Exploring Kenya's Inequality

Pulling Apart or Pooling Together?

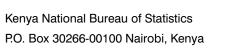


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Foreword

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

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

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

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

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

Ali Hersi

Society for International Development (SID) Regional Director



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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

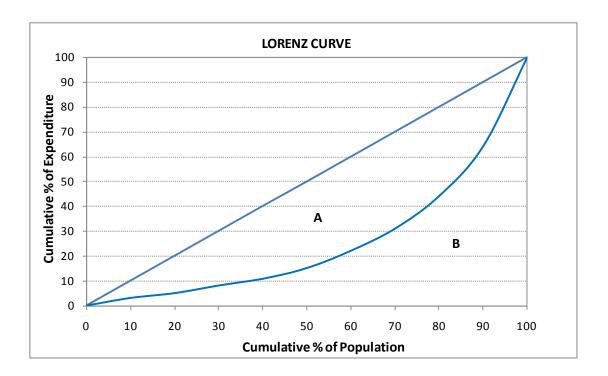
This is the most commonly used measure of inequality. The coefficient varies between '0', which reflects complete equality and '1' which indicates complete inequality. Graphically, the Gini coefficient can be



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 xi be a point on the X-axis, and yi a point on the Y-axis, the Gini coefficient formula is:

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

An Illustration of the Lorenz Curve



Small Area Estimation (SAE)

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

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

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

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

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

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

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



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

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

Identification of poor households Principal Component Analysis (PCA)

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

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

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

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

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

Concepts and definitions

Inequality

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

Equality and Equity

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

Poverty

The poverty line is a threshold below which people are deemed poor. Statistics summarizing the bottom of the consumption distribution (i.e. those that fall below the poverty line) are therefore provided. In 2005/06, the poverty line was estimated at Ksh1,562 and Ksh2,913 per adult equivalent 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.

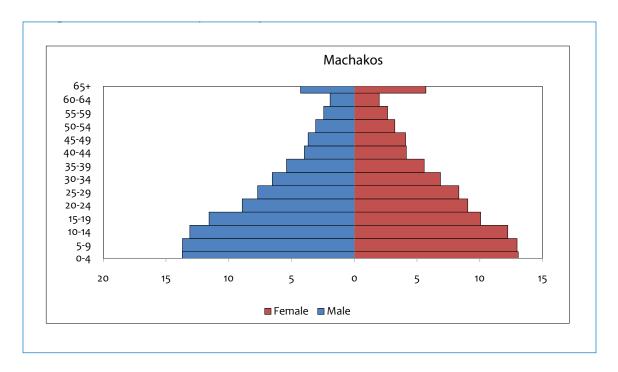


Machakos County



MACHAKOS COUNTY

Figure 22.1: Machakos Population Pyramid



Population

Machakos County is at the beginning of a transition from a child rich population structure where those aged between 0 - 14 at 39%, are at the onset of a decline while those aged between 15-34 years old who constitute 34% of the total population are beginning to increase. This is also evidenced by the fact that the percentage household size of 0-3 members is 42.3% and 4-6 household size members is 42.6%

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 22.3 up to ward level.

Table 22: Overall Employment by Education Levels in Machakos County

Education Level	Work for pay	Family Business	Family Agricul- tural Holding	Intern/ Volunteer	Retired/ Home- maker	Fulltime Student	Incapacitated	No work	Number of Individuals
Total	29.1	11.3	22.9	1.0	14.5	13.8	0.7	6.8	603,316
None	22.9	10.1	28.5	2.7	23.2	1.6	4.6	6.4	25,604
Primary	26.7	10.7	26.6	0.8	16.7	11.1	0.6	6.8	318,701
Secondary+	32.7	12.0	17.8	1.1	10.9	18.2	0.3	7.0	259,011

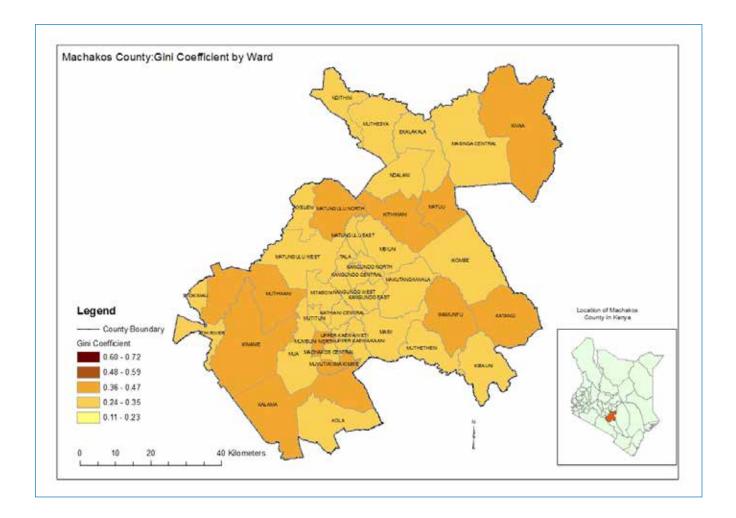
In Machakos County, 23% of the residents with no formal education 27% of those with a primary level of education and 33% of those with secondary level of education or above are working for pay. Work for pay is highest in Nairobi at 49% and this is 16 percentage points above the level in Machakos for those with secondary level of education or above.



Gini Coefficient

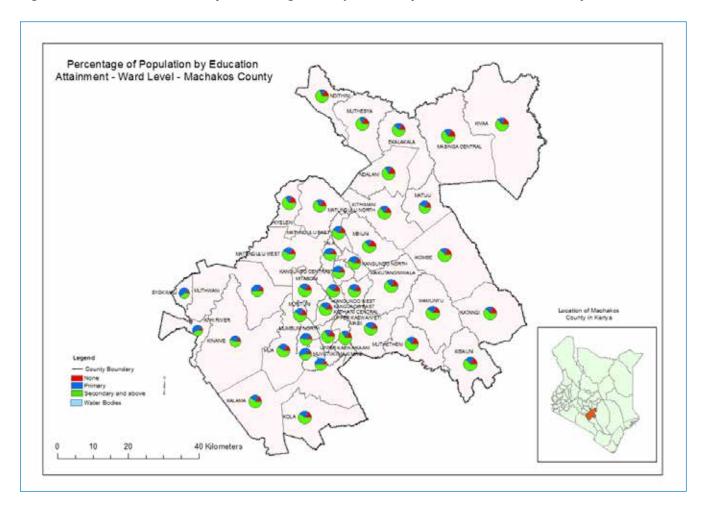
In this report, the Gini index measures the extent to which the distribution of consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A Gini index of '0' represents perfect equality, while an index of '1' implies perfect inequality. Machakos County's Gini index is 0.403 compared with Turkana County, which has the least inequality nationally (0.283).

Figure 22.2: Machakos County-Gini Coefficient by Ward



Education

Figure 22.3: Machakos County-Percentage of Population by Education Attainment by Ward



Only 27% of Machakos County residents have a secondary level of education or above. Mavoko constituency has the highest share of residents with a secondary level of education or above at 45%. This is almost three times Masinga constituency, which has the lowest share of residents with a secondary level of education or above. Mavoko constituency is 18 percentage points above the county average. Syokimau ward has the highest share of residents with a secondary level of education or above at 52%. This is four times Muthesya ward, which has the lowest share of residents with a secondary level of education or above. Syokimau ward is 25 percentage points above the county average.

A total of 58% of Machakos County residents have a primary level of education only. Masinga constituency has the highest share of residents with a primary level of education only at 65%. This is 21 percentage points above Mavoko constituency, which has the lowest share of residents with primary only. Masinga constituency is 10 percentage points above the county average. Ndithini ward has the highest share of residents with primary only at 69%. This is 30 percentage points above Syokimau ward, which has the lowest share of residents with a primary level of education only. Ndithini ward is 11 percentage points above the county average.

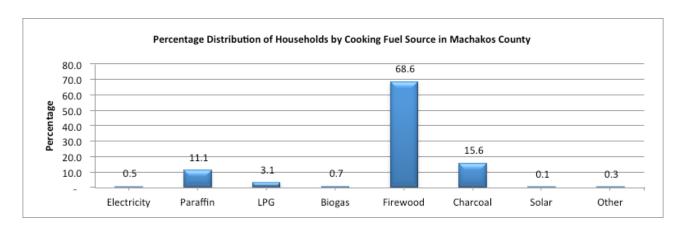
Some 15% of Machakos County residents have no formal education. Masinga constituency has the highest share of residents with no formal education at 18%. This is almost two times Mavoko constituency, which has the lowest share of residents with no formal education. Masinga constituency is 3 percentage points above the county average. Upper Kaewa/Kaani ward has the highest percentage of residents with no formal education at 16%. This is almost twice Syokimau ward, which has the lowest percentage of residents with no formal education. Upper Kaewa/Kaani ward is 1 percentage point above the county average.



Energy

Cooking Fuel

Figure 22.4: Percentage Distribution of Households by Source of Cooking Fuel in Machakos County



Only 3% of residents in Machakos County use liquefied petroleum gas (LPG), and 11% use paraffin. 69% use firewood and 16% use charcoal. Firewood is the most common cooking fuel by either gender with 64% of male headed households and 76% in female headed households.

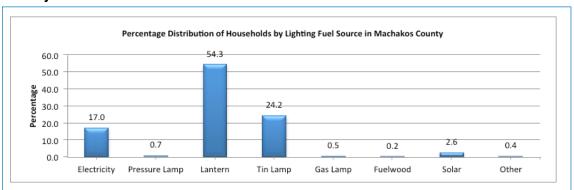
Masinga constituency has the highest level of firewood use in Machakos County at 91%. This is eight times Mavoko constituency, which has the lowest share at 12%. Masinga constituency is about 22 percentage points above the county average. Muthesya ward has the highest level of firewood use in Machakos County at 97%. This is 32 times Athi River ward, which has the lowest share at 3%. Muthesya ward is 28 percentage points above the county average.

Mavoko constituency has the highest level of charcoal use in Machakos County at 31%. This is five times Masinga constituency, which has the lowest share at 6%. Mavoko constituency is 15 percentage points above the county average. Athi River ward has the highest level of charcoal use in Machakos County at 41%. This is 39 percentage points more than Muthesya ward, which has the lowest share. Athi River ward is 25 percentage points above the county average.

Mavoko constituency has the highest level of paraffin use in Machakos County at 42%. This is 40 percentage points above Masinga constituency. Mavoko constituency is 31 percentage points higher than the county average. Syokimau ward has the highest level of paraffin use in Machakos County at 58%. This is 58 percentage points above Kangundo East ward, which has the lowest share. Syokimau ward is 47 percentage points above the county average.

Lighting

Figure 22.5: Percentage Distribution of Households by Source of Lighting Fuel in Machakos County



A total of 17% of residents in Machakos County use electricity as their main source of lighting. A further 54% use lanterns, and 24% use tin lamps. Less than 1% use fuel wood. Electricity use is mostly common in male headed households at 19% as compared with female headed households at 13%.

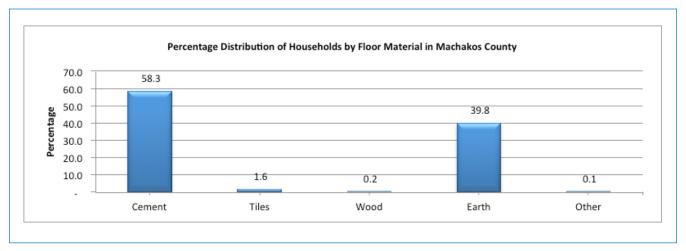
Mavoko constituency has the highest level of electricity use at 46%. That is 12 times Masinga constituency, which has the lowest level of electricity use. Mavoko constituency is 29 percentage points above the county average. Syokimau ward has the highest level of electricity use at 62%. That is 62 percentage points above Ikombe ward, which has the lowest level of electricity use. Syokimau ward is 45 percentage points above the county average.

Housing

Flooring

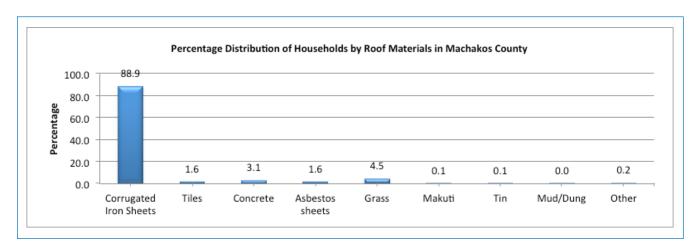
In Machakos County, 58% of residents have homes with cement floors, while 40% have earth floors. Less than less than 1% has wood and just 2% have tile floors. Mavoko constituency has the highest share of cement floors at 83%. That is twice Masinga constituency, which has the lowest share of cement floors. Mavoko constituency is 25 percentage points above the county average. Athi River ward has the highest share of cement floors at 92%. That is four times Kyeleni ward, which has the lowest share of cement floors. Athi River ward is 34 percentage points above the county average.

Figure 22.6: Percentage Distribution of Households by Floor Material in Machakos County



Roofing

Figure 22.7: Percentage Distribution of Households by Roof Material in Machakos County



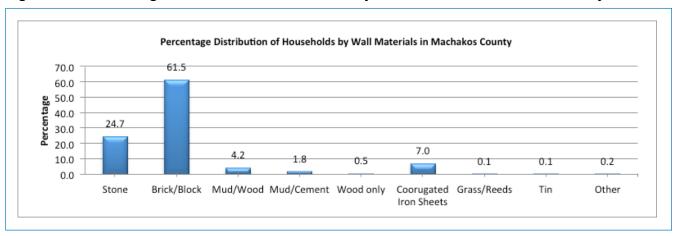
In Machakos County, 3% of residents have homes with concrete roofs, while 89% have corrugated iron sheet roofs. Grass and makuti roofs constitute 5% of homes, and none have mud/dung roofs.

Kathiani and Kangundo constituencies have the highest share of corrugated iron sheet roofs at 96% each. That is 21 percentage points above Mavoko constituency, which has the lowest share of corrugated iron sheet roofs. Kathiani and Kangundo constituencies are 7 percentage points above the county average. Kangundo North ward has the highest share of corrugated iron sheet roofs at 99%. That is 37 percentage points above Syokimau ward, which has the lowest share of corrugated iron sheet roofs. Kangundo North ward is 10 percentage points above the county average.

Masinga constituency has the highest share of grass/makuti roofs at 16%. That is 15 percentage points above Kathiani constituency, which has the lowest share of grass/makuti roofs. Masinga constituency is 11 percentage points above the county average. Masinga Central ward has the highest share of grass/makuti roofs at 22%. This is 21 percentage points above Machakos Central ward, which has no share of grass/makuti roofs. Masinga Central ward is 17 percentage points above the county average.

Walls

Figure 22.8: Percentage Distribution of Households by Wall Material in Machakos County



In Machakos County, 86% of homes have either brick or stone walls. 6% of homes have mud/wood or mud/cement walls. 1% has wood walls. 7% have corrugated iron walls. Less than 1% has grass/thatched or tin/other walls.

Kangundo constituency has the highest share of brick/stone walls at 98%. That is 42 percentage points above Mavoko constituency, which has the lowest share of brick/stone walls. Kangundo constituency is 12 percentage points above the county average. Three wards, Kangundo Central, Matungulu East and Kangundo East, have the highest share of brick/stone walls at 99% each. That is twice Athi River ward, which has the lowest share of mud with wood/cement walls. Kangundo Central, Matungulu East and Kangundo East wards are 13 percentage points above the county average.

Masinga and Yatta constituencies have the highest share of mud with wood/cement walls at 11% each. That is six times Kangundo constituency, which has the lowest share of mud with wood/cement walls. Masinga and Yatta constituencies are 5 percentage points above the county average. Katangi ward has the highest share of mud with wood/cement walls at 19% each. That is 19 percentage points above Kangundo Central ward, which has the lowest share of brick/stone walls. Katangi ward is 13 percentage points above the county average.

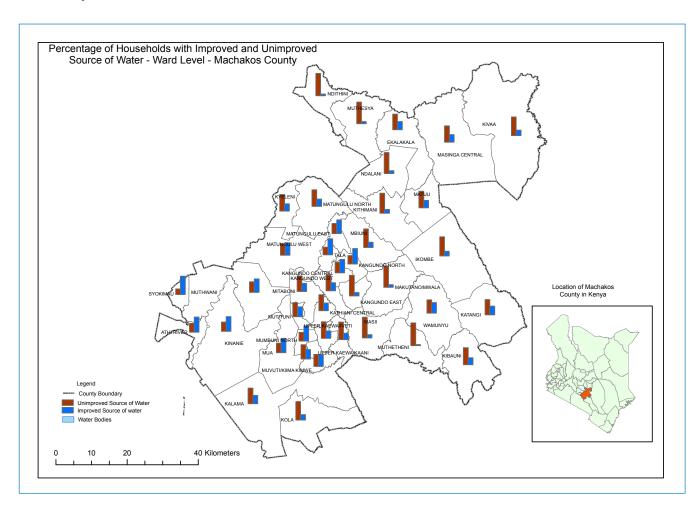
Water

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 Machakos County, 37% of residents use improved sources of water, with the rest relying on unimproved sources. Use of improved sources is mostly common in male headed households at 39% as compared with female headed households at 33%.

Mavoko constituency has the highest share of residents using improved sources of water at 65%. That is three times Mwala constituency, which has the lowest share using improved sources of water. Mavoko constituency is 28 percentage points above the county average. Syokimau ward has the highest share of residents using improved sources of water at 77%. That is 15 times Muthetheni ward, which has the lowest share using improved sources of water. Syokimau ward is 40 percentage points above the county average.

Figure 22.9: Machakos County-Percentage of Households with Improved and Unimproved Sources of Water by Ward

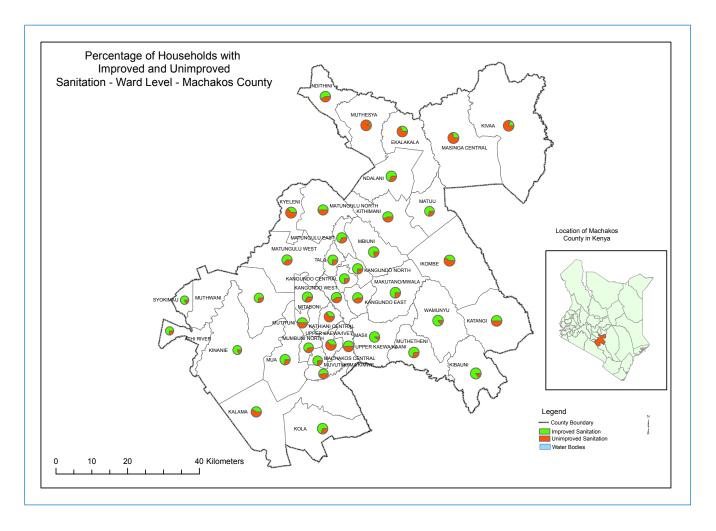


Sanitation

A total of 61% of residents in Machakos County use improved sanitation, while the rest use unimproved sanitation. Use of improved sanitation is slightly higher in male headed households at 62% compared with female headed households at 52%.

Mwala constituency has the highest share of residents using improved sanitation at 81%. That is almost three times Masinga constituency, which has the lowest share using improved sanitation. Mwala constituency is 20 percentage points above the county average. Masii ward has the highest share of residents using improved sanitation at 91%. That is 11 times Muthesya ward, which has the lowest share using improved sanitation. Masii ward is 30 percentage points above the county average.

Figure 22.10: Machakos County –Percentage of Households with Improved and Unimproved Sanitation by Ward



Machakos County Annex Tables

22. MACHAKOS

Table 22.1: Gender, Age group, Demographic Indicators and Households Size by County Constituency and Wards

	Gender			Age group						Demographic indicators	ic indicator	S		Prortion	Prortion of HH Members:	nbers:	
County/Constituency/ Wards	Total Pop	Male	Female	0-5 yrs	0-14 yrs	10-18 yrs	15-34 yrs	15-64 yrs	65+ yrs	sex Ratio	Total depen- dancy Ratio	Child de- pendancy Ratio	aged de- pendancy ratio	0-3	4-6	1 +2	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
Machakos County	1,084,631	535,404	549,227	175,652	427,023	233,096	374,537	603,316	54,292	0.975	0.798	0.708	0.090	42.3	42.6	15.1	260,780
Masinga Constituency	125,222	60,643	64,579	22,546	55,880	30,302	38,799	63,033	6,309	0.939	0.987	0.887	0.100	33.7	45.5	20.9	26892
Kivaa	33,779	16,017	17,762	6,030	14,995	8,375	10,782	17,173	1,611	0.902	0.967	0.873	0.094	34.7	1.4	21.1	7296
Masinga Central	32,905	15,803	17,102	6,013	14,992	8,083	10,221	16,350	1,563	0.924	1.013	0.917	960:0	30.4	46.3	23.2	6803
Ekalakala	18,816	9,166	9,650	3,268	8,099	4,422	5,891	9,627	1,090	0.950	0.955	0.841	0.113	34.0	47.6	18.4	4133
Muthesya	17,145	8,391	8,754	3,178	7,889	4,221	5,022	8,391	865	0.959	1.043	0.940	0.103	34.7	44.4	50.9	3698
Ndithini	22,577	11,266	11,311	4,057	9,905	5,201	6,883	11,492	1,180	966.0	0.965	0.862	0.103	35.4	45.4	19.2	4962
Yatta Constituency	145,159	096'69	75,199	25,552	62,916	34,131	46,225	74,919	7,324	0.930	0.938	0.840	0.098	38.2	42.9	19.0	32655
Ndalani	29,413	14,101	15,312	5,381	12,807	6,725	8,940	14,879	1,727	0.921	0.977	0.861	0.116	36.3	46.4	17.3	6618
Matuu	26,573	13,040	13,533	4,253	10,353	5,645	9,789	15,092	1,128	0.964	0.761	0.686	0.075	49.3	36.7	14.0	6901
Kithimani	32,827	16,263	16,564	5,625	13,842	7,345	10,478	17,320	1,665	0.982	0.895	0.799	960:0	40.9	42.1	17.0	6692
Ikombe	34,643	16,325	18,318	6,287	15,884	9,017	10,453	16,988	1,771	0.891	1.039	0.935	0.104	27.8	47.2	25.1	6089
Katangi	21,703	10,231	11,472	4,006	10,030	5,399	6,565	10,640	1,033	0.892	1.040	0.943	0.097	35.0	42.1	23.0	4628

Kangundo Constit- uency	93,776	45,897	47,879	14,658	35,774	19,902	30,170	51,809	6,193	0.959	0.810	0.690	0.120	37.6	48.3	14.1	21841
Kangundo North	22,257	10,837	11,420	3,569	8,550	4,689	6,938	12,142	1,565	0.949	0.833	0.704	0.129	35.9	49.4	14.7	5091
Kangundo Central	24,457	12,099	12,358	3,618	8,701	4,852	8,341	14,264	1,492	0.979	0.715	0.610	0.105	42.2	46.2	11.6	6037
Kangundo East	21,475	10,453	11,022	3,441	8,510	4,652	6,555	11,461	1,504	0.948	0.874	0.743	0.131	35.6	49.5	14.9	4902
Kangundo West	25,587	12,508	13,079	4,030	10,013	5,709	8,336	13,942	1,632	0.956	0.835	0.718	0.117	35.9	48.6	15.5	5811
Matungulu Constit- uency	123,600	61,576	62,024	20,843	49,434	25,535	41,194	68,019	6,147	0.993	0.817	0.727	060'0	37.4	45.8	16.8	28183
Tala	25,494	12,618	12,876	3,853	9,019	4,805	9,516	15,228	1,247	0.980	0.674	0.592	0.082	43.1	44.0	12.9	6284
Matungulu North	24,897	12,550	12,347	4,431	10,588	5,232	7,863	13,205	1,104	1.016	0.885	0.802	0.084	38.9	43.8	17.2	5759
Matungulu East	21,707	10,533	11,174	3,610	8,639	4,236	6,524	11,574	1,494	0.943	0.875	0.746	0.129	35.4	48.2	16.4	4864
Matungulu West	33,808	17,045	16,763	5,657	13,365	7,239	11,626	18,903	1,540	1.017	0.788	0.707	0.081	37.5	46.8	15.7	7792
Kyeleni	17,694	8,830	8,864	3,292	7,823	4,023	5,665	9,109	762	966.0	0.942	0.859	0.084	27.6	46.6	25.8	3484
Kathiani Constituency	103,868	49,785	54,083	17,485	43,258	23,374	32,589	54,639	5,971	0.921	0.901	0.792	0.109	34.9	48.6	16.5	23163
Mitaboni	30,042	14,394	15,648	5,029	12,446	6,642	9,364	15,723	1,873	0.920	0.911	0.792	0.119	36.7	48.5	14.7	6915
Kathiani Central	24,070	11,463	12,607	3,912	9,859	5,380	7,675	12,844	1,367	606.0	0.874	0.768	0.106	37.9	47.5	14.6	2606
Upper Kaewa/Iveti	26,853	13,011	13,842	4,733	11,405	950,9	8,375	14,006	1,442	0.940	0.917	0.814	0.103	31.6	50.3	18.1	5746
Upper Kaewa/Kaani	22,903	10,917	11,986	3,811	9,548	5,296	7,175	12,066	1,289	0.911	0.898	0.791	0.107	32.6	48.1	19.3	4896
Mavoko Constituency	136,181	73,942	62,239	20,632	42,134	19,195	64,828	92,360	1,687	1.188	0.474	0.456	0.018	64.7	28.4	6.9	44156
Athi River	50,854	26,956	23,898	7,929	15,762	6,812	24,846	34,648	444	1.128	0.468	0.455	0.013	68.3	27.0	4.7	17853
Kinanie	16,258	9,275	6,983	2,279	4,960	2,562	7,170	10,815	483	1.328	0.503	0.459	0.045	65.8	26.8	7.5	5367
Muthwani	28,324	15,297	13,027	4,288	9,920	5,069	11,250	17,851	553	1.174	0.587	0.556	0.031	44.9	38.3	16.9	6757
Syokimau	40,745	22,414	18,331	6,136	11,492	4,752	21,562	29,046	207	1.223	0.403	0.396	0.007	0.69	26.2	4.7	14179

Machakos Town Constituency	195,029	95,359	029'66	28,972	71,151	40,906	70,653	114,065	9,813	0.957	0.710	0.624	0.086	44.1	42.8	13.2	48438
Kalama	32,021	15,340	16,681	5,202	13,123	7,674	10,001	16,806	2,092	0.920	0.905	0.781	0.124	36.3	47.2	16.5	7274
Mua	25,354	13,085	12,269	3,641	9,283	5,482	9,191	14,950	1,121	1.067	969.0	0.621	0.075	37.9	45.0	17.0	5809
Mutituni	23,643	11,325	12,318	3,772	9,463	5,098	7,525	12,731	1,449	0.919	0.857	0.743	0.114	38.1	48.2	13.7	5508
Machakos Central	30,205	14,772	15,433	3,977	9,527	5,466	12,261	19,564	1,114	0.957	0.544	0.487	0.057	54.1	36.2	9.7	8505
Mumbuni North	27,912	13,693	14,219	3,889	9,240	5,342	10,883	17,397	1,275	0.963	0.604	0.531	0.073	46.4	42.9	10.7	7203
Muvuti/Kiima Kimwe	31,630	15,533	16,097	4,616	10,579	5,957	13,230	19,900	1,151	0.965	0.589	0.532	0.058	52.3	37.3	10.5	8717
Kola	24,264	11,611	12,653	3,875	9,936	5,887	7,562	12,717	1,611	0.918	0.908	0.781	0.127	35.2	47.8	17.0	5422
Mwala Constituency	161,796	78,242	83,554	24,964	66,476	39,751	50,079	84,472	10,848	0.936	0.915	0.787	0.128	34.2	47.5	18.3	35452
Mbiuni	31,755	15,345	16,410	5,255	13,341	7,304	9,725	16,374	2,040	0.935	0.939	0.815	0.125	33.5	48.7	17.8	2869
Makutano/Mwala	31,903	15,717	16,186	5,166	12,847	7,291	10,126	16,943	2,113	0.971	0.883	0.758	0.125	34.3	47.9	17.8	6002
Masii	32,102	15,701	16,401	4,562	12,362	7,767	10,493	17,729	2,011	0.957	0.811	0.697	0.113	36.3	46.7	17.0	7232
Muthetheni	22,700	10,678	12,022	3,409	9,463	5,935	6,682	11,470	1,767	0.888	0.979	0.825	0.154	34.2	47.4	18.5	4959
Wamunyu	25,452	12,325	13,127	3,817	10,322	6,326	2,960	13,343	1,787	0.939	0.908	0.774	0.134	34.5	46.5	19.0	5558
Kibauni	17,884	8,476	9,408	2,755	8,141	5,128	5,093	8,613	1,130	0.901	1.076	0.945	0.131	30.5	47.7	21.7	3707

Table 22.2: Employment by County, Constituency and Wards

County/Constituency/Wards	Work for pay	Family Business	Family Ag- ricultural Holding	Intern/ Volunteer	Retired/ Home- maker	Fulltime Student	Incapaci-	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
Machakos County	29.1	11.3	22.9	1.0	14.5	13.8	0.7	6.8	603,316
Masinga Constituency	18.5	11.2	31.3	0.9	18.2	13.5	0.7	5.7	63,033
Kivaa	19.7	12.2	19.7	1.1	24.3	15.4	0.8	6.8	17,173
Masinga Central	18.9	11.9	34.3	0.9	10.2	17.2	0.7	5.9	16,350
Ekalakala	20.3	11.1	29.5	1.9	10.0	18.5	0.6	8.0	9,627
Muthesya	15.2	7.1	40.7	0.4	24.7	6.7	0.6	4.7	8,391
Ndithini	16.9	11.8	38.8	0.4	22.4	6.3	0.9	2.5	11,492
Yatta Constituency	23.7	12.0	25.9	1.0	13.6	16.7	0.7	6.3	74,919
Ndalani	22.9	10.9	31.2	1.3	12.9	14.9	0.7	5.2	14,879
Matuu	32.4	15.1	22.3	1.3	8.8	13.5	0.5	6.1	15,092
Kithimani	25.2	12.0	21.8	1.2	12.9	16.2	0.6	10.0	17,320
Ikombe	17.6	10.6	30.8	0.6	18.2	17.8	0.8	3.6	16,988
Katangi	20.0	11.2	22.6	0.6	15.2	22.8	0.9	6.8	10,640
Kangundo Constituency	22.2	10.3	30.4	0.7	17.4	13.1	0.8	5.1	51,809
Kangundo North	21.8	8.9	28.7	0.7	20.2	14.3	0.9	4.5	12,142
Kangundo Central	24.2	12.9	33.0	0.7	13.9	10.4	0.8	4.1	14,264
Kangundo East	20.8	8.8	35.5	0.7	14.4	13.7	0.8	5.3	11,461
Kangundo West	21.7	9.9	25.1	0.9	20.9	14.3	0.7	6.5	13,942
Matungulu Constituency	27.9	12.1	23.9	0.9	16.2	12.8	0.7	5.7	68,019
Tala	30.7	18.9	13.4	1.2	15.3	11.9	0.7	8.0	15,228
Matungulu North	29.3	8.2	31.3	0.6	13.6	11.9	0.8	4.3	13,205
Matungulu East	26.1	7.9	26.1	0.8	18.8	14.8	0.9	4.6	11,574
Matungulu West	27.6	14.6	19.6	1.0	17.2	12.9	0.5	6.5	18,903
Kyeleni	24.1	6.5	36.8	0.5	15.8	12.7	0.4	3.3	9,109
Kathiani Constituency	22.5	10.8	34.4	1.0	10.7	14.6	1.0	5.0	54,639
Mitaboni	22.4	10.2	24.0	1.0	18.9	16.9	0.9	5.7	15,723
Kathiani Central	23.4	13.1	36.2	0.9	5.2	15.1	1.2	5.1	12,844

Upper Kaewa/Iveti	20.8	8.3	44.3	0.9	7.8	13.7	1.2	3.0	14,006
Upper Kaewa/Kaani	23.4	12.1	34.5	1.0	9.3	12.3	0.9	6.6	12,066
Mavoko Constituency	53.2	12.9	6.6	1.1	7.4	8.4	0.2	10.2	92,360
Athi River	55.1	13.0	4.5	1.3	7.2	7.8	0.2	11.1	34,648
Kinanie	46.2	10.3	15.3	1.6	6.3	9.9	0.3	10.0	10,815
Muthwani	46.2	13.5	11.9	1.0	7.3	10.3	0.2	9.7	17,851
Syokimau	57.9	13.2	2.8	0.8	8.2	7.3	0.1	9.7	29,046
Machakos Town Constituency	30.9	10.6	23.2	1.2	10.3	14.0	0.7	9.1	114,065
Kalama	21.8	7.1	34.9	0.9	11.3	16.5	0.8	6.6	16,806
Mua	32.2	6.7	21.5	1.2	14.0	14.8	0.5	9.3	14,950
Mutituni	21.7	11.9	39.1	1.3	4.3	12.1	0.8	8.8	12,731
Machakos Central	40.4	15.2	11.6	1.4	9.0	12.6	0.7	9.2	19,564
Mumbuni North	34.3	11.2	16.9	1.2	10.9	13.5	0.5	11.5	17,397
Muvuti/Kiima Kimwe	37.5	12.5	11.2	1.5	12.3	13.5	0.5	10.9	19,900
Kola	21.4	7.6	39.2	0.6	8.6	15.3	1.0	6.3	12,717
Mwala Constituency	22.5	10.0	18.4	1.0	25.3	17.5	0.8	4.5	84,472
Mbiuni	21.4	8.6	16.0	0.8	29.8	17.7	0.5	5.1	16,374
Makutano/Mwala	23.6	9.9	32.0	1.1	13.0	14.8	0.7	4.9	16,943
Masii	26.0	9.7	17.0	1.0	24.3	17.5	0.8	3.7	17,729
Muthetheni	19.5	8.7	12.1	1.2	31.1	20.6	0.8	6.1	11,470
Wamunyu	24.5	12.4	11.6	0.9	25.4	19.8	1.2	4.3	13,343
Kibauni	16.4	12.0	18.2	0.6	35.5	14.6	0.7	2.1	8,613

Table 22.3: Employment and Education Levels by County, Constituency and Wards

County /constituency/ Wards	Education Totallevel	Work for pay	Family Business	Family Agricultural Holding	Intern/ Volunteer	Retired/ Home- maker	Fulltime Student	Incapacitated	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
Machakos	Total	29.1	11.3	22.9	1.0	14.5	13.8	0.7	6.8	603,316
Machakos	None	22.9	10.1	28.5	2.7	23.2	1.6	4.6	6.4	25,604
Machakos	Primary	26.7	10.7	26.6	0.8	16.7	11.1	0.6	6.8	318,701
Machakos	Secondary+	32.7	12.0	17.8	1.1	10.9	18.2	0.3	7.0	259,011
Masinga Constituency	Total	18.5	11.2	31.3	0.9	18.2	13.5	0.7	5.7	63,033
Masinga Constituency	None	15.1	10.0	35.2	2.3	28.5	0.9	3.5	4.5	4,040
Masinga Constituency	Primary	17.7	11.1	33.3	0.8	19.5	11.2	0.6	5.8	40,479
Masinga Constituency	Secondary+	20.9	11.8	26.0	1.0	12.9	21.5	0.3	5.7	18,514
Kivaa Wards	Total	19.7	12.2	19.7	1.1	24.3	15.4	0.8	6.8	17,173
Kivaa Wards	None	13.9	10.5	22.0	2.2	42.1	1.0	3.4	4.9	1,234
Kivaa Wards	Primary	18.4	11.6	21.9	0.9	26.0	13.4	0.7	7.2	10,794
Kivaa Wards	Secondary+	23.9	13.8	14.7	1.3	16.4	23.1	0.3	6.5	5,145
Masinga Central Wards	Total	18.9	11.9	34.3	0.9	10.2	17.2	0.7	5.9	16,350
Masinga Central Wards	None	14.6	10.6	45.2	2.6	18.4	1.0	3.3	4.3	1,041
Masinga Central Wards	Primary	17.8	12.1	36.2	0.7	11.4	15.0	0.6	6.3	10,001
Masinga Central Wards	Secondary+	21.8	11.9	28.7	0.8	6.5	24.6	0.3	5.4	5,308
Ekalakala Wards	Total	20.3	11.1	29.5	1.9	10.0	18.5	0.6	8.0	9,627
Ekalakala Wards	None	13.9	11.4	41.6	3.3	17.8	1.9	5.0	5.0	517
Ekalakala Wards	Primary	20.6	11.2	32.1	2.1	11.4	13.9	0.5	8.2	5,701
Ekalakala Wards	Secondary+	20.8	10.9	23.4	1.4	6.5	28.8	0.2	8.0	3,409
Muthesya Wards	Total	15.2	7.1	40.7	0.4	24.7	6.7	0.6	4.7	8,391
Muthesya Wards	None	19.7	5.9	35.7	1.8	28.3	0.6	2.6	5.5	544
Muthesya Wards	Primary	14.6	7.0	41.5	0.3	25.1	6.2	0.6	4.9	5,889
Muthesya Wards	Secondary+	15.7	8.0	40.0	0.2	22.3	9.8	0.2	3.8	1,958
Ndithini Wards	Total	16.9	11.8	38.8	0.4	22.4	6.3	0.9	2.5	11,492
Ndithini Wards	None	14.9	10.2	38.6	1.6	27.7	0.3	3.8	2.8	704
Ndithini Wards	Primary	16.9	12.0	40.1	0.2	22.6	5.1	0.8	2.4	8,094
Ndithini Wards	Secondary+	17.5	11.4	35.2	0.6	20.4	11.5	0.4	3.0	2,694
Yatta Constituency	Total	23.7	12.0	25.9	1.0	13.6	16.7	0.7	6.3	74,919
Yatta Constituency	None	17.7	9.6	34.8	2.3	24.1	0.8	4.4	6.3	3,950

Yatta Constituency	Primary	22.8	11.6	28.0	0.8	15.1	14.7	0.6	6.5	45,069
Yatta Constituency	Secondary+	26.3	13.0	21.1	1.3	9.4	22.6	0.2	6.1	25,900
Ndalani Wards	Total	22.9	10.9	31.2	1.3	12.9	14.9	0.7	5.2	14,879
Ndalani Wards	None	20.1	9.1	38.7	2.2	20.8	0.4	3.6	5.2	758
Ndalani Wards	Primary	23.3	10.5	33.2	0.8	13.6	12.9	0.6	5.2	9,988
Ndalani Wards	Secondary+	22.7	12.4	25.0	2.3	9.9	22.4	0.4	5.0	4,133
Matuu Wards	Total	32.4	15.1	22.3	1.3	8.8	13.5	0.5	6.1	15,092
Matuu Wards	None	24.7	11.4	30.3	4.2	16.7	1.2	4.2	7.4	651
Matuu Wards	Primary	31.9	13.7	24.9	1.1	10.5	10.9	0.6	6.3	7,615
Matuu Wards	Secondary+	33.7	17.0	18.6	1.2	6.2	17.6	0.1	5.6	6,826
Kithimani Wards	Total	25.2	12.0	21.8	1.2	12.9	16.2	0.6	10.0	17,320
Kithimani Wards	None	19.2	9.3	24.8	3.4	27.1	1.1	4.9	10.3	739
Kithimani Wards	Primary	23.4	12.4	23.9	1.0	14.3	13.8	0.6	10.7	10,741
Kithimani Wards	Secondary+	29.4	11.5	17.6	1.5	8.6	22.4	0.2	8.8	5,840
Ikombe Wards	Total	17.6	10.6	30.8	0.6	18.2	17.8	0.8	3.6	16,988
Ikombe Wards	None	13.3	8.1	40.5	1.6	27.9	0.6	4.4	3.7	984
Ikombe Wards	Primary	17.6	10.7	31.4	0.4	19.6	16.4	0.6	3.3	10,425
Ikombe Wards	Secondary+	18.3	10.9	28.0	0.7	14.0	23.5	0.4	4.1	5,579
Katangi Wards	Total	20.0	11.2	22.6	0.6	15.2	22.8	0.9	6.8	10,640
Katangi Wards	None	13.9	10.8	36.9	0.6	25.7	1.0	4.9	6.2	818
Katangi Wards	Primary	18.5	10.9	24.4	0.5	17.2	20.8	0.7	7.0	6,300
Katangi Wards	Secondary+	23.9	11.7	15.8	0.8	9.2	31.7	0.2	6.8	3,522
Kangundo Constit- uency	Total	22.2	10.3	30.4	0.7	17.4	13.1	0.8	5.1	51,809
Kangundo Constit- uency	None	21.2	8.8	32.4	2.4	20.0	1.7	7.0	6.5	1,483
Kangundo Constit- uency	Primary	22.0	9.7	32.8	0.6	19.0	10.2	0.8	5.0	25,336
Kangundo Constit- uency	Secondary+	22.5	10.9	27.9	0.8	15.6	16.7	0.5	5.1	24,990
Kangundo North Wards	Total	21.8	8.9	28.7	0.7	20.2	14.3	0.9	4.5	12,142
Kangundo North Wards	None	24.1	6.0	32.5	3.2	19.3	2.8	7.6	4.4	249
Kangundo North Wards	Primary	22.1	7.8	31.9	0.6	21.8	11.2	0.9	3.8	5,755
Kangundo North Wards	Secondary+	21.5	10.1	25.6	0.8	18.6	17.7	0.7	5.2	6,138
Kangundo Central Wards	Total	24.2	12.9	33.0	0.7	13.9	10.4	0.8	4.1	14,264

Kangundo Central Wards	None	25.1	12.3	30.8	4.3	15.1	0.9	7.1	4.6	351
Kangundo Central Wards	Primary	23.0	12.4	37.0	0.4	15.0	7.4	0.9	3.9	6,247
Kangundo Central Wards	Secondary+	25.1	13.4	29.7	0.7	13.0	13.4	0.5	4.4	7,666
Kangundo East Wards	Total	20.8	8.8	35.5	0.7	14.4	13.7	0.8	5.3	11,461
Kangundo East Wards	None	17.5	4.9	43.3	1.2	16.0	1.5	8.6	7.1	326
Kangundo East Wards	Primary	20.3	8.5	37.0	0.6	15.9	11.6	0.7	5.5	5,958
Kangundo East Wards	Secondary+	21.7	9.3	33.4	0.8	12.6	16.9	0.5	5.0	5,177
Kangundo West Wards	Total	21.7	9.9	25.1	0.9	20.9	14.3	0.7	6.5	13,942
Kangundo West Wards	None	19.8	10.2	27.1	1.6	25.7	1.8	5.6	8.3	557
Kangundo West Wards	Primary	22.5	9.8	26.5	0.9	22.6	10.6	0.7	6.5	7,376
Kangundo West Wards	Secondary+	21.0	10.0	23.2	0.9	18.4	20.0	0.4	6.3	6,009
Matungulu Constit- uency	Total	27.9	12.1	23.9	0.9	16.2	12.8	0.7	5.7	68,019
Matungulu Constit- uency	None	25.0	10.5	26.1	3.4	21.3	1.9	4.7	7.2	2,616
Matungulu Constit- uency	Primary	28.4	11.0	26.9	0.6	17.4	9.8	0.6	5.2	37,366
Matungulu Constit- uency	Secondary+	27.5	13.7	19.6	1.0	14.0	17.7	0.4	6.1	28,037
Tala Wards	Total	30.7	18.9	13.4	1.2	15.3	11.9	0.7	8.0	15,228
Tala Wards	None	23.3	17.6	13.5	4.7	24.1	2.9	4.9	9.2	490
Tala Wards	Primary	30.8	18.9	15.7	0.9	16.7	8.7	0.7	7.7	6,709
Tala Wards	Secondary+	31.2	19.1	11.4	1.3	13.6	15.1	0.4	8.1	8,029
Matungulu North Wards	Total	29.3	8.2	31.3	0.6	13.6	11.9	0.8	4.3	13,205
Matungulu North Wards	None	30.3	6.4	32.1	1.8	18.4	0.6	5.7	4.8	673
Matungulu North Wards	Primary	30.0	7.4	33.6	0.4	14.4	9.2	0.6	4.4	8,567
Matungulu North Wards	Secondary+	27.5	10.3	26.0	0.9	11.1	19.6	0.5	4.2	3,965
Matungulu East Wards	Total	26.1	7.9	26.1	0.8	18.8	14.8	0.9	4.6	11,574
Matungulu East Wards	None	24.5	6.3	27.2	5.4	23.3	3.0	6.3	3.9	331
Matungulu East Wards	Primary	27.2	7.6	28.0	0.6	20.5	10.9	1.0	4.3	5,901
Matungulu East Wards	Secondary+	24.9	8.4	24.0	0.8	16.6	19.8	0.4	5.0	5,342
Matungulu West Wards	Total	27.6	14.6	19.6	1.0	17.2	12.9	0.5	6.5	18,903
Matungulu West Wards	None	20.7	14.0	20.9	4.1	23.8	2.3	3.5	10.7	748
Matungulu West Wards	Primary	28.5	13.6	21.8	0.8	18.8	10.1	0.5	5.9	10,121
Matungulu West Wards	Secondary+	27.2	15.9	16.8	1.0	14.6	17.4	0.3	6.9	8,034

Kyeleni Wards	Total	24.1	6.5	36.8	0.5	15.8	12.7	0.4	3.3	9,109
Kyeleni Wards	None	26.5	5.4	41.2	1.6	15.8	1.1	4.0	4.6	374
Kyeleni Wards	Primary	24.5	6.4	37.4	0.3	17.3	10.2	0.4	3.4	6,068
Kyeleni Wards	Secondary+	22.8	6.8	34.7	0.7	12.5	19.8	0.0	2.9	2,667
Kathiani Constituency	Total	22.5	10.8	34.4	1.0	10.7	14.6	1.0	5.0	54,639
Kathiani Constituency	None	21.7	11.3	37.5	2.8	13.2	1.7	6.3	5.6	2,353
Kathiani Constituency	Primary	22.3	11.1	37.5	0.7	11.4	11.4	1.0	4.7	32,421
Kathiani Constituency	Secondary+	22.9	10.3	28.9	1.1	9.3	21.4	0.5	5.6	19,865
Mitaboni Wards	Total	22.4	10.2	24.0	1.0	18.9	16.9	0.9	5.7	15,723
Mitaboni Wards	None	21.0	10.6	25.0	2.3	28.3	1.7	6.5	4.8	605
Mitaboni Wards	Primary	22.3	9.5	25.9	0.9	21.7	13.3	0.9	5.6	8,500
Mitaboni Wards	Secondary+	22.7	11.0	21.6	1.0	14.5	22.9	0.4	5.9	6,618
Kathiani Central Wards	Total	23.4	13.1	36.2	0.9	5.2	15.1	1.2	5.1	12,844
Kathiani Central Wards	None	21.2	14.8	45.4	2.8	4.0	2.2	5.4	4.2	500
Kathiani Central Wards	Primary	22.1	14.1	40.1	0.7	5.9	11.4	1.2	4.4	7,458
Kathiani Central Wards	Secondary+	25.5	11.4	29.2	1.0	4.1	22.1	0.6	6.1	4,886
Upper Kaewa/Iveti Wards	Total	20.8	8.3	44.3	0.9	7.8	13.7	1.2	3.0	14,006
Upper Kaewa/Iveti Wards	None	24.4	7.8	43.9	2.8	5.8	2.3	7.6	5.4	643
Upper Kaewa/Iveti Wards	Primary	21.2	8.3	47.2	0.6	8.1	10.8	1.0	2.7	8,813
Upper Kaewa/Iveti Wards	Secondary+	19.6	8.4	38.5	1.2	7.6	20.9	0.5	3.3	4,550
Upper Kaewa/Kaani Wards	Total	23.4	12.1	34.5	1.0	9.3	12.3	0.9	6.6	12,066
Upper Kaewa/Kaani Wards	None	20.0	12.9	36.9	3.3	13.6	0.5	5.3	7.6	605
Upper Kaewa/Kaani Wards	Primary	23.6	13.0	36.5	0.7	9.2	10.0	0.8	6.3	7,650
Upper Kaewa/Kaani Wards	Secondary+	23.5	10.2	29.9	1.3	8.8	18.9	0.4	7.1	3,811
Mavoko Constituency	Total	53.2	12.9	6.6	1.1	7.4	8.4	0.2	10.2	92,360
Mavoko Constituency	None	45.6	12.7	13.6	3.2	10.6	1.7	1.3	11.4	2,863
Mavoko Constituency	Primary	51.7	12.2	8.9	1.0	9.6	4.7	0.2	11.7	34,016
Mavoko Constituency	Secondary+	54.5	13.2	4.9	1.1	5.9	11.0	0.1	9.3	55,481
Athi River Wards	Total	55.1	13.0	4.5	1.3	7.2	7.8	0.2	11.1	34,648
Athi River Wards	None	47.6	13.5	10.4	4.5	11.2	1.7	1.6	9.6	961
Athi River Wards	Primary	52.3	13.8	5.7	1.1	9.9	4.2	0.2	12.7	11,819

Athi River Wards	Secondary+	56.9	12.6	3.5	1.2	5.6	9.9	0.1	10.2	21,868
Kinanie Wards	Total	46.2	10.3	15.3	1.6	6.3	9.9	0.3	10.0	10,815
Kinanie Wards	None	49.2	9.2	15.6	3.0	7.1	1.4	1.4	13.1	435
Kinanie Wards	Primary	47.1	9.4	16.2	1.6	7.4	5.7	0.3	12.3	5,589
Kinanie Wards	Secondary+	44.8	11.5	14.2	1.5	5.0	15.6	0.2	7.1	4,791
Muthwani Wards	Total	46.2	13.5	11.9	1.0	7.3	10.3	0.2	9.7	17,851
Muthwani Wards	None	38.7	13.3	21.0	2.2	9.1	1.3	1.9	12.5	690
Muthwani Wards	Primary	47.7	11.5	15.1	0.7	8.5	6.0	0.2	10.4	7,477
Muthwani Wards	Secondary+	45.6	15.0	8.7	1.1	6.2	14.3	0.1	8.9	9,684
Syokimau Wards	Total	57.9	13.2	2.8	0.8	8.2	7.3	0.1	9.7	29,046
Syokimau Wards	None	47.4	13.1	9.7	2.6	12.9	2.2	0.5	11.7	777
Syokimau Wards	Primary	57.2	12.6	3.4	0.6	11.5	3.6	0.2	11.0	9,131
Syokimau Wards	Secondary+	58.7	13.5	2.3	0.8	6.4	9.3	0.1	9.0	19,138
Machakos Town Constituency	Total	30.9	10.6	23.2	1.2	10.3	14.0	0.7	9.1	114,065
Machakos Town Constituency	None	24.5	10.2	30.4	3.0	14.8	2.9	5.7	8.5	3,883
Machakos Town Constituency	Primary	28.3	9.7	28.1	0.9	12.5	9.9	0.7	10.0	55,345
Machakos Town Constituency	Secondary+	34.0	11.5	17.8	1.4	7.7	18.9	0.3	8.3	54,837
Kalama Wards	Total	21.8	7.1	34.9	0.9	11.3	16.5	0.8	6.6	16,806
Kalama Wards	None	16.2	5.0	46.1	2.7	16.6	1.6	6.4	5.5	562
Kalama Wards	Primary	21.4	6.8	38.8	0.6	12.5	12.1	0.7	7.1	9,320
Kalama Wards	Secondary+	23.0	7.7	28.9	1.0	9.3	23.7	0.5	6.1	6,924
Mua Wards	Total	32.2	6.7	21.5	1.2	14.0	14.8	0.5	9.3	14,950
Mua Wards	None	29.9	6.7	26.1	2.1	21.0	3.0	4.1	7.2	568
Mua Wards	Primary	33.6	5.6	23.1	0.9	16.3	10.6	0.5	9.5	8,395
Mua Wards	Secondary+	30.4	8.1	18.7	1.4	10.1	21.8	0.2	9.3	5,987
Mutituni Wards	Total	21.7	11.9	39.1	1.3	4.3	12.1	0.8	8.8	12,731
Mutituni Wards	None	17.7	9.5	48.2	3.2	5.1	1.4	5.8	9.3	571
Mutituni Wards	Primary	21.1	11.3	42.9	1.1	4.9	9.0	0.7	9.0	7,190
Mutituni Wards	Secondary+	23.0	13.0	32.4	1.5	3.4	17.8	0.4	8.5	4,970
Machakos Central Wards	Total	40.4	15.2	11.6	1.4	9.0	12.6	0.7	9.2	19,564
Machakos Central Wards	None	30.3	19.5	15.3	3.0	12.2	2.8	5.1	11.8	568

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Machakos Central Wards	Primary	36.1	15.3	15.6	1.0	11.9	8.3	0.8	11.0	7,777
Machakos Central Wards	Secondary+	43.9	14.9	8.7	1.5	6.7	16.1	0.4	7.7	11,219
Mumbuni North Wards	Total	34.3	11.2	16.9	1.2	10.9	13.5	0.5	11.5	17,397
Mumbuni North Wards	None	28.8	9.0	23.4	5.1	16.2	2.9	5.8	8.8	487
Mumbuni North Wards	Primary	30.7	10.6	21.8	0.9	13.0	9.2	0.6	13.3	7,548
Mumbuni North Wards	Secondary+	37.5	11.9	12.7	1.2	8.9	17.6	0.2	10.2	9,362
Muvuti/Kiima Kimwe Wards	Total	37.5	12.5	11.2	1.5	12.3	13.5	0.5	10.9	19,900
Muvuti/Kiima Kimwe Wards	None	29.6	13.1	15.5	2.6	18.3	6.4	4.4	10.2	689
Muvuti/Kiima Kimwe Wards	Primary	32.4	12.0	14.4	0.9	17.5	8.9	0.6	13.3	8,551
Muvuti/Kiima Kimwe Wards	Secondary+	42.0	12.9	8.5	1.9	7.8	17.7	0.2	9.0	10,660
Kola Wards	Total	21.4	7.6	39.2	0.6	8.6	15.3	1.0	6.3	12,717
Kola Wards	None	17.1	7.1	43.4	2.5	13.2	1.1	9.6	5.9	438
Kola Wards	Primary	21.9	7.0	43.2	0.5	9.4	11.2	0.9	6.1	6,564
Kola Wards	Secondary+	21.2	8.3	34.3	0.7	7.3	21.2	0.5	6.5	5,715
Mwala Constituency	Total	22.5	10.0	18.4	1.0	25.3	17.5	0.8	4.5	84,472
Mwala Constituency	None	18.5	8.5	20.0	2.7	40.6	1.2	5.2	3.2	4,416
Mwala Constituency	Primary	22.4	9.8	19.7	0.8	27.3	15.1	0.7	4.3	48,669
Mwala Constituency	Secondary+	23.3	10.7	16.1	1.0	20.1	23.5	0.3	5.0	31,387
Mbiuni Wards	Total	21.4	8.6	16.0	0.8	29.8	17.7	0.5	5.1	16,374
Mbiuni Wards	None	17.5	6.2	16.7	3.2	48.4	1.1	2.6	4.4	817
Mbiuni Wards	Primary	21.2	8.9	16.3	0.7	31.7	15.9	0.5	4.9	10,178
Mbiuni Wards	Secondary+	22.3	8.3	15.5	0.8	23.4	23.7	0.3	5.7	5,379
Makutano/Mwala Wards	Total	23.6	9.9	32.0	1.1	13.0	14.8	0.7	4.9	16,943
Makutano/Mwala Wards	None	20.5	9.7	33.8	3.9	20.6	0.8	5.7	5.0	761
Makutano/Mwala Wards	Primary	22.9	9.6	34.7	0.9	13.8	12.8	0.6	4.7	10,328
Makutano/Mwala Wards	Secondary+	25.2	10.3	26.9	1.2	10.6	20.1	0.4	5.3	5,854
Masii Wards	Total	26.0	9.7	17.0	1.0	24.3	17.5	0.8	3.7	17,729
Masii Wards	None	18.3	9.1	17.8	2.7	39.9	2.2	7.8	2.3	695
Masii Wards	Primary	27.0	9.4	18.4	0.9	27.9	12.7	0.8	3.0	8,916
Masii Wards	Secondary+	25.4	10.1	15.4	1.1	19.0	24.2	0.3	4.4	8,118
Muthetheni Wards	Total	19.5	8.7	12.1	1.2	31.1	20.6	0.8	6.1	11,470

Muthetheni Wards	None	21.1	7.3	14.5	2.4	44.4	1.7	4.1	4.6	703
Muthetheni Wards	Primary	18.5	8.1	13.0	1.0	33.9	18.7	0.7	6.2	6,904
Widthethern Wards	Fillialy	10.5	0.1	13.0	1.0	33.3	10.7	0.7	0.2	0,904
Muthetheni Wards	Secondary+	20.9	10.0	10.0	1.3	23.7	27.4	0.3	6.4	3,863
Wamunyu Wards	Total	24.5	12.4	11.6	0.9	25.4	19.8	1.2	4.3	13,343
Wamunyu Wards	None	21.8	8.4	17.3	2.5	40.6	1.0	6.5	2.0	800
Wamunyu Wards	Primary	25.5	11.8	12.5	0.7	27.7	16.9	1.1	3.9	7,455
	,,	1	1110	1						1,100
Wamunyu Wards	Secondary+	23.4	13.7	9.4	1.0	19.6	27.1	0.5	5.3	5,088
Kibauni Wards	Total	16.4	12.0	18.2	0.6	35.5	14.6	0.7	2.1	8,613
Kibauni Wards	None	10.6	11.1	20.0	1.3	51.3	0.3	4.7	0.8	640
Kibauni Wards	Primary	16.0	11.8	18.4	0.5	35.9	14.7	0.5	2.3	4,888
Kibauni Wards	Secondary+	18.3	12.5	17.4	0.5	31.5	17.4	0.2	2.2	3,085

Table 22.4: Employment and Education Levels in Male Headed Household by County, Constituency and Wards

County, Constituency and Wards	Education Level reached	Work for Pay	Family Business	Family Agricultural holding	Internal/ Volunteer	Retired/ Home- maker	Fulltime Student	Incapaci- tated	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
Machakos	Total	32.7	11.8	21.9	1.0	13.2	11.9	0.6	7.0	410,210
Machakos	None	27.0	10.1	26.6	2.6	21.0	1.6	4.1	7.1	14,515
Machakos	Primary	29.7	11.2	25.8	0.8	15.5	9.5	0.6	6.9	213,582
Machakos	Secondary+	36.7	12.7	16.9	1.1	9.9	15.4	0.3	7.0	182,113

Masinga Constituency	Total	21.1	11.8	31.6	1.0	16.2	11.9	0.6	5.9	39,420
Masinga Constituency	None	18.6	9.4	34.2	1.9	26.5	0.9	3.2	5.3	2,107
Masinga Constituency	Primary	19.6	11.7	33.8	0.8	17.7	9.8	0.6	6.0	25,413
Masinga Constituency	Secondary+	24.6	12.5	26.3	1.1	11.1	18.4	0.3	5.8	11,900
Kivaa Ward	Total	23.4	13.2	19.1	1.2	21.9	13.2	0.6	7.5	10,132
Kivaa Ward	None	16.7	10.3	21.4	1.7	39.9	0.8	2.3	6.7	639
Kivaa Ward	Primary	21.2	12.7	21.0	0.9	24.1	11.3	0.6	8.1	6,295
Kivaa Ward	Secondary+	29.0	14.7	14.9	1.6	13.8	19.4	0.3	6.5	3,198
Masinga Central Ward	Total	21.1	12.7	33.3	0.9	9.5	15.7	0.6	6.2	10,142
Masinga Central Ward	None	17.4	9.7	42.3	2.9	18.7	0.5	3.8	4.6	546
Masinga Central Ward	Primary	19.1	12.9	35.8	0.7	10.9	13.6	0.5	6.5	6,206
Masinga Central Ward	Secondary+	25.3	12.7	27.4	0.9	5.5	21.9	0.3	5.9	3,390
Ekalakala Ward	Total	22.8	11.5	29.5	2.0	9.0	16.9	0.6	7.6	6,122
Ekalakala Ward	None	19.8	10.9	37.0	2.3	18.3	2.3	4.3	5.1	257
Ekalakala Ward	Primary	22.2	11.3	32.4	2.4	10.4	13.0	0.5	7.8	3,651
Ekalakala Ward	Secondary+	24.2	11.9	23.9	1.4	5.8	25.0	0.2	7.6	2,214
Muthesya Ward	Total	17.9	7.5	43.2	0.4	19.9	5.6	0.5	5.1	5,336
Muthesya Ward	None	24.9	5.5	40.3	0.7	19.5	1.0	3.4	4.8	293
Muthesya Ward	Primary	17.0	7.6	43.2	0.4	20.4	5.4	0.4	5.5	3,778
Muthesya Ward	Secondary+	18.7	7.6	43.8	0.2	18.4	7.4	0.1	3.8	1,265
Ndithini Ward	Total	18.8	12.2	39.2	0.4	20.5	5.5	0.7	2.7	7,688
Ndithini Ward	None	17.7	9.4	37.4	1.6	26.1	0.3	3.0	4.6	372
Ndithini Ward	Primary	18.4	12.3	40.8	0.2	20.8	4.4	0.7	2.4	5,483
Ndithini Ward	Secondary+	20.0	12.6	34.9	0.7	18.4	9.6	0.4	3.4	1,833
Yatta Constituency	Total	26.8	13.0	24.7	1.1	12.5	14.5	0.6	6.7	47,497
Yatta Constituency	None	19.9	10.0	32.4	2.2	23.6	0.7	4.4	6.7	2,056
Yatta Constituency	Primary	25.6	12.6	26.8	0.8	14.2	12.4	0.6	6.9	28,499
Yatta Constituency	Secondary+	29.7	14.1	20.3	1.4	8.4	19.7	0.2	6.4	16,942
Ndalani Ward	Total	26.5	11.8	29.8	1.4	11.6	13.0	0.7	5.3	9,062
Ndalani Ward	None	22.5	10.0	34.7	2.8	20.6	0.3	4.2	5.0	360
Ndalani Ward	Primary	26.7	11.4	31.9	0.9	12.5	10.7	0.6	5.3	6,060

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Ndalani Ward	Secondary+	26.7	13.0	24.3	2.3	8.3	19.8	0.4	5.3	2,642
Matuu Ward	Total	34.6	16.2	21.8	1.2	8.1	11.7	0.5	5.9	10,331
Matuu Ward	None	27.5	12.8	29.2	3.6	14.4	1.4	4.2	6.9	360
Matuu Ward	Primary	35.0	14.3	24.1	1.0	9.9	9.1	0.6	6.0	5,270
Matuu Ward	Secondary+	34.7	18.5	18.6	1.2	5.7	15.4	0.1	5.7	4,701
Kithimani Ward	Total	27.4	12.3	21.8	1.4	12.0	14.2	0.5	10.3	11,811
Kithimani Ward	None	21.4	9.5	22.4	3.4	27.0	0.7	4.1	11.4	411
Kithimani Ward	Primary	24.9	12.9	23.9	1.1	13.5	12.1	0.5	11.2	7,314
Kithimani Ward	Secondary+	32.6	11.7	18.1	1.7	7.7	19.4	0.1	8.8	4,086
Ikombe Ward	Total	20.3	12.4	29.0	0.6	17.6	15.6	0.7	3.8	10,117
Ikombe Ward	None	14.8	8.3	38.0	1.1	29.2	0.6	4.4	3.6	527
Ikombe Ward	Primary	19.7	12.7	29.9	0.4	19.1	14.1	0.5	3.4	6,233
Ikombe Ward	Secondary+	22.1	12.6	25.8	0.8	13.0	20.6	0.4	4.6	3,357
Katangi Ward	Total	23.8	11.8	20.8	0.6	14.0	20.2	0.9	7.8	6,176
Katangi Ward	None	16.1	10.1	36.4	0.8	23.6	0.8	5.3	7.0	398
Katangi Ward	Primary	21.9	11.6	22.9	0.5	16.3	17.8	0.7	8.3	3,622
Katangi Ward	Secondary+	28.5	12.6	14.6	0.8	8.3	27.9	0.2	7.2	2,156
Kangundo Constit- uency	Total	24.7	10.9	30.2	0.8	16.3	11.4	0.7	5.1	34,964
Kangundo Constit- uency	None	23.8	8.6	31.8	2.7	19.3	1.7	5.7	6.5	846
Kangundo Constit- uency	Primary	23.8	10.1	32.7	0.6	18.0	8.9	0.6	5.2	17,057
Kangundo Constit- uency	Secondary+	25.6	11.8	27.6	0.8	14.5	14.3	0.5	4.9	17,061
Kangundo North Ward	Total	23.9	9.7	29.3	0.8	18.3	12.5	0.8	4.6	8,008
Kangundo North Ward	None	29.0	5.8	33.3	2.9	15.2	3.6	5.1	5.1	138
Kangundo North Ward	Primary	23.4	8.1	33.1	0.5	20.0	10.2	0.7	4.0	3,761
Kangundo North Ward	Secondary+	24.2	11.3	25.8	0.9	16.9	15.0	0.7	5.1	4,109
Kangundo Central Ward	Total	26.1	13.6	32.4	0.7	13.6	9.1	0.7	3.9	10,031
Kangundo Central Ward	None	28.7	13.4	27.2	4.5	15.3	0.5	5.4	5.0	202
Kangundo Central Ward	Primary	24.3	13.1	36.5	0.4	15.1	6.1	0.7	3.9	4,310
Kangundo Central Ward	Secondary+	27.4	14.0	29.4	0.7	12.4	11.8	0.5	4.0	5,519
Kangundo East Ward	Total	23.1	9.4	34.9	0.7	13.7	12.2	0.7	5.5	7,612
Kangundo East Ward	None	15.2	4.5	43.8	1.7	18.0	1.1	7.9	7.9	178

	5.	04.0	0.0	00.7	0.5	45.0	40.4	0.0	5.0	0.047
Kangundo East Ward	Primary	21.8	8.9	36.7	0.5	15.2	10.4	0.6	5.9	3,947
Kangundo East Ward	Secondary+	24.9	10.2	32.3	0.8	11.8	14.7	0.4	4.9	3,487
Kangundo West Ward	Total	25.1	10.3	24.8	0.9	19.7	12.1	0.6	6.4	9,313
Kangundo West Ward	None	23.2	9.1	27.4	2.1	24.1	1.8	4.9	7.3	328
Kangundo West Ward	Primary	25.3	10.0	26.2	0.8	21.3	9.3	0.6	6.6	5,039
Kangundo West Ward	Secondary+	25.1	10.8	22.8	0.9	17.4	16.5	0.3	6.2	3,946
Matungulu Constit- uency	Total	30.2	12.6	23.7	0.8	15.1	11.4	0.6	5.5	47,349
Matungulu Constit- uency	None	27.3	10.3	24.2	3.5	20.3	2.1	4.0	8.2	1,465
Matungulu Constit- uency	Primary	30.4	11.3	26.7	0.6	16.5	8.8	0.5	5.1	26,087
Matungulu Constit- uency	Secondary+	30.2	14.5	19.7	1.0	12.9	15.5	0.3	5.9	19,797
Tala Ward	Total	32.0	20.0	13.3	1.1	14.8	10.7	0.6	7.6	10,617
Tala Ward	None	28.9	18.5	11.9	4.4	20.4	2.6	4.8	8.5	270
Tala Ward	Primary	31.7	19.6	15.7	0.7	16.3	7.9	0.6	7.4	4,659
Tala Ward	Secondary+	32.3	20.4	11.4	1.2	13.3	13.4	0.3	7.6	5,688
Matungulu North Ward	Total	31.9	8.2	31.7	0.6	12.7	10.5	0.6	4.0	9,053
Matungulu North Ward	None	33.0	4.9	31.5	1.7	18.9	-	4.0	6.0	349
Matungulu North Ward	Primary	32.3	7.1	34.0	0.4	13.4	8.4	0.5	4.0	5,967
Matungulu North Ward	Secondary+	30.9	10.9	26.7	0.9	10.4	16.3	0.4	3.7	2,737
Matungulu East Ward	Total	28.8	8.5	26.0	0.8	17.4	13.2	0.7	4.6	7,893
Matungulu East Ward	None	27.9	6.0	24.0	5.5	23.5	4.9	3.8	4.4	183
Matungulu East Ward	Primary	29.5	8.1	27.6	0.5	19.3	9.6	0.9	4.5	3,989
Matungulu East Ward	Secondary+	28.1	9.0	24.5	0.9	15.1	17.4	0.4	4.7	3,721
Matungulu West Ward	Total	30.6	15.0	19.1	1.0	15.8	11.3	0.4	6.6	13,458
		20.8		20.0	4.6	22.3	2.6			461
Matungulu West Ward	None		13.4					3.0	13.2	
Matungulu West Ward	Primary	31.3	14.0	21.3	0.8	17.5	8.8	0.4	5.9	7,186
Matungulu West Ward	Secondary+	30.6	16.3	16.4	1.1	13.1	15.2	0.3	7.0	5,811
Kyeleni Ward	Total	25.6	6.7	36.6	0.5	14.9	11.8	0.5	3.3	6,328
Kyeleni Ward	None	29.7	5.4	37.6	1.5	15.3	1.5	5.4	3.5	202
Kyeleni Ward	Primary	25.5	6.7	37.1	0.4	16.8	9.8	0.4	3.4	4,286
Kyeleni Ward	Secondary+	25.3	6.9	35.5	0.8	10.6	17.7	0.1	3.0	1,840
Kathiani Constituency	Total	24.9	11.3	34.5	0.9	9.6	12.9	1.0	4.9	35,497

Kathiani Constituency	None	23.9	12.5	34.8	2.2	12.5	1.9	6.3	5.9	1,292
Kathiani Constituency	Primary	24.2	11.4	37.8	0.6	10.3	10.2	1.0	4.6	21,112
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Kathiani Constituency	Secondary+	26.1	11.1	29.3	1.1	8.3	18.3	0.4	5.4	13,093
Mitaboni Ward	Total	25.5	11.1	24.2	1.1	16.6	14.8	0.9	5.9	9,756
Mitaboni Ward	None	24.2	11.3	23.6	1.6	26.1	1.6	6.3	5.3	318
Mitaboni Ward	Primary	24.7	10.2	26.4	0.9	18.9	11.9	1.0	6.0	5,246
Mitaboni Ward	Secondary+	26.6	12.1	21.6	1.2	13.0	19.4	0.4	5.7	4,192
Kathiani Central Ward	Total	26.0	14.1	35.1	0.7	5.0	13.0	1.2	4.8	8,305
Kathiani Central Ward	None	22.7	18.4	40.8	1.1	4.3	2.2	7.6	2.9	277
Kathiani Central Ward	Primary	24.4	14.7	38.8	0.6	5.8	10.3	1.2	4.2	4,863
Kathiani Central Ward	Secondary+	28.7	12.6	29.0	0.9	3.9	18.2	0.5	6.0	3,165
Upper Kaewa/Iveti Ward	Total	22.0	8.3	45.3	0.8	7.5	12.3	1.0	2.7	9,519
Upper Kaewa/Iveti Ward	None	25.5	9.1	41.1	3.0	4.6	3.0	7.0	6.7	372
Upper Kaewa/Iveti Ward	Primary	21.7	8.3	48.3	0.5	8.2	9.8	0.9	2.3	6,022
Upper Kaewa/Iveti Ward	Secondary+	22.4	8.4	40.0	1.1	6.5	18.2	0.4	3.0	3,125
Upper Kaewa/Kaani Ward	Total	26.3	12.3	33.7	0.9	8.4	11.1	0.8	6.5	7,917
Upper Kaewa/Kaani Ward	None	22.8	12.3	33.5	2.8	15.1	0.9	4.6	8.0	325
Upper Kaewa/Kaani Ward	Primary	26.5	13.0	36.1	0.6	8.1	8.9	0.7	6.1	4,981
Upper Kaewa/Kaani Ward	Secondary+	26.5	10.7	29.2	1.3	8.2	16.6	0.3	7.1	2,611
Mavoko Constituency	Total	55.2	12.4	6.2	1.0	7.6	7.4	0.2	9.9	75,948
Mavoko Constituency	None	49.1	11.4	13.5	2.5	9.6	1.5	1.3	11.0	2,206
Mavoko Constituency	Primary	54.0	11.5	8.2	0.9	10.1	4.0	0.2	11.2	27,973
Mavoko Constituency	Secondary+	56.3	13.1	4.7	1.0	6.0	9.8	0.1	9.0	45,769
Athi River Ward	Total	56.4	12.7	4.5	1.2	7.5	6.8	0.2	10.7	28,265
Athi River Ward	None	49.4	12.1	11.5	3.6	10.7	1.3	1.8	9.6	741
Athi River Ward	Primary	53.9	12.9	5.6	1.1	10.5	3.6	0.1	12.3	9,686
Athi River Ward	Secondary+	58.1	12.6	3.7	1.2	5.7	8.8	0.1	9.9	17,838
Kinanie Ward	Total	50.4	9.8	13.6	1.4	6.7	8.3	0.2	9.6	8,345
Kinanie Ward	None	57.0	7.6	14.6	2.5	6.4	0.3	1.3	10.2	314
Kinanie Ward	Primary	50.8	9.1	13.8	1.3	8.0	4.9	0.2	11.9	4,318
Kinanie Ward	Secondary+	49.4	10.7	13.2	1.4	5.3	12.9	0.1	7.0	3,713

Muthwani Ward	Total	48.3	13.3	11.3	0.9	7.2	9.5	0.2	9.4	14,707
Muthwani Ward	None	40.9	12.3	20.4	1.7	7.7	1.7	1.9	13.4	530
Muthwani Ward	Primary	50.0	11.1	14.6	0.6	8.5	5.4	0.2	9.6	6,151
Muthwani Ward	Secondary+	47.5	15.0	8.1	1.0	6.1	13.2	0.1	8.9	8,026
Syokimau Ward	Total	59.6	12.5	2.7	0.7	8.4	6.6	0.1	9.4	24,631
Syokimau Ward	None	51.7	11.8	9.5	1.9	11.6	2.1	0.3	11.1	621
Syokimau Ward	Primary	58.9	11.4	3.2	0.6	12.1	2.9	0.2	10.8	7,818
Syokimau Ward	Secondary+	60.2	13.1	2.2	0.8	6.5	8.5	0.1	8.7	16,192
Machakos Town Constituency	Total	34.0	11.1	21.9	1.2	10.0	12.2	0.6	9.0	77,201
Machakos Town Constituency	None	28.3	10.1	27.5	3.0	13.5	3.3	4.8	9.5	2,231
Machakos Town Constituency	Primary	31.1	10.0	26.5	0.9	12.3	8.7	0.6	9.9	37,265
Machakos Town Constituency	Secondary+	37.2	12.2	16.9	1.3	7.6	16.3	0.3	8.2	37,705
Kalama Ward	Total	25.8	7.1	33.5	0.9	11.4	13.8	0.7	6.8	10,396
Kalama Ward	None	21.0	5.8	42.9	1.9	14.8	1.6	5.5	6.5	310
Kalama Ward	Primary	24.7	6.4	37.5	0.8	12.6	10.3	0.7	7.1	5,757
Kalama Ward	Secondary+	27.6	8.2	27.5	1.0	9.6	19.2	0.4	6.4	4,329
Mua Ward	Total	35.4	6.8	20.9	1.2	13.1	13.5	0.3	8.9	10,660
Mua Ward	None	34.6	7.7	23.8	1.5	18.8	2.2	2.5	9.0	324
Mua Ward	Primary	37.0	5.6	22.7	0.9	15.3	9.5	0.3	8.7	6,020
Mua Ward	Secondary+	33.2	8.3	18.2	1.5	9.5	20.0	0.2	9.1	4,316
Mutituni Ward	Total	24.8	12.5	37.2	1.3	4.1	10.4	0.8	8.9	8,083
Mutituni Ward	None	22.0	7.0	43.3	4.0	6.0	2.0	5.3	10.3	300
Mutituni Ward	Primary	23.6	11.8	41.2	1.0	4.8	7.8	0.8	9.1	4,470
Mutituni Ward	Secondary+	26.7	14.0	31.2	1.5	3.0	14.6	0.4	8.5	3,313
Machakos Central Ward	Total	41.9	15.5	11.9	1.3	8.7	11.5	0.5	8.7	13,890
Machakos Central Ward	None	35.0	19.2	14.3	2.9	9.9	2.9	5.5	10.2	343
Machakos Central Ward	Primary	37.7	15.2	15.8	1.0	11.6	7.6	0.6	10.4	5,527
Machakos Central Ward	Secondary+	45.1	15.6	9.1	1.4	6.7	14.5	0.3	7.4	8,020
Mumbuni North Ward	Total	36.2	11.8	16.5	1.2	10.5	12.1	0.4	11.3	12,404
Mumbuni North Ward	None	32.4	8.0	20.0	6.5	15.3	3.3	2.9	11.6	275
Mumbuni North Ward	Primary	32.0	11.3	20.6	1.0	13.0	8.2	0.5	13.4	5,329

Mumbuni North Ward	Secondary+	39.7	12.4	13.1	1.1	8.4	15.5	0.2	9.7	6,800
Muvuti/Kiima Kimwe Ward	Total	39.9	13.1	10.9	1.4	12.0	11.7	0.5	10.5	13,977
Muvuti/Kiima Kimwe Ward	None	30.9	13.0	14.1	2.0	17.7	7.4	3.8	11.0	446
Muvuti/Kiima Kimwe Ward	Primary	34.5	12.4	13.9	0.9	16.9	7.9	0.6	12.9	6,100
Muvuti/Kiima Kimwe Ward	Secondary+	44.9	13.7	8.2	1.8	7.7	15.0	0.2	8.5	7,431
Kola Ward	Total	24.4	8.3	38.0	0.7	8.2	13.1	0.9	6.5	7,791
Kola Ward	None	17.6	6.4	45.9	3.4	9.4	1.3	9.4	6.4	233
Kola Ward	Primary	24.2	7.6	41.9	0.5	9.0	9.6	0.8	6.4	4,062
Kola Ward	Secondary+	25.0	9.2	33.0	0.7	7.1	17.8	0.4	6.8	3,496
Mwala Constituency	Total	25.4	11.0	18.9	1.0	23.1	15.5	0.7	4.5	52,334
Mwala Constituency	None	21.1	8.4	21.4	2.6	37.4	1.0	4.6	3.4	2,312
Mwala Constituency	Primary	24.7	10.7	20.2	0.8	25.4	13.3	0.6	4.3	30,176
Mwala Constituency	Secondary+	26.9	11.7	16.8	1.0	17.8	20.5	0.3	5.0	19,846
Mbiuni Ward	Total	24.1	9.2	16.4	0.8	28.1	15.4	0.5	5.6	10,334
Mbiuni Ward	None	19.6	5.8	18.4	3.4	45.2	0.9	1.8	4.9	445
Mbiuni Ward	Primary	23.7	9.5	16.1	0.6	30.5	13.9	0.5	5.2	6,478
Mbiuni Ward	Secondary+	25.4	9.1	16.6	0.8	21.2	20.2	0.3	6.4	3,411
Makutano/Mwala Ward	Total	25.6	10.4	32.9	1.1	11.5	13.2	0.7	4.7	11,036
Makutano/Mwala Ward	None	21.1	9.6	33.0	4.0	19.4	0.7	6.6	5.6	427
Makutano/Mwala Ward	Primary	24.1	10.0	36.0	0.8	12.5	11.5	0.5	4.5	6,761
Makutano/Mwala Ward	Secondary+	28.7	11.1	27.4	1.2	8.9	17.5	0.3	5.0	3,848
Masii Ward	Total	28.4	10.6	17.7	1.1	22.1	15.9	0.8	3.5	11,372
Masii Ward	None	22.6	9.7	20.3	2.6	32.0	2.6	8.6	1.7	350
Masii Ward	Primary	28.4	10.5	19.0	1.0	26.1	11.2	0.7	3.1	5,695
Masii Ward	Secondary+	28.7	10.8	16.1	1.1	17.1	21.9	0.3	4.0	5,327
Muthetheni Ward	Total	22.8	9.9	12.1	1.3	28.8	18.4	0.7	6.1	6,539
Muthetheni Ward	None	23.3	7.4	16.2	1.4	45.2	0.6	1.7	4.3	352
Muthetheni Ward	Primary	21.4	9.2	12.4	1.1	31.9	17.0	0.7	6.1	3,917
Muthetheni Ward	Secondary+	25.0	11.4	11.0	1.5	20.7	23.6	0.4	6.5	2,270
Wamunyu Ward	Total	27.6	14.4	11.1	1.0	23.0	17.6	0.9	4.4	8,053
Wamunyu Ward	None	26.4	7.5	16.5	2.4	39.4	1.2	4.7	1.9	424

Wamunyu Ward	Primary	28.2	13.8	11.8	0.9	25.2	15.1	0.9	4.0	4,532
Wamunyu Ward	Secondary+	26.9	16.2	9.2	0.9	17.5	23.4	0.4	5.4	3,097
wamunyu waru	Occordary.	20.3	10.2	J.Z	0.5	17.5	20.4	0.4	0.4	0,001
Kibauni Ward	Total	20.5	12.7	17.8	0.7	33.0	12.3	0.6	2.4	5,000
Kibauni Ward	None	11.8	11.5	23.6	1.6	45.5	0.3	4.8	1.0	314
Kibauni Ward	Primary	19.7	12.3	17.8	0.6	34.6	12.1	0.4	2.4	2,793
Kibauni Ward	Secondary+	23.1	13.5	16.9	0.6	28.5	14.5	0.2	2.6	1,893

Table 22.5: Employment and Education Levels in Female Headed Households by County, Constituency and Wards

County, Constituency and Wards	Education Level reached	Work for Pay	Family Business	Family Agri- cultural holding	Internal/ Volunteer	Retired/ Home- maker	Fulltime Student	Incapac- itated	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
Machakos	Total	21.4	10.1	25.1	1.0	17.2	17.7	.9	6.6	193150
Machakos	None	17.6	10.2	30.9	3.0	26.1	1.5	5.3	5.5	11088
Machakos	Primary	20.4	9.8	28.3	.8	19.1	14.4	.8	6.4	105098
Machakos	Secondary+	23.3	10.5	19.8	1.1	13.4	24.7	.4	6.9	76964
Masinga Constituency	Total	14.2	10.2	30.8	.9	21.5	16.3	.9	5.3	23607
Masinga Constituency	None	11.2	10.6	36.3	2.6	30.8	.9	3.9	3.6	1930
Masinga Constituency	Primary	14.5	10.0	32.5	.7	22.7	13.5	.8	5.4	15065
Masinga Constituency	Secondary+	14.4	10.4	25.4	.8	16.2	27.1	.3	5.5	6612
Kivaa Ward	Total	14.5	10.6	20.6	1.0	27.8	18.6	.9	5.9	7041
Kivaa Ward	None	10.9	10.6	22.5	2.7	44.5	1.2	4.5	3.0	595
Kivaa Ward	Primary	14.5	9.9	23.0	.8	28.7	16.3	.8	6.0	4499
Kivaa Ward	Secondary+	15.7	12.4	14.5	.9	20.6	29.1	.3	6.6	1947
Masinga Central Ward	Total	15.2	10.8	36.0	.8	11.4	19.7	.7	5.3	6206
Masinga Central Ward	None	11.5	11.5	48.6	2.2	18.2	1.2	2.6	4.0	494

Masinga Central Ward	Primary	15.6	10.8	36.9	.8	12.2	17.3	.6	5.9	3795
Masinga Central Ward	Secondary+	15.5	10.6	31.0	.6	8.1	29.3	.4	4.4	1917
Ekalakala Ward	Total	15.8	10.5	29.5	1.7	11.8	21.3	.8	8.6	3505
Ekalakala Ward	None	8.1	11.9	46.2	4.2	17.3	1.5	5.8	5.0	260
Ekalakala Ward	Primary	17.6	11.2	31.6	1.5	13.4	15.4	.5	8.9	2050
Ekalakala Ward	Secondary+	14.5	9.1	22.4	1.3	7.9	35.9	.1	8.8	1195
Muthesya Ward	Total	10.5	6.5	36.4	.4	33.0	8.5	.8	3.9	3053
Muthesya Ward	None	13.7	6.4	29.7	3.2	39.0	0.0	1.6	6.4	249
Muthesya Ward	Primary	10.2	5.8	38.3	.1	33.4	7.7	.8	3.6	2111
Muthesya Ward	Secondary+	10.2	8.7	33.0	.1	29.4	14.3	.4	3.8	693
Ndithini Ward	Total	13.2	10.8	38.1	.4	26.2	8.0	1.2	2.2	3802
Ndithini Ward	None	11.7	11.1	40.1	1.5	29.5	.3	4.8	.9	332
Ndithini Ward	Primary	13.7	11.5	38.5	.2	26.3	6.5	1.0	2.3	2610
Ndithini Ward	Secondary+	12.2	8.8	35.8	.5	24.7	15.5	.3	2.2	860
Yatta Constituency	Total	18.4	10.1	28.0	.9	15.5	20.5	.8	5.7	27420
Yatta Constituency	None	15.3	9.2	37.3	2.3	24.6	1.0	4.3	6.0	1894
Yatta Constituency	Primary	17.9	9.8	29.9	.6	16.8	18.5	.7	5.8	16568
Yatta Constituency	Secondary+	20.0	11.0	22.5	1.1	11.4	28.3	.2	5.5	8958
Ndalani Ward	Total	17.3	9.6	33.4	1.1	15.0	17.8	.8	5.0	5815
Ndalani Ward	None	17.8	8.3	42.2	1.8	21.1	.5	3.0	5.3	398
Ndalani Ward	Primary	18.0	9.0	35.3	.6	15.3	16.1	.7	5.1	3926
Ndalani Ward	Secondary+	15.6	11.4	26.1	2.3	12.7	27.0	.3	4.6	1491
Matuu Ward	Total	27.6	12.7	23.4	1.5	10.3	17.5	.6	6.3	4761
Matuu Ward	None	21.3	9.6	31.6	4.8	19.6	1.0	4.1	7.9	291
Matuu Ward	Primary	25.0	12.4	26.8	1.3	12.0	14.8	.6	7.0	2345
Matuu Ward	Secondary+	31.3	13.6	18.6	1.3	7.2	22.6	.1	5.4	2125
Kithimani Ward	Total	20.6	11.1	21.8	.9	15.0	20.4	1.0	9.3	5509
Kithimani Ward	None	16.5	9.1	27.7	3.4	27.1	1.5	5.8	8.8	328
Kithimani Ward	Primary	20.2	11.3	23.9	.7	16.0	17.6	.8	9.6	3427
Kithimani Ward	Secondary+	22.1	11.2	16.5	1.0	10.7	29.4	.3	8.8	1754
Ikombe Ward	Total	13.6	8.0	33.6	.6	19.2	21.1	.9	3.1	6871
Ikombe Ward	None	11.6	7.9	43.3	2.2	26.3	.7	4.4	3.7	457
Ikombe Ward	Primary	14.3	7.8	33.7	.4	20.3	19.8	.8	3.0	4192
Ikombe Ward	Secondary+	12.6	8.4	31.4	.5	15.5	27.9	.3	3.4	2222
Katangi Ward	Total	14.6	10.2	24.9	.5	16.9	26.5	.8	5.5	4464
Katangi Ward	None	11.9	11.4	37.4	.5	27.6	1.2	4.5	5.5	420
Katangi Ward	Primary	13.9	10.0	26.6	.4	18.5	24.7	.6	5.2	2678
Katangi Ward	Secondary+	16.7	10.2	17.9	.7	10.6	37.6	.1	6.1	1366
Kangundo Constituency	Total	17.1	8.9	30.8	.7	19.5	16.7	1.1	5.2	16843
Kangundo Constituency	None	17.9	9.1	33.3	2.0	20.9	1.7	8.6	6.4	637
Kangundo Constituency	Primary	18.4	8.8	32.9	.7	20.9	12.7	1.0	4.7	8277
Kangundo Constituency	Secondary+	15.8	9.0	28.5	.6	17.9	22.0	.5	5.6	7929
Kangundo North Ward	Total	17.8	7.4	27.4	.6	23.7	17.6	1.2	4.3	4134
Kangundo North Ward	None	18.0	6.3	31.5	3.6	24.3	1.8	10.8	3.6	111
Kangundo North Ward	Primary	19.7	7.2	29.5	.7	25.3	13.0	1.3	3.4	1994
Kangundo North Ward	Secondary+	15.8	7.7	25.0	.4	22.1	23.0	.6	5.3	2029
Kangundo Central Ward	Total	19.7	11.4	34.4	.7	14.7	13.5	1.1	4.6	4233
Kangundo Central Ward	None	20.1	10.7	35.6	4.0	14.8	1.3	9.4	4.0	149

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Kangundo Central Ward	Primary	20.2	11.0	38.3	.4	14.8	10.2	1.1	3.9	1937
Kangundo Central Ward	Secondary+	19.1	11.7	30.7	.7	14.6	17.4	.5	5.4	2147
Kangundo East Ward	Total	16.4	7.5	36.9	.6	15.8	16.7	1.0	5.0	3849
Kangundo East Ward	None	20.3	5.4	42.6	.7	13.5	2.0	9.5	6.1	148
Kangundo East Ward	Primary	17.4	7.7	37.5	.6	17.4	14.0	.8	4.8	2011
Kangundo East Ward	Secondary+	15.0	7.6	35.7	.6	14.2	21.2	.6	5.1	1690
Kangundo West Ward	Total	14.9	9.1	25.6	.9	23.3	18.7	.9	6.5	4627
Kangundo West Ward	None	14.8	11.8	26.6	.9	27.9	1.7	6.6	9.6	229
Kangundo West Ward	Primary	16.5	9.4	27.2	.9	25.4	13.4	.9	6.3	2335
Kangundo West Ward	Secondary+	13.0	8.4	23.8	.9	20.5	26.5	.4	6.5	2063
Matungulu Constituency	Total	22.6	10.9	24.2	1.0	18.6	15.8	.9	5.9	20674
Matungulu Constituency	None	22.0	10.8	28.5	3.3	22.4	1.6	5.6	5.8	1151
Matungulu Constituency	Primary	23.8	10.3	27.4	.7	19.7	12.0	.7	5.5	11279
Matungulu Constituency	Secondary+	21.1	11.9	19.3	1.0	16.5	23.1	.4	6.6	8244
Tala Ward	Total	27.9	16.5	13.4	1.6	16.5	14.4	.9	8.8	4615
Tala Ward	None	16.4	16.4	15.5	5.0	28.6	3.2	5.0	10.0	220
Tala Ward	Primary	28.5	17.3	15.8	1.2	17.6	10.3	1.0	8.2	2050
Tala Ward	Secondary+	28.4	15.8	11.2	1.6	14.4	19.1	.5	9.2	2345
Matungulu North Ward	Total	23.5	8.3	30.3	.7	15.7	15.0	1.3	5.2	4152
Matungulu North Ward	None	27.5	8.0	32.7	1.9	17.9	1.2	7.4	3.4	324
Matungulu North Ward	Primary	24.7	8.0	32.8	.5	16.9	11.0	.8	5.3	2600
Matungulu North Ward	Secondary+	19.8	9.0	24.4	1.0	12.5	27.1	.9	5.3	1228
Matungulu East Ward	Total	20.2	6.8	26.4	1.0	21.8	18.1	1.1	4.7	3681
Matungulu East Ward	None	20.3	6.8	31.1	5.4	23.0	.7	9.5	3.4	148
Matungulu East Ward	Primary	22.4	6.5	29.0	.7	23.2	13.4	1.0	3.8	1912
Matungulu East Ward	Secondary+	17.6	7.2	22.8	.8	20.0	25.3	.4	5.8	1621
Matungulu West Ward	Total	20.2	13.6	20.8	1.0	20.8	16.7	.7	6.2	5445
Matungulu West Ward	None	20.6	15.0	22.3	3.5	26.1	1.7	4.2	6.6	287
Matungulu West Ward	Primary	21.6	12.6	23.0	.9	22.0	13.4	.6	5.9	2935
Matungulu West Ward	Secondary+	18.3	14.8	17.6	.8	18.4	23.1	.4	6.7	2223
Kyeleni Ward	Total	20.6	5.9	37.1	.4	17.8	14.5	.4	3.4	2781
Kyeleni Ward	None	22.7	5.2	45.3	1.7	16.3	.6	2.3	5.8	172
Kyeleni Ward	Primary	22.0	5.8	38.3	.2	18.5	11.3	.4	3.6	1782
Kyeleni Ward	Secondary+	17.0	6.4	32.6	.5	16.6	24.4	0.0	2.4	827
Kathiani Constituency	Total	18.0	9.9	34.1	1.1	12.7	17.9	1.2	5.3	19141
Kathiani Constituency	None	19.0	9.9	40.8	3.6	14.0	1.3	6.1	5.2	1061
Kathiani Constituency	Primary	18.7	10.5	36.9	.9	13.5	13.6	1.0	4.9	11308
Kathiani Constituency	Secondary+	16.6	8.9	28.2	1.0	11.1	27.6	.6	5.9	6772
Mitaboni Ward	Total	17.5	8.8	23.7	.9	22.6	20.3	1.0	5.3	5967
Mitaboni Ward	None	17.4	9.8	26.5	3.1	30.7	1.7	6.6	4.2	287
Mitaboni Ward	Primary	18.4	8.5	25.1	.8	26.0	15.6	.8	4.8	3254
Mitaboni Ward	Secondary+	16.2	9.1	21.6	.7	17.1	28.8	.5	6.1	2426
Kathiani Central Ward	Total	18.6	11.3	38.1	1.2	5.4	18.9	1.2	5.5	4538
Kathiani Central Ward	None	19.3	10.3	51.1	4.9	3.6	2.2	2.7	5.8	223
Kathiani Central Ward		17.8	12.8	42.7	1.0	6.1	13.5	1.3	4.9	2594
	Primary									
Kathiani Central Ward	Secondary+	19.7	9.1	29.5	1.0	4.5	29.1	.8	6.2	1721
Upper Kaewa/Iveti Ward	Total	18.3	8.3	42.1	1.1	8.5	16.7	1.4	3.7	4487
Upper Kaewa/Iveti Ward	None	22.9	5.9	47.6	2.6	7.4	1.5	8.5	3.7	271

Upper Kaewa/Iveti Ward	Primary	20.2	8.5	45.0	.9	7.8	13.0	1.2	3.4	2791
Upper Kaewa/Iveti Ward	Secondary+	13.6	8.4	35.2	1.4	10.0	26.7	.6	4.1	1425
Upper Kaewa/Kaani Ward	Total	17.8	11.8	35.8	1.2	10.9	14.6	1.1	6.7	4149
Upper Kaewa/Kaani Ward	None	16.8	13.6	40.7	3.9	11.8	0.0	6.1	7.1	280
Upper Kaewa/Kaani Ward	Primary	18.3	12.9	37.2	.9	11.3	12.0	.9	6.5	2669
Upper Kaewa/Kaani Ward	Secondary+	16.8	8.9	31.6	1.4	10.0	23.8	.4	7.0	1200
Mayoko Constituency	Total	44.0	14.8	8.5	1.5	6.4	12.7	.3	11.8	16400
Mavoko Constituency	None	33.9	17.0	13.7	5.3	13.7	2.3	1.4	12.6	657
Mayoko Constituency	Primary	41.6	15.7	12.0	1.4	7.3	7.9	.3	13.8	6040
Mayoko Constituency	Secondary+	46.2	14.1	6.0	1.3	5.4	16.4	.1	10.6	9703
Athi River Ward	Total	49.1	14.6	4.1	1.5	5.9	11.9	.1	12.8	6370
Athi River Ward	None	41.4	18.2	6.8	7.3	13.2	2.7	.9	9.5	220
Athi River Ward	Primary	45.3	17.9	6.1	1.3	7.5	7.0	.2	14.7	2129
Athi River Ward	Secondary+	51.5	12.6	2.9	1.3	4.7	15.0	.1	11.9	4021
Kinanie Ward	•	31.8	12.0	21.1	2.3	5.1	15.5	.6	11.3	2469
Kinanie Ward	Total None	28.9	13.2	18.2	4.1	9.1	4.1	1.7	20.7	121
Kinanie Ward	Primary	34.5	10.4	24.3	2.5	5.4	8.6	.6	13.7	1270
Kinanie Ward	Secondary+	28.9	14.3	17.7	1.9	4.3	25.0	.5	7.4	1078
Muthwani Ward	Total	36.3	14.3	14.7	1.7	7.6	14.1	.3	11.0	3145
Muthwani Ward	None	31.3	16.9	23.1	3.8	13.8	0.0	1.9	9.4	160
Muthwani Ward	Primary	37.0	13.3	17.3	1.4	8.5	8.6	.3	13.7	1327
Muthwani Ward	Secondary+	36.2	14.9	11.8	1.7	6.3	19.9	.2	9.0	1658
Syokimau Ward	Total	48.9	16.8	3.5	1.0	7.0	11.3	.2	11.4	4416
Syokimau Ward	None	30.1	18.6	10.3	5.1	17.9	2.6	1.3	14.1	156
Syokimau Ward	Primary	47.0	19.6	4.5	.5	7.7	7.9	.3	12.6	1314
Syokimau Ward	Secondary+	50.7	15.5	2.7	1.0	6.1	13.3	.1	10.7	2946
Machakos Town Constituency	Total	24.4	9.5	26.2	1.2	10.8	17.7	.9	9.3	36934
Machakos Town Constituency	None	19.5	10.3	34.2	3.0	16.4	2.4	6.9	7.3	1654
Machakos Town Constituency	Primary	22.5	9.1	31.3	.8	12.8	12.5	.8	10.2	18074
Machakos Town Constituency	Secondary+	26.8	9.9	19.9	1.4	8.1	24.7	.5	8.6	17206
Kalama Ward	Total	15.4	7.0	37.3	.8	11.2	21.0	1.0	6.3	6410
Kalama Ward	None	10.3	4.0	50.0	3.6	18.7	1.6	7.5	4.4	252
Kalama Ward	Primary	15.9	7.4	40.9	.4	12.4	15.1	.8	7.1	3563
Kalama Ward	Secondary+	15.2	6.9	31.1	1.0	8.7	31.1	.5	5.5	2595
Mua Ward	Total	24.1	6.4	22.9	1.2	16.2	17.9	.9	10.5	4293
Mua Ward	None	23.7	5.3	29.0	3.3	23.7	4.1	6.1	4.9	245
Mua Ward	Primary	25.0	5.6	24.1	1.0	18.7	13.4	.7	11.5	2376
Mua Ward	Secondary+	23.0	7.7	20.2	1.1	11.5	26.3	.3	9.9	1672
Mutituni Ward	Total	16.2	10.8	42.3	1.3	4.7	15.2	.8	8.7	4644
Mutituni Ward	None	12.9	12.2	53.5	2.2	4.1	.7	6.3	8.1	271
Mutituni Ward	Primary	17.0	10.5	45.8	1.2	5.1	11.1	.5	8.9	2719
Mutituni Ward	Secondary+	15.5	11.1	34.7	1.4	4.2	24.3	.5	8.3	1654
Machakos Central Ward	Total	36.7	14.4	11.0	1.6	9.6	15.5	1.0	10.4	5674
Machakos Central Ward	None	23.1	20.0	16.9	3.1	15.6	2.7	4.4	14.2	225
Machakos Central Ward	Primary	32.0	15.5	15.0	1.0	12.8	10.0	1.1	12.6	2250
Machakos Central Ward	Secondary+	40.9	13.2	7.8	1.9	6.9	20.2	.6	8.5	3199
Mumbuni North Ward	Total	28.9	9.6	19.1	1.2	11.5	17.1	.9	11.7	5086
Mumbuni North Ward	None	23.9	10.3	27.7	3.8	17.4	2.3	9.4	5.2	213

Mumbuni North Word	Primary	27.4	8.8	24.6	.9	13.0	11.4	.8	13.1	2219
Mumbuni North Ward	-			-						
Mumbuni North Ward	Secondary+	30.5	10.2	13.8	1.3	9.8	22.9	.3	11.0	2654
Muvuti/Kiima Kimwe Ward	Total	31.5	11.2	12.0	1.7	13.1	17.8	.6	11.9	5902
Muvuti/Kiima Kimwe Ward	None	27.2	13.2	18.1	3.7	19.3	4.5	5.3	8.6	243
Muvuti/Kiima Kimwe Ward	Primary	27.2	11.1	15.3	1.0	19.1	11.3	.4	14.5	2446
Muvuti/Kiima Kimwe Ward	Secondary+	35.1	11.1	9.0	2.2	8.2	23.8	.4	10.2	3213
Kola Ward	Total	16.7	6.5	41.1	.5	9.2	18.9	1.3	5.8	4925
Kola Ward	None	16.6	7.8	40.5	1.5	17.6	1.0	9.8	5.4	205
Kola Ward	Primary	18.0	5.9	45.2	.4	10.1	13.7	1.2	5.6	2501
Kola Ward	Secondary+	15.1	7.0	36.5	.6	7.5	26.5	.6	6.2	2219
Mwala Constituency	Total	17.9	8.5	17.6	.9	29.0	20.7	1.0	4.4	32131
Mwala Constituency	None	15.6	8.7	18.5	2.8	44.2	1.3	5.8	3.1	2104
Mwala Constituency	Primary	18.6	8.3	19.1	.7	30.4	17.9	.8	4.2	18487
Mwala Constituency	Secondary+	17.0	8.8	15.0	.9	24.1	28.8	.4	5.0	11540
Mbiuni Ward	Total	16.7	7.5	15.4	1.0	32.8	21.6	.6	4.4	6040
Mbiuni Ward	None	15.1	6.7	14.5	3.0	52.2	1.3	3.5	3.8	372
Mbiuni Ward	Primary	16.8	7.8	16.5	.8	33.9	19.3	.5	4.4	3700
Mbiuni Ward	Secondary+	16.9	7.0	13.6	.9	27.2	29.7	.3	4.5	1968
Makutano/Mwala Ward	Total	19.9	8.9	30.3	1.2	15.6	17.8	.9	5.4	5907
Makutano/Mwala Ward	None	19.8	9.9	34.7	3.9	22.2	.9	4.5	4.2	334
Makutano/Mwala Ward	Primary	20.7	8.8	32.2	1.0	16.1	15.3	.8	5.2	3567
Makutano/Mwala Ward	Secondary+	18.6	8.9	26.0	1.2	13.7	25.2	.5	5.9	2006
Masii Ward	Total	21.7	8.2	15.7	.9	28.2	20.4	1.0	4.0	6354
Masii Ward	None	13.9	8.4	15.4	2.9	47.8	1.7	7.0	2.9	345
Masii Ward	Primary	24.7	7.6	17.2	.6	31.0	15.3	.8	3.0	3218
Masii Ward	Secondary+	19.1	8.8	14.0	1.0	22.7	28.6	.5	5.2	2791
Muthetheni Ward	Total	15.0	7.0	12.1	1.0	34.3	23.4	1.0	6.1	4932
Muthetheni Ward	None	18.8	7.1	12.8	3.4	43.6	2.8	6.6	4.8	351
Muthetheni Ward	Primary	14.6	6.5	13.8	.8	36.5	20.8	.7	6.2	2988
Muthetheni Ward	Secondary+	15.1	8.0	8.7	.9	28.1	32.8	.1	6.3	1593
Wamunyu Ward	Total	19.8	9.2	12.4	.8	29.0	23.1	1.6	4.1	5285
Wamunyu Ward	None	16.5	9.3	18.1	2.7	42.0	.8	8.5	2.1	376
Wamunyu Ward	Primary	21.4	8.8	13.5	.4	31.5	19.5	1.3	3.6	2919
Wamunyu Ward	Secondary+	17.9	9.9	9.8	1.0	22.8	32.8	.6	5.2	1990
Kibauni Ward	Total	10.8	11.0	18.7	.4	38.9	17.7	.8	1.8	3613
Kibauni Ward	None	9.5	10.7	16.6	.9	56.7	.3	4.6	.6	326
Kibauni Ward	Primary	11.1	11.1	19.2	.3	37.6	18.0	.5	2.1	2095
Kibauni Ward	Secondary+	10.7	10.8	18.2	.3	36.2	22.0	.2	1.6	1192

Table 22.6: 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
Machakos County	0.029	3,860	0.032	0.403
Masinga Constituency	0.003	1,960	0.0019	0.332
Kivaa	0.001	2,060	0.0005	0.351



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Masinga Central	0.001	2,020	0.0005	0.335
Ekalakala	0.001	1,930	0.0003	0.321
Muthesya	0.000	1,580	0.0002	0.290
Ndithini	0.001	2,020	0.0004	0.316
Yatta Constituency	0.004	3,020	0.0034	0.411
Ndalani	0.001	2,150	0.0005	0.335
Matuu	0.001	5,050	0.0010	0.392
Kithimani	0.001	3,530	0.0009	0.362
Ikombe	0.001	2,070	0.0006	0.329
Katangi	0.001	2,450	0.0004	0.402
Kangundo Constituency	0.003	4,380	0.0032	0.342
Kangundo North	0.001	3,960	0.0007	0.323
Kangundo Central	0.001	5,350	0.0010	0.349
Kangundo East	0.001	3,880	0.0007	0.317
Kangundo West	0.001	4,250	0.0008	0.340
Matungulu Constituency	0.003	4,510	0.0043	0.364
Tala	0.001	6,090	0.0012	0.346
Matungulu North	0.001	3,720	0.0007	0.355
Matungulu East	0.001	4,150	0.0007	0.334
Matungulu West	0.001	4,780	0.0013	0.349
Kyeleni	0.000	3,270	0.0005	0.320
Kathiani Constituency	0.003	2,930	0.0024	0.307
Mitaboni	0.001	3,160	0.0007	0.283
Kathiani Central	0.001	3,140	0.0006	0.348
Upper Kaewa/Iveti	0.001	2,810	0.0006	0.282
Upper Kaewa/Kaani	0.001	2,550	0.0005	0.305
Mavoko Constituency	0.004	6,600	0.0070	0.295
Athi River	0.001	6,820	0.0027	0.259
Kinanie	0.000	6,140	0.0008	0.375
Muthwani	0.001	5,290	0.0012	0.355
Syokimau	0.001	7,420	0.0023	0.245
Machakos Town Constituency	0.005	4,740	0.0072	0.362
Kalama	0.001	3,590	0.0009	0.364
Mua	0.001	4,800	0.0009	0.341
Mutituni	0.001	4,350	0.0008	0.325
Machakos Central	0.001	5,210	0.0012	0.320
Mumbuni North	0.001	5,920	0.0013	0.341
Muvuti/Kiima Kimwe	0.001	5,870	0.0014	0.368
Kola	0.001	3,130	0.0006	0.295
Mwala Constituency	0.004	2,540	0.0032	0.341
Mbiuni	0.001	2,420	0.0006	0.315
Makutano/Mwala	0.001	2,540	0.0006	0.318
Masii	0.001	3,260	0.0008	0.347
Muthetheni	0.001	2,270	0.0004	0.313
Wamunyu	0.001	2,550	0.0005	0.353
Kibauni	0.000	1,800	0.0003	0.333
	0.000	1,000	0.000	0.017

Table 22.7: 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
Machakos County	14.9	58.2	26.9	989,908
Masinga Constituency	18.3	65.0	16.7	113,608
Kivaa	19.3	63.6	17.2	30,701
Masinga Central	18.3	63.5	18.2	29,822
Ekalakala	16.4	63.2	20.4	17,151
Muthesya	19.3	67.8	12.9	15,470
Ndithini	17.6	68.8	13.6	20,464
Yatta Constituency	17.1	62.8	20.1	131,882
Ndalani	17.1	67.0	15.9	26,498
Matuu	14.4	56.8	28.7	24,335
Kithimani	16.4	63.4	20.2	29,896
Ikombe	18.1	63.8	18.2	31,464
Katangi	19.9	61.9	18.2	19,689
Kangundo Constituency	13.8	56.0	30.2	85,898
Kangundo North	12.9	55.6	31.5	20,387
Kangundo Central	12.1	52.3	35.6	22,438
Kangundo East	14.5	58.1	27.4	19,651
Kangundo West	15.4	58.1	26.5	23,422
Matungulu Constituency	14.5	59.6	25.9	112,110
Tala	12.2	52.1	35.7	23,283
Matungulu North	15.3	66.4	18.3	22,386
Matungulu East	14.7	57.1	28.2	19,832
Matungulu West	14.4	58.6	27.0	30,682
Kyeleni	16.6	66.3	17.2	15,927
Kathiani Constituency	15.5	62.7	21.8	94,380
Mitaboni	16.0	58.9	25.1	27,284
Kathiani Central	14.8	62.1	23.0	21,889
Upper Kaewa/Iveti	15.5	65.1	19.4	24,280
Upper Kaewa/Kaani	15.5	65.7	18.8	20,927
Mavoko Constituency	10.4	44.2	45.4	124,268
Athi River	10.0	42.0	48.0	46,209
Kinanie	11.5	55.6	32.9	14,922
Muthwani	12.1	49.8	38.1	25,975
Syokimau	9.4	38.5	52.1	37,162
Machakos Town Constituency	13.1	55.4	31.5	179,309
Kalama	15.1	60.4	24.5	29,311
Mua	13.0	60.6	26.4	23,413
Mutituni	15.7	60.4	23.9	21,526
Machakos Central	10.9	48.1	41.1	28,030
Mumbuni North	11.3	51.2	37.5	25,761
Muvuti/Kiima Kimwe	11.5	51.0	37.5	29,039
Kola	15.1	58.3	26.6	22,229
Mwala Constituency	16.7	61.4	21.9	148,453

Mbiuni	17.6	63.2	19.2	29,007
Makutano/Mwala	16.1	63.0	20.9	29,021
Masii	14.2	57.5	28.3	29,736
Muthetheni	18.1	62.7	19.2	20,808
Wamunyu	17.2	60.4	22.4	23,413
Kibauni	18.1	62.6	19.3	16,468

Table 22.8: 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
Machakos County	13.1	58.3	28.6	487,756	16.6	58.1	25.3	502,152
Masinga Constituency	16.2	66.0	17.8	54,805	20.2	64.1	15.6	58,803
Kivaa	17.1	64.9	18.0	14,467	21.2	62.4	16.4	16,234
Masinga Central	16.5	64.4	19.1	14,268	20.0	62.7	17.3	15,554
Ekalakala	13.7	65.0	21.3	8,354	19.1	61.5	19.5	8,797
Muthesya	17.8	68.1	14.1	7,525	20.7	67.5	11.8	7,945
Ndithini	15.4	68.9	15.7	10,191	19.8	68.7	11.5	10,273
Yatta Constituency	15.1	63.5	21.4	63,397	19.0	62.1	19.0	68,485
Ndalani	14.6	67.9	17.5	12,672	19.4	66.1	14.5	13,826
Matuu	12.5	57.6	29.9	11,907	16.3	56.1	27.6	12,428
Kithimani	14.6	63.4	21.9	14,830	18.1	63.5	18.4	15,066
Ikombe	16.4	64.7	18.9	14,769	19.6	62.9	17.5	16,695
Katangi	17.6	63.6	18.9	9,219	21.9	60.4	17.7	10,470
Kangundo Constituency	12.3	56.1	31.7	41,910	15.2	55.9	28.9	43,988
Kangundo North	11.9	55.2	33.0	9,908	13.9	56.0	30.0	10,479
Kangundo Central	11.0	52.0	37.0	11,095	13.3	52.6	34.2	11,343
Kangundo East	12.6	58.3	29.1	9,512	16.2	58.0	25.8	10,139
Kangundo West	13.5	59.0	27.5	11,395	17.3	57.3	25.5	12,027
Matungulu Constituency	12.9	59.8	27.3	55,783	16.0	59.5	24.5	56,327
Tala	11.0	52.3	36.8	11,506	13.5	51.9	34.7	11,777
Matungulu North	13.3	66.5	20.1	11,284	17.3	66.3	16.4	11,102

Matungulu East	13.1	57.4	29.5	9,583	16.2	56.9	27.0	10,249
Matungulu West	13.0	58.5	28.5	15,484	15.8	58.7	25.6	15,198
Kyeleni	14.9	66.3	18.9	7,926	18.3	66.3	15.5	8,001
Kathiani Constituency	13.7	62.7	23.6	44,901	17.1	62.8	20.1	49,479
Mitaboni	14.3	58.8	27.0	12,972	17.6	59.1	23.4	14,312
Kathiani Central	13.0	62.0	25.0	10,346	16.5	62.2	21.3	11,543
Upper Kaewa/Iveti	14.0	64.6	21.4	11,674	16.9	65.5	17.6	12,606
Upper Kaewa/Kaani	13.3	66.3	20.5	9,909	17.5	65.2	17.3	11,018
Mavoko Constituency	9.7	43.4	47.0	68,027	11.4	45.3	43.4	56,241
Athi River	9.5	40.0	50.5	24,679	10.5	44.3	45.1	21,530
Kinanie	9.8	56.6	33.6	8,576	13.8	54.2	32.0	6,346
Muthwani	11.1	50.6	38.3	14,154	13.2	48.9	37.9	11,821
Syokimau	8.8	36.9	54.3	20,618	10.2	40.5	49.3	16,544
Machakos Town Constituency	11.6	55.7	32.7	87,457	14.5	55.1	30.3	91,852
Kalama	13.4	60.7	25.9	13,993	16.7	60.1	23.2	15,318
Mua	11.5	61.5	27.0	12,122	14.6	59.6	25.7	11,291
Mutituni	13.6	60.6	25.8	10,200	17.5	60.2	22.3	11,326
Machakos Central	10.1	47.6	42.3	13,693	11.5	48.5	40.0	14,337
Mumbuni North	10.3	50.9	38.8	12,620	12.3	51.5	36.2	13,141
Muvuti/Kiima Kimwe	10.2	51.6	38.2	14,250	12.8	50.4	36.8	14,789
Kola	12.9	59.1	28.0	10,579	17.1	57.7	25.3	11,650
Mwala Constituency	14.4	62.6	23.0	71,476	18.8	60.3	20.9	76,977
Mbiuni	15.8	63.8	20.4	13,948	19.3	62.6	18.1	15,059
Makutano/Mwala	13.6	64.4	22.0	14,257	18.5	61.7	19.8	14,764
Masii	12.1	58.5	29.5	14,499	16.2	56.5	27.3	15,237
Muthetheni	15.5	64.0	20.6	9,738	20.3	61.6	18.1	11,070
Wamunyu	14.8	62.0	23.3	11,265	19.5	58.9	21.6	12,148
Kibauni	15.8	64.2	20.0	7,769	20.2	61.1	18.7	8,699

Table 22.9: 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
Machakos County	0.5	11.1	3.1	0.7	68.6	15.6	0.1	0.3	260,780
Masinga Constituency	0.6	1.9	0.3	0.2	90.8	6.1	0.0	0.1	26,892
Kivaa	1.6	2.2	0.7	0.2	85.0	10.3	-	0.1	7,296
Masinga Central	0.7	2.4	0.3	0.2	89.6	6.8	-	0.1	6,803
Ekalakala	0.2	2.7	0.2	0.1	91.1	5.6	0.0	0.1	4,133
Muthesya	-	0.5	0.1	0.2	97.3	1.6	0.2	0.1	3,698
Ndithini	0.0	1.1	0.2	0.2	95.8	2.7	0.0	0.0	4,962
Yatta Constituency	0.3	6.2	1.1	0.3	80.5	11.4	0.0	0.2	32,655
Ndalani	0.0	1.5	0.1	0.4	91.8	6.1	0.0	0.1	6,618
Matuu	0.5	19.1	3.3	0.4	54.4	21.8	0.0	0.5	6,901
Kithimani	0.6	4.0	1.4	0.4	80.2	13.4	-	0.0	7,699
Ikombe	0.0	1.6	0.0	0.2	93.4	4.5	0.1	0.1	6,809
Katangi	0.0	4.1	0.3	0.2	84.4	10.5	0.1	0.4	4,628
Kangundo Constituency	0.2	2.4	1.0	0.2	86.7	9.3	0.1	0.1	21,841
Kangundo North	0.3	0.8	0.6	0.2	90.4	7.6	0.1	0.1	5,091
Kangundo Central	0.3	5.1	2.7	0.2	73.1	18.3	-	0.2	6,037
Kangundo East	0.0	0.4	0.3	0.2	95.1	3.8	0.1	0.0	4,902
Kangundo West	0.1	2.7	0.4	0.2	90.4	6.2	0.1	-	5,811
Matungulu Constituency	0.2	4.7	1.4	0.6	77.6	14.7	0.0	0.8	28,183
Tala	0.6	12.3	3.0	1.0	54.9	27.6	0.0	0.6	6,284
Matungulu North	0.1	3.4	0.8	0.2	83.4	11.9	0.0	0.2	5,759
Matungulu East	0.0	0.7	0.4	0.2	91.9	6.6	0.1	0.1	4,864
Matungulu West	0.2	3.8	1.6	0.8	75.2	16.2	0.0	2.2	7,792
Kyeleni	0.1	0.5	0.1	0.3	94.4	4.5	0.1	0.1	3,484
Kathiani Constituency	0.1	1.9	0.7	0.2	88.8	8.0	0.1	0.3	23,163
Mitaboni	0.0	2.2	0.5	0.2	88.7	7.9	0.1	0.4	6,915
Kathiani Central	0.2	3.4	1.9	0.2	83.0	10.9	0.1	0.4	5,606
Upper Kaewa/Iveti	0.1	0.7	0.1	0.1	92.2	6.6	0.0	0.0	5,746
Upper Kaewa/Kaani	0.1	1.1	0.2	0.2	91.6	6.4	0.0	0.3	4,896
Mavoko Constituency	1.5	42.0	11.2	2.0	11.5	31.2	0.1	0.6	44,156
Athi River	1.8	42.3	10.1	1.4	3.1	41.0	0.0	0.3	17,853
Kinanie	1.5	24.6	6.1	0.2	37.2	29.1	0.1	1.2	5,367
Muthwani	0.7	22.7	11.4	2.0	30.2	32.5	0.1	0.3	6,757
Syokimau	1.6	57.5	14.2	3.4	3.3	19.0	0.1	0.8	14,179
Machakos Town Con- stituency	0.5	9.9	3.9	1.0	62.3	22.2	0.1	0.3	48,438
Kalama	0.2	2.1	0.8	0.4	88.2	8.1	0.1	0.1	7,274
Mua	0.3	1.9	1.5	0.4	81.5	14.1	0.1	0.1	5,809
Mutituni	0.2	1.9	0.4	0.4	83.9	13.1	0.1	0.0	5,508
Machakos Central	0.9	19.6	8.7	0.9	31.2	37.9	0.0	0.8	8,505
Mumbuni North	0.7	13.9	5.5	1.7	49.0	29.0	0.1	0.2	7,203

Muvuti/Kiima Kimwe	0.7	19.1	6.5	2.1	36.2	35.1	-	0.3	8,717
Kola	0.2	1.4	0.5	0.1	93.3	4.4	0.1	0.1	5,422
Mwala Constituency	0.3	2.5	0.4	0.3	88.8	7.6	0.1	0.1	35,452
Mbiuni	0.1	2.4	0.1	0.2	91.1	5.9	0.0	0.1	6,987
Makutano/Mwala	0.7	2.2	0.6	0.6	88.6	7.0	0.1	0.1	7,009
Masii	0.1	4.4	1.0	0.5	83.0	10.9	0.1	0.1	7,232
Muthetheni	0.2	1.6	0.2	0.1	93.8	3.9	0.1	0.0	4,959
Wamunyu	0.1	2.1	0.3	0.3	84.9	12.1	0.1	0.1	5,558
Kibauni	0.1	0.8	-	0.1	95.6	3.3	0.1	0.1	3,707

Table 22.10: 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
Machakos County	0.6	13.7	3.5	0.8	64.0	16.9	0.1	0.4	165,090
Masinga Constituency	0.9	2.0	0.5	0.2	89.8	6.5	0.1	0.1	15,335
Kivaa	2.3	2.3	1.0	0.1	82.3	11.8	0.0	0.1	3,924
Masinga Central	1.0	2.7	0.3	0.2	88.4	7.3	0.0	0.1	3,846
Ekalakala	0.3	2.9	0.3	0.2	90.6	5.6	0.0	0.1	2,360
Muthesya	0.0	0.4	0.1	0.2	97.2	1.6	0.3	0.1	2,143
Ndithini	0.0	1.4	0.2	0.1	95.3	2.7	0.0	0.1	3,062
Yatta Constituency	0.3	7.3	1.1	0.4	78.1	12.4	0.0	0.3	19,015
Ndalani	0.1	2.0	0.1	0.4	90.8	6.6	0.0	0.1	3,688
Matuu	0.6	20.5	3.1	0.5	52.5	22.1	0.0	0.7	4,359
Kithimani	0.7	4.7	1.4	0.4	79.3	13.4	0.0	0.1	4,842
Ikombe	0.0	2.0	0.1	0.3	91.7	5.7	0.0	0.2	3,693
Katangi	0.1	5.1	0.3	0.2	81.7	11.8	0.1	0.6	2,433
Kangundo Constituency	0.2	2.6	1.1	0.2	86.0	9.6	0.1	0.1	13,473
Kangundo North	0.3	1.0	0.7	0.2	89.5	8.1	0.1	0.2	3,063
Kangundo Central	0.3	5.3	2.7	0.3	73.1	18.2	0.0	0.2	3,956
Kangundo East	0.0	0.4	0.3	0.2	95.1	3.9	0.1	0.0	2,931
Kangundo West	0.1	2.9	0.4	0.3	90.1	6.1	0.1	0.0	3,523
Matungulu Constituency	0.2	4.8	1.4	0.5	77.2	14.9	0.0	0.9	18,319
Tala	0.6	11.9	3.1	0.8	55.3	27.5	0.0	0.8	4,099
Matungulu North	0.1	4.2	0.7	0.3	82.9	11.6	0.0	0.2	3,714
Matungulu East	0.1	0.7	0.4	0.2	91.4	7.0	0.0	0.1	3,041
Matungulu West	0.2	3.9	1.6	0.7	74.7	16.7	0.0	2.2	5,206
Kyeleni	0.1	0.7	0.2	0.2	94.4	4.2	0.0	0.1	2,259
Kathiani Constituency	0.1	2.1	0.7	0.2	88.2	8.1	0.1	0.4	13,362
Mitaboni	0.1	2.5	0.6	0.2	87.6	8.5	0.1	0.5	3,795
Kathiani Central	0.2	4.0	2.0	0.2	81.3	11.4	0.1	0.6	3,235
Upper Kaewa/Iveti	0.1	0.7	0.1	0.1	92.5	6.3	0.0	0.1	3,500
Upper Kaewa/Kaani	0.1	1.1	0.3	0.2	91.6	6.2	0.0	0.5	2,832
Mavoko Constituency	1.5	43.6	10.6	2.0	11.1	30.5	0.1	0.7	35,172
Athi River	1.8	44.2	9.7	1.4	2.8	39.7	0.0	0.4	14,069

Kinanie	1.4	25.7	5.3	0.2	37.5	28.3	0.1	1.3	4,028
Muthwani	0.8	24.0	10.9	1.9	29.0	33.1	0.1	0.3	5,480
Syokimau	1.5	58.4	13.4	3.4	3.4	18.8	0.1	0.9	11,595
Machakos Town Constit- uency	0.5	11.2	4.1	1.0	59.4	23.3	0.1	0.4	30,452
Kalama	0.2	2.8	1.0	0.5	86.2	9.0	0.2	0.1	4,053
Mua	0.4	2.2	1.5	0.5	81.0	14.1	0.1	0.2	3,968
Mutituni	0.3	2.1	0.4	0.6	82.5	14.1	0.0	0.0	3,059
Machakos Central	0.9	20.9	8.6	0.8	31.1	36.5	0.0	1.2	5,729
Mumbuni North	0.6	14.7	5.6	1.7	47.4	29.6	0.1	0.3	4,786
Muvuti/Kiima Kimwe	0.8	20.8	6.1	1.9	34.0	36.0	0.0	0.4	5,800
Kola	0.2	1.2	0.5	0.2	92.9	4.9	0.1	0.1	3,057
Mwala Constituency	0.3	2.8	0.4	0.4	88.0	7.8	0.1	0.1	19,962
Mbiuni	0.0	2.8	0.2	0.2	90.5	6.3	0.0	0.2	3,994
Makutano/Mwala	0.8	2.7	0.6	0.9	87.6	7.2	0.1	0.1	4,211
Masii	0.1	4.6	1.0	0.5	82.9	10.7	0.1	0.1	4,276
Muthetheni	0.3	2.3	0.3	0.2	92.3	4.5	0.2	0.1	2,553
Wamunyu	0.1	2.1	0.2	0.3	85.3	11.8	0.1	0.0	3,031
Kibauni	0.1	1.3	0.0	0.1	94.1	4.3	0.1	0.1	1,897

Table 22.11: 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
Machakos County	0.3	6.8	2.5	0.6	76.4	13.3	0.0	0.1	95,690
Masinga Constituency	0.3	1.7	0.2	0.2	92.1	5.5	0.0	0.0	11,557
Kivaa	0.7	2.1	0.3	0.2	88.1	8.5	-	0.1	3,372
Masinga Central	0.3	1.9	0.2	0.2	91.3	6.0	-	-	2,957
Ekalakala	0.1	2.4	0.2	-	91.7	5.6	0.1	-	1,773
Muthesya	-	0.7	0.1	0.1	97.4	1.6	0.1	-	1,555
Ndithini	-	0.5	0.1	0.2	96.6	2.7	-	-	1,900
Yatta Constituency	0.1	4.6	1.0	0.3	83.8	10.1	0.1	0.0	13,640
Ndalani	0.0	0.8	0.0	0.4	93.2	5.5	0.0	0.0	2,930
Matuu	0.3	16.7	3.7	0.4	57.7	21.1	0.0	0.1	2,542
Kithimani	0.4	2.9	1.4	0.3	81.7	13.4	-	-	2,857
Ikombe	-	1.1	0.0	0.2	95.5	3.1	0.1	-	3,116
Katangi	-	2.9	0.2	0.1	87.4	9.1	0.2	0.1	2,195
Kangundo Constituency	0.2	2.1	0.9	0.1	87.7	8.9	0.0	0.0	8,368
Kangundo North	0.2	0.6	0.4	0.1	91.7	6.9	0.0	-	2,028
Kangundo Central	0.4	4.9	2.6	0.2	73.3	18.5	-	0.1	2,081
Kangundo East	-	0.5	0.3	0.3	95.2	3.7	-	0.1	1,971
Kangundo West	-	2.3	0.3	-	90.9	6.3	0.1	-	2,288
Matungulu Constituency	0.2	4.5	1.3	0.7	78.3	14.4	0.1	0.6	9,864
Tala	0.5	13.1	2.8	1.3	54.2	27.8	0.0	0.1	2,185
Matungulu North	-	2.1	1.0	0.1	84.2	12.4	0.0	0.1	2,045
Matungulu East	-	0.8	0.4	0.3	92.6	5.8	0.1	-	1,823

Mat as I Wast	0.4	2.0	4.5	4.0	70.0	45.0		0.0	0.500
Matungulu West	0.1	3.6	1.5	1.0	76.3	15.2	-	2.3	2,586
Kyeleni	-	0.3	-	0.4	94.3	4.9	0.1	-	1,225
Kathiani Constituency	0.1	1.6	0.6	0.2	89.7	7.8	0.0	0.1	9,801
Mitaboni	0.0	1.8	0.4	0.2	90.2	7.2	0.0	0.2	3,120
Kathiani Central	0.1	2.4	1.8	0.3	85.2	10.2	-	0.1	2,371
Upper Kaewa/Iveti	0.2	0.8	0.1	0.1	91.7	7.1	-	-	2,246
Upper Kaewa/Kaani	0.1	1.1	0.2	0.1	91.8	6.6	0.0	0.1	2,064
Mavoko Constituency	1.4	35.7	13.4	2.0	13.0	34.0	0.1	0.3	8,984
Athi River	1.5	34.9	12.0	1.4	4.2	45.8	0.0	0.1	3,784
Kinanie	1.6	21.2	8.6	0.2	36.1	31.6	-	0.7	1,339
Muthwani	0.5	17.5	13.5	2.4	35.4	30.1	0.2	0.3	1,277
Syokimau	1.6	53.5	17.9	3.6	2.9	19.9	0.1	0.4	2,584
Machakos Town Constituency	0.4	7.6	3.7	0.9	67.1	20.2	0.0	0.1	17,986
Kalama	0.1	1.3	0.6	0.3	90.7	7.0	0.0	-	3,221
Mua	0.2	1.2	1.5	0.3	82.6	14.1	0.1	-	1,841
Mutituni	0.1	1.6	0.4	0.3	85.6	11.8	0.1	-	2,449
Machakos Central	0.8	16.8	9.1	1.0	31.5	40.7	0.0	0.1	2,776
Mumbuni North	0.8	12.4	5.1	1.7	52.2	27.8	0.0	-	2,417
Muvuti/Kiima Kimwe	0.6	15.6	7.5	2.3	40.5	33.3	-	0.2	2,917
Kola	0.3	1.6	0.4	0.1	93.7	3.7	0.0	0.0	2,365
Mwala Constituency	0.2	2.0	0.4	0.3	89.9	7.2	0.1	0.0	15,490
Mbiuni	0.2	2.0	0.0	0.2	92.0	5.5	0.1	0.0	2,993
Makutano/Mwala	0.7	1.5	0.5	0.3	90.2	6.6	0.0	0.1	2,798
Masii	0.1	4.1	0.9	0.5	83.1	11.3	-	-	2,956
Muthetheni	0.2	0.9	0.2	0.1	95.4	3.2	0.1	-	2,406
Wamunyu	0.2	2.2	0.4	0.4	84.4	12.4	-	0.1	2,527
Kibauni	0.1	0.3	-	-	97.2	2.3	0.1	0.1	1,810

Table 22.12: 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
Machakos County	17.0	0.7	54.3	24.2	0.5	0.2	2.6	0.4	165,090
Masinga Constituency	4.2	0.2	57.6	33.9	0.4	0.4	3.0	0.3	15,335
Kivaa	8.7	0.2	59.8	27.0	0.3	1.0	2.6	0.3	3,924
Masinga Central	4.5	0.2	61.8	30.1	0.3	0.2	2.6	0.2	3,846
Ekalakala	3.6	0.2	71.0	21.7	0.3	0.1	3.1	0.1	2,360
Muthesya	0.2	0.3	53.8	42.2	0.4	0.5	2.2	0.4	2,143
Ndithini	0.6	0.2	40.5	53.0	0.4	0.2	4.6	0.4	3,062
Yatta Constituency	9.3	0.4	60.9	25.8	0.5	0.3	2.5	0.3	19,015
Ndalani	2.5	0.3	66.5	27.2	0.4	0.2	2.8	0.1	3,688
Matuu	24.3	0.9	59.8	11.4	0.5	0.1	2.4	0.6	4,359
Kithimani	11.4	0.2	48.7	35.9	0.6	0.3	2.6	0.3	4,842
Ikombe	0.1	0.2	68.4	27.8	0.5	0.4	2.4	0.1	3,693



Katangi	6.7	0.2	63.9	25.7	0.5	0.4	2.2	0.3	2,433
Kangundo Constituency	8.9	0.5	62.6	23.1	0.9	0.2	3.6	0.2	13,473
Kangundo North	9.0	0.4	66.2	20.2	0.5	0.1	3.5	0.1	3,063
Kangundo Central	17.2	0.5	61.9	15.3	1.4	0.1	3.0	0.4	3,956
Kangundo East	2.3	0.5	57.2	32.9	1.3	0.4	5.2	0.2	2,931
Kangundo West	5.7	0.4	64.8	25.4	0.4	0.2	3.1	0.0	3,523
Matungulu Constituency	10.3	0.8	59.3	24.7	0.7	0.2	3.3	0.6	18,319
Tala	25.7	1.9	50.3	18.1	0.5	0.2	1.9	1.5	4,099
Matungulu North	7.9	0.5	54.2	33.4	1.3	0.6	1.9	0.2	3,714
Matungulu East	2.3	0.8	72.9	16.6	1.1	0.1	6.0	0.2	3,041
Matungulu West	8.9	0.4	63.1	22.4	0.4	0.2	4.1	0.6	5,206
Kyeleni	0.7	0.5	56.7	38.5	0.5	0.1	2.9	0.2	2,259
Kathiani Constituency	5.2	0.8	65.5	24.7	0.5	0.3	2.7	0.3	13,362
Mitaboni	3.6	1.3	72.3	18.3	0.8	0.1	3.4	0.1	3,795
Kathiani Central	10.3	0.8	63.5	22.3	0.4	0.3	2.0	0.4	3,235
Upper Kaewa/Iveti	3.8	0.5	65.9	26.5	0.3	0.3	2.3	0.5	3,500
Upper Kaewa/Kaani	3.1	0.4	57.8	34.7	0.4	0.3	3.1	0.2	2,832
Mavoko Constituency	46.4	1.1	31.8	18.5	0.3	0.1	1.0	0.9	35,172
Athi River	47.0	0.7	32.8	17.8	0.2	0.1	0.6	0.9	14,069
Kinanie	29.5	0.6	45.5	20.7	0.3	0.2	1.7	1.5	4,028
Muthwani	25.2	1.4	43.8	25.5	0.4	0.2	2.7	0.7	5,480
Syokimau	61.9	1.6	19.6	15.2	0.3	0.1	0.4	0.9	11,595
Machakos Town Constituency	24.3	0.9	54.5	17.0	0.4	0.1	2.3	0.4	30,452
Kalama	8.4	0.6	60.8	24.1	0.5	0.1	5.3	0.2	4,053
Mua	10.6	0.5	60.7	24.1	0.6	0.1	2.9	0.4	3,968
Mutituni	12.3	1.4	64.3	19.3	0.6	0.2	1.9	0.0	3,059
Machakos Central	42.3	0.8	46.1	9.0	0.2	0.1	0.6	1.0	5,729
Mumbuni North	39.6	0.5	44.6	13.0	0.4	0.1	1.1	0.7	4,786
Muvuti/Kiima Kimwe	37.3	1.5	45.2	13.8	0.2	0.1	1.5	0.4	5,800
Kola	3.2	0.7	71.0	20.6	0.4	0.1	3.9	0.1	3,057
Mwala Constituency	5.1	0.6	57.1	32.3	0.7	0.2	3.7	0.2	19,962
Mbiuni	1.6	1.0	56.2	35.6	0.7	0.3	4.5	0.1	3,994
Makutano/Mwala	6.1	0.3	49.6	39.4	0.4	0.2	3.4	0.5	4,211
Masii	10.8	0.5	60.2	23.8	0.4	0.1	4.0	0.2	4,276
Muthetheni	1.4	0.3	53.4	39.1	1.9	0.1	3.7	0.0	2,553
Wamunyu	6.3	1.4	59.9	28.6	0.6	0.1	2.8	0.2	3,031
Kibauni	1.9	0.2	67.9	25.2	0.5	0.6	3.3	0.4	1,897

Table 22.13: 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
Machakos County	19.2	0.7	52.2	23.9	0.5	0.2	2.6	0.5	165,090
Masinga Constituency	4.8	0.2	56.2	34.4	0.4	0.5	3.2	0.4	15,335
Kivaa	11.0	0.2	57.0	27.4	0.4	1.0	2.7	0.4	3,924

Masinga Central	4.9	0.2	60.9	30.2	0.3	0.2	2.9	0.3	3,846
Ekalakala	4.1	0.2	70.8	21.6	0.2	0.2	3.0	0.0	2,360
Muthesya	0.2	0.2	53.6	42.4	0.6	0.6	2.0	0.6	2,143
Ndithini	0.5	0.3	39.6	53.1	0.4	0.2	5.4	0.6	3,062
Yatta Constituency	10.5	0.4	59.1	26.2	0.5	0.2	2.7	0.4	19,015
Ndalani	3.1	0.2	65.4	27.5	0.4	0.2	3.0	0.1	3,688
Matuu	24.9	1.0	58.7	11.9	0.5	0.1	2.3	0.6	4,359
Kithimani	12.2	0.2	47.9	35.6	0.6	0.3	2.9	0.4	4,842
Ikombe	0.2	0.3	66.3	29.7	0.5	0.3	2.5	0.2	3,693
Katangi	8.1	0.2	62.1	25.4	0.7	0.4	2.7	0.4	2,433
Kangundo Constituency	9.6	0.5	62.7	22.2	0.9	0.2	3.6	0.2	13,473
Kangundo North	10.3	0.3	64.3	20.8	0.5	0.1	3.6	0.1	3,063
Kangundo Central	17.5	0.6	63.0	14.2	1.3	0.1	3.0	0.5	3,956
Kangundo East	2.6	0.5	57.2	32.2	1.2	0.5	5.6	0.2	2,931
Kangundo West	6.1	0.4	65.6	24.3	0.5	0.2	2.8	0.0	3,523
Matungulu Constituency	10.7	0.9	58.1	25.3	0.8	0.2	3.4	0.6	18,319
Tala	25.8	1.9	50.1	18.1	0.4	0.2	2.0	1.6	4,099
Matungulu North	8.7	0.6	52.0	34.8	1.5	0.6	1.6	0.2	3,714
Matungulu East	2.7	1.0	70.9	17.3	1.3	0.0	6.4	0.2	3,041
Matungulu West	9.1	0.4	61.9	23.1	0.4	0.2	4.1	0.6	5,206
Kyeleni	0.7	0.4	56.5	38.8	0.4	0.0	3.0	0.2	2,259
Kathiani Constituency	5.8	0.9	65.2	24.1	0.5	0.3	2.9	0.3	13,362
Mitaboni	4.7	1.7	71.0	17.9	0.8	0.1	3.6	0.2	3,795
Kathiani Central	11.1	0.9	63.2	21.4	0.4	0.3	2.4	0.4	3,235
Upper Kaewa/Iveti	4.0	0.5	67.0	25.1	0.4	0.3	2.3	0.4	3,500
Upper Kaewa/Kaani	3.5	0.4	57.5	34.0	0.4	0.4	3.5	0.3	2,832
Mavoko Constituency	45.7	1.1	31.4	19.4	0.3	0.1	1.0	1.0	35,172
Athi River	46.5	0.7	32.3	18.7	0.2	0.1	0.6	0.9	14,069
Kinanie	29.3	0.6	44.7	21.8	0.2	0.2	1.5	1.7	4,028
Muthwani	24.7	1.3	43.3	26.6	0.4	0.3	2.6	0.7	5,480
Syokimau	60.4	1.6	20.1	16.0	0.3	0.1	0.4	1.0	11,595
Machakos Town Constituency	25.6	0.9	53.5	16.6	0.4	0.1	2.4	0.5	30,452
Kalama	10.1	0.6	59.2	23.9	0.4	0.1	5.6	0.2	4,053
Mua	11.0	0.5	60.2	23.9	0.6	0.1	3.3	0.5	3,968
Mutituni	13.9	1.5	64.3	17.4	0.6	0.2	2.1	0.0	3,059
Machakos Central	41.4	0.8	47.0	8.7	0.2	0.1	0.7	1.1	5,729
Mumbuni North	40.1	0.6	43.8	13.1	0.4	0.1	1.2	0.8	4,786
Muvuti/Kiima Kimwe	36.7	1.7	45.5	13.9	0.2	0.1	1.4	0.5	5,800
Kola	3.3	0.6	69.3	21.8	0.5	0.1	4.3	0.2	3,057
Mwala Constituency	5.7	0.6	56.1	32.4	0.8	0.2	4.0	0.3	19,962
Mbiuni	1.9	0.9	54.6	36.9	0.8	0.3	4.4	0.2	3,994
Makutano/Mwala	6.8	0.4	48.8	39.3	0.4	0.2	3.4	0.7	4,211
Masii	11.2	0.4	59.9	23.3	0.4	0.2	4.4	0.3	4,276
Muthetheni	1.8	0.4	51.6	38.9	2.4	0.1	4.7	0.0	2,553
Wamunyu	6.4	1.5	59.2	28.8	0.7	0.1	3.2	0.3	3,031
Kibauni	2.5	0.2		24.7	0.4	0.6	3.8	0.3	1,897
Nibautii	2.0	0.2	67.5	24.1	U.4	0.0	3.0	0.3	1,09/

Table 22.14: Lighting Fuel for Female Headed Households by County, Constituency and Wards

County/Constituency/ Wards	Electricity	Pressure Lamp	Lantern	Tin Lamp	Gas Lamp	Fuelwood	Solar	Other	Households
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
Machakos County	13.1	0.6	57.9	24.7	0.5	0.2	2.6	0.3	95,690
Masinga Constituency	3.3	0.3	59.6	33.1	0.3	0.4	2.7	0.2	11,557
Kivaa	6.0	0.3	63.0	26.6	0.3	1.1	2.6	0.2	3,372
Masinga Central	4.0	0.3	62.8	30.0	0.3	0.2	2.3	0.1	2,957
Ekalakala	3.0	0.1	71.2	21.8	0.6	-	3.2	0.2	1,773
Muthesya	0.1	0.5	54.1	42.1	0.2	0.3	2.6	0.1	1,555
Ndithini	0.7	0.1	42.1	52.9	0.5	0.2	3.4	0.2	1,900
Yatta Constituency	7.7	0.3	63.3	25.4	0.5	0.3	2.3	0.2	13,640
Ndalani	1.8	0.3	67.8	26.8	0.4	0.1	2.5	0.1	2,930
Matuu	23.3	0.8	61.5	10.6	0.5	0.1	2.6	0.5	2,542
Kithimani	10.2	0.1	50.2	36.4	0.5	0.4	2.1	0.1	2,857
Ikombe	0.0	0.2	70.9	25.6	0.5	0.4	2.3	0.0	3,116
Katangi	5.1	0.3	65.8	26.0	0.4	0.4	1.7	0.3	2,195
Kangundo Constituency	7.7	0.4	62.5	24.4	1.0	0.2	3.6	0.2	8,368
Kangundo North	7.1	0.6	69.0	19.3	0.6	0.0	3.5	-	2,028
Kangundo Central	16.8	0.5	60.0	17.5	1.6	0.0	3.1	0.4	2,081
Kangundo East	1.9	0.4	57.2	33.8	1.4	0.4	4.6	0.3	1,971
Kangundo West	5.0	0.3	63.5	27.1	0.3	0.2	3.5	0.0	2,288
Matungulu Constituency	9.7	0.7	61.5	23.5	0.7	0.2	3.2	0.5	9,864
Tala	25.6	2.0	50.6	17.9	0.7	0.1	1.7	1.3	2,185
Matungulu North	6.5	0.3	58.1	31.0	1.1	0.4	2.4	0.1	2,045
Matungulu East	1.8	0.4	76.2	15.5	0.7	0.1	5.2	0.2	1,823
Matungulu West	8.5	0.3	65.4	21.0	0.3	0.1	3.9	0.4	2,586
Kyeleni	0.7	0.7	57.0	38.0	0.7	0.1	2.8	0.2	1,225
Kathiani Constituency	4.3	0.6	66.0	25.7	0.5	0.2	2.4	0.3	9,801
Mitaboni	2.3	0.8	73.9	18.7	0.8	0.2	3.2	0.1	3,120
Kathiani Central	9.2	0.8	64.0	23.5	0.5	0.3	1.4	0.3	2,371
Upper Kaewa/Iveti	3.5	0.5	64.1	28.5	0.2	0.3	2.4	0.5	2,246
Upper Kaewa/Kaani	2.5	0.3	58.2	35.7	0.4	0.2	2.5	0.1	2,064
Mavoko Constituency	48.8	1.1	33.2	14.9	0.2	0.1	1.1	0.6	8,984
Athi River	48.9	0.8	34.6	14.4	0.1	0.1	0.4	0.7	3,784
Kinanie	30.3	0.7	47.6	17.4	0.4	0.1	2.4	1.0	1,339
Muthwani	27.5	1.9	45.8	20.7	0.5	0.1	3.3	0.3	1,277
Syokimau	68.8	1.3	17.5	11.4	0.2	0.0	0.3	0.5	2,584
Machakos Town Constit- uency	22.1	0.9	56.2	17.7	0.4	0.1	2.3	0.2	17,986
Kalama	6.2	0.9	63.0	24.3	0.6	0.1	5.1	0.2	3,221
Mua	9.8	0.5	61.9	24.5	0.0	0.1	2.3	0.1	1,841
Mutituni	10.3	1.3	64.2	21.6	0.7	0.1	1.7	0.0	2,449
Machakos Central	44.1	0.9	44.2	9.5	0.0	0.1	0.3	0.6	2,776
Mumbuni North	38.7	0.9	46.1	12.8	0.1	0.1	0.8	0.6	2,776
Muvuti/Kiima Kimwe	38.4	1.3	44.6	13.7	0.5	0.1	1.7	0.5	2,417
				19.2				0.1	
Kola	3.0	0.7	73.2	19.2	0.4	0.2	3.3	-	2,365

Mwala Constituency	4.4	0.7	58.5	32.2	0.6	0.2	3.3	0.1	15,490
Mbiuni	1.3	1.1	58.3	33.9	0.5	0.2	4.6	0.0	2,993
Makutano/Mwala	5.0	0.3	50.9	39.6	0.4	0.2	3.5	0.2	2,798
Masii	10.2	0.6	60.5	24.6	0.4	0.2	3.4	0.1	2,956
Muthetheni	1.0	0.2	55.4	39.4	1.3	0.2	2.6	0.0	2,406
Wamunyu	6.3	1.3	60.8	28.5	0.5	0.1	2.5	0.1	2,527
Kibauni	1.3	0.2	68.2	25.8	0.6	0.7	2.9	0.4	1,810

Table 22.15: 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
Machakos County	58.3	1.6	0.2	39.8	0.1	260,780
Masinga Constituency	37.1	0.7	0.2	61.9	0.1	26,892
Kivaa	43.9	1.4	0.3	54.4	0.0	7,296
Masinga Central	39.1	0.4	0.2	60.2	0.1	6,803
Ekalakala	46.9	0.8	0.3	51.9	0.1	4,133
Muthesya	24.8	0.3	0.1	74.5	0.4	3,698
Ndithini	25.6	0.2	0.1	74.0	0.0	4,962
Yatta Constituency	45.8	0.4	0.1	53.4	0.2	32,655
Ndalani	39.7	0.4	0.1	59.7	0.1	6,618
Matuu	66.8	0.6	0.2	32.3	0.1	6,901
Kithimani	45.9	0.5	0.0	53.5	0.1	7,699
Ikombe	34.7	0.3	0.1	64.3	0.5	6,809
Katangi	39.5	0.3	0.2	59.9	0.1	4,628
Kangundo Constituency	59.2	0.9	0.1	39.7	0.1	21,841
Kangundo North	61.9	0.7	0.1	37.1	0.2	5,091
Kangundo Central	63.5	1.3	0.0	35.1	0.1	6,037
Kangundo East	58.9	0.9	0.1	40.0	0.1	4,902
Kangundo West	52.8	0.6	0.2	46.4	-	5,811
Matungulu Constituency	51.2	0.7	0.1	47.8	0.1	28,183
Tala	72.4	1.0	0.1	26.4	0.1	6,284
Matungulu North	39.6	0.4	0.3	59.3	0.3	5,759
Matungulu East	61.3	0.6	0.2	37.8	0.1	4,864
Matungulu West	49.7	0.9	0.1	49.2	0.1	7,792
Kyeleni	21.4	0.2	-	78.4	0.1	3,484
Kathiani Constituency	51.6	0.9	0.2	47.3	0.1	23,163
Mitaboni	53.7	1.0	0.2	45.0	0.0	6,915
Kathiani Central	56.1	1.4	0.2	42.2	0.1	5,606
Upper Kaewa/Iveti	46.9	0.6	0.2	52.2	0.1	5,746
Upper Kaewa/Kaani	48.9	0.5	0.2	50.4	0.1	4,896
Mavoko Constituency	82.9	5.0	0.3	11.8	0.1	44,156
Athi River	91.7	3.3	0.4	4.5	0.1	17,853
Kinanie	66.4	3.4	0.5	29.5	0.2	5,367
Muthwani	63.7	5.4	0.2	30.6	0.1	6,757
Syokimau	87.0	7.5	0.1	5.2	0.1	14,179

Machakos Town Constituency	68.3	1.7	0.2	29.6	0.1	48,438
Kalama	55.2	1.1	0.2	43.5	0.1	7,274
Mua	53.9	2.4	0.6	43.1	0.0	5,809
Mutituni	58.9	1.8	0.1	39.3	0.0	5,508
Machakos Central	85.2	2.2	0.3	12.1	0.2	8,505
Mumbuni North	73.9	2.7	0.1	23.2	0.0	7,203
Muvuti/Kiima Kimwe	81.2	1.1	0.1	17.4	0.2	8,717
Kola	56.6	0.5	0.2	42.7	0.0	5,422
Mwala Constituency	51.2	0.7	0.2	47.7	0.2	35,452
Mbiuni	47.6	0.6	0.2	51.5	0.1	6,987
Makutano/Mwala	51.2	0.7	0.1	47.6	0.4	7,009
Masii	65.8	0.9	0.1	33.0	0.1	7,232
Muthetheni	45.7	0.7	0.1	53.5	0.0	4,959
Wamunyu	52.1	0.9	0.1	46.8	0.1	5,558
Kibauni	35.3	0.4	0.5	63.4	0.4	3,707

Table 22.16: Main Material of the Floor in Male and Female Headed Households by County, Constituency and Ward

County/Constituency/ wards	Cement	Tiles	Wood	Earth	Other	Households	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
Machakos County	59.9	1.9	0.2	37.9	0.1	165,090	55.7	1.2	0.2	42.9	0.1	95,690
Masinga Constituency	36.9	0.8	0.2	62.0	0.1	15,335	37.5	0.5	0.2	61.7	0.1	11,557
Kivaa	44.8	2.1	0.3	52.8	0.0	3,924	42.8	0.6	0.2	56.3	0.1	3,372
Masinga Central	39.0	0.4	0.2	60.2	0.2	3,846	39.2	0.3	0.1	60.3	0.1	2,957
Ekalakala	45.6	0.7	0.4	53.2	0.1	2,360	48.7	0.8	0.3	50.1	0.1	1,773
Muthesya	23.8	0.2	0.0	75.5	0.5	2,143	26.2	0.4	0.1	73.1	0.2	1,555
Ndithini	26.4	0.2	0.1	73.3	0.0	3,062	24.4	0.3	0.1	75.3	-	1,900
Yatta Constituency	46.9	0.4	0.1	52.4	0.2	19,015	44.3	0.5	0.1	54.9	0.1	13,640
Ndalani	39.6	0.2	0.1	60.0	0.1	3,688	39.8	0.7	0.1	59.3	0.1	2,930
Matuu	67.5	0.6	0.2	31.6	0.0	4,359	65.5	0.6	0.2	33.6	0.1	2,542
Kithimani	46.1	0.4	0.0	53.3	0.2	4,842	45.5	0.5	0.0	53.9	0.0	2,857
Ikombe	34.0	0.2	0.1	64.9	0.7	3,693	35.6	0.4	0.0	63.6	0.3	3,116
Katangi	42.2	0.3	0.1	57.3	0.1	2,433	36.6	0.4	0.3	62.7	0.0	2,195
Kangundo Constituency	58.3	0.9	0.1	40.5	0.1	13,473	60.8	0.7	0.1	38.3	0.1	8,368
Kangundo North	61.7	0.8	0.2	37.2	0.2	3,063	62.2	0.5	0.0	37.0	0.2	2,028

Kangundo Central	62.6	1.5	0.1	35.7	0.2	3,956	65.1	0.8	0.0	33.9	0.1	2,081
Kangundo East	57.3	0.8	0.1	41.6	0.1	2,931	61.1	0.9	0.2	37.7	0.1	1,971
Kangundo West	51.1	0.6	0.3	48.0	-	3,523	55.4	0.6	0.0	44.0	-	2,288
Matungulu Constituency	50.0	0.8	0.2	48.9	0.1	18,319	53.5	0.5	0.1	45.8	0.1	9,864
Tala	71.0	1.2	0.1	27.5	0.0	4,099	74.8	0.5	-	24.4	0.2	2,185
Matungulu North	38.7	0.5	0.3	60.1	0.4	3,714	41.3	0.4	0.3	57.9	0.0	2,045
Matungulu East	59.6	0.7	0.3	39.4	0.1	3,041	64.2	0.5	0.2	35.0	0.1	1,823
Matungulu West	48.5	1.1	0.0	50.2	0.1	5,206	52.0	0.6	0.1	47.2	0.1	2,586
Kyeleni	20.5	0.2	-	79.2	0.0	2,259	22.9	0.2	-	76.7	0.1	1,225
Kathiani Constituency	51.8	0.8	0.2	47.2	0.1	13,362	51.4	1.0	0.1	47.4	0.1	9,801
Mitaboni	54.0	0.8	0.2	44.9	0.0	3,795	53.4	1.1	0.2	45.2	0.1	3,120
Kathiani Central	57.0	1.2	0.2	41.5	0.1	3,235	54.9	1.6	0.0	43.3	0.1	2,371
Upper Kaewa/Iveti	46.2	0.6	0.2	52.9	0.1	3,500	48.0	0.5	0.2	51.1	0.2	2,246
Upper Kaewa/Kaani	49.7	0.5	0.2	49.6	0.0	2,832	47.8	0.5	0.1	51.5	0.1	2,064
Mavoko Constituency	82.9	5.0	0.3	11.7	0.1	35,172	82.8	4.9	0.2	12.0	0.1	8,984
Athi River	91.7	3.3	0.5	4.4	0.1	14,069	91.8	3.0	0.3	4.9	0.0	3,784
Kinanie	66.2	3.2	0.6	29.8	0.2	4,028	67.2	4.0	-	28.6	0.1	1,339
Muthwani	64.2	5.2	0.2	30.3	0.1	5,480	61.6	6.3	0.1	31.6	0.3	1,277
Syokimau	86.7	7.6	0.1	5.5	0.1	11,595	88.4	7.3	0.2	4.2	-	2,584
Machakos Town Constituency	69.0	1.9	0.2	28.8	0.1	30,452	67.1	1.4	0.2	31.1	0.1	17,986
Kalama	55.2	1.3	0.1	43.3	0.1	4,053	55.2	0.9	0.2	43.7	0.1	3,221
Mua	53.9	2.4	0.6	43.0	0.1	3,968	54.0	2.2	0.5	43.3	-	1,841
Mutituni	59.7	2.0	0.0	38.3	-	3,059	57.9	1.5	0.1	40.5	0.1	2,449
Machakos Central	85.5	2.1	0.3	11.9	0.1	5,729	84.5	2.3	0.4	12.6	0.2	2,776
Mumbuni North	73.5	3.1	0.1	23.3	0.1	4,786	74.8	2.1	0.1	23.0	-	2,417
Muvuti/Kiima Kimwe	81.4	1.2	0.1	17.2	0.1	5,800	80.8	0.9	0.1	17.8	0.4	2,917
Kola	55.3	0.6	0.2	43.9	-	3,057	58.2	0.4	0.1	41.2	0.1	2,365
Mwala Constituency	51.0	0.7	0.2	47.8	0.2	19,962	51.4	0.7	0.2	47.6	0.1	15,490
Mbiuni	45.5	0.5	0.2	53.7	0.1	3,994	50.5	0.7	0.2	48.6	-	2,993
Makutano/Mwala	50.1	0.6	0.2	48.6	0.5	4,211	52.9	0.8	0.1	46.0	0.3	2,798
Masii	65.1	1.1	0.1	33.6	0.1	4,276	66.9	0.7	0.1	32.1	0.1	2,956

Muthetheni	46.6	0.7	0.1	52.6	0.0	2,553	44.6	0.7	0.1	54.6	0.0	2,406
Wamunyu	52.1	1.0	0.1	46.8	0.2	3,031	52.2	0.8	0.0	46.9	0.0	2,527
Kibauni	37.3	0.5	0.4	61.1	0.6	1,897	33.2	0.2	0.6	65.8	0.3	1,810

Table 22.17: Main Roofing Material by County Constituency and Wards

	Corrugated			Asbestos				Mud/		
County/Constituency/Wards	Iron Sheets	Tiles	Concrete	sheets	Grass	Makuti	Tin	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
Machakos County	88.9	1.6	3.1	1.6	4.5	0.1	0.1	0.0	0.2	260,780
Masinga Constituency	82.3	0.7	0.0	0.5	16.2	0.1	0.0	0.0	0.0	26,892
Kivaa	80.9	0.9	0.0	1.3	16.8	0.1	0.0	0.0	0.0	7,296
Masinga Central	76.4	0.8	0.0	0.5	22.1	0.1	0.1	0.0	0.1	6,803
Ekalakala	86.4	0.7	0.0	0.1	12.8	0.0	0.0	0.0	0.0	4,133
Muthesya	82.0	0.6	0.0	0.0	17.0	0.2	0.0	0.0	0.0	3,698
Ndithini	89.5	0.7	0.0	0.1	9.5	0.1	0.0	0.0	0.0	4,962
Yatta Constituency	89.4	0.7	0.5	0.8	8.2	0.2	0.1	0.0	0.1	32,655
Ndalani	92.6	0.9	0.0	0.2	6.1	0.0	0.0	0.0	0.0	6,618
Matuu	91.6	0.9	2.3	0.7	3.9	0.2	0.3	0.0	0.1	6,901
Kithimani	91.5	0.8	0.1	0.5	6.8	0.3	0.0	0.0	0.0	7,699
Ikombe	80.2	0.5	0.0	0.6	18.0	0.2	0.0	0.0	0.5	6,809
Katangi	91.4	0.6	0.1	2.2	5.5	0.0	0.1	0.0	0.0	4,628
Kangundo Constituency	95.7	0.7	0.2	2.0	1.0	0.1	0.2	0.0	0.1	21,841
Kangundo North	99.1	0.5	0.0	0.0	0.3	0.0	0.0	0.0	0.1	5,091
Kangundo Central	96.4	1.3	0.6	1.5	0.1	0.1	0.0	0.0	0.1	6,037
Kangundo East	92.3	0.6	0.1	3.6	2.5	0.3	0.6	0.0	0.0	4,902
Kangundo West	95.0	0.3	0.1	3.0	1.3	0.1	0.2	0.0	0.1	5,811
Matungulu Constituency	92.0	0.8	0.6	1.8	4.5	0.3	0.1	0.0	0.0	28,183
Tala	96.0	0.7	2.3	0.5	0.3	0.0	0.1	0.0	0.0	6,284
Matungulu North	85.5	0.7	0.1	5.1	7.1	1.4	0.1	0.0	0.1	5,759
Matungulu East	97.8	0.8	0.1	0.1	1.1	0.0	0.0	0.0	0.1	4,864
Matungulu West	95.6	0.9	0.1	1.7	1.4	0.1	0.1	0.0	0.0	7,792
Kyeleni	79.2	0.6	0.1	0.9	19.1	0.1	0.0	0.0	0.1	3,484
Kathiani Constituency	96.1	1.0	0.3	1.5	0.9	0.1	0.1	0.0	0.0	23,163
Mitaboni	95.8	0.9	0.1	1.7	1.4	0.0	0.1	0.0	0.0	6,915
Kathiani Central	96.7	1.6	0.8	0.2	0.5	0.1	0.1	0.0	0.0	5,606
Upper Kaewa/Iveti	96.5	0.9	0.2	2.1	0.1	0.0	0.1	0.0	0.1	5,746
Upper Kaewa/Kaani	95.2	0.7	0.1	2.0	1.7	0.1	0.2	0.0	0.0	4,896
Mavoko Constituency	75.2	4.7	15.4	2.5	1.1	0.1	0.2	0.2	0.6	44,156
Athi River	75.0	5.2	13.9	4.6	0.2	0.1	0.1	0.1	0.8	17,853
Kinanie	89.9	2.0	1.9	1.5	4.1	0.1	0.1	0.0	0.4	5,367
Muthwani	91.2	2.2	1.6	0.8	2.1	0.2	0.5	1.0	0.4	6,757
Syokimau	62.3	6.1	29.0	1.2	0.5	0.1	0.3	0.1	0.4	14,179
Machakos Town Constituency	93.2	1.6	1.4	2.4	1.2	0.0	0.1	0.0	0.1	48,438

Kalama	87.8	1.3	0.2	5.5	4.9	0.1	0.1	0.1	0.1	7,274
Mua	96.4	2.1	0.0	0.6	0.7	0.1	0.1	0.0	0.0	5,809
Mutituni	96.1	1.4	0.1	1.7	0.8	0.0	0.0	0.0	0.0	5,508
Machakos Central	90.7	2.9	3.6	2.4	0.0	0.0	0.2	0.0	0.2	8,505
Mumbuni North	95.0	1.3	1.8	1.6	0.1	0.0	0.1	0.0	0.0	7,203
Muvuti/Kiima Kimwe	93.5	1.1	2.7	2.2	0.2	0.0	0.0	0.0	0.2	8,717
Kola	94.9	0.6	0.1	1.9	2.4	0.0	0.0	0.0	0.0	5,422
Mwala Constituency	93.0	0.8	0.1	0.4	5.3	0.1	0.1	0.0	0.2	35,452
Mbiuni	95.0	1.0	0.0	0.0	3.6	0.2	0.0	0.0	0.0	6,987
Makutano/Mwala	91.4	0.9	0.1	0.3	6.6	0.1	0.1	0.0	0.5	7,009
Masii	94.1	0.7	0.2	0.1	4.6	0.2	0.0	0.0	0.1	7,232
Muthetheni	94.6	0.7	0.1	0.1	4.3	0.1	0.1	0.0	0.0	4,959
Wamunyu	91.6	0.8	0.1	0.7	6.7	0.0	0.1	0.0	0.0	5,558
Kibauni	90.1	0.6	0.1	1.7	6.9	0.1	0.0	0.0	0.5	3,707

Table 22.18: Main Roofing Material in Male Headed Households by County, Constituency and Wards

County/Constit- uency/Wards	Corrugated Iron Sheets	Tiles	Concrete	Asbestos sheets	Grass	Makuti	Tin	Mud/Dung	Other	House- holds
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
Machakos County	88.1	1.8	3.7	1.6	4.3	0.1	0.1	0.0	0.2	165,090
Masinga Con- stituency	81.3	0.8	0.0	0.6	17.0	0.2	0.0	0.0	0.0	15,335
Kivaa	79.5	0.9	-	1.8	17.6	0.2	-	-	0.0	3,924
Masinga Central	75.2	0.9	0.1	0.5	23.0	0.1	0.1	0.1	0.1	3,846
Ekalakala	85.1	0.7	0.0	0.1	14.0	0.0	-	-	-	2,360
Muthesya	80.3	0.7	-	0.0	18.6	0.3	0.0	-	0.0	2,143
Ndithini	89.2	0.8	0.0	0.1	9.7	0.2	-	-	-	3,062
Yatta Constit- uency	89.2	0.7	0.6	0.6	8.5	0.2	0.1	0.0	0.1	19,015
Ndalani	92.5	0.8	-	0.1	6.6	-	0.0	0.1	-	3,688
Matuu	91.7	0.9	2.4	0.7	3.7	0.2	0.4	0.0	0.1	4,359
Kithimani	91.2	0.8	0.0	0.6	7.1	0.2	0.0	-	0.0	4,842
Ikombe	78.5	0.5	-	0.5	19.6	0.3	-	-	0.6	3,693
Katangi	91.9	0.6	0.1	1.6	5.5	0.0	0.2	-	0.0	2,433
Kangundo Constituency	95.4	0.8	0.2	2.2	0.9	0.1	0.3	-	0.1	13,473
Kangundo North	98.9	0.7	0.0	0.1	0.2	-	0.0	-	0.1	3,063
Kangundo Central	96.1	1.5	0.6	1.4	0.2	0.0	0.0	-	0.1	3,956
Kangundo East	91.3	0.6	0.1	4.1	2.7	0.4	0.8	-	0.1	2,931
Kangundo West	94.9	0.3	0.1	3.3	1.0	0.1	0.3	-	0.0	3,523
Matungulu Constituency	91.8	0.8	0.6	1.8	4.5	0.4	0.1	0.0	0.1	18,319
Tala	96.0	0.7	2.3	0.4	0.4	-	0.1	0.0	-	4,099
Matungulu North	85.3	0.8	0.1	5.1	6.8	1.7	0.1	0.0	0.2	3,714

Matungulu East	97.5	0.8	0.1	0.2	1.3	-	0.0	0.0	0.1	3,041
Matungulu West	95.6	0.9	0.1	1.7	1.5	0.1	0.1	0.0	0.0	5,206
Kyeleni	78.5	0.8	0.2	0.9	19.5	0.1	-	-	0.0	2,259
Kathiani Constit- uency	95.8	1.0	0.3	1.6	1.0	0.1	0.1	0.0	0.0	13,362
Mitaboni	95.0	1.0	0.1	2.1	1.7	0.1	0.1	-	0.1	3,795
Kathiani Central	96.5	1.6	1.0	0.2	0.4	0.2	0.1	0.0	-	3,235
Upper Kaewa/ Iveti	97.0	0.8	0.1	1.9	0.0	-	0.1	0.1	-	3,500
Upper Kaewa/ Kaani	94.8	0.8	0.1	2.0	1.9	0.1	0.2	-	0.0	2,832
Mavoko Constit- uency	75.8	4.7	15.0	2.5	0.9	0.1	0.2	0.2	0.5	35,172
Athi River	75.4	5.2	13.6	4.5	0.2	0.1	0.1	0.1	0.8	14,069
Kinanie	90.2	2.3	1.4	1.5	3.9	0.0	0.2	-	0.4	4,028
Muthwani	91.7	2.2	1.6	0.7	1.7	0.3	0.5	0.8	0.4	5,480
Syokimau	63.7	6.2	27.8	1.3	0.4	0.1	0.3	0.0	0.3	11,595
Machakos Town Constituency	93.2	1.6	1.5	2.3	1.1	0.0	0.1	0.0	0.1	30,452
Kalama	86.7	1.4	0.2	6.0	5.4	0.0	0.1	0.1	0.1	4,053
Mua	96.8	2.1	-	0.5	0.5	0.1	0.1	-	0.0	3,968
Mutituni	95.9	1.6	0.1	1.7	0.8	-	-	-	-	3,059
Machakos Central	91.3	2.8	3.4	2.1	0.0	0.0	0.2	0.0	0.1	5,729
Mumbuni North	94.8	1.3	1.8	1.8	0.1	-	0.1	0.0	0.0	4,786
Muvuti/Kiima Kimwe	93.7	1.1	2.7	2.1	0.2	0.1	0.0	-	0.1	5,800
Kola	95.1	0.7	0.0	1.8	2.3	0.0	-	0.0	-	3,057
Mwala Constit- uency	92.4	0.9	0.1	0.4	5.8	0.1	0.0	0.0	0.2	19,962
Mbiuni	94.1	1.3	0.0	-	4.2	0.3	-	0.0	0.1	3,994
Makutano/Mwala	90.9	0.9	0.0	0.2	7.1	0.1	0.1	-	0.6	4,211
Masii	93.7	0.8	0.2	0.1	4.9	0.1	0.0	-	0.1	4,276
Muthetheni	93.9	0.9	0.1	0.1	4.8	0.1	0.0	0.0	0.0	2,553
Wamunyu	91.0	0.8	0.1	0.6	7.4	-	0.1	-	-	3,031
Kibauni	89.4	0.5	0.1	1.9	7.3	0.1	-	0.1	0.7	1,897

Table 22.19: Main Roofing Material in Female Headed Households by County, Constituency and Wards

County/Constitu- ency/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
Machakos County	90.2	1.2	2.0	1.4	4.7	0.1	0.1	0.0	0.1	95,690
Masinga Constit- uency	83.7	0.6	0.0	0.3	15.2	0.1	0.0	0.0	0.0	11,557
Kivaa	82.4	0.8	0.1	0.7	15.9	-	-	0.0	-	3,372
Masinga Central	77.9	0.6	0.0	0.5	20.8	0.1	0.1	-	0.0	2,957
Ekalakala	88.2	0.6	-	0.1	11.2	-	-	-	-	1,773
Muthesya	84.4	0.6	-	-	14.9	0.1	-	0.1	-	1,555
Ndithini	90.1	0.5	0.1	0.1	9.1	0.1	0.1	-	-	1,900

Yatta Constitu-										
ency	89.6	0.8	0.5	1.0	7.9	0.2	0.0	0.0	0.1	13,640
Ndalani	92.9	1.1	0.0	0.3	5.6	0.0	0.0	0.0	-	2,930
Matuu	91.3	1.0	2.3	0.9	4.1	0.2	0.1	-	0.1	2,542
Kithimani	91.9	0.8	0.1	0.5	6.2	0.4	-	-	0.0	2,857
Ikombe	82.3	0.5	-	0.6	16.2	0.1	-	-	0.3	3,116
Katangi	90.8	0.5	0.1	3.0	5.5	-	-	0.0	-	2,195
Kangundo Con- stituency	96.3	0.5	0.2	1.7	1.1	0.1	0.1	_	0.0	8,368
Kangundo North	99.3	0.3	-	-	0.3	-	-	-	0.0	2,028
Kangundo Central	96.8	0.8	0.6	1.5	0.1	0.1	-	-	-	2,081
Kangundo East	93.8	0.6	0.1	2.8	2.2	0.1	0.4	-	-	1,971
Kangundo West	95.2	0.3	0.1	2.4	1.7	0.1	0.2	-	0.1	2,288
Matungulu Con- stituency	92.3	0.7	0.5	1.8	4.4	0.2	0.1	0.0	0.0	9,864
Tala	95.9	0.7	2.2	0.8	0.2	0.0	0.1	0.0	-	2,185
Matungulu North	85.8	0.4	-	4.9	7.7	1.0	0.1	-	0.0	2,045
Matungulu East	98.2	0.9	0.1	0.1	0.7	-	0.1	-	0.1	1,823
Matungulu West	95.8	0.9	0.2	1.7	1.3	0.1	0.1	-	-	2,586
Kyeleni	80.4	0.2	-	0.8	18.4	0.1	-	-	0.1	1,225
Kathiani Constit- uency	96.4	1.0	0.2	1.4	0.8	0.1	0.1	0.0	0.0	9,801
Mitaboni	96.8	0.8	0.2	1.4	1.0	-	0.1	-	-	3,120
Kathiani Central	96.9	1.6	0.4	0.3	0.7	_	0.1	_	_	2,371
Upper Kaewa/Iveti	95.9	1.1	0.2	2.4	0.1	0.0	0.1	_	0.1	2,246
Upper Kaewa/ Kaani	95.7	0.4	0.1	2.0	1.4	0.2	0.0	0.0	-	2,064
Mavoko Constit- uency	73.1	4.4	17.0	2.6	1.5	0.0	0.3	0.4	0.7	8,984
Athi River	73.6	5.1	15.1	4.8	0.2	-	0.1	0.1	1.1	3,784
Kinanie	89.2	1.1	3.4	1.3	4.5	0.1	0.1	0.1	0.2	1,339
Muthwani	89.0	2.0	1.6	1.2	3.7	0.1	0.4	1.7	0.4	1,277
Syokimau	56.3	6.1	34.3	0.7	1.0	0.1	0.7	0.2	0.6	2,584
Machakos Town Constituency	93.1	1.5	1.4	2.5	1.4	0.1	0.1	0.0	0.1	17,986
Kalama	89.3	1.2	0.1	4.9	4.3	0.1	0.1	0.0	-	3,221
Mua	95.7	2.1	0.1	0.8	1.1	0.1	0.1	0.0	_	1,841
Mutituni	96.3	1.1	0.0	1.7	0.8	-	0.0	0.0	_	2,449
Machakos Central	89.4	3.1	4.0	2.8	-	0.1	0.3	0.0	0.2	2,776
Mumbuni North	95.4	1.2	2.0	1.2	0.1	-	0.0	0.0	-	2,417
Muvuti/Kiima Kimwe	93.0	1.2	2.7	2.4	0.3	0.0	0.0	-	0.3	2,917
Kola	94.7	0.5	0.1	2.1	2.5	0.0	0.0	-	0.0	2,365
Mwala Constit- uency	93.8	0.7	0.1	0.4	4.7	0.1	0.1	0.0	0.1	15,490
Mbiuni	96.1	0.7	0.1	0.1	2.8	0.2	0.1	-	-	2,993
Makutano/Mwala	92.2	0.9	0.1	0.5	5.9	0.1	0.0	-	0.4	2,798
Masii	94.7	0.6	0.1	0.0	4.2	0.2	-	-	0.1	2,956
Muthetheni	95.3	0.5	0.2	0.1	3.7	-	0.1	0.0	-	2,406
Wamunyu	92.3	0.8	0.0	0.8	5.8	0.1	0.1	0.0	0.0	2,527
Kibauni	90.9	0.7	0.1	1.4	6.5	0.1	0.1	-	0.3	1,810

Table 22.20: 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
Machakos County	24.7	61.5	4.2	1.8	0.5	7.0	0.1	0.1	0.2	260,780
Masinga Constituency	7.2	81.0	8.1	2.7	0.2	0.5	0.2	0.0	0.1	26,892
Kivaa	7.8	81.4	7.6	2.0	0.2	0.8	0.2	0.0	0.0	7,296
Masinga Central	8.8	72.6	12.8	5.0	0.3	0.3	0.1	0.0	0.1	6,803
Ekalakala	6.4	88.2	3.1	2.0	0.0	0.0	0.1	0.0	0.0	4,133
Muthesya	1.0	82.8	11.9	2.8	0.2	0.5	0.4	0.0	0.5	3,698
Ndithini	9.2	84.6	4.0	1.3	0.1	0.5	0.1	0.0	0.2	4,962
Yatta Constituency	28.5	59.3	7.9	2.6	0.2	1.2	0.1	0.0	0.1	32,655
Ndalani	14.0	81.2	2.6	0.7	0.2	1.1	0.1	0.0	0.0	6,618
Matuu	56.7	39.6	2.3	1.0	0.1	0.2	0.0	0.0	0.1	6,901
Kithimani	24.8	58.2	8.8	4.1	0.3	3.6	0.1	0.0	0.0	7,699
Ikombe	24.9	57.8	13.5	3.0	0.1	0.1	0.1	0.0	0.5	6,809
Katangi	18.7	61.8	14.2	4.6	0.1	0.5	0.1	0.0	0.0	4,628
Kangundo Constituency	24.3	73.6	0.4	1.4	0.1	0.1	0.1	0.0	0.0	21,841
Kangundo North	11.8	84.1	0.6	3.2	0.1	0.1	0.1	0.0	0.1	5,091
Kangundo Central	39.5	59.9	0.1	0.1	0.0	0.2	0.0	0.0	0.0	6,037
Kangundo East	6.0	92.6	0.5	0.3	0.1	0.2	0.3	0.0	0.0	4,902
Kangundo West	34.8	62.5	0.3	2.1	0.1	0.1	0.1	0.0	0.0	5,811
Matungulu Constituency	45.4	48.7	2.5	0.8	0.3	2.0	0.1	0.0	0.2	28,183
Tala	70.0	27.5	1.6	0.7	0.1	0.0	0.1	0.0	0.0	6,284
Matungulu North	30.1	61.2	4.8	2.0	0.3	1.1	0.2	0.1	0.3	5,759
Matungulu East	27.3	71.9	0.3	0.2	0.1	0.1	0.1	0.0	0.1	4,864
Matungulu West	48.7	42.7	1.7	0.7	0.5	5.5	0.1	0.1	0.0	7,792
Kyeleni	44.5	47.1	5.3	0.3	0.5	1.5	0.1	0.0	0.7	3,484
Kathiani Constituency	10.4	85.0	2.4	2.0	0.0	0.1	0.1	0.0	0.0	23,163
Mitaboni	19.5	76.5	1.6	2.2	0.0	0.1	0.0	0.0	0.0	6,915
Kathiani Central	14.9	82.5	1.9	0.3	0.0	0.1	0.1	0.0	0.0	5,606
Upper Kaewa/Iveti	1.8	91.7	2.6	3.7	0.0	0.0	0.1	0.0	0.0	5,746
Upper Kaewa/Kaani	2.3	91.9	3.6	1.9	0.0	0.0	0.1	0.0	0.0	4,896
Mavoko Constituency	39.0	17.1	2.7	1.0	1.8	37.1	0.1	0.6	0.6	44,156
Athi River	30.7	13.8	0.5	0.6	1.8	50.8	0.0	0.8	0.8	17,853
Kinanie	38.0	21.7	8.3	1.5	3.9	25.9	0.2	0.2	0.4	5,367
Muthwani	46.4	13.5	8.0	2.3	1.7	26.5	0.4	0.9	0.4	6,757
Syokimau	46.3	21.2	0.6	0.7	1.1	29.2	0.2	0.4	0.4	14,179
Machakos Town Con- stituency	27.8	63.8	4.5	2.1	0.3	1.4	0.1	0.0	0.1	48,438
Kalama	20.5	69.5	4.3	2.7	0.3	2.6	0.1	0.0	0.0	7,274
Mua	21.4	63.8	7.5	2.0	0.5	4.5	0.1	0.1	0.1	5,809
Mutituni	14.1	76.6	8.0	0.9	0.2	0.1	0.2	0.0	0.0	5,508
Machakos Central	42.5	51.3	2.6	2.1	0.5	0.6	0.1	0.0	0.1	8,505
Mumbuni North	32.6	56.2	7.2	3.1	0.2	0.6	0.1	0.0	0.1	7,203
Muvuti/Kiima Kimwe	40.9	55.0	1.2	2.0	0.2	0.4	0.0	0.0	0.3	8,717
Kola	8.1	86.6	2.5	1.1	0.3	1.3	0.1	0.0	0.0	5,422
Kola	8.1	86.6	2.5	1.1	0.3	1.3	0.1	0.0	0.0	5,422

Mwala Constituency	5.6	88.2	3.9	1.8	0.1	0.1	0.1	0.0	0.2	35,452
Mbiuni	5.0	91.6	2.1	1.0	0.1	0.0	0.1	0.0	0.0	6,987
Makutano/Mwala	3.4	88.9	4.2	2.5	0.1	0.2	0.3	0.0	0.4	7,009
Masii	10.5	84.3	3.5	1.4	0.2	0.0	0.0	0.0	0.1	7,232
Muthetheni	4.3	90.7	3.4	1.4	0.0	0.2	0.0	0.0	0.0	4,959
Wamunyu	6.9	89.5	1.2	2.0	0.1	0.1	0.1	0.1	0.0	5,558
Kibauni	1.2	82.6	12.0	3.3	0.1	0.1	0.2	0.0	0.5	3,707

Table 22.21: Main Material of the Wall in Male Headed Households by County, Constituency and Ward

County/ Constituency/ Wards	Stone	Brick/ Block	Mud/Wood	Mud/Ce- ment	Wood only	Corrugat- ed Iron Sheets	Grass/ Reeds	Tin	Other	House- holds
Kenya	17.5	16.6	34.7	7.6	11.4	7.4	3.4	0.3	1.2	5,762,320
Rural	5.8	13.1	48.9	7.3	15.4	2.6	5.2	0.3	1.4	3,413,616
Urban	34.6	21.6	14.0	7.9	5.6	14.4	0.7	0.3	0.9	2,348,704
Machakos County	26.3	58.0	4.0	1.7	0.6	9.0	0.1	0.2	0.2	165,090
Masinga Constituency	7.4	80.3	8.3	2.8	0.2	0.6	0.2	0.0	0.2	15,335
Kivaa	8.0	80.8	7.5	2.0	0.2	1.2	0.2	0.1	0.0	3,924
Masinga Central	8.9	72.7	12.8	4.7	0.3	0.4	0.1	-	0.1	3,846
Ekalakala	6.3	87.9	3.2	2.2	0.0	-	0.2	0.0	-	2,360
Muthesya	1.3	78.8	14.0	3.8	0.2	0.7	0.6	-	0.7	2,143
Ndithini	9.7	84.4	3.6	1.3	0.1	0.5	0.1	0.1	0.2	3,062
Yatta Constituency	29.9	57.7	8.0	2.3	0.2	1.6	0.1	0.0	0.1	19,015
Ndalani	15.3	79.4	2.8	0.7	0.2	1.5	0.1	-	0.0	3,688
Matuu	57.6	38.6	2.4	0.8	0.1	0.3	0.0	0.0	0.0	4,359
Kithimani	24.2	58.6	8.5	3.7	0.3	4.6	0.1	0.0	0.0	4,842
Ikombe	25.3	56.2	14.6	2.9	0.2	0.1	0.2	0.0	0.6	3,693
Katangi	20.6	59.9	15.0	3.7	0.1	0.5	0.1	0.0	0.0	2,433
Kangundo Constituency	24.5	73.3	0.4	1.4	0.1	0.2	0.1	0.0	0.1	13,473
Kangundo North	12.3	83.7	0.5	3.2	0.1	0.1	0.0	-	0.1	3,063
Kangundo Central	38.5	60.8	0.1	0.2	0.0	0.2	0.1	0.0	0.1	3,956
Kangundo East	6.3	92.3	0.6	0.2	0.1	0.2	0.2	-	0.1	2,931
Kangundo West	34.4	62.7	0.3	2.2	0.1	0.2	0.1	0.1	-	3,523
Matungulu Constituency	45.5	48.0	2.6	0.8	0.3	2.3	0.1	0.0	0.2	18,319
Tala	69.7	28.2	1.3	0.6	0.1	0.0	0.0	-	-	4,099
Matungulu North	30.4	60.0	5.2	1.9	0.4	1.4	0.2	0.1	0.4	3,714
Matungulu East	27.7	71.4	0.4	0.2	0.1	0.1	0.1	-	0.0	3,041
Matungulu West	48.5	41.6	1.8	0.9	0.6	6.5	0.0	0.1	0.0	5,206
Kyeleni	43.7	47.9	5.5	0.4	0.4	1.4	0.1	0.0	0.6	2,259
Kathiani Constituency	10.7	84.6	2.4	2.0	0.0	0.1	0.1	0.0	0.0	13,362
Mitaboni	21.2	74.8	1.5	2.3	0.0	0.2	-	-	0.1	3,795
Kathiani Central	15.2	81.9	2.3	0.4	0.0	0.1	0.1	0.0	0.0	3,235
Upper Kaewa/Iveti	1.6	92.3	2.7	3.2	0.1	-	0.1	-	-	3,500
Upper Kaewa/Kaani	2.8	91.3	3.5	2.1	-	0.0	0.2	-	0.1	2,832
Mavoko Constituency	38.4	16.8	2.5	1.1	1.8	38.2	0.1	0.6	0.5	35,172
Athi River	30.5	13.5	0.5	0.6	1.8	51.4	0.0	0.8	0.7	14,069
Kinanie	37.1	20.7	8.1	1.7	4.0	27.6	0.2	0.2	0.5	4,028

Muthwani	45.5	13.4	7.5	2.4	1.7	28.0	0.3	0.9	0.4	5,480
Syokimau	45.1	21.0	0.5	0.8	1.2	30.7	0.1	0.4	0.3	11,595
Machakos Town Con- stituency	29.0	62.3	4.3	2.1	0.4	1.7	0.1	0.0	0.1	30,452
Kalama	20.7	67.7	4.3	3.0	0.3	3.7	0.1	0.1	0.0	4,053
Mua	21.4	63.7	6.9	1.9	0.6	5.4	0.1	0.1	0.1	3,968
Mutituni	15.9	74.9	7.9	0.9	0.1	0.1	0.1	0.0	-	3,059
Machakos Central	42.2	52.3	2.4	1.6	0.6	0.6	0.2	0.1	0.1	5,729
Mumbuni North	32.9	55.9	6.9	3.2	0.2	0.7	0.1	0.0	0.1	4,786
Muvuti/Kiima Kimwe	41.3	54.5	1.1	2.2	0.2	0.4	0.0	0.0	0.2	5,800
Kola	9.2	85.0	2.9	1.0	0.4	1.6	-	-	-	3,057
Mwala Constituency	5.9	87.7	4.0	1.8	0.1	0.2	0.1	0.0	0.2	19,962
Mbiuni	5.0	91.1	2.6	0.9	0.1	0.1	0.2	0.0	0.1	3,994
Makutano/Mwala	3.5	88.2	4.5	2.8	0.1	0.2	0.3	-	0.5	4,211
Masii	10.6	84.5	3.3	1.2	0.2	0.0	0.0	0.0	0.1	4,276
Muthetheni	4.9	90.0	3.3	1.4	0.1	0.3	0.0	-	-	2,553
Wamunyu	7.3	89.0	1.3	2.1	-	0.2	0.1	0.1	-	3,031
Kibauni	1.7	81.6	12.3	3.3	0.2	0.2	0.1	-	0.6	1,897

Table 22.22: Main Material of the Wall in Female Headed Households by County, Constituency and Ward

County/ Constitu- ency	Stone	Brick/Block	Mud/Wood	Mud/Ce- ment	Wood only	Corrugat- ed Iron Sheets	Grass/ Reeds	Tin	Other	House- holds
Kenya	15.0	17.5	40.4	7.9	10.5	5.1	2.1	0.3	1.2	2,731,060
Rural	5.4	14.9	52.1	8.0	12.6	2.4	2.8	0.4	1.4	1,826,263
Urban	34.2	22.6	16.9	7.6	6.2	10.5	0.8	0.3	0.9	904,797
Machakos County	22.0	67.6	4.4	1.9	0.3	3.5	0.1	0.1	0.2	95,690
Masinga Constitu- ency	6.8	81.9	7.9	2.6	0.1	0.3	0.1	0.0	0.1	11,557
Kivaa	7.5	82.1	7.7	2.1	0.1	0.4	0.2	0.0	-	3,372
Masinga Central	8.6	72.5	12.7	5.3	0.4	0.2	0.1	-	0.1	2,957
Ekalakala	6.6	88.7	3.0	1.6	-	0.1	0.1	-	-	1,773
Muthesya	0.6	88.3	9.0	1.4	0.1	0.2	0.2	-	0.2	1,555
Ndithini	8.3	84.9	4.5	1.3	0.1	0.6	0.1	-	0.2	1,900
Yatta Constituency	26.6	61.6	7.8	3.0	0.1	0.7	0.1	0.0	0.1	13,640
Ndalani	12.4	83.4	2.5	0.8	0.1	0.7	0.0	-	-	2,930
Matuu	55.2	41.2	2.0	1.1	0.1	0.1	0.1	0.0	0.1	2,542
Kithimani	25.9	57.5	9.4	4.9	0.2	2.0	0.1	-	0.0	2,857
Ikombe	24.5	59.7	12.1	3.1	0.1	0.1	0.1	-	0.4	3,116
Katangi	16.7	63.9	13.2	5.6	0.0	0.5	0.0	0.0	-	2,195
Kangundo Constit- uency	24.0	73.9	0.3	1.4	0.1	0.1	0.1	0.0	0.0	8,368
Kangundo North	11.1	84.8	0.7	3.2	0.0	0.0	0.1	-	0.0	2,028
Kangundo Central	41.4	58.1	0.1	0.1	0.1	0.0	-	0.0	-	2,081
Kangundo East	5.6	93.1	0.4	0.4	0.1	0.1	0.4	-	-	1,971
Kangundo West	35.3	62.2	0.2	2.1	0.0	0.0	0.1	-	-	2,288
Matungulu Constit- uency	45.3	49.8	2.3	0.8	0.2	1.3	0.1	0.0	0.2	9,864
Tala	70.5	26.1	2.2	0.9	0.0	0.0	0.1	-	0.0	2,185

Matungulu North	29.5	63.2	3.9	2.2	0.1	0.7	0.1	-	0.2	2,045
Matungulu East	26.7	72.9	0.1	0.2	-	-	0.1	-	0.1	1,823
Matungulu West	49.1	45.0	1.5	0.4	0.3	3.6	0.1	0.0	0.0	2,586
Kyeleni	46.0	45.7	4.8	0.1	0.7	1.7	0.2	-	0.9	1,225
Kathiani Constituency	10.0	85.5	2.3	2.1	0.0	0.0	0.1	0.0	0.0	9,801
Mitaboni	17.6	78.5	1.7	2.1	0.1	0.0	0.1	-	-	3,120
Kathiani Central	14.6	83.5	1.4	0.3	0.0	0.1	0.1	-	-	2,371
Upper Kaewa/Iveti	2.3	90.8	2.4	4.3	-	-	0.1	-	0.1	2,246
Upper Kaewa/Kaani	1.7	92.7	3.8	1.6	0.0	-	0.1	0.0	-	2,064
Mavoko Constituency	41.3	18.2	3.3	0.8	1.9	32.8	0.2	0.6	0.8	8,984
Athi River	31.5	14.7	0.5	0.7	2.0	48.5	0.1	0.9	1.1	3,784
Kinanie	40.6	24.6	9.2	1.0	3.4	20.8	0.1	0.1	0.1	1,339
Muthwani	50.1	13.7	10.3	1.8	2.0	20.1	0.5	1.0	0.3	1,277
Syokimau	51.6	22.1	1.0	0.4	0.9	22.4	0.4	0.4	0.9	2,584
Machakos Town Constituency	25.8	66.2	4.8	2.0	0.3	0.8	0.1	-	0.1	17,986
Kalama	20.1	71.8	4.3	2.3	0.2	1.4	-	-	-	3,221
Mua	21.5	64.2	9.0	2.3	0.3	2.5	0.1	-	0.1	1,841
Mutituni	11.9	78.7	8.0	0.9	0.2	0.1	0.2	-	-	2,449
Machakos Central	43.1	49.4	3.2	3.2	0.3	0.6	0.0	-	0.2	2,776
Mumbuni North	32.0	56.8	7.7	2.7	0.3	0.5	0.1	-	-	2,417
Muvuti/Kiima Kimwe	40.0	56.0	1.5	1.6	0.3	0.2	-	-	0.4	2,917
Kola	6.8	88.8	2.0	1.3	0.2	0.8	0.1	-	0.0	2,365
Mwala Constituency	5.2	88.8	3.8	1.8	0.1	0.1	0.1	0.0	0.1	15,490
Mbiuni	5.0	92.2	1.5	1.0	0.1	0.0	0.1	-	-	2,993
Makutano/Mwala	3.2	90.1	3.8	2.1	0.1	0.1	0.2	-	0.3	2,798
Masii	10.4	83.9	3.7	1.6	0.3	0.0	0.1	-	0.1	2,956
Muthetheni	3.7	91.5	3.4	1.3	-	0.1	-	0.0	-	2,406
Wamunyu	6.5	90.2	1.1	1.8	0.2	0.0	0.1	-	0.1	2,527
Kibauni	0.7	83.6	11.6	3.4	0.1	0.1	0.3	_	0.3	1,810

Table 22.23: Source of Water by County, Constituency and Ward

County/Constituency/ Wards	Pond	Dam	Lake	Stream/ River	Unprotect- ed Spring	Unprotect- ed Well	Jabia	Water	Other	Unim- proved Sources	Protected Spring	Protected Well	Bore- hole	Piped into Dwell- ing	Piped	Rain Water Collec- tion	lm- proved 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	9.7	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	26.0	9.2	8.1	12.0	1.8	12.1	0.8	44.0	26,075,195
Urban	6:0	0.7	0.5	9.2	1.9	2.9	0.2	11.8	0.1	28.3	4.0	8.9	10.7	14.7	34.9	0.5	71.7	11,844,452
Machakos County	1.2	7.7	0.1	26.0	9.1	11.4	0.2	7.8	0.0	63.5	5.1	6.9	12.0	3.3	8.7	0.5	36.5	1,084,631
Masinga Constituency	1.4	13.7	0.1	29.4	10.3	22.4	0.0	9.0	0.0	77.9	2.4	2.0	11.3	8.0	5.5	0.2	22.1	125,222
Kivaa	0.5	9.8	0.1	40.6	1.2	26.4	0.0	1.7	0.0	79.1	0.5	2.0	8.4	1.9	8.1	0.0	20.9	33,779
Masinga Central	2.1	23.5	0.1	14.9	3.9	22.6	0.0	0.3	0.0	67.3	0.4	1.0	21.1	8.0	8.8	0.5	32.7	32,905
Ekalakala	1.3	27.3	0.1	13.8	5.6	16.7	0.0	0.1	0.0	64.9	5.3	5.5	17.4	0.2	6.5	0.1	35.1	18,816
Muthesya	0.0	3.8	0.0	24.2	37.2	25.5	0.0	0.0	0.0	20.7	2.9	0.4	5.8	0.2	0.0	0.1	9.3	17,145
Ndithini	3.1	3.0	0.0	50.5	16.9	18.5	0.1	0.5	0.0	92.7	5.2	1.5	0.3	0.0	0.2	0.1	7.3	22,577
Yatta Constituency	1.8	9.5	0.0	48.3	3.7	10.6	0.1	4.6	0.3	79.0	1.2	4.5	11.2	1.0	2.7	0.3	21.0	145,159
Ndalani	0.3	3.5	0.0	68.8	9.9	8.7	0.0	1.3	0.0	89.1	3.9	1.3	4.7	0.2	0.7	0.1	10.9	29,413
Matuu	8.9	3.2	0.0	24.0	1.7	20.8	0.3	13.2	0.0	70.0	0.4	9.7	1.8	4.2	12.5	1.3	30.0	26,573
Kithimani	1.2	3.6	0.0	60.7	1.3	9.8	0.2	9.7	1.3	84.5	9.0	2.7	10.2	8.0	1.1	0.1	15.5	32,827
Ikombe	1.0	25.8	0.1	37.1	6.2	9.7	0.0	1.0	0.0	80.9	0.7	5.1	13.2	0.0	0.0	0.1	19.1	34,643
Katangi	0.1	8.2	0.1	49.3	1.8	5.3	0.0	0.1	0:0	64.9	0.4	4.1	30.0	0.3	0.3	0.1	35.1	21,703
Kangundo Constituency	3.3	5.2	0.1	21.7	12.1	12.9	0.1	3.0	0.0	58.4	16.5	14.0	6.8	6.0	2.5	1.1	41.6	93,776
Kangundo North	1.4	0.0	0.0	8.4	15.9	9.6	0.1	0.5	0.0	36.0	38.9	19.2	1.2	0.2	3.8	0.8	64.0	22,257
Kangundo Central	0.4	0.1	0.0	9.0	16.6	12.3	0.0	5.8	0:0	44.3	15.6	26.8	5.6	3.0	3.9	0.8	55.7	24,457
Kangundo East	2.8	0.2	0.0	54.3	7.1	21.8	0.1	0.1	0.0	86.5	4.7	4.9	2.5	0.1	0.0	1.4	13.5	21,475
Kangundo West	8.2	18.7	0.2	18.1	8.5	0.6	0.0	5.0	0.0	87.8	9.7	4.8	16.5	0.1	2.0	1.3	32.2	25,587
Matungulu Constituency	2.0	5.2	0.0	10.9	8.7	19.3	0.1	0.9	0.0	52.3	8.2	16.6	17.1	6.0	4.7	0.2	47.7	123,600
Tala	1.0	0.4	0.0	3.9	3.4	0.6	0.2	16.0	0.0	33.9	7.0	11.5	34.5	3.8	9.0	0.3	66.1	25,494
Matungulu North	3.1	6.1	0.0	26.8	6.4	19.2	0.1	8.9	0.0	70.6	1.6	14.0	7.1	0.3	6.1	0.2	29.4	24,897
Matungulu East	0:0	0.4	0.0	13.7	15.0	13.8	0.2	9.0	0.0	43.7	33.5	18.2	3.1	0.2	1.2	0.1	56.3	21,707
Matungulu West	3.2	12.1	0.1	6.2	10.8	14.3	0.1	2.8	0.0	49.4	6.0	19.6	24.8	0.2	4.9	0.2	9.09	33,808
Kyeleni	2.1	3.8	0.0	4.3	8.0	50.4	0:0	0.5	0.0	69.2	2.5	19.7	8.1	0.1	0.3	0.1	30.8	17,694
Kathiani Constituency	0:0	0.6	0.0	14.1	31.0	14.0	0.1	8.0	0:0	69.2	12.7	5.1	6.1	1.7	4.9	0.5	30.8	103,868
Mitaboni	0.1	29.6	0.1	9.7	18.8	10.4	0.1	0.4	0.0	67.2	2.4	7.7	20.8	0.5	8.0	9.0	32.8	30,042

Kathiani Central	0.1	2.0	0.0	13.5	32.7	18.3	0.2	8.0	0.0	67.5 16.3	2.6	0.2	1.4	11.4	9.0	32.5	24,070
Upper Kaewa/Iveti	0.0	0.0	0.0	4.5	53.4	10.1	0.1	6:0	0.0	69.1 24.1	5.1	0.1	0.5	6.0	0.3	30.9	26,853
Upper Kaewa/Kaani	0.0	0.1	0.0	34.7	19.1	18.5	0.1	1.1	0.0	73.6 9.0	4.2	0.0	4.9	8.0	0.5	26.4	22,903
Mavoko Constituency	0.5	1.9	0:0	1.1	1.9	1.7	0.4	27.1	0.0	34.7 0.7	2.9	25.5	11.9	23.8	0.4	65.3	136,181
Athi River	0.1	0.0	0.0	9.0	0.1	0.0	0.0	35.5	0.0	36.4 0.6	0.7	13.2	19.1	30.0	0.1	63.6	50,854
Kinanie	0.3	5.9	0.0	2.2	12.3	6.7	0.1	10.1	0.1	38.9 2.3	1.9	28.4	5.4	22.0	1.1	61.1	16,258
Muthwani	2.0	5.5	0.0	2.9	2.0	2.8	0.3	29.6	0.0	45.2 0.2	11.4	31.3	2.7	8.3	1.1	54.8	28,324
Syokimau	0.2	0.0	0.0	0.1	0.0	9.0	1.0	21.6	0.0	23.5 0.6	0.1	35.9	12.0	27.8	0.2	76.5	40,745
Machakos Town Constituency	0.7	5.8	0.0	13.0	11.4	11.4	0.3	13.1	0:0	55.7 5.2	10.3	11.2	5.5	11.1	6.0	44.3	195,029
Kalama	1.8	6.9	0.0	30.9	11.4	6.3	0.3	8.7	0.0	66.4	3.2	4.2	4.8	12.7	6.0	33.6	32,021
Mua	0.1	7.1	0.2	6.5	7.2	10.0	0.1	9.8	0.0	41.1 4.2	10.5	27.5	2.4	12.6	1.7	58.9	25,354
Mutituni	2.3	0.4	0.0	21.3	13.5	19.3	0.1	2.6	0.0	59.3 8.5	15.3	11.4	2.2	2.2	6:0	40.7	23,643
Machakos Central	0.2	0.2	0.0	7.5	17.1	10.5	0.2	25.4	0.0	61.0 1.2	10.4	6.5	10.5	10.2	0.2	39.0	30,205
Mumbuni North	0.4	0.3	0.0	8.3	4.1	3.9	0.2	18.9	0.0	36.1	30.3	18.1	2.0	9.5	8.0	63.9	27,912
Muvuti/Kiima Kimwe	0.1	0.2	0.0	3.1	14.1	11.1	0.4	20.3	0.0	49.4 5.1	2.4	9.2	12.3	21.1	9.0	9.09	31,630
Kola	0.2	28.9	0.1	13.3	11.5	22.3	9.0	6.0	0.0	77.8 6.9	2.0	4.0	1.5	6.3	1.5	22.2	24,264
Mwala Constituency	0.4	11.1	0.2	61.8	9.0	3.1	0.1	2.5	0.0	79.9 0.4	2.1	5.5	1.7	6.6	9.0	20.1	161,796
Mbiuni	1.7	0.5	0.0	61.4	2.5	6.3	0.0	4.0	0.0	76.4 0.7	3.8	7.8	8.0	10.2	0.2	23.6	31,755
Makutano/Mwala	0:0	15.7	0.1	70.8	0.1	2.0	0.0	0.1	0.0	88.8 0.2	2.0	7.2	0.2	1.2	0.3	11.2	31,903
Masii	0.2	17.9	0.0	56.4	0.2	5.7	0.3	6.4	0.0	87.0 0.3	3.8	0.9	0.4	1.3	1.2	13.0	32,102
Muthetheni	0:0	13.9	1.3	78.3	0.1	9.0	0.0	9.0	0.0	94.9 0.4	0.2	4.2	0.1	0.0	0.2	5.1	22,700
Wamunyu	0.0	11.2	0.0	43.0	0.0	1.1	0.0	2.4	0.0	57.8 0.4	1.0	8.0	7.9	31.0	1.1	42.2	25,452
Kibauni	0.0	6.2	0:0	62.2	0.0	1.0	0.0	0.1	0.0	69.5 0.2	0.0	5.8	1.7	22.5	0.2	30.5	17,884

Table 22.24: Source of Water of Male headed Household by County, Constituency and Ward

Number of Individuals	53.6 26,755,066
Improved	53.6
Rain Water Col- lec- tion	7.0
Piped	19.9 0.7
Piped into Dwelling	6.2
Bore- hole	11.7
Protected Well	7.7
Pro- tected Spring	7.4
Unim- proved Sources	46.4 7.4
oth-	0.4
Water	5.6
Jabia	7.0 0.4
Unprotected Well	6.7
Stream/ Unprotect- Unprotected River ed Spring Well	4.8
Stream/ L	22.4
Lake	1.1
Pond Dam Lake	2.3
Pond	2.7
County/Constituency/ Wards	Kenya



Rural	3.7	3.1	1.4	29.1	6.3	8.6	0.4	2.4	0.5	55.6	9.5	8.2	12.1	1.9	12.2	0.8	44.4	18,016,471
Urban	0.8	9.0	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
Machakos County	1.2	7.3	0.1	24.2	8.7	10.9	0.2	8.9	0.0	61.4	5.0	7.1	12.8	3.9	9.3	9:0	38.6	699,433
Masinga Constituency	1.5	14.3	0.1	29.9	10.0	21.6	0:0	2.0		78.1	2.3	1.9	10.9	1.1	5.5	0.2	21.9	74,134
Kivaa	9.4	8.8	0.1	40.3	1.2	24.9	0.0	1.8	,	77.5	0.5	1.8	8.4	3.0	9.6	0.1	22.5	18,725
Masinga Central	2.3	24.5	0.1	14.9	3.7	22.5		0.3	,	68.3	0.4	1.	20.3	6.0	8.7	0.4	31.7	19,387
Ekalakala	1.2	28.4	0.1	13.8	6.1	15.8		0.1	,	65.6	5.5	5.5	16.5	0.2	6.5	0.1	34.4	11,374
Muthesya		4.8		27.1	33.7	25.2		1	,	8.06	2.5	0.3	6.1	0.3		0.1	9.2	10,316
Ndithini	3.3	3.3		51.4	16.3	18.1		9.0		93.0	4.7	1.5	0.5	0.0	0.1	0.2	7.0	14,332
Yatta Constituency	1.7	9.5	0.0	47.4	3.6	10.6	0.1	5.0	0.3	78.2	1.3	4.7	11.1	1.2	3.1	0.3	21.8	86,622
Ndalani	0.3	3.2		68.4	6.7	8.1		4.	,	88.0	4.3	1.3	5.3	0.2	0.7	0.1	12.0	16,901
Matuu	0.9	3.2		23.5	1.7	20.9	0.3	13.5	0.0	69.2	0.4	10.1	1.7	4.3	13.0	1.3	30.8	17,297
Kithimani	1.0	3.6		60.5	1.6	8.5	0.2	7.0	1.2	83.7	9.0	2.9	10.3	1.0	1.5	0:0	16.3	21,164
Ikombe	6.0	27.7	0.1	35.3	6.0	9.2	0:0	1.0	0.0	80.3	6.0	4.9	13.7	'		0.1	19.7	19,699
Katangi	0.1	7.7	0.1	48.8	1.6	5.2		0.1	,	63.6	0.5	4.6	30.6	6.0	0.2	0.2	36.4	11,561
Kangundo Constituency	3.4	5.0	0.1	21.6	11.4	12.8	0.1	3.0	0.0	57.4	16.5	14.4	7.1	6.0	5.6	11	42.6	60,587
Kangundo North	1.5	0.0		8.8	14.5	9.6	0.1	0.5	0.0	35.2	38.5	19.9	1.2	0.2	4.2	8:0	64.8	14,042
Kangundo Central	0.5	0.1		9.0	16.3	12.4	0:0	5.4	0.1	43.8	15.9	26.8	5.7	3.1	4.0	9:0	56.2	16,651
Kangundo East	2.4	0.2		55.6	6.0	21.6	0.1	0.1	,	86.0	4.6	5.1	5.6	0.1		1.5	14.0	13,532
Kangundo West	8.8	18.3	0.2	17.2	8.4	8.8	0.1	5.0		2.99	7.9	4.7	17.1	0.0	2.1	1.5	33.3	16,362
Matungulu Constituency	2.1	5.1	0.0	10.6	8.7	18.6	0.1	5.9		51.2	8.5	17.0	17.4	1.0	4.7	0.3	48.8	82,876

Tala	1.0	9.0	,	4.2	2.9	8.4	1.0	15.6		32.7	6.7	12.0	35.4	4.2	8.6	0.4	67.3	17,341
Matungulu North	3.1	0.9	,	25.8	6.7	18.9	0.0	8.8	,	69.4	1.7	14.0	7.3	0.3	7.0	0.3	30.6	16,399
Matungulu East	0.0	0.3	,	12.7	15.2	13.3	0.2	0.7		42.5	35.9	17.4	2.8	1.0	1.2	0.1	57.5	14,130
Matungulu West	3.2	11.5	0.1	6.7	10.8	12.6	0.1	2.7		47.8	6.0	21.5	24.7	0.2	4.7	0.3	52.2	23,000
Kyeleni	2.3	3.8	0.0	4.0	8.2	50.7	0.0	0.5		69.5	2.5	19.5	8.2	0.0	0.2	0.0	30.5	12,006
Kathiani Constituency	0.1	8.7	0.0	14.0	31.0	13.9	0.1	0.8	0.0	9.89	12.8	5.0	6.1	1.9	5.0	9:0	31.4	63,834
Mitaboni	0.1	29.7	0.1	7.0	17.3	10.8	0.2	0.4		65.6	2.2	7.9	21.9	0.7	8:0	9.0	34.4	17,480
Kathiani Central	0.1	2.3		12.9	32.7	18.4	0.1	6:0	0.0	67.4	16.1	2.7	0.2	1.3	11.6	0.7	32.6	14,835
Upper Kaewa/lveti		0.1		5.3	53.0	9.8	0.1	8.0		0.69	23.7	5.2	0.1	9.0	[-	0.3	31.0	17,329
Upper Kaewa/Kaani		0.1	,	34.2	19.4	18.2	0.1	1.2	0.0	73.2	9.1	3.8		5.5	7.8	9.0	26.8	14,190
Mavoko Constituency	0.5	1.8	0.0	1.0	1.8	1.6	0.4	27.3	0.0	34.3	7.0	2.7	26.0	12.1	23.9	0.4	65.7	110,432
Athi River	0.1	0.0	0.0	9.0	0.1	0.0	0.0	35.9	0.0	36.8	9.0	0.5	13.0	19.4	29.6	0.1	63.2	41,063
Kinanie	0.3	5.7		2.2	12.4	7.8	0.0	10.0	0.1	38.6	2.3	1.7	28.5	0.0	21.7	12	61.4	12,057
Muthwani	2.0	5.4	0.0	2.3	1.8	2.5	0.3	29.8	0.0	44.1	0.2	10.8	32.4	2.8	8.7	1.0	55.9	23,149
Syokimau	0.1	0.0	,	0.1	0.0	0.5	1.2	21.2	0.0	23.2	0.5	0.1	36.3	11.7	28.1	0.2	76.8	34,163
Machakos Town Constit- uency	0.7	5.5	0.0	12.0	11.1	11.1	0.3	14.0	0.0	54.6	4.7	10.3	12.0	6.0	11.5	1.0	45.4	126,079
Kalama	1.8	9.7	0.0	29.8	10.0	6.1	0.2	9.6	0:0	65.2	6.7	2.5	4.5	5.7	14.4	1.1	34.8	18,543
Mua	0.1	7.0	0.2	6.5	7.2	9.6	0.2	9.5	0:0	40.2	4.2	10.2	28.1	2.4	13.0	6:	59.8	17,390
Mutituni	2.0	9.0		20.7	13.2	19.2	0.2	3.1		58.8	7.7	15.4	12.3	2.3	2.3	1.3	41.2	14,091
Machakos Central	0.2	0.2	0.0	6.7	17.8	10.5	0.2	24.6	0.1	60.4	1.1	10.4	7.1	11.2	9.5	0.2	39.6	20,874
Mumbuni North	0.5	0.2	0:0	8.2	3.7	3.7	0.2	19.8	0.0	36.3	3.0	29.6	19.1	2.0	9.2	0.8	63.7	19,274



Muvuti/Kiima Kimwe	0.1	0.2		3.0	13.9	11.4	0.3	21.3	0.0	50.3	4.8	2.3	8.8	12.6	20.7	0.5	49.7	21,737
Kola	0.3	29.4	0.1	13.4	10.9	21.5	0.7	1.1	-	77.3	9.9	1.3	4.5	1.8	2.9	1.8	22.7	14,170
Mwala Constituency	0.3	10.8	0.2	62.1	9.0	3.2	0.1	2.8	0.0	80.0	0.3	2.1	5.5	1.8	9.5	0.7	20.0	94,869
Mbiuni	1.3	0.5	-	62.1	2.8	6.9	0.0	4.3	0.0	77.8	9.0	3.6	7.4	0.7	9.6	0.2	22.2	19,012
Makutano/Mwala	0.1	14.9	0.2	71.5	0.1	2.0	0.1	0.1	,	88.8	0.2	2.0	7.2	0.1	1.5	0.2	11.2	19,829
Masii	0.1	17.2	0:0	2.99	0.1	5.3	0.3	9.9	0.0	86.3	0.3	3.7	9.9	0.5	1.3	1.4	13.7	19,720
Muthetheni		13.4	1.2	79.0	0.3	0.5	0:0	6.0	ı	95.3	0.4	0.3	3.5	0.1		0.4	4.7	12,168
Wamunyu		10.3		41.6	0.0	6:0	0:0	2.8	,	55.6	0.3	1.1	8.0	8.6	32.3	1.3	44.4	14,502
Kibauni		6.9	0.0	63.0	0.0	0.8		0.2	,	71.1	0.2	0.1	6.1	1.8	20.5	0.4	28.9	9,638

Table 22.25: 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	Other	Unim- proved Sources	Protected Spring	Protected Well	Bore- hole	Piped into Dwell- ing	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	7:0	50.3	11,164,581
Rural	3.4	3.5	9.1	30.6	6.5	8.9	0.3	1.8	0.4	57.0	9.5	8.0	11.5	1.6	11.7	8.0	43.0	8,058,724
Urban	1.0	0.8	9.0	11.1	2.3	3.4	0.2	11.1	0.1	30.5	4.7	7.0	10.5	14.2	32.5	9.0	69.5	3,105,857
Machakos County	1.2	8.5	0.1	29.4	9.7	12.3	0.1	5.9	0.1	67.3	5.2	6.7	10.5	2.3	7.5	0.4	32.7	385,198
Masinga Constituency	1.3	12.7	0.1	28.5	10.8	23.6	0.0	9.0		9.77	2.4	2.0	11.9	0.4	5.5	0.2	22.4	51,088
Kivaa	9.0	8.3	0.1	40.9	1.2	28.3	0.0	1.5	-	80.9	0.4	2.2	8.5	9:0	7.4	-	19.1	15,054
Masinga Central	1.7	22.0	0.1	14.8	4.3	22.7	1	0.4	ı	62.9	0.5	1.0	22.3	8.0	8.8	8.0	34.1	13,518
Ekalakala	1.3	25.7		13.8	4.8	18.1		0.0	,	63.9	5.1	5.6	18.8	0.1	6.5	0.1	36.1	7,442

Muthesya		2.3	0.0	19.7	42.5	26.0				90.5	3.7	0.4	5.3		,	0.1	9.5	6,829
Ndithini	2.9	2.4		48.9	18.1	19.3	0.2	0.3		92.2	5.9	1.5	0.0	0.0	0.2	0.0	7.8	8,245
Yatta Constituency	2.0	9.5	0.0	49.6	3.8	10.6	0.1	4.2	0.3	80.1	77	4.2	11.4	8.0	2.2	0.3	19.9	58,537
Ndalani	0.4	4.0		69.2	6.4	9.6		1.		90.7	3.5	1.2	3.8	0.0	9.0	0.1	9.3	12,512
Matuu	8.4	3.2	0.0	24.9	1.6	20.5	0.1	12.6		71.4	0.3	9.1	2.1	4.0	11.7	ر ت	28.6	9,276
Kithimani	1.4	3.6		61.1	2.0	8.8	0.2	8.7	1.5	85.9	0.5	2.4	10.1	0.5	9.0	0.1	14.1	11,663
Ikombe	1.2	23.3	0.0	39.5	6.4	10.3		6.0		81.6	0.5	5.4	12.4	,	0.1	0.1	18.4	14,944
Katangi		8.7	0.1	49.8	2.1	5.4		0.1		66.3	0.4	3.5	29.3	0.2	9.0		33.7	10,142
Kangundo Constituency	3.2	5.5	0.0	21.9	13.2	13.1	0.0	3.1	0:0	60.2	16.4	13.3	6.3	0.7	2.2	1.0	39.8	33,189
Kangundo North	1.2			7.6	18.3	9.7	0.0	0.5		37.3	39.6	17.9	1.2	0.1	3.2	8.0	62.7	8,215
Kangundo Central	0.3	0.1	0.0	0.6	17.2	11.9	,	8.9		45.3	14.9	27.0	5.3	2.7	3.7	1.0	54.7	7,806
Kangundo East	3.6	0.3		52.1	9.0	22.1	0.2	0.1	0.1	87.3	4.7	4.4	2.3	,	0.1	1.2	12.7	7,943
Kangundo West	7.2	19.6	0.2	19.7	8.8	9.4	,	6.9		69.7	7.1	5.1	15.3	0.1	1.7	1.1	30.3	9,225
Matungulu Constituency	1.8	5.5	0.0	11.6	8.8	20.6	0.1	6.2	0:0	54.7	7.8	15.6	16.4	8:0	4.6	0.1	45.3	40,724
Tala	6:0	0.1		3.4	4.5	10.4	0.3	16.8	0.0	36.5	7.6	10.3	32.6	2.9	6.6	0.2	63.5	8,153
Matungulu North	2.9	6.5	0.0	28.7	5.8	19.6	0.1	9.2		72.9	1.4	14.2	6.7	0.3	4.4	0.1	27.1	8,498
Matungulu East		9.0		15.5	14.8	14.8	0.1	9.0		46.0	29.1	19.5	3.7	0.3	1.2	0.1	54.0	7,577
Matungulu West	3.0	13.2		5.2	10.8	17.8	0.1	2.9		52.8	6.0	15.5	25.2	0.2	5.3	0.1	47.2	10,808
Kyeleni	1.8	3.7	0.1	5.1	7.7	49.6		0.5		68.5	2.5	20.1	8.0	0.2	9.0	0.2	31.5	5,688
Kathiani Constituency	0:0	9.5	0.0	14.4	31.1	14.0	0.1	8.0		70.0	12.4	5.2	6.1	1.3	4.7	0.3	30.0	40,034
Mitaboni	0.1	29.3	0.1	8.5	21.0	6.6	0.1	0.4		69.4	2.6	7.5	19.3	0.2	0.7	0.3	30.6	12,562

Kathiani Central		1.4		14.5	32.8	18.2	0.2	0.7	ı	67.8	16.7	2.4	0.1	1.5	11.1	0.3	32.2	9,235
Upper Kaewa/Iveti	-			3.0	54.1	10.7	0.1	1.2		69.2	24.8	5.0	0.1	0.2	0.5	0.2	30.8	9,524
Upper Kaewa/Kaani		0.1	0.0	35.4	18.6	19.0	0.2	6:0	,	74.2	9.6	4.8		3.9	8.2	0.2	25.8	8,713
Mavoko Constituency	0.5	2.4	0.0	1.7	2.6	2.3	0.2	26.4	0.1	36.1	0.8	3.7	23.7	11.4	23.8	0.5	63.9	25,749
Athi River	0.1			9.0	0.0	0.0	0.0	33.8	0.0	34.6	0.4	1.4	13.9	18.1	31.5	,	65.4	9,791
Kinanie	0.2	6.7	,	2.1	11.9	8.1	0.1	10.4	0.3	39.8	2.4	2.6	28.0	3.6	22.8	6:0	60.2	4,201
Muthwani	1.8	6.3		5.3	3.1	3.9	9.4	29.1		50.0	0.1	13.7	26.3	2.2	6.5	1.3	50.0	5,175
Syokimau	0.3	0:0	0.0	0.2	0.0	0.7	0.3	23.5		25.1	0.8	0.1	33.7	13.6	26.5	0.3	74.9	6,582
Machakos Town Constit- uency	0.8	6.3	0.1	14.9	12.0	12.1	0.3	11.4	0.0	57.8	6.1	10.4	9.8	4.6	10.5	0.7	42.2	68,950
Kalama	1.9	6.0	0.0	32.4	13.4	9.9	0.4	7.5	-	68.1	9.2	4.1	3.9	3.6	10.3	0.7	31.9	13,478
Mua	0.1	7.3	0.4	9.9	7.3	10.9	0.1	10.4		43.0	4.1	11.1	26.2	2.5	11.7	1.3	57.0	7,964
Mutituni	2.7	0.3		22.2	13.9	19.3	0.0	1.8		60.2	9.7	15.2	10.2	2.2	2.1	0.5	39.8	9,552
Machakos Central	0.1	0.2	,	9.2	15.3	10.3	0.1	27.2	0.0	62.4	1.2	10.4	5.2	8.8	11.7	0.3	37.6	9,331
Mumbuni North	0.3	0.3		9.8	4.9	4.5	0.3	16.9	1	35.8	3.5	32.1	15.9	2.0	10.0	9.0	64.2	8,638
Muvuti/Kiima Kimwe	0.2	0.1		3.4	14.6	10.4	9.0	18.2		47.3	5.6	2.8	10.0	11.6	21.9	8.0	52.7	9,893
Kola	0.2	28.2	0.0	13.2	12.3	23.4	9.0	9.0	,	78.4	7.3	2.8	3.3	1.2	5.7	1.2	21.6	10,094
Mwala Constituency	0.5	11.6	0.3	61.4	0.5	3.1	0.1	2.2	ı	79.6	0.4	2.1	5.5	9.1	10.4	0.5	20.4	66,927
Mbiuni	2.4	0.5	0.0	60.3	2.0	5.5	0.0	3.7		74.4	9.0	4.1	8.4	1.0	11.0	0.2	25.6	12,743
Makutano/Mwala	0:0	16.9	0.1	69.5	0.0	2.0	0.0	0.0	ı	88.8	0.2	2.1	7.4	0.2	6.0	9.0	11.2	12,074
Masii	0.3	19.0	,	56.0	0.3	6.4	0.2	0.0	ı	88.1	0.3	3.9	5.2	0.2	1.3	1.0	11.9	12,382
Muthetheni		14.5	1.4	77.4	0.0	0.7	0.0	0.3	1	94.3	0.4	0.1	5.0	0.1		0.0	5.7	10,532

Waminori	0 1	12.4	0.1	9 77	0.1	1.3	0.1	19		60 6	0.4	60	80	6	29.3	60	39.4	10.950
	5	į	5	2	5	2	5	2			5	3	2	25		2		
Kibauni	0:0	5.3	0.0	61.1	•	1.1	-	0.1	1	67.7	0.3	1	9.6	1.5	24.9	0:0	32.3	8,246

Table 22.26: Human Waste Disposal by County, Constituency and Ward

County/ Constituency	Main Sewer	Septic Tank	Cess Pool	VIP Latrine	Pit Latrine	Improved Sanitation	PitLatrine 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
Machakos County	3.30	2.72	0.37	7.51	47.13	61.03	36.18	0.10	2.50	0.19	38.97	1,084,631
Masinga Constituency	0.10	0.34	0.81	4.71	23.24	29.21	64.57	0.03	6.11	60.0	70.79	125,222
Kivaa	0.24	69.0	1.46	4.43	13.75	20.57	69.45	0.00	9.77	0.21	79.43	33,779
Masinga Central	0.04	0.52	1.60	4.23	21.29	27.67	99.99	0.05	5.59	0.03	72.33	32,905
Ekalakala	0.04	0.03	0.00	8.80	22.62	31.48	65.17	0.05	3.25	0.05	68.52	18,816
Muthesya	80:0	0.01	0.00	2.08	5.78	7.94	85.07	0.00	6.88	0.11	92.06	17,145
Ndithini	80:0	0.05	0.00	4.43	54.07	58.63	38.16	0.03	3.18	0.00	41.37	22,577
Yatta Constituency	60:0	0.65	0.02	8.14	48.65	57.55	37.88	0.04	4.47	0.05	42.45	145,159
Ndalani	0.04	0.10	0.00	5.75	63.98	69.87	27.02	0.01	3.08	0.01	30.13	29,413
Matuu	0.13	1.14	80.0	11.96	58.94	72.25	26.05	0.17	1.48	0.05	27.75	26,573
Kithimani	0.23	0.25	0.01	7.64	48.61	56.74	40.96	0.01	2.18	0.11	43.26	32,827
Ikombe	0.00	1.50	0.00	8.59	31.08	41.17	51.61	0.02	7.16	0.04	58.83	34,643
Katangi	0.05	90.0	0.03	6.71	43.40	50.24	40.51	0.02	9.19	0.04	49.76	21,703
Kangundo Constituency	0.44	0.20	0.12	7.99	58.25	67.01	31.26	0.03	1.26	0.44	32.99	93,776
Kangundo North	0.10	0.25	60.0	69.9	66.52	73.65	24.83	0.05	1.37	60:0	26.35	22,257
Kangundo Central	1.50	0.36	0.31	10.93	62.60	75.70	23.92	0.01	0.33	0.04	24.30	24,457
Kangundo East	0.05	0.12	0.07	6.32	52.27	58.84	38.60	00:00	0.79	1.78	41.16	21,475
Kangundo West	20.0	0.05	0.02	7.72	51.93	59.79	37.73	0.04	2.43	0.00	40.21	25,587
Matungulu Constituency	0.39	0.61	0.05	10.76	47.89	59.71	37.90	0.25	2.06	60.0	40.29	123,600
Tala	1.64	1.97	90.0	15.69	53.51	72.86	25.66	60.0	1.29	60.0	27.14	25,494
Matungulu North	0.10	0.35	0.02	8.47	41.82	50.77	44.20	0.81	4.21	0.01	49.23	24,897
Matungulu East	20.0	0.12	90:0	9.32	58.21	67.79	31.40	0.04	0.73	0.04	32.21	21,707
Matungulu West	0.05	0.41	0.07	12.17	51.04	63.74	34.48	70.0	1.60	0.11	36.26	33,808

Kyeleni	0.05	0.03	0.00	5.96	29.68	35.71	61.19	0.28	2.61	0.21	64.29	17,694
Kathiani Constituency	0.20	0.18	0.04	7.25	40.84	48.53	49.87	0.10	0.92	0.58	51.47	103,868
Mitaboni	60.0	80:0	90:0	7.90	58.86	66.99	31.59 0	80:0	1.03	0.31	33.01	30,042
Kathiani Central	29:0	0.58	0.07	6.03	27.33	34.67	64.78 0	0.07	0.47	0.00	65.33	24,070
Upper Kaewa/Iveti	90.0	0.02	0.00	5.98	31.83	37.90	61.80	0.19	0.11	0.01	62.10	26,853
Upper Kaewa/Kaani	0.02	0.10	0.05	9.18	41.98	51.33	44.20 0	80.0	2.17	2.23	48.67	22,903
Mavoko Constituency	17.58	13.72	1.55	9.48	35.45	77.79	19.86	0.17	2.08	0.10	22.21	136,181
Athi River	41.65	12.02	0.70	6.50	13.98	74.84	23.64 0	0.16	1.27	0.09	25.16	50,854
Kinanie	92.0	3.62	0.25	14.14	64.66	83.44	12.19 0	00.00	4.10	0.27	16.56	16,258
Muthwani	0.94	7.03	0.02	14.02	51.28	73.29	23.03 0	0.04	3.54	0.10	26.71	28,324
Syokimau	5.82	24.54	4.19	8.20	39.59	82.33	15.99	0.35	1.27	90:0	17.67	40,745
Machakos Town Constituency	5.31	4.11	0.16	6.74	44.01	60.33	38.94 0	0.14	0.40	0.19	39.67	195,029
Kalama	0.02	66.0	0.05	6.93	33.22	41.22	57.86	90:0	0.68	0.18	58.78	32,021
Mua	0.11	76.0	0.22	4.11	67.52	72.93	25.81 0	0.00	0.47	0.79	27.07	25,354
Mutituni	0.08	0.24	0.02	4.48	43.98	48.81	50.56	0.08	0.49	0.05	51.19	23,643
Machakos Central	21.79	10.82	0.56	10.17	30.41	73.75	25.49 0	0.54	0.16	90:0	26.25	30,205
Mumbuni North	2.29	7.59	0.05	7.21	46.57	63.72	35.84 0	0.21	0.20	0.03	36.28	27,912
Muvuti/Kiima Kimwe	9.71	6.15	0.13	4.51	34.15	54.65	44.73 0	0.03	0.38	0.20	45.35	31,630
Kola	0.00	0.22	0.07	9.57	85.09	70.45	29.11 0	0.00	0.39	0.05	29.55	24,264
Mwala Constituency	0.07	0.18	0.20	5.79	74.83	81.06	15.85	0.04	2.93	0.11	18.94	161,796
Mbiuni	0.14	0.09	0.81	5.93	71.00	77.97	19.00	0.07	2.95	0.01	22.03	31,755
Makutano/Mwala	0.04	0.12	80.0	8.54	65.43	74.21	22.15 0	00.00	3.19	0.45	25.79	31,903
Masii	0.11	0.43	0.02	3.04	87.27	90.86	8.17 0	0.07	0.87	0.02	9.14	32,102
Muthetheni	0.02	0:30	0.03	0.88	70.23	71.45	26.86	0.01	1.60	0.07	28.55	22,700
Wamunyu	0.04	0.04	0.04	8.34	78.32	86.78	9.24 0	0.00	3.90	0.07	13.22	25,452
Kibauni	0.00	0.07	80.0	8.16	76.93	85.24	8.20 0	0.10	6.46	0.00	14.76	17,884

Table 22.27: 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
Machakos County	3.96	3.27	0.43	7.87	46.58	62.10	35.33	0.11	2.28	0.18	37.90	699,433
Masinga Constituency	0.15	0.43	1.01	4.76	23.98	30.33	63.83	0.04	5.70	0.09	69.67	74,134
Kivaa	0.41	1.00	2.30	4.19	14.18	22.08	68.92	0.00	8.73	0.27	77.92	18,725
Masinga Central	0.05	0.63	1.64	4.27	21.81	28.39	66.26	0.09	5.26	0.01	71.61	19,387
Ekalakala	0.00	0.03	0.00	9.02	23.63	32.68	64.51	0.09	2.65	0.08	67.32	11,374
Muthesya	0.13	0.01	0.00	2.05	6.49	8.67	83.12	0.00	8.13	0.08	91.33	10,316
Ndithini	0.06	0.05	0.00	4.77	52.57	57.46	39.47	0.04	3.03	0.00	42.54	14,332
Yatta Constituency	0.13	0.69	0.03	8.37	49.72	58.94	37.09	0.04	3.86	0.07	41.06	86,622
Ndalani	0.05	0.01	0.00	6.08	64.93	71.07	26.29	0.00	2.63	0.02	28.93	16,901
Matuu	0.19	1.23	0.10	12.46	58.98	72.95	25.59	0.14	1.25	0.06	27.05	17,297
Kithimani	0.29	0.30	0.01	7.45	49.18	57.23	40.60	0.01	2.04	0.12	42.77	21,164
Ikombe	0.00	1.62	0.00	8.56	32.78	42.96	50.21	0.03	6.75	0.07	57.04	19,699
Katangi	0.09	0.03	0.04	6.95	43.48	50.59	41.35	0.00	7.99	0.07	49.41	11,561
Kangundo Constit- uency	0.52	0.20	0.15	8.42	57.84	67.13	31.15	0.03	1.28	0.40	32.87	60,587
Kangundo North	0.12	0.29	0.14	6.96	66.33	73.84	24.82	0.04	1.27	0.02	26.16	14,042
Kangundo Central	1.65	0.35	0.32	11.28	62.69	76.30	23.30	0.01	0.35	0.04	23.70	16,651
Kangundo East	0.07	0.13	0.09	6.60	51.36	58.25	39.33	0.00	0.72	1.71	41.75	13,532
Kangundo West	0.09	0.04	0.03	8.26	50.98	59.40	37.82	0.07	2.71	0.01	40.60	16,362
Matungulu Constit- uency	0.42	0.64	0.05	10.89	47.28	59.27	38.28	0.28	2.09	0.08	40.73	82,876
Tala	1.71	2.01	0.05	15.90	53.30	72.96	25.74	0.07	1.18	0.04	27.04	17,341
Matungulu North	0.10	0.41	0.03	8.33	40.96	49.83	44.80	0.98	4.38	0.02	50.17	16,399
Matungulu East	0.11	0.06	0.08	9.85	56.86	66.96	32.30	0.05	0.65	0.04	33.04	14,130
Matungulu West	0.05	0.44	0.06	12.13	50.78	63.46	34.61	0.10	1.69	0.14	36.54	23,000
Kyeleni	0.07	0.02	0.00	5.98	29.27	35.33	61.54	0.27	2.72	0.14	64.67	12,006
Kathiani Constituency	0.20	0.14	0.05	7.80	39.93	48.12	50.43	0.10	0.79	0.56	51.88	63,834
Mitaboni	0.11	0.10	0.04	8.56	58.47	67.28	31.44	0.09	0.89	0.30	32.72	17,480
Kathiani Central	0.65	0.42	0.09	6.49	27.15	34.80	64.73	0.09	0.38	0.01	65.20	14,835
Upper Kaewa/Iveti	0.09	0.03	0.00	6.64	30.97	37.72	62.05	0.14	0.08	0.01	62.28	17,329
Upper Kaewa/Kaani	0.00	0.05	0.08	9.63	41.37	51.13	44.69	0.08	1.98	2.13	48.87	14,190
Mavoko Constituency	17.55	13.89	1.54	9.59	35.56	78.12	19.64	0.19	1.94	0.10	21.88	110,432
Athi River	41.53	12.08	0.74	6.60	14.28	75.23	23.27	0.18	1.25	0.07	24.77	41,063
Kinanie	0.94	3.57	0.27	15.07	64.05	83.89	12.10	0.00	3.74	0.27	16.11	12,057
Muthwani	1.09	6.95	0.01	14.22	51.86	74.12	22.20	0.03	3.52	0.13	25.88	23,149
Syokimau	5.75	24.40	3.99	8.11	40.03	82.28	16.21	0.38	1.06	0.06	17.72	34,163
Machakos Town Constituency	5.71	4.52	0.14	6.94	43.64	60.94	38.37	0.13	0.36	0.19	39.06	126,079
Kalama	0.03	1.16	0.09	7.04	31.54	39.87	59.29	0.03	0.74	0.06	60.13	18,543
Mua	0.14	0.94	0.20	4.49	68.06	73.82	24.89	0.00	0.45	0.84	26.18	17,390
Mutituni	0.13	0.27	0.00	5.32	43.62	49.34	50.17	0.11	0.33	0.06	50.66	14,091
Machakos Central	21.52	11.41	0.38	10.39	30.14	73.84	25.51	0.41	0.17	0.06	26.16	20,874
Mumbuni North	2.46	7.80	0.07	7.51	45.64	63.48	36.16	0.25	0.05	0.05	36.52	19,274
Muvuti/Kiima Kimwe	10.05	6.24	0.10	4.36	34.74	55.48	43.83	0.05	0.40	0.24	44.52	21,737

Kola	0.01	0.25	0.04	9.52	60.36	70.18	29.37	0.00	0.42	0.03	29.82	14,170
Mwala Constituency	0.07	0.20	0.20	6.11	74.75	81.34	15.58	0.04	2.89	0.15	18.66	94,869
Mbiuni	0.14	0.15	0.84	6.02	70.38	77.52	19.49	0.06	2.91	0.02	22.48	19,012
Makutano/Mwala	0.06	0.04	0.08	9.07	65.38	74.63	21.65	0.00	3.16	0.56	25.37	19,829
Masii	0.12	0.44	0.02	3.07	87.78	91.44	7.52	0.08	0.93	0.04	8.56	19,720
Muthetheni	0.00	0.48	0.01	1.18	70.61	72.27	26.27	0.00	1.42	0.04	27.73	12,168
Wamunyu	0.03	0.07	0.08	8.43	78.04	86.66	9.23	0.01	3.99	0.11	13.34	14,502
Kibauni	0.00	0.04	0.00	9.19	76.26	85.49	7.91	0.12	6.47	0.00	14.51	9,638

Table 22.28: Human Waste Disposal in Female Headed Household by County, Constituency and Ward

County/ Constituency	Main Sewer	Septic Tank	Cess Pool	VIP Latrine	Pit Latrine	Improved Sanitation	Pit Latrine Uncovered	Bucket	Bush	Other	Unimproved Sanitation	Number of HH 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
Machakos	2.1	1.7	0.3	6.9	48.1	59.1	37.7	0.1	2.9	0.2	40.9	385,198.0
Masinga	0.0	0.2	0.5	4.6	22.2	27.6	65.6	0.0	6.7	0.1	72.4	51,088.0
Kivaa	0.0	0.3	0.4	4.7	13.2	18.7	70.1	0.0	11.1	0.1	81.3	15,054.0
Masinga Central	0.0	0.4	1.5	4.2	20.5	26.6	67.2	0.0	6.1	0.1	73.4	13,518.0
Ekalakala	0.1	0.0	0.0	8.5	21.1	29.7	66.2	0.0	4.2	0.0	70.3	7,442.0
Muthesya	0.0	0.0	0.0	2.1	4.7	6.9	88.0	0.0	5.0	0.2	93.1	6,829.0
Ndithini	0.1	0.0	0.0	3.8	56.7	60.7	35.9	0.0	3.5	0.0	39.3	8,245.0
Yatta	0.0	0.6	0.0	7.8	47.1	55.5	39.0	0.1	5.4	0.0	44.5	58,537.0
Ndalani	0.0	0.2	0.0	5.3	62.7	68.2	28.0	0.0	3.7	0.0	31.8	12,512.0
Matuu	0.0	1.0	0.0	11.0	58.9	70.9	26.9	0.2	1.9	0.0	29.1	9,276.0
Kithimani	0.1	0.2	0.0	8.0	47.6	55.9	41.6	0.0	2.4	0.1	44.1	11,663.0
Ikombe	0.0	1.3	0.0	8.6	28.8	38.8	53.5	0.0	7.7	0.0	61.2	14,944.0
Katangi	0.0	0.1	0.0	6.4	43.3	49.8	39.6	0.0	10.6	0.0	50.2	10,142.0
Kangundo	0.3	0.2	0.1	7.2	59.0	66.8	31.5	0.0	1.2	0.5	33.2	33,189.0
Kangundo North	0.1	0.2	0.0	6.2	66.9	73.3	24.9	0.1	1.5	0.2	26.7	8,215.0
Kangundo Central	1.2	0.4	0.3	10.2	62.4	74.4	25.2	0.0	0.3	0.1	25.6	7,806.0
Kangundo East	0.0	0.1	0.1	5.9	53.8	59.8	37.4	0.0	0.9	1.9	40.2	7,943.0
Kangundo West	0.0	0.1	0.0	6.8	53.6	60.5	37.6	0.0	2.0	0.0	39.5	9,225.0
Matungulu	0.3	0.6	0.0	10.5	49.1	60.6	37.1	0.2	2.0	0.1	39.4	40,724.0
Tala	1.5	1.9	0.0	15.2	54.0	72.6	25.5	0.1	1.5	0.2	27.4	8,153.0
Matungulu North	0.1	0.2	0.0	8.8	43.5	52.6	43.1	0.5	3.9	0.0	47.4	8,498.0
Matungulu East	0.0	0.2	0.0	8.3	60.7	69.3	29.7	0.0	0.9	0.0	30.7	7,577.0
Matungulu West	0.1	0.4	0.1	12.3	51.6	64.3	34.2	0.0	1.4	0.1	35.7	10,808.0
Kyeleni	0.0	0.1	0.0	5.9	30.5	36.5	60.4	0.3	2.4	0.4	63.5	5,688.0
Kathiani	0.2	0.2	0.0	6.4	42.3	49.2	49.0	0.1	1.1	0.6	50.8	40,034.0
Mitaboni	0.1	0.0	0.1	7.0	59.4	66.6	31.8	0.1	1.2	0.3	33.4	12,562.0
Kathiani Central	0.7	0.8	0.0	5.3	27.6	34.5	64.9	0.0	0.6	0.0	65.5	9,235.0
Upper Kaewa/Iveti	0.0	0.0	0.0	4.8	33.4	38.2	61.3	0.3	0.2	0.0	61.8	9,524.0
Upper Kaewa/Kaani	0.1	0.2	0.0	8.5	43.0	51.6	43.4	0.1	2.5	2.4	48.4	8,713.0
Mavoko	17.7	13.0	1.6	9.0	35.0	76.3	20.8	0.1	2.7	0.1	23.7	25,749.0
Athi River	42.2	11.7	0.6	6.1	12.7	73.2	25.2	0.1	1.4	0.2	26.8	9,791.0

Kinanie	0.3	3.8	0.2	11.5	66.4	82.1	12.4	0.0	5.1	0.3	17.9	4,201.0
Muthwani	0.3	7.4	0.0	13.1	48.7	69.5	26.7	0.1	3.7	0.0	30.5	5,175.0
Syokimau	6.2	25.3	5.2	8.6	37.3	82.6	14.8	0.2	2.3	0.0	17.4	6,582.0
Machakos Town	4.6	3.4	0.2	6.4	44.7	59.2	40.0	0.2	0.5	0.2	40.8	68,950.0
Kalama	0.0	0.8	0.0	6.8	35.5	43.1	55.9	0.1	0.6	0.3	56.9	13,478.0
Mua	0.0	1.0	0.3	3.3	66.3	71.0	27.8	0.0	0.5	0.7	29.0	7,964.0
Mutituni	0.0	0.2	0.0	3.3	44.5	48.0	51.1	0.0	0.7	0.0	52.0	9,552.0
Machakos Central	22.4	9.5	0.9	9.7	31.0	73.5	25.4	0.8	0.1	0.1	26.5	9,331.0
Mumbuni North	1.9	7.1	0.0	6.5	48.6	64.2	35.1	0.1	0.5	0.0	35.8	8,638.0
Muvuti/Kiima Kimwe	9.0	5.9	0.2	4.9	32.9	52.8	46.7	0.0	0.4	0.1	47.2	9,893.0
Kola	0.0	0.2	0.1	9.6	60.9	70.8	28.7	0.0	0.3	0.1	29.2	10,094.0
Mwala	0.1	0.2	0.2	5.3	74.9	80.7	16.2	0.0	3.0	0.1	19.3	66,927.0
Mbiuni	0.1	0.0	0.8	5.8	71.9	78.6	18.3	0.1	3.0	0.0	21.4	12,743.0
Makutano/Mwala	0.0	0.3	0.1	7.7	65.5	73.5	23.0	0.0	3.2	0.3	26.5	12,074.0
Masii	0.1	0.4	0.0	3.0	86.4	89.9	9.2	0.1	0.8	0.0	10.1	12,382.0
Muthetheni	0.0	0.1	0.0	0.5	69.8	70.5	27.6	0.0	1.8	0.1	29.5	10,532.0
Wamunyu	0.0	0.0	0.0	8.2	78.7	86.9	9.3	0.0	3.8	0.0	13.1	10,950.0
Kibauni	0.0	0.1	0.2	7.0	77.7	85.0	8.5	0.1	6.4	0.0	15.0	8,246.0



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