

Exploring Kenya's Inequality

Pulling Apart or Pooling Together?

Lamu County



Published by



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



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

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

ISBN – 978 - 9966 - 029 - 18 - 8

With funding from DANIDA through Drivers of Accountability Programme



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

Written by:

Eston Ngugi

Data and tables generation:

Samuel Kipruto

Paul Samoei

Maps generation:

George Matheka Kamula

Technical Input and Editing:

Katindi Sivi-Njonjo

Jason Lakin

Copy Editing:

Ali Nadim Zaidi

Leonard Wanyama

Design, Print and Publishing:

Ascent Limited

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

Table of contents

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



Foreword

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

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

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

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

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

Ali Hersi

Society for International Development (SID)
Regional Director

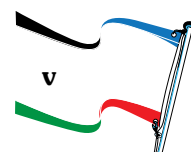


Acknowledgements

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

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

Stefano Prato
Managing Director,
SID



Striking Features on Intra-County Inequality in Kenya

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

Income/expenditure inequalities

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

Access to Education

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



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

Access to Improved Sanitation

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

Access to Improved Sources of Water

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

Access to Improved Sources of Lighting

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

Access to Improved Housing

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

Overall ranking of the variables

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

Abbreviations

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

Introduction

Background

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

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

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

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

Methodology

Gini-coefficient of inequality

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



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

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

An Illustration of the Lorenz Curve



Small Area Estimation (SAE)

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

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

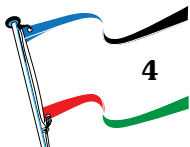
The sample in the 2005/06 KIHBS, which was a representative subset of the population, collected detailed information regarding consumption expenditures. The survey gives poverty estimate of urban and rural poverty at the national level, the provincial level and, albeit with less precision, at the district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

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

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

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

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



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

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

Identification of poor households Principal Component Analysis (PCA)

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

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

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

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

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

Concepts and definitions

Inequality

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

Equality and Equity

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

Poverty

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

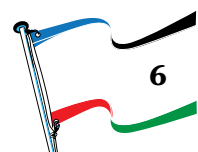
Spatial Dimensions

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

Employment

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

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



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

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

Education

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

Water

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

Sanitation

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

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

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

Housing Conditions (Roof, Wall and Floor)

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

Energy fuel for cooking and lighting

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

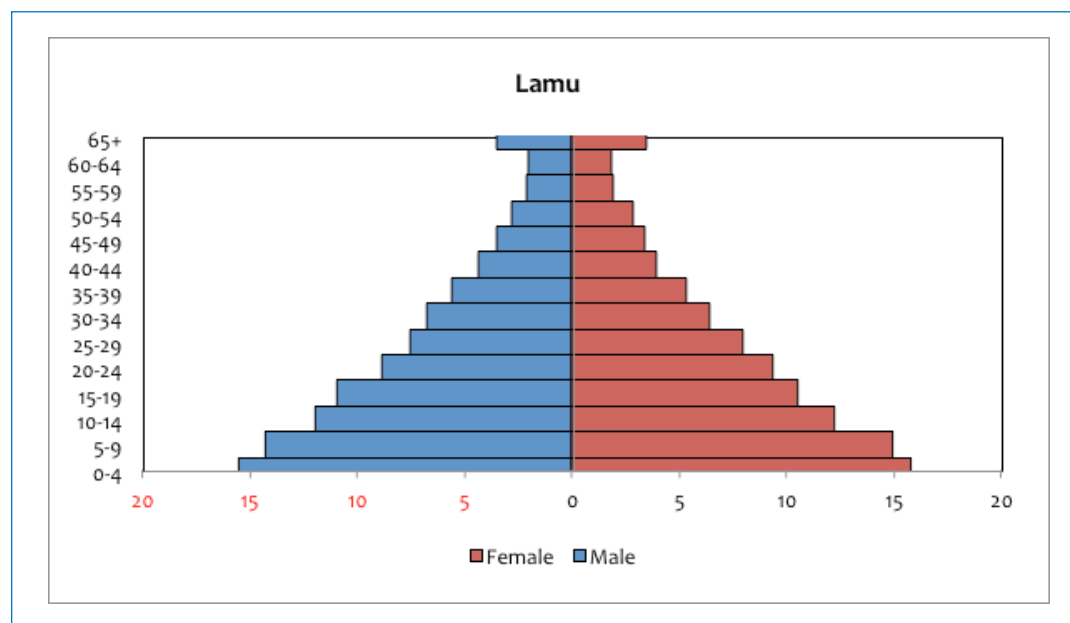


Lamu County



LAMU COUNTY

Figure 21.1: Lamu Population Pyramid



Population

Lamu County has a child rich population, where 0-14 year olds constitute 42% of the total population. However, the county is at the onset of a fertility decline as 39.8% of households have 0-3 members while 36% of households have 4-6 members.

Employment

The 2009 population and housing census covered in brief the labour status as tabulated below. The main variable of interest for inequality discussed in the text is work for pay by level of education. The other variables, notably family business, family agricultural holdings, intern/volunteer, retired/homemaker, fulltime student, incapacitated and no work are tabulated and presented in the annex table 21.3 up to ward level.

Table 21: Overall Employment by Education Levels in Lamu County

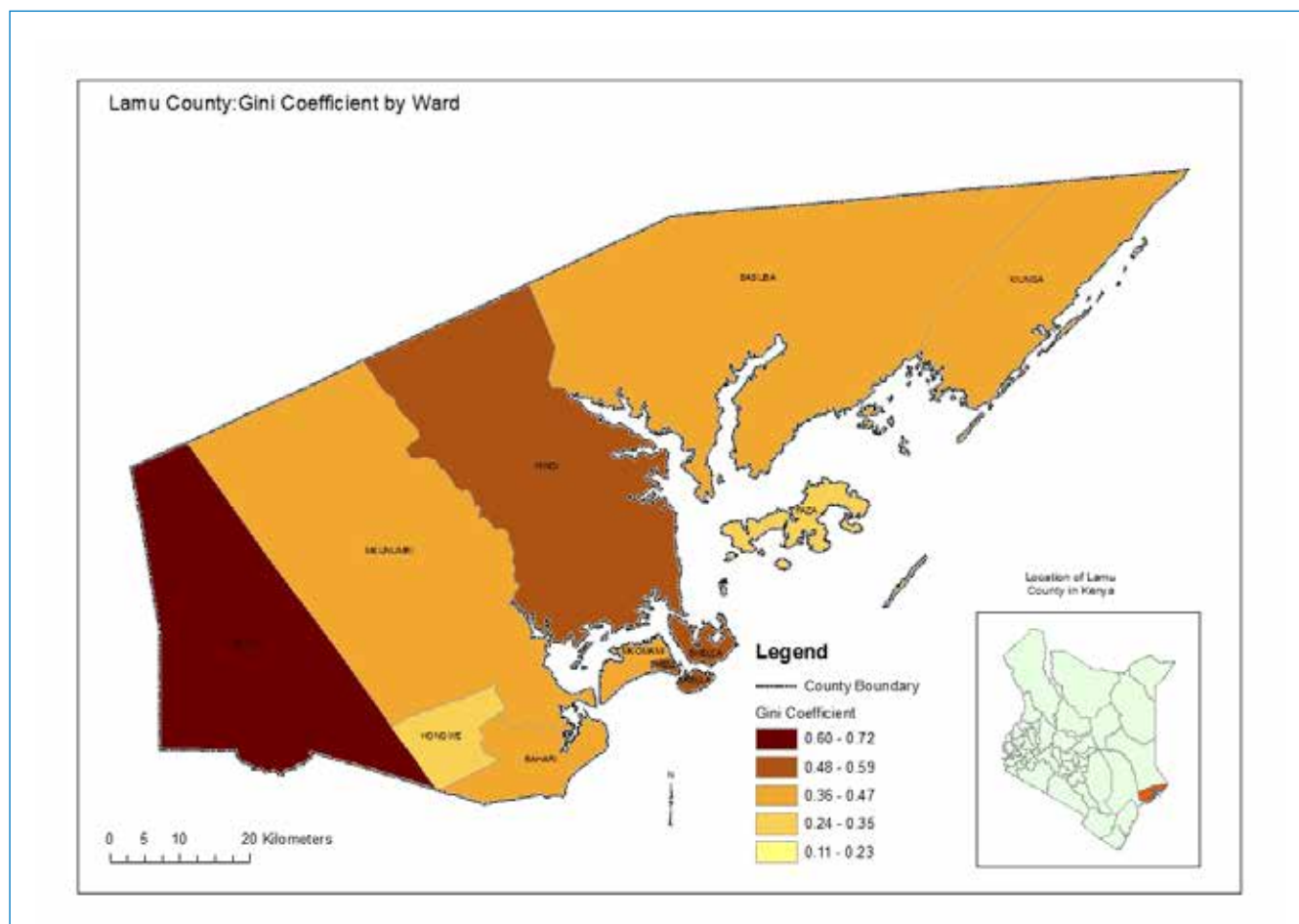
Education Level	Work for pay	Family Business	Family Agricultural Holding	Intern/Volunteer	Retired/ Home-maker	Fulltime Student	Incapacitated	No work	Number of Individuals
Total	20.9	10.8	39.4	0.9	13.1	9.2	0.4	5.3	53,848
None	16.8	12.8	36.9	1.4	24.4	0.7	1.2	5.8	13,621
Primary	18.1	10.3	45.0	0.7	11.3	9.3	0.2	5.1	28,544
Secondary+	32.6	9.6	28.5	1.0	4.4	18.8	0.2	5.0	11,683

In Lamu County, 17% of the residents with no formal education, 18% of those with a primary education and 33% of those with a secondary level of education or above are working for pay. Work for pay is highest in Nairobi at 49% and this is 16 percentage points above the level in Lamu for those with secondary level of education or above.

Gini Coefficient

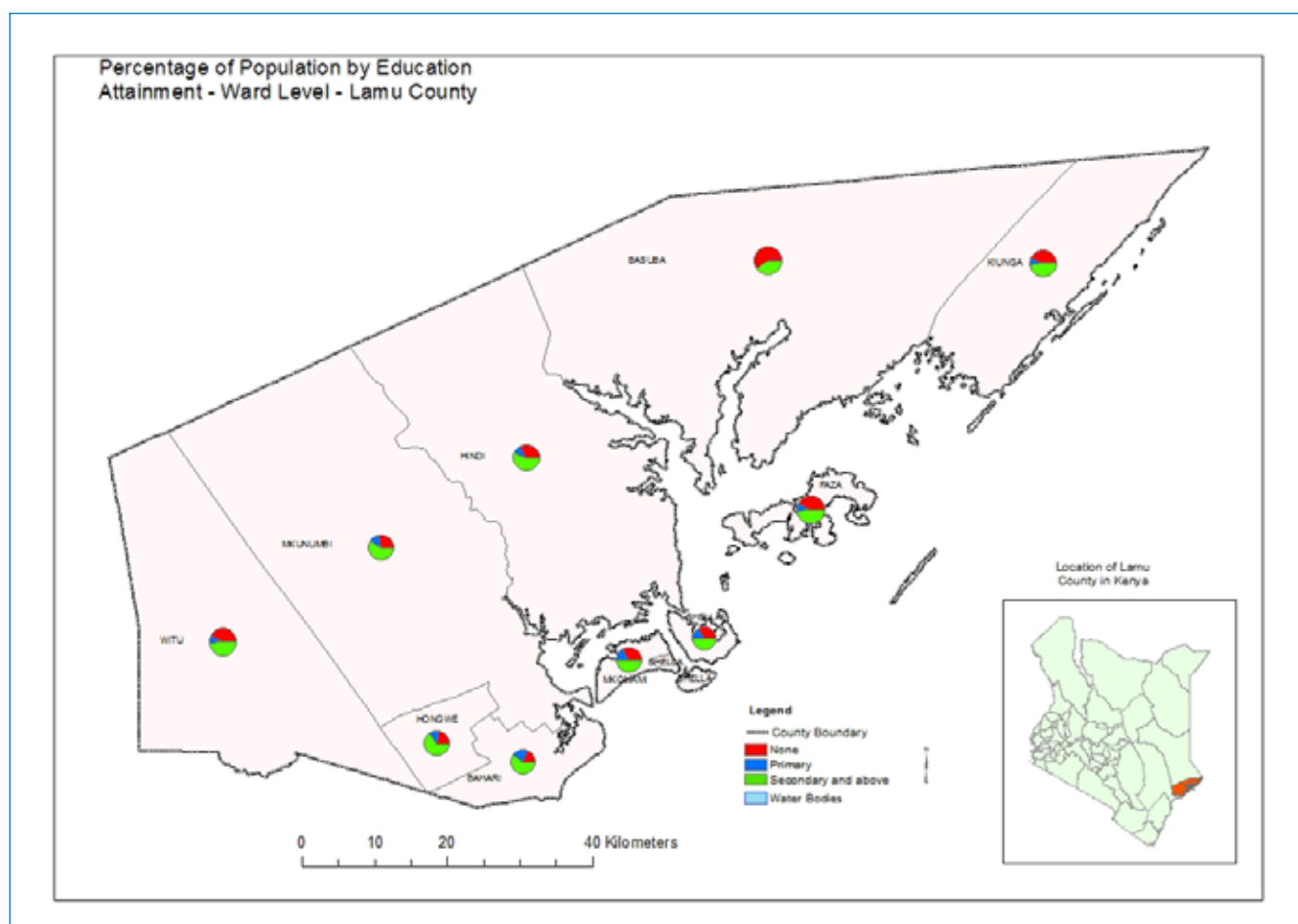
In this report, the Gini index measures the extent to which the distribution of consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of '0' represents perfect equality, while an index of '1' implies perfect inequality. Lamu County's Gini index is 0.471, compared with Turkana County which has the least inequality nationally (0.283).

Figure 21.2: Lamu County-Gini Coefficient by Ward



Education

Figure 21.3: Lamu County-Percentage of Population by Education attainment by Ward



Only 13% of Lamu County residents have secondary level of education or above. Lamu West constituency has the highest share of residents with secondary level of education or above at 15%. This is almost twice Lamu East constituency, which has the lowest share of residents with secondary or above. Lamu West constituency is 2 percentage points above the county average. Bahari ward has the highest share of residents with secondary level of education or above at 20%. This is 19 percentage points above Basuba ward, which has the lowest share of residents with a secondary level of education or above. Bahari ward is 7 percentage points above the county average.

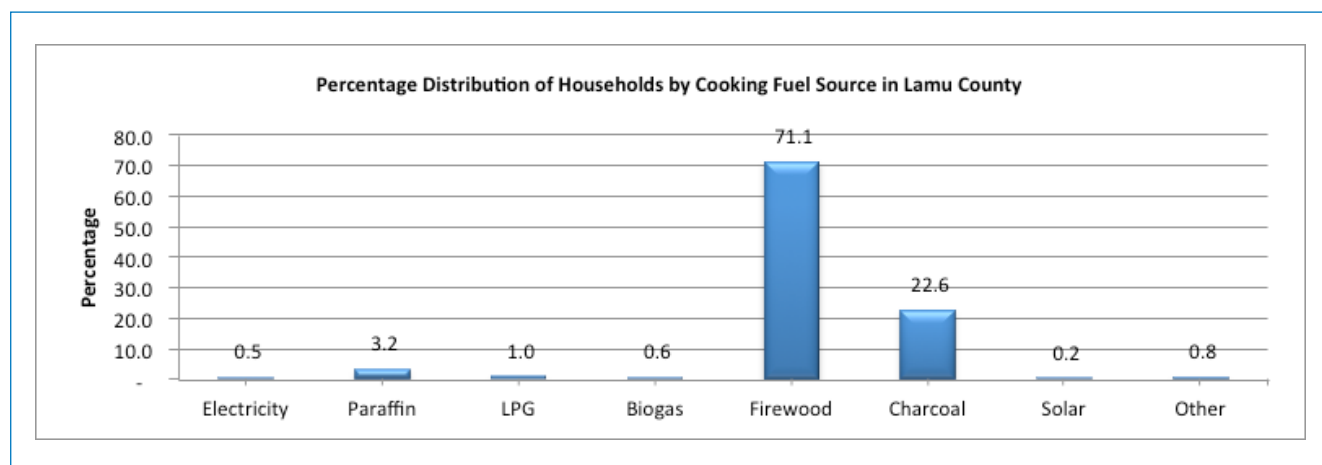
A total of 54% of Lamu County residents have a primary level of education only. Lamu West constituency has the highest share of residents with a primary level of education only at 55%. This is 7 percentage points above Lamu East constituency, which has the lowest share of residents with a primary level of education only. Lamu West constituency is 1 percentage point above the county average. Hongwe ward has the highest share of residents with a primary level of education only at 65%. This is 25 percentage points above Basuba ward, which has the lowest share of residents with primary only. Hongwe ward is 11 percentage points above the county average.

A total of 33% of Lamu County residents have no formal education. Lamu East constituency has the highest share of residents with no formal education at 44%. This is 14 percentage points above Lamu West constituency, which has the lowest share of residents with no formal education. Lamu East constituency is 11 percentage points above the county average. Basuba ward has the highest percentage of residents with no formal education at 59%. This is three times Bahari ward, which has the lowest percentage of residents with no formal education. Basuba ward is 26 percentage points above the county average.

Energy

Cooking Fuel

Figure 21.4: Percentage Distribution of Households by Source of Cooking Fuel in Lamu County



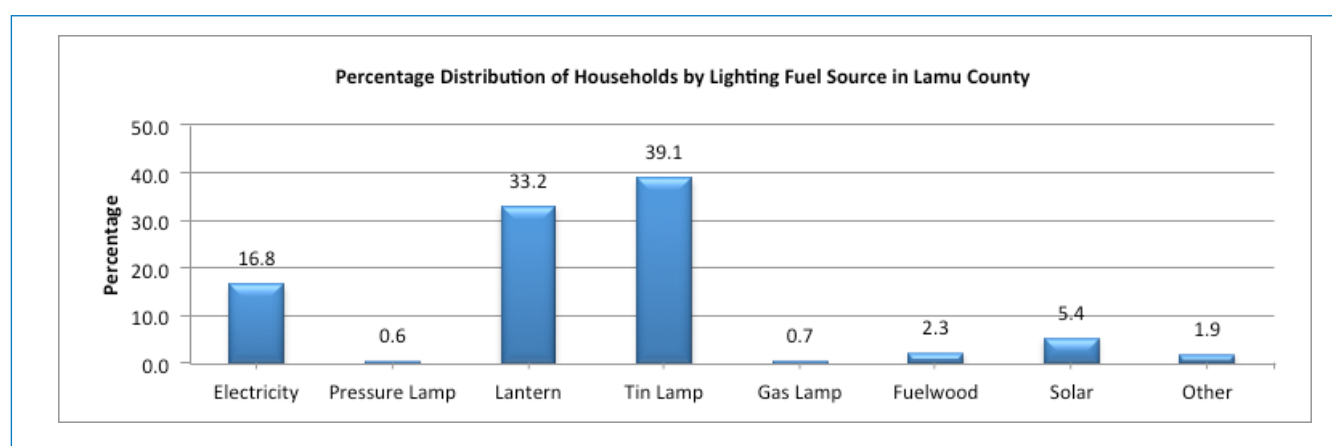
Just 1% of residents in Lamu County use liquefied petroleum gas (LPG), and 3% use paraffin. 71% use firewood and 23% use charcoal. Firewood is the most common cooking fuel by gender with no significant differential with 71% of male headed households and 72% of female headed households using it.

Lamu East constituency has the highest level of firewood use in Lamu County at 90%. This is 23 percentage points above Lamu West constituency, which has the lowest share at 67%. Lamu East constituency is about 19 percentage points above the county average. Basuba ward has the highest level of firewood use in Lamu County at 100%. This is three times Mkomani ward, which has the lowest share at 30%. Basuba ward is 29 percentage points above the county average.

Lamu West constituency has the highest level of charcoal use in Lamu County at 26%. This is four times Lamu East constituency, which has the lowest share at 6%. Lamu West constituency is 3 percentage points above the county average. Mkomani ward has the highest level of charcoal use in Lamu County at 56%. This is 55 percentage points more than Basuba ward, which has the lowest share. Mkomani ward is 33 percentage points above the county average.

Lighting

Figure 21.5: Percentage Distribution of Households by Source of Lighting Fuel in Lamu County



Only 17% of residents in Lamu County use electricity as their main source of lighting. A further 33% use lanterns, and 39% use tin lamps. 2% use fuel wood. Electricity use by gender has no significant variation with male headed households at 17% as compared with female at 16%.

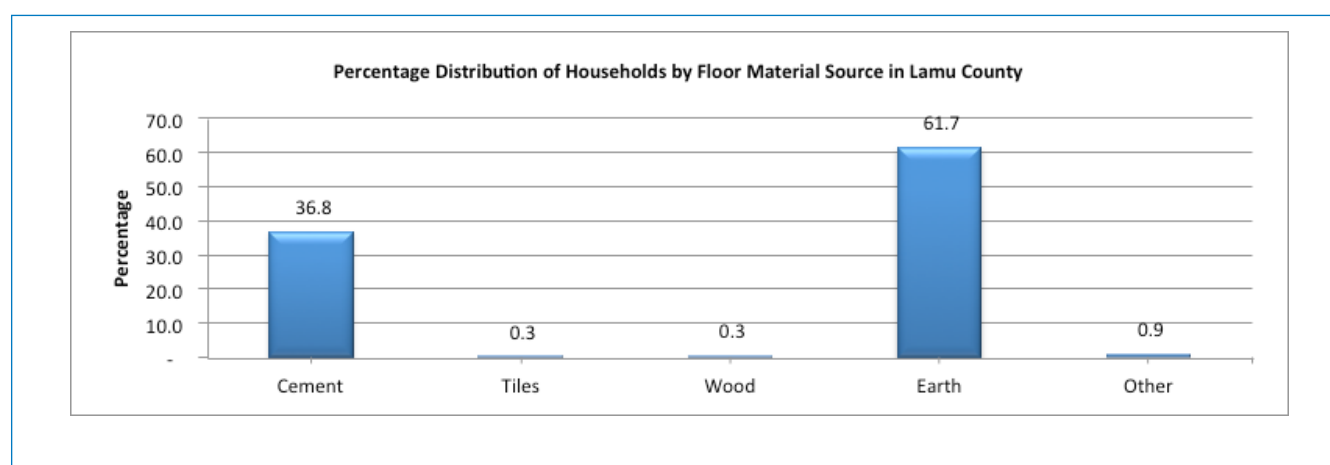
Lamu West constituency has the highest level of electricity use at 19%. This is 11 percentage points above Lamu East Constituency that has the lowest share. Lamu West constituency is 2 percentage points above the county average. Mkomani ward has the highest level of electricity use at 57%. This is 57 percentage points above Basuba ward that has no share of electricity use. Mkomani ward is 40 percentage points above the county average.

Housing

Flooring

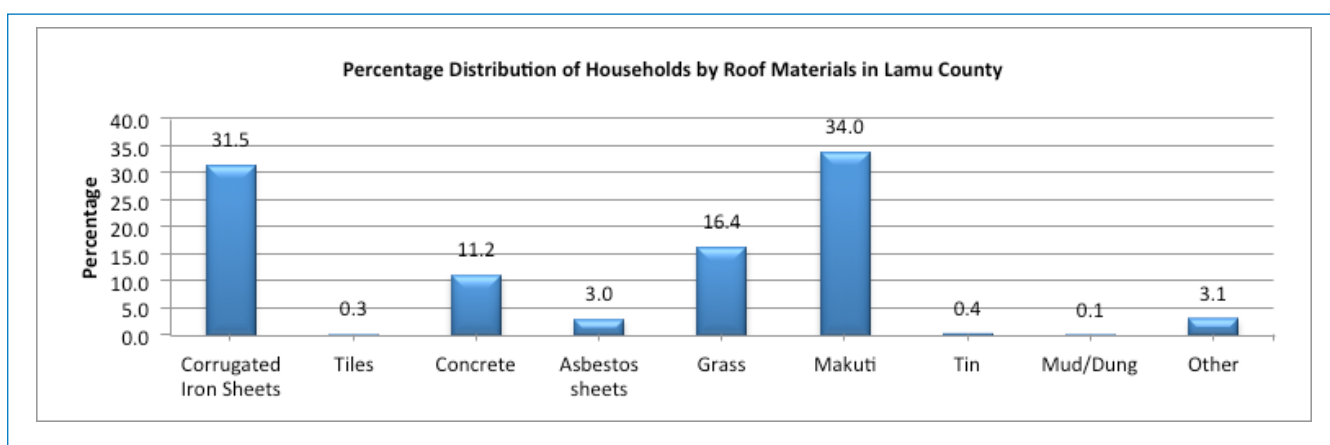
In Lamu County, 37% of residents have homes with cement floors, while 62% have earth floors. Less than 1% has wood or tile floors. Lamu East constituency has the highest share of cement floors at 44%. That is 9 percentage points above Lamu West constituency, which has the lowest share of cement floors. Lamu East constituency is 7 percentage points above the county average. Mkomani ward has the highest share of cement floors at 79%. That is 77 percentage points above Basuba ward, which has the lowest share of cement floors. Mkomani ward is 42 percentage points above the county average.

Figure 21.6: Percentage Distribution of Households by Floor Material in Lamu County



Roofing

Figure 21.7: Percentage Distribution of Households by Roof Material in Lamu County



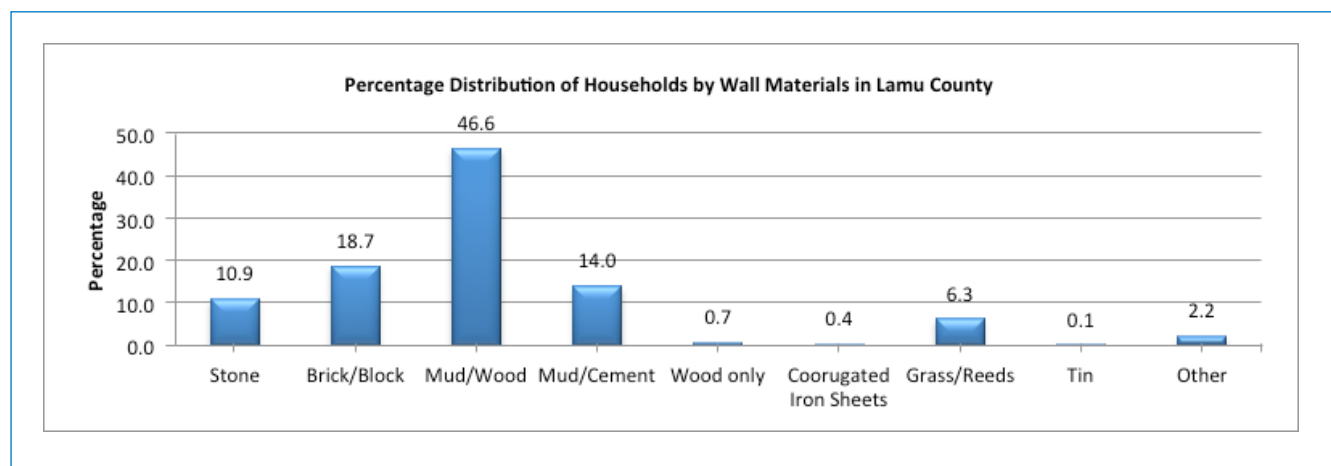
In Lamu County, 11% of residents have homes with concrete roofs, while 32% have corrugated iron sheet roofs. Grass and makuti roofs constitute 50% of homes, and less than 1% has mud/dung roofs.

Lamu West constituency has the highest share of corrugated iron sheet roofs at 37%. That is five times Lamu East constituency, which has the lowest share of corrugated iron sheet roofs. Lamu West constituency is 5 percentage points above the county average. Bahari ward has the highest share of corrugated iron sheet roofs at 74%. That is almost 72 percentage points above Basuba ward has the lowest share of corrugated iron sheet roofs. Bahari ward is 42 percentage points above the county average.

Lamu East constituency has the highest share of grass/makuti roofs at 80%. That is 35 percentage points above Lamu West constituency, which has the lowest share of grass/makuti roofs. Lamu East constituency is 30 percentage points above the county average. Basuba ward has the highest share of grass/makuti roofs at 83%. This is six times Bahari ward with the lowest share. Basuba ward is 33 percentage points above the county average.

Walls

Figure 21.8: Percentage Distribution of Households by Wall Material in Lamu County



In Lamu County, 30% of homes have either brick or stone walls. 61% of homes have mud/wood or mud/cement walls. 1% has wood walls. Less than 1% has corrugated iron walls. 6% have grass/thatched walls. 2% have tin or other walls.

Lamu East constituency has the highest share of brick/stone walls at 33%. That is 4 percentage points above Lamu West constituency, which has the lowest share of brick/stone walls. Lamu East constituency is 3 percentage points above the county average. Mkomani ward has the highest share of brick/stone walls at 77%. That is 76 percentage points above Basuba ward, which has the lowest share of brick/stone walls. Mkomani ward is 47 percentage points above the county average.

Lamu West constituency has the highest share of mud with wood/cement walls at 61%. That is 1% point above Lamu East constituency with the lowest share of mud with wood/cement. Lamu West constituency is similar to the county average. Hongwe ward has the highest share of mud with wood/cement walls at 86%. That is seven times Mkomani ward, which has the lowest share of mud with wood/cement walls. Hongwe ward is 25 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 Lamu County, 53% of residents use improved sources of water, with the rest relying on unimproved sources. There is no significant gender differential in use of improved sources with 53% of male headed households and 54% in female headed households.

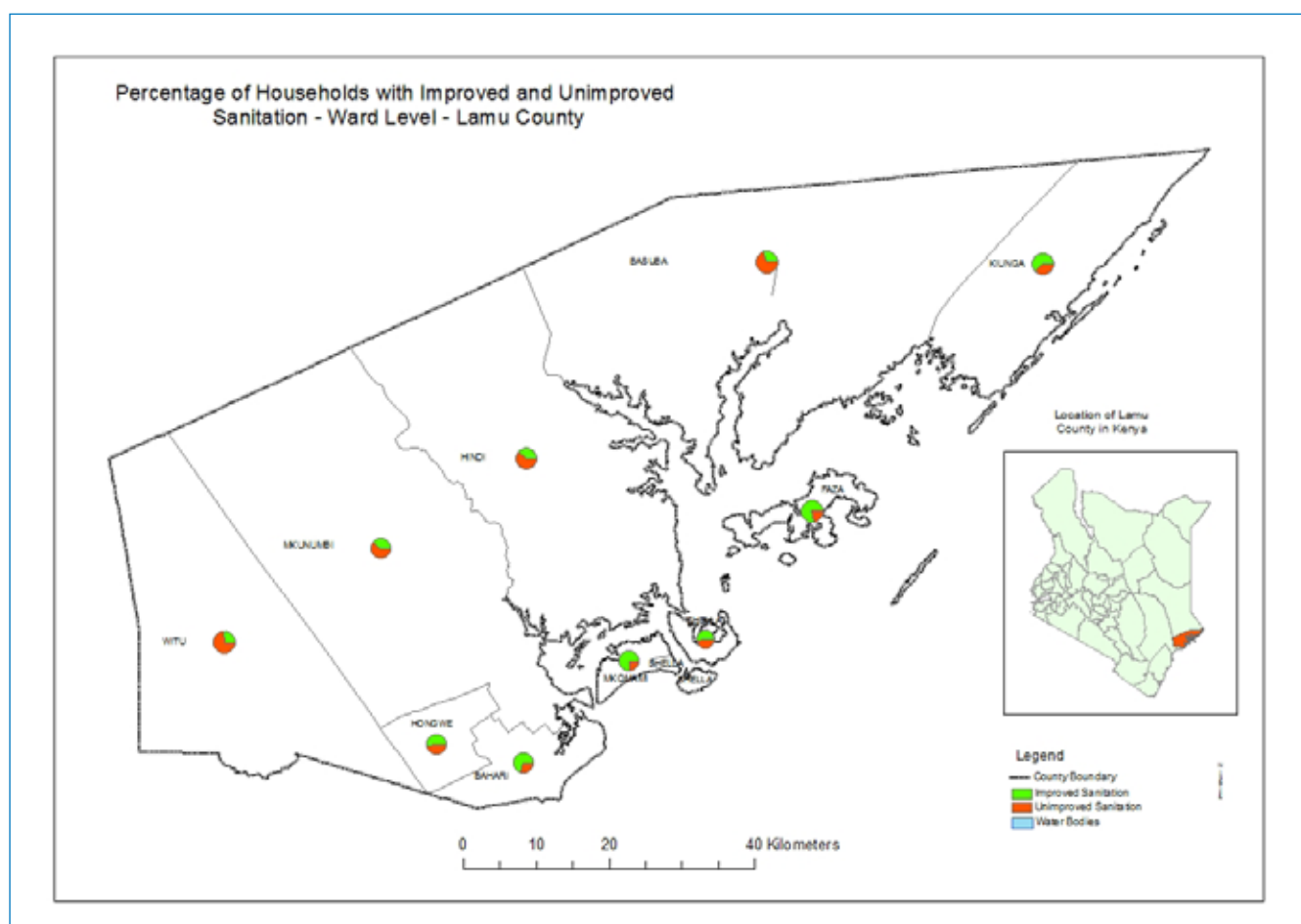
Lamu West constituency has the highest share of residents using improved sources of water at 61%. That is three times Lamu East constituency, which has the lowest share using improved sources of water. Lamu West constituency is 8 percentage points above the county average. Mkomani ward has the highest share of residents using improved sources of water at 81%. That is 76 percentage points above Kiunga ward, which has the lowest share using improved sources of water. Mkomani ward is 28 percentage points above the county average.

Sanitation

A total of 57% of residents in Lamu County use improved sanitation, while the rest use unimproved sanitation. Improved sanitation is higher in female headed households at 61% as compared with male headed households at 55%.

Lamu East constituency has the highest share of residents using improved sanitation at 72%. That is 19 percentage points above Lamu West constituency, which has the lowest share using improved sanitation. Lamu East constituency is 15 percentage points above the county average. Faza ward has the highest share of residents using improved sanitation at 78%. This is almost 51 percentage points above Witu ward, which has the lowest share using improved sanitation. Faza ward is 21 percentage points above the county average.

Figure 21.10: Lamu County –Percentage of Households with Improved and Unimproved Sanitation by Ward



Lamu County Annex Tables

21. LAMU

Table 21.1: 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 dependency Ratio	Child dependency Ratio	aged dependency ratio	0-3	4-6	7+	total
Kenya	37,919,647	18,787,698	19,131,949	7,035,670	16,346,414	8,293,207	13,329,717	20,249,800	1,323,433	0.982	0.873	0.807	0.065	41.5	38.4	20.1	8,493,380
Rural	26,075,195	12,869,034	13,206,161	5,059,515	12,024,773	6,134,730	8,303,007	12,984,788	1,065,634	0.974	1.008	0.926	0.082	33.2	41.3	25.4	5,239,879
Urban	11,844,452	5,918,664	5,925,788	1,976,155	4,321,641	2,158,477	5,026,710	7,265,012	257,799	0.999	0.630	0.595	0.035	54.8	33.7	11.5	3,253,501
Lamu County	99,466	51,393	48,073	18,618	42,158	20,933	34,090	53,848	3,460	1.069	0.847	0.783	0.064	39.8	36.2	24.1	21,058
Lamu East Constituency	18,539	9,333	9,206	3,357	7,729	3,954	6,029	10,043	767	1.014	0.846	0.770	0.076	30.6	38.2	31.2	3522
Faza	13,384	6,642	6,742	2,377	5,520	2,907	4,382	7,304	560	0.985	0.832	0.756	0.077	28.8	38.9	32.4	2479
Kiunga	4,103	2,149	1,954	683	1,647	873	1,381	2,287	169	1.100	0.794	0.720	0.074	37.1	35.0	27.9	846
Basuba	1,052	542	510	297	562	174	266	452	38	1.063	1.327	1.243	0.084	24.9	44.2	31.0	197
Lamu West Constituency	80,927	42,060	38,867	15,261	34,429	16,979	28,061	43,805	2,693	1.082	0.847	0.786	0.061	41.6	35.7	22.6	17536
Shella	2,935	1,725	1,210	514	1,034	468	1,135	1,829	72	1.426	0.605	0.565	0.039	62.2	24.6	13.3	875
Mkomami	18,660	9,353	9,307	3,264	7,157	3,669	7,028	10,911	592	1.005	0.710	0.656	0.054	44.5	32.1	23.4	4011
Hindi	10,039	5,387	4,652	1,956	4,399	2,084	3,379	5,361	279	1.158	0.873	0.821	0.052	41.0	33.3	25.7	2096
Mkunumbi	11,710	6,219	5,491	2,205	5,114	2,474	3,844	6,256	340	1.133	0.872	0.817	0.054	40.9	36.2	23.0	2549
Hongwe	9,084	4,738	4,346	1,757	4,094	1,972	2,926	4,644	346	1.090	0.956	0.882	0.075	40.1	40.8	19.1	2086
Witu	12,983	6,622	6,361	2,935	6,360	2,960	4,093	6,175	448	1.041	1.103	1.030	0.073	29.7	37.7	32.6	2296
Bahari	15,516	8,016	7,500	2,630	6,271	3,352	5,656	8,629	616	1.069	0.798	0.727	0.071	42.7	39.4	17.9	3623

Table 21.2: Employment by County, Constituency and Wards

County/Constituency/ Wards	Work for pay	Family Business	Family Agricultural Holding	Intern/Vol- unteer	Retired/Home- maker	Fulltime Student	Incapaci- tated	No work	Number of Individuals
Kenya	23.7	13.1	32.0	1.1	9.2	12.8	0.5	7.7	20,249,800
Rural	15.6	11.2	43.5	1.0	8.8	13.0	0.5	6.3	12,984,788
Urban	38.1	16.4	11.4	1.3	9.9	12.2	0.3	10.2	7,265,012
Lamu County	20.9	10.8	39.4	0.9	13.1	9.2	0.4	5.3	53,848
Lamu East Constituency	12.4	18.1	17.6	1.0	33.2	11.8	0.8	5.1	10,043
Faza	10.5	19.5	13.2	0.9	36.2	12.7	0.8	6.2	7,304
Kiunga	19.9	17.2	19.4	1.4	27.8	11.0	0.7	2.6	2,287
Basuba	3.8	1.3	80.8	-	11.7	1.3	0.2	0.9	452
Lamu West Constituency	22.9	9.1	44.4	0.9	8.5	8.6	0.4	5.3	43,805
Shella	40.7	13.2	27.9	0.6	6.3	6.5	0.3	4.5	1,829
Mkomami	40.0	11.9	6.5	1.2	21.6	10.8	0.5	7.6	10,911
Hindi	27.4	7.4	44.6	0.7	7.8	7.7	0.5	4.0	5,361
Mkunumbi	15.6	7.8	60.9	0.6	2.7	7.1	0.2	5.1	6,256
Hongwe	8.0	4.9	74.5	1.0	0.5	7.9	0.5	2.8	4,644
Witu	9.7	9.0	60.2	1.1	8.1	4.5	0.3	7.1	6,175
Bahari	17.3	9.0	56.0	0.8	1.6	11.4	0.3	3.6	8,629

Table 21.3: Employment and Education Levels by County, Constituency and Wards

County /constituency/ Wards	Education Totallevel	Work for pay	Family Busi- ness	Family Agricul- tural Holding	Intern/Vol- unteer	Retired/ Home- maker	Fulltime Student	Incapac- itated	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
Lamu	Total	20.9	10.8	39.4	0.9	13.1	9.2	0.4	5.3	53,848
Lamu	None	16.8	12.8	36.9	1.4	24.4	0.7	1.2	5.8	13,621
Lamu	Primary	18.1	10.3	45.0	0.7	11.3	9.3	0.2	5.1	28,544
Lamu	Secondary+	32.6	9.6	28.5	1.0	4.4	18.8	0.2	5.0	11,683
Lamu East Constituency	Total	12.4	18.1	17.6	1.0	33.2	11.8	0.8	5.1	10,043
Lamu East Constituency	None	6.4	19.7	23.8	1.0	42.7	1.1	1.6	3.6	3,935
Lamu East Constituency	Primary	11.7	18.9	15.9	1.0	31.6	14.6	0.2	6.1	4,756
Lamu East Constituency	Secondary+	32.0	11.0	5.7	0.8	11.2	33.1	0.2	6.0	1,352
Faza Wards	Total	10.5	19.5	13.2	0.9	36.2	12.7	0.8	6.2	7,304
Faza Wards	None	5.7	22.5	15.2	1.0	47.9	1.4	1.7	4.5	2,773
Faza Wards	Primary	10.2	19.0	13.8	0.9	33.8	14.7	0.3	7.3	3,528
Faza Wards	Secondary+	25.0	12.8	5.4	0.7	12.3	36.8	0.3	6.8	1,003
Kiunga Wards	Total	19.9	17.2	19.4	1.4	27.8	11.0	0.7	2.6	2,287
Kiunga Wards	None	10.1	16.7	33.7	1.5	34.2	0.6	1.7	1.6	897
Kiunga Wards	Primary	17.5	21.3	11.7	1.4	28.8	16.1	0.2	3.1	1,047
Kiunga Wards	Secondary+	52.5	6.1	5.5	1.2	8.2	22.7	-	3.8	343
Basuba Wards	Total	3.8	1.3	80.8	-	11.7	1.3	0.2	0.9	452
Basuba Wards	None	0.8	0.4	80.8	-	17.0	-	0.4	0.8	265
Basuba Wards	Primary	7.7	2.8	81.2	-	4.4	2.8	-	1.1	181
Basuba Wards	Secondary+	16.7	-	66.7	-	-	16.7	-	-	6
Lamu West Constituency	Total	22.9	9.1	44.4	0.9	8.5	8.6	0.4	5.3	43,805
Lamu West Constituency	None	21.1	10.0	42.2	1.5	17.0	0.6	1.0	6.8	9,686
Lamu West Constituency	Primary	19.3	8.6	50.9	0.6	7.2	8.3	0.2	4.9	23,788
Lamu West Constituency	Secondary+	32.7	9.4	31.5	1.0	3.5	17.0	0.1	4.9	10,331
Shella Wards	Total	40.7	13.2	27.9	0.6	6.3	6.5	0.3	4.5	1,829
Shella Wards	None	29.8	6.0	46.4	0.4	10.4	0.2	1.0	6.0	520
Shella Wards	Primary	42.4	16.2	24.2	0.6	6.0	6.7	-	4.0	898
Shella Wards	Secondary+	50.6	16.1	12.9	1.0	1.7	14.1	-	3.7	411
Mkomami Wards	Total	40.0	11.9	6.5	1.2	21.6	10.8	0.5	7.6	10,911
Mkomami Wards	None	34.7	10.9	9.4	1.9	32.4	0.7	1.3	8.6	2,981

Mkomami Wards	Primary	39.3	13.1	6.4	0.9	22.3	10.1	0.1	7.8	5,103
Mkomami Wards	Secondary+	46.7	10.8	3.7	0.9	8.8	22.7	0.1	6.3	2,827
Hindi Wards	Total	27.4	7.4	44.6	0.7	7.8	7.7	0.5	4.0	5,361
Hindi Wards	None	22.8	8.1	47.0	1.2	12.6	0.7	1.2	6.5	1,474
Hindi Wards	Primary	22.5	7.7	49.1	0.5	7.2	9.8	0.1	3.0	2,768
Hindi Wards	Secondary+	45.6	5.7	30.3	0.4	3.0	11.6	0.3	3.1	1,119
Mkunumbi Wards	Total	15.6	7.8	60.9	0.6	2.7	7.1	0.2	5.1	6,256
Mkunumbi Wards	None	16.6	17.9	51.4	0.9	5.0	0.2	0.8	7.3	1,183
Mkunumbi Wards	Primary	14.5	5.6	65.3	0.4	2.5	7.1	0.1	4.5	3,824
Mkunumbi Wards	Secondary+	18.0	5.0	56.5	0.6	1.3	13.6	0.1	4.8	1,249
Hongwe Wards	Total	8.0	4.9	74.5	1.0	0.5	7.9	0.5	2.8	4,644
Hongwe Wards	None	9.2	4.5	73.8	3.4	0.4	0.2	1.7	6.7	466
Hongwe Wards	Primary	5.0	4.4	80.5	0.5	0.5	7.0	0.4	1.9	3,133
Hongwe Wards	Secondary+	16.8	6.4	57.0	1.4	0.4	13.9	0.2	3.9	1,045
Witu Wards	Total	9.7	9.0	60.2	1.1	8.1	4.5	0.3	7.1	6,175
Witu Wards	None	8.2	8.5	60.7	1.3	15.1	0.7	0.4	5.1	2,346
Witu Wards	Primary	6.5	8.4	65.0	0.9	4.6	5.9	0.2	8.5	2,945
Witu Wards	Secondary+	24.1	12.0	43.1	1.2	1.4	9.6	0.3	8.3	884
Bahari Wards	Total	17.3	9.0	56.0	0.8	1.6	11.4	0.3	3.6	8,629
Bahari Wards	None	11.7	8.2	68.7	1.8	2.8	0.4	1.3	5.0	716
Bahari Wards	Primary	13.5	8.2	63.8	0.3	1.5	9.0	0.2	3.5	5,117
Bahari Wards	Secondary+	25.9	10.7	38.4	1.3	1.4	18.7	0.1	3.5	2,796

Table 21.4: 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 Agri-cultural 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	Secondary+	23.1	10.6	34.7	1.0	5.5	19.6	0.2	5.3	2,576,966
Urban Urban	Total	40.2	16.6	10.9	1.3	10.1	10.9	0.3	9.7	5,495,248
Urban Urban	None	25.8	15.5	16.1	3.0	18.2	1.4	1.3	18.7	359,797
Urban Urban	Primary	35.6	16.9	15.4	1.0	12.8	8.1	0.3	9.9	2,077,376
Urban Urban	Secondary+	45.1	16.6	7.3	1.2	7.4	13.8	0.1	8.5	3,058,075
Lamu	Total	23.0	10.7	40.1	0.9	12.0	8.0	0.4	5.0	41,393
Lamu	None	18.6	12.6	38.0	1.4	21.9	0.6	1.0	5.8	10,255
Lamu	Primary	19.5	10.1	46.1	0.6	10.7	8.1	0.2	4.8	22,062
Lamu	Secondary+	36.4	9.8	28.2	0.9	3.9	16.2	0.1	4.5	9,076
Lamu East Constituency	Total	15.1	18.1	19.8	1.0	30.1	10.2	0.7	5.1	7,378
Lamu East Constituency	None	7.1	19.8	27.7	1.2	37.8	1.0	1.5	3.9	2,813
Lamu East Constituency	Primary	13.2	19.0	17.8	0.9	30.2	12.8	0.1	5.9	3,499
Lamu East Constituency	Secondary+	42.5	10.6	5.5	0.6	9.2	25.9	0.3	5.4	1,066
Faza Ward	Total	11.8	20.2	15.0	0.9	33.6	11.3	0.7	6.4	5,113
Faza Ward	None	6.4	23.4	18.3	1.1	42.7	1.2	1.6	5.2	1,877
Faza Ward	Primary	11.1	19.6	15.0	0.9	33.0	13.1	0.2	7.2	2,541
Faza Ward	Secondary+	28.6	14.1	6.0	0.4	11.5	31.9	0.4	6.9	695
Kiunga Ward	Total	26.7	15.8	20.1	1.4	24.0	9.1	0.7	2.3	1,863
Kiunga Ward	None	10.8	16.5	36.0	1.8	30.9	0.7	1.7	1.6	705
Kiunga Ward	Primary	21.2	20.6	13.5	1.3	26.6	14.0	0.1	2.8	793
Kiunga Ward	Secondary+	69.3	4.1	3.6	0.8	4.9	14.5	-	2.7	365
Basuba Ward	Total	3.7	1.5	79.9	-	12.9	1.2	0.2	0.5	402
Basuba Ward	None	0.9	0.4	78.8	-	19.0	-	0.4	0.4	231
Basuba Ward	Primary	7.3	3.0	81.8	-	4.8	2.4	-	0.6	165
Basuba Ward	Secondary+	16.7	-	66.7	-	-	16.7	-	-	6
Lamu West Constituency	Total	24.7	9.0	44.6	0.9	8.0	7.6	0.3	5.0	34,015
Lamu West Constituency	None	22.9	9.9	41.9	1.5	15.9	0.5	0.7	6.5	7,442
Lamu West Constituency	Primary	20.6	8.4	51.4	0.6	7.0	7.2	0.2	4.6	18,563
Lamu West Constituency	Secondary+	35.5	9.7	31.2	1.0	3.2	14.9	0.1	4.4	8,010

Shella Ward	Total	42.7	13.6	26.9	0.6	6.3	5.3	0.3	4.4	1,579
Shella Ward	None	32.3	5.9	44.2	0.5	9.6	0.2	0.9	6.4	439
Shella Ward	Primary	43.9	16.4	23.8	0.5	6.3	5.3	-	3.8	797
Shella Ward	Secondary+	53.1	16.9	11.7	0.9	2.0	12.0	-	3.5	343
Mkomami Ward	Total	44.0	11.4	6.5	1.1	20.0	9.5	0.3	7.2	8,374
Mkomami Ward	None	38.5	9.8	9.6	1.8	30.0	0.7	0.9	8.7	2,212
Mkomami Ward	Primary	43.0	12.5	6.6	0.8	21.0	8.8	0.1	7.2	3,958
Mkomami Ward	Secondary+	51.4	11.2	3.2	0.8	8.1	19.6	0.0	5.7	2,204
Hindi Ward	Total	29.0	7.1	44.0	0.7	8.2	7.1	0.4	3.5	4,238
Hindi Ward	None	23.8	7.9	46.5	1.4	12.9	0.7	0.9	6.0	1,164
Hindi Ward	Primary	23.4	7.2	48.7	0.5	7.9	9.4	0.1	2.7	2,187
Hindi Ward	Secondary+	49.6	5.9	29.1	0.3	2.6	10.1	0.2	2.1	887
Mkunumbi Ward	Total	16.5	8.6	61.1	0.6	2.4	6.1	0.2	4.5	4,939
Mkunumbi Ward	None	18.6	20.9	48.0	1.1	4.8	0.2	0.4	6.1	940
Mkunumbi Ward	Primary	15.0	5.9	66.3	0.4	2.2	6.0	0.1	4.0	3,010
Mkunumbi Ward	Secondary+	19.1	5.3	57.8	0.7	0.6	12.0	0.1	4.3	989
Hongwe Ward	Total	7.9	4.9	75.2	1.0	0.3	7.6	0.4	2.7	3,619
Hongwe Ward	None	10.1	5.1	71.0	4.2	-	0.3	1.4	7.9	355
Hongwe Ward	Primary	5.1	4.3	81.4	0.5	0.3	6.6	0.4	1.5	2,470
Hongwe Ward	Secondary+	15.7	6.5	57.7	1.1	0.5	14.0	0.3	4.2	794
Witu Ward	Total	10.8	8.7	61.1	1.0	7.8	3.4	0.3	6.8	4,789
Witu Ward	None	8.7	8.5	61.4	1.0	14.7	0.4	0.4	4.8	1,815
Witu Ward	Primary	7.0	8.3	66.5	0.9	4.4	4.4	0.2	8.3	2,278
Witu Ward	Secondary+	29.0	10.8	42.5	1.4	1.0	7.8	0.3	7.2	696
Bahari Ward	Total	18.1	9.0	56.4	0.8	1.8	10.1	0.2	3.5	6,477
Bahari Ward	None	13.0	7.2	68.5	2.1	3.7	0.4	0.8	4.4	517
Bahari Ward	Primary	13.7	8.0	64.7	0.3	1.7	7.8	0.3	3.4	3,863
Bahari Ward	Secondary+	27.5	11.3	38.2	1.4	1.5	16.6	0.0	3.4	2,097

Table 21.5: Employment and Education Levels in Female Headed Households by County, Constituency and Wards

County, Constituency and Wards	Education Level reached	Work for Pay	Family Business	Family Agricultural holding	Internal/Volunteer	Retired/Home-maker	Fulltime Student	Incapacitated	No work	Population(15-64)
Kenya National	Total	18.87	11.91	32.74	1.20	9.85	16.66	0.69	8.08	5,518,645
Kenya National	None	10.34	13.04	44.55	1.90	16.45	0.80	1.76	11.17	974,824
Kenya National	Primary	16.74	11.75	37.10	0.89	9.82	16.23	0.59	6.89	2,589,877
Kenya National	Secondary+	25.95	11.57	21.07	1.27	6.59	25.16	0.28	8.11	1,953,944
Rural Rural	Total	31.53	15.66	12.80	1.54	9.33	16.99	0.54	11.60	1,781,078
Rural Rural	None	8.36	12.26	50.31	1.60	15.77	0.59	1.67	9.44	794,993
Rural Rural	Primary	13.02	9.90	43.79	0.81	9.49	17.03	0.60	5.36	1,924,111
Rural Rural	Secondary+	15.97	8.87	33.03	1.06	6.80	27.95	0.34	5.98	1,018,463
Urban Urban	Total	12.83	10.12	42.24	1.04	10.09	16.51	0.76	6.40	3,737,567
Urban Urban	None	19.09	16.50	19.04	3.22	19.45	1.70	2.18	18.83	179,831
Urban Urban	Primary	27.49	17.07	17.79	1.13	10.76	13.93	0.55	11.29	665,766
Urban Urban	Secondary+	36.81	14.50	8.06	1.51	6.36	22.11	0.22	10.43	935,481
Lamu	Total	15.16	11.00	36.39	1.03	16.69	12.97	0.68	6.07	12,599
Lamu	None	11.66	13.17	33.31	1.22	31.92	1.04	1.87	5.81	3,371
Lamu	Primary	13.55	10.96	41.43	0.75	13.38	13.47	0.28	6.19	6,496
Lamu	Secondary+	23.32	8.42	28.22	1.46	5.78	26.50	0.18	6.11	2,732
Lamu East Constituency	Total	8.44	17.50	11.11	1.01	40.30	15.69	0.94	5.01	2,772
Lamu East Constituency	None	4.90	19.32	14.16	0.62	55.03	1.51	1.78	2.67	1,123
Lamu East Constituency	Primary	8.14	18.34	10.36	1.19	35.26	19.45	0.47	6.80	1,265
Lamu East Constituency	Secondary+	19.79	9.38	4.69	1.56	13.80	44.79	-	5.99	384
Faza Ward	Total	7.63	17.59	8.91	0.96	42.35	16.03	1.01	5.53	2,189
Faza Ward	None	4.25	20.45	8.83	0.78	58.99	1.90	1.90	2.91	895
Faza Ward	Primary	7.81	17.44	10.55	1.01	36.11	18.97	0.51	7.61	986
Faza Ward	Secondary+	16.88	9.74	3.90	1.30	13.96	47.73	-	6.49	308
Kiunga Ward	Total	12.20	18.76	12.95	1.31	35.46	15.57	0.75	3.00	533
Kiunga Ward	None	8.76	17.53	24.74	-	45.88	-	1.55	1.55	194
Kiunga Ward	Primary	9.13	22.81	5.70	1.90	34.22	22.05	0.38	3.80	263
Kiunga Ward	Secondary+	31.58	7.89	7.89	2.63	13.16	32.89	-	3.95	76
Basuba Ward	Total									

Basuba Ward	None	0.0		94.1		2.9	0.0		2.9	34
Basuba Ward	Primary	12.5		75.0		0.0	6.3		6.3	16
Basuba Ward	Secondary+	4.0		88.0		2.0	2.0		4.0	50
Lamu West Constituency	Total	17.1	9.2	43.5	1.0	10.0	12.2	.6	6.4	9827
Lamu West Constituency	None	15.0	10.1	42.9	1.5	20.4	.8	1.9	7.4	2248
Lamu West Constituency	Primary	14.9	9.2	48.9	.6	8.1	12.0	.2	6.0	5231
Lamu West Constituency	Secondary+	23.9	8.3	32.1	1.4	4.5	23.5	.2	6.1	2348
Shella Ward	Total	28.0	10.8	34.8	.8	6.4	14.0	.4	4.8	250
Shella Ward	None	16.0	6.2	58.0	0.0	14.8	0.0	1.2	3.7	81
Shella Ward	Primary	30.7	13.9	26.7	1.0	4.0	17.8	0.0	5.9	101
Shella Ward	Secondary+	38.2	11.8	19.1	1.5	0.0	25.0	0.0	4.4	68
Mkomami Ward	Total	27.5	13.4	6.5	1.4	26.5	15.0	.9	8.8	2565
Mkomami Ward	None	24.2	14.1	8.8	2.3	39.5	.8	2.5	7.9	774
Mkomami Ward	Primary	27.4	15.0	5.7	1.0	26.3	14.6	.3	9.7	1159
Mkomami Ward	Secondary+	31.6	9.5	5.1	1.1	11.1	33.1	.3	8.2	632
Hindi Ward	Total	21.5	8.5	46.8	.4	6.6	9.6	.9	5.6	1123
Hindi Ward	None	19.0	8.7	49.0	.3	11.6	.6	2.6	8.1	310
Hindi Ward	Primary	19.3	9.8	50.4	.5	4.6	11.4	.2	3.8	581
Hindi Ward	Secondary+	30.2	5.2	34.9	.4	4.7	17.2	.4	6.9	232
Mkunumbi Ward	Total	12.0	4.7	60.0	.5	4.1	10.8	.5	7.4	1315
Mkunumbi Ward	None	8.6	6.6	64.6	.4	5.8	0.0	2.1	11.9	243
Mkunumbi Ward	Primary	12.4	4.3	61.4	.6	3.7	11.2	.1	6.3	813
Mkunumbi Ward	Secondary+	13.9	4.2	51.4	.4	3.9	19.7	0.0	6.6	259
Hongwe Ward	Total	8.4	4.9	72.3	.9	1.0	8.9	.6	3.1	1025
Hongwe Ward	None	6.3	2.7	82.9	.9	1.8	0.0	2.7	2.7	111
Hongwe Ward	Primary	4.4	4.8	77.1	.3	1.2	8.6	.5	3.2	663
Hongwe Ward	Secondary+	19.9	6.0	55.0	2.4	0.0	13.5	0.0	3.2	251
Witu Ward	Total	7.8	9.7	55.8	1.3	8.9	8.0	.4	8.1	1419
Witu Ward	None	6.4	8.7	58.4	2.1	16.4	1.7	.4	6.0	531
Witu Ward	Primary	4.9	9.0	59.4	.9	5.2	11.1	.4	9.0	668
Witu Ward	Secondary+	19.5	14.1	38.6	.5	2.3	14.1	.5	10.5	220
Bahari Ward	Total	14.4	8.7	55.2	1.1	1.1	15.3	.3	3.8	2130
Bahari Ward	None	8.6	10.6	69.7	1.0	.5	.5	2.5	6.6	198
Bahari Ward	Primary	12.3	8.7	61.6	.4	1.1	12.4	.1	3.5	1246
Bahari Ward	Secondary+	19.8	8.3	39.5	2.5	1.3	24.8	.1	3.6	686

Table 21.6: 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
Lamu County	0.003	4,190	0.003	0.471
Lamu East Constituency	0.000	2,870	0.0004	0.332
Faza	0.000	2,760	0.0003	0.283
Kiunga	0.000	3,470	0.0001	0.398
Basuba	0.000	1,890	0.0000	0.455
Lamu West Constituency	0.002	4,490	0.0028	0.479

Shella	0.000	5,570	0.0001	0.543
Mkomami	0.000	7,490	0.0011	0.351
Hindi	0.000	4,310	0.0003	0.528
Mkunumbi	0.000	3,360	0.0003	0.405
Hongwe	0.000	3,500	0.0003	0.336
Witu	0.000	1,950	0.0002	0.634
Bahari	0.000	4,380	0.0005	0.359

Table 21.7: 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
Lamu County	32.8	53.9	13.3	89,394
Lamu East Constituency	43.5	48.4	8.1	16,867
Faza	42.2	49.5	8.4	12,175
Kiunga	44.0	46.9	9.2	3,763
Basuba	59.3	40.0	0.7	929
Lamu West Constituency	30.3	55.2	14.6	72,527
Shella	35.1	49.3	15.6	2,653
Mkomami	34.1	48.8	17.1	16,830
Hindi	32.5	54.8	12.7	8,980
Mkunumbi	28.8	59.1	12.1	10,581
Hongwe	21.8	65.0	13.3	8,077
Witu	44.1	47.9	8.0	11,331
Bahari	18.2	61.4	20.4	14,075

Table 21.8: Education for Male and Female Headed Households by County, Constituency and Ward

County/Constituency/Wards	None	Primary	Secondary+	Total Pop	None	Primary	Secondary+	Total Pop
Kenya	23.5	51.8	24.7	16,819,031	26.8	52.2	21.0	17,205,365
Rural	27.7	54.9	17.4	11,472,394	31.2	54.4	14.4	11,841,868
Urban	14.4	45.2	40.4	5,346,637	17.2	47.2	35.6	5,363,497
Lamu County	29.3	54.5	16.2	46,244	36.6	53.2	10.3	43,150
Lamu East Constituency	39.3	50.3	10.5	8,474	47.8	46.5	5.7	8,393
Faza	38.7	51.1	10.2	6,021	45.6	47.9	6.5	6,154
Kiunga	38.0	48.7	13.3	1,979	50.6	44.8	4.5	1,784
Basuba	52.3	46.4	1.3	474	66.6	33.4	0.0	455
Lamu West Constituency	27.0	55.5	17.5	37,770	33.9	54.8	11.3	34,757
Shella	29.6	51.8	18.6	1,599	43.3	45.5	11.2	1,054

Mkomami	28.7	50.0	21.3	8,412	39.5	47.6	12.9	8,418
Hindi	29.5	54.3	16.1	4,822	36.0	55.3	8.7	4,158
Mkunumbi	27.5	58.2	14.3	5,627	30.4	60.1	9.5	4,954
Hongwe	20.6	64.0	15.4	4,253	23.1	66.0	10.9	3,824
Witu	39.3	50.0	10.7	5,788	49.1	45.8	5.1	5,543
Bahari	16.3	60.8	22.9	7,269	20.3	62.0	17.7	6,806

Table 21.9: 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
Lamu County	0.5	3.2	1.0	0.6	71.1	22.6	0.2	0.8	21,058
Lamu East Constituency	0.1	2.6	0.2	0.2	90.0	6.4	0.1	0.4	3,522
Faza	0.1	2.8	0.2	0.0	89.4	6.9	0.1	0.5	2,479
Kiunga	-	2.7	0.4	0.6	89.8	6.0	0.2	0.2	846
Basuba	-	-	-	-	99.5	0.5	-	-	197
Lamu West Constituency	0.6	3.4	1.2	0.6	67.3	25.9	0.2	0.9	17,536
Shella	4.6	9.3	1.8	1.5	58.1	24.7	0.1	-	875
Mkomami	1.1	8.7	2.1	1.6	29.6	55.7	0.0	1.2	4,011
Hindi	0.0	1.8	0.5	0.3	74.5	22.4	0.2	0.2	2,096
Mkunumbi	-	0.3	0.2	0.2	93.5	5.3	0.1	0.5	2,549
Hongwe	0.2	0.5	0.3	0.6	89.2	8.1	0.8	0.2	2,086
Witu	0.1	1.4	0.5	0.2	83.6	14.0	0.1	0.1	2,296
Bahari	0.3	2.0	1.9	0.2	66.0	27.4	0.0	2.3	3,623

Table 21.10: 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
Lamu County	0.5	3.8	1.1	0.6	70.9	22.0	0.2	1.0	15,813
Lamu East Constituency	0.0	3.5	0.3	0.1	89.1	6.3	0.1	0.5	2,582

Faza	0.1	3.9	0.2	0.0	88.3	6.7	0.1	0.7	1,757
Kiunga	0.0	3.3	0.5	0.5	88.5	6.8	0.2	0.3	659
Basuba	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	166
Lamu West Constituency	0.6	3.8	1.2	0.7	67.4	25.0	0.2	1.1	13,231
Shella	4.9	10.1	1.6	1.4	57.6	24.3	0.1	0.0	761
Mkomami	1.1	9.7	2.3	1.7	28.8	54.8	0.0	1.5	3,040
Hindi	0.0	2.0	0.4	0.4	74.8	21.9	0.2	0.2	1,631
Mkunumbi	0.0	0.2	0.2	0.3	93.9	4.9	0.1	0.6	1,981
Hongwe	0.2	0.5	0.3	0.7	90.0	7.2	0.8	0.2	1,546
Witu	0.1	1.8	0.6	0.1	84.4	12.9	0.1	0.1	1,688
Bahari	0.3	2.2	2.1	0.2	66.0	26.2	0.0	2.9	2,584

Table 21.11: 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
Lamu County	0.4	1.6	0.8	0.4	71.8	24.6	0.2	0.2	5,245
Lamu East Constituency	0.1	0.2	0.1	0.3	92.6	6.6	0.1	-	940
Faza	0.1	0.1	0.1	0.1	91.8	7.6	-	-	722
Kiunga	-	0.5	-	1.1	94.7	3.2	0.5	-	187
Basuba	-	-	-	-	96.8	3.2	-	-	31
Lamu West Constituency	0.4	1.9	1.0	0.5	67.2	28.5	0.2	0.3	4,305
Shella	2.6	3.5	3.5	1.8	61.4	27.2	-	-	114
Mkomami	1.0	5.3	1.4	1.3	31.9	58.7	0.1	0.2	971
Hindi	0.2	1.1	0.6	-	73.5	24.3	0.2	-	465
Mkunumbi	-	0.7	0.4	-	92.3	6.5	-	0.2	568
Hongwe	0.4	0.6	0.4	0.2	86.9	10.6	0.9	0.2	540
Witu	-	0.5	0.3	0.3	81.4	17.3	-	0.2	608
Bahari	0.2	1.3	1.4	0.2	65.8	30.4	-	0.7	1,039

Table 21.12: 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
Lamu County	16.8	0.6	33.2	39.1	0.7	2.3	5.4	1.9	15,813
Lamu East Constituency	7.7	0.3	70.9	12.2	0.5	1.8	6.4	0.2	2,582
Faza	2.8	0.3	84.5	4.5	0.6	0.0	6.9	0.3	1,757
Kiunga	23.8	0.2	40.0	27.8	0.2	1.8	6.3	0.0	659
Basuba	0.0	0.5	32.5	42.1	0.5	24.4	0.0	0.0	166
Lamu West Constituency	18.6	0.7	25.6	44.5	0.8	2.4	5.2	2.3	13,231
Shella	36.8	0.9	9.3	48.2	0.3	2.3	1.7	0.5	761
Mkomami	57.2	1.2	21.3	15.6	0.4	0.5	3.4	0.3	3,040

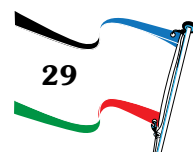
Hindi	1.4	0.3	29.9	50.8	1.7	5.4	8.9	1.5	1,631
Mkunumbi	0.4	0.2	26.8	62.1	0.4	2.4	6.4	1.3	1,981
Hongwe	1.7	0.2	26.0	61.7	1.6	2.3	5.8	0.6	1,546
Witu	5.1	0.3	16.6	60.2	0.5	6.1	2.0	9.3	1,688
Bahari	12.4	1.0	36.5	39.7	0.6	0.5	6.7	2.5	2,584

Table 21.13: 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
Kenya	24.6	0.6	30.4	36.8	0.9	4.2	1.7	0.7	5,762,320
Rural	5.6	0.5	35.3	47.5	1.1	6.8	2.4	0.7	3,413,616
Urban	52.4	0.9	23.3	21.2	0.6	0.4	0.7	0.7	2,348,704
Lamu County	17.0	0.6	31.7	39.9	0.8	2.6	5.5	1.9	15,813
Lamu East Constituency	7.3	0.4	69.5	13.5	0.5	1.9	6.6	0.2	2,582
Faza	2.8	0.4	83.4	5.0	0.6	0.1	7.4	0.3	1,757
Kiunga	21.1	0.3	41.4	28.5	0.2	2.3	6.2	0.0	659
Basuba	0.0	0.6	34.3	44.0	0.6	20.5	0.0	0.0	166
Lamu West Constituency	18.9	0.6	24.3	45.1	0.9	2.7	5.3	2.2	13,231
Shella	37.2	0.9	8.3	48.6	0.4	2.2	2.0	0.4	761
Mkomami	57.0	1.0	20.7	16.6	0.4	0.5	3.5	0.4	3,040
Hindi	1.7	0.4	28.3	50.7	2.1	6.4	8.8	1.7	1,631
Mkunumbi	0.5	0.3	25.5	63.3	0.5	2.6	6.0	1.4	1,981
Hongwe	1.5	0.3	26.3	60.9	1.9	2.4	6.0	0.8	1,546
Witu	5.0	0.3	15.0	60.7	0.7	7.3	2.0	8.9	1,688
Bahari	13.0	1.0	34.7	40.2	0.7	0.6	7.4	2.5	2,584

Table 21.14: Lighting Fuel for Female Headed Households by County, Constituency and Wards

County/Constituency/Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuel- wood	Solar	Other	Households
Kenya	19.2	0.5	31.0	42.1	0.8	4.5	1.4	0.5	2,731,060
Rural	4.5	0.4	33.7	51.8	0.8	6.5	1.8	0.5	1,826,263
Urban	48.8	0.8	25.4	22.6	0.7	0.6	0.6	0.5	904,797
Lamu County	16.1	0.7	37.7	36.7	0.4	1.4	5.0	1.9	5,245
Lamu East Constituency	8.7	0.1	74.7	8.6	0.5	1.5	5.7	0.1	940
Faza	2.8	0.1	87.3	3.3	0.6	-	5.8	0.1	722
Kiunga	33.2	-	34.8	25.1	0.5	-	6.4	-	187
Basuba	-	-	22.6	32.3	-	45.2	-	-	31
Lamu West Constituency	17.8	0.8	29.6	42.9	0.4	1.3	4.9	2.3	4,305
Shella	34.2	0.9	15.8	45.6	-	2.6	-	0.9	114
Mkomami	58.0	2.0	23.3	12.6	0.5	0.5	3.0	0.2	971



Hindi	0.4	-	35.7	51.2	0.4	1.9	9.2	1.1	465
Mkunumbi	0.4	0.2	31.2	57.9	0.2	1.8	7.7	0.7	568
Hongwe	2.2	-	25.2	64.1	0.9	2.0	5.4	0.2	540
Witu	5.1	0.3	20.9	58.7	-	3.0	1.8	10.2	608
Bahari	11.2	1.1	40.9	38.6	0.5	0.2	5.1	2.5	1,039

Table 21.15: Main material of the Floor by County, Constituency and Wards

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	Households
Kenya	41.2	1.6	0.7	56.0	0.5	8,493,380
Rural	22.1	0.3	0.7	76.5	0.4	5,239,879
Urban	71.8	3.5	0.9	23.0	0.8	3,253,501
Lamu County	36.8	0.3	0.3	61.7	0.9	21,058
Lamu East Constituency	43.9	0.1	0.3	52.7	3.0	3,522
Faza	47.9	0.2	0.2	48.2	3.5	2,479
Kiunga	42.1	-	0.2	55.6	2.1	846
Basuba	1.5	-	1.0	97.5	-	197
Lamu West Constituency	35.3	0.3	0.3	63.5	0.5	17,536
Shella	36.1	0.5	0.3	61.1	1.9	875
Mkomami	78.8	0.6	0.1	19.3	1.1	4,011
Hindi	24.3	0.1	1.0	74.4	0.1	2,096
Mkunumbi	11.4	0.0	0.3	87.9	0.4	2,549
Hongwe	10.1	0.0	0.3	89.4	0.2	2,086
Witu	13.5	0.3	0.3	86.0	0.0	2,296
Bahari	38.8	0.4	0.3	60.3	0.2	3,623

Table 21.16: 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	Households
Kenya	42.8	1.6	0.8	54.2	0.6	5,762,320	37.7	1.4	0.7	59.8	0.5	2,731,060
Rural	22.1	0.3	0.7	76.4	0.4	3,413,616	22.2	0.3	0.6	76.6	0.3	1,826,263
Urban	72.9	3.5	0.9	21.9	0.8	2,348,704	69.0	3.6	0.9	25.8	0.8	904,797
Lamu County	36.1	0.3	0.3	62.4	1.0	15,813	38.9	0.2	0.5	59.7	0.7	5,245
Lamu East Constituency	43.4	0.1	0.1	53.0	3.4	2,582	45.2	0.3	0.6	52.0	1.8	940
Faza	48.4	0.1	0.1	47.4	4.0	1,757	46.5	0.4	0.4	50.3	2.4	722
Kiunga	40.7	-	0.2	56.4	2.7	659	47.1	-	0.5	52.4	-	187
Basuba	1.2	-	-	98.8	-	166	3.2	-	6.5	90.3	-	31
Lamu West Constituency	34.6	0.3	0.3	64.2	0.5	13,231	37.5	0.2	0.5	61.4	0.4	4,305

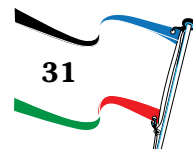
Shella	36.7	0.5	0.3	60.6	2.0	761	32.5	-	0.9	64.9	1.8	114
Mkomami	78.4	0.7	0.2	19.5	1.2	3,040	79.8	0.6	0.1	18.6	0.8	971
Hindi	24.0	0.1	0.7	75.0	0.2	1,631	25.4	-	2.2	72.5	-	465
Mkunumbi	10.2	0.1	0.3	89.1	0.4	1,981	15.5	-	0.2	83.6	0.7	568
Hongwe	9.4	0.1	0.3	90.1	0.1	1,546	12.0	-	0.2	87.4	0.4	540
Witu	12.1	0.4	0.2	87.3	0.1	1,688	17.1	-	0.5	82.4	-	608
Bahari	37.8	0.4	0.3	61.3	0.2	2,584	41.1	0.4	0.3	57.9	0.3	1,039

Table 21.17: 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
Lamu County	31.5	0.3	11.2	3.0	16.4	34.0	0.4	0.1	3.1	21,058
Lamu East Constituency	6.5	0.1	6.9	2.1	7.5	72.3	0.5	0.1	3.9	3,522
Faza	6.3	0.1	9.4	1.4	0.7	78.2	0.2	0.1	3.5	2,479
Kiunga	8.3	0.0	1.2	4.7	13.9	67.8	1.5	0.1	2.4	846
Basuba	1.5	0.0	0.0	0.0	65.5	17.3	0.0	0.5	15.2	197
Lamu West Constituency	36.5	0.4	12.0	3.2	18.2	26.4	0.3	0.1	2.9	17,536
Shella	1.9	0.3	22.1	2.9	6.5	63.2	0.2	0.0	2.9	875
Mkomami	13.9	0.5	44.1	3.1	0.1	36.5	0.5	0.0	1.2	4,011
Hindi	37.0	0.2	0.9	3.3	19.9	38.1	0.0	0.4	0.1	2,096
Mkunumbi	35.6	0.1	0.3	4.0	23.5	32.4	0.1	0.0	3.8	2,549
Hongwe	50.1	0.5	0.1	2.3	33.0	12.9	0.8	0.0	0.1	2,086
Witu	18.2	0.5	0.2	3.4	53.9	19.3	0.1	0.0	4.5	2,296
Bahari	74.0	0.3	3.0	3.2	5.3	7.4	0.4	0.0	6.5	3,623

Table 21.18: Main Roofing Material in Male Headed Households by County, Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/Dung	Other	Households
Kenya	73.0	2.3	3.9	2.3	13.5	3.2	0.3	0.5	1.0	5,762,320
Rural	69.2	0.8	0.2	1.8	21.5	4.4	0.2	0.9	1.1	3,413,616
Urban	78.5	4.6	9.3	2.9	2.0	1.4	0.3	0.1	0.9	2,348,704
Lamu County	30.2	0.3	11.5	3.1	17.1	34.1	0.4	0.1	3.3	15,813
Lamu East Constituency	6.3	0.1	7.3	2.6	8.1	70.3	0.7	0.1	4.5	2,582
Faza	6.1	0.1	10.3	1.7	0.7	76.7	0.3	0.1	4.0	1,757
Kiunga	7.7	-	1.2	5.8	14.1	66.2	2.0	0.2	2.9	659



Basuba	1.8	-	-	-	62.7	19.3	-	0.6	15.7	166
Lamu West Constituency	34.8	0.4	12.3	3.2	18.9	27.0	0.3	0.1	3.1	13,231
Shella	2.2	0.4	21.3	2.8	6.8	63.2	0.3	-	3.0	761
Mkomami	13.8	0.7	44.8	3.0	0.1	36.0	0.5	0.0	1.3	3,040
Hindi	36.3	0.2	0.6	3.4	21.8	37.1	-	0.5	0.2	1,631
Mkunumbi	33.9	0.1	0.3	4.0	24.0	33.3	0.1	-	4.3	1,981
Hongwe	48.4	0.3	0.1	2.5	34.4	13.5	0.7	-	0.1	1,546
Witu	16.5	0.5	0.1	3.9	56.0	18.8	0.1	-	4.0	1,688
Bahari	72.9	0.3	3.1	2.8	5.3	7.9	0.3	-	7.5	2,584

Table 21.19: Main Roofing Material in Female Headed Households by County, Constituency and Wards

County/Constituency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/ Dung	Other	Households
Kenya	74.5	2.0	3.0	2.2	12.7	3.2	0.3	1.2	1.0	2,731,060
Rural	72.5	0.7	0.1	1.8	17.8	3.9	0.3	1.8	1.1	1,826,263
Urban	78.6	4.5	8.7	2.9	2.3	1.6	0.3	0.1	0.9	904,797
Lamu County	35.5	0.3	10.2	2.9	14.3	34.0	0.4	0.1	2.4	5,245
Lamu East Constituency	7.2	0.1	5.9	0.7	5.9	77.7	-	0.1	2.4	940
Faza	6.8	0.1	7.3	0.7	0.7	81.7	-	0.1	2.5	722
Kiunga	10.2	-	1.1	1.1	13.4	73.8	-	-	0.5	187
Basuba	-	-	-	-	80.6	6.5	-	-	12.9	31
Lamu West Constituency	41.7	0.3	11.2	3.3	16.2	24.4	0.4	0.0	2.4	4,305
Shella	-	-	27.2	3.5	4.4	63.2	-	-	1.8	114
Mkomami	14.2	-	42.1	3.6	0.1	38.2	0.5	-	1.2	971
Hindi	39.4	0.4	1.9	3.2	13.3	41.5	-	0.2	-	465
Mkunumbi	41.7	0.2	0.4	4.2	21.8	29.4	-	0.2	2.1	568
Hongwe	55.0	1.3	-	1.9	29.1	11.5	1.1	-	0.2	540
Witu	23.0	0.3	0.3	2.1	47.9	20.4	0.2	-	5.8	608
Bahari	76.9	0.3	2.8	4.0	5.4	6.1	0.7	-	3.8	1,039

Table 21.20: Main material of the wall by County, Constituency and Wards

County/Constituency/ Wards	Stone	Brick/Block	Mud/ Wood	Mud/Cement	Wood only	Corrugated 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
Lamu County	10.9	18.7	46.6	14.0	0.7	0.4	6.3	0.1	2.2	21,058
Lamu East Constituency	21.5	11.1	35.7	24.1	0.1	0.1	3.0	0.4	4.0	3,522
Faza	30.0	11.7	34.9	18.3	0.2	0.1	0.4	0.2	4.2	2,479
Kiunga	1.3	11.7	39.5	38.2	0.1	0.1	4.1	1.3	3.7	846
Basuba	0.5	0.0	29.4	37.1	0.0	0.0	30.5	0.0	2.5	197
Lamu West Constituency	8.8	20.2	48.8	12.0	0.8	0.5	7.0	0.0	1.8	17,536
Shella	7.2	25.9	28.3	2.3	2.9	0.7	29.4	0.0	3.3	875
Mkomami	21.1	56.3	4.9	6.7	0.8	0.2	5.2	0.0	4.7	4,011
Hindi	1.8	9.7	60.2	11.4	1.0	2.0	13.3	0.1	0.6	2,096
Mkunumbi	3.5	4.0	72.9	10.1	0.3	0.2	7.2	0.0	1.8	2,549
Hongwe	7.0	1.8	76.5	9.7	1.0	0.1	3.8	0.0	0.1	2,086
Witu	1.2	6.3	66.6	15.0	0.8	0.6	8.5	0.2	0.8	2,296
Bahari	9.4	15.8	51.7	21.3	0.4	0.1	0.6	0.0	0.7	3,623

Table 21.21: 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	Households
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
Lamu County	10.7	18.9	46.2	13.3	0.8	0.5	7.2	0.1	2.4	15,813
Lamu East Constituency	20.1	12.0	34.2	24.7	0.1	0.1	3.7	0.6	4.6	2,582
Faza	28.9	12.9	33.8	18.6	0.1	0.1	0.5	0.2	4.8	1,757
Kiunga	1.4	12.6	37.0	37.8	-	0.2	5.0	1.7	4.4	659
Basuba	0.6	-	26.5	38.0	-	-	32.5	-	2.4	166
Lamu West Constituency	8.9	20.2	48.5	11.1	0.9	0.5	7.9	0.1	2.0	13,231
Shella	7.4	25.9	28.5	2.5	2.9	0.5	29.0	-	3.3	761
Mkomami	21.5	55.7	4.6	6.4	0.9	0.2	5.6	0.0	5.1	3,040
Hindi	1.9	10.2	58.0	10.4	1.2	2.5	15.2	0.1	0.6	1,631
Mkunumbi	3.1	3.7	74.4	8.4	0.4	0.2	7.7	-	2.1	1,981
Hongwe	7.1	1.4	76.6	9.4	1.1	0.1	4.1	0.1	0.1	1,546

Witu	1.3	6.5	65.7	13.9	0.9	0.7	10.0	0.2	0.8	1,688
Bahari	9.4	15.9	52.2	20.6	0.4	0.1	0.6	-	0.7	2,584

Table 21.22: 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
Lamu County	11.6	18.2	48.0	16.2	0.4	0.2	3.7	0.0	1.5	5,245
Lamu East Constituency	25.3	8.6	39.9	22.4	0.3	-	1.0	-	2.4	940
Faza	32.7	9.0	37.5	17.6	0.3	-	0.1	-	2.8	722
Kiunga	1.1	8.6	48.1	39.6	0.5	-	1.1	-	1.1	187
Basuba	-	-	45.2	32.3	-	-	19.4	-	3.2	31
Lamu West Constituency	8.6	20.3	49.8	14.9	0.5	0.3	4.3	0.0	1.3	4,305
Shella	6.1	26.3	27.2	0.9	2.6	1.8	31.6	-	3.5	114
Mkomami	19.8	58.3	5.9	7.5	0.6	0.2	4.0	-	3.7	971
Hindi	1.5	8.0	68.0	14.8	0.4	0.2	6.5	-	0.6	465
Mkunumbi	4.6	5.1	67.6	16.0	0.2	0.4	5.5	-	0.7	568
Hongwe	6.7	3.0	76.1	10.6	0.6	0.2	3.0	-	-	540
Witu	1.0	5.8	69.1	18.1	0.5	0.2	4.6	0.2	0.7	608
Bahari	9.4	15.5	50.3	23.1	0.2	0.2	0.6	-	0.7	1,039

Table 21.23: Source of Water by County, Constituency and Ward

County/Constituency/ Wards	Pond	Dam	Lake	Stream/ River	Unprotect- ed Spring	Unprotected Well	Jabia	Water vendor	Other	Unimproved Sources	Protected Spring	Protected Well	Borehole	Piped into Dwelling	Piped	Rain Water Collection	Improved Sources	Number of Individuals
Kenya	2.7	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
Lamu County	4.4	1.7	0.7	2.8	0.6	28.2	7.8	0.8	0.2	47.1	0.7	15.7	7.4	7.3	21.6	0.1	52.9	99,466
Lamu East Constituency	0.1	0.1	0.0	0.1	0.4	47.6	34.4	0.0	0.0	82.6	0.1	15.7	1.2	0.0	0.1	0.2	17.4	18,539
Faza	0.1	0.1	0.0	0.0	0.3	42.5	36.3	0.0	0.0	79.2	0.2	20.5	0.0	0.0	0.1	0.0	20.8	13,384
Kiunga	0.1	0.0	0.0	0.0	0.2	57.7	37.1	0.0	0.0	95.1	0.0	4.0	0.0	0.0	0.1	0.7	4.9	4,103
Basuba	0.0	0.0	0.0	2.2	1.8	73.1	0.0	0.0	0.0	77.1	0.0	1.1	21.8	0.0	0.0	0.0	22.9	1,052
Lamu West Constituency	5.4	2.0	0.9	3.4	0.6	23.7	1.7	1.0	0.3	39.0	0.9	15.7	8.8	8.9	26.5	0.1	61.0	80,927
Shella	0.4	0.0	0.0	0.0	0.0	6.5	17.2	12.4	0.0	36.6	0.5	19.8	0.6	24.0	17.1	1.4	63.4	2,935
Mkomami	0.1	0.1	0.0	0.0	0.6	18.1	0.0	0.4	0.0	19.4	0.8	14.0	7.5	27.9	30.4	0.0	80.6	18,660
Hindi	2.5	0.2	0.2	0.2	0.8	33.5	0.2	0.2	1.6	39.4	0.0	4.3	3.9	5.9	46.4	0.0	60.6	10,039
Mkunumbi	16.0	3.5	4.1	0.1	0.8	29.9	5.3	0.3	0.0	60.0	0.2	7.4	10.9	0.2	21.0	0.3	40.0	11,710
Hongwe	8.2	0.4	0.4	0.2	0.6	27.3	1.8	0.1	0.0	39.0	0.7	7.4	15.7	1.3	35.9	0.1	61.0	9,084
Witu	9.4	8.8	1.0	20.6	0.6	15.0	0.4	0.0	0.0	55.8	1.7	5.4	6.3	2.9	27.8	0.1	44.2	12,983
Bahari	1.4	0.1	0.3	0.2	0.7	27.9	0.0	1.7	0.3	32.6	1.5	44.4	11.7	1.3	8.5	0.1	67.4	15,516

Table 21.24: Source of Water of Male headed Household by County Constituency and Ward

County/Constituency/Wards	Pond	Dam	Lake	Stream/ River	Unpro- tected Spring	Unpro- tected Well	Jabia	Water vendor	Other	Unim- proved Sources	Pro- tected Spring	Protected Well	Borehole	Piped into Dwelling	Piped	Rain Water Collec- tion	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
Lamu County	4.9	1.8	0.7	2.8	0.6	28.2	7.3	0.9	0.3	47.4	0.8	15.6	7.4	7.1	21.6	0.2	52.6	74,370
Lamu East Constituency	0.1	0.1	0.0	0.2	0.4	47.5	32.8	-	-	81.0	0.2	17.3	1.2	-	0.1	0.2	19.0	13,224
Faza	0.1	0.1	0.0	-	0.3	40.4	35.7	-	-	76.6	0.3	23.0	-	-	0.0	-	23.4	9,215
Kiunga	-	-	-	-	0.3	60.3	33.5	-	-	94.1	-	4.7	-	-	0.2	1.0	5.9	3,104
Basuba	-	-	-	2.5	2.1	76.1	-	-	-	80.8	-	1.3	17.9	-	-	-	19.2	905
Lamu West Constituency	5.9	2.2	0.8	3.3	0.7	24.0	1.8	1.0	0.3	40.2	0.9	15.2	8.7	8.6	26.3	0.2	59.8	61,146
Shella	0.4	-	-	-	-	6.9	16.6	12.4	0.0	36.4	0.6	20.2	0.8	23.1	17.2	1.6	63.6	2,512
Mkomami	0.1	0.0	-	-	0.7	19.4	0.1	0.5	0.0	20.8	0.9	13.1	7.3	27.1	30.9	-	79.2	13,953
Hindi	3.0	0.1	0.3	0.1	0.8	34.0	0.3	0.3	2.1	41.0	-	3.9	4.4	5.1	45.6	0.0	59.0	7,721
Mkunumbi	17.3	4.0	3.5	0.1	0.8	28.2	5.5	0.3	-	59.7	0.2	7.4	10.8	0.3	21.2	0.3	40.3	9,183
Hongwe	8.4	0.5	0.3	0.3	0.5	28.0	1.8	0.1	-	40.0	0.7	7.1	16.2	1.4	34.6	0.1	60.0	6,806
Witu	10.7	9.5	1.0	20.5	0.8	15.4	0.1	0.0	0.1	58.1	1.5	5.1	6.8	2.2	26.1	0.1	41.9	9,665
Bahari	1.5	0.1	0.2	0.2	0.7	28.4	-	1.7	0.4	33.2	1.6	44.3	10.5	1.4	8.9	0.1	66.8	11,306

Table 21.25: Source of Water of Female headed Household by County Constituency and Ward

County/Constituency/ Wards	Pond	Dam	Lake	Stream/ River	Unprotect- ed Spring	Unprotected Well	Jabia	Water vendor	Other	Unim- proved Sources	Protected Spring	Protected Well	Bore- hole	Piped into Dwelling	Piped	Rain Water Collec- tion	Improved Sources	Number of Individuals
Kenya	2.8	2.7	1.3	25.2	5.3	7.4	0.3	4.4	0.3	49.7	8.1	7.7	11.3	5.1	17.5	0.7	50.3	11,164,581
Rural	3.4	3.5	1.6	30.6	6.5	8.9	0.3	1.8	0.4	57.0	9.5	8.0	11.5	1.6	11.7	0.8	43.0	8,058,724
Urban	1.0	0.8	0.6	11.1	2.3	3.4	0.2	11.1	0.1	30.5	4.7	7.0	10.5	14.2	32.5	0.6	69.5	3,105,857
Lamu County	2.9	1.2	0.9	2.8	0.5	28.0	9.3	0.5	0.0	46.2	0.6	16.2	7.6	7.9	21.5	0.0	53.8	25,096
Lamu East Constituency	0.1	0.1	-	-	0.2	47.8	38.4	-	-	86.6	-	11.9	1.3	-	0.2	-	13.4	5,315
Faza	0.0	0.1	-	-	0.3	47.1	37.4	-	-	85.0	-	14.8	-	-	0.2	-	15.0	4,169
Kiunga	0.5	-	-	-	-	49.5	48.1	-	-	98.2	-	1.8	-	-	-	-	1.8	999
Basuba	-	-	-	-	-	54.4	-	-	-	54.4	-	-	45.6	-	-	-	45.6	147
Lamu West Constituency	3.6	1.4	1.2	3.6	0.5	22.7	1.4	0.7	0.0	35.3	0.8	17.4	9.3	10.0	27.3	0.0	64.7	19,781
Shella	0.5	-	-	-	-	4.0	20.8	12.3	-	37.6	-	17.0	-	28.8	16.5	-	62.4	423
Mkomami	0.1	0.3	-	-	0.5	14.2	-	0.2	-	15.4	0.5	16.7	8.2	30.3	28.9	-	84.6	4,707
Hindi	1.2	0.3	0.2	0.2	0.8	31.5	-	0.1	-	34.3	-	5.6	2.2	8.5	49.4	-	65.7	2,318
Mkunumbi	11.3	1.8	6.5	-	0.6	36.2	4.6	0.0	-	61.1	-	7.2	11.3	-	20.2	0.2	38.9	2,527
Hongwe	7.7	-	0.7	-	0.9	25.2	1.7	-	-	36.2	0.6	8.3	14.2	1.2	39.6	-	63.8	2,278
Witu	5.5	6.6	0.9	20.7	0.1	13.7	1.3	-	-	48.9	2.2	6.3	4.8	4.9	32.9	-	51.1	3,318
Bahari	1.0	-	0.6	0.3	0.6	26.7	-	1.8	0.2	31.2	1.1	44.4	14.9	1.0	7.4	-	68.8	4,210

Table 21.26: 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 Memmbers
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
Lamu County	0.31	2.91	0.51	3.83	49.12	56.68	20.34	0.33	22.31	0.34	43.32	99,466
Lamu East Constituency	0.04	0.16	0.05	0.77	70.86	71.88	19.68	0.35	7.15	0.93	28.12	18,539
Faza	0.00	0.00	0.00	1.05	77.06	78.12	20.16	0.25	1.01	0.47	21.88	13,384
Kiunga	0.19	0.73	0.00	0.02	61.08	62.03	18.21	0.78	16.31	2.68	37.97	4,103
Basuba	0.00	0.00	0.95	0.00	30.04	30.99	19.39	0.00	49.62	0.00	69.01	1,052
Lamu West Constituency	0.37	3.53	0.62	4.53	44.14	53.19	20.49	0.32	25.78	0.21	46.81	80,927
Shella	0.10	2.79	0.14	9.20	40.10	52.33	4.43	0.14	42.69	0.41	47.67	2,935
Mkomami	0.69	12.15	1.48	11.97	48.61	74.90	17.02	0.63	7.15	0.30	25.10	18,660
Hindi	0.05	0.37	0.13	1.68	36.88	39.11	15.87	0.06	44.53	0.44	60.89	10,039
Mkunumbi	0.11	0.31	1.05	1.09	35.79	38.35	33.10	0.09	28.24	0.22	61.65	11,710
Hongwe	0.08	0.17	0.17	1.44	51.52	53.37	35.45	0.48	10.69	0.01	46.63	9,084
Witu	0.17	1.18	0.26	0.65	24.42	26.68	4.67	0.60	67.98	0.07	73.32	12,983
Bahari	0.79	1.74	0.21	4.21	62.70	69.65	25.66	0.02	4.54	0.13	30.35	15,516

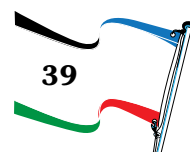
Table 21.27: Human Waste Disposal in Male Headed household by County, Constituency and Ward

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 Memmbers
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
Lamu County	0.30	2.97	0.56	3.80	47.51	55.14	20.22	0.32	23.92	0.40	44.86	74,370
Lamu East Constituency	0.06	0.23	0.08	0.76	68.92	70.04	20.03	0.43	8.33	1.17	29.96	13,224
Faza	0.00	0.00	0.00	1.07	76.41	77.48	20.55	0.27	1.07	0.62	22.52	9,215
Kiunga	0.26	0.97	0.00	0.03	57.70	58.96	18.27	1.03	18.59	3.16	41.04	3,104
Basuba	0.00	0.00	1.10	0.00	31.16	32.27	20.77	0.00	46.96	0.00	67.73	905
Lamu West Constituency	0.36	3.57	0.66	4.46	42.87	51.92	20.26	0.30	27.29	0.23	48.08	61,146
Shella	0.12	2.59	0.16	9.47	38.85	51.19	4.86	0.12	43.39	0.44	48.81	2,512
Mkomami	0.63	12.27	1.62	11.70	47.45	73.67	17.06	0.62	8.34	0.31	26.33	13,953
Hindi	0.05	0.39	0.10	1.74	33.96	36.24	15.94	0.05	47.20	0.57	63.76	7,721
Mkunumbi	0.08	0.30	1.01	1.09	35.95	38.43	31.13	0.08	30.08	0.28	61.57	9,183

Hongwe	0.06	0.22	0.19	1.47	49.81	51.75	36.14	0.48	11.61	0.01	48.25	6,806
Witu	0.16	1.24	0.31	0.70	22.74	25.15	4.80	0.47	69.49	0.09	74.85	9,665
Bahari	0.86	1.86	0.26	4.02	62.87	69.87	25.42	0.03	4.61	0.08	30.13	11,306

Table 21.28: 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	Buck-et	Bush	Other	Unimproved Sanitation	Number of HH Memmbers
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
Lamu	0.3	2.7	0.4	3.9	53.9	61.2	20.7	0.4	17.5	0.2	38.8	25,096.0
Lamu East	0.0	0.0	0.0	0.8	75.7	76.5	18.8	0.2	4.2	0.3	23.5	5,315.0
Faza	0.0	0.0	0.0	1.0	78.5	79.5	19.3	0.2	0.9	0.1	20.5	4,169.0
Kiunga	0.0	0.0	0.0	0.0	71.6	71.6	18.0	0.0	9.2	1.2	28.4	999.0
Basuba	0.0	0.0	0.0	0.0	23.1	23.1	10.9	0.0	66.0	0.0	76.9	147.0
Lamu West	0.4	3.4	0.5	4.8	48.0	57.1	21.2	0.4	21.1	0.1	42.9	19,781.0
Shella	0.0	4.0	0.0	7.6	47.5	59.1	1.9	0.2	38.5	0.2	40.9	423.0
Mkomami	0.8	11.8	1.1	12.8	52.1	78.5	16.9	0.7	3.6	0.3	21.5	4,707.0
Hindi	0.0	0.3	0.2	1.5	46.6	48.7	15.6	0.1	35.6	0.0	51.3	2,318.0
Mkunumbi	0.2	0.3	1.2	1.1	35.2	38.1	40.2	0.1	21.6	0.0	61.9	2,527.0
Hongwe	0.1	0.0	0.1	1.4	56.6	58.2	33.4	0.5	7.9	0.0	41.8	2,278.0
Witu	0.2	1.0	0.1	0.5	29.3	31.1	4.3	1.0	63.6	0.0	68.9	3,318.0
Bahari	0.6	1.4	0.1	4.7	62.3	69.1	26.3	0.0	4.4	0.3	30.9	4,210.0





About KNBS

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

Kenya National Bureau of Statistics (KNBS)

Herufi House, LT. Tumbo Road, Off Harambee Avenue

P.O. BOX 30266 00100 Nairobi GPO, Kenya

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

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



SID
Society for International Development

About SID

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

Society for International Development

Regional Office for Eastern Africa

Britam Centre, First Floor, Ragati/Mara Road

P O Box 2404 – 00100 Nairobi Kenya

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

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