

Exploring Kenya's Inequality

Pulling Apart or Pooling Together?

Laikipia County



Published by



Kenya National Bureau of Statistics
P.O. Box 30266-00100 Nairobi, Kenya
Email: info@knbs.or.ke Website: www.knbs.or.ke



Society for International Development – East Africa
P.O. Box 2404-00100 Nairobi, Kenya
Email: sidea@sidint.org | Website: www.sidint.net

© 2013 Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID)

ISBN – 978 - 9966 - 029 - 18 - 8

With funding from DANIDA through Drivers of Accountability Programme



The publication, however, remains the sole responsibility of the Kenya National Bureau of Statistics (KNBS) and the Society for International Development (SID).

Written by:

Eston Ngugi

Data and tables generation:

Samuel Kipruto

Paul Samoei

Maps generation:

George Matheka Kamula

Technical Input and Editing:

Katindi Sivi-Njonjo

Jason Lakin

Copy Editing:

Ali Nadim Zaidi

Leonard Wanyama

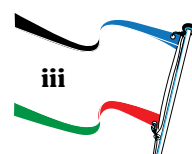
Design, Print and Publishing:

Ascent Limited

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, or by any means electronic, mechanical, photocopying, recording or otherwise, without the prior express and written permission of the publishers. Any part of this publication may be freely reviewed or quoted provided the source is duly acknowledged. It may not be sold or used for commercial purposes or for profit.

Table of contents

Table of contents	iii
Foreword	iv
Acknowledgements	v
Striking features on inter-county inequalities in Kenya	vi
List of Figures	viii
List Annex Tables	ix
Abbreviations	xi
Introduction	2
Laikipia County	9



Foreword

Kenya, like all African countries, focused on poverty alleviation at independence, perhaps due to the level of vulnerability of its populations but also as a result of the 'trickle down' economic discourses of the time, which assumed that poverty rather than distribution mattered – in other words, that it was only necessary to concentrate on economic growth because, as the country grew richer, this wealth would trickle down to benefit the poorest sections of society. Inequality therefore had a very low profile in political, policy and scholarly discourses. In recent years though, social dimensions such as levels of access to education, clean water and sanitation are important in assessing people's quality of life. Being deprived of these essential services deepens poverty and reduces people's well-being. Stark differences in accessing these essential services among different groups make it difficult to reduce poverty even when economies are growing. According to the *Economist* (June 1, 2013), a 1% increase in incomes in the most unequal countries produces a mere 0.6 percent reduction in poverty. In the most equal countries, the same 1% growth yields a 4.3% reduction in poverty. Poverty and inequality are thus part of the same problem, and there is a strong case to be made for both economic growth and redistributive policies. From this perspective, Kenya's quest in vision 2030 to grow by 10% per annum must also ensure that inequality is reduced along the way and all people benefit equitably from development initiatives and resources allocated.

Since 2004, the Society for International Development (SID) and Kenya National Bureau of Statistics (KNBS) have collaborated to spearhead inequality research in Kenya. Through their initial publications such as *'Pulling Apart: Facts and Figures on Inequality in Kenya'*, which sought to present simple facts about various manifestations of inequality in Kenya, the understanding of Kenyans of the subject was deepened and a national debate on the dynamics, causes and possible responses started. The report *'Geographic Dimensions of Well-Being in Kenya: Who and Where are the Poor?'* elevated the poverty and inequality discourse further while the publication *'Readings on Inequality in Kenya: Sectoral Dynamics and Perspectives'* presented the causality, dynamics and other technical aspects of inequality.

KNBS and SID in this publication go further to present monetary measures of inequality such as expenditure patterns of groups and non-money metric measures of inequality in important livelihood parameters like employment, education, energy, housing, water and sanitation to show the levels of vulnerability and patterns of unequal access to essential social services at the national, county, constituency and ward levels.

We envisage that this work will be particularly helpful to county leaders who are tasked with the responsibility of ensuring equitable social and economic development while addressing the needs of marginalized groups and regions. We also hope that it will help in informing public engagement with the devolution process and be instrumental in formulating strategies and actions to overcome exclusion of groups or individuals from the benefits of growth and development in Kenya.

It is therefore our great pleasure to present 'Exploring Kenya's inequality: Pulling apart or pooling together?'

Ali Hersi

Society for International Development (SID)
Regional Director

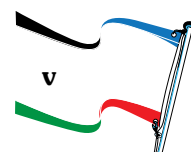


Acknowledgements

Kenya National Bureau of Statistics (KNBS) and Society for International Development (SID) are grateful to all the individuals directly involved in the publication of *‘Exploring Kenya’s Inequality: Pulling Apart or Pulling Together?’* books. Special mention goes to Zachary Mwangi (KNBS, Ag. Director General) and Ali Hersi (SID, Regional Director) for their institutional leadership; Katindi Sivi-Njonjo (SID, Programme Director) and Paul Samoei (KNBS) for the effective management of the project; Eston Ngugi; Tabitha Wambui Mwangi; Joshua Musyimi; Samuel Kipruto; George Kamula; Jason Lakin; Ali Zaidi; Leonard Wanyama; and Irene Omari for the different roles played in the completion of these publications.

KNBS and SID would like to thank Bernadette Wanjala (KIPPRA), Mwende Mwendwa (KIPPRA), Raphael Munavu (CRA), Moses Sichei (CRA), Calvin Muga (TISA), Chrispine Oduor (IEA), John T. Mukui, Awuor Ponge (IPAR, Kenya), Othieno Nyanjom, Mary Muyonga (SID), Prof. John Oucho (AMADPOC), Ms. Ada Mwangola (Vision 2030 Secretariat), Kilian Nyambu (NCIC), Charles Warria (DAP), Wanjiru Gikonyo (TISA) and Martin Napisa (NTA), for attending the peer review meetings held on 3rd October 2012 and Thursday, 28th Feb 2013 and for making invaluable comments that went into the initial production and the finalisation of the books. Special mention goes to Arthur Muliro, Wambui Gathathi, Con Omore, Andiwo Obondoh, Peter Gunja, Calleb Okoyo, Dennis Mutabazi, Leah Thuku, Jackson Kitololo, Yvonne Omwodo and Maureen Bwisa for their institutional support and administrative assistance throughout the project. The support of DANIDA through the Drivers of Accountability Project in Kenya is also gratefully acknowledged.

Stefano Prato
Managing Director,
SID



Striking Features on Intra-County Inequality in Kenya

Inequalities within counties in all the variables are extreme. In many cases, Kenyans living within a single county have completely different lifestyles and access to services.

Income/expenditure inequalities

1. The five counties with the worst income inequality (measured as a ratio of the top to the bottom decile) are in Coast. The ratio of expenditure by the wealthiest to the poorest is 20 to one and above in Lamu, Tana River, Kwale, and Kilifi. This means that those in the top decile have 20 times as much expenditure as those in the bottom decile. This is compared to an average for the whole country of nine to one.
2. Another way to look at income inequality is to compare the mean expenditure per adult across wards within a county. In 44 of the 47 counties, the mean expenditure in the poorest wards is less than 40 percent the mean expenditure in the wealthiest wards within the county. In both Kilifi and Kwale, the mean expenditure in the poorest wards (Garashi and Ndavaya, respectively) is less than 13 percent of expenditure in the wealthiest ward in the county.
3. Of the five poorest counties in terms of mean expenditure, four are in the North (Mandera, Wajir, Turkana and Marsabit) and the last is in Coast (Tana River). However, of the five most unequal counties, only one (Marsabit County) is in the North (looking at ratio of mean expenditure in richest to poorest ward). The other four most unequal counties by this measure are: Kilifi, Kwale, Kajiado and Kitui.
4. If we look at Gini coefficients for the whole county, the most unequal counties are also in Coast: Tana River (.631), Kwale (.604), and Kilifi (.570).
5. The most equal counties by income measure (ratio of top decile to bottom) are: Narok, West Pokot, Bomet, Nandi and Nairobi. Using the ratio of average income in top to bottom ward, the five most equal counties are: Kirinyaga, Samburu, Siaya, Nyandarua, Narok.

Access to Education

6. Major urban areas in Kenya have high education levels but very large disparities. Mombasa, Nairobi and Kisumu all have gaps between highest and lowest wards of nearly 50 percentage points in share of residents with secondary school education or higher levels.
7. In the 5 most rural counties (Baringo, Siaya, Pokot, Narok and Tharaka Nithi), education levels are lower but the gap, while still large, is somewhat lower than that espoused in urban areas. On average, the gap in these 5 counties between wards with highest share of residents with secondary school or higher and those with the lowest share is about 26 percentage points.
8. The most extreme difference in secondary school education and above is in Kajiado County where the top ward (Ongata Rongai) has nearly 59 percent of the population with secondary education plus, while the bottom ward (Mosiro) has only 2 percent.
9. One way to think about inequality in education is to compare the number of people with no education



to those with some education. A more unequal county is one that has large numbers of both. Isiolo is the most unequal county in Kenya by this measure, with 51 percent of the population having no education, and 49 percent with some. This is followed by West Pokot at 55 percent with no education and 45 percent with some, and Tana River at 56 percent with no education and 44 with some.

Access to Improved Sanitation

10. Kajiado County has the highest gap between wards with access to improved sanitation. The best performing ward (Ongata Rongai) has 89 percent of residents with access to improved sanitation while the worst performing ward (Mosiro) has 2 percent of residents with access to improved sanitation, a gap of nearly 87 percentage points.
11. There are 9 counties where the gap in access to improved sanitation between the best and worst performing wards is over 80 percentage points. These are Baringo, Garissa, Kajiado, Kericho, Kilifi, Machakos, Marsabit, Nyandarua and West Pokot.

Access to Improved Sources of Water

12. In all of the 47 counties, the highest gap in access to improved water sources between the county with the best access to improved water sources and the least is over 45 percentage points. The most severe gaps are in Mandera, Garissa, Marsabit, (over 99 percentage points), Kilifi (over 98 percentage points) and Wajir (over 97 percentage points).

Access to Improved Sources of Lighting

13. The gaps within counties in access to electricity for lighting are also enormous. In most counties (29 out of 47), the gap between the ward with the most access to electricity and the least access is more than 40 percentage points. The most severe disparities between wards are in Mombasa (95 percentage point gap between highest and lowest ward), Garissa (92 percentage points), and Nakuru (89 percentage points).

Access to Improved Housing

14. The highest extreme in this variable is found in Baringo County where all residents in Silale ward live in grass huts while no one in Ravine ward in the same county lives in grass huts.

Overall ranking of the variables

15. Overall, the counties with the most income inequalities as measured by the gini coefficient are Tana River, Kwale, Kilifi, Lamu, Migori and Busia. However, the counties that are consistently mentioned among the most deprived hence have the lowest access to essential services compared to others across the following nine variables i.e. poverty, mean household expenditure, education, work for pay, water, sanitation, cooking fuel, access to electricity and improved housing are Mandera (8 variables), Wajir (8 variables), Turkana (7 variables) and Marsabit (7 variables).

Abbreviations

AMADPOC	African Migration and Development Policy Centre
CRA	Commission on Revenue Allocation
DANIDA	Danish International Development Agency
DAP	Drivers of Accountability Programme
EAs	Enumeration Areas
HDI	Human Development Index
IBP	International Budget Partnership
IEA	Institute of Economic Affairs
IPAR	Institute of Policy Analysis and Research
KIHBS	Kenya Intergraded Household Budget Survey
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
LPG	Liquefied Petroleum Gas
NCIC	National Cohesion and Integration Commission
NTA	National Taxpayers Association
PCA	Principal Component Analysis
SAEs	Small Area Estimation
SID	Society for International Development
TISA	The Institute for Social Accountability
VIP latrine	Ventilated-Improved Pit latrine
VOCs	Volatile Organic Carbons
WDR	World Development Report

Introduction

Background

For more than half a century many people in the development sector in Kenya have worked at alleviating extreme poverty so that the poorest people can access basic goods and services for survival like food, safe drinking water, sanitation, shelter and education. However when the current national averages are disaggregated there are individuals and groups that still lag too behind. As a result, the gap between the rich and the poor, urban and rural areas, among ethnic groups or between genders reveal huge disparities between those who are well endowed and those who are deprived.

According to the world inequality statistics, Kenya was ranked 103 out of 169 countries making it the 66th most unequal country in the world. Kenya's Inequality is rooted in its history, politics, economics and social organization and manifests itself in the lack of access to services, resources, power, voice and agency. Inequality continues to be driven by various factors such as: social norms, behaviours and practices that fuel discrimination and obstruct access at the local level and/ or at the larger societal level; the fact that services are not reaching those who are most in need of them due to intentional or unintentional barriers; the governance, accountability, policy or legislative issues that do not favor equal opportunities for the disadvantaged; and economic forces i.e. the unequal control of productive assets by the different socio-economic groups.

According to the 2005 report on the World Social Situation, sustained poverty reduction cannot be achieved unless equality of opportunity and access to basic services is ensured. Reducing inequality must therefore be explicitly incorporated in policies and programmes aimed at poverty reduction. In addition, specific interventions may be required, such as: affirmative action; targeted public investments in underserved areas and sectors; access to resources that are not conditional; and a conscious effort to ensure that policies and programmes implemented have to provide equitable opportunities for all.

This chapter presents the basic concepts on inequality and poverty, methods used for analysis, justification and choice of variables on inequality. The analysis is based on the 2009 Kenya housing and population census while the 2006 Kenya integrated household budget survey is combined with census to estimate poverty and inequality measures from the national to the ward level. Tabulation of both money metric measures of inequality such as mean expenditure and non-money metric measures of inequality in important livelihood parameters like, employment, education, energy, housing, water and sanitation are presented. These variables were selected from the census data and analyzed in detail and form the core of the inequality reports. Other variables such as migration or health indicators like mortality, fertility etc. are analyzed and presented in several monographs by Kenya National Bureau of Statistics and were therefore left out of this report.

Methodology

Gini-coefficient of inequality

This is the most commonly used measure of inequality. The coefficient varies between '0', which reflects complete equality and '1' which indicates complete inequality. Graphically, the Gini coefficient can be



easily represented by the area between the Lorenz curve and the line of equality. On the figure below, the Lorenz curve maps the cumulative income share on the vertical axis against the distribution of the population on the horizontal axis. The Gini coefficient is calculated as the area (A) divided by the sum of areas (A and B) i.e. $A/(A+B)$. If $A=0$ the Gini coefficient becomes 0 which means perfect equality, whereas if $B=0$ the Gini coefficient becomes 1 which means complete inequality. Let x_i be a point on the X-axis, and y_i a point on the Y-axis, the Gini coefficient formula is:

$$Gini = 1 - \sum_{i=1}^N (x_i - x_{i-1})(y_i + y_{i-1})$$

An Illustration of the Lorenz Curve



Small Area Estimation (SAE)

The small area problem essentially concerns obtaining reliable estimates of quantities of interest — totals or means of study variables, for example — for geographical regions, when the regional sample sizes are small in the survey data set. In the context of small area estimation, an area or domain becomes small when its sample size is too small for direct estimation of adequate precision. If the regional estimates are to be obtained by the traditional direct survey estimators, based only on the sample data from the area of interest itself, small sample sizes lead to undesirably large standard errors for them. For instance, due to their low precision the estimates might not satisfy the generally accepted publishing criteria in official statistics. It may even happen that there are no sample members at all from some areas, making the direct estimation impossible. All this gives rise to the need of special small area estimation methodology.

Most of KNBS surveys were designed to provide statistically reliable, design-based estimates only at the national, provincial and district levels such as the Kenya Intergraded Household Budget Survey of 2005/06 (KIHBS). The sheer practical difficulties and cost of implementing and conducting sample surveys that would provide reliable estimates at levels finer than the district were generally prohibitive, both in terms of the increased sample size required and in terms of the added burden on providers of survey data (respondents). However through SAE and using the census and other survey datasets, accurate small area poverty estimates for 2009 for all the counties are obtainable.

The sample in the 2005/06 KIHBS, which was a representative subset of the population, collected detailed information regarding consumption expenditures. The survey gives poverty estimate of urban and rural poverty at the national level, the provincial level and, albeit with less precision, at the district level. However, the sample sizes of such household surveys preclude estimation of meaningful poverty measures for smaller areas such as divisions, locations or wards. Data collected through censuses are sufficiently large to provide representative measurements below the district level such as divisions, locations and sub-locations. However, this data does not contain the detailed information on consumption expenditures required to estimate poverty indicators. In small area estimation methodology, the first step of the analysis involves exploring the relationship between a set of characteristics of households and the welfare level of the same households, which has detailed information about household expenditure and consumption. A regression equation is then estimated to explain daily per capita consumption and expenditure of a household using a number of socio-economic variables such as household size, education levels, housing characteristics and access to basic services.

While the census does not contain household expenditure data, it does contain these socio-economic variables. Therefore, it will be possible to statistically impute household expenditures for the census households by applying the socio-economic variables from the census data on the estimated relationship based on the survey data. This will give estimates of the welfare level of all households in the census, which in turn allows for estimation of the proportion of households that are poor and other poverty measures for relatively small geographic areas. To determine how many people are poor in each area, the study would then utilize the 2005/06 monetary poverty lines for rural and urban households respectively. In terms of actual process, the following steps were undertaken:

Cluster Matching: Matching of the KIHBS clusters, which were created using the 1999 Population and Housing Census Enumeration Areas (EA) to 2009 Population and Housing Census EAs. The purpose was to trace the KIBHS 2005/06 clusters to the 2009 Enumeration Areas.

Zero Stage: The first step of the analysis involved finding out comparable variables from the survey (Kenya Integrated Household Budget 2005/06) and the census (Kenya 2009 Population and Housing Census). This required the use of the survey and census questionnaires as well as their manuals.

First Stage (Consumption Model): This stage involved the use of regression analysis to explore the relationship between an agreed set of characteristics in the household and the consumption levels of the same households from the survey data. The regression equation was then used to estimate and explain daily per capita consumption and expenditure of households using socio-economic variables



such as household size, education levels, housing characteristics and access to basic services, and other auxiliary variables. While the census did not contain household expenditure data, it did contain these socio-economic variables.

Second Stage (Simulation): Analysis at this stage involved statistical imputation of household expenditures for the census households, by applying the socio-economic variables from the census data on the estimated relationship based on the survey data.

Identification of poor households Principal Component Analysis (PCA)

In order to attain the objective of the poverty targeting in this study, the household needed to be established. There are three principal indicators of welfare; household income; household consumption expenditures; and household wealth. Household income is the theoretical indicator of choice of welfare/economic status. However, it is extremely difficult to measure accurately due to the fact that many people do not remember all the sources of their income or better still would not want to divulge this information. Measuring consumption expenditures has many drawbacks such as the fact that household consumption expenditures typically are obtained from recall method usually for a period of not more than four weeks. In all cases a well planned and large scale survey is needed, which is time consuming and costly to collect. The estimation of wealth is a difficult concept due to both the quantitative as well as the qualitative aspects of it. It can also be difficult to compute especially when wealth is looked at as both tangible and intangible.

Given that the three main indicators of welfare cannot be determined in a shorter time, an alternative method that is quick is needed. The alternative approach then in measuring welfare is generally through the asset index. In measuring the asset index, multivariate statistical procedures such the factor analysis, discriminate analysis, cluster analysis or the principal component analysis methods are used. Principal components analysis transforms the original set of variables into a smaller set of linear combinations that account for most of the variance in the original set. The purpose of PCA is to determine factors (i.e., principal components) in order to explain as much of the total variation in the data as possible.

In this project the principal component analysis was utilized in order to generate the asset (wealth) index for each household in the study area. The PCA can be used as an exploratory tool to investigate patterns in the data; in identify natural groupings of the population for further analysis and; to reduce several dimensionalities in the number of known dimensions. In generating this index information from the datasets such as the tenure status of main dwelling units; roof, wall, and floor materials of main dwelling; main source of water; means of human waste disposal; cooking and lighting fuels; household items such radio TV, fridge etc was required. The recent available dataset that contains this information for the project area is the Kenya Population and Housing Census 2009.

There are four main approaches to handling multivariate data for the construction of the asset index in surveys and censuses. The first three may be regarded as exploratory techniques leading to index construction. These are graphical procedures and summary measures. The two popular multivariate procedures - cluster analysis and principal component analysis (PCA) - are two of the key procedures that have a useful preliminary role to play in index construction and lastly regression modeling approach.

In the recent past there has been an increasing routine application of PCA to asset data in creating welfare indices (Gwatkin et al. 2000, Filmer and Pritchett 2001 and McKenzie 2003).

Concepts and definitions

Inequality

Inequality is characterized by the existence of unequal opportunities or life chances and unequal conditions such as incomes, goods and services. Inequality, usually structured and recurrent, results into an unfair or unjust gap between individuals, groups or households relative to others within a population. There are several methods of measuring inequality. In this study, we consider among other methods, the Gini-coefficient, the difference in expenditure shares and access to important basic services.

Equality and Equity

Although the two terms are sometimes used interchangeably, they are different concepts. Equality requires all to have same/ equal resources, while equity requires all to have the same opportunity to access same resources, survive, develop, and reach their full potential, without discrimination, bias, or favoritism. Equity also accepts differences that are earned fairly.

Poverty

The poverty line is a threshold below which people are deemed poor. Statistics summarizing the bottom of the consumption distribution (i.e. those that fall below the poverty line) are therefore provided. In 2005/06, the poverty line was estimated at Ksh1,562 and Ksh2,913 per adult equivalent¹ per month for rural and urban households respectively. Nationally, 45.2 percent of the population lives below the poverty line (2009 estimates) down from 46 percent in 2005/06.

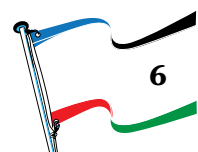
Spatial Dimensions

The reason poverty can be considered a spatial issue is two-fold. People of a similar socio-economic background tend to live in the same areas because the amount of money a person makes usually, but not always, influences their decision as to where to purchase or rent a home. At the same time, the area in which a person is born or lives can determine the level of access to opportunities like education and employment because income and education can influence settlement patterns and also be influenced by settlement patterns. They can therefore be considered causes and effects of spatial inequality and poverty.

Employment

Access to jobs is essential for overcoming inequality and reducing poverty. People who cannot access productive work are unable to generate an income sufficient to cover their basic needs and those of their families, or to accumulate savings to protect their households from the vicissitudes of the economy.

¹This is basically the idea that every person needs different levels of consumption because of their age, gender, height, weight, etc. and therefore we take this into account to create an adult equivalent based on the average needs of the different populations



The unemployed are therefore among the most vulnerable in society and are prone to poverty. Levels and patterns of employment and wages are also significant in determining degrees of poverty and inequality. Macroeconomic policy needs to emphasize the need for increasing regular good quality 'work for pay' that is covered by basic labour protection. The population and housing census 2009 included questions on labour and employment for the population aged 15-64.

The census, not being a labour survey, only had few categories of occupation which included work for pay, family business, family agricultural holdings, intern/volunteer, retired/home maker, full time student, incapacitated and no work. The tabulation was nested with education- for none, primary and secondary level.

Education

Education is typically seen as a means of improving people's welfare. Studies indicate that inequality declines as the average level of educational attainment increases, with secondary education producing the greatest payoff, especially for women (Cornia and Court, 2001). There is considerable evidence that even in settings where people are deprived of other essential services like sanitation or clean water, children of educated mothers have much better prospects of survival than do the children of uneducated mothers. Education is therefore typically viewed as a powerful factor in leveling the field of opportunity as it provides individuals with the capacity to obtain a higher income and standard of living. By learning to read and write and acquiring technical or professional skills, people increase their chances of obtaining decent, better-paying jobs. Education however can also represent a medium through which the worst forms of social stratification and segmentation are created. Inequalities in quality and access to education often translate into differentials in employment, occupation, income, residence and social class. These disparities are prevalent and tend to be determined by socio-economic and family background. Because such disparities are typically transmitted from generation to generation, access to educational and employment opportunities are to a certain degree inherited, with segments of the population systematically suffering exclusion. The importance of equal access to a well-functioning education system, particularly in relation to reducing inequalities, cannot be overemphasized.

Water

According to UNICEF (2008), over 1.1 billion people lack access to an improved water source and over three million people, mostly children, die annually from water-related diseases. Water quality refers to the basic and physical characteristics of water that determines its suitability for life or for human uses. The quality of water has tremendous effects on human health both in the short term and in the long term. As indicated in this report, slightly over half of Kenya's population has access to improved sources of water.

Sanitation

Sanitation refers to the principles and practices relating to the collection, removal or disposal of human excreta, household waste, water and refuse as they impact upon people and the environment. Decent sanitation includes appropriate hygiene awareness and behavior as well as acceptable, affordable and

sustainable sanitation services which is crucial for the health and wellbeing of people. Lack of access to safe human waste disposal facilities leads to higher costs to the community through pollution of rivers, ground water and higher incidence of air and water borne diseases. Other costs include reduced incomes as a result of disease and lower educational outcomes.

Nationally, 61 percent of the population has access to improved methods of waste disposal. A sizeable population i.e. 39 percent of the population is disadvantaged. Investments made in the provision of safe water supplies need to be commensurate with investments in safe waste disposal and hygiene promotion to have significant impact.

Housing Conditions (Roof, Wall and Floor)

Housing conditions are an indicator of the degree to which people live in humane conditions. Materials used in the construction of the floor, roof and wall materials of a dwelling unit are also indicative of the extent to which they protect occupants from the elements and other environmental hazards. Housing conditions have implications for provision of other services such as connections to water supply, electricity, and waste disposal. They also determine the safety, health and well being of the occupants. Low provision of these essential services leads to higher incidence of diseases, fewer opportunities for business services and lack of a conducive environment for learning. It is important to note that availability of materials, costs, weather and cultural conditions have a major influence on the type of materials used.

Energy fuel for cooking and lighting

Lack of access to clean sources of energy is a major impediment to development through health related complications such as increased respiratory infections and air pollution. The type of cooking fuel or lighting fuel used by households is related to the socio-economic status of households. High level energy sources are cleaner but cost more and are used by households with higher levels of income compared with primitive sources of fuel like firewood which are mainly used by households with a lower socio-economic profile. Globally about 2.5 billion people rely on biomass such as fuel-wood, charcoal, agricultural waste and animal dung to meet their energy needs for cooking.

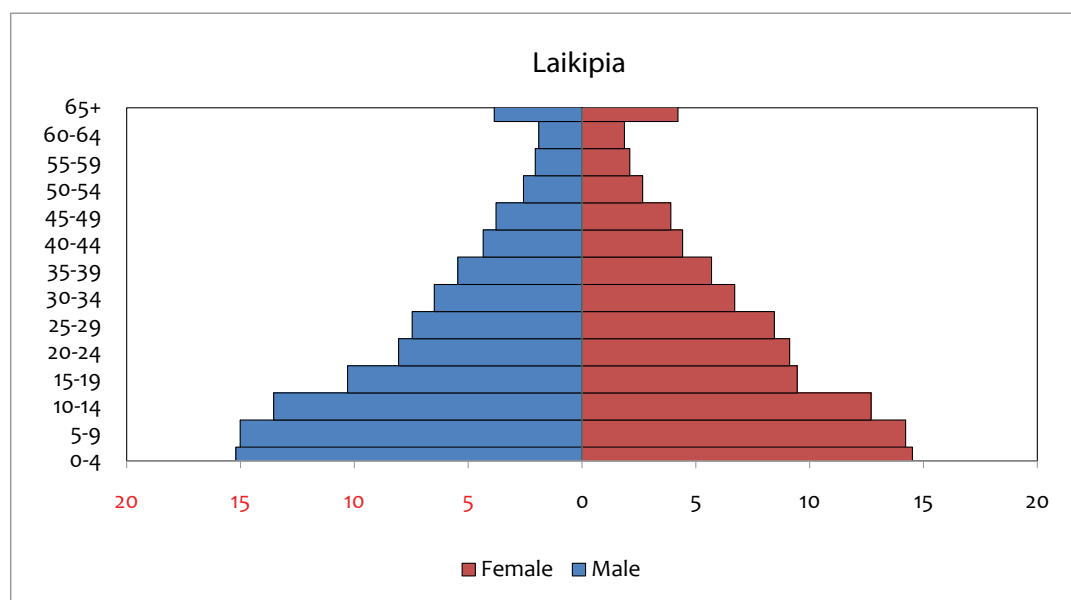


Laikipia County



LAIKIPIA COUNTY

Figure 20.1: Laikipia Population Pyramid



Population

Laikipia County has a child rich population, where 0-14 year olds constitute 43% of the total population. However, the county is at the onset of a fertility decline as 48% of households have 0-3 household members.

Employment

The 2009 population and housing census covered in brief the labour status as tabulated below. The main variable of interest for inequality discussed in the text is work for pay by level of education. The other variables, notably family business, family agricultural holdings, intern/volunteer, retired/homemaker, fulltime student, incapacitated and no work are tabulated and presented in the annex table 20.3 up to ward level.

Table 20: Overall Employment by Education Levels in Laikipia

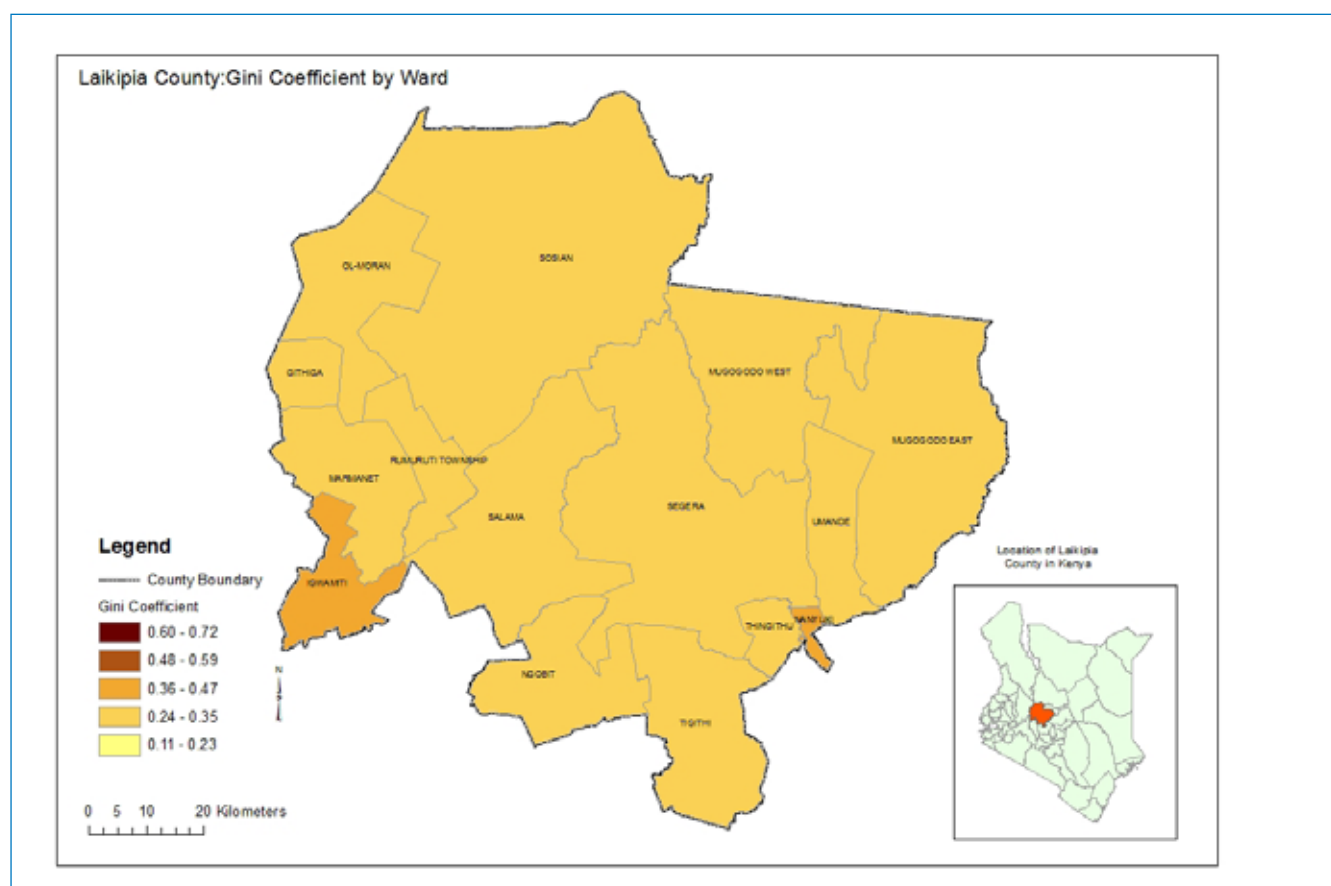
Education Level	Work for pay	Family Business	Family Agricultural Holding	Intern/Volunteer	Retired/ Home-maker	Fulltime Student	Incapacitated	No work	Number of Individuals
Total	25.1	10.9	31.9	0.9	9.6	12.3	0.4	8.8	209,091
None	16.0	8.9	41.2	1.3	18.1	0.4	1.2	12.9	31,316
Primary	22.4	10.3	37.5	0.8	9.6	10.3	0.4	8.8	97,692
Secondary+	31.9	12.4	21.6	1.0	6.3	19.5	0.2	7.1	80,083

In Laikipia County, 16% of the residents with no formal education, 22% of those with a primary education and 32% of those with secondary level of education or above are working for pay. Work for pay is highest in Nairobi at 49% and this is 17 percentage points above the level in Laikipia for those with a secondary level of education or above.

Gini Coefficient

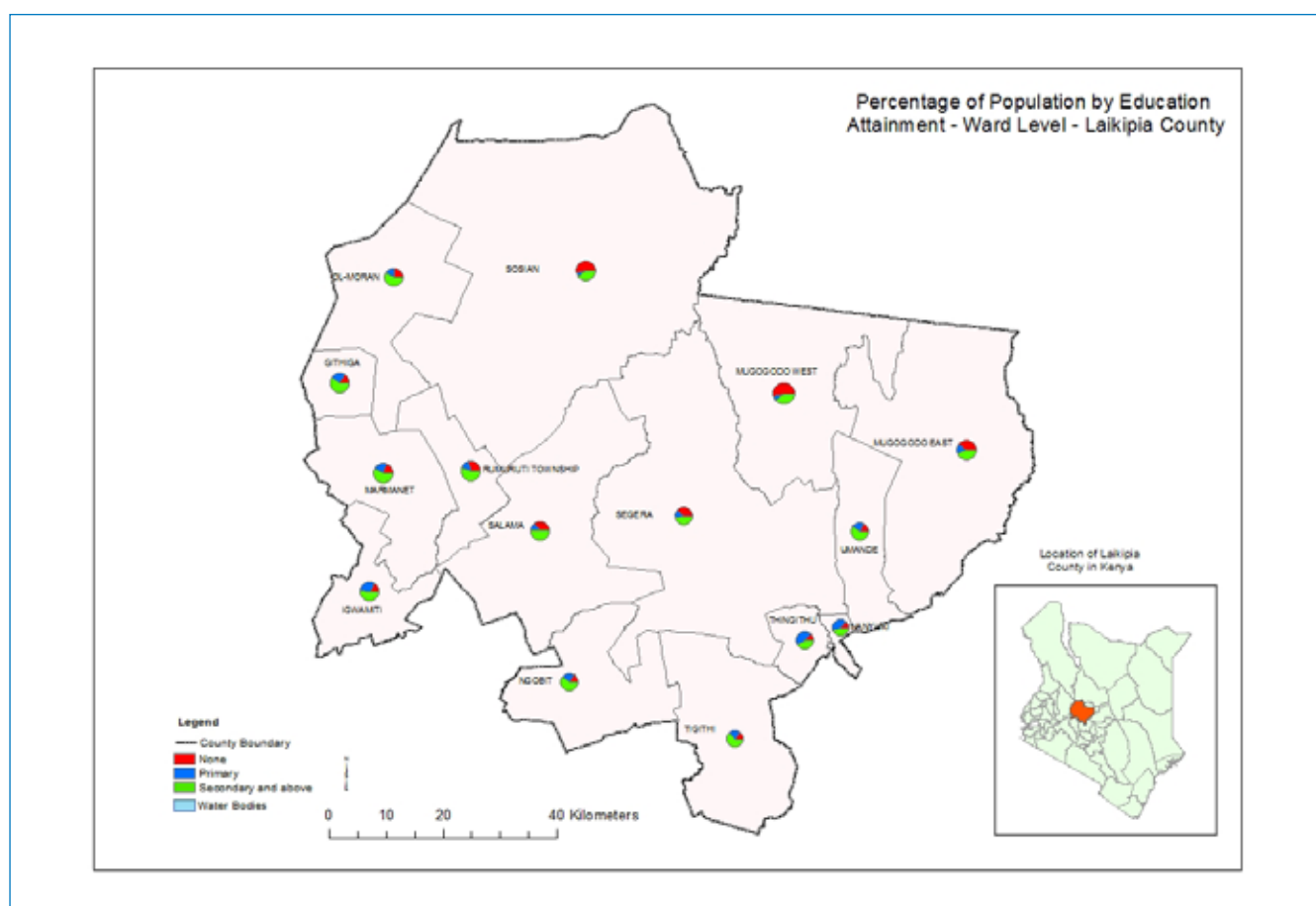
In this report, the Gini index measures the extent to which the distribution of consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of '0' represents perfect equality, while an index of '1' implies perfect inequality. Laikipia County's Gini index is 0.369 compared with Turkana County, which has the least inequality nationally (0.283).

Figure 20.2: Laikipia County-Gini Coefficient by Ward



Education

Figure 20.3: Laikipia County-Percentage of Population by Education attainment by Ward



Only 23% of Laikipia County residents have secondary level of education or above. Laikipia East constituency has the highest share of residents with a secondary level of education or above at 32%. This is three times Laikipia North constituency, which has the lowest share of residents with a secondary level of education or above. Laikipia East constituency is 9 percentage points above the county average. Thingithu ward has the highest share of residents with a secondary level of education or above at 45%. This is almost eight times Sosian ward, which has the lowest share of residents with a secondary level of education or above. Thingithu ward is 22 percentage points above the county average.

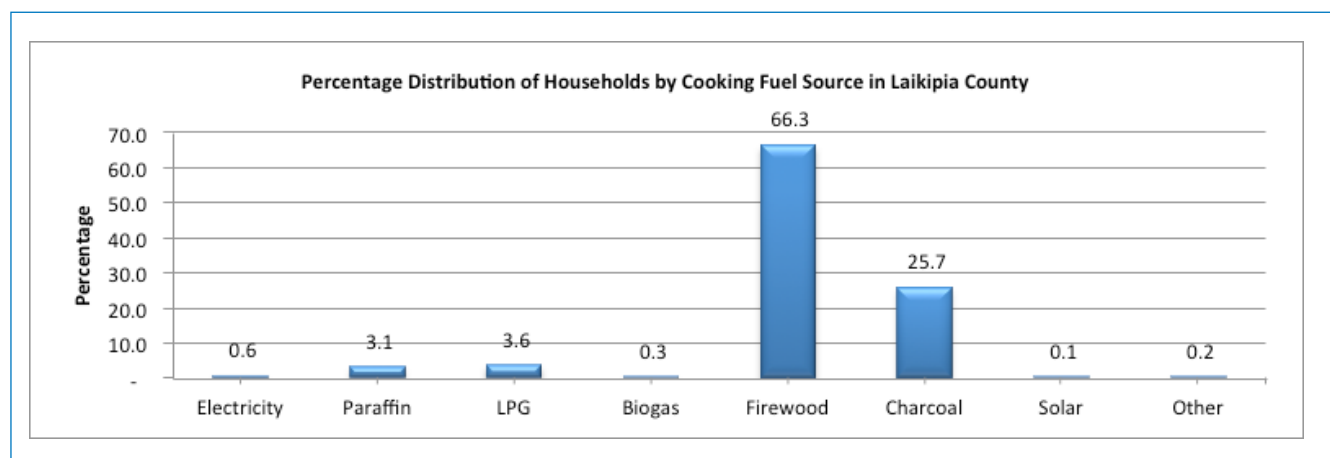
A total of 53% of Laikipia County residents have a primary level of education only. Laikipia West constituency has the highest share of residents with primary only at 55%. This is 12 percentage points above Laikipia North constituency, which has the lowest share of residents with a primary level of education only. Laikipia West constituency is 2 percentage points above the county average. Tigithi ward has the highest share of residents with a primary level of education only at 62%. This is almost twice Sosian ward, which has the lowest share of residents with a primary level of education only. Tigithi ward is 9 percentage points above the county average.

A total of 24% of Laikipia County residents have no formal education. Laikipia North constituency, which has the highest share of residents with no formal education, at 48%. This is thrice Laikipia East constituency, which has the lowest share of residents with no formal education. Laikipia North constituency is 24 percentage points above the county average. Two wards, Sosian and Mugogodo West, have the highest percentage of residents with no formal education at 54% each. This is almost five times Nanyuki ward, which has the lowest percentage of residents with no formal education. Sosian and Mugogodo West are 30 percentage points above the county average.

Energy

Cooking Fuel

Figure 20.4: Percentage Distribution of Households by Source of Cooking Fuel in Laikipia County



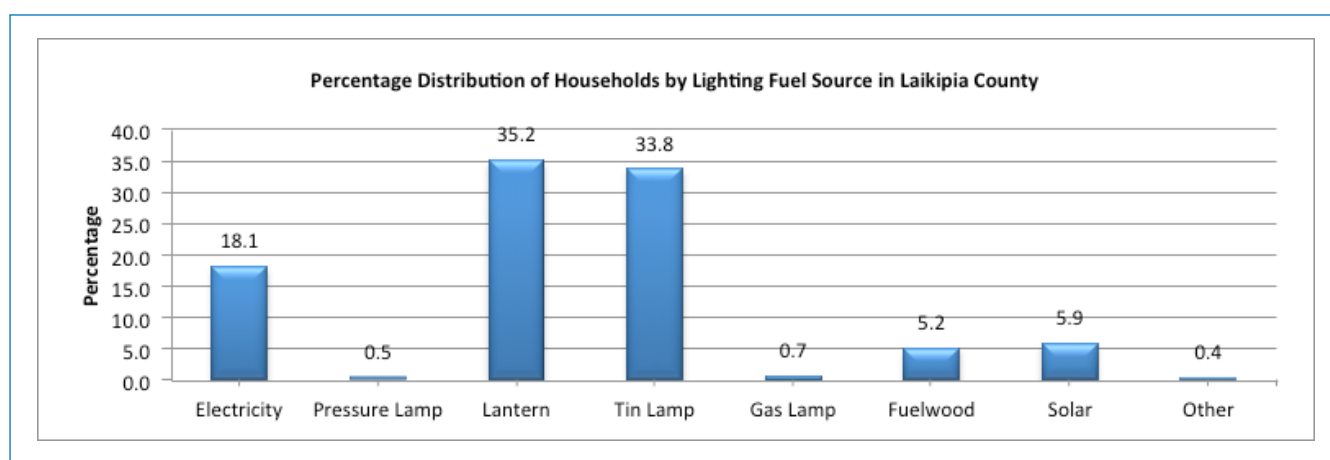
Only 4% of residents in Laikipia County use liquefied petroleum gas (LPG), and 3% use paraffin. 66% use firewood and 26% use charcoal. Firewood is the most common cooking fuel by either gender with 64% of male headed households and 70% in female headed households use it.

Laikipia North constituency has the highest level of firewood use in Laikipia County at 87%. This is 34 percentage points above Laikipia East constituency, which has the lowest share at 53%. Laikipia North constituency is 21 percentage points above the county average. Sosian ward has the highest level of firewood use in Laikipia County at 94%. This is six times Nanyuki ward, which has the lowest share. Sosian ward is 28 percentage points above the county average.

Laikipia East constituency has the highest level of charcoal use in Laikipia County at 33%. This is thrice Laikipia North constituency, which has the lowest share. Laikipia East is 7 percentage points above the county average. Nanyuki ward has the highest level of charcoal use in Laikipia County at 54%. This is almost 11 times Sosian ward, which has the lowest share. Nanyuki ward is 28 percentage points above the county average.

Lighting

Figure 20.5: Percentage Distribution of Households by Source of Lighting Fuel in Laikipia County



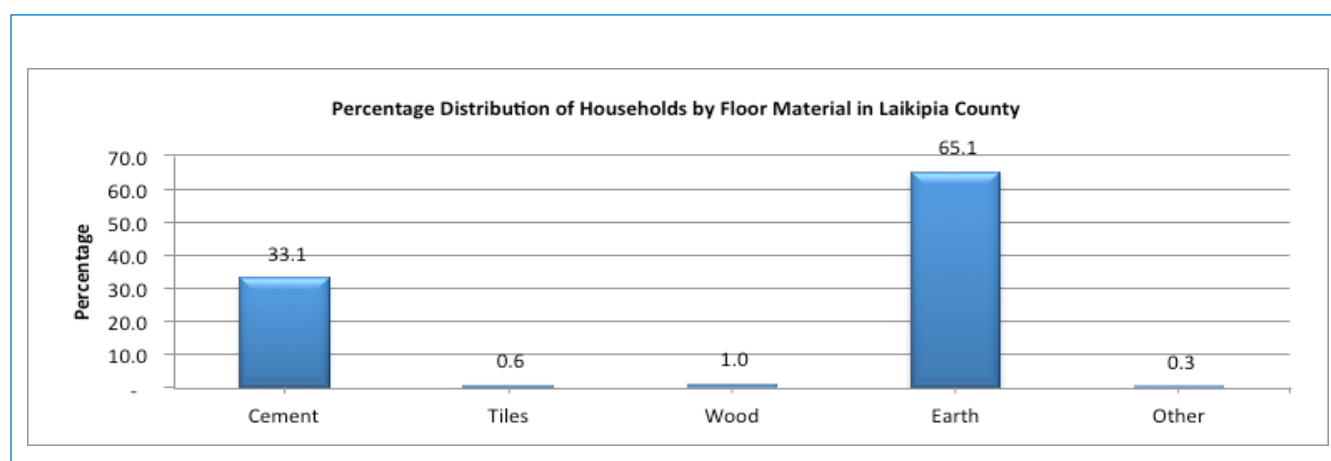
A total of 18% of residents in Laikipia County use electricity as their main source of lighting. A further 35% use lanterns, and 34% use tin lamps. 5% use fuel wood. Electricity use is slightly more common in male headed households at 19% as compared with female headed households at 16%.

Laikipia East constituency has the highest level of electricity use at 28%. That is seven times Laikipia North constituency, which has the lowest level of electricity use. Laikipia East constituency is 10 percentage points above the county average. Nanyuki ward has the highest level of electricity use at 55%. That is 54 percentage points above Salama ward, which has the lowest level of electricity use. Nanyuki ward is 37 percentage points above the county average.

Housing

Flooring

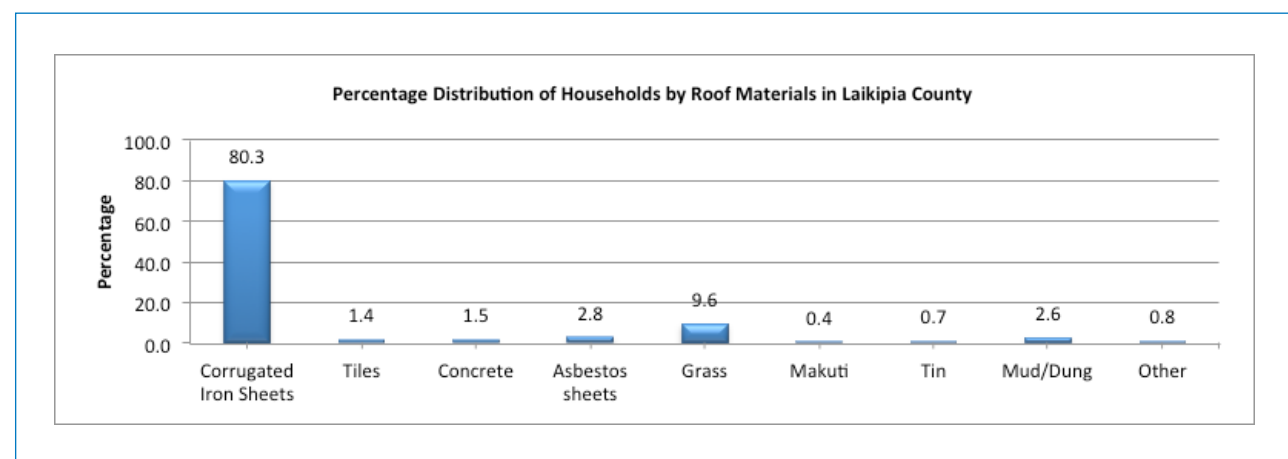
Figure 20.6: Percentage Distribution of Households by Floor Material in Laikipia County



In Laikipia County, 33% of residents have homes with cement floors, while 65% have earth floors. 1% has wood or tile floors. Laikipia East constituency has the highest share of cement floors at 44%. That is almost three times Laikipia North constituency, which has the lowest share of cement floors. Laikipia East constituency is 11 percentage points above the county average. Thingithu ward has the highest share of cement floors at 72%. That is 10 times Sosian ward, which has the lowest share of cement floors. Thingithu ward is 39 percentage points above the county average.

Roofing

Figure 20.7: Percentage Distribution of Households by Roof Material in Laikipia County



In Laikipia County, 2% of residents have homes with concrete roofs, while 80% have corrugated iron sheet roofs. Grass and makuti roofs constitute 10% of homes, and 3% have mud/dung roofs.

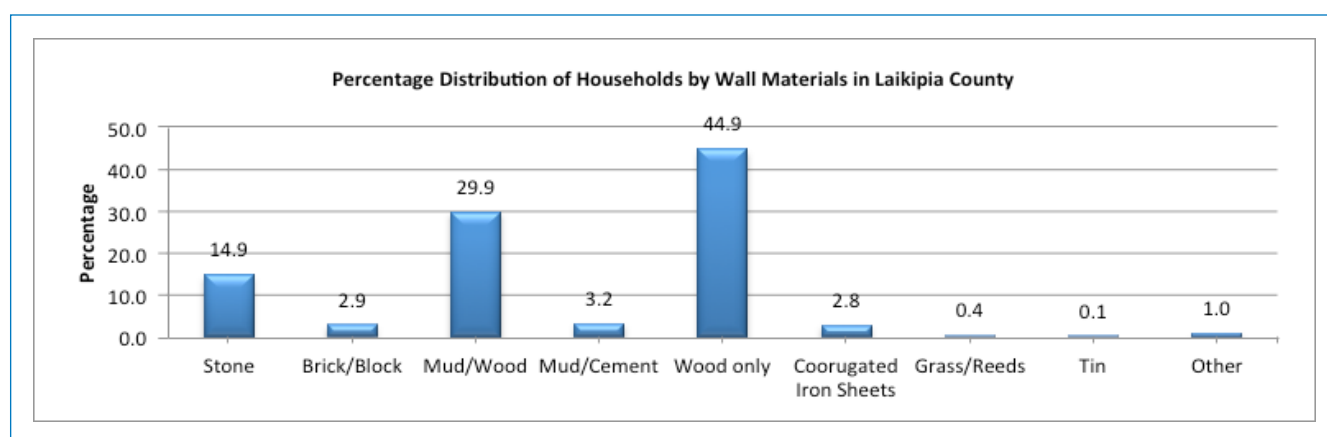
Laikipia East constituency has the highest share of corrugated iron sheet roofs at 90%. That is almost twice Laikipia North constituency, which has the lowest share of corrugated iron sheet roofs. Laikipia East constituency is 10 percentage points above the county average. Three wards Githiga, Tigithi and Umande, have the highest share of corrugated iron sheet roofs at 97% each. That is almost six times Mugogodo West ward, which has the lowest share of corrugated iron sheet roofs. Githiga, Tigithi and Umande are 17 percentage points above the county average.

Laikipia North constituency has the highest share of grass/makuti roofs at 33%. That is 32 percentage points above Laikipia East constituency, which has the lowest share of grass/makuti roofs. Laikipia North is 23 percentage points above the county average. Mugogodo West ward has the highest share of grass/makuti roofs at 67%. This is 67 percentage points above Nanyuki ward, which has the lowest share. Mugogodo West ward is 57 percentage points above the county average.

Walls

Figure 20.8: Percentage Distribution of Households by Wall Material in Laikipia County

In Laikipia County, 18% of homes have either brick or stone walls. 33% of homes have mud/wood or mud/cement walls. 45% have wood walls. 3% have corrugated iron walls. Less than 1% has grass/thatched walls. 1% has tin or other walls.



Laikipia East constituency has the highest share of brick/stone walls at 24%. That is twice Laikipia North constituency, which has the lowest share of brick/stone walls. Laikipia East constituency is 6 percentage points above the county average. Thingithu ward has the highest share of brick/stone walls at 51%. That is almost 13 times Sosian ward, which has the lowest share of brick/stone walls. Thingithu ward is 33 percentage points above the county average.

Laikipia North constituency has the highest share of mud with wood/cement walls at 67%. That is five times Laikipia East constituency, which has the lowest share of mud with wood/cement. Laikipia North constituency is 34 percentage points above the county average. Sosian ward has the highest share of mud with wood/cement walls at 85%. That is 14 times Thingithu ward, which has the lowest share of mud with wood/cement walls. Sosian ward is 52 percentage points above the county average.

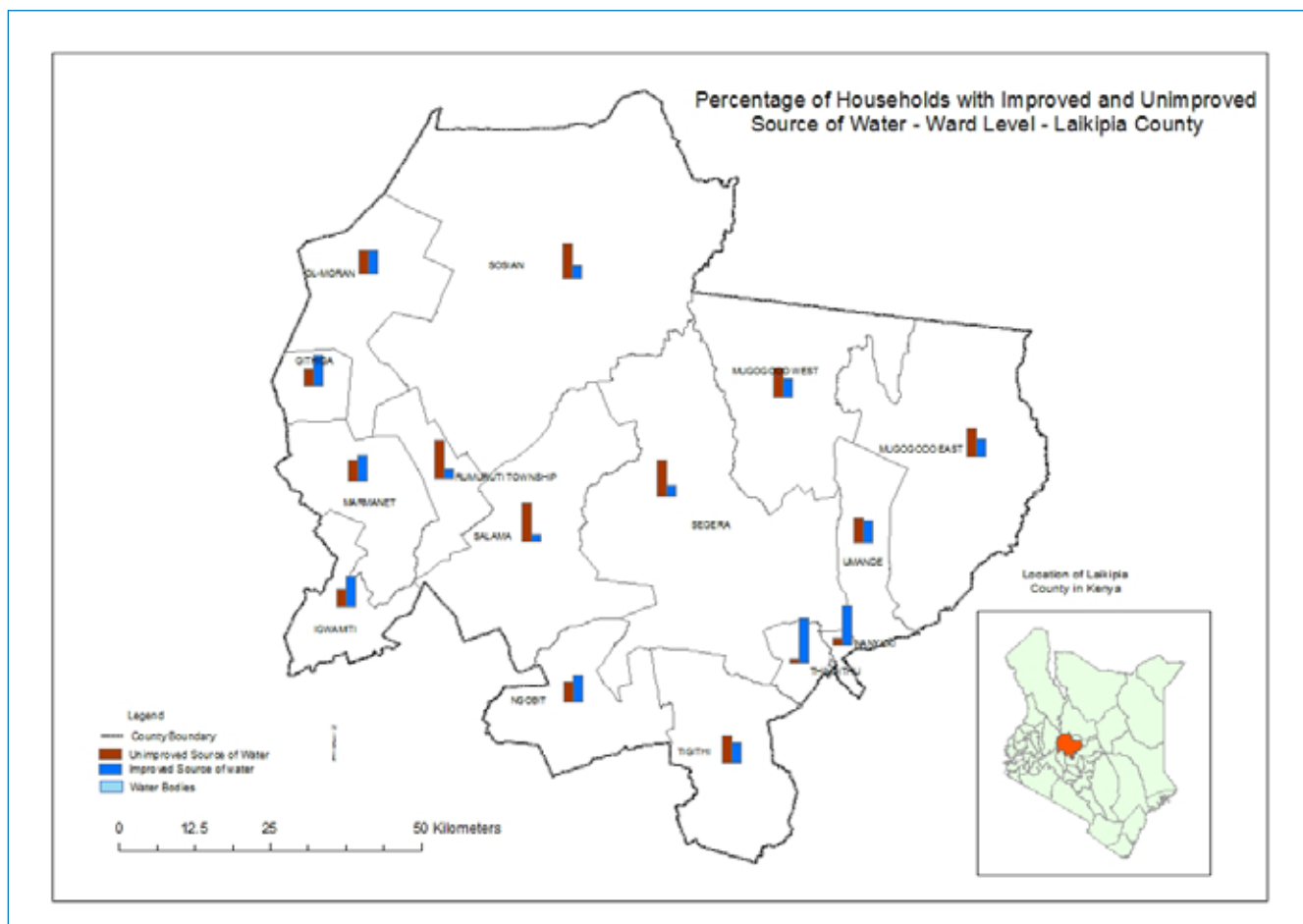
Water

Improved sources of water comprise protected spring, protected well, borehole, piped into dwelling, piped and rain water collection while unimproved sources include pond, dam, lake, stream/river, unprotected spring, unprotected well, jabia, water vendor and others.

In Laikipia County, 50% of residents use improved sources of water, with the rest relying on unimproved sources. Use of improved sources is slightly higher in male headed households at 52% as compared with female headed households 48% using it.

Laikipia East constituency has the highest share of residents using improved sources of water at 65%. That is twice Laikipia North constituency, which has the lowest share using improved sources of water. Laikipia East constituency is 15 percentage points above the county average. Thingithu ward has the highest share of residents using improved sources of water at 94%. That is six times Salama ward, which has the lowest share using improved sources of water. Thingithu ward is 44 percentage points above the county average.

Figure 20.9: Laikipia County-Percentage of Households with Improved and Unimproved Sources of Water by Ward

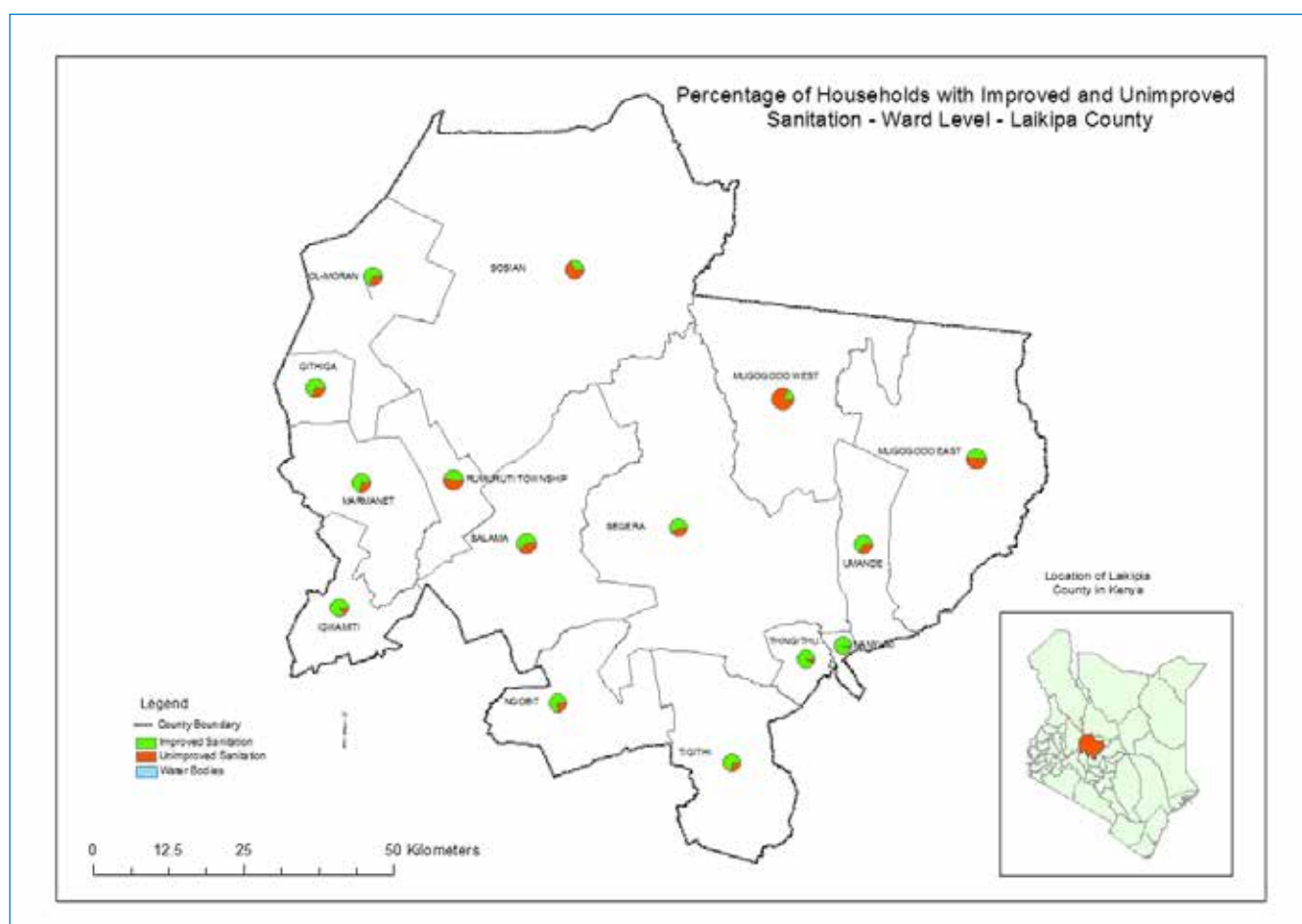


Sanitation

A total of 68% of residents in Laikipia County use improved sanitation, while the rest use unimproved sanitation. Use of improved sanitation is higher in male headed households at 71% as compared with female headed households at 64%.

Laikipia East constituency has the highest share of residents using improved sanitation at 81%. That is twice Laikipia North constituency, which has the lowest share using improved sanitation. Laikipia East constituency is 13 percentage points above the county average. Nanyuki ward has the highest share of residents using improved sanitation at 95%. That is almost six times Mugogodo West ward, which has the lowest share using improved sanitation. Nanyuki ward is 27 percentage points above the county average.

Figure 20.10: Laikipia County –Percentage of Households with Improved and Unimproved Sanitation by Ward



Laikipia County Annex Tables

20. LAIKIPIA

Table 20.1: Gender, Age group, Demographic Indicators and Households Size by County Constituency and Wards

County/ Constituency/ Wards	Gender			Age group							Demographic indicators					Protion of HH Members:			
	Total Pop	Male	Female	0-5 yrs	0-14 yrs	10-18 yrs	15-34 yrs	15-64 yrs	65+ yrs	sex Ratio	Total de- pendancy Ratio	Child de- pendancy Ratio	aged depen- dancy ratio	0-3	4-6	7+	total		
Kenya	37,919,647	18,787,698	19,131,949	7,035,670	16,346,414	8,293,207	13,329,717	20,249,800	1,323,433	0.982	0.873	0.807	0.065	41.5	38.4	20.1	8,493,380		
Rural	26,075,195	12,869,034	13,206,161	5,059,515	12,024,773	6,134,730	8,303,007	12,984,788	1,065,634	0.974	1.008	0.926	0.082	33.2	41.3	25.4	5,239,879		
Urban	11,844,452	5,918,664	5,925,788	1,976,155	4,321,641	2,158,477	5,026,710	7,265,012	257,799	0.999	0.630	0.595	0.035	54.8	33.7	11.5	3,253,501		
Laikipia County	391,597	193,379	198,218	70,296	166,686	83,616	129,321	209,091	15,820	0.976	0.873	0.797	0.076	47.6	37.9	14.4	97,112		
Laikipia West Constituency	199,491	97,377	102,114	35,793	85,400	43,627	64,891	105,636	8,455	0.954	0.888	0.808	0.080	45.2	38.9	15.9	47,960		
Ol-Moran	17,556	8,526	9,030	3,356	8,034	3,980	5,234	8,654	868	0.944	1.029	0.928	0.100	44.6	39.4	15.9	4,233		
Rumuruti Township	21,265	10,195	11,070	4,295	10,010	4,828	6,379	10,333	922	0.921	1.058	0.969	0.089	40.9	40.1	19.0	4,880		
Githiga	27,958	13,537	14,421	4,727	12,035	6,414	8,663	14,538	1,385	0.939	0.923	0.828	0.095	42.2	42.6	15.1	6,694		
Marmaret	42,422	21,029	21,393	7,303	18,012	9,677	13,285	22,291	2,119	0.983	0.903	0.808	0.095	36.7	42.2	21.1	9,072		
Igwamiti	66,466	32,317	34,149	11,016	26,083	13,480	24,206	38,243	2,140	0.946	0.738	0.682	0.056	53.0	34.9	12.1	17,591		
Salama	23,824	11,773	12,051	5,096	11,226	5,248	7,124	11,577	1,021	0.977	1.058	0.970	0.088	42.5	40.3	17.2	5,490		
Laikipia East Constituency	113,283	56,313	56,970	17,367	42,297	22,379	40,374	66,579	4,407	0.988	0.701	0.635	0.066	55.3	35.0	9.7	31,010		
Ngobit	23,836	11,947	11,889	3,863	9,496	5,018	7,450	13,224	1,116	1.005	0.802	0.718	0.084	51.1	39.3	9.6	6,544		
Tigithi	26,953	13,584	13,369	4,038	10,350	5,503	8,432	15,156	1,447	1.016	0.778	0.683	0.095	50.6	36.1	13.3	5,892		
Thingithu	20,069	9,707	10,362	3,161	7,317	3,915	8,004	12,347	405	0.937	0.625	0.593	0.033	55.6	36.1	8.3	5,796		
Nanyuki	26,267	12,943	13,324	3,882	8,929	4,711	11,122	16,717	621	0.971	0.571	0.534	0.037	64.1	27.6	8.3	8,349		

Umande	16,158	8,132	8,026	2,423	6,205	3,232	5,366	9,135	818	1,013	0.769	0.679	0.090	50.8	39.6	9.6	4429
Laikipia North Constituency	78,823	39,689	39,134	17,136	38,989	17,610	24,056	36,876	2,958	1,014	1.138	1.057	0.080	40.9	40.3	18.9	18142
Sosian	25,848	12,695	13,153	6,123	13,318	5,493	7,337	11,322	1,208	0.965	1.283	1.176	0.107	41.7	41.5	16.8	6077
Segera	15,911	8,092	7,819	3,305	7,276	3,190	4,969	7,938	697	1.035	1.004	0.917	0.088	52.8	34.9	12.3	4357
Mugogodo West	13,702	6,988	6,714	3,165	7,430	3,446	4,100	5,973	299	1.041	1.294	1.244	0.050	25.7	42.3	32.0	2536
Mugogodo East	23,362	11,914	11,448	4,543	10,965	5,481	7,650	11,643	754	1.041	1.007	0.942	0.065	37.4	42.3	20.3	5172

Table 20.2: Employment by County, Constituency and Wards

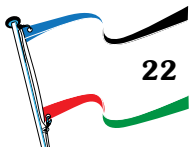
County/Constituency/ Wards	Work for pay	Family Business	Family Ag- ricultural Holding	Intern/ Volun- teer	Retired/ Home- maker	Fulltime Student	Incapaci- tated	No work	Number of Individuals
Kenya	23.7	13.1	32.0	1.1	9.2	12.8	0.5	7.7	20,249,800
Rural	15.6	11.2	43.5	1.0	8.8	13.0	0.5	6.3	12,984,788
Urban	38.1	16.4	11.4	1.3	9.9	12.2	0.3	10.2	7,265,012
Laikipia County	25.1	10.9	31.9	0.9	9.6	12.3	0.4	8.8	209,091
Laikipia West Constituency	22.3	12.0	37.3	1.0	5.5	13.4	0.5	8.2	105,636
Ol-Moran	15.9	15.8	32.1	1.1	7.0	14.6	0.5	13.1	8,654
Rumuruti Township	16.7	11.8	26.7	1.3	14.8	14.5	0.3	13.9	10,333
Githiga	13.8	8.3	50.1	0.8	5.8	14.7	0.7	6.0	14,538
Marmanet	16.8	8.1	48.4	0.7	2.8	14.3	0.4	8.6	22,291
Igwamiti	33.8	14.8	26.1	1.2	4.9	12.8	0.4	6.1	38,243
Salama	15.9	12.0	49.9	0.9	2.4	10.0	0.7	8.3	11,577
Laikipia East Constituency	32.5	10.5	23.5	1.0	12.9	11.1	0.4	8.1	66,579
Ngobit	20.6	7.4	44.1	0.7	10.3	9.6	0.7	6.7	13,224
Tigithi	22.5	8.7	34.3	1.5	14.6	10.1	0.5	8.0	15,156
Thingithu	41.8	15.3	13.7	0.8	9.5	12.7	0.3	6.0	12,347
Nanyuki	44.9	13.6	8.0	1.1	11.7	11.8	0.2	8.8	16,717
Umande	31.1	5.5	17.8	0.9	20.9	11.4	0.6	11.9	9,135
Laikipia North Constituency	19.7	8.6	31.7	0.7	15.6	11.6	0.4	11.8	36,876
Sosian	14.1	8.5	47.2	0.7	10.0	8.3	0.4	10.8	11,322
Segera	27.7	9.6	25.9	1.0	13.7	8.7	0.5	13.1	7,938
Mugogodo West	16.8	11.0	10.2	0.6	27.8	15.9	0.1	17.6	5,973
Mugogodo East	21.2	6.7	31.6	0.5	16.0	14.6	0.4	9.0	11,643

Table 20.3: Employment and Education Levels by County, Constituency and Wards

County /constituency/ Wards	Education Total level	Work for pay	Family Business	Family Agricultural Holding	Intern /Volunteer	Retired/ Home- maker	Fulltime Student	Inca- pacitat- ed	No work	Number of Individuals
Kenya	Total	23.7	13.1	32.0	1.1	9.2	12.8	0.5	7.7	20,249,800
Kenya	None	11.1	14.0	44.4	1.7	14.7	0.8	1.2	12.1	3,154,356
Kenya	Primary	20.7	12.6	37.3	0.8	9.6	12.1	0.4	6.5	9,528,270
Kenya	Secondary+	32.7	13.3	20.2	1.2	6.6	18.6	0.2	7.3	7,567,174
Rural	Total	15.6	11.2	43.5	1.0	8.8	13.0	0.5	6.3	12,984,788
Rural	None	8.5	13.6	50.0	1.4	13.9	0.7	1.2	10.7	2,614,951

Rural	Primary	15.5	10.8	45.9	0.8	8.4	13.2	0.5	5.0	6,785,745
Rural	Secondary+	21.0	10.1	34.3	1.0	5.9	21.9	0.3	5.5	3,584,092
Urban	Total	38.1	16.4	11.4	1.3	9.9	12.2	0.3	10.2	7,265,012
Urban	None	23.5	15.8	17.1	3.1	18.7	1.5	1.6	18.8	539,405
Urban	Primary	33.6	16.9	16.0	1.0	12.3	9.5	0.4	10.2	2,742,525
Urban	Secondary+	43.2	16.1	7.5	1.3	7.1	15.6	0.2	9.0	3,983,082
Laikipia	Total	25.1	10.9	31.9	0.9	9.6	12.3	0.4	8.8	209,091
Laikipia	None	16.0	8.9	41.2	1.3	18.1	0.4	1.2	12.9	31,316
Laikipia	Primary	22.4	10.3	37.5	0.8	9.6	10.3	0.4	8.8	97,692
Laikipia	Secondary+	31.9	12.4	21.6	1.0	6.3	19.5	0.2	7.1	80,083
Laikipia West Constituency	Total	22.3	12.0	37.3	1.0	5.5	13.4	0.5	8.2	105,636
Laikipia West Constituency	None	16.3	7.7	52.0	1.6	7.5	0.6	1.7	12.6	11,948
Laikipia West Constituency	Primary	19.3	11.6	43.4	0.8	6.3	10.0	0.4	8.1	52,587
Laikipia West Constituency	Secondary+	28.0	13.6	25.1	1.0	3.8	21.4	0.2	6.9	41,101
Ol-Moran Wards	Total	15.9	15.8	32.1	1.1	7.0	14.6	0.5	13.1	8,654
Ol-Moran Wards	None	8.8	9.6	59.8	1.3	6.6	0.3	0.9	12.7	1,181
Ol-Moran Wards	Primary	13.8	17.5	33.1	0.8	8.4	10.9	0.5	15.0	4,873
Ol-Moran Wards	Secondary+	22.9	15.5	17.7	1.4	4.7	27.9	0.2	9.8	2,600
Rumuruti Township Wards	Total	16.7	11.8	26.7	1.3	14.8	14.5	0.3	13.9	10,333
Rumuruti Township Wards	None	14.0	7.5	25.8	1.4	21.1	1.0	0.9	28.4	1,945
Rumuruti Township Wards	Primary	12.9	12.3	31.1	1.1	16.5	14.6	0.2	11.3	5,594
Rumuruti Township Wards	Secondary+	26.2	13.9	18.7	1.4	6.9	23.7	0.2	9.1	2,794
Githiga Wards	Total	13.8	8.3	50.1	0.8	5.8	14.7	0.7	6.0	14,538
Githiga Wards	None	11.4	3.3	60.5	2.1	11.8	0.6	2.8	7.5	851
Githiga Wards	Primary	11.3	7.8	58.6	0.7	6.3	9.1	0.4	5.8	8,135
Githiga Wards	Secondary+	17.8	9.7	35.9	0.8	4.1	25.0	0.7	6.1	5,552
Marmanet Wards	Total	16.8	8.1	48.4	0.7	2.8	14.3	0.4	8.6	22,291
Marmanet Wards	None	17.1	6.0	57.3	1.0	3.1	0.7	1.8	12.9	1,909
Marmanet Wards	Primary	16.8	7.9	52.9	0.5	3.2	10.2	0.3	8.2	11,816
Marmanet Wards	Secondary+	16.7	8.8	40.1	0.8	2.3	23.1	0.2	8.0	8,566
Igwamiti Wards	Total	33.8	14.8	26.1	1.2	4.9	12.8	0.4	6.1	38,243
Igwamiti Wards	None	25.1	8.7	48.9	2.6	5.5	0.8	2.0	6.4	2,697
Igwamiti Wards	Primary	30.0	13.4	34.5	1.0	5.8	8.6	0.5	6.2	16,416
Igwamiti Wards	Secondary+	38.3	16.8	15.7	1.1	4.0	18.1	0.2	5.9	19,130

Salama Wards	Total	15.9	12.0	49.9	0.9	2.4	10.0	0.7	8.3	11,577
Salama Wards	None	13.8	8.6	61.8	1.2	3.1	0.3	1.8	9.5	3,365
Salama Wards	Primary	16.0	13.9	48.8	0.8	2.5	9.9	0.4	7.9	5,753
Salama Wards	Secondary+	18.5	12.5	36.3	0.7	1.2	23.4	0.0	7.3	2,459
Laikipia East Constituency	Total	32.5	10.5	23.5	1.0	12.9	11.1	0.4	8.1	66,579
Laikipia East Constituency	None	28.4	7.6	25.8	2.7	20.9	0.8	3.0	10.8	3,454
Laikipia East Constituency	Primary	28.5	9.2	30.0	0.9	15.4	6.8	0.4	8.9	30,714
Laikipia East Constituency	Secondary+	36.8	12.0	17.2	1.0	9.7	16.3	0.2	7.0	32,411
Ngobit Wards	Total	20.6	7.4	44.1	0.7	10.3	9.6	0.7	6.7	13,224
Ngobit Wards	None	24.1	4.1	38.2	2.1	13.8	1.0	4.8	12.0	710
Ngobit Wards	Primary	20.2	6.5	47.1	0.7	11.6	6.8	0.6	6.5	7,231
Ngobit Wards	Secondary+	20.6	9.1	40.8	0.6	7.9	14.6	0.3	6.2	5,283
Tigithi Wards	Total	22.5	8.7	34.3	1.5	14.6	10.1	0.5	8.0	15,156
Tigithi Wards	None	29.3	6.0	30.9	3.0	20.5	0.6	2.9	6.8	823
Tigithi Wards	Primary	21.0	8.4	38.3	1.4	16.1	6.1	0.5	8.2	8,755
Tigithi Wards	Secondary+	23.7	9.6	28.4	1.4	11.3	17.6	0.2	7.8	5,578
Thingithu Wards	Total	41.8	15.3	13.7	0.8	9.5	12.7	0.3	6.0	12,347
Thingithu Wards	None	34.3	13.2	20.9	2.3	15.6	0.7	1.9	11.1	569
Thingithu Wards	Primary	37.9	13.6	21.5	0.4	11.8	8.2	0.4	6.2	3,675
Thingithu Wards	Secondary+	44.1	16.3	9.6	0.8	8.0	15.7	0.1	5.5	8,103
Nanyuki Wards	Total	44.9	13.6	8.0	1.1	11.7	11.8	0.2	8.8	16,717
Nanyuki Wards	None	30.3	10.7	14.8	3.4	24.8	1.2	1.2	13.6	816
Nanyuki Wards	Primary	41.6	14.0	10.7	0.8	14.4	7.4	0.2	11.0	5,913
Nanyuki Wards	Secondary+	48.1	13.6	5.8	1.1	9.0	15.2	0.1	7.1	9,988
Umande Wards	Total	31.1	5.5	17.8	0.9	20.9	11.4	0.6	11.9	9,135
Umande Wards	None	23.5	3.9	23.7	2.2	30.6	0.4	4.9	10.8	536
Umande Wards	Primary	30.9	5.8	19.9	0.6	23.4	6.1	0.5	12.9	5,140
Umande Wards	Secondary+	32.7	5.3	13.6	1.0	15.7	21.0	0.1	10.6	3,459
Laikipia North Constituency	Total	19.7	8.6	31.7	0.7	15.6	11.6	0.4	11.8	36,876
Laikipia North Constituency	None	13.1	10.1	36.4	0.8	25.5	0.2	0.5	13.5	15,914
Laikipia North Constituency	Primary	21.1	7.5	31.5	0.6	9.2	18.6	0.4	11.2	14,391



Laikipia North Constituency	Secondary+	32.8	7.0	20.9	0.8	5.5	23.9	0.2	9.0	6,571
Sosian Wards	Total	14.1	8.5	47.2	0.7	10.0	8.3	0.4	10.8	11,322
Sosian Wards	None	12.0	11.6	50.2	0.9	15.2	0.2	0.5	9.6	5,626
Sosian Wards	Primary	13.4	5.7	48.4	0.5	5.5	13.9	0.4	12.3	4,407
Sosian Wards	Secondary+	26.1	4.7	30.3	0.9	2.6	24.7	0.1	10.7	1,289
Segera Wards	Total	27.7	9.6	25.9	1.0	13.7	8.7	0.5	13.1	7,938
Segera Wards	None	20.6	10.4	27.4	1.2	23.7	0.1	0.8	15.8	2,762
Segera Wards	Primary	28.1	9.7	26.9	0.9	9.6	11.4	0.3	13.2	3,451
Segera Wards	Secondary+	38.2	8.0	21.5	0.8	5.8	16.9	0.2	8.6	1,725
Mugogodo West Wards	Total	16.8	11.0	10.2	0.6	27.8	15.9	0.1	17.6	5,973
Mugogodo West Wards	None	10.8	12.5	13.0	0.4	39.9	0.1	0.2	23.3	3,381
Mugogodo West Wards	Primary	19.1	9.7	7.6	0.8	13.3	38.6	-	11.0	1,811
Mugogodo West Wards	Secondary+	37.9	7.9	4.2	1.0	9.4	31.4	-	8.2	781
Mugogodo East Wards	Total	21.2	6.7	31.6	0.5	16.0	14.6	0.4	9.0	11,643
Mugogodo East Wards	None	11.7	6.2	42.6	0.5	28.9	0.4	0.4	9.3	4,145
Mugogodo East Wards	Primary	23.9	6.7	28.4	0.4	10.6	20.6	0.6	8.9	4,722
Mugogodo East Wards	Secondary+	31.0	7.2	20.8	0.8	5.7	25.7	0.2	8.7	2,776

Table 20.4: Employment and Education Levels in Male Headed Household by County, Constituency and Wards

County, Constituency and Wards	Education Level reached	Work for Pay	Family Business	Family Agricultural holding	Internal/ Volunteer	Retired/ Homemaker	Fulltime Student	Incapacitated	No work	Population (15-64)
Kenya National	Total	25.5	13.5	31.6	1.1	9.0	11.4	0.4	7.5	14,757,992
Kenya National	None	11.4	14.3	44.2	1.6	13.9	0.9	1.0	12.6	2,183,284
Kenya National	Primary	22.2	12.9	37.3	0.8	9.4	10.6	0.4	6.4	6,939,667
Kenya National	Secondary+	35.0	13.8	19.8	1.1	6.5	16.5	0.2	7.0	5,635,041
Rural Rural	Total	16.8	11.6	43.9	1.0	8.3	11.7	0.5	6.3	9,262,744
Rural Rural	None	8.6	14.1	49.8	1.4	13.0	0.8	1.0	11.4	1,823,487
Rural Rural	Primary	16.5	11.2	46.7	0.8	8.0	11.6	0.4	4.9	4,862,291
Rural Rural	Secondary+	23.1	10.6	34.7	1.0	5.5	19.6	0.2	5.3	2,576,966
Urban Urban	Total	40.2	16.6	10.9	1.3	10.1	10.9	0.3	9.7	5,495,248
Urban Urban	None	25.8	15.5	16.1	3.0	18.2	1.4	1.3	18.7	359,797
Urban Urban	Primary	35.6	16.9	15.4	1.0	12.8	8.1	0.3	9.9	2,077,376
Urban Urban	Secondary+	45.1	16.6	7.3	1.2	7.4	13.8	0.1	8.5	3,058,075
Laikipia	Total	27.3	11.6	31.5	0.9	9.0	10.9	0.4	8.5	145,211
Laikipia	None	18.8	9.6	39.6	1.2	16.3	0.4	1.0	13.1	19,278
Laikipia	Primary	23.9	10.7	37.6	0.8	9.3	8.8	0.3	8.5	69,168
Laikipia	Secondary+	34.2	13.3	21.4	0.9	6.2	17.1	0.2	6.8	56,765
Laikipia West Constituency	Total	23.8	12.7	36.9	0.9	5.5	12.0	0.4	7.8	73,601
Laikipia West Constituency	None	18.3	8.1	50.7	1.5	7.1	0.6	1.5	12.2	7,110
Laikipia West Constituency	Primary	20.2	12.1	43.7	0.8	6.4	8.6	0.3	7.9	37,527
Laikipia West Constituency	Secondary+	29.7	14.7	24.7	1.0	3.9	19.2	0.2	6.6	28,964
Ol-Moran Ward	Total	18.3	16.7	32.0	1.1	6.7	12.2	0.2	12.8	5,693
Ol-Moran Ward	None	10.4	9.8	58.5	1.3	6.0	0.3	0.3	13.4	672
Ol-Moran Ward	Primary	15.3	18.3	33.9	0.9	8.1	8.9	0.3	14.3	3,278
Ol-Moran Ward	Secondary+	27.0	16.3	18.0	1.3	4.5	23.1	0.2	9.8	1,743
Rumuruti Township Ward	Total	18.1	12.8	26.8	1.1	14.7	13.2	0.3	13.0	7,159
Rumuruti Township Ward	None	14.3	8.0	26.3	1.2	20.6	0.7	1.1	27.8	1,102
Rumuruti Township Ward	Primary	14.0	13.1	30.9	1.1	17.0	12.4	0.1	11.4	4,037
Rumuruti Township Ward	Secondary+	28.5	14.8	18.8	1.2	6.7	21.8	0.2	8.1	2,020

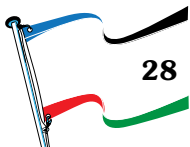
Githiga Ward	Total	14.8	9.3	50.0	0.8	5.7	12.8	0.5	6.1	10,329
Githiga Ward	None	11.7	3.7	57.2	2.7	12.3	0.8	2.9	8.6	486
Githiga Ward	Primary	11.6	8.8	58.9	0.7	6.3	7.7	0.3	5.8	5,947
Githiga Ward	Secondary+	20.1	10.7	35.4	0.9	4.0	22.1	0.6	6.2	3,896
Marmanet Ward	Total	17.6	8.5	48.8	0.6	2.8	13.0	0.3	8.5	15,131
Marmanet Ward	None	17.8	5.3	57.4	0.9	2.5	0.6	1.2	14.2	1,124
Marmanet Ward	Primary	17.3	8.1	53.8	0.5	3.0	8.9	0.2	8.0	8,218
Marmanet Ward	Secondary+	17.9	9.6	40.0	0.8	2.5	21.1	0.1	8.1	5,789
Igwamiti Ward	Total	35.1	15.4	25.6	1.1	5.1	11.7	0.3	5.8	27,420
Igwamiti Ward	None	27.2	9.1	47.6	2.3	5.0	0.8	1.9	6.2	1,770
Igwamiti Ward	Primary	31.4	13.5	34.1	1.0	5.9	7.6	0.4	6.1	11,893
Igwamiti Ward	Secondary+	39.2	18.0	15.3	1.0	4.3	16.5	0.1	5.5	13,757
Salama Ward	Total	17.2	13.2	49.3	0.9	2.4	9.0	0.6	7.3	7,869
Salama Ward	None	17.2	9.3	59.3	1.1	3.2	0.3	1.6	8.0	1,956
Salama Ward	Primary	16.2	15.0	49.6	0.8	2.6	8.4	0.4	7.1	4,154
Salama Ward	Secondary+	19.6	13.4	37.7	0.7	1.4	20.3	0.1	6.9	1,759
Laikipia East Constituency	Total	34.8	11.0	23.3	1.0	12.3	9.6	0.4	7.7	46,606
Laikipia East Constituency	None	32.6	7.9	24.1	2.4	19.2	0.7	2.5	10.7	2,070
Laikipia East Constituency	Primary	30.3	9.5	29.7	0.9	14.9	5.9	0.4	8.4	21,440
Laikipia East Constituency	Secondary+	39.3	12.6	17.2	0.9	9.2	13.9	0.1	6.7	23,096
Ngobit Ward	Total	21.8	7.8	45.5	0.7	9.2	8.2	0.6	6.2	9,203
Ngobit Ward	None	24.5	4.8	43.4	1.3	10.1	1.3	4.0	10.6	376
Ngobit Ward	Primary	21.2	6.6	48.4	0.7	10.8	5.9	0.5	5.8	5,086
Ngobit Ward	Secondary+	22.3	9.7	41.8	0.5	7.0	12.0	0.3	6.3	3,741
Tigithi Ward	Total	24.7	9.1	33.3	1.5	14.3	8.8	0.5	7.8	10,237
Tigithi Ward	None	34.9	4.8	26.1	2.1	20.6	0.4	2.5	8.6	476
Tigithi Ward	Primary	22.7	8.7	37.2	1.4	16.0	5.3	0.5	8.0	5,888
Tigithi Ward	Secondary+	26.4	10.3	28.3	1.5	10.8	15.1	0.2	7.4	3,873
Thingithu Ward	Total	43.6	15.8	13.3	0.7	9.4	11.2	0.2	5.8	9,114
Thingithu Ward	None	36.5	14.1	18.7	1.7	16.8	0.7	1.4	10.1	417
Thingithu Ward	Primary	39.6	13.8	20.8	0.4	11.8	7.1	0.4	6.1	2,687

Thingithu Ward	Secondary+	45.9	16.7	9.6	0.7	7.9	13.8	0.0	5.4	6,010
Nanyuki Ward	Total	47.6	14.2	7.8	1.0	11.2	9.9	0.2	8.0	11,800
Nanyuki Ward	None	34.3	10.1	14.5	4.2	22.0	1.0	1.2	12.7	496
Nanyuki Ward	Primary	43.7	14.3	10.5	0.7	14.2	6.4	0.2	10.1	4,179
Nanyuki Ward	Secondary+	50.9	14.4	5.7	1.0	8.8	12.6	0.1	6.5	7,125
Umande Ward	Total	33.8	5.6	17.8	1.0	19.6	10.0	0.5	11.7	6,252
Umande Ward	None	30.8	4.3	20.0	2.0	27.2	-	3.9	11.8	305
Umande Ward	Primary	32.9	6.1	20.0	0.8	22.0	5.3	0.4	12.4	3,600
Umande Ward	Secondary+	35.5	5.1	14.1	1.0	15.0	18.7	0.2	10.4	2,347
Laikipia North Constituency	Total	23.4	9.2	31.1	0.6	13.2	10.2	0.3	12.0	25,004
Laikipia North Constituency	None	16.4	11.1	34.9	0.7	22.1	0.1	0.4	14.3	10,098
Laikipia North Constituency	Primary	24.4	8.1	31.8	0.5	8.1	15.4	0.3	11.3	10,201
Laikipia North Constituency	Secondary+	36.3	7.5	21.2	0.7	5.1	20.3	0.2	8.7	4,705
Sosian Ward	Total	17.7	9.4	46.6	0.5	7.4	7.1	0.3	11.0	7,227
Sosian Ward	None	16.2	13.2	48.5	0.7	11.2	0.1	0.4	9.8	3,271
Sosian Ward	Primary	15.9	6.4	49.0	0.3	4.9	10.7	0.3	12.5	3,057
Sosian Ward	Secondary+	29.6	5.6	31.1	0.4	2.1	20.6	0.1	10.5	899
Segera Ward	Total	34.6	9.7	23.3	1.0	10.3	7.4	0.4	13.3	5,270
Segera Ward	None	29.2	11.1	21.9	1.3	18.0	0.1	0.7	17.7	1,550
Segera Ward	Primary	33.9	9.8	25.4	0.9	8.1	8.6	0.2	13.0	2,469
Segera Ward	Secondary+	42.9	7.7	20.6	1.0	5.2	14.1	0.2	8.3	1,251
Mugogodo West Ward	Total	18.9	12.0	10.6	0.4	25.4	14.3	0.1	18.2	4,250
Mugogodo West Ward	None	12.6	13.5	13.4	0.3	36.0	0.0	0.2	24.1	2,392
Mugogodo West Ward	Primary	21.5	11.0	7.6	0.5	13.2	34.6	-	11.5	1,296
Mugogodo West Ward	Secondary+	40.0	8.4	5.7	0.7	8.7	28.1	-	8.4	562
Mugogodo East Ward	Total	23.5	7.3	33.0	0.6	13.9	12.5	0.4	9.0	8,257
Mugogodo East Ward	None	12.9	6.7	44.4	0.6	25.4	0.3	0.3	9.5	2,885
Mugogodo East Ward	Primary	26.3	7.3	30.0	0.4	9.1	17.4	0.5	9.0	3,379
Mugogodo East Ward	Secondary+	34.2	8.0	21.5	0.8	5.3	21.9	0.2	8.2	1,993

Table 20.5: Employment and Education Levels in Female Headed Households by County, Constituency and Wards

County, Constituency and Wards	Education Level reached	Work for Pay	Family Business	Family Agricultural holding	Internal/ Volunteer	Retired /Home-maker	Fulltime Student	Incapacitated	No work	Population (15-64)
Kenya National	Total	18.87	11.91	32.74	1.20	9.85	16.66	0.69	8.08	5,518,645
Kenya National	None	10.34	13.04	44.55	1.90	16.45	0.80	1.76	11.17	974,824
Kenya National	Primary	16.74	11.75	37.10	0.89	9.82	16.23	0.59	6.89	2,589,877
Kenya National	Secondary+	25.95	11.57	21.07	1.27	6.59	25.16	0.28	8.11	1,953,944
Rural Rural	Total	31.53	15.66	12.80	1.54	9.33	16.99	0.54	11.60	1,781,078
Rural Rural	None	8.36	12.26	50.31	1.60	15.77	0.59	1.67	9.44	794,993
Rural Rural	Primary	13.02	9.90	43.79	0.81	9.49	17.03	0.60	5.36	1,924,111
Rural Rural	Secondary+	15.97	8.87	33.03	1.06	6.80	27.95	0.34	5.98	1,018,463
Urban Urban	Total	12.83	10.12	42.24	1.04	10.09	16.51	0.76	6.40	3,737,567
Urban Urban	None	19.09	16.50	19.04	3.22	19.45	1.70	2.18	18.83	179,831
Urban Urban	Primary	27.49	17.07	17.79	1.13	10.76	13.93	0.55	11.29	665,766
Urban Urban	Secondary+	36.81	14.50	8.06	1.51	6.36	22.11	0.22	10.43	935,481
Laikipia	Total	20.1	9.3	32.6	1.0	10.9	16.1	.6	9.4	64354
Laikipia	None	11.5	7.8	43.7	1.5	21.1	.5	1.6	12.4	12038
Laikipia	Primary	18.8	9.1	37.0	.8	10.3	13.9	.5	9.5	28532
Laikipia	Secondary+	26.2	10.1	21.6	1.1	6.5	26.6	.3	7.7	23784
Laikipia West Constituency	Total	18.8	10.0	37.5	1.0	5.3	17.7	.7	8.9	32492
Laikipia West Constituency	None	13.2	7.2	53.8	1.7	8.1	.6	2.0	13.3	4838
Laikipia West Constituency	Primary	17.0	10.4	42.7	.8	6.1	13.7	.6	8.8	15074
Laikipia West Constituency	Secondary+	23.2	10.6	25.1	1.1	3.3	29.0	.3	7.3	12580
Ol-Moran Ward	Total	11.2	14.0	32.4	1.0	7.6	19.1	.9	13.6	2961
Ol-Moran Ward	None	6.7	9.2	61.5	1.2	7.5	.4	1.8	11.8	509
Ol-Moran Ward	Primary	10.8	15.7	31.3	.7	9.0	15.1	.9	16.3	1595
Ol-Moran Ward	Secondary+	14.6	13.8	17.2	1.6	5.0	37.7	.4	9.8	857
Rumuruti Township Ward	Total	13.5	9.7	26.6	1.5	15.0	17.3	.3	16.0	3175
Rumuruti Township Ward	None	13.5	6.8	25.0	1.8	21.8	1.3	.6	29.2	843
Rumuruti Township Ward	Primary	10.2	10.3	31.5	1.2	15.0	20.4	.3	11.0	1557
Rumuruti Township Ward	Secondary+	20.1	11.7	18.5	1.8	7.6	28.5	.1	11.6	775
Githiga Ward	Total	11.3	5.7	50.2	.7	6.0	19.2	1.0	5.9	4209
Githiga Ward	None	11.0	2.7	64.9	1.4	11.0	.3	2.7	6.0	365
Githiga Ward	Primary	10.5	5.1	57.8	.6	6.3	12.9	.8	5.9	2188
Githiga Ward	Secondary+	12.4	7.2	36.9	.5	4.5	31.7	.8	6.0	1656

Marmanet Ward	Total	15.0	7.3	47.5	.7	3.0	17.2	.6	8.7	7150
Marmanet Ward	None	16.0	6.9	57.4	1.2	4.1	.8	2.7	11.0	781
Marmanet Ward	Primary	15.5	7.4	50.8	.6	3.5	13.1	.4	8.8	3595
Marmanet Ward	Secondary+	14.2	7.2	40.5	.7	2.1	27.1	.3	7.9	2774
Igwamiti Ward	Total	29.4	12.5	26.4	1.3	4.3	19.0	.6	6.5	11289
Igwamiti Ward	None	21.3	8.1	51.1	3.3	6.2	.8	2.4	6.9	931
Igwamiti Ward	Primary	26.3	13.1	35.3	1.1	5.5	11.6	.6	6.5	4540
Igwamiti Ward	Secondary+	33.1	12.6	15.5	1.3	3.1	27.7	.3	6.3	5818
Salama Ward	Total	13.1	9.5	51.2	.9	2.2	11.9	.9	10.2	3708
Salama Ward	None	9.0	7.5	65.3	1.2	2.9	.3	2.1	11.6	1409
Salama Ward	Primary	15.6	10.8	46.9	.6	2.2	13.8	.2	9.9	1599
Salama Ward	Secondary+	15.6	10.4	32.9	.9	.9	31.3	0.0	8.1	700
Laikipia East Constituency	Total	27.0	9.3	24.2	1.1	14.4	14.4	.6	9.0	19968
Laikipia East Constituency	None	22.1	7.1	28.5	3.2	23.4	.9	3.9	10.9	1384
Laikipia East Constituency	Primary	24.2	8.6	30.6	.8	16.6	8.7	.5	10.0	9268
Laikipia East Constituency	Secondary+	30.5	10.3	17.2	1.1	10.8	22.1	.2	7.8	9316
Ngobit Ward	Total	17.7	6.5	41.0	.8	12.7	12.7	.9	7.7	4021
Ngobit Ward	None	23.7	3.3	32.3	3.0	18.0	.6	5.7	13.5	334
Ngobit Ward	Primary	17.8	6.3	44.1	.5	13.6	8.8	.7	8.2	2145
Ngobit Ward	Secondary+	16.3	7.6	38.4	.8	10.2	20.7	.2	5.8	1542
Tigithi Ward	Total	17.8	7.8	36.2	1.5	15.2	12.6	.6	8.3	4915
Tigithi Ward	None	21.6	7.5	37.5	4.3	20.5	.9	3.5	4.3	347
Tigithi Ward	Primary	17.4	7.8	40.6	1.3	16.2	7.7	.5	8.5	2863
Tigithi Ward	Secondary+	17.6	7.9	28.6	1.2	12.5	23.3	.1	8.8	1705
Thingithu Ward	Total	36.7	14.2	14.8	1.0	9.7	16.9	.4	6.4	3230
Thingithu Ward	None	28.3	10.5	27.0	3.9	12.5	.7	3.3	13.8	152
Thingithu Ward	Primary	33.3	13.2	23.4	.5	11.8	11.0	.4	6.5	985
Thingithu Ward	Secondary+	38.8	14.9	9.9	1.0	8.5	20.8	.2	5.9	2093
Nanyuki Ward	Total	38.5	12.1	8.4	1.4	12.6	16.1	.2	10.6	4919
Nanyuki Ward	None	24.1	11.6	15.3	2.2	29.1	1.6	1.3	15.0	320
Nanyuki Ward	Primary	36.8	13.2	11.1	1.1	14.9	9.7	.2	13.1	1735
Nanyuki Ward	Secondary+	41.2	11.5	6.0	1.4	9.4	21.6	.2	8.6	2864
Umande Ward	Total	25.4	5.2	17.8	.6	23.6	14.3	.8	12.4	2883
Umande Ward	None	13.9	3.5	28.6	2.6	35.1	.9	6.1	9.5	231
Umande Ward	Primary	26.0	5.1	19.9	.2	26.4	7.9	.6	13.9	1540
Umande Ward	Secondary+	26.9	5.8	12.6	.8	17.2	25.9	0.0	10.9	1112
Laikipia North Constituency	Total	12.2	7.2	33.0	.8	20.5	14.6	.5	11.3	11894
Laikipia North Constituency	None	7.5	8.5	38.8	.9	31.3	.3	.6	12.1	5816
Laikipia North Constituency	Primary	13.0	6.0	30.9	.7	11.7	26.3	.5	11.0	4190
Laikipia North Constituency	Secondary+	24.6	5.8	19.7	1.1	6.7	32.5	.1	9.6	1888
Sosian Ward	Total	8.3	6.9	48.1	1.1	14.5	10.3	.5	10.2	4117
Sosian Ward	None	6.1	9.3	52.6	1.2	20.7	.3	.6	9.2	2355
Sosian Ward	Primary	7.7	4.1	46.8	.8	7.0	21.3	.4	11.8	1350
Sosian Ward	Secondary+	22.3	2.7	26.7	1.7	3.6	32.3	0.0	10.7	412



Sege Ward	Total	13.9	9.3	31.0	.9	20.4	11.2	.6	12.7	2668
Sege Ward	None	9.6	9.4	34.3	1.2	31.0	.2	1.0	13.4	1212
Sege Ward	Primary	13.5	9.5	30.4	.7	13.4	18.4	.4	13.5	982
Sege Ward	Secondary+	25.7	8.9	23.8	.4	7.4	24.3	.2	9.3	474
Mugogodo West Ward	Total	11.7	8.5	9.1	.9	33.8	19.7	.1	16.1	1723
Mugogodo West Ward	None	6.4	10.0	11.9	.5	49.5	.2	.2	21.2	989
Mugogodo West Ward	Primary	13.0	6.4	7.4	1.4	13.4	48.5	0.0	9.9	515
Mugogodo West Ward	Secondary+	32.4	6.8	.5	1.8	11.0	39.7	0.0	7.8	219
Mugogodo East Ward	Total	15.8	5.1	28.3	.5	21.0	19.8	.6	9.0	3386
Mugogodo East Ward	None	9.0	5.2	38.4	.3	37.0	.6	.7	8.9	1260
Mugogodo East Ward	Primary	17.9	5.1	24.3	.4	14.4	28.6	.7	8.6	1343
Mugogodo East Ward	Secondary+	23.0	5.2	18.9	.9	6.6	35.5	.1	9.7	783

Table 20.6: Gini Coefficient by County, Constituency and Ward

County/Constituency/Wards	Pop. Share	Mean	Consump. Share	Gini
Kenya	1	3,440	1	0.445
Rural	0.688	2,270	0.454	0.361
Urban	0.312	6,010	0.546	0.368
Laikipia County	0.010	2,720	0.008	0.369
Laikipia West Constituency	0.005	2,750	0.0042	0.375
Ol-Moran	0.000	1,980	0.0003	0.319
Rumuruti Township	0.001	1,970	0.0003	0.303
Githiga	0.001	2,170	0.0005	0.318
Marmanet	0.001	2,310	0.0008	0.298
Igwamiti	0.002	4,000	0.0020	0.375
Salama	0.001	2,050	0.0004	0.314
Laikipia East Constituency	0.003	3,300	0.0028	0.339
Ngobit	0.001	2,990	0.0006	0.272
Tigithi	0.001	2,760	0.0005	0.337
Thingithu	0.001	3,690	0.0006	0.337
Nanyuki	0.001	4,100	0.0008	0.361
Umande	0.000	2,740	0.0003	0.289
Laikipia North Constituency	0.002	1,840	0.0011	0.305
Sosian	0.001	1,700	0.0003	0.265
Sege Ward	0.000	2,190	0.0003	0.324
Mugogodo West	0.000	1,530	0.0002	0.264
Mugogodo East	0.001	1,950	0.0004	0.324

Table 20.7: Education by County, Constituency and Wards

County/Constituency/Wards	None	Primary	Secondary+	Total Pop
Kenya	25.2	52.0	22.8	34,024,396
Rural	29.5	54.7	15.9	23,314,262
Urban	15.8	46.2	38.0	10,710,134
Laikipia County	24.2	52.5	23.3	353,805
Laikipia West Constituency	21.0	55.4	23.6	179,974

Ol-Moran	24.1	58.9	17.0	15,773
Rumuruti Township	28.9	55.9	15.2	18,897
Githiga	16.2	61.1	22.6	25,469
Marmanet	18.6	58.4	23.0	38,476
Igwamiti	16.0	51.5	32.6	60,404
Salama	36.4	51.5	12.1	20,955
Laikipia East Constituency	14.0	54.0	32.0	103,887
Ngobit	14.9	60.0	25.1	21,801
Tigithi	14.5	62.3	23.2	24,768
Thingithu	13.0	41.9	45.1	18,361
Nanyuki	12.3	45.3	42.4	24,103
Umande	15.7	60.3	24.0	14,854
Laikipia North Constituency	47.5	42.9	9.7	69,944
Sosian	54.4	39.6	5.9	22,595
Segera	40.7	46.6	12.7	14,101
Mugogodo West	53.7	39.8	6.5	12,184
Mugogodo East	40.9	45.6	13.5	21,064

Table 20.8: Education for Male and Female Headed Households by County, Constituency and Ward

County/Constituency/Wards	None	Primary	Secondary+	Total Pop	None	Primary	Secondary+	Total Pop
Kenya	23.5	51.8	24.7	16,819,031	26.8	52.2	21.0	17,205,365
Rural	27.7	54.9	17.4	11,472,394	31.2	54.4	14.4	11,841,868
Urban	14.4	45.2	40.4	5,346,637	17.2	47.2	35.6	5,363,497
Laikipia County	21.7	53.6	24.8	174,280	26.6	51.5	21.9	179,525
Laikipia West Constituency	18.8	56.3	24.9	87,625	23.2	54.6	22.2	92,349
Ol-Moran	21.2	60.1	18.6	7,622	26.8	57.7	15.5	8,151
Rumuruti Township	25.2	57.7	17.0	9,040	32.2	54.2	13.6	9,857
Githiga	13.8	62.1	24.1	12,285	18.6	60.2	21.3	13,184
Marmanet	16.6	58.9	24.5	19,047	20.6	57.9	21.6	19,429
Igwamiti	15.1	51.4	33.6	29,332	16.8	51.5	31.6	31,072
Salama	31.7	54.5	13.9	10,299	41.1	48.5	10.4	10,656
Laikipia East Constituency	12.7	54.0	33.4	51,529	15.3	54.0	30.7	52,358
Ngobit	13.3	60.0	26.7	10,900	16.5	60.0	23.5	10,901
Tigithi	12.4	62.4	25.2	12,439	16.6	62.1	21.3	12,329
Thingithu	12.9	41.1	46.0	8,857	13.0	42.8	44.3	9,504
Nanyuki	11.5	44.7	43.8	11,867	13.2	45.9	41.0	12,236
Umande	13.7	60.9	25.4	7,466	17.6	59.7	22.7	7,388

Laikipia North Constituency	42.1	46.3	11.6	35,126	52.9	39.4	7.7	34,818
Sosian	48.7	43.6	7.7	10,998	59.9	35.8	4.3	11,597
Segeera	35.4	49.2	15.4	7,151	46.2	44.0	9.8	6,950
Mugogodo West	47.7	44.4	8.0	6,206	60.0	35.0	5.0	5,978
Mugogodo East	36.6	48.2	15.2	10,771	45.3	42.9	11.7	10,293

Table 20.9: Cooking Fuel by County, Constituency and Wards

County/Constituency/Wards	Electricity	Paraffin	LPG	Biogas	Firewood	Charcoal	Solar	Other	Households
Kenya	0.8	11.7	5.1	0.7	64.4	17.0	0.1	0.3	8,493,380
Rural	0.2	1.4	0.6	0.3	90.3	7.1	0.1	0.1	5,239,879
Urban	1.8	28.3	12.3	1.4	22.7	32.8	0.0	0.6	3,253,501
Laikipia County	0.6	3.1	3.6	0.3	66.3	25.7	0.1	0.2	97,112
Laikipia West Constituency	0.5	1.6	2.8	0.3	67.6	27.0	0.1	0.2	47,960
Ol-Moran	0.1	0.8	0.3	0.1	77.8	21.0	0.0	0.0	4,233
Rumuruti Township	0.2	1.0	0.9	0.3	70.0	27.4	-	0.2	4,880
Githiga	0.2	0.8	0.9	0.1	78.4	19.4	0.1	0.1	6,694
Marmaret	0.1	0.3	0.2	0.2	88.1	10.8	0.2	0.1	9,072
Igwamiti	1.1	3.3	6.9	0.5	43.4	44.5	0.0	0.3	17,591
Salama	-	0.4	0.2	0.2	87.7	11.5	0.1	0.1	5,490
Laikipia East Constituency	0.8	7.0	6.1	0.5	52.5	32.7	0.1	0.4	31,010
Ngobit	0.0	1.6	0.4	0.2	86.6	11.0	0.1	0.1	6,544
Tigithi	0.1	0.9	1.0	0.5	76.6	20.2	0.1	0.4	5,892
Thingithu	1.4	11.7	12.6	0.3	25.4	48.0	0.0	0.5	5,796
Nanyuki	1.9	15.3	12.4	0.9	15.1	53.7	0.0	0.7	8,349
Umande	0.3	1.1	0.6	0.3	76.0	21.6	0.1	0.1	4,429
Laikipia North Constituency	0.4	0.7	1.6	0.2	86.5	10.3	0.1	0.2	18,142
Sosian	0.2	0.4	0.3	0.2	93.7	4.9	0.1	0.1	6,077
Segeera	1.2	0.8	4.3	0.3	81.1	12.3	0.0	0.0	4,357
Mugogodo West	0.2	0.5	1.7	0.2	83.7	13.4	0.1	0.4	2,536
Mugogodo East	0.0	1.1	0.9	0.3	84.0	13.4	0.1	0.2	5,172

Table 20.10: Cooking Fuel for Male Headed Households by County, Constituency and Wards

County/Constituency/Wards	Electricity	Paraffin	LPG	Biogas	Firewood	Charcoal	Solar	Other	Households
Kenya	0.9	13.5	5.3	0.8	61.4	17.7	0.1	0.4	5,762,320
Rural	0.2	1.6	0.6	0.3	89.6	7.5	0.1	0.1	3,413,616
Urban	1.9	30.9	12.0	1.4	20.4	32.5	0.0	0.7	2,348,704
Laikipia County	0.7	3.6	3.7	0.3	64.4	26.9	0.1	0.3	62,287
Laikipia West Constituency	0.5	1.9	2.8	0.3	65.8	28.4	0.1	0.2	30,852
Ol-Moran	0.1	1.1	0.2	0.0	76.5	21.9	0.0	0.1	2,539
Rumuruti Township	0.2	1.2	0.9	0.2	67.6	29.5	0.0	0.3	3,070
Githiga	0.3	0.9	0.9	0.1	76.9	20.7	0.1	0.1	4,342
Marmanet	0.1	0.4	0.2	0.1	86.9	11.9	0.2	0.2	5,734
Igwamiti	1.2	3.8	6.5	0.5	42.8	44.9	0.0	0.3	11,746
Salama	0.0	0.5	0.3	0.1	86.0	12.9	0.1	0.0	3,421
Laikipia East Constituency	1.0	7.6	5.9	0.5	51.4	33.0	0.1	0.5	20,397
Ngobit	0.0	1.5	0.4	0.2	86.2	11.4	0.1	0.2	4,190
Tigithi	0.1	1.2	1.1	0.6	74.7	21.8	0.2	0.4	3,895
Thingithu	1.5	12.1	11.9	0.4	25.5	48.1	0.1	0.6	3,981
Nanyuki	2.2	16.6	11.9	0.9	15.3	52.0	0.0	1.0	5,544
Umande	0.3	1.4	0.6	0.2	75.6	21.7	0.1	0.1	2,787
Laikipia North Constituency	0.6	1.0	2.1	0.2	84.3	11.6	0.1	0.2	11,038
Sosian	0.3	0.6	0.4	0.2	92.0	6.2	0.1	0.1	3,363
Segera	1.7	1.1	5.6	0.1	77.6	13.8	0.0	0.0	2,700
Mugogodo West	0.2	0.7	1.8	0.1	82.1	14.6	0.1	0.4	1,622
Mugogodo East	0.1	1.5	1.0	0.4	83.1	13.7	0.1	0.2	3,353

Table 20.11: Cooking Fuel for Female Headed Households by County, Constituency and Wards

County/Constituency/Wards	Electricity	Paraffin	LPG	Biogas	Firewood	Charcoal	Solar	Other	Households
Kenya	0.6	7.9	4.6	0.7	70.6	15.5	0.0	0.1	2,731,060
Rural	0.1	1.0	0.5	0.3	91.5	6.5	0.0	0.1	1,826,263
Urban	1.6	21.7	13.0	1.5	28.5	33.6	0.0	0.3	904,797
Laikipia County	0.4	2.3	3.6	0.3	69.7	23.5	0.1	0.1	34,825
Laikipia West Constituency	0.4	1.0	2.9	0.3	70.7	24.5	0.1	0.1	17,108
Ol-Moran	0.1	0.3	0.4	0.1	79.6	19.5	0.1	-	1,694
Rumuruti Township	0.1	0.6	1.0	0.3	74.1	23.8	-	-	1,810
Githiga	-	0.6	0.9	0.2	81.0	17.1	0.1	0.1	2,352
Marmanet	0.1	0.1	0.2	0.2	90.3	8.9	0.1	0.0	3,338
Igwamiti	1.0	2.3	7.6	0.5	44.7	43.6	0.1	0.2	5,845
Salama	-	0.1	0.0	0.2	90.4	9.0	0.1	0.1	2,069
Laikipia East Constituency	0.6	5.7	6.4	0.4	54.6	32.0	0.0	0.2	10,613

Ngobit	-	1.7	0.5	0.1	87.5	10.1	0.1	-	2,354
Tigithi	0.2	0.5	1.0	0.4	80.5	17.1	0.1	0.5	1,997
Thingithu	1.4	10.7	14.2	0.3	25.3	47.8	-	0.3	1,815
Nanyuki	1.2	12.7	13.4	0.8	14.7	57.0	-	0.2	2,805
Umande	0.2	0.5	0.7	0.4	76.8	21.3	0.1	0.1	1,642
Laikipia North Constituency	0.2	0.3	0.9	0.3	89.9	8.3	0.1	0.2	7,104
Sosian	0.1	0.3	0.1	0.2	95.8	3.3	0.1	0.2	2,714
Segera	0.5	0.4	2.1	0.4	86.7	9.8	0.1	0.1	1,657
Mugogodo West	0.1	0.1	1.3	0.2	86.4	11.4	0.1	0.3	914
Mugogodo East	-	0.4	0.7	0.2	85.6	12.9	0.1	0.1	1,819

Table 20.12: Lighting Fuel by County, Constituency and Wards

County/Constituency/Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuelwood	Solar	Other	House-holds
Kenya	22.9	0.6	30.6	38.5	0.9	4.3	1.6	0.6	5,762,320
Rural	5.2	0.4	34.7	49.0	1.0	6.7	2.2	0.7	3,413,616
Urban	51.4	0.8	23.9	21.6	0.6	0.4	0.7	0.6	2,348,704
Laikipia County	18.1	0.5	35.2	33.8	0.7	5.2	5.9	0.4	62,287
Laikipia West Constituency	17.3	0.4	38.1	34.5	0.8	2.6	6.0	0.3	30,852
Ol-Moran	8.8	0.4	35.2	41.0	0.6	6.1	7.7	0.3	2,539
Rumuruti Township	12.0	0.2	31.7	48.5	1.8	2.1	3.3	0.3	3,070
Githiga	9.0	0.3	53.1	26.4	0.5	0.3	10.2	0.2	4,342
Marmaret	4.7	0.4	46.6	35.7	1.3	1.6	9.6	0.2	5,734
Igwamiti	35.6	0.5	33.9	25.6	0.6	0.7	2.9	0.3	11,746
Salama	0.8	0.2	27.2	53.7	0.5	10.5	6.4	0.7	3,421
Laikipia East Constituency	27.5	0.9	36.7	26.4	0.5	0.5	7.1	0.4	20,397
Ngobit	3.6	0.9	42.6	38.8	0.8	1.0	11.9	0.4	4,190
Tigithi	3.9	1.2	47.7	35.1	0.8	0.4	10.7	0.2	3,895
Thingithu	53.8	0.4	23.7	15.8	0.2	0.2	5.6	0.3	3,981
Nanyuki	55.1	1.4	29.9	10.6	0.1	0.5	1.8	0.6	5,544
Umande	7.8	0.5	43.4	39.8	0.5	0.5	7.3	0.2	2,787
Laikipia North Constituency	4.4	0.3	25.2	44.7	0.9	20.3	3.4	0.8	11,038
Sosian	2.1	0.2	15.8	51.7	0.5	26.6	2.0	1.1	3,363
Segera	7.2	0.3	24.4	51.9	2.3	9.2	4.3	0.3	2,700
Mugogodo West	6.8	0.0	19.2	39.9	0.4	30.8	1.9	0.9	1,622
Mugogodo East	3.6	0.6	39.8	32.8	0.5	16.9	5.0	0.7	3,353

Table 20.13: Lighting Fuel for Male Headed Households by County, Constituency and Wards

County/Constituency/Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuelwood	Solar	Other	House-holds
Kenya	24.6	0.6	30.4	36.8	0.9	4.2	1.7	0.7	5,762,320
Rural	5.6	0.5	35.3	47.5	1.1	6.8	2.4	0.7	3,413,616
Urban	52.4	0.9	23.3	21.2	0.6	0.4	0.7	0.7	2,348,704
Laikipia County	19.3	0.6	35.5	32.4	0.8	4.5	6.4	0.5	62,287
Laikipia West Constituency	18.2	0.4	38.1	33.4	0.8	2.2	6.5	0.3	30,852
Oi-Moran	10.0	0.3	35.3	40.1	0.6	5.1	8.5	0.3	2,539
Rumuruti Township	13.6	0.2	31.9	46.6	1.6	1.7	3.9	0.5	3,070
Githiga	10.2	0.3	52.3	24.9	0.6	0.3	11.2	0.2	4,342
Marmanet	4.8	0.5	46.5	35.0	1.5	1.5	10.0	0.2	5,734
Igwamiti	35.8	0.5	33.6	25.4	0.5	0.8	2.9	0.3	11,746
Salama	0.9	0.2	29.4	52.1	0.6	8.6	7.7	0.5	3,421
Laikipia East Constituency	28.4	1.0	35.8	25.8	0.5	0.5	7.5	0.5	20,397
Ngobit	3.5	0.9	42.1	38.3	0.8	0.9	13.1	0.5	4,190
Tigithi	4.7	1.4	47.0	34.7	0.9	0.4	10.7	0.3	3,895
Thingithu	53.4	0.3	23.5	16.0	0.2	0.3	6.0	0.4	3,981
Nanyuki	56.4	1.4	28.1	10.6	0.1	0.5	2.1	0.8	5,544
Umande	7.9	0.5	44.0	38.6	0.5	0.5	7.7	0.3	2,787
Laikipia North Constituency	5.5	0.3	27.4	42.1	1.1	18.5	4.0	1.0	11,038
Sosian	2.8	0.2	17.9	50.3	0.7	23.9	2.6	1.6	3,363
Segera	9.3	0.3	27.5	47.0	2.5	8.3	4.7	0.4	2,700
Mugogodo West	7.6	0.0	19.9	40.7	0.5	28.1	2.2	1.1	1,622
Mugogodo East	4.1	0.6	40.7	30.7	0.6	16.8	5.8	0.7	3,353

Table 20.14: Lighting Fuel for Female Headed Households by County, Constituency and Wards

County/Constituency/Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuelwood	Solar	Other	House-holds
Kenya	19.2	0.5	31.0	42.1	0.8	4.5	1.4	0.5	2,731,060
Rural	4.5	0.4	33.7	51.8	0.8	6.5	1.8	0.5	1,826,263
Urban	48.8	0.8	25.4	22.6	0.7	0.6	0.6	0.5	904,797

Laikipia County	16.0	0.5	34.8	36.3	0.7	6.5	5.0	0.3	34,825
Laikipia West Constituency	15.6	0.3	38.0	36.5	0.8	3.3	5.2	0.3	17,108
Ol-Moran	7.0	0.5	35.1	42.4	0.6	7.6	6.5	0.4	1,694
Rumuruti Township	9.4	0.3	31.3	51.7	2.0	2.8	2.3	0.2	1,810
Githiga	6.8	0.2	54.5	29.1	0.4	0.4	8.5	0.1	2,352
Marmanet	4.5	0.4	46.8	36.8	1.0	1.7	8.8	0.1	3,338
Igwamiti	35.3	0.4	34.4	26.0	0.6	0.5	2.7	0.1	5,845
Salama	0.6	0.1	23.5	56.3	0.3	13.8	4.3	1.0	2,069
Laikipia East Constituency	25.7	0.8	38.4	27.5	0.5	0.6	6.3	0.2	10,613
Ngobit	3.8	0.7	43.4	39.8	0.8	1.3	9.9	0.2	2,354
Tigithi	2.3	0.7	49.0	36.0	0.8	0.3	10.9	0.1	1,997
Thingithu	54.8	0.5	24.2	15.4	0.2	0.2	4.6	0.2	1,815
Nanyuki	52.5	1.4	33.6	10.7	0.2	0.4	1.1	0.2	2,805
Umande	7.5	0.5	42.3	41.8	0.6	0.5	6.6	0.2	1,642
Laikipia North Constituency	2.7	0.2	21.8	48.8	0.7	23.0	2.4	0.5	7,104
Sosian	1.1	0.1	13.3	53.5	0.3	30.1	1.1	0.4	2,714
Segera	3.7	0.2	19.5	60.0	2.0	10.7	3.6	0.2	1,657
Mugogodo West	5.4	-	17.9	38.5	0.3	35.8	1.4	0.7	914
Mugogodo East	2.7	0.5	38.4	36.8	0.3	17.1	3.5	0.7	1,819

Table 20.15: Main material of the Floor by County, Constituency and Wards

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	Households
Kenya	41.2	1.6	0.7	56.0	0.5	8,493,380
Rural	22.1	0.3	0.7	76.5	0.4	5,239,879
Urban	71.8	3.5	0.9	23.0	0.8	3,253,501
Laikipia County	33.1	0.6	1.0	65.1	0.3	97,112
Laikipia West Constituency	32.7	0.6	1.1	65.5	0.2	47,960
Ol-Moran	20.5	0.0	0.5	78.8	0.2	4,233
Rumuruti Township	24.3	0.2	0.4	74.9	0.1	4,880
Githiga	27.8	1.0	0.7	70.1	0.4	6,694
Marmanet	17.7	0.2	1.5	80.3	0.3	9,072
Igwamiti	54.2	0.9	1.3	43.5	0.1	17,591
Salama	11.5	0.1	1.1	87.2	0.1	5,490
Laikipia East Constituency	43.7	1.1	1.0	53.9	0.3	31,010
Ngobit	19.2	0.1	2.4	77.3	1.0	6,544
Tigithi	20.0	0.4	0.9	78.4	0.2	5,892

Thingithu	71.7	2.4	0.3	25.5	0.1	5,796
Nanyuki	68.7	1.7	0.7	28.8	0.0	8,349
Umande	27.7	0.3	0.8	70.9	0.2	4,429
Laikipia North Constituency	15.9	0.2	0.5	83.1	0.3	18,142
Sosian	7.1	0.0	0.7	91.9	0.2	6,077
Segera	21.0	0.3	0.3	78.0	0.3	4,357
Mugogodo West	16.9	0.4	0.3	82.2	0.3	2,536
Mugogodo East	21.3	0.2	0.7	77.6	0.3	5,172

Table 20.16: Main Material of the Floor in Male and Female Headed Households by County, Constituency and Ward

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	House- holds	Cement	Tiles	Wood	Earth	Other	House- holds
Kenya	42.8	1.6	0.8	54.2	0.6	5,762,320	37.7	1.4	0.7	59.8	0.5	2,731,060
Rural	22.1	0.3	0.7	76.4	0.4	3,413,616	22.2	0.3	0.6	76.6	0.3	1,826,263
Urban	72.9	3.5	0.9	21.9	0.8	2,348,704	69.0	3.6	0.9	25.8	0.8	904,797
Laikipia County	34.5	0.7	1.0	63.6	0.3	62,287	30.6	0.5	0.9	67.8	0.2	34,825
Laikipia West Constituency	33.5	0.6	1.2	64.6	0.2	30,852	31.2	0.5	0.9	67.1	0.2	17,108
Ol-Moran	21.5	0.1	0.5	77.7	0.2	2,539	18.8	-	0.4	80.5	0.3	1,694
Rumuruti Township	26.0	0.3	0.4	73.2	0.1	3,070	21.4	0.1	0.6	77.8	0.1	1,810
Githiga	28.9	1.1	0.8	68.8	0.4	4,342	25.7	0.8	0.6	72.5	0.3	2,352
Marmaret	17.4	0.2	1.7	80.4	0.3	5,734	18.1	0.2	1.2	80.3	0.2	3,338
Igwamiti	53.8	0.9	1.4	43.7	0.1	11,746	54.8	0.9	1.1	43.1	0.2	5,845
Salama	11.9	0.1	1.0	87.0	0.1	3,421	10.8	0.0	1.4	87.6	0.2	2,069
Laikipia East Constituency	44.1	1.2	1.0	53.3	0.3	20,397	42.9	0.7	1.2	54.9	0.3	10,613
Ngobit	19.4	0.0	2.0	77.4	1.1	4,190	18.7	0.2	3.1	77.1	0.8	2,354
Tigithi	20.5	0.5	1.0	77.8	0.3	3,895	19.0	0.4	0.9	79.7	0.1	1,997
Thingithu	70.8	3.0	0.3	25.8	0.1	3,981	73.6	1.2	0.4	24.7	0.1	1,815
Nanyuki	68.9	1.9	0.7	28.4	0.0	5,544	68.4	1.4	0.7	29.4	0.1	2,805
Umande	27.1	0.3	0.7	71.7	0.3	2,787	28.8	0.4	0.9	69.7	0.2	1,642
Laikipia North Constituency	19.3	0.2	0.5	79.6	0.4	11,038	10.6	0.2	0.5	88.6	0.1	7,104
Sosian	10.0	-	0.7	88.9	0.4	3,363	3.6	0.1	0.6	95.7	0.1	2,714
Segera	26.6	0.3	0.4	72.3	0.5	2,700	11.9	0.4	0.2	87.3	0.1	1,657
Mugogodo West	18.6	0.4	0.3	80.3	0.4	1,622	13.8	0.4	0.2	85.6	-	914
Mugogodo East	23.1	0.1	0.6	75.9	0.2	3,353	18.1	0.2	0.8	80.6	0.3	1,819

Table 20.17: Main Roofing Material by County Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/Dung	Other	Households
Kenya	73.5	2.2	3.6	2.2	13.3	3.2	0.3	0.8	1.0	8,493,380
Rural	70.3	0.7	0.2	1.8	20.2	4.2	0.2	1.2	1.1	5,239,879
Urban	78.5	4.6	9.1	2.9	2.1	1.5	0.3	0.1	0.9	3,253,501
Laikipia County	80.3	1.4	1.5	2.8	9.6	0.4	0.7	2.6	0.8	97,112
Laikipia West Constituency	86.7	1.1	1.1	2.9	6.7	0.2	0.1	0.7	0.5	47,960
Ol-Moran	79.1	0.7	0.1	12.4	5.2	0.1	0.1	0.4	1.9	4,233
Rumuruti Township	74.7	0.5	0.0	0.4	23.1	0.9	0.0	0.3	0.0	4,880
Githiga	97.3	1.2	0.3	0.1	0.9	0.0	0.1	0.0	0.0	6,694
Marmaret	94.2	0.5	0.0	0.7	4.3	0.1	0.1	0.0	0.1	9,072
Igwamiti	89.4	1.9	2.8	4.0	1.4	0.1	0.1	0.0	0.2	17,591
Salama	68.9	0.5	0.0	1.2	21.3	0.7	0.2	5.1	2.1	5,490
Laikipia East Constituency	89.5	2.5	2.9	1.8	0.9	0.3	1.9	0.0	0.3	31,010
Ngobit	96.4	0.3	0.1	1.2	1.0	0.1	0.0	0.0	0.9	6,544
Tigithi	97.1	0.8	0.0	0.1	1.4	0.2	0.1	0.0	0.3	5,892
Thingithu	87.1	3.3	4.6	3.8	0.6	0.3	0.1	0.0	0.1	5,796
Nanyuki	76.5	5.8	7.5	2.8	0.4	0.0	6.9	0.0	0.0	8,349
Umande	96.9	0.4	0.0	0.1	1.6	1.0	0.0	0.0	0.0	4,429
Laikipia North Constituency	47.5	0.4	0.0	4.4	31.9	1.1	0.1	12.0	2.5	18,142
Sosian	38.6	0.3	0.0	5.8	28.7	2.1	0.0	21.4	3.0	6,077
Segera	58.0	0.6	0.1	6.8	28.2	0.5	0.2	4.3	1.2	4,357
Mugogodo West	16.8	0.4	0.0	1.7	66.2	0.3	0.0	9.3	5.2	2,536
Mugogodo East	64.1	0.4	0.0	2.1	21.9	1.0	0.1	8.9	1.5	5,172

Table 20.18: Main Roofing Material in Male Headed Households by County, Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/Dung	Other	Households
Kenya	73.0	2.3	3.9	2.3	13.5	3.2	0.3	0.5	1.0	5,762,320
Rural	69.2	0.8	0.2	1.8	21.5	4.4	0.2	0.9	1.1	3,413,616
Urban	78.5	4.6	9.3	2.9	2.0	1.4	0.3	0.1	0.9	2,348,704
Laikipia County	82.0	1.6	1.5	2.8	8.5	0.4	0.6	1.7	0.8	62,287
Laikipia West Constituency	87.8	1.3	1.0	2.8	5.9	0.2	0.1	0.4	0.4	30,852
Ol-Moran	79.8	0.9	0.2	12.5	4.6	0.2	0.1	0.3	1.6	2,539
Rumuruti Township	77.3	0.6	0.0	0.4	20.7	0.8	-	0.3	-	3,070
Githiga	97.2	1.4	0.3	0.1	0.8	0.0	0.1	0.0	0.0	4,342
Marmaret	94.3	0.6	-	0.7	4.2	0.1	0.1	0.0	0.1	5,734
Igwamiti	89.5	2.1	2.6	4.0	1.5	0.1	0.1	0.0	0.2	11,746

Salama	74.2	0.4	-	1.1	18.4	0.5	0.2	3.4	1.8	3,421
Laikipia East Constituency	89.3	2.7	2.9	1.8	0.9	0.3	1.8	0.0	0.3	20,397
Ngobit	96.7	0.3	0.1	1.2	0.7	0.1	-	-	1.1	4,190
Tigithi	97.1	0.8	-	0.1	1.4	0.2	0.1	0.0	0.3	3,895
Thingithu	86.7	3.7	4.8	3.7	0.6	0.3	0.0	0.0	0.1	3,981
Nanyuki	76.6	6.2	7.3	2.9	0.5	0.1	6.5	-	-	5,544
Umande	96.6	0.5	0.0	0.1	1.5	1.2	0.0	-	0.0	2,787
Laikipia North Constituency	52.6	0.5	0.0	4.6	29.9	1.3	0.1	8.1	3.0	11,038
Sosian	46.2	0.4	0.0	6.8	27.9	2.4	0.1	12.3	3.9	3,363
Segeera	64.9	0.7	0.0	6.7	22.9	0.7	0.2	2.5	1.3	2,700
Mugogodo West	18.8	0.5	0.1	1.8	64.2	0.4	-	8.7	5.5	1,622
Mugogodo East	65.3	0.4	-	2.1	21.0	1.0	0.1	8.1	2.1	3,353

Table 20.19: Main Roofing Material in Female Headed Households by County, Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/Dung	Other	Households
Kenya	74.5	2.0	3.0	2.2	12.7	3.2	0.3	1.2	1.0	2,731,060
Rural	72.5	0.7	0.1	1.8	17.8	3.9	0.3	1.8	1.1	1,826,263
Urban	78.6	4.5	8.7	2.9	2.3	1.6	0.3	0.1	0.9	904,797
Laikipia County	77.1	1.1	1.4	2.8	11.4	0.4	0.7	4.2	0.8	34,825
Laikipia West Constituency	84.7	0.9	1.1	3.0	8.1	0.3	0.1	1.1	0.6	17,108
Ol-Moran	78.0	0.5	0.1	12.2	6.1	0.1	0.1	0.6	2.4	1,694
Rumuruti Township	70.4	0.3	-	0.4	27.3	1.2	-	0.4	-	1,810
Githiga	97.6	0.6	0.4	0.2	1.1	-	0.0	-	0.0	2,352
Marmaret	93.9	0.4	-	0.8	4.6	0.1	0.1	-	0.1	3,338
Igwamiti	89.2	1.6	3.1	4.2	1.3	0.1	0.1	0.1	0.2	5,845
Salama	60.2	0.5	-	1.3	26.1	1.0	0.1	8.1	2.6	2,069
Laikipia East Constituency	89.8	2.0	2.8	1.7	1.0	0.2	2.1	0.0	0.3	10,613
Ngobit	96.0	0.3	0.1	1.1	1.7	0.0	-	0.0	0.6	2,354
Tigithi	97.1	0.6	-	0.2	1.4	0.2	0.2	0.1	0.4	1,997
Thingithu	87.9	2.6	4.1	3.9	0.6	0.4	0.3	-	0.2	1,815
Nanyuki	76.3	5.1	7.9	2.7	0.2	0.0	7.8	-	0.1	2,805

Umande	97.4	0.2	0.1	-	1.7	0.5	-	0.1	-	1,642
Laikipia North Constituency	39.6	0.3	0.0	4.1	34.9	1.0	0.1	18.1	1.7	7,104
Sosian	29.2	0.2	-	4.6	29.6	1.7	0.0	32.7	2.0	2,714
Segera	46.8	0.5	0.2	6.9	36.9	0.2	0.1	7.3	1.0	1,657
Mugogodo West	13.3	0.2	-	1.5	69.7	0.2	-	10.3	4.7	914
Mugogodo East	61.9	0.5	-	2.1	23.6	0.9	0.1	10.3	0.6	1,819

Table 20.20: Main material of the wall by County, Constituency and Wards

County/Constituency/Wards	Stone	Brick/Block	Mud/Wood	Mud/Cement	Wood only	Coorugated Iron Sheets	Grass/Reeds	Tin	Other	Households
Kenya	16.7	16.9	36.5	7.7	11.1	6.7	3.0	0.3	1.2	8,493,380
Rural	5.7	13.8	50.0	7.6	14.4	2.5	4.4	0.3	1.4	5,239,879
Urban	34.5	21.9	14.8	7.8	5.8	13.3	0.8	0.3	0.9	3,253,501
Laikipia County	14.9	2.9	29.9	3.2	44.9	2.8	0.4	0.1	1.0	97,112
Laikipia West Constituency	14.6	2.8	30.9	2.2	46.5	1.8	0.1	0.1	0.9	47,960
Ol-Moran	6.3	2.2	59.6	2.2	26.6	2.7	0.0	0.2	0.1	4,233
Rumuruti Township	8.4	3.4	52.7	2.7	24.3	1.3	0.2	0.0	6.9	4,880
Githiga	3.1	6.3	39.7	3.4	45.2	2.0	0.0	0.2	0.1	6,694
Marmanet	3.9	1.3	27.0	1.0	65.6	1.0	0.1	0.0	0.2	9,072
Igwamiti	31.8	2.5	10.1	0.9	52.8	1.5	0.1	0.1	0.2	17,591
Salama	3.0	1.5	51.9	6.9	31.5	4.0	0.5	0.1	0.5	5,490
Laikipia East Constituency	20.9	2.9	10.6	2.5	58.6	3.9	0.1	0.1	0.4	31,010
Ngobit	3.9	2.2	11.7	1.2	76.1	3.9	0.2	0.0	0.9	6,544
Tigithi	4.6	1.2	11.5	1.7	72.9	7.6	0.1	0.1	0.4	5,892
Thingithu	45.5	5.0	3.6	1.9	40.0	3.4	0.1	0.1	0.4	5,796
Nanyuki	37.4	2.9	9.8	4.6	42.9	2.1	0.2	0.1	0.1	8,349
Umande	4.6	3.9	18.4	2.3	67.4	2.9	0.0	0.2	0.3	4,429
Laikipia North Constituency	5.2	3.3	60.0	6.9	17.4	3.4	1.7	0.1	2.1	18,142
Sosian	3.1	1.2	72.3	12.3	4.7	3.1	0.9	0.1	2.3	6,077
Segera	8.4	5.7	48.8	3.4	22.1	7.3	3.4	0.1	0.9	4,357
Mugogodo West	3.5	5.7	69.2	6.9	4.2	1.4	3.1	0.1	5.8	2,536
Mugogodo East	5.9	2.4	50.4	3.4	34.8	1.3	0.7	0.2	0.9	5,172

Table 20.21: Main Material of the Wall in Male Headed Households by County, Constituency and Ward

County/ Constituency/Wards	Stone	Brick/Block	Mud/Wood	Mud/ Cement	Wood only	Coorugated Iron Sheets	Grass/ Reeds	Tin	Other	House-holds
Kenya	17.5	16.6	34.7	7.6	11.4	7.4	3.4	0.3	1.2	5,762,320
Rural	5.8	13.1	48.9	7.3	15.4	2.6	5.2	0.3	1.4	3,413,616
Urban	34.6	21.6	14.0	7.9	5.6	14.4	0.7	0.3	0.9	2,348,704
Laikipia County	15.5	3.2	27.5	3.1	45.9	3.1	0.4	0.1	1.1	62,287
Laikipia West Constituency	14.8	2.9	29.5	2.1	47.5	1.9	0.1	0.1	0.9	30,852
Ol-Moran	6.8	2.1	58.0	2.0	28.1	2.6	0.0	0.2	0.0	2,539
Rumuruti Township	8.7	4.2	51.1	2.6	24.7	1.3	0.2	0.0	7.2	3,070
Githiga	3.3	6.8	38.6	3.4	45.5	2.0	0.1	0.2	0.1	4,342
Marmanet	4.1	1.3	26.4	1.0	65.9	1.0	0.0	0.0	0.3	5,734
Igwamiti	31.0	2.6	10.3	0.9	53.4	1.6	0.1	0.1	0.2	11,746
Salama	3.2	1.6	49.1	6.2	34.0	4.4	0.7	0.2	0.5	3,421
Laikipia East Constituency	21.3	3.1	10.2	2.4	58.2	4.1	0.1	0.1	0.5	20,397
Ngobit	3.9	2.3	11.5	1.3	75.9	3.9	0.1	0.0	1.1	4,190
Tigithi	5.1	1.2	11.5	1.7	71.8	8.1	0.1	0.1	0.5	3,895
Thingithu	44.7	5.4	3.8	1.7	40.2	3.7	0.0	0.1	0.3	3,981
Nanyuki	37.3	3.0	9.6	4.2	43.1	2.3	0.3	0.1	0.1	5,544
Umande	4.9	4.1	17.2	2.2	68.0	2.9	0.1	0.2	0.4	2,787
Laikipia North Constituency	6.7	4.1	53.8	7.4	18.9	4.9	1.4	0.1	2.6	11,038
Sosian	4.6	1.7	65.2	13.8	5.0	5.2	1.1	0.1	3.3	3,363
Segera	11.0	7.4	40.5	3.7	23.4	10.4	2.3	0.2	1.2	2,700
Mugogodo West	3.3	6.8	67.0	8.2	4.3	1.7	2.6	0.1	6.2	1,622
Mugogodo East	7.0	2.5	46.6	3.7	36.4	1.7	0.6	0.2	1.3	3,353

Table 20.22: Main Material of the Wall in Female Headed Households by County, Constituency and Ward

County/ Constituency	Stone	Brick/ Block	Mud/ Wood	Mud/ Cement	Wood only	Coorugated Iron Sheets	Grass/ Reeds	Tin	Other	House-holds
Kenya	15.0	17.5	40.4	7.9	10.5	5.1	2.1	0.3	1.2	2,731,060
Rural	5.4	14.9	52.1	8.0	12.6	2.4	2.8	0.4	1.4	1,826,263
Urban	34.2	22.6	16.9	7.6	6.2	10.5	0.8	0.3	0.9	904,797

Laikipia County	13.7	2.4	34.0	3.2	43.1	2.1	0.5	0.1	0.8	34,825
Laikipia West Constituency	14.2	2.4	33.4	2.4	44.7	1.7	0.1	0.1	0.9	17,108
Ol-Moran	5.5	2.5	62.0	2.5	24.3	2.8	0.1	0.2	0.2	1,694
Rumuruti Township	7.9	2.1	55.4	2.7	23.8	1.3	0.2	0.1	6.6	1,810
Githiga	2.7	5.4	41.7	3.3	44.7	2.0	-	0.2	0.0	2,352
Marmaret	3.5	1.2	28.0	0.9	65.2	0.9	0.1	0.0	0.1	3,338
Igwamiti	33.6	2.4	9.9	0.8	51.6	1.4	0.0	0.1	0.2	5,845
Salama	2.6	1.3	56.5	8.1	27.5	3.2	0.2	-	0.6	2,069
Laikipia East Constituency	20.2	2.6	11.2	2.7	59.3	3.4	0.1	0.1	0.3	10,613
Ngobit	4.0	2.0	12.0	1.0	76.4	3.8	0.2	0.0	0.7	2,354
Tigithi	3.7	1.2	11.4	1.7	75.0	6.5	0.2	0.1	0.3	1,997
Thingithu	47.3	4.1	3.2	2.3	39.7	2.7	0.2	0.1	0.4	1,815
Nanyuki	37.6	2.6	10.3	5.2	42.4	1.7	-	0.1	0.1	2,805
Umande	4.1	3.5	20.5	2.6	66.3	2.7	-	0.1	0.2	1,642
Laikipia North Constituency	2.9	2.0	69.6	6.0	15.0	1.0	2.2	0.1	1.3	7,104
Sosian	1.3	0.7	81.0	10.6	4.3	0.5	0.5	0.1	1.1	2,714
Segera	4.0	3.0	62.4	2.7	20.0	2.3	5.1	-	0.4	1,657
Mugogodo West	4.0	3.8	73.1	4.7	4.0	0.9	4.0	0.2	5.1	914
Mugogodo East	3.7	2.1	57.3	2.9	31.9	0.5	1.0	0.2	0.3	1,819

Table 20.23: Source of Water by County, Constituency and Ward

County/ Constituency/ Wards	Pond	Dam	Lake	Stream/ River	Unprotected Spring	Unprotected Well	Jabia	Water vendor	Other	Unimproved Sources	Protected Spring	Protected Well	Bore- hole	Piped into Dwelling	Piped	Rain Water Collection	Improved Sources	Number of Individ- uals
Kenya	2.7	2.4	1.2	23.2	5.0	6.9	0.3	5.2	0.4	47.4	7.6	7.7	11.6	5.9	19.2	0.7	52.6	37,919,647
Rural	3.6	3.2	1.5	29.6	6.4	8.7	0.4	2.2	0.5	56.0	9.2	8.1	12.0	1.8	12.1	0.8	44.0	26,075,195
Urban	0.9	0.7	0.5	9.2	1.9	2.9	0.2	11.8	0.1	28.3	4.0	6.8	10.7	14.7	34.9	0.5	71.7	11,844,452
Laikipia County	1.2	7.8	0.0	27.4	3.2	6.9	0.2	2.8	0.1	49.6	2.2	7.8	14.2	7.7	17.4	1.1	50.4	391,597
Laikipia West Constituency	1.7	9.1	0.0	24.5	4.0	7.6	0.2	3.1	0.0	50.3	3.4	13.4	12.9	5.5	12.9	1.6	49.7	199,491
Ol-Moran	17.1	26.4	0.1	0.0	0.5	5.2	0.4	1.7	0.0	51.5	0.5	7.1	35.2	0.1	1.1	4.4	48.5	17,556
Rumuruti Town- ship	0.0	20.4	0.2	39.6	4.1	3.9	0.0	14.5	0.0	82.7	1.2	3.1	8.9	0.8	2.6	0.8	17.3	21,265
Githiga	0.3	2.5	0.0	2.2	2.1	24.3	0.2	2.5	0.0	33.9	5.7	39.4	17.9	0.3	1.8	1.0	66.1	27,958
Marmanet	0.3	11.3	0.0	19.6	6.1	7.2	0.0	0.3	0.0	44.8	5.3	14.8	12.0	2.5	18.6	2.0	55.2	42,422
Igwamiti	0.2	1.4	0.0	23.3	5.0	4.2	0.2	3.0	0.1	37.4	3.2	10.6	8.2	14.0	24.8	1.8	62.6	66,466
Salama	0.1	11.5	0.1	67.5	2.0	3.8	0.0	0.1	0.1	85.3	1.7	2.2	8.7	1.4	0.5	0.3	14.7	23,824
Laikipia East Constituency	0.1	0.8	0.0	29.4	0.2	0.5	0.1	3.9	0.1	35.2	0.3	1.5	14.2	16.6	31.6	0.6	64.8	113,283
Ngobit	0.2	3.7	0.0	29.2	0.7	0.7	0.2	8.2	0.0	42.9	0.9	0.6	19.7	16.9	18.1	1.0	57.1	23,836
Tigithi	0.1	0.0	0.1	54.0	0.0	1.1	0.1	2.1	0.0	57.5	0.3	5.8	33.2	0.9	1.9	0.5	42.5	26,953
Thingithu	0.2	0.1	0.0	1.8	0.0	0.0	0.3	3.2	0.1	5.7	0.0	0.0	8.5	31.1	54.2	0.4	94.3	20,069
Nanyuki	0.1	0.1	0.0	10.6	0.1	0.1	0.1	4.7	0.0	15.8	0.1	0.0	0.5	25.1	58.1	0.3	84.2	26,267
Umande	0.0	0.0	0.0	53.8	0.1	0.4	0.1	0.2	0.3	54.8	0.1	0.0	3.8	10.2	30.4	0.7	45.2	16,158
Laikipia North Constituency	1.3	14.7	0.1	31.8	5.7	14.3	0.4	0.6	0.0	68.7	2.1	2.3	17.5	0.6	8.2	0.6	31.3	78,823

Sosian	3.4	33.7	0.1	21.6	3.3	10.8	0.4	0.1	0.0	73.3	3.8	3.4	18.4	0.1	1.0	0.1	26.7	25,848
Segera	0.5	1.7	0.0	74.2	0.2	0.9	0.9	0.1	0.0	78.4	0.8	0.7	12.8	0.2	5.1	2.0	21.6	15,911
Mugogodo West	0.0	16.7	0.2	17.9	0.3	23.2	0.1	2.4	0.0	60.9	2.6	3.5	27.5	2.0	3.3	0.2	39.1	13,702
Mugogodo East	0.1	1.3	0.0	22.4	15.3	22.0	0.2	0.3	0.1	61.7	0.8	1.5	13.7	0.7	21.3	0.4	38.3	23,362

Table 20.24: Source of Water of Male headed Household by County Constituency and Ward

County/Constituency/Wards	Pond	Dam	Lake	Stream/River	Unprotected Spring	Unprotected Well	Jabia	Water vendor	Other	Unimproved Sources	Protected Spring	Protected Well	Bore-hole	Piped into Dwelling	Piped	Rain Water Collection	Improved Sources	Number of Individuals
Kenya	2.7	2.3	1.1	22.4	4.8	6.7	0.4	5.6	0.4	46.4	7.4	7.7	11.7	6.2	19.9	0.7	53.6	26,755,066
Rural	3.7	3.1	1.4	29.1	6.3	8.6	0.4	2.4	0.5	55.6	9.2	8.2	12.1	1.9	12.2	0.8	44.4	18,016,471
Urban	0.8	0.6	0.5	8.5	1.8	2.8	0.2	12.1	0.1	27.5	3.8	6.7	10.8	14.9	35.8	0.5	72.5	8,738,595
Laikipia County	1.0	7.7	0.1	26.6	3.3	6.7	0.2	2.8	0.1	48.4	2.2	7.8	14.2	8.2	18.1	1.1	51.6	259,438
Laikipia West Constituency	1.5	8.9	0.0	24.1	4.0	7.6	0.2	3.0	0.0	49.3	3.4	13.6	13.0	6.0	13.1	1.6	50.7	133,989
Ol-Moran	15.4	27.5	0.1	0.0	0.5	4.8	0.5	1.7	-	50.6	0.7	6.5	36.0	0.1	1.2	4.9	49.4	11,025
Rumuruti Township	0.0	20.6	0.1	38.6	4.2	4.2	0.0	13.9	0.0	81.7	1.4	3.7	8.3	0.9	3.0	0.9	18.3	14,106
Githiga	0.3	2.4	-	2.3	1.9	24.9	0.2	2.4	-	34.4	5.8	39.2	17.5	0.3	1.9	0.9	65.6	19,229
Marmanet	0.4	11.6	0.0	19.1	5.8	7.3	0.0	0.4	0.0	44.8	5.3	14.8	12.9	2.5	17.8	1.9	55.2	28,064
Igwamiti	0.2	1.3	0.0	22.9	5.2	4.0	0.2	2.8	0.1	36.7	3.1	10.7	8.3	14.7	25.0	1.6	63.3	46,432
Salama	0.2	10.4	0.0	68.5	2.0	2.9	0.0	0.1	0.1	84.3	1.8	1.9	9.2	2.0	0.6	0.3	15.7	15,133
Laikipia East Constituency	0.1	0.6	0.0	28.7	0.2	0.5	0.1	3.8	0.1	34.3	0.3	1.5	13.7	16.8	32.8	0.6	65.7	76,334
Ngobit	0.2	2.8	-	30.2	0.7	0.7	0.1	8.0	0.0	42.9	0.9	0.5	18.9	16.8	18.9	1.1	57.1	15,763

Tigithi	0.1	0.0	0.1	53.8	0.0	1.2	0.1	2.4	-	57.6	0.3	6.0	32.4	1.0	2.1	0.5	42.4	17,872
Thingithu	0.2	0.1	-	1.7	-	0.0	0.3	3.3	0.1	5.8	0.0	-	8.2	31.5	53.9	0.6	94.2	14,489
Nanyuki	0.1	0.0	0.1	10.3	0.1	0.1	0.1	4.2	0.0	15.1	0.1	0.0	0.3	24.5	59.7	0.4	84.9	17,709
Umande	0.0	-	-	52.1	0.1	0.4	0.1	0.2	0.5	53.4	0.1	-	4.0	10.6	31.2	0.6	46.6	10,501
Laikipia North Constituency	1.1	15.5	0.1	30.1	6.1	13.7	0.4	0.6	0.0	67.6	1.7	1.9	18.7	0.7	8.9	0.4	32.4	49,115
Sosian	3.3	37.8	0.1	19.0	3.5	8.6	0.5	0.1	-	73.1	3.1	1.8	21.0	0.1	0.8	0.1	26.9	14,799
Segera	0.5	0.9	-	73.6	0.2	0.7	1.3	0.1	-	77.3	0.7	0.9	13.8	0.2	5.7	1.3	22.7	9,326
Mugogodo West	-	18.2	0.2	16.3	0.3	23.0	0.1	2.4	-	60.5	2.1	3.5	28.2	1.9	3.5	0.2	39.5	9,235
Mugogodo East	0.1	1.5	0.0	22.7	15.4	20.8	0.1	0.3	0.1	60.9	0.7	1.7	13.9	0.8	21.6	0.3	39.1	15,755

Table 20.25: Source of Water of Female headed Household by County Constituency and Ward

County/Constituency/Wards	Pond	Dam	Lake	Stream/River	Unprotected Spring	Unprotected Well	Jabia	Water vendor	Other	Unimproved Sources	Protected Spring	Protected Well	Borehole	Piped into Dwelling	Piped	Rain Water Collection	Improved Sources	Number of Individuals
Kenya	2.8	2.7	1.3	25.2	5.3	7.4	0.3	4.4	0.3	49.7	8.1	7.7	11.3	5.1	17.5	0.7	50.3	11,164,581
Rural	3.4	3.5	1.6	30.6	6.5	8.9	0.3	1.8	0.4	57.0	9.5	8.0	11.5	1.6	11.7	0.8	43.0	8,058,724
Urban	1.0	0.8	0.6	11.1	2.3	3.4	0.2	11.1	0.1	30.5	4.7	7.0	10.5	14.2	32.5	0.6	69.5	3,105,857
Laikipia County	1.4	8.1	0.0	29.0	3.1	7.3	0.2	2.9	0.0	52.1	2.3	7.6	14.0	6.8	16.0	1.2	47.9	132,159
Laikipia West Constituency	2.2	9.6	0.0	25.4	3.9	7.6	0.1	3.4	0.1	52.3	3.2	13.2	12.7	4.5	12.5	1.7	47.7	65,502
Ol-Moran	20.2	24.4	-	0.0	0.4	5.9	0.2	1.8	-	53.0	0.2	8.1	34.0	0.2	1.1	3.4	47.0	6,531
Rumuruti Township	0.1	19.8	0.2	41.6	3.9	3.3	-	15.7	0.0	84.6	0.7	1.9	10.0	0.5	1.6	0.6	15.4	7,159
Githiga	0.2	2.7	-	1.8	2.6	22.8	0.2	2.5	-	32.8	5.5	40.0	18.7	0.3	1.6	1.1	67.2	8,729

Marmaret	0.1	10.7	-	20.4	6.6	6.8	0.0	0.3	-	44.9	5.2	14.8	10.3	2.4	20.2	2.1	55.1	14,358
Igwamiti	0.3	1.6	0.0	24.1	4.5	4.7	0.3	3.5	0.1	39.1	3.4	10.5	7.9	12.4	24.5	2.3	60.9	20,034
Salama	-	13.4	0.1	65.9	2.0	5.3	0.0	0.1	0.2	87.0	1.5	2.8	7.7	0.4	0.4	0.2	13.0	8,691
Laikipia East Constituency	0.1	1.2	0.0	30.9	0.2	0.4	0.1	4.1	0.0	37.1	0.3	1.6	15.3	16.0	29.2	0.5	62.9	36,949
Ngobit	0.2	5.3	0.0	27.3	0.7	0.6	0.2	8.5	0.0	42.9	0.7	0.9	21.2	17.0	16.3	0.9	57.1	8,073
Tigithi	0.1	-	-	54.4	0.0	0.9	0.1	1.7	-	57.2	0.3	5.4	34.7	0.6	1.3	0.5	42.8	9,081
Thingithu	0.2	0.1	-	1.9	-	-	-	3.0	0.1	5.5	-	0.1	9.4	30.0	54.9	0.1	94.5	5,580
Nanyuki	0.1	0.1	0.0	11.1	0.1	0.2	0.2	5.7	0.0	17.4	0.2	0.1	0.9	26.6	54.7	0.2	82.6	8,558
Umande	0.1	-	-	56.8	0.1	0.3	-	0.2	0.0	57.5	0.1	0.1	3.4	9.3	28.7	1.0	42.5	5,657
Laikipia North Constituency	1.5	13.3	0.1	34.6	5.1	15.2	0.2	0.5	0.0	70.5	2.7	2.9	15.4	0.5	7.1	0.8	29.5	29,708
Sosian	3.6	28.1	0.1	24.9	3.0	13.7	0.2	0.1	-	73.6	4.8	5.5	15.0	-	1.2	0.0	26.4	11,049
Segera	0.6	2.7	-	75.0	0.3	1.1	0.3	-	-	80.0	0.8	0.4	11.5	0.1	4.1	3.1	20.0	6,585
Mugogodo West	-	13.7	0.3	21.2	0.3	23.6	0.1	2.4	-	61.5	3.6	3.5	26.0	2.4	2.9	0.1	38.5	4,467
Mugogodo East	0.1	0.9	-	21.7	15.0	24.6	0.3	0.4	0.2	63.2	1.0	1.2	13.2	0.4	20.6	0.5	36.8	7,607

Table 20.26: Human Waste Disposal by County, Constituency and Ward

County/ Constituency	Main Sewer	Septic Tank	Cess Pool	VIP Latrine	Pit Latrine	Improved Sanitation	Pit Latrine Uncovered	Bucket	Bush	Other	Unimproved Sanitation	Number of HH Members
Kenya	5.91	2.76	0.27	4.57	47.62	61.14	20.87	0.27	17.58	0.14	38.86	37,919,647
Rural	0.14	0.37	0.08	3.97	48.91	53.47	22.32	0.07	24.01	0.13	46.53	26,075,195
Urban	18.61	8.01	0.70	5.90	44.80	78.02	17.67	0.71	3.42	0.18	21.98	11,844,452
Laikipia County	7.79	1.50	0.17	3.46	55.45	68.38	17.08	0.07	14.41	0.06	31.62	391,597
Laikipia West Constituency	5.99	1.56	0.18	4.07	60.51	72.30	20.69	0.04	6.93	0.04	27.70	199,491
Ol-Moran	0.10	0.11	0.01	5.22	63.64	69.08	21.41	0.05	9.44	0.02	30.92	17,556
Rumuruti Township	0.05	1.14	0.01	2.28	42.95	46.43	33.47	0.00	20.00	0.10	53.57	21,265
Githiga	0.40	0.38	0.07	4.08	66.40	71.33	28.30	0.10	0.22	0.05	28.67	27,958
Marmanet	0.15	0.19	0.09	5.77	66.85	73.06	23.90	0.04	3.00	0.01	26.94	42,422
Igwamiti	17.67	3.93	0.42	4.11	59.60	85.73	13.70	0.04	0.52	0.02	14.27	66,466
Salama	0.00	0.18	0.04	1.69	58.21	60.12	13.60	0.01	26.15	0.12	39.88	23,824
Laikipia East Constituency	16.34	1.96	0.19	3.49	59.40	81.38	17.78	0.14	0.65	0.05	18.62	113,283
Ngobit	0.03	0.24	0.01	5.47	70.72	76.47	22.94	0.03	0.52	0.04	23.53	23,836
Tigithi	0.03	0.23	0.04	2.55	71.20	74.05	24.10	0.00	1.84	0.00	25.95	26,953
Thingithu	42.65	1.97	0.05	2.82	43.75	91.25	8.41	0.02	0.24	0.08	8.75	20,069
Nanyuki	37.79	6.22	0.72	3.45	46.32	94.50	4.80	0.44	0.20	0.06	5.50	26,267
Umande	0.06	0.46	0.00	3.02	63.71	67.25	32.37	0.22	0.09	0.07	32.75	16,158
Laikipia North Constituency	0.08	0.71	0.13	1.86	36.99	39.77	6.95	0.02	53.14	0.12	60.23	78,823
Sosian	0.12	0.15	0.15	0.99	31.87	33.28	11.57	0.04	55.11	0.00	66.72	25,848
Segera	0.07	1.09	0.33	2.88	55.01	59.38	4.79	0.00	35.30	0.53	40.62	15,911
Mugogodo West	0.00	1.38	0.00	3.12	12.46	16.96	3.77	0.00	79.27	0.00	83.04	13,702
Mugogodo East	0.09	0.66	0.06	1.40	44.76	46.97	5.20	0.02	47.79	0.03	53.03	23,362

Table 20.27: Human Waste Disposal in Male Headed household by County, Constituency and Ward

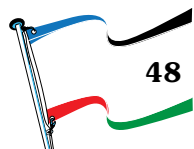
County/ Constituency/wards	Main Sewer	Septic Tank	Cess Pool	VIP Latrine	Pit Latrine	Improved Sanitation	Pit Latrine Uncovered	Bucket	Bush	Other	Unimproved Sanitation	Number of HH Members
Kenya	6.30	2.98	0.29	4.60	47.65	61.81	20.65	0.28	17.12	0.14	38.19	26,755,066
Rural	0.15	0.40	0.08	3.97	49.08	53.68	22.22	0.07	23.91	0.12	46.32	18,016,471

Urban	18.98	8.29	0.73	5.89	44.69	78.58	17.41	0.70	3.13	0.18	21.42	8,738,595
Laikipia County	8.02	1.68	0.17	3.53	57.07	70.47	16.76	0.06	12.65	0.06	29.53	259,438
Laikipia West Constituency	6.14	1.72	0.19	4.06	61.49	73.60	20.43	0.05	5.87	0.05	26.40	133,989
OI-Moran	0.15	0.09	0.02	5.55	65.98	71.79	20.40	0.00	7.81	0.00	28.21	11,025
Rumuruti Township	0.07	1.39	0.00	2.45	44.38	48.28	32.59	0.01	18.98	0.14	51.72	14,106
Githiga	0.47	0.39	0.05	4.20	66.22	71.33	28.19	0.12	0.28	0.07	28.67	19,229
Marmaret	0.11	0.20	0.14	5.90	66.55	72.89	24.16	0.06	2.87	0.02	27.11	28,064
Igwamiti	17.40	4.16	0.42	3.81	60.09	85.88	13.47	0.04	0.60	0.00	14.12	46,432
Salama	0.00	0.25	0.06	1.63	63.10	65.04	13.72	0.00	21.05	0.19	34.96	15,133
Laikipia East Constituency	16.43	2.18	0.19	3.51	60.35	82.67	16.44	0.11	0.73	0.05	17.33	76,334
Ngobit	0.03	0.30	0.00	5.33	72.26	77.92	21.63	0.03	0.38	0.05	22.08	15,763
Tigithi	0.04	0.20	0.07	2.49	72.33	75.12	22.49	0.00	2.39	0.01	24.88	17,872
Thingithu	42.33	2.27	0.04	2.78	44.70	92.12	7.47	0.03	0.28	0.10	7.88	14,489
Nanyuki	36.10	6.83	0.72	3.83	47.51	94.98	4.48	0.34	0.14	0.06	5.02	17,709
Umande	0.03	0.43	0.00	3.02	65.36	68.83	30.91	0.17	0.06	0.03	31.17	10,501
Laikipia North Constituency	0.05	0.79	0.11	2.12	39.91	42.98	7.25	0.02	49.67	0.08	57.02	49,115
Sosian	0.09	0.21	0.14	1.10	37.30	38.84	13.16	0.05	47.94	0.01	61.16	14,799
Segera	0.05	1.59	0.32	3.50	62.18	67.64	4.47	0.00	27.57	0.32	32.36	9,326
Mugogodo West	0.00	1.04	0.00	3.49	13.71	18.23	4.87	0.00	76.89	0.00	81.77	9,235
Mugogodo East	0.04	0.72	0.02	1.47	44.53	46.77	4.74	0.03	48.42	0.05	53.23	15,755

Table 20.28: Human Waste Disposal in Female Headed Household by County, Constituency and Ward

County/ Constituency	Main Sewer	Septic Tank	Cess Pool	VIP Latrine	Pit Latrine	Improved Sanitation	Pit Latrine Uncovered	Bucket	Bush	Other	Unimproved Sanitation	Number of HH Members
Kenya	5.0	2.2	0.2	4.5	47.6	59.5	21.4	0.3	18.7	0.2	40.5	11,164,581.0
Rural	0.1	0.3	0.1	4.0	48.5	53.0	22.6	0.1	24.2	0.1	47.0	8,058,724.0
Urban	17.6	7.2	0.6	5.9	45.1	76.4	18.4	0.7	4.3	0.2	23.6	3,105,857.0
Laikipia	7.4	1.2	0.2	3.3	52.3	64.3	17.7	0.1	17.9	0.1	35.7	132,159.0
Laikipia West	5.7	1.2	0.1	4.1	58.5	69.6	21.2	0.0	9.1	0.0	30.4	65,502.0
OI-Moran	0.0	0.1	0.0	4.7	59.7	64.5	23.1	0.1	12.2	0.1	35.5	6,531.0
Rumuruti Township	0.0	0.6	0.0	1.9	40.1	42.8	35.2	0.0	22.0	0.0	57.2	7,159.0
Githiga	0.2	0.4	0.1	3.8	66.8	71.3	28.5	0.0	0.1	0.0	28.7	8,729.0
Marmaret	0.2	0.2	0.0	5.5	67.5	73.4	23.4	0.0	3.2	0.0	26.6	14,358.0
Igwamiti	18.3	3.4	0.4	4.8	58.5	85.4	14.2	0.0	0.3	0.1	14.6	20,034.0
Salama	0.0	0.1	0.0	1.8	49.7	51.5	13.4	0.0	35.0	0.0	48.5	8,691.0

Laikipia East	16.2	1.5	0.2	3.4	57.4	78.7	20.5	0.2	0.5	0.0	21.3	36,949.0
Ngobit	0.0	0.1	0.0	5.7	67.7	73.7	25.5	0.0	0.8	0.0	26.3	8,073.0
Tigithi	0.0	0.3	0.0	2.7	69.0	72.0	27.3	0.0	0.8	0.0	28.0	9,081.0
Thingithu	43.5	1.2	0.1	2.9	41.3	89.0	10.8	0.0	0.2	0.0	11.0	5,580.0
Nanyuki	41.3	5.0	0.7	2.7	43.9	93.5	5.4	0.7	0.3	0.1	6.5	8,558.0
Umande	0.1	0.5	0.0	3.0	60.7	64.3	35.1	0.3	0.2	0.1	35.7	5,657.0
Laikipia North	0.1	0.6	0.2	1.4	32.2	34.5	6.5	0.0	58.9	0.2	65.5	29,708.0
Sosian	0.1	0.1	0.2	0.9	24.6	25.8	9.4	0.0	64.7	0.0	74.2	11,049.0
Segera	0.1	0.4	0.3	2.0	44.8	47.7	5.2	0.0	46.2	0.8	52.3	6,585.0
Mugogodo West	0.0	2.1	0.0	2.4	9.9	14.3	1.5	0.0	84.2	0.0	85.7	4,467.0
Mugogodo East	0.2	0.6	0.1	1.2	45.2	47.4	6.2	0.0	46.5	0.0	52.6	7,607.0





About KNBS

The Kenya National Bureau of Statistics (KNBS) is a semi-autonomous organization established under Statistics Act 2006 as the principal agency for collecting, compiling, analyzing, publishing and disseminating statistical information needed for planning and policy formulation and is the custodian of official statistical information. More specifically the Bureau is charged with responsibility of: planning, authorizing, co-coordinating and supervising all official statistical programmes undertaken within the National Statistical System (NSS); establishing standards and promoting the use of best practices and methods in the production and dissemination of statistical information across the NSS; collecting, compiling, analyzing, abstracting and disseminating statistical information on matters specified in the First Schedule of the Statistics Act; conducting population and housing census every ten years, and such other censuses and surveys as the board may determine; and maintaining a comprehensive and reliable national socio-economic database.

Kenya National Bureau of Statistics (KNBS)

Herufi House, LT. Tumbo Road, Off Harambee Avenue

P.O. BOX 30266 00100 Nairobi GPO, Kenya

Nairobi 317586/8, 317612/22, 317623, 317651

Email: info@knbs.or.ke; Website: www.knbs.or.ke



SID

Society for International Development

About SID

The Society for International Development (SID) is an international network of individuals and organizations with an interest in development, policy and governance research and dialogue. Since its creation in 1957, SID has consistently been at the forefront of reappraising prevalent development ideas and has confronted the theory and practice of development, challenging existing practices and suggesting alternative approaches. Over the years, three values have been – and remain – at the core of the Society's work – respect for diversity, participation and equity. SID East Africa is incorporated as a Company Limited by Guarantee under the Laws of Kenya. It serves as the Regional Office of the SID International Secretariat which is headquartered in Rome, Italy.

Society for International Development

Regional Office for Eastern Africa

Britam Centre, First Floor, Ragati/Mara Road

P O Box 2404 – 00100 Nairobi Kenya

Telephone: +254 - 20 - 2737991 • Fax: +254 - 20 - 273 7992

Email: sidea@sidint.org • Website: www.sidint.net