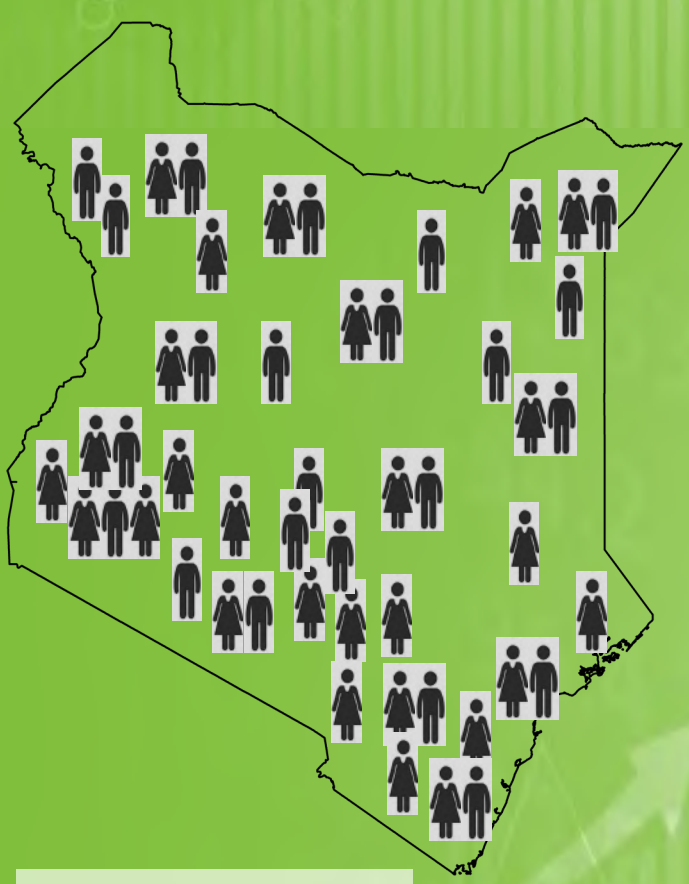
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KENYA NATIONAL BUREAU OF STATISTICS
Keeping you informed

2019 Kenya Population and Housing Census

Analytical Report on Agriculture

Volume XXI





October, 2022

Kenya National Bureau of Statistics
The National Treasury and Planning

2019 Kenya Population and Housing Census

"Counting Our People for Sustainable Development and Devolution of Services"

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Abbreviations

AfDB	African Development Bank
ASALs	Arid and Semi-Arid Lands
ASTGS	Agriculture Sector Transformation and Growth Strategy
CAADP	Comprehensive Africa Agriculture Development Programme
CCIFSC	Census of Commercial and Institutional Farms & Specialty Crops
CIDP	County Investment Development Plan
CSPro	Census and Survey Processing System
DK	Don't Know
EA	Enumeration Area
FAO	Food and Agriculture Organization of the United Nations
GoK	Government of Kenya
GDP	Gross Domestic Product
ISIC	International Standard Industrial Classification of all economic activities
ICT	Information Communication Technology
IFAD	International Fund for Agricultural Development
IP	Internet Protocol
KNBS	Kenya National Bureau of Statistics
KPHC	Kenya Population and Housing Census
LAN	Local Area Network
MoALFC	Ministry of Agriculture, Livestock, Fisheries and Co-operatives
MTP	Medium Term Plan
NSDS	National Strategy for Development of Statistics
ONS-UK	Office of National Statistics United Kingdom
SDGs	Sustainable Development Goals
SPSS	Statistical Package for Social Scientists
TV	Television
UN	United Nations
UNECA	United Nations Economic Commission for Africa
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNSC	United Nations Statistical Commission
MT	Metric Tonnes
QoS	Quality of Service
WSIS	World Summit on Information Society

Foreword

The 2019 Kenya Population and Housing Census (KPHC) was conducted from the night of 24th/25th to 31st August 2019 and followed the United Nations principles and recommendations for conducting the 2020 round of censuses. The theme of the Census was "Counting Our People for Sustainable Development and Devolution of Services". This resonated very well with Kenya's development agenda -Vision 2030 and the Big Four, as well as other regional and international development initiatives such as the Sustainable Development Goals (SDGs) and the African Union Agenda 2063. The main objective was to provide the Government and other stakeholders with essential information for evaluating policies and easing planning and budgeting processes.

The first set of the census reports (basic volumes I-IV) were released in a record 6 months after enumeration. The second set of the census reports covers the thematic areas of: Fertility and Nuptiality; Mortality; Migration; Education and Training; Youth and Adolescents; Information and Communication Technology; Housing Conditions, Amenities and Household Assets; Gender Dimensions; Older and Vulnerable Population; Urbanization; Disability; Household and Family Dynamics; Labour Force Dynamics; Agriculture; Population Dynamics and Population Projections.

This monograph presents socio-economic characteristics of farming households from the 2019 Census data. The census found that most agricultural households in Kenya practiced mixed farming. Aqua-culture was undertaken by the fewest number of households, indicating the enormous untapped potential in this sub-sector. Access to water and sanitation remains a major challenge since most agricultural households had river/stream as the main source of drinking water and bush as the main method of human waste disposal. Although more than half of the farming households own mobile phones, the census results show that internet use by the same households was less than 20 per cent. The use of internet for E-commerce was even less prevalent.

On behalf of the Government, I wish to thank the staff, management and Board of Directors of the Kenya National Bureau of Statistics as well as the authors for their contribution towards the preparation of this report. I further wish to extend special thanks to our development partners, especially UNFPA, UNICEF, UN-Women, WHO and UNDP under the coordination of UN Resident Coordinators' Office and all the other stakeholders who were involved in the process for their technical and financial support.



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Acknowledgement

The 2019 Kenya Population and Housing Census (KPHC) was implemented under the provisions of the Constitution of Kenya, 2010 and the Statistics Act, 2006. The census was the sixth to be conducted in Kenya since independence and the first that was fully digitized, where the latest technology was embraced. This monograph is among the set of 16 such reports, addressing various topical areas regarding the demographic, social, and economic profiles of the Kenyan population.

The 2019 KPHC implementation process was accomplished through a concerted effort of various government ministries, departments, agencies, International and local organizations and individuals who assisted during preparation, collection, compilation, processing, analyzing and publishing the results. Kenya National Bureau of Statistics (KNBS), on behalf of the Government, takes this opportunity to sincerely thank all those who participated in the preparation of this report.

The Bureau is indebted to all the organs of government, the private sector, and the general public for the overwhelming support and participation that led to the successful implementation of the 2019 Census. Special gratitude goes to United Nations Population Fund (UNFPA); United Nations Entity for Gender Equality and the Empowerment of Women (UN Women); United Nations Children's Fund (UNICEF); United Nations Economic Commission for Africa (UNECA); World Health Organization (WHO); and United Nations Development Programme (UNDP) under the coordination of UN Resident Coordinators' Office (UNRCO); African Development Bank (AfDB); Statistics Sweden; Office of National Statistics, United Kingdom (ONS-UK) and Italian Agency for Development Cooperation (AICS) for their immense support. I also recognize the census personnel (coordinators, content and ICT supervisors, enumerators, village elders and security) for the role they played in the overall success of the 2019 KPHC.



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Key indicators at a Glance

INDICATOR	Unit	Sex			Place of Residence	
		Male	Female	Total	Rural	Urban
Total Agriculture Households	Million	4.0	2.4	6.4	5.7	0.6
Crop Farming Households	"	1.0	0.7	1.7	1.5	0.2
Livestock Farming Households	"	0.42	0.34	0.76	0.62	0.14
Mixed Farming Households	"	3.64	0.24	3.9	3.6	0.2
Total Agriculture Population age 18yrs+	"	7.1	7.8	14.9	13.4	1.5
Total Youth (18-34 years) in Agriculture	"	3.4	3.7	7.2	6.4	0.7
Total Population of paid employees in Agriculture	"	2.5	1.3	3.7	3.3	0.5
Total Population of contributing family workers in Agriculture	"	0.5	0.8	1.4	1.3	0.1
Total Disabled Population in Agriculture by sex	"	0.3	0.4	0.7	0.6	0.1
Share of agriculture population to total population	Per cent	81.7	44.3	62.8	82.9	17.8
Share of youth (18-34 years) in agriculture to total youth population	"	48.3	47.9	48.1	48.0	48.9
Share of youth (18-34 years) in agriculture to total agriculture population	"	23.6	24.9	24.2	23.9	27.8
Share of youth (18-34 years) in agriculture to total population	"	14.8	17.7	15.2	19.8	5.0
Mean age of the Household Head in Agriculture	Years	47.4	46.9	47.2	47.4	45.9

Executive Summary

Agriculture continues to be the dominant sector of the Kenyan economy accounting for 21.1 per cent of the Gross Domestic Product (GDP). According to the 2019 Kenya Population and Housing Census (KPHC), 6.4 million agricultural households were enumerated accounting for 52.8 of all the households enumerated. Out of these 60.9 per cent of the agricultural households practiced mixed farming, 12.0 per cent were engaged in livestock farming only. Crop farming only was practiced by 26.7 per cent agricultural households. Fishing and aquaculture were practiced by less than one per cent of the agricultural households respectively. Agricultural sector employment stood at 56.2 per cent of population aged (15-64 years).

The share of agricultural population to total population was 62.8 per cent. Majority of this population (91.2 per cent) resided in rural areas with 76.0 per cent of the farming households engaged in subsistence agriculture. The rest were engaged in commercial farming at household level. Samburu had the highest proportion of subsistence farmers (96.7 per cent). Nyamira had the highest proportion of commercial farmers (63.3 per cent). Eighty-eight per cent of the agricultural households had agricultural holdings with size below 5 acres (2 hectares). More than a third of the agricultural households had land holding sizes that were less than one acre. As expected, Nairobi and Mombasa counties being largely urban areas had the least number of farming households. Nakuru county had the highest number of agriculture households followed by Bungoma county.

Male and female headed households practicing agriculture were 62.1 and 37.9 per cent respectively. The trend is more or less the same across the counties except for Samburu where the proportions are reversed with women taking 62.9 per cent.

Close to half of the farming household heads had primary education while close to 20 per cent of the farming household heads had no education.

The share of youth (18-34 years) in agriculture to total youth population stood at 48.1 per cent. The share of male youth (18-34 years) in agriculture to total youth population stood at 48.3 per cent while the share for females stood at 47.9 per cent.

The share of youth (18-34 years) in agriculture to total population stood at 15.2 per cent. For males, this indicator recorded 14.8 per cent while females recorded 15.7 per cent indicating a higher share of females in agriculture than males.

The share of youth (18-34 years) in agriculture to total agriculture population stood at 24.2 per cent. For males, this indicator recorded 23.6 per cent while females recorded 24.9 per cent indicating a higher share of females in agriculture than males.

Chapter 1: Introduction

1.1. Background Information

A population census is the process of collecting, compiling, analysing and publishing or otherwise disseminating demographic, economic, and social data pertaining to all persons in a country or in a well delimited part of a country, at a specified time. It is vital for effective national development planning because it provides detailed bench-mark data on all population characteristics.

The first known population census in Kenya was conducted in 1897 and was basically a headcount. This was followed by the 1948 census that focused on non-natives. A complete census that enumerated 8.6 million persons was conducted in 1962 and was used to set up political and administrative structures. The first post-independence census was undertaken in 1969 and enumerated 10.9 million persons. Since then, the country has conducted decennial population and housing censuses on a de facto basis with the midnight of 24th/25th August as the reference point. The censuses have been implemented in accordance with the United Nations (UN) Principles and Recommendations for conducting population and housing censuses. Table 1.1 presents census results since 1897.

Table 1.1: Summary of Census Counts in Kenya

Year	Population (millions)
1897	2.5
1948	5.4
1962	8.6
1969	10.9
1979	15.3
1989	21.4
1999	28.7
2009	37.7
2019	47.6

The 2019 Kenya Population and Housing Census was conducted under the provisions of the Constitution of Kenya, 2010 (Fourth Schedule Part 1 Item 11), the Statistics (Amendment) Act, 2019 and the Statistics (Census of Population) Order, 2018 - Legal Notice No. 205 and the Cabinet Memorandum of May 2017 on the implementation of the 2019 population and housing census process. The theme for the census was "Counting Our People for Sustainable Development and Devolution of Services".

1.2. Objectives of the 2019 Census

The main objective of the 2019 KPHC was to collect information on the size, composition, distribution and socio-economic characteristics of the population. The specific objectives were to ascertain:

- Population size, composition, and spatial distribution;
- Levels of fertility, mortality and migration;
- Educational attainment;
- Household composition;
- Rate and pattern of urbanization;
- Size and deployment of labour force;
- Distribution of persons with disability;
- Housing conditions and availability of household amenities; and
- Agricultural indicators to inform the creation of an agriculture sampling frame.

This information will be used in planning, budgeting and programming for important services; future policy formulation, resource allocation; creation of administrative and political units; monitoring and evaluation of programmes and projects; research; development of a master household sampling frame; development of geo-spatial database; and benchmark for agricultural censuses/surveys.

1.3. Agriculture Sector in Kenya

Kenya's economy is largely dependent on agriculture. About 63 per cent of the population lives in the rural areas and derive their livelihood directly or indirectly from agriculture. The sector directly contributed about 22.4 per cent to the country's Gross Domestic Product (GDP) in 2021. This implies the sector's performance has a direct bearing on the wellbeing of the population at large. Most of the agriculture is rain-fed with a small proportion combining both rain and irrigation, which exposes the farming community to the vagaries of weather changes. This has made the country remain in a vicious cycle of unending drought, especially in the northern part of the country. However, despite the important role of Agriculture to the economy and the population in general, the quantity and quality of agriculture statistics have deteriorated over the years. The country has tended to rely on administrative data for current agriculture statistics such as production, prices and output and inputs to the sector among others.

1.4. Global strategy to improve agricultural and rural statistics

An evaluation of FAO in 2008 argued that the most pressing need in national statistical systems was to improve the capacity for agricultural statistics. The decline in the priority level and in the resources (including financial resources to collect data) faced by national agricultural systems assigned to collecting and reporting reliable agricultural statistics was paralleled by a decline in donor support to such statistical activities. A number of reasons contributed to this decline. One reason was the lack of country-level capacity in public statistical agencies, while a second was that many countries had failed to adequately include agricultural statistics in the National Strategies for the Development of Statistics (NSDS). Several international partners, including Food and Agriculture organization of the United Nations (FAO), concluded that a global approach was needed to improve agricultural statistics and a Global Strategy to Improve Agricultural and Rural Statistics (2010) was developed in close consultation with national stakeholders. This Global Strategy was endorsed by the United Nations Statistical Council (UNSC) in 2010.

The first step in the implementation of the Global Strategy, was an Action Plan developed by FAO in 2012, which was implemented in cooperation with development partners. The Global Strategy therefore provided a blueprint for a coordinated and long-term initiative to address the decline in agricultural statistics systems. In essence, the purpose of the Global Strategy was to provide the vision for national and international statistical systems to produce the basic data and information to guide the decision-making required for the 21st century. The Global Strategy was based on a thorough country assessment of data user needs. The Global strategy recommends the collection of a minimum set of core indicators in a population census or in agriculture census. The inclusion of some selected agricultural questions took cognizance of this recommendation.

1.5. Agriculture Census Taking

Kenyan agriculture is characterized by smallholder farming as well as large scale farming. The United Nations Food and Agriculture Organization recommends that countries undertake Agriculture Censuses once every ten years to monitor changes in the basic structure of agriculture in the country. The country has never undertaken a comprehensive Agriculture Census largely due to funding constraints. However, an annual Census of Large Farms has been conducted in the past up to the early 1990s. The statistics generated in an agriculture census include number of farmers by sex, location, type of crops grown, number of livestock kept by type, among others. Basic agriculture statistics have remained scanty over the years except 2009 and 2019 when for two consecutive times, an agriculture module was included in the respective Population and Housing Censuses (KPHC). In the 2009 KPHC, only a livestock module was included while in the 2019 KPHC, both crops and livestock modules were included.

1.6. Scope of Agriculture in the 2019 KPHC

Following recommendations by the FAO World Census of Agriculture 2020, the following items were covered in the 2019 KPHC:

a) Sex of agricultural holder
b) Age of agricultural holder
c) Main purpose of production of the holding
d) Other economic activities of the household
e) Total area of holding
f) Irrigation practices on the holding
g) Growing of selected perennial crops of national interest
h) Number of permanent crop trees in scattered plantations (for each tree crop)
i) Number of permanent crop trees in compact plantations (for each tree crop)
j) Number of livestock by type
k) Household size by sex and age groups
l) Presence of aquaculture on the holding
m) Presence of fishing activity on the holding

1.7. Census of Large Farms

The agriculture module in the 2019 KPHC was administered to all households in Kenya in 2019. This therefore excluded all non-household farms (establishments) and institutions in the country. Due to this gap, the Bureau conducted a Census of Commercial & Institutional Farms and Specialty Crops (CCIFSC) in 2020. The 2020 CCIFSC is a reincarnation of the Census of Large Farms which was discontinued in the 1990s due to funding constraints after having been conducted over four decades. The study was conducted for a period of two months albeit with interruptions due to the outbreak of the Corona Virus in the country and the subsequent containment measures.

1.8. Objectives of the Agriculture Module

Broadly, the inclusion of the agriculture module in the Population and Housing Census was to provide basic agricultural statistics. An initial release of these statistics is presented in volume four of the KPHC on Distribution of the Population by Socio-Economic characteristics. Further analysis of the KPHC agriculture data has resulted in the production of an agriculture monograph with the following objectives:

To produce detailed information by cross tabulation of agriculture variables with other socio-economic variables for informed decision making by various users.

a) To monitor the achievement of the Government strategies, plans and policies. These include the Agriculture Sector Transformation and Growth Strategy (ASTGS), National Agricultural Investment Plans, County Integrated Development Plans (CIDPs), Medium Term Plans (MTP), the Big Four Agenda and Vision 2030, among others.
b) To produce gender disaggregated agricultural statistics for gender relevant policy making.
c) To fill in agricultural data gaps and contribute to monitoring and evaluation and reporting on international initiatives such as the Comprehensive African Agricultural Development Programme (CAADP).

Chapter 2: Methodology

2.1. Approaches to Agriculture Census Taking

Agriculture according to International Standard Industrial Classification of all Economic Activities (ISIC) consists of the following:
Growing of crops
Rearing of livestock
Aquaculture
Fishing
Forestry

The ISIC rev. 4 was used to delimit the scope of agriculture activities to be covered during the 2019 KPHC. Subsequently, an agriculture module was developed, incorporated in the main KPHC questionnaire and administered to all households countrywide.

According to FAO, a census of agriculture is a statistical operation for collecting, processing and disseminating data on the structure of agriculture, covering the whole or a significant part of the country. A census of Agriculture Census can be undertaken on complete or large sample basis. The FAO recommends that countries undertake agriculture censuses on decadal basis. In doing so, several approaches are available for use. The first is to include an agriculture module in the Population or Housing Census. Alternatively, screening questions are asked in a PHC to determine the statistics generated are considered basic and include number of farmers by sex, location, type of crops grown, number of livestock kept by type among others. Basic agriculture statistics have remained scanty over the years except in the 2009 and 2019 when for two consecutive times, an agriculture module has been included in the respective Kenya Population and Housing Censuses (KPHC). In the 2009 KPHC, only a livestock module was included while in the 2019 KPHC, both crops and livestock modules were included.

2.2. Use of Technology

Kenya adopted the use of mobile technology to collect data during the 2019 census as recommended by the UN for the 2020 round of censuses. This was the first census in Kenya to use mobile technology in the capture and transmission of data for both cartographic mapping and enumeration. The mobile devices (tablets) used for data collection were assembled by local universities.

2.3. Recruitment and Training

Recruitment of census personnel who included supervisors (both content ant ICT) and enumerators was undertaken by the County and Sub-County Census Committees through a competitive process. The training of these personnel was conducted in a cascaded manner from the training of trainers to the training of enumerators. The training for various cadres was conducted for seven days for each cadre. These trainings were sequentially conducted between 14th July and 20th August 2019.

2.4. Enumeration

The census enumeration was preceded by enumeration area (EA) boundary identification and pre-enumeration listing of households in each EA for two days prior to the census night. The pre-enumeration listing exercise helped in gauging the expected workload during the seven days of enumeration and also in monitoring the level of coverage as enumeration progressed.

The actual enumeration took place from the night of 24th/25th August 2019 and ended on 31st August 2019. A mop-up exercise was conducted on 1st and 2nd September 2019. Special populations were strictly enumerated on the night of 24th/25th August 2019. The 2019 Census adopted the de facto approach where all persons within the boundaries of Kenya were enumerated depending on where they spent (or were found on) the census night. The canvasser method of enumeration, where information for each individual or household is collected and recorded by a trained census official designated to perform the tasks in the assigned area, was used.

2.5. Data Transmission and Storage

Data collected by enumerators using mobile devices (tablets) were subsequently transmitted to a central server. The data were encrypted prior to transmission and backed up in off-site locations.

2.6. Data Processing

Editing of the census data was guided by the United Nations Handbook on Population and Housing Census Editing. The data were processed using CSPro, Stata and Statistical Package for Social Scientists (SPSS) softwares. In addition, validation checks were done to ensure that all EAs, aligned to administrative boundaries, were accounted for in the dataset. Outputs were generated based on administrative and geo-political units.

2.7. Quality Assurance

Quality assurance was integrated in all phases of the census process. Comprehensive guidelines were developed and shared with census personnel. Field supervision followed a three-tier structure to ensure adequate support, real-time response to emerging issues, and feedback during data collection. In addition, enumeration reporting schedules and control forms were used to facilitate monitoring of activities. Field monitoring teams oversaw technical, logistical and administrative aspects of enumeration in each region. Further, independent observers, drawn from the international community and national statistics offices across Africa, monitored and observed the 2019 census enumeration process.

2.8. Data Quality

The 2019 Kenya Population and Housing Census (KPHC), just as during the previous censuses encountered some administrative and logistic challenges. These gave rise to coverage and content errors, which vary both in nature and magnitude from one county to another. Coverage errors result from omission of certain pockets of the population, while content errors pertain to misreporting or misclassification of events. The errors cause biases and distortion in the estimates based on such data.

2.9. Definitions of Key Concepts and Terms

Agricultural Holding: This is a unit where agricultural activities are practiced under the management of a member of the household. These include:

a) Growing of crops
b) Keeping of livestock
c) Fish farming
d) Tree farming (agro-forestry)

An agricultural holding is made up of parcels; whereby a parcel is any piece of land of single ownership. This may be surrounded by other pieces of land belonging to different owner(s), or other natural features.

A holding may consist of one or more parcels, located in one or more separate areas or in one or more territorial or administrative divisions, provided the parcels share the same production means, such as labour, farm buildings, machinery or draught animals. Operationally, the focus of this question was to aggregate the area of all parcels operated by the household within the county. The same principle was also applied for non-household establishments, that is, those agricultural establishments managed by corporations, cooperatives or government agencies, etc.

Annual/Temporary crop: This applies to a plant that completes its life cycle, from germination to the production of seeds, within a few months up to one year, and then dies. Most of the annual/temporary crops do not have woody stems.

Perennial/Permanent crop: These are long-living crops that grow for more than one year; many have woody stems.

Tillers: A tiller is a stem produced by a plant (mainly grass family) and refers to all shoots that grow after the initial parent shoot grows from a seed. Tillers grow separately from the main shoot and may mature to form own flowers and seeds.

Compact plantation: These are plants, trees and shrubs planted in the holding in a regular and systematic spacing pattern; usually, area of compact plantation which is easy to measure.

Scattered plantation: These are trees, fruits, etc. planted in the holding with no clear spacing pattern, along fences, etc. usually area not easy to measure.

Livestock farming: This refers to keeping or rearing of all animals, birds and insects in captivity mainly for agricultural purposes. These include cattle, camel, donkey, sheep, goat, camels, and pigs, rabbits as well as chicken and bees.

Aquaculture: This comprises pond culture, cage culture, among others. The fish are kept and breed on the farm.

Fishing: This involves harvesting of fish from rivers, lakes, oceans. As opposed to aquaculture, fishing does not entail application of inputs among other fish farming practices.

Farmer: A farmer was defined as person who was engaged in any agricultural activity during the last 12 months prior to the census period. These activities include: planting and harvesting of crops; raising or rearing of livestock, as well as rearing of fish in ponds or cages.

Household: A household was defined as a person or group of persons who reside in the same homestead/compound but not necessarily in the same dwelling unit, have same cooking arrangements, and are answerable to the same household head.

Household head: The household head is defined as the most responsible/respectable member of the household who makes key decisions of the household on a day-to-day basis and whose authority is recognized by all members of the household. It could be the father, the mother or a child, or any other responsible member of the household depending on the status of the household

Subsistence farming: Subsistence farming is a form of production in which nearly all crops or livestock are raised to sustain the farm family, and rarely producing surpluses to sell for cash or store for later use.

Commercial farming: Commercial farming is the farming method in which plant and livestock production is practiced with the intention of selling the products on the market.

Mixed farming: Mixed farming involves growing of crops coupled with rearing of livestock by an agricultural household or enterprise.

Chapter 3: Agricultural Households in Kenya

3.1. Agricultural Households by County

In 2019, the total number of households practicing agriculture in Kenya stood at 6.4 million, which is 52.8 per cent out of 12.0 million households as shown in Table 3.1. Among the counties, Kitui and Bomet had the highest proportions of farming households at 82.1 and 81.4 per cent, respectively. Moreover, less than 40 per cent of the households in Kiambu, Kajiado, Garissa, and Turkana counties were engaged in agriculture. The city counties of Nairobi and Mombasa had the least share of households involved in agricultural activities due to their urban nature.

Table 3. 1: Distribution of Agricultural Households by County, 2019

	Total	Farming Households	Non-Farming Households
Total	12,040,701	52.8	47.2
Mombasa	376,212	3.5	96.5
Kwale	172,767	63.1	36.9
Kilifi	297,935	54.6	45.4
Tana River	66,964	52.3	47.7
Lamu	34,223	59.2	40.8
Taita-Taveta	94,453	60.2	39.8
Garissa	138,917	33.2	66.8
Wajir	126,874	48.8	51.2
Mandera	123,935	49.7	50.3
Marsabit	76,669	50.6	49.4
Isiolo	53,206	45.1	54.9
Meru	423,848	64.7	35.3
Tharaka-Nithi	109,425	78.3	21.7
Embu	182,413	71.8	28.2
Kitui	261,787	82.1	17.9
Machakos	399,453	57.9	42.1
Makueni	243,948	79.3	20.7
Nyandarua	178,205	79.0	21.0
Nyeri	244,542	67.1	32.9
Kirinyaga	203,554	68.7	31.3
Murang'a	317,459	72.8	27.2
Kiambu	792,147	27.0	73.0
Turkana	162,567	38.4	61.6
West Pokot	115,738	77.4	22.6
Samburu	63,947	66.8	33.2
Trans Nzoia	222,967	62.8	37.2
Uasin Gishu	301,065	46.9	53.1
Elgeyo-Marakwet	99,104	75.4	24.6
Nandi	199,024	74.7	25.3
Baringo	141,867	70.7	29.3
Laikipia	145,764	62.1	37.9
Nakuru	598,156	47.6	52.4
Narok	238,071	76.1	23.9
Kajiado	313,130	30.7	69.3
Kericho	205,890	73.2	26.8
Bomet	187,217	81.4	18.6
Kakamega	432,191	77.5	22.5
Vihiga	143,265	79.3	20.7
Bungoma	357,687	78.3	21.7
Busia	197,921	75.6	24.4
Siaya	249,279	79.3	20.7
Kisumu	296,766	49.8	50.2
Homabay	260,262	76.7	23.3
Migori	238,078	72.3	27.7
Kisii	307,224	71.4	28.6
Nyamira	150,489	73.0	27.0
Nairobi City	1,494,096	2.1	97.9

Figure 3.1 shows top 10 counties with the largest proportion of farming households in 2019. At the county level, Kitui had the highest proportion of households practicing agriculture, followed by Bomet, Makueni, Siaya, Vihiga and Nyandarua.

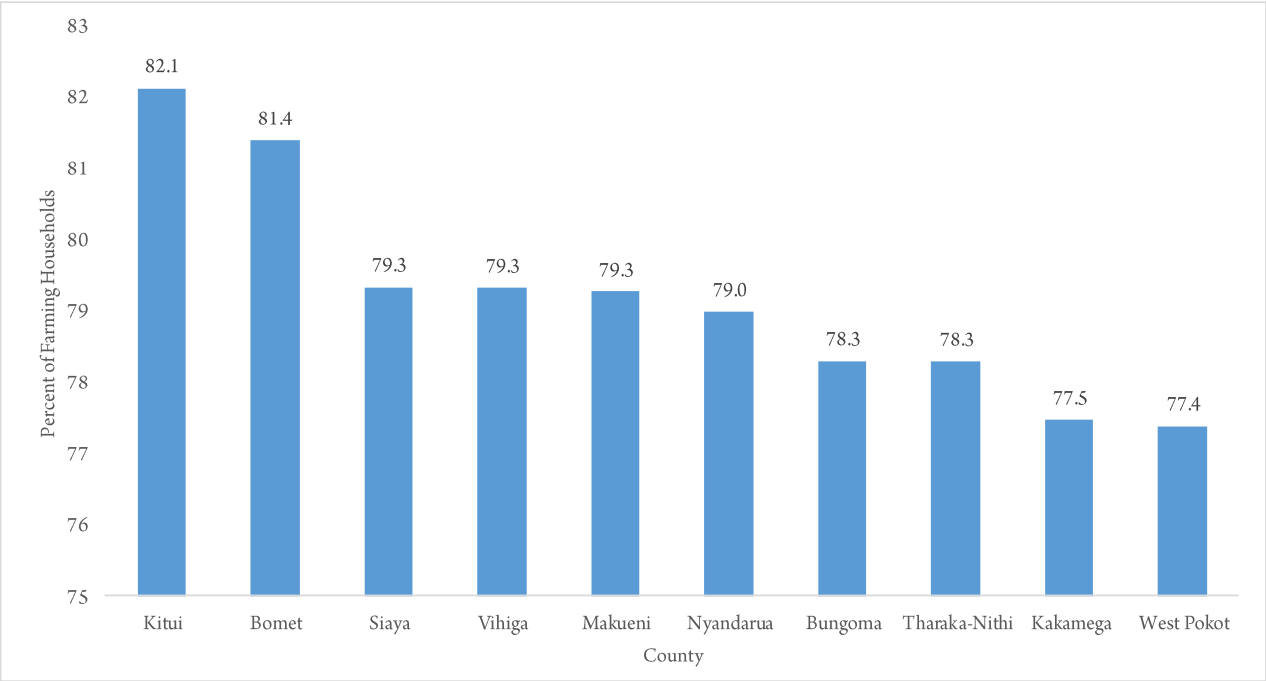


Figure 3. 1: Proportion of farming Households-top ten counties, 2019

3.2. Distribution of Farming Households by Type of Farming

In 2019, five types of farming practices were reported namely; crop farming, livestock farming, mixed farming, aquaculture and fishing. As shown in Figure 3.2 and Table 3.2, 60.9 per cent of the 6.4 million farming households in Kenya practiced mixed farming. The proportion of farming households growing crops only stood at 26.7 per cent; those rearing livestock only stood at 12.0 per cent; while the share of agriculture households that were undertaking aquaculture was less than one per cent of the total farming households, as shown in Table 3.2.

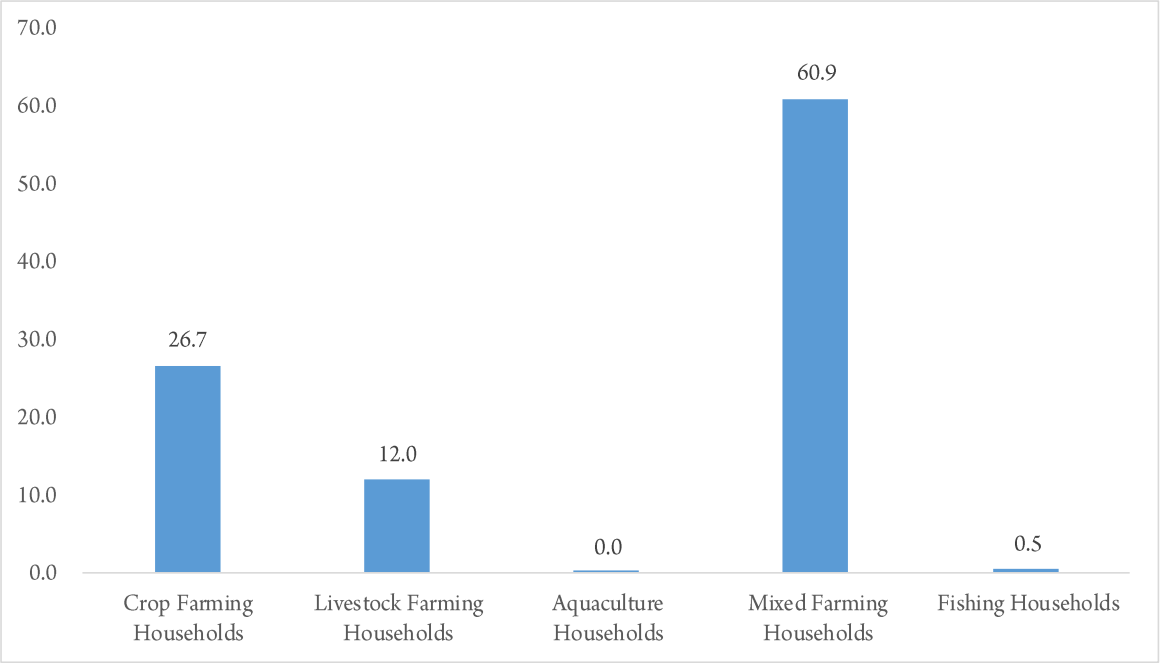


Figure 3. 2: Distribution of farming households by type of farming, 2019

Table 3.2 shows the percentage distribution of farming households by counties in 2019. The most predominant type of farming across all the counties was mixed farming. Bomet county had the highest proportion of mixed farming households at 77.7 per cent. Rearing of livestock only is predominantly undertaken in the ASAL counties. Wajir county led in the category of counties rearing livestock only with 94.7 per cent of the farming households involved. The proportion of farming households engaged in fishing was insignificant at 0.5 per cent of the total farming households while the proportion of households practicing aquaculture was 0.4 per cent.

Table 3. 2: Distribution of Farming Households by type of farming and County, 2019

	Crop Farming Households	Livestock Farming Households	Aquaculture Households	Mixed Farming Households	Fishing Households
EA Type					
Total	**26.7**	**12.0**	**0.0**	**60.9**	**0.5**
Rural	25.4	10.8	0.0	63.4	0.4
Urban	38.0	22.6	0.0	38.0	1.4
County					
Total	26.7	12.0	0.0	60.9	0.5
Mombasa	28.6	36.4	0.2	26.9	7.9
Kwale	33.3	6.8	0.0	58.8	1.1
Kilifi	37.7	6.7	0.0	54.4	1.2
Tana River	21.5	50.0	0.0	27.1	1.3
Lamu	24.5	14.9	0.0	52.4	8.1
Taita-Taveta	24.4	14.5	0.0	60.8	0.2
Garissa	3.2	88.4	0.0	7.9	0.5
Wajir	1.1	94.7	0.0	3.9	0.3
Mandera	3.8	74.0	0.0	21.9	0.3
Marsabit	2.3	89.7	0.0	6.9	1.2
Isiolo	4.0	87.4	0.0	8.5	0.1
Meru	28.8	8.5	0.0	62.7	0.0
Tharaka-Nithi	22.0	7.4	0.0	70.6	0.1
Embu	25.9	5.7	0.0	68.3	0.1
Kitui	18.9	7.1	0.0	73.9	0.0
Machakos	24.7	5.9	0.0	69.3	0.1
Makueni	19.3	6.5	0.0	74.2	0.0
Nyandarua	22.6	3.9	0.0	73.4	0.0
Nyeri	26.1	5.8	0.0	68.0	0.0
Kirinyaga	31.3	6.4	0.0	62.2	0.1
Murang'a	25.8	4.8	0.0	69.4	0.0
Kiambu	32.5	16.6	0.0	50.7	0.2
Turkana	7.7	70.3	0.1	17.5	4.4
West Pokot	14.6	10.3	0.0	75.0	0.0
Samburu	5.4	67.0	0.0	27.5	0.1
Trans Nzoia	32.4	7.0	0.0	60.5	0.1
Uasin Gishu	27.5	6.5	0.0	65.9	0.1
Elgeyo-Marakwet	29.8	4.8	0.0	65.4	0.0
Nandi	27.0	3.7	0.0	69.2	0.0
Baringo	21.2	15.4	0.0	63.2	0.2
Laikipia	25.5	17.7	0.0	56.8	0.0
Nakuru	33.5	7.7	0.0	58.3	0.5
Narok	18.5	16.7	0.0	64.7	0.0
Kajiado	16.9	51.6	0.0	31.3	0.1
Kericho	27.3	3.1	0.0	69.6	0.0
Bomet	18.3	3.9	0.0	77.7	0.0
Kakamega	31.4	3.8	0.0	64.8	0.0
Vihiga	27.2	4.4	0.0	68.3	0.0
Bungoma	31.7	3.5	0.0	64.7	0.0
Busia	29.5	4.5	0.0	64.9	1.1
Siaya	32.2	4.3	0.0	61.6	1.8
Kisumu	32.4	8.6	0.0	58.2	0.7
Homabay	32.3	3.9	0.0	60.7	3.1
Migori	34.1	4.6	0.0	59.9	1.4
Kisii	34.2	5.4	0.0	60.3	0.0
Nyamira	30.1	6.2	0.0	63.7	0.0
Nairobi City	31.0	47.9	0.2	20.9	0.0

3.3. Distribution of Farming Households by Household Size

Table 3.3 presents distribution of population engaged in Agriculture by Household size and County in 2019. The total number of people that engaged in this type of farming was 29.6 million out of which 91.2 per cent resided in the rural areas. The table shows that proportion of households increased in tandem with increase in household size from one to 6-9 after which the declined to 11 per cent for households with size above ten.

Table 3. 3: Percentage distribution of Households engaged in Farming by Household size and County, 2019

EA Type	Total	1	2 - 3	4 -5	6- 9	10+
Total	**29,565,869**	**2.3**	**13.5**	**30.9**	**42.2**	**11.0**
Rural	26,975,641	2.2	13.2	30.6	42.9	11.1
Urban	2,590,228	3.9	16.9	34.5	35.3	9.4
County						
Total	**29,565,869**	**2.3**	**13.5**	**30.9**	**42.2**	**11.0**
Mombasa	61,806	3.3	12.6	26.2	40.9	17.1
Kwale	635,424	1.3	7.4	19.8	47.5	24.1
Kilifi	980,112	1.5	7.1	17.2	43.9	30.3
Tana River	189,731	1.0	9.7	23.7	50.8	14.8
Lamu	92,008	3.4	13.7	26.9	42.7	13.3
Taita-Taveta	230,408	4.4	17.5	32.8	37.0	8.3
Garissa	319,917	0.1	4.0	16.5	45.5	33.9
Wajir	410,947	0.1	4.7	18.5	47.6	29.0
Mandera	464,434	0.0	2.7	13.3	42.8	41.2
Marsabit	247,429	0.2	5.2	19.2	52.4	22.9
Isiolo	139,109	0.5	7.9	24.1	47.8	19.7
Meru	1,109,319	3.1	19.1	39.4	33.6	4.8
Tharaka-Nithi	332,763	3.6	21.0	40.3	31.5	3.7
Embu	483,687	4.4	22.5	41.4	28.3	3.3
Kitui	993,449	2.3	13.6	31.1	43.4	9.6
Machakos	950,458	3.0	17.9	39.2	34.8	5.0
Makueni	845,390	2.7	15.4	34.7	39.8	7.5
Nyandarua	546,140	4.3	19.3	38.4	32.8	5.2
Nyeri	561,418	6.0	25.2	41.4	23.7	3.7
Kirinyaga	458,070	5.9	28.6	46.3	17.5	1.7
Murang'a	842,891	4.8	22.5	40.6	28.1	3.9
Kiambu	822,687	3.8	19.8	42.7	30.2	3.6
Turkana	405,122	0.3	4.8	19.1	49.4	26.4
West Pokot	519,768	0.6	7.8	21.9	51.2	18.4
Samburu	227,737	0.6	10.9	27.3	48.1	13.1
Trans Nzoia	705,866	1.7	10.9	28.0	46.8	12.7
Uasin Gishu	690,092	1.9	11.2	30.1	46.5	10.3
Elgeyo-Marakwet	378,992	2.1	10.2	24.6	49.0	14.1
Nandi	734,082	1.7	10.9	30.6	46.6	10.3
Baringo	520,930	1.8	9.6	25.2	48.0	15.3
Laikipia	364,754	3.9	18.0	36.0	35.8	6.3
Nakuru	1,238,163	3.2	14.8	32.7	41.5	7.8
Narok	961,319	1.2	9.0	26.4	52.0	11.5
Kajiado	465,497	1.7	11.6	31.9	47.3	7.5
Kericho	741,744	1.6	11.1	30.5	47.6	9.1
Bomet	772,652	1.3	10.8	28.8	49.3	9.8
Kakamega	1,570,462	2.1	13.2	30.9	45.2	8.6
Vihiga	501,878	2.9	14.8	32.4	41.9	8.1
Bungoma	1,419,262	1.5	11.2	27.4	48.1	11.8
Busia	734,964	1.9	11.9	27.7	46.9	11.6
Siaya	842,991	3.4	15.9	31.7	41.5	7.5
Kisumu	666,412	2.6	14.0	31.8	43.9	7.8
Homabay	931,451	2.2	13.0	30.4	45.7	8.7
Migori	875,411	1.5	10.5	27.7	48.2	12.0
Kisii	982,797	2.0	14.7	36.0	41.7	5.5
Nyamira	474,546	2.2	16.3	38.1	39.0	4.4
Nairobi City	121,380	4.4	18.7	39.6	32.8	4.4

Figure 3.3 shows that the rural farming households with 6-9 persons had the highest proportion of households at 42.9 per cent and 35.3 per cent in urban areas while 1 member household constituted two and four per cent of the rural and urban population respectively.

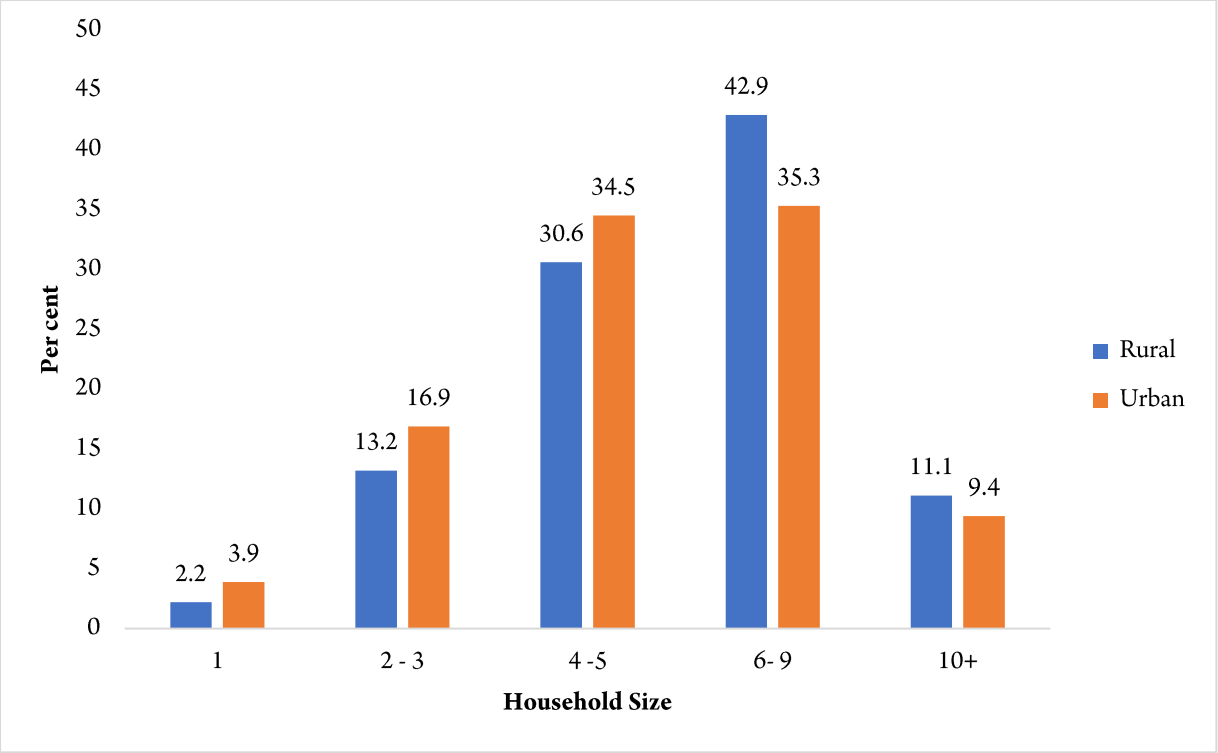


Figure 3. 3: Distribution of Population engaged in Farming by Household size

3.4. Distribution of Farming Households by Education level of Household Head

Table 3.4 shows the distribution of farming households by the education level of the household head. At the national level 44.8 per cent of the 6.4 million farming household heads had completed primary education. The proportion of farming household heads with secondary education stood at 20.4 per cent. A higher proportion of farming household heads in rural areas had primary education compared to urban areas. However, a higher proportion of household heads in urban areas had secondary and tertiary education (29.5 and 23.9 per cent) compared to rural areas (19.4 and 7.9 per cent). The Arid and Semi-Arid counties of Northern Kenya had the highest proportion of farmers who had not attended school at over 90 per cent in most of the counties.

Table 3. 4: Distribution of Farming Households by Education level of Household Head

EA Type	Total	None/Never Attended	Other (Informal)	Primary	Secondary	Tertiary	Not Stated /DK
Total	**6,360,303**	**21.1**	**2.8**	**44.8**	**20.4**	**9.5**	**1.5**
Rural	**5,733,714**	**22.3**	**2.9**	**46.0**	**19.4**	**7.9**	**1.5**
Urban	**626,589**	**10.0**	**1.6**	**33.7**	**29.5**	**23.9**	**1.4**
County							
Mombasa	13,171	18.3	3.9	37.4	22.3	16.9	1.2
Kwale	109,040	41.7	2.0	40.7	9.8	4.5	1.3
Kilifi	162,648	35.9	2.8	42.1	11.7	6.3	1.1
Tana River	34,989	59.3	2.1	24.9	8.9	3.6	1.1
Lamu	20,254	28.3	2.5	46.3	14.8	6.2	1.8
Taita-Taveta	56,881	13.4	2.4	54.7	18.9	9.6	0.9
Garissa	46,109	90.8	0.4	2.0	3.0	1.3	2.5
Wajir	61,959	94.1	0.2	1.4	2.2	1.3	0.9
Mandera	61,583	91.6	0.3	2.3	2.7	1.5	1.7
Marsabit	38,811	88.9	0.3	4.4	3.0	2.9	0.5
Isiolo	23,996	76.8	0.5	11.0	6.8	4.4	0.5
Meru	274,081	19.6	3.8	50.4	16.1	8.5	1.6
Tharaka-Nithi	85,676	14.2	4.2	51.1	18.2	10.2	2.0
Embu	130,925	11.8	4.4	50.4	22.0	10.3	1.1
Kitui	215,003	20.4	3.7	51.2	14.1	8.5	2.0
Machakos	231,177	9.9	2.8	48.7	25.2	11.5	1.9
Makueni	193,384	10.8	3.3	51.7	21.8	9.9	2.5
Nyandarua	140,759	9.3	1.9	55.7	24.1	8.2	0.8
Nyeri	164,077	7.2	1.3	48.5	30.4	11.2	1.3
Kirinyaga	139,850	8.7	2.7	49.8	27.0	10.5	1.3
Murang'a	231,171	10.1	2.1	55.4	23.8	7.6	1.1
Kiambu	213,544	7.1	1.4	42.2	30.9	17.1	1.3
Turkana	62,469	90.1	0.6	4.4	1.8	1.6	1.5
West Pokot	89,569	59.1	2.0	23.8	7.6	6.4	1.1
Samburu	42,738	80.3	0.9	9.5	4.3	4.4	0.6
Trans Nzoia	139,981	12.7	3.7	46.2	25.0	10.7	1.7
Uasin Gishu	141,313	11.3	2.3	42.2	26.4	16.5	1.3
Elgeyo-Marakwet	74,709	18.1	3.2	44.8	21.9	10.6	1.5
Nandi	148,660	12.2	4.4	50.7	20.1	11.1	1.5
Baringo	100,242	30.3	2.0	34.7	18.9	12.5	1.6
Laikipia	90,457	22.3	1.5	45.1	21.7	8.2	1.4
Nakuru	284,495	11.5	2.5	48.9	24.6	10.9	1.6
Narok	181,080	43.3	3.3	33.0	12.5	6.7	1.3
Kajiado	96,177	46.3	2.2	23.1	14.7	12.5	1.3
Kericho	150,625	12.4	3.0	47.6	23.2	12.8	1.1
Bomet	152,384	14.2	2.7	47.2	21.5	12.9	1.6
Kakamega	334,835	15.3	3.3	50.4	20.8	8.8	1.4
Vihiga	113,645	12.1	3.9	53.2	20.9	8.3	1.7
Bungoma	280,086	11.2	2.9	46.0	26.9	11.4	1.6
Busia	149,675	19.5	3.9	49.9	17.6	7.7	1.3
Siaya	197,783	16.2	2.3	55.9	17.0	6.6	2.0
Kisumu	147,790	14.0	3.5	49.8	20.9	10.4	1.4
Homabay	199,693	15.1	2.8	54.3	18.2	8.2	1.4
Migori	172,024	16.9	3.2	54.5	16.2	7.5	1.7
Kisii	219,479	15.2	4.2	41.0	29.6	9.1	1.0
Nyamira	109,790	16.0	2.7	37.2	33.4	9.5	1.2
Nairobi City	31,516	3.7	1.2	27.8	33.8	32.1	1.3

3.5. Distribution of Farming Households by Main Purpose of Production, 2019

Table 3.5 shows the distribution of counties engaged in both subsistence and commercial farming in 2019. In 2019, out of the 6.4 million agricultural households, 76.0 per cent were engaged in subsistence farming while 23.3 per cent were engaged in commercial farming. Figure 3.4 shows counties with the highest proportion of subsistence farming.

Table 3. 5: Distribution of Farming Households by Purpose of Production and County, 2019

	Farming Households	Subsistence Farming	Commercial Production	DK
Total	**6,360,303**	**76.0**	**23.3**	**0.7**
Mombasa	13,171	75.1	16.5	8.4
Kwale	109,040	89.7	9.0	1.3
Kilifi	162,648	92.0	6.7	1.3
Tana River	34,989	83.1	14.7	2.1
Lamu	20,254	67.2	24.4	8.4
Taita-Taveta	56,881	86.3	13.4	0.3
Garissa	46,109	87.4	8.0	4.6
Wajir	61,959	92.9	4.4	2.7
Mandera	61,583	90.9	5.7	3.4
Marsabit	38,811	94.9	2.9	2.2
Isiolo	23,996	92.5	6.6	0.9
Meru	274,081	59.8	40.1	0.1
Tharaka-Nithi	85,676	71.9	28.0	0.1
Embu	130,925	50.3	49.5	0.2
Kitui	215,003	91.3	8.5	0.2
Machakos	231,177	81.2	18.7	0.2
Makueni	193,384	81.7	18.2	0.1
Nyandarua	140,759	72.7	27.2	0.1
Nyeri	164,077	48.6	51.3	0.1
Kirinyaga	139,850	42.4	57.4	0.2
Murang'a	231,171	55.5	44.5	0.1
Kiambu	213,544	65.5	34.2	0.3
Turkana	62,469	90.4	1.1	8.5
West Pokot	89,569	90.5	9.2	0.3
Samburu	42,738	96.7	2.5	0.8
Trans Nzoia	139,981	80.9	18.8	0.2
Uasin Gishu	141,313	81.9	18.0	0.2
Elgeyo-Marakwet	74,709	79.6	20.2	0.1
Nandi	148,660	62.1	37.8	0.1
Baringo	100,242	85.8	13.6	0.6
Laikipia	90,457	86.8	13.0	0.2
Nakuru	284,495	80.2	19.2	0.6
Narok	181,080	78.7	20.8	0.5
Kajiado	96,177	83.8	14.8	1.4
Kericho	150,625	47.9	52.1	0.1
Bomet	152,384	60.6	39.4	0.1
Kakamega	334,835	90.7	9.2	0.1
Vihiga	113,645	85.2	14.7	0.1
Bungoma	280,086	80.3	19.5	0.2
Busia	149,675	90.5	8.3	1.2
Siaya	197,783	90.2	7.9	1.9
Kisumu	147,790	89.2	10.0	0.8
Homabay	199,693	87.5	9.3	3.1
Migori	172,024	88.3	10.2	1.5
Kisii	219,479	58.7	41.2	0.1
Nyamira	109,790	36.6	63.3	0.1
Nairobi City	31,516	77.5	22.1	0.4
Location				
Total	**6,360,303**	**76.0**	**23.3**	**0.7**
Rural	**5,733,714**	**76.2**	**23.2**	**0.6**
Urban	**626,589**	**74.8**	**23.4**	**1.7**

As shown in Table 3.5 and Figure 3.4, Samburu County had the highest proportion of subsistence farmers with 96.7 per cent of the farming households engaged. Other counties with over 90 per cent engaged in subsistence farming include Marsabit, Wajir, Isiolo, Kilifi, Kitui among others.

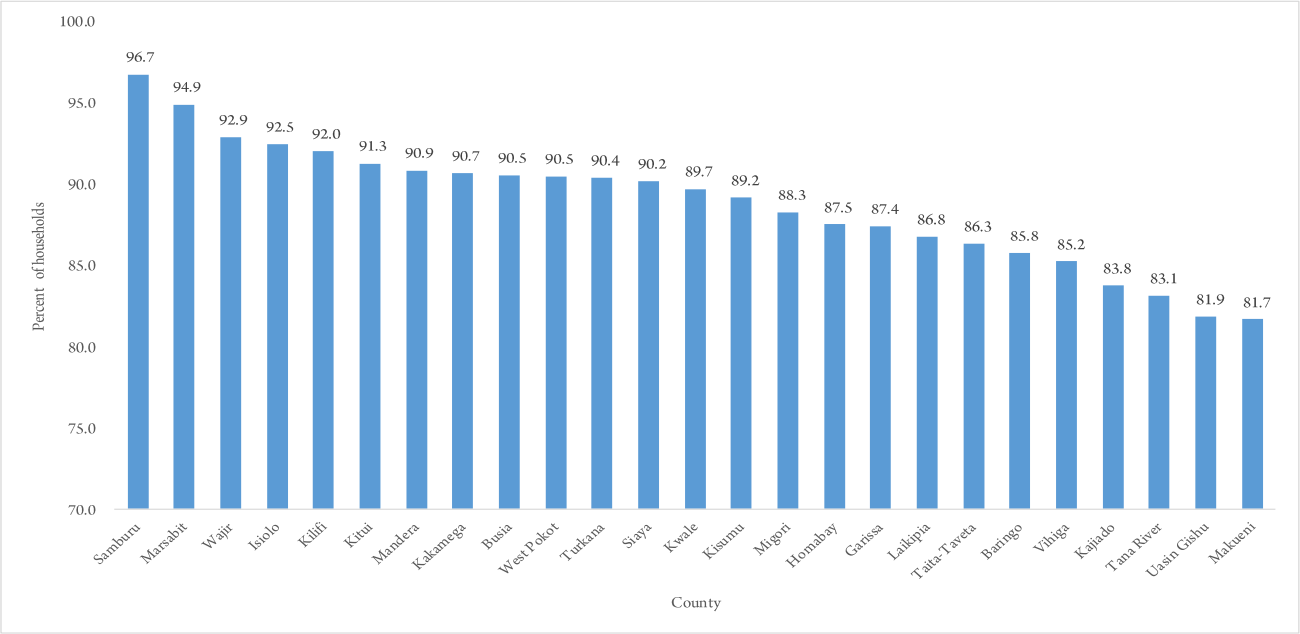


Figure 3. 4: Distribution of counties with the largest number of subsistence farming, 2019

Figure 3.5 and Table 3.5 show that Nyamira county had the highest proportion of commercial farmers at 63.3 per cent. This was followed by Kirinyaga, Kericho, Nyeri and Embu counties.

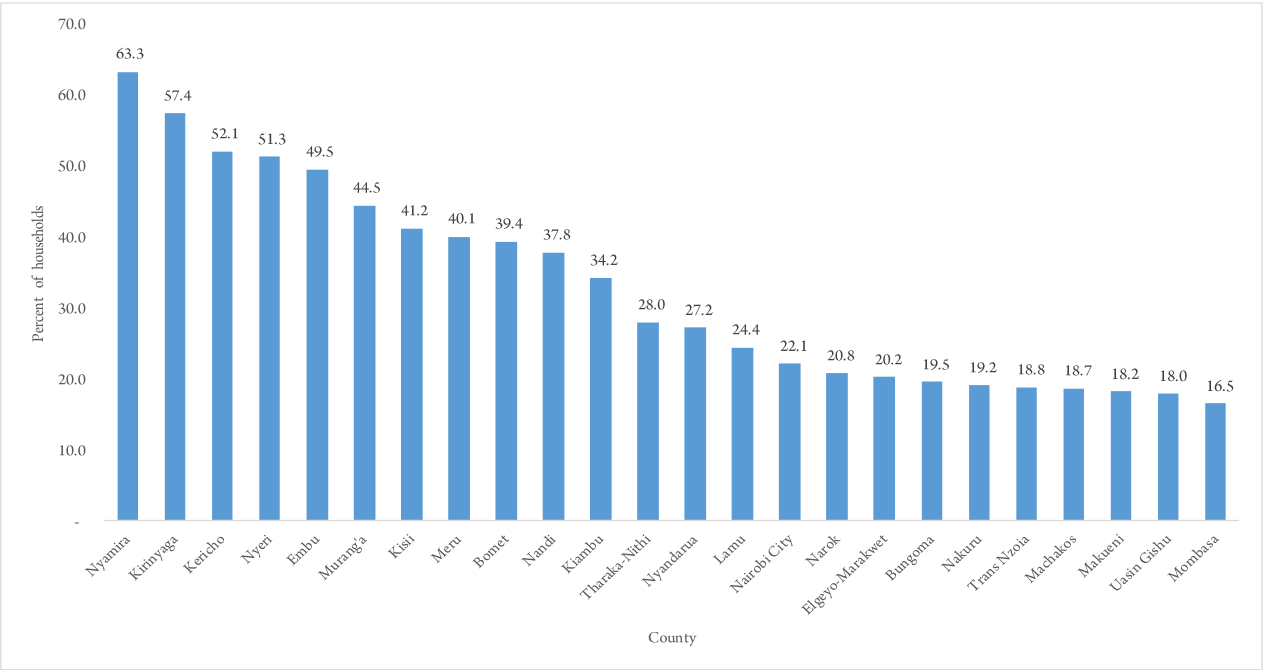


Figure 3. 5: Distribution of Counties with the largest number of commercial farming, 2019

3.6. Distribution of Farming Households by sex of the household head

In 2019, most of the farming households were male headed as shown in Figure 3.6 and Table 3.6.

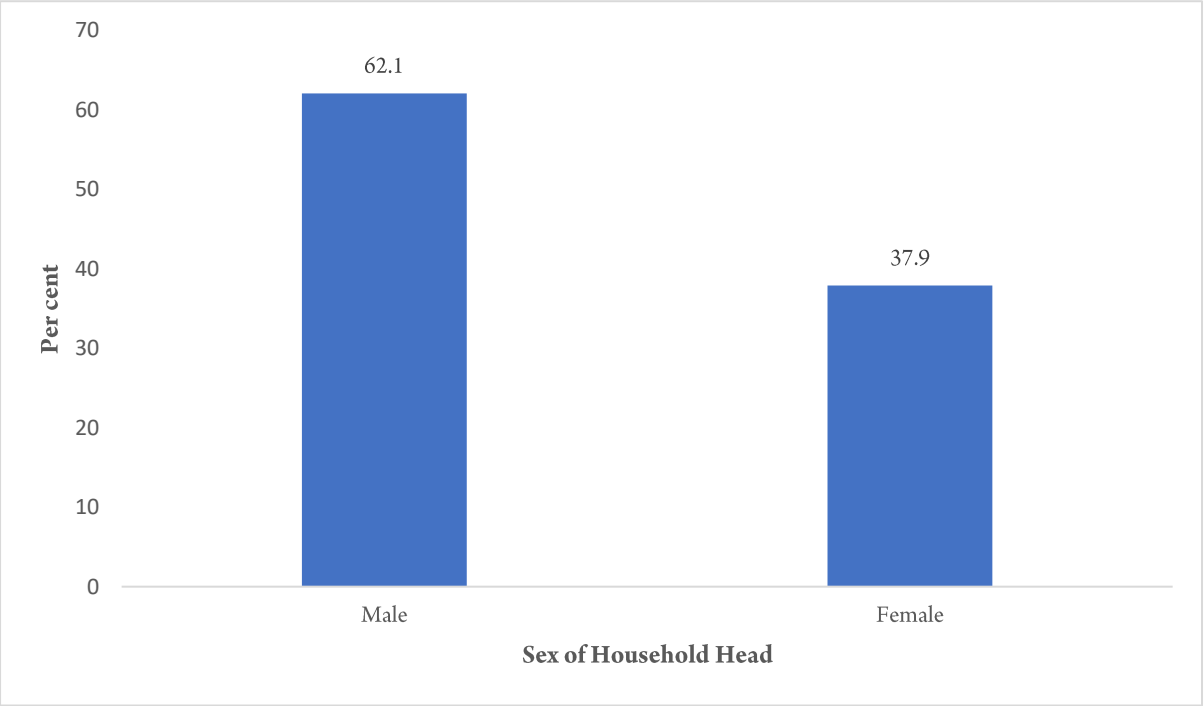


Figure 3. 6: Distribution of farming households by sex of the household head, 2019

Table 3.6 shows distribution of Farming Households by Sex of the Household Head. Most households were headed by males, with Nairobi, Kirinyaga, Mombasa, Nandi and Kiambu having the highest. Samburu, Marsabit, Isiolo, Turkana, Kisumu, Siaya, Migori and Homabay counties were among the top ten counties which had a higher proportion of female headed farming households.

Table 3. 6: Distribution of Farming Households by Sex of the Household Head and County, 2019

County	Sex of Household head		
	Total	Male	Female
National	**6,360,303**	**62.1**	**37.9**
Mombasa	13,171	70.5	29.5
Kwale	109,040	64.6	35.3
Kilifi	162,648	62.5	37.5
Tana River	34,989	62.7	37.3
Lamu	20,254	68.1	31.9
Taita-Taveta	56,881	63.9	36.1
Garissa	46,109	55.6	44.4
Wajir	61,959	54.0	46.0
Mandera	61,583	46.0	54.0
Marsabit	38,811	51.4	48.6
Isiolo	23,996	60.6	39.4
Meru	274,081	67.5	32.5
Tharaka-Nithi	85,676	67.9	32.1
Embu	130,925	68.4	31.6
Kitui	215,003	55.2	44.8
Machakos	231,177	63.3	36.7
Makueni	193,384	59.1	40.9
Nyandarua	140,759	64.8	35.2
Nyeri	164,077	64.7	35.3
Kirinyaga	139,850	71.1	28.8
Murang'a	231,171	65.3	34.7
Kiambu	213,544	70.3	29.7
Turkana	62,469	45.9	54.1
West Pokot	89,569	58.7	41.3
Samburu	42,738	37.0	62.9
Trans Nzoia	139,981	63.3	36.7
Uasin Gishu	141,313	65.7	34.3
Elgeyo-Marakwet	74,709	69.6	30.4
Nandi	148,660	70.4	29.6
Baringo	100,242	62.7	37.2
Laikipia	90,457	60.4	39.6
Nakuru	284,495	64.1	35.8
Narok	181,080	57.8	42.2
Kajiado	96,177	59.8	40.2
Kericho	150,625	69.0	31.0
Bomet	152,384	66.5	33.5
Kakamega	334,835	61.0	39.0
Vihiga	113,645	58.9	41.1
Bungoma	280,086	63.4	36.6
Busia	149,675	59.1	40.9
Siaya	197,783	52.7	47.3
Kisumu	147,790	56.8	43.2
Homabay	199,693	54.0	45.9
Migori	172,024	58.9	41.1
Kisii	219,479	61.1	38.9
Nyamira	109,790	64.2	35.8
Nairobi City	31,516	71.1	28.9

As shown in Figure 3.7, the counties of Mombasa, Kirinyaga, Kiambu, Nandi and Nairobi had the highest proportion of male headed farming households, at over 70.0 per cent each. The counties of Mandera, Turkana and Samburu had the highest proportion of female headed farming households at more than 50 per cent each.

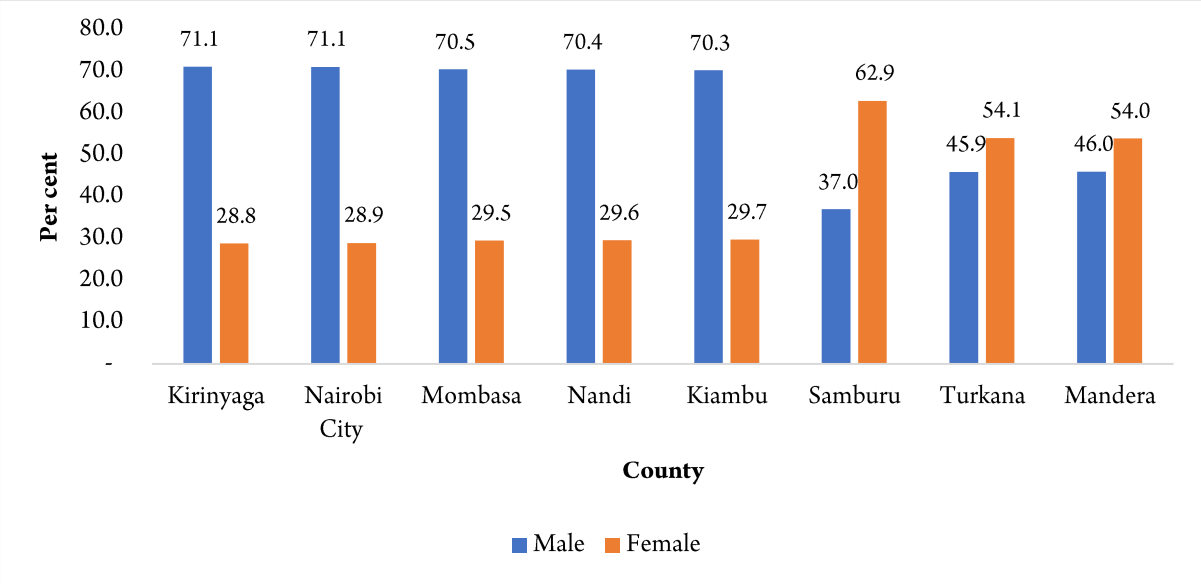


Figure 3. 7: Percentage distribution of farming households by sex of the household head in Selected Counties

3.7. Distribution of farming households by place of residence and sex of the head of households

Figure 3.8 shows the percentage distribution of farming households by place of residence and sex of the head of farming household in 2019. More than 90 per cent of the farming households in Kenya live in the rural areas.

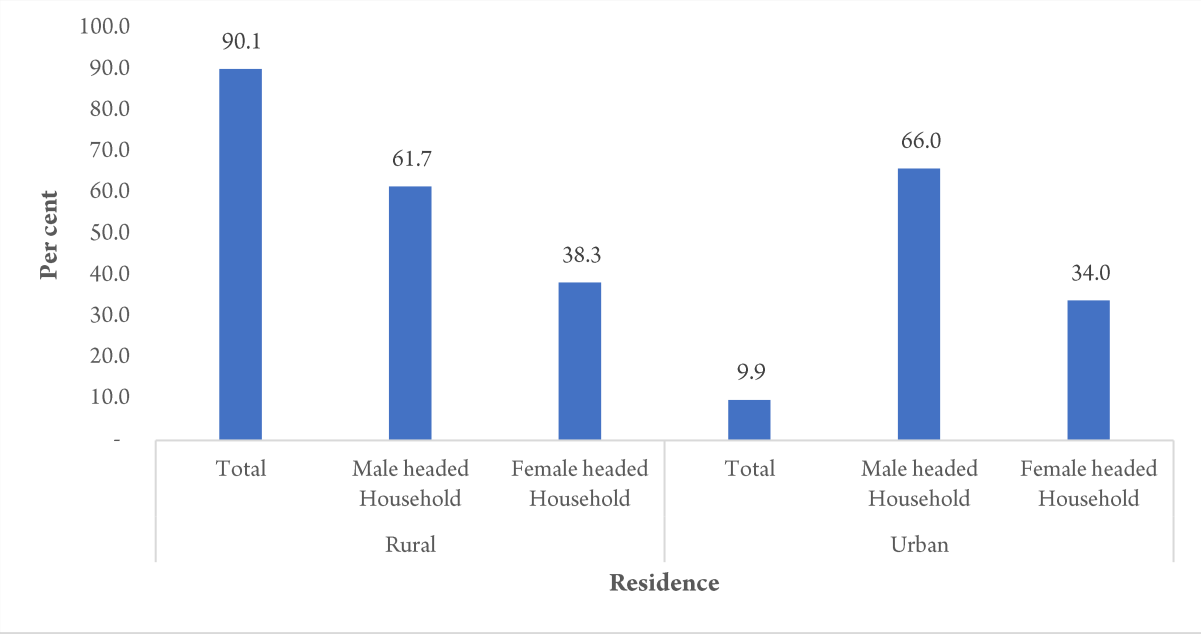


Figure 3. 8: Distribution of farming households by place of residence and sex of household head, 2019

Table 3.7 presents the distribution of farming households by residence (rural/urban) and sex of the household head. There were more male and female headed agricultural households in the rural areas compared to the urban areas. However, the proportion of the male headed agricultural households in the rural areas was slightly lower compared to male headed agricultural households in the urban areas at 55.6 and 66.0 per cent, respectively. Overall, it was apparent that most agricultural households, both in rural and urban areas, were dominated by male heads.

Table 3. 7: Distribution of Farming Households by Residence (Rural/Urban) and Sex of the Household Head and County

Counties	Total	Rural farming households			Urban farming households		
	Total farming Households	Total	Male headed Household	Female headed Household	Total	Male headed Household	Female headed Household
National	**6,360,303**	90.1	55.6	34.6	**9.9**	66.0	34.0
Mombasa	13,171	0.0	0.0	0.0	100.0	70.5	29.5
Kwale	109,040	94.0	60.6	33.4	6.0	67.1	32.9
Kilifi	162,648	86.8	53.6	33.2	13.2	67.2	32.8
Tana River	34,989	90.0	56.0	33.9	10.0	66.7	33.3
Lamu	20,254	86.7	59.3	27.4	13.3	66.6	33.4
Taita-Taveta	56,881	88.8	56.5	32.3	11.2	66.0	34.0
Garissa	46,109	91.5	50.9	40.5	8.5	54.6	45.4
Wajir	61,959	91.6	49.4	42.1	8.4	53.9	46.1
Mandera	61,583	83.8	38.8	45.1	16.2	44.7	55.3
Marsabit	38,811	92.9	47.0	45.9	7.1	62.2	37.8
Isiolo	23,996	73.5	42.6	30.9	26.5	67.7	32.3
Meru	274,081	95.8	64.8	31.0	4.2	63.6	36.4
Tharaka-Nithi	85,676	95.1	64.5	30.6	4.9	68.9	31.1
Embu	130,925	94.2	64.6	29.7	5.8	66.1	33.9
Kitui	215,003	97.8	53.8	44.0	2.2	61.6	38.4
Machakos	231,177	91.4	57.3	34.1	8.6	69.4	30.6
Makueni	193,384	96.3	56.7	39.6	3.7	63.9	36.1
Nyandarua	140,759	93.4	60.5	32.9	6.6	64.7	35.3
Nyeri	164,077	92.0	59.4	32.6	8.0	65.6	34.4
Kirinyaga	139,850	86.1	61.8	24.3	13.9	67.4	32.6
Murang'a	231,171	94.4	61.5	32.9	5.6	67.7	32.3
Kiambu	213,544	61.2	42.6	18.6	38.8	71.3	28.7
Turkana	62,469	96.1	43.9	52.2	3.9	51.7	48.3
West Pokot	89,569	97.5	57.1	40.4	2.5	64.0	36.0
Samburu	42,738	93.7	33.4	60.2	6.3	56.6	43.4
Trans Nzoia	139,981	90.6	57.0	33.6	9.4	67.0	33.0
Uasin Gishu	141,313	78.0	51.1	26.9	22.0	66.2	33.8
Elgeyo-Marakwet	74,709	97.1	67.7	29.4	2.9	65.7	34.3
Nandi	148,660	96.3	67.9	28.3	3.7	67.1	32.9
Baringo	100,242	92.1	57.6	34.5	7.9	64.9	35.0
Laikipia	90,457	88.8	53.5	35.3	11.2	61.8	38.2
Nakuru	284,495	73.5	47.1	26.4	26.5	64.2	35.8
Narok	181,080	95.8	55.2	40.6	4.2	63.3	36.7
Kajiado	96,177	76.5	44.0	32.6	23.5	67.3	32.7
Kericho	150,625	95.6	66.1	29.5	4.4	65.5	34.5
Bomet	152,384	98.4	65.5	32.9	1.6	62.6	37.4
Kakamega	334,835	94.2	57.3	36.9	5.8	63.7	36.3
Vihiga	113,645	93.3	55.0	38.3	6.7	59.1	40.9
Bungoma	280,086	92.3	58.3	33.9	7.7	65.0	35.0
Busia	149,675	94.2	55.4	38.8	5.8	64.2	35.8
Siaya	197,783	95.3	49.8	45.5	4.7	59.9	40.1
Kisumu	147,790	86.0	47.8	38.2	14.0	64.4	35.6
Homabay	199,693	94.8	50.7	44.1	5.2	65.2	34.8
Migori	172,024	92.5	53.9	38.6	7.5	66.8	33.2
Kisii	219,479	94.2	57.2	37.0	5.8	68.3	31.7
Nyamira	109,790	95.5	61.2	34.3	4.5	68.1	31.9
Nairobi City	31,516	0.0	0.0	0.0	100.0	71.1	28.9

3.8. Distribution of the Farming Households by Age of the Household Head

Table 3.8 and Figure 3.9 show the distribution of farming households by age group of the household head. Majority of the farming households (23.2 per cent) were headed by persons within the age bracket (35- 44 years). This is followed by persons within the age bracket (25 - 34 years) at 20.1 per cent. Children headed farming households (age less than 18 years) accounted for less than one per cent of the 6.4 million households. Nationally, farming households headed by the elderly (age 65 years and above) accounted for 16.5 per cent of the total.

Table 3. 8: Distribution of Farming Households by Age of the Household Head and by County, 2019

	Total	Under 18 Years	(18 - 24) Years	(25 - 34) Years	(35 - 44) Years	(45 - 54) Years	(55 - 64) Years	65 Years and Above
Total	**6,360,303**	0.4	4.5	20.1	23.2	19.6	15.7	16.5
Mombasa	13,171	0.3	5.3	22.8	26.7	22.3	14.1	8.6
Kwale	109,040	0.6	4.5	21	24.2	19.1	15.6	14.9
Kilifi	162,648	0.5	4.8	20.2	22.2	19.9	17	15.5
Tana River	34,989	0.8	9	25.5	22.2	18.3	13.9	10.4
Lamu	20,254	0.5	5.7	22	24.7	19.8	14.7	12.6
Taita-Taveta	56,881	0.4	3.3	14.8	21.5	21.4	18.5	20.1
Garissa	46,109	1.4	12.3	29.4	26.4	16	8.7	5.9
Wajir	61,959	1.2	11.7	33.4	26.1	13.9	8.1	5.6
Mandera	61,583	2	14.8	32.6	23.9	12.5	8	6.3
Marsabit	38,811	0.5	8.6	26.6	21.2	17.1	12.7	13.3
Isiolo	23,996	1.3	8.3	27.2	22.5	15.3	13.9	11.6
Meru	274,081	0.2	3.5	17.4	25.4	20.4	16.2	16.9
Tharaka-Nithi	85,676	0.2	3.1	17.2	22.6	20.6	17.2	19.1
Embu	130,925	0.2	3	16.2	23.4	21.4	17	18.8
Kitui	215,003	1	3.8	17.1	23.1	20.9	15.3	18.9
Machakos	231,177	0.4	2.5	14.2	23.1	20.6	18.5	20.7
Makueni	193,384	0.6	2.9	14.6	22.4	21.3	17.2	20.9
Nyandarua	140,759	0.3	2.6	15	23.7	23.8	16.6	18.1
Nyeri	164,077	0.1	1.6	10.3	20.3	23.6	18.9	25.1
Kirinyaga	139,850	0.1	2.3	14.7	24.9	23.3	16.8	17.9
Murang'a	231,171	0.2	1.8	11.3	20.4	21.6	18.5	26.4
Kiambu	213,544	0.1	2.1	12.4	22.4	23.8	18.1	21.1
Turkana	62,469	0.5	6.2	26.3	24.4	18.2	12.1	12.3
West Pokot	89,569	0.5	9.4	30.6	22	17	10.4	10.1
Samburu	42,738	1.7	13.6	29.9	19.6	14.8	10.3	10
Trans Nzoia	139,981	0.4	4.3	21.1	24.3	19.9	15.8	14.2
Uasin Gishu	141,313	0.3	3.7	20.5	26.3	21.6	14.2	13.3
Elgeyo-Marakwet	74,709	0.2	5.5	24.7	23.6	18.6	13.9	13.5
Nandi	148,660	0.2	2.8	21.6	25.1	20.4	15	14.9
Baringo	100,242	0.5	7.6	24.3	22.2	18.2	13.3	13.9
Laikipia	90,457	0.5	4.9	18.1	22.3	21	15.9	17.2
Nakuru	284,495	0.4	4.6	20.3	24.1	21	14.6	15
Narok	181,080	0.7	9.4	30.6	23.6	17.3	10.3	8
Kajiado	96,177	0.7	7.3	26.2	23.6	20.4	12.4	9.4
Kericho	150,625	0.2	4.3	24	24.1	19	14.3	13.9
Bomet	152,384	0.3	5.1	25.4	23.8	18.5	13.2	13.7
Kakamega	334,835	0.4	3.7	20	22.8	19.2	16.9	16.8
Vihiga	113,645	0.4	2.2	12.6	19.4	19.3	19.2	26.9
Bungoma	280,086	0.3	5	24	23.2	18.3	15.3	13.8
Busia	149,675	0.4	4.3	21.3	22.7	18.4	16.5	16.3
Siaya	197,783	0.4	3.9	19.4	21.5	17	16.3	21.5
Kisumu	147,790	0.4	3.7	20	23.2	17.3	16.7	18.6
Homabay	199,693	0.6	5.2	23.1	23.5	16.2	15.1	16.5
Migori	172,024	0.5	6.2	26.1	23.8	17.2	13.5	12.7
Kisii	219,479	0.4	4	22	22.4	18	18.2	15.1
Nyamira	109,790	0.4	3	20	23.2	18.4	18.8	16.3
Nairobi City	31,516	0.3	5.5	19.6	25.6	23.6	15.1	10.3

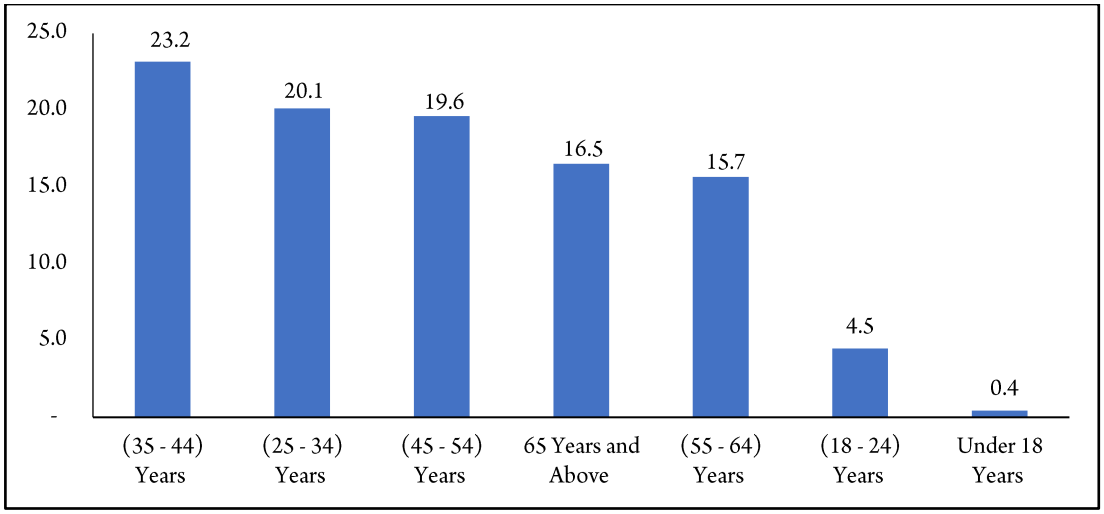


Figure 3. 9: Percentage distribution of farming households by age of household head, 2019

As shown in Figure 3.10, at the county level, the top ten headed by the elderly (age 65 years and above) were Vihiga, Murang'a, Nyeri, Siaya, Kiambu, Makueni, Machakos, Taita Taveta, Tharaka Nithi and Kitui. On the other hand the main counties headed by youth (18-34 years) were Mandera, Wajir, Samburu, Garissa, West Pokot, Narok, Isiolo, Marsabit, Tana River and Kajiado.

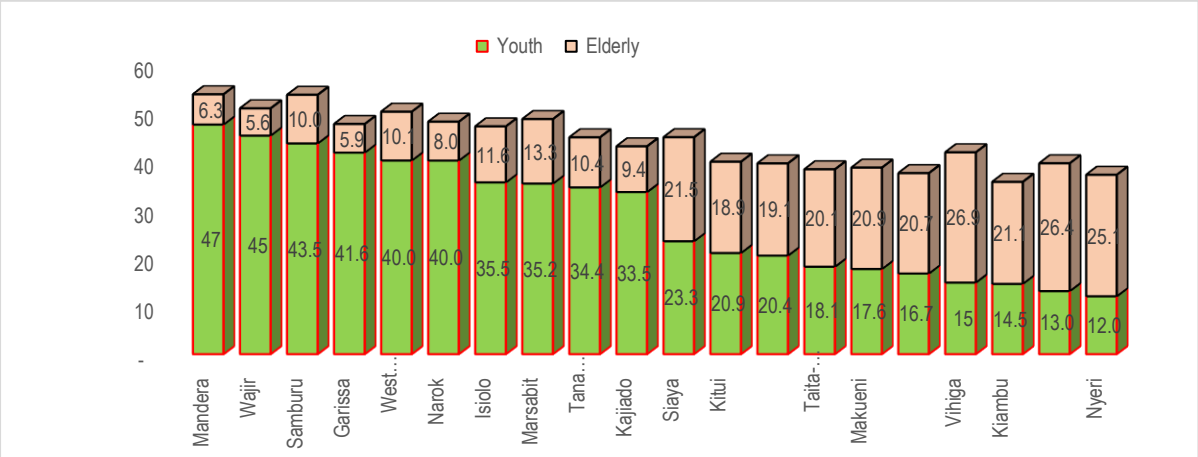


Figure 3. 10: Distribution of youth and elderly Headed Households in the top Counties, 2019

3.9. Distribution of Farming Households by Size of Holding and County

Most of the farming households operate land holdings of less than one acre. As shown in Table 3.9 and Figure 3.11, out of the 6.4 million farming households, 34.9 per cent had less than 1 acre of land holding. The second largest category of farming households was operating a holding between 2 to 5 acres, which accounted for 28.7 per cent of total farming households. Farming households who operated between 1 to 2 acres accounted for 24.6 per cent of the total farming households. Households operating 5 to 10 acres of agricultural holding accounted for 2.9 per cent of all farming households. Households operating between 10 to 20 acres of land accounted for only 1.1 per cent of all the farming households. The rest of the farming households operating more than 20 acres of holding represent less than 8 per cent of all the farming households.

Table 3. 9: Distribution of Farming Households by Size of Agricultural Holding (acres)and County, 2019

	Total	Less than 1 Acre	1 – 1.99 Acre	2 – 4.99 Acre	5 – 9.99 Acre	10 – 19.99 Acre	20 – 49.99 Acre	50 – 99 Acre	100-499 Acres	500 – 999 Acre	1000+ Acre	Not Stated
Total	**6,360,303**	34.9	24.6	28.7	6.8	2.9	1.1	0.6	0	0	0	0.4
Mombasa	13,171	46.1	17.3	21.8	4.3	1.8	0.7	0.4	0	0	0	7.7
Kwale	109,040	9.5	16.8	42.7	18.1	8	3.1	0.7	0	0	0	1.1
Kilifi	162,648	12.5	28.8	45.5	8.3	2.7	0.8	0.2	0	0	0	1.2
Tana River	34,989	26.3	17.9	36.6	10.3	4.9	1.6	0.9	0	0	0	1.3
Lamu	20,254	14.3	14.2	32.5	18	10.5	2.3	0.1	0	0	0	8.1
Taita-Taveta	56,881	24.4	23.9	35.5	10.4	4.1	1.3	0.2	0	0	0	0.2
Garissa	46,109	21.6	4.3	13.9	52.2	3	2.5	1.7	0.3	0.1	0	0.4
Wajir	61,959	12	6.2	17.8	7.8	49.5	3.2	3.1	0.2	0	0	0.2
Mandera	61,583	25.1	9.6	30.7	15.1	8.7	5.9	4.4	0.3	0	0.1	0.2
Marsabit	38,811	46.9	7.8	17.1	6.6	15.9	2.2	2.4	0	0	0	1.1
Isiolo	23,996	59.3	7	17.7	5.4	2.9	2.8	4.4	0.2	0	0	0.1
Meru	274,081	45.5	27.2	21.6	3.5	1	0.6	0.7	0	0	0	0
Tharaka-Nithi	85,676	28.8	25.6	33.6	7.7	2.6	0.9	0.8	0	0	0	0.1
Embu	130,925	33.1	27.5	30.6	6.3	1.9	0.4	0.1	0	0	0	0.1
Kitui	215,003	7.4	18.4	49.3	16.7	6.1	1.8	0.3	0	0	0	0
Machakos	231,177	27.7	23.3	36	8.8	3	0.9	0.2	0	0	0	0.1
Makueni	193,384	17.1	23.2	41	12.1	4.6	1.6	0.3	0	0	0	0
Nyandarua	140,759	40.9	30.5	23.9	3.4	0.8	0.3	0.1	0	0	0	0
Nyeri	164,077	51.8	25.9	18.6	2.8	0.6	0.2	0.1	0	0	0	0
Kirinyaga	139,850	50.3	28.2	18.1	2.6	0.5	0.1	0	0	0	0	0.1
Murang'a	231,171	51.4	27.5	18	2.4	0.5	0.1	0	0	0	0	0
Kiambu	213,544	65.6	19.5	12	1.9	0.4	0.2	0.2	0	0	0	0.2
Turkana	62,469	36.2	13	28.1	9.2	3.9	2.1	3.1	0	0	0	4.3
West Pokot	89,569	8.8	22.5	49.5	11.1	5	2.3	0.7	0	0	0	0
Samburu	42,738	31.9	16.8	31.9	8.7	4.5	3.2	2.6	0.3	0	0	0.1
Trans Nzoia	139,981	43.4	25	22.4	5.8	2.1	0.9	0.2	0.1	0	0	0.1
Uasin Gishu	141,313	37	25.4	25.2	7.1	3.2	1.5	0.3	0.1	0	0	0.1
Elgeyo-Marakwet	74,709	27.6	32.1	32.5	5.3	1.8	0.6	0.1	0	0	0	0
Nandi	148,660	41.8	24.6	23.6	6.4	2.5	0.8	0.2	0	0	0	0
Baringo	100,242	20.5	27.7	38.3	8.1	3.3	1.4	0.5	0	0	0	0.2
Laikipia	90,457	33	27.9	30.2	5.9	1.7	0.8	0.5	0	0	0	0
Nakuru	284,495	36.6	28.5	25.8	6	1.9	0.5	0.2	0	0	0	0.5
Narok	181,080	12.6	21.9	37	11.4	6.4	7	3.4	0.3	0	0	0
Kajiado	96,177	27.6	17.6	26	8.1	5.7	7	7.4	0.4	0	0	0.1
Kericho	150,625	41.1	26.9	24.9	5.1	1.5	0.4	0.1	0	0	0	0
Bomet	152,384	40.6	27.2	24.4	5.6	1.6	0.4	0.1	0	0	0	0
Kakamega	334,835	46	26.5	22.2	3.9	1	0.3	0.1	0	0	0	0
Vihiga	113,645	62	20.6	15.1	1.8	0.4	0.1	0	0	0	0	0
Bungoma	280,086	38.2	29.6	25.6	4.7	1.3	0.4	0.1	0	0	0	0
Busia	149,675	33.5	29.7	28.9	4.9	1.4	0.3	0.1	0	0	0	1.1
Siaya	197,783	38.1	28.2	27.3	3.6	0.8	0.2	0.1	0	0	0	1.8
Kisumu	147,790	36.2	26.6	30.6	4.2	1.2	0.3	0.2	0	0	0	0.7
Homabay	199,693	21.3	25.1	40.6	7.4	2	0.5	0.1	0	0	0	3.1
Migori	172,024	23	24.8	39	8.4	2.6	0.6	0.1	0	0	0	1.4
Kisii	219,479	40.2	25.7	29.2	3.7	0.8	0.2	0.2	0	0	0	0
Nyamira	109,790	39.9	25.6	29.2	4	0.9	0.3	0.1	0	0	0	0
Nairobi City	31,516	73.2	12.8	9.7	2	0.9	0.5	0.8	0	0	0	0

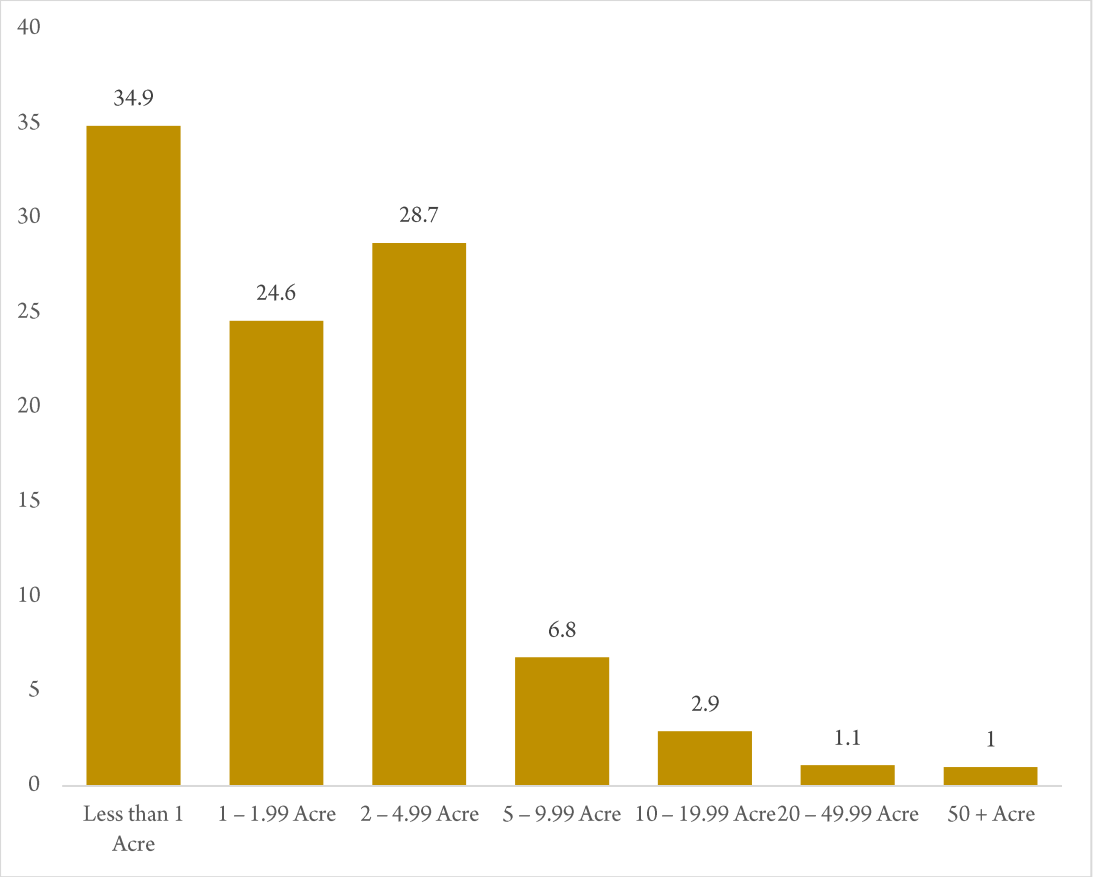


Figure 3. 11: Distribution of farming households by size of the holdings (land) in acres, 2019

3.10. Distribution of Farming Households by access to sanitation

Access to sanitation through proper waste disposal contributes to reduction of human and livestock diseases. Table 3.10 shows the distribution of farming households with access to different types of waste disposal methods. Overall, most of the farming households (62.2 per cent) had access to a covered pit latrine with 11.7 and 12.1 per cent of the farm households having access to a VIP pit latrine and uncovered pit latrine, respectively. However, 9.9 per cent of the households did not have access to proper means of human waste disposal and hence used bush.

Table 3. 10: Agricultural households by access to sanitation, 2019

EA Type	Total	Main Sewer	Septic tank	Cess pool	VIP Pit Latrin	Pit latrine covered	Pit Latrine uncovered	Bucket latrine	Bush	Bio-septic tank / Biodigester
Total	**6,360,303**	**0.7**	**2.7**	**0.1**	**11.7**	**62.2**	**12.1**	**0.4**	**9.9**	**0.1**
Rural	5,733,714	0.2	1.2	0.1	11.1	63.5	12.7	0.3	10.8	-
Urban	626,589	6.0	16.3	0.4	17.9	50.5	6.4	0.6	1.7	0.3
County										
Total	**6,360,303**	**0.7**	**2.7**	**0.1**	**11.7**	**62.2**	**12.1**	**0.4**	**9.9**	**0.1**
Mombasa	13,171	8.6	27.6	0.9	9.5	31.5	8.7	2.4	10.5	0.3
Kwale	109,040	0.3	3.7	0.3	6.8	35.7	10.5	0.8	41.9	0.1
Kilifi	162,648	0.8	9.4	0.5	8.8	42.4	10.8	1.2	26.0	0.1
Tana River	34,989	0.3	1.7	0.2	2.1	23.9	6.4	0.4	64.8	0.1
Lamu	20,254	0.8	4.4	0.3	8.9	44.0	17.3	0.9	23.3	0.1
Taita-Taveta	56,881	0.4	5.0	0.2	13.9	62.8	14.8	0.2	2.8	-
Garissa	46,109	1.3	1.3	0.2	2.7	18.4	13.6	1.3	61.1	0.1
Wajir	61,959	0.5	1.7	0.1	1.3	22.1	18.9	4.6	50.7	0.1
Mandera	61,583	0.4	1.6	0.1	2.1	23.5	21.9	1.8	48.4	-
Marsabit	38,811	-	0.2	-	3.5	21.4	7.0	0.2	67.6	-
Isiolo	23,996	1.1	1.1	0.1	14.9	26.9	6.6	0.3	49.1	-
Meru	274,081	0.3	3.0	0.1	21.0	65.3	8.8	0.2	1.2	-
Tharaka-Nithi	85,676	0.3	1.9	0.1	13.6	70.0	12.9	0.2	1.0	0.1
Embu	130,925	0.7	3.6	0.2	14.3	70.8	9.5	0.2	0.7	-
Kitui	215,003	0.2	1.2	0.1	11.9	64.0	12.8	0.2	9.5	-
Machakos	231,177	0.8	3.0	0.2	15.5	65.8	13.4	0.2	1.1	0.1
Makueni	193,384	0.1	1.2	0.1	13.2	70.0	14.2	0.2	1.0	0.1
Nyandarua	140,759	0.1	1.9	0.1	15.0	75.6	7.0	0.1	0.2	-
Nyeri	164,077	1.7	4.1	0.1	13.7	74.5	5.8	0.1	0.1	0.1
Kirinyaga	139,850	0.4	5.0	0.2	17.6	72.6	4.0	0.1	0.1	-
Murang'a	231,171	0.7	2.2	0.1	14.5	76.5	5.6	0.1	0.2	0.1
Kiambu	213,544	1.7	10.4	0.2	17.9	65.4	3.8	0.1	0.2	0.3
Turkana	62,469	-	0.3	0.1	1.2	6.3	2.7	0.4	88.8	0.1
West Pokot	89,569	0.1	0.7	0.1	4.5	41.2	7.9	0.6	45.0	-
Samburu	42,738	0.1	0.9	-	2.3	14.3	3.2	0.4	78.8	-
Trans Nzoia	139,981	0.7	2.2	0.1	13.3	66.3	15.8	0.2	1.2	0.1
Uasin Gishu	141,313	1.9	4.7	0.1	15.0	65.9	11.7	0.2	0.5	0.1
Elgeyo-Marakwet	74,709	0.2	0.6	-	8.4	58.6	26.2	0.2	5.7	-
Nandi	148,660	0.2	1.0	0.1	16.5	68.2	12.2	0.2	1.5	-
Baringo	100,242	0.1	1.4	-	11.5	45.6	9.0	0.2	32.2	-
Laikipia	90,457	2.2	2.3	0.1	9.9	63.5	9.9	0.1	11.8	0.1
Nakuru	284,495	1.8	4.3	0.1	14.8	64.0	13.4	0.3	1.2	0.1
Narok	181,080	0.2	0.9	0.1	6.5	48.8	11.5	0.5	31.5	-
Kajiado	96,177	0.7	7.3	0.2	12.3	38.1	6.2	0.4	34.7	0.2
Kericho	150,625	0.4	1.1	-	7.9	72.6	16.0	0.3	1.7	0.1
Bomet	152,384	0.1	0.5	0.1	5.5	78.9	13.7	0.2	1.0	-
Kakamega	334,835	0.3	1.2	0.1	11.9	75.7	9.5	0.3	1.0	-
Vihiga	113,645	0.2	0.7	0.1	17.4	71.5	9.4	0.2	0.5	-
Bungoma	280,086	0.3	1.5	0.2	10.2	70.4	15.7	0.4	1.3	-
Busia	149,675	0.2	0.9	0.1	10.0	69.8	16.2	0.3	2.5	-
Siaya	197,783	0.2	0.9	0.1	10.0	70.1	12.4	0.2	6.2	-
Kisumu	147,790	1.0	2.3	0.1	7.6	71.5	11.7	0.4	5.4	-
Homabay	199,693	0.4	0.7	0.1	9.3	62.3	15.9	0.5	10.7	-
Migori	172,024	0.2	0.9	0.2	8.7	62.7	16.5	0.5	10.2	-
Kisii	219,479	0.5	1.2	0.2	10.2	60.5	26.1	0.4	0.9	-
Nyamira	109,790	0.2	0.9	0.2	12.9	61.0	23.6	0.4	0.8	-
Nairobi City	31,516	28.4	27.9	0.4	11.1	27.8	2.8	0.7	0.3	0.6

3.11. Distribution of Farming Households by access to clean drinking water

Access to clean drinking water by households just like access to sanitation prevents mortality and morbidity. Table 3.11 shows the distribution of farm households with access to water. Overall, majority of the farming households (25.1 per cent) of the farm households had access to stream/river as the main source of drinking water. In urban areas majority of the farming households rely on piped to yard/plot water at 19.8 per cent, followed by piped into dwelling at 16.5 per cent, and water vendors at 10.7 per cent. In rural areas, majority of the rural households at 27.0 per cent rely on stream/river, followed by protected spring and borehole/tube well at 11.3 per cent respectively.

Table 3. 11: Agricultural households by access to clean drinking water, 2019

EA Type	Total	Pond	Dam	Lake	Stream /River	Protected Spring	Unprotected Spring	Protected Well	Unprotected Well	Borehole /Tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/ Harvested water	Water Vendor	Public tap/ Standpipe
Total	**6,360,303**	**2.3**	**3.2**	**1.1**	**25.1**	**10.7**	**3.7**	**9.0**	**3.9**	**11.1**	**6.0**	**8.5**	**0.4**	**5.4**	**3.3**	**6.3**
Rural	5,733,714	2.5	3.5	1.1	27.0	11.3	4.0	9.2	4.2	11.3	4.9	7.2	0.2	5.3	2.5	5.7
Urban	626,589	0.4	1.0	0.8	6.8	4.7	0.9	7.9	1.2	9.4	16.5	19.8	2.6	5.8	10.7	11.5
County																
Total	**6,360,303**	**2.3**	**3.2**	**1.1**	**25.1**	**10.7**	**3.7**	**9.0**	**3.9**	**11.1**	**6.0**	**8.5**	**0.4**	**5.4**	**3.3**	**6.3**
Mombasa	13,171	0.8	0.7	-	0.3	1.4	2.3	5.3	3.4	6.3	8.0	9.3	5.8	1.2	29.7	25.4
Kwale	109,040	24.6	14.5	-	4.0	1.1	2.3	7.5	10.5	10.2	2.2	3.8	0.3	1.9	1.4	15.7
Kilifi	162,648	9.7	10.7	-	4.0	0.7	0.8	3.3	5.0	3.6	5.3	10.8	0.4	0.5	7.2	37.9
Tana River	34,989	2.2	11.2	-	22.4	0.6	0.6	12.4	11.4	23.4	1.4	3.0	0.1	0.1	4.2	7.2
Lamu	20,254	6.3	2.6	-	1.8	1.3	0.8	16.1	21.0	6.3	3.5	2.7	0.9	10.5	5.1	21.2
Taita-Taveta	56,881	0.2	1.2	0.7	22.0	4.0	2.7	2.2	1.5	6.5	8.4	18.4	0.2	1.8	8.5	21.7
Garissa	46,109	20.3	26.1	-	8.2	0.3	0.4	2.5	6.3	26.9	1.1	2.2	0.4	0.2	1.7	3.4
Wajir	61,959	6.1	26.7	-	0.1	0.2	0.3	5.2	7.5	40.4	1.0	1.4	0.3	0.4	8.8	1.6
Mandera	61,583	14.4	24.4	-	7.0	0.5	0.2	4.1	3.8	27.2	0.9	1.6	0.1	0.9	12.0	2.9
Marsabit	38,811	1.2	12.3	1.1	2.3	1.4	1.1	8.4	25.0	29.0	0.5	1.0	0.1	2.9	6.3	7.3
Isiolo	23,996	0.7	4.1	-	29.0	0.8	1.7	3.7	13.2	15.6	2.7	15.6	0.2	0.2	1.7	10.7
Meru	274,081	0.3	0.2	-	23.3	2.6	2.1	2.2	1.6	7.8	19.0	22.6	0.6	1.5	10.0	6.2
Tharaka-Nithi	85,676	0.5	0.1	-	38.0	0.6	1.0	3.3	3.2	5.5	17.8	21.4	0.2	0.3	1.5	6.6
Embu	130,925	0.8	3.8	-	23.2	0.6	1.1	3.4	3.7	6.6	18.1	25.7	0.1	1.5	4.0	7.5
Kitui	215,003	0.7	6.0	-	45.7	0.9	0.8	7.1	6.8	14.0	1.9	1.4	0.3	2.6	3.6	8.0
Machakos	231,177	1.1	5.5	-	20.7	4.9	6.2	7.4	6.6	25.4	2.0	1.4	1.2	6.7	5.2	5.9
Makueni	193,384	0.6	2.9	-	32.4	2.8	6.3	6.6	8.4	12.4	2.2	2.1	0.5	6.9	7.2	8.7
Nyandarua	140,759	0.6	2.9	0.0	12.4	1.6	1.3	21.7	4.4	5.2	8.6	15.6	0.1	20.7	1.9	2.9
Nyeri	164,077	0.3	0.4	-	16.4	0.6	0.5	2.4	1.4	0.9	22.2	37.3	0.1	11.4	1.6	4.5
Kirinyaga	139,850	0.1	0.1	-	29.2	1.4	1.1	8.1	1.6	3.5	18.2	28.2	0.5	1.5	1.4	5.2
Murang'a	231,171	0.5	0.4	-	29.1	1.7	1.9	8.6	2.6	5.5	16.0	18.1	0.1	9.0	2.6	3.8
Kiambu	213,544	0.2	0.4	-	8.6	0.7	0.4	15.6	0.6	12.0	19.3	26.0	0.9	3.4	5.9	5.9
Turkana	62,469	0.7	1.8	4.4	36.2	1.0	1.8	3.3	17.9	14.9	1.2	2.1	0.0	0.2	1.5	12.9
West Pokot	89,569	1.3	1.9	0.9	62.0	2.5	2.4	2.8	2.1	11.2	3.7	5.5	0.1	0.4	0.2	2.9
Samburu	42,738	2.6	9.0	0.3	40.4	1.6	2.6	3.8	14.8	14.8	0.8	1.7	0.2	1.3	1.3	4.8
Trans Nzoia	139,981	1.0	0.3	-	17.9	17.6	3.1	25.3	3.4	17.3	3.5	4.0	0.1	0.8	1.1	4.6
Uasin Gishu	141,313	1.2	0.5	-	8.6	3.4	2.4	32.1	12.9	19.9	5.9	6.6	0.4	1.7	0.8	3.8
Elgeyo-Marakwet	74,709	0.7	0.4	-	49.9	2.7	3.1	11.1	3.8	5.2	5.2	12.2	0.1	0.9	0.2	4.4
Nandi	148,660	1.1	0.5	-	39.9	9.4	11.5	13.1	4.4	7.4	4.1	5.0	0.1	1.2	0.2	2.1
Baringo	100,242	2.6	8.7	1.6	50.6	1.7	2.1	3.6	1.3	9.4	3.1	7.5	0.2	3.5	1.7	2.5
Laikipia	90,457	1.1	7.8	-	24.7	1.4	2.4	12.0	3.9	12.5	7.6	12.4	0.2	7.9	2.5	3.7
Nakuru	284,495	0.5	1.4	0.3	20.4	2.2	2.8	10.3	1.7	12.6	5.7	9.0	1.0	18.5	7.6	6.0
Narok	181,080	6.5	8.1	-	45.9	6.1	7.4	4.6	3.2	4.7	0.7	1.2	0.6	5.6	2.5	2.9
Kajiado	96,177	1.3	6.5	0.3	12.4	3.1	1.7	3.7	2.2	32.0	5.9	6.0	3.0	2.2	10.8	8.9
Kericho	150,625	0.9	0.9	-	49.4	8.7	6.2	7.4	2.5	4.5	5.1	6.3	0.1	4.0	0.5	3.7
Bomet	152,384	8.9	4.7	-	41.8	6.2	6.0	2.5	2.0	2.1	2.1	4.0	0.1	15.1	0.7	3.9
Kakamega	334,835	0.9	0.3	-	19.0	38.0	5.7	16.4	2.1	9.8	1.8	2.3	0.1	0.6	0.4	2.5
Vihiga	113,645	0.5	0.2	-	25.2	56.5	4.7	3.4	0.7	1.6	1.1	1.7	0.1	2.9	0.3	1.1
Bungoma	280,086	0.8	0.2	-	9.7	42.1	5.3	15.6	3.0	11.5	2.5	3.5	0.1	0.5	0.9	4.5
Busia	149,675	0.8	0.3	2.8	12.4	19.3	5.5	15.6	4.0	29.3	1.2	2.3	0.1	0.7	0.8	5.0
Siaya	197,783	3.5	2.2	11.0	22.0	12.7	3.5	5.0	1.6	13.1	1.3	2.5	0.2	7.2	3.0	11.2
Kisumu	147,790	1.3	0.8	1.7	23.1	2.9	1.5	12.4	1.6	16.8	3.2	5.0	0.3	12.7	3.3	13.3
Homabay	199,693	3.1	2.1	12.9	23.2	7.9	3.3	7.4	2.5	13.7	0.5	0.9	0.3	16.1	1.8	4.1
Migori	172,024	2.8	2.5	4.5	35.2	10.2	7.6	10.6	5.1	8.0	0.6	0.7	0.4	9.0	1.1	1.8
Kisii	219,479	0.3	0.2	-	38.0	43.6	8.5	2.5	0.9	0.8	0.4	0.6	0.1	3.2	0.2	0.7
Nyamira	109,790	0.5	0.3	-	35.8	38.8	10.4	4.0	1.2	1.0	0.5	0.5	0.1	6.4	0.2	0.3
Nairobi City	31,516	0.1	0.1	-	0.1	0.3	0.0	1.9	0.1	9.7	22.6	22.8	6.2	4.1	18.8	13.1

3.12. Distribution of Farming Households by ICT use, 2019

Ownership and use of mobile phones by households promotes communication and mobile money transactions among many other uses. Table 3.12 shows the distribution of farm households with use of ICT. Overall, 50.4 per cent of the population in the farming households owned and used mobile phones.

In urban areas, 66.5 per cent of the population in farm households owned and used mobile phones while in the rural areas in the farming households was 48.9 per cent. The proportion of urban population in farm households using a computer/laptop/tablet from any source stood at 19.0 per cent. The proportion of urban population in farm households that bought or ordered goods online in the last three months stood at 4.7 per cent.

Table 3. 12: Distribution population of agricultural households by ICT use, 2019

EA Type	Mobile phone ownership and use				Used the internet from any location in the last 3 months				Used a computer/ Laptop/ Tablet from any location in the last 3 months				Bought or ordered goods or services online in the last 3 months					
	Total	Yes	No	DK	Total	Yes	No	DK	Total	Yes	No	DK	Total	Searched and bought online	Searched and bought elsewhere	Searched only	Never	DK
Total	**27,486,872**	**50.4**	**49.3**	**0.3**	**27,487,163**	**15.0**	**84.5**	**0.5**	**27,486,797**	**6.6**	**92.9**	**0.5**	**17,292,453**	**1.3**	**0.6**	**1.9**	**58.8**	**0.4**
Rural	25,064,781	48.9	50.8	0.3	25,065,053	13.2	86.3	0.5	25,064,706	5.4	94.1	0.5	15,627,439	1.0	0.5	1.6	58.9	0.4
Urban	2,422,091	66.5	33.2	0.2	2,422,110	33.8	65.7	0.4	2,422,091	19.0	80.5	0.5	1,665,014	4.7	1.0	4.6	57.8	0.7
County																		
Total	**27,486,872**	**50.4**	**49.3**	**0.3**	**27,487,163**	**15.0**	**84.5**	**0.5**	**27,486,797**	**6.6**	**92.9**	**0.5**	**17,292,453**	**1.3**	**0.6**	**1.9**	**58.8**	**0.4**
Mombasa	57,406	60.7	39.2	0.1	57,406	28.0	71.6	0.3	57,406	14.4	85.2	0.4	38,553	4.1	0.7	3.9	58.0	0.5
Kwale	578,740	42.1	57.4	0.5	578,744	8.1	91.2	0.7	578,736	3.0	96.3	0.7	334,139	0.4	0.3	0.8	55.8	0.4
Kilifi	900,739	45.1	54.7	0.2	900,740	10.0	89.7	0.4	900,739	4.7	94.9	0.4	538,568	0.7	0.3	1.3	57.2	0.2
Tana River	171,292	33.7	66.0	0.4	171,299	6.3	93.3	0.4	171,287	2.4	97.1	0.4	92,360	0.4	0.2	0.7	52.4	0.3
Lamu	84,795	47.9	51.9	0.2	84,796	13.2	86.6	0.3	84,794	4.0	95.7	0.3	53,019	1.0	0.4	1.5	59.4	0.2
Taita-Taveta	215,560	62.7	37.2	0.1	215,562	19.3	80.5	0.3	215,558	8.0	91.7	0.4	148,817	1.7	0.5	2.6	63.9	0.3
Garissa	298,331	34.3	64.2	1.6	298,338	9.5	89.0	1.5	298,330	3.9	94.5	1.6	165,049	0.7	0.7	0.7	52.0	1.1
Wajir	376,033	31.1	68.1	0.8	376,053	7.1	92.2	0.7	376,030	2.4	96.8	0.8	195,422	0.5	0.6	0.9	49.5	0.4
Mandera	418,188	28.0	70.1	1.8	418,201	7.0	91.2	1.8	418,183	2.6	95.4	1.9	203,971	0.4	0.6	0.7	46.2	0.9
Marsabit	227,438	29.3	70.1	0.5	227,440	5.3	94.2	0.5	227,436	2.1	97.3	0.6	126,087	0.2	0.3	0.6	53.9	0.3
Isiolo	127,167	37.7	61.9	0.3	127,168	8.8	90.9	0.3	127,165	3.4	96.3	0.4	71,251	0.5	0.4	1.1	53.7	0.2
Meru	1,042,751	58.3	41.5	0.2	1,042,756	17.4	82.2	0.4	1,042,748	6.6	93.0	0.4	716,083	1.2	0.7	2.2	64.2	0.4
Tharaka-Nithi	313,491	60.7	39.0	0.2	313,492	16.7	82.9	0.5	313,489	7.2	92.3	0.5	218,988	1.1	0.6	2.1	65.6	0.4
Embu	456,220	64.3	35.6	0.1	456,221	18.9	80.8	0.3	456,219	8.1	91.6	0.3	328,338	1.4	0.6	2.5	67.1	0.3
Kitui	929,993	50.6	49.0	0.4	930,004	12.1	87.4	0.5	929,990	4.4	95.1	0.6	597,133	0.9	0.5	1.3	61.0	0.4
Machakos	897,991	59.3	40.5	0.1	897,995	17.6	82.1	0.4	897,992	7.3	92.3	0.4	628,682	1.7	0.6	2.2	65.2	0.4
Makueni	798,657	56.5	43.3	0.2	798,662	14.5	84.8	0.6	798,658	5.7	93.7	0.6	543,815	1.1	0.5	1.5	64.3	0.6
Nyandarua	512,332	65.9	33.9	0.1	512,335	18.6	81.1	0.2	512,333	7.2	92.5	0.3	347,913	1.3	0.7	2.2	63.5	0.2
Nyeri	532,061	73.9	26.0	0.1	532,064	25.3	74.3	0.4	532,061	11.5	88.0	0.4	392,840	2.4	0.9	3.4	66.7	0.5
Kirinyaga	434,201	71.8	28.1	0.1	434,203	22.1	77.5	0.4	434,200	9.3	90.3	0.4	326,348	1.9	0.6	2.4	69.7	0.5
Murang'a	794,659	66.6	33.3	0.1	794,661	18.1	81.6	0.3	794,654	7.1	92.6	0.3	567,337	1.4	0.6	2.4	66.8	0.3
Kiambu	776,993	72.0	27.9	0.1	776,997	31.8	67.9	0.4	776,992	15.5	84.0	0.4	565,859	3.9	1.0	4.7	62.7	0.6
Turkana	375,464	15.1	83.1	1.8	375,471	3.7	94.4	1.8	375,462	1.4	96.7	1.9	217,658	0.2	0.4	0.5	55.9	1.0
West Pokot	464,237	23.5	75.6	0.9	464,265	7.2	92.0	0.7	464,236	2.8	96.4	0.8	246,913	0.3	0.4	0.9	51.1	0.5
Samburu	206,364	27.8	71.5	0.7	206,377	6.8	92.5	0.6	206,362	3.1	96.2	0.7	110,848	0.5	0.4	0.8	51.6	0.4
Trans Nzoia	655,889	46.7	53.0	0.3	655,899	15.4	84.2	0.4	655,888	6.9	92.7	0.5	398,903	1.2	0.5	1.9	56.9	0.3
Uasin Gishu	644,868	54.7	45.1	0.2	644,871	22.1	77.6	0.3	644,869	11.1	88.4	0.4	421,600	2.3	0.7	2.9	59.1	0.4
Elgeyo-Marakwet	350,250	44.5	55.3	0.2	350,257	13.7	86.0	0.4	350,249	5.6	93.9	0.4	215,707	0.9	0.7	1.8	57.9	0.3
Nandi	684,230	48.9	50.9	0.3	684,235	16.4	83.2	0.4	684,227	6.8	92.7	0.5	442,297	1.2	0.6	2.1	60.4	0.4
Baringo	479,725	41.2	58.4	0.4	479,734	14.3	85.2	0.5	479,724	6.2	93.2	0.6	283,618	1.1	0.5	1.9	55.1	0.5
Laikipia	338,507	56.7	43.0	0.2	338,510	17.0	82.6	0.4	338,504	7.0	92.6	0.5	220,162	1.3	0.6	2.0	60.9	0.4
Nakuru	1,150,994	56.0	43.7	0.2	1,151,004	19.2	80.3	0.5	1,150,996	8.5	91.0	0.5	736,758	1.8	0.6	2.5	58.6	0.5
Narok	873,163	37.5	62.1	0.5	873,185	10.1	89.4	0.5	873,162	3.6	95.8	0.6	473,152	0.6	0.5	1.2	51.6	0.4
Kajiado	425,467	48.8	50.8	0.4	425,475	19.2	80.3	0.5	425,463	9.5	90.0	0.6	252,286	2.2	0.7	2.6	53.2	0.6
Kericho	690,671	48.7	51.1	0.2	690,676	16.7	83.0	0.3	690,671	7.7	92.0	0.4	441,967	1.3	0.6	2.4	59.4	0.3
Bomet	717,659	47.9	51.7	0.3	717,666	15.8	83.7	0.4	717,657	6.8	92.6	0.5	445,956	1.2	0.7	2.3	57.5	0.5
Kakamega	1,464,313	48.4	51.4	0.2	1,464,324	12.9	86.8	0.3	1,464,307	5.7	93.9	0.4	893,921	1.0	0.4	1.4	57.9	0.3
Vihiga	471,509	50.2	49.6	0.1	471,509	12.6	87.1	0.4	471,509	6.0	93.6	0.4	302,903	1.1	0.4	1.4	61.1	0.3
Bungoma	1,314,570	43.5	56.1	0.3	1,314,578	12.4	87.2	0.4	1,314,567	5.6	93.9	0.5	775,947	0.9	0.5	1.4	55.9	0.3
Busia	681,341	45.3	54.5	0.2	681,349	11.7	88.0	0.3	681,342	5.3	94.3	0.4	414,630	0.9	0.5	1.5	57.7	0.3
Siaya	785,029	52.9	46.9	0.2	785,032	13.2	86.3	0.5	785,029	5.9	93.5	0.5	487,732	1.3	0.4	1.6	58.5	0.4
Kisumu	621,215	55.1	44.7	0.1	621,216	17.1	82.6	0.3	621,212	8.9	90.8	0.4	390,269	1.9	0.5	2.1	58.1	0.3
Homabay	859,593	50.2	49.7	0.2	859,602	13.7	86.0	0.3	859,589	6.2	93.4	0.4	507,535	1.3	0.5	1.6	55.4	0.3
Migori	803,540	45.3	54.5	0.3	803,551	12.5	87.1	0.4	803,539	5.4	94.2	0.5	462,720	1.1	0.5	1.5	54.1	0.3
Kisii	921,698	51.7	48.2	0.1	921,700	13.8	86.0	0.2	921,696	6.8	92.9	0.3	577,442	1.1	0.5	1.6	59.2	0.2
Nyamira	446,942	54.1	45.7	0.2	446,944	15.1	84.7	0.2	446,941	7.3	92.4	0.3	286,824	1.3	0.4	1.8	60.5	0.2
Nairobi City	114,596	80.4	19.5	0.1	114,596	52.1	47.6	0.3	114,596	33.1	66.4	0.5	84,133	10.6	1.4	7.1	53.3	1.0

3.13. Distribution of Farming Households by Agricultural household assets, 2019

Some of the key agricultural assets reported include tractors, ox-plough, animal drawn cart, motor bike among others. Table 3.13 shows the distribution of farming households by ownership of agricultural assets. Overall, 0.7 per cent of the agricultural households own a tractor. The proportion of the farming households that owned an ox-plough was 8.8 per cent while 3.0 per cent own an animal drawn cart. Bicycle is owned by 18.6 per cent of the households while 12.1 per cent of the households owned a motor cycle.

In rural areas, 0.7 per cent of the agricultural households own a tractor. The proportion of the farming households that owned an ox-plough was 9.5 per cent while 3.1 per cent own an animal drawn cart. Bicycle is owned by 18.0 per cent of the households while 12.0 per cent of the households owned a motor cycle. In urban areas, 0.9 per cent of the agricultural households own a tractor. The proportion of the farming households that owned an ox-plough was 2.0 per cent while 2.2 per cent owned an animal drawn cart. Bicycle is owned by 24.0 per cent of the households while 12.7 per cent of the households owned a motor cycle.

Uasin Gishu county has the highest proportion of households that own tractors at 3.7 per cent, followed by Trans Nzoia County at 2.0 per cent. Kitui county had the highest proportion of households that own ox-ploughs at 40.5 per cent, followed by Makueni (35.0 per cent) and Machakos (30.9 per cent). Lamu county had the highest proportion of households that own bicycles at 40.1 per cent, followed by Busia (39.1 per cent) and Siaya (36.9 per cent).

Table 3. 13: Distribution of agricultural households by agricultural household assets, 2019

EA Type	Tractor			Ox-plough			Animal Drawn cart			Bicycle			Motor Cycle			Car		
	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No
Total	**6,360,303**	**0.7**	**99.3**	**6,360,303**	**8.8**	**91.2**	**6,360,303**	**3.0**	**97.0**	**6,360,303**	**18.6**	**81.4**	**6,360,303**	**12.1**	**87.9**	**6,360,303**	**4.9**	**95.1**
Rural	5,733,714	0.7	99.3	5,733,714	9.5	90.5	5,733,714	3.1	96.9	5,733,714	18.0	82.0	5,733,714	12.0	88.0	5,733,714	3.7	96.3
Urban	626,589	0.9	99.1	626,589	2.0	98.0	626,589	2.2	97.8	626,589	24.0	76.0	626,589	12.7	87.3	626,589	15.5	84.5
County																		
Total	**6,360,303**	**0.7**	**99.3**	**6,360,303**	**8.8**	**91.2**	**6,360,303**	**3.0**	**97.0**	**6,360,303**	**18.6**	**81.4**	**6,360,303**	**12.1**	**87.9**	**6,360,303**	**4.9**	**95.1**
Mombasa	13,171	0.5	99.5	13,171	0.8	99.2	13,171	0.8	99.2	13,171	22.7	77.3	13,171	11.2	88.8	13,171	9.1	90.9
Kwale	109,040	0.4	99.6	109,040	17.8	82.2	109,040	1.2	98.8	109,040	22.5	77.5	109,040	12.6	87.4	109,040	1.7	98.3
Kilifi	162,648	0.3	99.7	162,648	1.9	98.1	162,648	0.7	99.3	162,648	18.4	81.6	162,648	11.9	88.1	162,648	2.0	98.0
Tana River	34,989	0.4	99.6	34,989	0.5	99.5	34,989	2.3	97.7	34,989	11.8	88.2	34,989	11.1	88.9	34,989	1.2	98.8
Lamu	20,254	0.4	99.6	20,254	1.1	98.9	20,254	0.7	99.3	20,254	40.1	59.9	20,254	21.1	78.9	20,254	1.6	98.4
Taita-Taveta	56,881	0.4	99.6	56,881	5.2	94.8	56,881	2.3	97.7	56,881	23.2	76.8	56,881	18.2	81.8	56,881	3.2	96.8
Garissa	46,109	0.9	99.1	46,109	1.7	98.3	46,109	14.6	85.4	46,109	3.3	96.7	46,109	3.1	96.9	46,109	3.8	96.2
Wajir	61,959	0.7	99.3	61,959	1.7	98.3	61,959	33.0	67.0	61,959	1.9	98.1	61,959	3.2	96.8	61,959	1.9	98.1
Mandera	61,583	1.1	98.9	61,583	6.6	93.4	61,583	26.6	73.4	61,583	3.7	96.3	61,583	8.4	91.6	61,583	2.7	97.3
Marsabit	38,811	0.4	99.6	38,811	1.2	98.8	38,811	1.2	98.8	38,811	1.3	98.7	38,811	4.6	95.4	38,811	1.4	98.6
Isiolo	23,996	0.5	99.5	23,996	1.0	99.0	23,996	5.6	94.4	23,996	3.2	96.8	23,996	8.5	91.5	23,996	2.7	97.3
Meru	274,081	0.4	99.6	274,081	3.4	96.6	274,081	2.3	97.7	274,081	11.0	89.0	274,081	11.9	88.1	274,081	5.8	94.2
Tharaka-Nithi	85,676	0.3	99.7	85,676	11.5	88.5	85,676	0.6	99.4	85,676	21.2	78.8	85,676	15.2	84.8	85,676	5.0	95.0
Embu	130,925	0.4	99.6	130,925	10.2	89.8	130,925	8.4	91.6	130,925	21.0	79.0	130,925	16.5	83.5	130,925	6.9	93.1
Kitui	215,003	0.6	99.4	215,003	40.5	59.5	215,003	4.5	95.5	215,003	24.6	75.4	215,003	14.2	85.8	215,003	3.5	96.5
Machakos	231,177	0.6	99.4	231,177	30.9	69.1	231,177	13.3	86.7	231,177	24.9	75.1	231,177	12.3	87.7	231,177	6.5	93.5
Makueni	193,384	0.8	99.2	193,384	35.0	65.0	193,384	8.4	91.6	193,384	33.5	66.5	193,384	15.8	84.2	193,384	4.7	95.3
Nyandarua	140,759	0.6	99.4	140,759	0.4	99.6	140,759	3.2	96.8	140,759	23.5	76.5	140,759	12.5	87.5	140,759	5.9	94.1
Nyeri	164,077	0.4	99.6	164,077	0.3	99.7	164,077	0.5	99.5	164,077	13.4	86.6	164,077	10.2	89.8	164,077	8.0	92.0
Kirinyaga	139,850	0.4	99.6	139,850	4.6	95.4	139,850	9.2	90.8	139,850	25.8	74.2	139,850	17.8	82.2	139,850	6.9	93.1
Murang'a	231,171	0.3	99.7	231,171	0.8	99.2	231,171	0.7	99.3	231,171	13.6	86.4	231,171	9.3	90.7	231,171	5.1	94.9
Kiambu	213,544	0.4	99.6	213,544	0.3	99.7	213,544	2.7	97.3	213,544	21.9	78.1	213,544	10.1	89.9	213,544	14.8	85.2
Turkana	62,469	0.3	99.7	62,469	0.3	99.7	62,469	0.4	99.6	62,469	4.6	95.4	62,469	4.4	95.6	62,469	0.9	99.1
West Pokot	89,569	0.5	99.5	89,569	2.1	97.9	89,569	0.4	99.6	89,569	3.4	96.6	89,569	6.1	93.9	89,569	1.5	98.5
Samburu	42,738	0.4	99.6	42,738	0.3	99.7	42,738	0.4	99.6	42,738	5.0	95.0	42,738	7.0	93.0	42,738	2.2	97.8
Trans Nzoia	139,981	2.0	98.0	139,981	3.2	96.8	139,981	1.2	98.8	139,981	25.6	74.4	139,981	15.0	85.0	139,981	5.6	94.4
Uasin Gishu	141,313	3.7	96.3	141,313	1.4	98.6	141,313	0.6	99.4	141,313	26.0	74.0	141,313	15.1	84.9	141,313	10.3	89.7
Elgeyo-Marakwet	74,709	0.9	99.1	74,709	2.0	98.0	74,709	0.3	99.7	74,709	4.2	95.8	74,709	8.1	91.9	74,709	3.5	96.5
Nandi	148,660	1.6	98.4	148,660	6.8	93.2	148,660	0.7	99.3	148,660	12.6	87.4	148,660	12.7	87.3	148,660	5.0	95.0
Baringo	100,242	1.0	99.0	100,242	2.0	98.0	100,242	0.3	99.7	100,242	8.2	91.8	100,242	9.5	90.5	100,242	4.5	95.5
Laikipia	90,457	1.0	99.0	90,457	0.5	99.5	90,457	2.1	97.9	90,457	26.6	73.4	90,457	16.7	83.3	90,457	6.3	93.7
Nakuru	284,495	0.9	99.1	284,495	2.3	97.7	284,495	1.2	98.8	284,495	22.0	78.0	284,495	14.5	85.5	284,495	7.5	92.5
Narok	181,080	1.0	99.0	181,080	14.4	85.6	181,080	1.1	98.9	181,080	3.6	96.4	181,080	11.8	88.2	181,080	3.2	96.8
Kajiado	96,177	0.6	99.4	96,177	2.7	97.3	96,177	1.8	98.2	96,177	12.7	87.3	96,177	16.8	83.2	96,177	11.0	89.0
Kericho	150,625	0.9	99.1	150,625	7.1	92.9	150,625	0.6	99.4	150,625	4.7	95.3	150,625	9.4	90.6	150,625	5.0	95.0
Bomet	152,384	0.9	99.1	152,384	10.1	89.9	152,384	0.9	99.1	152,384	6.2	93.8	152,384	13.5	86.5	152,384	3.8	96.2
Kakamega	334,835	0.6	99.4	334,835	3.7	96.3	334,835	1.2	98.8	334,835	28.4	71.6	334,835	12.8	87.2	334,835	3.2	96.8
Vihiga	113,645	0.3	99.7	113,645	0.3	99.7	113,645	0.4	99.6	113,645	12.8	87.2	113,645	7.9	92.1	113,645	2.9	97.1
Bungoma	280,086	0.6	99.4	280,086	10.6	89.4	280,086	2.2	97.8	280,086	30.2	69.8	280,086	13.2	86.8	280,086	3.0	97.0
Busia	149,675	0.5	99.5	149,675	5.1	94.9	149,675	0.6	99.4	149,675	39.1	60.9	149,675	13.0	87.0	149,675	2.6	97.4
Siaya	197,783	0.4	99.6	197,783	6.0	94.0	197,783	0.9	99.1	197,783	36.9	63.1	197,783	12.2	87.8	197,783	2.7	97.3
Kisumu	147,790	0.6	99.4	147,790	6.1	93.9	147,790	1.0	99.0	147,790	28.0	72.0	147,790	11.6	88.4	147,790	4.2	95.8
Homabay	199,693	0.5	99.5	199,693	20.7	79.3	199,693	1.8	98.2	199,693	14.6	85.4	199,693	11.5	88.5	199,693	2.4	97.6
Migori	172,024	0.6	99.4	172,024	29.3	70.7	172,024	1.5	98.5	172,024	13.3	86.7	172,024	14.9	85.1	172,024	2.6	97.4
Kisii	219,479	0.4	99.6	219,479	4.2	95.8	219,479	0.5	99.5	219,479	3.7	96.3	219,479	8.4	91.6	219,479	3.0	97.0
Nyamira	109,790	0.4	99.6	109,790	1.7	98.3	109,790	0.3	99.7	109,790	4.4	95.6	109,790	9.0	91.0	109,790	3.3	96.7
Nairobi City	31,516	0.6	99.4	31,516	1.1	98.9	31,516	1.9	98.1	31,516	28.3	71.7	31,516	8.1	91.9	31,516	27.2	72.8

Table 3.13: Distribution of agricultural households by agricultural household assets, 2019, cont'd

EA Type	Truck/Lorry/Bus/Three-Wheeler truck			Refrigerator			Motor boat			Canoes			Tuk Tuk		
	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No	Total	Yes	No
Total	**6,360,303**	**0.8**	**99.2**	**6,360,303**	**4.1**	**95.9**	**6,360,303**	**0.4**	**99.6**	**6,360,303**	**0.4**	**99.6**	**6,360,303**	**0.4**	**99.6**
Rural	5,733,714	0.7	99.3	5,733,714	2.3	97.7	5,733,714	0.4	99.6	5,733,714	0.4	99.6	5,733,714	0.4	99.6
Urban	626,589	2.3	97.7	626,589	20.4	79.6	626,589	0.5	99.5	626,589	0.4	99.6	626,589	0.7	99.3
County															
Total	**6,360,303**	**0.8**	**99.2**	**6,360,303**	**4.1**	**95.9**	**6,360,303**	**0.4**	**99.6**	**6,360,303**	**0.4**	**99.6**	**6,360,303**	**0.4**	**99.6**
Mombasa	13,171	1.4	98.6	13,171	24.0	76.0	13,171	0.7	99.3	13,171	1.3	98.7	13,171	1.7	98.3
Kwale	109,040	0.4	99.6	109,040	3.1	96.9	109,040	0.4	99.6	109,040	0.8	99.2	109,040	0.5	99.5
Kilifi	162,648	0.4	99.6	162,648	4.0	96.0	162,648	0.3	99.7	162,648	0.4	99.6	162,648	0.7	99.3
Tana River	34,989	0.4	99.6	34,989	2.2	97.8	34,989	0.3	99.7	34,989	2.6	97.4	34,989	0.5	99.5
Lamu	20,254	0.5	99.5	20,254	5.3	94.7	20,254	0.8	99.2	20,254	1.7	98.3	20,254	0.5	99.5
Taita-Taveta	56,881	0.8	99.2	56,881	5.1	94.9	56,881	0.3	99.7	56,881	0.3	99.7	56,881	0.4	99.6
Garissa	46,109	1.3	98.7	46,109	1.9	98.1	46,109	1.0	99.0	46,109	0.8	99.2	46,109	1.9	98.1
Wajir	61,959	0.5	99.5	61,959	1.3	98.7	61,959	0.8	99.2	61,959	0.7	99.3	61,959	1.7	98.3
Mandera	61,583	1.0	99.0	61,583	2.0	98.0	61,583	1.3	98.7	61,583	1.0	99.0	61,583	2.8	97.2
Marsabit	38,811	0.5	99.5	38,811	1.1	98.9	38,811	0.4	99.6	38,811	0.5	99.5	38,811	0.6	99.4
Isiolo	23,996	0.6	99.4	23,996	4.8	95.2	23,996	0.5	99.5	23,996	0.4	99.6	23,996	0.6	99.4
Meru	274,081	0.8	99.2	274,081	3.2	96.8	274,081	0.3	99.7	274,081	0.3	99.7	274,081	0.3	99.7
Tharaka-Nithi	85,676	0.7	99.3	85,676	3.0	97.0	85,676	0.2	99.8	85,676	0.2	99.8	85,676	0.3	99.7
Embu	130,925	1.0	99.0	130,925	4.7	95.3	130,925	0.4	99.6	130,925	0.4	99.6	130,925	0.4	99.6
Kitui	215,003	0.7	99.3	215,003	2.0	98.0	215,003	0.4	99.6	215,003	0.3	99.7	215,003	0.6	99.4
Machakos	231,177	1.1	98.9	231,177	5.0	95.0	231,177	0.4	99.6	231,177	0.4	99.6	231,177	0.4	99.6
Makueni	193,384	0.9	99.1	193,384	2.0	98.0	193,384	0.3	99.7	193,384	0.3	99.7	193,384	0.4	99.6
Nyandarua	140,759	1.3	98.7	140,759	2.0	98.0	140,759	0.2	99.8	140,759	0.2	99.8	140,759	0.3	99.7
Nyeri	164,077	1.1	98.9	164,077	6.3	93.7	164,077	0.2	99.8	164,077	0.2	99.8	164,077	0.3	99.7
Kirinyaga	139,850	1.0	99.0	139,850	5.4	94.6	139,850	0.3	99.7	139,850	0.3	99.7	139,850	0.5	99.5
Murang'a	231,171	1.0	99.0	231,171	4.0	96.0	231,171	0.2	99.8	231,171	0.2	99.8	231,171	0.3	99.7
Kiambu	213,544	2.3	97.7	213,544	18.3	81.7	213,544	0.3	99.7	213,544	0.2	99.8	213,544	0.4	99.6
Turkana	62,469	0.3	99.7	62,469	0.7	99.3	62,469	0.7	99.3	62,469	0.7	99.3	62,469	0.3	99.7
West Pokot	89,569	0.4	99.6	89,569	0.4	99.6	89,569	0.2	99.8	89,569	0.2	99.8	89,569	0.2	99.8
Samburu	42,738	0.5	99.5	42,738	1.1	98.9	42,738	0.2	99.8	42,738	0.2	99.8	42,738	0.3	99.7
Trans Nzoia	139,981	1.0	99.0	139,981	3.5	96.5	139,981	0.3	99.7	139,981	0.3	99.7	139,981	0.4	99.6
Uasin Gishu	141,313	1.6	98.4	141,313	7.0	93.0	141,313	0.3	99.7	141,313	0.2	99.8	141,313	0.3	99.7
Elgeyo-Marakwet	74,709	0.7	99.3	74,709	1.1	98.9	74,709	0.2	99.8	74,709	0.2	99.8	74,709	0.3	99.7
Nandi	148,660	0.6	99.4	148,660	2.3	97.7	148,660	0.3	99.7	148,660	0.2	99.8	148,660	0.3	99.7
Baringo	100,242	0.6	99.4	100,242	1.7	98.3	100,242	0.3	99.7	100,242	0.3	99.7	100,242	0.3	99.7
Laikipia	90,457	1.0	99.0	90,457	3.4	96.6	90,457	0.3	99.7	90,457	0.2	99.8	90,457	0.4	99.6
Nakuru	284,495	1.2	98.8	284,495	6.8	93.2	284,495	0.3	99.7	284,495	0.2	99.8	284,495	0.4	99.6
Narok	181,080	0.6	99.4	181,080	1.2	98.8	181,080	0.3	99.7	181,080	0.4	99.6	181,080	0.4	99.6
Kajiado	96,177	1.5	98.5	96,177	10.5	89.5	96,177	0.4	99.6	96,177	0.3	99.7	96,177	0.6	99.4
Kericho	150,625	0.7	99.3	150,625	2.4	97.6	150,625	0.2	99.8	150,625	0.2	99.8	150,625	0.3	99.7
Bomet	152,384	0.5	99.5	152,384	1.2	98.8	152,384	0.3	99.7	152,384	0.2	99.8	152,384	0.3	99.7
Kakamega	334,835	0.6	99.4	334,835	2.6	97.4	334,835	0.3	99.7	334,835	0.3	99.7	334,835	0.4	99.6
Vihiga	113,645	0.5	99.5	113,645	2.9	97.1	113,645	0.2	99.8	113,645	0.2	99.8	113,645	0.3	99.7
Bungoma	280,086	0.6	99.4	280,086	2.2	97.8	280,086	0.3	99.7	280,086	0.3	99.7	280,086	0.4	99.6
Busia	149,675	0.6	99.4	149,675	2.7	97.3	149,675	0.5	99.5	149,675	0.9	99.1	149,675	0.3	99.7
Siaya	197,783	0.6	99.4	197,783	3.3	96.7	197,783	0.6	99.4	197,783	1.4	98.6	197,783	0.4	99.6
Kisumu	147,790	0.8	99.2	147,790	7.0	93.0	147,790	0.5	99.5	147,790	0.7	99.3	147,790	0.6	99.4
Homabay	199,693	0.6	99.4	199,693	2.5	97.5	199,693	0.8	99.2	199,693	1.8	98.2	199,693	0.4	99.6
Migori	172,024	0.6	99.4	172,024	2.6	97.4	172,024	0.6	99.4	172,024	1.0	99.0	172,024	0.4	99.6
Kisii	219,479	0.6	99.4	219,479	2.2	97.8	219,479	0.3	99.7	219,479	0.3	99.7	219,479	0.3	99.7
Nyamira	109,790	0.8	99.2	109,790	1.8	98.2	109,790	0.3	99.7	109,790	0.2	99.8	109,790	0.3	99.7
Nairobi City	31,516	3.7	96.3	31,516	40.5	59.5	31,516	0.4	99.6	31,516	0.3	99.7	31,516	0.6	99.4

3.14. Distribution of Population in Farming Households by Disability Status, Sex and County, 2019

Table 3.14 shows the distribution of population in farming households by disability status, sex and county for 5 years and above. Overall, 2.6 per cent of the population in the agricultural households aged 5 years and above reported to have some disability. The proportion of males and females that reported some form of disability were 1.1 and 1.5 per cent respectively.

In urban areas 2.1 per cent of the population in the agricultural households have some disability. The proportion of males and females that reported some form of disability were 0.9 and 1.2 per cent respectively.

Table 3. 14: Distribution of Population aged 5 years+ in Agriculture households by Disability Status, Sex, and Area of Residence and County

EA Type	Total			Persons with Disability		
	Total	Male	Female	Total	Male	Female
Total	**25,891,645**	**49.0**	**51.0**	**2.6**	**1.1**	**1.5**
Rural	23,590,559	49.1	50.9	2.6	1.1	1.5
Urban	2,301,086	48.8	51.2	2.1	0.9	1.2
County	-					
Total	**25,891,645**	**49.0**	**51.0**	**2.6**	**1.1**	**1.5**
Mombasa	54,405	50.4	49.6	2.3	1.0	1.3
Kwale	536,489	48.6	51.4	1.7	0.8	0.9
Kilifi	842,068	47.7	52.3	1.7	0.8	0.9
Tana River	156,763	50.1	49.9	1.5	0.8	0.7
Lamu	79,432	51.7	48.3	2.0	1.0	1.0
Taita-Taveta	205,107	50.1	49.9	3.1	1.3	1.7
Garissa	276,830	56.4	43.6	0.6	0.4	0.3
Wajir	343,480	53.7	46.3	0.5	0.3	0.2
Mandera	378,430	51.1	48.9	0.9	0.5	0.4
Marsabit	210,077	53.2	46.8	0.8	0.4	0.4
Isiolo	117,161	52.5	47.5	1.1	0.6	0.5
Meru	993,144	49.7	50.3	3.8	1.7	2.1
Tharaka-Nithi	299,453	49.2	50.8	3.7	1.6	2.1
Embu	436,443	50.0	50.0	4.6	1.9	2.7
Kitui	883,449	47.9	52.1	2.8	1.2	1.6
Machakos	858,983	49.6	50.3	3.0	1.3	1.7
Makueni	764,181	49.0	51.0	4.2	1.7	2.5
Nyandarua	488,077	48.9	51.1	2.9	1.2	1.7
Nyeri	510,693	48.8	51.2	3.5	1.4	2.1
Kirinyaga	417,172	49.6	50.4	3.5	1.4	2.1
Murang'a	758,800	49.3	50.7	3.9	1.5	2.3
Kiambu	743,805	48.9	51.1	3.0	1.2	1.8
Turkana	348,397	52.1	47.9	0.9	0.5	0.5
West Pokot	422,500	49.1	50.9	1.0	0.5	0.5
Samburu	188,848	50.5	49.5	1.3	0.6	0.6
Trans Nzoia	616,844	49.1	50.9	2.1	1.0	1.1
Uasin Gishu	610,797	49.4	50.6	1.6	0.7	0.9
Elgeyo-Marakwet	328,135	49.5	50.5	1.2	0.6	0.6
Nandi	647,791	49.6	50.4	1.8	0.8	1.0
Baringo	446,765	50.0	50.0	1.5	0.7	0.8
Laikipia	318,764	49.4	50.6	2.0	0.9	1.1
Nakuru	1,085,344	49.3	50.7	2.0	0.9	1.2
Narok	801,893	49.7	50.3	0.9	0.4	0.5
Kajiado	393,648	49.6	50.4	1.2	0.6	0.7
Kericho	652,073	49.6	50.3	1.1	0.5	0.6
Bomet	675,285	49.3	50.7	1.2	0.6	0.6
Kakamega	1,382,744	47.7	52.3	2.9	1.3	1.7
Vihiga	448,346	47.7	52.3	3.9	1.6	2.3
Bungoma	1,234,199	48.5	51.5	2.0	0.9	1.1
Busia	642,479	47.4	52.6	2.7	1.2	1.5
Siaya	741,599	47.2	52.8	4.0	1.7	2.4
Kisumu	588,425	48.0	52.0	4.8	2.0	2.8
Homabay	803,995	47.6	52.4	4.4	1.8	2.5
Migori	749,484	48.1	51.9	3.1	1.4	1.7
Kisii	873,909	47.4	52.6	3.3	1.4	1.9
Nyamira	425,151	47.6	52.4	3.3	1.4	1.9
Nairobi City	109,788	48.4	51.6	2.0	0.9	1.1

Crop Farming

3.15. Crops only farming agricultural households

Household size has a direct bearing on demand for food, health, among other welfare indicators at the household, community and national level. This implies that the higher the household size, the higher the demand for food and vice versa. This has implication in terms of national food and nutrition security.

Table 3.15 shows the number that reported they grow crops only in the 2019 Kenya Population and Housing Census by household size, residence and county. A total of 1,695,107 households reported to be engaged in growing of only crops as their agricultural activity. In terms of household size, 35.6 per cent of the households engaged in growing only crops had more than five members and the least was 12.8 percent with a household size of 2 members. Of the total growing only crops that resided in rural areas 36.2 had more than 5 members in a household and the smallest household size was 2 members at 12.6 percent. Overall, 86.1 per cent of these crop farmers resided in rural areas.

Table 3. 15: Percentage Distribution of Agricultural Households Growing Crops only by Household Size, Residence and County, 2019

		Number of Members				
EA Type	**Total**	**1**	**2**	**3**	**4**	**5+**
Total	1,695,107	19.4	12.8	15.7	16.5	35.6
Rural	1,457,099	19.2	12.6	15.7	16.4	36.2
Urban	238,008	20.7	14.3	16.1	17.1	31.8
County						
Total	1,695,107	19.4	12.8	15.7	16.5	35.6
Mombasa	3,765	19.9	12.4	13	14.1	40.6
Kwale	36,264	12.4	9.3	11.5	13.2	53.6
Kilifi	61,293	12.6	9.2	11.1	12.4	54.7
Tana River	7,523	12.3	9.5	12.3	13.6	52.5
Lamu	4,971	29.2	13.3	13.9	13.2	30.5
Taita-Taveta	13,902	31.7	15.3	15.1	13.8	24.2
Garissa	1,481	4.5	5.7	8.1	10.3	71.3
Wajir	665	3.8	4.8	9.5	13.7	68.3
Mandera	2,330	1.2	3.1	6.7	10.8	78.2
Marsabit	874	4.5	6.1	11	13	65.4
Isiolo	958	14	10.2	13.4	14.4	48
Meru	78,846	20.1	14.1	18.3	17.8	29.8
Tharaka-Nithi	18,831	25.9	15.6	19.3	16.5	22.7
Embu	33,898	29.7	15.5	18.6	16.5	19.7
Kitui	40,716	21.2	12.7	15.2	16	34.8
Machakos	57,066	21	13.7	17	18.7	29.6
Makueni	37,254	22.7	13.2	15.8	16.8	31.5
Nyandarua	31,810	29	13.6	17.2	15.8	24.4
Nyeri	42,906	33.7	16.2	16.2	15.4	18.6
Kirinyaga	43,744	31.9	17.1	18.7	17.4	15
Murang'a	59,583	29.6	15.1	15.8	16	23.5
Kiambu	69,395	22.8	14.7	16.4	18	28.2
Turkana	4,811	2.7	4.1	7.9	11.9	73.4
West Pokot	13,098	8.8	10.2	14.1	15.7	51.3
Samburu	2,312	6.5	8.4	14.1	16.7	54.3
Trans Nzoia	45,318	14.9	11.6	14.9	16.6	42
Uasin Gishu	38,915	17.5	12	15.7	17	37.8
Elgeyo-Marakwet	22,242	18.6	12.4	14.6	14.8	39.5
Nandi	40,206	17	11.3	16.5	18	37.2
Baringo	21,299	19.3	11.6	15.2	15.6	38.3
Laikipia	23,093	27.4	14.7	15.2	16.2	26.5
Nakuru	95,325	22	12.7	15.8	16.6	32.7
Narok	33,492	19.3	12.7	15.6	15.7	36.7
Kajiado	16,279	22.5	14.6	16.2	16.5	30.3
Kericho	41,061	14.8	11.2	17.2	18.5	38.3
Bomet	27,895	13.5	11.3	19.3	18.7	37.2
Kakamega	105,237	16.6	12.9	16.1	16.7	37.7
Vihiga	30,920	24.3	13.1	14.4	15.5	32.6
Bungoma	88,774	13.3	12	16.1	16.3	42.2
Busia	44,150	16	12.5	15.4	16	40.1
Siaya	63,749	21.6	14	15	15.7	33.9
Kisumu	47,870	17	12.2	14.6	16.8	39.4
Homabay	64,559	14.5	11.9	14.8	17.1	41.6
Migori	58,576	11.4	10.4	14.5	16.9	46.7
Kisii	75,054	14.2	12.3	15.7	18.2	39.6
Nyamira	33,022	15.5	13.2	16.6	18.2	36.5
Nairobi City	9,775	23.9	15.3	15.4	16.6	28.9

As shown in Table 3.15 and Figure 3.12 shows that counties of Mandera, Turkana and Garissa led with the highest proportion of households with five members and above. The top ten counties with the highest number of farming households that engaged in growing only crops as their agricultural activity include Kakamega,Nakuru Bungoma, Meru, Kisii, Kiambu, Homabay, Siaya, Kilifi and Murang'a.

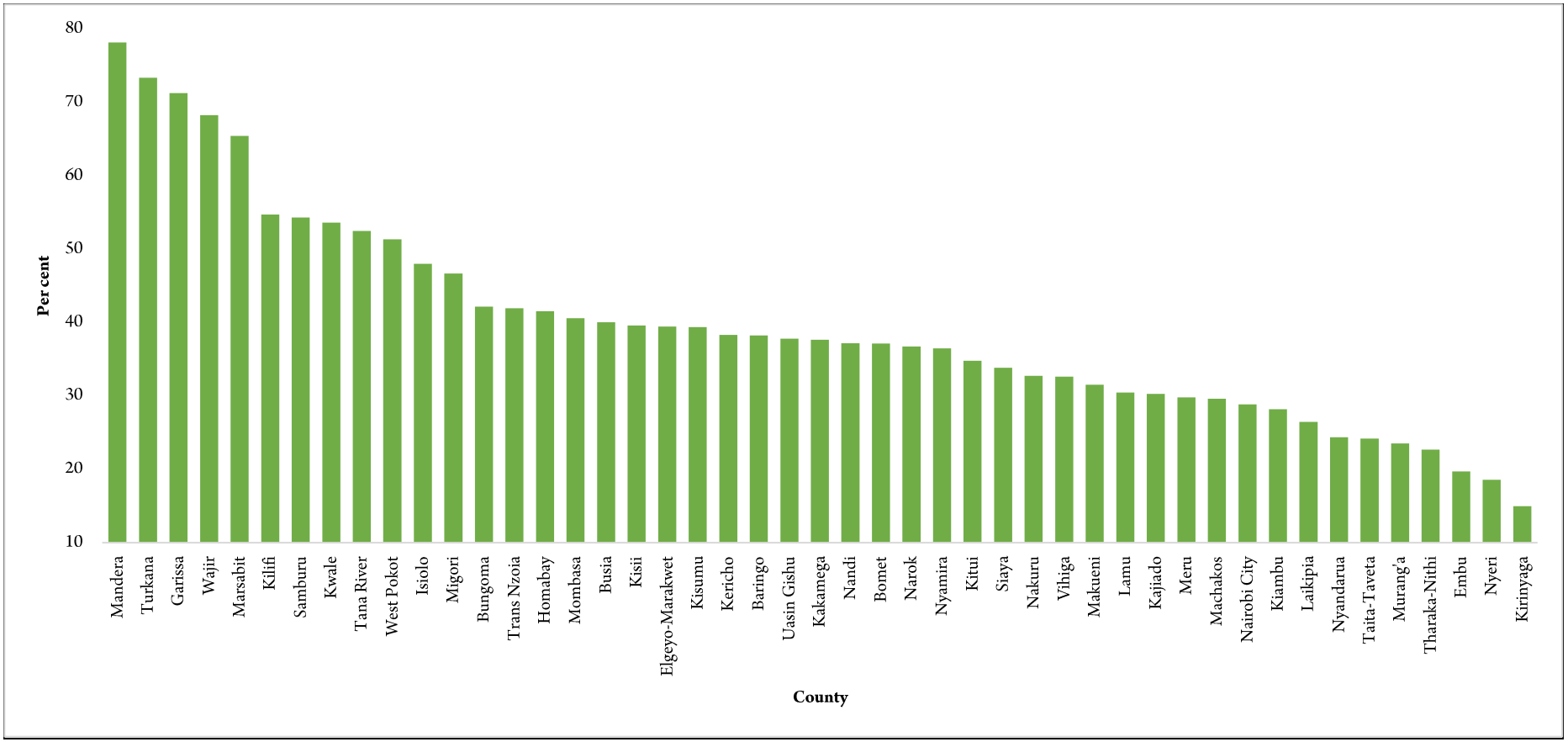


Figure 3. 12: Percentage Distribution of Households Size 5+ by County, 2019

3.16. Main Purpose of Crop Production, 2019

Figure 3.13 shows the proportion of crop producing households by main purpose of production. There were 74.2 per cent of households engaged in subsistence crop farming in rural areas compared to 25.7 per cent of households that were engaged in commercial crop production in urban areas.

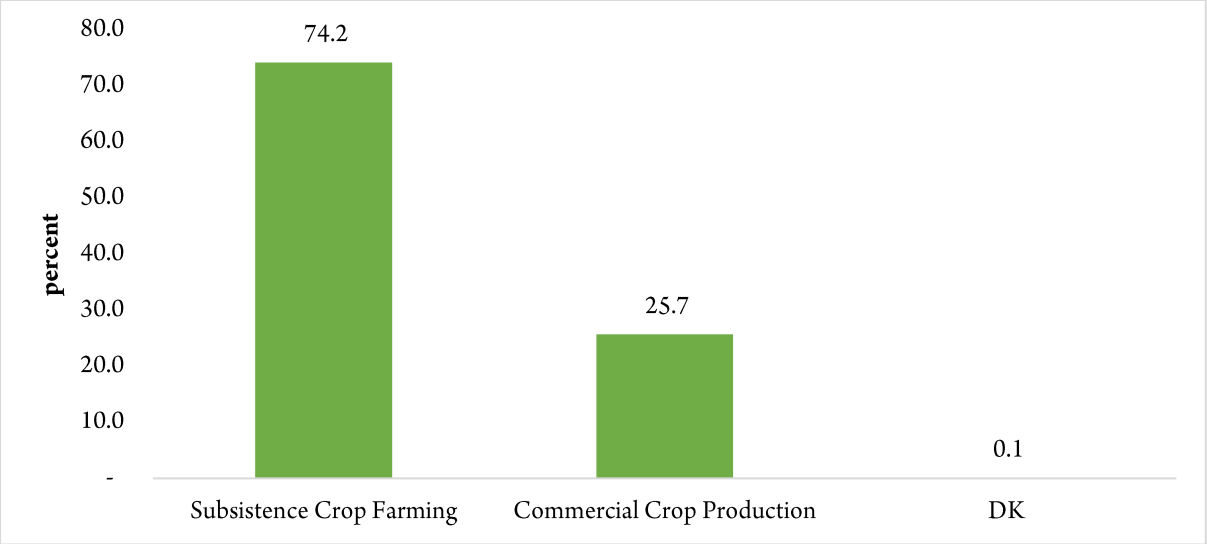


Figure 3. 13: Proportion of Crop Producing Households by Main Purpose of Production, 2019

As seen in Table 3.16, Turkana, Samburu, Kilifi, Siaya, Busia, Kitui, Kwale and Homa Bay are counties where over 90 per cent of households practiced subsistence crop farming. On the other hand, Nyamira, Kirinyaga, Nyeri, Kericho and Embu counties indicated more than 50.0 per cent of crop farming households were engaged in commercial crop agriculture. Overall, three quarters of the farming households are engaged in subsistence crop growing while only a quarter were involved in commercial agriculture.

Table 3. 16: Distribution of Crop Farming Households by Main Purpose of Production Residence and County, 2019

	Crop Farming Households	Subsistence Crop Farming	Commercial Crop Production	DK
EA Type				
Total	**5,555,334**	**74.2**	**25.7**	**0.1**
Rural	5,081,125	74.3	25.7	0.1
Urban	474,209	73.6	26.3	0.1
County				
Total	**5,555,334**	**74.2**	**25.7**	**0.1**
Mombasa	7,207	86.6	13.2	0.2
Kwale	100,010	90.6	9.3	0.1
Kilifi	149,324	93.4	6.6	0.1
Tana River	16,716	73.0	26.9	0.1
Lamu	15,195	69.5	30.4	0.1
Taita-Taveta	48,379	85.8	14.1	0.0
Garissa	4,372	53.9	43.0	3.0
Wajir	2,461	81.6	15.2	3.3
Mandera	15,258	83.1	15.5	1.3
Marsabit	2,644	89.3	10.4	0.4
Isiolo	2,776	77.8	22.0	0.2
Meru	250,462	56.8	43.2	0.1
Tharaka-Nithi	79,222	70.3	29.6	0.0
Embu	123,261	48.0	52.0	0.0
Kitui	199,438	91.3	8.6	0.1
Machakos	217,054	80.5	19.4	0.1
Makueni	180,634	81.2	18.8	0.1
Nyandarua	135,142	72.4	27.6	0.0
Nyeri	154,413	46.1	53.8	0.0
Kirinyaga	130,573	39.6	60.4	0.0
Murang'a	219,962	53.7	46.3	0.0
Kiambu	177,393	62.6	37.3	0.0
Turkana	14,198	97.7	1.6	0.7
West Pokot	80,170	89.8	10.0	0.2
Samburu	13,806	93.9	5.8	0.3
Trans Nzoia	129,934	80.3	19.6	0.1
Uasin Gishu	132,000	81.5	18.4	0.1
Elgeyo-Marakwet	71,077	79.0	21.0	0.1
Nandi	143,009	60.9	39.0	0.0
Baringo	84,420	84.5	15.4	0.2
Laikipia	74,332	85.5	14.4	0.0
Nakuru	260,984	80.1	19.9	0.1
Narok	150,406	75.9	23.9	0.2
Kajiado	45,924	75.2	24.6	0.3
Kericho	145,842	46.4	53.5	0.0
Bomet	146,323	59.3	40.7	0.0
Kakamega	321,923	90.5	9.5	0.0
Vihiga	108,520	84.7	15.3	0.0
Bungoma	269,960	79.8	20.1	0.1
Busia	140,666	91.4	8.6	0.0
Siaya	184,955	91.7	8.2	0.0
Kisumu	133,378	89.6	10.3	0.0
Homabay	184,359	90.1	9.9	0.0
Migori	160,694	89.2	10.7	0.1
Kisii	207,387	56.6	43.4	0.0
Nyamira	102,848	32.6	67.4	0.0
Nairobi City	16,323	78.1	21.6	0.3

3.17. Distribution of crops farming households by Education level of the household head, 2019

As shown in Figure 3.14 and Table 3.17, nationally, 17 per cent of the household heads never attended school, 47 per cent had completed primary level and 21 per cent had completed secondary school. Ten per cent of the household heads had completed education in a tertiary institution.

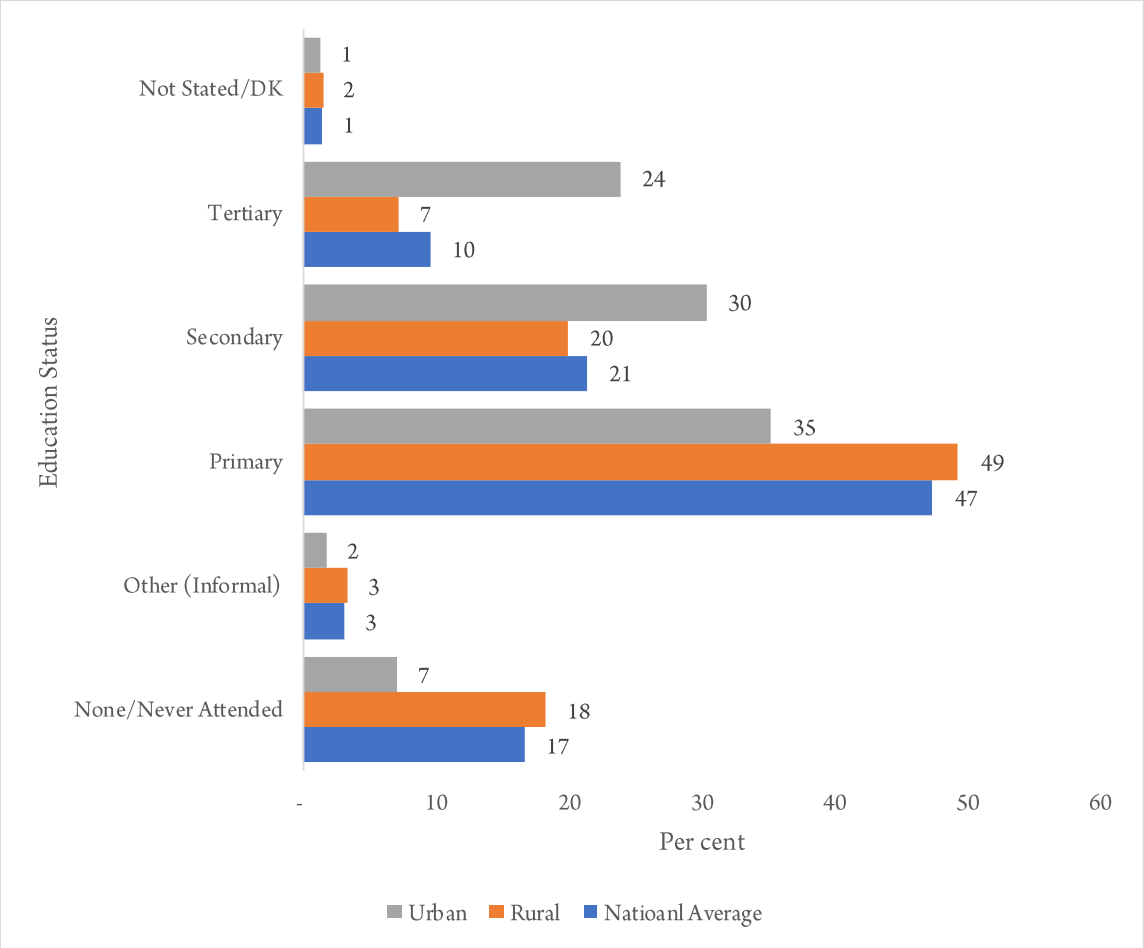


Figure 3. 14: Percentage Distribution of Education Level Completed by Household Head by Rural and Urban, 2019

Table 3.17 shows the number of reported crops only farming households in the 2019 Kenya Population and Housing Census by education level of the household head, rural urban and county. In rural areas, 18 per cent of the household heads had never attended school, 49 per cent had completed primary level, 20 per cent of the heads had completed secondary level and seven per cent had completed tertiary level. Among the counties, the highest number of household heads engaged in crops farming with no education were in Wajir, Mandera, Turkana, Garissa, Marsabit and Samburu. Counties with the highest proportion of household heads practicing crops farming with tertiary level of education include Nairobi City, Uasin-Gishu, Kajiado, Mombasa and Kiambu. Overall, 47.5 per cent of the crops farming households had at least primary level education.

Table 3. 17: Education level of agricultural household head by County, 2019

	Total	None/Never Attended	Other (Informal)	Primary	Secondary	Tertiary	Not Stated/DK
EA Type							
Total	1,679,493	16.7	3.2	47.5	21.5	9.6	1.5
Rural	1,443,612	18.3	3.4	49.5	20	7.3	1.5
Urban	235,881	7.1	1.8	35.3	30.4	24	1.3
County							
Total	1,679,493	16.7	3.2	47.5	21.5	9.6	1.5
Mombasa	3,738	19.9	4.3	37.6	20.6	16.4	1.2
Kwale	36,006	42.8	2.1	39.5	9.9	4.6	1.1
Kilifi	60,917	35.6	2.8	42	12.3	6.1	1.1
Tana River	7,488	29.1	3.7	43.9	16	6.1	1.2
Lamu	4,930	20.9	3.1	47.4	18.9	7.9	1.8
Taita-Taveta	13,761	13	2.8	54.4	19.7	9.2	0.9
Garissa	1,466	79.7	0.8	6.6	5.5	3.8	3.6
Wajir	661	84.9	0.2	2.7	4.2	5.6	2.4
Mandera	2,310	84.6	0.4	4.7	4.8	2.6	2.9
Marsabit	868	58.5	0.8	17.5	12.1	10.0	1
Isiolo	955	35.3	1.8	31.6	17.5	12.7	1.2
Meru	78,212	22.7	4.2	48	15.1	8.2	1.8
Tharaka-Nithi	18,651	16.7	4.5	50	17.8	9.2	1.8
Embu	33,556	12.2	4.7	50.3	22.3	9.6	0.9
Kitui	40,065	20.9	3.8	50.1	14.9	8.1	2.2
Machakos	56,140	9.4	3	50.6	24.3	10.9	1.8
Makueni	36,686	10.4	3.8	53.6	20.7	9.1	2.4
Nyandarua	31,501	8	2.2	55.9	25.1	8.1	0.7
Nyeri	42,342	6.9	1.4	49	30.2	11.3	1.2
Kirinyaga	43,314	8.7	2.8	49.6	27	10.7	1.2
Murang'a	58,927	10	2.3	56.1	23.4	7.2	1
Kiambu	68,889	7.1	1.6	43.3	30.4	16.3	1.2
Turkana	4,794	80.9	1	8.1	4.6	3.7	1.8
West Pokot	13,013	49	3	27.4	11	7.9	1.8
Samburu	2,290	56.3	1.2	21.7	10.5	8.2	2
Trans Nzoia	44,960	13.5	3.9	47	24	9.7	1.8
Uasin Gishu	38,578	10.2	2.6	42.8	26	17.1	1.3
Elgeyo-Marakwet	22,097	19.4	3.7	45.3	20.9	9.2	1.5
Nandi	39,953	12	4.9	52.7	19	9.7	1.7
Baringo	21,133	19	2.2	39.7	23.9	13.2	1.9
Laikipia	22,906	14.4	1.7	48.5	24.9	9.0	1.5
Nakuru	94,405	9.9	2.6	49.2	25.4	11.2	1.6
Narok	33,296	27.9	4.1	42	17.8	6.5	1.7
Kajiado	16,143	19.6	3.5	35.9	22.8	16.8	1.5
Kericho	40,826	11.5	3.3	50.9	22.3	10.9	1.2
Bomet	27,681	12	3.1	50.8	21.1	11.3	1.7
Kakamega	104,116	17.3	3.7	49.5	19.8	8.2	1.5
Vihiga	30,564	12.7	4.2	52.9	20.6	7.8	1.8
Bungoma	88,043	13.3	3.4	45.6	24.9	10.9	1.8
Busia	43,828	23.4	4.2	46.9	16.5	7.6	1.4
Siaya	63,115	18.2	2.4	54.6	16.9	6.1	1.9
Kisumu	47,439	14.3	3.4	48.5	21.7	10.8	1.3
Homabay	64,070	18	2.8	51.1	18.3	8.4	1.4
Migori	58,160	18.9	3.2	51.1	17	8.1	1.7
Kisii	74,381	17.2	4.6	41	27.7	8.4	0.9
Nyamira	32,634	18.2	2.9	38.4	31.3	8.0	1.3
Nairobi City	9,685	3.8	1.2	26.9	32.1	34.5	1.3

3.18. Distribution of crop farming households by method of waste disposal, 2019

The number of reported crops only farmers in the 2019 Kenya Population and Housing Census by household access to sanitation, EA type and county is shown in Figure 3.15 and Table 3.18. Overall, the main method of waste disposal was the pit latrine covered with 1.1 million households (63.7 per cent). The second most commonly used method of human waste disposal was the pit latrine uncovered, reported by 239,770 households (14.1 per cent).

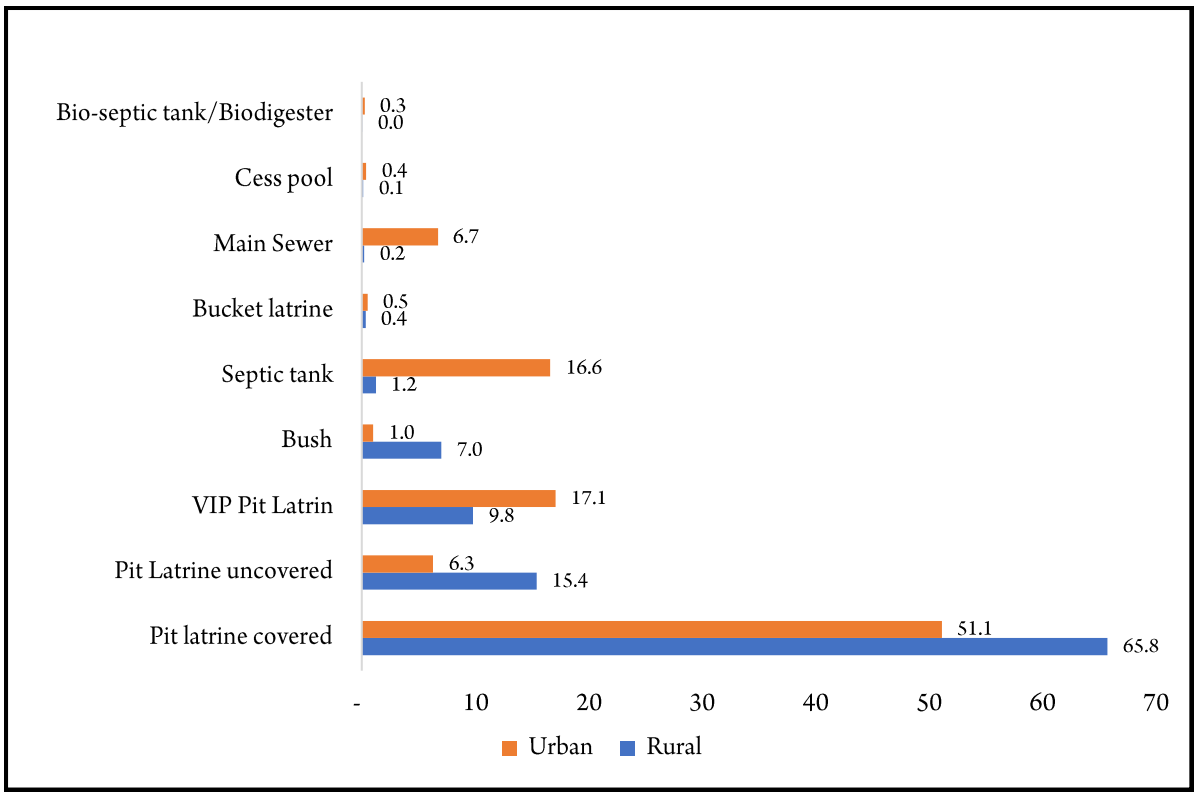


Figure 3. 15: Percentage Distribution to pure crop farming households by access of sanitation, 2019

Table 3.18 shows the number of reported crops only farming households in the 2019 Kenya Population and Housing Census by access to sanitation and residence (rural, urban and county). In rural areas, 65.8 per cent of the households used pit latrine covered for human waste disposal followed by 15.4 per cent of the households who used the pit latrine uncovered. Bush as a method of human waste disposal is used by 81.7 per cent of the crops only farming households in Turkana County. This is followed by 46.5 per cent of the crops only farming households in Samburu County. Other counties with similarly high proportion of farmers using bush include Kwale, Garissa and Mandera. Figure 3.16 shows counties with the highest number of crop farmers using pit latrine covered. These include Murang'a, Kakamega, Nyeri, Bomet, Vihiga, Nyandarua, Kirinyaga, Kisumu, Embu and Kericho.

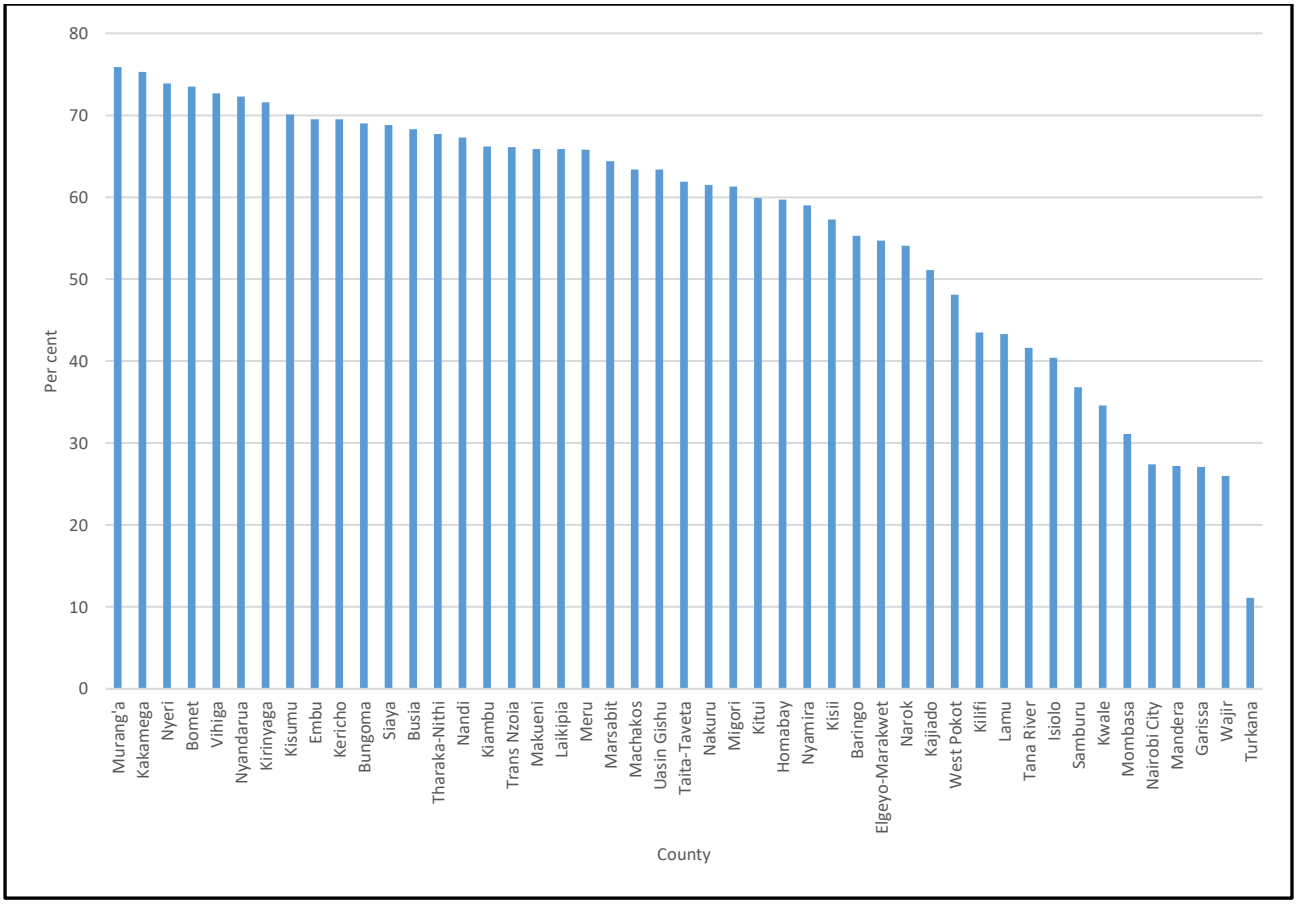


Figure 3. 16: Proportion of crops only farmers using pit latrine (covered) by county

Table 3. 18: Distribution of crops only farming household by access to sanitation, 2019

	Total	Main Sewer	Septic tank	Cess pool	VIP Pit Latrin	Pit latrine covered	Pit Latrine uncovered	Bucket latrine	Bush	Bio-septic tank/Biodigester
EA Type										
Total	1,695,107	1.1	3.4	0.2	10.8	63.7	14.1	0.4	6.2	0.1
Rural	1,457,099	0.2	1.2	0.1	9.8	65.8	15.4	0.4	7	0
Urban	238,008	6.7	16.6	0.4	17.1	51.1	6.3	0.5	1	0.3
County										
Total	1,695,107	1.1	3.4	0.2	10.8	63.7	14.1	0.4	6.2	0.1
Mombasa	3,765	7.5	25.4	0.8	8.7	31.1	9.9	2.6	13.4	0.6
Kwale	36,264	0.4	4.1	0.3	6.8	34.6	10.8	0.9	42.1	0
Kilifi	61,293	0.9	9.8	0.5	9	43.5	11	1.1	24	0.1
Tana River	7,523	0.5	2.3	0.1	3	41.6	9.6	0.3	42.5	0
Lamu	4,971	0.9	6	0.2	8.8	43.3	18.3	0.4	22	0.1
Taita-Taveta	13,902	0.6	5.2	0.2	12.6	61.9	16.3	0.2	3.1	0
Garissa	1,481	5.7	5.5	0.7	4.7	27.1	15.1	1.4	39.6	0.2
Wajir	665	4.1	5	0	1.8	26	14.7	12	35.2	1.2
Mandera	2,330	1	2	0.2	4	27.2	22.7	2.6	40.3	0.1
Marsabit	874	0	1.6	0.1	6.6	64.4	12.6	0.1	14.5	0
Isiolo	958	4.1	5.6	0.5	20.6	40.4	7.1	0.2	21.2	0.3
Meru	78,846	0.4	3.7	0.2	17.8	65.8	10.6	0.2	1.3	0
Tharaka-Nithi	18,831	0.3	2.1	0.1	11.8	67.7	15.7	0.2	2.1	0.1
Embu	33,898	1.2	4.5	0.2	12.5	69.5	10.4	0.3	1.2	0
Kitui	40,716	0.4	1.8	0.1	11.3	59.9	13.7	0.4	12.4	0.1
Machakos	57,066	1.3	3.7	0.2	13.1	63.4	16.3	0.2	1.8	0.1
Makueni	37,254	0.1	1.5	0.1	11.8	65.9	18.1	0.2	2.2	0.1
Nyandarua	31,810	0.3	2.8	0.1	15.7	72.3	8.4	0.1	0.3	0
Nyeri	42,906	3.1	4.6	0.1	11.5	73.9	6.4	0.1	0.2	0
Kirinyaga	43,744	0.5	6.9	0.2	15.6	71.6	4.8	0.1	0.2	0
Murang'a	59,583	1.3	2.6	0.1	12.6	75.9	6.9	0.1	0.4	0.1
Kiambu	69,395	2.2	10.7	0.2	15.9	66.2	4.1	0.1	0.2	0.3
Turkana	4,811	0.2	0.3	0	2.5	11.1	3.3	0.7	81.7	0.2
West Pokot	13,098	0.3	1.4	0.1	4.9	48.1	9.4	0.6	35.2	0
Samburu	2,312	0.4	2	0	7.5	36.8	6.1	0.6	46.5	0.1
Trans Nzoia	45,318	1	2.6	0.1	11.1	66.1	17.3	0.2	1.4	0.1
Uasin Gishu	38,915	3.3	6.3	0.1	11.8	63.4	13.8	0.2	1	0.1
Elgeyo-Marakwet	22,242	0.4	0.6	0	6.1	54.7	30.2	0.3	7.6	0
Nandi	40,206	0.3	1.2	0.2	12.7	67.3	15.7	0.2	2.4	0
Baringo	21,299	0.1	1.7	0	11.2	55.3	13.3	0.2	18.1	0
Laikipia	23,093	4.1	2.9	0.1	11.5	65.9	12.1	0.1	3.3	0.1
Nakuru	95,325	2.9	5.3	0.2	14.3	61.5	14.2	0.4	1.1	0.1
Narok	33,492	0.3	1.5	0.1	8.5	54.1	15	0.5	19.9	0
Kajiado	16,279	1.1	12.7	0.3	13.1	51.1	9	0.5	11.8	0.4
Kericho	41,061	0.6	1.2	0	6.8	69.5	19.4	0.4	2.1	0.1
Bomet	27,895	0.3	0.7	0.1	5.1	73.5	18.1	0.3	1.8	0
Kakamega	105,237	0.4	1.4	0.1	9.6	75.3	11.2	0.4	1.5	0
Vihiga	30,920	0.2	0.7	0.1	13.6	72.7	11.5	0.2	1	0
Bungoma	88,774	0.5	2	0.2	8.7	69	17.2	0.5	1.9	0
Busia	44,150	0.2	1.1	0.1	9.1	68.3	17.3	0.4	3.4	0.1
Siaya	63,749	0.2	0.9	0.1	8.7	68.8	14	0.3	7	0
Kisumu	47,870	1.2	2.5	0.1	6.9	70.1	12	0.4	6.7	0.1
Homabay	64,559	0.5	0.8	0.1	8.3	59.7	17	0.7	12.9	0
Migori	58,576	0.3	1	0.3	8.5	61.3	16.6	0.5	11.5	0
Kisii	75,054	0.7	1.3	0.3	7.8	57.3	30.9	0.5	1.2	0
Nyamira	33,022	0.1	0.9	0.2	9.5	59	28.6	0.6	1.1	0
Nairobi City	9,775	29.8	28.3	0.4	9.6	27.4	2.9	0.6	0.2	0.6

3.19. Distribution of crops only farming households by main source of drinking water, 2019

Table 3.19 shows the number of reported crops only farming households in the 2019 Kenya Population and Housing Census by source of drinking water, by EA type and by county. River/stream water is the main source of water, used by 25.2 per cent of the households. The second most commonly used source of water is protected spring reported by 11.8 per cent of the households. Households in the rural areas followed a similar pattern with 28.1 per cent of them using stream/river as a source of drinking water followed by 13.0 per cent of the households who used protected spring. Overall, 14.8 per cent of the households had access to piped water and 25.2 per cent of the households had access to stream/river water.

As shown in Figure 3.17, the counties with the highest number of crops only farmers using river/stream as a source of water include West Pokot, Elgeyo-Marakwet, Baringo, Kericho, Bomet, Narok, Nandi, Kitui, Tharaka-Nithi and Kisii. Figure 3.18 graphically shows access to piped water by county. Kiambu, Meru and Nyeri are the top three counties with the highest access to piped water with 11.8, 11.1 and 9.6 per cent of the households respectively.

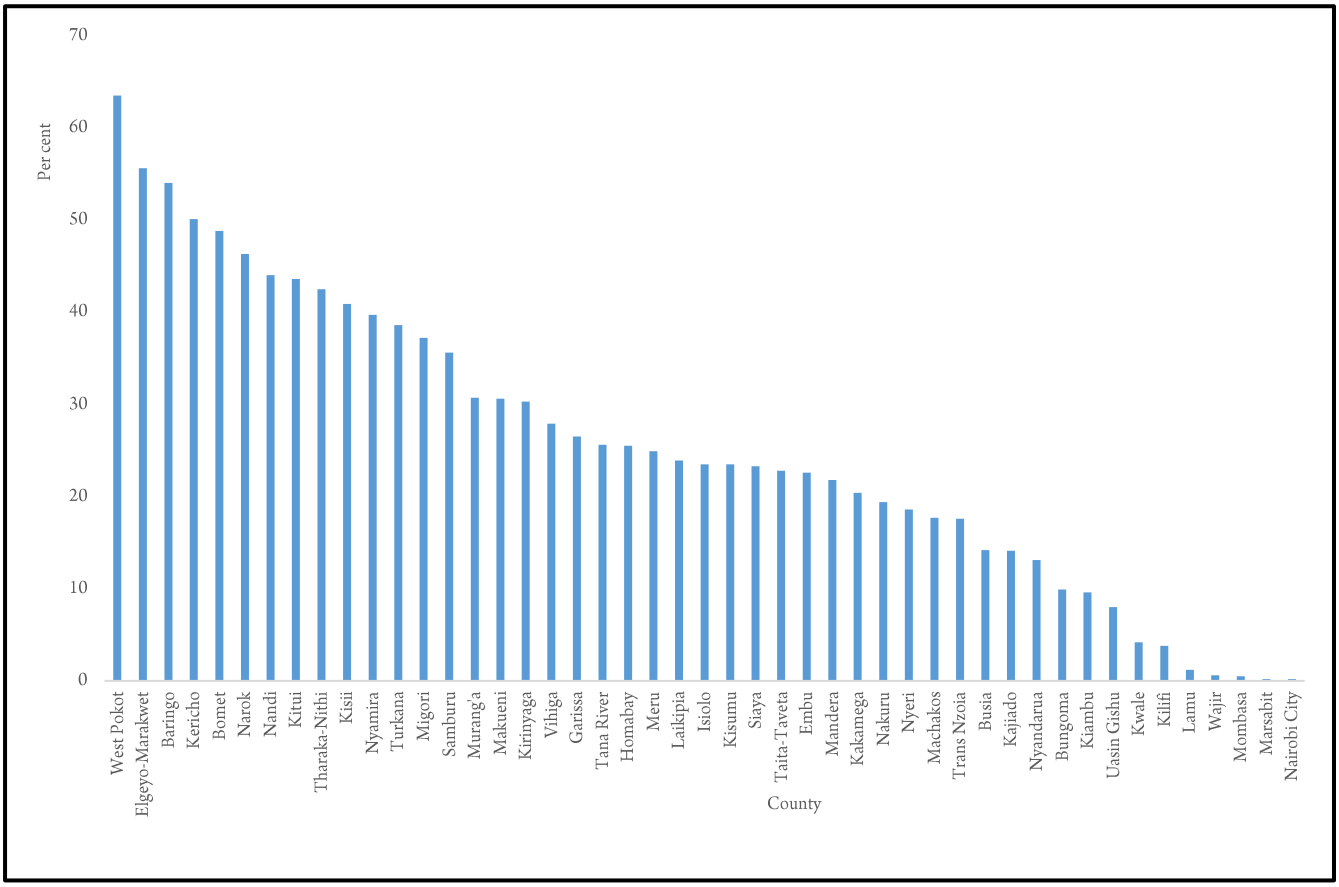


Figure 3. 17: Distribution of crops farmers using river/stream as a source of water by County

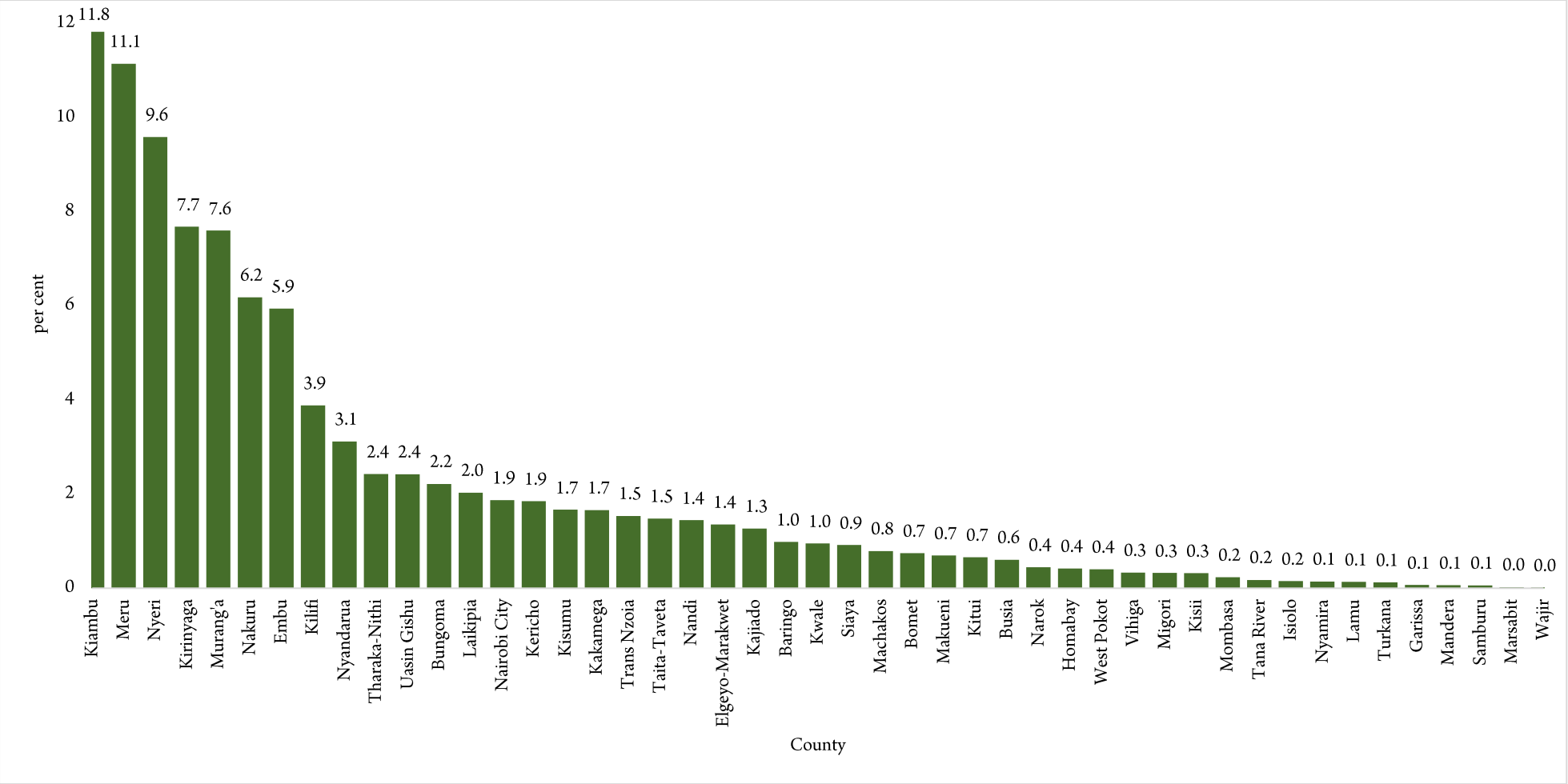


Figure 3. 18: Percentage Distribution of Households with Access to Piped Water by County, 2019

Table 3. 19: Percentage Distribution of Households with Access to drinking water by County, 2019

EA Type	Total	Pond	Dam	Lake	Stream /River	Protected Spring	Unprotected Spring	Protected Well	Unprotected Well	Borehole/ Tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/ Harvested water	Water Vendor	Public tap/ Standpipe
Total	1,695,107	2.0	2.1	0.8	25.2	11.8	3.9	9.5	3.3	10.1	6.1	8.8	0.6	4.7	4.0	7.1
Rural	1,457,099	2.2	2.4	0.8	28.1	13	4.4	9.7	3.7	10.3	4.4	6.9	0.2	4.6	2.9	6.2
Urban	238,008	0.3	0.5	0.4	7.5	4.7	0.9	8.0	0.9	9.2	16.3	20.3	2.7	5.2	10.7	12.4
County																
Total	1,695,107	2.0	2.1	0.8	25.2	11.8	3.9	9.5	3.3	10.1	6.1	8.8	0.6	4.7	4.0	7.1
Mombasa	3,765	1.1	0.7	0.0	0.5	1.6	2.2	6.0	3.9	7.7	6.5	9.2	6.1	1.2	27.4	25.9
Kwale	36,264	22.5	14.7	0.0	4.2	1.2	2.3	8.0	10	10.9	2.6	4.0	0.4	1.3	1.7	16.3
Kilifi	61,293	8.6	9.7	0.0	3.8	0.8	1.0	3.4	5.3	4.1	5.4	10.5	0.4	0.5	8.3	38.3
Tana River	7,523	0.7	4.2	0.0	25.6	0.8	0.7	18.4	4.8	26.3	1.9	4.0	0.1	0.1	4.1	8.5
Lamu	4,971	6.0	2.7	0.0	1.2	1.5	0.8	18.5	23	6.0	3.7	3.1	1.8	6.0	6.0	19.7
Taita-Taveta	13,902	0.3	0.9	0.2	22.8	4.5	3.3	2.2	1.7	6.6	8.8	18	0.3	1.7	8.5	20.1
Garissa	1,481	13.3	12.2	0.0	26.5	0.5	0.1	2.8	0.7	19.3	3.1	8.5	0.3	0.5	1.6	10.7
Wajir	665	9.0	29.9	0.0	0.6	0.5	0.2	12.6	8.6	22.3	3.0	2.4	1.4	0.3	4.7	4.7
Mandera	2,330	13.9	19.1	0.0	21.8	0.6	0.0	2.7	1.4	7.7	1.7	5.4	0.3	3.8	13.1	8.4
Marsabit	874	0.6	7.3	0.2	0.2	2.1	1.0	6.3	7.8	13.5	3.5	3.2	1.0	3.9	39.5	9.8
Isiolo	958	0.4	1.4	0.0	23.5	1.5	1.1	5.3	2.0	6.8	8.2	31.9	1.3	0.3	4.8	11.5
Meru	78,846	0.3	0.3	0.0	24.9	2.6	2.1	2.0	1.4	8.2	15.4	20.2	0.9	1.8	13.1	6.7
Tharaka-Nithi	18,831	0.5	0.1	0.0	42.5	0.6	1.1	3.1	3.3	6.2	14.3	18.2	0.2	0.3	2.2	7.4
Embu	33,898	0.9	2.5	0.0	22.6	0.7	1.2	3.6	3.7	6.3	18.2	25.9	0.1	1.3	5.2	7.8
Kitui	40,716	0.8	5.2	0.0	43.6	1.0	0.9	7.3	6.6	13.7	2.4	1.6	0.5	2.4	4.8	9.2
Machakos	57,066	1.1	4.9	0.0	17.7	5.6	7.5	8.6	7.3	25	1.9	1.6	1.6	4.4	6.9	5.9
Makueni	37,254	0.7	2.7	0.0	30.6	3.6	8.1	6.4	9.5	11.5	2.2	2.5	0.7	4.4	8.2	8.8
Nyandarua	31,810	0.6	3.0	0.0	13.1	1.7	1.5	21.6	4.3	5.8	7.5	17.1	0.2	16.7	3.6	3.2
Nyeri	42,906	0.3	0.4	0.0	18.6	0.6	0.5	2.6	1.6	1.1	21.1	35.2	0.1	10.4	2.5	5.0
Kirinyaga	43,744	0.1	0.1	0.0	30.3	1.5	1.1	7.5	1.6	3.8	16.7	27.5	0.8	1.2	1.8	6.0
Murang'a	59,583	0.5	0.5	0.0	30.7	1.7	2.0	8.4	2.6	5.9	15.0	17.1	0.2	7.1	3.7	4.5
Kiambu	69,395	0.3	0.5	0.0	9.6	0.8	0.5	15.1	0.6	11.8	18.0	24.9	1.1	3.2	7.4	6.4
Turkana	4,811	0.5	0.4	0.9	38.6	0.6	0.4	2.7	6.2	18.7	2.5	3.9	0.0	0.1	1.0	23.4
West Pokot	13,098	1.2	1.1	0.8	63.5	3.6	2.5	4.6	1.5	8.6	2.9	4.8	0.1	0.6	0.5	3.6
Samburu	2,312	2.2	9.5	0.3	35.6	1.2	3.5	4.5	10.0	13.2	3.3	3.4	0.8	4.4	3.0	5.0
Trans Nzoia	45,318	1.1	0.3	0.0	17.6	17.2	2.9	24.2	3.3	16.7	3.8	4.8	0.1	0.8	1.7	5.4
Uasin Gishu	38,915	1.3	0.4	0.0	8.0	3.6	2.6	29.4	12	18.6	7.4	8.2	0.5	1.8	1.2	5.0
Elgeyo-Marakwet	22,242	0.8	0.4	0.0	55.6	2.8	3.4	7.8	3.6	4.1	4.3	11	0.2	0.8	0.2	4.9
Nandi	40,206	1.1	0.7	0.0	44.0	9.4	11.0	10.4	4.1	6.2	3.8	5.3	0.1	1.2	0.4	2.4
Baringo	21,299	1.6	4.1	0.9	54.0	2.1	2.4	4.0	1.0	8.4	3.5	8.1	0.3	3.0	2.8	3.6
Laikipia	23,093	1.3	5.1	0.0	23.9	1.6	1.8	13.3	3.1	11.7	8.5	13.6	0.3	5.9	4.0	5.7
Nakuru	95,325	0.5	1.3	0.3	19.4	2.0	2.5	10.0	1.6	13	6.2	10.1	1.4	15	9.6	7.1
Narok	33,492	4.9	5.8	0.0	46.3	5.0	5.5	4.6	3.4	5.5	1.0	2.3	1.3	5.4	5.9	2.9
Kajiado	16,279	0.3	1.0	0.2	14.1	3.5	1.5	3.4	1.7	20.6	9.8	9.8	5.3	3.2	16.1	9.6
Kericho	41,061	1.0	1.0	0.0	50.1	8.6	6.3	6.6	2.4	4.4	5.1	6.3	0.1	3.2	0.9	4.1
Bomet	27,895	6.6	4.3	0.0	48.8	7.1	6.2	2.6	1.6	2.1	2.3	4.4	0.2	8.9	1.1	3.9
Kakamega	105,237	0.9	0.3	0.0	20.4	36.3	5.4	16.5	2.4	9.8	1.9	2.1	0.1	0.6	0.5	2.8
Vihiga	30,920	0.6	0.4	0.0	27.9	54.2	4.6	3.3	0.6	1.6	1.1	1.6	0.1	2.4	0.4	1.2
Bungoma	88,774	0.9	0.2	0.0	9.9	40.5	5.2	15.7	3.0	11.5	2.6	3.7	0.1	0.4	1.3	5.0
Busia	44,150	1.0	0.4	1.6	14.2	18.6	4.9	15.3	3.5	30.2	1.1	2.3	0.2	0.7	1.0	4.8
Siaya	63,749	3.5	2.4	7.1	23.3	13.4	3.9	5.5	1.8	14.2	1.3	2.4	0.2	6.3	3.3	11.3
Kisumu	47,870	1.0	0.7	1.3	23.5	2.9	1.7	12.7	1.6	15.8	3.5	5.3	0.4	11.4	3.7	14.4
Homabay	64,559	3.5	2.5	8.2	25.5	8.4	3.4	8.2	2.6	14.1	0.7	1.0	0.3	15.3	1.9	4.5
Migori	58,576	2.8	3.0	2.2	37.2	10.2	7.5	11.2	4.8	7.5	0.6	0.8	0.5	9.1	1.0	1.7
Kisii	75,054	0.3	0.2	0.0	40.9	41.5	8.2	2.4	0.9	0.7	0.5	0.6	0.2	2.7	0.2	0.8
Nyamira	33,022	0.6	0.3	0.0	39.7	37.1	9.9	3.7	1.2	0.9	0.5	0.5	0.1	4.7	0.2	0.4
Nairobi City	9,775	0.1	0.1	0.0	0.2	0.4	0.0	2.0	0.2	9.6	24.9	23.3	7.3	2.5	15	14.2

3.20. Distribution of crops only farming households by ICT usage, 2019

Table 3.20 shows the number of individuals in crops only farming households who reported owning a mobile phone by rural/urban and county. Nationally, more than half of the population age 3 years and above own mobile phones. Within the rural areas, nearly 49 per cent of the individuals in crops only farming households owned a mobile phone compared with 67 per cent in urban areas. Figure 3.19 presents counties that have a higher proportion of individuals who owned mobile phones. These include Nairobi, Nyeri, Kiambu, Kirinyaga, Taita Taveta, Nyandarua, Murang'a, Embu, Kajiado and Mombasa.

Table 3.20 also shows the number of individuals aged 3 years and above in crops only farming households that reported having used internet from any location in the last three months by rural/urban and county. Nationally, 15 per cent of the population age 3 years and above used internet from any location in the last three months. In the rural areas, 13.2 per cent of the individuals in crops only farming households reported to have used internet from any location in the last three months compared with nearly 34 per cent in urban areas. The leading counties in internet use for crop farmers include the city counties of Nairobi and Mombasa, while others are Nyeri, Kiambu and Kirinyaga among others. At least, 16 per cent of individuals aged 3 years and above in crops only farming households reported to have used a computer, laptop or tablet from any location in the last three months. Nearly five per cent of the individuals in crops only farming households in rural areas reported to have used a computer, laptop or tablet from any location in the last three months compared with 19 per cent in urban areas. The leading counties in computer, laptop or tablet use from any location in the last three months were Nairobi, Kiambu, Mombasa, Nyeri and Uasin Gishu with over 10 per cent of the individuals aged 3 years and above in crops only farming households reporting to have used a computer, laptop or tablet from any location in the last three months.

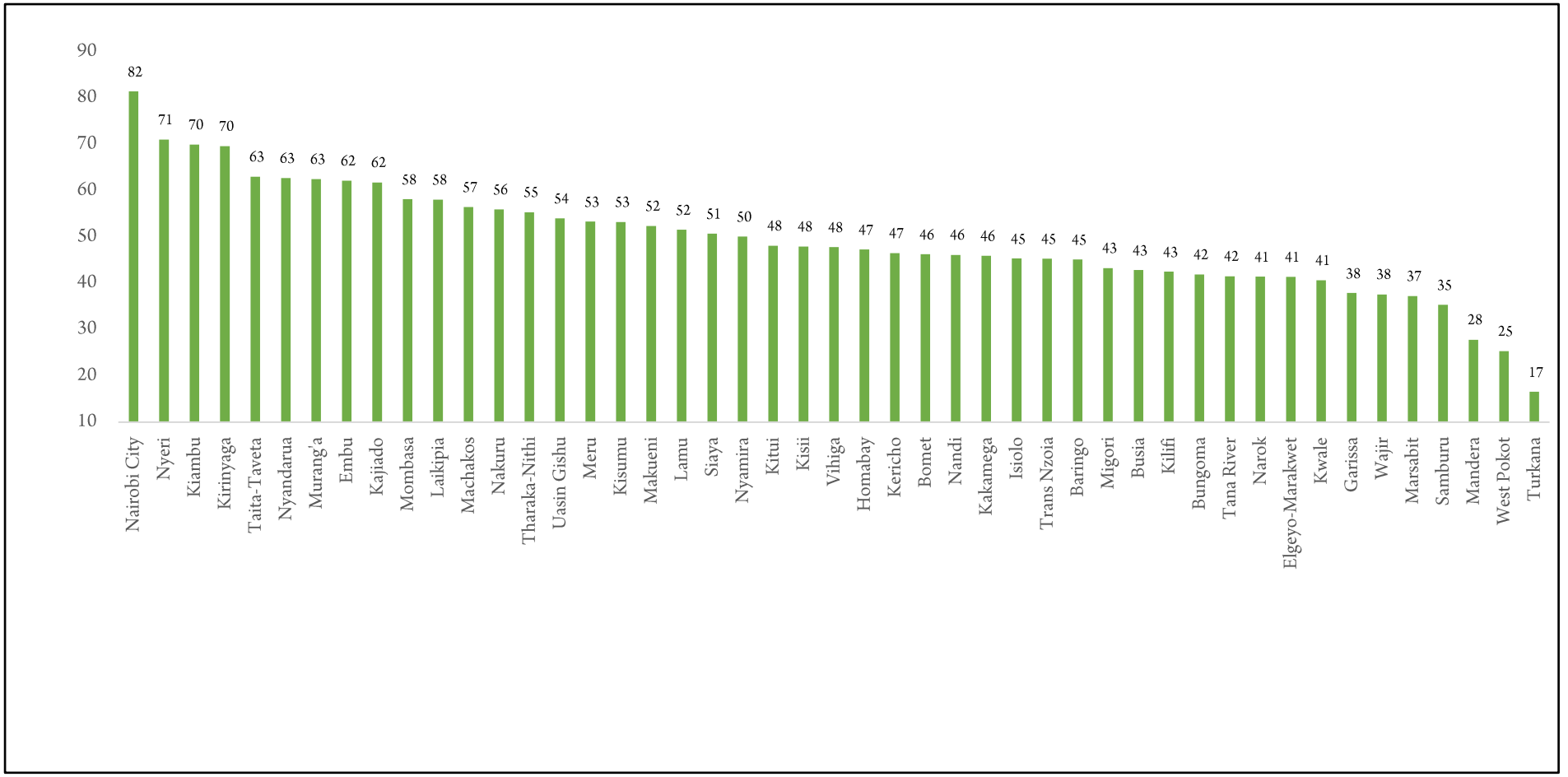


Figure 3. 19: Percentage Distribution of Individuals Owning Mobile Phones by County, 2019

The number of individuals aged 15 years and above in crops only farming households who reported that they searched and bought goods online in the last three months were 2.0 per cent. Nationally, nearly one per cent of the population age 15 years and above searched and bought goods elsewhere in the last three months. Around 3.0 per cent of the individuals in crops only farming households in rural areas are reported to have searched goods online only in the last three months. Nearly 7.0 per cent of the individuals in crops only farming households in the urban areas compared with 1.5 per cent in the rural areas searched and bought goods online in the last three months. The leading counties with the highest number of farmers engaged in farming of crops only who searched and bought goods online include Nairobi, Kiambu, Kajiado, Uasin Gishu, Nyeri and Kisumu, all with at least 3.0 per cent .

Table 3. 20: Distribution population of crops only farming households by use of internet by residence and county, 2019

EA Type	Ownership of Mobile phone				Used the internet from any location in the last 3 months				Used a computer/ Laptop/ Tablet from any location in the last 3 months				Bought or ordered goods or services online in the last 3 months					
	Total	Yes	No	DK	Total	Yes	No	DK	Total	Yes	No	DK	Total	Searched and bought online	Searched and bought elsewhere	Searched only	Never	DK
Total	27,486,872	50.4	49.3	0.3	27,487,163	15.0	84.5	0.5	27,486,797	6.6	92.9	0.5	17,292,453	2.0	0.9	3.0	93.5	0.6
Rural	25,064,781	48.9	50.8	0.3	25,065,053	13.2	86.3	0.5	25,064,706	5.4	94.1	0.5	15,627,439	1.5	0.8	2.6	94.5	0.6
Urban	2,422,091	66.5	33.2	0.2	2,422,110	33.8	65.7	0.4	2,422,091	19.0	80.5	0.5	1,665,014	6.9	1.4	6.6	84.1	0.9
County																		
Total	27,486,872	50.4	49.3	0.3	27,487,163	15.0	84.5	0.5	27,486,797	6.6	92.9	0.5	17,292,453	2.0	0.9	3.0	93.5	0.6
Mombasa	57,406	60.7	39.2	0.1	57,406	28.0	71.6	0.3	57,406	14.4	85.2	0.4	38,553	6.1	1.0	5.8	86.4	0.7
Kwale	578,740	42.1	57.4	0.5	578,744	8.1	91.2	0.7	578,736	3.0	96.3	0.7	334,139	0.8	0.5	1.4	96.7	0.7
Kilifi	900,739	45.1	54.7	0.2	900,740	10.0	89.7	0.4	900,739	4.7	94.9	0.4	538,568	1.2	0.5	2.1	95.7	0.4
Tana River	171,292	33.7	66.0	0.4	171,299	6.3	93.3	0.4	171,287	2.4	97.1	0.4	92,360	0.7	0.4	1.3	97.2	0.5
Lamu	84,795	47.9	51.9	0.2	84,796	13.2	86.6	0.3	84,794	4.0	95.7	0.3	53,019	1.6	0.7	2.4	95.0	0.3
Taita-Taveta	215,560	62.7	37.2	0.1	215,562	19.3	80.5	0.3	215,558	8.0	91.7	0.4	148,817	2.5	0.8	3.8	92.5	0.4
Garissa	298,331	34.3	64.2	1.6	298,338	9.5	89.0	1.5	298,330	3.9	94.5	1.6	165,049	1.2	1.3	1.4	94.1	2.1
Wajir	376,033	31.1	68.1	0.8	376,053	7.1	92.2	0.7	376,030	2.4	96.8	0.8	195,422	0.9	1.2	1.7	95.3	0.8
Mandera	418,188	28.0	70.1	1.8	418,201	7.0	91.2	1.8	418,183	2.6	95.4	1.9	203,971	0.8	1.2	1.3	94.8	1.8
Marsabit	227,438	29.3	70.1	0.5	227,440	5.3	94.2	0.5	227,436	2.1	97.3	0.6	126,087	0.4	0.6	1.1	97.3	0.6
Isiolo	127,167	37.7	61.9	0.3	127,168	8.8	90.9	0.3	127,165	3.4	96.3	0.4	71,251	0.9	0.8	1.9	95.9	0.4
Meru	1,042,751	58.3	41.5	0.2	1,042,756	17.4	82.2	0.4	1,042,748	6.6	93.0	0.4	716,083	1.8	1.0	3.2	93.5	0.6
Tharaka-Nithi	313,491	60.7	39.0	0.2	313,492	16.7	82.9	0.5	313,489	7.2	92.3	0.5	218,988	1.6	0.9	3.0	93.8	0.6
Embu	456,220	64.3	35.6	0.1	456,221	18.9	80.8	0.3	456,219	8.1	91.6	0.3	328,338	1.9	0.9	3.5	93.3	0.4
Kitui	929,993	50.6	49.0	0.4	930,004	12.1	87.4	0.5	929,990	4.4	95.1	0.6	597,133	1.4	0.8	2.0	95.0	0.7
Machakos	897,991	59.3	40.5	0.1	897,995	17.6	82.1	0.4	897,992	7.3	92.3	0.4	628,682	2.4	0.9	3.1	93.2	0.5
Makueni	798,657	56.5	43.3	0.2	798,662	14.5	84.8	0.6	798,658	5.7	93.7	0.6	543,815	1.7	0.8	2.2	94.4	0.9
Nyandarua	512,332	65.9	33.9	0.1	512,335	18.6	81.1	0.2	512,333	7.2	92.5	0.3	347,913	1.9	1.1	3.2	93.5	0.4
Nyeri	532,061	73.9	26.0	0.1	532,064	25.3	74.3	0.4	532,061	11.5	88.0	0.4	392,840	3.2	1.2	4.6	90.3	0.7
Kirinyaga	434,201	71.8	28.1	0.1	434,203	22.1	77.5	0.4	434,200	9.3	90.3	0.4	326,348	2.5	0.8	3.3	92.7	0.7
Murang'a	794,659	66.6	33.3	0.1	794,661	18.1	81.6	0.3	794,654	7.1	92.6	0.3	567,337	1.9	0.8	3.3	93.5	0.4
Kiambu	776,993	72.0	27.9	0.1	776,997	31.8	67.9	0.4	776,992	15.5	84.0	0.4	565,859	5.4	1.4	6.4	86.0	0.8
Turkana	375,464	15.1	83.1	1.8	375,471	3.7	94.4	1.8	375,462	1.4	96.7	1.9	217,658	0.4	0.7	0.8	96.4	1.7
West Pokot	464,237	23.5	75.6	0.9	464,265	7.2	92.0	0.7	464,236	2.8	96.4	0.8	246,913	0.6	0.7	1.7	96.0	1.0
Samburu	206,364	27.8	71.5	0.7	206,377	6.8	92.5	0.6	206,362	3.1	96.2	0.7	110,848	0.8	0.8	1.5	96.0	0.8
Trans Nzoia	655,889	46.7	53.0	0.3	655,899	15.4	84.2	0.4	655,888	6.9	92.7	0.5	398,903	2.0	0.8	3.1	93.6	0.5
Uasin Gishu	644,868	54.7	45.1	0.2	644,871	22.1	77.6	0.3	644,869	11.1	88.4	0.4	421,600	3.5	1.1	4.4	90.3	0.7
Elgeyo-Marakwet	350,250	44.5	55.3	0.2	350,257	13.7	86.0	0.4	350,249	5.6	93.9	0.4	215,707	1.5	1.1	2.9	94.0	0.5
Nandi	684,230	48.9	50.9	0.3	684,235	16.4	83.2	0.4	684,227	6.8	92.7	0.5	442,297	1.9	0.9	3.2	93.4	0.6
Baringo	479,725	41.2	58.4	0.4	479,734	14.3	85.2	0.5	479,724	6.2	93.2	0.6	283,618	1.8	0.9	3.3	93.2	0.8
Laikipia	338,507	56.7	43.0	0.2	338,510	17.0	82.6	0.4	338,504	7.0	92.6	0.5	220,162	2.0	0.8	3.1	93.6	0.6
Nakuru	1,150,994	56.0	43.7	0.2	1,151,004	19.2	80.3	0.5	1,150,996	8.5	91.0	0.5	736,758	2.9	1.0	3.9	91.5	0.8
Narok	873,163	37.5	62.1	0.5	873,185	10.1	89.4	0.5	873,162	3.6	95.8	0.6	473,152	1.1	0.8	2.2	95.2	0.7
Kajiado	425,467	48.8	50.8	0.4	425,475	19.2	80.3	0.5	425,463	9.5	90.0	0.6	252,286	3.7	1.1	4.4	89.8	0.9
Kericho	690,671	48.7	51.1	0.2	690,676	16.7	83.0	0.3	690,671	7.7	92.0	0.4	441,967	2.0	1.0	3.8	92.9	0.4
Bomet	717,659	47.9	51.7	0.3	717,666	15.8	83.7	0.4	717,657	6.8	92.6	0.5	445,956	1.9	1.1	3.7	92.5	0.7
Kakamega	1,464,313	48.4	51.4	0.2	1,464,324	12.9	86.8	0.3	1,464,307	5.7	93.9	0.4	893,921	1.7	0.7	2.4	94.8	0.4
Vihiga	471,509	50.2	49.6	0.1	471,509	12.6	87.1	0.4	471,509	6.0	93.6	0.4	302,903	1.7	0.6	2.1	95.1	0.5
Bungoma	1,314,570	43.5	56.1	0.3	1,314,578	12.4	87.2	0.4	1,314,567	5.6	93.9	0.5	775,947	1.6	0.8	2.4	94.7	0.5
Busia	681,341	45.3	54.5	0.2	681,349	11.7	88.0	0.3	681,342	5.3	94.3	0.4	414,630	1.6	0.8	2.4	94.9	0.4
Siaya	785,029	52.9	46.9	0.2	785,032	13.2	86.3	0.5	785,029	5.9	93.5	0.5	487,732	2.0	0.6	2.5	94.2	0.7
Kisumu	621,215	55.1	44.7	0.1	621,216	17.1	82.6	0.3	621,212	8.9	90.8	0.4	390,269	3.0	0.8	3.3	92.4	0.4
Homabay	859,593	50.2	49.7	0.2	859,602	13.7	86.0	0.3	859,589	6.2	93.4	0.4	507,535	2.1	0.9	2.6	93.9	0.5
Migori	803,540	45.3	54.5	0.3	803,551	12.5	87.1	0.4	803,539	5.4	94.2	0.5	462,720	1.9	0.9	2.7	94.0	0.5
Kisii	921,698	51.7	48.2	0.1	921,700	13.8	86.0	0.2	921,696	6.8	92.9	0.3	577,442	1.7	0.8	2.5	94.6	0.4
Nyamira	446,942	54.1	45.7	0.2	446,944	15.1	84.7	0.2	446,941	7.3	92.4	0.3	286,824	1.9	0.7	2.7	94.3	0.3
Nairobi City	114,596	80.4	19.5	0.1	114,596	52.1	47.6	0.3	114,596	33.1	66.4	0.5	84,133	14.4	2.0	9.6	72.6	1.4

3.21. Distribution of crops only farming households by ownership of household assets, 2019

The distribution of crops only farming households by assets owned are as shown in Figure 3.20. The main assets owned by crops only agricultural households were bicycle (13.5 per cent), motor cycle (8.7 per cent), car (3.7 per cent) and ox-plough (3.2 per cent). This implies that bicycle and motorcycles are the main mode of transport in crops only farming households. Tractors which are very important in mechanized farming are few indicating that mechanization is still low among crops only farming households.

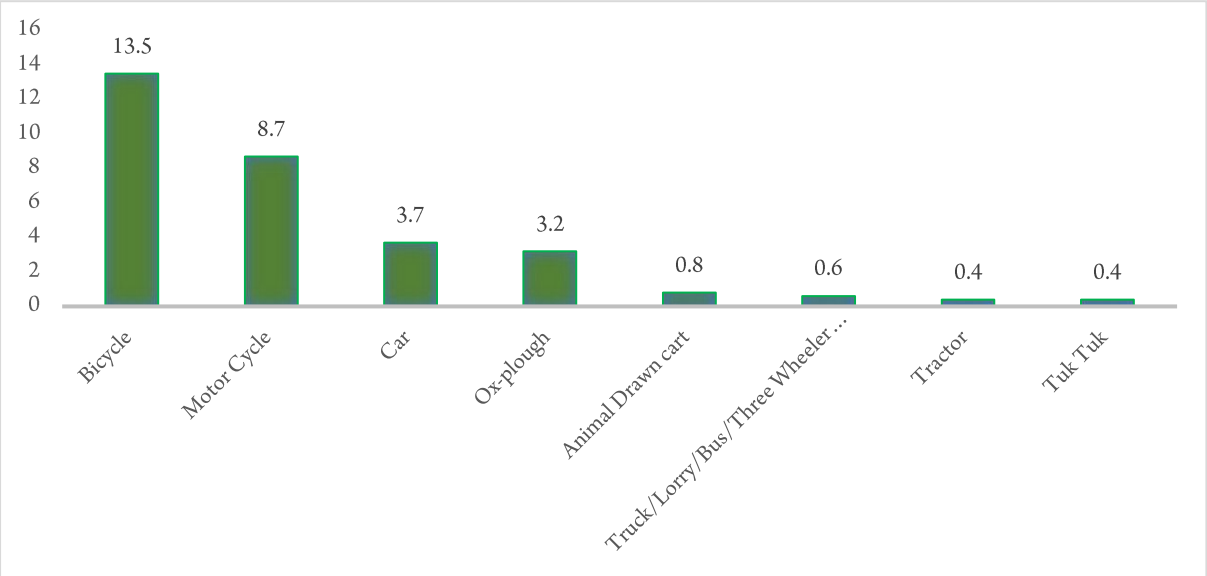


Figure 3. 20: Distribution of crops only farming households by assets owned, 2019

Counties with the highest number of assets were Kakamega, Nakuru and Bungoma as shown in Table 3.21. Counties with the least number of assets were Wajir, Marsabit and Isiolo.

Table 3. 21: Distribution population of crops only farming households by use of internet by residence and county, 2019

	Total	Tractor	Ox-plough	Animal Drawn cart	Bicycle	Motor Cycle	Car	Truck/Lorry/Bus/Three-Wheeler truck	Refrigerator	Motor boat	Canoes	Tuk Tuk
Total	**1,695,107**	**0.4**	**3.2**	**0.8**	**13.5**	**8.7**	**3.7**	**0.6**	**3.9**	**0.3**	**0.3**	**0.4**
Rural	**1,457,099**	**0.4**	**3.6**	**0.8**	**12.5**	**8.3**	**2.2**	**0.4**	**1.7**	**0.3**	**0.3**	**0.3**
Urban	**238,008**	**0.6**	**1**	**0.8**	**19.5**	**10.6**	**12.5**	**1.6**	**17.1**	**0.3**	**0.3**	**0.6**
County												
National	**1,695,107**	0.4	3.2	0.8	13.5	8.7	3.7	0.6	3.9	0.3	0.3	0.4
Mombasa	3,765	0.5	0.4	0.5	18.1	8.1	8.4	1	19	0.4	0.6	1.5
Kwale	36,264	0.4	5.2	0.5	15.8	8.2	1.4	0.3	3	0.2	0.2	0.4
Kilifi	61,293	0.3	0.7	0.3	13.1	8.5	1.5	0.3	3.5	0.2	0.2	0.6
Tana River	7,523	0.4	0.4	0.9	17.6	12.3	1.2	0.3	3	0.2	3.4	0.5
Lamu	4,971	0.4	0.4	0.3	36.7	17.9	1.4	0.4	4.9	0.5	0.6	0.3
Taita-Taveta	13,902	0.4	1.5	0.6	15.9	11.7	2.5	0.5	4.3	0.2	0.2	0.3
Garissa	1,481	2.6	5.3	8.2	5.6	4.9	9.3	3.4	9.2	2.1	2.1	3.6
Wajir	665	1.8	6.8	13.8	4.2	5.9	6	2.4	5.6	1.2	1.4	3.3
Mandera	2,330	1.2	10.3	11.4	4	6.4	3.3	0.8	3.6	0.7	0.8	2.7
Marsabit	874	0.9	3.8	0.5	5.4	13.6	4	1	6.3	0.3	0.1	0.7
Isiolo	958	0.7	1.3	2	7.8	10.8	7	0.7	9.2	0.4	0.3	0.4
Meru	78,846	0.3	1	0.6	6.3	7.6	4.2	0.5	2.7	0.3	0.2	0.3
Tharaka-Nithi	18,831	0.3	5.8	0.3	14.5	9.7	3.2	0.4	2.1	0.2	0.2	0.2
Embu	33,898	0.4	3.4	2.3	13.2	10.5	4.8	0.7	3.9	0.3	0.3	0.3
Kitui	40,716	0.5	16.4	1.5	14.9	8.5	2.9	0.5	2.2	0.3	0.3	0.4
Machakos	57,066	0.4	10.8	3.4	15.4	7.6	4.5	0.8	4.4	0.3	0.3	0.3
Makueni	37,254	0.5	12.3	2.1	21.2	9.4	2.9	0.5	1.7	0.3	0.3	0.4
Nyandarua	31,810	0.4	0.3	0.6	13.6	8.1	3.2	0.7	1.7	0.2	0.2	0.2
Nyeri	42,906	0.3	0.2	0.3	9.2	6.8	5.5	0.7	5.3	0.2	0.2	0.3
Kirinyaga	43,744	0.3	1.5	2.5	18.8	13.3	5.2	0.7	5	0.2	0.2	0.4
Murang'a	59,583	0.2	0.4	0.3	9.5	6.7	3.3	0.6	3.1	0.2	0.2	0.3
Kiambu	69,395	0.3	0.3	1	15.8	7	10.6	1.4	14.5	0.3	0.2	0.4
Turkana	4,811	0.2	0.3	0.3	8	5.1	1	0.3	0.8	0.2	0.2	0.3
West Pokot	13,098	0.3	0.9	0.3	2.7	5	1.2	0.2	0.6	0.2	0.2	0.2
Samburu	2,312	0.6	0.3	0.2	8.1	8.7	3.8	0.9	3	0.2	0.2	0.4
Trans Nzoia	45,318	0.8	1.1	0.5	18.7	11.2	3.6	0.6	2.7	0.3	0.3	0.4
Uasin Gishu	38,915	1	0.6	0.4	17.4	10	7.3	1	6.8	0.3	0.2	0.3
Elgeyo-Marakwet	22,242	0.4	0.6	0.2	2.2	4.5	1.6	0.4	0.7	0.2	0.1	0.2
Nandi	40,206	0.5	1.9	0.3	7	8.3	2.7	0.4	1.6	0.2	0.2	0.2
Baringo	21,299	0.5	0.7	0.2	4.3	6.3	3	0.4	1.5	0.2	0.2	0.2
Laikipia	23,093	0.7	0.4	0.7	21.1	11.5	4.6	0.8	3.4	0.2	0.2	0.3
Nakuru	95,325	0.5	0.7	0.5	17	10.3	5.8	0.9	6.6	0.2	0.2	0.4
Narok	33,492	0.7	4.6	0.5	3.3	8.8	2.6	0.5	1.7	0.3	0.3	0.4
Kajiado	16,279	0.5	1	1	14.9	11.3	12.9	1.8	16.3	0.3	0.3	0.6
Kericho	41,061	0.4	2	0.2	2.7	6.6	2.6	0.5	1.7	0.2	0.2	0.2
Bomet	27,895	0.4	2.5	0.4	2.7	9.2	1.9	0.4	0.9	0.2	0.2	0.3
Kakamega	105,237	0.5	1.4	0.5	18.3	9.1	2.2	0.5	2.2	0.3	0.3	0.3
Vihiga	30,920	0.2	0.2	0.3	8.1	6.2	2.1	0.3	2.3	0.2	0.2	0.3
Bungoma	88,774	0.5	3.7	0.7	19.6	9.9	2.1	0.5	2	0.3	0.3	0.4
Busia	44,150	0.4	1.8	0.4	26.6	8.9	2	0.4	2.3	0.3	0.4	0.3
Siaya	63,749	0.3	2.1	0.5	26.2	9	1.9	0.4	2.4	0.3	0.5	0.3
Kisumu	47,870	0.5	2.2	0.6	20.1	9	3.5	0.6	6.2	0.4	0.3	0.5
Homabay	64,559	0.5	9.8	0.8	9.2	8.4	1.9	0.5	2.3	0.4	0.5	0.4
Migori	58,576	0.5	13.3	0.7	8.5	10.7	2.2	0.5	2.7	0.4	0.5	0.4
Kisii	75,054	0.3	1.8	0.3	2.5	6.2	2.2	0.4	1.9	0.3	0.2	0.3
Nyamira	33,022	0.3	0.8	0.3	2.9	6.4	2	0.5	1.1	0.3	0.2	0.3
Nairobi City	9,775	0.7	0.9	1.1	23.6	5.6	25.7	3	37.9	0.5	0.3	0.4

Livestock Farming

3.22. Household size, EA type and by county

The distribution of pure livestock-based households in Kenya are as shown in Figure 3.21 and Table 3.22. The household sizes were categorized based on the number of members present in the household and they were grouped into 5 categories 1, 2, 3, 4 and 5+ (five members and above). Those households with more than 5 persons per household were 55.4 per cent of the total pure livestock only agricultural households and was the highest. Households with one (1) person were 8.3 per cent, two (2) persons were 8.6 per cent, three (3) persons were 12.5 per cent and four (4) persons were 15.1 per cent. Counties with the greatest household size (5+) were Mandera (84 per cent), Garissa (79 per cent), Wajir (76 per cent), Turkana (75 per cent) and Marsabit (75 per cent). Counties with the least household sizes were Kirinyaga (19 per cent) Embu (23 per cent) and Nyeri (23 per cent).

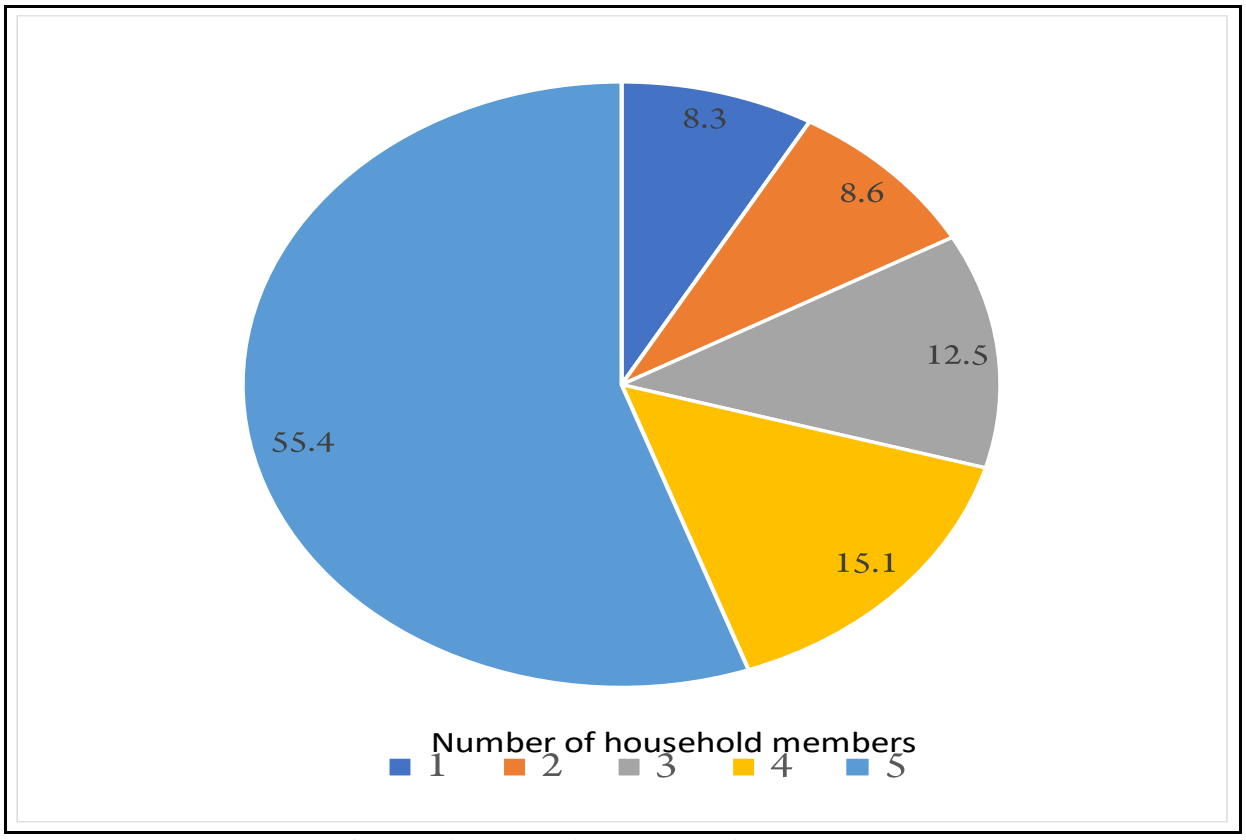


Figure 3. 21: Percentage share of livestock households by household size, 2019

Table 3. 22: Percentage distribution of livestock based agricultural households by agricultural household size and by county, 2019

County/EA Type	Total Households	Household size				
		1	2	3	4	5+
Kenya	**760,263**	8.3	8.6	12.5	15.1	55.4
Rural	618,658	7.4	8.2	12.2	14.6	57.5
Urban	141,605	12.0	10.5	13.9	17.3	46.3
County						
Mombasa	4,800	11.2	10.4	13.6	16.8	48.1
Kwale	7,418	8.3	7.7	11.7	13.4	58.8
Kilifi	10,932	11.9	9.4	11.5	12.7	54.5
Tana River	17,508	2.7	8.5	12.8	14.4	61.6
Lamu	3,024	9.7	11.2	13.3	15.1	50.7
Taita-Taveta	8,232	17.5	13.2	15.8	16.7	36.8
Garissa	40,762	0.7	3.3	6.9	10.4	78.8
Wajir	58,691	0.7	3.5	8.1	11.5	76.3
Mandera	45,585	0.3	1.8	5.4	8.6	84.1
Marsabit	34,797	0.9	3.8	8.3	12.0	75.0
Isiolo	20,966	2.4	6.2	11.1	13.9	66.4
Meru	23,239	13.8	13.3	17.9	19.2	35.8
Tharaka-Nithi	6,334	16.9	14.7	19.1	19.2	30.1
Embu	7,401	20.1	17.0	19.9	19.8	23.2
Kitui	15,348	14.8	12.5	14.2	15.2	43.3
Machakos	13,726	15.6	13.5	16.2	18.7	35.9
Makueni	12,589	17.1	12.6	14.6	16.3	39.4
Nyandarua	5,533	27.4	15.6	16.2	15.1	25.7
Nyeri	9,498	25.8	17.0	17.0	17.7	22.5
Kirinyaga	9,001	20.9	17.2	21.3	21.4	19.2
Murang'a	11,022	23.4	15.3	17.5	18.1	25.6
Kiambu	35,499	13.1	12.1	16.0	21.4	37.5
Turkana	43,940	1.6	3.5	7.8	11.7	75.4
West Pokot	9,187	6.8	9.4	14.4	14.8	54.7
Samburu	28,638	3.2	9.5	15.4	16.6	55.4
Trans Nzoia	9,850	8.8	9.8	13.9	17.0	50.5
Uasin Gishu	9,142	11.0	9.6	13.8	17.3	48.2
Elgeyo-Marakwet	3,557	21.7	12.8	12.4	12.4	40.6
Nandi	5,505	11.7	11.3	14.6	16.4	46.1
Baringo	15,388	8.8	7.8	12.1	14.1	57.1
Laikipia	15,986	11.2	10.8	15.5	16.9	45.7
Nakuru	21,830	14.8	12.2	15.1	17.4	40.4
Narok	30,244	3.9	6.4	11.8	15.8	62.1
Kajiado	49,614	4.2	6.5	12.5	17.2	59.6
Kericho	4,678	13.1	10.6	13.4	16.5	46.3
Bomet	5,974	13.1	11.0	14.4	15.5	46.0
Kakamega	12,590	13.6	13.4	16.3	16.8	39.9
Vihiga	5,045	15.1	13.2	16.1	16.9	38.7
Bungoma	9,850	11.5	12.0	15.8	15.2	45.4
Busia	6,677	14.8	12.4	15.4	15.4	42.0
Siaya	8,421	22.5	15.4	15.8	14.9	31.4
Kisumu	12,753	14.0	12.5	15.2	16.0	42.3
Homabay	7,753	16.1	13.6	15.2	15.9	39.3
Migori	7,954	11.5	10.3	14.1	16.1	47.9
Kisii	11,862	11.4	13.0	15.8	18.5	41.3
Nyamira	6,816	11.6	12.3	16.6	19.3	40.1
Nairobi City	15,104	13.4	12.0	15.0	19.7	39.8

3.23. Level of Education of household head

Figure 3.22 shows the distribution of Livestock-agricultural household head based on level of Education nationally. Most Livestock - agricultural household heads reported that they had none/never attended school (52.3 per cent). Further, 23.2 per cent had primary education 13.4 per cent reported to have attained secondary level education. About 8.2 per cent reported to have attained tertiary level education.

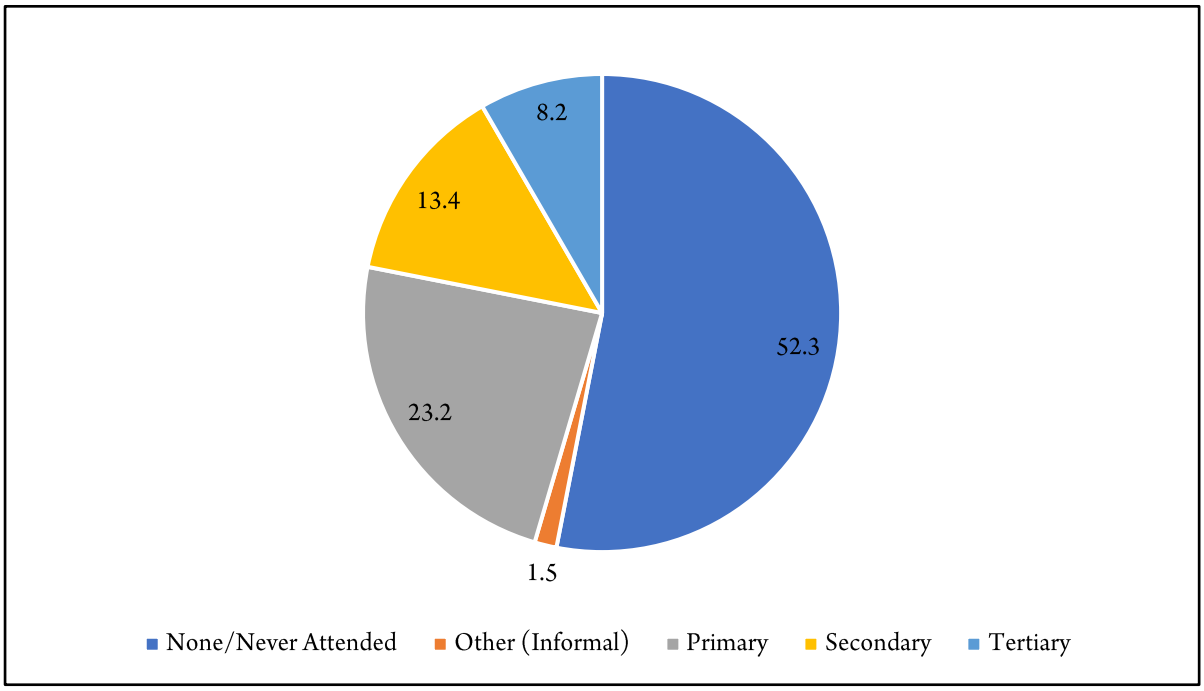


Figure 3. 22: Distribution of Livestock - agricultural households based on level of Education

Table 3.23 shows the distribution of Livestock agricultural household heads based on education level by county. Leading counties with the highest number of livestock-agricultural household heads who had none/never attended school were Wajir, Turkana, Mandera, Garissa and Marsabit, all with at least over 90 per cent. None/never attended school for livestock farming household heads was least in Nairobi, Kiambu, Uasin Gishu and Nyeri with at most below10 per cent. Nairobi, Kiambu, Mombasa, and Uasin Gishu are the counties where at least 20 per cent of the livestock farming household heads have tertiary level education. Overall, slightly more than half the heads of the households in livestock only rearing households have never attended school while below 10 per cent have tertiary level education.

Table 3. 23: Distribution of Education level of Livestock based agricultural household head, 2019

	Total	None/Never Attended	Other (Informal)	Primary	Secondary	Tertiary	Not Stated/DK
EA Type							
Total	**754,757**	**52.3**	**1.5**	**23.2**	**13.4**	**8.2**	**1.4**
Rural	614,267	60.1	1.5	22	10	5	1.4
Urban	140,490	18.4	1.1	28.4	28	22.6	1.5
County							
Total	754,757	52.3	1.5	23.2	13.4	8.2	1.4
Mombasa	4,764	11.5	2.7	35.2	27.5	21.7	1.3
Kwale	7,367	38.4	1.2	39.3	13.4	6.1	1.5
Kilifi	10,854	30.3	2.1	39.3	16.6	10	1.6
Tana River	17,404	81.0	1	10.1	4.4	2.3	1.2
Lamu	2,978	57.6	0.9	25.3	9.2	4.4	2.6
Taita-Taveta	8,149	17.7	2.7	47.8	19	11.8	0.9
Garissa	40,600	91.6	0.3	1.8	2.9	1.2	2.3
Wajir	58,430	94.4	0.2	1.3	2.1	1.2	0.8
Mandera	45,400	92.3	0.3	2	2.5	1.3	1.6
Marsabit	34,673	90.4	0.3	3.7	2.6	2.4	0.5
Isiolo	20,881	80.3	0.4	9.1	6.1	3.7	0.5
Meru	23,076	26.9	3.7	46.6	13.7	7.3	1.8
Tharaka-Nithi	6,265	17.0	3.3	46.6	18.4	12.3	2.4
Kitui	15,076	26.4	3.9	45.2	13.5	9.2	1.8
Machakos	13,524	12.3	2.5	39.3	25.7	18.1	2.2
Makueni	12,334	14.3	3.2	48.5	21	10	3
Nyandarua	5,460	15.5	1.5	46	24.6	11.5	0.9
Nyeri	9,380	9.7	1.2	43.8	29.7	14.2	1.5
Kirinyaga	8,916	11.1	2.4	50.1	24.2	10.7	1.5
Murang'a	10,903	12.0	2	48.6	24.6	11.5	1.4
Kiambu	35,250	5.4	1.1	36.6	32.5	23.2	1.4
Turkana	43,784	92.4	0.4	3.1	1.3	1.4	1.5
West Pokot	9,129	74.8	1.4	13.5	5.1	4.4	0.9
Samburu	28,456	87.2	0.7	5.9	3	2.8	0.4
Trans Nzoia	9,803	13.6	4.2	48.6	22.3	8.9	2.4
Uasin Gishu	9,055	9.7	1.8	37.8	27.8	21.4	1.6
Elgeyo-Marakwet	3,526	35.3	3.0	33.2	17.1	9.8	1.6
Nandi	5,469	17.2	4.4	46.5	18.7	11.1	2.2
Baringo	15,294	60.7	1.3	18.8	10.7	7.3	1.2
Laikipia	15,848	54.0	0.8	24.4	13.7	6.4	0.8
Nakuru	21,606	14.4	1.5	38.1	28.3	15.6	2
Narok	30,108	70.0	1.7	14.9	7.2	5	1.2
Kajiado	49,266	60.7	1.3	16.2	11	9.6	1.2
Kericho	4,642	16.0	2.6	41.6	22	16.5	1.2
Bomet	5,921	20.5	2.7	42.9	19.7	12.4	1.8
Kakamega	12,449	19.8	2.8	46.5	19.4	9.9	1.6
Vihiga	4,993	16.6	3.7	48.9	18.6	10.5	1.7
Bungoma	9,785	15.4	2.1	43.6	24.5	12.7	1.7
Busia	6,626	22.4	3.2	42.1	20.1	10.9	1.5
Siaya	8,285	20.9	1.8	43.4	20.5	11.5	2
Kisumu	12,629	14.9	2.5	40.3	24.7	15.8	1.8
Homabay	7,663	18.5	2.1	43.5	20.7	13.8	1.4
Migori	7,892	18.2	2.5	47.5	19.1	10.6	2.1
Kisii	11,768	17.5	3.6	35.9	28.4	13.2	1.3
Nyamira	6,751	17.9	2.5	33.1	32.8	12.5	1.2
Nairobi City	14,995	4.0	1.1	29.9	35.5	28.1	1.4

NB. Only applicable to usual household members

3.24. Access to sanitation

National distribution of Livestock-agricultural households' access to sanitation is as shown in Figure 3.23. Pit latrine covered and bush were the main sanitary facilities used by livestock-agricultural households. This implies that most livestock households do not have access to safe sanitary facilities. Distribution of livestock based Agricultural household access to sanitation by county are as shown in Table 3.24. Overall, 1.6 per cent of the counties use the main sewer system while 4.4 per cent use septic tank for their sanitation services. Pit latrines are very common, with the VIP, covered and uncovered being used by 9.2, 37.8 and 9.5 per cent respectively. At the county level, the city counties of Nairobi and Mombasa widely use the main sewer sanitation. Other counties that lead in use of the main sewer system are Uasin Gishu, Nakuru and Nyeri, all at above 4.0 per cent. Besides most livestock farming households widely using the covered pit latrine within the counties, over 20 per cent of the same in Nyandarua, Nakuru and Nandi counties use the VIP pit latrine for sanitation. The bush as a means of sanitation is used by 44.0 of the livestock farming households in the rural areas. Over 70 per cent of the livestock farming households in Turkana, Samburu, Tana River, Marsabit and West Pokot counties use the bush as a means of sanitation.

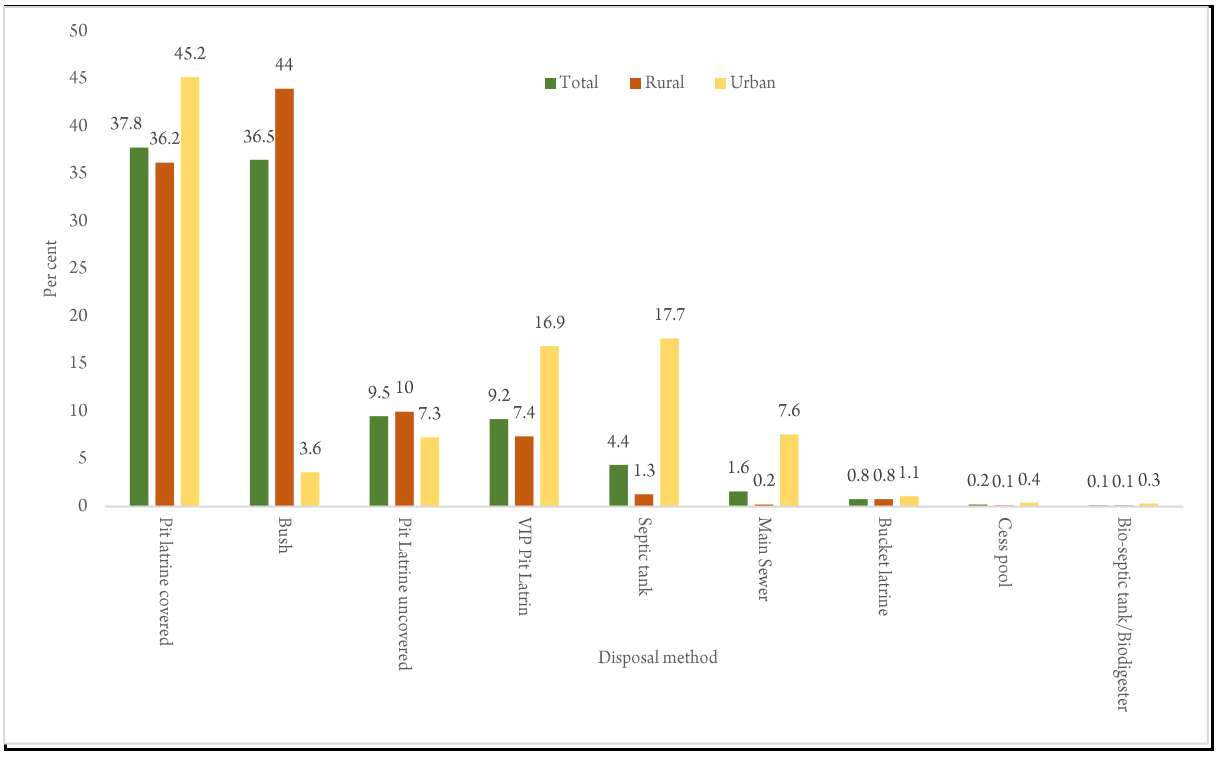


Figure 3. 23: Percentage distribution of Livestock-agricultural households access to sanitation by county, 2019

Table 3. 24: Percentage distribution of livestock based Agricultural household by access to sanitation and county, 2019

Country/EA type/County	Total	Main Sewer	Septic tank	Cess pool	VIP Pit Latrine	Pit latrine covered	Pit Latrine uncovered	Bucket latrine	Bush	Bio-septic tank/Biodigester
EA Type										
Total	**760,263**	**1.6**	**4.4**	**0.2**	**9.2**	**37.8**	**9.5**	**0.8**	**36.5**	**0.1**
Rural	**618,658**	**0.2**	**1.3**	**0.1**	**7.4**	**36.2**	**10**	**0.8**	**44**	**0.1**
Urban	**141,605**	**7.6**	**17.7**	**0.4**	**16.9**	**45.2**	**7.3**	**1.1**	**3.6**	**0.3**
County										
Total	**760,263**	**1.6**	**4.4**	**0.2**	**9.2**	**37.8**	**9.5**	**0.8**	**36.5**	**0.1**
Mombasa	4,800	11.2	35.2	1.3	9.6	31.2	6.6	2.5	2.2	0.3
Kwale	7,418	0.7	8.3	0.5	9.4	33.8	8.2	1.5	37.3	0.2
Kilifi	10,932	1.8	18.1	0.6	9.9	37.1	8.5	1.6	22.4	0
Tana River	17,508	0.1	1.5	0.3	1.6	13.1	4.3	0.4	78.5	0.1
Lamu	3,024	0.8	3.7	0.2	7.6	28.2	7.6	0.9	50.9	0.1
Taita-Taveta	8,232	0.6	9	0.3	15	55.9	12	0.3	6.9	0.1
Garissa	40,762	0.8	1	0.2	2.5	18.1	13.9	1.2	62.3	0.1
Wajir	58,691	0.4	1.5	0.1	1.3	22.2	18.9	4.4	51.2	0.1
Mandera	45,585	0.4	1.5	0.1	2	23.3	21.9	1.7	49	0
Marsabit	34,797	0	0.1	0	3.3	19	6.7	0.2	70.5	0
Isiolo	20,966	0.9	0.7	0	14.3	25.2	6.1	0.3	52.5	0
Meru	23,239	0.4	3.2	0.2	19.1	63.2	9.1	0.3	4.5	0
Tharaka-Nithi	6,334	0.3	3	0.1	16.7	66.9	11.3	0.3	1.2	0.1
Embu	7,401	1.8	7.1	0.3	14	66.8	9.1	0.2	0.7	0
Kitui	15,348	0.2	2.1	0.1	13.3	58.5	12.1	0.2	13.3	0.1
Machakos	13,726	1.8	10.1	0.2	15.8	58	11.2	0.3	2.1	0.4
Makueni	12,589	0.2	2.2	0.1	15	65.9	14.3	0.2	2.1	0.1
Nyandarua	5,533	0.3	4.2	0.3	22	66.3	6.5	0.1	0.3	0.1
Nyeri	9,498	4.2	7.6	0.3	13.6	69	5	0.1	0.1	0.1
Kirinyaga	9,001	0.8	6.8	0.2	16.3	72	3.5	0.2	0.2	0.1
Murang'a	11,022	2.2	5.6	0.1	15.1	71.5	5.1	0.1	0.2	0.1
Kiambu	35,499	2.9	18.1	0.2	19.1	55	3.7	0.2	0.2	0.6
Turkana	43,940	0	0.3	0.1	1	5.4	2.6	0.4	90	0.1
West Pokot	9,187	0	0.5	0.2	3.1	21.3	4	0.5	70.3	0
Samburu	28,638	0.1	0.5	0	1.3	9.2	2.6	0.3	85.8	0
Trans Nzoia	9,850	1	2.7	0.2	14.2	66.7	13.4	0.3	1.6	0
Uasin Gishu	9,142	4.7	8.8	0.1	17.1	60.1	8.6	0.1	0.3	0.1
Elgeyo-Marakwet	3,557	0.2	1.3		9.7	47.5	21.5	0.4	19.4	0
Nandi	5,505	0.3	2	0.1	20.4	65.5	10.2	0.2	1.3	0.1
Baringo	15,388	0.1	1.3	0.1	6.9	22.5	3.6	0.3	65.2	0.1
Laikipia	15,986	2.7	2.3	0.1	6.6	35.2	6.3	0.3	46.4	0.1
Nakuru	21,830	4.3	9.5	0.2	21.9	51.6	7.8	0.5	3.9	0.2
Narok	30,244	0.2	1.1	0	5.5	20.7	3.6	0.5	68.4	0
Kajiado	49,614	0.6	4.8	0.2	10.8	28.7	3.8	0.4	50.5	0.1
Kericho	4,678	1.4	3.4	0.1	11.4	70.2	11.4	0.5	1.6	0
Bomet	5,974	0.4	1.1	0.1	7.4	75.9	12.8	0.2	2	0.1
Kakamega	12,590	0.9	2.6	0.2	14.2	72.5	8.4	0.3	0.9	0.1
Vihiga	5,045	0.5	1.4	0.2	19	69.1	9.2	0.1	0.5	0
Bungoma	9,850	1.2	3.4	0.2	12.2	62.3	18	0.4	2.2	0.1
Busia	6,677	0.7	2.6	0.1	14	67.1	13	0.3	2.2	0
Siaya	8,421	0.2	1.9	0.1	13.4	68.7	10.6	0.3	4.8	0.1
Kisumu	12,753	2.9	5.7	0.2	10.3	66.5	10.6	0.4	3.2	0.1
Homabay	7,753	1.1	1.6	0.1	12.7	62.8	12.8	0.5	8.4	0.1
Migori	7,954	0.5	2	0.2	11.6	60.6	12.7	0.6	11.8	0.1
Kisii	11,862	1	2.1	0.2	13	60.2	22.2	0.4	0.8	0
Nyamira	6,816	0.4	1.8	0.2	14.7	61.9	19.8	0.4	0.9	0.1
Nairobi City	15,104	30.3	26	0.5	11.3	27.5	2.7	0.9	0.4	0.4

3.25. Main Purpose of Livestock Producing Households, 2019

Figure 3.24 shows that the proportion of livestock keeping households for subsistence production was high both in the rural and urban areas at 75.3 per cent and 75.9 per cent, respectively.

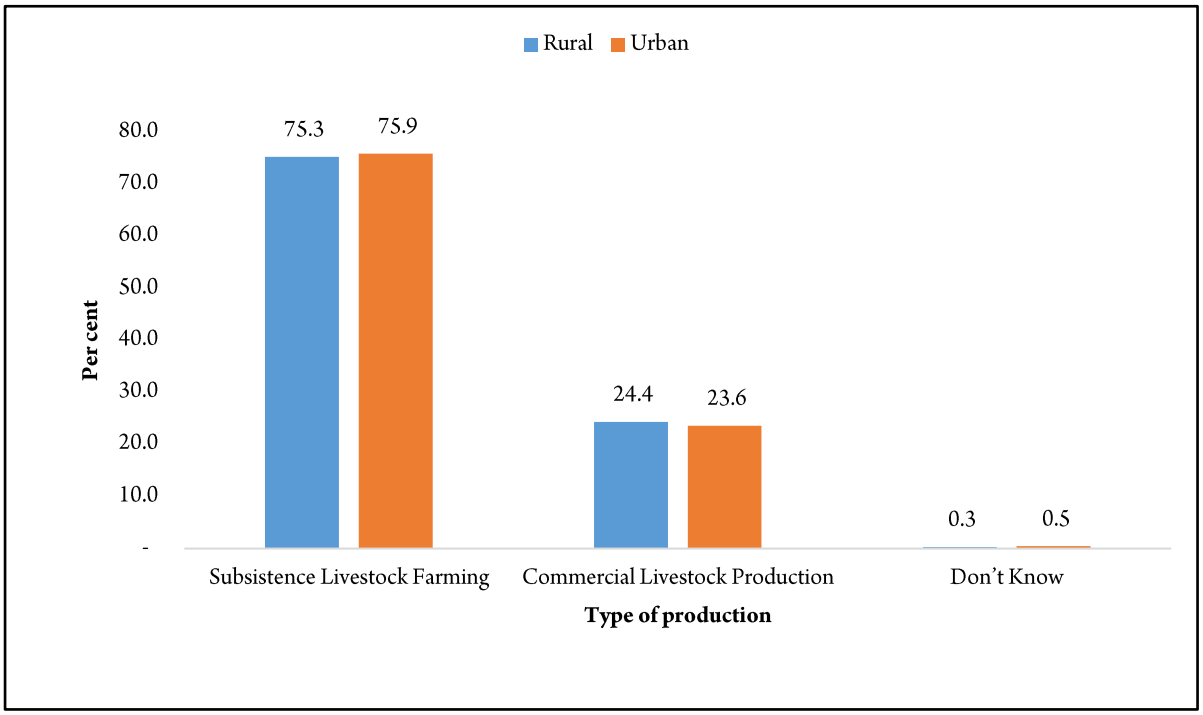


Figure 3. 24: Distribution of Livestock Keeping Households by type of production, 2019

Table 3.25 shows the distribution of livestock farming households by their main purpose of production and county for the year 2019. Nearly three quarters of the farming households practice livestock rearing. The counties with the highest proportion of households practicing livestock farming include Wajir, Marsabit, Garissa, Mandera and Isiolo, all with over 95 per cent. The proportion of households whose main purpose of livestock rearing was subsistence accounted for 54.6 per cent while those practicing commercial livestock farming accounted for 17.6 per cent. Counties with the highest proportion of subsistence livestock farming households include: Marsabit, Wajir, Samburu, Isiolo, Mandera and Garissa, all with over 85 per cent. Counties that lead with high proportions of livestock farming for commercial purpose includes Nyamira, Kericho, Kirinyaga, Nyeri, Embu, Murang'a, Bomet and Nandi all with over 30 per cent. Commercial livestock farming is least reared in Turkana, with less than one per cent of the livestock keeping households being involved. Similarly, less than five per cent of the households in Samburu, Marsabit, Wajir and Kilifi keep livestock for commercial purposes.

Table 3. 25: Percentage distribution of Livestock Farming Households by Main Purpose of Production and County, 2019

Number

County	Farming Households	Livestock Farming Households	Subsistence Livestock Farming	Commercial Livestock Production	Don't Know
Kenya	**6,360,303**	72.5	54.6	17.6	0.2
Mombasa	13,171	62.4	49.1	12.9	0.4
Kwale	109,040	64.4	58.0	6.2	0.1
Kilifi	162,648	60.2	55.3	4.9	0.1
Tana River	34,989	74.8	66.2	7.8	0.8
Lamu	20,254	64.9	48.1	16.6	0.2
Taita-Taveta	56,881	75.1	65.1	10.0	0.1
Garissa	46,109	96.1	85.6	6.6	3.9
Wajir	61,959	98.6	92.0	4.2	2.4
Mandera	61,583	95.9	87.8	5.0	3.0
Marsabit	38,811	96.5	92.9	2.6	1.0
Isiolo	23,996	95.8	89.6	5.4	0.8
Meru	274,081	71.0	41.1	29.9	0.1
Tharaka-Nithi	85,676	77.8	54.3	23.5	0.1
Embu	130,925	73.7	36.4	37.3	0.0
Kitui	215,003	80.9	73.6	7.2	0.1
Machakos	231,177	75.0	60.3	14.7	0.1
Makueni	193,384	80.6	65.2	15.3	0.1
Nyandarua	140,759	77.3	54.8	22.5	0.0
Nyeri	164,077	73.6	34.2	39.4	0.0
Kirinyaga	139,850	68.2	27.4	40.8	0.0
Murang'a	231,171	74.0	38.9	35.1	0.0
Kiambu	213,544	67.1	42.4	24.7	0.1
Turkana	62,469	87.7	82.6	0.9	4.1
West Pokot	89,569	85.2	76.8	8.2	0.2
Samburu	42,738	94.4	91.5	2.3	0.6
Trans Nzoia	139,981	67.4	53.1	14.2	0.1
Uasin Gishu	141,313	72.3	57.9	14.3	0.1
Elgeyo-Marakwet	74,709	70.0	54.4	15.6	0.1
Nandi	148,660	72.7	42.2	30.5	0.1
Baringo	100,242	78.4	67.1	10.9	0.3
Laikipia	90,457	74.3	64.7	9.4	0.2
Nakuru	284,495	65.8	52.5	13.2	0.1
Narok	181,080	81.3	66.1	14.8	0.4
Kajiado	96,177	82.8	71.9	9.7	1.2
Kericho	150,625	72.6	31.7	40.8	0.0
Bomet	152,384	81.6	49.8	31.7	0.0
Kakamega	334,835	68.2	61.1	7.1	0.0
Vihiga	113,645	72.6	60.9	11.7	0.0
Bungoma	280,086	68.0	53.2	14.8	0.1
Busia	149,675	68.4	62.2	6.2	0.0
Siaya	197,783	64.2	58.5	5.6	0.1
Kisumu	147,790	65.8	58.8	6.9	0.1
Homabay	199,693	62.5	55.7	6.7	0.0
Migori	172,024	63.8	56.3	7.4	0.1
Kisii	219,479	65.5	36.1	29.4	0.0
Nyamira	109,790	69.7	23.9	45.8	0.0
Nairobi City	31,516	68.6	52.7	15.6	0.2

3.26. Access to clean drinking water by County

A household is said to have access to clean drinking water source if it has water piped into its dwelling, water piped to a yard/plot, a public tap/standpipe, a tube well/borehole, a protected dug well, a protected spring and rainwater. Among the livestock farming households, 52.9 per cent had access to clean drinking water. Kiambu county (85.3 per cent) and Uasin Gishu county (82.8 per cent) had the highest livestock farming households who had access to clean drinking water. Households in Baringo (21.1 per cent) and Narok (23.6 per cent) counties were lowest in access to clean drinking water respectively.

Table 3. 26: Percentage distribution of livestock farming agricultural households by access to clean drinking water and County, 2019

	Total	Pond	Dam	Lake	Stream/River	Protected Spring	Unprotected Spring	Protected Well	Unprotected Well	Borehole/Tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/Harvested water	Water Vendor	Public tap/Standpipe
EA Type																
Total	760,263	3.8	9.0	0.7	18.9	4.3	2.0	6.2	6.6	18.2	5.4	7.6	0.8	3.2	6.3	7.2
Rural	618,658	4.5	10.5	0.8	22.1	4.7	2.3	6.0	7.7	20.2	2.9	4.6	0.3	2.8	4.6	6.1
Urban	141,605	0.6	2.4	0.3	4.7	2.5	0.6	6.7	1.7	9.7	16.6	20.6	3.2	4.8	13.7	11.8
County																
Total	760,263	3.8	9.0	0.7	18.9	4.3	2.0	6.2	6.6	18.2	5.4	7.6	0.8	3.2	6.3	7.2
Mombasa	4,800	0.1	0.6	-	-	1.4	0.4	5.0	0.9	5.4	11.7	7.3	6.4	0.8	35.9	24.1
Kwale	7,418	16.8	10.0	-	1.9	0.9	1.1	11.9	7.9	14.6	5.1	6.0	0.8	1.6	3.2	18.1
Kilifi	10,932	6.6	7.0	-	5.9	0.7	0.5	4.3	3.0	4.0	10.7	13.1	1.0	0.5	8.6	34.2
Tana River	17,508	3.6	17.1	-	20.1	0.4	0.7	7.2	15.9	18.9	1.2	2.7	0.1	0.2	4.7	7.2
Lamu	3,024	10.2	4.8	-	5.6	1.7	0.3	14.2	13.4	3.5	4.4	4.3	0.8	7.4	6.1	23.3
Taita-Taveta	8,232	0.3	0.9	1.6	15.3	3.4	1.2	2.8	1.0	6.2	9.9	21.6	0.3	1.1	14.3	20.2
Garissa	40,762	20.5	26.6	-	7.3	0.2	0.4	2.5	6.8	27.8	1.0	1.8	0.3	0.2	1.8	2.9
Wajir	58,691	5.8	26.3	-	0.1	0.2	0.3	5.1	7.3	41.4	0.9	1.4	0.2	0.3	9.0	1.6
Mandera	45,585	12.5	24.0	-	3.0	0.5	0.2	4.9	4.5	33.2	0.8	0.8	0.1	0.6	12.8	2.0
Marsabit	34,797	1.3	12.9	0.5	2.4	1.2	1.1	8.7	25.0	31.0	0.3	0.8	0.1	2.8	5.0	6.9
Isiolo	20,966	0.7	4.6	-	28.6	0.7	1.8	3.6	14.6	15.9	2.0	14.5	0.1	0.2	1.6	11.1
Meru	23,239	0.3	0.2	-	22.6	2.5	2.2	3.2	2.0	10.2	14.0	20.3	0.6	1.5	11.9	8.5
Tharaka-Nithi	6,334	0.4	0.2	-	34.1	0.4	0.9	2.7	3.7	6.8	18.0	24.2	0.3	0.3	1.8	6.3
Embu	7,401	0.6	2.8	-	20.1	0.4	0.7	2.6	2.1	4.5	21.9	28.8	0.2	1.1	5.4	8.7
Kitui	15,348	1.1	5.4	-	44.0	1.2	0.7	6.3	7.5	14.1	2.3	1.6	0.7	1.5	6.0	7.7
Machakos	13,726	0.8	4.3	-	17.8	3.0	3.8	6.6	4.6	24.2	3.2	2.5	4.2	8.0	11.0	6.2
Makueni	12,589	1.0	2.4	-	28.3	1.6	2.7	5.8	5.0	11.2	3.8	2.9	1.2	3.5	16.5	14.1
Nyandarua	5,533	0.2	2.4	-	10.0	1.5	1.0	20.8	3.0	5.0	9.6	19.8	0.5	20.0	3.3	3.1
Nyeri	9,498	0.2	0.2	-	14.1	0.5	0.4	2.1	0.9	1.0	23.7	39.3	0.3	8.9	3.2	5.3
Kirinyaga	9,001	0.1	-	-	33.2	1.2	0.7	6.5	0.9	4.2	17.4	26.0	0.7	1.4	2.4	5.2
Murang'a	11,022	0.5	0.5	-	22.8	1.8	1.8	10.2	2.1	6.7	17.9	18.2	0.4	7.2	4.7	5.2
Kiambu	35,499	0.2	0.4	-	5.7	0.6	0.4	11.5	0.4	12.0	24.3	25.9	1.8	2.9	7.8	6.3
Turkana	43,940	0.6	2.3	1.4	37.1	1.0	2.3	3.4	21.2	15.3	0.9	1.9	-	0.2	1.2	11.1
West Pokot	9,187	1.1	5.6	2.2	60.3	1.9	2.0	2.5	2.5	13.7	1.8	2.6	0.2	0.5	0.3	2.8
Samburu	28,638	2.3	7.8	0.2	41.4	1.3	1.9	4.2	17.2	15.0	0.5	1.6	0.2	0.5	1.1	4.9
Trans Nzoia	9,850	1.0	0.1	-	12.6	17.0	2.5	24.4	3.4	18.0	4.3	6.6	0.2	0.7	2.6	6.6
Uasin Gishu	9,142	0.9	0.4	-	4.2	3.5	1.5	28.4	7.6	17.9	10.5	12.8	0.8	1.8	2.5	7.1
Elgeyo-Marakwet	3,557	0.8	0.3	-	52.1	2.6	3.0	10.3	2.6	5.1	4.6	10.3	0.2	0.8	0.4	7.1
Nandi	5,505	0.9	0.8	-	36.2	10.2	11.4	13.7	3.5	7.5	4.6	5.5	0.1	1.9	0.6	2.8
Baringo	15,388	4.5	15.5	3.4	50.4	0.9	1.5	1.5	1.5	9.3	1.7	3.6	0.1	2.0	2.2	2.0
Laikipia	15,986	1.0	15.8	-	28.9	0.9	3.6	3.6	7.0	14.1	5.8	9.7	0.1	3.9	2.0	3.6
Nakuru	21,830	0.2	1.0	0.4	9.0	1.5	1.2	5.4	0.7	10.8	9.1	14.7	2.6	19.4	15.2	8.7
Narok	30,244	8.5	10.8	-	44.2	6.6	8.0	2.9	2.3	4.7	0.8	1.2	0.7	2.7	2.6	3.9
Kajiado	49,614	1.9	10.5	0.5	10.7	2.8	1.9	3.5	2.6	36.0	3.2	3.8	2.4	1.6	8.9	9.5
Kericho	4,678	0.7	0.5	-	41.9	7.9	4.6	6.1	1.4	3.9	9.5	10.9	0.2	5.0	1.6	5.9
Bomet	5,974	7.7	4.8	-	42.1	5.3	4.3	2.3	1.7	2.0	2.8	5.3	0.2	15.3	1.8	4.4
Kakamega	12,590	0.8	0.3	-	18.5	32.9	4.5	15.5	1.9	10.2	3.2	5.2	0.2	1.0	1.4	4.3
Vihiga	5,045	0.4	0.1	-	28.4	48.6	4.9	4.1	0.6	2.5	1.4	3.3	0.2	3.4	0.6	1.5
Bungoma	9,850	0.8	0.1	-	13.3	31.9	5.0	14.8	2.2	10.7	4.8	6.6	0.2	0.7	2.3	6.5
Busia	6,677	0.6	0.2	6.3	9.7	13.3	2.7	16.8	2.4	28.5	2.7	4.8	0.4	1.3	2.5	7.8
Siaya	8,421	2.6	2.3	9.9	15.2	9.0	2.3	5.0	1.2	13.4	2.3	4.7	0.5	10.0	5.2	16.4
Kisumu	12,753	1.0	0.6	0.9	13.9	2.2	0.8	8.6	0.7	12.2	7.4	10.7	0.6	11.9	6.7	21.7
Homabay	7,753	2.5	1.8	18.0	15.6	5.8	1.3	6.1	1.2	11.3	1.4	3.1	0.8	19.8	4.6	6.7
Migori	7,954	2.0	2.1	10.8	25.3	7.9	5.6	10.2	3.2	10.5	1.3	1.7	0.9	11.9	3.0	3.7
Kisii	11,862	0.3	0.2	-	36.6	42.7	7.3	2.9	1.0	1.0	0.8	1.0	0.3	4.7	0.4	0.9
Nyamira	6,816	0.4	0.5	-	34.2	36.6	9.2	4.0	1.1	1.0	0.7	0.8	0.1	9.8	0.8	0.6
Nairobi City	15,104	0.1	0.1	-	-	0.2	-	1.1	-	9.0	20.2	23.5	5.5	4.1	22.9	13.2

3.27. ICT use by Livestock farming Agricultural Households

ICT has been at the centre stage of economic development, notably through rapid technological advancement, facilitating speedy access of ideas and experiences, and prompt exchange of information. In today's world, access, usage and ownership of ICT are fundamental in linking communities, facilitating businesses and empowering communities socially and economically. Enhancement of access to information and communications services in rural, remote and underserved areas is, therefore, crucial to accelerating development. As shown in Table 3.27, of the total number of livestock farming population aged 15 years and above, 40.4 per cent used Mobile Phone, 13.2 per cent used the internet, 5.9 per cent used a computer, 1.3 per cent searched and bought online, 1.6 per cent searched only, and 0.6 per cent, searched and bought elsewhere.

Table 3. 27: Percentage distribution of livestock farming agricultural by ICT Use and County, 2019

	Mobile Phone				Used the internet from any location in the last 3 months			Used a computer/ Laptop/ Tablet from any location in the last 3 months			Bought or ordered goods or services online in the last 3 months				
	Total	Yes	No	DK	Yes	No	DK	Yes	No	DK	Searched and bought online	Searched and bought elsewhere	Searched only	Never	DK
EA Type															
Total	3,621,464	40.4	58.9	0.7	13.2	86.0	0.8	5.9	93.2	0.9	1.3	0.6	1.6	54.2	0.6
Rural	3,013,484	35.8	63.4	0.8	9.2	89.9	0.8	3.5	95.5	0.9	0.6	0.5	1.1	54.0	0.5
Urban	607,980	63.1	36.5	0.4	33.0	66.4	0.6	17.9	81.4	0.7	4.4	0.9	4.4	55.2	0.7
County															
Total	3,621,464	40.4	58.9	0.7	13.2	86.0	0.8	5.9	93.2	0.9	1.3	0.6	1.6	54.2	0.6
Mombasa	21,234	66.6	33.2	0.1	35.6	64.1	0.3	18.6	81.0	0.4	5.3	0.9	4.9	56.5	0.6
Kwale	36,897	44.7	54.9	0.5	13.0	86.3	0.7	4.7	94.6	0.7	0.9	0.3	1.1	57.5	0.6
Kilifi	53,631	49.0	50.8	0.2	16.0	83.6	0.4	7.7	91.8	0.5	1.6	0.4	2.0	57.5	0.3
Tana River	85,787	27.7	71.8	0.5	5.1	94.4	0.5	1.7	97.7	0.6	0.3	0.2	0.5	50.6	0.3
Lamu	13,211	37.9	61.8	0.4	10.2	89.4	0.4	2.7	96.8	0.5	0.7	0.3	1.0	54.4	0.3
Taita-Taveta	30,488	61.6	38.2	0.2	22.8	76.9	0.3	9.4	90.2	0.4	2.2	0.6	3.0	61.6	0.3
Garissa	264,047	33.4	65.1	1.5	8.8	89.7	1.5	3.3	95.2	1.6	0.5	0.6	0.7	52.1	1.1
Wajir	356,625	30.7	68.5	0.8	6.7	92.6	0.7	2.2	97.0	0.8	0.4	0.6	0.9	49.5	0.4
Mandera	309,695	28.0	70.2	1.8	6.9	91.3	1.8	2.6	95.5	1.9	0.4	0.6	0.7	45.7	0.9
Marsabit	205,140	29.3	70.2	0.5	4.9	94.6	0.5	1.9	97.5	0.6	0.2	0.3	0.6	54.0	0.3
Isiolo	110,783	37.3	62.4	0.3	8.1	91.5	0.3	3.0	96.6	0.4	0.4	0.4	1.1	53.5	0.2
Meru	85,808	54.4	45.3	0.3	16.0	83.6	0.5	5.7	93.9	0.5	1.1	0.6	2.2	62.7	0.4
Tharaka-Nithi	21,613	59.9	39.8	0.3	18.1	81.4	0.4	7.8	91.8	0.4	1.3	0.5	2.5	65.4	0.4
Embu	23,006	65.7	34.2	0.1	22.9	76.8	0.3	10.0	89.6	0.4	1.9	0.7	2.8	66.9	0.4
Kitui	62,583	47.5	52.0	0.5	12.4	87.0	0.7	4.7	94.6	0.7	1.0	0.6	1.4	60.9	0.5
Machakos	50,339	62.8	37.1	0.1	26.3	73.3	0.4	13.4	86.2	0.4	3.3	0.7	3.5	61.8	0.6
Makueni	48,720	55.1	44.6	0.3	14.9	84.2	0.9	6.0	93.1	0.8	1.3	0.5	1.5	64.3	0.9
Nyandarua	16,672	68.9	31.0	0.1	24.9	74.9	0.3	9.8	89.8	0.3	2.0	1.1	2.9	64.0	0.3
Nyeri	28,148	74.5	25.4	0.1	31.0	68.6	0.4	14.4	85.1	0.5	3.0	1.0	4.1	64.7	0.7
Kirinyaga	26,649	70.1	29.7	0.1	22.8	76.7	0.4	9.3	90.3	0.4	1.8	0.6	2.5	68.0	0.5
Murang'a	33,954	67.9	32.0	0.1	24.2	75.6	0.3	9.7	90.0	0.3	2.1	0.8	3.3	64.7	0.4
Kiambu	131,052	75.0	24.9	0.1	40.4	59.3	0.4	21.4	78.2	0.5	5.4	1.2	6.0	58.2	0.7
Turkana	264,739	14.2	83.8	2.0	3.5	94.5	2.0	1.3	96.7	2.0	0.2	0.4	0.4	55.9	1.0
West Pokot	41,578	19.7	79.6	0.8	5.6	93.7	0.7	2.2	97.0	0.8	0.3	0.3	0.7	51.1	0.7
Samburu	133,026	25.0	74.2	0.7	5.3	94.0	0.7	2.3	96.9	0.8	0.3	0.4	0.6	52.1	0.4
Trans Nzoia	43,184	47.3	52.4	0.3	15.7	83.8	0.4	6.5	93.0	0.5	1.1	0.4	1.8	56.1	0.4
Uasin Gishu	38,513	60.0	39.9	0.2	28.2	71.4	0.4	15.2	84.3	0.5	3.4	0.8	3.4	57.1	0.6
Elgeyo-Marakwet	13,612	43.7	56.1	0.2	13.6	86.0	0.4	5.9	93.6	0.5	1.0	0.9	1.9	59.6	0.4
Nandi	22,965	48.5	51.2	0.3	17.0	82.5	0.5	6.9	92.6	0.5	1.3	0.5	2.0	60.4	0.5
Baringo	73,294	26.4	73.0	0.6	9.0	90.4	0.6	3.9	95.4	0.7	0.6	0.4	1.2	52.5	0.4
Laikipia	64,641	42.0	57.6	0.4	12.4	87.1	0.5	5.3	94.2	0.5	1.0	0.5	1.4	54.6	0.3
Nakuru	83,277	63.1	36.7	0.2	28.9	70.6	0.5	13.8	85.7	0.6	3.0	0.8	3.8	57.8	0.7
Narok	144,537	34.2	65.2	0.7	8.6	90.7	0.7	3.1	96.1	0.8	0.5	0.4	1.1	48.1	0.4
Kajiado	231,860	43.0	56.5	0.5	15.0	84.5	0.5	6.9	92.5	0.7	1.5	0.6	2.0	50.8	0.5
Kericho	19,387	50.7	49.0	0.3	20.0	79.7	0.4	9.9	89.8	0.4	1.6	0.7	3.0	60.0	0.3
Bomet	24,821	47.7	52.0	0.3	16.8	82.7	0.5	6.9	92.6	0.5	1.3	0.7	2.3	58.8	0.4
Kakamega	48,256	49.4	50.3	0.3	15.7	84.0	0.4	7.2	92.4	0.4	1.5	0.5	1.7	58.3	0.4
Vihiga	19,177	50.0	49.9	0.2	15.1	84.6	0.3	7.0	92.7	0.3	1.5	0.5	1.8	59.6	0.3
Bungoma	40,502	44.6	55.1	0.3	15.1	84.5	0.4	7.1	92.4	0.5	1.3	0.7	1.8	56.3	0.4
Busia	26,604	49.8	50.0	0.2	16.6	83.0	0.4	7.8	91.8	0.3	1.8	0.6	2.0	58.2	0.4
Siaya	28,141	57.3	42.5	0.2	20.2	79.4	0.4	10.1	89.5	0.5	2.5	0.5	2.5	59.3	0.5
Kisumu	50,029	59.7	40.1	0.2	24.2	75.5	0.4	13.9	85.7	0.4	3.1	0.7	2.8	57.7	0.4
Homabay	29,282	54.3	45.6	0.1	19.4	80.3	0.3	10.2	89.6	0.2	2.3	0.7	2.2	56.5	0.2
Migori	33,668	48.2	51.5	0.3	16.2	83.3	0.5	7.9	91.5	0.6	1.6	0.7	2.0	55.1	0.4
Kisii	46,226	52.7	47.1	0.2	16.4	83.3	0.3	8.6	91.1	0.3	1.4	0.5	1.8	59.3	0.2
Nyamira	26,192	54.1	45.7	0.2	16.6	83.2	0.2	8.1	91.5	0.4	1.5	0.4	2.0	59.5	0.2
Nairobi City	57,871	78.8	21.2	0.1	49.2	50.4	0.3	29.3	70.2	0.5	8.3	1.4	6.9	53.5	1.0

Fishing Farming

3.28. Introduction

Table 3.28 shows the distribution of fishing households by purpose and county. Fishing households accounted for only 1.3 per cent of the total farming households. Rural areas accounted for 92.4 per cent of subsistence fishing activities compared to 7.6 per cent in urban areas. Commercial fishing in rural areas was undertaken by 87.5 per cent of the fishing households compared to 12.5 per cent in the urban areas.

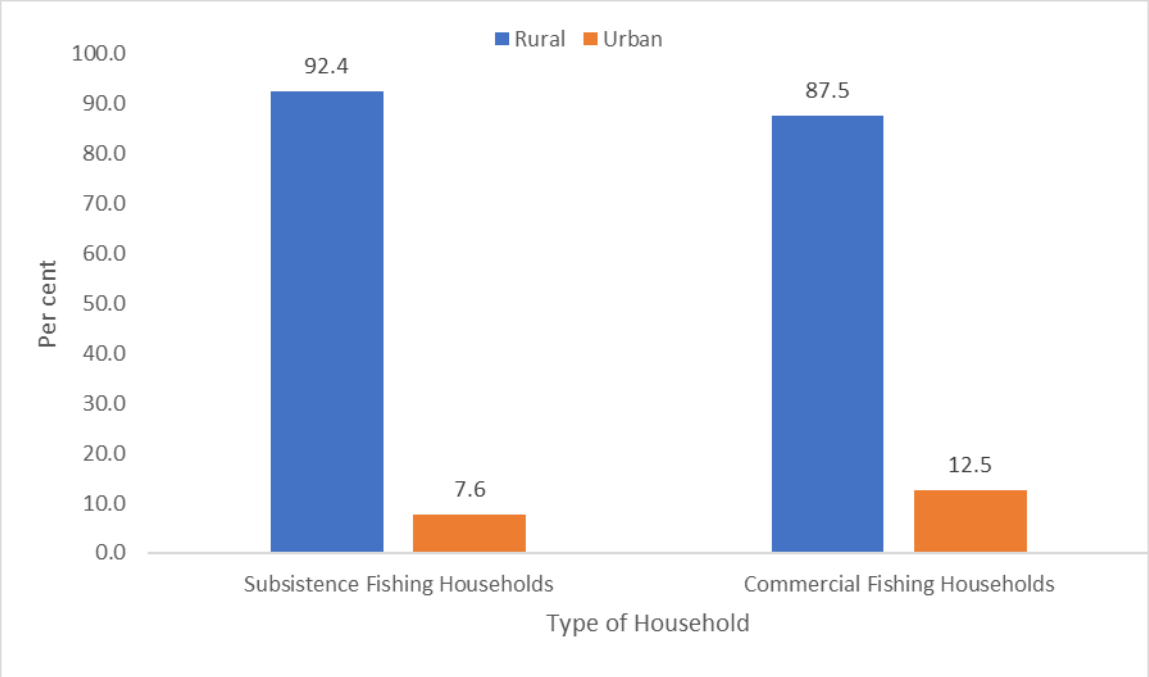


Figure 3. 25: Percentage distribution of fishing households purpose by enumeration area type, 2019.

According to Table 3.28, a total of 79,908 households were engaged in fishing with most of the households (91.4 per cent) being registered in the rural areas. The counties of Homa Bay (14.5 per cent), Siaya (11.4 per cent), Kisumu (6.3 per cent), Busia (5.6 per cent), Kilifi (5.6 per cent), Migori (5.6 per cent) and Kwale (4.0 per cent) registered the highest number of households engaged in fishing activities. Nairobi, Isiolo, Samburu, Elgeyo Marakwet and West Pokot counties registered the lowest proportion of households engaged in fishing.

Table 3. 28: Percentage distribution of fishing households by purpose and county, 2019

County	Farming Households	Fishing Households	Subsistence Fishing Households	Commercial Fishing Households	DK
Total	**6,360,303**	**79,908**	**63,512**	**15,975**	**421**
Total	100.0	100.0	100.0	100.0	100.0
Rural	90.1	91.4	92.4	87.5	93.6
Urban	9.9	8.6	7.6	12.5	6.4
County					
Mombasa	0.2	0.5	0.5	0.4	0.2
Kwale	1.7	4.0	4.5	2.1	1.4
Kilifi	2.6	5.6	6.4	2.3	1.0
Tana River	0.6	2.1	2.0	2.7	0.7
Lamu	0.3	1.9	1.8	2.1	2.1
Taita-Taveta	0.9	0.7	0.6	0.9	0.2
Garissa	0.7	1.5	1.3	1.8	16.2
Wajir	1.0	0.9	1.0	0.4	9.5
Mandera	1.0	1.2	1.2	0.9	5.2
Marsabit	0.6	1.1	1.3	0.1	1.7
Isiolo	0.4	0.2	0.3	0.1	-
Meru	4.3	2.0	1.2	5.0	0.5
Tharaka-Nithi	1.3	0.9	0.7	1.7	0.0
Embu	2.1	1.9	1.0	5.2	0.5
Kitui	3.4	1.0	1.0	0.9	0.5
Machakos	3.6	2.1	2.0	2.4	0.5
Makueni	3.0	1.1	0.9	1.6	0.0
Nyandarua	2.2	0.7	0.6	1.1	0.2
Nyeri	2.6	1.5	0.7	4.7	0.0
Kirinyaga	2.2	2.0	1.1	5.6	0.0
Murang'a	3.6	1.6	1.1	3.5	0.2
Kiambu	3.4	1.1	0.8	2.3	0.2
Turkana	1.0	2.2	2.6	0.2	34.7
West Pokot	1.4	0.4	0.5	0.4	0.5
Samburu	0.7	0.3	0.4	0.1	0.5
Trans Nzoia	2.2	0.9	0.7	1.6	0.5
Uasin Gishu	2.2	0.8	0.7	1.1	0.5
Elgeyo-Marakwet	1.2	0.4	0.4	0.5	0.2
Nandi	2.3	1.2	0.8	3.1	1.0
Baringo	1.6	0.8	0.9	0.6	1.2
Laikipia	1.4	0.6	0.5	0.7	0.0
Nakuru	4.5	1.3	1.2	1.8	0.7
Narok	2.8	1.0	0.9	1.1	1.9
Kajiado	1.5	0.7	0.6	0.7	2.1
Kericho	2.4	0.8	0.5	2.2	0.2
Bomet	2.4	1.0	0.8	2.0	0.0
Kakamega	5.3	3.8	4.0	3.4	0.2
Vihiga	1.8	0.8	0.7	1.0	0.0
Bungoma	4.4	2.3	2.2	2.9	1.0
Busia	2.4	5.6	6.3	2.9	1.4
Siaya	3.1	11.4	12.8	5.8	2.6
Kisumu	2.3	6.3	6.9	4.0	1.4
Homabay	3.1	14.5	16.3	7.6	1.9
Migori	2.7	5.6	6.1	3.2	6.7
Kisii	3.5	1.2	0.8	3.1	0.0
Nyamira	1.7	0.6	0.3	2.0	0.0
Nairobi City	0.5	0.0	0.0	0.0	0.0

As seen in Table 3.29, counties with the highest proportion of one member household engaged in fishing activities include Homa Bay (21.2 per cent), Siaya (16.6 per cent), Nakuru (7.6 per cent), Migori (7.1 per cent), Kilifi (7.0 per cent) and Busia (5.7 per cent). This is an indication of involvement of the youths in fishing activities in these counties. Majority of fishing households in Homa Bay (19.4 per cent) and Turkana (14.7 per cent) registered highest proportion of households with more than five (5+) members. This implies that most households in these counties rely on fishing activities as a main source of livelihood.

Table 3. 29: Percentage distribution of fishing households by household size, 2019

	Fishing Households					
	Total	**1**	**2**	**3**	**4**	**5+**
EA Type						
Total	**29,041**	**6,328**	**3,707**	**4,283**	**4,155**	**10,568**
Rural	70.5	66.1	66.0	69.0	72.2	74.5
Urban	29.5	33.9	34.0	31.0	27.8	25.5
County						
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Mombasa	3.6	4.6	3.8	3.1	2.5	3.5
Kwale	4.3	3.6	3.4	3.6	4.5	5.2
Kilifi	6.6	7.0	5.4	5.9	5.9	7.4
Tana River	1.6	1.5	1.5	1.3	1.6	1.7
Lamu	5.7	3.4	4.5	5.2	5.3	7.7
Taita-Taveta	0.5	0.7	0.7	0.6	0.3	0.2
Garissa	0.8	0.1	0.5	0.7	0.7	1.3
Wajir	0.5	0.1	0.3	0.4	0.5	1.0
Mandera	0.6	0.1	0.2	0.3	0.3	1.2
Marsabit	1.6	0.9	0.7	1.5	1.6	2.3
Isiolo	0.1	0.1	0.1	0.1	0.0	0.1
Meru	0.3	0.6	0.5	0.3	0.3	0.2
Tharaka-Nithi	0.2	0.2	0.2	0.3	0.1	0.1
Embu	0.5	1.0	0.5	0.6	0.4	0.2
Kitui	0.2	0.3	0.3	0.3	0.1	0.2
Machakos	0.7	1.2	0.9	0.6	0.6	0.4
Makueni	0.2	0.4	0.2	0.3	0.2	0.1
Nyandarua	0.1	0.2	0.2	0.1	0.1	0.0
Nyeri	0.2	0.7	0.2	0.1	0.2	0.1
Kirinyaga	0.6	1.3	0.4	0.5	0.5	0.2
Murang'a	0.3	0.9	0.2	0.3	0.2	0.1
Kiambu	1.4	2.4	1.7	1.6	1.5	0.7
Turkana	9.4	2.0	6.0	8.9	10.8	14.7
West Pokot	0.1	0.0	0.2	0.0	0.1	0.2
Samburu	0.1	0.1	0.1	0.1	0.2	0.1
Trans Nzoia	0.2	0.3	0.2	0.4	0.2	0.2
Uasin Gishu	0.3	0.4	0.3	0.3	0.4	0.2
Elgeyo-Marakwet	0.1	0.2	0.1	0.1	0.1	0.0
Nandi	0.2	0.3	0.2	0.0	0.3	0.2
Baringo	0.6	0.8	0.6	0.4	0.6	0.5
Laikipia	0.1	0.1	0.2	0.0	0.0	0.1
Nakuru	5.0	7.6	6.8	6.7	4.8	2.3
Narok	0.2	0.2	0.2	0.2	0.2	0.2
Kajiado	0.4	0.5	0.5	0.5	0.4	0.3
Kericho	0.1	0.2	0.1	0.1	0.1	0.1
Bomet	0.1	0.1	0.2	0.1	0.1	0.1
Kakamega	0.4	0.4	0.5	0.3	0.4	0.3
Vihiga	0.1	0.1	0.1	0.0	0.0	0.0
Bungoma	0.3	0.3	0.4	0.3	0.4	0.3
Busia	5.7	5.7	6.7	6.2	5.0	5.4
Siaya	12.6	16.6	15.3	13.1	12.7	9.0
Kisumu	3.7	4.2	3.7	3.5	4.1	3.5
Homabay	21.2	21.2	23.2	22.0	23.3	19.4
Migori	8.1	7.1	7.8	8.5	8.0	8.7
Kisii	0.3	0.3	0.4	0.3	0.4	0.2
Nyamira	0.1	0.1	-	0.1	0.1	0.1
Nairobi City	-	-	-	-	-	-

Figure 3.26 shows the distribution of pure fishing households and size of the household. A bigger percentage of households whose members were greater than 5 were engaged in fishing, accounting for 36 per cent. Households that have a size of two (2) members account for 13 per cent while those with sizes of 3 and 4 have shares of 15 and 14 per cent, respectively. A one (1) member household size, with a share of 22 per cent, has a higher likelihood of being involved in fishing than 2, 3 and 4 households' members' sizes.

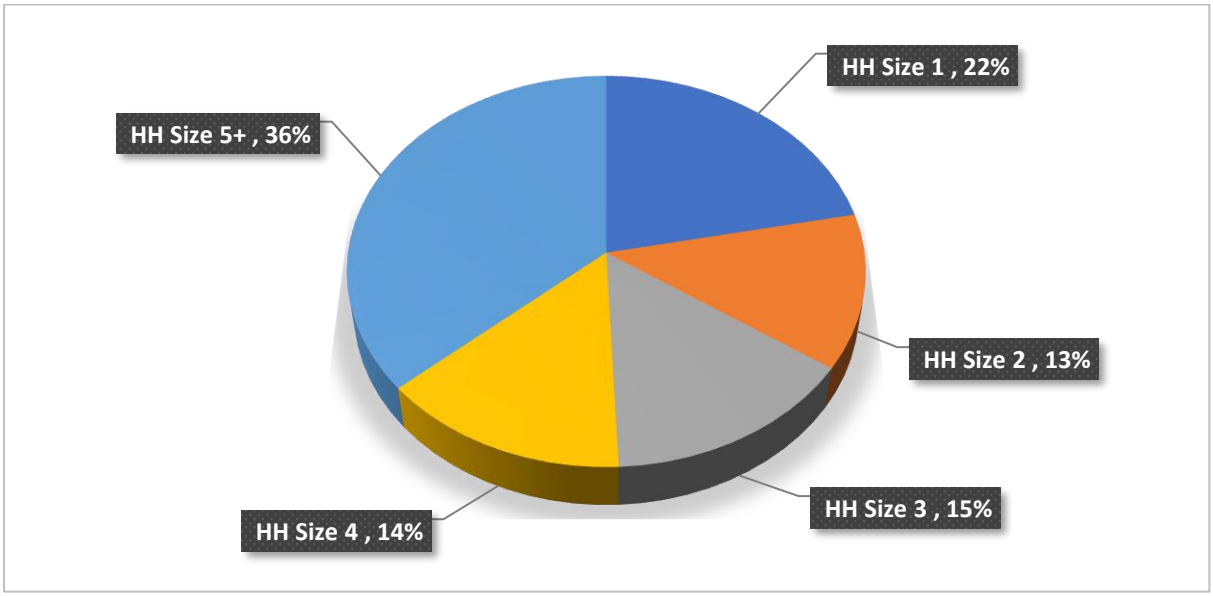


Figure 3. 26: Percentage distribution of pure fishing households by size

Figure 3.27 presents the distribution of pure fishing households and size of the household and rural and urban areas. The proportion of fishing households in rural areas rises with increase in household size. Further, the proportion of fishing households in rural households is about double the urban households for 1-3 member households. However, the proportion of rural households almost triples as the household size increases above this threshold.

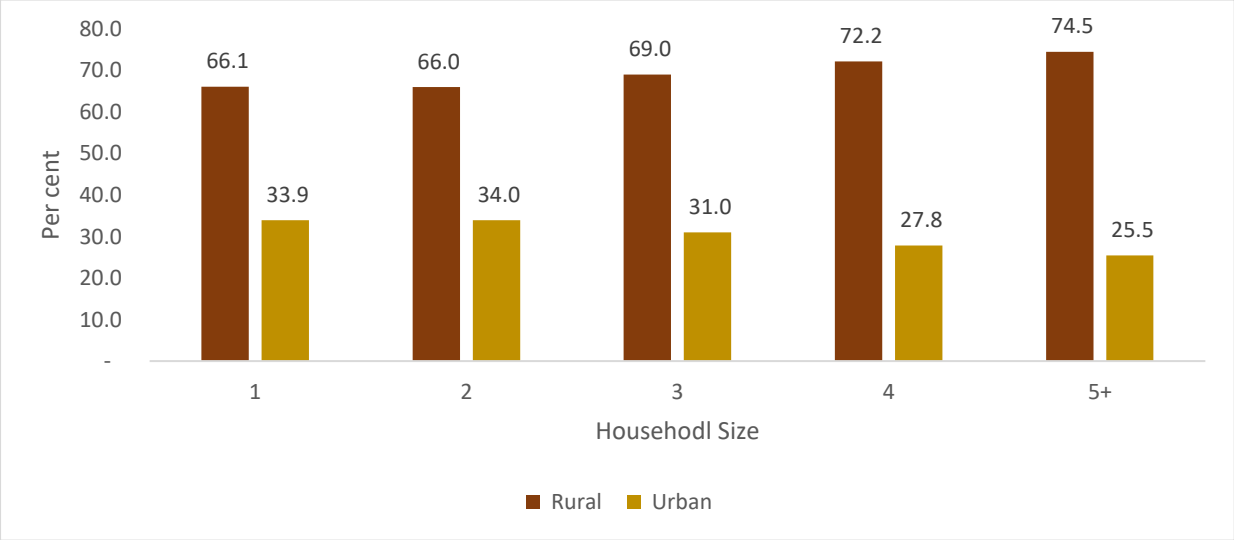


Figure 3. 27: Distribution of pure fishing households by household size and rural/urban

3.29. Distribution of pure fishing households by age of household head

Table 3.30 and Figure 3.28 show that 50 per cent of fishing households head were below 34 years, 38 per cent were between 35-54 years and 12 per cent above 55 years. Overall, 70.4 per cent of the fishing households resided in the rural areas. Homabay (20.8 per cent), Siaya (14.9 per cent), Turkana (11.0 per cent), Nakuru (8.6 per cent), Migori (7.8 per cent) and Busia (5.4 per cent) had the highest proportion of fishing households' head aged below 25 years engaged in fishing activities. These counties combined accounted for 68.5 per cent of all the fishing households in this age group. For household heads above 65 years engaged in fishing activities, Homabay (14.7 per cent), Lamu (10.7 per cent), Kilifi (9.3 per cent), Turkana (8.7 per cent), Kwale (7.2 per cent), Migori (6.9 per cent) and Mombasa (5.7 per cent) led and in total accounted for more than 60 per cent of fishing households in this category.

Table 3. 30: Percentage distribution of pure fishing households by age of household head

	Total	Under 25	25 - 34	35 - 44	45 - 54	55 - 64	65+
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Rural	**70.4**	**69.0**	**71.3**	**70.5**	**67.7**	**69.7**	**75.7**
Urban	**29.6**	**31.0**	**28.7**	**29.5**	**32.3**	**30.3**	**24.3**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mombasa	3.6	2.3	2.7	3.4	6.0	5.8	5.7
Kwale	4.3	2.5	3.4	4.7	5.8	6.0	7.2
Kilifi	6.6	4.3	5.0	7.0	9.8	10.7	9.3
Tana River	1.6	1.4	1.2	1.5	2.0	2.9	2.0
Lamu	5.7	2.8	4.1	5.3	8.0	13.1	10.7
Taita-Taveta	0.5	0.5	0.4	0.4	0.8	0.3	0.9
Garissa	0.8	0.7	0.6	0.8	0.9	1.2	1.1
Wajir	0.5	0.7	0.5	0.5	0.6	0.8	0.6
Mandera	0.6	0.7	0.5	0.5	0.5	0.6	0.5
Marsabit	1.6	1.4	1.4	1.3	1.8	2.9	2.2
Isiolo	0.1	0.2	0.1	0.1	0.0	0.1	0.1
Meru	0.3	0.3	0.3	0.3	0.4	0.1	0.7
Tharaka-Nithi	0.2	0.1	0.1	0.1	0.3	0.2	0.2
Embu	0.5	0.4	0.4	0.6	0.7	0.6	0.5
Kitui	0.2	0.3	0.1	0.1	0.1	0.5	0.6
Machakos	0.7	0.5	0.7	0.7	0.8	0.6	0.8
Makueni	0.2	0.3	0.2	0.3	0.2	0.1	0.1
Nyandarua	0.1	0.2	0.1	0.1	0.1	0.1	0.3
Nyeri	0.2	0.3	0.2	0.3	0.3	0.2	0.1
Kirinyaga	0.6	0.6	0.5	0.5	0.9	0.5	0.7
Murang'a	0.3	0.5	0.3	0.3	0.4	0.2	0.4
Kiambu	1.4	2.4	1.4	1.2	1.5	1.1	0.6
Turkana	9.4	11.0	9.7	8.7	9.1	8.2	8.7
West Pokot	0.1	0.1	0.1	0.1	0.1	0.3	0.1
Samburu	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Trans Nzoia	0.2	0.3	0.2	0.2	0.3	0.1	0.6
Uasin Gishu	0.3	0.6	0.3	0.3	0.3	0.3	-
Elgeyo-Marakwet	0.1	0.2	0.1	0.0	0.1	0.1	0.3
Nandi	0.2	0.1	0.2	0.2	0.3	0.3	0.4
Baringo	0.6	0.7	0.5	0.5	0.7	0.6	0.5
Laikipia	0.1	0.1	0.1	0.1	0.1	0.2	0.3
Nakuru	5.0	8.6	5.5	4.6	3.8	2.4	1.3
Narok	0.2	0.4	0.2	0.2	0.2	0.4	0.1
Kajiado	0.4	0.5	0.4	0.4	0.4	0.4	0.5
Kericho	0.1	0.1	0.1	0.1	0.2	0.1	0.2
Bomet	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Kakamega	0.4	0.3	0.3	0.3	0.5	0.5	1.2
Vihiga	0.1	0.1	0.1	0.0	-	0.1	0.2
Bungoma	0.3	0.2	0.2	0.4	0.3	0.2	0.6
Busia	5.7	5.4	5.6	6.0	5.4	6.0	5.4
Siaya	12.6	14.9	15.4	12.8	8.3	5.1	5.7
Kisumu	3.7	4.0	4.0	3.5	3.0	3.0	5.7
Homabay	21.2	20.8	23.9	22.7	16.8	15.0	14.7
Migori	8.1	7.8	8.7	8.5	7.3	6.5	6.9
Kisii	0.3	0.2	0.2	0.3	0.3	0.6	0.7
Nyamira	0.1	0.1	0.1	0.1	0.1	-	0.2
Nairobi City	-	-	-	-	-	-	-

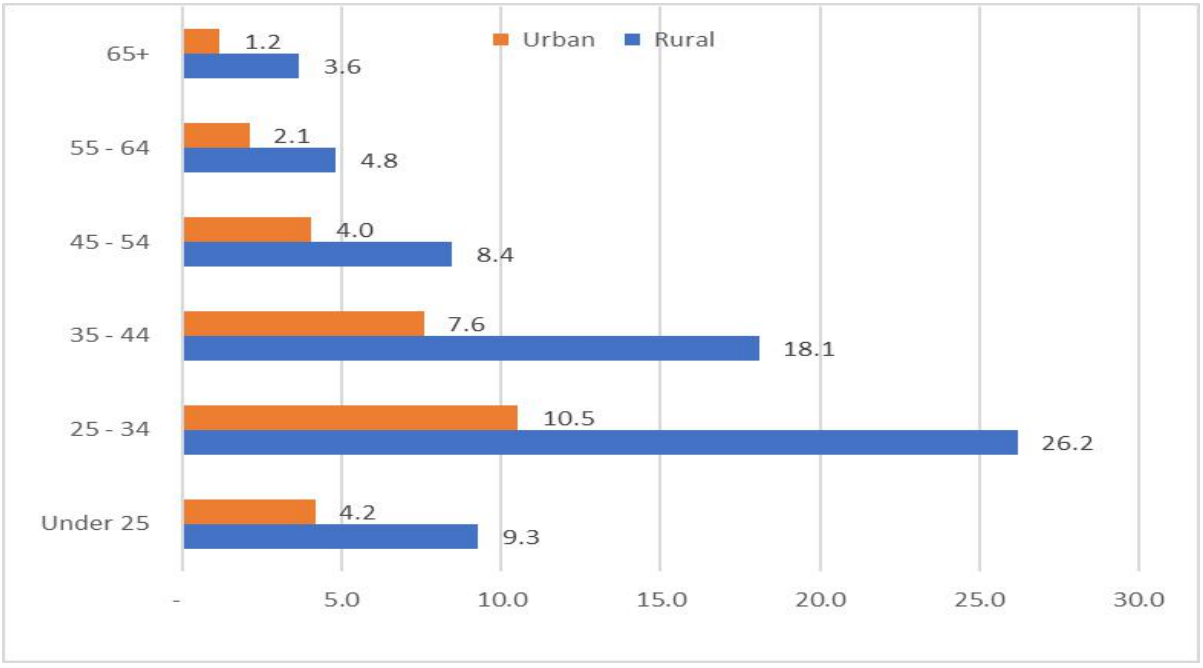


Figure 3. 28: Distribution of Fishing Households by age of the household head and residence, 2019

3.30. Distribution of pure fishing households by education level of household head

Fishing is one of the major activities in the agricultural sector. It has positively impacted the livelihood of the fishing communities in ways such as poverty alleviation, source of income, source of food and has led to women and youth empowerment through creation of employment. The sector however attracts most of unskilled workers as it can be carried out with little or no knowledge; this has encouraged school dropouts since young people are assured of a ready income. Fishing households comprise mostly people with lower level of education. Even though education is vital for proper management of fisheries resources, the Census showed that the number of household heads with tertiary level of education stands at only 4 per cent compared to those that had primary education, which was the highest at 51 per cent followed by those who never attained any kind of education at 23 per cent (Figure 3.29).

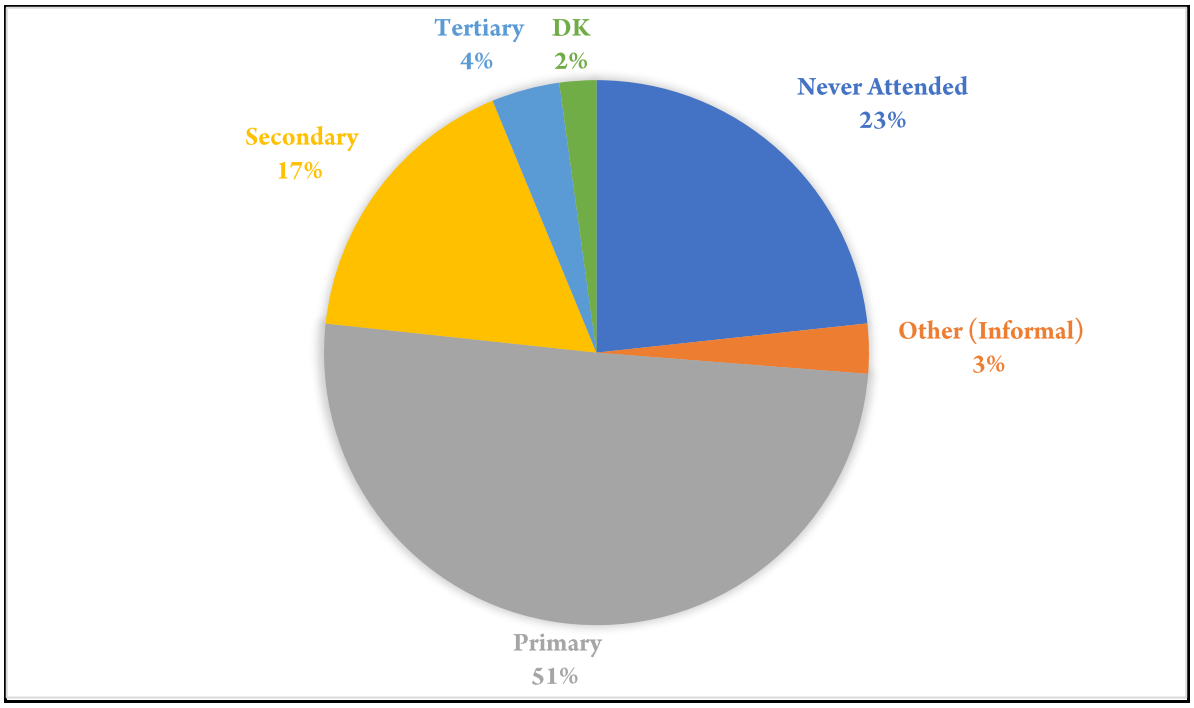


Figure 3. 29: Percentage distribution of pure fishing households by level of education

As shown in Table 3.31, rural areas had the higher percentage of those involved in pure fishing at 70.4 per cent while the urban had 29.6 per cent. Homabay, Siaya and Turkana were leading with 6,164, 3,657 and 2,730 in terms of those involved in fishing. Vihiga, Elgeyo Marakwet, Laikipia and Nyamira had the lowest number of households engaged in fishing, all registering below 30 households. Homabay is leading in number of household heads with tertiary education at 0.6 per cent.

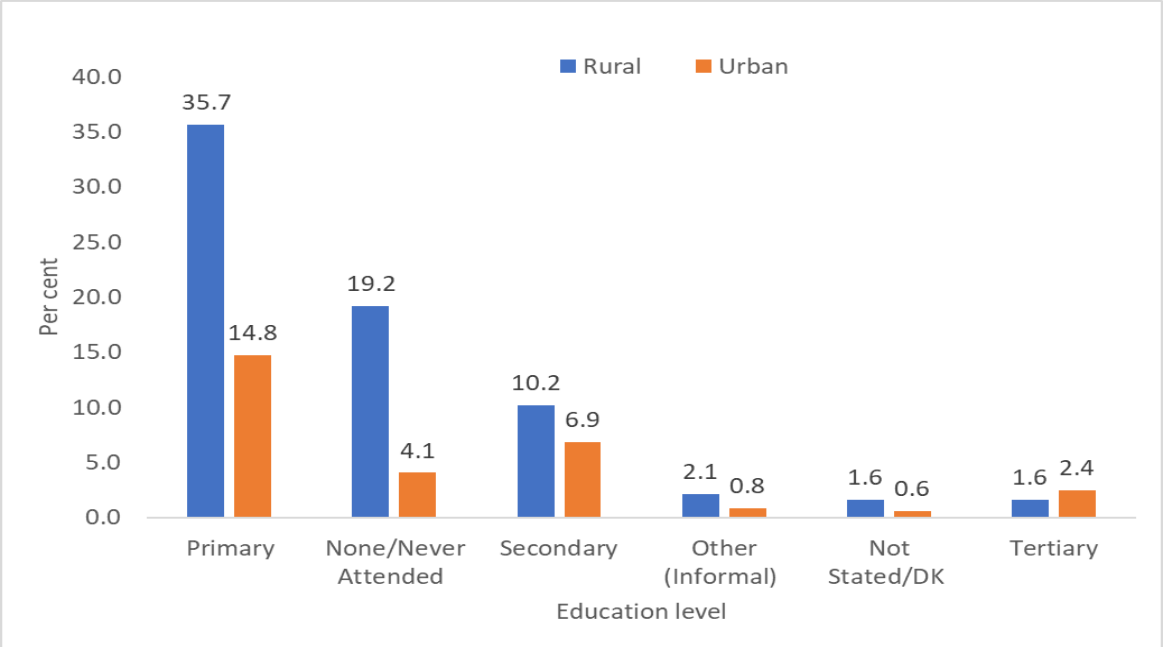


Figure 3. 30: Distribution of pure fishing households in EA type by level of education

Table 3. 31: Percentage distribution of pure fishing households by level of education and county, 2019

	Total	None/Never Attended	Other (Informal)	Primary	Secondary	Tertiary	Not Stated/DK
EA Type							
Total	**29,041**	**23.3**	**3.0**	**50.5**	**17.1**	**4.0**	**2.2**
Rural	20,460	19.2	2.1	35.7	10.2	1.6	1.6
Urban	8,581	4.1	0.8	14.8	6.9	2.4	0.6
County							
Total	**29,041**	23.3	3.0	50.5	17.1	4.0	2.2
Mombasa	1,037	0.7	0.2	1.7	0.7	0.3	0.0
Kwale	1,242	1.2	0.1	2.2	0.5	0.1	0.2
Kilifi	1,922	1.8	0.3	3.4	0.7	0.2	0.3
Tana River	451	0.4	0.1	0.8	0.3	0.0	0.0
Lamu	1,643	2.1	0.3	2.4	0.6	0.2	0.2
Taita-Taveta	134	0.0	0.0	0.3	0.1	0.0	0.0
Garissa	229	0.7	0.0	0.0	0.0	0.0	0.0
Wajir	157	0.5	0.0	0.0	0.0	0.0	0.0
Mandera	161	0.5	0.0	0.0	0.0	0.0	0.0
Marsabit	455	1.4	0.0	0.1	0.0	0.0	0.0
Isiolo	27	0.0	0.0	0.0	0.0	0.0	0.0
Meru	97	0.1	0.0	0.1	0.1	0.0	0.0
Tharaka-Nithi	45	0.0	0.0	0.1	0.0	0.0	0.0
Embu	148	0.1	0.0	0.3	0.1	0.0	0.0
Kitui	58	0.0	0.0	0.1	0.0	0.0	0.0
Machakos	195	0.1	0.0	0.3	0.2	0.1	0.0
Makueni	65	0.0	0.0	0.1	0.1	0.0	0.0
Nyandarua	35	0.0	0.0	0.1	0.0	0.0	0.0
Nyeri	68	0.0	0.0	0.1	0.1	0.1	0.0
Kirinyaga	164	0.0	0.0	0.3	0.1	0.1	0.0
Murang'a	94	0.0	0.0	0.2	0.1	0.0	0.0
Kiambu	419	0.0	0.0	0.5	0.5	0.4	0.0
Turkana	2,730	7.3	0.2	1.4	0.3	0.1	0.1
West Pokot	38	0.1	0.0	0.0	0.0	0.0	0.0
Samburu	34	0.1	0.0	0.0	0.0	0.0	0.0
Trans Nzoia	72	0.0	0.0	0.1	0.1	0.0	0.0
Uasin Gishu	89	0.0	0.0	0.1	0.1	0.1	0.0
Elgeyo-Marakwet	22	0.0	0.0	0.0	0.0	0.0	0.0
Nandi	58	0.0	0.0	0.1	0.0	0.0	0.0
Baringo	164	0.2	0.0	0.2	0.1	0.1	0.0
Laikipia	27	0.0	0.0	0.0	0.0	0.0	0.0
Nakuru	1,460	0.2	0.1	2.4	1.9	0.4	0.1
Narok	64	0.1	0.0	0.0	0.0	0.0	0.0
Kajiado	123	0.1	0.0	0.1	0.1	0.1	0.0
Kericho	42	0.0	0.0	0.1	0.0	0.0	0.0
Bomet	31	0.0	0.0	0.1	0.0	0.0	0.0
Kakamega	108	0.1	0.0	0.2	0.0	0.0	0.0
Vihiga	20	0.0	0.0	0.0	0.0	0.0	0.0
Bungoma	87	0.1	0.0	0.1	0.1	0.0	0.0
Busia	1,648	0.7	0.2	3.5	1.1	0.1	0.1
Siaya	3,657	0.9	0.3	8.4	2.3	0.3	0.3
Kisumu	1,087	0.4	0.3	2.2	0.6	0.2	0.0
Homabay	6,164	2.4	0.6	12.8	4.6	0.6	0.3
Migori	2,357	0.8	0.1	5.3	1.4	0.2	0.3
Kisii	86	0.1	0.0	0.1	0.1	0.1	0.0
Nyamira	27	0.0	0.0	0.0	0.0	0.0	0.0
Nairobi City	-	0.0	0.0	0.0	0.0	0.0	0.0

3.31. Distribution of pure fishing households by access to sanitation facilities

Sanitation is a basic necessity that contributes to better human health, dignity and quality of life. The economic and social benefits of sanitation interventions create more time for productive pursuits, higher productivity, better performance at school and work, lower medical costs. Closer access leads to a better living environment, dignity, safety, convenience, comfort and status. In Kenya basic sanitation services are not accessible to majority of the population. The result is that the poor are deprived of decent and dignified lifestyles leading to deterioration of health, wellbeing and human environment.

This 2019 Census report gathered information of the household's access to sanitation facilities in relation to fishing. Figure 3.31 and Table 3.32 show that majority (47.9 per cent) of the population practicing pure fishing has access to the pit latrine covered toilets. Unfortunately, a part of the population (25.1 per cent) lacked basic sanitation and practiced open defecation. Turkana, Homabay and Siaya counties recorded the highest proportion of fishing households that used bush hence lacked access to sanitation. Use of hygienic toilets including ventilated and improved pit (VIP) latrines recorded 9.9 per cent while use of septic tanks recorded 4.6 per cent in areas practicing fishing.

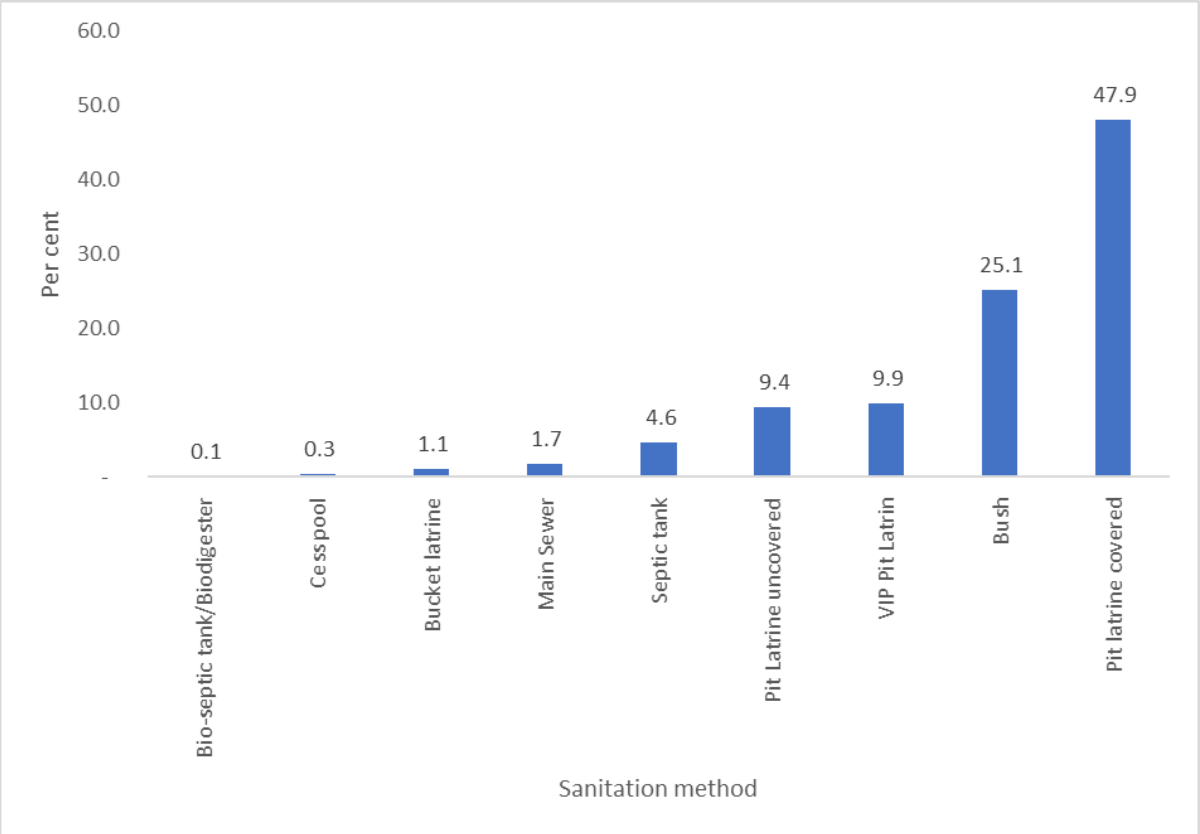


Figure 3. 31: Distribution of pure fishing households by sanitation methods, 2019

Table 3. 32: Percentage distribution of pure fishing households by sanitation methods and county, 2019

Number

Counties	Total	Main Sewer	Septic tank	Cess pool	VIP Pit Latrine	Pit latrine covered	Pit Latrine uncovered	Bucket latrine	Bush	Bio-septic tank/Biodigester
Total	**29,041**	1.7	4.6	0.3	9.9	47.9	9.4	1.1	25.1	0.1
Mombasa	1,037	0.4	0.8	0.0	0.4	1.2	0.3	0.1	0.2	0.0
Kwale	1,242	0.0	0.2	0.0	0.5	1.4	0.3	0.1	1.7	-
Kilifi	1,922	0.3	1.1	0.1	0.8	2.3	0.7	0.1	1.4	-
Tana River	451	-	0.0	-	0.1	0.6	0.2	0.0	0.7	0.0
Lamu	1,643	0.1	0.5	0.1	0.7	3.0	0.6	0.2	0.3	0.0
Taita-Taveta	134	0.0	0.0	-	0.0	0.3	0.1	-	0.1	-
Garissa	229	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.4	0.0
Wajir	157	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.0
Mandera	161	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	-
Marsabit	455	0.0	-	0.0	0.1	0.3	0.1	-	1.1	-
Isiolo	27	-	0.0	-	0.0	0.0	0.0	-	0.0	-
Meru	97	-	0.0	-	0.1	0.2	0.0	0.0	0.0	-
Tharaka-Nithi	45	-	0.0	-	0.0	0.1	0.0	-	0.0	-
Embu	148	0.0	0.0	-	0.1	0.3	0.1	-	0.0	-
Kitui	58	0.0	0.0	-	0.0	0.1	0.0	0.0	0.0	-
Machakos	195	0.0	0.1	0.0	0.1	0.3	0.1	-	0.0	0.0
Makueni	65	-	0.0	-	0.0	0.2	0.0	-	0.0	-
Nyandarua	35	-	0.0	-	0.0	0.1	0.0	-	0.0	-
Nyeri	68	0.0	0.0	-	0.0	0.1	0.0	-	-	-
Kirinyaga	164	0.0	0.0	-	0.1	0.4	0.1	-	0.0	-
Murang'a	94	0.0	0.0	0.0	0.1	0.1	0.0	-	-	-
Kiambu	419	0.1	0.4	0.0	0.3	0.6	0.1	-	0.0	0.0
Turkana	2,730	0.0	0.0	0.0	0.1	0.6	0.2	0.0	8.5	0.0
West Pokot	38	-	-	-	0.0	0.0	0.0	0.0	0.1	-
Samburu	34	-	-	-	0.0	0.0	0.0	-	0.1	-
Trans Nzoia	72	0.0	0.0	-	0.0	0.1	0.0	0.0	0.0	-
Uasin Gishu	89	0.1	0.1	-	0.0	0.1	0.0	-	0.0	-
Elgeyo-Marakwet	22	-	-	-	0.0	0.0	0.0	-	0.0	-
Nandi	58	-	0.0	-	0.0	0.1	0.0	-	0.0	-
Baringo	164	0.0	0.0	-	0.1	0.2	0.0	0.0	0.2	-
Laikipia	27	0.0	0.0	-	0.0	0.0	0.0	-	0.0	-
Nakuru	1,460	0.2	0.5	0.0	1.3	2.7	0.3	0.0	0.0	0.0
Narok	64	0.0	0.0	-	0.0	0.1	0.0	-	0.1	-
Kajiado	123	0.0	0.0	0.0	0.1	0.2	0.0	-	0.1	-
Kericho	42	0.0	0.0	-	0.0	0.1	0.0	-	0.0	-
Bomet	31	-	-	-	0.0	0.1	0.0	-	-	-
Kakamega	108	0.0	0.0	-	0.0	0.3	0.0	0.0	-	-
Vihiga	20	-	-	-	0.0	0.0	0.0	-	0.0	-
Bungoma	87	0.0	0.0	-	0.0	0.2	0.0	0.0	0.0	-
Busia	1,648	0.0	0.0	-	0.5	3.7	0.9	0.0	0.5	0.0
Siaya	3,657	-	0.0	0.0	1.0	7.7	1.1	0.1	2.6	0.0
Kisumu	1,087	0.1	0.1	-	0.3	2.4	0.5	0.0	0.4	-
Homabay	6,164	0.1	0.1	0.0	1.8	12.9	1.9	0.2	4.2	0.0
Migori	2,357	0.0	0.2	-	0.7	4.1	1.3	0.1	1.7	-
Kisii	86	0.0	0.0	-	0.0	0.2	0.1	0.0	0.0	-
Nyamira	27	-	0.0	-	0.0	0.1	0.0	0.0	0.0	-
Nairobi City	-	-	-	-	-	-	-	-	-	-

3.32. Access to clean drinking water

Significantly, more Kenyans have access to clean drinking water than to basic sanitation (UNICEF, 2018). Since 2000, access to clean drinking water has increased by 12 per cent, while access to basic sanitation has fallen by five per cent. In Kenya, 9.9 million people drink directly from contaminated surface water sources and an estimated five million people practice open defecation. Only 25 per cent have hand-washing facilities with soap and water at home (UNICEF, 2018).

Clean drinking water, basic sanitation and good hygiene practices are essential for the survival of children. Global evidence shows that better water, sanitation, and hygiene could prevent the deaths of 297,000 children aged under five each year globally. Achieving universal access to clean drinking water and sanitation by 2030 will be challenging given current levels of investment, projected population growth and climate change.

This 2019 Census report gathered information on access to clean drinking water for households practicing fishing. Majority of the households (42 per cent) used lake as their source of clean drinking water. This would explain their inclination to practicing fish farming in their establishment. Pond use was recorded as the least likely place the households sourced for clean water for drinking. This would be attributed to the likelihood that most of the ponds in the country are stagnant and therefore contaminated from lack of an intake or outlet.

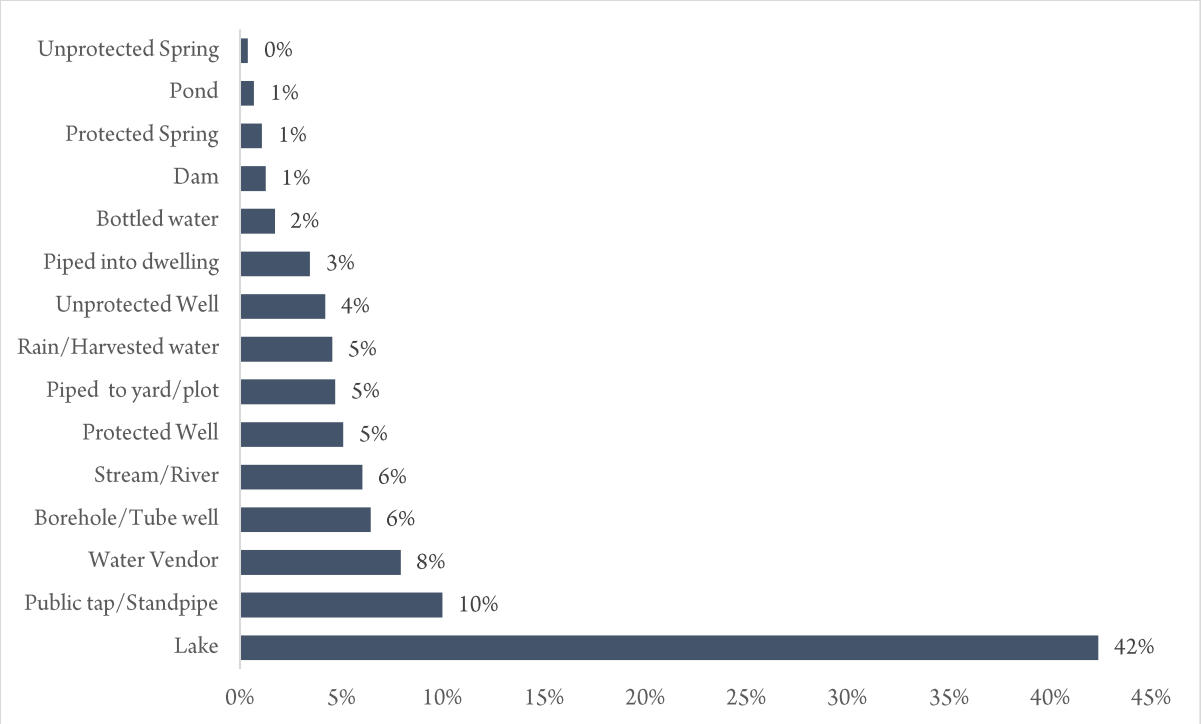


Figure 3. 32: Percentage distribution of pure fishing households by access to clean drinking water

Table 3. 33: Percentage distribution of pure fishing households by source of drinking water and county, 2019

Counties	Pond	Dam	Lake	Stream/River	Protected Spring	Unprotected Spring	Protected Well	Unprotected Well	Borehole/Tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/Harvested water	Water Vendor	Public tap/Standpipe
Mombasa	1	1	-	-	23	2	74	9	93	36	34	79	5	476	204
Kwale	6	9	-	1	5	14	323	267	219	36	37	10	87	56	172
Kilifi	5	8	-	22	7	5	239	194	118	276	223	16	3	186	620
Tana River	10	11	-	70	4	-	91	44	121	22	28	-	-	18	32
Lamu	15	8	-	1	4	3	201	185	86	159	24	15	737	77	128
Taita-Taveta	-	-	70	13	-	-	1	-	-	3	14	-	1	24	8
Garissa	50	60	-	22	2	4	8	4	37	8	17	-	-	5	12
Wajir	16	55	-	5	3	1	7	11	33	4	3	2	2	14	1
Mandera	21	52	-	14	-	2	15	3	30	1	1	1	2	10	9
Marsabit	1	5	164	-	12	-	21	171	14	29	15	1	2	4	16
Isiolo	-	1	-	5	-	2	2	-	2	5	9	1	-	-	-
Meru	-	1	-	19	4	3	1	-	7	11	31	1	-	11	8
Tharaka-Nithi	-	-	-	22	-	-	-	2	4	8	6	-	-	-	3
Embu	4	19	-	59	-	-	2	-	5	14	32	-	-	7	6
Kitui	1	7	-	17	-	1	4	3	3	4	2	4	-	6	6
Machakos	4	22	-	21	2	5	2	7	41	8	9	20	3	21	30
Makueni	-	-	-	15	1	1	-	2	7	1	5	1	1	22	9
Nyandarua	-	2	-	4	1	-	7	2	1	2	12	-	3	1	-
Nyeri	-	6	-	9	-	-	-	-	-	17	31	-	3	1	1
Kirinyaga	-	-	-	82	-	2	5	2	11	13	37	-	-	4	8
Murang'a	1	1	-	23	1	2	5	3	9	12	19	1	4	9	4
Kiambu	2	-	-	23	10	1	16	2	38	92	130	11	-	40	54
Turkana	3	16	1,381	447	10	11	73	243	120	12	31	-	-	275	108
West Pokot	-	9	2	16	-	2	1	-	5	1	2	-	-	-	-
Samburu	1	6	-	12	1	1	4	3	2	-	1	-	-	2	1
Trans Nzoia	2	1	-	11	4	4	14	2	8	7	8	-	-	1	10
Uasin Gishu	1	-	-	1	3	-	23	2	11	19	20	1	-	1	7
Elgeyo-Marakwet	1	-	-	7	-	1	1	-	3	1	4	-	1	-	3
Nandi	1	-	-	22	7	2	12	1	1	5	4	1	2	-	-
Baringo	3	8	53	59	4	-	1	1	13	3	4	-	2	8	5
Laikipia	-	2	-	3	2	-	-	-	1	6	8	-	1	-	4
Nakuru	2	-	33	15	4	1	15	-	149	69	250	135	77	534	176
Narok	4	4	-	28	4	2	-	-	5	2	5	1	2	3	4
Kajiado	-	16	1	17	2	-	1	-	22	12	9	8	3	22	10
Kericho	-	-	-	15	5	3	5	-	-	3	5	-	-	2	4
Bomet	2	2	-	19	1	-	1	-	-	-	1	-	4	1	-
Kakamega	1	1	-	19	37	3	17	1	14	3	4	2	-	2	4
Vihiga	-	-	-	5	8	1	1	1	1	-	1	-	1	-	1
Bungoma	2	1	-	11	34	1	13	2	6	7	4	-	1	2	3
Busia	2	-	766	167	8	6	48	23	256	20	141	8	7	15	181
Siaya	10	6	3,172	47	9	-	11	1	26	4	21	17	40	74	219
Kisumu	1	5	155	146	26	7	84	17	203	30	40	5	71	47	250
Homabay	14	18	4,828	132	15	4	86	5	79	22	55	119	217	186	384
Migori	12	4	1,684	62	23	6	42	9	69	14	25	40	34	137	196
Kisii	1	-	-	34	22	7	3	-	3	1	1	-	8	2	4
Nyamira	-	1	-	13	6	3	1	-	-	1	-	-	2	-	-
Nairobi City	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

3.33. Distribution of pure fishing farming households by ICT usage, 2019

Communication is one of the important aspects when it comes to human's day to day interaction. Information has to be relayed and with the current global change ICT usage has been embraced globally. The fishing households have not been left behind in this transition as they use the internet to market their products, has eased communication between fishers and their customers and enhance the safety aspect of the fishermen when at sea. Table 3.34 and Figure 3.33 shows that pure fishing farming households in rural areas embraced the use of ICT as compared to urban area. Mobile phones had the highest usage followed by internet and lastly laptops, computer and tablets. In the rural areas phone usage was at 43.3 per cent while in the urban area at 60.3 per cent. Internet use in the rural areas was at 10.6 per cent while in urban areas it was 24.7 per cent. Computer, laptop and tablet came last however in this case the urban area had a higher use (9.5 per cent) of these gadgets as compared to the rural area (3.0 per cent).

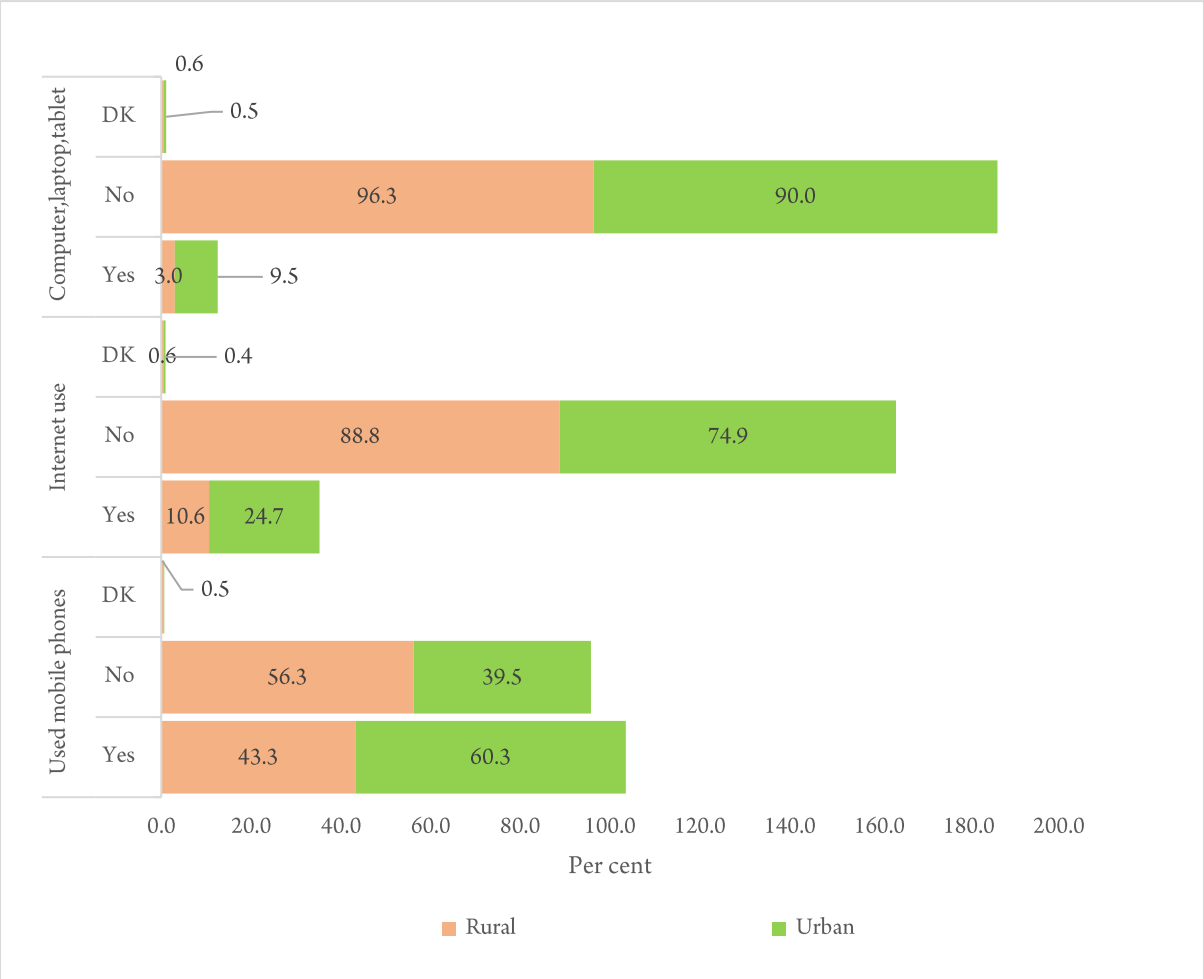


Figure 3. 33: Distribution of pure fishing households by ICT type and rural/urban location

Table 3. 34: Percentage distribution of pure fishing households by type of ICT and county, 2019

	Used mobile phones				Internet use			Computer, laptop, tablet		
EA Type	**Total**	**Yes**	**No**	**DK**	**Yes**	**No**	**DK**	**Yes**	**No**	**DK**
Total	104,314	48.0	51.6	0.4	14.5	85.0	0.5	4.8	94.6	0.6
Rural	75,580	43.3	56.3	0.5	10.6	88.8	0.6	3.0	96.3	0.6
Urban	28,734	60.3	39.5	0.2	24.7	74.9	0.4	9.5	90.0	0.5
County										
Mombasa	3,766	64.0	36.0	0.0	31.0	68.8	0.2	12.3	87.4	0.2
Kwale	5,027	48.8	50.9	0.2	13.3	86.4	0.4	2.4	97.3	0.3
Kilifi	7,702	50.8	49.0	0.2	16.8	83.0	0.2	4.7	95.0	0.3
Tana River	1,727	49.1	50.7	0.2	9.7	90.0	0.3	2.0	97.7	0.2
Lamu	7,376	45.7	54.2	0.1	14.9	85.0	0.1	3.5	96.3	0.3
Taita-Taveta	356	59.6	40.2	0.3	15.4	84.3	0.3	5.9	93.8	0.3
Garissa	1,230	39.0	57.2	3.8	18.8	77.6	3.6	9.8	86.3	3.8
Wajir	858	28.0	69.3	2.7	15.9	81.8	2.4	8.6	88.8	2.6
Mandera	978	30.3	67.7	2.0	15.2	83.1	1.6	7.8	89.6	2.6
Marsabit	2,170	14.0	85.7	0.3	3.3	96.6	0.1	1.7	98.2	0.0
Isiolo	118	46.6	53.4	0.0	20.3	79.7	0.0	9.3	90.7	0.0
Meru	280	51.4	47.9	0.7	24.6	75.4	0.0	7.5	92.1	0.4
Tharaka-Nithi	114	60.5	39.5	0.0	19.3	79.8	0.9	12.3	87.7	0.0
Embu	342	61.7	38.0	0.3	17.8	81.9	0.3	7.6	92.1	0.3
Kitui	191	47.1	50.8	2.1	17.8	80.1	2.1	7.9	91.1	1.0
Machakos	516	61.2	38.8	0.0	29.7	70.2	0.2	16.1	83.3	0.6
Makueni	171	63.2	36.8	0.0	25.1	74.3	0.6	9.9	90.1	0.0
Nyandarua	75	73.3	26.7	0.0	25.3	72.0	2.7	10.7	85.3	4.0
Nyeri	129	76.7	22.5	0.8	39.5	58.9	1.6	23.3	75.2	1.6
Kirinyaga	366	68.9	31.1	0.0	21.9	77.6	0.5	10.4	88.8	0.8
Murang'a	182	75.3	24.7	0.0	36.3	63.7	0.0	21.4	78.6	0.0
Kiambu	1,070	78.2	21.7	0.1	48.3	51.4	0.3	26.9	72.8	0.3
Turkana	13,107	22.7	76.6	0.7	3.4	95.8	0.8	0.9	98.4	0.8
West Pokot	167	26.3	70.1	3.6	9.6	86.8	3.6	3.0	93.4	3.6
Samburu	130	27.7	72.3	0.0	10.8	89.2	0.0	3.8	96.2	0.0
Trans Nzoia	240	55.8	42.1	2.1	30.0	68.8	1.3	14.2	82.9	2.9
Uasin Gishu	271	72.0	27.7	0.4	38.4	60.9	0.7	24.4	74.9	0.7
Elgeyo-Marakwet	45	66.7	33.3	0.0	28.9	71.1	0.0	13.3	84.4	2.2
Nandi	191	47.6	52.4	0.0	18.3	81.7	0.0	7.3	92.1	0.5
Baringo	517	42.7	56.1	1.2	19.3	79.7	1.0	7.9	90.5	1.5
Laikipia	88	63.6	36.4	0.0	34.1	65.9	0.0	21.6	78.4	0.0
Nakuru	3,679	71.6	28.0	0.4	32.7	66.5	0.8	11.3	87.8	0.8
Narok	227	35.2	63.9	0.9	16.7	82.8	0.4	9.7	89.9	0.4
Kajiado	386	55.7	44.0	0.3	33.4	66.3	0.3	20.2	79.3	0.5
Kericho	140	49.3	50.0	0.7	25.0	72.9	2.1	8.6	90.0	1.4
Bomet	106	45.3	53.8	0.9	17.9	80.2	1.9	3.8	95.3	0.9
Kakamega	338	48.2	50.0	1.8	23.7	74.6	1.8	13.9	84.0	2.1
Vihiga	53	64.2	35.8	0.0	9.4	90.6	0.0	5.7	88.7	5.7
Bungoma	312	39.1	56.7	4.2	20.8	75.0	4.2	8.3	87.2	4.5
Busia	5,900	51.0	48.7	0.3	11.2	87.9	0.9	3.6	95.7	0.7
Siaya	10,706	54.1	45.6	0.3	12.9	86.6	0.5	3.5	95.9	0.6
Kisumu	3,610	51.5	48.3	0.1	13.7	86.0	0.3	5.7	94.0	0.4
Homabay	20,466	53.1	46.7	0.2	14.4	85.3	0.3	4.1	95.5	0.3
Migori	8,527	49.7	50.1	0.3	11.4	88.1	0.5	3.2	96.2	0.6
Kisii	274	58.4	41.6	0.0	21.9	77.7	0.4	15.0	85.0	0.0
Nyamira	90	60.0	40.0	0.0	18.9	80.0	1.1	10.0	88.9	1.1
Nairobi City	0	0	0	0	0	0	0	0	0	0

Aquaculture

3.34. Introduction

Aquaculture is the farming of aquatic organisms such as fish, crustaceans, mollusks and aquatic plants, as opposed to other forms of aquatic exploitation such as capture fisheries. Various types of aquaculture form an important component within agricultural and farming systems development. These can contribute to the alleviation of food insecurity, malnutrition and poverty through the provision of food of high nutritional value, income and employment generation, decreased risk of monoculture production failure, improved access to water, enhanced aquatic resource management and increased farm sustainability (e.g., FAO 2000a, Prein and Ahmed 2000).

3.35. Distribution of aquaculture agricultural households by county

Table 3.35 shows the distribution of aquatic households by size and county. A total of 1,026 households were engaged in aquaculture with most of the households being registered at the rural areas (759) compared to urban areas (267). Nairobi City (61 per cent), Kisii (49 per cent) and Meru (47 per cent) registered the highest number of households engaged in aquaculture activities while Murang'a, Marsabit and Lamu registered the lowest number of households engaged in aquaculture activities recording 6 per cent,5 per cent and 1 per cent respectively.

Table 3. 35: Distribution of aquatic farming households by household size and county, 2019

EA Type	Total	1	2	3	4	5+
Total	**1,026**	**18.0**	**12.3**	**14.5**	**13.9**	**41.2**
Rural	759	14.9	11.6	15.2	13.3	45.1
Urban	267	27.0	14.2	12.7	15.7	30.3
County						
Total	**1,026**	**18.0**	**12.3**	**14.5**	**13.9**	**41.2**
Nairobi City	61	32.8	19.7	9.8	16.4	21.3
Kisii	49	14.3	18.4	10.2	16.3	40.8
Meru	47	23.4	14.9	19.1	10.6	31.9
Narok	44	15.9	11.4	18.2	6.8	47.7
Kakamega	44	18.2	9.1	11.4	15.9	45.5
Turkana	43	4.7	11.6	11.6	11.6	60.5
Bungoma	43	14.0	11.6	20.9	16.3	37.2
Kisumu	39	15.4	5.1	17.9	15.4	46.2
Kajiado	38	21.1	18.4	13.2	21.1	26.3
Migori	38	2.6	13.2	10.5	21.1	52.6
Siaya	36	41.7	16.7	5.6	11.1	25.0
Baringo	34	8.8	11.8	11.8	17.6	50.0
Homabay	34	20.6	11.8	5.9	23.5	38.2
Trans Nzoia	31	-	9.7	25.8	9.7	54.8
Machakos	29	13.8	6.9	13.8	20.7	44.8
West Pokot	29	-	17.2	17.2	10.3	55.2
Kitui	28	14.3	-	14.3	17.9	53.6
Kiambu	26	23.1	15.4	15.4	11.5	34.6
Kilifi	24	20.8	16.7	8.3	12.5	41.7
Mombasa	23	21.7	8.7	8.7	17.4	43.5
Nakuru	23	30.4	8.7	13.0	13.0	34.8
Busia	21	19.0	14.3	14.3	23.8	28.6
Kwale	19	21.1	-	15.8	15.8	47.4
Nandi	19	10.5	10.5	31.6	-	47.4
Samburu	18	11.1	5.6	16.7	5.6	61.1
Kericho	17	5.9	-	23.5	11.8	58.8
Uasin Gishu	16	25.0	6.3	25.0	12.5	31.3
Nyamira	16	12.5	25.0	31.3	-	31.3
Makueni	13	23.1	7.7	15.4	15.4	38.5
Tana River	11	18.2	27.3	27.3	9.1	18.2
Kirinyaga	11	45.5	9.1	27.3	9.1	9.1
Isiolo	10	20.0	-	-	-	80.0
Nyeri	10	30.0	30.0	10.0	10.0	20.0
Elgeyo-Marakwet	10	10.0	20.0	-	30.0	40.0
Laikipia	10	30.0	-	20.0	10.0	40.0
Vihiga	10	20.0	10.0	10.0	-	60.0
Nyandarua	9	22.2	22.2	11.1	11.1	33.3
Taita-Taveta	8	37.5	25.0	25.0	-	12.5
Tharaka-Nithi	8	25.0	12.5	12.5	12.5	37.5
Embu	8	37.5	12.5	-	12.5	37.5
Bomet	7	14.3	14.3	-	-	71.4
Murang'a	6	33.3	-	-	33.3	33.3
Marsabit	5	-	-	20.0	20.0	60.0
Lamu	1	-	-	100.0	-	-
Garissa	-	-	-	-	-	-
Wajir	-	-	-	-	-	-
Mandera	-	-	-	-	-	-

Inland aquaculture sub-sector in Kenya is growing rapidly in response to declining capture fisheries and increasing national demand for fish. There is already a significant gap between the projected demand and production, which is expected to increase to 360 thousand tonnes by 2025, resulting in a continuous decline in per capita average consumption and rising prices.

3.36. Distribution of aquatic farming households by households' size

Socio-demographic factors have a direct and indirect influence on decisions and level of investment in aquaculture. Factors such as household size, age, level of education, occupation, level of income, among others, are key drivers in enhancing sustainable fish farming. Such factors are also thought to influence investment and production levels in any aquaculture enterprise.

Figure 3.34 shows the distribution of aquaculture households and size of the household. There was a wide disparity in the proportion of rural and urban aqua-culture households with one member and those with five members and above. There was near parity in the proportion of rural and urban aqua-culture households with two to four members. A bigger percentage of households whose members were greater than 5 were engaged in aquaculture accounting to 45.1 per cent.

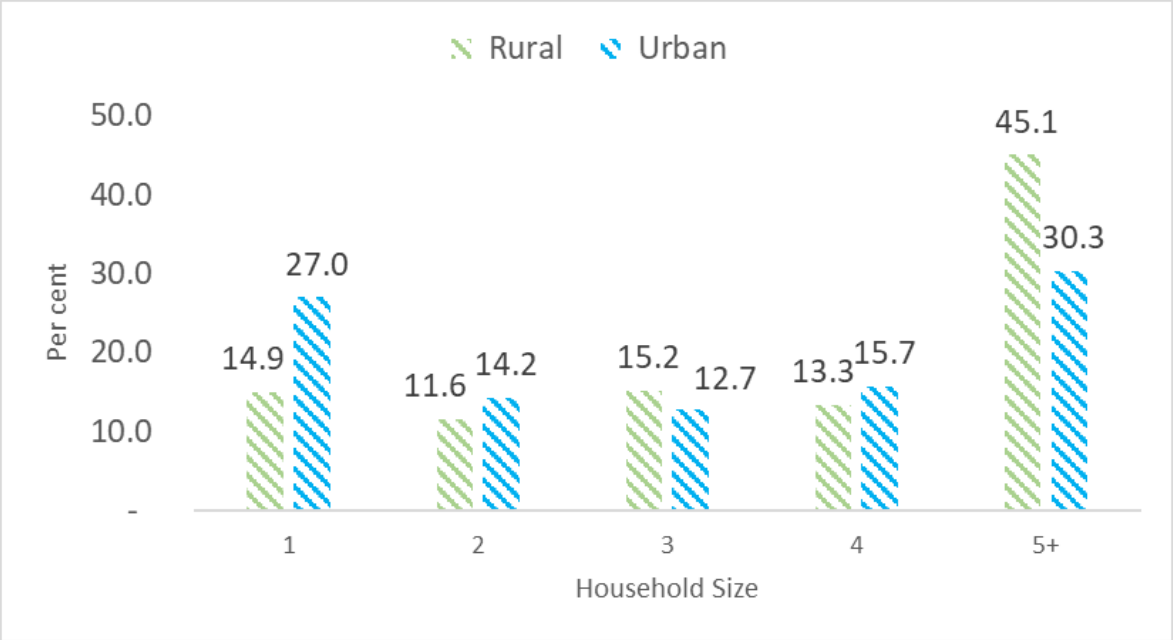


Figure 3. 34: Distribution of aquaculture agricultural households by type of Enumeration Area

3.37. Distribution of aquaculture farming households by education level of household head

Statistics reveal that even those with secondary and degree levels of education are actively engaged in aquaculture, though in relatively smaller numbers. This indicates recognition of aquaculture and the great potential in job and wealth creation for improved livelihoods. The paradigm shift where elites take up aquaculture activities, a venture which for long was a preserve of the poor and the illiterate in society, is a signal of a better future for aquaculture in the region.

With such trends, aquaculture is no longer at subsistence level but is evolving into a serious commercial activity in the country. Education is important in aquaculture sustainability by equipping farmers with better skills and training, resulting to better management and high production. Often elites who have attained tertiary education demean fish farming and go for formal employment leaving aquaculture in the hands of illiterate poor smallholders. This 2019 Census report gathered information of the household education in relation to aquaculture practice.

As shown in Figure 3.35 majority of the household heads have no education at all (36 per cent), while very few have other forms of education. The overall educational status of the farmers surveyed in the region is presented in Table 3.36. Majority of the respondents (24 per cent) did not have any educational background while a small section of them had informal education (1 per cent).

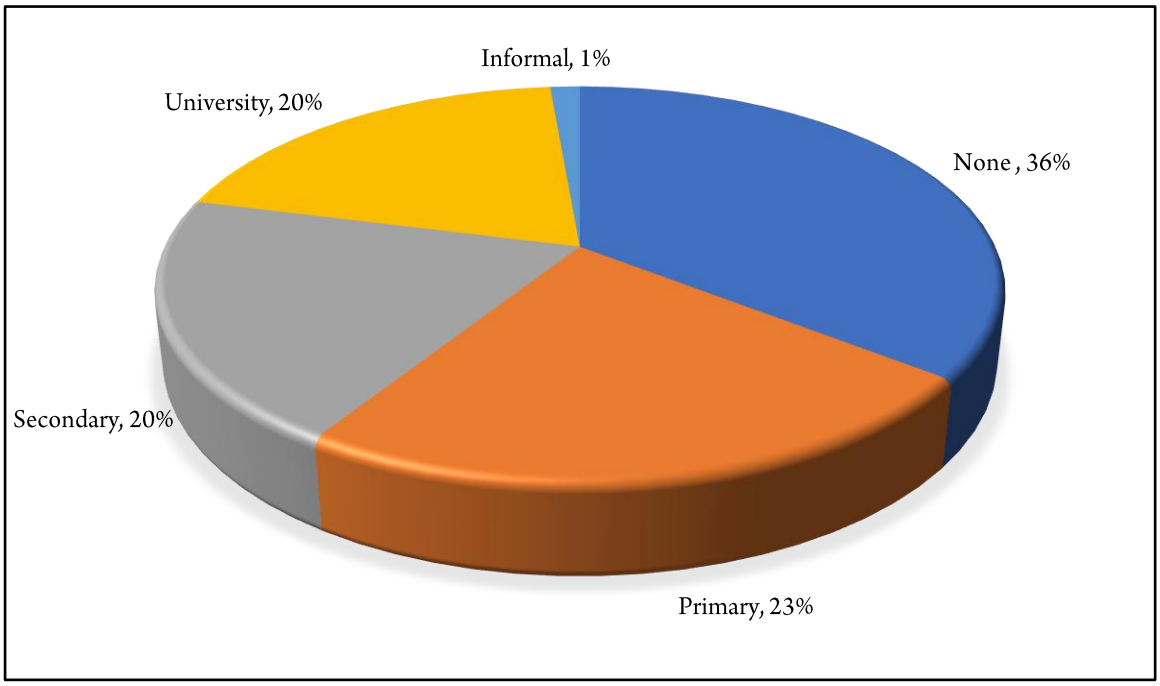


Figure 3. 35: Percentage distribution of aquaculture farming households, 2019

Table 3. 36: Percentage distribution of aquaculture farming households by Education status, 2019

County	None	Other	Primary	Secondary	University+	DK	Total
Mombasa	9.1		13.6	40.9	36.4		22
Kwale	63.2		15.8		10.5	10.5	19
Kilifi	50		25	8.3	16.7		24
Tana River	90.9			9.1			11
Lamu			100				1
Taita-Taveta	12.5		50	25	12.5		8
Garissa							-
Wajir							-
Mandera							-
Marsabit	100						5
Isiolo	88.9		11.1				9
Meru	36.2		36.2	12.8	12.8	2.1	47
Tharaka-Nithi			25	12.5	37.5	25	8
Embu	12.5		25	25	37.5		8
Kitui	30.8	3.8	7.7	7.7		50	26
Machakos	24.1		20.7	20.7	34.5		29
Makueni	15.4		30.8	30.8	15.4	7.7	13
Nyandarua			77.8	22.2			9
Nyeri			22.2	33.3	44.4		9
Kirinyaga			30	40	30		10
Murang'a	16.7	16.7	33.3	16.7	16.7		6
Kiambu	15.4		19.2	23.1	38.5	3.8	26
Turkana	68.3		4.9	12.2	4.9	9.8	41
West Pokot	69		17.2	10.3		3.4	29
Samburu	82.4			5.9	11.8		17
Trans Nzoia	23.3	3.3	20	23.3	3.3	26.7	30
Uasin Gishu	25	6.3	18.8	18.8	25	6.3	16
Elgeyo-Marakwet	20	10	40	10	10	10	10
Nandi	42.1		15.8	21.1	10.5	10.5	19
Baringo	88.2		5.9	5.9			34
Laikipia	44.4		11.1	33.3	11.1		9
Nakuru	21.7		34.8	34.8	8.7		23
Narok	63.6	2.3	15.9	9.1	9.1		44
Kajiado	39.5		23.7	18.4	15.8	2.6	38
Kericho	43.8	6.3	25	12.5		12.5	16
Bomet	42.9	14.3	14.3	14.3		14.3	7
Kakamega	14	4.7	34.9	18.6	25.6	2.3	43
Vihiga	20		50	10	10	10	10
Bungoma	34.9		20.9	20.9	16.3	7	43
Busia	28.6	4.8	33.3	9.5	23.8		21
Siaya	5.6		30.6	33.3	30.6		36
Kisumu	13.2		26.3	23.7	31.6	5.3	38
Homabay	17.6		44.1	14.7	17.6	5.9	34
Migori	27	2.7	29.7	18.9	21.6		37
Kisii	33.3		16.7	22.9	20.8	6.3	48
Nyamira	43.8		6.3	31.3	18.8		16
Nairobi City		1.6	11.5	32.8	52.5	1.6	61
TOTAL	33.7	1.3	22.2	18.9	18.6	5.3	1,010

3.38. Distribution of aquaculture households by access to sanitation facilities

This 2019 Census report gathered information of the household's access to sanitation facilities in relation to aquaculture practice. Majority (42 per cent) of the population practicing aquaculture has access to the pit latrine covered toilets. Unfortunately, a part of the population (16 per cent) lacked basic sanitation and practiced open defecation. It is encouraging to see the promotion of the use of hygienic toilets including ventilated and improved pit (VIP) latrines (12 per cent) and septic tanks (1 per cent) in areas practicing aquaculture. Nairobi city was ranked as the area having the best sanitation while Lamu had the worst. No information was gathered for Garissa, Wajir and Mandera.

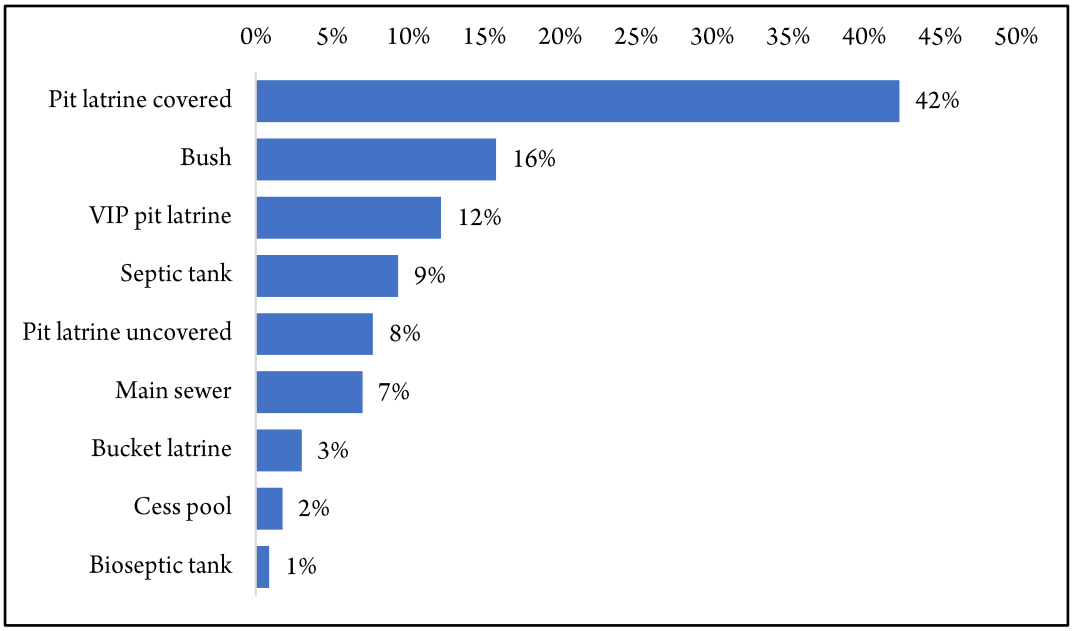


Figure 3. 36: Percentage distribution of aquaculture farming households by sanitation methods

Table 3. 37: Percentage distribution of aquaculture farming households by sanitation methods

County	Main sewer	Septic tank	Cess pool	VIP pit latrine	Pit latrine covered	Pit latrine uncovered	Bucket latrine	Bush	Bioseptic tank	Total
Mombasa	17.4	69.6		4.3	4.3				4.3	23
Kwale		5.3			26.3	21.1	5.3	42.1		19
Kilifi		20.8		4.2	33.3	16.7	8.3	16.7		24
Tana River					18.2	9.1		72.7		11
Lamu					100.0					1
Taita-Taveta	12.5	12.5			75.0					8
Garissa										-
Wajir										-
Mandera										-
Marsabit					20.0			80.0		5
Isiolo					40.0			60.0		10
Meru	12.8	8.5	6.4	25.5	36.2	6.4	2.1	2.1		47
Tharaka-Nithi		12.5		25.0	50.0	12.5				8
Embu		25.0		25.0	50.0					8
Kitui	3.6	3.6	3.6	10.7	53.6	7.1	10.7	7.1		28
Machakos	13.8	10.3		17.2	34.5	6.9	10.3	3.4	3.4	29
Makueni					53.8	7.7	7.7	15.4	15.4	13
Nyandarua				22.2	66.7	11.1				9
Nyeri	20.0	10.0		20.0	50.0					10
Kirinyaga		18.2		18.2	63.6					11
Murang'a		16.7		16.7	50.0			16.7		6
Kiambu	19.2	23.1		15.4	42.3					26
Turkana		2.3	4.7	9.3	11.6	4.7		67.4		43
West Pokot				3.4	27.6	10.3	6.9	48.3	3.4	29
Samburu				11.1	22.2		5.6	61.1		18
Trans Nzoia	6.5			25.8	54.8	6.5	3.2		3.2	31
Uasin Gishu	12.5	12.5		12.5	50.0	6.3		6.3		16
Elgeyo-Marakwet				20.0	60.0	20.0				10
Nandi		5.3	5.3	31.6	21.1	31.6	5.3			19
Baringo		2.9	2.9	2.9	23.5	2.9	2.9	61.8		34
Laikipia		10.0			40.0	10.0		40.0		10
Nakuru	17.4	13.0		8.7	43.5	8.7	4.3	4.3		23
Narok	2.3			9.1	34.1	4.5	2.3	47.7		44
Kajiado	2.6	23.7	13.2		28.9	10.5		18.4	2.6	38
Kericho			5.9	11.8	52.9	29.4				17
Bomet		14.3			71.4	14.3				7
Kakamega		15.9		11.4	61.4	6.8		4.5		44
Vihiga					90.0		10.0			10
Bungoma		4.7	2.3	9.3	67.4	11.6		4.7		43
Busia		4.8	4.8	14.3	66.7	9.5				21
Siaya		5.6		27.8	58.3	5.6		2.8		36
Kisumu	7.7	7.7		7.7	56.4	10.3	2.6	5.1	2.6	39
Homabay		2.9		14.7	61.8	11.8	2.9	5.9		34
Migori	2.6	10.5		26.3	39.5		7.9	13.2		38
Kisii	4.1	2.0	2.0	14.3	55.1	12.2	8.2	2.0		49
Nyamira	6.3			18.8	56.3	12.5	6.3			16
Nairobi City	52.5	19.7	1.6	6.6	14.8		1.6	1.6	1.6	61
TOTAL	**7.0**	**9.4**	**1.8**	**12.2**	**42.3**	**7.7**	**3.0**	**15.8**	**0.9**	**1026**

3.39. Access to clean drinking water

This 2019 Census report gathered information on access to clean drinking water for households practicing aquaculture. Majority of the households (24 per cent) used rivers/ streams as their source of clean drinking. This would explain their inclination to practicing fish farming in their establishment. Pond use was recorded as the least likely place the households sourced for clean water for drinking. This would be attributed to the likelihood that most of the ponds in the country are stagnant and therefore contaminated from lack of an intake or outlet. As shown in Table 3.38, Nairobi City was recorded as the county with the most sources of clean drinking water with Lamu recording the lowest. No data was obtained for the counties Garissa, Wajir and Mandera.

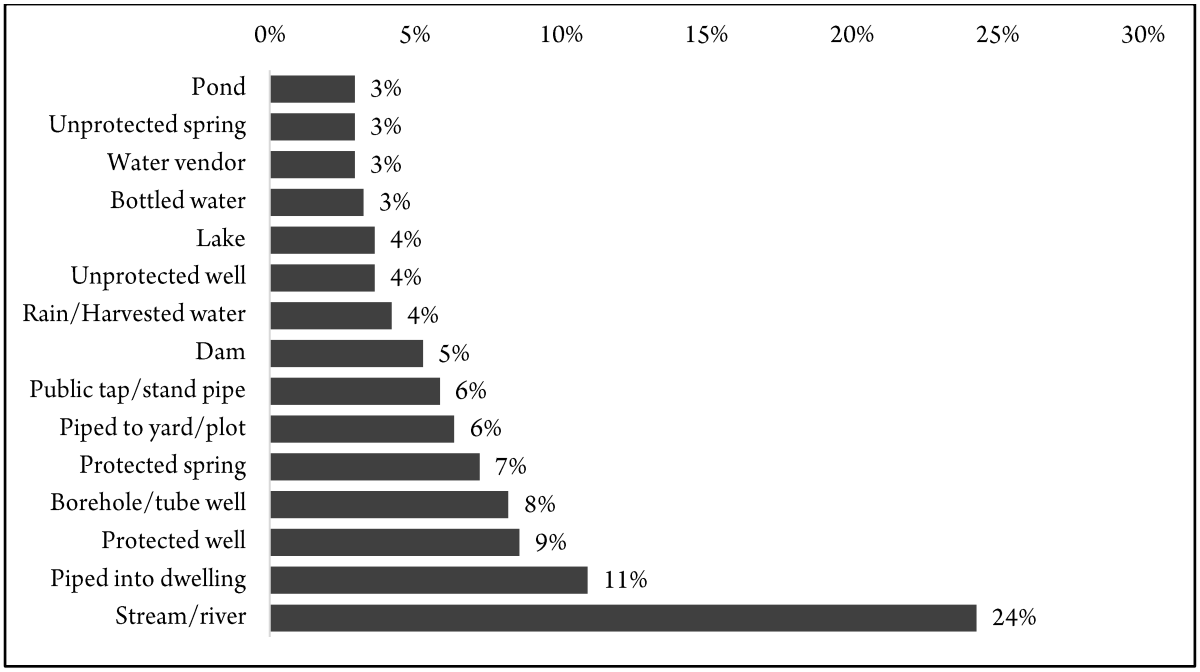


Figure 3. 37: Percentage distribution of aquaculture households by access to clean drinking water

Table 3. 38: Distribution of aquaculture households by source of drinking water and county, 2019

County	Pond	Dam	Lake	Stream/river	Protected spring	Unprotected spring	Protected well	Unprotected well	Borehole/tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/Harvested water	Water vendor	Public tap/stand pipe	Total
Mombasa							8.7		4.3	26.1		13.0	4.3	34.8	8.7	23
Kwale	21.1	31.6			10.5		10.5	5.3	5.3		5.3	5.3			5.3	19
Kilifi		16.7					8.3	8.3	4.2	16.7	8.3	4.2	8.3	4.2	20.8	24
Tana River	9.1	36.4		27.3				9.1	9.1	9.1						11
Lamu							100.0									1
Taita-Taveta		12.5	12.5	12.5			12.5			25.0	25.0					8
Garissa																-
Wajir																-
Mandera																-
Marsabit		20.0						60.0	20.0							5
Isiolo	10.0	20.0		20.0		20.0			10.0		10.0		10.0			10
Meru	2.1	4.3		19.1	4.3	6.4	4.3	2.1	2.1	17.0	19.1		2.1	14.9	2.1	47
Tharaka-Nithi				12.5			25.0			37.5	25.0					8
Embu				12.5						25.0	37.5				25.0	8
Kitui	3.6	21.4		46.4	7.1	3.6	3.6	7.1				3.6			3.6	28
Machakos	6.9	6.9		24.1		3.4	3.4	6.9	13.8	20.7		6.9	3.4	3.4		29
Makueni		15.4		30.8	7.7	23.1	7.7		7.7		7.7					13
Nyandarua				22.2		11.1	11.1				11.1		22.2		22.2	9
Nyeri				20.0				10.0		40.0	10.0	10.0	10.0			10
Kirinyaga				36.4			9.1			36.4	9.1	9.1				11
Murang'a				16.7	16.7					33.3	16.7		16.7			6
Kiambu				11.5			3.8		11.5	30.8	11.5	7.7	11.5		11.5	26
Turkana	2.3		18.6	18.6	7.0	2.3	14.0	11.6	7.0	4.7					14.0	43
West Pokot		3.4		62.1		3.4			24.1	3.4	3.4					29
Samburu		11.1		44.4	5.6			16.7	11.1		5.6		5.6			18
Trans Nzoia	6.5			9.7	25.8		16.1		32.3		3.2				6.5	31
Uasin Gishu		6.3		18.8	6.3		25.0		6.3	25.0	6.3				6.3	16
Elgeyo-Marakwet				60.0			10.0	20.0							10.0	10
Nandi	5.3			36.8	5.3	10.5	10.5		5.3	21.1	5.3					19
Baringo	2.9	14.7	5.9	61.8	2.9		2.9	2.9		2.9	2.9					34
Laikipia	10.0	10.0		20.0			10.0	10.0	10.0		20.0		10.0			10
Nakuru		4.3	4.3			4.3	8.7		4.3	17.4	8.7	8.7	21.7	13.0	4.3	23
Narok	9.1	2.3		50.0	2.3	6.8	6.8	2.3	2.3	4.5	2.3	6.8	4.5			44
Kajiado	2.6	15.8	2.6	10.5		2.6	5.3		23.7	7.9		13.2	2.6	10.5	2.6	38
Kericho				52.9	17.6		5.9	5.9	5.9		5.9		5.9			17
Bomet		14.3		42.9	14.3					14.3					14.3	7
Kakamega	4.5			6.8	36.4	2.3	22.7	2.3	4.5	11.4			2.3		6.8	44
Vihiga	20.0			60.0			10.0				10.0					10
Bungoma		4.7		16.3	9.3	2.3	30.2	4.7	20.9	7.0					4.7	43
Busia				14.3	14.3	4.8	9.5		52.4						4.8	21
Siaya	2.8		36.1	5.6	5.6		2.8	2.8	5.6	8.3	2.8	8.3	5.6	2.8	11.1	36
Kisumu	2.6	2.6		15.4		2.6	5.1	7.7	5.1	15.4	15.4		5.1	2.6	20.5	39
Homabay	2.9	2.9	23.5	23.5	5.9		2.9	2.9	8.8	5.9	2.9		14.7	2.9		34
Migori	2.6	2.6	7.9	42.1	7.9	7.9	13.2	2.6	2.6			2.6	5.3		2.6	38
Kisii	2.0			49.0	28.6	2.0	4.1		2.0	2.0			10.2			49
Nyamira				43.8	12.5	12.5	12.5	6.3					12.5			16
Nairobi City							4.9		1.6	32.8	26.2	11.5		4.9	18.0	61
TOTAL	**2.9**	**5.3**	**3.6**	**24.3**	**7.2**	**2.9**	**8.6**	**3.6**	**8.2**	**10.9**	**6.3**	**3.2**	**4.2**	**2.9**	**5.8**	**1026**

3.40. Distribution of aquaculture farming households by ICT usage, 2019

The National ICT policy was last reviewed in 2006. Since then, the sector has experienced rapid technological advancement, changes to the legal and administrative framework and many emerging issues. The latter include increased IT enabled services, increased demand on bandwidth and for Quality of Service (QoS), challenges of cyber-security, integration projects and harmonization of ICT policies regionally and internationally.

By harnessing the power of ICTs, private and state-owned enterprises like aquaculture are expected to improve their sourcing, sales and logistics systems; streamline operations, track market trends and boost their marketing, research and innovation capabilities. Enterprise operations will become more efficient, translating into productivity gains and the creation of new markets for innovative products and services. The strategies and action plans developed as a result of this policy will continue to bring about the rapid transformation of Kenya.

Mobile phones were recorded to have the most use in regards to ICT as shown in Figure 3.38. Further, as shown in Table 3.39, on ICT use for households practicing aquaculture Nairobi City recorded the highest ICT usage followed by Kisumu while Lamu and Mandera had the least.

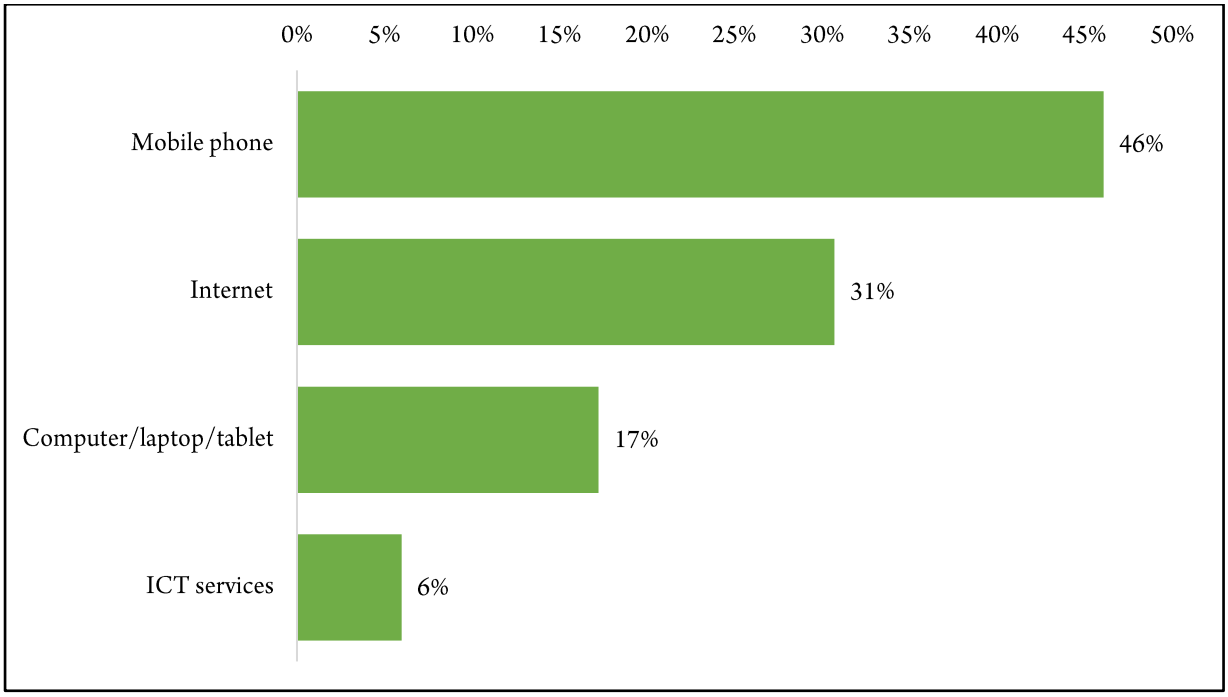


Figure 3. 38: Percentage distribution of aquaculture farming households by ICT use, 2019

Table 3. 39: Distribution of aquaculture farming households by ICT usage, 2019

County	Mobile phone	Internet	Computer/ laptop/tablet	ICT services	Total
Mombasa	40.5	29.5	21.6	8.4	190
Kwale	50.0	20.6	20.6	8.8	34
Kilifi	55.4	27.0	13.5	4.1	74
Tana River	69.2	15.4	15.4		13
Lamu	100.0				1
Taita-Taveta	56.5	30.4	13.0		23
Garissa					-
Wajir					-
Mandera					-
Marsabit	25.0	62.5	12.5		8
Isiolo	42.0	29.0	24.6	4.3	69
Meru	56.9	29.2	13.2	0.7	144
Tharaka-Nithi	48.3	24.1	27.6		29
Embu	37.8	33.3	20.0	8.9	45
Kitui	38.5	47.3	12.1	2.2	91
Machakos	43.5	31.2	21.0	4.3	138
Makueni	85.0	15.0			20
Nyandarua	67.7	19.4	12.9		31
Nyeri	42.0	26.0	20.0	12.0	50
Kirinyaga	42.2	26.7	26.7	4.4	45
Murang'a	73.3	20.0	6.7		15
Kiambu	36.6	30.6	21.3	11.5	183
Turkana	46.8	30.4	19.0	3.8	79
West Pokot	69.0	27.6	3.4		29
Samburu	70.0	20.0	10.0		10
Trans Nzoia	50.0	27.7	18.8	3.6	112
Uasin Gishu	46.0	28.6	17.5	7.9	63
Elgeyo-Marakwet	60.0	28.0	8.0	4.0	25
Nandi	47.2	31.9	18.1	2.8	72
Baringo	49.1	45.5	5.5		55
Laikipia	41.7	37.5	12.5	8.3	24
Nakuru	51.5	29.4	13.2	5.9	68
Narok	54.3	34.8	9.8	1.1	92
Kajiado	41.6	30.4	18.6	9.3	161
Kericho	49.2	32.2	15.3	3.4	59
Bomet	50.0	36.7	10.0	3.3	30
Kakamega	43.9	30.5	18.3	7.3	164
Vihiga	63.3	26.7	3.3	6.7	30
Bungoma	53.8	29.8	13.5	2.9	104
Busia	50.8	32.3	13.8	3.1	65
Siaya	43.0	28.5	19.6	8.9	158
Kisumu	44.6	28.3	20.2	6.9	233
Homabay	49.1	33.0	12.5	5.4	112
Migori	44.8	34.5	13.8	6.9	174
Kisii	45.5	32.6	16.5	5.4	224
Nyamira	57.4	29.6	11.1	1.9	54
Nairobi City	37.3	30.5	22.1	10.1	407
TOTAL	46.1	30.7	17.2	6.0	**3,807**

3.41. Agricultural household assets

The differences in smallholder fish farms between counties can be significant, and often reflect differences in the stages of development across counties. This is because the evolution of the small fish farm is intrinsically related to the process of economic development.

But across all stages of development, smallholders operate their farms as entrepreneurs operate their firms. They raise capital from multiple sources and invest in productive assets; for many of them even a fish net or a bicycle are important assets. They make decisions in risky environments. Aquaculture involves many decisions: what species to rear, which inputs to use and how, when to stock, to feed, to harvest; how much to keep for consumption in the household and how much to sell to raise cash, or how much to keep for brooding. Smallholders often make these decisions in an economic environment in which markets do not function well, if at all, and which is also subject to many risks, such as adverse weather and price surges. And this has significant implications for their choices and their livelihoods. It also affects their choices on investing on themselves and their children - on how to attain social and human capital objectives, such as education and health.

As shown in Figure 3.39, bicycles were reported to be the most (25 per cent) held asset among the household's practicing aquaculture. Canoes were the least held asset (2 per cent).

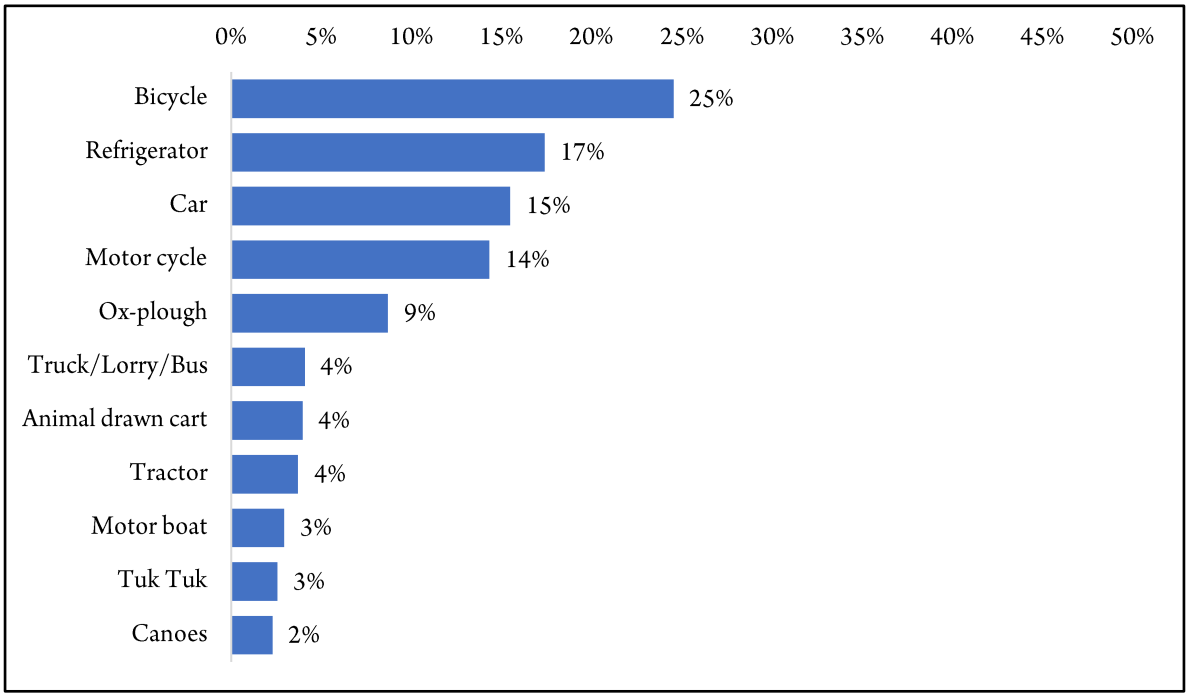


Figure 3. 39: Percentage distribution of aquaculture farming households by ownership of household assets, 2019

Table 3.40 presents details of aquaculture farming households by ownership of household assets as at 2019. Among the essential assets for an aquaculture household is a refrigerator. This asset is owned by most aquaculture households in Mombasa, Nairobi, Kilifi and Kiambu counties, all above 10 per cent. Tractors, as household assets are owned by aquaculture households largely in

Machakos and Tana River counties. Similarly, animal drawn carts are owned by aquaculture households in Tharaka Nithi and Kirinyaga. Bicycles are in most aquaculture households of Lamu, Kisumu, Machakos, Kiambu, Siaya and Kirinyaga counties.

Table 3. 40: Distribution of aquaculture farming households by ownership of household assets, 2019

County	Tractor	Ox-plough	Animal drawn cart	Bicycle	Motor cycle	Car	Truck/ Lorry/ Bus	Refrigerator	Motor boat	Canoes	Tuk Tuk	Total
Mombasa				5.4	4.1	27.0	1.4	16.2	14.9		31.1	**74**
Kwale	1.6			3.3	1.6	29.5	1.6	4.9	26.2	1.6	29.5	**61**
Kilifi		1.2		9.8	2.4	26.8	1.2	11.0	18.3		29.3	**82**
Tana River	4.9	4.9	4.9	2.4	2.4	24.4	2.4		26.8	2.4	24.4	**41**
Lamu				25.0		25.0			25.0		25.0	**4**
Taita-Taveta				4.0		32.0		4.0	28.0		32.0	**25**
Garissa												**0**
Wajir												**0**
Mandera												**0**
Marsabit						33.3			33.3		33.3	**15**
Isiolo			3.1	3.1	3.1	28.1			31.3		31.3	**32**
Meru	0.7	0.7		2.7	2.0	29.9			32.0	0.7	31.3	**147**
Tharaka-Nithi	3.2	3.2	6.5	6.5	9.7	16.1	3.2	3.2	22.6	3.2	22.6	**31**
Embu					4.2	29.2		8.3	25.0		33.3	**24**
Kitui		7.4		4.2	1.1	28.4			29.5		29.5	**95**
Machakos	5.3	10.5	4.5	12.0	6.8	15.0	2.3	3.0	18.8	2.3	19.5	**133**
Makueni		4.5		6.8	2.3	27.3			29.5		29.5	**44**
Nyandarua	3.2			6.5	3.2	25.8	3.2	3.2	25.8		29.0	**31**
Nyeri				9.1	6.1	24.2		6.1	24.2		30.3	**33**
Kirinyaga			5.1	10.3	5.1	23.1		7.7	20.5		28.2	**39**
Murang'a				5.3	5.3	26.3		5.3	26.3		31.6	**19**
Kiambu				11.2	1.1	28.1	1.1	10.1	19.1		29.2	**89**
Turkana				1.5	2.3	30.5			32.8		32.8	**131**
West Pokot		1.1	1.1	2.2	2.2	29.7			31.9		31.9	**91**
Samburu						33.3			33.3		33.3	**54**
Trans Nzoia		1.0		6.9	5.0	25.7		1.0	29.7		30.7	**101**
Uasin Gishu				5.9		31.4		7.8	23.5		31.4	**51**
Elgeyo-Marakwet					3.2	29.0	3.2		32.3	3.2	29.0	**31**
Nandi		1.7		3.3	3.3	28.3		1.7	30.0		31.7	**60**
Baringo	0.9			3.7	2.8	29.0			31.8		31.8	**107**
Laikipia		3.0		3.0	3.0	27.3	3.0	3.0	27.3		30.3	**33**
Nakuru				8.0	6.7	24.0		6.7	24.0		30.7	**75**
Narok	1.4	2.2		1.4	2.9	28.8			31.7		31.7	**139**
Kajiado	0.8			6.3	1.6	28.6	2.4	6.3	23.8		30.2	**126**
Kericho		5.4		1.8	1.8	28.6	1.8		30.4		30.4	**56**
Bomet				4.5		31.8			31.8		31.8	**22**
Kakamega			1.4	3.6	4.3	27.1	0.7	3.6	27.9		31.4	**140**
Vihiga		3.1		3.1	3.1	28.1		3.1	28.1		31.3	**32**
Bungoma	2.0	2.7	0.7	6.1	4.1	25.2	0.7	3.4	25.9	0.7	28.6	**147**
Busia			1.4	9.7	4.2	25.0	1.4	2.8	26.4	1.4	27.8	**72**
Siaya	0.8	0.8		10.9	6.3	21.9	3.1	6.3	21.9	3.1	25.0	**128**
Kisumu	0.7	1.4	2.1	12.1	3.5	24.1	0.7	7.1	20.6		27.7	**141**
Homabay	0.9	4.3	1.7	5.1	7.7	21.4	0.9	2.6	26.5	1.7	27.4	**117**
Migori	1.5	5.2	0.7	6.7	2.2	26.1	0.7	2.2	26.1	0.7	27.6	**134**
Kisii	1.8	4.8	3.6	1.2	3.6	25.6	1.2		29.2	0.6	28.6	**168**
Nyamira						33.3		2.1	31.3		33.3	**48**
Nairobi City	0.5	1.0	0.5	7.7	1.4	28.0	1.9	14.5	15.0		29.5	**207**
TOTAL	**3.7**	**8.7**	**4.0**	**24.6**	**14.3**	**15.5**	**4.1**	**17.4**	**2.9**	**2.3**	**2.6**	**782**

Mixed Farming

3.42. Household size of agricultural holdings

Table 3.41 shows the distribution of mixed farming households by household size, location and by County. The total number of mixed farming households in the 2019 Kenya Population and Housing Census was 3.9 million households amongst which were 3.6 million from the rural areas. The proportion of mixed farming households increases with the increase of the household size.

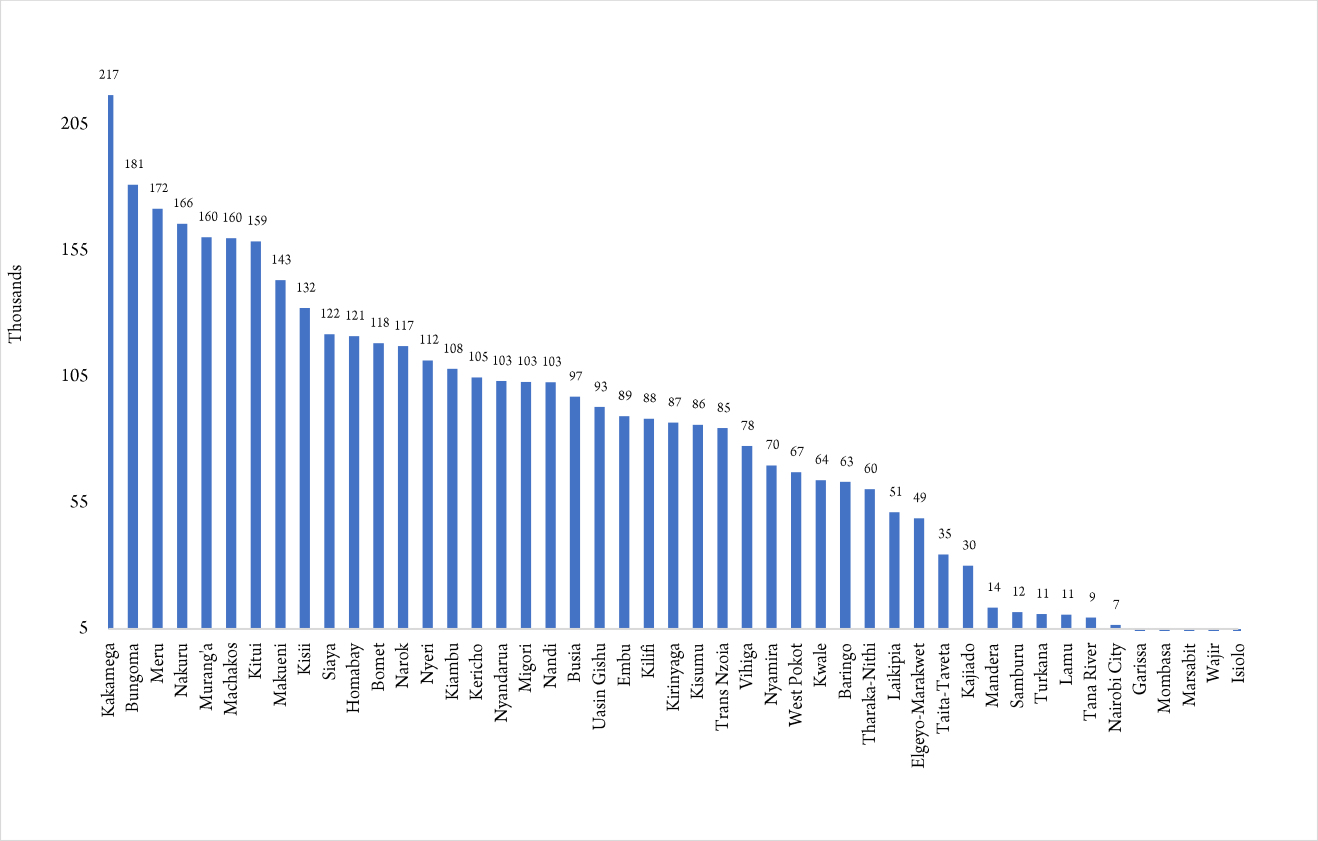


Figure 3. 40: Mixed agriculture households in counties, 2019

Figure 3.40 shows the number of mixed agriculture households in the counties. The top ten counties with mixed farming households are Kakamega, followed by Bungoma, Meru, Nakuru, Murang'a, Machakos, Kitui, Makueni, Kisii, Siaya and Homabay. On the other hand, the ten counties with the least number of mixed farming households are: Isiolo, Wajir, Marsabit, Mombasa, Garissa, Nairobi city, Tana River, Lamu, Turkana and Samburu. This indicates that as the number of mixed agricultural households increases with size of the household in the counties.

Table 3. 41: Distribution of Mixed farming agricultural households by agricultural household size, 2019

EA Type	Total	1	2	3	4	5+
Total	**3,874,866**	7.6	9.8	13.4	16.8	52.3
Rural	3,636,738	7.3	9.7	13.4	16.8	52.9
Urban	238,128	13.5	11.9	14.2	17.0	43.4
County						
Total	**3,874,866**	7.6	9.8	13.4	16.8	52.3
Mombasa	3,546	12.2	8.5	10.6	13.9	54.9
Kwale	64,097	4.8	5.7	8.3	11.2	70.1
Kilifi	88,477	5.8	5.9	7.7	9.8	70.8
Tana River	9,496	4.8	7.1	10.4	12.1	65.5
Lamu	10,615	11.2	9.9	13.2	15.0	50.7
Taita-Taveta	34,605	12.0	12.1	14.6	16.6	44.7
Garissa	3,637	1.3	3.7	6.5	9.4	79.1
Wajir	2,446	1.7	2.5	7.9	13.0	74.9
Mandera	13,507	0.4	2.2	5.6	9.4	82.4
Marsabit	2,680	1.8	4.1	9.3	12.3	72.6
Isiolo	2,035	2.8	5.0	8.7	11.5	72.0
Meru	171,852	8.8	11.4	17.2	21.3	41.3
Tharaka-Nithi	60,458	9.7	12.1	18.0	21.4	38.7
Embu	89,470	11.0	13.1	18.3	21.8	35.9
Kitui	158,853	7.8	9.9	13.5	16.6	52.2
Machakos	160,161	8.7	11.9	16.0	20.1	43.3
Makueni	143,463	8.5	10.9	14.5	18.1	48.0
Nyandarua	103,372	12.4	13.3	15.6	18.5	40.4
Nyeri	111,595	14.8	17.3	17.9	19.2	30.8
Kirinyaga	86,930	12.8	16.2	21.0	24.6	25.5
Murang'a	160,466	12.8	16.1	17.2	18.9	35.1
Kiambu	108,205	9.8	13.8	16.1	20.2	40.1
Turkana	10,945	1.7	3.0	6.5	10.8	78.0
West Pokot	67,217	2.3	5.2	9.8	13.0	69.6
Samburu	11,736	2.1	4.7	10.4	15.3	67.5
Trans Nzoia	84,710	4.9	6.8	11.1	14.8	62.4
Uasin Gishu	93,151	5.7	7.1	11.0	15.5	60.7
Elgeyo-Marakwet	48,878	6.5	6.9	9.8	12.9	63.9
Nandi	102,872	5.0	6.3	11.1	16.3	61.3
Baringo	63,357	6.3	6.5	10.1	13.6	63.5
Laikipia	51,341	11.6	13.3	15.5	17.9	41.7
Nakuru	165,857	9.0	10.1	12.8	16.1	52.0
Narok	117,236	3.3	5.2	10.1	14.2	67.1
Kajiado	30,123	6.5	7.7	12.9	16.9	56.1
Kericho	104,827	5.2	6.7	11.2	15.7	61.2
Bomet	118,477	4.7	6.6	11.7	15.4	61.5
Kakamega	216,856	6.0	8.5	12.7	16.2	56.5
Vihiga	77,650	7.8	10.8	13.8	16.7	51.0
Bungoma	181,332	4.4	6.7	11.6	14.8	62.5
Busia	97,179	5.6	8.0	11.7	14.8	59.9
Siaya	121,920	10.0	11.8	13.6	15.4	49.2
Kisumu	86,041	8.3	10.3	12.8	15.4	53.2
Homabay	121,183	7.3	9.6	12.1	15.0	56.0
Migori	103,099	5.1	7.2	10.6	14.1	63.0
Kisii	132,428	5.8	9.9	14.0	18.1	52.2
Nyamira	69,909	6.2	10.8	15.2	19.2	48.5
Nairobi City	6,576	15.3	12.8	15.8	17.7	38.4

3.43. Education level of household head

This section looks at the level of education that was reported to have been completed by the head of the household in the mixed agricultural holding. These levels are: - primary, secondary, and tertiary. Table 3.42 presents data on education level of mixed farming household head during the 2019 Population and Housing Census. The data shows that the level of education completed by most of the mixed farming household heads was primary school which was 48 per cent and secondary school at 21 per cent of the total number of household heads. Ten per cent completed tertiary education while the rest of the household heads did not attend, complete or state their level of education. More household heads were found in rural (94 per cent) areas.

Table 3. 42: Education level of Mixed Farming agricultural household head

EA Type	Total	None/Never Attended	Other (Informal)	Primary	Secondary	Tertiary	Not Stated/DK
Total	**3,874,861**	**16.8**	**2.9**	**47.9**	**21.3**	**9.7**	**1.4**
Rural	3,636,733	17.4	3.0	48.7	20.7	8.7	1.4
Urban	238,128	7.7	1.7	34.8	29.6	24.9	1.3
County							
Total	**3,874,861**	**16.8**	**2.9**	**47.9**	**21.3**	**9.7**	**1.4**
Mombasa	3,546	25.6	4.6	37.5	17.9	13.4	1.0
Kwale	64,097	41.7	2.1	41.3	9.3	4.3	1.3
Kilifi	88,477	37.0	2.8	42.4	10.8	6.1	1.0
Tana River	9,496	44.9	2.8	36.0	11.1	4.1	0.9
Lamu	10,615	22.0	2.4	52.5	15.2	6.4	1.5
Taita-Taveta	34,605	12.6	2.3	56.6	18.5	9.1	1.0
Garissa	3,637	86.6	0.5	2.9	3.5	1.8	4.8
Wajir	2,446	89.4	0.3	2.5	3.1	2.7	2.0
Mandera	13,507	90.4	0.3	3.0	3.0	1.7	1.6
Marsabit	2,680	78.8	0.6	8.4	5.7	6.0	0.4
Isiolo	2,035	61.0	0.8	20.8	9.2	7.4	0.8
Meru	171,852	17.1	3.7	52.1	16.8	8.8	1.5
Tharaka-Nithi	60,458	13.2	4.2	51.9	18.3	10.3	2.0
Embu	89,470	11.5	4.3	51.0	21.8	10.3	1.1
Kitui	158,852	19.8	3.7	52.1	13.9	8.5	1.9
Machakos	160,161	10.0	2.8	48.9	25.4	11.1	1.9
Makueni	143,463	10.6	3.2	51.5	22.1	10.0	2.5
Nyandarua	103,372	9.4	1.9	56.2	23.8	8.0	0.8
Nyeri	111,595	7.1	1.3	48.8	30.6	10.9	1.4
Kirinyaga	86,930	8.6	2.7	49.9	27.3	10.3	1.3
Murang'a	160,466	10.0	2.0	55.6	23.9	7.4	1.1
Kiambu	108,205	7.6	1.4	43.4	30.7	15.5	1.4
Turkana	10,944	88.3	0.8	5.5	2.0	1.9	1.4
West Pokot	67,215	58.9	2.0	24.5	7.3	6.4	1.0
Samburu	11,736	68.2	1.2	16.1	6.2	7.3	0.9
Trans Nzoia	84,710	12.1	3.6	45.5	25.8	11.5	1.5
Uasin Gishu	93,151	11.9	2.3	42.4	26.5	15.7	1.3
Elgeyo-Marakwet	48,878	16.2	3.0	45.5	22.6	11.3	1.4
Nandi	102,872	12.1	4.2	50.1	20.6	11.6	1.5
Baringo	63,357	26.6	2.2	36.9	19.2	13.5	1.6
Laikipia	51,341	15.9	1.6	50.0	22.6	8.4	1.5
Nakuru	165,857	12.1	2.5	50.2	23.6	10.0	1.6
Narok	117,236	40.8	3.5	35.1	12.3	7.2	1.2
Kajiado	30,123	37.3	3.0	27.6	16.3	14.6	1.2
Kericho	104,827	12.6	2.9	46.6	23.7	13.3	1.0
Bomet	118,477	14.3	2.6	46.5	21.7	13.3	1.5
Kakamega	216,856	14.1	3.2	51.2	21.3	8.9	1.3
Vihiga	77,650	11.6	3.7	53.7	21.1	8.3	1.7
Bungoma	181,332	9.9	2.7	46.4	28.0	11.6	1.5
Busia	97,179	17.7	3.9	51.7	17.9	7.6	1.2
Siaya	121,920	15.2	2.3	57.2	16.7	6.6	2.0
Kisumu	86,041	13.8	3.7	51.8	19.9	9.3	1.4
Homabay	121,182	13.5	2.9	56.5	17.7	8.0	1.3
Migori	103,099	15.8	3.3	56.7	15.5	7.0	1.7
Kisii	132,428	13.9	4.0	41.4	30.7	9.0	0.9
Nyamira	69,909	14.9	2.7	37.0	34.5	9.9	1.1
Nairobi City	6,576	3.1	1.3	24.9	32.2	37.5	1.0

As shown in the table, in the counties, most household heads in mixed agricultural households completed primary school as their highest level of education. The leading counties are Siaya, Migori, Taita-Taveta, Homabay, Nyandarua and Murang'a, all registering above 55 per cent.

Figure 3.41 presents the level of education of mixed farming household heads in rural and urban areas. Mixed farming household heads in the rural areas have achieved higher primary level of education attainment (48.7 per cent) compared to urban heads of households (34.8 per cent). Similarly, rural heads of households outperform their urban counterparts in school none attendance (17.4 per cent) compared to 7.7 per cent in urban areas.

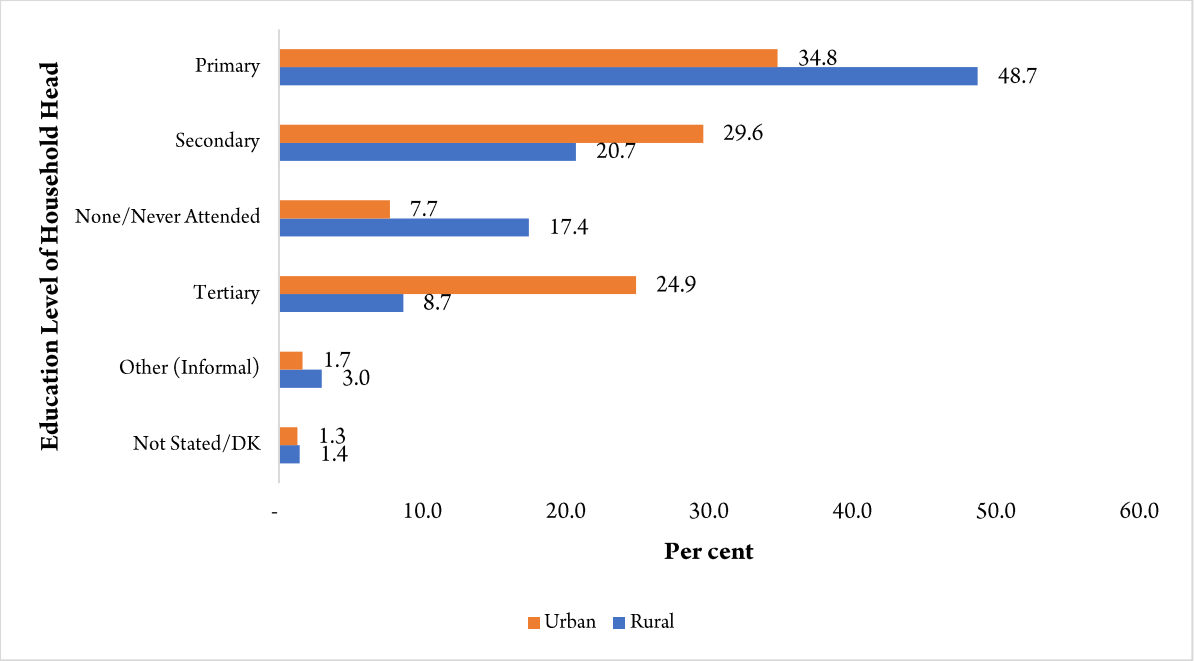


Figure 3. 41: Education Level of Mixed Farming Agricultural Household Head in Rural and Urban Areas

3.44. Agricultural household access to sanitation, 2019

Out of the 17 United Nations' Sustainable Development goals (SDG) "adequate and equitable sanitation by 2030" is one of the goals to be achieved by the year 2030. Table 3.43 shows the distribution of mixed farming agriculture households access to sanitation and by Enumeration Area type and Counties in the 2019 Kenya Population and Housing Census. The total number of mixed farming households in the 2019 Kenya Population and Housing Census was 3.9 million. Mixed farming households with access to sanitation in rural areas was 93.9 per cent while it was 6.1 per cent in urban areas. Out of the total mixed farming households with access to sanitation, 66.5 per cent used pit latrine covered and the least method used was bio septic tank/biodigester.

Table 3. 43: Mixed Farming Agricultural household access to sanitation, 2019

EA Type	Total	Main Sewer	Septic tank	Cess pool	VIP Pit Latrine	Pit latrine covered	Pit Latrine uncovered	Bucket latrine	Bush	Bio-septic tank/Biodigester
Total	3,874,866	0.4	2.0	0.1	12.7	66.5	11.8	0.3	6.2	0.0
Rural	3,636,738	0.1	1.2	0.1	12.2	67.4	12.2	0.3	6.5	0.0
Urban	238,128	4.3	15.3	0.3	19.4	53.0	6.0	0.4	1.1	0.3
County										
Total	3,874,866	0.4	2.0	0.1	12.7	66.5	11.8	0.3	6.2	0.0
Mombasa	3,546	5.0	20.8	0.5	9.4	31.9	10.1	1.9	20.1	0.3
Kwale	64,097	0.3	2.9	0.2	6.4	36.6	10.7	0.6	42.3	0.1
Kilifi	88,477	0.6	7.8	0.4	8.5	42.4	11.0	1.2	28.0	0.1
Tana River	9,496	0.5	1.6	0.1	2.3	29.0	7.7	0.5	58.2	0.1
Lamu	10,615	0.5	3.2	0.1	8.7	47.4	20.5	0.7	18.8	0.1
Taita-Taveta	34,605	0.2	3.9	0.2	14.2	64.8	14.9	0.1	1.7	0.0
Garissa	3,637	4.9	2.4	0.4	4.3	18.3	10.3	2.4	56.9	0.1
Wajir	2,446	1.5	4.5	0.9	1.6	20.2	20.5	7.6	42.8	0.6
Mandera	13,507	0.4	2.0	0.1	2.1	23.6	21.8	2.0	48.0	0.1
Marsabit	2,680	0.0	0.6	0.3	4.6	38.7	8.4	0.3	47.2	0.1
Isiolo	2,035	1.8	2.7	-	17.8	37.3	12.2	0.2	27.8	0.1
Meru	171,852	0.2	2.6	0.1	22.8	65.4	8.0	0.1	0.7	0.0
Tharaka-Nithi	60,458	0.3	1.7	0.1	13.8	71.0	12.2	0.2	0.7	0.1
Embu	89,470	0.4	2.9	0.2	14.9	71.7	9.2	0.2	0.5	0.0
Kitui	158,853	0.1	1.0	0.1	11.9	65.6	12.7	0.2	8.4	0.0
Machakos	160,161	0.6	2.2	0.1	16.3	67.4	12.5	0.1	0.7	0.1
Makueni	143,463	0.1	1.0	0.1	13.4	71.4	13.2	0.1	0.6	0.0
Nyandarua	103,372	0.1	1.5	0.1	14.4	77.2	6.6	0.0	0.1	0.0
Nyeri	111,595	0.9	3.5	0.1	14.5	75.2	5.6	0.1	0.0	0.1
Kirinyaga	86,930	0.3	3.8	0.1	18.7	73.2	3.6	0.1	0.1	0.0
Murang'a	160,466	0.4	1.8	0.1	15.1	77.1	5.2	0.1	0.2	0.1
Kiambu	108,205	0.9	7.5	0.1	18.9	68.4	3.7	0.1	0.1	0.2
Turkana	10,945	0.0	0.3	0.0	1.2	7.8	3.0	0.6	86.9	0.1
West Pokot	67,217	0.1	0.6	0.1	4.6	42.5	8.2	0.5	43.4	0.0
Samburu	11,736	0.1	1.4	0.0	3.6	22.1	4.0	0.5	68.1	0.0
Trans Nzoia	84,710	0.6	2.0	0.1	14.4	66.3	15.2	0.2	1.1	0.1
Uasin Gishu	93,151	1.1	3.6	0.1	16.1	67.5	11.1	0.1	0.4	0.1
Elgeyo-Marakwet	48,878	0.2	0.5	0.0	9.3	61.1	24.7	0.2	3.9	0.0
Nandi	102,872	0.1	0.9	0.1	17.7	68.7	11.0	0.2	1.2	0.0
Baringo	63,357	0.1	1.3	0.0	12.7	47.9	8.9	0.2	28.9	0.0
Laikipia	51,341	1.2	2.1	0.1	10.2	71.4	10.1	0.1	4.9	0.1
Nakuru	165,857	0.8	2.9	0.1	14.1	67.2	13.7	0.3	0.9	0.0
Narok	117,236	0.2	0.7	0.1	6.2	54.5	12.6	0.4	25.4	0.0
Kajiado	30,123	0.5	8.3	0.3	14.3	46.6	8.5	0.3	20.9	0.2
Kericho	104,827	0.3	1.0	0.0	8.1	73.9	14.8	0.2	1.6	0.1
Bomet	118,477	0.1	0.5	0.1	5.5	80.3	12.7	0.1	0.7	0.0
Kakamega	216,856	0.2	1.0	0.1	12.9	76.1	8.8	0.3	0.7	0.0
Vihiga	77,650	0.2	0.6	0.1	18.9	71.2	8.6	0.2	0.3	0.0
Bungoma	181,332	0.2	1.2	0.1	10.8	71.5	14.9	0.3	0.9	0.0
Busia	97,179	0.1	0.7	0.1	10.1	70.7	15.9	0.3	1.9	0.0
Siaya	121,920	0.2	0.8	0.1	10.5	71.1	11.8	0.2	5.4	0.0
Kisumu	86,041	0.6	1.8	0.1	7.6	73.1	11.6	0.3	4.9	0.0
Homabay	121,183	0.3	0.7	0.1	9.6	63.7	15.9	0.4	9.3	0.0
Migori	103,099	0.1	0.8	0.2	8.6	64.0	16.8	0.4	9.1	0.0
Kisii	132,428	0.3	1.0	0.2	11.3	62.4	23.7	0.3	0.8	0.0
Nyamira	69,909	0.2	0.9	0.2	14.3	61.9	21.6	0.3	0.6	0.0
Nairobi City	6,576	21.5	31.5	0.4	13.0	29.2	2.8	0.6	0.1	0.9

Figure 3.42 shows that in rural areas, 67.4 per cent of the mixed farming households used pit latrine covered while 12.2 per cent used pit latrine uncovered and VIP pit latrine. A further 6.5 per cent of the households used the bush. In urban areas, 53.0 per cent of the mixed farming households used pit latrine covered while the VIP pit latrine, septic tank and pit latrine uncovered was used by 12.7, 15.3 and 6.0 per cent, respectively.

The counties that were leading in accessibility to sanitation in mixed farming households were Kakamega at 5.6 per cent, Bungoma at 4.7 per cent, Meru at 4.4 per cent, Nakuru at 4.3 per cent and Murang'a, Machakos and Kitui at 4.1 per cent each. Overall, the table shows that the most commonly used means of access to sanitation in the counties was pit latrine covered (66.5 per cent), followed by VIP pit latrine (12.7 per cent) and pit latrine uncovered (11.8 per cent). Bio septic tank/Biodigester was the least used.

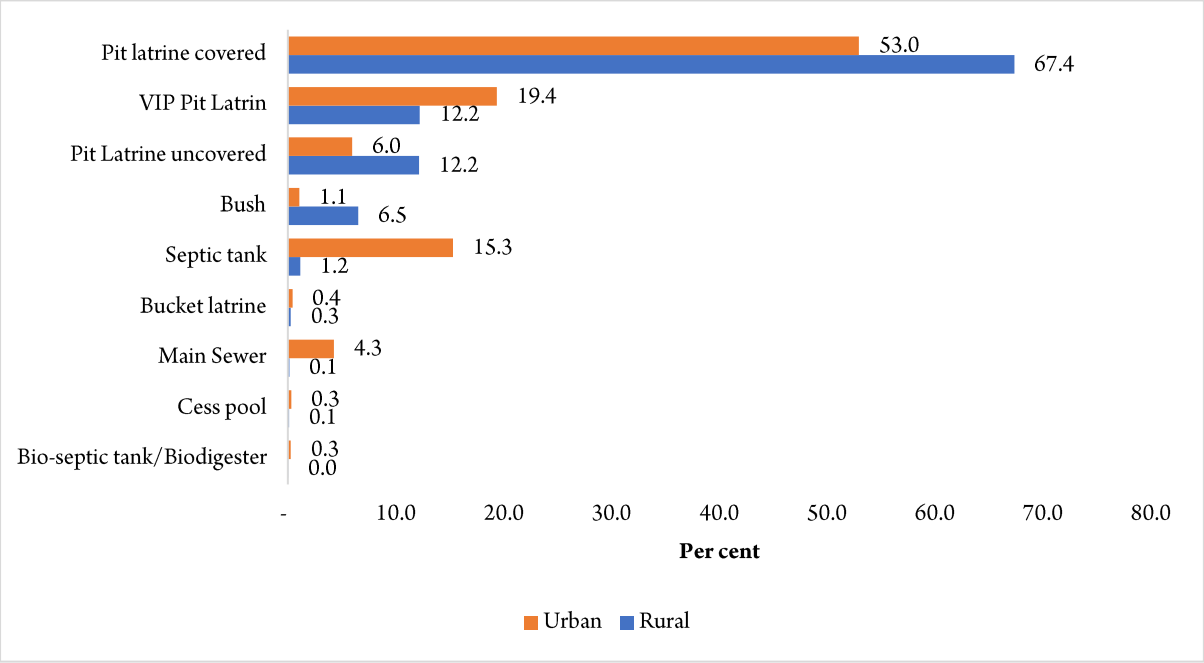


Figure 3. 42: Mixed Farming Agricultural household access to sanitation, 2019

3.45. Agricultural Household Access to clean drinking water

Lack of easy access to an improved water source may limit the quantity of suitable drinking water that is available to a household as well as increase the risk of illness. Unimproved water sources increase the spread of waterborne disease and the burden of service delivery through increased demand for health care; these sources include unprotected wells or springs, water delivered by tanker trucks and surface water. Improved water sources include piped water into the dwelling, yard, or plot; a public tap/standpipe or borehole; a protected well or protected spring water; rainwater; and bottled water.

Table 3.44 shows the distribution of mixed farming households access to clean drinking water and by location and Counties as at 2019. The total number of mixed farming households was 3.9

million in 2019. Among these population, 26.3 per cent of the households had access to drinking water from Streams/Rivers (11.5 per cent), Protected Springs (10.2 per cent), Borehole/Tube Well, Protected Well (9.4 per cent), piped to Yard/Plot (8.5 per cent) and 6.1 per cent for Piped into dwelling and Rain/Harvested water respectively.

Table 3. 44: Mixed Farming Agricultural household access to clean drinking water, 2019

	Total	Pond	Dam	Lake	Stream/River	Protected Spring	Unprotected Spring	Protected Well	Unprotected Well	Borehole/Tube well	Piped into dwelling	Piped to yard/plot	Bottled water	Rain/Harvested water	Water Vendor	Public tap/Standpipe
EA Type																
Total	3,874,866	2.2	2.6	1.0	26.3	11.5	4.0	9.4	3.7	10.2	6.1	8.5	0.3	6.1	2.4	5.7
Rural	3,636,738	2.3	2.7	1.0	27.6	11.8	4.2	9.5	3.8	10.2	5.4	7.8	0.1	6.1	2.0	5.4
Urban	238,128	0.4	0.8	0.7	7.5	6.0	1.0	8.7	1.1	9.6	16.9	19.2	2.1	7.0	8.5	10.4
County																
Total	3,874,866	2.2	2.6	1.0	26.3	11.5	4.0	9.4	3.7	10.2	6.1	8.5	0.3	6.1	2.4	5.7
Mombasa	3,546	1.6	1.1	-	0.6	1.0	5.7	4.5	7.0	5.4	5.8	13.7	4.2	2.1	18.9	28.4
Kwale	64,097	27.2	15.2	-	4.3	1.0	2.4	6.3	10.9	9.1	1.7	3.4	0.2	2.1	0.9	15.1
Kilifi	88,477	11.0	12.1	-	4.0	0.7	0.8	3.0	5.0	3.1	4.4	10.6	0.3	0.5	6.3	38.2
Tana River	9,496	0.9	6.2	-	24.3	0.7	0.3	16.7	8.3	29.2	1.2	2.6	0.1	0.1	3.2	6.2
Lamu	10,615	6.1	2.2	-	1.3	1.3	1.0	16.1	23.7	7.4	2.1	2.2	0.6	8.1	4.5	23.3
Taita-Taveta	34,605	0.2	1.4	0.5	23.3	4.0	2.8	2.1	1.5	6.6	8.0	17.8	0.2	1.9	7.0	22.8
Garissa	3,637	20.9	26.6	-	10.8	0.4	0.3	2.4	3.1	20.6	1.8	4.4	1.2	0.2	1.0	6.3
Wajir	2,446	12.0	34.8	-	0.4	0.4	0.4	7.3	11.3	22.3	2.8	1.6	0.8	0.4	4.0	1.4
Mandera	13,507	21.1	26.5	-	18.2	0.2	0.1	1.5	1.6	10.2	1.1	3.6	0.2	1.5	9.1	5.1
Marsabit	2,680	0.2	8.3	3.3	3.1	2.8	2.1	5.3	28.1	11.8	1.4	2.4	0.3	5.1	13.4	12.3
Isiolo	2,035	0.4	0.7	-	35.1	1.5	1.5	4.2	4.8	16.4	6.6	19.8	0.2	0.2	1.9	6.6
Meru	171,852	0.3	0.2	-	22.7	2.5	2.1	2.2	1.7	7.3	21.3	23.9	0.4	1.4	8.4	5.6
Tharaka-Nithi	60,458	0.5	0.1	-	37.0	0.7	1.1	3.4	3.1	5.1	18.9	22.1	0.1	0.3	1.3	6.3
Embu	89,470	0.8	4.3	-	23.7	0.6	1.1	3.4	3.8	6.8	17.7	25.4	0.1	1.7	3.4	7.3
Kitui	158,853	0.7	6.3	-	46.4	0.9	0.8	7.1	6.8	14.1	1.8	1.3	0.2	2.8	3.1	7.8
Machakos	160,161	1.1	5.8	-	22.1	4.8	5.9	7.0	6.5	25.7	1.9	1.2	0.7	7.4	4.1	5.8
Makueni	143,463	0.6	3.0	-	33.2	2.7	6.1	6.7	8.5	12.8	2.0	1.9	0.3	7.8	6.2	8.2
Nyandarua	103,372	0.6	2.9	0.0	12.3	1.6	1.3	21.7	4.5	5.1	8.9	14.9	0.1	22.0	1.3	2.8
Nyeri	111,595	0.3	0.4	-	15.8	0.6	0.5	2.4	1.3	0.9	22.5	38.0	0.1	12.0	1.2	4.2
Kirinyaga	86,930	0.1	0.1	-	28.2	1.4	1.2	8.6	1.6	3.3	19.1	28.8	0.3	1.7	1.0	4.7
Murang'a	160,466	0.5	0.3	-	29.0	1.7	1.9	8.5	2.7	5.3	16.2	18.4	0.1	9.9	2.1	3.4
Kiambu	108,205	0.2	0.4	-	9.0	0.6	0.4	17.2	0.6	12.1	18.6	26.7	0.6	3.7	4.4	5.5
Turkana	10,945	1.0	0.9	6.6	36.6	1.1	0.7	3.1	12.2	14.5	1.9	2.7	0.0	0.0	0.9	17.6
West Pokot	67,217	1.4	1.6	0.8	62.0	2.4	2.5	2.4	2.2	11.3	4.1	6.0	0.0	0.4	0.2	2.7
Samburu	11,736	3.2	11.8	0.3	38.7	2.4	4.3	2.9	9.7	14.8	1.0	1.8	0.3	2.8	1.4	4.7
Trans Nzoia	84,710	0.9	0.3	-	18.8	17.8	3.3	26.0	3.4	17.5	3.3	3.3	0.1	0.9	0.6	3.9
Uasin Gishu	93,151	1.2	0.5	-	9.3	3.4	2.4	33.6	13.8	20.7	4.7	5.2	0.3	1.6	0.4	3.0
Elgeyo-Marakwet	48,878	0.7	0.4	-	47.1	2.7	3.1	12.7	3.9	5.7	5.6	12.9	0.1	1.0	0.1	3.9
Nandi	102,872	1.1	0.4	-	38.5	9.3	11.7	14.2	4.6	7.9	4.2	4.8	0.1	1.2	0.1	1.9
Baringo	63,357	2.4	8.6	1.3	49.5	1.8	2.2	3.9	1.3	9.7	3.4	8.3	0.1	4.0	1.2	2.3
Laikipia	51,341	1.0	6.5	-	23.7	1.4	2.2	14.0	3.3	12.3	7.8	12.8	0.1	10.0	2.0	2.9
Nakuru	165,857	0.6	1.4	0.3	22.6	2.5	3.2	11.3	1.9	12.6	4.9	7.5	0.5	20.4	5.2	5.0
Narok	117,236	6.5	8.0	-	46.2	6.3	7.7	5.0	3.4	4.4	0.6	0.9	0.4	6.4	1.5	2.6
Kajiado	30,123	0.9	2.8	0.2	14.4	3.6	1.5	4.0	1.7	31.4	8.1	7.4	2.8	2.7	11.0	7.6
Kericho	104,827	0.9	0.9	-	49.4	8.7	6.2	7.8	2.5	4.6	4.9	6.1	0.1	4.3	0.3	3.4
Bomet	118,477	9.5	4.8	-	40.1	6.0	6.0	2.5	2.1	2.1	2.0	3.8	0.1	16.6	0.6	3.8
Kakamega	216,856	0.9	0.2	-	18.4	39.2	5.9	16.4	2.0	9.8	1.7	2.1	0.1	0.7	0.3	2.2
Vihiga	77,650	0.5	0.2	-	23.9	58.0	4.7	3.4	0.7	1.5	1.0	1.7	0.0	3.0	0.3	1.1
Bungoma	181,332	0.7	0.2	-	9.4	43.4	5.3	15.5	3.0	11.6	2.2	3.2	0.1	0.5	0.7	4.2
Busia	97,179	0.7	0.3	2.3	11.7	20.3	6.1	15.8	4.4	29.1	1.1	2.0	0.1	0.7	0.6	4.7
Siaya	121,920	3.6	2.2	10.8	22.4	12.9	3.6	4.9	1.6	12.8	1.3	2.5	0.1	7.7	2.6	11.0
Kisumu	86,041	1.6	0.8	1.8	24.4	3.0	1.5	12.9	1.6	18.1	2.5	4.1	0.3	13.6	2.6	11.3
Homabay	121,183	3.1	2.0	11.7	23.6	8.2	3.6	7.4	2.7	14.2	0.4	0.8	0.2	17.0	1.4	3.7
Migori	103,099	2.9	2.4	3.8	35.6	10.6	8.1	10.4	5.6	8.2	0.5	0.6	0.3	8.9	0.8	1.5
Kisii	132,428	0.2	0.2	-	36.5	44.9	8.8	2.5	0.9	0.8	0.4	0.5	0.1	3.4	0.1	0.7
Nyamira	69,909	0.4	0.3	-	34.0	39.8	10.8	4.2	1.3	1.0	0.4	0.4	0.1	6.8	0.1	0.3
Nairobi City	6,576	0.1	0.2	-	0.2	0.3	0.0	3.3	0.1	11.5	24.5	20.6	6.2	6.3	15.3	11.4

The number of mixed farming households comprised of 3.6 million households belonging to rural areas while the urban areas had 238.1 thousand households with access to clean drinking water. Figure 3.43 shows that most of the households in rural areas had access to drinking water from Stream/River, Protected Springs, Borehole/Tube well, Protected Well, piped into Yard/Plot, piped into dwelling and Public tap/stand pipe, in decreasing order of accessibility. On the other hand, households' in urban areas mainly had access to clean drinking water from Piped water into Yard/Plot, Piped into dwelling, Borehole/Tube Well and water vendors. Table 3.44 shows counties with mixed farming households which have access to drinking water. The 19 leading counties which reported to have access to drinking water were Kakamega, Bungoma, Nakuru, Murang'a, Makueni, Machakos, Kitui, Meru, Nyandarua, Nyeri, Kiambu, Nandi, Narok, Kericho, Bomet, Busia, Homabay, Migori and Kisii.

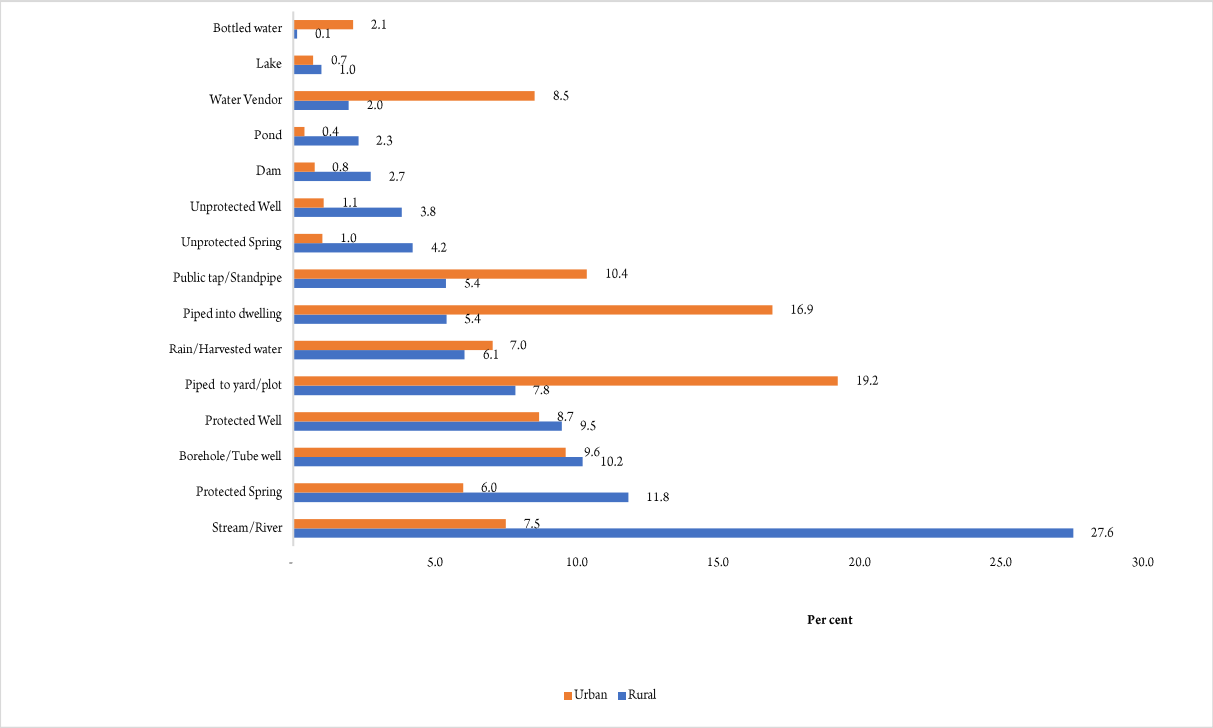


Figure 3. 43: Distribution of Mixed Farming Household Access to Clean Drinking Water in Rural and Urban Areas, 2019

3.46. Agriculture Population who use ICT

By using ICTs, there have already "been diverse types of innovations taking place in the agriculture sector, which include commodity and stock market price information and analysis, meteorological data collection, advisory services to farmers for agricultural extension, early warning systems for disaster prevention and control, financial services, traceability of agricultural products, agricultural statistical data gathering, etc." (ICT for sustainable agriculture, FAO, 2013).

In 2007, FAO and a group of founding partners launched the e-Agriculture Community of Practice - an online space to facilitate an exchange of knowledge and experiences of projects where ICTs are used for agriculture and rural development (e-Agriculture 10 year Review Report).

Implementation of the World Summit on Information Society, (WSIS, 2015). Table 3.60 shows the distribution of mixed farming agriculture households by ICT use during the 2019 Kenya Population and Housing Census. The total number of mixed farming households who used ICT either in the form of Mobile Phone, Internet, Computer, Laptop or ordered goods and services online were 17.7 million. The households that used mobile phone were 52.5 per cent, those who used internet from any location for the last 3 months were 15.3 per cent and those who used Computer/Laptop/Tablet from any location for the last 3 months were 6.7 per cent of the total number of mixed farming household who used ICT. Few households bought or ordered goods and services online.

Table 3. 45: Distribution population of Mixed Farming agricultural households by ICT use

	Mobile Phone				Used the internet from any location in the last 3 months			Used a computer/ Laptop/ Tablet from any location in the last 3 months			Bought or ordered goods or services online in the last 3 months				
	Total	Yes	No	DK	Yes	No	DK	Yes	No	DK	Searched and bought online	Searched and bought elsewhere	Searched only	Never	DK
EA Type															
Total	17,706,226	52.5	47.2	0.2	15.3	84.3	0.4	6.7	92.8	0.5	1.3	0.6	1.9	59.5	0.4
Rural	16,732,406	51.6	48.2	0.2	14.2	85.4	0.4	6.0	93.6	0.5	1.0	0.5	1.8	59.5	0.4
Urban	973,820	68.5	31.4	0.2	34.4	65.2	0.4	20.0	79.5	0.5	4.9	1.0	4.7	58.8	0.7
County															
Total	17,706,226	52.5	47.2	0.2	15.3	84.3	0.4	6.7	92.8	0.5	1.3	0.6	1.9	59.5	0.4
Mombasa	17,542	54.9	45.0	0.1	20.2	79.4	0.3	10.5	89.1	0.3	3.0	0.5	2.8	58.7	0.5
Kwale	371,328	42.5	57.1	0.5	7.5	91.8	0.7	2.8	96.5	0.7	0.4	0.3	0.7	55.5	0.4
Kilifi	544,523	46.0	53.8	0.2	9.5	90.2	0.4	4.7	94.9	0.4	0.7	0.3	1.3	57.0	0.2
Tana River	50,050	38.2	61.6	0.2	6.6	93.0	0.3	2.7	96.9	0.3	0.3	0.2	0.7	52.8	0.2
Lamu	47,881	49.8	50.0	0.2	12.9	86.8	0.2	4.1	95.6	0.3	0.9	0.5	1.6	59.2	0.2
Taita-Taveta	143,758	62.8	37.1	0.1	18.5	81.2	0.3	7.8	91.9	0.4	1.6	0.5	2.5	63.7	0.2
Garissa	24,004	42.4	56.2	1.4	14.0	84.6	1.4	8.5	90.1	1.4	1.7	1.1	1.2	51.7	1.9
Wajir	14,807	38.2	60.4	1.4	13.4	85.2	1.4	6.2	92.2	1.6	1.8	1.1	0.9	50.3	0.8
Mandera	92,222	28.2	70.2	1.6	6.9	91.6	1.5	2.5	95.9	1.6	0.3	0.4	0.6	47.8	0.6
Marsabit	15,428	29.4	70.1	0.5	8.7	90.8	0.5	3.9	95.5	0.6	0.5	0.7	1.1	52.6	0.3
Isiolo	11,977	39.3	60.5	0.2	11.5	88.1	0.4	5.3	94.3	0.4	1.0	0.6	1.0	55.1	0.2
Meru	692,814	60.7	39.1	0.2	18.0	81.5	0.4	6.9	92.6	0.4	1.2	0.7	2.3	64.6	0.4
Tharaka-Nithi	236,015	62.1	37.7	0.2	16.9	82.6	0.5	7.4	92.1	0.5	1.1	0.7	2.1	65.4	0.4
Embu	337,908	64.8	35.1	0.1	18.8	80.9	0.3	8.1	91.6	0.3	1.4	0.6	2.6	66.9	0.3
Kitui	723,604	51.4	48.3	0.3	12.0	87.5	0.5	4.3	95.1	0.6	0.8	0.5	1.3	61.1	0.4
Machakos	657,924	59.9	40.0	0.1	17.2	82.4	0.4	7.0	92.7	0.4	1.5	0.6	2.1	65.6	0.4
Makueni	624,100	57.4	42.4	0.2	14.8	84.6	0.6	5.8	93.5	0.6	1.2	0.5	1.6	64.5	0.7
Nyandarua	402,132	66.6	33.3	0.1	18.5	81.2	0.3	7.3	92.4	0.3	1.3	0.7	2.2	63.7	0.3
Nyeri	388,797	74.7	25.2	0.1	25.0	74.6	0.4	11.5	88.1	0.5	2.3	0.9	3.4	66.9	0.5
Kirinyaga	293,327	72.8	27.1	0.1	21.9	77.6	0.4	9.4	90.1	0.5	1.9	0.6	2.4	69.6	0.5
Murang'a	587,551	67.7	32.2	0.1	18.2	81.5	0.3	7.2	92.5	0.3	1.4	0.6	2.4	66.9	0.3
Kiambu	423,258	72.2	27.7	0.1	29.7	69.9	0.4	14.1	85.5	0.5	3.4	1.0	4.4	63.9	0.6
Turkana	68,631	16.5	81.7	1.7	4.3	94.1	1.6	1.7	96.5	1.8	0.4	0.4	0.6	55.5	0.8
West Pokot	365,549	23.7	75.5	0.8	7.2	92.1	0.7	2.7	96.5	0.8	0.3	0.4	0.9	50.7	0.4
Samburu	62,363	32.5	67.0	0.5	9.2	90.3	0.5	4.4	95.0	0.6	0.8	0.5	1.2	50.4	0.5
Trans Nzoia	434,673	47.2	52.5	0.2	15.7	83.9	0.4	7.2	92.3	0.5	1.3	0.5	2.0	56.9	0.3
Uasin Gishu	463,350	54.5	45.3	0.2	21.6	78.1	0.3	10.8	88.8	0.4	2.1	0.7	2.9	59.5	0.4
Elgeyo-Marakwet	253,631	45.5	54.2	0.2	14.4	85.3	0.4	6.1	93.5	0.4	1.0	0.7	1.9	57.6	0.3
Nandi	514,068	49.7	50.1	0.3	17.0	82.6	0.4	7.3	92.2	0.5	1.3	0.6	2.2	60.4	0.4
Baringo	327,852	43.5	56.1	0.3	15.2	84.4	0.5	6.7	92.8	0.5	1.1	0.6	2.1	55.2	0.5
Laikipia	203,091	61.0	38.8	0.2	17.9	81.6	0.4	7.4	92.1	0.5	1.3	0.6	2.1	62.4	0.4
Nakuru	743,400	55.2	44.6	0.2	17.7	81.8	0.5	7.8	91.7	0.5	1.6	0.6	2.4	58.6	0.5
Narok	610,299	37.5	62.1	0.4	10.2	89.4	0.5	3.7	95.8	0.5	0.6	0.5	1.2	51.5	0.4
Kajiado	139,455	53.3	46.5	0.2	22.3	77.3	0.4	11.3	88.3	0.5	2.7	0.7	3.1	54.8	0.6
Kericho	518,936	49.3	50.5	0.2	17.1	82.6	0.3	8.0	91.6	0.4	1.3	0.7	2.5	59.5	0.3
Bomet	590,550	48.2	51.4	0.3	16.0	83.6	0.4	7.1	92.4	0.5	1.2	0.7	2.3	57.4	0.5
Kakamega	1,029,850	49.2	50.6	0.2	13.0	86.7	0.3	5.8	93.8	0.4	1.0	0.4	1.5	57.8	0.3
Vihiga	348,115	50.9	48.9	0.1	12.6	87.0	0.4	6.1	93.5	0.4	1.1	0.4	1.4	61.0	0.3
Bungoma	925,815	44.1	55.6	0.3	12.4	87.2	0.4	5.7	93.9	0.4	0.9	0.5	1.4	55.6	0.3
Busia	481,073	45.9	53.9	0.2	11.6	88.1	0.3	5.4	94.3	0.4	0.9	0.4	1.5	57.4	0.3
Siaya	529,542	53.6	46.2	0.2	13.1	86.4	0.5	6.0	93.4	0.5	1.2	0.4	1.6	58.6	0.4
Kisumu	390,523	55.4	44.5	0.1	16.3	83.4	0.3	8.5	91.2	0.3	1.7	0.5	2.0	58.4	0.3
Homabay	564,198	51.1	48.8	0.2	13.6	86.1	0.3	6.3	93.4	0.4	1.3	0.5	1.6	55.4	0.3
Migori	522,359	45.9	53.8	0.3	12.3	87.2	0.4	5.3	94.2	0.5	1.0	0.5	1.6	54.0	0.3
Kisii	592,069	53.4	46.5	0.1	14.2	85.5	0.2	7.0	92.7	0.3	1.1	0.6	1.7	59.5	0.2
Nyamira	301,086	55.8	44.1	0.2	15.7	84.1	0.2	7.7	92.0	0.3	1.3	0.5	1.8	60.8	0.2
Nairobi City	24,798	82.8	17.1	0.1	55.5	44.2	0.3	37.4	62.1	0.4	12.3	1.7	7.3	53.3	1.1

In rural areas, the number of mixed farming households that used ICT was 16.7 million, which is 94.5 per cent of the total households using ICT while the household that were in urban areas using ICT were 5.5 per cent. Figure 3.44 shows that 51.6 per cent of the mixed farming households in rural areas used Mobile Phones, 14.2 and 6.0 per cent used internet and Computer/Laptop/Tablet from any location for the last 3 months, respectively. In urban areas, 68.5 per cent of the mixed farming households used Mobile Phones, 34.4 per cent used internet and 20.0 per cent used computer/Laptop/Tablet from any location.

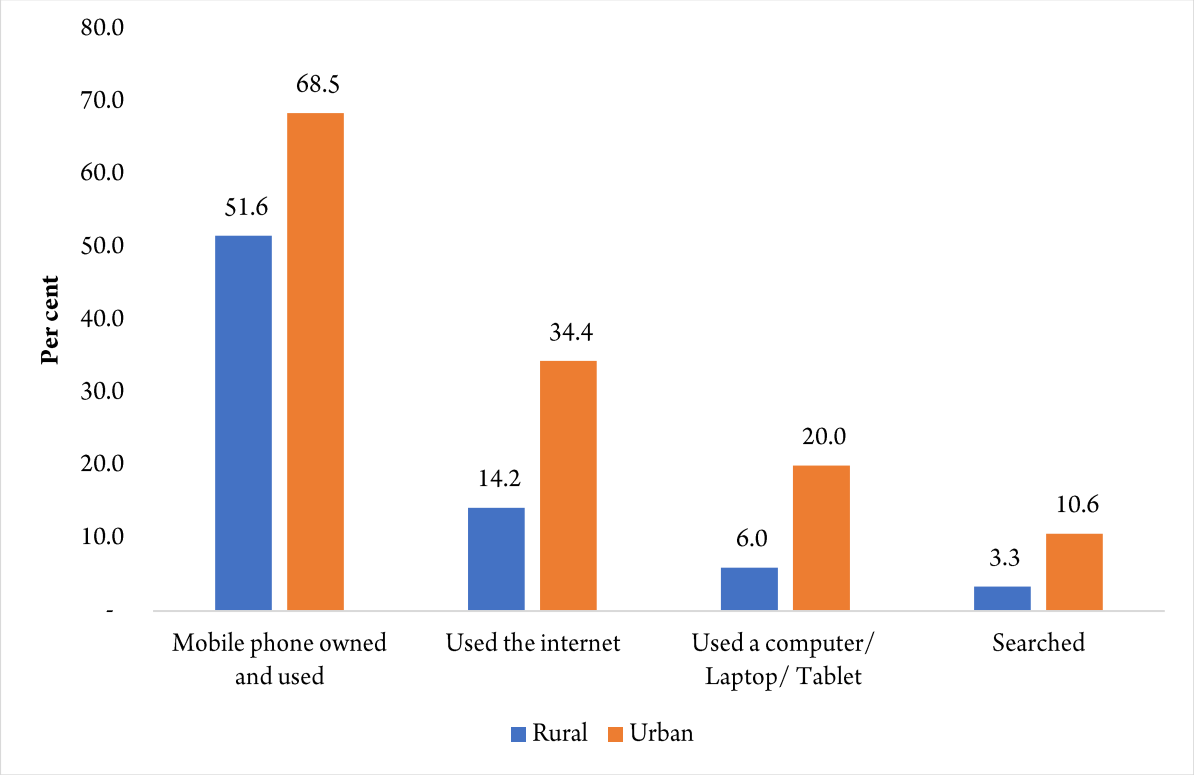


Figure 3. 44: ICT use in Mixed Farming Households in Rural and Urban areas.

Figure 3.45 shows overall usage of ICT in counties. The counties that led in the usage of ICT in mixed farming households are Kakamega, Bungoma, Nakuru, Kitui, Meru, Machakos, Makueni, Kilifi, Murang'a, Uasin Gishu, Nandi, Narok, Kericho, Bomet, Busia, Siaya, Homabay, Migori and Kisii.

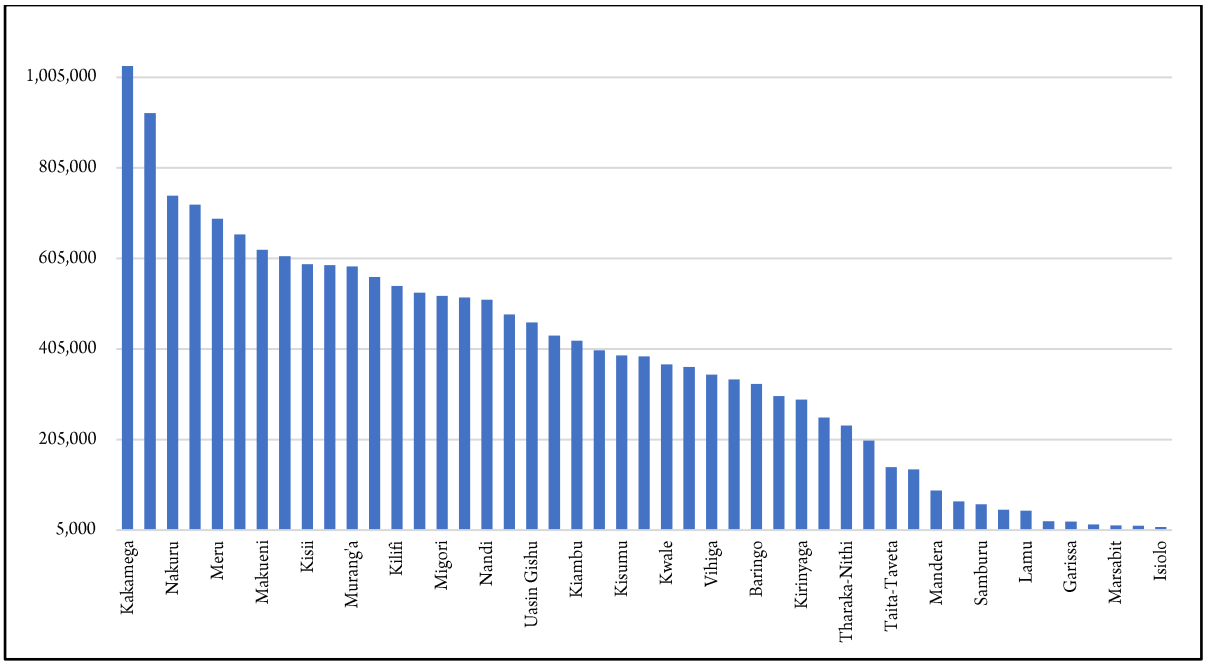


Figure 3. 45: Mixed Farming agricultural households by ICT use in Counties, 2019

3.47. Agriculture Household Ownership of Agricultural Assets

Table 3.46 shows the distribution of mixed farming agriculture households by agricultural household assets in the rural, urban and counties in the 2019 Kenya Population and Housing Census. The total number of mixed agricultural households with agricultural household assets was 3.9 million. The assets that were mostly found in the mixed farming agricultural household were bicycle, motorcycle, ox-plough and car at 22.2, 14.1, 12.3 and 5.3 per cent respectively. Figure 3.46 shows that ox-plough and animal drawn cart are more common in rural areas than in urban areas. The rest are more common in urban areas.

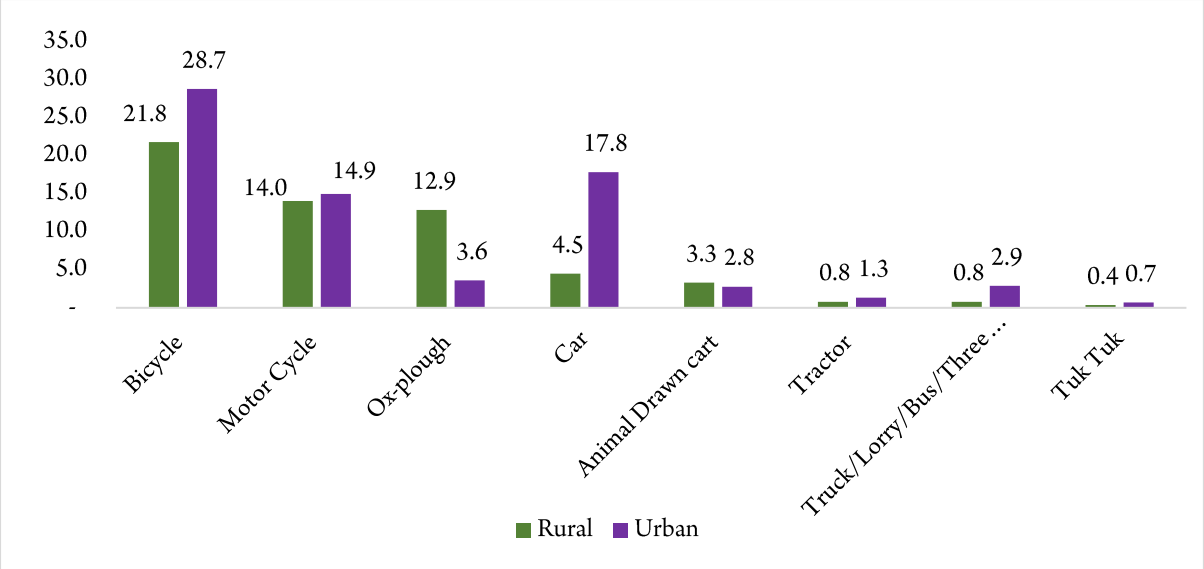


Figure 3. 46: Mixed farming agricultural households by agricultural household assets

Table 3.46: Distribution of Mixed Farming agricultural households by agricultural household assets

EA Type	Total	Tractor		Ox-plough		Animal Drawn cart		Bicycle		Motor Cycle		Car		Truck/Lorry/ Bus/Three		Tuk Tuk	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Total	**3,874,866**	**0.8**	**99.2**	**12.3**	**87.7**	**3.3**	**96.7**	**22.2**	**77.8**	**14.1**	**85.9**	**5.3**	**94.7**	**0.9**	**99.1**	**0.4**	**99.6**
Rural	3,636,738	0.8	99.2	12.9	87.1	3.3	96.7	21.8	78.2	14.0	86.0	4.5	95.5	0.8	99.2	0.4	99.6
Urban	238,128	1.3	98.7	3.6	96.4	2.8	97.2	28.7	71.3	14.9	85.1	17.8	82.2	2.9	97.1	0.7	99.3
County																	
Total	**3,874,866**	**0.8**	**99.2**	**12.3**	**87.7**	**3.3**	**96.7**	**22.2**	**77.8**	**14.1**	**85.9**	**5.3**	**94.7**	**0.9**	**99.1**	**0.4**	**99.6**
Mombasa	3,546	0.5	99.5	1.5	98.5	1.0	99.0	23.4	76.6	13.0	87.0	7.7	92.3	1.1	98.9	1.1	98.9
Kwale	64,097	0.5	99.5	26.3	73.7	1.6	98.4	26.2	73.8	14.8	85.2	1.7	98.3	0.4	99.6	0.5	99.5
Kilifi	88,477	0.4	99.6	2.9	97.1	0.9	99.1	21.7	78.3	13.8	86.2	2.1	97.9	0.5	99.5	0.8	99.2
Tana River	9,496	0.4	99.6	0.6	99.4	2.3	97.7	20.9	79.1	15.2	84.8	1.4	98.6	0.5	99.5	0.5	99.5
Lamu	10,615	0.5	99.5	1.7	98.3	1.0	99.0	54.0	46.0	27.8	72.2	1.8	98.2	0.6	99.4	0.7	99.3
Taita-Taveta	34,605	0.4	99.6	7.3	92.7	3.1	96.9	26.0	74.0	20.3	79.7	3.2	96.8	0.8	99.2	0.4	99.6
Garissa	3,637	2.2	97.8	4.7	95.3	13.3	86.7	6.4	93.6	5.2	94.8	5.5	94.5	2.4	97.6	3.3	96.7
Wajir	2,446	1.6	98.4	3.4	96.6	24.8	75.2	3.2	96.8	5.7	94.3	4.1	95.9	1.1	98.9	2.6	97.4
Mandera	13,507	1.0	99.0	17.1	82.9	25.7	74.3	4.4	95.6	10.0	90.0	2.8	97.2	0.9	99.1	3.4	96.6
Marsabit	2,680	0.5	99.5	6.2	93.8	0.5	99.5	3.1	96.9	9.2	90.8	3.2	96.8	0.7	99.3	0.9	99.1
Isiolo	2,035	0.7	99.3	2.3	97.7	4.2	95.8	6.2	93.8	14.6	85.4	5.5	94.5	1.3	98.7	0.5	99.5
Meru	171,852	0.5	99.5	4.6	95.4	3.1	96.9	13.5	86.5	13.9	86.1	6.7	93.3	0.9	99.1	0.3	99.7
Tharaka-Nithi	60,458	0.3	99.7	13.1	86.9	0.7	99.3	23.6	76.4	16.9	83.1	5.5	94.5	0.8	99.2	0.3	99.7
Embu	89,470	0.5	99.5	13.1	86.9	11.0	89.0	24.3	75.7	18.8	81.2	7.5	92.5	1.1	98.9	0.4	99.6
Kitui	158,853	0.6	99.4	46.9	53.1	5.4	94.6	27.5	72.5	15.7	84.3	3.7	96.3	0.7	99.3	0.6	99.4
Machakos	160,161	0.7	99.3	38.9	61.1	17.2	82.8	28.3	71.7	14.0	86.0	6.6	93.4	1.2	98.8	0.4	99.6
Makueni	143,463	0.8	99.2	40.9	59.1	10.1	89.9	35.6	64.4	17.2	82.8	5.1	94.9	1.0	99.0	0.4	99.6
Nyandarua	103,372	0.7	99.3	0.4	99.6	4.1	95.9	26.7	73.3	13.9	86.1	6.5	93.5	1.4	98.6	0.3	99.7
Nyeri	111,595	0.4	99.6	0.3	99.7	0.5	99.5	14.9	85.1	11.4	88.6	8.7	91.3	1.2	98.8	0.3	99.7
Kirinyaga	86,930	0.4	99.6	6.3	93.7	12.9	87.1	29.4	70.6	20.1	79.9	7.8	92.2	1.1	98.9	0.5	99.5
Murang'a	160,466	0.3	99.7	1.0	99.0	0.8	99.2	15.0	85.0	10.1	89.9	5.6	94.4	1.1	98.9	0.3	99.7
Kiambu	108,205	0.4	99.6	0.4	99.6	4.1	95.9	23.8	76.2	11.5	88.5	14.9	85.1	2.7	97.3	0.4	99.6
Turkana	10,945	0.3	99.7	0.3	99.7	0.3	99.7	6.3	93.7	5.8	94.2	1.1	98.9	0.3	99.7	0.3	99.7
West Pokot	67,217	0.5	99.5	2.4	97.6	0.4	99.6	3.6	96.4	6.4	93.6	1.6	98.4	0.4	99.6	0.2	99.8
Samburu	11,736	0.4	99.6	0.3	99.7	0.3	99.7	9.0	91.0	11.4	88.6	4.0	96.0	0.7	99.3	0.4	99.6
Trans Nzoia	84,710	2.8	97.2	4.6	95.4	1.5	98.5	29.3	70.7	16.9	83.1	6.7	93.3	1.1	98.9	0.4	99.6
Uasin Gishu	93,151	5.1	94.9	1.9	98.1	0.7	99.3	29.6	70.4	17.4	82.6	11.2	88.8	1.8	98.2	0.3	99.7
Elgeyo-Marakwet	48,878	1.2	98.8	2.7	97.3	0.4	99.6	5.2	94.8	10.0	90.0	4.3	95.7	0.9	99.1	0.3	99.7
Nandi	102,872	2.0	98.0	8.9	91.1	0.9	99.1	14.9	85.1	14.4	85.6	5.8	94.2	0.7	99.3	0.3	99.7
Baringo	63,357	1.3	98.7	2.7	97.3	0.3	99.7	10.0	90.0	11.2	88.8	5.4	94.6	0.7	99.3	0.3	99.7
Laikipia	51,341	1.3	98.7	0.7	99.3	3.2	96.8	33.5	66.5	19.7	80.3	7.3	92.7	1.1	98.9	0.4	99.6
Nakuru	165,857	1.1	98.9	3.5	96.5	1.6	98.4	23.9	76.1	16.9	83.1	7.7	92.3	1.3	98.7	0.4	99.6
Narok	117,236	1.2	98.8	20.2	79.8	1.4	98.6	4.1	95.9	12.7	87.3	3.3	96.7	0.6	99.4	0.4	99.6
Kajiado	30,123	0.8	99.2	4.7	95.3	3.1	96.9	17.8	82.2	21.0	79.0	14.3	85.7	2.0	98.0	0.6	99.4
Kericho	104,827	1.1	98.9	9.3	90.7	0.7	99.3	5.4	94.6	10.5	89.5	5.7	94.3	0.8	99.2	0.3	99.7
Bomet	118,477	1.0	99.0	12.1	87.9	1.1	98.9	7.0	93.0	14.6	85.4	4.2	95.8	0.6	99.4	0.3	99.7
Kakamega	216,856	0.7	99.3	5.0	95.0	1.5	98.5	33.6	66.4	14.6	85.4	3.6	96.4	0.7	99.3	0.4	99.6
Vihiga	77,650	0.3	99.7	0.4	99.6	0.4	99.6	14.7	85.3	8.4	91.6	3.1	96.9	0.6	99.4	0.3	99.7
Bungoma	181,332	0.7	99.3	14.2	85.8	2.9	97.1	35.8	64.2	14.9	85.1	3.4	96.6	0.7	99.3	0.4	99.6
Busia	97,179	0.5	99.5	6.8	93.2	0.7	99.3	45.5	54.5	14.9	85.1	2.8	97.2	0.7	99.3	0.3	99.7
Siaya	121,920	0.4	99.6	8.3	91.7	1.1	98.9	43.5	56.5	13.9	86.1	3.1	96.9	0.7	99.3	0.4	99.6
Kisumu	86,041	0.6	99.4	8.9	91.1	1.2	98.8	32.7	67.3	12.9	87.1	4.0	96.0	0.9	99.1	0.6	99.4
Homabay	121,183	0.6	99.4	27.9	72.1	2.4	97.6	18.1	81.9	13.4	86.6	2.6	97.4	0.6	99.4	0.5	99.5
Migori	103,099	0.6	99.4	39.9	60.1	1.9	98.1	16.3	83.7	17.4	82.6	2.7	97.3	0.6	99.4	0.4	99.6
Kisii	132,428	0.4	99.6	5.6	94.4	0.6	99.4	4.3	95.7	9.6	90.4	3.3	96.7	0.6	99.4	0.3	99.7
Nyamira	69,909	0.4	99.6	2.2	97.8	0.3	99.7	5.1	94.9	10.0	90.0	3.9	96.1	0.8	99.2	0.3	99.7
Nairobi City	6,576	1.0	99.0	1.8	98.2	2.3	97.7	33.4	66.6	9.6	90.4	34.3	65.7	5.5	94.5	0.6	99.4

The proportion of mixed agricultural household that were found to have agricultural household assets. Tractors are most common in Uasin Gishu county (5.1 per cent). Ox-ploughs are most common in Kitui county (46.9 per cent). Animal drawn carts are most common in Mandera (25.7 per cent). Bicycles and motor cycles are most common in Lamu county (54.0 per cent and 27.8 per cent) respectively.

Chapter 4: CAADP Indicators

This chapter presents selected Indicators monitored by the biennial report of the Comprehensive African Agriculture Development Programme (CAADP). A detailed presentation of the CAADP indicators such as those related to food, nutrition, government spending in agriculture among others was beyond the scope of the KPHC. The chapter therefore presents indicators relating to the proportion of women and the youth in Agriculture by various levels of disaggregation (National, rural/urban and counties). The indicators presented relate to the entire agriculture sector like chapter three.

4.1. Farmer Population by sex (18 years and above)

Table 4.1 presents distribution of population aged 18 years and above engaged in Agriculture by sex and county in 2019. The total number of people that engaged in this type of farming was 14,899,504. Out of these, 90.1 percent were in rural areas and 9.9 per cent in urban areas. The table shows that the proportion of females at the national level (52.3 per cent) was higher than that of males (47.7 per cent). A similar trend is observed in urban and rural areas.

At the county level, Kakamega had the highest number of adults engaged in farming (755,885). Other counties with more than half a million adult famers include Bungoma, Nakuru, Meru, Kiambu, Murang'a, Machakos and Kitui. Mombasa county had the least number of adult farmers (34,430). This is in part due to the small size of the county and the aggregate population. The sex ratio of the adult farmers across the counties follows a similar trend with the national level.

Table 4. 1: Distribution of Population aged 18 Yrs+ engaged in Agriculture by sex and region, 2019

EA Type/County	Total	Male	Female	Intersex
Total	**14,899,504**	**47.7**	**52.3**	**0.0**
Rural	13,425,032	47.6	52.4	0.0
Urban	1,474,472	48.1	51.9	0.0
County				
Total	14,899,504	47.7	52.3	0.0
Mombasa	34,430	50.4	49.6	-
Kwale	286,220	46.6	53.4	0.0
Kilifi	457,892	45.3	54.7	0.0
Tana River	79,028	48.6	51.4	-
Lamu	46,268	51.7	48.3	-
Taita-Taveta	132,262	49.6	50.4	0.0
Garissa	134,649	55.3	44.7	0.0
Wajir	160,683	52.7	47.3	0.0
Mandera	164,170	51.2	48.8	0.0
Marsabit	105,540	53.0	47.0	0.0
Isiolo	59,316	52.0	48.0	0.0
Meru	634,845	49.2	50.7	0.0
Tharaka-Nithi	194,380	48.6	51.4	0.0
Embu	293,471	49.6	50.4	0.0
Kitui	505,477	45.7	54.3	0.0
Machakos	555,582	48.8	51.2	0.0
Makueni	470,457	47.9	52.1	0.0
Nyandarua	302,320	47.3	52.7	0.0
Nyeri	355,527	47.7	52.3	0.0
Kirinyaga	296,480	49.2	50.8	0.0
Murang'a	508,595	48.4	51.6	0.0
Kiambu	509,259	47.9	52.1	0.0
Turkana	183,702	51.0	49.0	0.0
West Pokot	208,398	47.6	52.4	0.0
Samburu	93,311	48.7	51.3	0.0
Trans Nzoia	335,979	47.7	52.3	0.0
Uasin Gishu	363,395	48.5	51.5	0.0
Elgeyo-Marakwet	184,344	48.7	51.3	0.0
Nandi	381,129	48.8	51.2	0.0
Baringo	240,045	48.6	51.4	0.0
Laikipia	191,588	47.9	52.1	0.0
Nakuru	635,699	48.1	51.9	0.0
Narok	402,086	48.3	51.7	0.0
Kajiado	220,175	48.7	51.3	0.0
Kericho	381,970	49.0	51.0	0.0
Bomet	380,197	48.2	51.8	0.0
Kakamega	755,885	45.8	54.2	0.0
Vihiga	259,803	46.0	54.0	0.0
Bungoma	648,976	46.9	53.1	0.0
Busia	348,662	45.4	54.6	0.0
Siaya	419,276	44.7	55.3	0.0
Kisumu	334,151	46.1	53.9	0.0
Homabay	430,014	45.0	55.0	0.0
Migori	391,709	46.0	54.0	0.0
Kisii	497,468	45.2	54.8	0.0
Nyamira	248,387	45.6	54.4	0.0
Nairobi City	76,304	47.7	52.3	0.0

4.2. Farmer Population by sex (35-60 years and 61 years+)

Table 4.2 presents distribution of population aged 35-60 years and 61+ years engaged in Agriculture by sex and county in 2019. The total number of people aged 35-60 years that engaged in this type of farming was 5,809,888. Out of these, 89.4 percent were in rural areas and 10.6 per cent in urban areas. The total number of people aged 61+ years that engaged in this type of farming was 1,923,891. Out of these, 92.9 percent were in rural areas and 7.1 per cent in urban areas. The table shows that the proportion of females at the national level for the two age categories were (51.8 and 54.7 per cent) compared to that of males (48.2 and 45.3 per cent) respectively. A similar trend is observed in urban and rural areas.

At the county level, Kakamega had the highest number of adults aged 35-60 years engaged in farming (290,327). The same county had the highest number of elderly farmers aged 61+ years engaged in farming (100,512). Mombasa county had the lowest population of farmers aged 35-60 years and 61+ years respectively. This is in part due to the small size of the county and the aggregate population. The sex ratio of the adult farmers across the counties follows a similar trend with the national level in most cases.

Table 4. 2Distribution of Population aged (35-60 and 61+) Years engaged in Agriculture by sex and region, 2019

EA Type	Agriculture population Aged (35-60 years)				Agriculture population Aged (61+ years)			
	Total	Male	Female	Intersex	Total	Male	Female	Intersex
Total	5,809,888	48.2	51.8	0.0	1,923,891	45.3	54.7	0.0
Rural	5,192,575	48.0	52.0	0.0	1,787,877	45.2	54.8	0.0
Urban	617,313	49.6	50.4	0.0	136,014	47.7	52.3	0.0
County								
Total	5,809,888	48.2	51.8	0.0	1,923,891	45.3	54.7	0.0
Mombasa	13,860	52.8	47.2	-	2,813	49.8	50.2	-
Kwale	102,488	48.3	51.7	-	34,594	46.6	53.4	-
Kilifi	157,376	45.6	54.4	0.0	59,427	41.7	58.3	-
Tana River	29,473	50.1	49.9	-	7,875	53.7	46.3	-
Lamu	18,806	52.3	47.7	-	5,354	53.8	46.2	-
Taita-Taveta	56,965	49.9	50.1	-	21,614	46.0	54.0	-
Garissa	43,922	55.3	44.7	0.0	6,153	63.0	37.0	-
Wajir	53,623	55.9	44.1	0.0	7,895	64.2	35.8	-
Mandera	50,063	52.8	47.2	0.0	8,752	62.1	37.9	0.0
Marsabit	34,038	53.0	47.0	-	9,481	56.5	43.5	-
Isiolo	20,084	52.7	47.3	-	5,559	55.8	44.2	-
Meru	277,623	50.0	50.0	0.0	87,041	46.2	53.8	0.0
Tharaka-Nithi	83,014	49.6	50.4	0.0	31,165	45.5	54.5	-
Embu	131,605	49.6	50.4	0.0	43,444	44.3	55.7	0.0
Kitui	197,769	45.1	54.9	0.0	80,477	42.6	57.4	0.0
Machakos	236,350	48.6	51.4	0.0	92,056	43.4	56.5	0.0
Makueni	189,930	47.2	52.8	0.0	79,149	42.7	57.3	0.0
Nyandarua	140,815	46.9	53.1	0.0	42,065	44.7	55.3	-
Nyeri	172,046	47.6	52.4	0.0	66,613	44.3	55.7	0.0
Kirinyaga	148,131	50.1	49.9	0.0	43,175	44.3	55.6	0.0
Murang'a	234,136	48.4	51.6	0.0	100,193	44.3	55.7	-
Kiambu	236,837	47.9	52.1	0.0	76,476	45.1	54.9	0.0
Turkana	59,548	48.8	51.2	-	14,668	47.3	52.7	0.0
West Pokot	66,712	48.7	51.3	0.0	18,465	44.2	55.8	-
Samburu	28,398	48.9	51.1	-	8,710	47.8	52.2	-
Trans Nzoia	128,452	47.7	52.3	0.0	38,220	47.0	53.0	0.0
Uasin Gishu	140,353	49.0	51.0	0.0	37,420	45.9	54.1	-
Elgeyo-Marakwet	64,663	49.3	50.7	-	20,052	46.1	53.9	0.0
Nandi	139,667	49.8	50.2	0.0	42,024	47.2	52.8	0.0
Baringo	83,971	48.6	51.4	0.0	26,809	47.3	52.7	0.0
Laikipia	82,898	48.3	51.7	0.0	27,187	46.4	53.6	-
Nakuru	263,889	48.7	51.3	0.0	75,477	46.6	53.4	-
Narok	137,347	49.5	50.5	0.0	31,128	49.1	50.9	0.0
Kajiado	83,227	49.7	50.3	0.0	19,532	48.5	51.5	-
Kericho	135,719	50.8	49.2	0.0	39,785	48.0	52.0	0.0
Bomet	129,916	50.5	49.5	0.0	38,845	45.3	54.7	-
Kakamega	290,327	46.0	54.0	0.0	100,512	45.8	54.2	0.0
Vihiga	100,921	45.2	54.8	0.0	51,925	44.8	55.2	0.0
Bungoma	237,177	47.7	52.3	0.0	71,466	45.2	54.8	0.0
Busia	126,332	45.4	54.6	0.0	43,064	43.9	56.1	-
Siaya	154,502	45.2	54.8	0.0	66,456	40.6	59.4	-
Kisumu	120,705	46.9	53.1	0.0	45,252	44.4	55.6	-
Homabay	150,277	45.8	54.2	0.0	53,856	43.7	56.3	0.0
Migori	132,003	47.2	52.8	0.0	38,209	44.7	55.3	-
Kisii	190,320	46.9	53.1	0.0	63,642	46.2	53.8	0.0
Nyamira	99,606	47.7	52.3	0.0	33,152	47.8	52.2	0.0
Nairobi City	34,004	49.6	50.4	-	6,664	47.4	52.6	-

4.3. Irrigation Agriculture

Table 4.3 presents distribution of farming households practicing irrigation by rural/urban, county and sex of the household head in 2019. This question was only applicable to crop growing households (5.6 million) at the country level. Irrigation was practiced by 6.7 per cent of the households. A higher proportion of urban farming households (11.1 per cent) practiced irrigation compared to rural farming households (6.2 per cent).

Across the counties, a proportion of 6.7 per cent of the farming households practiced irrigation. This is a result of 6.2 per cent of the farming households in the rural areas who practice irrigation. The counties with the highest proportion of farming households that practice irrigation farming include: Isiolo, Garissa, Mandera, Turkana and Kirinyaga, among others. Counties with the least proportion of farming households practicing irrigation include: Nyamira, Vihiga, Kisii, Bomet, Kericho and Migori. A higher proportion of male headed households (7.6 per cent) practiced irrigation compared to 5.0 per cent of the female headed households. The intersex headed households though few had a high proportion (9.7 per cent) who practiced irrigation.

Table 4. 3: Proportion of Farming Households practicing irrigation by Rural/Urban, County and Sex of the household head, 2019

EA Type	Total	Yes	No	Don't Know
Total	**5,555,605**	6.7	93.3	0.1
Rural	5,081,334	6.2	93.7	0.1
Urban	474,271	11.1	88.8	0.1
County				
Total	5,555,605	6.7	93.3	0.1
Mombasa	7,211	13.3	86.6	0.1
Kwale	100,015	2.4	97.5	0.1
Kilifi	149,329	3.8	96.2	0.1
Tana River	16,719	27.1	72.9	0.1
Lamu	15,196	7.1	92.8	0.0
Taita-Taveta	48,379	21.1	78.8	0.0
Garissa	4,386	41.4	56.9	1.7
Wajir	2,471	25.8	72.9	1.3
Mandera	15,288	35.5	63.7	0.8
Marsabit	2,650	6.0	93.7	0.2
Isiolo	2,780	47.6	52.3	0.1
Meru	250,467	20.6	79.3	0.1
Tharaka-Nithi	79,225	9.8	90.1	0.1
Embu	123,262	9.6	90.3	0.0
Kitui	199,450	3.4	96.5	0.1
Machakos	217,064	7.7	92.2	0.1
Makueni	180,635	8.5	91.4	0.1
Nyandarua	135,147	3.1	96.8	0.0
Nyeri	154,415	15.2	84.7	0.0
Kirinyaga	130,574	32.4	67.6	0.0
Murang'a	219,968	5.1	94.9	0.0
Kiambu	177,405	8.4	91.6	0.1
Turkana	14,216	34.9	64.6	0.5
West Pokot	80,177	10.1	89.7	0.2
Samburu	13,810	3.4	96.3	0.3
Trans Nzoia	129,940	4.0	95.9	0.1
Uasin Gishu	132,004	3.9	96.0	0.1
Elgeyo-Marakwet	71,078	11.8	88.1	0.1
Nandi	143,011	2.6	97.2	0.1
Baringo	84,425	8.5	91.4	0.2
Laikipia	74,334	12.3	87.6	0.1
Nakuru	260,990	3.0	96.9	0.1
Narok	150,416	4.6	95.3	0.1
Kajiado	45,933	26.6	73.3	0.1
Kericho	145,843	1.7	98.2	0.1
Bomet	146,326	1.4	98.5	0.1
Kakamega	321,932	1.5	98.4	0.1
Vihiga	108,521	1.4	98.6	0.1
Bungoma	269,966	2.3	97.6	0.1
Busia	140,666	2.1	97.9	0.1
Siaya	184,957	2.4	97.6	0.1
Kisumu	133,386	7.3	92.7	0.1
Homabay	184,360	2.8	97.1	0.1
Migori	160,698	1.9	98.1	0.1
Kisii	207,391	1.4	98.5	0.1
Nyamira	102,852	1.2	98.7	0.1
Nairobi City	16,337	20.5	79.3	0.2
Sex of Head of Household				
Total	5,555,605	6.7	93.3	0.1
Male headed Household	3,493,839	7.6	92.3	0.1
Female headed Household	2,061,466	5.0	94.9	0.1
Intersex headed Household	300	9.7	89.7	0.7

4.4. Land ownership by age of household head

Table 4.4 presents distribution of farming households by land size and age of the household head in 2019. The proportion of household heads under 18 years owning less than 1 hectare was 0.4 per cent. The proportion of household heads aged 35-44 years owning less than one hectare was the highest at 23.2 per cent. This was followed by those aged 25-34 years at 20.1 per cent. The pattern is the same across the other land categories where the two age groups dominate. A big proportion aged 35-44 years did not state their size of holding

Table 4. 4: Distribution of Farming Households by Size of Agricultural Holding (in Hectares) by Age of the Household Head

	Total	Under 18 Years	(18 - 24) Years	(25 - 34) Years	(35 - 44) Years	(45 - 54) Years	(55 - 64) Years	65 Years and Above
Total	**6,360,303**	**0.4**	**4.5**	**20.1**	**23.2**	**19.6**	**15.7**	**16.5**
Less than 1 Ha	4,421,186	0.4	4.4	21.1	24.2	19.6	14.9	15.3
1 – 1.99 Ha	1,009,316	0.4	4.0	17.6	21.3	19.9	17.6	19.1
2 – 4.99 Ha	723,784	0.5	4.4	16.4	20.0	19.9	18.2	20.5
5 – 9.99 Ha	104,513	0.7	7.0	20.6	20.5	17.3	15.5	18.5
10 – 19.99 Ha	32,373	0.7	7.4	21.0	19.4	17.7	14.5	19.3
20 – 49.99 Ha	38,898	0.7	7.8	24.1	22.0	18.7	13.2	13.6
50 – 99 Ha	815	0.5	7.9	21.0	21.2	19.0	14.6	15.8
100 – 199 Ha	249	0.8	7.6	24.5	13.3	18.9	16.9	18.1
200 – 499 Ha	246	0.4	4.1	23.2	22.0	23.2	13.8	13.4
500 – 999 Ha	44	-	2.3	18.2	22.7	6.8	18.2	31.8
1000+ Ha	66	1.5	6.1	25.8	25.8	12.1	16.7	12.1
Not Stated	28,813	0.6	12.8	36.7	25.6	12.5	6.9	4.8

4.5. Population aged (18-34) Years engaged in Agriculture by county

Table 4.5 and Figure 4.1 presents distribution of youth farming population aged 18-34 years by national, rural/urban and county disaggregation. At the national level, the share of agriculture population (18-34 years) to total agriculture population stood at 24.2 per cent with the respective male share being 23.6 per cent and the female share being 24.9 per cent. In the rural areas, the share of agriculture population (18-34 years) to total agriculture population stood at 23.9 per cent with the respective male share being 23.3 per cent and the female share being 24.5 per cent.

Nationally, the share of youth population engaged in agriculture to total youth population (18-34) stood at 48.1 per cent with the respective male share being 48.3 per cent and female share being 47.9 per cent. In rural areas, the share of youth population engaged in agriculture to total youth population (18-34) followed the same pattern. In urban areas, the share of youth population engaged in agriculture to total youth population (18-34) stood at 48.9 per cent with the respective male share being 47.8 per cent and female share being 50.0 per cent

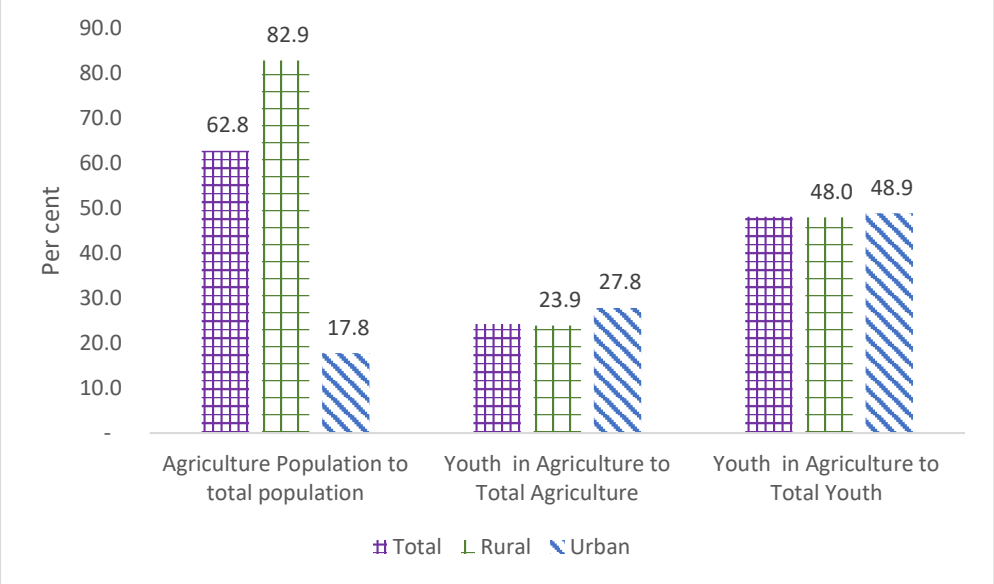


Figure 4. 1: Distribution of Agriculture and Youth Population by Rural and Urban, 2019

Table 4.5 also shows that Nairobi County had the highest share of the youth population engaged in agriculture to total youth population (18-34) at 29.4 per cent with the respective male share being 27.8 per cent and female share being 30.8 per cent respectively. Mandera county had the highest share of youth population engaged in agriculture to total youth population (18-34) at 64.2 per cent with the respective male share being 62.1 per cent and the female share being 66.4 per cent.

Table 4. 5: Distribution of Population aged (18-34) Years engaged in Agriculture by sex and region, 2019

EA Type/County	Population			Share of Agriculture Population (18yrs+)to total population			Share of Youth Population (18-34 years) to Total Agriculture Population			Share of Youth Population (18-34) Yrs engaged in Agriculture to Total Youth Population		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	47,105,234	49.3	50.7	62.8	62.6	63.0	24.2	23.6	24.9	48.1	48.3	47.9
Rural	32,551,929	49.4	50.6	82.9	82.6	83.2	23.9	23.3	24.5	48.0	48.3	47.7
Urban	14,553,305	49.2	50.8	17.8	17.7	17.9	27.8	26.7	28.9	48.9	47.8	50.0
County												
Total	47,105,234	49.3	50.7	62.8	62.6	63.0	24.2	23.6	24.9	48.1	48.3	47.9
Mombasa	1,188,639	50.2	49.8	5.2	5.2	5.2	28.7	27.6	29.8	51.6	49.7	53.5
Kwale	858,263	49.0	51.0	74.0	73.9	74.2	23.5	21.8	25.1	52.1	50.8	53.2
Kilifi	1,440,289	48.3	51.7	68.0	67.7	68.4	24.6	23.6	25.6	52.7	53.5	52.0
Tana River	313,384	49.9	50.1	60.5	61.0	60.0	22.0	20.3	23.6	52.7	50.5	54.8
Lamu	138,148	51.4	48.6	66.6	67.1	66.1	24.0	23.5	24.6	47.8	46.8	48.8
Taita-Taveta	333,643	50.3	49.7	69.1	68.7	69.4	23.3	23.6	23.0	40.6	41.5	39.7
Garissa	832,910	54.3	45.7	38.4	39.3	37.3	26.4	26.0	26.9	62.8	62.2	63.6
Wajir	774,213	53.0	47.0	53.1	53.2	52.9	24.1	22.8	25.7	61.7	58.6	65.1
Mandera	860,132	49.9	50.1	54.0	54.3	53.7	22.7	22.4	23.0	64.2	62.1	66.4
Marsabit	446,157	52.3	47.7	55.5	56.0	54.9	25.1	24.9	25.3	58.8	58.2	59.4
Isiolo	263,105	51.5	48.5	52.9	53.6	52.1	24.2	23.6	24.8	56.8	55.6	58.0
Meru	1,532,938	49.5	50.5	72.4	72.7	72.0	24.4	24.2	24.5	42.6	42.8	42.4
Tharaka-Nithi	390,825	49.2	50.8	85.1	85.3	85.0	24.1	23.8	24.4	41.3	41.4	41.1
Embu	604,407	49.9	50.1	80.0	80.4	79.7	24.5	25.2	23.8	40.4	41.9	38.8
Kitui	1,128,899	48.2	51.8	88.0	87.9	88.1	22.9	22.5	23.2	45.0	46.5	43.6
Machakos	1,410,901	49.9	50.1	67.4	67.2	67.5	23.9	24.6	23.2	40.9	42.9	39.0
Makueni	976,222	49.3	50.7	86.6	86.4	86.8	23.8	24.5	23.2	42.8	45.2	40.6
Nyandarua	634,486	49.3	50.7	86.1	85.6	86.5	21.9	21.8	22.0	39.5	40.7	38.4
Nyeri	749,170	49.1	50.9	74.9	74.8	75.1	20.8	21.1	20.5	32.9	34.3	31.6
Kirinyaga	604,986	49.3	50.7	75.7	76.2	75.3	23.0	23.1	22.8	35.5	36.0	34.9
Murang'a	1,052,386	49.5	50.5	80.1	80.0	80.2	20.7	21.3	20.1	34.3	36.0	32.7
Kiambu	2,399,479	49.0	51.0	34.3	34.3	34.3	23.8	23.8	23.8	38.5	39.4	37.7
Turkana	919,826	51.4	48.6	44.0	44.4	43.7	27.0	27.5	26.6	59.6	61.6	57.6
West Pokot	618,341	49.3	50.7	84.1	84.1	84.1	23.7	22.9	24.5	59.1	59.1	59.2
Samburu	305,987	50.1	49.9	74.4	74.9	73.9	24.7	23.8	25.6	60.2	60.2	60.2
Trans Nzoia	984,462	49.3	50.7	71.7	71.6	71.8	24.0	23.4	24.6	50.4	50.6	50.2
Uasin Gishu	1,148,713	49.6	50.4	60.1	60.0	60.2	26.9	26.4	27.4	51.1	51.2	50.9
Elgeyo-Marakwet	452,613	49.9	50.1	83.7	83.2	84.3	26.3	25.9	26.7	54.0	54.2	53.9
Nandi	883,188	49.8	50.2	83.1	82.9	83.3	27.2	26.5	27.8	52.3	51.9	52.7
Baringo	662,087	50.3	49.7	78.7	78.4	79.0	24.8	24.2	25.4	53.9	54.2	53.5
Laikipia	510,356	49.6	50.4	71.5	71.4	71.5	22.3	21.7	23.0	42.5	42.7	42.4
Nakuru	2,124,581	49.5	50.5	58.3	58.3	58.3	23.9	23.1	24.7	46.6	46.4	46.8
Narok	1,146,240	49.8	50.2	83.9	83.9	83.8	24.3	23.2	25.4	58.1	57.1	59.1
Kajiado	1,104,068	49.6	50.4	42.2	42.3	42.0	25.2	24.3	26.1	53.3	52.6	54.0
Kericho	896,591	49.9	50.1	82.7	82.5	83.0	27.8	26.8	28.8	54.1	52.9	55.1
Bomet	872,553	49.6	50.4	88.6	88.4	88.7	27.4	26.2	28.6	55.6	54.6	56.6
Kakamega	1,860,113	48.0	52.0	84.4	84.4	84.5	23.2	22.2	24.2	48.3	48.2	48.4
Vihiga	587,039	48.1	51.9	85.5	85.3	85.7	21.3	21.0	21.6	41.2	42.3	40.2
Bungoma	1,662,696	48.6	51.4	85.4	85.6	85.2	24.0	23.0	24.9	52.4	52.2	52.6
Busia	886,588	47.5	52.5	82.9	83.2	82.6	24.4	23.4	25.3	51.4	51.9	51.0
Siaya	988,118	47.4	52.6	85.3	85.6	85.1	23.5	22.6	24.4	47.3	48.4	46.4
Kisumu	1,140,672	48.3	51.7	58.4	58.3	58.5	25.2	24.1	26.3	50.3	50.3	50.4
Homabay	1,124,025	47.6	52.4	82.9	83.4	82.4	24.3	22.7	25.7	52.5	52.3	52.7
Migori	1,106,776	48.0	52.0	79.1	79.6	78.6	25.3	23.9	26.6	56.5	56.0	57.0
Kisii	1,259,608	47.8	52.2	78.0	77.9	78.1	24.8	22.6	26.7	48.9	47.2	50.4
Nyamira	602,859	48.0	52.0	78.7	78.5	78.9	24.4	22.0	26.6	46.6	44.1	48.6
Nairobi City	4,323,552	49.6	50.4	2.8	2.8	2.9	29.4	27.8	30.8	46.7	45.0	48.3

4.6. Population aged (35-60) Years engaged in Agriculture by county

Table 4.6 presents distribution of farming population aged 35-60 years and 61+ years by national, rural/urban and county disaggregation. At the national level, the share of agriculture population (35-60 years) to total population stood at 12.3 per cent with the respective male share being 12.0 per cent and the female share being 12.6 per cent. The share of agriculture population 61+ years to total population stood at 4.1 per cent with the respective male share being 3.8 per cent and the female share being 4.4 per cent.

In the rural areas, the share of agriculture population (35-60 years) to total population stood at 16.0 per cent with the respective male share being 15.5 per cent and the female share being 16.4 per cent. The share of rural agriculture population 61+ years to total population stood at 5.5 per cent with the respective male share being 5.0 per cent and the female share being 6.0 per cent. In the urban areas, the share of agriculture population (35-60 years) to total population stood at 4.2 per cent with the respective male share being 4.3 per cent and the female share being 4.2 per cent. The share of urban agriculture population 61+ years to total population stood at 0.9 per cent with the respective male share being 0.9 per cent and the female share being 1.0 per cent.

Kirinyaga county had the highest share of agriculture population (35-60 years) to total population stood at 24.5 per cent with the respective male share being 24.9 per cent and the female share being 24.1 per cent. Nyeri county had the highest share of agriculture population 61+ years to total population stood at 8.9 per cent with the respective male share being 8.0 per cent and the female share being 9.7 per cent.

Table 4. 6: Distribution of Population aged (35-60) Years engaged in Agriculture by sex and region, 2019

EA Type/County	Share of Male/Female to Total Population			Share of Population aged (35-60) Yrs engaged in Agriculture to Total Population			Share of Population aged (61+) Yrs engaged in Agriculture to Total Population		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total	47,105,234	49.3	50.7	12.3	12.0	12.6	4.1	3.8	4.4
Rural	32,551,929	49.4	50.6	16.0	15.5	16.4	5.5	5.0	6.0
Urban	14,553,305	49.2	50.8	4.2	4.3	4.2	0.9	0.9	1.0
County									
Total	47,105,234	49.3	50.7	12.3	12.0	12.6	4.1	3.8	4.4
Mombasa	1,188,639	50.2	49.8	1.2	1.2	1.1	0.2	0.2	0.2
Kwale	858,263	49.0	51.0	11.9	11.8	12.1	4.0	3.8	4.2
Kilifi	1,440,289	48.3	51.7	10.9	10.3	11.5	4.1	3.6	4.6
Tana River	313,384	49.9	50.1	9.4	9.4	9.4	2.5	2.7	2.3
Lamu	138,148	51.4	48.6	13.6	13.9	13.4	3.9	4.1	3.7
Taita-Taveta	333,643	50.3	49.7	17.1	16.9	17.2	6.5	5.9	7.0
Garissa	832,910	54.3	45.7	5.3	5.4	5.2	0.7	0.9	0.6
Wajir	774,213	53.0	47.0	6.9	7.3	6.5	1.0	1.2	0.8
Mandera	860,132	49.9	50.1	5.8	6.2	5.5	1.0	1.3	0.8
Marsabit	446,157	52.3	47.7	7.6	7.7	7.5	2.1	2.3	1.9
Isiolo	263,105	51.5	48.5	7.6	7.8	7.4	2.1	2.3	1.9
Meru	1,532,938	49.5	50.5	18.1	18.3	17.9	5.7	5.3	6.1
Tharaka-Nithi	390,825	49.2	50.8	21.2	21.4	21.1	8.0	7.4	8.6
Embu	604,407	49.9	50.1	21.8	21.7	21.9	7.2	6.4	8.0
Kitui	1,128,899	48.2	51.8	17.5	16.4	18.6	7.1	6.3	7.9
Machakos	1,410,901	49.9	50.1	16.8	16.3	17.2	6.5	5.7	7.4
Makueni	976,222	49.3	50.7	19.5	18.6	20.3	8.1	7.0	9.2
Nyandarua	634,486	49.3	50.7	22.2	21.1	23.3	6.6	6.0	7.2
Nyeri	749,170	49.1	50.9	23.0	22.3	23.6	8.9	8.0	9.7
Kirinyaga	604,986	49.3	50.7	24.5	24.9	24.1	7.1	6.4	7.8
Murang'a	1,052,386	49.5	50.5	22.2	21.7	22.8	9.5	8.5	10.5
Kiambu	2,399,479	49.0	51.0	9.9	9.6	10.1	3.2	2.9	3.4
Turkana	919,826	51.4	48.6	6.5	6.1	6.8	1.6	1.5	1.7
West Pokot	618,341	49.3	50.7	10.8	10.6	10.9	3.0	2.7	3.3
Samburu	305,987	50.1	49.9	9.3	9.1	9.5	2.8	2.7	3.0
Trans Nzoia	984,462	49.3	50.7	13.0	12.6	13.5	3.9	3.7	4.1
Uasin Gishu	1,148,713	49.6	50.4	12.2	12.1	12.4	3.3	3.0	3.5
Elgeyo-Marakwet	452,613	49.9	50.1	14.3	14.1	14.5	4.4	4.1	4.8
Nandi	883,188	49.8	50.2	15.8	15.8	15.8	4.8	4.5	5.0
Baringo	662,087	50.3	49.7	12.7	12.2	13.1	4.0	3.8	4.3
Laikipia	510,356	49.6	50.4	16.2	15.8	16.7	5.3	5.0	5.7
Nakuru	2,124,581	49.5	50.5	12.4	12.2	12.6	3.6	3.3	3.8
Narok	1,146,240	49.8	50.2	12.0	11.9	12.0	2.7	2.7	2.8
Kajiado	1,104,068	49.6	50.4	7.5	7.6	7.5	1.8	1.7	1.8
Kericho	896,591	49.9	50.1	15.1	15.4	14.9	4.4	4.3	4.6
Bomet	872,553	49.6	50.4	14.9	15.2	14.6	4.5	4.1	4.8
Kakamega	1,860,113	48.0	52.0	15.6	15.0	16.2	5.4	5.2	5.6
Vihiga	587,039	48.1	51.9	17.2	16.2	18.1	8.8	8.2	9.4
Bungoma	1,662,696	48.6	51.4	14.3	14.0	14.5	4.3	4.0	4.6
Busia	886,588	47.5	52.5	14.2	13.6	14.8	4.9	4.5	5.2
Siaya	988,118	47.4	52.6	15.6	14.9	16.3	6.7	5.8	7.6
Kisumu	1,140,672	48.3	51.7	10.6	10.3	10.9	4.0	3.6	4.3
Homabay	1,124,025	47.6	52.4	13.4	12.9	13.8	4.8	4.4	5.1
Migori	1,106,776	48.0	52.0	11.9	11.7	12.1	3.5	3.2	3.7
Kisii	1,259,608	47.8	52.2	15.1	14.8	15.4	5.1	4.9	5.2
Nyamira	602,859	48.0	52.0	16.5	16.4	16.6	5.5	5.5	5.5
Nairobi City	4,323,552	49.6	50.4	0.8	0.8	0.8	0.2	0.1	0.2

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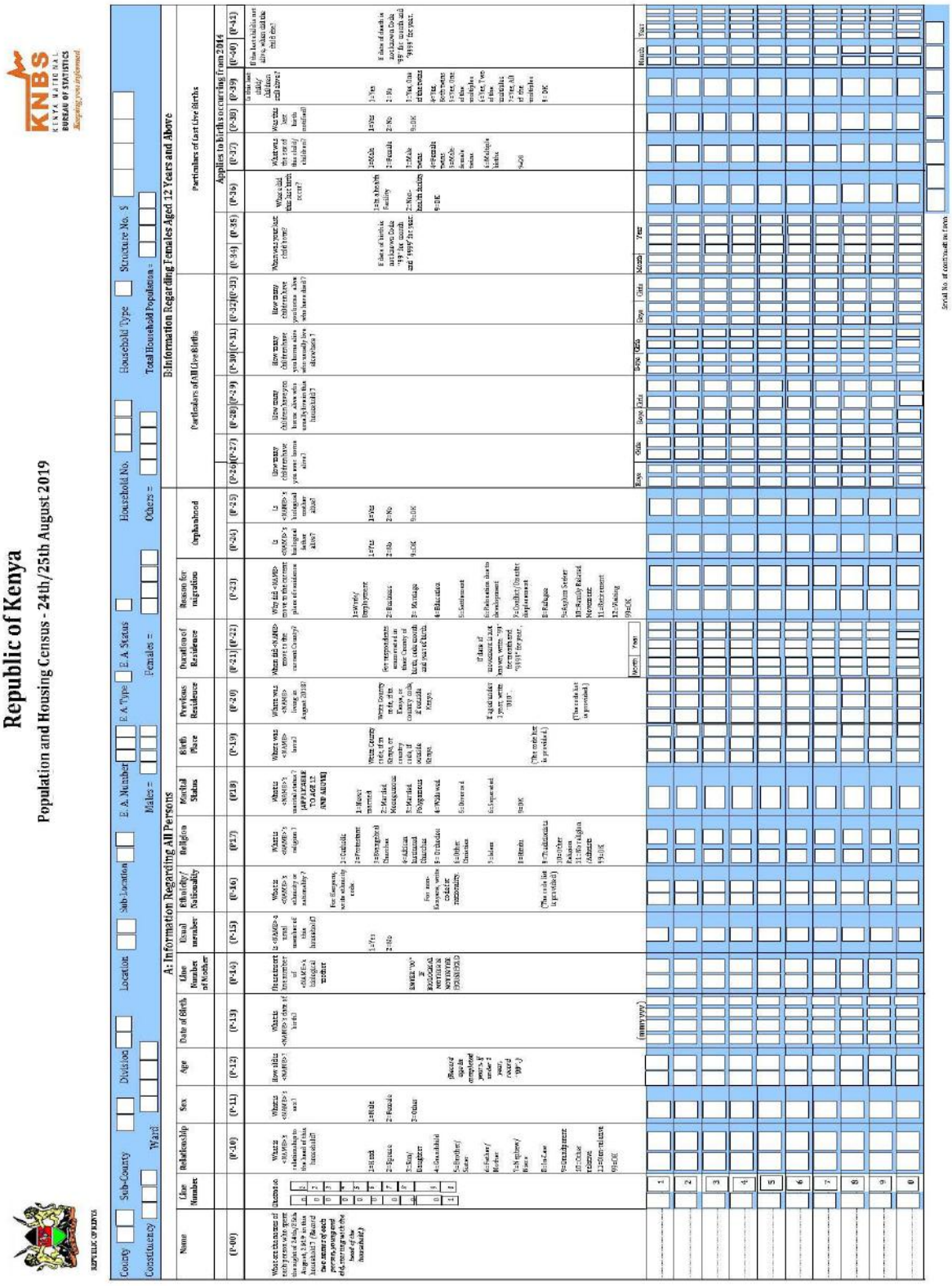
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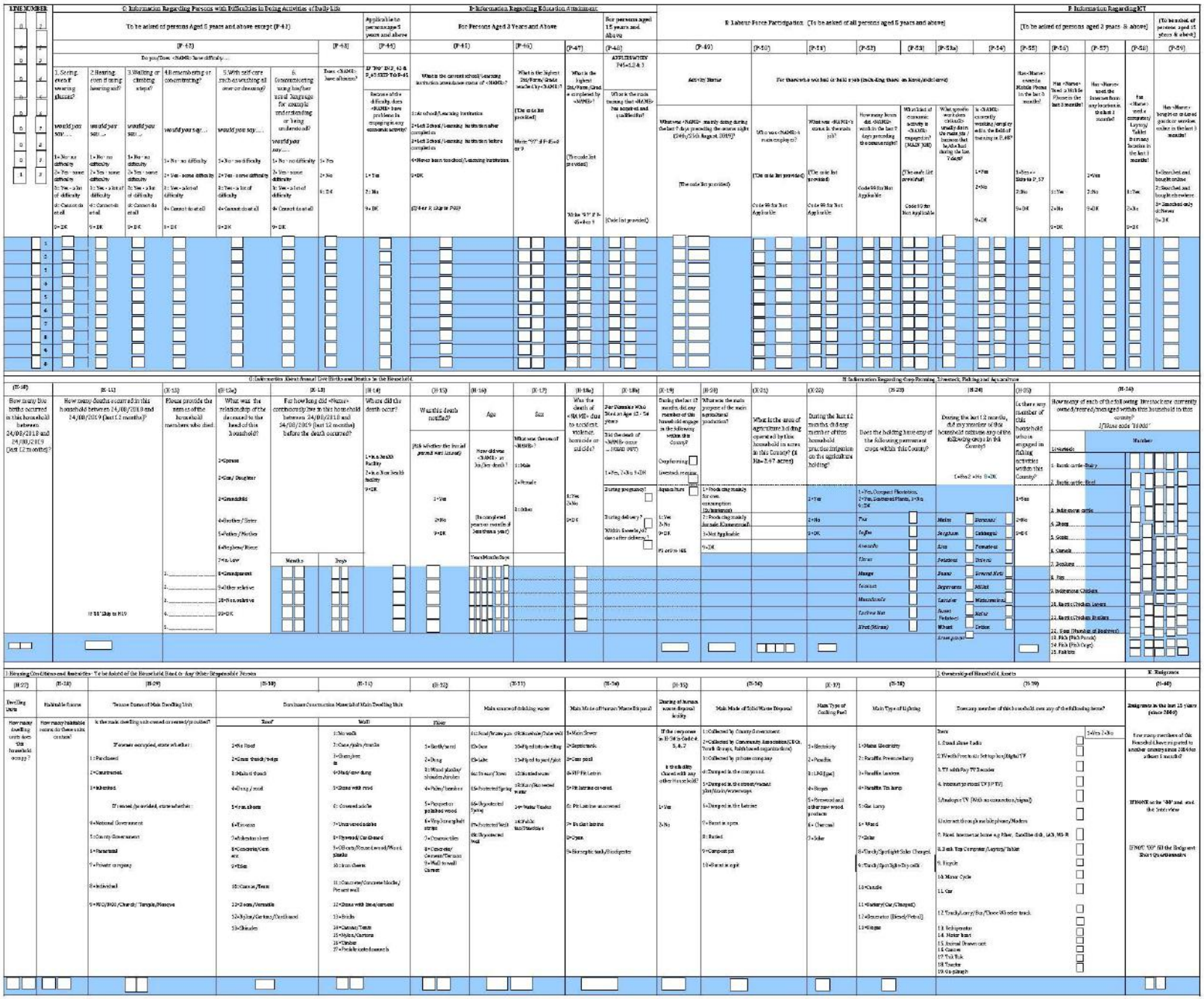
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Appendices

Appendix 1: 2019 KPHC Questionnaires





Republic of Kenya

POPULATION AND HOUSING CENSUS 24TH/25TH AUGUST 2019

Statistics Act 2006

STRICTLY CONFIDENTIAL

HOTEL/LODGE RESIDENTS, HOSPITAL IN-PATIENTS, PRISON/POLICE CELLS AND SCHOOLS/CHILDREN HOMES

County=	Sub-County=	Division=	Location=	Sub-Location=	E.A. Number
E.A. Type=	E.A. Status=	Constituency=	Ward=	Males =	Females =	Other =
Total Population =					

Type of Institution: Hotel/Lodge Residents ☐ Hospital In-patients ☐ Prison/Police Cells ☐ Schools/learning institution ☐

Name of Institution:.....

Line Number	Name	Sex	Age	County/ Country of Birth	Nationality/ Ethnicity
(SQ01)	(SQ02)	(SQ03)	(SQ04)	(SQ05)	(SQ07)
Illustration	What are the names of all persons who spent the night of **24th/25th August, 2019** in this institution? ***(Record two names for each person.)*** ***An illustration of how to write the names is shown below.***	What is <NAME>'s sex? 1=Male 2=Female 3=Other	How old is <NAME>? ***(Record age in completed years using two digits. If under 1 year, record "00". If 95 years and above, code "95".)***	What is <NAME>'s country/ county of birth?	What is <NAME>'s Nationality/Ethnicity?
0 1	JOHN MOGAKA				
0 1					
0 2					
0 3					
0 4					
0 5					
0 6					
0 7					
0 8					
0 9					
1 0					

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POPULATION AND HOUSING CENSUS 24th /25th AUGUST 2019
SHORT QUESTIONNAIRE FOR EMIGRANTS

E-01: Serial No.	**E-01(a):** Line No. of Respondent	E-02: Name of Emigrant Please give me the name(s) of the emigrant(s)?	**E-03: Sex** What is <NAME>'s Sex? Male=1 Female=2	**E-04: Age** How old was **<NAME>** at the time of his/her departure?	**E-05: Level of Education** What was the highest level of education that <NAME> had completed at the time of his/her departure?	**E-06: Professional training** What professional training had <NAME> acquired before departure from Kenya? (***Applicable to persons age 15 years & above***)	**E-07:** Country of first Destination What was <NAME>'s country of first destination during his/her departure?	**E-08:** Year of Departure When did <NAME> depart from Kenya?	**E-09:** Main reason for Departure What was the main reason for <NAME> departing from Kenya?	**E-10:** Country of current residence What is the current country of residence of <NAME>?	**E-10a:** Select the Name of the Emigrant if currently in Kenya.	**E-11: Remittances** Did <NAME> remit money to any member of this household while outside Kenya in the last 12 months? Yes= 1 No= 2 DK= 9	**E-12: Utilization of funds** How was the money utilized? *(Allow for maximum of 3 responses)*
1													
2													
3													
4													
5													
6													
7													
8													

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POPULATION AND HOUSING CENSUS 24TH/25TH AUGUST 2019

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TRAVELLERS AND PERSONS ON TRANSIT

County | Sub-county | Division | Location | Sub-Location | E.A. Number

E.A. Type | E.A. Status | Constituency | Ward | Males = | Females = | Others=

Total Population =

Name of Place/Street/Station/Airport of Enumeration:.....

Line Number	Name	Sex	Age	Country/County of birth	Current residence
(SQ01)	(SQ02)	(SQ03)	(SQ04)	(SQ05)	(SQ06)
	Names of each traveller? (Record two names for each traveller.)	What is <NAME>'s sex? 1=Male 2=Female 3=Other	How old was <NAME> in his/her last birthday? ***(Record age in completed years using two digits. If under 1 year, record "00". If 95 years and above, code "95".)***	What is <NAME>'s Country/County of birth? **(Code list provided)**	What is <NAME>'s current Country/County of residence? **(Code list provided)**

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SHORT QUESTIONNAIRE FOR STREET PERSONS/OUTDOOR SLEEPERS/VAGRANTS

County ☐☐ Sub-county ☐☐ Division ☐☐☐

Location ☐☐ Sub-Location ☐☐ EA Number ☐☐☐

Constituency ☐☐☐ Ward ☐☐☐☐

Name of the street……Code……

Line /NO	**Name** *(List at least two names)*	**SEX** 1. Male 2. Female 3. Other 4. Not Stated	**AGE in** ***Completed years***	**COUNTY/ COUNTRY OF BIRTH**	**ETHNICITY/ NATIONALITY** ***What is <NAME>'s Nationality/Ethnicity?***
1		☐	☐☐		
2		☐	☐☐		
3		☐	☐☐		
4		☐	☐☐		
5		☐	☐☐		
6		☐	☐☐		
7		☐	☐☐		
8					

TOTAL: MALES_____ FEMALES_____ OTHER_____UNSPECIFIED SEX_____ TOTAL_____

Appendix 2 1(a): Distribution of Farming Households by Size of Agricultural Holding in Hectares and Residence (Urban) and Age of the Household Head

	Total	Under 18 Years	(18 - 24) Years	(25 - 34) Years	(35 - 44) Years	(45 - 54) Years	(55 - 64) Years	65 Years and Above
Total	626,589	0.3	5.4	22.1	25.4	21.3	14.4	11.1
Less than 1 Acre	306,761	0.3	4.7	20.7	27.0	22.6	14.2	10.5
1 – 1.99 Acre	127,474	0.3	5.6	22.6	24.6	20.6	14.7	11.7
2 – 4.99 Acre	128,233	0.3	5.9	23.8	23.6	20.0	14.7	11.7
5 – 9.99 Acre	30,527	0.5	6.5	22.8	23.2	19.7	15.3	12.0
10 – 19.99 Acre	14,652	0.5	6.9	24.0	22.8	19.5	14.5	11.7
20 – 49.99 Acre	5,821	0.5	6.1	22.4	23.3	20.3	14.9	12.6
50 – 99 Acre	4,066	0.4	6.3	22.5	23.9	20.3	14.2	12.3
100 – 199 Acre	300	0.3	4.3	22.7	23.3	20.7	16.3	12.3
200 – 499 Acre	146	-	9.6	22.6	21.2	19.2	12.3	15.1
500 – 999 Acre	66	-	4.5	27.3	30.3	19.7	7.6	10.6
1000+ Acre	61	1.6	8.2	24.6	21.3	16.4	13.1	14.8
Not Stated	8,482	0.8	13.3	35.7	25.6	13.6	7.0	3.9

Appendix 2 2(b): Distribution of Farming Households by Size of Agricultural Holding in acres, Residence (Rural) and Age of the Household Head

	Total	Under 18 Years	(18 - 24) Years	(25 - 34) Years	(35 - 44) Years	(45 - 54) Years	(55 - 64) Years	65 Years and Above
Total Rural Households	**5,733,714**	0.4	4.4	19.9	22.9	19.4	15.8	17.1
Less than 1 Acre	1,914,053	0.4	4.8	23.8	25.5	18.6	13.1	13.7
1 – 1.99 Acre	1,435,527	0.4	4.0	19.5	23.1	19.8	16.1	17.0
2 – 4.99 Acre	1,696,387	0.5	3.9	17.0	21.3	20.2	17.8	19.4
5 – 9.99 Acre	402,940	0.5	4.2	14.7	19.0	20.0	19.0	22.5
10 – 19.99 Acre	168,093	0.6	5.7	17.7	19.4	18.3	17.2	21.1
20 – 49.99 Acre	62,402	0.7	6.7	19.3	18.8	18.0	15.8	20.8
50 – 99 Acre	32,198	0.7	7.9	24.1	21.7	18.6	13.1	13.9
100 – 199 Acre	1,291	0.4	8.3	22.2	18.9	19.8	14.4	16.0
200 – 499 Acre	550	0.9	8.0	23.1	18.4	16.9	16.5	16.2
500 – 999 Acre	127	-	3.9	18.9	18.1	22.8	19.7	16.5
1000+ Acre	129	-	4.7	27.9	23.3	17.8	12.4	14.0
Not Stated	20,017	0.5	12.6	37.3	25.7	12.0	6.7	5.1

Appendix 3: Contributors to the 2019 Kenya Population and Housing Census Monographs

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