	13.3	58.0	3.8	17.1	7.8	3,333
Uasin Gishu.....	21.8	56.2	2.0	4.1	15.8	2,374
Elgeyo / Marakwet.....	22.2	32.3	11.5	0.5	33.5	294
Nandi.....	17.6	49.6	12.4	4.3	16.2	914
Baringo.....	27.1	47.6	7.2	4.8	13.3	901
Laikipia.....	33.2	23.0	6.1	17.0	20.7	768
Nakuru.....	36.8	51.9	3.5	0.4	7.5	6,096
Narok.....	42.0	26.1	22.7	8.7	0.5	672
Kajiado.....	8.2	26.9	5.1	50.6	9.2	1,711
Kericho.....	16.9	58.9	5.0	5.9	13.4	909
Bomet.....	58.6	22.1	3.4	0.0	15.9	39
Kakamega.....	33.6	46.9	6.7	2.9	9.9	5,146
Vihiga.....	48.2	36.6	7.1	3.1	5.1	1,945
Bungoma.....	38.3	28.0	10.7	15.8	7.1	1,218
Busia.....	41.7	37.8	12.8	3.8	3.9	1,445
Siaya.....	55.1	28.1	5.6	3.6	7.7	2,155
Kisumu.....	8.7	77.3	5.5	3.8	4.7	1,815
Homa Bay.....	28.1	45.6	6.7	1.5	18.2	1,156
Migori.....	38.3	49.7	3.5	4.4	4.0	2,465
Kisii.....	12.4	77.7	6.1	3.4	0.4	2,222
Nyamira.....	27.7	45.7	5.9	4.1	16.7	2,157
Nairobi City.....	14.0	70.3	2.2	4.4	9.2	9,949

Table 8.4 presents the share of cash transfers received from outside Kenya by expenditure items. Expenditure at national level presents a similar pattern to that of transfers from within Kenya where a higher proportion of remittances was spent on education or school fees followed by food.

**Table 8.4: Share of Cash Transfers Received from Outside Kenya by Expenditure Items, Residence and Household Headship**

Residence/ household headship	Food	Education/ School fees	Health	Investment/ Business	Other	Total cash transfers received ('000)
National.....	22.8	29.4	9.8	11.4	26.6	5,302
Male-Headed.....	15.4	46.4	4.8	7.6	25.8	1,387
Female-Headed.....	25.5	23.3	11.6	12.7	26.9	3,916
Rural.....	20.4	39.3	3.5	19.3	17.5	2,095
Male-Headed.....	4.8	55.5	3.3	6.7	29.6	885
Female-Headed.....	31.9	27.4	3.6	28.5	8.6	1,210
Urban.....	24.4	22.9	13.9	6.2	32.6	3,208
Male-Headed.....	34.0	30.3	7.3	9.3	19.1	502
Female-Headed.....	22.6	21.5	15.2	5.6	35.1	2,706

### 8.3 Modes of Cash Transfers

Transfers are remitted through various modes classified under formal or informal channels. Formal channels of cash transfers are those that are licensed to officially operate such as banks, money transfer agents and mobile money transfer agents. Informal channels of cash transfers are those outside the official regulation and supervision.

Table 8.5 presents the proportion of households that received cash transfers from within Kenya by mode of transfer. Majority (43.7%) of households received cash transfers through mobile money transfer. Other preferred modes of transfer were through family or relative (39.8%) and commercial banks (17.5%). Mobile money transfer was used more by households in rural areas (46.2%) than in urban areas (38.9%).

**Table 8.5: Proportion of Households that Received Cash Transfers from Within Kenya by Mode and Residence**

Residence/ Household headship	Money transfer agents	Banks	Mobile money transfer	Hawala	Neighbour / friend	Family/ relative	Bus	Courier	Other	Number of households that received cash transfers from within Kenya ('000)
National.....	11.0	17.5	43.7	0.0	10.3	39.8	0.0	0.0	3.1	3,150
Male-Headed.....	10.1	18.4	44.0	0.0	10.2	38.0	0.0	0.0	2.9	1,461
Female-Headed.....	11.7	16.7	43.5	0.0	10.4	41.4	0.1	0.0	3.2	1,689
Rural	9.7	15.4	46.2	0.0	10.5	42.0	0.1	0.0	2.2	2,112
Male-Headed.....	9.4	16.2	46.7	0.0	10.2	39.9	0.0	0.0	1.9	958
Female-Headed.....	10.0	14.7	45.7	0.0	10.8	43.7	0.1	0.0	2.4	1,154
Urban	13.5	21.7	38.9	0.1	9.8	35.5	0.0	0.1	4.9	1,038
Male-Headed.....	11.5	22.7	38.8	0.1	10.2	34.2	0.0	0.1	4.8	503
Female-Headed.....	15.3	20.8	38.9	0.1	9.4	36.7	0.0	0.1	5.0	535

The proportion of households that received cash transfers from outside Kenya by mode of transfer is shown in Table 8.6. Majority of the households (33.2 %) received cash transfers from outside Kenya through money transfer agents. Other major modes used to transfer cash from outside Kenya were banks (29.1%) and mobile money transfer (23.5%). In urban areas, 37.8 per cent of the households received cash transfers through mobile money transfer agents compared to 28.0 per in rural areas. The proportion of households that received cash transfers through family or a relative was 2.9 per cent in urban areas compared to 5.8 per cent in the rural areas.

**Table 8.6: Proportion of Households that Received Cash Transfers from Outside Kenya by Mode and Residence**

Residence/ Household headship	Money Transfer Agents	Banks	Mobile Money Transfer	Hawala	Neighbour/ Friend	Family /Relative	Number of households that received cash transfers from outside Kenya ('000)
National.....	33.2	29.1	23.5	2.0	4.3	9.3	57
Male-Headed.....	40.7	26.7	25.5	0.0	0.0	7.3	25
Female-Headed.....	27.4	31.0	22.0	3.5	7.6	10.8	32
Rural.....	28.0	36.0	25.1	2.7	5.8	2.3	27
Male-Headed.....	23.8	39.0	32.8	0.0	0.0	4.4	9
Female-Headed.....	30.4	34.4	20.9	4.2	8.9	1.1	17
Urban.....	37.8	22.9	22.1	1.3	2.9	15.5	30
Male-Headed.....	51.2	19.1	20.9	0.0	0.0	9.1	15
Female-Headed.....	23.8	27.0	23.4	2.7	6.0	22.2	15

The share of cash transfers received from government programmes by expenditure category, residence and county is shown in Table 8.7. Nationally, 54.7 per cent of cash transfers received from government programmes was spent on education while 32.0 per cent was spent on food. In rural areas, 43.8 per cent of cash received was spent on education compared with 73.4 per cent in urban areas. The entire portions of cash transfers received from the government in Makeni, Kajiado, Bomet and Nairobi City Counties was spent on education. Most of the government programmes cash transfers (89.3%) received by households in Siaya County was spent on food

**Table 8.7: Share of Cash Transfers received from Government Programmes by Expenditure Category, Residence, Household Headship and County.**

Residence/ Household Headship / County	Education/ School fees	Food	Health Care	Rent/ housing	Clothing	Business/ Investment	Debt repayment	Other	Total cash transfers from Government programmes (KSh million)
<b>National.....</b>	<b>54.7</b>	<b>32.0</b>	<b>3.6</b>	<b>1.0</b>	<b>1.9</b>	<b>1.6</b>	<b>1.3</b>	<b>3.9</b>	<b>7,824</b>
Male-Headed.....	60.1	28.3	2.8	0.5	1.4	2.0	0.9	3.9	3,808
Female-Headed.....	49.6	35.4	4.5	1.5	2.3	1.3	1.6	3.8	4,016
<b>Rural</b>	<b>43.8</b>	<b>40.1</b>	<b>4.6</b>	<b>0.7</b>	<b>2.5</b>	<b>2.0</b>	<b>1.7</b>	<b>4.6</b>	<b>4,937</b>
Male-Headed.....	45.6	39.1	3.8	0.1	1.9	3.0	1.2	5.4	2,113
Female-Headed.....	42.5	40.9	5.1	1.2	3.0	1.2	2.1	4.1	2,824
<b>Urban</b>	<b>73.4</b>	<b>18.1</b>	<b>2.1</b>	<b>1.6</b>	<b>0.7</b>	<b>1.1</b>	<b>0.5</b>	<b>2.5</b>	<b>2,887</b>
Male-Headed.....	78.2	15.0	1.6	1.1	0.8	0.7	0.4	2.1	1,695
Female-Headed.....	66.5	22.4	2.9	2.4	0.6	1.5	0.7	3.1	1,192
<b>County</b>									
Mombasa.....	96.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0	277
Kwale.....	71.3	18.2	5.4	0.0	0.7	1.7	1.0	1.6	138
Kilifi.....	38.1	53.9	4.4	0.0	3.5	0.0	0.0	0.0	92
Tana River.....	81.6	10.8	6.9	0.0	0.7	0.0	0.1	0.0	115
Lamu.....	47.2	41.8	0.9	0.0	9.9	0.2	0.0	0.0	27
Taita / Taveta.....	63.3	25.4	3.0	0.0	0.5	4.9	0.0	2.8	138
Garissa.....	47.0	22.5	4.3	0.0	2.5	0.0	6.4	17.2	30
Wajir.....	24.3	53.5	5.2	0.1	3.2	6.8	3.5	3.5	170
Mandera.....	17.9	71.2	2.8	0.0	4.5	0.4	1.0	2.1	465
Marsabit.....	13.7	64.9	1.2	6.0	1.0	3.8	2.3	7.0	539
Isiolo.....	74.6	0.0	17.0	0.0	4.2	0.0	0.0	4.2	2
Meru.....	49.6	18.2	5.7	6.1	3.7	13.3	3.4	0.0	266
Tharaka-Nithi.....	40.0	33.2	12.8	0.0	2.1	3.1	0.0	8.9	59
Embu.....	73.2	16.2	1.7	0.0	5.6	2.0	0.0	1.2	62
Kitui.....	26.2	65.0	5.0	0.0	1.6	0.0	0.8	1.3	253
Machakos.....	47.6	35.6	2.5	4.4	1.3	1.1	0.4	7.1	167
Makueni.....	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
Nyandarua.....	96.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0	92
Nyeri.....	79.5	8.0	8.5	0.0	0.0	0.0	2.2	1.8	152
Kirinyaga.....	85.4	14.6	0.0	0.0	0.0	0.0	0.0	0.0	67
Murang'a.....	25.7	44.0	7.5	0.0	8.7	0.0	14.2	0.0	50
Kiambu.....	73.0	23.5	3.0	0.0	0.2	0.0	0.3	0.0	486
Turkana.....	11.2	60.6	1.8	0.0	4.4	1.3	6.5	14.3	480
West Pokot.....	71.9	15.0	2.6	0.0	2.3	0.4	0.0	7.7	165
Samburu.....	20.1	25.4	7.0	0.0	4.2	6.8	1.1	35.3	108
Trans Nzoia.....	58.6	13.8	18.5	0.0	6.5	2.8	0.0	0.0	67
Uasin Gishu.....	79.7	12.6	0.7	0.0	2.0	0.0	0.0	5.0	394
Elgeyo / Marakwet...	41.4	45.3	1.3	0.0	2.1	0.7	0.0	9.2	98
Nandi.....	46.8	25.4	22.8	0.0	5.0	0.0	0.0	0.0	69
Baringo.....	68.6	21.4	5.2	0.0	3.9	0.9	0.0	0.0	218
Laikipia.....	67.9	26.1	0.0	0.0	5.9	0.0	0.0	0.0	28
Nakuru.....	83.0	13.6	3.4	0.0	0.0	0.0	0.0	0.0	522
Narok.....	57.5	35.0	7.5	0.0	0.0	0.0	0.0	0.0	26
Kajiado.....	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	79
Kericho.....	43.8	35.1	0.7	5.9	5.7	6.0	0.0	2.7	174
Bomet.....	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
Kakamega.....	66.0	24.3	1.9	3.5	1.2	1.4	1.5	0.3	223
Vihiga.....	46.6	45.7	0.6	2.6	0.6	0.2	0.3	3.4	182
Bungoma.....	38.2	7.9	0.0	0.0	2.8	0.0	21.3	29.8	53
Busia.....	45.5	40.6	3.0	0.0	1.3	9.1	0.0	0.6	73
Siaya.....	4.1	89.3	1.7	0.0	5.0	0.0	0.0	0.0	55
Kisumu.....	41.1	22.8	31.9	1.8	2.2	0.0	0.2	0.0	99
Homa Bay.....	63.8	22.2	7.8	0.0	0.0	0.0	0.0	6.2	169
Migori.....	29.6	58.7	1.3	0.0	0.0	0.0	0.5	9.9	206
Kisii.....	59.8	23.4	12.0	0.0	0.2	4.0	0.0	0.6	148
Nyamira.....	83.8	12.2	1.1	0.0	0.0	0.0	0.0	2.9	181
Nairobi City.....	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	345

#### 8.4 Transfers in Kind

Transfers in-kind refer to exchange of ownership of a good or asset that is not in form of cash or provision of services for which no payment is given in return. In this survey, transfers in kind were converted to monetary terms in Kenya Shillings. The proportion of households that received in-kind transfers by type is presented in Table 8.8. Majority (83.3%) of the households received in-kind transfers in form of food, followed by clothing (39.6%). There was no variation in the in-kind receipts across households in rural and urban areas. More than 85 per cent of households in Garissa County received in-kind transfers in form of clothing. A higher proportion of households in Isiolo, Trans Nzoia, Tharaka-Nithi and Kisumu Counties received transfers in form of health/medical care

**Table 8.8: Proportion of Households that Received In- Kind Transfers by Type**

Residence/ household headship/ County	Food	Clothing	Health care/ Medical Care	Number of households that received In-Kind transfers (000)
<b>National</b> .....	83.3	39.6	22.8	1,942
Male-Headed.....	83.5	38.2	21.8	880
Female-Headed.....	83.1	40.7	23.6	1,062
<b>Rural</b>	83.9	40.3	22.7	1,461
Male-Headed.....	83.2	40.5	21.6	668
Female-Headed.....	84.5	40.2	23.6	793
<b>Urban</b>	81.5	37.1	23.0	481
Male-Headed.....	84.6	31.1	22.4	212
Female-Headed.....	79.0	41.9	23.5	269
<b>County</b>				
Mombasa.....	84.0	29.4	4.0	15
Kwale.....	89.4	24.0	8.4	20
Kilifi.....	72.1	48.9	36.3	57
Tana River.....	90.5	31.3	1.4	13
Lamu.....	78.9	48.4	6.1	11
Taita / Taveta.....	87.9	49.3	46.2	33
Garissa.....	75.6	85.2	16.7	3
Wajir.....	84.1	32.3	12.8	2
Mandera.....	97.3	3.5	4.9	42
Marsabit.....	86.3	19.7	10.4	10
Isiolo.....	63.5	19.9	72.0	9
Meru.....	81.1	41.7	22.0	33
Tharaka-Nithi.....	84.5	72.1	64.0	21
Embu.....	74.0	24.8	53.4	24
Kitui.....	89.6	58.3	13.3	72
Machakos.....	90.7	41.7	11.8	72
Makueni.....	76.1	52.0	27.4	52
Nyandarua.....	80.9	33.1	0.0	10
Nyeri.....	88.9	66.9	22.2	47
Kirinyaga.....	89.0	36.8	12.9	63
Murang'a.....	82.9	35.9	16.4	48
Kiambu.....	80.0	64.3	26.4	15
Turkana.....	98.8	8.6	13.6	129
West Pokot.....	89.3	9.5	14.9	10
Samburu.....	99.7	0.9	2.5	34
Trans Nzoia.....	69.6	45.4	65.9	101
Uasin Gishu.....	74.1	36.3	23.2	29
Elgeyo / Marakwet.....	64.1	59.0	35.0	4
Nandi.....	78.0	68.0	26.9	30
Baringo.....	78.9	60.3	26.3	21
Laikipia.....	92.8	24.8	13.4	19
Nakuru.....	91.8	20.3	1.8	63
Narok.....	90.6	19.5	7.9	26
Kajiado.....	0.0	0.0	0.0	0
Kericho.....	75.2	22.3	47.9	17
Bomet.....	30.5	54.1	0.0	4
Kakamega.....	85.5	50.7	13.0	199
Vihiga.....	68.8	52.7	29.9	60
Bungoma.....	78.7	52.5	7.2	83
Busia.....	61.7	68.8	30.4	21
Siaya.....	52.7	65.6	28.0	24
Kisumu.....	82.2	58.0	60.0	48
Homa Bay.....	71.8	22.0	58.4	70
Migori.....	86.1	23.6	22.5	60
Kisii.....	90.9	30.1	6.8	87
Nyamira.....	86.6	48.5	15.8	82
Nairobi City.....	74.9	33.9	18.8	52

Table 8.9 shows the average value of in-kind transfers received by households by source and use. A large amount of in-kind transfers from individuals (KSh 6,460 per household receiving transfer in kind) was spent on unspecified uses (any use). An average value of KSh 6,094 received in-kind from individuals was spent on health/medical services.

**Table 8.9: Average value of In- Kind Transfers Households Received by Source and Use**

Use	Individual	Non Profit Organization	Government	Corporate	Outside Kenya
Food.....	4,628	778	194	29	42
Clothing.....	2,650	257	17	2	168
Health /Medical.....	6,094	522	1,636	43	619
Any use .....	6,460	892	555	36	249

The proportion of households that gave out cash and in-kind transfers is presented in Table 8.10. More than half of the households (53.0%) gave out both cash and in-kind transfers. The proportion of households who gave out cash and in-kind transfers were 56.3 per cent in urban areas compared to 50.4 per cent in rural areas. The highest proportion of households (81.2%) giving transfers was registered in Nyeri County.

Table 8.10: Proportion of Households Giving-Out Support/Gifts in the last 12 months

Residence/ household headship/ County	% of households giving support/Gifts	Number of Households ('000)	% of Households Giving Out Support/Gifts as				Number of households giving out supports/ gifts ('000)
			Cash	Food	Clothing	Other in- kind	
National.....	53.0	11,415	87.6	49.4	21.1	11.3	6,050
Male-Headed.....	54.9	5,884	90.0	47.7	20.5	12.1	3,230
Female-Headed.....	51.0	5,531	84.8	51.4	21.9	10.5	2,819
Rural	50.4	6,442	81.8	57.3	18.3	10.6	3,249
Male-Headed.....	51.4	3,159	83.9	56.8	17.7	11.1	1,625
Female-Headed.....	49.5	3,283	79.6	57.9	18.9	10.1	1,624
Urban	56.3	4,972	94.3	40.2	24.4	12.2	2,801
Male-Headed.....	58.9	2,725	96.2	38.5	23.2	13.1	1,606
Female-Headed.....	53.2	2,247	91.8	42.5	26.0	11.0	1,195
<b>County</b>							
Mombasa.....	39.7	397	96.0	12.7	12.0	0.4	157
Kwale.....	34.1	174	59.5	37.7	18.2	21.4	59
Kilifi.....	30.7	326	90.4	39.4	13.7	10.1	100
Tana River.....	20.0	56	61.4	46.5	22.9	15.3	11
Lamu.....	36.0	30	77.2	42.1	16.6	5.3	11
Taita / Taveta.....	60.2	102	86.1	58.2	26.3	2.6	61
Garissa.....	7.8	78	72.3	54.8	43.8	2.8	6
Wajir.....	10.1	69	76.8	50.7	25.9	23.7	7
Mandera.....	10.2	111	70.5	40.3	9.4	26.0	11
Marsabit.....	12.5	62	94.5	12.4	0.8	12.5	8
Isiolo.....	14.4	34	96.4	48.1	8.3	13.8	5
Meru.....	27.3	393	77.0	38.0	14.7	7.5	108
Tharaka-Nithi.....	66.9	107	72.9	85.8	23.3	6.9	72
Embu.....	58.1	164	95.0	64.2	11.4	9.6	96
Kitui.....	49.9	236	96.7	85.4	26.2	76.4	118
Machakos.....	64.4	328	87.3	40.6	20.3	11.2	211
Makueni.....	59.4	233	83.9	65.0	18.1	4.3	139
Nyandarua.....	31.2	191	83.5	25.7	7.8	12.8	60
Nyeri.....	81.2	271	96.0	24.3	4.5	2.9	220
Kirinyaga.....	59.4	198	81.3	61.0	15.6	12.1	118
Muranga.....	77.7	323	98.6	51.9	12.5	11.4	251
Kiambu.....	49.1	600	96.4	12.1	10.8	0.0	294
Turkana.....	40.6	246	62.4	72.4	24.0	23.3	100
West Pokot.....	37.8	119	91.7	19.9	7.8	72.0	45
Samburu.....	34.5	61	78.7	66.4	26.8	20.3	21
Trans Nzoia.....	73.4	210	82.6	76.7	36.0	11.6	154
Uasin Gishu.....	51.4	270	82.5	57.6	39.8	7.2	138
Elgeyo / Marakwet...	35.0	99	79.4	50.2	27.6	2.0	35
Nandi.....	42.5	202	98.6	59.1	33.5	4.1	86
Baringo.....	77.2	152	94.8	63.0	12.0	16.9	118
Laikipia.....	44.1	135	72.4	56.9	15.1	9.5	60
Nakuru.....	52.9	578	91.9	34.7	11.6	9.2	306
Narok.....	53.5	223	67.5	62.6	26.5	11.3	119
Kajiado.....	41.2	250	97.2	1.2	0.0	4.5	103
Kericho.....	48.6	211	93.7	24.9	7.9	4.3	102
Bomet.....	39.7	179	97.7	68.9	23.8	10.8	71
Kakamega.....	76.5	392	77.0	68.5	15.2	7.0	300
Vihiga.....	43.3	144	59.7	72.3	18.7	17.2	62
Bungoma.....	61.3	321	76.0	70.0	37.4	6.7	197
Busia.....	17.0	177	94.4	25.7	5.9	2.4	30
Siaya.....	57.9	246	67.9	70.8	44.4	13.2	142
Kisumu.....	45.8	284	89.8	86.7	65.3	12.2	130
Homa Bay.....	80.8	224	81.8	40.7	14.0	4.8	181
Migori.....	58.8	233	64.0	75.7	24.8	6.7	137
Kisii.....	65.4	291	97.1	23.6	6.6	3.7	190
Nyamira.....	64.9	179	86.6	62.1	21.1	15.8	116
Nairobi City.....	65.4	1,503	97.5	47.9	30.1	15.5	983

Table 8.11 shows the average value of support/gifts given out by households in the last 12 months. Nationally, the average amount given out by households in kind was KSh 17,955. The average amount of cash given out in kind by urban households was KSh 27,910 while rural households gave out on average KSh 9,372.

Table 8.11: Average Value in KSh of Support/Gifts Given Out by Households in the last 12 months

Residence/ household headship	Cash	Food	Clothing	Other in-kind	Total	Number of households that gave out support/gifts ('000)
<b>National.....</b>	<b>14,262</b>	<b>2,174</b>	<b>563</b>	<b>955</b>	<b>17,955</b>	<b>6,050</b>
Male-Headed.....	16,809	2,305	590	1,078	20,781	3,230
Female-Headed.....	11,344	2,025	533	814	14,716	2,819
<b>Rural</b>	<b>6,491</b>	<b>1,813</b>	<b>370</b>	<b>696</b>	<b>9,372</b>	<b>3,249</b>
Male-Headed.....	7,013	1,930	406	944	10,294	1,625
Female-Headed.....	5,969	1,697	335	449	8,450	1,624
<b>Urban</b>	<b>23,275</b>	<b>2,593</b>	<b>787</b>	<b>1,254</b>	<b>27,910</b>	<b>2,801</b>
Male-Headed.....	26,720	2,684	775	1,213	31,393	1,606
Female-Headed.....	18,648	2,470	803	1,310	23,231	1,195
<b>County</b>						
Mombasa.....	23,159	997	410	3	24,569	157
Kwale.....	6,750	1,284	302	520	8,857	59
Kilifi.....	27,980	4,657	712	477	33,826	100
Tana River.....	22,633	3,544	1,255	12,686	40,118	11
Lamu.....	7,249	984	388	176	8,796	11
Taita / Taveta.....	22,504	4,355	1,733	174	28,766	61
Garissa.....	20,709	13,114	3,204	110	37,137	6
Wajir.....	12,921	2,175	558	6,360	22,013	7
Mandera.....	39,259	900	130	2,192	42,481	11
Marsabit.....	12,122	996	5	566	13,689	8
Isiolo.....	28,021	4,080	349	983	33,433	5
Meru.....	14,831	1,727	707	468	17,734	108
Tharaka-Nithi.....	4,982	1,680	453	196	7,311	72
Embu.....	5,165	1,642	321	453	7,580	96
Kitui.....	14,416	2,691	746	2,233	20,086	118
Machakos.....	18,305	3,405	495	727	22,932	211
Makueni.....	9,809	2,938	603	298	13,648	139
Nyandarua.....	9,585	663	300	355	10,904	60
Nyeri.....	10,514	1,128	170	83	11,896	220
Kirinyaga.....	8,624	2,414	332	522	11,893	118
Murang'a.....	6,420	1,166	284	229	8,098	251
Kiambu.....	26,317	777	361	0	27,455	294
Turkana.....	6,128	1,203	717	799	8,847	100
West Pokot.....	5,781	180	29	4,282	10,272	45
Samburu.....	2,169	7,251	2,825	25,392	37,637	21
Trans Nzoia.....	14,117	4,620	1,270	1,270	21,276	154
Uasin Gishu.....	11,796	2,035	840	183	14,854	138
Elgeyo / Marakwet...	7,277	1,721	261	37	9,296	35
Nandi.....	8,679	1,488	945	142	11,254	86
Baringo.....	8,095	2,286	400	588	11,369	118
Laikipia.....	5,800	1,486	285	171	7,742	60
Nakuru.....	13,694	2,284	769	1,723	18,470	306
Narok.....	8,482	3,034	647	1,192	13,355	119
Kajiado.....	20,144	176	0	388	20,707	103
Kericho.....	7,631	1,284	99	57	9,071	102
Bomet.....	7,481	583	331	228	8,623	71
Kakamega.....	8,042	1,670	199	303	10,214	300
Vihiga.....	6,981	1,359	246	5,658	14,244	62
Bungoma.....	3,687	1,778	517	172	6,154	197
Busia.....	7,697	587	144	74	8,501	30
Siaya.....	4,304	2,279	656	2,060	9,298	142
Kisumu.....	2,675	1,259	711	449	5,093	130
Homa Bay.....	2,686	1,160	194	73	4,112	181
Migori.....	8,284	1,161	252	560	10,257	137
Kisii.....	2,896	239	170	182	3,486	190
Nyamira.....	11,952	2,804	794	4,510	20,060	116
Nairobi City.....	30,799	3,817	926	1,427	36,968	983

# CHAPTER 9

## 9. INFORMATION AND COMMUNICATION TECHNOLOGY

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### 9.1 Introduction

Information and Communication Technology (ICT) contributes significantly to economic growth of the country while at the same time it acts as a catalyst for growth for other sectors. Rapid expansion of ICT infrastructure and increased uptake of ICT products and services has led to high demand for the sector's statistics.

The 2015/16 KIHBS captured selected indicators that measure ICT access at the individual level and ownership at the household level. The indicators were on; mobile money transfer and mobile banking platforms, internet, mobile phones, fixed lines, Subscriber Identity Modules (SIMs), radio and television. The indicators are useful as benchmark statistics for tracking progress and development in the ICT sector.

### 9.2 Use of ICT equipment and services

The proportion of the population aged 3 years and above by ICT equipment and services use; residence and county is presented in Table 9.1. Eight out of every ten persons listen to radio while about seven out of ten use mobile phones. On the other hand, the least proportion of the population (9.5%) use computers. It is worth noting that 16.6 per cent of the population aged 3 years and above use internet. There is a wide variation in the use of ICT equipment and services in the rural and urban areas, with urban areas consistently having higher proportions of population using ICT equipment and services.

Analysis by county reveals notable variations in the proportion of population using ICT equipment and services. The highest proportion of 88.7 per cent of the population using television was reported in Nairobi City, while the lowest was reported in Wajir at 8.0 per cent. Nyeri County had the highest proportion (96.7%) of population using radio while Mandera had the least (20.8%). Usage of mobile phones at the county level mirrored that for radio with the highest proportion of population registered in Nyeri and the least in Mandera.

**Table 9.1: Proportion of Population Aged 3 years and above by ICT Equipment and Services Used, Residence and County**

Residence /County	Television	Radio	Mobile phone	Computer	Internet	Population aged 3 years and above ('000)
<b>National.....</b>	<b>47.8</b>	<b>79.1</b>	<b>68.2</b>	<b>9.5</b>	<b>16.6</b>	<b>41,751</b>
<b>Rural.....</b>	<b>33.7</b>	<b>75.6</b>	<b>62</b>	<b>4.5</b>	<b>8.6</b>	<b>26,795</b>
<b>Urban.....</b>	<b>73.1</b>	<b>85.3</b>	<b>79.4</b>	<b>18.5</b>	<b>30.9</b>	<b>14,956</b>
<b>County</b>						
Mombasa.....	87.9	96.0	87.5	20.4	39.5	1,095
Kwale.....	47.3	81.6	70.0	5.5	10.6	736
Kilifi.....	57.7	84.1	76.4	8.7	13.2	1,251
Tana River.....	35.4	45.1	71.2	3.0	7.4	276
Lamu.....	54.1	74.4	81.4	7.0	9.9	117
Taita / Taveta.....	49.8	81.1	69.2	10.9	17.0	333
Garissa.....	15.6	52.7	40.5	0.9	3.9	398
Wajir.....	8.0	37.4	37.8	0.7	2.0	405
Mandera.....	10.2	20.8	26.2	1.0	5.4	648
Marsabit.....	14.4	27.7	30.7	1.5	4.3	285
Isiolo.....	29.2	37.4	49.8	3.9	10.5	142
Meru.....	47.7	75.2	62.1	5.4	14.0	1,372
Tharaka-Nithi.....	24.6	66.0	54.4	4.1	8.3	369
Embu.....	68.4	93.1	74.3	7.8	12.4	525
Kitui.....	16.7	68.4	62.2	3.4	5.8	1,013
Machakos.....	33.4	77.1	65.1	5.7	14.8	1,098
Makueni.....	27.0	81.0	65.0	5.7	8.6	892
Nyandarua.....	26.0	83.9	61.5	3.2	11.4	645
Nyeri.....	62.4	96.7	95.0	9.9	20.4	752
Kirinyaga.....	71.3	94.8	84.9	8.6	13.9	571
Murang'a.....	45.0	87.3	86.1	5.4	13.6	1,016
Kiambu.....	81.0	91.1	83.7	14.4	24.3	1,748
Turkana.....	23.9	32.0	28.6	4.5	8.6	968
West Pokot.....	14.1	42.0	35.2	1.9	3.9	577
Samburu.....	15.8	33.1	31.6	2.3	4.2	252
Trans Nzoia.....	41.5	83.1	80.0	9.0	14.9	961
Uasin Gishu.....	54.1	81.2	70.3	12.6	17.2	1,039
Elgeyo / Marakwet...	50.7	92.4	75.0	9.1	11.8	427
Nandi.....	66.4	88.8	81.7	12.9	14.3	879
Baringo.....	46.2	81.6	65.5	4.5	12.4	644
Laikipia.....	35.1	64.2	56.5	5.6	14.0	466
Nakuru.....	56.6	90.8	82.5	11.9	16.3	1,870
Narok.....	19.7	66.9	64.4	4.2	9.8	965
Kajiado.....	65.6	78.8	71.2	13.6	23.1	798
Kericho.....	58.8	85.4	73.3	6.1	11.6	880
Bomet.....	15.9	64.4	47.7	1.9	5.0	846
Kakamega.....	32.2	81.6	44.5	4.3	9.5	1,727
Vihiga.....	24.2	68.7	54.2	4.3	9.6	587
Bungoma.....	37.3	86.0	63.8	7.9	13.8	1,419
Busia.....	39.8	77.2	60.2	2.3	2.5	774
Siaya.....	37.2	87.8	83.2	5.6	12.2	907
Kisumu.....	67.3	91.3	75.1	20.5	40.6	1,049
Homa Bay.....	31.6	78.7	58.5	2.4	4.2	970
Migori.....	35.5	91.1	78.6	7.4	12.2	1,037
Kisii.....	40.7	86.2	58.8	3.8	11.5	1,260
Nyamira.....	27.9	75.0	59.0	4.9	8.6	656
Nairobi City.....	88.0	89.1	85.8	29.0	43.8	4,107

The proportion of the population aged 3 years and above by ICT equipment and service used and age group is presented in Table 9.2. In all cases, the 18-35 years age group reported the highest proportion in usage of ICT equipment and services; mobile phone (90.1%), radio (83.5%), television (60.5%), internet (36.8%) and computer (18.4%). Notably, a high proportion of the population aged 70 years and above used radio (66.2%) and mobile phone (59.2%) while their use of computer and internet was negligible.

**Table 9.2: Proportion of Population Aged 3 Years and above by ICT equipment and service used and Age Group, Residence and County.**

Age groups	Television	Radio	Mobile phone	Computer	Internet	Population aged 3 years and above ('000)
<b>National.....</b>	<b>47.8</b>	<b>79.1</b>	<b>68.2</b>	<b>9.5</b>	<b>16.6</b>	<b>41,751</b>
<b>Age groups</b>						
3-5 years.....	36.7	69.5	28.8	1.7	0.4	3,806
6-17 years.....	40.4	76.0	45.9	4.6	4.2	14,483
18-35 years.....	60.5	83.7	90.1	18.4	36.8	13,136
36-70 years.....	48.4	82.5	89.2	8.7	15.6	9,336
Over 70 years.....	25.5	66.2	59.2	0.8	1.0	990
15 - 24 Years.....	55.3	82.4	77.6	17.1	29.7	9,085

### 9.3 Use of the Internet

Table 9.3 presents the proportion of population aged 3 years and above that used the Internet by place of use, residence and county. Approximately 6.9 million people (16.6%) aged 3 years and above used the Internet (See Table 9.1). The most common place from which the Internet was used is in mobility as reported by 79.3 per cent of the population that used the Internet. Other places where the Internet was frequently used were at home (20.8%), work (13.3%) and cyber café (9.0%). The proportion of population in urban areas using internet in mobility, at home and at work was higher compared to that of their counterparts in rural areas.

**Table 9.3: The Proportion of Population Aged 3 Years and Above that Reported to Have Used the Internet by Place of Use, Residence and County**

Residence/ County	In mobility	At work place	Cyber café	Education centre	Community Centre	Another person's home	At home	Other	Population of Households that used internet ('000)
<b>National.....</b>	<b>79.3</b>	<b>13.3</b>	<b>9.0</b>	<b>6.6</b>	<b>0.3</b>	<b>0.8</b>	<b>20.8</b>	<b>1.5</b>	<b>6,929</b>
<b>Rural.....</b>	<b>75.8</b>	<b>6.9</b>	<b>9.5</b>	<b>8.9</b>	<b>0.7</b>	<b>1.3</b>	<b>16.5</b>	<b>1.3</b>	<b>2,308</b>
<b>Urban.....</b>	<b>81.1</b>	<b>16.5</b>	<b>8.7</b>	<b>5.4</b>	<b>0.1</b>	<b>0.6</b>	<b>23.0</b>	<b>1.6</b>	<b>4,622</b>
<b>County</b>									
Mombasa.....	94.1	6.0	4.0	3.0	0.0	0.2	0.5	0.9	433
Kwale.....	86.6	7.3	4.1	5.8	1.5	4.8	13.0	0	78
Kilifi.....	81.9	11.3	8.5	5.6	0.0	0.0	6.6	7.6	166
Tana River.....	68.4	11.2	3.6	1.9	0.0	0.0	31.3	0	20
Lamu.....	87.2	12.7	8.1	7.4	0.0	0.5	2.9	0	12
Taita / Taveta.....	90.3	12.7	5.6	11.6	0.0	1.2	1.4	2.8	57
Garissa.....	92.7	2.2	7.0	3.9	0.0	0.0	1.1	0.6	16
Wajir.....	66.5	5.7	17.4	1.5	0.0	2.0	8.1	18.9	8
Mandera.....	59.4	2.4	7.3	11.4	0.0	4.6	17.1	17.5	35
Marsabit.....	37.2	17.4	34.0	17.1	0.0	2.5	21.5	0	12
Isiolo.....	92.1	14.2	2.2	6.6	0.0	1.1	17.0	0	15
Meru.....	55.2	8.0	3.3	13.1	1.1	2.7	50.9	0	192
Tharaka-Nithi.....	81.3	9.4	6.5	5.6	0.0	0.0	2.6	10	30
Embu.....	35.8	12.9	4.6	14.1	0.0	0.8	49.5	0	65
Kitui.....	83.8	3.8	5.8	9.2	0.0	0.5	11.5	0	58
Machakos.....	89.1	7.3	9.4	0.4	0.0	0.0	3.1	2.9	162
Makueni.....	86.0	1.9	10.8	3.4	0.0	0.0	11.7	0	77
Nyandarua.....	99.2	8.2	2.3	0.8	0.0	0.0	0.7	0	74
Nyeri.....	90.8	7.7	9.2	3.8	0.0	0.0	5.5	0.7	153
Kirinyaga.....	59.1	11.0	3.5	3.9	0.0	0.0	39.5	0.5	79
Murang'a.....	88.9	2.1	8.7	13.6	0.0	0.0	3.1	0.9	138
Kiambu.....	94.0	11.0	7.2	4.2	0.7	0.4	14.3	1.1	424
Turkana.....	67.1	14.1	8.2	0.9	0.0	0.0	3.3	16.4	83
West Pokot.....	15.1	22.7	17.6	11.0	0.0	0.0	35.3	28.8	22
Samburu.....	70.2	22.1	3.2	9.1	0.0	0.0	16.7	0	11
Trans Nzoia.....	53.9	9.2	14.8	5.8	0.4	1.6	50.1	0	143
Uasin Gishu.....	81.2	15.1	11.5	13.1	1.6	0.7	6.3	0.3	179
Elgeyo / Marakwet...	96.1	10.5	22.9	0.7	0.0	0.0	2.5	0.2	50
Nandi.....	92.6	6.7	7.1	5.0	0.0	0.3	2.6	0.5	125
Baringo.....	95.8	6.0	11.5	5.7	0.0	0.2	4.0	0	80
Laikipia.....	63.5	8.5	1.7	3.7	0.0	0.0	34.8	0.5	65
Nakuru.....	84.4	14.2	8.5	7.8	0.0	0.0	12.4	0	305
Narok.....	17.6	20.4	5.9	10.2	0.2	0.0	85.1	0	95
Kajiado.....	92.6	20.5	7.8	2.7	0.0	0.0	3.9	1.6	184
Kericho.....	79.0	12.7	7.4	5.9	0.4	0.0	20.8	0	102
Bomet.....	86.0	9.1	9.6	0.0	0.0	0.0	0.6	3.1	42
Kakamega.....	90.3	4.8	3.2	3.4	0.0	0.0	5.0	3.1	164
Vihiga.....	87.7	4.1	8.7	0.3	0.0	0.0	11.3	0	56
Bungoma.....	76.2	4.8	14.0	5.6	0.0	0.0	10.7	1	196
Busia.....	56.1	26.5	24.1	2.4	0.0	2.2	9.4	4.2	19
Siaya.....	81.9	11.6	21.4	9.5	1.9	0.0	3.0	1.8	110
Kisumu.....	65.9	12.7	17.3	12.5	1.9	5.9	18.8	0.7	426
Homa Bay.....	60.0	10.4	18.3	6.7	0.0	0.0	26.3	3.1	41
Migori.....	87.5	5.4	19.6	11.6	0.0	2.6	2.2	0	127
Kisii.....	94.9	7.1	7.8	5.3	0.3	0.0	3.3	0	145
Nyamira.....	81.0	15.9	17.4	9.0	0.0	1.2	6.7	0	57
Nairobi City.....	76.6	23.1	7.7	6.5	0.0	0.4	40.5	1.2	1,797

Table 9.4 presents the proportion of population aged 3 years and above that used the Internet by place of use and age group. Use of the internet in mobility was the most common for all age groups except for the 3-5 years age group that predominantly used it at home. The highest proportion of population using the internet in mobility was in the 18-35 years age group followed by those aged 36-70 years. The highest proportion of population using internet at work was recorded in the 36-70 years age group.

**Table 9.4: Proportion of Population Aged 3 Years and Above that Used the Internet by Place of Use and Age Group**

Age group (Years)	In mobility	At work place	Cyber cafe	Education centre	Community center	Another person's home	At home	Other	Population that used internet ('000)
National.....	79.3	13.3	9.0	6.6	0.3	0.8	20.8	1.5	6,929
<b>Age groups</b>									
3-5 years.....	33.5	0.0	0.0	0.0	0.0	0.0	66.5	0.0	14
6-17 years.....	67.9	0.7	7.5	15.6	0.3	3.8	19.6	1.2	610
18-35 years.....	80.7	11.9	9.7	7.2	0.4	0.6	21.4	1.5	4,836
36-70 years.....	79.9	23.6	7.2	0.9	0.2	0.1	19.0	1.3	1,459
Over 70 years.....	74.3	6.6	4.5	15.0	0.0	0.0	41.5	0.0	10

Table 9.5 shows the proportion of population aged 3 years and above that used the Internet by purpose, residence and county. The Internet was mostly used for social networking as reported by 74.7 per cent of the population followed by reading other informative materials at 26.9 per cent. Other significant purposes were: watching movies or listening to music or playing games (17.1 %) and reading newspapers online (15.7 %). The rural-urban variation was minimal for all purposes where the Internet was used except in reading newspapers online.

**Table 9.5: Percentage Distribution of Population Aged 3 Years and above that used Internet by Purpose, Residence and County**

Residence/ County	Seeking health information	Making an appointment with a health practitioner via a website/ email	Getting information from any government website	Reading newspaper online	Internet banking	Telephoning over the internet/ VOIP	Selling goods or services	Purchasing or ordering goods or services	Doing a formal on-line course
<b>National.....</b>	2.5	0.7	6.6	15.7	3.8	2.5	2.8	1.5	1.4
<b>Rural.....</b>	2.4	0.6	6.6	11.2	3.2	1.1	0.8	0.9	1.3
<b>Urban.....</b>	2.6	0.7	6.6	17.9	4.1	3.2	3.7	1.8	1.5
<b>County</b>									
Mombasa.....	0.9	0.2	2.0	2.4	2.9	0.5	0.5	0.2	0.2
Kwale.....	2.8	0.0	0.8	5.9	2.4	0.3	0.2	0.5	2.1
Kilifi.....	0.9	0.6	6.6	21.0	5.0	0.0	0.4	0.7	1.4
Tana River.....	0.2	0.6	1.3	18.5	1.9	0.4	0.9	0.0	5.8
Lamu.....	1.2	0.1	2.3	4.5	0.1	0.9	0.6	0.2	0.0
Taita / Taveta.....	8.2	2.5	6.5	24.3	3.6	2.6	5.1	5.5	0.0
Garissa.....	3.7	0.0	1.2	5.9	0.0	1.1	0.0	0.0	0.6
Wajir.....	0.6	0.0	10.4	11.8	0.0	2.0	0.0	0.0	0.0
Mandera.....	0.0	1.5	4.4	34.8	0.6	2.2	0.0	0.0	0.0
Marsabit.....	8.5	10.7	10.9	23.8	2.1	0.0	0.0	0.0	0.0
Isiolo.....	2.9	0.8	1.1	1.3	0.0	0.0	0.3	0.0	0.0
Meru.....	3.0	0.8	5.1	3.7	1.9	3.0	0.6	1.1	0.3
Tharaka-Nithi.....	3.0	0.0	3.0	4.9	0.0	2.4	0.8	1.2	5.0
Embu.....	3.3	0.0	5.3	2.8	0.0	0.9	0.2	0.9	1.9
Kitui.....	0.6	6.6	3.3	14.8	0.7	0.0	0.5	0.5	0.5
Machakos.....	1.8	0.0	5.1	6.0	1.8	0.0	2.9	2.8	1.6
Makueni.....	1.0	0.0	2.7	5.5	1.0	0.0	0.0	0.0	0.0
Nyandarua.....	2.0	0.0	3.5	2.3	0.0	1.3	0.0	0.1	0.6
Nyeri.....	0.9	0.0	1.3	2.0	0.4	0.0	2.2	0.2	0.8
Kirinyaga.....	0.7	0.0	4.4	3.4	1.9	0.0	1.9	0.7	0.6
Murang'a.....	1.8	0.0	4.4	3.9	0.4	0.0	4.9	1.2	1.4
Kiambu.....	3.1	0.2	7.7	2.2	0.6	4.1	1.2	0.5	1.4
Turkana.....	0.4	0.0	4.0	4.4	0.0	0.4	0.0	0.7	1.1
West Pokot.....	1.2	1.0	2.9	12.1	0.0	0.0	0.0	0.5	0.0
Samburu.....	3.9	0.0	14.6	24.9	2.9	0.0	0.0	2.0	1.7
Trans Nzoia.....	3.8	4.5	1.1	10.2	0.3	0.1	0.0	0.3	0.0
Uasin Gishu.....	3.1	0.0	21.1	12.3	1.3	1.6	0.7	0.9	1.2
Elgeyo / Marakwet...	0.0	0.4	13.5	32.4	0.0	0.3	0.0	0.1	0.4
Nandi.....	1.7	0.0	13.0	12.3	1.1	0.0	0.0	1.3	0.4
Baringo.....	0.7	0.3	5.3	9.5	1.5	0.2	0.3	1.2	1.5
Laikipia.....	1.2	0.8	4.2	5.0	1.4	0.2	0.8	1.2	0.4
Nakuru.....	1.0	0.2	6.1	10.4	1.0	0.6	0.5	1.4	0.0
Narok.....	2.2	0.4	2.2	6.2	0.7	3.0	1.9	0.9	0.6
Kajiado.....	3.2	2.8	10.2	10.9	1.4	5.7	9.7	4.7	3.8
Kericho.....	5.3	0.6	8.7	5.2	0.5	0.2	0.0	0.7	0.7
Bomet.....	0.4	0.0	33.5	27.0	1.0	0.0	0.0	0.6	0.0
Kakamega.....	3.7	0.0	5.9	4.2	0.0	0.6	1.0	0.0	2.0
Vihiga.....	0.0	0.8	1.8	6.1	0.0	0.0	0.7	0.9	0.0
Bungoma.....	1.1	0.0	3.6	9.9	0.0	0.0	0.2	0.7	1.0
Busia.....	1.9	2.9	25.9	16.3	0.0	6.3	6.0	5.3	5.4
Siaya.....	4.6	1.3	16.9	34.8	3.5	7.7	0.2	0.5	2.4
Kisumu.....	3.6	1.7	6.9	25.3	38.2	0.4	0.7	0.8	1.2
Homa Bay.....	8.2	0.0	10.9	37.6	3.4	0.0	0.0	0.0	1.1
Migori.....	6.9	0.5	7.9	13.5	0.0	0.0	0.5	0.2	1.4
Kisii.....	17.6	0.0	13.3	9.8	0.3	0.5	1.1	2.9	0.2
Nyamira.....	5.8	0.0	15.5	40.2	0.0	2.1	0.1	0.7	4.5
Nairobi City.....	1.50	0.60	5.70	29.80	2.40	6.20	7.20	3.00	2.50

Table 9.5: Percentage Distribution of Population Aged 3 Years and above that used Internet by Purpose, Residence and County...Cont'd

Residence/County	Researching on online encyclopedias or other websites for formal learning purpose	Reading other informative information	Writing online articles such as blogs, online forums etc	Participating in social networks	Watching a movie or listening to music or playing games via internet	Searching for work	Other	Population aged 3 years and above that used internet ('000')
National.....	12.7	26.9	2.1	74.7	17.1	4.1	1.0	6,929
Rural.....	11.6	27.6	1.7	76.1	15.8	3.0	1.0	2,308
Urban.....	13.2	26.6	2.2	74.0	17.8	4.7	0.9	4,622
<b>County</b>								
Mombasa.....	4.2	8.6	1.0	92.0	2.5	2.3	0.6	433
Kwale.....	5.2	35.5	0.2	93.5	5.8	5.8	1.3	78
Kilifi.....	5.9	50.2	2.3	60.6	17.5	1.7	2.8	166
Tana River.....	4.7	24.7	0.0	86.5	22.2	1.9	0.3	20
Lamu.....	14.0	38.2	3.2	70.2	3.5	2.5	0.0	12
Taita / Taveta.....	19.3	43.3	4.5	77.6	5.9	11.7	0.9	57
Garissa.....	2.2	11.4	0.0	88.4	1.3	0.0	0.0	16
Wajir.....	5.2	7.7	5.0	65.5	11.1	3.2	2.3	8
Mandera.....	15.5	2.8	3.3	92.3	1.6	2.2	0.0	35
Marsabit.....	6.3	36.3	9.3	68.0	2.9	0.3	0.8	12
Isiolo.....	2.3	13.7	0.0	90.9	2.3	2.1	0.0	15
Meru.....	8.6	35.4	0.5	86.5	24.9	1.6	0.6	192
Tharaka-Nithi.....	10.0	16.3	0.0	87.6	9.3	3.3	0.8	30
Embu.....	16.5	10.1	1.6	91.0	6.5	4.2	0.0	65
Kitui.....	17.3	29.8	2.2	70.9	3.1	0.0	0.6	58
Machakos.....	7.4	17.4	1.4	87.5	0.0	5.2	0.4	162
Makueni.....	7.3	39.9	2.0	86.3	9.9	3.0	0.5	77
Nyandarua.....	11.2	25.7	0.7	87.4	1.5	2.0	0.1	74
Nyeri.....	23.1	22.6	0.8	88.7	34.1	1.9	0.0	153
Kirinyaga.....	15.5	22.2	0.0	79.8	5.8	2.9	1.0	79
Murang'a.....	14.9	17.5	0.0	87.0	6.1	1.9	0.0	138
Kiambu.....	12.9	12.8	1.4	91.7	2.9	1.4	0.2	424
Turkana.....	8.1	12.6	0.0	75.2	5.0	2.2	10.1	83
West Pokot.....	8.3	33.2	1.9	76.0	8.8	6.8	0.0	22
Samburu.....	17.9	22.0	0.0	49.5	17.4	0.0	0.0	11
Trans Nzoia.....	14.2	45.2	0.8	84.8	7.5	4.9	0.8	143
Uasin Gishu.....	19.9	24.5	0.2	82.8	5.2	10.9	0.9	179
Elgeyo / Marakwet...	2.8	25.9	0.0	63.5	28.8	1.0	3.4	50
Nandi.....	5.0	65.8	1.6	85.5	2.6	1.8	0.5	125
Baringo.....	16.9	43.8	1.4	88.6	10.3	1.7	3.0	80
Laikipia.....	8.0	19.8	2.1	87.2	2.6	1.3	3.6	65
Nakuru.....	15.3	21.2	1.0	82.5	16.8	3.9	0.5	305
Narok.....	11.5	15.9	0.5	89.9	4.2	1.2	2.4	95
Kajiado.....	17.5	29.7	6.5	74.4	20.0	14.1	1.1	184
Kericho.....	17.9	49.2	6.5	85.5	5.1	3.9	1.9	102
Bomet.....	19.4	38.7	2.1	34.6	12.2	3.0	0.0	42
Kakamega.....	16.3	8.9	4.0	80.0	10.9	4.4	1.0	164
Vihiga.....	16.4	9.4	0.0	82.8	4.3	2.2	2.8	56
Bungoma.....	5.2	13.6	0.4	70.2	39.4	2.4	1.0	196
Busia.....	0.0	20.7	0.5	48.2	12.1	6.1	0.0	19
Siaya.....	9.2	32.1	5.6	41.5	23.4	6.4	2.2	110
Kisumu.....	7.3	21.7	3.1	70.0	45.7	5.9	1.0	426
Homa Bay.....	9.2	34.8	1.4	31.8	2.3	1.5	9.4	41
Migori.....	6.6	39.7	9.6	73.9	5.9	2.1	0.0	127
Kisii.....	14.4	37.8	1.2	71.8	5.4	4.4	0.0	145
Nyamira.....	38.3	34.6	3.9	82.3	3.5	4.0	0.0	57
Nairobi City.....	16.0	32.1	2.2	59.3	27.4	5.0	0.6	1,797

Table 9.6 shows the proportion of population aged 3 years and above that used the internet by purpose and age group. Social networking was the most cited purpose for the Internet use by all age groups except 3-5 years age group that predominantly used it for watching movies, listening to music or playing games. The highest proportion of population using the Internet for social networking was in the 18-35 years age group at 78.9 per cent followed by those in the 6-17 years age group at 68.8 per cent.

**Table 9.6: Proportion of Population Aged 3 Years and Above that Used the Internet by Purpose and Age Group**

Age group (Years)	Purpose of Internet use								
	Seeking health information	Making an appointment with a health practitioner via a website/ email	Getting information from any government website	Reading newspaper online	Internet banking	Telephoning over the internet/ VOIP	Selling goods or services	Purchasing or ordering goods or services	Doing a formal online course
National.....	2.5	0.7	6.6	15.7	3.8	2.5	2.8	1.5	1.4
<b>Age group</b>									
3-5 years.....	0	0	0	0	0	0	0	0	0
6-17 years.....	0.4	0	1.6	9.2	0.4	1.9	0.8	0.3	0.3
18-35 years.....	1.9	0.4	5.3	14.5	3.2	2.7	2.1	1.3	1.5
36-70 years.....	5.6	1.8	13	22.3	7.2	2.2	5.7	2.7	1.7
Over 70 years...	4.5	2.7	21.1	17.7	13.2	19.6	0	0	5.3

**Table 9.6: Proportion of Population Aged 3 Years and Above that Used the Internet by Purpose and Age Group...Cont'd**

Age group (Years)	Purpose of Internet use							Population above 3 years that used internet ('000)
	Researching on online encyclopedias or other websites for formal learning purpose	Reading other informative information	Writing online articles such as blogs, online forums etc	Participating in social networks	Watching a movie or listening to music or playing games via internet	Searching for work	Other	
National.....	12.7	26.9	2.1	74.7	17.1	4.1	1	6,929
<b>Age group</b>								
3-5 years.....	2.9	0	0	15.4	92.2	0	2.3	14
6-17 years.....	11.7	15.3	1.4	68.8	37.8	0.2	0.4	610
18-35 years.....	14.1	26.3	2	78.9	17	4.9	1	4,836
36-70 years.....	8.4	33.7	2.5	64	8.2	3.2	1.2	1,459
Over 70 years...	15	51.5	0	44.1	0	0	0	10

The proportion of population aged 3 years and above that did not use the internet by reason, residence and county is shown in Table 9.7. Rural areas registered a higher proportion of population that did not use the Internet. Slightly over 30 per cent of the population that did not use the Internet reported that they did not need to use it. Other frequent reasons cited were lack of knowledge on how to use the Internet (29.5%) and being too young

Counties with high proportions of population reporting no need to use the Internet were; Kirinyaga (54.2%), Kisii (52.9%), Nandi (51.7%) and Machakos (51.6%). Similarly, a high proportion of population that did not use the Internet because of lack of knowledge and skills were in West Pokot (57.6%), Samburu (53.9%) and Turkana (47.2%) Counties. Being too young was the most cited reason for not using the Internet in Siaya and Elgeyo/Marakwet Counties.

Further analysis of population aged 3 years and above that did not use the Internet is presented in Table 9.8.

Table 9.7: Proportion of Persons aged 3 Years and above that did not use the Internet by Reason, Residence and County

Residence/ County	Too young	Do not need to use internet	Lack of knowledge / skills to use the internet	Expensive	No internet/ network in the area	Cultural reasons	Control (Parental, School, Work etc)	Security/ privacy Concerns	Others (specify)	Not Stated	Population that never used internet ('000)
<b>National.....</b>	<b>23.9</b>	<b>30.1</b>	<b>29.5</b>	<b>4.0</b>	<b>1.5</b>	<b>0.2</b>	<b>9.7</b>	<b>0.1</b>	<b>0.8</b>	<b>0.2</b>	<b>34,687</b>
<b>Rural.....</b>	<b>23.2</b>	<b>29.0</b>	<b>32.1</b>	<b>3.7</b>	<b>1.8</b>	<b>0.2</b>	<b>9.2</b>	<b>0.0</b>	<b>0.6</b>	<b>0.2</b>	<b>24,417</b>
<b>Urban.....</b>	<b>25.6</b>	<b>32.7</b>	<b>23.5</b>	<b>4.8</b>	<b>0.5</b>	<b>0.3</b>	<b>10.9</b>	<b>0.1</b>	<b>1.4</b>	<b>0.2</b>	<b>10,270</b>
<b>County</b>											
Mombasa.....	28.8	24.1	31.0	5.6	1.2	0.4	8.0	0.1	0.2	0.5	662
Kwale.....	21.4	18.9	31.7	0.6	0.0	0.1	26.4	0.2	0.7	0.0	656
Kilifi.....	22.6	25.0	29.6	5.3	0.0	0.0	13.3	0.0	0.5	3.7	1,073
Tana River.....	18.2	26.7	27.1	11.9	1.5	0.0	14.3	0.0	0.3	0.0	255
Lamu.....	19.2	28.3	37.9	9.4	2.0	0.0	3.1	0.0	0.1	0.0	106
Taita / Taveta.....	37.6	34.3	17.3	4.3	0.6	0.0	5.3	0.0	0.6	0.0	276
Garissa.....	18.5	25.0	38.8	0.3	1.7	3.2	11.9	0.0	0.4	0.0	382
Wajir.....	22.9	12.6	38.7	1.2	23.4	0.0	1.0	0.0	0.1	0.1	395
Mandera.....	32.0	4.2	26.4	9.5	15.4	1.2	10.5	0.0	0.9	0.0	613
Marsabit.....	21.6	29.5	28.2	3.8	6.4	0.0	10.3	0.0	0.2	0.1	272
Isiolo.....	25.3	37.6	20.5	8.2	2.0	0.2	6.0	0.0	0.2	0.0	127
Meru.....	25.5	34.1	37.0	0.7	0.2	0.0	1.8	0.0	0.7	0.0	1,179
Tharaka-Nithi.....	16.0	22.5	40.0	5.4	1.4	0.0	13.6	0.0	1.0	0.0	338
Embu.....	9.3	39.1	32.1	1.1	1.5	0.2	15.9	0.0	0.8	0.0	460
Kitui.....	8.4	27.4	47.0	3.8	1.5	0.0	10.8	0.0	1.0	0.0	955
Machakos.....	13.0	51.6	16.1	1.9	0.0	0.1	15.2	0.0	1.9	0.0	936
Makueni.....	27.7	17.0	33.7	6.4	5.1	0.0	9.2	0.0	0.9	0.0	815
Nyandarua.....	30.0	35.5	27.0	4.0	0.4	0.2	1.6	0.0	0.3	1.1	555
Nyeri.....	13.7	41.1	17.6	2.9	0.3	0.1	23.3	0.0	1.0	0.0	599
Kirinyaga.....	26.1	54.2	7.3	0.5	0.5	0.3	9.1	0.0	1.6	0.5	491
Murang'a.....	13.6	36.0	40.4	5.8	0.2	0.0	2.5	0.0	1.3	0.1	877
Kiambu.....	24.4	41.9	21.4	0.5	0.5	0.0	10.9	0.0	0.5	0.0	1,324
Turkana.....	21.6	16.4	49.4	5.4	3.3	0.6	2.0	0.0	0.0	1.1	867
West Pokot.....	27.4	2.6	57.6	2.3	0.6	0.0	7.9	0.0	0.1	1.4	549
Samburu.....	23.0	6.1	53.9	11.1	3.3	0.0	2.3	0.0	0.2	0.0	241
Trans Nzoia.....	18.4	29.1	47.2	2.5	0.8	0.0	1.5	0.0	0.6	0.0	818
Uasin Gishu.....	33.9	30.6	13.7	4.4	7.2	0.1	8.6	0.0	0.5	1.1	854
Elgeyo / Marakwet...	34.4	34.7	17.9	1.5	0.8	0.0	9.2	0.1	1.4	0.0	376
Nandi.....	11.7	51.7	30.8	0.7	0.4	0.0	4.6	0.0	0.1	0.1	752
Baringo.....	22.6	20.3	27.2	5.4	1.3	0.2	22.1	0.1	0.8	0.0	565
Laikipia.....	16.6	35.2	22.0	14.0	1.0	0.2	9.6	0.9	0.6	0.0	401
Nakuru.....	28.3	41.6	16.5	3.6	0.4	0.0	8.9	0.0	0.7	0.0	1,558
Narok.....	27.6	12.4	40.0	2.8	1.2	0.4	13.5	0.0	2.1	0.0	865
Kajiado.....	19.9	25.1	37.5	4.8	1.7	0.7	8.9	0.7	0.6	0.0	611
Kericho.....	27.4	42.7	12.3	5.8	0.8	0.1	10.6	0.1	0.2	0.0	778
Bomet.....	26.4	31.9	39.8	0.9	0.5	0.0	0.3	0.0	0.2	0.1	799
Kakamega.....	24.8	18.0	38.3	4.2	0.2	0.1	14.0	0.0	0.5	0.0	1,559
Vihiga.....	24.9	26.1	33.3	2.2	0.4	2.7	9.0	0.0	1.4	0.0	531
Bungoma.....	23.5	28.9	40.9	1.8	0.2	0.1	2.5	0.1	1.9	0.0	1,218
Busia.....	28.9	51.1	16.6	2.9	0.1	0.1	0.1	0.1	0.1	0.0	755
Siaya.....	41.4	10.8	40.2	4.2	0.5	0.0	1.6	0.1	1.2	0.0	796
Kisumu.....	22.9	23.7	14.9	8.6	0.0	0.2	27.3	0.0	1.8	0.5	619
Homa Bay.....	25.0	35.2	8.3	9.6	0.3	0.1	21.3	0.0	0.3	0.0	928
Migori.....	22.4	32.4	35.7	3.7	0.4	0.0	5.1	0.1	0.2	0.0	911
Kisii.....	19.6	52.9	4.1	5.2	0.4	0.0	17.6	0.0	0.1	0.1	1,113
Nyamira.....	20.0	18.2	36.7	5.8	0.2	0.0	17.9	0.0	1.2	0.0	598
Nairobi City.....	31.2	26.9	27.3	3.8	0.2	0.0	8.0	0.1	2.4	0.0	2,280

**Table 9.8: Percentage Distribution of Population Aged 3 Years and above that did not Use the Internet by Reason and Age Group**

Age Groups	Too young	Do not need to use the internet	Lack of knowledge and skills on how to use the internet	Internet is expensive	No internet/network in the area	Cultural/faith reasons	Control (Parental,work or school)	Security/privacy concerns	Other	Not Stated	Population 3 years and above that did not use internet ('000)
National.....	23.9	30.1	29.5	4.0	1.5	0.2	9.7	0.1	0.8	0.2	34,687
Age Group											
3-5 years.....	76.6	6.1	10.1	0.3	0.5	0.0	6.0	0.0	0.0	0.3	3,756
6-17 years...	38.4	16.2	20.9	2.3	1.2	0.2	20.3	0.0	0.2	0.3	13,802
18-35 years....	0.9	45.6	35.4	9.0	2.5	0.2	4.2	0.1	1.9	0.2	8,287
36-70 years....	0.3	48.1	44.9	3.7	1.4	0.2	0.0	0.1	1.1	0.2	7,862
Over 70 years...	0.2	41.7	52.1	2.2	0.7	0.1	0.1	0.0	2.8	0.1	979

#### 9.4 Ownership of ICT Equipment

This sub-section presents findings on ownership of ICT equipment. Ownership of mobile phones was analysed at individual level while ownership of computers/laptops/tablets, television sets and pay TV decoders was analysed at household level.

##### Mobile phones

Table 9.9a shows proportion of the population aged 3 years and above who have a mobile phone and average number of Subscriber Identification/Identity Module (SIM) cards per person by residence and county. The results show that overall, 44.8 Per cent of the targeted population had a Mobile phone. The population in urban was 59.0 percent and rural 36.9. Overall, the average number of sim cards was 1.3 for the population aged 3 years and above.

Table 9.9 b presents the proportion of the population aged 18 years and above that have a mobile phone and the average number of Subscriber Identification/Identity Module (SIM) cards per person by residence and county. About three in every four persons aged 18 years and above reported to have a mobile phone with an average of 1.3 SIM cards per person. Urban areas had the highest proportion of population with ownership of a mobile phone at 88.2 per cent compared to 68.8 per cent in rural areas. Similarly, the number of SIM cards owner in urban areas averaged of 1.4 per person compared to 1.3 per person in rural areas. Spatial analysis by county shows Nairobi City had the highest proportion of population with a mobile phone at 94.0 per cent while Turkana had the lowest at 42.8 per cent.

**Table 9.9a: Proportion of Population Aged 3 Years and Above with a Mobile Phone and Average Number of SIMs per Person by Residence and County**

Residence/ County	Proportion population having a phone	Population 3+ years ('000)	Average number of SIMs	Population 3+ years having SIM Cards ('000)
National.....	44.8	41,751	1.3	18,710
Rural.....	36.9	26,795	1.3	9,890
Urban.....	59.0	14,956	1.4	8,820
<b>County</b>				
Mombasa.....	65.6	1,095	1.4	718
Kwale.....	35.5	736	1.3	261
Kilifi.....	41.2	1,251	1.3	515
Tana River.....	31.1	276	1.3	86
Lamu.....	39.0	117	1.4	46
Taita / Taveta.....	51.8	333	1.5	172
Garissa.....	34.2	398	1.1	136
Wajir.....	27.0	405	1.0	110
Mandera.....	23.8	648	1.1	154
Marsabit.....	30.2	285	1.1	86
Isiolo.....	40.3	142	1.1	57
Meru.....	48.3	1,372	1.3	663
Tharaka-Nithi.....	44.0	369	1.2	162
Embu.....	51.8	525	1.2	272
Kitui.....	37.9	1,013	1.3	384
Machakos.....	51.7	1,098	1.3	567
Makueni.....	43.9	892	1.2	392
Nyandarua.....	50.4	645	1.3	325
Nyeri.....	61.2	752	1.4	460
Kirinyaga.....	54.8	571	1.3	313
Murang'a.....	52.3	1,016	1.2	532
Kiambu.....	60.3	1,748	1.4	1,055
Turkana.....	22.1	968	1.2	214
West Pokot.....	23.6	577	1.2	136
Samburu.....	26.0	252	1.1	66
Trans Nzoia.....	38.4	961	1.3	369
Uasin Gishu.....	44.1	1,039	1.4	458
Elgeyo / Marakwet...	34.9	427	1.3	149
Nandi.....	39.2	879	1.3	345
Baringo.....	37.4	644	1.3	241
Laikipia.....	45.5	466	1.3	212
Nakuru.....	48.5	1,870	1.4	907
Narok.....	36.0	965	1.4	348
Kajiado.....	56.3	798	1.3	449
Kericho.....	39.7	880	1.4	349
Bomet.....	31.6	846	1.2	268
Kakamega.....	36.5	1,727	1.3	630
Vihiga.....	40.6	587	1.3	239
Bungoma.....	32.9	1,419	1.3	467
Busia.....	30.7	774	1.2	238
Siaya.....	39.8	907	1.3	361
Kisumu.....	51.8	1,049	1.4	543
Homa Bay.....	30.6	970	1.3	296
Migori.....	34.7	1,037	1.2	360
Kisii.....	41.0	1,260	1.2	517
Nyamira.....	41.4	656	1.4	272
Nairobi City.....	68.5	4,107	1.4	2,812

**Table 9.9b: Proportion of Population Aged 18 Years and Above with a Mobile Phone and Average Number of SIMs per Person by Residence and County**

Residence/ County	Proportion of population that have a mobile phone (%)	Population 18+ years ('000)	Average SIM cards per person (Number)	Population 18+ years having SIM Cards ('000)
<b>National.....</b>	76.7	23,462	1.3	18,002
<b>Rural.....</b>	68.8	13,878	1.3	9,553
<b>Urban.....</b>	88.2	9,584	1.4	8,449
<b>County</b>				
Mombasa.....	93.1	754	1.4	702
Kwale.....	65.4	389	1.3	254
Kilifi.....	73.1	665	1.4	486
Tana River.....	61.0	135	1.4	82
Lamu.....	67.3	65	1.4	44
Taita / Taveta.....	82.7	202	1.5	167
Garissa.....	76.6	172	1.1	132
Wajir.....	59.0	174	1.0	103
Mandera.....	52.1	273	1.1	142
Marsabit.....	59.6	136	1.1	81
Isiolo.....	74.8	73	1.2	55
Meru.....	75.3	835	1.3	629
Tharaka-Nithi.....	70.2	220	1.3	154
Embu.....	79.4	329	1.2	262
Kitui.....	68.3	539	1.3	368
Machakos.....	77.9	702	1.3	547
Makueni.....	75.4	500	1.2	377
Nyandarua.....	85.6	361	1.3	309
Nyeri.....	88.3	499	1.4	441
Kirinyaga.....	82.2	365	1.3	300
Murang'a.....	81.4	622	1.2	506
Kiambu.....	87.9	1,142	1.4	1,004
Turkana.....	42.8	469	1.2	200
West Pokot.....	48.2	272	1.3	131
Samburu.....	54.5	115	1.2	63
Trans Nzoia.....	70.8	512	1.4	363
Uasin Gishu.....	75.5	596	1.4	449
Elgeyo / Marakwet..	62.6	234	1.3	147
Nandi.....	69.0	489	1.3	337
Baringo.....	68.2	340	1.3	232
Laikipia.....	79.2	257	1.3	204
Nakuru.....	84.0	1,047	1.4	880
Narok.....	72.3	462	1.4	334
Kajiado.....	88.6	481	1.3	426
Kericho.....	69.4	494	1.4	342
Bomet.....	62.6	418	1.2	262
Kakamega.....	70.8	861	1.3	609
Vihiga.....	72.7	318	1.3	231
Bungoma.....	66.7	680	1.4	453
Busia.....	60.7	384	1.2	233
Siaya.....	74.5	467	1.3	347
Kisumu.....	88.1	576	1.4	508
Homa Bay.....	64.7	447	1.3	289
Migori.....	70.3	487	1.2	343
Kisii.....	75.1	670	1.2	503
Nyamira.....	74.5	358	1.4	267
Nairobi City.....	94.0	2,874	1.5	2,703

Table 9.10 shows the distribution of population aged 18 years and above with a mobile phone and average number of SIM cards per person by age group. Over 80 per cent of persons in the 36-70 years age group had a mobile phone compared to 43.6 per cent of those aged above 70 years. On average, persons in the 18-35 years age group were reported to have the highest number of SIM cards at 1.4 per person while persons aged more than 70 years recorded the least number at 1.1

**Table 9.10a: Proportion of Population 3+ with a mobile and the average number of SIM Cards per person**

Age group (Years)	Proportion population having a phone	Population 3+ years ('000)	Average number of SIMs	Population 3+ years having SIM Cards ('000)
National.....	44.8	41,751	1.3	18,710
Age group (Years)				
3-5 yrs.....	0.2	3,806	0.4	7
6-17 yrs.....	4.8	14,483	1	701
18-35 yrs.....	76.7	13,136	1.4	10,076
36-70 yrs.....	80.4	9,336	1.3	7,505
Over 70 yrs.....	42.6	990	1.1	422

**Table 9.10b: Proportion of Population Aged 18 Years and above With A Mobile Phone and Average Number of Sims per Person by Age Group**

Age group (Years)	Proportion population having a phone	Population 18+ years ('000)	Average number of SIMs	Population 18+ years having SIM Cards ('000)
National.....	76.7	23,462	1.3	18,002
18-35 yrs.....	76.7	13,136	1.4	10,076
36-70 yrs.....	80.4	9,336	1.3	7,505
Over 70 yrs.....	42.6	990	1.1	422

Table 9.11 presents the percentage distribution of population aged 18 years and above by reason for not having a phone, residence and county. The most cited reason for not having a mobile phone was 'high cost of mobile phone' as reported by 50.3 per cent of the population without a phone, followed by 'do not need a phone' at 16.9 per cent. Busia County had the highest proportion (75.4%) of population without a mobile phone who reported that the phone is expensive. Additional information on the distribution of population that did not have a mobile phone by various age groups is presented in Table 9.12.

**Table 9.11: Percentage Distribution of Population Aged 18 Years and above by Reason of not having a Phone, Residence and County**

Residence/ County	Proportion of population aged 18 years and above that do not have a mobile phone	Population aged 18 years and above ('000)	Too young	Do not need a phone	Restricted by parent/ guardian	No network in the area	Gender bias	No electricity	Phone is expensive	Maintaining a phone is expensive	Other
National.....	23.2	23,462	3.1	16.9	9.5	1.7	0.2	0.5	50.3	9.9	14.7
Rural.....	31.2	13,878	3.2	17.9	9.4	2.1	0.3	0.5	50.1	8.9	13.6
Urban.....	11.6	9,584	2.6	12.9	10.0	0.1	0.2	0.3	50.7	13.6	19.2
<b>County</b>											
Mombasa.....	6.8	754	2.6	4.5	9.7	0.0	0.0	2.5	57.4	23.6	27.4
Kwale.....	34.6	389	0.8	13.8	12.0	0.0	0.2	0.7	52.7	2.2	25.5
Kilifi.....	26.8	665	1.6	10.9	6.9	0.0	0.0	0.0	74.4	20.0	5.1
Tana River.....	38.8	135	1.8	24.7	6.8	2.3	0.0	0.0	45.4	13.8	10.0
Lamu.....	32.7	65	3.1	29.6	7.2	1.2	0.2	0.6	54.1	6.0	4.3
Taita / Taveta.....	17.3	202	10.2	18.9	8.5	0.4	0.8	0.8	48.8	11.9	23.6
Garissa.....	23.4	172	1.8	18.6	22.4	1.2	0.0	2.0	37.4	22.9	3.8
Wajir.....	41.0	174	0.9	25.0	1.1	6.6	0.0	0.0	60.0	5.1	3.2
Mandera.....	47.9	273	0.1	4.7	4.5	29.0	0.0	2.7	59.2	13.3	1.9
Marsabit.....	40.4	136	0.8	35.9	7.9	17.8	0.0	0.0	30.5	11.5	2.6
Isiolo.....	25.2	73	1.5	61.3	3.2	9.1	1.2	1.0	21.5	2.3	6.3
Meru.....	24.7	835	3.6	30.9	5.5	0.0	0.0	0.0	32.5	11.8	19.6
Tharaka-Nithi.....	29.7	220	2.3	13.9	7.4	0.0	0.0	0.0	50.9	18.6	11.2
Embu.....	20.6	329	0.9	36.6	9.6	0.0	0.0	0.8	28.4	9.8	16.8
Kitui.....	31.7	539	1.0	10.0	14.2	0.2	0.0	0.2	59.2	16.5	3.8
Machakos.....	22.1	702	2.1	11.2	13.8	0.0	0.0	0.0	45.7	6.0	25.9
Makueni.....	24.6	500	6.2	19.3	10.5	0.0	0.0	0.0	33.0	10.4	24.5
Nyandarua.....	14.4	361	8.0	38.2	9.4	0.3	0.0	0.0	17.1	4.5	28.7
Nyeri.....	11.7	499	1.7	33.9	14.6	0.0	0.0	0.0	23.6	17.4	10.6
Kirinyaga.....	17.8	365	6.9	30.5	2.7	0.0	0.0	0.0	35.4	5.5	23.2
Murang'a.....	18.6	622	0.0	16.8	0.8	0.0	0.0	0.7	50.9	11.6	23.9
Kiambu.....	12.1	1,142	4.3	20.9	6.4	0.0	0.0	0.0	41.1	17.2	11.3
Turkana.....	57.2	469	1.2	8.3	2.2	4.8	1.3	0.8	74.5	6.3	6.8
West Pokot.....	51.8	272	1.9	8.2	20.4	0.5	1.5	0.4	62.9	3.7	4.0
Samburu.....	45.5	115	3.2	23.6	0.8	20.8	0.2	2.5	51.9	4.2	5.3
Trans Nzoia.....	29.2	512	0.4	14.1	17.7	0.0	0.0	0.0	49.6	7.5	20.2
Uasin Gishu.....	24.5	596	6.3	18.9	9.1	0.2	0.0	0.0	34.4	26.0	6.6
Elgeyo / Marakwet... Nandi.....	37.1	234	4.0	34.9	10.6	0.1	0.0	0.0	29.8	5.7	17.9
Baringo.....	31.0	489	5.8	21.3	11.7	0.0	0.0	1.9	51.0	9.3	7.4
Laikipia.....	31.8	340	1.1	17.4	16.0	1.8	0.0	0.0	60.4	10.3	3.5
Nakuru.....	20.8	257	3.9	22.5	13.3	1.0	1.3	1.5	44.9	11.2	18.4
Narok.....	15.7	1,047	1.3	16.0	6.8	0.0	0.0	0.0	39.4	3.3	36.5
Kajiado.....	27.0	462	5.5	17.9	10.8	0.8	1.6	0.4	38.1	2.7	29.9
Kericho.....	11.4	481	2.0	16.9	13.2	14.2	0.9	1.7	30.5	11.9	21.3
Bomet.....	30.6	494	1.8	21.9	9.2	0.0	0.3	0.8	62.8	5.1	5.1
Kakamega.....	37.4	418	7.0	8.1	5.1	0.0	0.3	0.0	45.6	13.0	13.1
Vihiga.....	29.2	861	12.9	10.7	11.6	0.0	0.0	1.5	49.2	5.4	10.4
Bungoma.....	27.3	318	5.8	4.1	13.1	0.0	0.0	0.0	54.9	4.1	29.4
Busia.....	33.3	680	0.8	18.5	11.9	0.0	0.0	0.0	41.1	0.5	27.3
Siaya.....	39.3	384	1.7	14.4	3.9	0.0	0.6	0.0	75.4	5.2	2.0
Kisumu.....	25.5	467	10.2	10.9	9.5	0.0	0.0	0.6	31.7	15.3	32.0
Homa Bay.....	11.9	576	2.6	2.7	18.4	0.0	0.0	0.7	51.3	6.9	16.4
Migori.....	35.3	447	1.8	13.1	2.8	0.0	0.0	0.9	59.9	1.9	23.4
Kisii.....	29.7	487	0.0	15.4	14.6	0.0	0.3	0.0	65.9	7.3	4.3
Nyamira.....	24.9	670	1.1	32.1	11.1	0.0	0.6	0.0	47.8	8.4	4.1
Nairobi City.....	25.5	358	1.1	17.5	22.4	0.0	0.2	0.0	53.8	5.0	6.2
	5.5	2,880	0.0	7.5	4.2	0.0	0.0	0.0	63.5	35.0	25.1

**Table 9.12: Percentage distribution of population aged 18 years and above that did not have a mobile phone by reason and age group**

Age groups	Too young	Do not need a phone	Restricted by parent/guardian	No network in the area	Gender bias	No electricity	Phone is expensive	Maintaining a phone is expensive	Other	Population aged 18 years and above that did not have a mobile phone ('000)
Age groups										
3-5 years.....	84.9	5.2	12.3	0.2	0	0	4.1	0.3	0.2	3,782
6-17 years.....	49.6	10.3	33.9	0.5	0	0.1	12	1.5	0.6	13,756
18-35 years.....	0	11.7	16.8	1.8	0.3	0.5	47.5	8.4	13.8	3,050
36-70 years.....	0	17.6	0.1	1.7	0.2	0.6	58.5	12.5	16.3	1,819
Over 70 years....	0	42.6	0.2	1.1	0.1	0.2	38.7	9.4	14.9	568

### Subscription to mobile money transfer and mobile banking platforms

Table 9.13 presents the proportion of the population aged 18 years and above reported to have subscribed to mobile money transfer and mobile banking platforms, by residence and county. Overall, 74.8 per cent of the population aged 18 years and above have subscribed to mobile money transfer while 13.9 per cent have subscribed to mobile banking platforms. Over 85 per cent of the population in the urban areas have subscribed to mobile money transfer platforms compared to 67.1 per cent in rural areas. A similar pattern was observed for mobile banking platform with a higher proportion of subscribers in urban areas than in rural areas. Counties with high proportions of population subscribing to mobile money transfer platforms include; Mombasa (91.6%), Nairobi City (89.8%) and Kisumu (87.4%), while those with the low proportions include; West Pokot (39%), Turkana (42.8%) and Mandera (48.9%).

**Table 9.13: Proportion of Population Aged 18 Years and Above that Subscribed to Mobile Money Transfer and Mobile Banking Platforms by Residence and County**

Residence / County	Proportion of population subscribed to mobile money transfer platform (%)	Proportion of population subscribed to mobile banking platform (%)	Population aged 18 years and above ('000)
<b>National</b> .....	<b>74.8</b>	<b>13.9</b>	<b>23,462</b>
<b>Rural</b> .....	<b>67.1</b>	<b>9.2</b>	<b>13,878</b>
<b>Urban</b> .....	<b>85.9</b>	<b>20.8</b>	<b>9,584</b>
<b>County</b>			
Mombasa.....	91.6	17.6	754
Kwale.....	65.0	11.3	389
Kilifi.....	71.4	12.6	665
Tana River.....	57.6	4.6	135
Lamu.....	66.1	13.5	65
Taita / Taveta.....	81.0	15.1	202
Garissa.....	63.8	15.5	172
Wajir.....	56.9	2.0	174
Mandera.....	48.9	3.0	273
Marsabit.....	51.6	2.5	136
Isiolo.....	72.3	8.9	73
Meru.....	62.8	9.6	835
Tharaka-Nithi.....	64.4	7.7	220
Embu.....	77.4	10.9	329
Kitui.....	65.4	8.8	539
Machakos.....	78.8	13.3	702
Makueni.....	74.0	4.4	500
Nyandarua.....	85.3	10.5	361
Nyeri.....	85.2	16.6	499
Kirinyaga.....	77.3	12.2	365
Murang'a.....	82.4	10.5	622
Kiambu.....	86.5	18.7	1,142
Turkana.....	42.8	10.7	469
West Pokot.....	39.0	4.9	272
Samburu.....	53.4	23.2	115
Trans Nzoia.....	70.6	8.8	512
Uasin Gishu.....	77.0	15.5	596
Elgeyo / Marakwet...	62.6	9.0	234
Nandi.....	68.2	11.9	489
Baringo.....	67.4	11.1	340
Laikipia.....	76.9	16.4	257
Nakuru.....	81.6	15.7	1,047
Narok.....	59.0	13.4	462
Kajiado.....	80.0	20.6	481
Kericho.....	70.9	12.9	494
Bomet.....	69.2	6.4	418
Kakamega.....	72.0	10.6	861
Vihiga.....	71.9	12.8	318
Bungoma.....	68.9	9.6	680
Busia.....	60.1	3.6	384
Siaya.....	72.3	29.1	467
Kisumu.....	87.4	50.1	576
Homa Bay.....	64.8	5.1	447
Migori.....	76.3	6.6	487
Kisii.....	76.8	9.3	670
Nyamira.....	74.9	9.1	358
Nairobi City.....	89.8	20.3	2,874

Table 9.14 presents the proportion of population aged 18 years and above reported to have subscribed to mobile money transfer and mobile banking platforms by age group. Persons in the 36-70 years age group accounted for the highest proportion of mobile money transfer and mobile banking platforms subscribers. Subscription to mobile money transfer and mobile banking platforms was lowest among the population aged over 70 years.

**Table 9.14: Proportion of Population Aged 18 Years and Above That Subscribed to Mobile Money Transfer and Mobile Banking Platforms by Age Group**

Age Groups	Subscribed to mobile money transfer platform (%)	Subscribed to mobile banking platform (%)	Population aged 18 years and above ('000)
3+ years.....	74.8	13.9	23,462
Age groups (Years)			
18-35.....	74.8	14.3	13,136
36-70.....	78.4	14.6	9,336
70+.....	39.9	2.6	990

### Ownership of Computers, Television and Pay TV decoders

Information on the proportion of households owning computers and television sets that are functioning, by residence and county is provided in Table 9.15. In this survey, computers refer to either desktop computers, laptops or tablets. Overall, 6.6 per cent of households had functioning computers with households in urban areas reporting a higher proportion (12.0%) compared to their counterparts in rural areas (2.4%). At county level, Nairobi City had the highest proportion of households (16.6%) with functioning computers followed by Kajiado (14.1%). In Garissa County, a paltry 0.2 per cent of households had functioning computers.

Nationally, nearly one-third of households had functioning television sets. The proportion of households in urban areas with TV sets was more than triple that in rural areas. Nairobi City County recorded the highest proportion of households (65.3%) with television sets followed by Kiambu (59.8 %) and Mombasa (55.5 %). Wajir County recorded the lowest proportion of households (3.3%) with television sets.

**Table 9.15: Proportion of Households that Owned Functional ICT Equipment and Used ICT Services by Residence and County (computer, laptop television)**

Residence/County	Computer/ Laptop/ Tablet (%)	Television (%)	Number of Households ('000)
<b>National.....</b>	<b>6.6</b>	<b>32.0</b>	<b>11,415</b>
<b>Rural.....</b>	<b>2.4</b>	<b>15.7</b>	<b>64,422</b>
<b>Urban.....</b>	<b>12.0</b>	<b>53.1</b>	<b>4,972</b>
<b>County</b>			
Mombasa.....	7.3	55.5	397
Kwale.....	3.3	15.6	174
Kilifi.....	5.0	24.8	326
Tana River.....	2.8	14.9	56
Lamu.....	4.9	26.5	30
Taita / Taveta.....	4.6	32.1	102
Garissa.....	0.2	9.0	78
Wajir.....	0.9	3.3	69
Mandera.....	1.5	6.9	111
Marsabit.....	2.5	12.5	62
Isiolo.....	2.7	25.8	34
Meru.....	4.2	24.2	393
Tharaka-Nithi.....	2.9	16.2	107
Embu.....	3.3	24.6	164
Kitui.....	2.6	15.9	236
Machakos.....	3.4	33.5	328
Makueni.....	2.9	15.7	233
Nyandarua.....	6.5	27.8	191
Nyeri.....	7.2	48.2	271
Kirinyaga.....	5.4	38.6	198
Murang'a.....	2.6	26.1	323
Kiambu.....	13.6	59.8	600
Turkana.....	1.3	9.1	246
West Pokot.....	1.7	4.8	119
Samburu.....	2.3	12.1	61
Trans Nzoia.....	7.2	29.0	210
Uasin Gishu.....	6.6	32.5	270
Elgeyo / Marakwet...	3.7	13.7	99
Nandi.....	4.1	14.0	202
Baringo.....	3.8	15.0	152
Laikipia.....	3.6	38.9	135
Nakuru.....	7.5	39.5	578
Narok.....	5.4	18.8	223
Kajiado.....	14.1	53.8	250
Kericho.....	4.7	21.2	211
Bomet.....	1.6	6.9	179
Kakamega.....	3.9	19.4	392
Vihiga.....	3.4	17.5	144
Bungoma.....	2.8	11.5	321
Busia.....	1.5	8.7	177
Siaya.....	2.3	9.6	246
Kisumu.....	10.4	42.6	284
Homa Bay.....	2.1	11.7	224
Migori.....	0.9	11.5	233
Kisii.....	4.5	23.5	291
Nyamira.....	2.5	19.6	179
Nairobi City.....	16.6	65.3	1,503

**Multichannel TV and Decoders**

The proportion of households that had multichannel TV or decoders by residence and county is shown in Table 9.16. Among the households that had television sets, majority had Pay TV decoders at 18.3 per cent followed by free to air Set Top Box at 8.1 per cent. Approximately 4 per cent of the households that had functioning television sets did not have any type of decoder.

Table 9.16 Proportion of Households that had Multichannel TV or Decoders by Residence and County

Residence/ County	Proportion of Households with TV	Number of Households ('000)	Households with TV					Number of Households with TV
			Built-in Digital TV	Pay TV Decoder	Free to air set box	Internet protocol TV	None	
National.....	32.0	11,415	4.8	57.3	25.5	0.4	13.5	3,649
Rural.....	15.7	6,442	4.4	47.1	29.2	0.1	19.7	1,009
Urban.....	53.1	4,972	4.9	61.2	24.1	0.5	11.1	2,640
<b>County</b>								
Mombasa.....	55.5	397	2.8	67.5	20.8	0.0	10.2	220
Kwale.....	15.6	174	0.8	57.4	33.9	0.0	7.9	27
Kilifi.....	24.8	326	3.0	59.9	13.1	0.0	23.3	81
Tana River.....	14.9	56	11.3	53.9	7.8	0.0	31.7	8
Lamu.....	26.5	30	9.0	60.9	6.3	0.0	23.8	8
Taita / Taveta.....	32.1	102	0.8	47.9	29.4	0.0	23.9	33
Garissa.....	9.0	78	0.0	55.9	5.4	0.0	38.7	7
Wajir.....	3.3	69	43.6	40.4	12.9	0.0	3.1	2
Mandera.....	6.9	111	2.9	93.8	0.0	0.0	3.3	8
Marsabit.....	12.5	62	7.6	57.0	15.0	0.0	25.0	8
Isiolo.....	25.9	34	5.3	73.1	17.1	0.0	4.5	9
Meru.....	24.2	393	8.8	39.0	44.2	1.2	6.8	95
Tharaka-Nithi.....	16.2	107	10.3	34.1	28.1	0.0	26.8	17
Embu.....	24.6	164	6.0	38.0	46.0	0.0	10.8	40
Kitui.....	15.9	236	13.0	40.9	13.2	0.0	34.6	38
Machakos.....	33.5	328	10.6	50.1	19.4	0.0	21.6	110
Makueni.....	15.7	233	11.9	39.1	13.2	0.0	37.2	37
Nyandarua.....	27.8	191	0.0	42.1	37.2	0.0	20.7	53
Nyeri.....	48.2	271	0.9	37.8	47.1	0.0	14.4	131
Kirinyaga.....	38.6	198	1.5	43.4	40.4	0.0	15.5	77
Murang'a.....	26.1	323	6.0	42.7	47.2	0.0	4.2	84
Kiambu.....	59.8	600	6.2	43.6	39.5	0.9	10.3	359
Turkana.....	9.1	246	2.7	75.5	0.0	1.3	20.5	22
West Pokot.....	4.8	119	6.7	76.9	0.0	0.0	19.3	6
Samburu.....	12.1	61	6.8	78.5	6.8	0.0	7.9	7
Trans Nzoia.....	29.0	210	2.4	59.0	15.8	0.0	22.6	61
Uasin Gishu.....	32.5	270	3.0	63.7	29.6	0.0	3.7	87
Elgeyo / Marakwet...	13.7	99	0.9	48.4	16.3	0.0	34.5	14
Nandi.....	14.0	202	5.6	66.6	25.1	0.0	3.6	28
Baringo.....	15.0	152	6.9	66.9	21.6	0.4	5.2	23
Laikipia.....	38.9	135	2.8	52.3	23.6	0.0	22.4	53
Nakuru.....	39.5	578	2.8	68.3	22.9	0.0	7.3	228
Narok.....	18.8	223	0.0	69.7	11.9	0.0	20.1	42
Kajiado.....	53.8	250	6.7	67.3	25.6	0.0	1.0	135
Kericho.....	21.2	211	8.0	65.1	18.3	0.7	12.3	45
Bomet.....	6.9	179	24.2	50.2	14.9	0.0	10.7	12
Kakamega.....	19.4	392	1.2	48.9	22.0	0.0	27.9	76
Vihiga.....	17.5	144	1.9	63.3	22.4	0.0	12.4	25
Bungoma.....	11.5	321	3.7	72.9	17.3	0.0	9.7	37
Busia.....	8.7	177	21.8	66.2	1.2	0.0	16.1	15
Siaya.....	9.6	246	6.1	76.3	3.3	4.7	11.0	24
Kisumu.....	42.6	284	6.9	77.4	10.0	0.0	7.4	121
Homa Bay.....	11.7	224	5.2	63.1	0.0	0.0	31.6	26
Migori.....	11.5	233	4.1	49.2	25.2	0.0	22.4	27
Kisii.....	23.5	291	2.1	86.9	8.5	0.0	3.4	68
Nyamira.....	19.6	179	3.1	56.3	5.5	0.0	35.0	35
Nairobi City.....	65.3	1,503	4.5	59.3	24.5	0.8	14.0	981

## Subscription to Pay TV

Table 9.17 presents the proportion of households reported to have subscribed to Pay TV services in the last 12 months preceding the survey by type of signal, package and residence. At the national level, 60.3 per cent of households had subscribed to Pay TV for an average period of 8 months. Over 80 per cent of the households with subscription to pay TV had aerial TV signal receivers while 19.4 per cent had a satellite dish.

**Table 9.17: Proportion of households that reported to have subscribed to Pay TV in the last 12 months by type of signal, package, expenditure, residence and county**

Residence/County	Television Ownership		% of Pay TV Subscription								Number of households with Pay TV subscription ('000)	
	% of Households subscribed to Pay TV	Number of Households with television ('000)	Satellite dish	Aerial	Other	TV channel only	TV channel with Internet	TV channels and phone	TV channels with internet and phone	Months of subscription		Pay TV Expenditure per month (KSh)
National.....	60.3	3,646	19.4	80.2	0.8	96.6	2.5	0.2	0.9	0.8	521	2,201
Rural.....	47.9	1,007	23.3	75.9	1.3	98.5	1.0	0.2	0.2	1.9	506	482
Urban.....	65.1	2,639	18.3	81.4	0.7	96.0	2.9	0.2	1.1	0.5	525	1,719

## Connection to the Internet

Table 9.18 presents the proportion of households with connection to the Internet by type, residence and county. Overall, 29.9 per cent of households were reported to be connected to the Internet. The Kisumu County had the highest proportion of households (67.6%) with Internet connection at 67.6 per cent followed by Nairobi City (66.1%) and Kiambu (42.0%). At the national level, mobile phone was the most common type of Internet connection as reported by 29.5 per cent of the households with Internet connection. Internet connection using mobile broadband was reported by 3.2 per cent of those with Internet connection. The least used form of Internet connection was terrestrial fixed wireless followed by fixed wired broadband.

Table 9.18: Percentage Distribution of Households with Connection to the Internet by Type, Residence and County

Residence/ County	Proportion of households with Internet connection (%)	Number of Households ('000)	Households with internet connectgion					Number of Households with internet ('000)
			Fixed wired broadband	Terrestrial fixed wireless	Mobile broadband	Mobile	Other	
National.....	29.9	11,415	1.4	0.8	10.8	94.1	0.2	3,419
Rural.....	16.7	6,442	0.8	0.2	10.4	93.1	0.0	1,078
Urban.....	47.1	4,972	1.7	1.0	11.0	94.5	0.3	2,341
<b>County</b>								
Mombasa.....	30.8	397	3.9	0.4	5.0	90.4	0.0	122
Kwale.....	25.4	174	1.4	0.0	10.1	98.6	0.0	44
Kilifi.....	31.8	326	1.2	0.5	16.4	95.6	0.0	104
Tana River.....	18.2	56	1.7	0.8	14.4	95.3	0.0	10
Lamu.....	14.7	30	2.7	0.0	11.6	94.4	0.0	4
Taita / Taveta.....	2.1	102	0.0	8.3	47.3	57.1	0.0	2
Garissa.....	1.3	78	0.0	0.0	0.0	100.0	0.0	1
Wajir.....	0.0	69	0.0	0.0	0.0	0.0	0.0	0.0
Mandera.....	6.8	111	0.0	0.0	7.0	100.0	0.0	8
Marsabit.....	0.0	62	0.0	0.0	0.0	0.0	0.0	0.0
Isiolo.....	14.3	34	0.0	0.0	15.3	100.0	0.0	5
Meru.....	28.8	393	3.9	0.0	0.6	95.9	0.0	113
Tharaka-Nithi.....	14.6	107	0.0	0.8	14.1	87.7	0.0	16
Embu.....	1.2	164	0.0	0.0	13.4	100.0	0.0	2
Kitui.....	9.5	236	0.0	0.0	19.9	98.7	0.0	22
Machakos.....	23.7	328	2.4	0.0	13.5	86.4	5.8	78
Makueni.....	14.1	233	0.0	0.0	1.7	100.0	0.0	33
Nyandarua.....	28.6	191	0.0	0.6	34.8	65.4	0.9	55
Nyeri.....	27.3	271	0.8	0.2	27.2	91.4	0.0	74
Kirinyaga.....	24.4	198	1.4	0.1	5.0	95.5	0.0	48
Murang'a.....	28.9	323	1.4	0.0	3.0	98.6	0.0	93
Kiambu.....	42.0	600	0.0	0.9	9.1	97.3	0.0	252
Turkana.....	1.7	246	0.0	0.0	55.6	90.3	0.0	4
West Pokot.....	5.3	119	0.0	0.0	7.2	92.8	0.0	6
Samburu.....	11.8	61	0.0	3.0	10.0	96.9	1.4	7
Trans Nzoia.....	40.9	210	0.0	0.4	6.6	99.0	0.0	86
Uasin Gishu.....	29.6	270	0.0	0.8	5.6	96.8	0.0	80
Elgeyo / Marakwet...	24.8	99	1.5	2.4	4.5	95.3	0.0	25
Nandi.....	19.2	202	1.2	0.0	5.9	95.3	0.0	39
Baringo.....	36.1	152	0.3	0.0	9.1	97.0	0.0	55
Laikipia.....	31.6	135	0.8	0.0	3.3	98.6	0.6	43
Nakuru.....	41.5	578	2.2	1.2	11.5	90.8	0.0	240
Narok.....	7.1	223	2.0	0.0	18.0	86.6	0.0	16
Kajiado.....	26.6	250	0.0	1.5	9.0	92.0	0.0	66
Kericho.....	22.9	211	0.0	1.6	14.3	89.4	0.0	48
Bomet.....	2.9	179	1.8	0.0	26.5	72.7	4.0	5
Kakamega.....	20.9	392	0.0	0.0	9.7	95.1	1.3	82
Vihiga.....	23.4	144	0.0	0.0	9.6	95.4	0.0	34
Bungoma.....	25.6	321	0.5	0.0	7.5	97.4	0.0	82
Busia.....	3.1	177	0.0	5.5	41.6	74.5	0.0	5
Siaya.....	21.5	246	1.7	0.0	19.6	85.7	0.0	53
Kisumu.....	67.6	284	0.0	0.5	21.9	93.0	0.0	192
Homa Bay.....	12.9	224	0.0	0.0	9.9	97.9	0.0	29
Migori.....	21.4	233	1.1	0.0	7.1	96.2	0.0	50
Kisii.....	20.2	291	0.7	0.0	16.6	98.3	0.0	59
Nyamira.....	18.4	179	2.2	0.0	7.0	98.5	0.0	33
Nairobi City.....	66.1	1,503	2.2	1.4	9.3	94.8	0.0	994

At the national level, 69.8 per cent of the households were not connected to the Internet as shown in Table 9.19. The findings reveal significant variations between rural and urban areas. The proportion of households without Internet connection in rural areas was 83.1 per cent compared to 52.5 per cent in urban areas. The most prevalent reason for no Internet connection was no need to use Internet, reported by 50.7 per cent of the households, followed by lack of knowledge or skills on how to use Internet cited by 45.1 per cent of the households. High cost of equipment and connection service was each cited by approximately 13 per cent of the households as the main reason for no Internet connection. Busia (89.6%), Kirinyaga (86.0%) and Nakuru (71.2%) Counties had high proportions of households citing no need to use the Internet as the reason for no Internet connection. In addition, a high proportion of households in West Pokot (85.1%), Siaya (83.3%), Kitui (78.9%) and Machakos (73.3%) reported lack of knowledge or skills on how to use the Internet.

Table 9.19: Percentage distribution of households without internet connection by reason, residence and county

Residence/ County	Proportion of households without internet connection (%)	Total Number of Households ('000)	Households without Internet									Number of Households Without Internet Connection ('000)
			Do not need to use internet	Lack of knowledge or skills to use the internet	No internet/ network in the area	Access internet elsewhere	Internet is available but does not meet household needs	Cost of service is too high	Cost of equipment is too high	Cultural Reasons	Other Reasons	
<b>National.....</b>	70.1	11,415	50.4	30.6	3.2	2.3	0.2	8.2	3.7	0.1	0.7	7,996
<b>Rural.....</b>	83.3	6,442	49.9	34.2	3.5	1.5	0.1	6.4	3.5	0.1	0.5	5,365
<b>Urban.....</b>	52.9	4,972	51.6	23.1	2.6	3.9	0.4	12.0	4.1	0.2	1.1	2,631
<b>County</b>												
Mombasa.....	69.2	397	24.1	10.7	0.6	0.2	0.0	57.9	6.3	0.0	0.0	274
Kwale.....	74.6	174	49.7	42.9	1.0	0.0	0.0	4.2	0.8	0.0	1.4	130
Kilifi.....	68.2	326	52.5	22.6	0.0	0.7	0.0	21.6	1.0	0.2	0.3	222
Tana River....	81.8	56	28.4	43.7	1.3	0.2	0.0	25.0	1.2	0.0	0.0	46
Lamu.....	85.3	30	15.2	28.5	1.0	0.5	0.0	49.3	5.4	0.0	0.0	25
Taita / Taveta...	97.9	102	62.9	10.7	1.3	18.5	0.0	6.2	0.0	0.0	0.0	100
Garissa.....	98.7	78	23.2	37.3	11.2	2.3	0.8	8.9	10.2	4.5	0.9	77
Wajir.....	100.0	69	11.3	26.6	58.9	0.2	0.2	1.4	0.6	0.0	0.5	69
Mandera.....	93.2	111	1.6	43.2	22.1	0.0	0.0	17.9	13.3	2.0	0.0	103
Marsabit.....	100.0	62	32.5	52.4	6.2	0.9	0.0	5.8	1.4	0.0	0.8	62
Isiolo.....	85.7	34	49.4	33.4	5.8	0.1	1.3	4.9	5.0	0.0	0.0	29
Meru.....	71.2	393	62.0	34.3	0.8	0.5	0.8	0.3	0.4	0.0	0.8	280
Tharaka-Nithi....	85.4	107	43.9	50.9	0.2	0.7	0.0	1.3	2.3	0.0	0.3	91
Embu.....	98.8	164	54.1	29.7	1.0	11.4	0.0	2.1	1.3	0.0	0.2	162
Kitui.....	90.5	236	55.0	38.9	0.2	0.6	0.0	3.1	0.9	0.0	0.9	214
Machakos.....	76.3	328	20.5	68.6	0.0	0.0	0.0	0.6	7.1	0.0	2.9	250
Makueni.....	85.9	233	25.0	25.8	7.2	0.6	0.0	22.3	18.1	0.0	0.8	200
Nyandarua.....	71.4	191	56.9	38.5	0.5	0.5	0.3	1.0	2.0	0.0	0.3	137
Nyeri.....	72.7	271	53.0	18.9	9.3	4.6	0.0	10.9	2.9	0.0	0.3	197
Kirinyaga.....	75.6	198	86.0	8.4	1.0	1.3	0.0	1.5	0.4	0.0	1.1	150
Murang'a.....	71.1	323	56.1	37.4	0.0	0.6	0.0	2.0	2.7	0.0	1.0	230
Kiambu.....	58.0	600	69.4	28.2	1.1	0.6	0.0	0.7	0.0	0.0	0.0	348
Turkana.....	98.3	246	61.6	20.7	10.5	3.6	0.0	3.0	0.6	0.0	0.0	241
West Pokot.....	94.7	119	22.5	69.4	0.8	0.1	0.0	5.4	0.7	0.0	0.0	113
Samburu.....	88.2	61	10.5	61.1	6.3	0.0	0.2	19.4	2.2	0.0	0.2	54
Trans Nzoia.....	59.1	210	56.8	32.2	1.2	1.6	0.0	6.5	1.6	0.0	0.2	124
Uasin Gishu.....	70.4	270	59.2	10.3	14.7	4.5	2.9	6.1	1.5	0.0	0.6	190
Elgeyo / Marakwet...	75.2	99	43.9	41.0	0.7	0.0	0.0	4.6	8.0	0.4	0.5	75
Nandi.....	80.8	202	54.2	33.0	0.0	12.4	0.0	0.0	0.4	0.0	0.0	163
Baringo.....	63.9	152	59.2	36.9	1.3	0.0	0.0	0.6	1.2	0.0	0.5	97
Laikipia.....	68.4	135	51.6	24.6	4.7	0.5	0.0	14.8	2.8	0.2	0.5	93
Nakuru.....	58.5	578	70.8	23.8	0.3	1.9	0.0	1.4	0.6	0.0	0.4	338
Narok.....	92.9	223	34.4	37.1	5.9	0.6	0.0	9.4	10.2	0.1	1.4	207
Kajiado.....	73.4	250	40.4	32.4	9.5	14.2	0.0	2.1	0.3	0.3	0.0	184
Kericho.....	77.1	211	66.2	10.5	5.2	0.3	0.0	9.4	8.4	0.0	0.0	162
Bomet.....	97.1	179	49.7	31.1	1.1	0.4	0.0	2.0	14.6	0.0	0.4	174
Kakamega.....	79.1	392	45.7	39.9	0.1	1.1	0.9	6.8	5.5	0.0	0.0	310
Vihiga.....	76.6	144	47.2	41.0	0.5	0.3	0.0	3.1	2.0	3.5	2.3	111
Bungoma.....	74.4	321	56.0	33.5	1.6	0.7	0.0	3.7	0.2	0.0	2.4	239
Busia.....	96.9	177	89.6	6.9	0.3	1.6	0.0	1.0	0.6	0.0	0.0	172
Siaya.....	78.5	246	31.5	58.6	2.1	2.0	0.0	2.9	0.8	0.1	1.7	193
Kisumu.....	32.4	284	30.8	28.8	2.0	0.0	0.0	8.9	26.5	0.9	1.3	92
Homa Bay.....	87.1	224	57.2	13.3	0.1	1.7	0.3	16.2	10.2	0.0	0.3	196
Migori.....	78.6	233	59.9	32.1	0.7	3.5	0.2	2.2	1.1	0.0	0.2	183
Kisii.....	79.8	291	58.8	5.8	0.2	2.3	0.1	28.3	4.1	0.0	0.0	232
Nyamira.....	81.6	179	36.2	46.3	0.0	0.8	0.0	10.9	5.4	0.0	0.2	146
Nairobi City.....	33.9	1,503	57.6	26.2	2.3	3.5	0.9	3.9	1.4	0.0	1.9	510

# CHAPTER 10

## 10. DOMESTIC TOURISM

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### 10.1. Introduction

Domestic tourism comprises activities of residents travelling to and staying at least over a night in places outside their usual environment within the country, for not more than 12 months for leisure, business or other purposes. This category excludes all those who travel for employment. The information presented will provide baseline data on domestic tourism characteristics. This chapter discusses the number of trips taken within the 3 months preceding the survey, purpose of travel, trip sponsorship, expenditures as well as reasons for not undertaking trips.

### 10.2. Trips

A trip in this Chapter is defined as travel to a main destination outside an individual's usual environment for less than a year, for any main purpose (business leisure or other personal purpose) other than to be employed. A trip is characterized by at least an overnight stay outside the usual environment.

Table 10.1 shows the proportion of the population that travelled out of their usual environment over the last 3 months preceding the survey, by residence and county. At national level, 13.4 per cent of the population travelled. More urban residents travelled compared to their rural counter-parts. Most of the travellers in absolute numbers resided in Nairobi City.

**Table 10.1: Proportion of the population that took a trip in the last 3 months preceding the survey, by residence, age group and county**

Residence/ County	Proportion that took a trip	Number of individuals (‘000)
National.....	13.4	45,371
Rural.....	8.4	29,127
Urban.....	22.4	16,245
<b>County</b>		
Mombasa.....	22.8	1,185
Kwale.....	10.6	820
Kilifi.....	12.9	1,400
Tana River.....	16.5	304
Lamu.....	19.1	128
Taita / Taveta.....	14.7	358
Garissa.....	3.8	432
Wajir.....	1.3	459
Mandera.....	2.8	711
Marsabit.....	1.6	316
Isiolo.....	11.7	156
Meru.....	6.1	1,471
Tharaka-Nithi.....	6.3	396
Embu.....	9.2	560
Kitui.....	7.6	1,098
Machakos.....	17.8	1,191
Makueni.....	20.1	959
Nyandarua.....	17.1	686
Nyeri.....	22.4	798
Kirinyaga.....	8.9	608
Murang’a.....	11.0	1,085
Kiambu.....	9.2	1,868
Turkana.....	8.8	1,084
West Pokot.....	2.1	649
Samburu.....	2.3	284
Trans Nzoia.....	10.6	1,038
Uasin Gishu.....	12.7	1,133
Elgeyo / Marakwet...	5.1	469
Nandi.....	2.4	954
Baringo.....	17.5	704
Laikipia.....	11.6	507
Nakuru.....	13.8	2,031
Narok.....	12.6	1,078
Kajiado.....	15.0	871
Kericho.....	8.4	945
Bomet.....	2.9	916
Kakamega.....	6.4	1,876
Vihiga.....	10.7	627
Bungoma.....	8.1	1,553
Busia.....	4.2	840
Siaya.....	5.9	985
Kisumu.....	36.6	1,132
Homa Bay.....	9.1	1,072
Migori.....	17.2	1,126
Kisii.....	5.0	1,347
Nyamira.....	7.3	699
Nairobi City.....	35.6	4,463

Table 10.2 presents the percentage distribution of population that travelled by age group and residence. Majority (42.7%) of those who travelled were in the 18-35 years age group with 47.9 per cent being in urban areas compared to 35.1 per cent in rural.

**Table 10.2 Percentage Distribution of Population who travelled in the last 3 months by, Age Group and Residence**

Residence	Age Group (Years)					Number of individuals that took a trip ('000)
	0 - 17	18 - 35	36 - 64	65+	Not Stated	
National....	25.0	42.7	28.5	3.6	0.1	6,097
Rural.....	23.8	35.1	34.9	6.0	0.2	2,452
Urban.....	25.8	47.9	24.3	2.0	0.0	3,645

Table 10.3 shows the distribution of population of residents by the number of trips taken within 3 months preceding the survey, by age group and residence. The survey results show that a high proportion of the population that travelled fall under the 18-35 year and 36-64 years age groups. Among those who travelled, 79.8 per cent took one trip. This pattern was replicated in the urban and rural areas and across all age groups.

**Table 10.3: Percentage Distribution of Population by those who Travelled and Number of Trips taken in the last 3 Months, by Age Group and Residence.**

Residence/Age group	Number of Trips						Number of Individuals that took a trip ('000)
	1	2	3	4	5	6+	
National.....	79.8	10.9	5.4	1.8	0.5	1.8	6,097
Rural.....	83.1	10.3	4.2	0.9	0.4	1.2	2,452
Urban.....	77.5	11.3	6.2	2.4	0.6	2.2	3,645
<b>Age Group (years)</b>							
0-17.....	89	7.2	2.4	0.6	0.1	0.7	1,526
18-35.....	77.4	11.9	6.6	1.6	0.7	1.9	2,605
36-64.....	76.1	12.3	6.1	2.7	0.5	2.2	1,741
65+.....	73.5	12.6	5.8	4.2	0.1	3.8	221
Don't Know/Not Stated..	60.6	0	24.1	0	0	15.3	5

### 10.3. Purpose of visit

Table 10.4 shows the percentage distribution of population who travelled by age group and purpose of visit. Majority (57.5%) of those who travelled in the rural areas were visiting friends and relatives. Those travelling for social gathering, and study/professional activities were 12.6 per cent and 6.3 per cent, respectively. Majority (71.3%) of those who travelled in urban areas were visiting friends and relatives. Age cohort analysis shows that the two main purposes of travelling were visiting friends/relatives and social gathering.

**Table 10.4 Proportion of population who took a trip in the last 3 months by Purpose of visit, Residence and Age Group**

Residence/Age Group	Holiday/ Leisure	Honey Moon	Visiting Friends and Relatives	Social Gathering	Business / Professional	Meeting Convention	Study/ Student	Sport	Cultural Event/ Exhibition
National.....	5.0	0.2	65.8	9.6	4.7	2.2	4.1	0.5	0.6
Rural.....	2.8	0.2	57.5	12.6	5.2	3.0	6.3	0.5	0.7
Urban.....	6.5	0.2	71.3	7.6	4.4	1.7	2.5	0.4	0.5
<b>Age Group (years)</b>									
0-17.....	5.7	0.3	70.4	6.0	0.2	0.8	5.3	0.5	0.3
18-35.....	6.3	0.2	66.2	8.5	6.0	1.9	5.6	0.5	0.5
36-64.....	3.1	0.0	61.7	13.3	7.1	4.1	1.2	0.4	0.9
65+.....	0.6	0.0	61.5	17.4	1.6	1.9	0.1	0.0	0.7
Don't Know/Not Stated....	0.0	0.0	50.6	25.2	0.0	0.0	0.0	0.0	0.0

**Table 10.4 Proportion of population who took a trip in the last 3 months by Purpose of visit, Residence and Age Group... cont'd**

Residence/Age Group	Medical Treatment	Religious	Second Residence	Other	Number of Individual that took Trip ('000)
National.....	2.3	3.9	4.9	4.1	6,097
Rural.....	4.6	4.5	3.5	5.8	2,452
Urban.....	0.7	3.5	5.8	3.0	3,645
<b>Age Group (years)</b>					
0-17.....	0.8	3.1	4.4	3.6	1,526
18-35.....	1.5	3.5	5.5	3.9	2,605
36-64.....	3.6	5.0	4.6	4.7	1,741
65+.....	10.5	6.4	2.9	6.0	221
Don't Know/Not Stated....	39.4	0.0	0.0	0.0	5

Table 10.5 presents the average number of days spent away on travel by purpose of visit in the last 3 months preceding the survey. Students were away for longer periods followed by those seeking medical treatment. More days were spent away by residents in rural areas while visiting their second residence. Analysis by age group shows that the population in all the age groups took on average a higher number of days for medical treatment. The younger age groups on average took longer days for study visits while those aged 16 years and above spent more days on business or professional activities.

**Table 10.5 Average number of days away by purpose of visit in the last 3 months preceding the survey, by age group and residence**

Residence/ Age Group	Purpose of Trip (%)						
	Holiday/ Leisure	Honey moon	Visiting Friends and Relatives	Social Gathering	Business/ Professional	Meeting/ Convention	Study/ Student
National.....	6.2	1.9	5.3	2.7	6.5	3.2	17.6
Rural.....	6.5	1.9	5.3	2.6	6.5	3.4	18.8
Urban.....	6.1	1.9	5.3	2.9	6.5	3.0	15.7
<b>Age Group (years)</b>							
0-17.....	8.2	0.0	6.6	3.4	0.0	0.0	13.8
18-35.....	5.7	1.9	5.2	2.6	6.1	3.5	21.6
36-64.....	4.5	2.3	4.3	2.5	6.7	3.1	5.1
65+.....	1.6	3.0	4.8	3.4	16.5	2.4	2.0

**Table 10.5 Average number of days away by purpose of visit in the last 3 months preceding the survey, by age group and residence ... cont'd**

Residence/ Age Group	Purpose of Trip (%)					
	Sport	Cultural Event / Exhibition	Medical/ Treatment	Religious	Second Residence	Other
National.....	2.8	3.1	9.6	2.4	8.6	4.8
Rural.....	2.7	3.2	9.8	2.5	12.9	4.6
Urban.....	2.8	3.1	8.5	2.3	6.8	5.0
<b>Age Group (years)</b>						
0-17.....	1.8	4.9	12.8	1.6	8.7	5.1
18-35.....	3.4	2.0	11.0	2.4	9.5	6.0
36-64.....	2.7	3.7	6.9	2.8	6.9	3.2
65+.....	0.0	1.4	12.3	2.3	6.0	2.8

#### 10.4. Trip Sponsorship

Table 10.6 shows the distribution of population who travelled by the sponsor of the trip, residence and age group. Nationally, most of the trips were self-sponsored (66.4%). The same scenario was replicated in urban and rural areas. Young people aged 0-17 years who travelled were funded mainly by other sponsors while 20.5 per cent sponsored themselves. Most travellers sponsored themselves except for those in the 0-17 years age group.

**Table 10.6 Percentage distribution of population that travelled by the sponsor of the trip, age group and residence**

Residence/Age group	Sponsor of trip (%)			No of trips taken ('000)
	Self	Employer	Other	
National.....	66.4	2.0	31.1	6,097
Rural.....	69.7	1.5	29.3	2,452
Urban.....	64.2	2.2	32.2	3,645
<b>Age Group (years)</b>				
0-17.....	20.5	0.0	74.7	1,526
18-35.....	77.1	2.4	21.4	2,605
36-64.....	88.6	3.2	8.8	1,741
65+.....	87.1	0.5	13.6	221
Don't Know/Not Stated..	77.1	0.0	0.0	5

### 10.5. Expenditure on Domestic Tourism

The share of expenditure on domestic tourism by category, age group and residence is presented in Table 10.7. Nationally, transport accounted for the largest share (38.4%) of the expenditure on domestic tourism followed by shopping for personal use (12.9%) and gifts or presents (11.5%).

**Table 10.7: Share of Expenditure (%) on Domestic Tourism by Category, Age Group and Residence**

Residence/ Age group	Expenditure Category (%)											Number of Individuals that travelled ('000)
	Transport	Food and Beverages	Accommodation	Entertainment /Amusement	Parks Entry Fees	Shopping for personal use	Shopping for goods to sell	Medical	Gifts/ Presents	*Package	Other	
National.....	38.4	10.0	6.5	1.5	0.2	12.9	4.6	3.6	11.5	0.5	10.3	6,097
Rural.....	36.0	10.5	6.2	0.8	0.2	8.1	7.6	7.8	10.8	0.3	11.5	2,453
Urban.....	39.5	9.8	6.7	1.9	0.1	15.2	3.1	1.6	11.8	0.6	9.6	3,645
<b>Age Group (years)</b>												
0-17.....	57.5	16.2	4.6	1.9	0.2	6.4	0.0	3.0	3.0	0.4	6.9	1,523
18-35.....	39.7	10.5	6.0	1.8	0.2	14.9	4.7	2.2	13.1	0.8	6.1	2,605
36-64.....	35.0	9.3	7.4	1.3	0.1	12.1	4.8	3.7	11.0	0.3	14.9	1,739
65+.....	38.6	6.6	4.9	0.2	0.1	7.0	7.3	17.4	8.9	0.5	8.4	230

\* Package option refers to when the cost of items is aggregated.

### 10.6. Reasons for not taking a trip

Table 10.8 presents distribution of population by reasons of not taking a trip, residence and age group. Majority of the population did not take a trip due to cost limitations. Almost a third of the population in urban areas cited time constraint and affordability as reasons for not taking a trip. The limitation among the population in rural areas was mainly affordability and being in school.

Analysis by age groups shows that 42.6 per cent in the age group 0-17 years did not travel because they were in school. The main reason cited for not taking a trip by the population in the 18-35 and 65 and above, age groups was affordability while for those in 36-64 age group it was time constraint.

**Table 10.8 Distribution of population by Reason for not taking a trip, Residence and Age group**

Residence/Age group	Time Con- straint	Dislike travelling	Health Reasons	Too old/ Young to travel	Can not Afford to travel	Insecurity	Incapacitated	In School	No need	Number Individuals that did not Travel ('000)
National.....	23.0	1.5	0.9	13.7	32.0	0.3	0.1	25.3	20.7	39,270
Rural.....	19.3	1.3	0.9	14.9	32.2	0.3	0.1	25.7	22.4	26,672
Urban.....	31.0	1.9	1.0	11.3	31.4	0.3	0.1	24.4	16.9	12,598
<b>Age Group (years)</b>										
0-17.....	7.7	0.4	0.2	24.2	25.2	0.1	0.1	42.6	15.5	20,304
18-35.....	36.8	2.6	1.0	0.3	39.6	0.2	0.2	12.1	25.0	10,510
36-64.....	46.7	2.5	1.7	1.0	39.8	0.5	0.1	0.2	27.3	6,883
65+.....	25.3	4.0	7.2	23.4	33.9	1.7	0.3	0.0	29.3	1,573

# CHAPTER II

## 11. SHOCKS TO HOUSEHOLDS' WELFARE

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### 11.1. Introduction

This chapter presents information on shocks which occurred during the five-year period preceding the survey and had a negative impact on households' economic status or welfare. A shock is an event that may trigger a decline in the well-being of an individual, a community, a region, or even a nation. It is worth noting that the same shock could affect different households differently.

### 11.2. Incidence of Shocks

Table 11.1 presents information on the distribution of households that reported experiencing shocks by residence and county. Nationally, about three in every five households reported that they experienced at least one shock within the last five years preceding the survey. The proportion of households that reported at least one shock was 68.7 per cent in the rural areas compared to 53.4 per cent in urban areas. A higher proportion of households that experienced shocks were in Kitui (96.0%), Migori (92.0%) and Baringo (91.0%). Households in Kiambu (16.8%), Mombasa (23.6%) and Bomet (27.9%) Counties reported low incidences of shocks.

Table 11.1: Proportion of Households that experienced a Shock by Residence/County

Residence/ County	Percentage of Households reporting any shock	Number of households ('000)
National.....	61.9	11,415
Rural.....	68.7	6,431
Urban.....	53.4	4,963
<b>County</b>		
Mombasa.....	23.6	397
Kwale.....	68.8	174
Kilifi.....	61.7	326
Tana River.....	47.5	56
Lamu.....	64.2	30
Taita / Taveta.....	88.7	102
Garissa.....	28.4	78
Wajir.....	29.5	69
Mandera.....	74.5	111
Marsabit.....	54.8	62
Isiolo.....	32.0	34
Meru.....	47.8	393
Tharaka-Nithi.....	59.9	107
Embu.....	59.5	164
Kitui.....	96.0	236
Machakos.....	70.5	328
Makueni.....	82.4	233
Nyandarua.....	45.3	191
Nyeri.....	46.6	271
Kirinyaga.....	54.4	198
Murang'a.....	71.7	323
Kiambu.....	16.8	600
Turkana.....	75.8	246
West Pokot.....	78.9	119
Samburu.....	76.9	61
Trans Nzoia.....	41.6	210
Uasin Gishu.....	55.6	270
Elgeyo / Marakwet...	42.5	99
Nandi.....	69.9	202
Baringo.....	91.0	152
Laikipia.....	76.2	135
Nakuru.....	53.8	578
Narok.....	90.9	223
Kajiado.....	67.4	250
Kericho.....	56.6	211
Bomet.....	27.9	179
Kakamega.....	89.7	392
Vihiga.....	62.3	144
Bungoma.....	85.2	321
Busia.....	29.8	177
Siaya.....	70.5	246
Kisumu.....	70.9	284
Homa Bay.....	88.2	224
Migori.....	92.0	233
Kisii.....	89.2	291
Nyamira.....	87.6	179
Nairobi City.....	58.6	1,503

### 11.3. Severity of Shocks

Severity of a shock is an assessment to define the extent of impact to the household's economic or social welfare. This is a simple ranking mechanism from the respondent's perception to assist in determining the degree of effect of the shock. The first severe shock has the most debilitating effect to the household economic or welfare status.

Table 11.2 presents information on the proportion of households by type of shocks and their severity. Nationally, large rise in food prices was reported as a severe shock by the highest proportion of households (30.1%). Other shocks reported by a high proportion of households as severe were droughts/floods (27.3%), death of other member of family (21.5%) and death of livestock (20.1%).

**Table 11.2: Proportion of Households by Severity and Type of Shock**

Shock	First Severe	Second Severe	Third Severe	All (First, Second and Third) shocks
Droughts or floods.....	13.7	14.2	12.2	27.3
Crop disease or crop pests.....	6.7	8.5	8.7	15.4
Livestock died.....	8.9	12.6	8.7	20.1
Livestock were stolen.....	2.3	2.5	3.1	5.1
Household business failure, non-agricultural.....	3.9	6.3	5.1	9.8
Loss of salaried employment or non-payment of salary.....	4.7	2.4	3.0	7.4
End of regular assistance, aid, or remittances from outside the household.....	1.2	1.6	1.1	2.6
Large fall in sale prices for crops.....	2.2	3.4	3.9	5.8
Large rise in price of food.....	11.0	16.4	22.4	30.1
Large rise in agricultural input prices.....	0.9	3.2	5.7	5.2
Severe water shortage.....	2.8	5.7	7.9	9.4
Birth in the household.....	1.3	1.5	1.5	2.8
Death of household head.....	3.8	0.4	0.3	4.2
Death of working member of household.....	1.0	0.2	0.3	1.3
Death of other family member.....	15.1	6.8	5.4	21.5
Break-up of the household.....	3.3	1.6	1.2	4.8
Bread winner jailed.....	0.4	0.3	0.2	0.7
Fire.....	1.1	0.8	0.4	1.8
Robbery/burglary/assault.....	4.5	3.9	3.3	8.2
Carjacking.....	0.2	0.1	0.1	0.2
Dwelling damaged, destroyed.....	0.4	0.7	0.8	1.2
Eviction.....	0.4	0.4	0.3	0.8
Ethnic/clan clashes.....	0.8	0.5	0.6	1.4
Conflict.....	0.8	0.7	1.2	1.7
HIV/AIDS.....	0.6	0.3	0.4	1.0
Other.....	8.0	4.7	2.2	6.1

Table 11.3 presents the proportion of households by the first severe shock and residence/county. Drought or floods were experienced by 18.5 per cent of households in the rural areas followed by death of other family member at 15.1 per cent. In urban areas, high proportions of households reported that they experienced large rise in food prices (18.6%) and death of other family member (14.9%). Death of other family member was ranked as the first severe shock, by about the same proportion of households in rural and urban areas.

**Table 11.3: The proportion of households by the First Severe Shock and Residence/County**

Residence/ County	Droughts or Floods	Crop disease or crop pests	Livestock died	Livestock were stolen	Household business failure, non-Agricultural	Loss of salaried employment or non-payment of salary	End of regular assistance, aid, or remittances from outside the household	Large fall in sale prices for crops	Large rise in price of food
<b>National.....</b>	13.7	6.7	8.9	2.3	3.9	4.7	1.2	2.2	11.0
<b>Rural.....</b>	18.5	8.8	11.3	2.7	2.7	2.3	1.1	2.6	6.4
<b>Urban.....</b>	5.7	3.1	4.8	1.6	6.0	8.7	1.3	1.5	18.6
<b>County</b>									
Mombasa.....	0.6	0.0	2.5	0.0	6.3	14.1	0.0	0.0	14.3
Kwale.....	10.2	0.7	9.2	1.2	0.8	7.5	0.0	0.2	12.6
Kilifi.....	15.0	2.1	6.0	0.9	6.2	8.3	0.3	0.0	21.1
Tana River.....	32.9	1.4	7.5	3.6	0.7	0.0	0.0	0.3	7.7
Lamu.....	3.9	2.4	4.8	2.2	10.3	2.9	1.9	0.0	1.5
Taita / Taveta.....	18.6	2.0	6.9	1.2	4.0	2.5	0.4	2.5	9.2
Garissa.....	41.7	0.0	12.8	0.7	0.0	2.5	0.0	0.0	11.1
Wajir.....	17.3	0.0	21.8	1.5	0.8	0.3	0.0	0.0	0.8
Mandera.....	8.7	0.0	22.6	1.3	0.5	0.3	1.3	0.1	12.9
Marsabit.....	29.8	0.5	18.0	2.9	0.8	1.3	1.4	0.0	1.9
Isiolo.....	10.1	0.4	32.3	7.5	1.1	3.0	0.0	0.0	12.3
Meru.....	13.7	7.5	5.9	1.6	2.7	2.1	0.0	0.2	3.6
Tharaka-Nithi.....	7.5	0.0	7.8	1.2	1.2	1.7	0.0	0.5	0.5
Embu.....	21.2	1.0	25.3	3.6	3.4	4.6	0.0	0.0	1.5
Kitui.....	26.4	9.3	9.0	2.6	0.4	1.4	0.9	1.1	35.4
Machakos.....	11.5	0.2	5.1	0.8	4.3	12.4	0.4	0.6	8.9
Makueni.....	29.0	2.0	5.4	0.0	3.4	1.5	1.5	0.7	5.9
Nyandarua.....	2.5	15.6	12.6	2.6	4.5	1.9	0.2	1.9	15.0
Nyeri.....	0.6	0.9	4.2	0.6	2.6	2.2	0.0	0.4	0.3
Kirinyaga.....	6.5	4.0	6.9	1.3	3.3	1.6	0.0	1.0	4.6
Murang'a.....	10.0	7.6	17.5	2.6	3.7	2.2	1.7	0.6	5.7
Kiambu.....	0.0	0.8	6.5	0.0	1.6	7.9	0.0	2.5	14.6
Turkana.....	46.5	0.0	5.6	13.4	1.1	0.0	2.7	0.0	1.2
West Pokot.....	30.8	0.9	12.5	1.0	0.2	0.0	0.0	1.7	10.7
Samburu.....	49.5	0.7	21.1	5.0	0.4	1.0	0.0	0.3	1.0
Trans Nzoia.....	21.7	3.3	27.2	4.1	11.8	3.3	0.4	0.0	2.7
Uasin Gishu.....	9.9	1.6	5.5	1.2	5.6	7.3	0.2	1.3	6.2
Elgeyo / Marakwet..	3.9	6.4	8.1	1.1	0.3	1.4	0.0	2.0	0.0
Nandi.....	10.5	27.4	20.8	0.6	0.9	0.5	0.0	1.1	6.6
Baringo.....	16.7	19.0	20.8	1.7	4.2	1.7	0.3	4.0	10.5
Laikipia.....	31.6	2.5	4.6	2.0	3.6	3.6	1.5	2.3	12.1
Nakuru.....	13.6	19.5	2.7	2.8	2.9	5.6	1.1	1.8	10.7
Narok.....	18.2	31.4	11.4	1.5	2.6	0.5	0.3	2.4	6.7
Kajiado.....	25.2	3.4	4.3	0.2	2.2	10.8	2.4	0.7	7.6
Kericho.....	10.2	30.4	11.5	0.1	3.0	3.8	0.4	1.2	3.1
Bomet.....	26.7	35.0	8.6	2.2	1.7	0.0	0.0	1.9	6.9
Kakamega.....	2.6	5.5	13.0	3.8	3.7	4.9	0.5	0.3	5.9
Vihiga.....	0.0	4.7	25.6	4.8	8.3	3.1	5.2	0.5	5.7
Bungoma.....	16.8	4.5	8.8	3.4	3.9	2.0	0.2	4.6	3.9
Busia.....	13.9	0.8	3.0	1.1	1.7	8.2	1.0	0.0	3.5
Siaya.....	5.7	1.5	7.0	1.1	0.5	6.0	1.7	0.1	2.9
Kisumu.....	6.6	6.6	20.5	14.7	2.9	2.5	0.5	0.0	4.1
Homa Bay.....	12.5	2.7	6.1	1.3	3.4	0.5	0.4	26.6	8.7
Migori.....	8.6	3.5	5.7	1.2	4.9	2.8	2.2	2.2	4.2
Kisii.....	23.6	4.2	2.8	0.3	7.3	9.6	9.2	8.4	13.5
Nyamira.....	23.5	19.9	6.5	1.6	7.1	2.0	0.9	4.3	4.7
Nairobi City.....	2.5	1.8	3.2	0.7	7.3	9.5	1.4	1.0	29.9

Table 11.3: The proportion of households by the first severe shock and residence/county...Cont'd

Residence/ County	Large rise in agricultural input prices	Severe water shortage	Birth in the household	Death of household head	Death of working member of household	Death of other family Member	Break-up of the household	Bread winner jailed	Fire
National.....	0.9	2.8	1.3	3.8	1.0	15.1	3.3	0.4	1.1
Rural.....	1.0	2.0	1.0	4.4	1.2	15.3	2.8	0.3	1.1
Urban.....	0.8	4.0	1.7	2.9	0.8	14.9	4.1	0.4	1.3
<b>County</b>									
Mombasa.....	0.0	0.8	1.5	5.9	0.0	8.0	11.2	0.0	3.0
Kwale.....	0.2	1.0	0.9	4.4	3.7	20.3	2.0	0.2	2.7
Kilifi.....	0.3	5.1	1.0	3.0	0.6	12.7	2.3	0.0	0.6
Tana River.....	2.4	6.9	2.2	4.2	0.0	7.7	3.0	0.0	2.2
Lamu.....	0.0	0.8	2.2	3.0	0.5	13.3	2.0	0.0	1.3
Taita / Taveta.....	0.7	8.0	1.0	1.3	1.3	28.4	1.3	0.2	0.4
Garissa.....	0.0	20.5	0.8	0.0	0.5	7.9	0.0	0.0	0.8
Wajir.....	0.0	0.0	0.0	9.3	7.1	17.2	3.2	0.0	5.6
Mandera.....	0.0	4.7	0.0	3.4	0.0	1.9	3.5	0.0	0.8
Marsabit.....	0.0	15.7	0.9	4.2	1.9	4.5	2.7	0.0	0.0
Isiolo.....	0.0	0.0	0.7	7.9	2.5	9.1	3.8	0.0	2.5
Meru.....	0.4	1.8	1.0	6.9	2.2	12.4	10.1	1.0	1.3
Tharaka-Nithi.....	0.0	0.0	1.3	6.1	2.7	29.9	3.8	3.5	1.6
Embu.....	0.0	6.0	0.0	4.9	2.5	8.2	3.7	0.5	0.7
Kitui.....	0.6	4.2	0.0	0.5	0.6	1.1	0.8	0.0	0.6
Machakos.....	0.2	12.2	8.8	3.4	0.5	8.4	3.3	0.5	0.3
Makueni.....	0.5	9.3	1.2	3.4	0.5	22.2	1.8	1.2	1.1
Nyandarua.....	2.3	0.3	0.0	5.5	2.6	11.0	6.3	1.0	1.1
Nyeri.....	0.0	0.0	0.3	4.8	4.3	24.1	5.3	0.0	1.6
Kirinyaga.....	2.7	0.9	0.5	5.3	1.5	28.2	2.9	0.0	1.9
Murang'a.....	1.1	0.8	0.9	4.0	1.2	9.5	4.6	0.8	1.2
Kiambu.....	1.3	0.0	0.0	7.3	0.4	11.8	11.1	0.0	2.4
Turkana.....	0.0	2.4	0.4	6.0	0.7	3.8	1.2	0.0	2.8
West Pokot.....	0.5	4.5	0.6	3.5	1.0	8.5	1.8	0.2	0.2
Samburu.....	0.0	4.8	0.5	0.9	0.0	0.9	0.6	0.1	0.0
Trans Nzoia.....	0.4	0.0	0.3	0.5	0.6	10.1	0.7	0.0	0.0
Uasin Gishu.....	2.0	0.4	0.8	3.1	1.1	35.6	2.5	0.0	0.4
Elgeyo / Marakwet...	0.0	1.5	0.9	6.9	0.0	39.7	2.6	0.0	0.0
Nandi.....	0.6	0.3	0.0	4.2	0.2	12.4	1.4	0.0	0.5
Baringo.....	1.0	0.6	0.2	2.2	0.4	7.7	0.6	0.1	0.9
Laikipia.....	0.4	4.0	2.3	5.4	1.2	7.9	4.2	0.0	0.9
Nakuru.....	1.7	1.5	0.7	2.6	1.1	14.6	2.1	0.6	0.4
Narok.....	1.9	5.1	0.2	0.9	0.4	5.7	0.8	0.0	2.0
Kajiado.....	0.0	1.7	1.1	0.8	1.8	15.7	2.7	0.0	0.6
Kericho.....	1.1	2.4	0.7	2.8	1.2	10.6	1.5	0.0	1.1
Bomet.....	0.0	0.0	0.8	2.7	0.0	5.8	4.8	0.0	0.5
Kakamega.....	2.1	0.3	2.2	6.6	2.3	33.3	3.4	1.1	2.3
Vihiga.....	0.0	0.0	2.5	1.8	1.0	15.1	3.5	0.2	2.3
Bungoma.....	2.3	1.3	2.6	2.8	0.9	20.0	4.2	0.7	0.8
Busia.....	0.0	0.6	0.4	2.9	0.0	10.8	6.2	0.0	1.0
Siaya.....	0.0	0.8	1.2	6.3	0.0	37.3	2.4	0.4	0.9
Kisumu.....	0.2	1.0	0.7	4.0	1.2	9.3	7.3	0.1	0.3
Homa Bay.....	1.0	3.0	1.1	3.8	2.3	14.1	1.9	0.5	1.5
Migori.....	0.3	1.0	1.0	9.7	1.5	39.2	3.2	0.0	0.9
Kisii.....	2.9	0.0	3.3	3.1	0.3	2.7	3.6	0.0	0.2
Nyamira.....	0.8	0.0	0.0	3.0	0.6	9.5	4.4	0.6	0.7
Nairobi City.....	0.7	4.2	0.9	3.0	0.0	13.0	2.8	0.4	1.5

Table 11.3: The proportion of households by the first severe shock and residence/county...Cont'd

Residence/ County	Robbery / Burglary / Assault	Carjacking	Dwelling damaged, destroyed	Eviction	Ethnic/ Clan Clashes	Conflict	HIV/ AIDS	Other	Number of households with Shock ('000)
National.....	4.5	0.2	0.4	0.4	0.8	0.8	0.6	7.9	7,160
Rural.....	2.2	0.0	0.4	0.2	1.1	0.9	0.7	16.9	4,473
Urban.....	8.3	0.4	0.5	0.7	0.4	0.7	0.6	8.1	2,687
<b>County</b>									
Mombasa.....	20.5	0.0	1.6	0.8	1.0	0.0	0.0	3.1	94
Kwale.....	2.4	0.0	1.1	0.0	0.0	0.6	1.0	34.2	121
Kilifi.....	1.6	0.0	0.8	0.5	0.0	2.2	1.3	7.1	203
Tana River.....	1.3	0.0	1.4	0.0	11.0	0.2	0.5	0.8	26
Lamu.....	7.3	0.0	0.0	0.7	1.3	3.3	0.0	7.3	19
Taita / Taveta.....	1.6	0.0	0.3	0.0	0.0	0.4	0.7	4.4	91
Garissa.....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	22
Wajir.....	0.9	0.0	0.1	0.0	4.1	2.8	0.0	1.6	21
Mandera.....	2.5	0.0	0.3	0.0	29.9	0.5	0.4	18.8	84
Marsabit.....	0.0	0.0	0.0	4.3	4.9	0.5	0.0	23.3	33
Isiolo.....	2.1	0.0	0.0	0.0	3.1	0.0	0.0	9.0	11
Meru.....	2.3	0.0	0.3	1.1	0.0	1.1	1.9	2.6	196
Tharaka-Nithi.....	1.5	0.0	0.4	0.3	0.0	5.1	0.0	14.7	64
Embu.....	3.6	0.0	0.4	0.0	0.0	0.0	0.0	6.2	98
Kitui.....	1.2	0.0	1.1	0.0	0.2	0.1	0.0	7.9	228
Machakos.....	2.2	0.0	0.0	0.4	0.0	0.9	0.2	37.3	233
Makueni.....	1.4	0.0	0.0	0.2	0.6	0.5	0.6	23.3	196
Nyandarua.....	2.8	0.0	0.0	0.0	0.5	1.5	0.5	19.0	89
Nyeri.....	6.3	0.0	0.2	3.3	0.0	0.6	0.0	9.0	127
Kirinyaga.....	2.1	0.0	1.1	0.4	0.0	0.0	0.0	7.7	104
Murang'a.....	2.7	0.0	0.4	0.7	0.0	1.4	0.0	8.8	235
Kiambu.....	22.7	0.0	0.0	0.0	0.0	0.0	0.0	1.5	101
Turkana.....	2.1	0.0	0.8	0.2	1.1	0.0	0.1	7.0	187
West Pokot.....	4.9	0.0	0.2	0.1	6.3	0.7	0.1	6.8	98
Samburu.....	2.7	0.0	0.0	0.3	7.8	1.1	0.0	19.2	48
Trans Nzoia.....	2.0	0.0	0.0	0.0	0.5	3.2	0.0	9.5	88
Uasin Gishu.....	6.2	0.4	0.1	0.1	0.0	1.0	0.7	2.9	150
Elgeyo / Marakwet...	0.3	0.0	0.3	1.2	2.7	1.4	0.0	5.7	42
Nandi.....	1.7	0.0	0.4	0.0	0.0	0.0	0.5	5.6	141
Baringo.....	2.6	0.0	0.0	0.0	1.2	0.2	0.3	4.8	140
Laikipia.....	1.4	0.0	0.2	0.3	0.8	0.2	1.0	10.9	103
Nakuru.....	5.6	0.3	0.0	0.0	0.0	0.9	1.5	6.8	324
Narok.....	1.2	0.0	0.0	0.0	1.6	0.4	0.0	0.0	207
Kajiado.....	5.9	0.4	0.0	0.0	0.0	0.2	1.2	2.4	172
Kericho.....	1.8	0.0	1.6	0.0	0.0	3.2	1.5	3.0	120
Bomet.....	2.1	0.0	0.0	0.0	0.0	0.3	0.0	9.4	51
Kakamega.....	1.0	0.0	0.0	0.0	0.0	2.1	0.7	40.1	359
Vihiga.....	6.1	0.0	2.5	0.0	0.4	1.2	2.6	17.2	92
Bungoma.....	4.2	0.0	0.4	0.0	0.0	1.4	0.8	7.4	282
Busia.....	1.1	0.0	1.1	0.5	0.0	0.9	1.4	2.4	53
Siaya.....	5.1	0.0	0.4	0.1	0.0	0.1	1.3	1.9	173
Kisumu.....	7.4	1.0	1.5	0.0	0.0	0.0	0.0	1.1	203
Homa Bay.....	1.2	0.0	0.3	0.3	2.2	0.7	1.3	2.3	200
Migori.....	3.1	0.0	0.0	0.0	0.0	1.5	1.4	2.1	214
Kisii.....	1.9	0.0	0.8	0.0	0.1	0.1	1.0	8.0	257
Nyamira.....	4.9	0.0	0.0	1.4	0.8	0.0	0.5	0.0	157
Nairobi City.....	10.9	0.8	0.5	1.2	0.0	0.2	0.5	0.0	902

#### 11.4. Loss to households due to shocks

Table 11.4 presents the proportion of households that suffered loss of income, asset or both due to adverse shocks experienced within the 5 years period preceding the survey. The results show that 44.9 per cent and 44.7 per cent households suffered loss of both income and assets due to death of livestock and theft of livestock, respectively. Ethnic and clan clashes resulted in loss of both income and assets for 53.0 per cent of the households that experienced shocks within the reference period.

End of regular assistance, aid, or remittances from outside the household; loss of salaried employment or non-payment of salary; and large rise in prices of agricultural inputs mostly resulted in loss of household income. Damage and destruction of dwellings; fire; and robbery, burglary and assault were the major causes of loss of assets as reported by 47.1 per cent, 41.6 per cent and 38.9 per cent of the households, respectively.

**Table 11.4: Percentage distribution of households by shocks and the type of loss suffered due to shocks**

Shock	Income loss	Asset loss	Loss of both	Neither	Not Stated	Number of Households ('000)
Droughts or floods.....	42.9	13.0	38.8	4.6	0.7	1,956
Crop disease or crop pests.....	57.9	10.6	28.5	2.5	0.4	1,101
Livestock died.....	23.2	29.7	44.9	1.4	0.7	1,442
Livestock were stolen.....	24.4	27.4	44.7	2.3	1.3	364
Household business failure, non-agricultural.....	64.6	2.9	29.4	2.4	0.7	704
Loss of salaried employment or non-payment of salary.....	89.3	1.5	7.9	0.6	0.7	532
End of regular assistance, aid, or remittances from outside the household...	91.3	0.8	6.7	1.2	0.0	184
Large fall in sale prices for crops.....	56.2	10.1	29.7	3.7	0.3	416
Large rise in price of food.....	62.9	4.3	12.3	19.8	0.7	2,152
Large rise in agricultural input prices.....	71.7	4.3	14.0	9.2	0.9	369
Severe water shortage.....	50.4	4.8	11.0	32.6	1.2	673
Birth in the household.....	60.6	2.5	13.0	21.9	1.9	201
Death of household head.....	44.0	4.5	38.4	11.6	1.5	301
Death of working member of household.....	54.9	3.5	29.5	12.1	0.0	91
Death of other family member.....	40.7	8.5	21.8	28.4	0.7	1,536
Break-up of the household.....	34.3	4.5	37.2	22.9	1.1	342
Bread winner jailed.....	60.0	0.8	23.3	15.9	0.0	48
Fire.....	24.0	41.6	30.5	2.8	1.1	126
Robbery/burglary/assault.....	34.1	38.9	19.9	7.1	0.0	586
Carjacking.....	42.8	34.3	6.6	16.3	0.0	17
Dwelling damaged, destroyed.....	16.3	47.1	28.7	7.8	0.0	85
Eviction.....	15.3	26.8	38.7	16.8	2.4	54
Ethnic/clan clashes.....	15.5	17.0	53.0	14.5	0.0	97
Conflict.....	36.3	16.0	20.3	27.4	0.0	120
HIV/AIDS.....	44.9	11.3	16.6	26.1	1.0	73
Other.....	50.0	6.9	33.0	9.4	0.6	858

As indicated in Table 11.5, in most instances, shocks affected only the reporting households. End of regular assistance, aid, or remittances from outside the household (83.5%), birth in the household (79.3%) and household non-agricultural business failure (78.8%) in many instances affected only the reporting households. The shocks that affected the whole community were ethnic or clan clashes, droughts or floods and severe water shortage.

**Table 11.5: Percentage Distribution of Shocks by whom they impacted on**

Shock	Own household only	Some other households too	Most households in community	All households in community	Not stated	Number of Households ('000)
Droughts or floods.....	4.3	15.1	35.7	44.1	0.8	1,956
Crop disease or crop pests.....	10.4	23.9	38.6	26.2	0.9	1,101
Livestock died.....	49.4	21.8	20.6	7.2	1.1	1,442
Livestock were stolen.....	56.7	23.6	10.1	8.1	1.5	364
Household business failure, non-agricultural.....	78.8	17.4	1.8	0.5	1.5	704
Loss of salaried employment or non-payment of salary.....	64.9	29.2	2.0	1.6	2.3	532
End of regular assistance, aid, or remittances from outside the household...	83.5	11.2	1.8	3.5	0.0	184
Large fall in sale prices for crops.....	8.2	27.2	33.8	30.0	0.9	416
Large rise in price of food.....	5.7	18.6	42.8	31.8	1.2	2,152
Large rise in agricultural input prices.....	6.7	22.0	48.0	22.4	0.9	369
Severe water shortage.....	2.9	13.4	38.4	42.4	2.9	673
Birth in the household.....	79.3	17.2	1.2	0.2	2.1	201
Death of household head.....	35.9	52.7	7.4	2.3	1.7	301
Death of working member of household.....	38.8	48.6	10.8	1.8	0.0	91
Death of other family member.....	24.4	67.5	5.7	1.1	1.4	1,536
Break-up of the household.....	74.3	22.6	0.5	0.0	2.6	342
Bread winner jailed.....	51.1	41.7	1.8	0.0	5.4	48
Fire.....	59.0	25.5	12.6	0.8	2.1	126
Robbery/burglary/assault.....	75.9	20.5	2.7	0.7	0.1	586
Carjacking.....	57.5	42.5	0.0	0.0	0.0	17
Dwelling damaged, destroyed.....	70.5	22.8	4.6	1.8	0.2	85
Eviction.....	45.0	21.7	24.7	7.7	1.0	54
Ethnic/clan clashes.....	8.3	12.7	29.3	46.5	3.3	97
Conflict.....	54.1	41.6	1.9	1.8	0.5	120
HIV/AIDS.....	56.4	39.4	3.2	0.0	1.0	73
Other.....	60.1	32.8	4.6	1.5	1.1	858

### 11.5. Coping Mechanisms

Information on Households by type of Shock experienced and the coping mechanism(s) is presented in Table 11.6. Households were asked on the action(s) they took which they considered to be important in coping or regaining the households' welfare level prior to the event they experienced. The analysis discussed here-in focused on the coping mechanism ranked as the first or having the most positive impact.

Overall, affected households tend to spend available savings in the event of a shock. However, the findings reveal that households employ different coping strategies dependent on the type of shock experienced. For instance, majority of households that were affected by death of a household or family member, fire, dwelling destroyed/damaged or conflict received help from family and friends. Households that lost livestock through death or theft mainly resorted to selling animals, while those that experienced a large rise in price of food reduced food consumption at household level. The results further show that some households that were affected by large fall in sale price for crops (34.1%), break-up of the household (36.8%), livestock were stolen (42.5%), livestock died (48.0%) or robbery, burglary and assault (46.7%) did nothing to cope and regain the household welfare level.

# CHAPTER 12

## 12. JUSTICE

### 12.1 Introduction

This chapter focuses on household experiences regarding accessing justice. Justice refers to the process or result through which fairness is administered during disputes. Questions related to household's access to justice in the two years preceding the survey were asked to the head of the household. The survey sought to collect information on the grievances/disputes experienced by households, resolution mechanisms, status of grievance/dispute resolution and costs incurred.

### 12.2. Grievances/Disputes

Grievances or disputes refer to conflicts that affected households, including those that do not pertain to the legal system. Table 12.1 presents the distribution of households by grievances experienced, residence and County. Nationally, the leading complaint by households was on succession and inheritance (26.2%), followed by land (16.3%) and religious/witchcraft offences (14.1%). Survey findings show that a higher proportion of households in the rural areas (30.9%) experienced grievances related to succession and inheritance compared to urban areas (19.5%). More households in urban areas (21.7%) experienced grievances related to Land than their counterparts in the rural areas (12.5%).

The proportion of households that reported grievances on land matters was high in Bomet (62.5%), Nyamira (47.1%), Turkana (45.5%) and Kisii (42.7%) Counties. The counties that reported relatively high proportions of households with commercial disputes included Nyamira (32.6%), and Homa Bay (26.2%) while s family matter disputes were predominant in Marsabit (21.5%), Bomet (14.2%) and Kilifi (9.3%). The results also show that a high proportion of households with disputes related to criminal matters were reported in Murang'a (10.3%) and Siaya (10.1%) Counties.

**Table 12.1: Percentage Distribution of Households by grievance experienced, Residence and County**

Residence/ County	Proportion of Households Reporting Grievances	Number of Households ('000)	Land (squatters, allocation, title, use, boundaries, ownership, etc.)	Commercial (unpaid debts, undelivered goods/services, contractual business disputes, etc.)	Family matters (divorce; paternity; child custody, maintenance etc.)	Succession and inheritance (inheritance / management of a deceased person's property)	Criminal matters (murder, sexual offenses, theft, assault etc.)	Natural resources (communal grazing land, water sources, misuse of public forests/land)	Tenants vs. Landlords
<b>National.....</b>	<b>16.0</b>	<b>11,415</b>	<b>16.3</b>	<b>9.7</b>	<b>1.1</b>	<b>26.2</b>	<b>3.3</b>	<b>1.3</b>	<b>8.6</b>
<b>Rural.....</b>	<b>16.7</b>	<b>6,442</b>	<b>12.5</b>	<b>11.5</b>	<b>1.2</b>	<b>30.9</b>	<b>4.4</b>	<b>1.2</b>	<b>11.0</b>
<b>Urban.....</b>	<b>15.2</b>	<b>4,972</b>	<b>21.7</b>	<b>7.2</b>	<b>1.0</b>	<b>19.5</b>	<b>1.7</b>	<b>1.4</b>	<b>5.1</b>
<b>County</b>									
Mombasa.....	12.3	397	0.0	0.0	1.2	12.6	1.3	0.0	0.0
Kwale.....	22.4	174	1.4	15.0	1.1	25.9	7.8	0.0	6.6
Kilifi.....	15.7	326	16.7	18.2	9.3	33.8	8.0	1.0	1.3
Tana River.....	10.4	56	36.8	11.8	6.5	29.1	4.7	1.3	8.3
Lamu.....	29.5	30	29.3	26.2	0.0	8.2	4.0	0.0	6.3
Taita / Taveta.....	13.3	102	19.5	16.9	5.8	17.3	4.6	0.0	13.5
Garissa.....	1.7	78	0.0	11.8	0.0	0.0	0.0	0.0	0.0
Wajir.....	1.8	69	14.7	9.3	0.0	13.5	0.0	0.0	22.0
Mandera.....	11.5	111	11.1	15.5	2.4	23.3	0.0	0.0	10.1
Marsabit.....	3.1	62	0.0	0.0	21.5	0.0	3.4	0.0	28.3
Isiolo.....	2.5	34	0.0	9.1	0.0	22.1	0.0	9.0	5.4
Meru.....	14.8	393	4.5	4.7	0.0	22.5	0.0	0.0	9.3
Tharaka-Nithi.....	26.9	107	3.3	16.8	0.8	40.6	5.4	0.5	1.0
Embu.....	17.3	164	2.2	0.0	0.0	40.9	2.0	0.0	3.0
Kitui.....	17.2	236	20.6	11.5	0.0	37.3	2.0	0.0	12.6
Machakos.....	6.5	328	4.3	3.3	0.0	40.5	1.3	0.0	1.1
Makueni.....	23.3	233	19.6	6.4	0.9	30.4	9.5	2.2	4.6
Nyandarua.....	10.1	191	0.7	0.8	0.0	32.4	2.1	6.8	4.6
Nyeri.....	7.7	271	3.2	5.1	0.0	13.0	0.0	0.0	0.0
Kirinyaga.....	14.6	198	3.2	2.8	0.0	14.4	1.7	0.0	6.1
Murang'a.....	9.3	323	0.0	5.4	0.0	31.0	10.3	3.1	0.7
Kiambu.....	4.8	600	9.3	4.9	0.0	7.0	7.7	0.0	0.0
Turkana.....	15.4	246	45.5	2.4	0.0	13.1	0.0	0.0	10.3
West Pokot.....	12.9	119	1.7	5.9	0.0	66.8	0.0	0.0	15.5
Samburu.....	10.9	61	1.1	2.4	3.9	21.9	0.0	29.7	32.9
Trans Nzoia.....	10.4	210	5.1	2.5	1.1	33.4	4.6	0.0	17.8
Uasin Gishu.....	19.1	270	2.0	2.6	0.0	25.6	10.0	0.6	7.2
Elgeyo / Marakwet...	15.6	99	0.7	7.7	4.0	48.2	0.0	0.0	31.9
Nandi.....	8.4	202	18.6	6.8	0.0	17.3	4.2	0.0	27.2
Baringo.....	13.3	152	11.6	7.8	0.0	54.7	6.2	0.0	11.8
Laikipia.....	14.6	135	5.8	0.0	1.0	8.6	2.3	0.0	14.0
Nakuru.....	9.6	578	31.9	5.8	0.0	12.8	2.3	0.0	4.1
Narok.....	22.0	223	1.5	1.3	2.5	16.2	3.3	0.9	15.7
Kajiado.....	15.0	250	6.5	0.0	0.7	34.6	5.1	4.3	1.3
Kericho.....	20.3	211	0.8	14.6	0.0	37.3	3.5	0.0	12.5
Bomet.....	0.6	179	62.5	0.0	14.2	0.0	0.0	0.0	14.2
Kakamega.....	24.5	392	2.6	17.6	2.1	33.6	6.6	2.3	14.2
Vihiga.....	15.5	144	14.6	2.1	1.9	12.1	3.4	0.0	20.3
Bungoma.....	32.5	321	11.3	21.2	0.7	20.6	1.3	0.0	13.6
Busia.....	3.0	177	0.0	8.8	8.1	40.1	0.0	0.0	0.0
Siaya.....	15.1	246	2.5	8.8	2.3	48.1	10.1	2.3	16.0
Kisumu.....	28.0	284	8.8	8.5	0.6	33.1	3.8	1.3	15.0
Homa Bay.....	21.1	224	24.0	26.2	0.0	20.1	2.6	0.8	9.1
Migori.....	28.4	233	0.9	9.1	0.8	18.1	3.8	0.7	3.4
Kisii.....	34.1	291	42.7	1.5	0.4	51.3	0.1	2.1	3.1
Nyamira.....	38.8	179	47.1	32.6	1.2	17.3	1.0	1.6	26.3
Nairobi City.....	17.9	1,503	33.9	8.8	0.8	17.2	0.5	2.4	2.6

Table 12.1: Percentage Distribution of Households by grievance experienced, Residence and County... Cont'd

Residence/ County	Disputes over personal property (cars, household items, livestock)	Domestic violence (sexual, physical, psychological)	Labour (employee/employer disputes, unpaid wages, etc.)	Traffic matters	Religious/ Witchcraft offenses	Political disagreements/election related grievances	Corruption/ bribery	Other	Number of Households with Grievances ('000)
National.....	0.0	0.1	0.1	1.5	14.1	10.2	1.4	0.1	1,826
Rural.....	0.1	0.0	0.1	1.1	10.3	9.5	0.3	0.0	1,076
Urban.....	0.0	0.1	0.0	2.1	19.6	11.2	3.0	0.1	756
<b>County</b>									
Mombasa.....	0.0	0.0	0.0	7.5	13.5	4.1	0.0	0.0	49
Kwale.....	0.0	0.0	0.0	1.5	10.8	4.3	0.0	0.0	39
Kilifi.....	0.0	0.0	0.0	7.3	13.6	16.7	0.0	0.0	51
Tana River.....	0.0	0.0	0.0	0.0	0.0	9.8	0.0	0.0	6
Lamu.....	0.0	0.0	0.0	1.7	7.1	16.1	0.2	0.0	9
Taita / Taveta.....	0.0	0.0	0.9	0.0	3.7	14.6	0.0	0.0	14
Garissa.....	0.0	0.0	0.0	0.0	0.0	44.1	0.0	0.0	1
Wajir.....	0.0	0.0	0.0	0.0	7.5	0.0	0.0	0.0	1
Mandera.....	0.0	0.0	0.0	0.0	5.9	0.0	0.0	0.0	13
Marsabit.....	0.0	0.0	5.1	0.0	2.9	11.4	0.0	0.0	2
Isiolo.....	0.0	0.0	0.0	0.0	36.4	18.0	0.0	0.0	1
Meru.....	0.0	0.0	0.0	5.9	21.3	29.0	0.0	0.0	58
Tharaka-Nithi.....	0.0	0.0	0.0	1.1	22.0	18.2	0.8	0.0	29
Embu.....	0.0	0.0	0.0	0.6	26.0	8.4	0.0	0.0	28
Kitui.....	0.0	0.0	0.0	0.8	10.8	3.9	0.0	0.0	41
Machakos.....	0.0	0.0	0.0	8.8	9.2	23.1	0.0	0.0	21
Makueni.....	0.0	0.2	0.0	0.0	4.2	2.7	0.0	0.0	54
Nyandarua.....	0.0	0.0	0.0	10.9	19.8	18.0	0.0	0.0	19
Nyeri.....	0.0	0.0	0.0	10.0	7.6	46.9	0.0	0.0	21
Kirinyaga.....	0.0	0.0	0.0	3.0	21.4	30.5	0.0	0.0	29
Murang'a.....	0.0	0.0	0.0	2.4	45.1	2.0	0.0	0.0	30
Kiambu.....	0.0	0.0	0.0	0.0	16.7	36.7	0.0	0.0	29
Turkana.....	0.0	0.0	0.0	0.0	25.8	0.0	0.0	0.0	38
West Pokot.....	0.0	0.0	0.0	0.0	3.3	2.4	1.4	0.0	15
Samburu.....	0.0	0.0	7.1	0.0	7.0	1.1	1.1	0.0	7
Trans Nzoia.....	0.0	0.0	0.0	0.0	10.8	9.1	2.0	0.0	22
Uasin Gishu.....	0.0	0.0	0.0	0.0	14.7	11.4	0.0	0.0	51
Elgeyo / Marakwet...	0.0	0.0	0.0	0.0	7.0	10.8	0.0	0.0	15
Nandi.....	0.0	0.0	0.0	4.5	18.0	2.7	0.0	0.0	17
Baringo.....	0.0	0.0	0.0	3.1	5.2	14.7	0.0	0.0	20
Laikipia.....	0.0	0.0	0.0	2.3	0.5	7.8	0.0	0.0	20
Nakuru.....	0.0	1.9	0.0	0.0	11.6	12.7	0.0	0.0	56
Narok.....	1.7	0.0	0.0	1.5	13.0	16.3	0.8	0.0	49
Kajiado.....	0.0	0.0	0.0	8.9	29.1	1.4	0.0	0.0	37
Kericho.....	0.0	0.0	1.3	0.0	9.8	14.7	0.7	0.0	43
Bomet.....	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	1
Kakamega.....	0.0	0.0	0.0	0.0	6.7	17.6	0.0	0.0	96
Vihiga.....	0.0	0.0	0.0	1.6	13.9	12.9	0.0	0.0	22
Bungoma.....	0.0	0.0	0.0	0.4	16.7	2.9	0.3	0.0	104
Busia.....	0.0	0.0	0.0	8.3	6.9	16.4	0.0	0.0	5
Siaya.....	0.0	0.0	0.0	1.8	13.6	5.9	1.2	0.0	37
Kisumu.....	0.0	0.0	0.0	0.0	24.9	8.2	1.9	0.0	80
Homa Bay.....	0.0	0.0	0.0	0.0	8.0	4.5	1.9	0.0	47
Migori.....	0.0	0.0	0.0	0.0	3.2	1.6	0.4	0.0	66
Kisii.....	0.0	0.0	0.0	0.0	1.9	4.1	1.4	0.5	99
Nyamira.....	0.0	0.0	0.0	0.0	2.2	1.2	1.3	0.7	69
Nairobi City.....	0.0	0.0	0.0	0.0	21.7	9.8	7.0	0.0	269

### 12.3 Conflict Resolution Mechanism

Table 12.2 presents the distribution of households by grievance experienced and persons/ organization/ groups consulted for resolution. The results show that most of the households that experienced conflicts presented their grievances to chiefs/assistant chiefs. Specifically, a high proportion of households with disputes relating to succession and inheritance (38.8%), land matters (37.0%) and disputes on personal property (25.3%) reported them to the chief/assistant chief. Over 51 per cent of households with disputes related to tenants and landlords, 38.5 per cent of households with labour disputes and 23.0 per cent of households with commercial disputes presented their cases directly to the other party.

Among households that experienced domestic violence, 31.4 per cent reported their cases to members of extended the family (outside the household) for resolution. The highest proportion of households that reported disputes to the police were those that experienced traffic (40.5%), criminal (40.4%) and corruption/ bribery (36.9%) grievances. A large proportion of households did not report their grievances to any person, organization or group for resolution. The results further showed that, households that had grievances on corruption (44.6%), disputes of commercial nature (40.5%), political disagreements (39.7%) and religious/ witchcraft offences (39.6%) did not seek any resolution.

### 12.4. Grievance/Dispute Resolution Mechanism

More than one in five households (23.3%) that had a grievance/dispute sought interventions from the local administrators (chiefs/assistant chiefs) as shown in Table 12.3. Less than one per cent of the households resolved their grievances through their elected leaders such as Members of Parliament and Members of the County Assembly. Nearly 28.0 per cent of households in the rural areas went to the administrators for resolution of their conflicts. Almost one fifth (19.4%) of urban households did not go to any party to resolve their conflicts/grievances.

A large proportion of households in Bomet (62.5%) and Turkana (40.3%) Counties preferred to engage the other party directly to resolve their grievances. Households in Murang'a (45.1%) and Isiolo (36.4%) Counties sought police intervention to resolve grievances. Furthermore, a high proportion of households in Nyeri (46.9%), Garissa (44.1%) and Kiambu (36.7%) Counties opted for courts of law as their main mechanism of dispute resolution. A high proportion of households in several counties including; Migori (63.3%), Laikipia (62.0%), Mombasa (57.0%) and Wajir (47.4%) Counties did not seek any dispute resolution for their conflicts or grievances.

A large proportion of households in Bomet (62.5%) and Turkana (45.5%) Counties preferred to engage the other party directly to resolve their grievances. Households in Murang'a (45.1%) and Isiolo (36.4%) Counties sought police intervention to resolve grievances. Furthermore, a high proportion of households in Nyeri (46.9%), Garissa (44.1%) and Kiambu (36.7%) Counties opted for courts of law as their main mechanism of dispute resolution. A high proportion of households in several counties including; Migori (70.7 %), Laikipia (85.5 %), Mombasa (83.6 %) and Narok (50.2 %) Counties did not seek any dispute resolution for their conflicts or grievances.

Table 12.2: Percentage Distribution of Households by Grievance and Resolution Mechanism

Grievances	Directly to the Other Party	Extended Family Members	Religious Institution/ Religious Leader	Chief/ Assistant Chief	Other National Government Official	County Government Official	Traditional Leader/ Elder	Mp (National Assembly/ Senate)	Member Of County Assembly (MCA)
Land (squatters, allocation, title, use, boundaries, ownership, etc.).....	5.7	8.2	0.4	37.0	6.2	1.0	8.8	0.0	0.0
Commercial (unpaid debts, undelivered goods/services, contractual business disputes, etc.)..	23.0	1.7	1.2	12.1	0.6	0.9	4.6	0.0	0.0
Family matters (divorce; paternity; child custody, maintenance etc.) .....	9.0	19.2	1.7	22.9	2.8	0.6	4.7	0.2	0.0
Succession and inheritance (inheritance/management of a deceased person's property).....	2.0	12.1	0.2	38.8	3.1	2.4	6.1	0.0	0.0
Criminal matters (murder,sexual offenses, theft, assault etc.).....	2.5	2.6	0.2	22.0	1.1	0.1	9.2	0.0	0.0
Natural resources (communal grazing land, water sources, misuse of public forests/land)....	15.2	3.4	0.0	24.4	5.1	2.4	11.8	0.0	0.0
Tenants vs. Landlords.....	51.2	1.1	0.0	21.0	0.6	0.1	2.2	0.0	0.8
Disputes over personal property (cars, household items, livestock).....	17.7	4.6	1.1	25.3	3.0	0.9	16.3	0.2	0.0
Domestic violence (sexual, physical, psychological).....	10.7	31.4	2.1	11.5	0.0	0.8	9.6	0.0	0.0
Labour (employee/employer disputes, unpaid wages, etc.).....	38.5	0.6	0.0	3.5	2.1	0.4	3.7	0.0	0.0
Traffic matters.....	8.3	0.0	0.0	0.0	1.2	2.7	0.0	0.0	0.0
Religious/Witchcraft offenses.....	8.1	1.8	10.9	12.2	0.0	0.0	21.7	0.0	0.0
Political disagreements/election related grievances.....	7.8	0.0	0.0	0.7	0.0	0.0	6.8	0.0	0.0
Corruption/bribery.....	5.7	0.0	0.0	3.1	2.1	4.6	0.7	0.0	0.0

Table 12.2: Percentage Distribution of Households by Grievance and Resolution Mechanism...Cont'd

Grievances	NGO/ CBO	Lawyer	Police	Courts.	Friend	Gangs	None	Other	Number of Households with Grievance ('000)
Land (squatters, allocation, title, use, boundaries, ownership, etc.).....	0.0	2.4	2.5	14.0	0.8	0.1	9.5	3.7	530
Commercial (unpaid debts, undelivered goods/services, contractual business disputes, etc.)..	0.0	1.0	7.9	2.7	2.5	0.0	40.5	1.4	264
Family matters (divorce; paternity; child custody, maintenance etc.) .....	0.2	0.4	6.8	5.7	0.1	0.0	20.7	4.9	261
Succession and inheritance (inheritance/management of a deceased person's property).....	0.0	4.0	2.4	13.4	0.2	0.0	15.1	0.2	120
Criminal matters (murder,sexual offenses, theft, assault etc.).....	0.0	0.3	40.4	8.6	0.2	0.2	8.5	4.2	221
Natural resources (communal grazing land, water sources, misuse of public forests/land)....	0.9	0.0	9.4	5.2	0.0	0.0	19.1	3.1	56
Tenants vs. Landlords.....	0.0	0.3	1.2	0.0	3.1	0.0	16.8	1.5	127
Disputes over personal property (cars, household items, livestock).....	0.0	1.4	9.5	4.3	0.2	0.0	12.1	3.5	101
Domestic violence (sexual, physical, psychological).....	0.0	0.0	7.7	2.5	0.7	0.0	22.5	0.5	161
Labour (employee/employer disputes, unpaid wages, etc.).....	0.0	2.5	8.5	13.6	0.2	0.0	20.6	5.7	124
Traffic matters.....	0.0	0.9	40.5	21.0	0.0	0.0	22.8	2.5	113
Religious/Witchcraft offenses.....	0.0	0.2	2.6	2.2	0.0	0.0	39.6	0.8	49
Political disagreements/election related grievances.....	0.0	0.0	3.0	9.0	30.5	0.0	39.7	2.3	26
Corruption/bribery.....	0.0	0.0	36.9	0.1	1.4	0.0	44.6	0.7	76

Table 12.3: Distribution of Households by Resolution Mechanism, Residence and County

Residence/ County	Directly to the Other Party	Extended Family Members	Religious Institution/ Religious Leader	Chief/ Assistant Chief	Other National Government Official	County Government Official	Traditional Leader/ Elder	Mp (National Assembly/ Senate)	Member Of County Assembly (MCA)
National.....	13.2	8.1	0.8	23.3	2.8	1.0	7.0	0.0	0.1
Rural.....	10.6	9.7	0.9	27.8	3.6	1.0	9.2	0.1	0.0
Urban.....	17.0	5.8	0.7	17.1	1.7	1.0	3.9	0.0	0.1
<b>County</b>									
Mombasa.....	0.0	0.0	1.2	12.6	1.3	0.0	0.0	0.0	0.0
Kwale.....	1.4	15.0	1.1	25.9	7.8	0.0	4.9	0.0	0.0
Kilifi.....	13.9	14.5	9.3	29.0	6.9	0.7	1.3	0.0	0.0
Tana River.....	27.4	10.7	6.5	22.7	4.7	0.3	8.3	0.0	0.0
Lamu.....	21.7	23.1	0.0	8.2	4.0	0.0	6.3	0.0	0.0
Taita / Taveta.....	17.9	16.9	5.8	17.3	4.6	0.0	13.5	0.0	0.0
Garissa.....	0.0	11.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wajir.....	14.7	9.3	0.0	13.5	0.0	0.0	0.0	0.0	0.0
Mandera.....	11.1	15.5	2.4	23.0	0.0	0.0	10.1	0.0	0.0
Marsabit.....	0.0	0.0	21.5	0.0	3.4	0.0	28.3	0.0	0.0
Isiolo.....	0.0	9.1	0.0	22.1	0.0	9.0	5.4	0.0	0.0
Meru.....	4.5	4.7	0.0	22.5	0.0	0.0	9.3	0.0	0.0
Tharaka-Nithi.....	2.5	15.5	0.8	32.7	5.4	0.5	1.0	0.0	0.0
Embu.....	2.2	0.0	0.0	40.9	2.0	0.0	3.0	0.0	0.0
Kitui.....	19.9	11.5	0.0	34.1	2.0	0.0	9.1	0.0	0.0
Machakos.....	4.3	3.3	0.0	40.5	1.3	0.0	1.1	0.0	0.0
Makueni.....	16.7	4.8	0.4	27.5	8.5	2.2	4.6	0.0	0.2
Nyandarua.....	0.7	0.8	0.0	29.6	2.1	6.8	4.6	0.0	0.0
Nyeri.....	3.2	5.1	0.0	13.0	0.0	0.0	0.0	0.0	0.0
Kirinyaga.....	3.2	2.8	0.0	14.4	0.0	0.0	6.1	0.0	0.0
Murang'a.....	0.0	5.4	0.0	31.0	10.3	3.1	0.7	0.0	0.0
Kiambu.....	9.3	4.9	0.0	7.0	7.7	0.0	0.0	0.0	0.0
Turkana.....	40.3	2.4	0.0	12.1	0.0	0.0	10.3	0.0	0.0
West Pokot.....	1.7	5.9	0.0	66.8	0.0	0.0	15.5	0.0	0.0
Samburu.....	0.0	2.4	3.9	15.2	0.0	26.3	25.6	0.0	0.0
Trans Nzoia.....	3.4	1.4	1.1	32.4	4.6	0.0	13.6	0.0	0.0
Uasin Gishu.....	2.0	2.6	0.0	23.8	10.0	0.6	7.2	0.0	0.0
Elgeyo / Marakwet...	0.7	6.6	4.0	43.0	0.0	0.0	27.1	0.0	0.0
Nandi.....	18.6	6.8	0.0	17.3	4.2	0.0	23.0	0.0	0.0
Baringo.....	11.6	6.9	0.0	45.3	3.4	0.0	10.2	0.0	0.0
Laikipia.....	2.6	0.0	1.0	8.6	2.3	0.0	14.0	0.0	0.0
Nakuru.....	27.8	5.8	0.0	9.1	2.3	0.0	4.1	0.0	1.9
Narok.....	1.5	1.3	2.5	15.6	1.1	0.9	13.2	1.7	0.0
Kajiado.....	5.2	0.0	0.7	34.6	5.1	4.3	1.3	0.0	0.0
Kericho.....	0.0	13.1	0.0	36.3	2.9	0.0	11.4	0.0	0.0
Bomet.....	62.5	0.0	14.2	0.0	0.0	0.0	14.2	0.0	0.0
Kakamega.....	2.6	16.8	0.0	30.6	4.4	1.0	11.8	0.0	0.0
Vihiga.....	14.6	2.1	1.0	12.1	3.4	0.0	19.6	0.0	0.0
Bungoma.....	11.3	18.7	0.7	18.2	1.3	0.0	13.0	0.0	0.0
Busia.....	0.0	8.8	8.1	40.1	0.0	0.0	0.0	0.0	0.0
Siaya.....	2.5	6.6	0.0	33.2	8.3	2.3	14.1	0.0	0.0
Kisumu.....	7.7	8.5	0.6	28.0	3.1	1.3	12.9	0.0	0.0
Homa Bay.....	19.7	23.8	0.0	19.3	2.6	0.8	5.5	0.0	0.0
Migori.....	0.9	7.0	0.8	17.7	2.8	0.7	2.5	0.0	0.0
Kisii.....	39.4	1.5	0.0	43.0	0.1	2.1	2.3	0.0	0.0
Nyamira.....	20.1	16.9	1.2	15.2	0.6	1.6	15.1	0.0	0.0
Nairobi City.....	26.5	5.9	0.0	13.0	0.5	1.3	0.6	0.0	0.0

Table 12.3: Distribution of Households by Resolution Mechanism, Residence and County...Cont'd

Residence/ County	NGO/ CBO	Lawyer	Police	Courts	Friend	Gangs	None	Other	Number of Households with Grievance ('000)
National.....	0.1	1.5	11.7	9.3	0.9	0.0	17.1	2.9	1,832
Rural.....	0.1	1.1	8.9	8.4	0.3	0.0	15.5	2.9	1,076
Urban.....	0.0	2.1	15.7	10.7	1.9	0.0	19.4	2.9	756
<b>County</b>									
Mombasa.....	0.0	7.5	13.5	4.1	0.0	0.0	57.0	2.9	49
Kwale.....	0.0	1.5	9.5	4.3	0.0	0.0	27.8	0.6	39
Kilifi.....	0.0	7.3	3.8	10.3	0.0	0.0	1.8	1.1	51
Tana River.....	0.0	0.0	0.0	9.8	0.0	0.0	5.8	3.8	6
Lamu.....	0.0	1.7	7.1	15.3	0.2	0.0	10.8	1.6	9
Taita / Taveta.....	0.9	0.0	3.7	14.6	0.0	0.0	3.0	1.7	13
Garissa.....	0.0	0.0	0.0	44.1	0.0	0.0	44.1	0.0	1
Wajir.....	0.0	0.0	7.5	0.0	0.0	0.0	47.4	7.5	1
Mandera.....	0.0	0.0	5.9	0.0	0.0	0.0	31.9	0.0	13
Marsabit.....	5.1	0.0	2.9	11.4	0.0	0.0	27.4	0.0	2
Isiolo.....	0.0	0.0	36.4	18.0	0.0	0.0	0.0	0.0	1
Meru.....	0.0	5.9	19.4	29.0	0.0	0.0	1.6	3.2	58
Tharaka-Nithi.....	0.0	1.1	18.3	17.7	0.8	0.0	0.9	2.9	29
Embu.....	0.0	0.6	26.0	8.4	0.0	0.0	16.2	0.6	28
Kitui.....	0.0	0.8	9.9	3.9	0.0	0.0	6.7	2.1	41
Machakos.....	0.0	8.8	9.2	20.2	0.0	0.0	7.1	4.1	21
Makueni.....	0.0	0.0	3.2	1.9	0.0	0.0	29.4	0.5	54
Nyandarua.....	0.0	10.9	19.8	15.2	0.0	0.0	9.6	0.0	19
Nyeri.....	0.0	10.0	7.6	46.9	0.0	0.0	14.3	0.0	21
Kirinyaga.....	0.0	3.0	21.4	30.5	0.0	0.0	10.4	8.1	29
Murang'a.....	0.0	2.4	45.1	2.0	0.0	0.0	0.0	0.0	30
Kiambu.....	0.0	0.0	16.7	36.7	0.0	0.0	17.7	0.0	29
Turkana.....	0.0	0.0	24.7	0.0	0.0	0.0	10.2	0.0	38
West Pokot.....	0.0	0.0	3.3	2.4	1.4	0.0	3.0	0.0	15
Samburu.....	7.1	0.0	1.9	0.0	0.0	0.0	8.6	8.9	7
Trans Nzoia.....	0.0	0.0	10.8	9.1	2.0	0.0	11.5	10.2	22
Uasin Gishu.....	0.0	0.0	12.1	11.4	0.0	0.0	30.3	0.0	51
Elgeyo / Marakwet...	0.0	0.0	5.2	9.2	0.0	0.0	3.7	0.4	15
Nandi.....	0.0	4.5	16.6	2.7	0.0	0.0	0.0	6.5	17
Baringo.....	0.0	3.1	3.4	12.3	0.0	0.0	3.9	0.0	20
Laikipia.....	0.0	2.3	0.3	6.5	0.0	0.0	62.0	0.4	20
Nakuru.....	0.0	0.0	8.8	10.8	0.0	0.0	22.9	6.6	56
Narok.....	0.0	1.5	8.5	14.5	0.8	0.0	35.1	1.9	49
Kajiado.....	0.0	8.9	29.1	1.4	0.0	0.0	2.6	6.8	37
Kericho.....	1.3	0.0	8.5	13.0	0.0	0.0	12.2	1.4	43
Bomet.....	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	1
Kakamega.....	0.0	0.0	4.2	14.5	0.0	0.0	11.1	3.1	96
Vihiga.....	0.0	1.6	11.3	12.9	0.0	0.0	20.3	1.2	22
Bungoma.....	0.0	0.4	15.1	2.9	0.3	0.0	9.0	9.1	105
Busia.....	0.0	8.3	6.9	16.4	0.0	0.0	11.4	0.0	5
Siaya.....	0.0	1.8	10.1	5.9	0.0	0.0	13.2	2.0	37
Kisumu.....	0.0	0.0	20.1	5.6	1.2	0.0	6.3	4.7	80
Homa Bay.....	0.0	0.0	8.0	3.7	1.9	0.0	9.8	5.0	47
Migori.....	0.0	0.0	2.7	1.3	0.4	0.0	63.3	0.0	66
Kisii.....	0.0	0.0	1.9	3.1	1.4	0.5	3.3	1.4	99
Nyamira.....	0.0	0.0	0.9	1.1	0.8	0.0	26.5	0.0	69
Nairobi City.....	0.0	0.0	15.2	9.8	4.3	0.0	19.0	3.8	269

## 12.5 Rationale for Choice of a Dispute Resolution Mechanism

Reasons cited by households choosing a dispute resolution mechanism are presented in Table 12.4. The results show that 24.2 per cent and 20.3 per cent of households presented their cases to other parties directly and extended family members, respectively, as it would have the least disruption to their lives. Similarly, 21.1 per cent of the households reported that they would present their cases to other parties since it had minimal cost implication. Households that presented their grievances to lawyers (56.1%), NGO/CBO (53.6%) and courts (20.5%) attributed it to their technical skills.

Among the households that presented their grievances to a friend, the highest proportion (72.4%) did it because they felt more comfortable with the person. The highest proportion of households (37.7%) that presented their grievances to a member of the extended family (outside the household) attributed it to the party having community/family respect. The same reason was given by households that sought resolution for their grievances from traditional leader/elder (33.9%).

**Table 12.4: Percentage Distribution of Households by Dispute Resolution Mechanism and Rationale for Choice of the Mechanism**

Person/ Organisation/ Group	Cost	Party Has Community/Family Respect	Party Has Technical Skill	Proximity/ Location	Party Has the Power/ Authority	Would Cause Least Disruption To Life	Most Comfortable With This Person	Tradition	Other	Number of Households ('000)
Directly To The Other Party.....	21.1	9.6	2.5	15.4	24.2	11.0	1.8	6.5	0.4	299
Extended Family Members (Outside The Household)...	4.4	37.7	1.1	3.6	20.3	12.2	14.3	0.7	0.1	178
Religious Institution/Religious Leader.....	4.3	29.7	6.8	0.0	11.5	23.4	1.7	15.6	0.0	20
Chief/Assistant Chief.....	1.9	24.2	8.2	19.9	4.2	2.6	2.8	1.1	0.1	481
Other National Government Official.....	1.6	10.8	23.7	1.5	1.3	1.9	1.3	4.3	0.0	60
County Government Official.....	0.0	2.7	22.9	4.6	15.1	0.3	0.0	0.0	0.0	23
Traditional Leader/Elder.....	2.8	33.9	2.5	15.0	5.3	12.9	11.5	0.1	0.5	157
Mp (National Assembly/Senate).....	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	1
Member Of County Assembly (MCA).....	0.0	0.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0	1
NGO/CBO.....	0.0	0.0	53.6	0.0	0.0	7.9	0.0	0.0	0.0	1
Lawyer.....	2.5	2.4	56.1	0.0	1.5	12.2	0.0	0.0	0.0	28
Police.....	4.5	1.2	19.5	9.5	6.5	2.3	0.9	2.1	0.9	259
Courts.....	0.4	3.7	20.5	2.0	0.3	3.2	0.1	1.7	0.0	187
Friend.....	1.7	18.4	0.0	4.8	1.5	72.4	0.0	0.0	0.0	26
Gangs.....	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0	1
Other.....	6.3	27.7	7.2	13.0	4.9	11.1	3.9	7.8	0.8	65

## 12.6 Status of Grievance/Dispute Resolution

Table 12.5 shows the distribution of households by the kind of grievances and the status of resolution of the grievances. Majority of the households reported that the parties they went to for conflict resolution resolved their conflicts/grievances. High proportions of households reported that their conflicts/grievances were resolved when presented to the following parties/organizations/groups; directly to other parties (71.4%), extended family members (68.8%), religious institution (64.3%), Chiefs/Assistant Chiefs (55.2%), County Government officials (67.8%), Traditional leaders/elders (72.1%), Police (62.5%) and Friends (63.6%).

Majority of the households that reported that their conflicts/grievances were unresolved or were still pending had presented them to a Member of County Assembly (92.6%), Lawyer (85.4%), Member of Parliament (77.7%), NGO/CBO (53.6%) and courts (51.0%).

**Table 12.5: Distribution of Households by Type of Resolution Mechanism and Status of Resolution**

Person/ Organisation/ Group	No, they could not help us with the dispute	No, the matter is still pending	No, they decided not to rule on matter	Yes, and the matter is resolved	Other	Not Stated	Number of Households with grievances ('000 )
Directly To The Other Party.....	7.1	19.1	1.1	71.4	0.2	1.1	299
Extended Family Members (Outside The Household)...	8.7	17.4	3.8	68.8	0.6	0.7	178
Religious Institution/Religious Leader.....	2.6	32.0	0.0	64.3	0.0	1.1	20
Chief/Assistant Chief.....	13.7	25.4	5.5	55.2	0.1	0.0	481
Other National Government Official.....	7.3	43.7	4.5	43.5	1.0	0.0	60
County Government Official.....	2.7	26.1	3.1	67.8	0.0	0.3	23
Traditional Leader/Elder.....	8.9	17.5	1.5	72.1	0.0	0.0	157
Mp (National Assembly/Senate).....	0.0	77.7	0.0	22.3	0.0	0.0	1
Member Of County Assembly (MCA).....	0.0	92.6	0.0	7.4	0.0	0.0	1
NGO/CBO.....	7.9	53.6	0.0	38.5	0.0	0.0	1
Lawyer.....	0.0	85.4	1.7	12.9	0.0	0.0	28
Police.....	12.2	20.9	3.8	62.5	0.6	0.0	259
Courts.....	4.3	51.0	2.9	41.7	0.0	0.0	187
Friend.....	33.2	3.2	0.0	63.6	0.0	0.0	26
Gangs.....	50.3	0.0	0.0	49.7	0.0	0.0	1
Other.....	6.3	27.5	5.2	59.5	0.6	0.8	65

## 12.7 Formal Cost of Grievance/Dispute Resolution

Formal cost of grievance/dispute resolution is the official payment made to facilitate dispute resolution. Table 12.6 presents average formal cost incurred by households in resolving grievances/disputes two years preceding the survey. On average, the highest payment (KSh 59, 849) to primary organizations/persons for grievance resolution was paid to lawyers while the least (KSh 47) was paid to gangs.

**Table 12.6: Average Formal Payment for Conflict Resolution by Grievance/Dispute Mechanism**

Person/ Organization/ Group	Primary Organization		Other Organization	
	Average (KSh)	Number of households ('000)	Average (KSh)	Number of households ('000)
Directly To The Other Party.....	4,689	222	32.7	3
Extended Family Members (Outside The Household)...	1,140	106	2,247.3	5
Religious Institution/Religious Leader.....	3,621	16	85.6	5
Chief/Assistant Chief.....	2,344	356	790.5	19
Other National Government Official.....	13,052	38	12,131.5	4
County Government Official.....	5,042	21	0.0	3
Traditional Leader/Elder.....	1,321	119	888.5	7
Mp (National Assembly/Senate).....	10,225	1	0.0	0
Member Of County Assembly (MCA).....	16,038	31	975.3	2
NGO/CBO.....	21,176	1	0.0	1
Lawyer.....	59,849	51	38,447.4	13
Police.....	2,928	187	3,567.5	12
Courts.....	26,429	137	39,055.8	14
Friend.....	859	6	1,916.9	4
Gangs.....	47	8	0.0	2
None.....	62	428	0.0	397
Other.....	2,707	44	2,301.2	14

## 12.8. Informal Cost of Grievance/Dispute Resolution

Informal cost of grievance/dispute resolution is the unofficial payment made to facilitate dispute resolution e.g. bribes or tokens meant to hasten the process of conflict resolution or influence the outcome. Table 12.7 presents the average informal cost incurred by households seeking conflict/grievance resolution. On average, households spent KSh 6,260 for conflict/grievance resolution in courts. The second highest informal payment for grievance/dispute resolution was made to lawyers at KSh 5,655.

**Table 12.7: Average Informal Payment for Conflict Resolution by Grievance/Dispute Mechanism**

Person/ Organization/ Group	Primary Organization		Other Organization	
	Average (KSh)	Number of household ('000)	Average (KSh)	Number of household ('000)
Directly To The Other Party.....	2,442	139	575	1
Extended Family Member.....	850	84	258	4
Traditional Leader/Elder.....	748	106	258	10
National Government.....	1,217	169	643	15
County Government.....	1,104	21	660	5
MP (National Assembly/Senate).....	6	6		1
Member Of Country Assembly (MCA).	98	10		3
Police.....	2,985	152	2,516	19
Courts.....	6,260	59	1,013	12
Lawyer.....	5,655	14	168	6
Other.....	141	225	393	74

## 12.9 Formal Cost of Grievance/Dispute Resolution by Type of Conflict/Grievance

Table 12.8 presents the average formal cost incurred by households for grievance resolution by type in the two years preceding the survey. Payments made for resolving land matters through a primary organization was KSh 12,481. Matters relating to succession and inheritance costed on average of KSh 9,618 while those relating to traffic costed KSh 9,009 Domestic violence and corruption/bribery related grievances had the lowest settlement costs.

**Table 12.8: Average Formal Payment for Conflict Resolution by Type of Dispute/Grievance KSh**

Grievances	Primary Organization		Other Organization	
	Average (KSh)	Number of households ('000)	Average (KSh)	Number of households ('000)
Land (squatters, allocation, title, use, boundaries, ownership, etc.).....	12,481	480	2,342	278
Succession and inheritance .....	9,616	102	6,668	43
Traffic matters.....	9,009	87	257	44
Natural resources (communal grazing land, water sources, misuse of public forests/land	5,898	46	131	29
Religious/Witchcraft offenses.....	3,287	30	242	17
Commercial (unpaid debts, undelivered goods/services, contractual business disputes, etc.)..	3,625	157	142	86
Family matters (divorce; paternity; child custody, maintenance etc.).....	3,222	207	351	114
Labour (employee/employer disputes, unpaid wages, etc.).....	3,154	98	99	52
Disputes over personal property (cars, household items, livestock).....	3,281	89	56	56
Criminal matters (murder,sexual offenses, theft, assault etc.).....	3,173	202	1,368	125
Tenants vs. Landlords.....	452	106	0	56
Political disagreements/election related grievances.....	557	16	755	2
Domestic violence (sexual, physical, psychological).....	355	125	359	68
Corruption/bribery.....	246	42	0	29

\*Primary organization refers to the first organization that a household reported to

### 12.10 Informal Cost of Grievance/Dispute Resolution by Type of Conflict/Grievance

Table 12.9 presents the average informal costs incurred by households while seeking justice at primary and subsequent reporting to the various organization or persons or institutions. On average, high informal costs were incurred by households on political disagreements/election related grievances (KSh 2,014) and land matters (KSh 1973).

**Table 12.9: Average Informal Payment for conflict resolution by Type of Conflict/Grievance**

Grievances	Primary Organization		Other Organization	
	Average (KSh)	Number of household ('000)	Average (KSh)	Number of household ('000)
Land (squatters, allocation, title, use, boundaries, ownership, etc.).....	1,973	480	264	278
Succession and inheritance .....	614	102	84	43
Traffic matters.....	1,316	87	12	44
Natural resources (communal grazing land, water sources, misuse of public forests/land)...	147	46		29
Religious/Witchcraft offenses.....	726	30		17
Commercial (unpaid debts, undelivered goods/services, contractual business disputes, etc.)..	238	157	64	86
Family matters (divorce; paternity; child custody, maintenance etc.).....	291	207	22	114
Labour (employee/employer disputes, unpaid wages, etc.).....	121	98	40	52
Disputes over personal property (cars, household items, livestock).....	812	89	15	56
Criminal matters (murder,sexual offenses, theft, assault etc.).....	958	202	149	125
Tenants vs. Landlords.....	52	106	14	56
Political disagreements/election related grievances.....	511	16	2,014	2
Domestic violence (sexual, physical, psychological).....	325	125	9	68
Corruption/bribery.....	2,066	42	40	29

\*Primary organization refers to the first organization that a household reported to

# APPENDIX I

## *KIHBS SAMPLE DESIGN*

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### **Sample Design**

The 2015/16 Kenya Integrated Households Budget Survey (KIHBS) was a cross-sectional population-based survey utilizing a two-stage stratified cluster sampling methodology. It was designed to provide valid estimates at national level, rural and urban areas separately and for each of the 47 counties.

### **Sample Size and Allocation**

In designing the sample, the mean total household expenditure was used to compute minimum sample sizes in each county. Further, power allocation method was used to distribute the households to the rural and urban strata of each county based on the 2009 Kenya Population and Housing Census enumerated figures. Since the survey was also expected to provide quarterly estimates, adjustments were done to ensure adequate national representative samples. In each quarter, it was estimated that approximately 6,000 households were sufficient to produce quarterly estimates for various indicators. A uniform take of 10 households per cluster was applied.

The final sample for the 2015/16 KIHBS was 24,000 households drawn from 2,400 clusters. This constituted 1,416 and 984 rural and urban clusters, respectively. The total sample at county level ranged from 440 to 720 households. The distribution of the sample is shown in Annex Table 1.

Annex Table 1: Sample Allocation for 2015/16 KIHBS

S/NO	County	Number of Clusters			Number of Households		
		Rural	Urban	Total	Rural	Urban	Total
1	Mombasa.....	0	52	52	0	520	520
2	Kwale.....	32	20	52	320	200	520
3	Kilifi.....	28	24	52	280	240	520
4	Tana River.....	32	16	48	320	160	480
5	Lamu.....	24	20	44	240	200	440
6	Taita / Taveta.....	32	16	48	320	160	480
7	Garissa.....	32	20	52	320	200	520
8	Wajir.....	32	16	48	320	160	480
9	Mandera.....	32	16	48	320	160	480
10	Marsabit.....	28	16	44	280	160	440
11	Isiolo.....	24	20	44	240	200	440
12	Meru.....	40	16	56	400	160	560
13	Tharaka-Nithi.....	32	16	48	320	160	480
14	Embu.....	32	16	48	320	160	480
15	Kitui.....	36	16	52	360	160	520
16	Machakos.....	24	28	52	240	280	520
17	Makueni.....	36	16	52	360	160	520
18	Nyandarua.....	32	16	48	320	160	480
19	Nyeri.....	32	20	52	320	200	520
20	Kirinyaga.....	32	20	52	320	200	520
21	Murang'a.....	36	16	52	360	160	520
22	Kiambu.....	24	34	58	240	340	580
23	Turkana.....	32	16	48	320	160	480
24	West Pokot.....	36	12	48	360	120	480
25	Samburu.....	28	16	44	280	160	440
26	Trans Nzoia.....	32	20	52	320	200	520
27	Uasin Gishu.....	28	26	54	280	260	540
28	Elgeyo / Marakwet...	32	16	48	320	160	480
29	Nandi.....	36	16	52	360	160	520
30	Baringo.....	32	16	48	320	160	480
31	Laikipia.....	32	20	52	320	200	520
32	Nakuru.....	28	30	58	280	300	580
33	Narok.....	36	12	48	360	120	480
34	Kajiado.....	24	24	48	240	240	480
35	Kericho.....	28	24	52	280	240	520
36	Bomet.....	36	16	52	360	160	520
37	Kakamega.....	36	16	52	360	160	520
38	Vihiga.....	28	20	48	280	200	480
39	Bungoma.....	36	16	52	360	160	520
40	Busia.....	36	16	52	360	160	520
41	Siaya.....	32	20	52	320	200	520
42	Kisumu.....	24	30	54	240	300	540
43	Homa Bay.....	32	20	52	320	200	520
44	Migori.....	28	24	52	280	240	520
45	Kisii.....	36	20	56	360	200	560
46	Nyamira.....	36	16	52	360	160	520
47	Nairobi City.....	0	72	72	0	720	720
	<b>Total</b>	<b>1,416</b>	<b>984</b>	<b>2,400</b>	<b>14,160</b>	<b>9,840</b>	<b>24,000</b>



## Sample Frame

Kenya is administratively divided into 47 counties. Each county is subdivided into sub-counties. A total of 96,251 EAs were developed during the 2009 Census cartographic mapping. This information was used in 2010 to design a master sample known as the fifth National Sample Survey and Evaluation Programme (NASSEP V) where a total of 5,360 EAs were selected. This is the frame that was used for the 2015/16 KIHBS.

The NASSEP V master frame was designed in a multi-tiered structure with four sub-samples (C1, C2, C3 and C4), each consisting of 1,340 EAs that can serve as independent frames. The frame used the counties as the first level stratification and further stratified by rural and urban areas, making a total of 92 strata with Nairobi City and Mombasa counties having only urban areas. The sampling of EAs into the frame was done independently within each stratum. Each sampled EA was developed into a cluster through listing and mapping process that standardized them into one measure of size having an average of 100 households (between 50 and 149 households). The frame was gradually developed in phases from the year 2012 to 2015.

The C3 and C4 sub-samples were primarily used in the 2015/16 KIHBS. In situations where a stratum did not have sufficient clusters from the two sub-samples, the other sub-samples were included.

## Sampling

The survey sample was selected in two stages. Stage one involved selection of clusters, while the second stage involved selection of households. The sampling was done using the Complex Module of the SPSS software.

### Sampling of PSUs

The selection of 2,400 clusters for the survey was done using the Equal Probability Selection Method (EPSEM). The clusters were selected systematically from NASSEP V frame independently within each stratum. The process involved ordering the clusters by county, then by urban/rural, and finally by geographic location. The resulting sample retained properties of PPS as used in creation of the frame.

### Sampling of Households and Respondents

This survey provided an opportunity to test the use of Computer Assisted Personal Interview (CAPI) in preparation for the proposed Kenya Continuous Household Survey Programme (KCHSP). The CAPI needed a sample of 6 households from each cluster.

All the developed clusters had information necessary for sampling of households. A few sampled clusters that had not been developed were subsequently developed during the period of the survey. Among the already developed clusters, the ones that were more than one year since the last listing/updating were updated gradually based on the quarters of the survey.

Using the total number of households from each sampled cluster available from the NASSEP V, a uniform sample of 16 households per cluster was selected using systematic sampling method. This procedure of selecting the sample households with a random start was done using the following criteria:

Let  $L$  be the total number of households listed in the cluster;

Let Random be a random number between  $(0, 1)$ ;

Let  $n$  be the number of households selected in the cluster;

Let  $I = L/n$  be the sampling interval.

- (1) The first selected sample household is  $k$  ( $k$  is the serial number of the household in the listing) if and only if:

$$(k-1)/L < \text{Random} \leq k/L$$

(2) The subsequent selected households are those having serial numbers:

$$k + (j-1)*I, \text{ (rounded to integers) for } j = 2, 3, \dots n;$$

Random numbers were different and independent from cluster to cluster.

Once the 16 households were sampled, a further sub-sampling was done systematically to select the ten households for the survey and the remaining ones for CAPI. In addition, half of the survey households were meant for the administration of Diary Questionnaires and, therefore, a further systematic sampling was done to separate the households.

This information was availed to the teams in advance before the start of data collection. The survey did not provide for substitution of sampled households and there was strictly no replacement of the preselected households.

### **Response Rates**

The survey recorded high response rates as shown in Annex Table 2 . Overall, 91 per cent of the sampled households had questionnaires completed with the least being Nairobi City County (76 per cent). Thirteen clusters could not be done either due to insecurity or non-availability of households partly occasioned by movement of populations in nomadic areas. However, in terms of the sample, the survey design had catered for such non-coverage.

Annex Table 2 : Survey Response Rates by Residence and County

Residence/ County	Number of Sampled Households	Interview Result				Postponed
		Completed	Partially complete (incomplete)	No household member at home or no competent respondent at home at time of visit	Entire household absent for extended period of time	
		(C)	(PC)	(HP)	(HA)	
<b>National.....</b>	<b>23,852</b>	<b>91.2</b>	<b>0.4</b>	<b>0.5</b>	<b>4.2</b>	<b>0.0</b>
<b>Rural .....</b>	<b>13,982</b>	<b>93.5</b>	<b>0.2</b>	<b>0.3</b>	<b>3.2</b>	<b>0.0</b>
<b>Urban .....</b>	<b>9,870</b>	<b>87.8</b>	<b>0.5</b>	<b>0.7</b>	<b>5.6</b>	<b>0.0</b>
<b>County</b>						
Mombasa.....	520	88.1	0.4	0.0	6.7	-
Kwale.....	520	89.6	0.6	0.2	6.0	-
Kilifi.....	510	91.6	1.0	0.4	3.1	-
Tana River.....	479	91.2	1.0	0.2	5.2	-
Lamu.....	440	94.8	0.5	0.2	1.6	-
Taita / Taveta.....	480	92.5	0.6	0.6	3.8	-
Garissa.....	509	82.9	0.2	1.0	8.3	-
Wajir.....	459	88.9	0.2	0.2	8.7	-
Mandera.....	460	91.5	0.0	0.0	5.7	-
Marsabit.....	431	80.5	0.0	0.5	13.5	0.2
Isiolo.....	420	95.2	0.0	0.7	1.7	-
Meru.....	560	95.4	0.2	0.5	1.4	-
Tharaka-Nithi.....	480	92.5	0.6	0.2	1.7	-
Embu.....	480	94.4	0.4	0.8	1.9	-
Kitui.....	510	90.2	0.6	0.4	6.3	-
Machakos.....	520	92.5	0.6	0.6	4.8	-
Makueni.....	520	95.2	0.0	0.2	3.7	-
Nyandarua.....	480	93.5	0.0	0.2	2.1	-
Nyeri.....	520	96.5	0.0	0.2	2.3	-
Kirinyaga.....	510	90.4	1.2	1.0	3.3	-
Murang'a.....	520	93.3	0.0	0.0	2.5	-
Kiambu.....	580	88.1	0.0	1.7	5.7	-
Turkana.....	470	87.9	0.0	0.2	6.8	-
West Pokot.....	479	91.0	0.0	0.2	6.3	-
Samburu.....	440	95.9	0.0	0.0	0.7	-
Trans Nzoia.....	520	93.5	0.0	0.2	1.3	-
Uasin Gishu.....	540	90.4	0.4	0.7	4.4	-
Elgeyo / Marakwet...	475	92.2	0.6	0.0	6.3	-
Nandi.....	520	93.3	0.2	0.0	3.7	-
Baringo.....	480	91.3	0.0	0.0	3.8	-
Laikipia.....	510	91.2	0.4	0.0	3.7	-
Nakuru.....	570	86.1	0.5	2.5	4.4	-
Narok.....	480	94.4	1.3	0.2	2.3	-
Kajiado.....	480	81.9	0.0	1.9	5.8	-
Kericho.....	520	91.0	0.2	0.6	2.3	-
Bomet.....	520	93.5	0.0	0.6	3.5	-
Kakamega.....	520	95.2	0.0	0.4	2.1	-
Vihiga.....	480	95.4	0.0	0.2	1.7	0.2
Bungoma.....	520	93.3	0.4	0.0	2.3	-
Busia.....	520	91.0	0.4	1.2	4.6	-
Siaya.....	520	93.5	0.0	0.4	3.5	-
Kisumu.....	540	93.0	0.2	1.3	3.9	-
Homa Bay.....	520	91.2	0.4	0.0	6.0	-
Migori.....	520	92.1	0.4	0.0	2.7	-
Kisii.....	560	95.2	0.2	0.5	2.0	-
Nyamira.....	520	93.8	0.4	1.0	2.7	-
Nairobi City.....	720	76.0	1.9	0.0	9.7	-

<sup>1</sup>Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:  $100 \times C / (C+CP+HP+P+R)$

Annex Table 2: Survey Response Rates by Residence and County...Cont'd

Residence/ County	Interview Result						Household Response Rate
	Refused	Dwelling vacant or structure not a dwelling	Dwelling destroyed	Dwelling not found	Other	Total	
	(R)	(DV)	(DD)	(DNF)	(O)		
National.....	0.5	2.1	0.3	0.1	0.7	100	98.5
Rural .....	0.2	1.4	0.4	0.2	0.5	100	99.2
Urban .....	0.9	3	0.3	0.1	0.9	100	97.5
<b>County</b>							
Mombasa.....	1.7	3.1	-	-	-	100	97.7
Kwale.....	0.4	2.9	0.4	-	-	100	98.7
Kilifi.....	0.8	1.4	1	-	0.8	100	97.7
Tana River.....	0.2	1.5	-	-	0.6	100	98.4
Lamu.....	0.5	1.6	0.2	-	0.7	100	98.8
Taita / Taveta.....	0.8	1	0.4	-	0.2	100	97.8
Garissa.....	-	2	3.3	2	0.4	100	98.6
Wajir.....	0.2	0.4	0.9	0.4	-	100	99.3
Mandera.....	0.4	2.2	-	0.2	-	100	99.5
Marsabit.....	0.5	2.3	-	2.6	-	100	98.6
Isiolo.....	0.2	1.9	0.2	-	-	100	99
Meru.....	0.2	2.1	-	0.2	-	100	99.1
Tharaka-Nithi.....	1	3.5	0.2	-	0.2	100	98
Embu.....	-	-	0.2	-	2.3	100	98.7
Kitui.....	0.8	1.4	0.2	-	0.2	100	98.1
Machakos.....	0.2	1	0.4	-	-	100	98.6
Makueni.....	-	0.6	-	-	0.4	100	99.8
Nyandarua.....	-	2.7	0.6	-	0.8	100	99.8
Nyeri.....	0.2	0.6	-	-	0.2	100	99.6
Kirinyaga.....	0.8	2.7	0.4	-	0.2	100	96.8
Murang'a.....	0.8	2.5	-	-	1	100	99.2
Kiambu.....	0.9	2.2	0.2	-	1.2	100	97.1
Turkana.....	0.2	3.6	0.9	-	0.4	100	99.5
West Pokot.....	0.2	1.9	-	-	0.4	100	99.5
Samburu.....	-	1.8	1.6	-	-	100	100
Trans Nzoia.....	0.8	3.1	0.4	-	0.8	100	99
Uasin Gishu.....	0.7	2.2	0.4	-	0.7	100	98
Elgeyo / Marakwet...	-	0.4	0.2	0.2	-	100	99.3
Nandi.....	0.2	2.3	-	-	0.4	100	99.6
Baringo.....	0.2	4.6	0.2	-	-	100	99.8
Laikipia.....	0.6	3.1	0.2	-	0.8	100	98.9
Nakuru.....	0.4	2.6	-	-	3.5	100	96.3
Narok.....	0.4	1.3	0.2	-	-	100	98.1
Kajiado.....	3.1	6.5	0.2	0.4	0.2	100	94.2
Kericho.....	1	3.5	0.2	0.6	0.8	100	98.1
Bomet.....	-	1.9	0.4	-	0.2	100	99.4
Kakamega.....	0.6	0.8	0.4	0.2	0.4	100	99
Vihiga.....	0.2	0.8	-	-	1.5	100	99.3
Bungoma.....	-	3.5	0.2	-	0.4	100	99.6
Busia.....	0.6	0.4	0.6	-	1.3	100	97.7
Siaya.....	-	2.1	0.4	-	0.2	100	99.6
Kisumu.....	0.4	1.3	-	-	-	100	98
Homa Bay.....	0.4	0.6	-	-	1.5	100	99.2
Migori.....	0.4	2.7	0.4	0.2	1.2	100	99.2
Kisii.....	0.2	1.4	0.4	0.2	-	100	99.1
Nyamira.....	0.2	0.8	-	-	1.2	100	98.4
Nairobi City.....	2.6	4.7	0.6	0.1	4.3	100	94.3

## Weights

The survey was not self-weighting because of the non-proportional sample allocation to the sampling strata. The resulting data have therefore been weighted to be representative at both the national and county levels.

In the computation process, adjustment was done for cluster and household non-response. Thus, the generation of the cluster weights is a product of sample cluster design weight and household as well as cluster response adjustment factors. The mathematical relation is given as follows:

$$W_i = D_h \times \frac{S_h}{I_h} \times \frac{C_h}{c_h}$$

where,

$W_i$  = Overall cluster weight for the i-th cluster in the h-th stratum

$D_i$  = Sample cluster design weight obtained from inverse of cluster selection probabilities for the i-th cluster in the h-th stratum

$S_h$  = Number of listed households in the i-th cluster in the h-th stratum

$I_h$  = Number of responding households in i-th cluster in the h-th stratum

$C_h$  = Number of clusters in h-th stratum

$c_h$  = Number of selected clusters in the h-th stratum

After this, the weights were calibrated to match the projected population figures (as at mid-2016) at the county level. Kenya's population projection for 2016 is estimated at 45,371 thousand persons.

The weights were applied to each individual item to obtain estimates on any given variable in a specified domain or category.

# APPENDIX 2

## CONCEPTS AND DEFINITIONS

**Age cohort:** A group of individuals that share the same age range.

**Age-Dependency Ratio:** This is the ratio of the proportion of population (age 0-14 and 65+ years) that is dependent on the working age population (age 15-64 years)

**Child Age Dependency Ratio:** This is the number of children aged below 15 years relative to the total number of persons aged 15-64 years

**County:** One of the 47 local territories of devolved governance listed in the First Schedule of the Constitution of Kenya, 2010.

**Cluster:** A Primary Sampling Unit (PSU) under the NASSEP V sampling frame from which KNBS obtains nationally and sub-nationally representative household survey samples.

**Domestic Tourist:** This is a traveller taking a trip to a main destination outside his/her usual environment for less than a year, for any main purpose (business leisure or other personal purpose) other than to be employed by a resident entity within the country.

**Dwelling Unit:** This is a place from abode or residence occupied by one or more households with a private entrance. It is made of a structure which a household uses for sleeping, eating, entertaining guests, etc. A dwelling unit may be a whole structure or part of a structure, especially in the urban setting.

**Enumeration Area (EA):** A designated area with an average of about 100 households, but may vary from 50 to 149 households depending on the population density, terrain, and/or vastness of the area concerned. An EA may be a village, group of villages or part of a village, and is so delineated to be conveniently covered by an enumerator.

**Gross Attendance Ratio (GAR):** This is the total number of persons attending school regardless of their age, expressed as a percentage of the official school age population for a particular level of education.

**Habitable room:** One that is used mainly for living purposes or entertaining guests and excludes stores, kitchen, bathrooms and granaries. A kitchen (or store, and garage), under normal circumstances, is not considered as a habitable room. However, if the household uses the kitchen (or store, and garage), for eating and/or sleeping purposes or entertaining guest, then it is considered as a habitable room

**Household:** A person or a group of people living in the same compound (fenced or unfenced); answerable to the same head and sharing a common source of food and/or income as a single unit in the sense that they have common housekeeping arrangements (that is, share or are supported by a common budget).

**Household head:** A member of the household who makes key day to day decisions pertaining to the household and whose authority is recognized by all other members of the household.

**Household Size:** The number of persons living in the household

**Net Attendance Ratio:** This refers to the total number of persons in the official school age group attending a specific educational level to the total population in that age group

**Old-Age Dependency Ratio:** This is the population aged 65 years and above relative to the total number of persons aged 15-64 years

**Orphan:** A child under 18 years old who has lost one or both parents.

**Residence:** This is the segment of an area defined by population density; can be rural or urban.

**Respondent:** Any responsible adult member of the household who provides information to the research assistant during the survey.

**Rural residence:** A large and isolated area of an open country, often with low population density.

**Safe/Improved Drinking Water:** Households were considered to use improved drinking water if it was obtained from the following sources: piped water, borehole with pump, protected spring, protected well, rain water and bottled water. In this survey, no tests were undertaken to ascertain the water quality

**Sex ratio:** The number of males per 100 females in a population.

**Shocks to the household:** Unexpected occurrences that influence the household economic welfare.

**Stunting:** A child whose z-score falls below minus two standard deviations from the median of the reference population in terms of height-for-age is considered short for his/ her age or stunted.

**Tenure:** The proprietary status under which a dwelling is occupied by households.

**Urban residence:** Any aggregate part of the county, region or country, made up of urban centres or parts of urban centres whose population was estimated at 2,000 or higher during the 2009 Population and Housing Census.

**Visitor:** A visitor is classified as a tourist if his/her trip includes an overnight stay or excursion (sometimes referred to as a day visitor). The 2015/16 KIHBS excluded excursionists.

**Z-score:** A measure of how many standard deviations an observation is from the mean of the distribution.



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