

# Exploring Kenya's Inequality

## Pulling Apart or Pooling Together?

Kirinyaga County



## Published by



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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).

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# 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**

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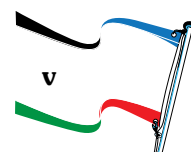


# Acknowledgements

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 3<sup>rd</sup> October 2012 and Thursday, 28<sup>th</sup> 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,**  
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# 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

<b>AMADPOC</b>	African Migration and Development Policy Centre
<b>CRA</b>	Commission on Revenue Allocation
<b>DANIDA</b>	Danish International Development Agency
<b>DAP</b>	Drivers of Accountability Programme
<b>EAs</b>	Enumeration Areas
<b>HDI</b>	Human Development Index
<b>IBP</b>	International Budget Partnership
<b>IEA</b>	Institute of Economic Affairs
<b>IPAR</b>	Institute of Policy Analysis and Research
<b>KIHBS</b>	Kenya Intergraded Household Budget Survey
<b>KIPPRA</b>	Kenya Institute for Public Policy Research and Analysis
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>LPG</b>	Liquefied Petroleum Gas
<b>NCIC</b>	National Cohesion and Integration Commission
<b>NTA</b>	National Taxpayers Association
<b>PCA</b>	Principal Component Analysis
<b>SAEs</b>	Small Area Estimation
<b>SID</b>	Society for International Development
<b>TISA</b>	The Institute for Social Accountability
<b>VIP latrine</b>	Ventilated-Improved Pit latrine
<b>VOCs</b>	Volatile Organic Carbons
<b>WDR</b>	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 equivalent<sup>1</sup> 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.

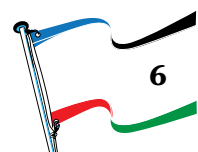
### Spatial Dimensions

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.

<sup>1</sup>This 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.



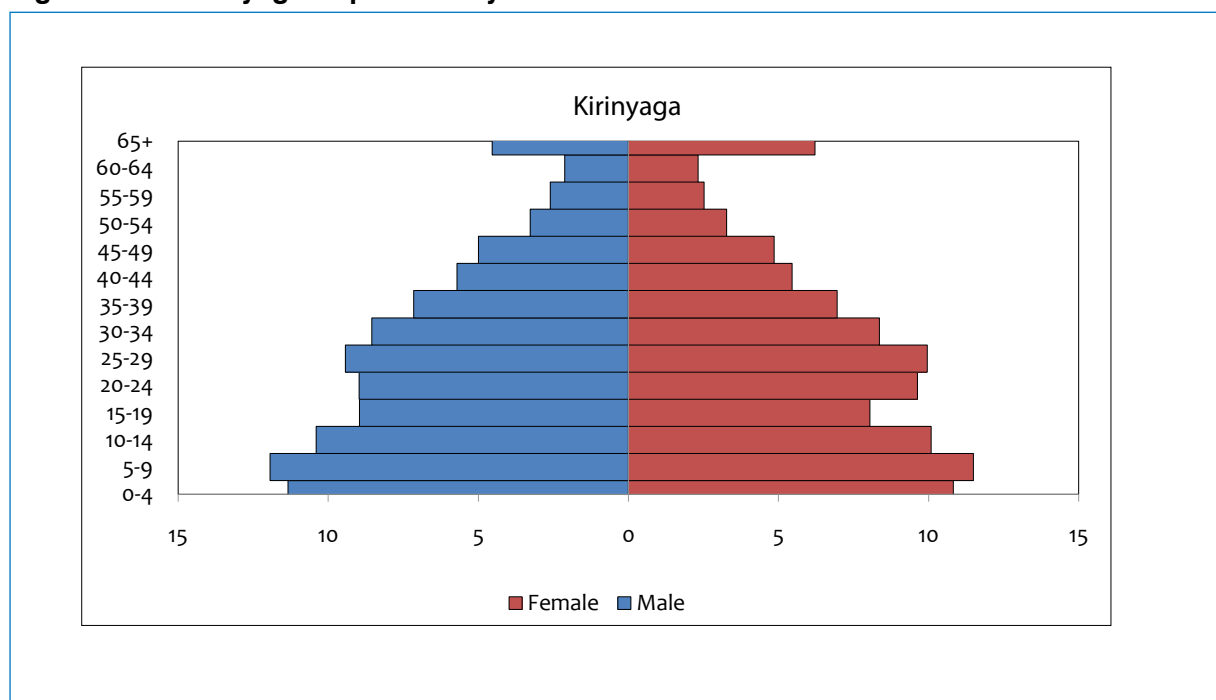


# **Kirinyaga County**



## KIRINYAGA COUNTY

**Figure 15.1: Kirinyaga Population Pyramid**



## Population

As a result of declining fertility rates among women, as shown by the highest percentage household size of 0-3 members at 55%, Kirinyaga County has a transitional population structure where the number of 0-14 year olds, constituting 33% of the total population, is declining and working age population of 15-64 year olds, constituting 62% of the total population, is increasing.

## 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 15.3 up to ward level.

**Table 15: Overall Employment by Education in Kirinyaga County**

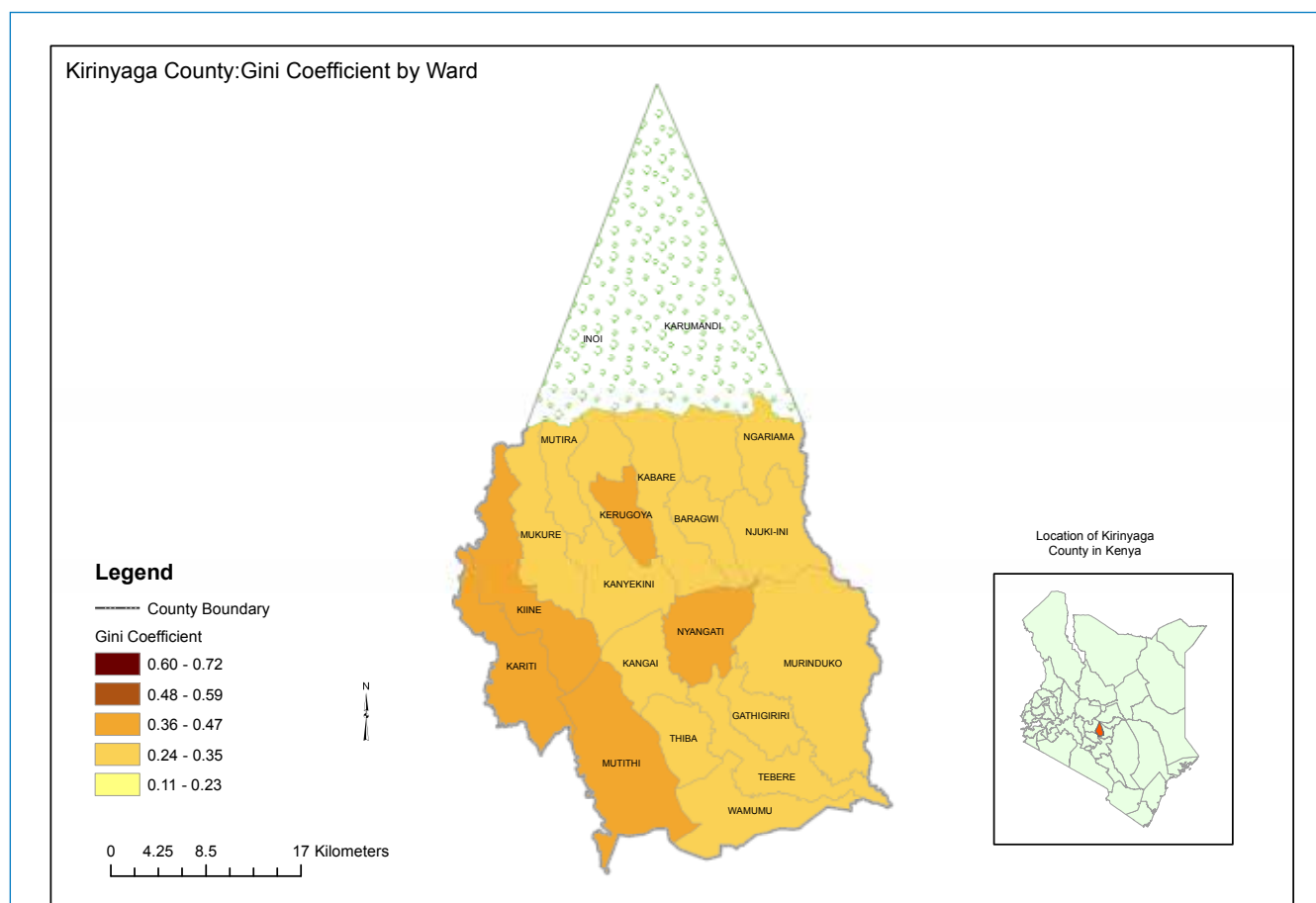
Education Level	Work for pay	Family Business	Family Agricultural Holding	Intern/ Volunteer	Retired/ Home-maker	Fulltime Student	Incapacitated	No work	Number of Individuals
<b>Total</b>	25.6	12.5	45.7	0.7	2.2	9.8	0.4	3.1	320,821
<b>None</b>	22.5	9.5	56.1	2.0	3.0	0.6	2.8	3.5	17,327
<b>Primary</b>	25.3	11.9	51.6	0.4	2.1	5.9	0.3	2.6	174,752
<b>Secondary+</b>	26.5	13.8	36.4	0.8	2.3	16.4	0.2	3.7	128,742

In Kirinyaga County, 23% of the residents with no formal education 25% of those with primary education and 27% 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 almost twice the level in Kirinyaga for those with secondary level of education or above.

## Gini Coefficient

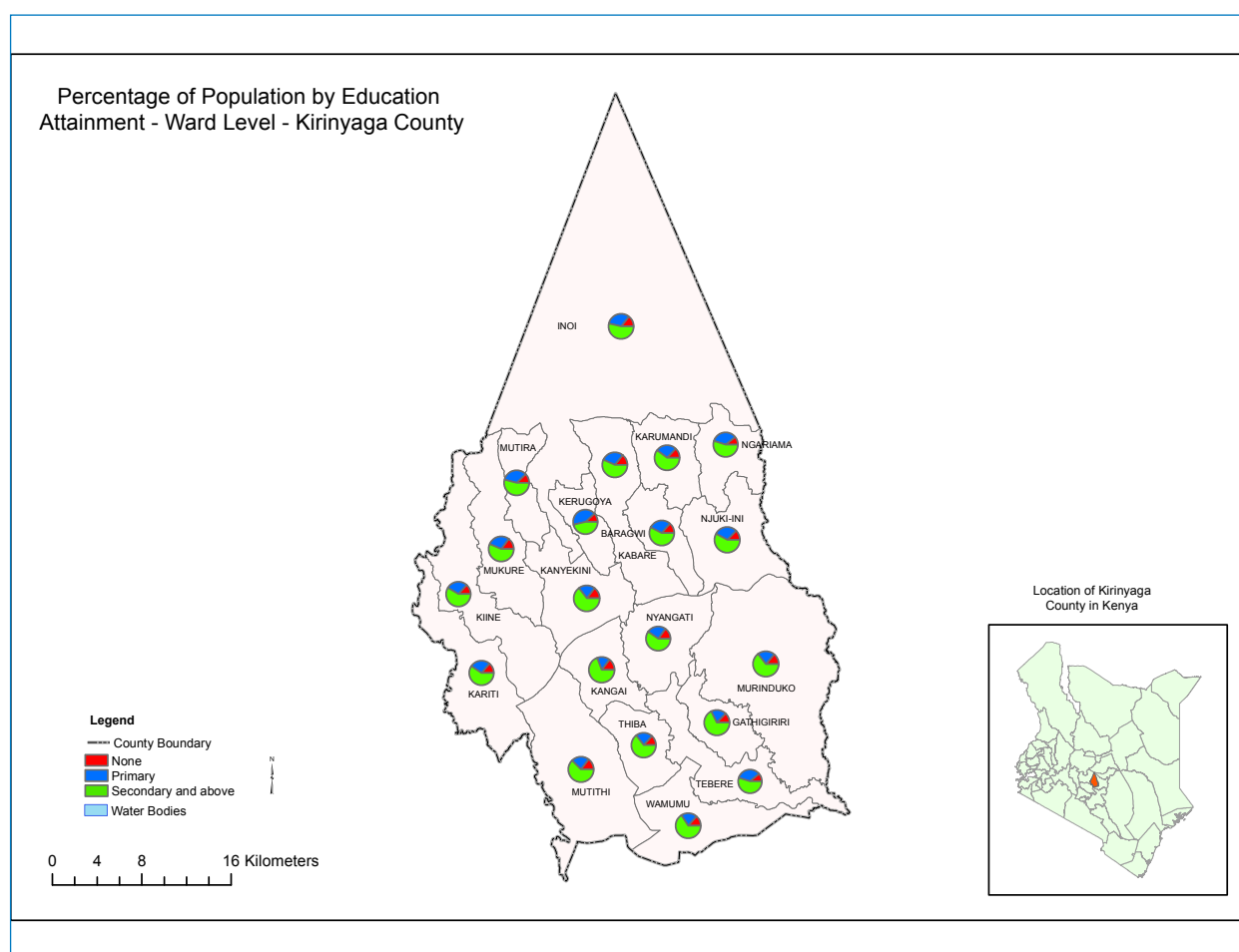
In this report, the Gini index measures the extent to which the distribution of consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of '0' represents perfect equality, while an index of '1' implies perfect inequality. Kirinyaga County's Gini index is 0.354 compared with Turkana County, which has the least inequality nationally (0.283).

**Figure 15.2: Kirinyaga County-Gini Coefficient by Ward**



## Education

**Figure 15.3: Kirinyaga County-Percentage of Population by Education Attainment by Ward**



A total of 28% of Kirinyaga County residents have a secondary level of education or above. Kirinyaga Central constituency has the highest share of residents with a secondary level of education or above at 32%. This is 8 percentage points above Mwea constituency, which has the lowest share of residents with a secondary level of education or above. Kirinyaga Central constituency is 4 percentage points above the county average. Kerugoya ward has the highest share of residents with a secondary level of education or above at 42%. This is three times Kangai ward, which has the lowest share of residents with a secondary level of education or above. Kerugoya ward is 14 percentage points above the county average.

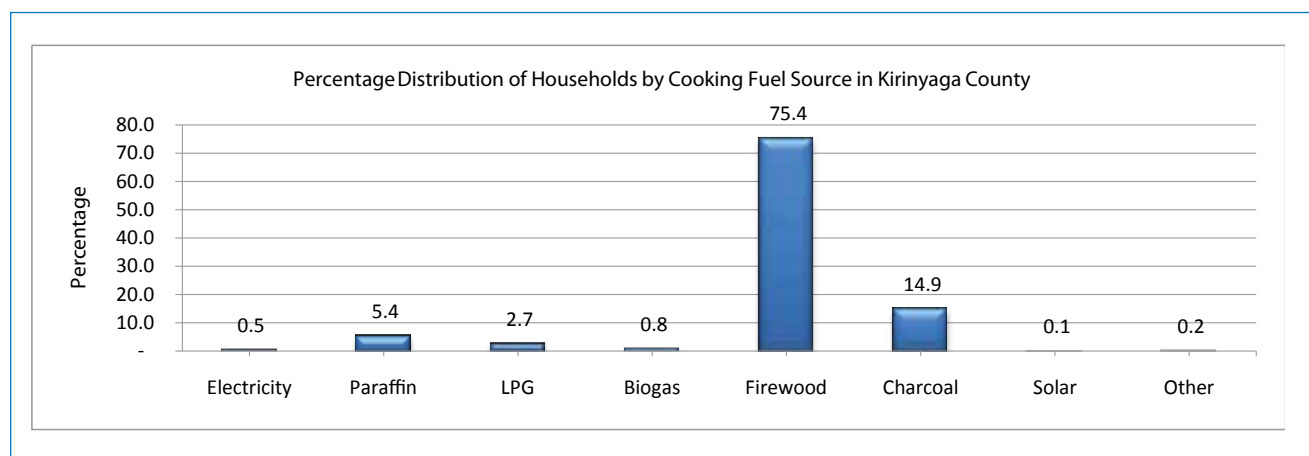
A total of 59% of Kirinyaga County residents have a primary level of education only. Mwea constituency has the highest share of residents with a primary level of education only at 63%. This is 8 percentage points above Kirinyaga Central constituency that the lowest share of residents with primary only. Mwea constituency is 4 percentage points above the county average. Kangai ward has the highest share of residents with a primary level of education only at 69%. This is almost twice Kerugoya ward, which has the lowest share of residents with a primary level of education only. Kangai ward is 10 percentage points above the county average.

Some 14% of Kirinyaga County residents have no formal education. Ndia and Mwea constituencies have the highest share of residents with no formal education at 14% each. This is 1 percentage point above Gichugu and Kirinyaga Central constituencies, which have the lowest share of residents with no formal education. Ndia and Mwea constituencies are 1 percentage point above the county average. Kangai, Nyangati, Mutithi, Kanyekini and Mukure wards have the highest percentage of residents with no formal education at 15% each. This is 4 percentage points above Ngariama ward, which has the lowest percentage of residents with no formal education. Kangai, Nyangati, Mutithi, Kanyekini and Mukure wards are 1 percentage point above the county average.

## Energy

### Cooking Fuel

**Figure 15.4: Percentage Distribution of Households by Source of Cooking Fuel in Kirinyaga County**



Just 3% of residents in Kirinyaga County use liquefied petroleum gas (LPG), and 5% use paraffin. 75% use firewood and 15% use charcoal. Firewood is the most common cooking fuel by either gender at 76% in male headed households and 74% in female headed households.

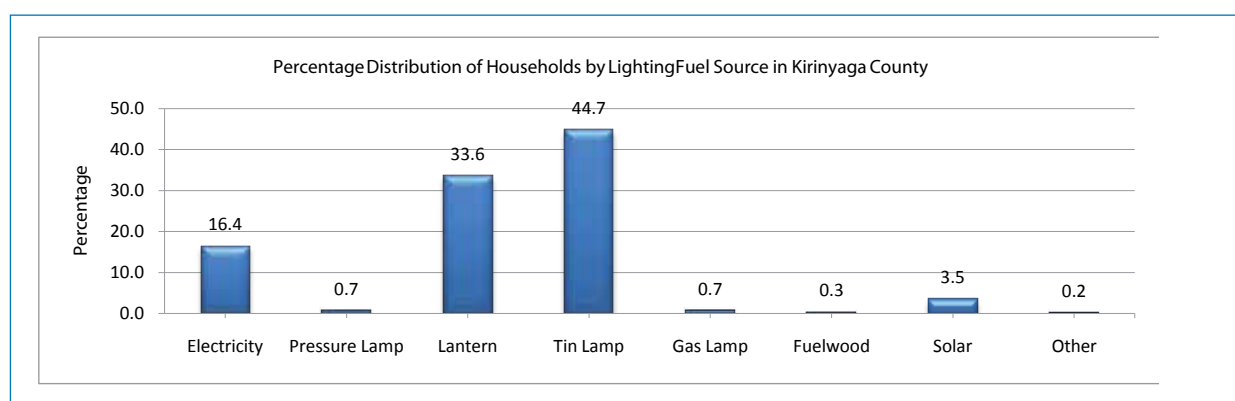
Kirinyaga Central constituency has the highest level of use of LPG in Kirinyaga County at 5%. This is 4 percentage points more than Gichugu constituency, which has the lowest share. Kirinyaga Central constituency is 2 percentage points above the county average. Kerugoya ward has the highest level of use of LPG in Kirinyaga County at 13%. This is 13 percentage points above Wamumu ward, which has the lowest share. Kerugoya ward is 10 percentage points above the county average.

Gichugu constituency has the highest level of firewood use in Kirinyaga County at 89%. This is 24 percentage points above Mwea constituency, which has the lowest share at 65%. Gichugu constituency is about 14 percentage points above the county average. Kanyekini ward has the highest level of firewood use in Kirinyaga County at 95%. This is twice the level in Tebere ward, which has the lowest share at 39%. Kanyekini ward is 20 percentage points above the county average.

Mwea constituency has the highest level of use of charcoal at 24%. This is three times Gichugu constituency at 7%. Mwea constituency is 9 percentage points higher than the county average. Wamumu ward has the highest level of use of charcoal in Kirinyaga County at 42%. This is 14 times Kanyekiri ward, which has the lowest share at 2%. Wamumu ward is 27 percentage points above the county average.

### Lighting

**Figure 15.5: Percentage Distribution of Households by Source of Lighting Fuel in Kirinyaga County**



16% of residents in Kirinyaga County use electricity as their main source of lighting. A further 34% use lanterns, and 45% use tin lamps. Less than 1% use fuel wood. Tin lamps are the most common lighting source in both male headed households at 44% and female headed households at 46%.

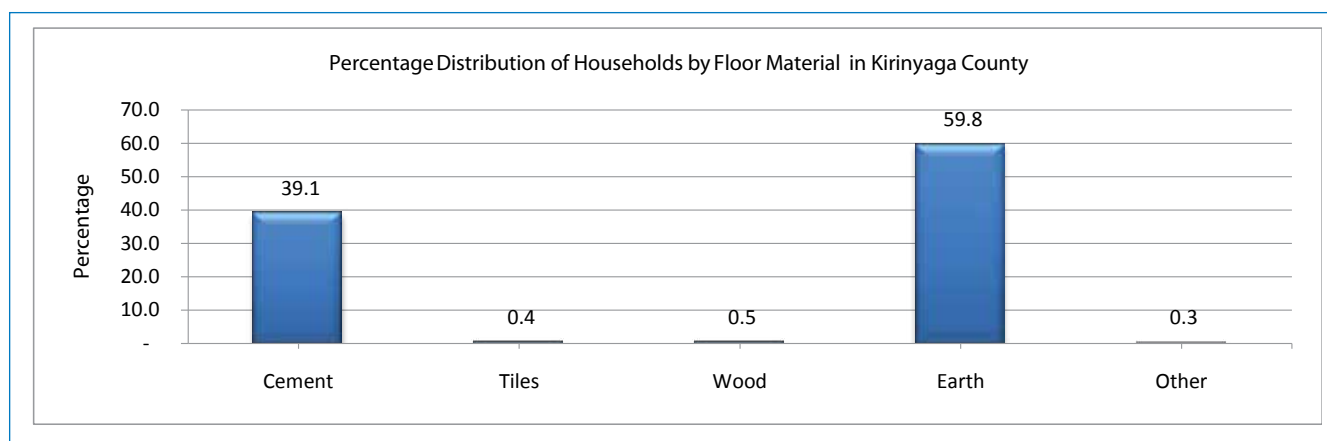
Kirinyaga Central constituency has the highest level of electricity use at 23%. That is almost twice Gichugu constituency, which has the lowest level of electricity use. Kirinyaga Central constituency is 7 percentage points above the county average. Kerugoya ward has the highest level of electricity use at 48%. That is 24 times Kangai ward, which has the lowest level of electricity use. Kerugoya ward is 32 percentage points above the county average.

## Housing

### Flooring

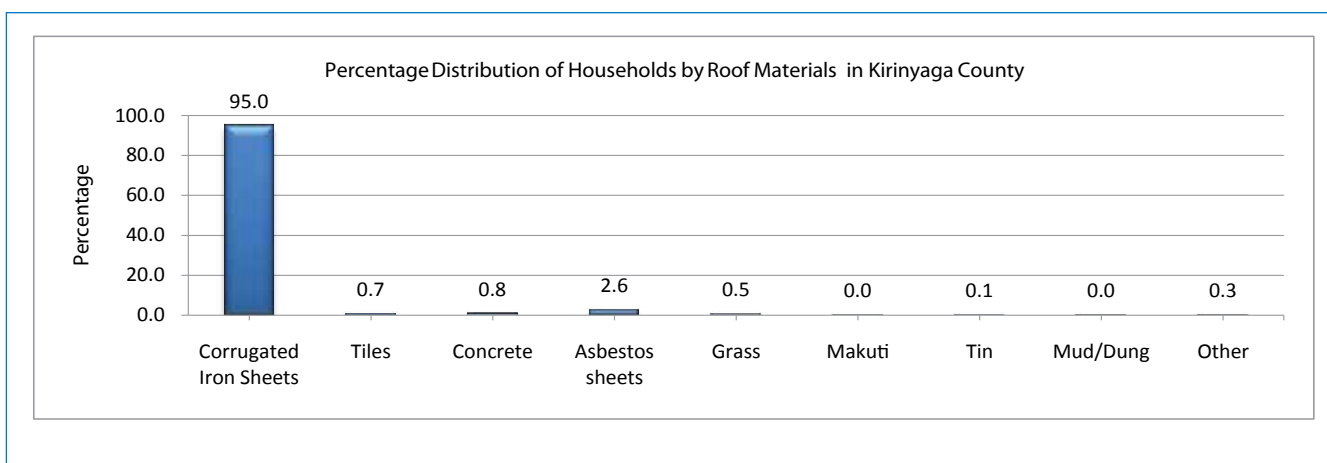
In Kirinyaga County, 39% of residents have homes with cement floors, while 60% have earth floors. Less than 1% has tiles and 1% has wood floors. Kirinyaga Central constituency has the highest share of cement floors at 46%. That is 11 percentage points above Mwea constituency, which has the lowest share of cement floors. Kirinyaga Central constituency is 7 percentage points above the county average. Kerugoya ward has the highest share of cement floors at 63%. That is almost four times Kangai ward, which has the lowest share of cement floors. Kerugoya ward is 24 percentage points above the county average.

**Figure 15.6: Percentage Distribution of Households by Floor Material in Kirinyaga County**



### Roofing

**Figure 15.7: Percentage Distribution of Households by Roof Material in Kirinyaga County**



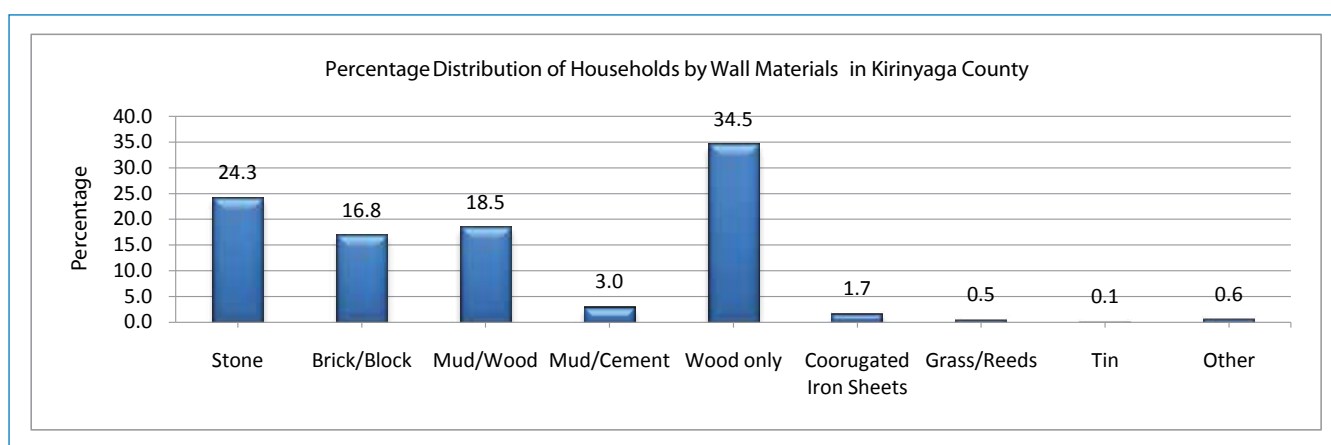
In Kirinyaga County, only 1% of residents have homes with concrete roofs, while 95% have corrugated iron sheet roofs. Asbestos sheets constitute 3% of homes. Grass and makuti roofs constitute 1% of homes, and mud/dung roofs are absent.

Gichugu constituency has the highest share of corrugated iron sheet roofs at 97%. That is 5 percentage points above Mwea constituency, which has the lowest share of iron sheet roofs. Gichugu constituency is 2 percentage points above the county average. Three wards, namely: Ngariama, Karumandi and Mutira have the highest share of corrugated iron sheet roofs at 98%. That is 15 percentage points above Murinduko ward that has the lowest share of concrete roofs. Ngariama, Karumandi and Mutira are 3% above the county average.

Mwea constituency has the highest share of asbestos sheet roofing at 5%. This is 4 times Ndia constituency that has the lowest share. Mwea constituency is 2 percentage points above the county average. Nyangati ward has share of asbestos sheet roofing at 8%. This is 8 times Mutira and Ngariama wards that have the lowest share. Nyangati ward is 5 percentage points above the county average.

## Walls

**Figure 15.8: Percentage Distribution of Households by Wall Material in Kirinyaga County**



In Kirinyaga County, 41% of homes have either brick or stone walls. 22% of homes have mud/wood or mud/cement walls. 35% have wood walls. 2% have corrugated iron walls. 1% has grass/thatched walls. 1% has tin or other walls.

Mwea constituency has the highest share of brick/stone walls at 57%. That is twice Gichugu constituency, which has the lowest share of brick/stone walls. Mwea constituency is 16 percentage points above the county average. Tebere ward has the highest share of brick/stone walls at 73%. That is almost five times Karumandi ward, which has the lowest share of brick/stone walls. Tebere ward is 32 percentage points above the county average.

Mwea constituency has the highest share of mud with wood/cement walls at 30%. That is twice Kirinyaga Central constituency, which has the lowest share of mud with wood/cement. Mwea constituency is 8 percentage points above the county average. Kangai ward has the highest share of mud with wood/cement walls at 48%. That is almost 10 times Mutira ward, which has the lowest share of mud with wood/cement walls. Kangai ward is 26 percentage points above the county average.



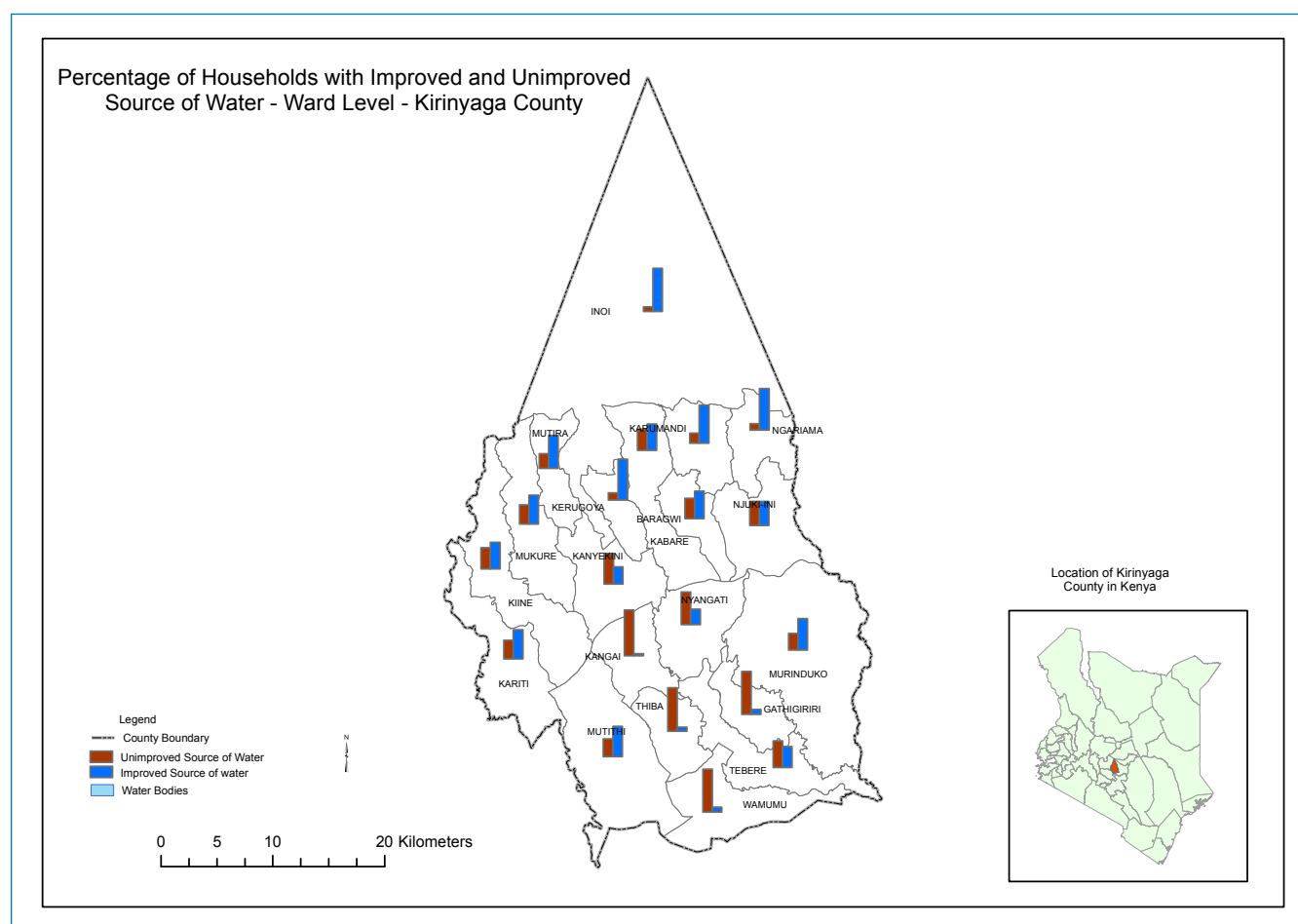
## Water

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 Kirinyaga County, 53% of residents use improved sources of water, with the rest relying on unimproved sources. There is no gender differential by either gender in the use of improved sources at 53% for both male and female headed households.

Kirinyaga Central constituency has the highest share of residents using improved sources of water at 69%. That is twice Mwea constituency, which has the lowest share using improved sources of water. Kirinyaga Central constituency is 16 percentage points above the county average. Inoi ward has the highest share of residents using improved sources of water at 91%. That is 23 times Kangai ward which has the lowest share using improved sources of water. Inoi ward is 38 percentage points above the county average.

**Figure 15.9: Kirinyaga County-Percentage of Households with Improved and Unimproved Sources of Water by Ward**

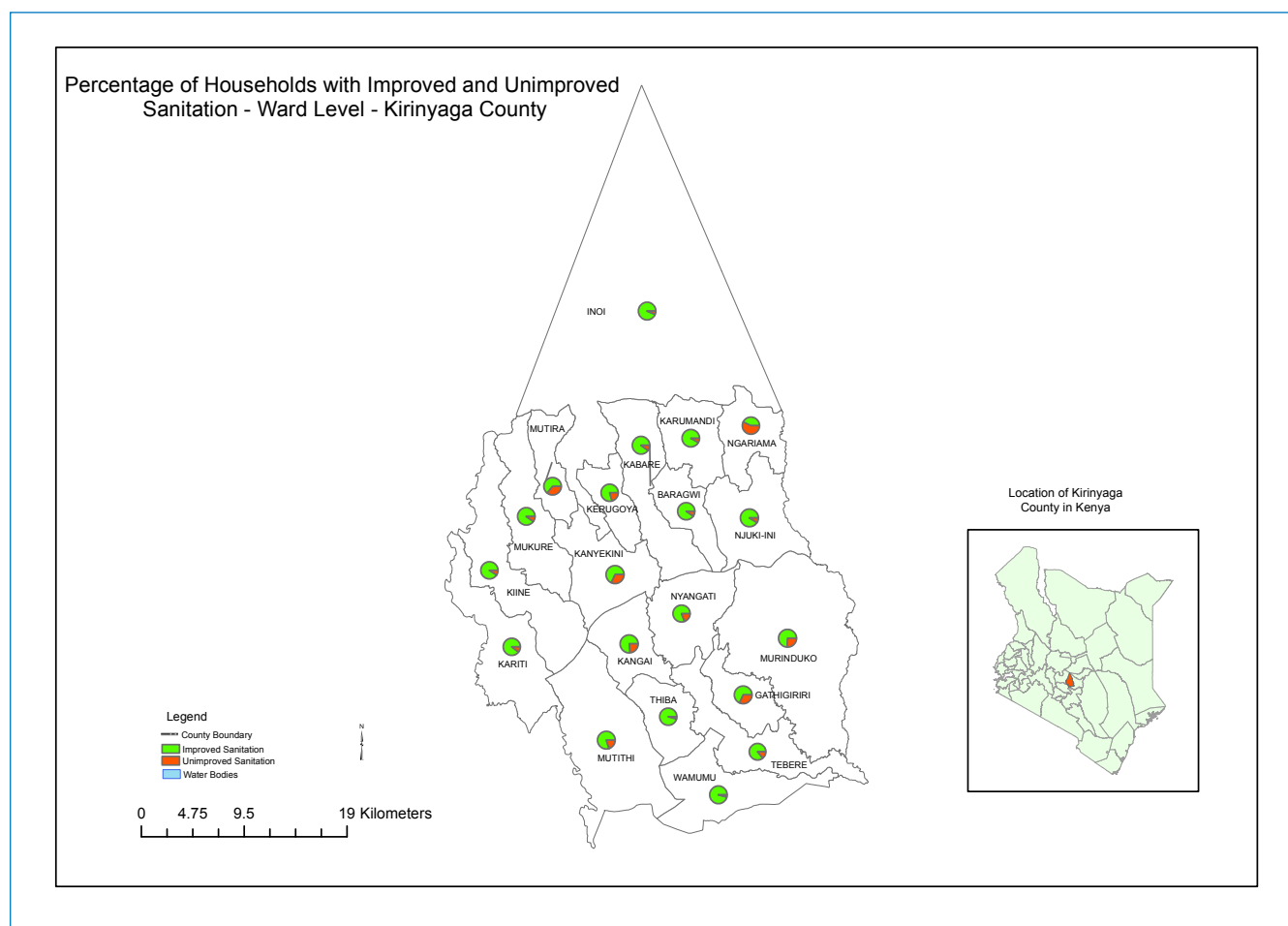


## Sanitation

A total of 83% of residents in Kirinyaga County use improved sanitation, while the rest use unimproved sanitation. There is no gender differential in the use of improved sources with both male and female households at 83%.

Ndia constituency has the highest share of residents using improved sanitation at 90%. That is 13 percentage points above Kirinyaga Central constituency, which has the lowest share using improved sanitation. Ndia constituency is 7 percentage points above the county average. Wamumu ward has the highest share of residents using improved sanitation at 96%. That is twice Ngariama ward, which has the lowest share using improved sanitation. Wamumu ward is 13 percentage points above the county average.

**Figure 15.10: Kirinyaga County –Percentage of Households with Improved and Unimproved Sanitation by Ward**



## Kirinyaga County Annex Tables

## 15. KIRINYAGA

Table 15.1: Gender, Age group, Demographic Indicators and Households Size by County, Constituency and Wards

County/Constituency/ Wards	Gender		Age group						Demographic indicators				Proportion 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 depen- dancy Ratio	Child depen- dancy Ratio	aged depen- dancy ratio	0-3	4-6	7+
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
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
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
Kirinyaga County	521,025	256,539	264,486	70,672	172,137	89,441	187,364	320,821	28,067	0.970	0.624	0.537	0.087	54.8	39.6	5.6
Mwea Constituency	187,399	93,911	93,488	27,136	63,995	31,896	70,588	114,994	8,410	1.005	0.630	0.557	0.073	55.5	38.4	6.1
Mutithi	26,182	13,196	12,986	3,699	8,986	4,528	9,666	15,831	1,365	1.016	0.654	0.568	0.086	54.8	38.8	6.4
Kangai	19,295	9,633	9,662	2,829	6,734	3,477	7,249	11,590	971	0.997	0.665	0.581	0.084	49.6	43.6	6.8
Thiba	23,096	11,460	11,636	3,395	8,179	4,062	8,620	13,820	1,097	0.985	0.671	0.592	0.079	55.6	39.6	4.8
Wamumu	17,872	8,975	8,897	2,745	6,480	3,089	6,704	10,560	832	1.009	0.692	0.614	0.079	51.7	42.1	6.1
Nyangati	24,305	11,906	12,399	3,568	8,125	4,041	9,305	15,216	964	0.960	0.597	0.534	0.063	59.7	35.4	5.0
Murinduko	28,050	14,747	13,303	3,651	8,656	4,656	9,511	17,725	1,669	1.109	0.583	0.488	0.094	49.9	40.1	10.0
Gathigiriri	17,767	8,845	8,922	2,651	6,473	3,239	6,629	10,673	621	0.991	0.665	0.606	0.058	52.4	41.8	5.9
Tebere	30,832	15,149	15,683	4,598	10,362	4,804	12,904	19,579	891	0.966	0.575	0.529	0.046	63.6	32.1	4.3
Gichugu Constituency	123,749	60,799	62,950	15,950	39,266	20,689	43,036	77,165	7,318	0.966	0.604	0.509	0.095	53.5	41.8	4.7
Kabare	38,001	18,484	19,517	4,845	12,021	6,284	13,233	23,693	2,287	0.947	0.604	0.507	0.097	53.3	42.2	4.5
Baragwi	19,993	9,882	10,111	2,681	6,532	3,374	6,990	12,337	1,124	0.977	0.621	0.529	0.091	53.7	41.6	4.7

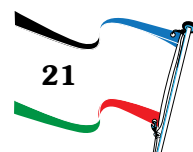
Njuki-Ini	23,971	11,863	12,108	3,117	7,694	4,228	8,232	14,836	1,441	0.980	0.616	0.519	0.097	51.7	41.9	6.5	6721
Ngariama	17,993	8,930	9,063	2,187	5,463	2,932	6,202	11,453	1,077	0.985	0.571	0.477	0.094	56.0	40.1	3.9	5378
Karumandi	23,791	11,640	12,151	3,120	7,556	3,871	8,379	14,846	1,389	0.958	0.603	0.509	0.094	53.2	42.9	3.9	6917
Ndia Constituency	98,905	48,022	50,883	13,292	33,162	17,862	33,854	59,591	6,152	0.944	0.660	0.556	0.103	55.6	38.5	5.9	29233
Mukure	30,519	14,836	15,683	3,921	10,092	5,486	10,087	18,470	1,957	0.946	0.652	0.546	0.106	53.0	41.2	5.8	8775
Kiine	40,848	19,623	21,225	5,577	13,877	7,308	14,027	24,484	2,487	0.925	0.668	0.567	0.102	56.3	38.0	5.7	12187
Kariti	27,538	13,563	13,975	3,794	9,193	5,068	9,740	16,637	1,708	0.971	0.655	0.553	0.103	57.5	36.3	6.2	8271
Kirinyaga Central Constituency	110,972	53,807	57,165	14,294	35,714	18,994	39,886	69,071	6,187	0.941	0.607	0.517	0.090	54.5	39.9	5.6	32445
Mutira	22,871	10,913	11,958	2,855	7,347	3,937	8,024	14,231	1,293	0.913	0.607	0.516	0.091	54.7	40.6	4.7	6766
Kanyekini	32,143	16,037	16,106	4,336	10,839	5,811	11,078	19,194	2,110	0.996	0.675	0.565	0.110	49.0	43.7	7.3	8761
Kerugoya	28,732	13,739	14,993	3,660	8,712	4,537	11,291	18,861	1,159	0.916	0.523	0.462	0.061	60.5	34.8	4.7	9052
Inoi	27,226	13,118	14,108	3,443	8,816	4,709	9,493	16,785	1,625	0.930	0.622	0.525	0.097	53.3	41.2	5.5	7866

**Table 15.2: Employment by County, Constituency and Wards**

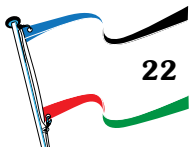
County/Constituency/Wards	Work for pay	Family Business	Family Agricultural Holding	Intern/Volunteer	Retired/Home-maker	Fulltime Student	Incapacitated	No work	Number of Individuals
Kenya	23.7	13.1	32.0	1.1	9.2	12.8	0.5	7.7	20,249,800
Rural	15.6	11.2	43.5	1.0	8.8	13.0	0.5	6.3	12,984,788
Urban	38.1	16.4	11.4	1.3	9.9	12.2	0.3	10.2	7,265,012
Kirinyaga County	25.6	12.5	45.7	0.7	2.2	9.8	0.4	3.1	320,821
Mwea Constituency	29.0	13.8	42.5	0.7	2.1	8.4	0.3	3.1	114,994
Mutithi	19.4	13.7	51.0	0.9	1.5	9.2	0.3	4.1	15,831
Kangai	29.0	7.4	49.6	0.6	1.1	10.2	0.3	1.7	11,590
Thiba	36.4	12.3	36.0	0.5	2.8	9.1	0.5	2.4	13,820
Wamumu	20.7	13.8	44.4	0.5	4.4	7.2	0.5	8.5	10,560
Nyangati	26.0	21.9	36.6	0.9	2.1	9.4	0.3	3.0	15,216
Murinduko	20.9	9.5	56.6	0.6	1.4	8.8	0.4	1.8	17,725
Gathigiriri	36.1	8.3	47.0	0.5	0.9	5.8	0.4	1.0	10,673
Tebere	41.8	19.4	24.2	1.0	2.8	7.3	0.3	3.3	19,579
Gichugu Constituency	18.7	11.2	55.4	0.5	2.1	9.4	0.4	2.4	77,165
Kabare	17.6	11.0	56.4	0.4	1.6	10.2	0.5	2.3	23,693
Baragwi	21.5	17.0	43.3	0.6	4.4	9.1	0.3	3.8	12,337
Njuki-Ini	19.8	10.9	52.9	0.7	2.2	11.0	0.4	2.2	14,836
Ngariama	19.2	10.6	58.5	0.5	2.0	7.0	0.5	1.7	11,453
Karumandi	16.6	7.5	63.9	0.5	0.8	8.4	0.4	2.0	14,846
Ndia Constituency	23.5	12.3	44.8	0.7	2.6	11.8	0.5	3.9	59,591
Mukure	20.9	10.0	51.6	0.6	1.8	11.9	0.5	2.6	18,470
Kiine	22.2	13.7	44.0	0.7	2.6	12.2	0.5	4.1	24,484
Kariti	28.2	12.9	38.4	0.8	3.3	11.1	0.5	5.0	16,637
Kirinyaga Central Constituency	29.5	12.1	41.2	0.7	2.3	10.8	0.4	3.1	69,071
Mutira	28.9	11.5	44.0	0.8	2.6	9.3	0.4	2.5	14,231
Kanyekini	17.5	11.1	56.4	0.5	1.3	10.8	0.4	2.1	19,194
Kerugoya	38.3	14.4	25.9	1.1	4.0	10.9	0.3	5.1	18,861
Inoi	33.7	11.1	38.7	0.5	1.1	12.1	0.4	2.4	16,785

Table 15.3: Employment and Education Levels by County, Constituency and Wards

County /constituency/ Wards	Education Totallevel	Work for pay	Family Business	Family Agricultural Holding	Intern/ Volunteer	Retired/ Home- maker	Fulltime Student	Inca- paci- tated	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
Kirinyaga	Total	25.6	12.5	45.7	0.7	2.2	9.8	0.4	3.1	320,821
Kirinyaga	None	22.5	9.5	56.1	2.0	3.0	0.6	2.8	3.5	17,327
Kirinyaga	Primary	25.3	11.9	51.6	0.4	2.1	5.9	0.3	2.6	174,752
Kirinyaga	Secondary+	26.5	13.8	36.4	0.8	2.3	16.4	0.2	3.7	128,742
Mwea Constituency	Total	29.0	13.8	42.5	0.7	2.1	8.4	0.3	3.1	114,994
Mwea Constituency	None	29.2	9.9	48.9	1.9	2.8	0.4	2.6	4.3	6,419
Mwea Constituency	Primary	29.5	12.4	46.9	0.5	1.9	5.8	0.3	2.7	69,121
Mwea Constituency	Secondary+	28.0	17.0	33.6	0.9	2.4	14.4	0.1	3.6	39,454
Mutithi Wards	Total	19.4	13.7	51.0	0.9	1.5	9.2	0.3	4.1	15,831
Mutithi Wards	None	15.4	11.1	63.9	1.9	1.8	0.1	2.1	3.7	996
Mutithi Wards	Primary	18.0	12.1	57.6	0.6	1.3	6.7	0.2	3.5	9,564
Mutithi Wards	Secondary+	22.6	17.2	36.6	1.1	1.9	15.4	0.1	5.1	5,271
Kangai Wards	Total	29.0	7.4	49.6	0.6	1.1	10.2	0.3	1.7	11,590
Kangai Wards	None	38.7	5.1	48.6	1.6	1.5	0.2	2.7	1.8	828
Kangai Wards	Primary	30.3	7.3	51.9	0.4	1.0	7.4	0.2	1.6	8,001
Kangai Wards	Secondary+	22.4	8.4	43.1	0.8	1.4	21.6	0.1	2.1	2,761



Thiba Wards	Total	36.4	12.3	36.0	0.5	2.8	9.1	0.5	2.4	13,820
Thiba Wards	None	31.8	8.4	42.8	3.2	4.7	1.1	4.7	3.4	559
Thiba Wards	Primary	39.5	11.8	37.3	0.3	2.5	6.2	0.4	2.0	8,690
Thiba Wards	Secondary+	31.0	13.9	32.5	0.7	3.1	15.6	0.2	3.0	4,571
Wamumu Wards	Total	20.7	13.8	44.4	0.5	4.4	7.2	0.5	8.5	10,560
Wamumu Wards	None	18.1	8.0	48.8	1.1	4.7	0.2	4.1	15.1	615
Wamumu Wards	Primary	22.6	13.2	45.7	0.4	4.4	5.0	0.2	8.5	6,637
Wamumu Wards	Secondary+	17.5	16.1	40.9	0.6	4.4	13.1	0.2	7.3	3,308
Nyangati Wards	Total	26.0	21.9	36.6	0.9	2.1	9.4	0.3	3.0	15,216
Nyangati Wards	None	35.2	16.2	38.0	1.7	3.2	0.4	1.8	3.6	1,066
Nyangati Wards	Primary	25.8	20.3	42.4	0.6	2.1	6.2	0.2	2.5	8,561
Nyangati Wards	Secondary+	24.5	25.4	27.5	1.1	1.8	15.9	0.1	3.6	5,589
Murinduko Wards	Total	20.9	9.5	56.6	0.6	1.4	8.8	0.4	1.8	17,725
Murinduko Wards	None	17.4	8.9	65.1	1.9	1.7	0.3	2.1	2.7	1,060
Murinduko Wards	Primary	20.6	9.4	60.4	0.5	1.2	6.3	0.3	1.3	11,150
Murinduko Wards	Secondary+	22.2	9.9	47.1	0.7	1.9	15.5	0.1	2.7	5,515
Gathigiriri Wards	Total	36.1	8.3	47.0	0.5	0.9	5.8	0.4	1.0	10,673
Gathigiriri Wards	None	39.3	5.8	43.2	2.3	2.1	0.2	3.3	3.7	514
Gathigiriri Wards	Primary	37.6	8.0	48.7	0.4	0.8	3.6	0.3	0.7	7,032
Gathigiriri Wards	Secondary+	32.0	9.3	43.9	0.6	1.1	11.7	0.1	1.3	3,127
Tebere Wards	Total	41.8	19.4	24.2	1.0	2.8	7.3	0.3	3.3	19,579
Tebere Wards	None	45.2	11.7	31.1	2.2	3.7	0.6	1.9	3.6	781
Tebere Wards	Primary	44.1	16.5	28.6	0.6	2.6	4.5	0.3	3.0	9,486
Tebere Wards	Secondary+	39.2	23.0	19.1	1.3	3.0	10.7	0.1	3.6	9,312
Gichugu Constituency	Total	18.7	11.2	55.4	0.5	2.1	9.4	0.4	2.4	77,165
Gichugu Constituency	None	14.5	9.4	65.8	2.0	2.7	0.6	2.8	2.4	4,073
Gichugu Constituency	Primary	18.1	11.1	61.3	0.3	1.9	5.2	0.4	1.8	40,247
Gichugu Constituency	Secondary+	20.1	11.6	46.8	0.6	2.2	15.6	0.2	3.1	32,845
Kabare Wards	Total	17.6	11.0	56.4	0.4	1.6	10.2	0.5	2.3	23,693
Kabare Wards	None	12.5	8.8	71.4	1.1	1.8	0.3	2.8	1.5	1,509
Kabare Wards	Primary	17.1	12.0	61.8	0.2	1.4	5.5	0.4	1.6	12,228





Kabare Wards	Secondary+	19.0	10.2	47.6	0.5	1.8	17.4	0.2	3.3	9,956
Baragwi Wards	Total	21.5	17.0	43.3	0.6	4.4	9.1	0.3	3.8	12,337
Baragwi Wards	None	14.2	12.8	58.3	2.3	6.0	0.5	2.0	3.9	648
Baragwi Wards	Primary	18.1	17.1	51.3	0.4	4.2	5.1	0.3	3.5	6,428
Baragwi Wards	Secondary+	26.7	17.3	31.7	0.7	4.4	15.0	0.1	4.2	5,261
Njuki-Ini Wards	Total	19.8	10.9	52.9	0.7	2.2	11.0	0.4	2.2	14,836
Njuki-Ini Wards	None	20.4	9.9	56.7	2.9	2.9	1.4	4.0	1.8	769
Njuki-Ini Wards	Primary	19.9	10.0	59.6	0.3	2.4	5.8	0.2	1.8	7,755
Njuki-Ini Wards	Secondary+	19.6	12.1	44.2	0.9	1.9	18.6	0.2	2.6	6,312
Ngariama Wards	Total	19.2	10.6	58.5	0.5	2.0	7.0	0.5	1.7	11,453
Ngariama Wards	None	15.8	12.4	58.1	1.5	2.6	0.2	3.5	5.9	461
Ngariama Wards	Primary	20.9	9.7	62.6	0.5	1.8	3.1	0.4	1.0	5,465
Ngariama Wards	Secondary+	17.8	11.3	54.5	0.5	2.2	11.4	0.2	2.1	5,527
Karumandi Wards	Total	16.6	7.5	63.9	0.5	0.8	8.4	0.4	2.0	14,846
Karumandi Wards	None	11.5	5.1	76.0	2.8	1.2	0.7	1.6	1.2	686
Karumandi Wards	Primary	15.8	7.0	69.3	0.3	0.7	5.4	0.4	1.2	8,371
Karumandi Wards	Secondary+	18.5	8.5	54.6	0.5	1.0	13.6	0.2	3.1	5,789
Ndia Constituency	Total	23.5	12.3	44.8	0.7	2.6	11.8	0.5	3.9	59,591
Ndia Constituency	None	19.3	9.4	56.6	2.2	4.0	0.7	3.5	4.3	3,241
Ndia Constituency	Primary	22.9	12.1	51.4	0.5	2.6	6.6	0.4	3.6	31,489
Ndia Constituency	Secondary+	24.8	13.0	34.9	0.8	2.3	19.8	0.3	4.2	24,861
Mukure Wards	Total	20.9	10.0	51.6	0.6	1.8	11.9	0.5	2.6	18,470
Mukure Wards	None	16.0	9.7	64.4	1.9	3.2	0.3	2.7	1.8	1,139
Mukure Wards	Primary	19.9	10.3	58.1	0.5	2.0	6.6	0.4	2.2	9,316
Mukure Wards	Secondary+	22.9	9.8	42.3	0.5	1.4	19.6	0.3	3.2	8,015
Kiine Wards	Total	22.2	13.7	44.0	0.7	2.6	12.2	0.5	4.1	24,484
Kiine Wards	None	14.2	9.1	60.7	2.4	4.1	1.0	4.3	4.2	1,159
Kiine Wards	Primary	21.8	13.5	50.9	0.4	2.6	6.8	0.4	3.6	13,092
Kiine Wards	Secondary+	23.6	14.5	33.3	0.8	2.5	20.4	0.2	4.6	10,233
Kariti Wards	Total	28.2	12.9	38.4	0.8	3.3	11.1	0.5	5.0	16,637
Kariti Wards	None	29.5	9.4	42.1	2.2	5.0	1.1	3.5	7.2	943

Kariti Wards	Primary	27.5	11.9	45.2	0.5	3.3	6.4	0.4	4.8	9,081
Kariti Wards	Secondary+	28.9	14.6	28.4	1.0	3.0	19.1	0.2	4.8	6,613
Kirinyaga Central Constituency	Total	29.5	12.1	41.2	0.7	2.3	10.8	0.4	3.1	69,071
Kirinyaga Central Constituency	None	22.4	9.0	57.5	2.1	2.9	0.8	2.6	2.7	3,594
Kirinyaga Central Constituency	Primary	27.5	11.9	49.6	0.4	1.9	6.1	0.3	2.3	33,895
Kirinyaga Central Constituency	Secondary+	32.5	12.6	30.3	0.9	2.5	17.1	0.2	3.9	31,582
Mutira Wards	Total	28.9	11.5	44.0	0.8	2.6	9.3	0.4	2.5	14,231
Mutira Wards	None	25.4	7.5	53.7	3.3	2.5	0.7	2.8	4.2	722
Mutira Wards	Primary	29.9	10.8	49.8	0.4	2.2	4.7	0.5	1.8	6,621
Mutira Wards	Secondary+	28.2	12.6	37.4	0.9	3.0	14.7	0.1	3.1	6,888
Kanyekini Wards	Total	17.5	11.1	56.4	0.5	1.3	10.8	0.4	2.1	19,194
Kanyekini Wards	None	15.1	9.6	67.0	1.8	1.6	0.7	1.8	2.4	1,142
Kanyekini Wards	Primary	17.2	11.7	60.5	0.3	1.2	7.1	0.3	1.7	12,174
Kanyekini Wards	Secondary+	18.8	10.2	45.8	0.7	1.3	20.4	0.2	2.7	5,878
Kerugoya Wards	Total	38.3	14.4	25.9	1.1	4.0	10.9	0.3	5.1	18,861
Kerugoya Wards	None	24.4	9.6	49.6	2.5	6.6	1.2	2.3	3.9	774
Kerugoya Wards	Primary	32.1	13.3	39.2	0.7	4.0	5.7	0.4	4.7	7,158
Kerugoya Wards	Secondary+	43.4	15.4	15.5	1.2	3.8	15.0	0.2	5.5	10,929
Inoi Wards	Total	33.7	11.1	38.7	0.5	1.1	12.1	0.4	2.4	16,785
Inoi Wards	None	27.4	9.1	55.4	1.1	1.7	0.6	3.6	1.2	956
Inoi Wards	Primary	37.0	11.9	42.2	0.4	1.0	5.9	0.2	1.5	7,942
Inoi Wards	Secondary+	31.2	10.7	33.1	0.6	1.1	19.7	0.2	3.5	7,887

Table 15.4: 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/ Home-maker	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	Second-ary+	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	Second-ary+	45.1	16.6	7.3	1.2	7.4	13.8	0.1	8.5	3,058,075
Kirinyaga	Total	25.3	12.6	47.3	0.6	2.2	8.9	0.3	2.8	245,766
Kirinyaga	None	22.1	9.7	57.0	2.0	2.8	0.6	2.3	3.4	10,660
Kirinyaga	Primary	24.5	11.9	53.3	0.4	2.0	5.2	0.3	2.4	136,198
Kirinyaga	Second-ary+	26.6	13.9	38.1	0.8	2.3	14.9	0.1	3.4	98,908
Mwea Constituency	Total	28.1	13.8	44.6	0.7	2.0	7.7	0.2	2.8	89,280
Mwea Constituency	None	28.2	10.6	49.9	2.2	2.6	0.4	2.0	4.2	3,992
Mwea Constituency	Primary	28.3	12.3	49.1	0.4	1.9	5.3	0.2	2.5	54,508
Mwea Constituency	Second-ary+	27.7	16.9	35.9	0.9	2.3	13.0	0.1	3.2	30,780
Mutithi Ward	Total	19.2	13.6	52.7	0.8	1.4	8.3	0.2	3.7	12,292
Mutithi Ward	None	16.6	12.2	62.5	1.7	1.6	0.2	1.7	3.4	638
Mutithi Ward	Primary	17.6	11.7	59.3	0.5	1.2	6.3	0.2	3.2	7,578
Mutithi Ward	Second-ary+	22.6	17.3	39.1	1.0	1.7	13.4	0.1	4.8	4,076
Kangai Ward	Total	28.0	7.8	51.2	0.5	1.1	9.7	0.2	1.5	9,337
Kangai Ward	None	37.6	5.7	51.0	1.0	1.1	0.2	1.9	1.5	524
Kangai Ward	Primary	29.1	7.5	53.8	0.4	1.0	6.7	0.1	1.4	6,525
Kangai Ward	Second-ary+	22.6	8.8	44.1	0.8	1.4	20.4	0.0	1.8	2,288
Thiba Ward	Total	34.9	12.5	38.5	0.6	2.5	8.4	0.4	2.3	10,544
Thiba Ward	None	30.0	9.5	43.1	5.2	3.1	1.5	4.0	3.7	327
Thiba Ward	Primary	37.6	11.8	39.6	0.3	2.5	5.9	0.4	1.9	6,687
Thiba Ward	Second-ary+	30.1	14.0	35.9	0.7	2.6	13.7	0.2	2.9	3,530
Wamumu Ward	Total	19.9	13.8	47.2	0.6	4.3	6.5	0.3	7.4	8,351
Wamumu Ward	None	15.9	7.8	52.6	1.7	5.1	-	3.9	13.0	409
Wamumu Ward	Primary	21.5	13.0	48.7	0.4	4.3	4.3	0.2	7.7	5,254
Wamumu Ward	Second-ary+	17.4	16.2	43.6	0.7	4.1	11.8	0.1	6.1	2,688

Nyangati Ward	Total	25.3	22.1	38.8	0.8	1.9	8.5	0.2	2.5	11,617
Nyangati Ward	None	35.0	17.8	37.1	1.7	3.3	0.5	1.1	3.6	645
Nyangati Ward	Primary	24.8	20.3	44.8	0.6	2.0	5.4	0.1	2.0	6,686
Nyangati Ward	Second-ary+	24.5	25.5	29.8	1.1	1.6	14.5	0.0	3.0	4,286
Murinduko Ward	Total	20.9	9.7	57.3	0.6	1.5	8.0	0.2	1.8	13,977
Murinduko Ward	None	17.9	9.2	64.4	2.3	2.0	0.5	1.1	2.9	665
Murinduko Ward	Primary	20.5	9.6	61.3	0.5	1.2	5.5	0.2	1.3	8,957
Murinduko Ward	Second-ary+	22.3	10.1	48.1	0.7	2.0	14.1	0.1	2.6	4,355
Gathigiriri Ward	Total	34.1	8.6	49.2	0.5	1.0	5.5	0.2	0.8	8,380
Gathigiriri Ward	None	36.3	6.9	45.4	2.3	2.0	0.3	2.6	4.2	306
Gathigiriri Ward	Primary	35.2	8.3	51.2	0.3	0.9	3.4	0.2	0.6	5,492
Gathigiriri Ward	Second-ary+	31.4	9.6	45.2	0.7	1.3	10.7	0.1	1.0	2,582
Tebere Ward	Total	40.9	18.9	26.4	1.0	2.8	6.7	0.2	3.1	14,782
Tebere Ward	None	42.3	11.3	34.7	2.7	3.3	0.6	1.5	3.6	478
Tebere Ward	Primary	42.7	16.0	31.0	0.6	2.6	4.1	0.3	2.9	7,329
Tebere Ward	Second-ary+	38.9	22.6	21.0	1.2	3.1	9.8	0.1	3.3	6,975
Gichugu Constituency	Total	18.7	11.3	56.4	0.5	2.0	8.6	0.3	2.2	60,046
Gichugu Constituency	None	14.6	8.5	67.1	1.5	2.6	0.7	2.6	2.5	2,508
Gichugu Constituency	Primary	17.6	11.1	62.4	0.3	1.9	4.7	0.3	1.6	31,614
Gichugu Constituency	Second-ary+	20.5	11.7	48.0	0.5	2.2	14.2	0.1	2.9	25,924
Kabare Ward	Total	17.6	10.8	57.6	0.3	1.6	9.5	0.4	2.1	18,678
Kabare Ward	None	10.0	7.5	75.6	0.9	1.6	0.4	2.4	1.6	931
Kabare Ward	Primary	16.8	11.7	63.0	0.2	1.5	5.1	0.3	1.5	9,776
Kabare Ward	Second-ary+	19.6	10.0	49.0	0.4	1.9	15.9	0.2	3.1	7,971
Baragwi Ward	Total	21.6	17.1	44.1	0.6	4.4	8.4	0.2	3.6	9,624
Baragwi Ward	None	15.2	11.4	58.9	2.4	5.8	0.5	1.4	4.3	414
Baragwi Ward	Primary	18.0	17.0	52.1	0.4	4.3	4.7	0.2	3.2	5,100
Baragwi Ward	Second-ary+	26.7	17.6	32.7	0.7	4.4	13.7	0.1	4.1	4,110
Njuki-Ini Ward	Total	20.4	11.0	53.6	0.7	2.1	10.0	0.3	1.9	11,121
Njuki-Ini Ward	None	25.4	9.5	51.4	2.4	2.8	1.5	5.0	2.0	461
Njuki-Ini Ward	Primary	19.9	10.2	60.1	0.4	2.2	5.3	0.1	1.7	5,899

Njuki-Ini Ward	Second-ary+	20.6	12.1	45.8	0.9	1.9	16.5	0.1	2.1	4,761
Ngariama Ward	Total	19.4	11.0	59.0	0.4	1.8	6.4	0.3	1.7	8,889
Ngariama Ward	None	15.7	10.8	62.0	0.7	1.7	0.3	2.4	6.3	287
Ngariama Ward	Primary	20.4	10.3	63.3	0.4	1.6	2.8	0.3	0.9	4,237
Ngariama Ward	Second-ary+	18.7	11.6	54.6	0.4	2.1	10.3	0.2	2.1	4,365
Karumandi Ward	Total	16.0	7.8	65.1	0.3	0.9	7.9	0.3	1.7	11,734
Karumandi Ward	None	11.6	5.3	76.9	1.7	1.7	0.7	1.7	0.5	415
Karumandi Ward	Primary	14.8	7.1	71.2	0.2	0.7	4.8	0.3	1.0	6,602
Karumandi Ward	Second-ary+	18.2	9.0	55.5	0.4	1.1	12.8	0.2	2.8	4,717
Ndia Constituency	Total	23.8	12.5	46.2	0.7	2.5	10.5	0.4	3.6	43,586
Ndia Constituency	None	20.2	9.9	56.8	2.1	3.6	0.6	2.8	3.9	1,899
Ndia Constituency	Primary	22.5	12.1	52.9	0.5	2.6	5.8	0.3	3.3	23,526
Ndia Constituency	Second-ary+	25.8	13.3	36.4	0.8	2.1	17.6	0.2	3.8	18,161
Mukure Ward	Total	21.0	10.7	52.0	0.6	1.8	11.0	0.3	2.6	13,970
Mukure Ward	None	15.8	11.0	62.8	2.0	4.0	0.3	1.9	2.2	697
Mukure Ward	Primary	19.1	10.9	58.9	0.5	2.1	6.1	0.3	2.2	7,195
Mukure Ward	Second-ary+	23.9	10.4	42.5	0.5	1.3	18.0	0.2	3.2	6,078
Kiine Ward	Total	22.4	13.6	46.3	0.6	2.4	10.7	0.4	3.6	17,694
Kiine Ward	None	15.2	8.6	62.3	2.1	3.2	1.2	3.3	4.1	660
Kiine Ward	Primary	21.3	13.1	53.2	0.4	2.5	6.0	0.4	3.2	9,714
Kiine Ward	Second-ary+	24.5	14.7	35.7	0.8	2.3	17.8	0.2	4.0	7,320
Kariti Ward	Total	29.1	12.8	39.3	0.8	3.2	9.7	0.4	4.6	11,922
Kariti Ward	None	32.1	10.0	42.3	2.0	3.7	0.4	3.5	6.1	542
Kariti Ward	Primary	28.1	11.7	46.0	0.5	3.4	5.3	0.3	4.7	6,617
Kariti Ward	Second-ary+	30.2	14.7	29.6	1.1	2.9	17.0	0.3	4.3	4,763
Kirinyaga Central Con-stituency	Total	29.1	12.3	42.5	0.7	2.2	9.9	0.3	3.0	52,854
Kirinyaga Central Con-stituency	None	21.4	9.5	58.3	2.3	2.9	0.8	2.0	2.7	2,261
Kirinyaga Central Con-stituency	Primary	26.8	11.9	51.2	0.4	2.0	5.3	0.3	2.2	26,550
Kirinyaga Central Con-stituency	Second-ary+	32.4	12.9	31.5	0.8	2.5	15.9	0.1	3.8	24,043
Mutira Ward	Total	28.4	11.5	45.5	0.8	2.4	8.5	0.3	2.5	10,823
Mutira Ward	None	26.1	6.5	56.1	4.1	1.8	0.7	0.7	4.1	444

Mutira Ward	Primary	28.6	10.9	52.0	0.3	2.2	3.9	0.5	1.6	5,090
Mutira Ward	Secondary+	28.4	12.6	38.4	1.0	2.7	13.6	0.1	3.2	5,289
Kanyekini Ward	Total	17.4	11.2	57.4	0.4	1.2	10.1	0.3	2.0	15,021
Kanyekini Ward	None	13.4	10.4	67.8	1.6	2.0	0.8	1.7	2.3	709
Kanyekini Ward	Primary	16.8	11.7	62.0	0.2	1.2	6.1	0.2	1.7	9,676
Kanyekini Ward	Secondary+	19.2	10.3	46.2	0.6	1.2	19.7	0.1	2.8	4,636
Kerugoya Ward	Total	38.2	14.4	27.2	1.0	4.1	9.9	0.3	4.8	14,243
Kerugoya Ward	None	24.0	9.2	49.3	3.1	6.7	1.2	2.1	4.4	521
Kerugoya Ward	Primary	32.6	12.7	40.0	0.6	4.1	5.2	0.3	4.4	5,593
Kerugoya Ward	Secondary+	43.0	16.0	17.0	1.1	4.0	13.8	0.1	5.1	8,129
Inoi Ward	Total	33.3	11.7	39.7	0.5	1.2	11.0	0.3	2.4	12,767
Inoi Ward	None	25.2	10.9	56.6	1.2	1.5	0.7	3.2	0.7	587
Inoi Ward	Primary	35.6	12.3	43.6	0.4	1.1	5.2	0.2	1.6	6,191
Inoi Ward	Secondary+	31.7	11.1	33.9	0.5	1.2	17.9	0.2	3.4	5,989

Table 15.5: 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 Agri-cultural holding	Internal/ Volunteer	Retired Homemaker	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
Kirinyaga	Total	26.73	12.29	40.54	0.78	2.42	12.66	0.74	3.85	75,067

Kirinyaga	None	23.18	9.14	54.59	2.01	3.25	0.51	3.66	3.67	6,675
Kirinyaga	Primary	27.90	11.96	45.63	0.49	2.16	8.03	0.55	3.28	38,559
Kirinyaga	Secondary+	26.00	13.42	30.81	0.89	2.56	21.37	0.33	4.62	29,833
Mwea Constituency	Total	32.17	13.89	35.06	0.79	2.39	10.83	0.69	4.18	25,720
Mwea Constituency	None	31.00	8.86	47.07	1.57	3.05	0.25	3.63	4.58	2,426
Mwea Constituency	Primary	34.10	12.60	38.84	0.55	2.05	7.74	0.44	3.67	14,617
Mwea Constituency	Secondary+	29.25	17.47	25.33	0.96	2.77	19.00	0.29	4.93	8,677
Mutithi Ward	Total	19.98	14.21	44.93	1.13	1.95	12.09	0.54	5.17	3,539
Mutithi Ward	None	13.13	9.22	66.20	2.23	2.23	-	2.79	4.19	358
Mutithi Ward	Primary	19.69	13.49	51.16	0.81	1.56	8.16	0.35	4.78	1,986
Mutithi Ward	Secondary+	22.51	16.90	28.20	1.34	2.51	22.26	0.17	6.11	1,195
Kangai Ward	Total	33.32	5.81	42.77	0.80	1.20	12.42	0.93	2.75	2,254
Kangai Ward	None	40.46	3.95	44.41	2.63	1.97	0.33	3.95	2.30	304
Kangai Ward	Primary	35.68	5.96	43.74	0.47	0.88	10.22	0.47	2.57	1,477
Kangai Ward	Secondary+	21.35	6.55	38.69	0.63	1.69	27.06	0.42	3.59	473
Thiba Ward	Total	41.29	11.87	27.86	0.43	3.60	11.47	0.79	2.69	3,277
Thiba Ward	None	34.48	6.90	42.24	0.43	6.90	0.43	5.60	3.02	232
Thiba Ward	Primary	45.73	11.58	29.66	0.30	2.75	7.24	0.40	2.35	2,003
Thiba Ward	Secondary+	34.26	13.53	21.21	0.67	4.51	22.07	0.48	3.26	1,042
Wamumu Ward	Total	23.81	13.81	33.59	0.41	5.12	9.91	0.86	12.49	2,209
Wamumu Ward	None	22.33	8.25	41.26	-	3.88	0.49	4.37	19.42	206
Wamumu Ward	Primary	26.75	13.81	34.42	0.51	5.06	7.52	0.43	11.50	1,383
Wamumu Ward	Secondary+	17.74	15.65	29.19	0.32	5.65	18.39	0.65	12.42	620
Nyangati Ward	Total	28.38	21.26	29.41	0.92	2.53	12.31	0.61	4.59	3,598
Nyangati Ward	None	35.48	13.81	39.29	1.67	3.10	0.24	2.86	3.57	420
Nyangati Ward	Primary	29.39	20.05	33.81	0.59	2.40	9.33	0.32	4.11	1,875
Nyangati Ward	Secondary+	24.64	25.40	19.88	1.15	2.53	20.49	0.31	5.60	1,303
Murinduko Ward	Total	20.82	8.72	53.85	0.64	1.28	11.78	0.85	2.05	3,751
Murinduko Ward	None	16.46	8.35	66.33	1.27	1.27	-	3.80	2.53	395
Murinduko Ward	Primary	21.19	8.57	57.16	0.59	1.14	9.21	0.68	1.46	2,194
Murinduko Ward	Secondary+	21.60	9.12	43.37	0.52	1.55	20.65	0.17	3.01	1,162



Gathigiriri Ward	Total	43.35	6.89	39.25	0.83	0.61	6.67	0.87	1.53	2,293
Gathigiriri Ward	None	43.75	4.33	39.90	2.40	2.40	-	4.33	2.88	208
Gathigiriri Ward	Primary	46.30	6.95	39.74	0.71	0.45	4.09	0.65	1.10	1,540
Gathigiriri Ward	Secondary+	34.86	7.71	37.61	0.55	0.37	16.51	0.18	2.20	545
Tebere Ward	Total	44.63	20.73	17.30	0.94	2.79	9.27	0.40	3.94	4,799
Tebere Ward	None	49.83	12.21	25.41	1.32	4.29	0.66	2.64	3.63	303
Tebere Ward	Primary	48.73	18.16	20.61	0.46	2.50	5.97	0.28	3.29	2,159
Tebere Ward	Secondary+	40.18	24.22	13.18	1.33	2.87	13.44	0.21	4.58	2,337
Gichugu Constituency	Total	18.61	10.97	51.90	0.74	2.20	11.90	0.78	2.92	17,118
Gichugu Constituency	None	14.25	10.80	63.77	2.68	2.81	0.45	3.07	2.17	1,565
Gichugu Constituency	Primary	19.57	10.84	57.31	0.42	2.07	6.81	0.72	2.26	8,632
Gichugu Constituency	Secondary+	18.39	11.15	42.46	0.71	2.21	20.84	0.33	3.90	6,921
Kabare Ward	Total	17.55	11.84	51.94	0.60	1.48	12.88	0.92	2.79	5,015
Kabare Ward	None	16.44	10.73	64.53	1.56	2.08	-	3.46	1.21	578
Kabare Ward	Primary	18.60	12.97	56.97	0.24	1.14	7.26	0.82	2.00	2,452
Kabare Ward	Secondary+	16.57	10.78	42.07	0.76	1.71	23.58	0.30	4.23	1,985
Baragwi Ward	Total	21.38	16.73	40.43	0.63	4.31	11.54	0.63	4.35	2,713
Baragwi Ward	None	12.39	15.38	57.26	2.14	6.41	0.43	2.99	2.99	234
Baragwi Ward	Primary	18.45	17.39	48.27	0.38	3.92	6.40	0.68	4.52	1,328
Baragwi Ward	Secondary+	26.59	16.25	27.98	0.61	4.34	19.72	0.09	4.43	1,151
Njuki-Ini Ward	Total	17.82	10.39	50.71	0.81	2.48	14.21	0.62	2.96	3,715
Njuki-Ini Ward	None	12.99	10.39	64.61	3.57	2.92	1.30	2.60	1.62	308
Njuki-Ini Ward	Primary	19.67	9.16	57.92	0.27	2.91	7.44	0.54	2.10	1,856
Njuki-Ini Ward	Secondary+	16.57	11.86	39.33	0.90	1.87	24.89	0.32	4.26	1,551
Ngariama Ward	Total	18.53	9.32	56.86	0.82	2.85	9.01	0.94	1.68	2,564
Ngariama Ward	None	16.09	14.94	51.72	2.87	4.02	-	5.17	5.17	174
Ngariama Ward	Primary	22.48	7.65	60.10	0.81	2.77	4.32	0.81	1.06	1,228
Ngariama Ward	Secondary+	14.72	10.24	54.22	0.52	2.75	15.32	0.43	1.81	1,162
Karumandi Ward	Total	18.90	6.56	59.14	0.93	0.64	10.25	0.74	2.83	3,111
Karumandi Ward	None	11.44	4.80	74.54	4.43	0.37	0.74	1.48	2.21	271
Karumandi Ward	Primary	19.63	6.96	61.99	0.57	0.62	7.58	0.74	1.92	1,768

Karumandi Ward	Secondary+	19.59	6.34	50.56	0.65	0.75	17.07	0.56	4.48	1,072
Ndia Constituency	Total	22.63	11.98	40.96	0.74	2.84	15.31	0.83	4.71	16,016
Ndia Constituency	None	18.50	8.59	55.96	2.37	4.59	0.89	4.44	4.66	1,351
Ndia Constituency	Primary	23.79	12.15	46.93	0.44	2.69	9.15	0.58	4.27	7,965
Ndia Constituency	Secondary+	22.07	12.46	30.84	0.78	2.67	25.54	0.40	5.24	6,700
Mukure Ward	Total	20.64	8.00	50.47	0.76	1.71	14.69	1.09	2.64	4,500
Mukure Ward	None	16.29	7.47	66.97	1.81	1.81	0.23	4.07	1.36	442
Mukure Ward	Primary	22.35	8.02	55.35	0.66	1.84	8.63	0.75	2.40	2,121
Mukure Ward	Secondary+	19.77	8.11	41.35	0.62	1.55	24.63	0.77	3.20	1,937
Kiine Ward	Total	21.64	14.00	38.18	0.78	3.19	16.20	0.78	5.23	6,792
Kiine Ward	None	13.03	9.62	58.52	2.81	5.41	0.60	5.61	4.41	499
Kiine Ward	Primary	23.11	14.62	44.47	0.38	2.93	9.38	0.41	4.70	3,380
Kiine Ward	Secondary+	21.42	14.04	27.39	0.89	3.12	26.78	0.38	5.97	2,913
Kariti Ward	Total	25.93	12.87	35.90	0.68	3.41	14.63	0.66	5.93	4,724
Kariti Ward	None	27.56	8.54	40.98	2.44	6.59	1.95	3.41	8.54	410
Kariti Ward	Primary	25.97	12.34	43.06	0.32	3.08	9.29	0.65	5.28	2,464
Kariti Ward	Secondary+	25.51	14.54	25.24	0.76	3.14	24.54	0.05	6.22	1,850
Kirinyaga Central Constituency	Total	30.70	11.45	36.82	0.86	2.28	13.75	0.68	3.46	16,213
Kirinyaga Central Constituency	None	24.16	8.25	56.11	1.65	2.78	0.68	3.60	2.78	1,333
Kirinyaga Central Constituency	Primary	29.80	11.79	44.00	0.49	1.91	8.82	0.53	2.65	7,345
Kirinyaga Central Constituency	Secondary+	32.74	11.68	26.40	1.09	2.56	20.86	0.31	4.37	7,535
Mutira Ward	Total	30.31	11.38	39.16	0.68	3.18	11.82	0.79	2.68	3,401
Mutira Ward	None	24.10	8.99	50.00	2.16	3.60	0.72	6.12	4.32	278
Mutira Ward	Primary	34.18	10.52	42.48	0.39	2.35	7.25	0.46	2.35	1,530
Mutira Ward	Secondary+	27.68	12.62	34.09	0.69	3.89	18.14	0.19	2.70	1,593
Kanyekini Ward	Total	18.04	10.68	52.79	0.72	1.49	13.41	0.72	2.16	4,175
Kanyekini Ward	None	17.78	8.31	65.59	2.31	0.92	0.46	2.08	2.54	433
Kanyekini Ward	Primary	18.41	11.53	54.80	0.36	1.40	10.93	0.60	1.96	2,498
Kanyekini Ward	Secondary+	17.36	9.81	44.29	0.88	1.85	22.91	0.48	2.41	1,244
Kerugoya Ward	Total	38.59	14.03	21.83	1.41	3.59	13.86	0.54	6.15	4,618
Kerugoya Ward	None	25.30	10.28	50.20	1.19	6.32	1.19	2.77	2.77	253

Kerugoya Ward	Primary	30.10	15.34	36.04	0.89	3.83	7.48	0.58	5.75	1,565
Kerugoya Ward	Secondary+	44.54	13.64	11.32	1.71	3.21	18.57	0.32	6.68	2,800
Inoi Ward	Total	35.13	9.33	35.46	0.55	0.85	15.60	0.70	2.39	4,019
Inoi Ward	None	30.89	6.23	53.66	0.81	1.90	0.54	4.07	1.90	369
Inoi Ward	Primary	41.95	10.10	37.04	0.40	0.51	8.39	0.46	1.14	1,752
Inoi Ward	Secondary+	29.66	9.22	30.45	0.63	0.95	25.18	0.26	3.64	1,898

**Table 15.6: 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
Kirinyaga County	0.014	3,740	0.015	0.354
Mwea Constituency	0.005	3,760	0.0055	0.375
Mutithi	0.001	3,620	0.0007	0.352
Kangai	0.001	2,740	0.0004	0.314
Thiba	0.001	3,150	0.0006	0.288
Wamumu	0.000	3,080	0.0004	0.295
Nyangati	0.001	4,650	0.0009	0.376
Murinduko	0.001	2,660	0.0006	0.346
Gathigiriri	0.000	3,190	0.0004	0.324
Tebere	0.001	6,000	0.0014	0.348
Gichugu Constituency	0.003	3,330	0.0032	0.294
Kabare	0.001	3,410	0.0010	0.283
Baragwi	0.001	2,960	0.0005	0.293
Njuki-Ini	0.001	3,300	0.0006	0.314
Ngariama	0.000	3,620	0.0005	0.294
Karumandi	0.001	3,310	0.0006	0.283
Ndia Constituency	0.003	3,690	0.0028	0.355
Mukure	0.001	3,350	0.0008	0.300
Kiine	0.001	3,820	0.0012	0.366
Kariti	0.001	3,850	0.0008	0.384
Kirinyaga Central Constituency	0.003	4,210	0.0036	0.361
Mutira	0.001	4,180	0.0007	0.326
Kanyekini	0.001	2,800	0.0007	0.316
Kerugoya	0.001	5,890	0.0013	0.355
Inoi	0.001	4,120	0.0009	0.304

**Table 15.7: 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
Kirinyaga County	13.5	59.0	27.5	483,654
Mwea Constituency	13.5	62.9	23.5	172,700
Mutithi	14.8	62.7	22.6	24,255
Kangai	14.9	69.1	16.0	17,801
Thiba	13.6	64.6	21.9	21,333
Wamumu	13.4	65.9	20.8	16,350
Nyangati	14.9	59.5	25.6	22,429
Murinduko	13.6	64.5	22.0	26,091
Gathigiriri	12.7	67.6	19.7	16,290
Tebere	11.1	55.0	33.9	28,151
Gichugu Constituency	13.2	57.4	29.4	115,491
Kabare	14.4	56.6	29.0	35,485
Baragwi	13.4	57.4	29.2	18,652
Njuki-Ini	12.7	57.9	29.4	22,247
Ngariama	11.0	55.0	34.0	16,883
Karumandi	13.1	60.1	26.8	22,224
Ndia Constituency	13.9	58.1	28.1	91,934
Mukure	14.7	56.1	29.2	28,495
Kiine	13.4	58.7	27.9	38,026
Kariti	13.7	59.3	27.0	25,413
Kirinyaga Central Constituency	13.4	55.0	31.6	103,529
Mutira	12.3	54.0	33.6	21,286
Kanyekini	14.8	64.7	20.6	29,895
Kerugoya	12.0	46.2	41.9	26,846
Inoi	14.3	53.6	32.1	25,502

**Table 15.8: Education for Male and Female Headed Households by County, Constituency and Ward**

County/Constituency/Wards	None	Primary	Secondary+	Total Pop	None	Primary	Second-ary+	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
Kirinyaga County	10.8	60.2	29.0	237,698	16.1	57.8	26.1	245,956
Mwea Constituency	11.2	63.8	25.0	86,486	15.9	62.0	22.0	86,214
Mutithi	11.9	64.2	24.0	12,238	17.7	61.1	21.2	12,017
Kangai	11.5	70.7	17.7	8,903	18.3	67.4	14.2	8,898
Thiba	11.4	64.6	24.0	10,583	15.8	64.5	19.7	10,750

Wamumu	11.0	65.7	23.4	8,212	15.8	66.1	18.1	8,138
Nyangati	12.7	61.0	26.3	10,989	17.0	58.1	25.0	11,440
Murinduko	10.4	66.3	23.3	13,719	17.1	62.4	20.5	12,372
Gathigiriri	11.0	66.5	22.5	8,113	14.4	68.6	16.9	8,177
Tebere	10.0	55.6	34.4	13,729	12.1	54.4	33.5	14,422
Gichugu Constituency	10.2	59.0	30.8	56,661	16.0	55.9	28.1	58,830
Kabare	10.7	58.5	30.8	17,256	17.8	54.8	27.4	18,229
Baragwi	10.5	59.0	30.5	9,214	16.3	55.8	27.9	9,438
Njuki-Ini	10.0	59.2	30.8	10,987	15.3	56.6	28.1	11,260
Ngariamama	9.3	55.9	34.8	8,370	12.6	54.2	33.2	8,513
Karumandi	10.1	61.8	28.2	10,834	16.0	58.5	25.5	11,390
Ndia Constituency	11.1	58.8	30.2	44,549	16.5	57.4	26.1	47,385
Mukure	11.7	56.8	31.6	13,830	17.5	55.5	27.1	14,665
Kiine	10.7	59.9	29.4	18,196	15.8	57.7	26.5	19,830
Kariti	11.0	59.3	29.7	12,523	16.4	59.2	24.4	12,890
Kirinyaga Central Constituency	10.5	56.8	32.8	50,002	16.2	53.3	30.5	53,527
Mutira	9.6	55.5	35.0	10,084	14.8	52.8	32.4	11,202
Kanyekini	11.0	66.5	22.4	14,890	18.4	62.9	18.7	15,005
Kerugoya	10.3	47.8	42.0	12,791	13.5	44.7	41.8	14,055
Inoi	10.9	55.3	33.9	12,237	17.5	52.1	30.4	13,265

Table 15.9: 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
Kirinyaga County	0.5	5.4	2.7	0.8	75.4	14.9	0.1	0.2	152,646
Mwea Constituency	0.4	6.7	2.6	0.8	65.4	23.7	0.1	0.3	55,098
Mutithi	0.2	7.1	3.0	0.4	75.7	13.4	0.1	0.1	7,574
Kangai	0.1	1.9	0.3	0.6	89.5	7.4	0.1	0.1	5,276

Thiba	0.2	3.4	1.0	0.7	56.9	37.5	0.1	0.2	6,882
Wamumu	0.1	1.8	0.3	0.4	55.0	42.2	0.1	0.1	5,063
Nyangati	0.4	9.4	3.4	0.5	59.6	26.1	0.1	0.5	7,560
Murinduko	0.1	1.7	1.2	0.3	91.7	4.8	0.1	0.1	7,480
Gathigiriri	0.3	3.7	0.5	1.1	69.4	24.6	-	0.4	5,154
Tebere	0.9	17.0	7.5	1.9	38.9	33.1	0.1	0.6	10,109
Gichugu Constituency	0.6	2.4	1.4	0.5	88.5	6.6	0.1	0.1	35,870
Kabare	0.7	1.3	0.8	0.6	91.1	5.3	0.1	0.1	10,993
Baragwi	1.0	4.9	3.5	0.4	81.9	8.1	0.1	0.1	5,861
Njuki-Ini	0.3	2.7	1.2	0.4	88.3	7.0	0.0	0.0	6,721
Ngariama	0.5	2.0	0.8	0.5	87.4	8.6	-	0.2	5,378
Karumandi	0.4	1.7	1.0	0.6	91.0	5.2	0.1	0.0	6,917
Ndia Constituency	0.7	6.6	2.1	0.8	79.3	10.1	0.1	0.2	29,233
Mukure	0.5	2.7	1.4	0.4	90.0	4.9	-	0.1	8,775
Kiine	0.5	7.7	2.3	1.0	75.8	12.3	0.1	0.4	12,187
Kariti	1.1	9.2	2.6	1.1	73.1	12.5	0.2	0.1	8,271
Kirinyaga Central Constituency	0.6	5.5	4.8	1.2	74.3	13.4	0.0	0.2	32,445
Mutira	0.5	5.1	2.4	0.7	74.5	16.6	0.0	0.2	6,766
Kanyekini	0.1	1.0	0.5	0.6	95.2	2.5	0.0	0.0	8,761
Kerugoya	1.3	13.2	13.2	3.0	45.5	23.3	0.0	0.4	9,052
Inoi	0.3	2.0	2.1	0.2	83.8	11.3	0.1	0.1	7,866

Table 15.10: 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
Kirinyaga County	0.5	5.3	2.4	0.8	76.2	14.4	0.1	0.3	106,905
Mwea Constituency	0.4	6.5	2.4	0.8	66.2	23.3	0.1	0.4	39,514
Mutithi	0.2	6.7	2.6	0.4	77.3	12.7	0.1	0.1	5,413
Kangai	0.1	2.0	0.4	0.6	89.7	6.9	0.0	0.2	3,922
Thiba	0.2	4.0	0.9	0.7	56.0	37.8	0.1	0.3	4,844
Wamumu	0.2	1.7	0.3	0.5	54.4	42.7	0.1	0.1	3,792
Nyangati	0.5	9.3	3.5	0.5	61.0	24.6	0.1	0.7	5,286

Murinduko	0.1	1.6	1.2	0.3	92.1	4.5	0.1	0.1	5,540
Gathigiriri	0.5	4.4	0.5	1.1	67.7	25.3	0.0	0.5	3,754
Tebere	0.9	16.3	6.8	1.8	40.5	32.8	0.2	0.8	6,963
Gichugu Constituency	0.5	2.3	1.2	0.5	89.3	5.9	0.1	0.1	25,509
Kabare	0.6	1.4	0.7	0.5	92.0	4.6	0.1	0.1	7,880
Baragwi	1.1	4.5	3.2	0.4	83.1	7.4	0.2	0.1	4,176
Njuki-Ini	0.3	3.0	1.1	0.4	88.5	6.7	0.0	0.0	4,623
Ngariama	0.3	2.1	0.8	0.6	88.0	8.0	0.0	0.2	3,849
Karumandi	0.3	1.5	0.8	0.4	92.2	4.6	0.1	0.0	4,981
Ndia Constituency	0.6	6.8	1.8	0.8	80.0	9.6	0.1	0.3	19,339
Mukure	0.5	3.3	1.2	0.4	89.9	4.6	0.0	0.1	5,998
Kiine	0.4	7.4	2.0	0.8	77.3	11.4	0.1	0.5	7,938
Kariti	1.2	9.6	2.4	1.0	73.0	12.5	0.2	0.2	5,403
Kirinyaga Central Constituency	0.6	5.5	4.4	1.1	75.5	12.7	0.0	0.3	22,543
Mutira	0.6	4.9	2.3	0.6	75.9	15.4	0.0	0.3	4,646
Kanyekini	0.1	1.1	0.4	0.7	95.4	2.2	0.0	0.0	6,266
Kerugoya	1.3	13.2	11.9	2.5	48.0	22.6	0.1	0.5	6,198
Inoi	0.3	2.2	2.1	0.3	83.5	11.3	0.0	0.2	5,433

Table 15.11: 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
Kirinyaga County	0.5	5.6	3.4	1.0	73.5	15.9	0.1	0.1	45,741
Mwea Constituency	0.3	7.2	3.3	0.8	63.3	24.9	0.1	0.1	15,584
Mutithi	0.4	8.1	4.1	0.5	71.6	15.3	0.0	-	2,161
Kangai	0.1	1.6	0.2	0.5	88.7	8.7	0.1	-	1,354
Thiba	0.2	2.1	1.3	0.8	58.9	36.7	0.0	-	2,038
Wamumu	-	1.9	0.4	0.1	56.7	40.8	0.1	-	1,271
Nyangati	0.4	9.6	3.2	0.5	56.2	29.8	0.0	0.2	2,274
Murinduko	0.2	2.0	1.3	0.3	90.6	5.5	0.2	-	1,940
Gathigiriri	-	1.7	0.4	1.1	74.1	22.7	-	-	1,400
Tebere	0.7	18.7	9.0	2.1	35.4	33.9	0.1	0.1	3,146
Gichugu Constituency	0.7	2.4	1.7	0.6	86.4	8.1	0.0	0.1	10,361
Kabare	0.9	1.2	1.2	0.6	88.9	7.2	0.0	0.0	3,113

Baragwi	0.8	5.6	4.2	0.4	78.9	9.9	-	0.1	1,685
Njuki-Ini	0.2	2.2	1.4	0.4	88.0	7.8	0.0	-	2,098
Ngariama	1.0	1.8	0.8	0.3	86.1	9.9	-	0.1	1,529
Karumandi	0.4	2.3	1.4	1.1	87.8	6.8	0.1	0.1	1,936
Ndia Constituency	0.7	6.3	2.7	1.0	77.9	11.2	0.1	0.1	9,894
Mukure	0.6	1.4	1.8	0.3	90.2	5.6	-	0.0	2,777
Kiine	0.6	8.1	3.0	1.3	73.0	13.9	0.1	0.1	4,249
Kariti	1.0	8.5	3.1	1.3	73.3	12.5	0.1	0.1	2,868
Kirinyaga Central Constituency	0.6	5.6	5.9	1.5	71.5	14.8	0.0	0.1	9,902
Mutira	0.4	5.5	2.5	0.7	71.7	19.2	0.0	0.1	2,120
Kanyekini	0.2	0.8	0.6	0.4	94.6	3.2	-	0.0	2,495
Kerugoya	1.2	13.3	16.1	4.1	40.2	24.8	-	0.2	2,854
Inoi	0.3	1.6	2.1	0.1	84.5	11.3	0.1	0.0	2,433

Table 15.12: Lighting Fuel by County, Constituency and Wards

County/Constituency/Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuelwood	Solar	Other	Households
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
Kirinyaga County	16.4	0.7	33.6	44.7	0.7	0.3	3.5	0.2	106,905
Mwea Constituency	14.8	0.7	30.7	49.2	0.5	0.4	3.3	0.3	39,514
Mutithi	15.6	0.4	36.7	42.5	0.6	0.1	3.9	0.3	5,413
Kangai	2.0	0.3	25.2	68.6	0.9	0.2	2.7	0.1	3,922
Thiba	7.9	0.4	35.5	50.2	0.2	1.8	3.8	0.2	4,844
Wamumu	5.0	0.4	39.7	49.9	0.3	0.5	4.1	0.2	3,792
Nyangati	21.9	0.5	33.3	40.3	0.9	0.3	2.5	0.4	5,286
Murinduko	6.5	0.4	28.1	59.7	0.5	0.3	4.2	0.3	5,540
Gathigiriri	8.6	0.3	23.4	64.3	0.4	0.2	2.7	0.2	3,754
Tebere	34.7	1.9	25.2	34.4	0.4	0.1	2.7	0.6	6,963
Gichugu Constituency	14.3	0.5	31.9	48.6	0.7	0.2	3.7	0.1	25,509
Kabare	17.8	0.3	28.5	49.8	0.4	0.2	2.8	0.1	7,880
Baragwi	17.7	0.3	28.1	50.7	0.5	0.1	2.5	0.2	4,176
Njuki-Ini	10.8	1.4	35.1	46.8	0.4	0.2	5.2	0.2	4,623
Ngariama	13.5	0.4	35.3	44.2	0.6	0.4	5.5	0.1	3,849
Karumandi	10.0	0.2	34.8	49.8	1.6	0.2	3.4	0.0	4,981
Ndia Constituency	14.5	0.5	40.3	38.9	0.8	0.2	4.5	0.2	19,339
Mukure	10.8	0.5	47.1	36.6	0.8	0.2	4.0	0.0	5,998
Kiine	15.2	0.5	38.7	39.3	0.6	0.2	5.3	0.4	7,938
Kariti	17.5	0.6	35.6	40.8	1.1	0.2	4.0	0.2	5,403



Kirinyaga Central Constituency	23.2	1.0	34.2	38.0	0.7	0.1	2.6	0.2	22,543
Mutira	20.7	0.6	46.1	28.1	0.5	0.2	3.4	0.5	4,646
Kanyekini	3.8	0.7	29.6	62.5	0.6	0.1	2.6	0.1	6,266
Kerugoya	48.2	0.9	24.2	23.9	0.6	0.1	1.8	0.3	6,198
Inoi	18.3	1.9	40.5	35.4	1.1	0.1	2.6	0.1	5,433

Table 15.13: 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	Households
<b>Kenya</b>	<b>24.6</b>	<b>0.6</b>	<b>30.4</b>	<b>36.8</b>	<b>0.9</b>	<b>4.2</b>	<b>1.7</b>	<b>0.7</b>	<b>5,762,320</b>
<b>Rural</b>	<b>5.6</b>	<b>0.5</b>	<b>35.3</b>	<b>47.5</b>	<b>1.1</b>	<b>6.8</b>	<b>2.4</b>	<b>0.7</b>	<b>3,413,616</b>
<b>Urban</b>	<b>52.4</b>	<b>0.9</b>	<b>23.3</b>	<b>21.2</b>	<b>0.6</b>	<b>0.4</b>	<b>0.7</b>	<b>0.7</b>	<b>2,348,704</b>
Kirinyaga County	15.8	0.7	34.4	44.0	0.7	0.3	3.9	0.2	106,905
Mwea Constituency	14.1	0.6	31.5	48.6	0.6	0.4	3.9	0.3	39,514
Mutithi	13.9	0.4	38.0	42.2	0.6	0.1	4.5	0.3	5,413
Kangai	2.1	0.3	27.0	66.1	1.0	0.2	3.1	0.1	3,922
Thiba	7.7	0.4	36.3	48.8	0.2	1.8	4.5	0.2	4,844
Wamumu	5.3	0.3	41.5	47.3	0.3	0.6	4.6	0.2	3,792
Nyangati	21.6	0.4	33.3	39.9	1.0	0.4	3.1	0.4	5,286
Murinduko	6.2	0.4	28.3	59.4	0.5	0.2	4.7	0.3	5,540
Gathigiriri	9.7	0.3	24.1	62.1	0.3	0.1	3.3	0.2	3,754
Tebere	33.2	1.9	25.1	35.2	0.5	0.2	3.2	0.7	6,963
Gichugu Constituency	14.1	0.5	33.0	47.3	0.7	0.2	4.0	0.1	25,509
Kabare	17.8	0.3	29.7	48.5	0.4	0.2	3.0	0.1	7,880
Baragwi	16.9	0.3	29.2	50.2	0.5	0.1	2.7	0.2	4,176
Njuki-Ini	10.8	1.3	35.8	45.9	0.3	0.2	5.6	0.2	4,623
Ngariama	13.2	0.3	36.4	42.9	0.7	0.4	6.0	0.1	3,849
Karumandi	10.0	0.2	36.4	47.7	1.8	0.2	3.8	0.0	4,981
Ndia Constituency	14.3	0.5	41.2	38.0	0.7	0.2	4.8	0.3	19,339
Mukure	11.0	0.5	48.3	35.2	0.7	0.2	4.1	0.0	5,998
Kiine	14.4	0.5	39.1	39.2	0.5	0.2	5.7	0.4	7,938
Kariti	17.6	0.6	36.5	39.4	1.0	0.2	4.4	0.3	5,403
Kirinyaga Central Constituency	22.1	1.0	35.5	37.4	0.7	0.1	2.9	0.2	22,543
Mutira	20.2	0.6	47.5	26.6	0.6	0.2	3.8	0.5	4,646
Kanyekini	3.7	0.9	30.6	61.3	0.6	0.1	2.8	0.1	6,266
Kerugoya	46.1	0.8	25.1	24.7	0.6	0.1	2.3	0.2	6,198
Inoi	17.8	1.8	42.6	33.5	1.1	0.1	2.9	0.1	5,433

Table 15.14: 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	Households
<b>Kenya</b>	<b>19.2</b>	<b>0.5</b>	<b>31.0</b>	<b>42.1</b>	<b>0.8</b>	<b>4.5</b>	<b>1.4</b>	<b>0.5</b>	<b>2,731,060</b>
<b>Rural</b>	<b>4.5</b>	<b>0.4</b>	<b>33.7</b>	<b>51.8</b>	<b>0.8</b>	<b>6.5</b>	<b>1.8</b>	<b>0.5</b>	<b>1,826,263</b>
<b>Urban</b>	<b>48.8</b>	<b>0.8</b>	<b>25.4</b>	<b>22.6</b>	<b>0.7</b>	<b>0.6</b>	<b>0.6</b>	<b>0.5</b>	<b>904,797</b>
Kirinyaga County	17.8	0.7	31.6	46.3	0.6	0.2	2.5	0.2	45,741
Mwea Constituency	16.7	0.7	28.9	50.7	0.4	0.4	2.0	0.2	15,584
Mutithi	19.8	0.3	33.3	43.4	0.5	0.0	2.5	0.2	2,161
Kangai	1.9	0.3	19.9	75.7	0.6	0.2	1.4	-	1,354
Thiba	8.4	0.4	33.6	53.5	0.1	1.8	2.0	0.1	2,038
Wamumu	4.2	0.5	34.6	57.7	0.2	0.2	2.6	0.1	1,271
Nyangati	22.6	0.7	33.2	41.0	0.6	0.1	1.3	0.4	2,274
Murinduko	7.5	0.3	27.5	60.6	0.5	0.4	3.0	0.2	1,940
Gathigiriri	5.7	0.3	21.6	70.1	0.6	0.4	1.1	0.1	1,400
Tebere	37.8	1.9	25.3	32.5	0.3	0.1	1.7	0.5	3,146
Gichugu Constituency	14.8	0.5	29.2	51.7	0.6	0.2	2.9	0.1	10,361
Kabare	18.0	0.1	25.5	53.3	0.4	0.2	2.2	0.2	3,113
Baragwi	19.5	0.4	25.5	52.1	0.4	0.1	1.8	0.2	1,685
Njuki-Ini	10.8	1.6	33.5	49.0	0.7	0.2	4.1	0.0	2,098
Ngariama	14.4	0.5	32.8	47.4	0.5	0.3	4.2	-	1,529
Karumandi	9.9	0.3	30.8	55.2	1.2	0.2	2.5	-	1,936
Ndia Constituency	15.0	0.5	38.6	40.6	0.9	0.2	3.9	0.2	9,894
Mukure	10.4	0.5	44.7	39.5	1.0	0.2	3.7	0.1	2,777
Kiine	16.6	0.4	37.9	39.4	0.7	0.1	4.5	0.2	4,249
Kariti	17.2	0.7	33.9	43.4	1.3	0.2	3.1	0.2	2,868
Kirinyaga Central Constituency	25.6	1.1	31.2	39.4	0.6	0.1	1.8	0.3	9,902
Mutira	21.7	0.6	43.0	31.6	0.2	0.2	2.4	0.3	2,120
Kanyekini	4.0	0.4	27.1	65.5	0.5	0.1	2.2	0.2	2,495
Kerugoya	52.8	1.0	22.2	22.0	0.7	0.1	0.8	0.4	2,854
Inoi	19.3	2.3	35.6	39.7	1.1	0.2	1.8	0.1	2,433

**Table 15.15: Main material of the Floor by County, Constituency and Wards**

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	Households
<b>Kenya</b>	<b>41.2</b>	<b>1.6</b>	<b>0.7</b>	<b>56.0</b>	<b>0.5</b>	<b>8,493,380</b>
<b>Rural</b>	<b>22.1</b>	<b>0.3</b>	<b>0.7</b>	<b>76.5</b>	<b>0.4</b>	<b>5,239,879</b>
<b>Urban</b>	<b>71.8</b>	<b>3.5</b>	<b>0.9</b>	<b>23.0</b>	<b>0.8</b>	<b>3,253,501</b>
Kirinyaga County	39.1	0.4	0.5	59.8	0.3	152,646
Mwea Constituency	35.4	0.3	0.3	63.6	0.4	55,098
Mutithi	38.3	0.3	0.4	60.9	0.1	7,574
Kangai	18.4	0.1	0.5	80.9	0.1	5,276
Thiba	21.2	0.1	0.1	77.6	1.0	6,882
Wamumu	29.5	0.3	0.1	70.1	0.0	5,063
Nyangati	49.0	0.3	0.3	48.7	1.7	7,560
Murinduko	23.1	0.7	0.3	75.7	0.1	7,480
Gathigiriri	22.2	0.1	0.3	77.3	0.1	5,154
Tebere	60.2	0.5	0.2	39.0	0.0	10,109
Gichugu Constituency	37.7	0.3	0.7	61.1	0.2	35,870
Kabare	36.0	0.2	1.2	62.3	0.2	10,993
Baragwi	38.1	0.4	0.5	60.9	0.1	5,861
Njuki-Ini	37.1	0.5	0.3	62.1	0.1	6,721
Ngariama	42.5	0.2	0.3	56.7	0.3	5,378
Karumandi	37.0	0.1	0.7	61.8	0.4	6,917
Ndia Constituency	40.1	0.5	0.4	58.8	0.1	29,233
Mukure	34.6	0.3	0.5	64.4	0.1	8,775
Kiine	40.6	0.4	0.4	58.4	0.2	12,187
Kariti	45.2	0.7	0.3	53.6	0.1	8,271
Kirinyaga Central Constituency	45.8	0.8	0.6	52.6	0.2	32,445
Mutira	52.8	0.3	0.8	46.1	0.1	6,766
Kanyekini	22.6	0.3	0.5	76.4	0.2	8,761
Kerugoya	63.1	1.9	0.7	34.0	0.4	9,052
Inoi	45.8	0.4	0.5	53.1	0.2	7,866

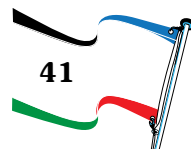
**Table 15.16: Main Material of the Floor in Male and Female Headed Households by County, Constituency and Ward**

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	House-holds	Cement	Tiles	Wood	Earth	Other	House-holds
<b>Kenya</b>	<b>42.8</b>	<b>1.6</b>	<b>0.8</b>	<b>54.2</b>	<b>0.6</b>	<b>5,762,320</b>	<b>37.7</b>	<b>1.4</b>	<b>0.7</b>	<b>59.8</b>	<b>0.5</b>	<b>2,731,060</b>
<b>Rural</b>	<b>22.1</b>	<b>0.3</b>	<b>0.7</b>	<b>76.4</b>	<b>0.4</b>	<b>3,413,616</b>	<b>22.2</b>	<b>0.3</b>	<b>0.6</b>	<b>76.6</b>	<b>0.3</b>	<b>1,826,263</b>
<b>Urban</b>	<b>72.9</b>	<b>3.5</b>	<b>0.9</b>	<b>21.9</b>	<b>0.8</b>	<b>2,348,704</b>	<b>69.0</b>	<b>3.6</b>	<b>0.9</b>	<b>25.8</b>	<b>0.8</b>	<b>904,797</b>
Kirinyaga County	37.4	0.4	0.5	61.5	0.3	106,905	43.0	0.5	0.5	55.7	0.3	45,741

Mwea Constituency	33.7	0.3	0.3	65.3	0.4	39,514	39.6	0.3	0.3	59.3	0.5	15,584
Mutithi	35.3	0.3	0.5	63.8	0.1	5,413	45.8	0.4	0.2	53.6	0.0	2,161
Kangai	18.4	0.2	0.4	80.9	0.1	3,922	18.4	-	0.8	80.7	0.1	1,354
Thiba	20.3	0.1	0.1	78.7	0.8	4,844	23.3	0.1	0.2	75.0	1.4	2,038
Wamumu	28.6	0.2	0.1	71.1	0.0	3,792	32.3	0.6	0.1	67.0	-	1,271
Nyangati	47.4	0.2	0.3	50.3	1.8	5,286	52.8	0.4	0.4	44.9	1.6	2,274
Murinduko	22.0	0.8	0.2	76.9	0.1	5,540	26.3	0.7	0.5	72.3	0.2	1,940
Gathigiriri	23.1	0.1	0.3	76.4	0.1	3,754	19.8	0.1	0.3	79.6	0.2	1,400
Tebere	57.9	0.6	0.3	41.2	0.0	6,963	65.4	0.3	0.1	34.1	-	3,146
Gichugu Constituency	36.1	0.3	0.7	62.7	0.2	25,509	41.6	0.3	0.6	57.1	0.3	10,361
Kabare	34.0	0.2	1.3	64.3	0.2	7,880	41.1	0.3	1.1	57.2	0.3	3,113
Baragwi	36.7	0.3	0.5	62.4	0.1	4,176	41.7	0.4	0.5	57.3	0.1	1,685
Njuki-Ini	35.4	0.4	0.3	63.8	0.1	4,623	40.8	0.6	0.3	58.2	0.1	2,098
Ngariama	40.7	0.3	0.3	58.6	0.2	3,849	47.2	0.2	0.3	51.9	0.5	1,529
Karumandi	36.3	0.1	0.7	62.7	0.2	4,981	39.0	0.2	0.6	59.3	0.9	1,936
Ndia Constituency	38.8	0.5	0.4	60.2	0.1	19,339	42.7	0.4	0.5	56.2	0.2	9,894
Mukure	33.5	0.3	0.5	65.6	0.1	5,998	37.1	0.3	0.6	61.8	0.2	2,777
Kiine	38.7	0.5	0.3	60.4	0.1	7,938	44.2	0.3	0.6	54.6	0.3	4,249
Kariti	44.8	0.7	0.3	54.0	0.1	5,403	45.9	0.8	0.3	52.9	-	2,868
Kirinyaga Central Constituency	43.9	0.7	0.6	54.6	0.2	22,543	50.2	0.8	0.6	48.1	0.2	9,902
Mutira	50.9	0.2	0.8	48.0	0.1	4,646	56.9	0.3	0.8	41.9	-	2,120
Kanyekini	22.1	0.2	0.6	77.0	0.2	6,266	24.0	0.4	0.4	74.9	0.3	2,495
Kerugoya	60.4	1.8	0.7	36.8	0.3	6,198	69.0	1.9	0.8	27.8	0.4	2,854
Inoi	44.3	0.4	0.5	54.6	0.1	5,433	49.1	0.5	0.6	49.7	0.2	2,433

Table 15.17: 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
Kirinyaga County	95.0	0.7	0.8	2.6	0.5	0.0	0.1	0.0	0.3	152,646
Mwea Constituency	92.3	0.5	0.8	4.5	1.3	0.0	0.0	0.0	0.5	55,098



Mutithi	91.1	0.5	1.3	6.6	0.2	0.0	0.1	0.1	0.1	7,574
Kangai	96.5	0.3	0.0	2.7	0.2	0.1	0.0	0.1	0.0	5,276
Thiba	93.9	0.3	0.1	4.6	0.1	0.1	0.0	0.0	0.9	6,882
Wamumu	96.6	0.6	0.0	2.5	0.1	0.0	0.1	0.1	0.0	5,063
Nyangati	88.4	0.3	1.4	8.1	0.1	0.0	0.0	0.0	1.6	7,560
Murinduko	83.4	0.9	0.1	5.5	8.5	0.1	0.1	0.0	1.4	7,480
Gathigiriri	94.0	0.4	0.0	5.3	0.1	0.0	0.0	0.0	0.1	5,154
Tebere	96.4	0.5	2.1	0.9	0.1	0.0	0.0	0.0	0.0	10,109
Gichugu Constituency	97.1	0.7	0.2	1.6	0.0	0.0	0.1	0.0	0.1	35,870
Kabare	96.0	1.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	10,993
Baragwi	96.8	0.9	0.9	0.7	0.0	0.0	0.7	0.0	0.0	5,861
Njuki-Ini	97.0	0.7	0.1	2.0	0.1	0.0	0.0	0.0	0.0	6,721
Ngariama	98.4	0.7	0.2	0.5	0.0	0.0	0.0	0.0	0.1	5,378
Karumandi	98.4	0.4	0.1	0.9	0.0	0.0	0.0	0.0	0.2	6,917
Ndia Constituency	96.0	1.0	1.3	1.3	0.1	0.0	0.0	0.0	0.2	29,233
Mukure	97.5	1.2	0.1	0.9	0.1	0.0	0.0	0.1	0.1	8,775
Kiine	95.9	1.0	1.5	1.4	0.1	0.0	0.0	0.0	0.0	12,187
Kariti	94.5	0.9	2.4	1.5	0.1	0.0	0.1	0.0	0.5	8,271
Kirinyaga Central Constituency	96.1	1.0	1.2	1.5	0.0	0.0	0.0	0.0	0.1	32,445
Mutira	98.4	0.4	0.6	0.5	0.0	0.0	0.0	0.0	0.0	6,766
Kanyekini	97.5	0.5	0.1	1.5	0.1	0.0	0.1	0.0	0.2	8,761
Kerugoya	91.7	1.9	3.6	2.6	0.0	0.0	0.1	0.0	0.1	9,052
Inoi	97.7	0.9	0.1	1.2	0.0	0.0	0.0	0.0	0.0	7,866

Table 15.18: Main Roofing Material in Male Headed Households by County, Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Ma-kuti	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
Kirinyaga County	95.1	0.8	0.8	2.5	0.5	0.0	0.1	0.0	0.3	106,905
Mwea Constituency	92.4	0.5	0.7	4.3	1.3	0.1	0.0	0.0	0.5	39,514
Mutithi	91.4	0.5	1.2	6.3	0.2	0.0	0.1	0.1	0.1	5,413
Kangai	96.6	0.3	0.0	2.7	0.2	0.1	0.0	0.1	-	3,922
Thiba	94.2	0.4	0.1	4.4	0.1	0.1	-	0.0	0.8	4,844
Wamumu	96.7	0.6	0.1	2.3	0.1	-	0.2	0.1	-	3,792
Nyangati	88.7	0.3	1.3	7.7	0.2	0.0	0.0	0.0	1.7	5,286

Murinduko	83.2	1.0	0.1	5.4	8.6	0.1	0.1	0.0	1.5	5,540
Gathigiriri	94.0	0.4	0.0	5.4	0.1	-	-	-	0.1	3,754
Tebere	96.6	0.6	1.7	0.8	0.1	0.0	0.0	-	0.0	6,963
Gichugu Constituency	97.2	0.7	0.2	1.6	0.0	0.0	0.2	0.0	0.0	25,509
Kabare	96.3	0.9	0.0	2.7	0.1	0.0	0.0	0.0	-	7,880
Baragwi	96.2	1.0	0.9	0.9	-	0.0	0.9	0.0	0.0	4,176
Njuki-Ini	97.1	0.6	0.1	2.1	0.1	-	0.0	0.0	0.0	4,623
Ngariama	98.6	0.6	0.2	0.5	-	0.1	0.1	-	-	3,849
Karumandi	98.7	0.4	0.1	0.8	0.0	-	-	-	0.1	4,981
Ndia Constituency	96.1	1.1	1.2	1.3	0.1	-	0.0	0.1	0.2	19,339
Mukure	97.4	1.3	0.1	0.8	0.1	-	0.0	0.2	0.1	5,998
Kiine	96.0	1.0	1.4	1.4	0.1	-	0.0	-	0.0	7,938
Kariti	94.6	0.9	2.3	1.5	0.1	-	0.1	-	0.4	5,403
Kirinyaga Central Constituency	96.3	1.0	1.1	1.5	0.0	0.0	0.0	0.0	0.1	22,543
Mutira	98.3	0.4	0.7	0.6	0.0	0.0	-	-	-	4,646
Kanyekini	97.6	0.5	0.1	1.4	0.1	0.0	0.0	0.0	0.2	6,266
Kerugoya	92.2	1.9	3.1	2.6	0.0	-	0.1	0.0	0.1	6,198
Inoi	97.9	0.8	0.1	1.1	-	-	0.0	-	0.0	5,433

Table 15.19: 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	House-holds
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
Kirinyaga County	94.7	0.7	1.0	2.7	0.4	0.0	0.0	0.0	0.3	45,741
Mwea Constituency	92.0	0.4	1.0	4.9	1.1	0.0	0.0	0.0	0.5	15,584
Mutithi	90.4	0.5	1.3	7.4	0.2	0.0	0.0	-	-	2,161
Kangai	96.2	0.4	0.1	3.0	0.1	-	-	0.2	-	1,354
Thiba	93.2	0.0	0.2	5.2	0.1	0.0	-	0.0	1.1	2,038
Wamumu	96.5	0.5	-	2.8	0.2	-	-	-	-	1,271

Nyangati	87.7	0.2	1.7	8.8	0.1	-	-	-	1.5	2,274
Murinduko	84.0	0.8	-	5.7	8.1	0.1	0.2	-	1.1	1,940
Gathigiriri	94.2	0.4	-	5.1	0.1	-	-	-	0.1	1,400
Tebere	95.9	0.2	2.8	1.0	0.0	0.0	0.0	-	-	3,146
Gichugu Constituency	96.9	0.8	0.2	1.8	0.0	-	0.0	0.0	0.2	10,361
Kabare	95.2	1.2	0.0	3.4	-	-	0.0	0.1	0.1	3,113
Baragwi	98.2	0.6	0.8	0.4	0.1	-	-	-	-	1,685
Njuki-Ini	96.9	0.9	0.0	2.0	0.1	-	0.0	0.0	-	2,098
Ngariama	98.0	0.9	0.3	0.5	0.1	-	-	-	0.3	1,529
Karumandi	97.7	0.4	0.1	1.1	0.1	-	-	-	0.6	1,936
Ndia Constituency	95.8	1.0	1.5	1.4	0.1	-	0.1	0.0	0.2	9,894
Mukure	97.6	1.0	0.0	1.2	0.0	-	0.0	0.0	0.1	2,777
Kiine	95.7	1.1	1.7	1.3	0.1	-	0.0	-	0.0	4,249
Kariti	94.1	0.8	2.6	1.5	0.1	-	0.2	0.0	0.6	2,868
Kirinyaga Central Constituency	95.7	1.0	1.4	1.6	0.0	0.0	0.1	0.1	0.1	9,902
Mutira	98.8	0.4	0.4	0.4	-	-	-	0.0	-	2,120
Kanyekini	97.2	0.4	0.1	1.8	0.0	0.0	0.2	0.1	0.2	2,495
Kerugoya	90.7	1.8	4.5	2.7	-	0.0	0.0	0.1	0.1	2,854
Inoi	97.4	1.1	0.1	1.3	0.1	0.1	-	-	0.0	2,433

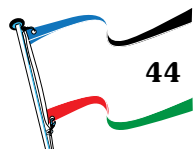


Table 15.20: Main material of the wall by County, Constituency and Wards

County/Constituency/Wards	Stone	Brick/Block	Mud/Wood	Mud/ Cement	Wood only	Corru- gated 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
Kirinyaga County	24.3	16.8	18.5	3.0	34.5	1.7	0.5	0.1	0.6	152,646
Mwea Constituency	28.6	28.3	24.5	5.0	8.0	2.8	1.3	0.1	1.3	55,098
Mutithi	32.8	21.9	26.2	3.7	8.2	6.5	0.3	0.2	0.1	7,574
Kangai	10.9	19.2	46.0	2.0	20.2	1.6	0.1	0.0	0.0	5,276
Thiba	16.5	36.4	23.1	11.9	7.7	3.5	0.0	0.0	0.9	6,882
Wamumu	20.0	49.6	22.4	4.1	1.2	1.2	0.1	0.2	1.2	5,063
Nyangati	36.3	18.6	23.9	4.1	14.2	1.2	0.0	0.1	1.7	7,560
Murinduko	17.1	35.7	16.6	4.9	8.4	1.6	9.3	0.1	6.1	7,480
Gathigiriri	21.8	37.4	30.2	6.6	1.8	2.1	0.0	0.0	0.1	5,154
Tebere	53.5	19.1	17.4	3.0	3.3	3.6	0.1	0.1	0.0	10,109
Gichugu Constituency	17.1	7.2	17.7	1.8	55.4	0.5	0.0	0.2	0.1	35,870
Kabare	15.0	7.4	18.7	0.9	57.6	0.3	0.0	0.0	0.1	10,993
Baragwi	23.9	12.6	19.6	2.4	40.0	0.5	0.0	0.8	0.2	5,861
Njuki-Ini	19.0	12.8	30.8	4.6	31.8	0.9	0.0	0.1	0.0	6,721
Ngariama	17.1	1.2	8.5	1.1	71.2	0.7	0.0	0.0	0.1	5,378
Karumandi	12.7	1.5	9.2	0.5	75.5	0.2	0.0	0.0	0.3	6,917
Ndia Constituency	26.1	21.7	15.1	2.3	32.4	1.9	0.0	0.1	0.3	29,233
Mukure	16.2	7.4	11.6	1.2	62.0	0.9	0.0	0.1	0.5	8,775
Kiine	27.8	29.6	13.5	2.0	25.3	1.6	0.1	0.0	0.2	12,187
Kariti	34.2	25.2	21.2	4.0	11.3	3.6	0.0	0.2	0.3	8,271
Kirinyaga Central Constituency	23.1	3.3	12.2	1.6	58.4	0.9	0.0	0.1	0.3	32,445
Mutira	23.0	1.3	3.9	0.8	70.0	0.7	0.0	0.1	0.2	6,766
Kanyekini	9.1	7.5	32.1	4.2	45.9	0.7	0.0	0.1	0.4	8,761
Kerugoya	44.0	2.9	5.8	0.9	44.2	1.7	0.0	0.1	0.4	9,052
Inoi	14.9	1.0	4.6	0.3	78.6	0.5	0.0	0.0	0.1	7,866



**Table 15.21: 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	Corrugated 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
Kirinyaga County	22.6	17.5	18.8	3.1	35.0	1.7	0.5	0.1	0.6	106,905
Mwea Constituency	26.8	29.3	24.9	5.1	8.1	2.9	1.4	0.1	1.3	39,514
Mutithi	29.9	22.9	26.9	4.0	8.6	7.0	0.4	0.3	0.1	5,413
Kangai	10.4	19.9	45.5	2.1	20.3	1.6	0.1	0.1	0.0	3,922
Thiba	15.3	36.3	23.7	12.2	8.0	3.6	0.0	0.0	0.8	4,844
Wamumu	18.7	50.2	22.9	4.4	1.2	1.2	0.1	0.2	1.1	3,792
Nyangati	34.9	19.4	24.5	4.0	14.3	1.1	0.0	0.1	1.7	5,286
Murinduko	15.9	37.6	15.5	5.1	8.3	1.6	9.6	0.1	6.3	5,540
Gathigiriri	22.2	36.9	30.2	6.6	1.6	2.2	0.1	0.0	0.1	3,754
Tebere	51.0	20.0	18.4	3.0	3.4	3.9	0.1	0.1	0.0	6,963
Gichugu Constituency	15.5	7.4	17.9	1.8	56.7	0.5	0.0	0.2	0.1	25,509
Kabare	13.6	7.7	19.1	0.9	58.4	0.3	-	0.0	0.1	7,880
Baragwi	21.8	13.0	19.9	2.7	40.8	0.4	0.0	1.1	0.2	4,176
Njuki-Ini	17.8	13.2	31.2	4.8	32.2	0.9	-	0.0	-	4,623
Ngariama	15.5	1.2	8.4	1.1	73.0	0.7	0.1	0.0	0.1	3,849
Karumandi	11.1	1.5	9.2	0.5	77.4	0.2	0.0	0.0	0.1	4,981
Ndia Constituency	25.2	22.7	15.1	2.2	32.4	1.8	0.1	0.1	0.3	19,339
Mukure	15.9	7.6	11.9	1.2	61.7	1.1	0.0	0.1	0.6	5,998
Kiine	26.1	31.7	13.6	1.8	25.0	1.6	0.1	0.1	0.2	7,938
Kariti	34.2	26.4	21.0	4.1	10.7	3.1	0.0	0.2	0.3	5,403
Kirinyaga Central Constituency	21.1	3.6	12.5	1.6	59.9	0.9	0.0	0.1	0.3	22,543
Mutira	21.2	1.4	3.6	0.8	72.1	0.7	0.0	0.1	0.2	4,646
Kanyekini	8.4	8.4	32.0	3.9	46.2	0.6	0.0	0.1	0.4	6,266
Kerugoya	40.4	3.0	6.0	1.0	47.3	1.9	0.0	0.1	0.4	6,198
Inoi	13.8	0.9	4.9	0.3	79.6	0.4	-	0.0	0.1	5,433

Table 15.22: 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	Corrugated Iron Sheets	Grass/ Reeds	Tin	Other	Households
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
Kirinyaga County	28.1	15.2	17.8	2.9	33.3	1.6	0.4	0.1	0.6	45,741
Mwea Constituency	33.2	26.0	23.6	4.6	7.7	2.5	1.1	0.1	1.2	15,584
Mutithi	40.1	19.3	24.4	3.0	7.4	5.3	0.2	0.2	0.1	2,161
Kangai	12.2	17.1	47.4	1.8	19.7	1.6	0.1	-	0.1	1,354
Thiba	19.1	36.6	21.8	11.1	7.0	3.1	-	-	1.1	2,038
Wamumu	23.9	48.1	20.8	3.4	1.1	1.2	0.1	0.1	1.4	1,271
Nyangati	39.5	16.8	22.5	4.2	13.9	1.5	-	0.1	1.5	2,274
Murinduko	20.4	30.3	19.9	4.4	9.0	1.6	8.6	0.2	5.7	1,940
Gathigiriri	20.6	38.6	30.0	6.4	2.6	1.7	-	-	0.1	1,400
Tebere	59.2	16.9	15.1	2.8	3.0	2.7	0.1	0.1	-	3,146
Gichugu Constituency	21.0	6.8	17.4	1.7	52.2	0.6	0.0	0.1	0.2	10,361
Kabare	18.6	6.7	17.5	0.8	55.8	0.4	-	0.0	0.1	3,113
Baragwi	29.1	11.7	18.7	1.7	37.9	0.7	-	0.1	0.2	1,685
Njuki-Ini	21.7	12.1	30.0	4.3	30.9	0.9	0.0	0.1	-	2,098
Ngariama	21.2	1.0	8.8	1.1	66.8	0.9	-	-	0.3	1,529
Karumandi	16.9	1.5	9.2	0.7	70.6	0.3	-	0.1	0.7	1,936
Ndia Constituency	28.0	19.6	15.2	2.4	32.3	2.1	0.0	0.1	0.3	9,894
Mukure	16.9	7.0	11.1	1.3	62.6	0.7	-	0.0	0.4	2,777
Kiine	31.1	25.6	13.4	2.3	26.0	1.5	0.0	-	0.1	4,249
Kariti	34.2	23.0	21.7	3.8	12.3	4.5	0.0	0.2	0.4	2,868
Kirinyaga Central Constituency	27.7	2.7	11.7	1.8	55.0	0.8	0.0	0.1	0.3	9,902
Mutira	27.0	1.3	4.4	0.9	65.4	0.6	-	0.0	0.2	2,120
Kanyekini	10.9	5.3	32.3	5.0	45.3	0.8	0.0	0.0	0.4	2,495
Kerugoya	51.7	2.7	5.5	0.8	37.5	1.2	0.0	0.1	0.5	2,854
Inoi	17.3	1.3	4.0	0.4	76.2	0.7	-	-	0.0	2,433

Table 15.23: Source of Water by County, Constituency and Ward

County/Constituency/ Wards	Pond	Dam	Lake	Stream/ River	Unpro- tected Spring	Unprotect- ed Well	Jabia	Water vendor	Other	Unim- proved Sources	Protected Spring	Protected Well	Borehole	Piped into Dwelling	Piped	Rain Water Collection	Improved Sources	Number of Individuals
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
Kirinyaga County	0.1	0.1	0.0	42.1	0.9	1.9	0.2	1.7	0.0	47.0	1.7	7.0	4.9	7.1	32.0	0.3	53.0	521,025
Mwea Constituency	0.2	0.0	0.0	59.7	0.5	2.4	0.1	3.7	0.0	66.6	0.6	5.1	4.2	5.4	18.2	0.0	33.4	187,399
Mutithi	0.7	0.1	0.0	22.3	0.7	9.2	0.0	3.8	0.0	36.9	0.4	16.8	13.1	9.2	23.6	0.1	63.1	26,182
Kangai	0.0	0.0	0.0	95.0	0.3	0.5	0.0	0.1	0.0	96.1	1.3	1.3	0.8	0.3	0.2	0.0	3.9	19,295
Thiba	0.0	0.0	0.0	76.2	0.0	0.0	0.0	15.1	0.0	91.4	0.5	0.6	0.4	2.3	4.6	0.1	8.6	23,096
Wamumu	0.0	0.1	0.0	88.2	0.2	2.0	0.0	0.1	0.0	90.6	0.7	7.3	1.3	0.0	0.0	0.0	9.4	17,872
Nyangati	0.1	0.0	0.0	61.0	0.4	3.5	0.0	2.6	0.0	67.6	0.8	1.7	6.5	8.4	15.0	0.0	32.4	24,305
Murinduko	0.2	0.0	0.0	28.2	1.3	1.2	0.3	3.2	0.1	34.5	0.4	3.5	2.1	6.4	53.0	0.0	65.5	28,050
Gathigiriri	0.4	0.1	0.1	88.7	0.3	0.2	0.0	0.1	0.0	89.8	0.3	2.9	5.3	0.7	1.0	0.0	10.2	17,767
Tebere	0.1	0.0	0.0	51.2	0.2	1.2	0.1	2.8	0.1	55.7	0.4	5.0	2.4	10.1	26.4	0.0	44.3	30,832
Gichugu Constituency	0.1	0.0	0.0	33.3	0.9	1.4	0.1	0.5	0.0	36.3	2.5	2.7	4.0	7.3	47.1	0.1	63.7	123,749
Kabare	0.0	0.0	0.0	42.5	0.9	0.8	0.0	0.1	0.0	44.3	1.9	3.1	2.3	8.0	40.3	0.1	55.7	38,001
Baragwi	0.1	0.0	0.0	36.8	1.9	2.0	0.3	0.9	0.0	42.0	7.5	5.6	9.7	4.7	30.4	0.1	58.0	19,993
Njuki-Ini	0.1	0.1	0.0	43.3	1.7	3.5	0.0	1.8	0.1	50.6	3.0	3.3	7.3	5.1	30.6	0.1	49.4	23,971
Ngariama	0.1	0.0	0.0	13.4	0.0	0.1	0.0	0.1	0.0	13.6	0.1	0.1	0.9	9.7	75.6	0.1	86.4	17,993

Karumandi	0.1	0.0	0.0	0.0	20.6	0.2	0.6	0.0	0.0	0.0	21.5	0.8	1.0	0.8	8.7	67.2	0.0	78.5	23,791
Ndia Constituency	0.1	0.0	0.0	0.0	36.4	2.0	1.6	0.6	0.6	0.0	41.3	2.6	9.6	5.6	7.8	32.0	1.1	58.7	98,905
Mukure	0.1	0.0	0.0	0.0	36.1	1.4	0.6	1.5	0.3	0.0	40.0	1.4	12.2	2.9	5.4	37.2	0.8	60.0	30,519
Kiine	0.1	0.0	0.0	0.0	39.8	1.7	1.4	0.2	0.4	0.0	43.8	1.2	8.8	4.6	8.1	32.1	1.3	56.2	40,848
Kariti	0.1	0.1	0.0	0.0	31.5	3.0	2.8	0.1	1.3	0.0	38.9	5.8	8.1	10.0	10.1	26.1	1.1	61.1	27,538
Kirinyaga Central Constituency	0.2	0.3	0.0	0.0	27.2	0.7	2.0	0.0	0.5	0.1	31.0	1.7	12.6	6.6	9.2	38.6	0.2	69.0	110,972
Mutira	0.6	0.0	0.1	0.1	29.0	0.1	0.9	0.1	0.1	0.1	31.2	1.0	15.6	5.0	7.6	38.9	0.6	68.8	22,871
Kanyekini	0.0	0.8	0.0	0.0	57.3	1.3	4.1	0.0	0.7	0.0	64.3	4.4	14.3	6.7	2.1	8.3	0.0	35.7	32,143
Kerugoya	0.1	0.0	0.0	0.0	10.7	1.0	0.9	0.0	1.1	0.3	14.1	0.6	8.5	7.1	19.6	49.9	0.1	85.9	28,732
Inoi	0.1	0.0	0.0	0.0	7.4	0.1	1.6	0.0	0.2	0.1	9.5	0.4	12.2	7.5	7.7	62.4	0.3	90.5	27,226

Table 15.24: 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	Pro- tected Well	Bore- hole	Piped into Dwell- ing	Piped	Rain Water Col- lection	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
Kirinyaga County	0.2	0.1	0.0	42.3	0.9	1.9	0.2	1.6	0.0	47.2	1.7	7.1	5.0	7.0	31.8	0.3	52.8	389,010
Mwea Constituency	0.2	0.0	0.0	59.9	0.4	2.3	0.1	3.5	0.0	66.6	0.6	5.2	4.3	5.3	18.0	0.0	33.4	142,446
Mutithi	0.8	0.1	0.0	22.3	0.8	9.3	0.0	3.6	0.0	36.9	0.4	16.8	14.0	8.7	23.1	0.1	63.1	19,958

Kangai	0.0	0.0	0.0	0.0	95.2	0.2	0.4	0.0	0.1	-	96.0	1.5	1.1	0.9	0.3	0.2	0.0	4.0	15,168
Thiba	0.0	-	0.0	-	76.3	-	0.0	-	14.9	0.0	91.3	0.4	0.7	0.5	2.1	4.8	0.1	8.7	17,140
Wamumu	0.0	0.0	-	-	87.3	0.2	2.0	0.0	0.0	-	89.7	0.7	8.2	1.4	0.0	-	0.1	10.3	13,878
Nyangati	0.2	-	-	-	61.6	0.3	3.2	0.0	2.4	-	67.7	0.9	1.7	6.5	8.8	14.4	0.0	32.3	18,105
Murinduko	0.2	0.0	-	-	28.8	1.2	1.1	0.4	3.0	0.1	34.6	0.3	3.3	2.1	6.7	52.9	0.0	65.4	21,698
Gathigiriri	0.4	0.1	0.1	-	88.5	0.3	0.2	-	0.0	-	89.6	0.4	2.7	5.5	0.9	1.0	0.0	10.4	13,638
Tebere	0.1	0.0	0.0	-	51.6	0.2	1.3	0.1	2.6	0.1	56.0	0.4	5.5	2.4	9.9	25.8	0.0	44.0	22,861
Gichugu Constituency	0.1	0.0	0.0	-	33.1	0.9	1.3	0.1	0.5	0.0	36.0	2.5	2.8	3.9	7.4	47.3	0.1	64.0	93,788
Kabare	0.0	-	0.0	-	42.7	0.9	0.8	-	0.1	0.0	44.6	1.8	3.1	2.3	7.9	40.1	0.2	55.4	29,196
Baragwi	0.0	0.0	-	-	37.3	1.8	2.0	0.4	0.7	-	42.3	7.3	5.8	10.2	4.9	29.5	0.1	57.7	15,267
Njukh-Ini	0.1	0.1	0.0	-	43.1	1.8	3.2	0.0	1.7	0.0	50.1	3.1	3.3	7.0	5.4	31.0	0.1	49.9	17,437
Ngariama	0.1	-	-	-	13.0	0.0	0.1	-	0.0	0.0	13.3	0.1	0.2	0.8	10.0	75.6	0.1	86.7	13,592
Karumandi	0.1	-	0.0	-	19.8	0.2	0.5	-	0.0	-	20.6	0.7	1.0	0.7	8.6	68.4	-	79.4	18,296
Ndia Constituency	0.1	0.1	0.0	-	36.5	2.0	1.6	0.6	0.6	-	41.4	2.6	10.0	5.6	7.7	31.5	1.1	58.6	69,713
Mukure	0.1	0.0	-	-	35.9	1.5	0.6	1.6	0.3	-	40.0	1.3	12.5	2.8	5.3	37.3	0.9	60.0	22,198
Kiine	0.1	0.1	-	-	40.0	1.8	1.6	0.2	0.4	-	44.3	1.3	9.3	4.9	8.2	30.8	1.3	55.7	28,508
Kariti	0.1	0.1	0.0	-	31.8	2.9	2.7	0.1	1.2	-	38.9	6.2	8.3	10.0	9.7	25.8	1.1	61.1	19,007
Kirinyaga Central Constituency	0.2	0.3	0.0	-	27.2	0.7	2.1	0.1	0.5	0.1	31.2	1.8	12.8	6.9	9.0	38.2	0.2	68.8	83,063

Mutira	0.7	0.0	0.0	28.4	0.1	1.0	0.2	0.1	0.1	30.8	1.0	16.0	5.2	7.8	38.7	0.5	69.2	16,962
Kanyekini	0.0	0.8	-	57.0	1.4	4.1	0.0	0.7	-	64.1	4.4	14.3	6.8	1.9	8.4	0.0	35.9	24,351
Kerugoya	0.1	0.0	-	11.5	1.0	0.9	0.0	0.9	0.3	14.7	0.7	8.9	7.5	19.2	49.1	0.1	85.3	21,504
Inoi	0.1	0.0	-	7.3	0.1	1.8	-	0.2	0.1	9.5	0.4	12.3	7.8	7.5	62.2	0.3	90.5	20,246

Table 15.25: Source of Water of Female headed Household by County Constituency and Ward

County/Constituency/Wards	Pond	Dam	Lake	Stream/ River	Unprotect- ed Spring	Unprotect- ed Well	Ja- bia	Water vender	Other	Unim- proved Sources	Protected Spring	Protected Well	Borehole	Piped into Dwelling	Piped	Rain Water Collec- tion	Im- proved Sources	Number of Individ- uals
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
Kirinyaga County	0.1	0.1	0.0	41.4	1.0	1.9	0.1	1.9	0.1	46.6	1.7	6.7	4.6	7.3	32.8	0.3	53.4	132,015
Mwea Constituency	0.2	0.1	0.0	58.9	0.5	2.5	0.0	4.3	0.0	66.5	0.5	4.8	3.7	5.6	18.9	0.0	33.5	44,953
Mutithi	0.6	0.2	-	22.5	0.5	8.8	-	4.2	-	36.9	0.3	16.9	10.0	10.9	25.0	0.0	63.1	6,224
Kangai	-	0.0	-	94.5	0.6	0.8	-	0.2	-	96.2	0.8	2.0	0.4	0.4	0.2	0.0	3.8	4,127
Thiba	0.1	-	0.1	75.8	-	-	0.0	15.8	0.1	91.8	0.6	0.2	0.2	3.1	4.2	0.1	8.2	5,956
Wamumu	-	0.1	-	91.3	0.2	2.0	-	0.2	-	93.7	0.6	4.3	1.3	0.1	-	-	6.3	3,994
Nyangati	0.0	0.1	0.0	59.3	0.4	4.3	0.0	3.0	0.0	67.2	0.5	1.8	6.7	7.0	16.7	0.1	32.8	6,200
Murinduko	0.2	-	0.0	26.2	1.8	1.5	0.2	3.9	0.1	33.9	0.8	4.4	2.4	5.4	53.1	-	66.1	6,352
Gathigiriri	0.3	0.0	0.1	89.4	0.1	0.3	-	0.1	-	90.5	0.2	3.6	4.7	0.2	0.9	-	9.5	4,129

Tebere	0.0	0.1	-	50.2	0.2	0.9	0.0	3.3	0.0	54.8	0.3	3.7	2.6	10.6	28.0	0.0	45.2	7,971
Gichugu Constituency	0.0	0.0	-	33.7	0.9	1.7	0.0	0.7	0.1	37.2	2.6	2.5	4.1	6.9	46.6	0.1	62.8	29,961
Kabare	-	-	-	41.7	0.8	0.9	0.0	-	0.1	43.4	2.1	2.8	2.3	8.1	41.1	0.1	56.6	8,805
Baragwi	0.1	-	-	35.2	2.4	2.0	0.1	1.4	-	41.2	7.9	5.0	8.3	4.1	33.5	0.0	58.8	4,726
Njuki-Ini	0.0	0.1	-	43.9	1.4	4.3	0.1	2.1	0.2	52.1	2.7	3.3	7.8	4.3	29.6	0.1	47.9	6,534
Ngariama	0.0	-	-	14.4	-	0.0	-	0.1	-	14.6	0.1	-	1.2	8.5	75.6	0.1	85.4	4,401
Karumandi	-	-	-	23.1	0.1	0.9	-	0.1	-	24.3	0.9	1.1	1.0	9.2	63.4	0.1	75.7	5,495
Ndia Constituency	0.1	0.0	0.0	36.1	1.9	1.5	0.5	0.7	0.0	40.8	2.5	8.7	5.5	8.1	33.3	1.1	59.2	29,192
Mukure	0.0	-	0.0	36.6	1.2	0.7	1.3	0.3	0.0	40.2	1.8	11.5	3.2	5.6	37.1	0.6	59.8	8,321
Kiine	0.1	0.0	0.0	39.3	1.6	1.0	0.3	0.5	0.0	42.8	1.1	7.6	4.0	7.9	35.2	1.4	57.2	12,340
Kariti	0.2	-	-	30.9	3.1	2.9	0.1	1.5	-	38.7	5.0	7.5	10.0	10.9	26.7	1.1	61.3	8,531
Kirinyaga Central Constituency	0.1	0.3	0.1	26.9	0.7	1.7	0.0	0.6	0.1	30.6	1.7	11.9	5.9	9.7	39.8	0.4	69.4	27,909
Mutira	0.2	0.1	0.2	30.7	0.3	0.6	0.0	0.2	0.1	32.3	1.2	14.6	4.6	7.1	39.2	0.9	67.7	5,909
Kanyekini	0.0	0.9	0.2	58.3	1.1	3.9	-	0.6	-	65.0	4.4	14.0	6.3	2.4	7.9	0.0	35.0	7,792
Kerugoya	0.1	-	-	8.5	1.0	1.0	0.1	1.5	0.3	12.5	0.5	7.4	5.8	21.0	52.5	0.2	87.5	7,228
Inoi	0.0	0.1	-	7.8	0.2	1.1	-	0.1	0.1	9.4	0.4	11.9	6.5	8.5	62.9	0.4	90.6	6,980

Table 15.26: 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
Kirinyaga County	0.70	2.87	0.16	5.98	73.25	82.95	16.40	0.13	0.44	0.08	17.05	521,025
Mwea Constituency	0.69	1.95	0.07	5.13	74.42	82.27	16.36	0.21	1.05	0.10	17.73	187,399
Mutithi	0.25	2.04	0.03	5.55	72.16	80.03	16.75	0.21	2.91	0.10	19.97	26,182
Kangai	0.05	0.06	0.13	4.45	71.99	76.68	23.13	0.00	0.17	0.02	23.32	19,295
Thiba	0.03	1.54	0.01	3.35	91.02	95.94	3.50	0.00	0.38	0.18	4.06	23,096
Wamumu	0.01	0.03	0.05	2.73	93.29	96.11	3.59	0.06	0.24	0.01	3.89	17,872
Nyangati	0.96	2.48	0.12	7.25	69.85	80.66	19.15	0.01	0.16	0.02	19.34	24,305
Murinduko	0.45	0.97	0.14	2.60	70.33	74.48	21.84	0.07	3.51	0.10	25.52	28,050
Gathigiriri	0.15	0.21	0.04	10.16	57.45	68.01	30.28	1.60	0.02	0.09	31.99	17,767
Tebere	2.65	5.98	0.07	5.64	71.62	85.97	13.65	0.08	0.07	0.22	14.03	30,832
Gichugu Constituency	0.14	1.02	0.20	6.74	75.69	83.78	16.04	0.04	0.04	0.10	16.22	123,749
Kabare	0.10	0.98	0.15	7.07	81.49	89.78	10.09	0.09	0.03	0.00	10.22	38,001
Baragwi	0.37	1.48	0.53	6.74	81.28	90.39	9.50	0.01	0.09	0.02	9.61	19,993
Njuki-Ini	0.05	0.84	0.15	8.49	81.72	91.25	8.23	0.01	0.03	0.49	8.75	23,971
Ngariama	0.12	0.63	0.15	6.57	35.55	43.02	56.93	0.01	0.01	0.03	56.98	17,993
Karumandi	0.11	1.16	0.08	4.56	86.02	91.94	7.97	0.04	0.06	0.00	8.06	23,791
Ndia Constituency	0.62	2.67	0.06	7.16	79.87	90.39	9.34	0.10	0.15	0.02	9.61	98,905
Mukure	0.12	1.41	0.09	7.32	81.40	90.34	9.27	0.15	0.24	0.00	9.66	30,519
Kine	0.77	1.11	0.02	9.35	79.83	91.08	8.76	0.09	0.05	0.01	8.92	40,848
Kariti	0.97	6.39	0.10	3.72	78.24	89.43	10.29	0.04	0.20	0.04	10.57	27,538
Kirinyaga Central Constituency	1.40	6.66	0.34	5.52	62.63	76.55	23.15	0.12	0.09	0.09	23.45	110,972
Mutira	0.68	1.42	0.24	2.32	59.17	63.83	35.95	0.05	0.07	0.10	36.17	22,871
Kanyekini	0.16	0.27	0.02	6.41	61.32	68.18	31.53	0.05	0.19	0.05	31.82	32,143
Kerugoya	4.67	22.53	0.33	4.41	47.95	79.89	19.63	0.23	0.07	0.18	20.11	28,732
Inoi	0.02	1.87	0.82	8.33	82.56	93.61	6.21	0.15	0.00	0.02	6.39	27,226



Table 15.27: 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
Kirinyaga County	0.68	2.78	0.15	5.95	73.36	82.93	16.42	0.14	0.43	0.08	17.07	389,010
Mwea Constituency	0.68	1.88	0.08	5.16	74.42	82.22	16.42	0.24	1.03	0.10	17.78	142,446
Mutithi	0.20	2.26	0.03	5.41	71.88	79.77	16.98	0.18	2.96	0.12	20.23	19,958
Kangai	0.00	0.05	0.11	4.42	72.20	76.79	23.15	0.00	0.05	0.01	23.21	15,168
Thiba	0.04	1.23	0.02	3.39	91.24	95.91	3.58	0.01	0.37	0.14	4.09	17,140
Wamumu	0.01	0.02	0.04	3.00	92.95	96.01	3.74	0.06	0.19	0.01	3.99	13,878
Nyangati	0.93	2.60	0.15	7.36	69.70	80.75	19.07	0.01	0.17	0.01	19.25	18,105
Murinduko	0.44	0.99	0.17	2.40	70.85	74.84	21.64	0.08	3.34	0.10	25.16	21,698
Gathigiriri	0.18	0.27	0.01	10.57	57.43	68.46	29.55	1.86	0.03	0.11	31.54	13,638
Tebere	2.79	5.61	0.09	5.73	71.49	85.72	13.91	0.08	0.07	0.21	14.28	22,861
Gichugu Constituency	0.15	1.00	0.18	6.86	75.88	84.07	15.77	0.04	0.03	0.09	15.93	93,788
Kabare	0.10	0.95	0.08	7.34	81.63	90.10	9.77	0.10	0.03	0.00	9.90	29,196
Baragwi	0.42	1.45	0.50	7.13	81.09	90.59	9.28	0.01	0.10	0.02	9.41	15,267
Njuki-Ini	0.05	0.77	0.18	8.43	81.81	91.24	8.29	0.00	0.00	0.46	8.76	17,437
Ngariama	0.13	0.70	0.18	6.69	35.56	43.25	56.70	0.00	0.01	0.04	56.75	13,592
Karumandi	0.12	1.15	0.08	4.47	86.66	92.48	7.47	0.03	0.02	0.00	7.52	18,296
Ndia Constituency	0.62	2.67	0.05	6.96	79.98	90.27	9.47	0.10	0.14	0.02	9.73	69,713
Mukure	0.14	1.50	0.08	6.92	81.36	90.00	9.57	0.14	0.29	0.00	10.00	22,198
Kline	0.77	1.13	0.02	9.17	79.89	90.98	8.86	0.11	0.03	0.02	9.02	28,508
Kariti	0.96	6.33	0.06	3.67	78.49	89.51	10.28	0.03	0.14	0.05	10.49	19,007
Kirinyaga Central Constituency	1.31	6.44	0.33	5.44	63.16	76.68	22.99	0.15	0.07	0.10	23.32	83,063

Mutira	0.73	1.46	0.30	2.35	60.39	65.23	34.52	0.06	0.09	0.11	34.77	16,962
Kanyekini	0.14	0.26	0.02	6.24	61.69	68.35	31.37	0.05	0.16	0.06	31.65	24,351
Kerugoya	4.32	21.61	0.33	4.35	48.40	78.99	20.49	0.27	0.03	0.22	21.01	21,504
Inoi	0.01	1.95	0.72	8.21	82.95	93.85	5.92	0.21	0.00	0.03	6.15	20,246

Table 15.28: 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
Kirinyaga	0.8	3.1	0.2	6.1	72.9	83.0	16.3	0.1	0.5	0.1	17.0	132,015.0
Mwea	0.7	2.2	0.1	5.0	74.5	82.4	16.2	0.1	1.1	0.1	17.6	44,953.0
Mutithi	0.4	1.3	0.0	6.0	73.1	80.9	16.0	0.3	2.7	0.0	19.1	6,224.0
Kangai	0.2	0.1	0.2	4.6	71.2	76.3	23.0	0.0	0.6	0.0	23.7	4,127.0
Thiba	0.0	2.4	0.0	3.2	90.4	96.0	3.3	0.0	0.4	0.3	4.0	5,956.0
Wamumu	0.0	0.1	0.1	1.8	94.5	96.4	3.1	0.1	0.4	0.0	3.6	3,994.0
Nyangati	1.0	2.1	0.0	6.9	70.3	80.4	19.4	0.0	0.1	0.0	19.6	6,200.0
Murinduko	0.5	0.9	0.0	3.3	68.6	73.3	22.5	0.1	4.1	0.1	26.7	6,352.0
Gathigiriri	0.0	0.0	0.1	8.8	57.5	66.6	32.7	0.8	0.0	0.0	33.4	4,129.0
Tebere	2.3	7.1	0.0	5.4	72.0	86.7	12.9	0.1	0.1	0.3	13.3	7,971.0
Gichugu	0.1	1.1	0.2	6.4	75.1	82.9	16.9	0.0	0.1	0.1	17.1	29,961.0
Kabare	0.1	1.1	0.4	6.2	81.0	88.7	11.2	0.1	0.0	0.0	11.3	8,805.0
Baragwi	0.2	1.6	0.6	5.5	81.9	89.8	10.2	0.0	0.0	0.0	10.2	4,726.0
Njuki-Ini	0.1	1.0	0.0	8.6	81.5	91.3	8.1	0.0	0.1	0.6	8.7	6,534.0
Ngariama	0.1	0.4	0.1	6.2	35.5	42.3	57.6	0.0	0.0	0.0	57.7	4,401.0
Karumandi	0.1	1.2	0.1	4.9	83.9	90.1	9.6	0.1	0.2	0.0	9.9	5,495.0
Ndia	0.6	2.7	0.1	7.6	79.6	90.7	9.0	0.1	0.2	0.0	9.3	29,192.0
Mukure	0.1	1.1	0.1	8.4	81.5	91.2	8.5	0.2	0.1	0.0	8.8	8,321.0
Kiine	0.8	1.1	0.0	9.8	79.7	91.3	8.5	0.0	0.1	0.0	8.7	12,340.0

Kariti	1.0	6.5	0.2	3.8	77.7	89.3	10.3	0.1	0.3	0.0	10.7	8,531.0
Kirinyaga Central	1.7	7.3	0.4	5.8	61.0	76.2	23.6	0.0	0.1	0.0	23.8	27,909.0
Mutira	0.5	1.3	0.1	2.2	55.7	59.8	40.1	0.0	0.0	0.1	40.2	5,909.0
Kanyekini	0.2	0.3	0.0	6.9	60.2	67.6	32.0	0.1	0.3	0.0	32.4	7,792.0
Kerugoya	5.7	25.3	0.3	4.6	46.6	82.6	17.1	0.1	0.2	0.1	17.4	7,228.0
Inoi	0.0	1.6	1.1	8.7	81.4	92.9	7.1	0.0	0.0	0.0	7.1	6,980.0





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