



REPUBLIC OF KENYA



2023/24 KENYA HOUSING SURVEY



Basic Report



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Finally, I am grateful to the University of Nairobi – Faculty of the Built Environment and Design for peer reviewing the report and providing valuable feedback that helped refine the final document.

A handwritten signature in black ink, appearing to read 'Macdonald G. Obudho', with a stylized flourish at the end.

Macdonald G. Obudho, PhD, EBS, MBS

DIRECTOR GENERAL

KENYA NATIONAL BUREAU OF STATISTICS

Table of Contents

Preface	i
Forward	ii
Acknowledgement	iii
List of Acronyms	xviii
Executive Summary	xx
CHAPTER ONE: Introduction	2
1.1 Background	2
1.2 Policy, Legal and Institutional Framework	2
1.3 Justification for the Survey	6
1.4 Survey Objectives	8
1.5 The Key Players in Housing	8
CHAPTER TWO: Methodology	10
2.1 Survey Design	10
2.2 Scope and Target Population	10
2.3 Sample size determination	10
2.4 Sampling frame	13
2.5 Sample Selection	13
2.6 Sampling of Clusters	13
2.7 Sampling of Households	13
2.8 Computation of Survey Weights	13
2.9 Data Quality	14
2.10 Key Concepts and Definitions	15
CHAPTER THREE: Household Demographic and Economic Characteristics	21
3.1 Introduction	22
3.2 Household Demographics	22
3.3. Population Distribution by Residence and Sex	23
3.4. Marital Status of Household Heads	25
3.5. Dependency Ratios	26
3.6 Household Distribution	27
3.7 Household Size	31
3.8 Education	33
3.9 Economic Activity Status of Household Members	34
3.9.1 Summary of Key Labour Market Indicators	35
3.10 Economic Activity Status of Household Heads	38
3.11 Employment Status of Household Heads	38
3.12 Activity Status and Type of Dwelling	40
3.13 Housing and Disability	41
3.14 Distribution of Population Aged 5 years and above by Disability Status, Sex and Age	42
3.15 Ratings of Safety and Adequacy of Housing Units by People with Disabilities	43
3.15.1 Rating of Housing Unit Safety, Especially for People with Mobility Challenges	43
3.15.2 Rating of the Adequacy of Main Dwelling Units	43
3.16 Factors that Prevent Households from Having Adequate Housing Units	44

3.17 Accessibility of Housing Units to Persons with Disability	45
3.17.1 Rating of Satisfaction with the Accessibility of Housing Unit	45
3.17.2 Proportion of Housing Units with Various Accessibility Aids, by Ownership Status	46
3.17.3 Distribution of Housing Units with Accessibility Aids by Disability Status	47
3.18 Information and Communication Technology	47
3.18.1 Introduction	47
3.18.2 Mobile Phone Ownership	48
3.18.3 Mobile Phone Users who Don't Own It	49
3.18.4 Total Mobile Phone Usage	50
3.18.5 Internet Use	52
3.19 Smart Technologies	54

CHAPTER FOUR: Home Ownership and Tenancy **55**

4.1 Introduction	56
4.2 Distribution of Dwelling Structures	56
4.3 Tenancy	57
4.3.1 Amount of Rent Paid by Tenants	57
4.3.2 Rent Collection Entities	64
4.3.3 Tenancy Agreements with Landlords	66
4.3.4 Rent Increments in the Last 5 Years	67
4.3.5 Factors Influencing Tenants' Choice of Neighbourhood	68
4.3.6 Preferences of Tenants	69
4.3.7 Plans Made by Tenants Towards Home Ownership	71
4.3.8 Rental Disputes and Awareness of the Rent Restriction Tribunal by Tenants	72
4.3.9 Eviction Threats	73
4.3.10 Demolitions in the Neighborhood in the Last 5 Years	74
4.4 Home Owners	75
4.4.1. Mode of Home Acquisition	75
4.4.2 Mode of Financing Home Acquisition	75
4.4.3 Sources of Financing	75
4.4.4 Construction of Houses	79
4.4.5 Use of Built Environment Professionals in Construction	81
4.4.6 Reasons for Not Utilizing Services of Built Environment Professionals	82
4.4.7 Dwelling Units Owned Elsewhere	82
4.4.8 Current Use of Dwelling Units owned elsewhere	83

CHAPTER FIVE: Housing Characteristics Amenities and Adequacy **86**

5.1 Introduction	86
5.2 Construction Materials of Main Dwelling Units	86
5.2.1 Floor Material	86
5.2.2 Wall Material	89
5.2.3 Roof Material	92
5.3 Dwelling Spaces	94
5.4 Energy	96
5.4.1 Cooking and Lighting	96
5.4.2 Sources of Cooking fuel	96

5.4.3 Cooking Appliances and Technologies	100
5.4.4 Sources of Energy for Lighting	103
5.4.5 Main Source of Lighting	103
5.5 Access and Sources of Water	109
5.5.1 Distribution of Households by Access to Main Source of Drinking Water	109
5.5.2 Distribution of Households by Access to Main Source of Water for Other Uses	112
5.5.3 Average Time Taken to Fetch Water	115
5.5.4 Distribution of Persons Fetching Water by Residence, Counties, and Sex	116
5.5.5 Proportion of Households with Piped water	117
5.5.6 Sustainable Development Goals Ladder for Drinking Water Services	118
5.6 Human Waste Disposal	120
5.6.1 Main Mode of Human Waste Disposal	120
5.6.2 Shared Human Waste Disposal Facilities	123
5.6.3 Distribution of Households with Hand washing Facility	123
5.7 Adequacy of Housing Index	125
5.7.1 Consolidated Housing Quality Index (CHQI)	125
5.7.2 Dwelling Fitness Results	127
5.7.3 Consolidated Housing Quality Index (CHQI Indicator)	131
5.8 Transport, Infrastructure and Housing Environs	132
5.8.1 Transport and Infrastructure	132
5.8.2 Type of Access Road	134
5.8.3 Street Lighting	134
5.8.4 Utilities Provided by Government	135
5.8.5 Main Mode of Transport to School.	136
5.8.6 Mode of Transport to Work.	137
5.8.7 Housing Environs	138
5.8.8 Land Terrain	138
5.8.9 Proximity of Dwellings to Potential Hazards	139
5.9 Solid Waste Disposal	142
5.10 Membership to Associations	144

CHAPTER SIX: Housing Awareness and Perceptions **146**

6.1 Comfort in Dwellings	146
6.2 Neighbourhood Safety	147
6.3 Incidence of Crime	148
6.4 Awareness of Rules and Regulations in the Building Sector	149
6.5 Challenges Associated with the Implementation of Regulations in the Building Sector	150
6.6 Awareness on the Minimum Housing Requirement	150
6.7 Rent Regulation	153
6.8: Affordable Housing Program	156
6.8.1 Stamp Duty Exemption for First-Time Homebuyers	157
6.8.2 Affordable Housing relief	158
6.8.3 Tax Deductibility of Interest Paid on Housing Loans	159

CHAPTER SEVEN: Housing Finance	162
7.1 Introduction	162
7.2 Saving Products for Housing	163
7.3 Loan Products for Housing	164
7.4 Housing Loans Issued in 2023	165
7.5 Non-Performing Loans	165
7.6 Categorization of a loan as Non – Performing	166
7.7 Average Rates of fees charged on Mortgage	167
7.8 Interest Rates	167
7.9 Availability of Mortgage Products to Special Groups	168
7.10 Demand for Housing/Mortgage Products by Special Groups	169
7.11 Measures used to encourage timely repayment of loans	170
7.12 Recovery Processes for Non-Performing Loans	170
7.13 Barriers to Lending for Mortgage and Construction Financing	171
7.14 Funding Restrictions	171
7.15 Financial Incentives	172
7.16 Challenges in Loan Recovery	172
 CHAPTER EIGHT: Housing Development and Property Prices	 174
8.1: Introduction	175
8.2 Housing Development	175
8.2.1 Compliance to Housing Development Control Requirements	175
8.2.2 Engagement of Built Environment Professionals by Housing Developers	176
8.2.2.1 Professional fees	176
8.2.2.2 Negotiation of Professional Fees	177
8.2.3 Usage of various forms of contracting in housing development	178
8.2.4 Alternative Building Technologies	179
8.2.5 Choice of Area for Housing Development	181
8.2.6 Perceived Challenges in Housing Development in Kenya	182
8.2.7 Incentives to Housing Development	182
8.2.7.1 VAT exemption on all construction inputs under affordable housing programme	182
8.2.7.2 Reduction of Corporation tax to 15 per cent in the year of income	184
8.3 Residential Property Prices	186
8.3.1 Average sale prices of residential properties	186
8.3.2 Average sale prices of residential properties by region	187
 CHAPTER NINE: Built Environment Professionals	 190
9.1 Introduction	190
9.2 Advisory Practices of Built Environment Professionals to Clients on Alternative Building Technologies and Materials	191
9.3 Alternative Building Technologies and Materials Advocated for use by Built Environment Professionals	191
9.4 Reasons for Alternative Building Technologies and Materials	192
9.5 Adherence to Building Approval Process	193
9.6 Steps to Reduce the Cost of Housing Construction	194

9.7 Steps to Improve Housing Conditions	195
9.8 Challenges Facing Housing Development	197
9.9 Ways to Reduce Maintenance Cost of Buildings/ Homes	198
9.10 Reasons for Collapse of Buildings under Construction	199
9.11 Reasons why Approved Buildings Get Demolished by the Government	200
9.12 Professional Bodies for BEPs	200
9.13 Effectiveness of Registration Boards for BEPs	202
9.14 Professional Fees Structure and Indemnity Cover	204
9.15 Preferred Fee Structure	206

CHAPTER TEN: Institutional and Regulatory Framework **208**

10.1 Introduction	208
10.2 County Governments	209
10.2.1 Housing Building Plan Approval	209
10.2.2 Digitization of Building Applications	211
10.2.3 Institutions consulted by County Governments for Residential Building Applications	212
10.2.4 Duration for Obtaining Building Approvals	212
10.2.5 Reasons for Rejecting Building Approval	213
10.2.6 Built Environment Professionals at County Governments	213
10.2.7 Approval of Change of User and Extension of User	214
10.2.8 Completion Certificates	218
10.2.9 Ratification of Building Code	219
10.2.10 Challenges in Building Approval Process	220
10.2.11 Measures to Address Challenges in Approval of Residential Buildings	220
10.2.12 Slum/Informal Settlements Improvement	221
10.2.13 Raw Materials for Foundation and Walling	221
10.2.14 County Government Budget Devoted to Housing	222
10.2.15 Local Physical and Land Use Development Plans	223
10.2.16 Reasons for Low Approval of Local Physical and Land Use Development Plans	225
10.2.17 Area of Approved Development Plans	225
10.2.18 Area Planned for Housing	226
10.2.19 Freehold Titles and Residential Housing Development in Urban Areas	227
10.2.20 Control measures for development in areas planned for residential housing development	228
10.3 Water and Sewerage Service Providers	228
10.3.1 Water Connection	228
10.3.2 Sewer Connection	230
10.3.3 Plans to increase water and sewerage coverage to residential neighbourhoods	231
10.3.4 Time taken and cost for residential and water connection.	232
10.3.5 Approval for Water and Sewerage Connection	234
10.3.6 Water and sewerage connection in informal/slum areas	235
10.3.7 Volume of water supplied to residential areas	236
10.3.8 Smart Meters for Water and Sewerage	236
10.3.9 Challenges Faced by WSSPs in Facilitating Supply of Water	237
10.3.10 Strategies for efficient water supply	237
10.4 National Environment Management Authority (NEMA)	238
10.4.1 Housing Development Licences Processed by NEMA	238

10.4.2 Factors Considered in Licensing Housing Development Projects	240
10.4.3 Factors that Inform License Cost for Housing Development	240
10.4.4 Average time taken to process and license housing development projects from NEMA	241
10.4.5 Challenges faced by NEMA in licensing housing development projects	242
10.4.6 Licensing Challenges Mitigation Measures	242
10.5 Land Administration	243
10.5.1 Land Transfer	243
10.5.2 Applications for Land Transfers Received and Processed in 2023	244
10.5.3 Reasons for Rejection of Land Transfer Applications	245
10.5.4 Reasons for delays in property transfer	245
10.5.5 Measures put in Place to Improve Land Management	246
10.5.6 Impact of Land Management Measures on land transfer process	246

CHAPTER ELEVEN: Land Use and Security of Tenure **248**

11.1 Introduction	248
11.2 Land Acquisition and Ownership Rights	249
11.3 Use of Land Parcels	250
11.4 Land Ownership Documents	251
11.5 Perception of tenure security	252
11.6 Reasons for Involuntarily Losing Ownership or Use Rights	252

CHAPTER TWELVE: Land Consumption Rate and Green Space **254**

12.1 Introduction	254
12.2 Methodology	254
12.3 Land Consumption Rate	255
12.4 Green Spaces	260

List of Tables

Table 2.1:	Distribution of Clusters and Households by County	11
Table 2.2:	Household Response Rate by Residence	19
Table 2.3:	Household Response Rate by County	20
Table 3.1:	Population Distribution by Age Group and Sex	23
Table 3.2:	Population Distribution by Residence, County and Sex, 2024	24
Table 3.3:	Marital Status of Household Heads aged 15 years and above by Sex and Residency	25
Table 3.4:	Dependency Ratios by Type and Residence	26
Table 3.5:	Percentage Distribution of Households by County and Residence	27
Table 3.6:	Distribution of Households by Tenureship Status, County and Residence	29
Table 3.7:	Percentage Distribution of Household Sizes by Residence and Counties.	32
Table 3.8:	Proportions of Household Size by Tenureship Status	33
Table 3.9a:	Summary of Key Labour Market Indicators	35
Table 3.9b:	Distribution of Population 15-64 Years by Activity Status, Residence, Sex, and Age	36
Table 3.10:	Percentage Distribution of Households by Activity Status of Heads and Type of Dwelling Structure	40
Table 3.11:	Distribution of the Population Aged 5 years and Above by Disability Status, Sex and Age	42
Table 3.12:	Rating of Housing Unit Safety by Households with People with Disabilities	43
Table 3.13:	Percentage Distribution of Factors Leading to Inadequacy of Housing Units by Disability Status	44
Table 3.14:	Distribution of Housing Units with Various Accessibility Aids, by Ownership Status	46
Table 3.15:	Proportion of Individuals Aged 3 Years and Above who Owned a Mobile Phone	48
Table 3.16:	Proportion of Individuals Aged 3 Years and Above who Used a Mobile Phone Without Owning	49
Table 3.17:	Proportion of Individuals Aged 3 Years and Above who Used a Mobile Phone	50
Table 3.18:	Proportion of Individuals Aged 3 Years and Above who Used Internet	52
Table 3.19:	Proportion of Individuals Aged 3 Years and Above who Used a Computer	53
Table 3.20:	Proportion of Households with Smart Technologies by Type	54
Table 3.21:	Proportion of Households with Smart Technologies by Type of Dwelling Structure	54
Table 4.1:	Average Rent by County, Dwelling Type and Number of Bedrooms, Urban	57
Table 4.2:	Proportion of Rent to Household Expenditure, 2024	63
Table 4.3:	Rent Collection Entities by County	65
Table 4.4:	Proportion of Tenants with Written Rent Agreements by County	67
Table 4.5:	Dwelling Units Tenants Prefer to Build/Buy	69
Table 4.6:	Number of Bedrooms Tenants Prefer to Build/Buy	70
Table 4.7:	Dwelling Unit Tenants Prefer to Rent	70
Table 4.8:	Number of Bedrooms Tenants Prefer to Rent	70
Table 4.9:	Counties of Preference for Tenants Seeking Home Ownership	70
Table 4.10:	Proportion of Tenants with Rent Disputes and Awareness of the Rent Restriction Tribunal by County	73
Table 4.11:	Modes of Home Acquisition by County	76
Table 4.12:	Modes of Financing Homes Acquisition by County	77
Table 4.13:	Modes of Acquisition of Homes by Owners by County, 2024	78

Table 4.14:	Duration of Construction by County	80
Table 4.15:	Use of Built Environment Professionals in Construction	81
Table 4.16:	Reasons for Not Utilizing Services of BEP	82
Table 4.17:	Location of Additional Homes Homeowners Own Elsewhere by County	83
Table 5.1:	Durability based on the type of main construction materials of the roof, wall and floors.	86
Table 5.2:	Percentage Distribution of Dwelling Units by Type of Floor Material, Residence and County	87
Table 5.3:	Percentage Distribution of Dwelling Units by Type of Wall Material, Residence and County	90
Table 5.4:	Percentage Distribution of Dwelling Units by Type of Roof Material by Residence and County	93
Table 5.5:	Distribution of Households by Average Area Per Person and HH Size	94
Table 5.6:	Categorization of the Main Type of Cooking Fuel	96
Table 5.7:	Percentage Distribution of Households by Main Source of Cooking Fuel, Residence and County	98
Table 5.8:	Percentage Distribution of Households by Primary type of Cooking Appliance, Residence and County	101
Table 5.9:	Categorization of the Main Type of Lighting Fuel	103
Table 5.10:	Percentage Distribution of Households by Main Source of Lighting and Residence/ County	104
Table 5.11:	Percentage Distribution of Households Connected to Electricity from the Main Grid by Residence and County	106
Table 5.12:	Percentage Distribution of Households Connected to Electricity on the Main Grid by Type of Dwelling Unit	108
Table 5.13:	Categories of Main Sources of Water	109
Table 5.14:	Percentage Distribution of Households by Access to Main Source of Drinking Water	110
Table 5.15:	Percentage Distribution of Households by Access to Main Source of Water for Other Uses	113
Table 5.16:	Distribution of Persons Fetching Drinking Water by Residence, Counties, and Sex	116
Table 5.17:	Distribution of Persons Fetching Water for Other Uses by Residence, Counties and Sex	117
Table 5.18:	Proportion of Households with Piped Water by County	118
Table 5.19:	Drinking Water Service Ladder by Residence and County	119
Table 5.20:	Categories of Main Modes of Human Waste Disposal	120
Table 5.21:	Percentage Distribution of Households by Category of Toilet Facility	121
Table 5.22:	Proportion of Households Sharing Toilet Facilities by Residence and County	123
Table 5.23:	Percentage Distribution of Households with a Hand Washing Facility	124
Table 5.24:	Scorecard for Dwelling Fitness	126
Table 5.25:	Distribution of Persons per Habitable Room by Residence and County (Fit and Unfit)	128
Table 5.26:	Structure Fitness by Residence and County	129
Table 5.27:	Energy Use Fitness by County	130
Table 5.28:	Water and Sanitation Fitness by County	131
Table 5.29:	Consolidated Housing Quality Index by Residence and County	132
Table 5.30:	Average Distance from Dwelling Units to Social Amenities (kms)	133
Table 5.31:	Percentage Distribution of Households by Type of Access Road Leading to Dwelling Units by Residence	134
Table 5.32:	Percentage Distribution of Households by Street Lighting/High Mask Lighting for Access Road to Dwelling Units by Residence	135

Table 5.33:	Percentage Distribution of Households by Utilities Provided by the Government by Residence	135
Table 5.34:	Percentage Distribution of Households by Functionality of Utilities Provided by the Government	136
Table 5.35:	Proportion of Dwelling Units by Land Terrain	138
Table 5.36:	Proximity of Dwellings to Potential Hazards in Metres	139
Table 5.37:	Percentage of Households in Areas Prone to Flooding & Mudslides by Residence	140
Table 5.38:	Percentage Distribution of Households by Primary Method of Waste Disposal by Residence	142
Table 5.39:	Percentage Distribution of Households by Frequency of Waste Collection by County	143
Table 6.1:	Proportion of Individuals Aged 18 years and Above who Reported they were Comfortable with their Current Residence	146
Table 6.2:	Proportion of Persons Aged 18 years and Above who Felt Secure in their Neighbourhood at Night	147
Table 6.3:	Proportion of Persons aged 18 years and Above who have been Victims of Crime. within their Locality in the 12 months Preceding the survey	148
Table 6.4:	Proportion of Persons Aged 18 years and Above who were aware of the Rules and Regulations in the Building Sector	149
Table 6.5:	Proportion of Persons Aged 18 years and Above who are Aware of the Minimum Housing Requirement	151
Table 6.6:	Proportion of Persons Aged 18 years and Above who Consider the Minimum Housing Requirement Useful	152
Table 6.7:	Proportion of Adult Population who think that Government/Public Agencies Should Regulate Rent	154
Table 6.8:	Percentage Distribution on the Opinion that Government/Public Agencies should Regulate Interest Rates on Housing Loans and Mortgages	155
Table 6.9:	Percentage of Respondents Aware of Affordable Housing Program	156
Table 6.10:	Percentage of Respondents Aware of Stamp Duty Exemption	157
Table 6.11:	Proportion of Respondents who Benefitted from Stamp Duty Exemption	158
Table 6.12:	Percentage of Respondents Population Aware of Affordable Housing Relief	159
Table 6.13:	Percentage of Respondents Aware of Tax Deductibility paid on Housing Loans	160
Table 8.1:	Average sale prices of residential properties by type, 2023	186
Table 8.2:	Average sale prices of residential properties by region (KSh)	188
Table 9.1:	Measures to Overcome Challenges Facing Housing Development (%)	197
Table 10.1:	Number of Building Plans Applications Received and Approved	210
Table 10.2:	Building Plans Applications Received and Approved by Building Type	211
Table 10.3:	Duration for Obtaining Building Approvals	212
Table 10.4:	Number of Applications Received for Change of User by County	217
Table 10.5:	Number of Completion Certificate Applications Received and Issued, by Type of Building	218
Table 10.6:	Completion Certificate Applications Received and Issued, by County	219
Table 10.7:	Proportion of Counties with Informal Settlements/Slums, and their Number by Type of Jurisdiction Area	221
Table 10.8:	Number of Local Physical and Land Use Development plans by jurisdiction area	223
Table 10.9:	Number of Local Physical and Land Use Development Plans by Jurisdiction Area and County	224
Table 10.10:	Measures Taken by County Governments to Control Development in Areas Planned for Residential Housing Development	228

Table 10.11:	Number of Applications for Water Connections Received in 2022 and 2023 by County and Type of Building	229
Table 10.12:	Number of Applications Received for Sewer Connection and Proportion of Sewer Coverage by county	230
Table 10.13:	Time Taken and Cost for Residential Water and Sewer connection	233
Table 10.14:	Volume of Water Supplied to Residential Areas in 2022 and 2023, Cubic Meters	236
Table 10.15:	Number and Proportion of Licensing Applications for Housing Development Projects Received and Licensed by NEMA in 2022 and 2023	239
Table 10.16:	Average Time Taken to Process and License Housing Development Projects from NEMA	241
Table 10.17:	Number and Proportion of Applications for Land Transfer Received and Processed in 2023	244
Table 11.1:	Likelihood to involuntarily lose ownership or use rights	252
Table 11.2:	Reasons for the Likelihood of Involuntarily Losing Ownership or Use Rights	252
Table 12.1:	Land Consumption Rate, 2016-2023	255
Table 12.2:	Area Occupied by Green Spaces, 2016-2023	260

List of Figures

Figure 2.1:	The Distribution of KHS Clusters by County and Residence	12
Figure 3.1:	Kenya Population Pyramid, 2024	23
Figure 3.2:	Distribution of Population by Level of Education Completed	33
Figure 3.3:	Distribution of Tenureship Status by Level of Education Completed	34
Figure 3.4:	Economic Activity Status of Household Heads by Residence	38
Figure 3.5:	Employment Status of Household Heads	38
Figure 3.6:	Activity Status by Type of Tenureship	39
Figure 3.7:	Employment Status of Home Owners and Tenants	39
Figure 3.8:	Rating of the Adequacy of Main Dwelling Units by Disability Status	44
Figure 3.9:	Rating of Satisfaction with the Accessibility of Housing Unit	45
Figure 3.10:	Distribution of households with various accessibility Aid by Disability Status	47
Figure 4.1:	Distribution of Dwelling Structures by Type and Residence	56
Figure 4.2:	Rent Collection Entities	64
Figure 4.3:	Proportion of Tenants with Written Rent Agreements	66
Figure 4.4:	Percentage of Tenants Who Reported Rent Increment from 2019 to 2023	68
Figure 4.5:	Factors Influencing Tenants' Choice of Neighborhood	68
Figure 4.6:	Proportion of Tenants Willing to Purchase Current Dwelling Unit	69
Figure 4.7:	Proportion of Tenants Preferring to Build or Buy Own Dwelling Unit	69
Figure 4.8:	Reasons for Renting Instead of Residing in Own Dwelling	71
Figure 4.9:	Plans Made by Tenants Towards Home Ownership	72
Figure 4.10:	Threats of Eviction	73

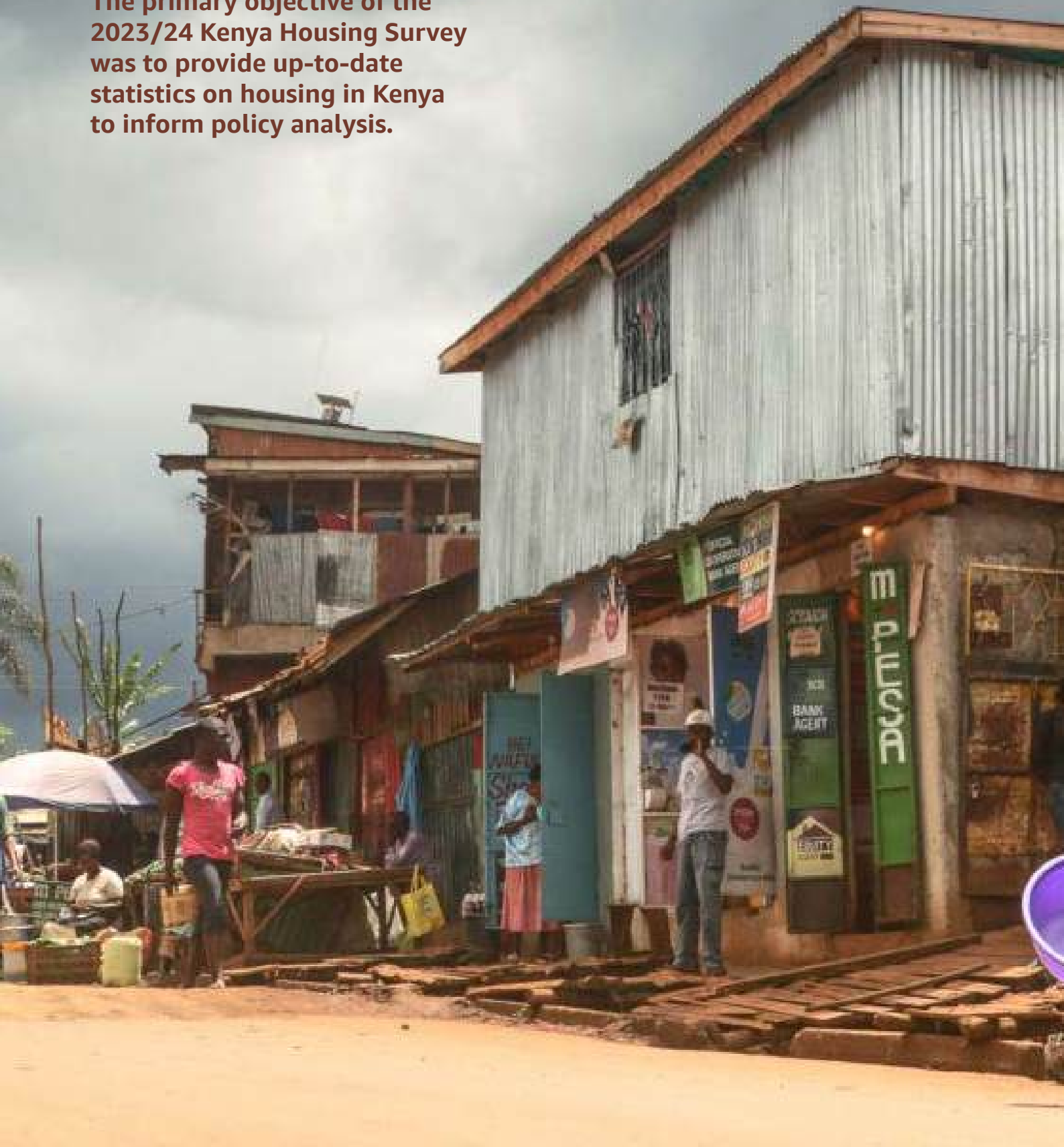
Figure 4.11:	Reasons for Eviction Threats	74
Figure 4.12	Demolitions in the Neighbourhood in the Last 5 Years	74
Figure 4.13:	Factors Influencing the Choice of Area for Homeowners	79
Figure 4.14:	Proportion of Status of Completion at Time of Purchase	81
Figure 4.15:	Current Use of Dwelling Use	83
Figure 5.1:	Proportion of Dwelling Units by Durability of the Main Type of Floor Material and Residence	87
Figure 5.2:	Proportion of dwelling units by main type of wall material and residence	89
Figure 5.3:	Proportion of dwellings by main type of roof material and residence	92
Figure 5.4:	Average Number of Persons per Room by Residence and County	94
Figure 5.5	Distribution of Households by Cooking Fuel Categories and Residence	96
Figure 5.6	Percentage distribution of Households relying on clean fuels and technologies by county	97
Figure 5.7:	Reasons why Households are not Connected to Electricity from the Main Grid	107
Figure 5.8:	Average Time Taken to Fetch Drinking Water	115
Figure 5.9:	Average Time Taken to Fetch Water for Other Uses	115
Figure 5.10:	Number of Persons per Habitable Room	128
Figure 5.11:	Main Mode of Transport to School for Day Scholars	137
Figure 5.12:	Main Mode of Transport to Work	137
Figure 5.13:	Primary method of Solid Waste Disposal	142
Figure 5.14:	Membership to Associations by Locality	144
Figure 6.1:	Challenges associated with the Implementation of Regulations in the Building Sector	150
Figure 7.1:	Proportion of financial institutions with saving products for housing	163
Figure 7.2a:	Provision of loan products	164
Figure 7.2b:	Provision of loan products for construction/housing among financiers	164
Figure 7.3:	Percentage of the value of loan per products	165
Figure 7.4:	Proportion of housing NPLs to total Housing Loans	165
Figure 7.5:	Number of days after due date a loan is declared Non-Performing	166
Figure 7.6:	Average Rate of fees charged on Mortgage	167
Figure 7.7:	Average Interest Rate for Mortgage	167
Figure 7.8:	Availability of Mortgage Products to Special Groups	168
Figure 7.9:	Demand for Housing/Mortgage Products by Special Groups	169
Figure 7.10:	Measures Used to Encourage Timely Repayment of Loans	170
Figure 7.11:	Recovery Processes for Non-Performing Loans	170
Figure 7.12:	Key barriers to lending	171
Figure 7.13:	Funding Restrictions	171
Figure 7.14:	Incentives to lend	172
Figures 7.15:	Challenges in recovering housing construction and mortgage loans	172
Figure 8.1:	Rating of time taken, fee charged and efficiency of approval process for housing development (%)	176
Figure 8.2:	Proportion of developers who consider stipulated professional fees as equivalent to services provided by various built environment professionals	176
Figure 8.3:	Proportion of housing developers who negotiate professional fees by type of profession	177
Figure 8.4:	Distribution of housing developers by frequency of negotiating professional fee by type of profession(%)	178
Figure 8.5:	Distribution of developers by usage of various forms of contracting in housing developments (%)	179
Figure 8.6:	Awareness of alternative building technologies by housing developers (%)	180
Figure 8.7:	Factors Influencing Choice of Area for Housing Development (%)	181

Figure 8.8:	Challenges to housing development in Kenya (%)	182
Figure 8.9:	Proportion of housing developers who are aware of VAT exemption on construction inputs and proportion of housing developers that have benefitted from the exemption	183
Figure 8.10:	Reasons why housing developers do not benefit from VAT exemption on all construction inputs under affordable housing scheme (%)	183
Figure 8.11:	Proportion of housing developers who are aware of the reduction on corporation tax to 15% in the year of income for construction of at least 100 residential units	184
Figure 8.12:	Reasons for not benefitting from the reduction on corporation tax to 15% in the year of income by housing developers (%)	184
Figure 9.1:	Advisory Practices of Built Environment Professionals to Clients on Alternative Building Technologies and Materials (%)	191
Figure 9.2:	Alternative Building Technologies and Materials Advocated for use by the Built Environment Professionals (%)	192
Figure 9.3:	Reasons for Use of Alternative Building Technologies and Materials (%)	192
Figure 9.4:	Compliance with Building Approval Process by Clients of Built Environment Professionals (%)	193
Figure 9.5:	Reasons not seeking official building approval (%)	194
Figure 9.6:	Views of Built Environment Professionals on steps to reduce the cost of housing construction (%)	195
Figure 9.7:	Steps to improve housing conditions (%)	196
Figure 9.8:	Challenges facing housing development (%)	197
Figure 9.9:	Ways to Reduce Maintenance Cost of Buildings/Homes (%)	198
Figure 9.10:	Reasons why buildings under construction collapse (%)	199
Figure 9.11:	Reasons why buildings get demolished by the Government (%)	200
Figure 9.12:	Benefits Received by BEPs from Professional Bodies (%)	201
Figure 9.13:	How Professional Bodies can Serve BEPs Better (%)	201
Figure 9.14:	Reasons for Effective Registration Boards (%)	202
Figure 9.15:	Measures to Enhance Effectiveness of Registration Boards of BEPs (%)	203
Figure 9.16:	Ways to improve service delivery of housing sector professionals (%)	203
Figure 9.17:	Proportion of BEPs with Indemnity Cover	204
Figure 9.18:	Barriers to Indemnity Cover Adoption among Built Environment Professionals	205
Figure 9.19:	Distribution of Built Environment Professionals by Preferred Fee Structure (%)	206
Figure 10.1:	Proportion of Counties that have Digitized Residential Building Applications and Georeferenced Land	211
Figure 10.2:	Institutions Consulted in Residential Building Applications by Counties (%)	212
Figure 10.3:	Reasons for Rejecting Building Approval Applications (%)	213
Figure 10.4:	Proportion of Counties with Built Environment Professionals in their Staff Establishment	214
Figure 10.5:	Proportion of Counties by Factors Considered in Approving Change of User or Extension of User Applications	215
Figure 10.6:	Total Number of Applications for Change of User and Extension of User	215
Figure 10.7:	Total Number of Applications of Change of User Applications by Purpose	216
Figure 10.8:	Proportion of Counties that have Ratified Building Code 95 (revised building by-laws)	219
Figure 10.9:	Main Challenges Encountered by Counties in Residential Building Approvals process	220
Figure 10.10:	Proportion of Counties by Measures put in place to Address Challenges in Residential Buildings Approval	220
Figure 10.11:	Proportion of Counties by Measures Taken to Improve Informal/Slum Settlements	221
Figure 10.12:	Proportion of Counties Raw materials Commonly Used for Foundation and Walling	222
Figure 10.13:	Proportion of County Government Budget Devoted to Housing	222

Figure 10.14: Reasons Why Counties do not Approve Local Physical and Land use Development Plans	225
Figure 10.15: Area of Approved Local Physical and Land Use Development Plans and Residential land use by jurisdiction	225
Figure 10.16: Area of Unapproved Local Physical and Land Use Development Plans and Residential Land Use by Jurisdiction Area	226
Figure 10.17: Total Area (hectares) Planned for Housing in County Urban Centers, Under Public and Private Land	226
Figure 10.18: Steps taken by county governments to facilitate release of urban land under freehold title for residential housing development	227
Figure 10.19: Plans to increase water coverage, per cent	231
Figure 10.20: Plans by Water and Sewerage Service Providers to increase sewer coverage, per cent	232
Figure 10.21: Reasons for Declining Water and Sewerage Connections	234
Figure 10.22: Factors Considered in Fair Distribution of Tap Water to Residential Areas	235
Figure 10.23: Proportion of water and sewerage service providers that undertake water connections in informal settlements/slum areas	235
Figure 10.24: Introduction of Smart Meters for Water and Sewerage	236
Figure 10.25: Challenges Encountered by WSSPs in Facilitating Supply of Water	237
Figure 10.26: Measures to Address Challenges Encountered by Water and Sewerage Companies Providers in Water Delivery	237
Figure 10.27: Factors Considered in Licensing Housing Development Projects	240
Figure 10.28: Factors that Inform License Assessment Cost for Housing Development	240
Figure 10.29: Main Challenges in the Licensing Process by NEMA (%)	242
Figure 10.30: Measures Used to Address Licensing Challenges in Housing Projects	242
Figure 10.31: Proportion of Respondents by Factors Considered in Allocating Leasehold Land for Housing Development	243
Figure 10.32: Reasons for Rejection of Land Transfer Applications (%)	245
Figure 10.33: Reasons for Delays in Property Transfer (%)	245
Figure 10.34: Measures put in place to improve land management, per cent	246
Figure 10.35: Impact of land management measures on land transfer process.	246
Figure 11.1: Acquisition of Land Use or Ownership Rights	249
Figure 11.2: Distribution of Various Types of Land Use in Kenya	250
Figure 11.3: Proportion of Land Documents for Parcels	251
Figure 12.1: Nairobi City County Built-Up Areas	256
Figure 12.2: Mombasa County Built-Up Areas	257
Figure 12.3: Kisumu County Built-Up Areas	258
Figure 12.4: Nakuru County Built-Up Areas	259
Figure 12.5: Nairobi City County Green Spaces	261
Figure 12.6: Mombasa County Green Spaces	262
Figure 12.7: Kisumu County Green spaces	263
Figure 12.8: Nakuru County Green Spaces	264



The primary objective of the 2023/24 Kenya Housing Survey was to provide up-to-date statistics on housing in Kenya to inform policy analysis.





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List of Acronyms

2019 KPHC	2019 Kenya Population and Housing Census
2023/24 KHS	2023/2024 Kenya Housing Survey
ABTs	Alternative Building Technologies
AHP	Affordable Housing Project
AIDS	Acquired Immunodeficiency Syndrome
BEPs	Built Environment Professionals
BETA	Bottom-Up Economic Transformation Agenda
BORAQS	Board of Registration of Architects and Quantity Surveyors
CBO	Community Based Organization
CCTV	Closed-Circuit Television Camera
CHQI	Consolidated Housing Quality Index
CLA	Community Land Act
CPI	Consumer Price Index
EA	Enumeration Area
EIA	Environmental Impact Assessment
ELC	Environment and Land Court
EMCA	Environmental Management and Coordination Act
EPSM	Equal Probability Selection Method
FOSA	Front Office Service Activity
FSIs	Financial Soundness Indicators
HIV	Human Immunodeficiency Virus
ICT	Information, Communication and Technology
IoT	Internet of Things
IMF	International Monetary Fund
ITU	International Telecommunication Union
KENSUP	Kenya Slum Upgrading Program
K-HMSF	Kenya Household Master Sample Frame
KHS	Kenya Housing Survey
KISIP	Kenya Informal Settlement Improvement Program
KPHC	Kenya Population and Housing Census
KPLC	Kenya Power and Lighting Company
KRA	Kenya Revenue Authority
KSh	Kenya Shilling
KURA	Kenya Urban Roads Authority

KUSP	Kenya Urban Support Program
LCA	Land Control Act
LCB	Land Control Board
LPG	Liquefied Petroleum Gas
LRA	Land Registration Act
MFBs	Microfinance Banks
MTPs	Medium Term Plans
NCA	National Construction Authority
NEMA	National Environment Management Authority
NHC	National Housing Corporation
NLC	National Land Commission
NLP	National Land Policy
NLUP	The National Land Use Policy
NPLs	Non-performing Loans
NPPR	Number of Persons Per Room
NUDP	National Urban Development Policy
PLUPA	Physical and Land Use Planning Act
PPP	Public Private Partnership
PPS	Probability Proportional to Size
PSUs	Primary Sampling Units
PSV	Public Service Vehicle
PWDs	Persons Living with Disabilities
SACCO	Savings and Credit Cooperative Society
SDGs	Sustainable Development Goals
Sq Meters	Square Meters
VAT	Value Added Tax
VIP	Ventilated Improved Pit Latrine
WHR	Window for Host Communities and Refugees
WSSPs	Water and Sewerage Service Providers

Executive Summary

The 2023/24 Kenya Housing Survey (2023/24 KHS) provides a comprehensive analysis of housing conditions, affordability and tenure across the country. The survey was conducted by the Kenya National Bureau of Statistics (KNBS) in collaboration with the State Department for Housing and Urban Development, the State Department for Labour and Skills Development, the Kenya Space Agency, the Directorate of Resource Survey and Remote Sensing and the Central Bank of Kenya. The primary objective of the 2023/24 KHS was to provide up-to-date housing statistics to facilitate evidence-based planning and decision making in the housing sector. In addition, the survey addressed housing challenges in line with national development goals and international commitments such as the Sustainable Development Goals (SDGs). Data collection was carried out from 7th March to 10th May 2024 in all the 47 counties and targeted both households and institutions.

The survey collected data on various aspects of housing, including the stock of dwellings, household spending on housing, land and dwelling ownership, access to utilities, housing affordability, overcrowding, durability of construction materials, and economic and financial statistics related to housing. Additionally, it collected information on the age, size, and characteristics of dwellings. Satellite imagery analysis was also used to assess changes in built-up areas and green spaces in Nairobi City, Mombasa, Kisumu, and Nakuru counties. Different players in the housing sector including tenants and home owners, Housing Financiers, Developers, Water Service Providers, Built Environment Professionals and Housing Regulators (County Government Physical Planning Department, Lands Department and National Environmental Management Authority) were interviewed.

From the survey findings, majority of home owners were in the rural areas at 85.5 per cent, while urban areas home ownership was at 22.8 per cent. Urban areas had higher percentages of households paying rent/leasing at 72.3 per cent, while the proportion of households who paid rent in rural areas was 8.9 per cent. Bungalows were

the most owned type of house in both rural and urban set ups at 76.3 per cent and 69.1 per cent, respectively. Nationally, 58.9 per cent of dwelling units were made of durable floor materials, 47.2 per cent had durable wall materials and 93.6 per cent had durable roofing materials.

Regarding access to utilities, the survey revealed that 73.5 per cent of households had access to improved sources of drinking water and 34.4 per cent used clean fuels for cooking. About 71.7 per cent of the households had access to an improved toilet facility.

Based on the survey findings, 53.5 per cent of the population were aware of the Affordable Housing Program. Nationally, 7.7 per cent of respondents reported that they were aware of the stamp duty exemption for first-time home buyers and of those aware, 11.9 per cent had benefited from it.

The survey indicated that 20.5 per cent of the counties reported they had digitized building plans applications while 23.3 per cent of counties had georeferenced land records. Nationally, 78.2 per cent of the Environmental Impact Assessment (EIA) reports on housing projects received by National Environment Management Authority were approved in 2023. The largest proportion of Built Environment Professionals had more than 20 years of experience accounting for 27.0 per cent. Among the financiers, 33.3 per cent had savings products aimed at purchase of land, while 20.7 per cent focused on savings for incremental building.



88.2%

From the survey findings, majority of homeowners were in the rural areas at 88.2 per cent, while urban areas home ownership was at 26.0 per cent.



20.5%

The survey indicated that 20.5 per cent of the counties reported they had digitized building plans applications while 23.3 per cent of counties had georeferenced land records.





CHAPTER 01

Introduction

1.1 Background

The growing population in Kenya has led to a significant increase in the demand for housing. The 2019 Kenya Population and Housing Census Analytical Report on Housing and Amenities provided fundamental indicators on housing, including tenure status, dwelling conditions, construction materials, sources of drinking water, energy use and household assets. The 2023/24 KHS gives updated statistics on housing and residential dwellings in Kenya necessary for informing housing sector policies, compilation of national accounts statistics and international comparisons.

The survey adhered to international standards and guidelines for housing statistics in collecting information. The data collected was analysed and disaggregated by urban, rural and counties to provide key housing sector statistics and the achievements of selected indicators of Sustainable Development Goals (SDGs) 1, 5, 6, 7, 9, 11, 16 and 17 related to housing. The survey also assessed the awareness and uptake of the incentives of the Affordable Housing Program (AHP). The findings are valuable to policymakers, academia, development partners and other stakeholders in making informed decisions and undertaking in-depth analysis.

1.2 Policy, Legal and Institutional Framework

The right to adequate housing is a human right recognized by international, regional, and national laws. This right is derived from 'the right to an adequate standard of living' as defined in Article 25 of The Universal Declaration of Human Rights. In Kenya, the right is reflected in Article

43 (1)(b) of the Constitution, which guarantees every person the right 'to accessible and adequate housing; and to reasonable standards of sanitation'.

The housing sector is governed by various international, regional and national policies as outlined below: -

1. The Sustainable Development Goals: Target 11.1 "By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums."

2. The New Urban Agenda: Adopted in 2016 at Habitat III, is a concise, action-oriented, forward-looking, and universal framework of actions for housing and sustainable urban development.

3. Agenda 2063: The Africa We Want—is a declaration signed by African Union member states in May 2013. It serves as a strategic framework aimed at the socio-economic transformation of the continent. This initiative builds upon and aims to accelerate the implementation of previous and existing continental efforts focused on growth and sustainable development.

4. The Kenya Vision 2030: The country's development blueprint vision for housing and urbanization is 'an adequately and decently housed nation in a sustainable environment'. This is to be achieved through various undertakings which include but are not limited to, facilitation of construction of 200,000 housing units annually through various initiatives and development of quality and affordable houses for low income Kenyans.



In Kenya, the right is reflected in Article 43 (1)(b) of the Constitution, which guarantees every person the right 'to accessible and adequate housing; and to reasonable standards of sanitation'.

5. Sessional Paper No. 3 of 2016 on The National Housing Policy: Provides the guidelines for progressive realization of the right to accessible and adequate housing and reasonable standards of sanitation for every person as per Article 43 of the Constitution. It also intends to prevent the deteriorating housing conditions countrywide and bridge the shortfall in housing stock arising from demand that far surpasses supply particularly for low-income housing in urban areas.

6. Sessional Paper No. 2 of 2016 on the National Slum Upgrading and Prevention Policy: Its purpose is to integrate the existing slums into the formal system, enabling them to enjoy reasonable basic amenities. It will also prevent formation of new slums by adhering to urban planning, provision of infrastructure, and low-cost housing.

7. Sessional paper No. 2 of 2015 on National Building Maintenance Policy: Aims to create awareness and build capacity of all Kenyan citizens on the importance of proper maintenance of buildings and related infrastructures and guides on the establishment of efficient, effective and economic use of scarce maintenance resources with a view of maintaining the existing housing stock to prolong and realize a longer economic value.

8. Sessional paper No. 1 of 2017 on National Land Use Policy (NLUP): The overall objective is to “provide legal, administrative, institutional and technological framework for optimal utilization and productivity of land and land related resources in a sustainable and desirable manner at National, County, Sub-County and other local levels”.

9. Sessional paper No. 3 of 2009 on National Land Policy (NLP): The overall objective of the National Land Policy is to provide a mechanism through which land is held, used and managed in an equitable, efficient, productive and sustainable manner.

10. Sessional paper No. 1 of 2023 on National Urban Development Policy (NUDP): Aims to strengthen urban governance and management, development planning, urban investment, and the delivery of social and physical infrastructure throughout the country.

The following legislations govern the sector: -

The Constitution of Kenya, 2010: Provides for the right to accessible and adequate housing under Article 43(1) (b), which is fundamental to enable individuals live in dignity. The Constitution envisages every person having a right to accessible and adequate housing as well as reasonable standards of sanitation. Article 21(2) dictates that the State shall take legislative, policy and other measures, including the setting of standards, to achieve the progressive realization of the rights guaranteed under Article 43.

Affordable Housing Act, 2024: Gives effect to Article 43(1)(b) of the Constitution and provides a framework for development and access to affordable housing and institutional housing. It also establishes the affordable housing fund.

Sectional Properties Act, No. 21 of 2020: Provides a legal framework for the subdivision of land and buildings into individual units or sections, each with separate ownership rights.

The County Government Act, 2012: Dictates that development control in a city or municipality should be within the national housing and building code framework. The Act further gives the counties powers to perform the functions spelt out under the fourth schedule of the constitution such as development planning.

The Physical and Land Use Planning Act (Act No. 13 of 2019) (PLUPA): Is the principal Act for land use planning in Kenya. It makes provision for the planning, use, regulation and development of land and establishes offices and institutions for the purposes of planning in the country.

Housing Act, 1953 (Amended 2019): Established the National Housing Corporation which provides loans and grants for the construction of dwellings and facilitates access to innovative housing solutions.

Environmental Management and Coordination Act, 1999 (EMCA)(Amended 2015): Provides for the establishment of an appropriate legal and institutional framework for the management of the environment.

Stamp Duty Act, 2012: Makes provision for the levying and management of stamp duties. Exemption from

payment of stamp duty for first-time home buyers under the Affordable Housing Scheme is anchored on this Act.

Key institutions in the housing sector include the Ministry of Lands, Public Works, Housing and Urban Development, County Governments, the National Environment Management Authority (NEMA), the National Construction Authority (NCA), Kenya Mortgage Refinancing Company (KMRC), National Housing Corporation (NHC) and the Kenya Revenue Authority (KRA).

Interventions and programs

The following are the interventions and programs being undertaken:

1. The Affordable Housing Program

The Fourth Medium Term Plan (MTP IV) 2023-2027 implements the Bottom-Up Economic Transformation Agenda (BETA), which is geared towards economic turnaround and inclusive growth through a value chain approach. The State Department for Housing and Urban Development is implementing the Affordable Housing Program (AHP) which aims to construct 200,000 housing units annually to bridge the housing deficit in the country. The AHP also has the potential to spur economic growth through manufacturing of construction materials, revamping and formalizing the Jua Kali sector and creation of jobs. The program further aims to grow the number of mortgages to 1,000,000 by facilitating low-cost mortgages.

2. The Kenya Urban Support Program (KUSP)

The Government of Kenya through the State Department for Housing and Urban Development is implementing the second phase of the Kenya Urban Support Program (KUSP II) as a follow-up to the first phase of the Kenya Urban Support Program. The KUSP was mooted to address the urbanization challenges in Kenya with urban areas experiencing massive challenges of haphazard developments leading to informality, unemployment, inadequate infrastructure and services, poor waste collection among others. The first phase of KUSP was implemented from 2018 to 2023 in 45 counties and benefitted 59 municipalities. KUSP II is being implemented across 79 Municipalities and will incorporate 2 special municipalities of Dadaab and Kakuma -Window for Host and Refugee (WHR municipalities).

1,000,000

The Affordable Housing Program aims to grow the number of mortgages to 1,000,000 by facilitating low-cost mortgages.





Increased urbanization coupled with low affordability for housing is significantly contributing to a growing annual housing deficit.



3. The Kenya Informal Settlement Improvement Project (KISIP)

The Kenya Informal Settlement Improvement Project (KISIP) was initiated by the Government of Kenya, with support from Development Partners, in 2011 to complement the national Kenya Slum Upgrading Program. It also supports the State Department of Lands' efforts to introduce urban planning and strengthen security of tenure in unplanned and impoverished urban neighborhoods, in line with the National Land Policy.

The project's development objective is to improve living conditions and enhance security of tenure in informal settlements in selected towns across Kenya. This is achieved through securing land tenure and investing in infrastructure, with plans developed in consultation with the community. Additionally, KISIP supports improvements in existing informal settlements.

4. Kenya Slum Upgrading Program (KENSUP)

The Government of Kenya, in collaboration with UN-HABITAT and other stakeholders, initiated the Kenya Slum Upgrading Program (KENSUP) in 2004 to improve lives and livelihoods of people working and living in slums. The program involves construction of low-cost houses, installation of social and physical infrastructure, introducing income generation activities, facilitating security of tenure, environment and solid waste management, community and resource mobilization, capacity building among the communities and addressing cross-cutting issues including HIV and AIDS, alcohol, drug and substance abuse and insecurity among others. The program has since transitioned to a fully fledged department under the State Department for Housing and Urban Development.

**200,000**

The Affordable Housing Program also aims to construct 200,000 housing units annually and its implementation requires updated statistics to track the achievement of the goals.

1.3 Justification for the Survey

The right to housing is embedded in the Constitution of Kenya, which provides that every person has the right to accessible and adequate housing. Kenya Vision 2030 aims to address the country's housing needs by targeting to construct 200,000 housing units annually through various strategies. The Sessional Paper No. 3 on the National Housing Policy (2016) recognizes lack of comprehensive data and regular market analysis on housing supply and demand at both the National and County levels as one of the key policy issues affecting the sector. To address this, the policy mandates the National and County governments to establish databases on real estate activities and conduct periodic market analysis every five years in collaboration with accredited research institutions.

The Affordable Housing Program also aims to construct 200,000 housing units annually and its implementation requires updated statistics to track the achievement of the goals. The 2019 Kenya Population and Housing Census revealed a deficit of 14.7 million habitable rooms and developed a consolidated housing quality index based on the materials used for construction. This

housing survey provides updated indicators to complement existing data. With the Affordable Housing Program, the target is to deliver decent and affordable housing to low and middle-income households which is fundamental in creating a stable and healthy environment that supports academic success and economic opportunities, contributing to the overall well-being and prosperity of communities.

Investing in affordable housing is not just a matter of providing shelter; it is a critical component of fostering equitable and sustainable development. Assessing awareness and uptake of the various incentives under the AHP will inform better policy decisions based on the survey findings.

Monitoring ownership of land/house and housing expenditure is essential for informing changes in welfare implications for different population segments. Increased urbanization coupled with low affordability for housing is significantly contributing to a growing annual housing deficit. Therefore, there was a critical need to monitor housing stocks to address this issue effectively.

Regulators of housing development play an important role by ensuring housing projects comply with national and local regulations, safety standards, building codes and environmental requirements. To enhance the quality of life for all residents, there is need to provide safe, durable and sustainable living environments through housing developments that adhere to set rules and regulations.

For social inclusion and living standards to be maintained, access to affordable housing finance

is essential. Information on housing finance and development from the demand side must be gathered to identify gaps and challenges in improving housing quality and lowering unfavorable living conditions.

Housing developers play a crucial role in shaping communities by building various types of housing. In a nutshell, developers must balance financial objectives with regulatory requirements and community needs to successfully complete projects. Their work significantly impacts the availability and quality of housing in any given area. Understanding the perspectives and practices of housing developers is essential for assessing their influence on community development and housing markets. This survey was vital for gaining insights into how they navigate possible challenges in housing and contribute to shaping the built environment in Kenya.

Access to infrastructure and services is critical for enhancing the quality of life, supporting economic development and achieving sustainable housing solutions. The objective is to evaluate and enhance access to essential infrastructure and services in both urban and rural areas of Kenya, ensuring equitable distribution and addressing deficiencies in water supply, electricity,

sanitation, and waste management. By identifying areas with inadequate services, targeted interventions can be employed to improve living conditions and support overall community well-being.

Land consumption rates and green spaces are crucial components of urban planning and development, especially in fast-growing cities across the world. Integrating built-up area and green spaces data with housing surveys provides a powerful tool for urban analysis. Examining these relationships allows urban planners and policymakers to make data-driven decisions to promote sustainable, equitable, and resilient urban environments, ensuring that urban growth aligns with residents' needs and well-being. Geospatial tools were used to track changes in built-up area and green spaces.

The statistics generated from this survey will establish an updated housing database, building on the 2012/13 National Housing Survey, to evaluate the impact of future housing policies. Given that the last housing survey was conducted in the 2012/13 financial year, it was imperative to undertake a new survey to update the structure of the construction and housing sector and fill data gaps for periodic sector monitoring.



1.4 Survey Objectives

The primary objective of the 2023/24 Kenya Housing Survey was to provide up-to-date statistics on housing in Kenya to inform policy analysis. The specific objectives of the survey were to:

1. Assess the quality and condition of housing units.
2. Evaluate the level of access to infrastructure and services
3. Evaluate housing affordability by providing insights into housing costs and rent.
4. Assess the level of awareness and perceptions regarding the Affordable Housing Program, housing regulations, and comfort in dwellings.
5. Track progress towards national housing goals (Vision 2030 and Sustainable Development Goals (SDG) 1, 5, 6, 7, 9, 11, 16 and 17 indicators related to housing).
6. Assess the change in land consumption using geospatial tools from 2016 to 2023.

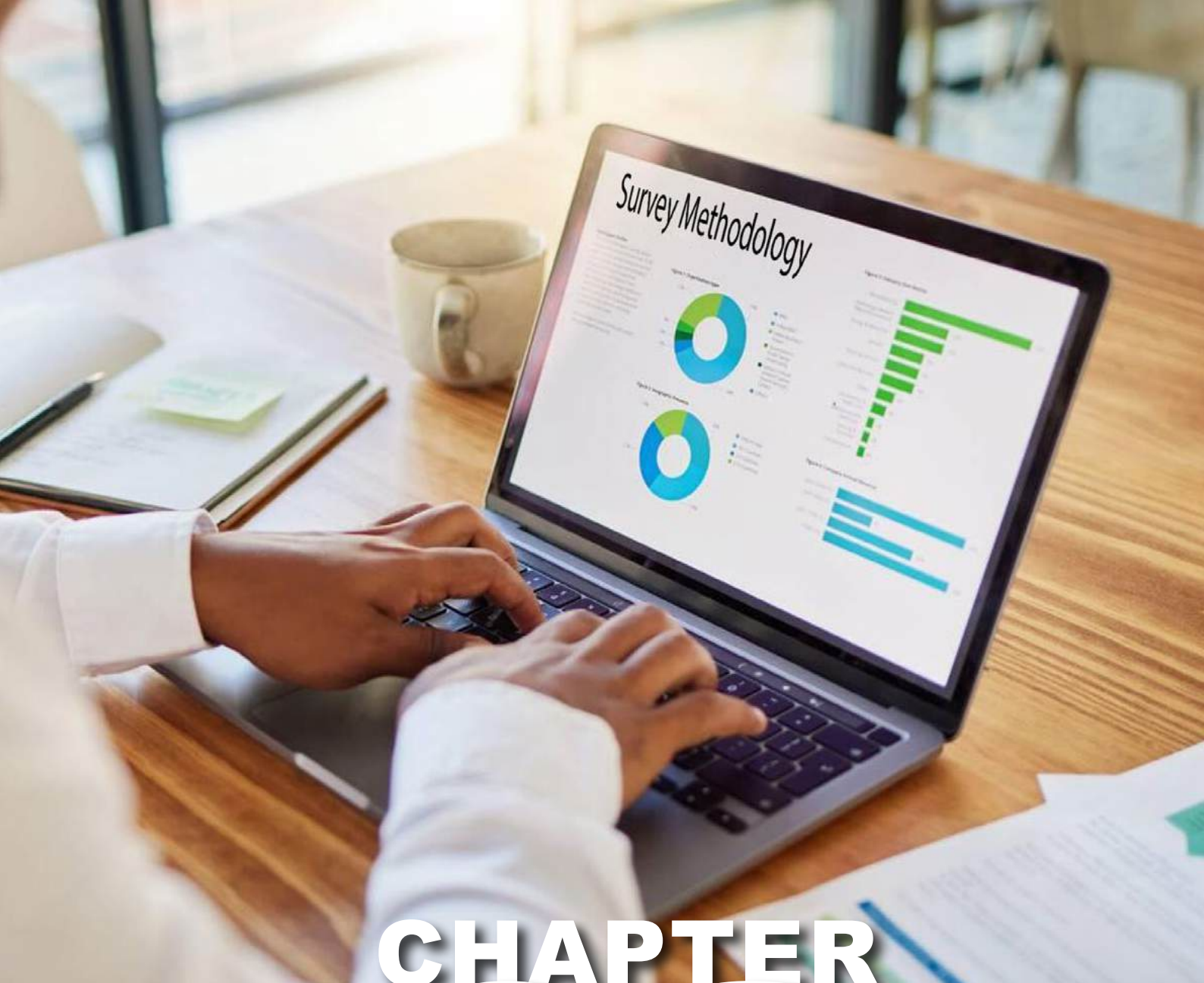
1.5 The Key Players in Housing

The key players in the housing sector are persons and institutions who hold a pivotal role in the investment and development of housing in Kenya. They include:

- Home owners and tenants
- Real Estate
- Financial Institutions
- National and County Governments
- Government Ministries, Departments and Agencies
- Housing Enablers- Roads Authorities, Kenya Power and Lighting Company, Water and Sewerage Providers, Internet Providers
- Developers and Investors
- Builders and Contractors
- UN Bodies, Non Profit and Advocacy groups
- Built Environment Professional Bodies



Housing developers play a crucial role in shaping communities by building various types of housing. In a nutshell, developers must balance financial objectives with regulatory requirements and community needs to successfully complete projects.



CHAPTER 02



Methodology

2.1 Survey Design

The survey employed a cross-sectional study design to collect data for estimating housing indicators at national, rural, urban and county levels. To achieve this, a hybrid data collection system was incorporated, targeting both households and institutions. The household component of the survey was designed independently from that of the institutions. A sample survey was conducted for the households, while a census was carried out for all identified institutions key in the housing sector.

2.2 Scope and Target Population

The survey covered all 47 counties to ensure that the coverage was comprehensive and representative of the entire country. The household component targeted residential housing units in both urban and rural areas while the institutional component targeted housing developers, real estate firms, Water Service Providers, County Governments-Physical Planning Departments, NEMA and Land Administration Department. The professional component targeted members from Engineers Board of Kenya (EBK), Kenya Institute of Planners (KIPs) and Board of Registration of Architects and Quantity Surveyors (BORAQS).

2.3 Sample size determination

The sample size for the household component of the survey was computed independently for each county using the following formula.

$$n = Deft^2 \times \frac{(1/P - 1)}{\alpha^2}$$

Where;

Deft² is the square of the design effect (1.5² = 2.25)

P is the estimated proportion of tenants /owner occupiers (varies for each county).

α^2 is the square of the relative standard error (Measure of precision - varies for each county).

By incorporating the county-specific response rates obtained from previous surveys that used the same household sampling frame, the application of the formula resulted in a sample size of 25,900 households and 1,295 clusters which were randomly selected for the survey. The distribution of the household sample by county is presented in Table 2.1, while Figure 2.1 shows that counties in central and western Kenya seem clustered with many clusters due to their small spatial size as compared to those in the northeastern and eastern regions.



47

The survey covered all 47 counties to ensure that the coverage was comprehensive and representative of the entire country.



25,900

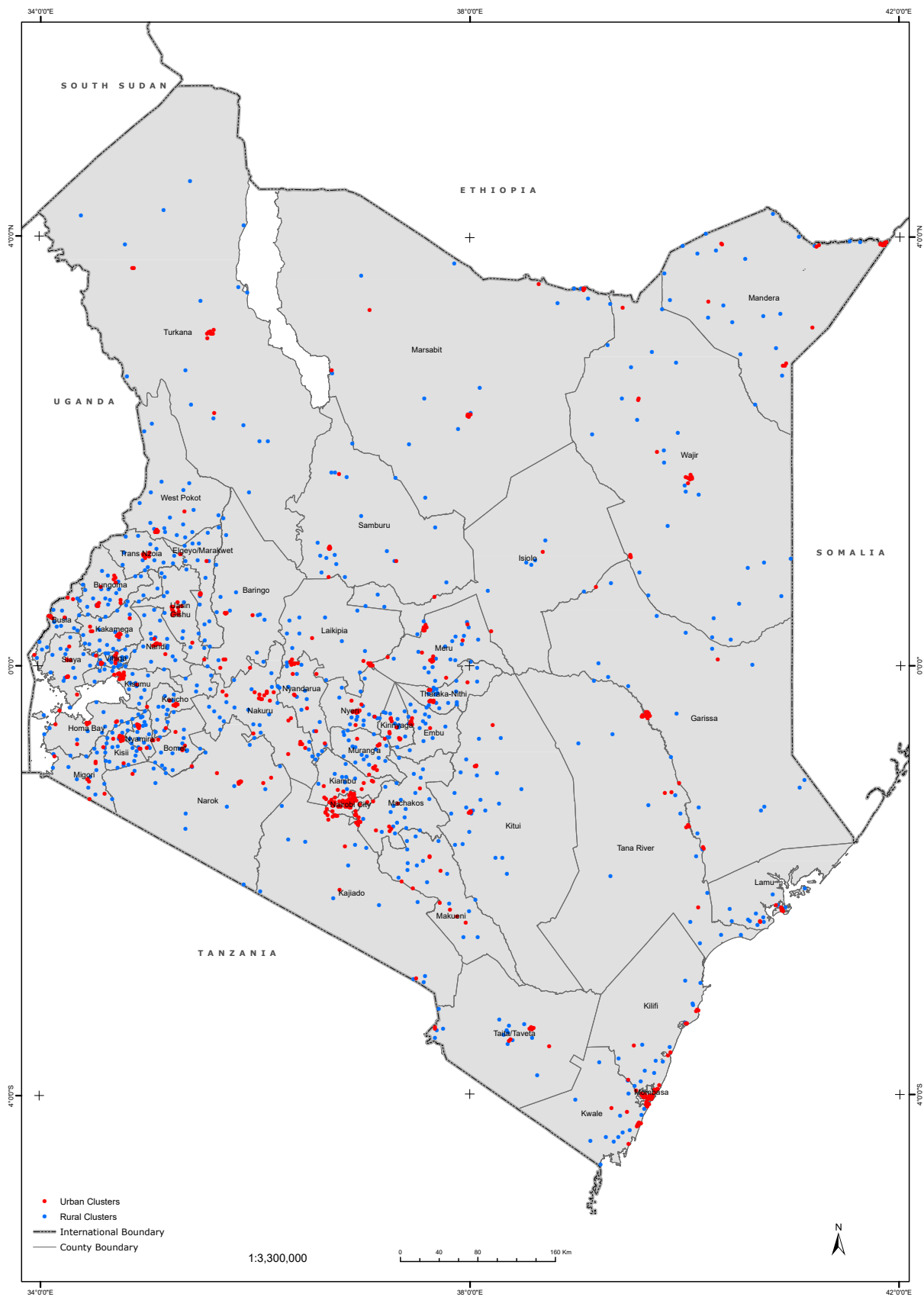
By incorporating the county-specific response rates obtained from previous surveys that used the same household sampling frame, the application of the formula resulted in a sample size of 25,900 households and 1,295 clusters which were randomly selected for the survey.

Table 2.1: Distribution of Clusters and Households by County

Number

County	Clusters			Households		
	Rural	Urban	Total	Rural	Urban	Total
Mombasa	0	28	28	0	560	560
Kwale	14	11	25	280	220	500
Kilifi	14	12	26	280	240	520
Tana River	13	11	24	260	220	480
Lamu	12	10	22	240	200	440
Taita-Taveta	14	11	25	280	220	500
Garissa	17	13	30	340	260	600
Wajir	25	18	43	500	360	860
Mandera	21	17	38	420	340	760
Marsabit	15	12	27	300	240	540
Isiolo	11	11	22	220	220	440
Meru	18	11	29	360	220	580
Tharaka-Nithi	15	9	24	300	180	480
Embu	14	9	23	280	180	460
Kitui	22	12	34	440	240	680
Machakos	19	16	35	380	320	700
Makueni	15	9	24	300	180	480
Nyandarua	15	9	24	300	180	480
Nyeri	15	11	26	300	220	520
Kirinyaga	14	10	24	280	200	480
Murang'a	15	9	24	300	180	480
Kiambu	10	12	22	200	240	440
Turkana	16	11	27	320	220	540
West Pokot	18	10	28	360	200	560
Samburu	16	12	28	320	240	560
Trans Nzoia	13	9	22	260	180	440
Uasin Gishu	13	14	27	260	280	540
Elgeyo-Marakwet	15	8	23	300	160	460
Nandi	15	9	24	300	180	480
Baringo	14	9	23	280	180	460
Laikipia	13	11	24	260	220	480
Nakuru	20	21	41	400	420	820
Narok	15	10	25	300	200	500
Kajiado	13	15	28	260	300	560
Kericho	15	10	25	300	200	500
Bomet	16	8	24	320	160	480
Kakamega	18	11	29	360	220	580
Vihiga	16	10	26	320	200	520
Bungoma	18	11	29	360	220	580
Busia	15	10	25	300	200	500
Siaya	15	9	24	300	180	480
Kisumu	15	14	29	300	280	580
Homabay	15	9	24	300	180	480
Migori	13	9	22	260	180	440
Kisii	19	12	31	380	240	620
Nyamira	16	9	25	320	180	500
Nairobi City	0	63	63	0	1,260	1,260
Total	700	595	1,295	14,000	11,900	25,900

Figure 2.1: The Distribution of KHS Clusters by County and Residence



2.4 Sampling frame

The sample for the household component of the survey was drawn from the Kenya Household Master Sample Frame (K-HMSF), which was developed based on the 2019 Kenya Population and Housing Census. The clusters in K-HMSF were selected using Probability Proportional to Size (PPS) systematic sampling method from approximately 128,000 Enumeration Areas (EAs).

The 47 counties were stratified into 92 sampling strata, comprising urban and rural strata in 45 counties, and purely urban strata for Nairobi City and Mombasa counties. Additionally, the K-HMSF is divided into four components, denoted as C1, C2, C3, and C4. Each component consists of 2,500 clusters, which can serve as independent sampling frames. Depending on the required sample size, any two or more components can be combined to provide a sufficiently large sampling frame.

The institutional component of the survey was conducted using multiple lists obtained from various sources, including the State Department for Housing and Urban Development and Water Service Regulatory Board. The Built Environment Professionals (BEPs) list was sourced from Engineers Board of Kenya (EBK), Kenya Institute of Planners (KIPs) and Board of Registration of Architects and Quantity Surveyors (BORAQS).

2.5 Sample Selection

A two-stage cluster sampling methodology was adopted for the household component of the survey. In the first stage, clusters were randomly selected from the sampling frame. In the second stage, households within these clusters were selected for interviews. For the institutional component of the survey, a census was undertaken for all Developers, Water Service Providers, Real Estate firms and Built Environment Professionals.

2.6 Sampling of Clusters

The clusters in the K-HMSF served as the Primary Sampling Units (PSUs) for the survey, and were independently selected from each of the 92 sampling strata in the frame. The clusters were selected using Equal Probability Selection Method (EPSM) given that enumeration areas that formed the clusters had been selected with Probability Proportional to Size (PPS) and standardization of the clusters undertaken through segmentation of clusters that exceeded the measure of size.

2.7 Sampling of Households

A fixed number of 20 households were systematically sampled with a random start from the list of households enumerated in each of the selected clusters. Sampling of the households was done centrally at the head office, and interviews were conducted exclusively in the pre-selected households. There was no replacement of clusters or households during the fieldwork.

2.8 Computation of Survey Weights

Given that the household sample was disproportionately allocated to the various sampling strata, the data was not self-weighting, which necessitated the application of survey weights to ensure representativeness of the target population. The survey weights also ensured the data conformed to known population distributions and adjusted for non-response of some of the sampled households effectively minimizing survey non-response bias.

The survey weights (W) were computed by taking the inverse of the product of the selection probabilities at each stage of sampling. The probability (P) of selecting a household for the survey is the product of four selection probabilities, P_i :

$$P = \prod_{i=1}^4 P_i$$

Where;

P_1 = the probability of selecting the EA into K-HMSF among all the EAs used during the 2019 Kenya Population and Housing Census;

P_2 = the probability of selecting the cluster from the K-HMSF;

P_3 = the probability of selecting a segment of the cluster among all segments created during segmentation of clusters that exceed the measure of size;

P_4 = the probability of selecting the household among all the households in the cluster.

2.9 Data Quality

The quality of data for the Housing Survey was ensured through a multi-step approach. This began with defining the survey's content and scope, designing survey instruments, conducting a pre-test and pilot survey, training survey personnel, and incorporating technology for data collection and transmission. Additionally, data validation, analysis, creation of final report tables, and stakeholder engagement were all integral parts of the process. A thorough process was undertaken to review and refine the survey instruments aimed at eliminating redundancies and ensuring the questions were accurate and relevant to the current housing development programs and addressed user needs. The data collection tools were integrated

into CAPI with in-built checks and controls to ensure consistency and flag out any outliers in the data.

A multilevel supervision of the data collection exercise also ensured that the probability of any errors going unnoticed was minimized significantly. To further support the data quality assurance, a dashboard based at the headquarters was also used to monitor the data as fieldwork continued. Upon completion of the data collection, edit specifications were developed by subject matter specialists to provide a basis for cleaning and editing of the data. The specifications were subsequently coded into programs using statistical applications and subjected on the raw data to derive a cleaned dataset that developed the tables in the report.



2.10 Key Concepts and Definitions

The following terms and concepts were used during the survey.

Affordable Housing Relief: Effected to reduce the amount of tax payable by each employee, calculated as 15 per cent of the employee's contribution with a maximum limit of Sh108,000 per year.

Alternative Building Technology: Encompass a variety of construction methods and materials that are designed to be more sustainable, cost-effective and efficient compared to traditional building techniques. These technologies aim to reduce environmental impact, improve energy efficiency and often utilize locally available resources.

Biogas Energy System: This uses animal waste to generate gas used for domestic purposes.

Building Insurance: Insurance taken by the owner of the property to insure the property against risks such as fire, landslide etc.

Built Environment Professional: An expert involved in the planning, design, construction, and management of the physical environment in which people live and work. This broad field encompasses various roles, each contributing to the development and maintenance of infrastructure, buildings and public spaces. They include engineers, architects, quantity surveyors, and planners among others.

Bungalow: A detached stand-alone house, typically designed to be occupied by one family.

Cluster: The smallest geographical statistical unit, which is either an Enumeration Area (EA) or part of an EA with details about households and structures.

Commercial Bank: A financial institution licensed by the Central Bank of Kenya to take deposits and give loans for a diverse range of products.

Dam: A reservoir formed by building a barrier across a river to hold back water and control its flow.

Deposits: Customer savings held by the financial institution. These are liabilities to the institution.

Dwelling unit: A place of abode or residence occupied by one or more and with a private entrance. There can be more than one dwelling unit within a structure.

Employee (working for someone else for pay in cash or in-kind): Comprises persons who during the last week preceding the survey worked for wages, salaries, commissions, tips, contracts and paid in kind (especially in the rural areas where people who have rendered services may be paid using food or clothing).

Employer (employing one or more employees): Comprise persons who during the last week preceding the survey worked in their own business which also employs other persons. The person must have also been spending much of his/her time at the place. The people employed can either be paid in cash or in kind.

Employment to population ratio: This is the proportion of a country's working-age population (15 to 64 years) that is employed.

Enumeration Area (EA): The smallest geographical unit created during cartographic mapping which precedes a Population and Housing Census.

Exemption on stamp duty for first-time home buyers: Stamp duty is charged on the market value of the property at the rate of four per cent in towns and two per cent in rural areas. Currently, the exemption from stamp duty applies to first-time homebuyers of approved affordable housing units. This strategy is aimed at reducing the cost of home ownership.

Flat: A housing type contained in a vertical development containing several similar housing units. It shares a common access through common stairways etc.

Georeferencing: It refers to the process of assigning real-world geographic coordinates (such as latitude and longitude) to a digital image, map, or dataset so that it can be accurately placed and analyzed in relation to physical locations on the Earth's surface.

Habitable Room: This is a room in the dwelling unit that is used mainly for living and excludes stores, granaries, offices, toilets, garages, bathrooms etc.

Home Acquisition: It involves several key steps and considerations, including the desired method of acquiring the home and the financial preparation, which encompasses the mode and source of financing.

Household head: The most responsible member of the household who makes key decisions affecting the household on a day-to-day basis. 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.

Household: Is a person or group of persons who live in the same compound, under one or several roofs, answerable to the same household head and share common cooking arrangements.

Housing developer: A person or company involved in the process of planning, financing, constructing and selling residential properties. Housing developers play a crucial role in creating new housing units, whether they are single-family homes, townhouses, condominiums, or apartment complexes.

Housing: The processes and outcomes of the production (construction) and consumption (use) of residential (living) shelters. It includes the physical product, the process that yields the product, and the socio-cultural and environmental circumstances in which the product is developed, delivered and used. It also involves the process of analysing.

Labour Force Participation Rate (LFPR): The LFPR is a measure of the proportion of a country's working-age population usually 15-64 years who are in the labour force. It indicates the level of labour market activity and is calculated as a ratio of the labour force to the working-age population.

Lake: A naturally occurring large area of water surrounded by land, whose water collects through rain, rivers etc. It is different from a dam in that it is not man-made.

Land consumption rate (LCR): Refers to the rate of change in the land area taken up by urban land uses such as residential, commercial and industrial areas during a specified period as a per centage of the land area at the beginning of that period, usually a year. It measures the extent of land used for urban development and infrastructure relative to the total initial urban area.

Loan: Constitute debt taken by an institution or individual, where one party is the borrower and the other the lender. Interest is typically expected to be paid monthly, though different loan interest repayments can be negotiated between the lender and the borrower. For this survey, 'Short term loans' are loans which are less than 2 years, and 'Long term loans' are loans which are more than 2 years.

Maisonette: A maisonnette is a residential property typically consisting of two or more floors and featuring a private entrance, often directly from the outside. Maisonettes can be terraced, semi-detached, or detached.

Manyatta/Traditional house: Are houses which are constructed in traditional designs and using traditionally locally available materials by particular ethnic groups.

Mortgage financing: Is financing for homebuyers who are buying units which are already constructed. It is generally provided for a longer duration and is for a set repayment rate every month for the duration of the loan.

Mortgage insurance: An insurance policy which compensates lenders or investors for losses due to the default of a mortgage loan.

Own-account worker (not employing any employee): This category comprises self-employed persons who worked on own business or worked on own/ family business for family gain. It includes artisans, mechanics, traders in farm produce and family workers offering services in own or family business.

Piped water: Means water drawn through pipes installed in a dwelling unit and originating in a central (public) source.

Plan approval: The act of giving a go-ahead for a project to be implemented as designed.

Pond: A small area of still water. Usually, this water collects after rain or through an underground drainage.

Population outside the Labour Force: The population not in the labour force, previously referred to as inactive population, covers those members of the population who were not available for work. This category includes full-time students, infirm/incapacitated, retired or those who did not need work due to unspecified reasons.

Prefabricated panel: Is a section of a house that is factory designed and made ready for assembly on site.

Rainwater harvesting: Is harnessing and storage of rainwater for domestic and non-domestic purposes.

Real Estate Firm: An entity or business that engages in real estate activities with own or leased property such as buying and selling of residential and non-residential buildings; renting and operating of self-owned or leased real estate; operating of furnished/serviced apartments (owned or leased), activities of real estate developers of own property for leasing or sale (construction work done by a separate entity at a fee) and real estate activities on a fee or contract basis such as activities of real estate agents and brokers; intermediation in buying, selling and renting of real estate on a fee or contract basis as well as management of real estate on a fee or contract basis.

Rural: Is a large and isolated part of an open or agricultural country, including trading, market and service centres with relatively low population concentrations of less than 2,000 people.

Savings and Credit Cooperative Society (SACCO): Is a regulated group saving and lending institution. It comprises an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled association. It may include a deposit-taking Front Office Service Activity (FOSA) or non-deposit taking.

Seeking work: A person who in the week preceding the survey was actively looking for work belongs to this category. This category did not include the under-employed (i.e. those who had paid work but wished to leave for better opportunities). Persons who had no work at all and were looking for work were categorized under this category. If a person was working on the family holding but was seeking work, he/she was considered as "contributing family worker" and not as "seeking work". This category included only persons who were available full time for work and hence were actively looking for it.

Sewer: Means the sewage liquid waste from the structure is drained by pipes into a main trunk sewer line. This type of sewage disposal is common in main urban centres like Nairobi, Mombasa, etc.

Shanty: This typically denotes an informal house. The location of the house (in an urban, rural or peri-urban area, or in a high income or middle income or low-income area) is not important. What is important is whether the structure itself appears to be of a temporary nature and if the building materials appear to be temporary building materials.

Smart technology: Refers to devices, systems, or technologies that use advanced sensors, data processing, machine learning, artificial intelligence (AI), and internet connectivity to gather and analyze information, make decisions, and adapt to user preferences or environmental conditions.

Solar Energy System: Solar heated water, solar heated power.

Spring: Is a place where water wells up from earth or underground.

Stamp Duty: Is a tax that is levied on documents such as land transactions. In Kenya, this is tax paid to Kenya Revenue Authority for any property transfer and currently stands at 4% in urban areas and 2% in rural areas of the value of the property.

Stream/river: Is a naturally flowing source of water.

Structure: A building used for the purposes of residential, business or any other activity.

Student: Is a person who spent most of his/her time in a regular educational institution (primary, secondary, college, university etc.) and hence not available for work. If, for instance, a student was on holiday during the past week preceding the survey and may have been engaged in gainful employment, he/she was coded as employed.

Swahili house: This connotes communal living in a formal structure. The structure usually comprises separate rooms and open or closed common areas, and a separate area for toilet(s), shower(s) and kitchen(s) which are shared. The traditional Swahili house was built in a rectangular shape, with rooms in along 3 walls, and the shared areas along one wall. There would be closed and open common spaces inside the structure. However, long vertical rooms with shared toilet, shower and kitchen facilities at one end are also included in this definition.

Tax deductibility of interest paid on Housing Loans: Effective 1 January 2017, interest payments on loans borrowed for improvement or construction of residential premises are deductible, subject to a limit of KES 300,000 per annum (or KES 25,000 per month).

Town houses: Detached houses of a similar style built in one compound, often found in urban high-end neighborhoods. It can be single-storey, double-storey or even triple-storey.

Urban: Is a built-up and compact human settlement with a population of at least 2,000 people defined without regard to the local authority boundaries. It is normally a trading, market and service centre that provides goods and services to both the residents and surrounding population and therefore sometimes referred to as an urban centre.

Valuation fee: Fee paid for the valuation of the property. The valuation is usually done by a valuer appointed by the institution.

Response Rates: Out of the 25,900 households sampled for the survey, 23,166 were found to be eligible. A household is considered to be eligible if it meets one of the following criteria: it is identified and successfully interviewed; it is identified but refuses to respond; it is identified but no competent respondent is available at home during visits; or it is identified, the interview is started, and then postponed.

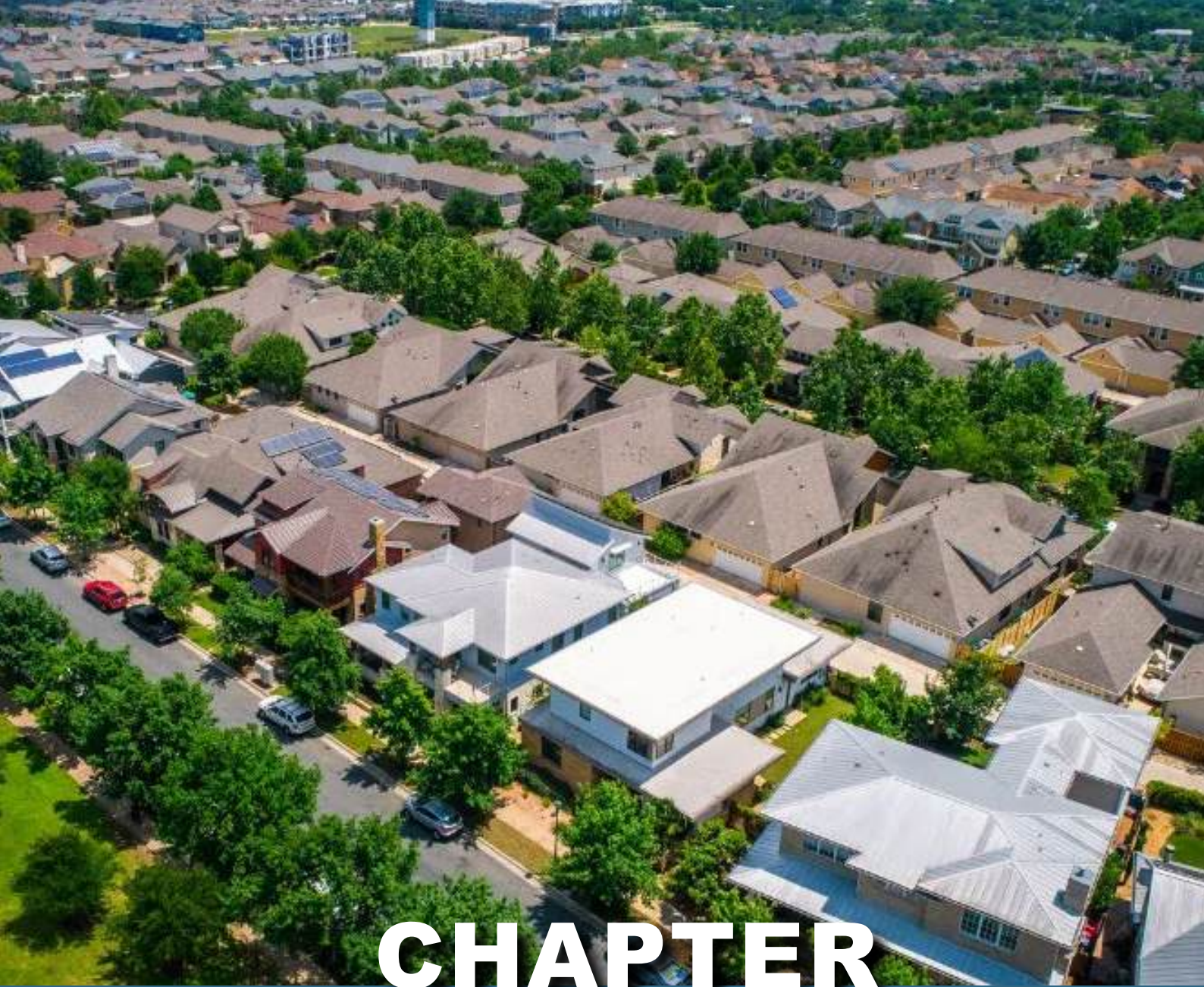
Among the eligible households, 21,347 completed the questionnaire, resulting in a national household response rate of 92.1 per cent. The response rate was higher in rural areas at 94.0 per cent compared to 89.9 per cent in urban areas. Table 2.2 and table 2.3 shows the household response rates by residence and county respectively.

Table 2.2: Household Response Rate by Residence

Residence	Households Sampled	Eligible Households	Households that Responded	Response Rate
Kenya	25,900	23,166	21,347	92.1
Rural	14,000	12,660	11,900	94.0
Urban	11,900	10,506	9,447	89.9

Table 2.3: Household Response Rate by County

County	Households Sampled	Eligible Households	Households that Responded	Response Rate
Kenya	25,900	23,166	21,347	92.1
Mombasa	560	491	425	86.6
Kwale	500	440	410	93.2
Kilifi	520	474	434	91.6
Tana River	480	459	450	98.0
Lamu	440	381	361	94.8
Taita-Taveta	500	439	405	92.3
Garissa	600	471	468	99.4
Wajir	860	721	637	88.3
Mandera	760	539	503	93.3
Marsabit	540	488	462	94.7
Isiolo	440	365	335	91.8
Meru	580	516	412	79.8
Tharaka-Nithi	480	465	455	97.8
Embu	460	424	406	95.8
Kitui	680	628	573	91.2
Machakos	700	646	618	95.7
Makueni	480	448	409	91.3
Nyandarua	480	423	382	90.3
Nyeri	520	483	434	89.9
Kirinyaga	480	464	450	97.0
Murang'a	480	429	355	82.8
Kiambu	440	383	319	83.3
Turkana	540	422	368	87.2
West Pokot	560	521	517	99.2
Samburu	560	511	478	93.5
Trans Nzoia	440	395	373	94.4
Uasin Gishu	540	484	435	89.9
Elgeyo-Marakwet	460	438	391	89.3
Nandi	480	458	420	91.7
Baringo	460	414	382	92.3
Laikipia	480	465	445	95.7
Nakuru	820	738	686	93.0
Narok	500	484	479	99.0
Kajiado	560	471	411	87.3
Kericho	500	442	410	92.8
Bomet	480	452	422	93.4
Kakamega	580	515	480	93.2
Vihiga	520	467	400	85.7
Bungoma	580	525	462	88.0
Busia	500	457	412	90.2
Siaya	480	424	394	92.9
Kisumu	580	483	446	92.3
Homa Bay	480	443	422	95.3
Migori	440	410	403	98.3
Kisii	620	570	510	89.5
Nyamira	500	448	439	98.0
Nairobi City	1,260	1,152	1,059	91.9



CHAPTER 03



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Household Demographic and Economic Characteristics

Key Findings

- ✓ Total dependency ratio was 65.5 per cent with a child dependency ratio of 59.0 per cent and an old age dependency ratio of 6.5 per cent.
- ✓ Kiambu, Kajiado, and Nakuru had higher proportions of households in urban areas at 73.8, 66.0, and 54.9 per cent, respectively, relative to the rural areas, besides Nairobi and Mombasa, which are entirely urban.
- ✓ The most common household size membership had 1-2 persons (34.1%) and 3-4 persons (33.5%). The household size of 1-2 persons was prominent in urban areas (43.7%) compared to rural areas (28.0%).
- ✓ Four out of every ten home owners (41.9%) had primary level education while 20.5 per cent had no education. More households were home owners (61.3%) than those that paid rent/ leased (34.4%).
- ✓ Nationally, the employment-to-population ratio was 61.6 per cent, with men more likely to be employed at 68.1 per cent compared to women at 55.1 per cent.
- ✓ Three out of every ten (33.1%) households with individuals who have mobility challenges indicated that their housing units were safe. However, very few housing units with persons with disability had the special aids like grab bars (2.8%) and visual or audio smoke alarms (0.0%) which are key to those with mobility and visual challenges.
- ✓ Low income was given as the main reason for inadequacy of housing by a majority of households (77.9%).
- ✓ Nationally, 53.7 per cent of the population owned a mobile phone while 64.9 per cent used a mobile phone regardless of the ownership status.
- ✓ Three in every eight of households (36.3%) had an internet connection (either mobile or fixed), and 8.8 per cent had computers.

3.1 Introduction

Demographic characteristics of a household provide a background for determining the socio-economic status of household members and provides the information necessary for development planning, and resource allocation. Understanding demographic shifts is also crucial for anticipating future housing market trends. This chapter presents details of various demographic and economic characteristics of the population and households with focus on the population size, age, sex, distribution, disability status, and access to ICT equipment. Additionally, it covers the economic activity status, and education levels of household members. These characteristics are then linked to the tenure status of the households.

Home owners in this context are defined as those households that reside in homes they own, regardless of how the property was acquired. Tenants are those who pay rent, either directly or indirectly, to their landlords.

3.2 Household Demographics

The 2023/24 KHS survey results indicate a population level of 51.5 million nationally. Figure 3.1 presents a population pyramid showing the age and sex structure of the population. The pyramid shows that the Kenyan population is predominantly youthful.

Table 3.1 shows a nearly balanced distribution by sex across all the ages. The population is heavily skewed towards the younger age groups, with the highest proportions observed in the 0-4 and 5-9 age brackets. This suggests a relatively high birth rate and a young population overall, which is typical for developing countries. As age increases, there is a notable decline in population numbers. There is a higher number of females than males in the older age groups reflecting a common trend seen globally where female life expectancy tends to be higher than male life expectancy.

Figure 3.1: Kenya Population Pyramid, 2024

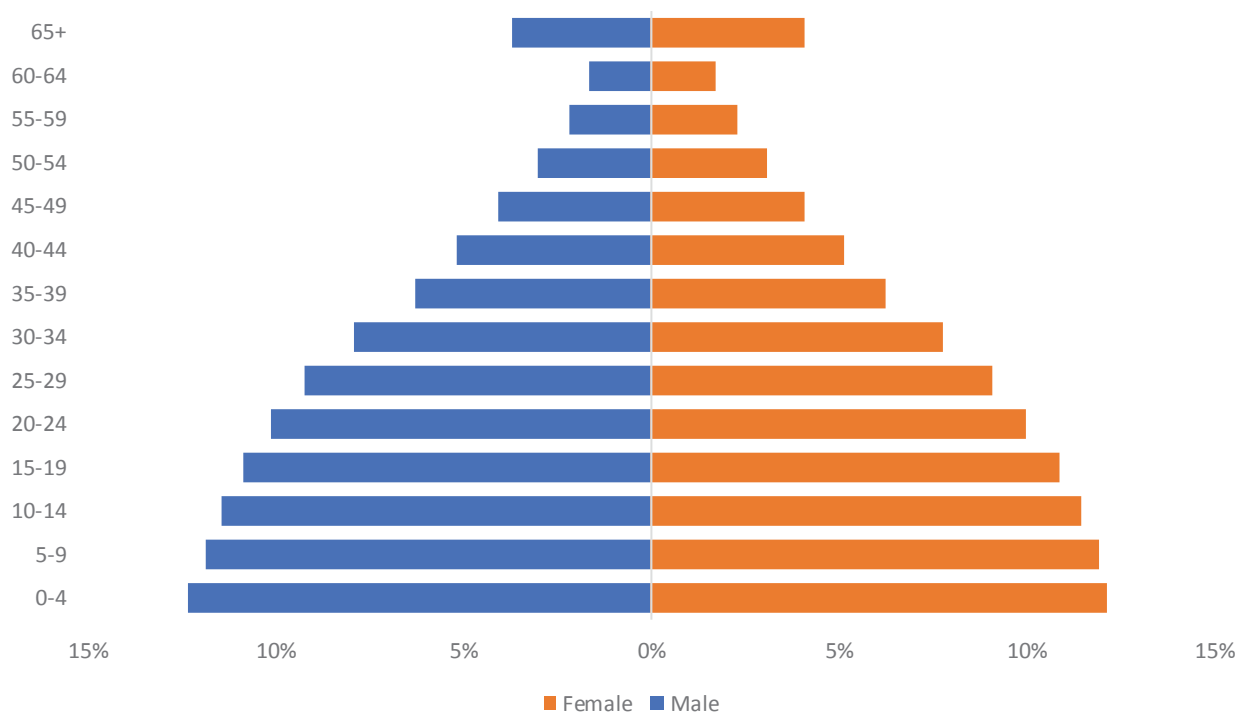


Table 3.1: Population Distribution by Age Group and Sex

Age Group	Male	Female	Total
	Per centage	Per centage	
0-4	49.9	50.1	6,311,965
5-9	49.4	50.6	6,146,835
10-14	49.5	50.5	5,915,717
15-19	49.6	50.4	5,604,147
20-24	49.9	50.1	5,177,420
25-29	50.0	50.0	4,714,586
30-34	50.0	50.0	4,047,955
35-39	49.8	50.2	3,228,026
40-44	49.6	50.4	2,660,101
45-49	49.5	50.5	2,115,586
50-54	49.1	50.9	1,567,750
55-59	48.6	51.4	1,155,716
60-64	48.3	51.7	869,026
65+	46.8	53.2	2,010,755
Total	49.5	50.5	51,525,585

3.3. Population Distribution by Residence and Sex

The survey results indicate a nearly even distribution of the population by sex and residency as indicated in Table 3.2. The proportion of females is slightly higher than that of males nationally and in rural areas (50.5% vs 49.5%) as well as in urban areas (50.4% vs 49.6%).

Table 3.2: Population Distribution by Residence, County and Sex, 2024

	Male	Female	Total
	%	%	No.
Kenya	49.5	50.5	51,525,585
Rural	49.5	50.5	35,150,632
Urban	49.6	50.4	16,374,954
County			
Mombasa	49.8	50.2	1,311,860
Kwale	49.6	50.4	944,464
Kilifi	49.7	50.3	1,577,335
Tana River	49.4	50.6	352,549
Lamu	49.9	50.1	167,332
Taita-Taveta	49.3	50.7	363,990
Garissa	49.5	50.5	927,031
Wajir	49.6	50.4	870,636
Mandera	49.0	51.0	959,236
Marsabit	49.7	50.3	515,292
Isiolo	48.9	51.1	315,937
Meru	49.7	50.3	1,625,982
Tharaka-Nithi	49.1	50.9	416,383
Embu	49.4	50.6	648,425
Kitui	49.0	51.0	1,229,790
Machakos	49.5	50.5	1,487,758
Makueni	49.2	50.8	1,042,300
Nyandarua	49.2	50.8	695,531
Nyeri	49.0	51.0	835,408
Kirinyaga	48.8	51.2	653,112
Murang'a	49.1	50.9	1,112,288
Kiambu	49.6	50.4	2,652,880
Turkana	49.4	50.6	1,022,773
West Pokot	49.3	50.7	676,326
Samburu	49.5	50.5	348,298
Trans Nzoia	49.8	50.2	1,069,039
Uasin Gishu	49.6	50.4	1,257,330
Elgeyo-Marakwet	49.6	50.4	495,239
Nandi	49.0	51.0	951,460
Baringo	49.3	50.7	733,333
Laikipia	48.3	51.7	561,223
Nakuru	49.6	50.4	2,347,849
Narok	49.4	50.6	1,284,204
Kajiado	49.7	50.3	1,268,261
Kericho	49.3	50.7	954,896
Bomet	49.1	50.9	939,761
Kakamega	50.1	49.9	2,002,435
Vihiga	48.6	51.4	625,765
Bungoma	50.4	49.6	1,786,973
Busia	49.4	50.6	968,763
Siaya	50.5	49.5	1,059,458
Kisumu	49.7	50.3	1,248,474
Homabay	49.1	50.9	1,231,659
Migori	49.2	50.8	1,234,082
Kisii	49.6	50.4	1,344,907
Nyamira	48.4	51.6	657,502
Nairobi City	50.0	50.0	4,750,056

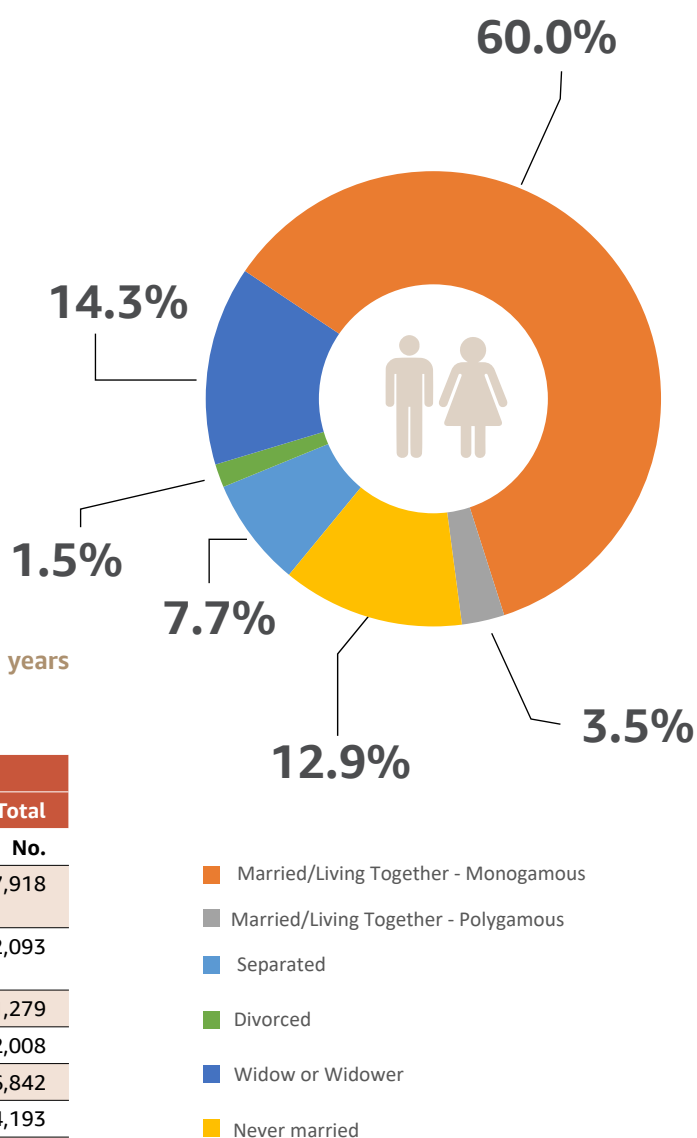
3.4. Marital Status of Household Heads

The highest proportion of the household heads aged 15 years and above were those who are married/living together-monogamous (60.0%), widow/widowers, (14.3%), and never married (12.9%) as shown in Table 3.3.

Of the Household heads who were married/living together-polygamous and married/living together-monogamous 84.8 Per cent and 62.9 per cent were rural residents respectively. Of those who had never married, 69.2 per cent were urban residents, while 80.9 per cent of widows/widowers were rural residents.

Table 3.3: Marital Status of Household Heads aged 15 years and above by Sex and Residency

Marital status	Sex		Total
	Male	Female	
	%	%	No.
Married/Living Together - Monogamous	88.3	11.7	8,327,918
Married/Living Together - Polygamous	69.4	30.6	492,093
Separated	44.4	55.6	1,071,279
Divorced	33.8	66.2	212,008
Widow or Widower	14.4	85.6	1,986,842
Never married	53.0	47.0	1,794,193
Total	68.3	31.7	13,884,333
	Residency		Total
	Rural	Urban	
	%	%	No.
Married/Living Together - Monogamous	62.9	37.1	8,327,918
Married/Living Together - Polygamous	84.8	15.2	492,093
Separated	54.1	45.9	1,071,279
Divorced	57.0	43.0	212,008
Widow or Widower	80.9	19.1	1,986,842
Never married	30.8	69.2	1,794,193
Total	61.4	38.6	13,884,333



Understanding demographic shifts is crucial for anticipating future housing market trends.

3.5. Dependency Ratios

Dependency ratio, also referred to as total dependency ratio, is the measure of the number of dependents aged 0-14 years and the older population aged 65 years and above, relative to the working age population 15-64 years. This ratio typically indicates the number of dependents (both young and old) per 100 working-age individuals. Child dependency is the number of children

(0-14 years) per 100 working population (15-64 years).

The total dependency ratio was 65.5 per cent with a child dependency ratio of 59.0 per cent and an old age dependency ratio of 6.5 per cent. There was a clear distinction between urban (lower dependency ratios) and rural areas (higher dependency ratios) as shown in Table 3.4.

Table 3.4: Dependency Ratios by Type and Residence

Residence	Total Dependency	Child Dependency	Old Age Dependency
Kenya	65.5	59.0	6.5
Rural	72.8	64.6	8.3
Urban	51.6	48.5	3.0



3.6 Household Distribution

The number of households gives an indication of the number of housing units required to serve the population. The results in Table 3.5 shows that there were more households in rural areas (61.4 %) than in urban areas (38.6%). Besides Nairobi and Mombasa, which are entirely urban, Kiambu, Kajiado, and Nakuru had higher proportions of households in urban areas at 73.8, 66.0, and 54.9 per cent, respectively, relative to the rural areas. In contrast Bomet, Elgeyo Marakwet, and Kitui had relatively high proportions of households in rural areas at 95.0, 93.8, and 92.7 per cent, respectively.

Table 3.6 shows the proportion of home owners and tenants by residence presented by different categories of housing tenure. Nationally, 61.3 per cent of the households were home owners, while 33.4 per cent paid rent/lease. Analysis by residence showed that rural areas had higher rates of home ownership (85.5%) compared to urban areas (22.8%). Conversely, urban areas had a higher proportion of households paying rent/leasing (72.3%) than rural areas (8.9%).

61.4%

The No. of
households in
rural areas.



Table 3.5: Percentage Distribution of Households by County and Residence

	Rural	Urban	Total
	%	%	Number
Kenya	61.4	38.6	13,886,126
County			
Mombasa	0.0	100.0	405,415
Kwale	78.6	21.4	183,739
Kilifi	62.2	37.8	407,221
Tana River	70.5	29.5	74,962
Lamu	69.9	30.1	40,543
Taita-Taveta	68.8	31.2	108,463
Garissa	73.4	26.6	180,468
Wajir	76.4	23.6	152,058
Mandera	68.4	31.6	167,096
Marsabit	73.6	26.4	87,421
Isiolo	47.6	52.4	63,947
Meru	88.1	11.9	463,535
Tharaka-Nithi	89.2	10.8	120,886
Embu	84.6	15.4	199,046
Kitui	92.7	7.3	275,514
Machakos	64.3	35.7	430,469
Makueni	89.0	11.0	257,105
Nyandarua	87.0	13.0	198,250
Nyeri	77.3	22.7	270,743
Kirinyaga	75.8	24.2	217,216
Murang'a	86.9	13.1	385,599
Kiambu	26.2	73.8	997,101
Turkana	81.6	18.4	219,588
West Pokot	92.6	7.4	183,115
Samburu	80.5	19.5	95,708
Trans Nzoia	77.8	22.2	266,538
Uasin Gishu	46.5	53.5	351,899
Elgeyo-Marakwet	93.8	6.2	110,356
Nandi	90.7	9.3	226,515
Baringo	84.1	15.9	157,303
Laikipia	70.7	29.3	154,631
Nakuru	45.1	54.9	673,026
Narok	86.6	13.4	263,863
Kajiado	34.0	66.0	371,234
Kericho	85.0	15.0	233,615
Bomet	95.0	5.0	219,222
Kakamega	87.4	12.6	484,205
Vihiga	88.9	11.1	160,520
Bungoma	85.9	14.1	470,168
Busia	84.5	15.5	216,855
Siaya	90.0	10.0	247,647
Kisumu	56.9	43.1	338,619
Homabay	88.0	12.0	270,043
Migori	82.0	18.0	267,547
Kisii	85.1	14.9	371,985
Nyamira	90.8	9.2	183,594
Nairobi City	0.0	100.0	1,661,533

The proportion of home ownership in rural areas was highest in Isiolo (98.0%), Marsabit (97.5%), and Baringo (96.9%), while in urban areas home ownership was highest in Wajir at 87.0 per cent. The proportion of

Squatters was highest in Mandera (14.0%), Lamu (9.0%), and Garissa (6.2%). Proportion of tenants who did not pay rent with the consent of owners was highest in Lamu (19.3%), Mandera (18.9%), and Nyandarua (12.0%).

**61.3%**

The per centage of the households that were home owners.

**33.4%**

The per centage of household that paid rent/ leased.

**85.5%**

The per centage of rural areas had higher rates of home ownership compared to urban areas (22.8%).

**72.3%**

The per centage of urban areas had a higher proportion of households paying rent/leasing than rural areas (8.9%).

**5,366,201**

The number of households in urban areas



Table 3.6: Distribution of Households by Tenureship Status, County and Residence

	Owns			Pays Rent/Lease			No Rent with Consent of Owner			No Rent, Squatting			Total		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Number	Rural	Urban
Kenya	61.3	85.5	22.8	33.4	8.9	72.3	4.6	4.6	4.4	0.8	1.0	0.4	13,886,126	8,519,926	5,366,201
County															
Mombasa	23.5	0.0	23.5	71.8	0.0	71.8	4.5	0.0	4.5	0.2	0.0	0.2	405,415	0.0	405,415
Kwale	72.3	79.6	45.5	19.9	11.5	51.0	7.8	8.9	3.5	0.0	0.0	0.0	183,739	144,491	39,248
Kilifi	68.7	89.8	33.9	24.3	2.8	59.6	6.4	6.4	6.5	0.6	1.0	0.0	407,221	253,356	153,865
Tana River	70.2	82.4	41.3	22.5	9.9	52.6	6.9	7.3	5.8	0.4	0.4	0.3	74,962	52,849	22,113
Lamu	44.2	51.9	26.3	27.6	13.2	60.8	19.3	22.1	12.9	9.0	12.8	0.0	40,543	28,324	12,219
Taita-Taveta	60.2	70.6	37.3	28.0	17.7	50.9	11.8	11.7	11.8	0.0	0.0	0.0	108,463	74,647	33,816
Garissa	73.7	82.0	50.8	11.5	0.7	41.5	8.5	9.1	7.1	6.2	8.2	0.6	180,468	132,499	47,970
Wajir	89.3	90.1	87.0	1.7	0.3	6.0	8.9	9.6	6.7	0.1	0.0	0.3	152,058	116,110	35,948
Mandera	61.0	62.7	57.4	6.1	1.6	15.7	18.9	19.7	17.2	14.0	15.9	9.7	167,096	114,212	52,884
Marsabit	86.6	97.5	56.0	7.0	0.9	23.8	6.5	1.5	20.3	0.0	0.0	0.0	87,421	64,361	23,060
Isiolo	72.8	98.0	49.9	23.3	0.0	44.5	3.4	0.9	5.6	0.5	1.1	0.0	63,947	30,465	33,482
Meru	77.2	83.4	31.3	20.7	14.8	64.3	1.7	1.4	3.7	0.4	0.4	0.8	463,535	408,180	55,354
Tharaka-Nithi	80.9	86.1	38.0	18.6	13.5	60.1	0.6	0.4	1.9	0.0	0.0	0.0	120,886	107,816	13,070
Embu	78.9	90.2	16.7	19.7	8.3	81.7	0.8	0.7	1.6	0.6	0.7	0.0	199,046	168,359	30,687
Kitui	66.1	71.0	4.6	28.7	23.7	91.9	5.3	5.4	3.5	0.0	0.0	0.0	275,514	255,301	20,213
Machakos	69.0	93.5	24.9	26.9	2.8	70.4	3.9	3.5	4.8	0.2	0.3	0.0	430,469	276,728	153,741
Makueni	85.4	95.0	8.6	11.7	2.2	89.0	2.8	2.9	2.4	0.0	0.0	0.0	257,105	228,731	28,374
Nyandarua	62.8	69.0	21.3	25.2	18.0	73.7	12.0	13.0	5.0	0.0	0.0	0.0	198,250	172,422	25,827
Nyeri	56.2	68.5	14.3	32.7	19.0	79.4	11.1	12.5	6.3	0.0	0.0	0.0	270,743	209,337	61,407
Kirinyaga	71.5	85.7	27.1	22.7	7.7	69.6	5.8	6.6	3.3	0.0	0.0	0.0	217,216	164,590	52,626
Murang'a	77.8	80.6	58.7	18.0	14.8	39.7	4.2	4.6	1.6	0.0	0.0	0.0	385,599	335,245	50,354
Kiambu	44.8	68.1	36.5	46.6	18.8	56.5	7.5	8.9	7.0	1.1	4.2	0.0	997,101	261,215	735,886
Turkana	86.7	92.1	62.9	6.5	1.1	30.1	6.1	6.0	6.9	0.7	0.9	0.0	219,588	179,087	40,501
West Pokot	90.1	95.4	24.8	8.8	3.6	73.9	0.3	0.2	1.4	0.8	0.8	0.0	183,115	169,519	13,595
Samburu	74.5	86.1	27.0	23.2	12.0	69.4	2.0	1.6	3.6	0.3	0.4	0.0	95,708	77,010	18,698
Trans Nzoia	67.8	79.7	26.0	27.5	15.5	69.9	4.6	4.9	3.5	0.1	0.0	0.5	266,538	207,482	59,056
Uasin Gishu	49.8	87.6	17.0	47.2	7.5	81.7	2.9	4.8	1.2	0.1	0.0	0.2	351,899	163,563	188,336
Elgeyo-Marakwet	85.0	89.1	22.5	12.8	8.7	75.2	2.1	2.1	1.6	0.0	0.0	0.7	110,356	103,569	6,787
Nandi	77.6	82.4	30.7	13.5	8.1	65.5	9.0	9.5	3.8	0.0	0.0	0.0	226,515	205,427	21,088
Baringo	86.0	96.9	28.5	12.1	1.4	68.8	1.6	1.4	2.8	0.3	0.3	0.0	157,303	132,342	24,961

Table 3.6: Distribution of Households by Tenureship Status, County and Residence (Continued)

	Owns			Pays Rent/Lease			No Rent with Consent ff Owner			No Rent, Squatting			Total		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Number	Rural	Urban
Laikipia	52.5	64.7	23.0	34.5	18.2	73.7	10.1	12.9	3.3	2.9	4.2	0.0	154,631	109,279	45,351
Nakuru	51.6	83.7	25.3	44.3	10.7	71.9	3.5	4.7	2.6	0.5	0.9	0.2	673,026	303,230	369,795
Narok	71.7	82.1	4.4	22.9	12.2	92.1	4.1	4.2	3.5	1.3	1.5	0.0	263,863	228,600	35,263
Kajiado	41.1	83.4	19.3	53.0	12.2	74.0	5.5	3.9	6.4	0.4	0.4	0.4	371,234	126,274	244,960
Kericho	82.6	94.8	13.5	15.8	3.7	84.9	1.0	0.9	1.6	0.5	0.6	0.0	233,615	198,666	34,949
Bomet	87.4	91.0	20.3	6.3	2.9	69.8	1.9	1.8	3.8	4.4	4.3	6.1	219,222	208,282	10,940
Kakamega	78.9	87.3	20.9	16.4	7.8	75.5	4.1	4.2	3.0	0.7	0.7	0.6	484,205	422,956	61,248
Vihiga	92.5	95.8	65.9	7.0	3.8	32.4	0.5	0.4	1.6	0.0	0.0	0.0	160,520	142,719	17,800
Bungoma	79.2	84.9	44.6	17.7	12.4	50.1	3.0	2.7	4.7	0.1	0.0	0.6	470,168	403,710	66,458
Busia	81.9	91.5	29.3	14.8	5.7	64.3	3.3	2.8	6.4	0.0	0.0	0.0	216,855	183,163	33,692
Siaya	84.8	92.5	16.0	12.0	4.7	78.2	2.3	2.0	5.3	0.8	0.8	0.5	247,647	222,889	24,758
Kisumu	62.8	92.4	23.8	32.6	2.3	72.6	3.6	3.6	3.6	1.0	1.7	0.0	338,619	192,568	146,051
Homabay	85.1	94.3	17.4	12.3	4.4	70.9	1.5	1.0	5.2	1.1	0.3	6.5	270,043	237,766	32,277
Migori	82.3	94.7	26.0	16.3	4.2	71.5	1.4	1.1	2.4	0.0	0.0	0.0	267,547	219,503	48,044
Kisii	81.2	92.1	19.2	16.9	6.4	76.5	1.2	0.8	3.1	0.7	0.7	1.2	371,985	316,452	55,533
Nyamira	84.6	88.0	52.1	8.4	5.1	41.3	5.9	5.9	5.9	1.0	1.0	0.7	183,594	166,629	16,965
Nairobi City	7.7	0.0	7.7	88.8	0.0	88.8	3.1	0.0	3.1	0.5	0.0	0.5	1,661,533	0.0	1,661,533





3.7 Household Size

Household size influences the demand for housing and the sizes of the units. As household size increases, the demand for larger space increases. Household size membership varied from 1-2 persons to 11+ members. The most common household size membership as shown in Table 3.7 had 1-2 persons (34.1%) and 3-4 persons (33.5%). Urban areas had a higher percentage of households with 1-2 persons (43.7%) and “3-4 persons” (35.9%) compared to rural areas with 28.0 per cent

and 32.1 per cent, respectively. Larger household size membership of 5-6 persons and 7-8 persons were more common in rural areas.

The proportion of households with 1-2 members was highest in Nyeri (55.4%), Laikipia (46.8%), and Kiambu (46.7%). Elgeyo-Marakwet (12.3%), Garissa (9.9%), and West Pokot (9.0%) had the highest proportion of household size with 9+ members.

Table 3.7: Per centage Distribution of Household Sizes by Residence and Counties.

Residence	HouseHold Size					
	1-2 persons	3-4 persons	5-6 persons	7-8 persons	9-10 persons	11+ persons
Kenya	34.1	33.5	22.1	7.7	1.9	0.6
Rural	28.0	32.1	26.3	10.1	2.6	0.9
Urban	43.7	35.9	15.5	3.8	0.8	0.3
County						
Mombasa	39.9	35.6	16.2	6.3	1.1	0.9
Kwale	28.4	32.5	21.7	11.4	3.5	2.5
Kilifi	39.7	28.2	19.4	8.6	2.5	1.7
Tana River	21.0	30.5	29.1	14.9	3.4	1.0
Lamu	38.4	35.3	21.0	3.5	1.3	0.5
Taita-Taveta	45.3	27.1	18.1	7.4	1.4	0.7
Garissa	27.1	28.6	22.5	11.9	5.0	4.9
Wajir	15.2	39.5	32.2	10.8	2.0	0.4
Mandera	10.0	21.8	33.5	26.3	7.1	1.4
Marsabit	11.1	26.1	32.2	22.8	6.1	1.7
Isiolo	13.9	25.4	32.9	19.6	6.2	2.0
Meru	33.1	36.5	25.1	4.3	1.0	0.0
Tharaka-Nithi	35.5	38.7	20.1	4.9	0.2	0.6
Embu	39.2	41.9	15.6	2.8	0.3	0.3
Kitui	39.5	29.7	20.2	8.0	2.0	0.6
Machakos	38.5	38.0	19.5	3.1	0.7	0.2
Makueni	36.7	37.3	20.3	4.1	1.3	0.4
Nyandarua	39.1	33.3	22.4	4.9	0.4	0.0
Nyeri	55.4	29.2	14.4	0.3	0.7	0.0
Kirinyaga	46.5	36.3	15.2	1.2	0.7	0.0
Murang'a	40.6	33.7	18.3	6.4	0.1	0.9
Kiambu	46.7	32.1	17.1	2.4	1.7	0.0
Turkana	16.8	24.8	30.3	19.7	6.6	1.8
West Pokot	16.6	26.6	33.1	14.8	6.3	2.7
Samburu	16.2	28.4	33.7	16.5	4.6	0.6
Trans Nzoia	20.6	40.0	25.5	11.6	2.3	0.0
Uasin Gishu	39.2	32.5	20.8	5.5	1.8	0.2
Elgeyo-Marakwet	20.9	25.5	30.1	11.2	8.4	3.9
Nandi	28.7	29.5	30.5	9.1	1.8	0.4
Baringo	17.1	28.4	30.0	16.3	3.7	4.5
Laikipia	46.8	29.1	19.4	4.1	0.6	0.0
Nakuru	35.0	35.4	22.2	5.7	1.3	0.4
Narok	19.1	33.9	28.6	14.3	3.2	0.8
Kajiado	41.2	45.3	12.0	1.2	0.2	0.2
Kericho	27.1	25.6	30.3	11.6	5.1	0.3
Bomet	24.3	29.0	27.1	15.7	3.6	0.4
Kakamega	37.6	32.1	23.0	6.1	1.1	0.0
Vihiga	35.7	32.5	23.1	7.2	1.1	0.4
Bungoma	25.6	34.3	29.2	9.3	1.2	0.3
Busia	24.5	31.2	27.6	11.8	3.3	1.6
Siaya	26.4	30.1	26.1	13.0	3.1	1.3
Kisumu	33.5	36.2	20.5	8.3	0.8	0.7
Homabay	20.0	26.4	32.8	15.4	4.6	0.9
Migori	20.7	23	32.7	18.0	4.3	1.3
Kisii	30.0	34.9	23.2	9.6	1.9	0.2
Nyamira	30.0	29.5	30.0	7.8	2.6	0.1
Nairobi City	41.7	40.0	14.8	3.3	0.2	0.1

An analysis of the household sizes and their tenureship status, as shown in Table 3.8, reveals that households with 3-4 persons (32.5%) had the highest proportion of home ownership followed by 5-6 persons households (28.1%) and 1-2 persons households (24.4%). Households with 1-2 persons (48.3%) were the highest proportion of renters followed by 3-4 persons households (37.2%) and 5-6 persons households (12.0%).

Table 3.8: Proportions of Household Size by Tenureship Status

HH size categories	Owns	Pays Rent/ Lease	No Rent with Consent of Owner	No Rent, Squatting
1-2 persons	24.4	48.3	58.8	41.5
3-4 persons	32.5	37.2	22.3	21.7
5-6 persons	28.1	12.0	14.7	27.9
7-8 persons	11.0	2.2	3.4	8.6
9-10 persons	3.0	0.2	0.6	0.3
11+ persons	1.0	0.1	0.2	0
Total	8,503,898	4,635,229	637,765	109,234

3.8 Education

Information on the education history of all household members aged 3 years and above was collected during the 2023/24 Kenya Housing Survey. The information included; school attendance status, highest grade/year of education currently attending, and the highest grade/year of education completed.

Figure 3.2 shows the per centage distribution of population age 3 years and above by level of education

completed. Overall, 19.7 per cent of the household members had not attained any level of education, 37.6 per cent had primary education, 26.4 per cent had secondary education, and 4.7 per cent had University education. Analysis by residence shows that 21.6 per cent of rural residents had no education compared to 15.7 per cent of urban residents.

Figure 3.2 Distribution of Population by Level of Education Completed

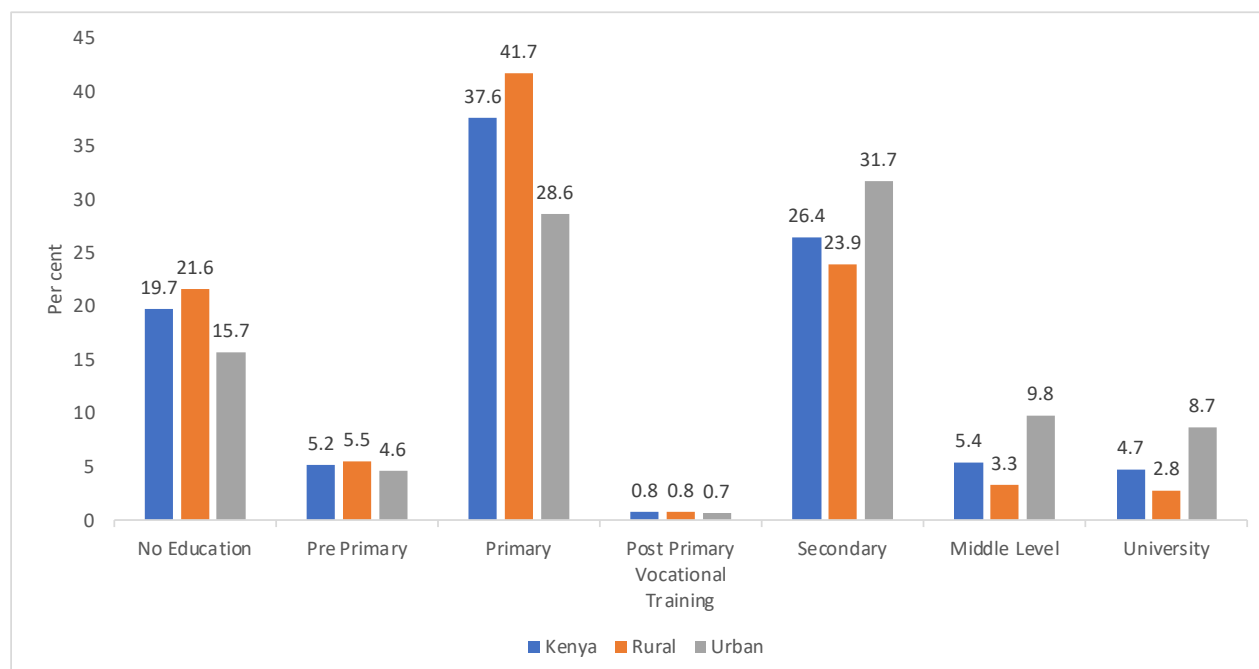
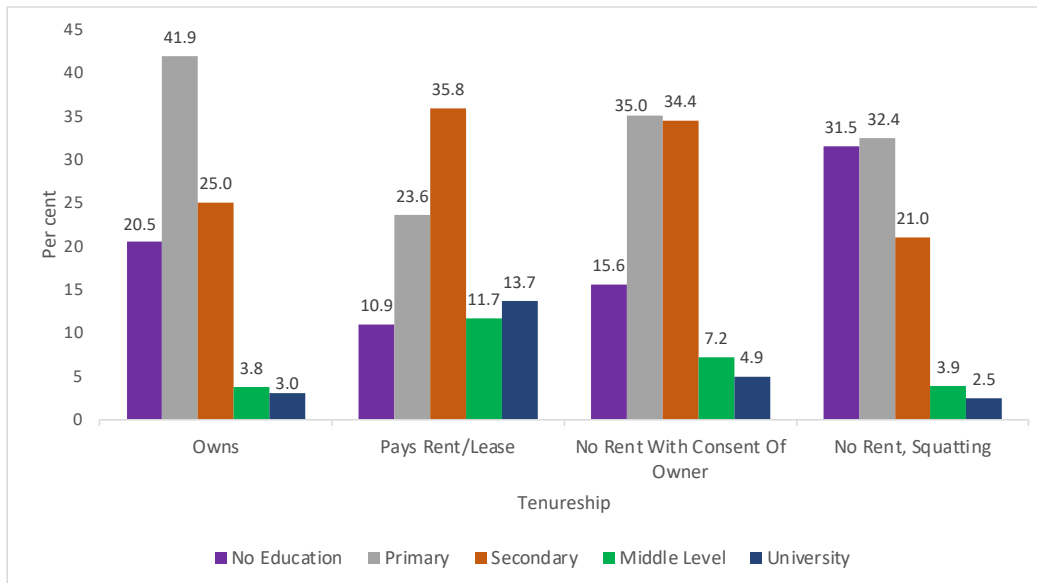


Figure 3.3 shows the proportion of household heads by their level of education attained and tenureship status of their dwelling units. Four out of every ten home owners (41.9%) had primary level education, while 20.5 per cent had no education. Among the tenants paying rent/

leasing, 35.8 per cent had secondary education, 23.6 per cent had primary education, and 13.7 per cent had university education. The highest proportion of tenants who don't pay rent with the owner's consent, as well as squatters had only attained primary level education.

Figure 3.3: Distribution of Tenureship Status by Level of Education Completed



3.9 Economic Activity Status of Household Members

The economic activity status of household members determines their financial capability and housing affordability. This section analyzes how the economic activity status of household heads relates with various housing dynamics. Information on economic activity status was collected for household members aged 5 years and above.

The active population consists of persons (15 years and above) who during the reference period were either employed or unemployed. Population outside the labour force refers to persons who are not involved in the labour market, that is, they are neither in employment nor are they unemployed.



3.9.1 Summary of Key Labour Market Indicators

Labour market indicators from the 2023/24 Kenya Housing Survey revealed notable disparities in employment and labour force participation across gender and residence. A large majority of the working-age population (15 to 64 years), which totaled over 31 million, were from rural areas, with nearly equal distribution between males and females. However, labour force participation was higher for males at 73.2 per cent compared to 62.2 per cent for females, and urban areas had a slightly higher participation rate of 69.4 per cent compared to 66.8 per cent in rural areas. The employment-to-population ratio

was 61.6 per cent, with men more likely to be employed at 68.1 per cent compared to women at 55.1 per cent. Unemployment rates showed a contrast, with females reporting a higher rate of 11.5 per cent compared to 6.9 per cent for males, and urban areas experiencing a higher unemployment rate of 12.5 per cent compared to 7.2 per cent in rural areas. Additionally, the proportion of youth Not in Employment, Education, or Training (NEET) was 20.2 per cent, with females having a much higher NEET rate of 26.1 per cent compared to 14.3 per cent for males.

Table 3.9a: Summary of Key Labour Market Indicators

Indicator	Total	Male	Female	Rural	Urban
Population (15-64)	31,140,313	15,465,079	15,675,235	20,336,116	10,804,198
Labour Force	21,081,871	11,324,308	9,757,562	13,584,413	7,497,458
Employed	19,169,953	10,539,237	8,630,716	12,609,022	6,560,931
Employment/Population Ratio (%)	61.6	68.1	55.1	62.0	60.7
Unemployed ¹	1,911,918	785,071	1,126,846	975,391	936,527
Unemployment Rate [LU1](%)	9.1	6.9	11.5	7.2	12.5
Not in Labor Force (Inactive)	10,058,442	4,140,771	5,917,672	6,751,703	3,306,740
Labour Force Participation (%)	67.7	73.2	62.2	66.8	69.4
Youth (15-34yrs)	19,544,108	9,739,907	9,804,200	12,702,378	6,841,728
Youth Not in Employment Education or Training (NEET)	3,954,510	1,392,833	2,561,677	2,249,041	1,705,469
NEET Rate	20.2	14.3	26.1	17.7	24.9



As presented in Table 3.9b, the survey results reveal that the highest labour force participation rates were observed in the 45-49 cohort at 89.9 per cent, followed closely by the 40-44 age group at 89.2 per cent. The highest employment-to-population ratios were also found in these age groups, with 87.4 per cent for ages 45-49 and 86.1 per cent for ages 40-44. In contrast, the highest unemployment rate was recorded in the 20-24 age group at 22.4 per cent, highlighting significant challenges for younger job seekers. The middle-aged workforce displayed the highest levels of labour force engagement and employment stability, while younger cohorts reported lower employment rates.



Table 3.9b: Distribution of Population 15-64 Years by Activity Status, Residence, Sex, and Age

Age	Employed	Unemployed	Not in Labour Force	Total	Labour Force Participation Rate	Employment to Population Ratio	Unemployment Rate
15-19	886,805	158,976	4,558,365	5,604,147	18.7	15.8	15.2
20-24	2,117,154	610,535	2,449,732	5,177,420	52.7	40.9	22.4
25-29	3,183,464	547,772	983,349	4,714,586	79.1	67.5	14.7
30-34	3,199,851	256,878	591,226	4,047,955	85.4	79.0	7.4
35-39	2,710,648	128,079	389,299	3,228,026	87.9	84.0	4.5
40-44	2,291,574	81,311	287,216	2,660,101	89.2	86.1	3.4
45-49	1,848,444	52,540	214,603	2,115,586	89.9	87.4	2.8
50-54	1,313,818	39,380	214,553	1,567,750	86.3	83.8	2.9
55-59	958,386	27,403	169,927	1,155,716	85.3	82.9	2.8
60-64	659,810	9,043	200,172	869,026	77.0	75.9	1.4
Total	19,169,953	1,911,918	10,058,442	31,140,313	67.7	61.6	9.1
RURAL							
15-19	758,015	84,370	3,223,860	4,066,245	20.7	18.6	10.0
20-24	1,449,291	319,957	1,609,917	3,379,165	52.4	42.9	18.1
25-29	1,917,732	283,961	610,244	2,811,937	78.3	68.2	12.9
30-34	1,956,603	115,735	372,694	2,445,031	84.8	80.0	5.6
35-39	1,688,012	60,125	250,431	1,998,568	87.5	84.5	3.4
40-44	1,473,676	53,821	175,516	1,703,013	89.7	86.5	3.5
45-49	1,219,218	23,768	142,701	1,385,687	89.7	88.0	1.9
50-54	907,694	19,063	127,390	1,054,148	87.9	86.1	2.1
55-59	709,095	10,907	110,934	830,936	86.6	85.3	1.5
60-64	529,686	3,684	128,016	661,386	80.6	80.1	0.7
Total	12,609,022	975,391	6,751,703	20,336,116	66.8	62.0	7.2

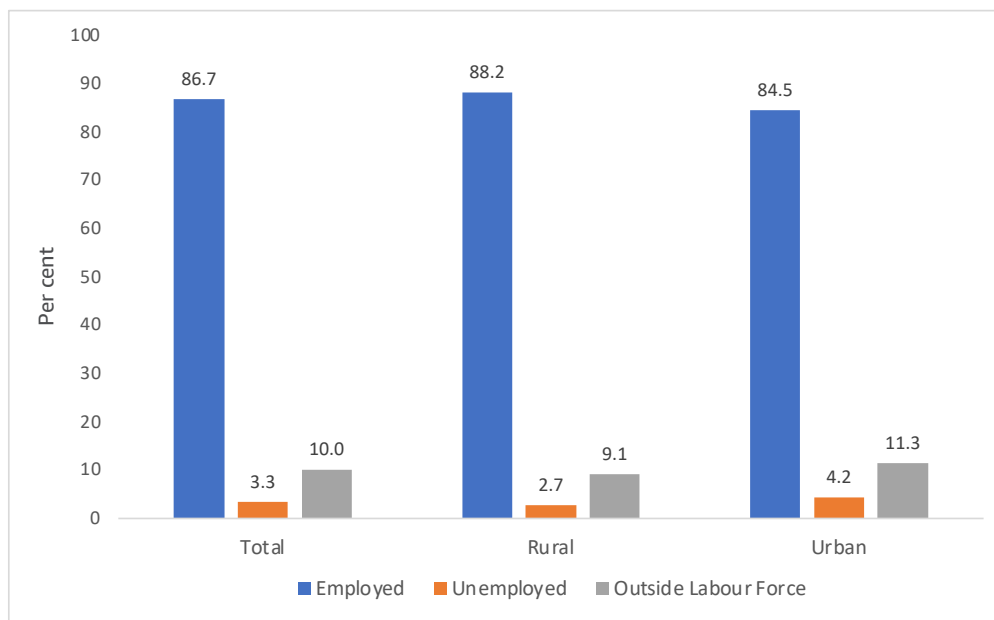
Age	Employed	Unemployed	Not in Labour Force	Total	Labour Force Participation Rate	Employment to Population Ratio	Unemployment Rate
URBAN							
15-19	128,791	74,606	1,334,505	1,537,902	13.2	8.4	36.7
20-24	667,862	290,577	839,815	1,798,254	53.3	37.1	30.3
25-29	1,265,732	263,811	373,106	1,902,649	80.4	66.5	17.2
30-34	1,243,248	141,144	218,532	1,602,923	86.4	77.6	10.2
35-39	1,022,636	67,954	138,868	1,229,458	88.7	83.2	6.2
40-44	817,897	27,491	111,700	957,088	88.3	85.5	3.3
45-49	629,226	28,772	71,902	729,899	90.1	86.2	4.4
50-54	406,124	20,316	87,162	513,602	83.0	79.1	4.8
55-59	249,291	16,496	58,993	324,780	81.8	76.8	6.2
60-64	130,125	5,360	72,156	207,641	65.2	62.7	4.0
Total	6,560,931	936,527	3,306,740	10,804,198	69.4	60.7	12.5
MALE							
15-19	505,852	76,755	2,195,736	2,778,343	21.0	18.2	13.2
20-24	1,230,833	262,075	1,089,053	2,581,960	57.8	47.7	17.6
25-29	1,801,999	227,442	325,680	2,355,121	86.2	76.5	11.2
30-34	1,797,504	88,778	138,201	2,024,483	93.2	88.8	4.7
35-39	1,481,672	39,865	85,014	1,606,551	94.7	92.2	2.6
40-44	1,205,860	27,289	85,955	1,319,103	93.5	91.4	2.2
45-49	971,254	18,998	56,936	1,047,188	94.6	92.7	1.9
50-54	700,604	23,480	46,240	770,325	94.0	90.9	3.2
55-59	500,191	16,241	45,637	562,069	91.9	89.0	3.1
60-64	343,468	4,149	72,319	419,936	82.8	81.8	1.2
Total	10,539,237	785,071	4,140,771	15,465,079	73.2	68.1	6.9
FEMALE							
15-19	380,954	82,221	2,362,629	2,825,804	16.4	13.5	17.8
20-24	886,321	348,460	1,360,679	2,595,459	47.6	34.1	28.2
25-29	1,381,466	320,331	657,669	2,359,465	72.1	58.5	18.8
30-34	1,402,347	168,101	453,025	2,023,472	77.6	69.3	10.7
35-39	1,228,976	88,214	304,285	1,621,475	81.2	75.8	6.7
40-44	1,085,714	54,022	201,261	1,340,998	85.0	81.0	4.7
45-49	877,189	33,542	157,667	1,068,399	85.2	82.1	3.7
50-54	613,214	15,900	168,312	797,426	78.9	76.9	2.5
55-59	458,195	11,162	124,290	593,647	79.1	77.2	2.4
60-64	316,342	4,894	127,854	449,090	71.5	70.4	1.5
Total	8,630,716	1,126,846	5,917,672	15,675,235	62.2	55.1	11.5

3.10 Economic Activity Status of Household Heads

This section focuses on the household heads and their economic activity status. Results as shown in Figure 3.4 reveal that 86.7 per cent were employed/working during the reference period, while 3.3 per cent were

unemployed and 10.0 per cent were not-in-labour force. In the rural areas, 88.2 per cent of the household heads were employed/working compared to 84.5 per cent of their counterparts in the urban areas.

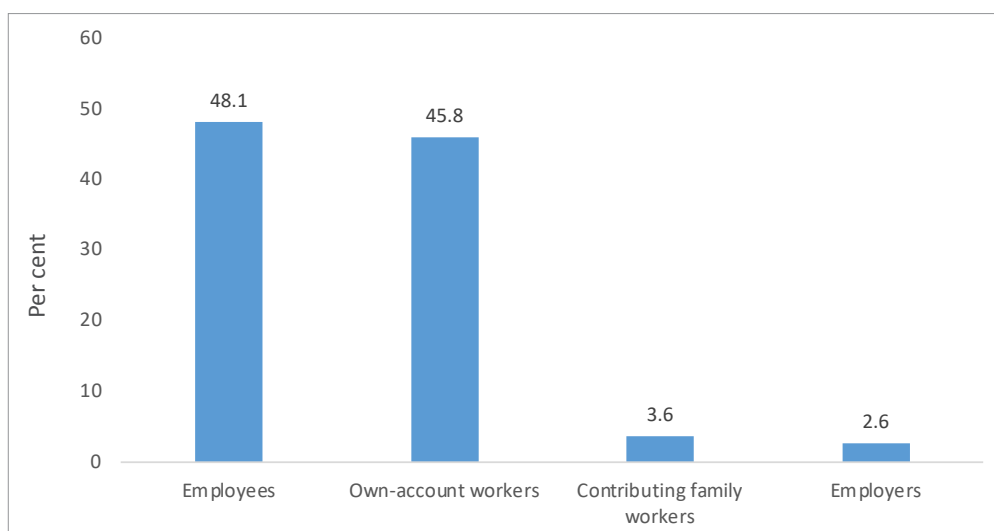
Figure 3.4: Economic Activity Status of Household Heads by Residence



3.11 Employment Status of Household Heads

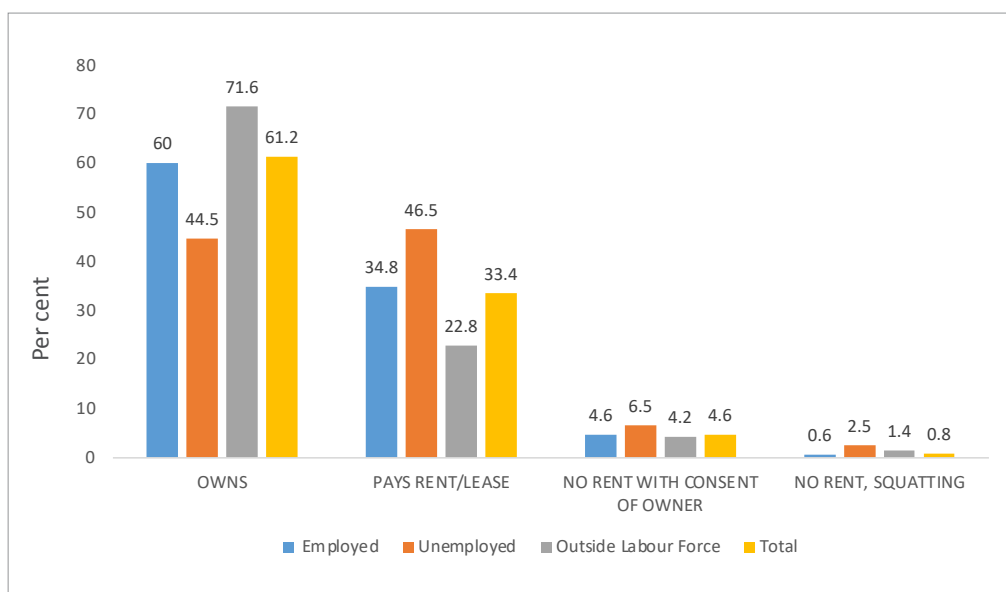
The distribution of household heads by their employment status with reference to their main job is illustrated in Figure 3.5. The majority of the household heads were employees (48.1%), while own account workers constituted 45.8 per cent. The proportion of employers was 2.6 per cent and 3.6 per cent of the household heads were contributing family workers.

Figure 3.5: Employment Status of Household Heads



As shown in figure 3.6 the highest proportion of employed are home owners at 60.0 per cent while the highest proportion of unemployed are tenants at 46.5 per cent. The highest proportion of those outside labour force are home owners at 71.6 per cent.

Figure 3.6: Activity Status by Type of Tenureship



As shown in figure 3.7 the highest proportion of self employed are home owners at 73.9 per cent, while the highest proportion of employed are tenants at 51.7 per cent. In addition, the employed represent a high proportion of squatters compared to the self employed at 0.8 per cent.

Figure 3.7: Employment Status of Home Owners and Tenants



3.12 Activity Status and Type of Dwelling

The tabulation of activity status by type of dwelling unit and residence is presented in Table 3.10. Overall, the most common dwelling structure occupied by household heads residing in urban areas, who were working, were swahili/compound houses sharing facilities (40.3%) and

flats/apartments (30.8%). The data shows that 41.7 per cent of the unemployed lived in swahili/compound houses with shared facilities with a further 23.5 per cent living in flats/apartments. About 34.8 per cent of the outside labour force lived in bungalows.

Table 3.10: Percentage Distribution of Households by Activity Status of Heads and Type of Dwelling Structure

Activity Status	Bungalow	Flat / Apartment	Maisonette	Swahili/Compound Houses Sharing Facilities	Compound Houses not Sharing Facilities	Shanty	Manyatta/Traditional House/Hut	Townhouse
Working	52.2	12.4	0.8	21.6	3.5	0.6	8.7	0.3
Unemployed	30.6	13.3	0.5	31.1	9.4	0.5	14.4	0.2
Outside Labour Force	53.7	6.2	1.4	16.9	4.2	0.3	16.9	0.5
Total	51.8	11.5	0.9	21.2	3.7	0.5	10.0	0.3
Rural								
Working	73.7	0.7	0.5	9.8	1.5	0.3	13.3	0.1
Unemployed	49.6	0.0	0.0	17.4	2.3	0.2	30.5	0.0
Outside Labour Force	63.9	0.4	0.9	8.2	1.6	0.3	24.5	0.2
Total	71.8	0.7	0.5	9.7	1.6	0.3	15.3	0.1
Urban								
Working	18.0	30.8	1.3	40.3	6.6	1.1	1.4	0.6
Unemployed	16.0	23.5	0.8	41.7	15.0	0.6	2.0	0.4
Outside Labour Force	34.8	17.0	2.2	33.1	9.0	0.4	2.7	0.9
Total	20.0	28.8	1.4	39.4	7.2	1.0	1.6	0.6

40.3%

The data shows that 40.3 per cent of working household heads lived in swahili/compound houses with shared facilities.



41.7%

The data shows that 41.7 per cent of the unemployed lived in swahili/compound houses with shared facilities

34.8%

The data shows that 34.8 per cent of the household heads who are outside labour force lived in bungalows.





3.13 Housing and Disability

Accessible housing is imperative to enabling independent living for many people with disabilities. People with disabilities often struggle to find and acquire accessible and affordable housing. The 2016 Housing Policy indicates that new public buildings and facilities, public housing and transport systems are required to put in place measures that ensure access by elderly and disabled persons. Similar measures are encouraged during renovation of existing buildings whenever feasible. Inaccessible housing options poses a challenge to those who need or prefer to live close to employment opportunities and social amenities such as hospitals and schools. Therefore, lack of inclusive and accessible housing continues to marginalize people living with disabilities.

The 2023/24 Kenya Housing Survey incorporated questions on levels of difficulties in performing daily

activities across six domains, namely: vision, hearing, mobility, cognition, self-care and communication as per the Washington Group on Disability Short Set of Questions. Four levels of difficulties were asked for each of the six domains, that is '*No, No Difficulty*', '*Yes, Some Difficulty*', '*Yes, a lot of Difficulty*' and '*Cannot do all*'.

In addition, the survey gathered more information on adequacy, safety, and accessibility of the housing units considering design modifications made to accommodate and to account for the needs and preferences of people with disabilities.

Disability status among respondents has been computed using the threshold of those with '*A lot of difficulty*' or those who '*Cannot do at all*' in at least one of the six domains. Thus, a person is said to have a disability if he/she responded that he/she has *a lot of difficulty* or *cannot do it at all*.

3.14 Distribution of Population Aged 5 years and above by Disability Status, Sex and Age

Table 3.11 shows the distribution of the population by disability status disaggregated by sex and age. The analysis indicates that 942,076 persons aged 5 years and above had a disability, resulting in a disability prevalence of 2.1 per cent. Prevalence of disability was higher among females at 2.4 per cent compared to males at 1.8 per cent. Further, disability prevalence among adults (30 years and above) increases with age and is more prominent among women.



The 2023/24 Kenya Housing Survey gathered information on adequacy, safety and accessibility of the housing units considering design modifications made to accommodate and to account for the needs and preferences of people with disabilities.

Table 3.11: Distribution of the Population Aged 5 years and Above by Disability Status, Sex and Age

Age	Persons without Disability			Persons with Disability			Prevalence (%)		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
5-9	6,084,808	3,000,865	3,083,943	62,026	33,501	28,525	1.0	1.1	0.9
10-14	5,855,738	2,896,446	2,959,292	59,978	29,914	30,064	1.0	1.0	1.0
15-19	5,532,597	2,745,461	2,787,136	71,550	32,882	38,668	1.3	1.2	1.4
20-24	5,128,622	2,560,612	2,568,010	48,799	21,349	27,450	0.9	0.8	1.1
25-29	4,655,028	2,313,388	2,341,640	59,559	41,733	17,826	1.3	1.8	0.8
30-34	4,011,896	2,007,332	2,004,564	36,059	17,151	18,908	0.9	0.8	0.9
35-39	3,186,140	1,590,305	1,595,835	41,886	16,246	25,640	1.3	1.0	1.6
40-44	2,602,681	1,298,041	1,304,640	57,420	21,062	36,358	2.2	1.6	2.7
45-49	2,055,366	1,028,544	1,026,822	60,220	18,644	41,576	2.8	1.8	3.9
50-54	1,507,730	751,547	756,183	60,021	18,778	41,243	3.8	2.4	5.2
55-59	1,102,421	540,814	561,607	53,294	21,254	32,040	4.6	3.8	5.4
60-64	804,160	397,078	407,082	64,866	22,858	42,008	7.5	5.4	9.4
65-69	583,338	287,288	296,050	58,756	24,772	33,984	9.2	7.9	10.3
70-74	521,561	251,477	270,084	70,817	27,569	43,248	12.0	9.9	13.8
75-79	287,275	149,317	137,958	46,986	14,437	32,549	14.1	8.8	19.1
80-84	174,824	72,977	101,847	43,775	18,582	25,193	20.0	20.3	19.8
85-89	89,395	43,623	45,772	24,751	10,492	14,259	21.7	19.4	23.8
90-94	48,359	21,665	26,694	9,784	3,195	6,589	16.8	12.9	19.8
95-99	21,050	5,994	15,056	6,496	1,630	4,866	23.6	21.4	24.4
100+	18,555	7,156	11,399	5,033	823	4,210	21.3	10.3	27.0
Total	44,271,544	21,969,930	22,301,614	942,076	396,872	545,204	2.1	1.8	2.4

3.15 Ratings of Safety and Adequacy of Housing Units by People with Disabilities

Many people with disabilities have specific housing accessibility and adequacy requirements. Consequently, the majority live in housing units which cannot meet their needs and those who do, face barriers in interacting with those in their surrounding community.

3.15.1 Rating of Housing Unit Safety, Especially for People with Mobility Challenges

Table 3.12 presents the ratings of housing units' safety by households with individuals with disability, by the type of disability. Across all disability categories, households that had safe (safe and very safe) housing units were 34.8 per cent. In particular, only three out of every ten (33.1%) households with individuals who have mobility challenges indicated that their housing units were safe.



Table 3.12: Rating of Housing Unit Safety by Households with People with Disabilities

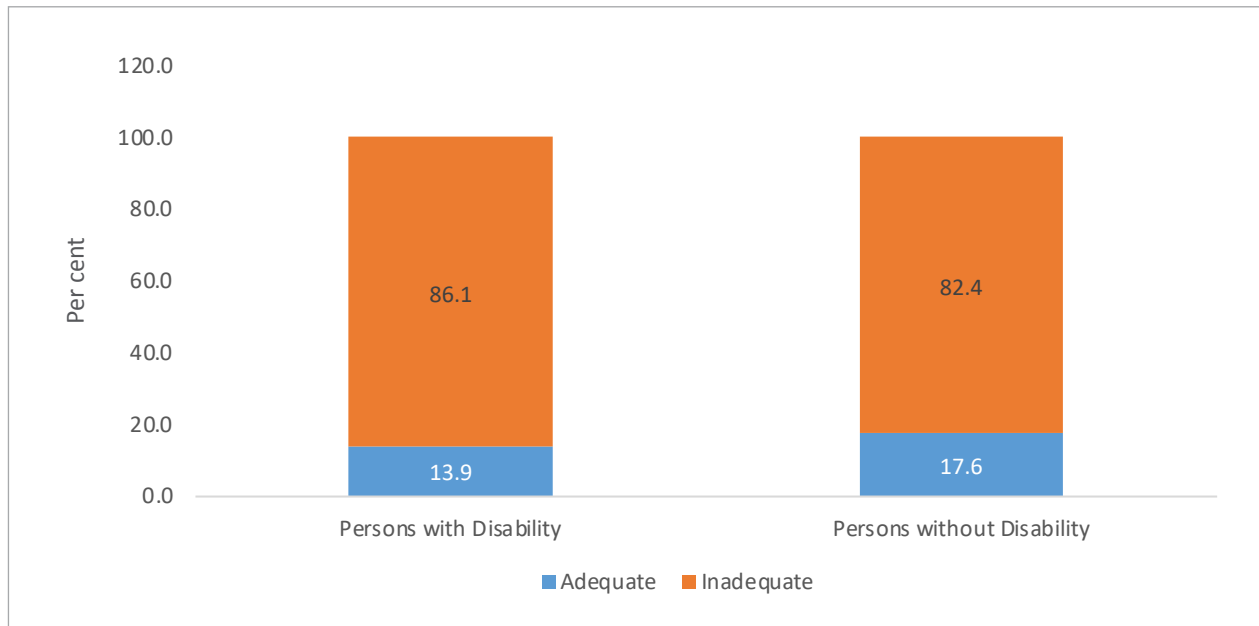
Overall Safety of Housing	Disability Category						Total
	Visual	Hearing	Mobility	Cognition	Selfcare	Communication	
Very Unsafe	12.8	5.6	9.8	0.0	0.0	14.2	9.3
Unsafe	32.1	34.0	30.6	44.0	24.9	48.8	32.2
Neutral	24.0	25.6	24.0	16.9	18.9	17.9	23.6
Safe	29.5	34.9	33.1	39.0	51.2	19.1	33.0
Very Safe	1.7	0.0	2.5	0.0	5.0	0.0	1.8
Total (Number of HHs with PWDs)	115,216	55,381	165,750	14,855	18,143	7,931	377,275

3.15.2 Rating of the Adequacy of Main Dwelling Units

Recognizing the diversity in types and characteristics of dwelling units, the 2023/24 KHS incorporated an extensive set of questions on housing to highlight areas for improvement and to ensure that infrastructure development meets the needs of persons with disabilities.

This included identification of barriers to accessibility in housing units or inadequate facilities. Figure 3.8 shows that 82.4 per cent of households without persons with disabilities and 86.1 per cent with persons with disabilities reported that they had inadequate housing units.

Figure 3.8: Rating of the Adequacy of Main Dwelling Units by Disability Status



3.16 Factors that Prevent Households from Having Adequate Housing Units

Table 3.13 shows the factors that prevent households from having adequate housing units. Majority of the households reported low income as the main reason, with 97.4 per cent being households without persons with disabilities and 2.6 per cent being those with

persons with disabilities. In addition, 99.5 per cent of households without persons with disabilities reported high cost of rent as a main reason that prevents them from having adequate housing units compared to 0.5 per cent of households with persons with disabilities.

Table 3.13: Per centage Distribution of Factors Leading to Inadequacy of Housing Units by Disability Status

Factors	Disability Status					
	Households with persons without disability		Households with persons with disability		Total	
	No.	%	No.	%	No.	%
High cost of rent	216,119	99.5	1,169	0.5	217,288	100.0
High cost of land	19,609	100.0	0.0	0.0	19,609	100.0
Lack of valid legal ownership of land documentation	3,365	100.0	0.0	0.0	3,365	100.0
Don't qualify for a loan	1,657	100.0	0.0	0.0	1,657	100.0
High cost of materials	114,327	96.9	3,615	3.1	117,942	100.0
High interest rates on loan/ mortgage	3,021	100.0	0.0	0.0	3,021	100.0
Houses too costly to buy	34,705	100.0	0.0	0.0	34,705	100.0
Low income	1,840,138	97.4	49,502	2.6	1,889,640	100.0
Proximity to basic amenities	82,769	97.6	2,010	2.4	84,780	100.0
Not interested in moving	47,530	96.2	1,869	3.8	49,398	100.0
Not stated	1,793	61.6	1,116	38.4	2,910	100.0
Total	2,365,034	97.6	59,282	2.4	2,424,316	100.0

3.17 Accessibility of Housing Units to Persons with Disability

Accessible housing refers to housing that has been designed or modified to satisfy applicable accessibility requirements and to account for the needs and preferences of people with disabilities. This section is important because it assesses the overall accessibility of housing for individuals with disabilities. It provides a clear picture of the existing challenges and areas where improvements are needed.

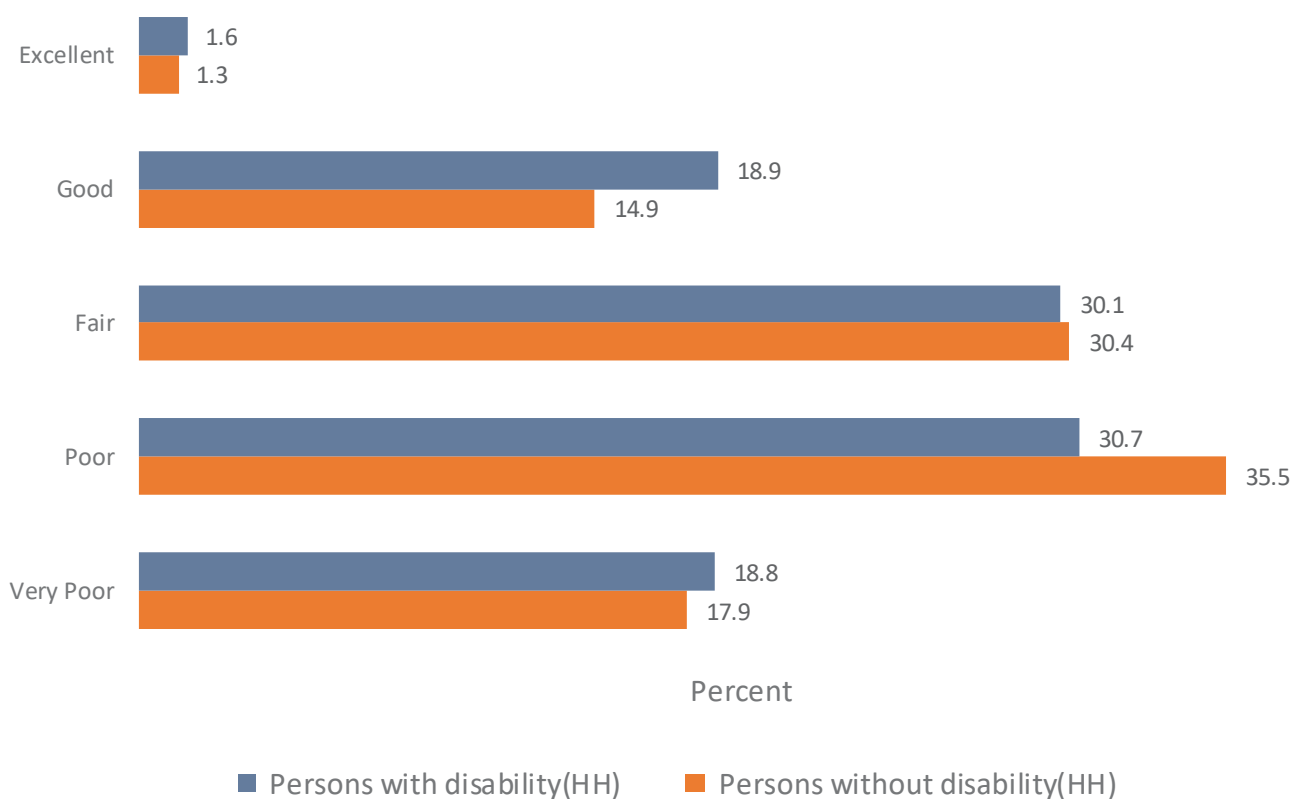
The accessibility requirements considered in this survey included: wide doorways and hallways for wheelchair or mobility aid access; installed grab bars in the bathroom; entrance ramps or no-step entries; lever-style door handles; elevators in multi-storey buildings; visual or auditory smoke alarms for residents with sensory impairments; light switches and electrical outlets at

easy-to-reach heights for individuals with limited mobility; and kitchen accommodations, such as lowered countertops and accessible cabinets.

3.17.1 Rating of Satisfaction with the Accessibility of Housing Unit

Analysis shows that 1.3 per cent of households without persons with disability and 1.6 per cent of households with persons with disability indicated that their current housing is excellent for the mobility of persons with disability, while 17.9 per cent of households without persons with disability and 18.8 per cent of households with persons with disability indicated that their current housing was very poor as shown in Figure 3.9.

Figure 3.9: Rating of Satisfaction with the Accessibility of Housing Unit





3.17.2 Proportion of Housing Units with Various Accessibility Aids, by Ownership Status

Majority of the households (1.5 million) reported having wide doorways and hallways, with homeowners reporting the highest percentage (66.6%). This was followed by Lowered countertops and accessible cabinets (1.4 million), with the highest number being homeowners. However, visual or audio smoke alarms and grab bars installed in the bathroom or toilet were the least reported at 15 thousand and 48 thousand respectively, as shown in Table 3.14 .

The accessibility aids considered in this survey include: wide doorways and hallways for wheelchair or mobility aid access; installed grab bars in the bathroom; entrance ramps or no-step entries; lever-style door handles; elevators in multi-storey buildings; visual or auditory smoke alarms for residents with sensory impairments; light switches and electrical outlets at easy-to-reach heights for individuals with limited mobility; and kitchen accommodations, such as lowered countertops and accessible cabinets.

Table 3.14: Distribution of Housing Units with Various Accessibility Aids, by Ownership Status

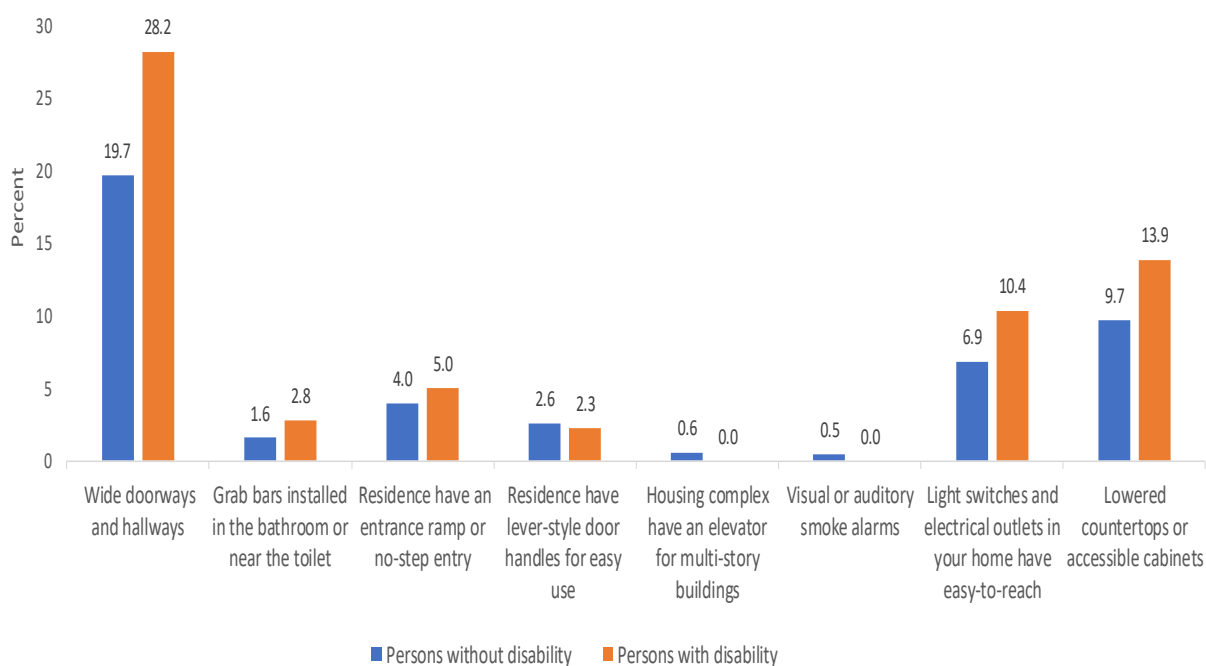
Accessability Aid	Housing Tenure									
	Owns		Pays rent/lease		No rent with consent of owner		No rent without consent (squatting)		Total	
	No	%	No	%	No	%	No	%	No	%
Wide doorways and hallways	997,028	66.6	432,439	28.9	59,668	4.0	8,145	0.5	1,497,280	100.0
Grab bars installed in the bathroom or near the toilet	33,410	69.3	13,336	27.7	1,466	3.0	0.0	0.0	48,212	100.0
Entrance ramp or no-step entry	192,082	72.2	57,660	21.7	16,073	6.0	128	0.0	265,944	100.0
Lever-style door handles for easy use	96,620	66.6	40,987	28.2	7,488	5.2	0.0	0.0	145,095	100.0
Elevator for multi-storey buildings	2,717	5.5	46,325	93.1	739	1.5	0.0	0.0	49,782	100.0
Visual or audio smoke alarms	7,499	48.7	7,886	51.3	0.0	0.0	0.0	0.0	15,385	100.0
Light switches and electrical outlets in your homes	208,307	51.3	179,919	44.3	16,471	4.1	1,029	0.3	405,727	100.0
Lowered countertops or accesible cabinets	841,943	61.9	432,026	31.8	71,592	5.3	13,918	1.0	1,359,479	100.0

3.17.3 Distribution of Housing Units with Accessibility Aids by Disability Status

Figure 3.10 shows that 28.2 per cent of the households with persons with disability had wide doorways and hallways to aid accessibility while 13.9 per cent had lowered countertops and cabinets. However, very few housing units with persons with disability had the special aids like grab bars (2.8%) and visual or audio smoke alarms (0.0%) which are key to those with mobility and visual challenges.



Figure 3.10: Distribution of households with various accessibility aid by Disability Status

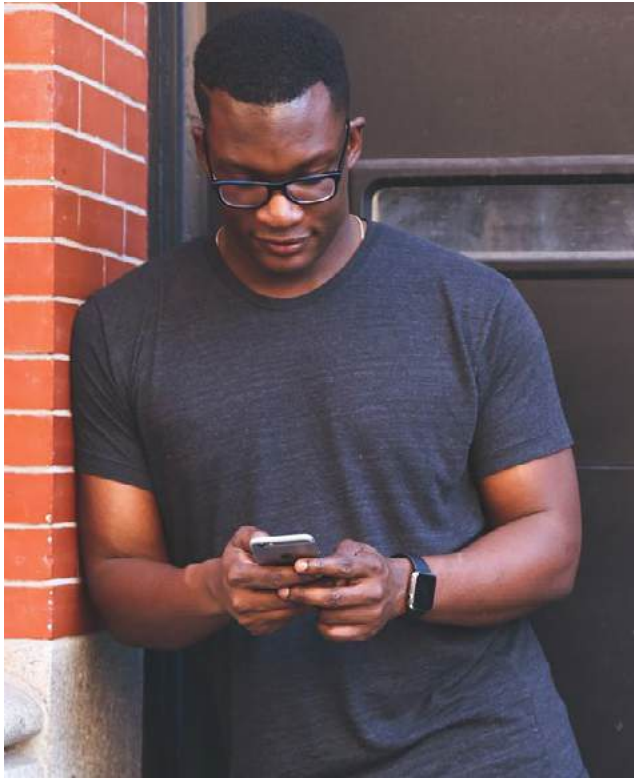


3.18: Information and Communication Technology

3.18.1 Introduction

In the evolving dynamics of housing in Kenya, understanding technological integration is more than a measure of digital adoption; it's a lens through which we view the comprehensive living experiences of residents. The 2023/24 Kenya Housing Survey provides a holistic perspective on housing and residential dwellings, with a particular emphasis on key ICT indicators such

as advancement in mobile phone ownership and usage of mobile phone, internet, computer and smart technology. These indicators followed the International Telecommunication Union (ITU) guidelines, ensuring alignment with global standards. The reference period for the data collected was three months, and respondents included individuals from the age of three.



3.18.2 Mobile Phone Ownership

The survey reveals significant disparities in mobile phone ownership across Kenyan counties and between urban and rural areas. Nationally, 53.7 per cent of the population owns a mobile phone, with urban areas showing a significantly higher ownership rate at 64.6 per cent compared to 48.6 per cent in rural areas as shown in Table 3.15.

Males and females reported near equal proportions in ownership of a mobile phone in the last three months at 54.5 per cent and 52.9 per cent, respectively at national level. A similar trend was observed for both males and females in the urban and rural areas. Mobile phone ownership varied across the counties. The highest mobile phone ownership rates were in Nairobi City (67.7%) followed by Kirinyaga (65.0%), while the least were in Turkana (29.4%) and West Pokot (29.0%).

Table 3.15: Proportion of Individuals Aged 3 Years and Above who Owned a Mobile Phone

	Male	Female	Total
Kenya	54.5	52.9	53.7
Urban	65.6	63.7	64.6
Rural	49.3	47.9	48.6
County			
Mombasa	60.3	56.7	58.5
Kwale	44.4	40.9	42.7
Kilifi	55.6	45.8	50.7
Tana River	42.6	28.8	35.5
Lamu	53.5	49.0	51.3
Taita-Taveta	60.0	60.7	60.3
Garissa	51.7	48.0	49.8
Wajir	44.1	43.8	43.9
Mandera	45.5	41.3	43.4
Marsabit	37.0	32.6	34.8
Isiolo	47.8	48.0	47.9
Meru	57.2	53.6	55.4
Tharaka-Nithi	58.3	60.2	59.3
Embu	59.1	60.8	60.0
Kitui	50.2	54.5	52.4
Machakos	59.2	62.5	60.9
Makueni	57.7	55.3	56.5
Nyandarua	63.9	63.8	63.9
Nyeri	60.4	61.5	61.0
Kirinyaga	63.6	66.3	65.0
Murang'a	60.2	64.4	62.3
Kiambu	60.9	63.3	62.1

	Male	Female	Total
Turkana	31.7	27.1	29.4
West Pokot	32.4	25.7	29.0
Samburu	39.7	33.9	36.8
Trans Nzoia	54.1	55.3	54.7
Uasin Gishu	58.3	56.2	57.2
Elgeyo-Marakwet	47.7	46.3	47.0
Nandi	52.0	52.4	52.2
Baringo	44.6	43.8	44.2
Laikipia	56.5	59.2	57.9
Nakuru	59.1	57.6	58.4
Narok	42.4	36.3	39.3
Kajiado	52.6	52.3	52.4
Kericho	52.0	52.5	52.2
Bomet	46.6	43.2	44.9
Kakamega	53.7	52.7	53.2
Vihiga	50.2	51.5	50.9
Bungoma	54.9	54.2	54.6
Busia	50.7	47.7	49.2
Siaya	48.4	48.0	48.2
Kisumu	55.6	51.2	53.4
Homabay	48.1	45.0	46.5
Migori	46.2	40.9	43.5
Kisii	56.5	56.7	56.6
Nyamira	57.2	57.7	57.4
Nairobi City	69.2	66.3	67.7

3.18.3 Mobile Phone Users who Don't Own It

The report reveals insights into the use of mobile phones without ownership across different regions. Nationally, 11.3 per cent of people use mobile phones they don't own, with a slight difference observed between males and females as shown in Table 3.16. Urban areas show a

higher reliance on shared or borrowed phones at 11.8 per cent, compared to 11.0 per cent in rural areas. Nyandarua (22.2%) had the highest number of individuals using non-owned phones, followed by Taita-Taveta (20.1 %), while the least were from Bomet (2.0 %) and Narok (2.0 %).

Table 3.16: Proportion of Individuals Aged 3 Years and Above who Used a Mobile Phone Without Owning

	Male	Female	Total
Kenya	11.0	11.5	11.3
Urban	11.2	12.4	11.8
Rural	11.0	11.1	11.0
County			
Mombasa	7.9	11.0	9.5
Kwale	7.4	10.5	9.0
Kilifi	5.9	8.8	7.4
Tana River	3.2	3.4	3.3
Lamu	1.6	2.8	2.2
Taita-Taveta	19.5	20.6	20.1
Garissa	4.2	3.9	4.1
Wajir	10.4	7.9	9.1
Mandera	8.1	9.3	8.7
Marsabit	7.4	5.8	6.6
Isiolo	14.5	16.2	15.4
Meru	16.1	19.0	17.5
Tharaka-Nithi	11.8	10.7	11.2
Embu	13.8	10.6	12.2
Kitui	16.3	14.1	15.2
Machakos	13.1	12.3	12.7
Makueni	10.4	10.1	10.3
Nyandarua	22.5	22.0	22.2
Nyeri	20.8	15.3	18.0
Kirinyaga	13.5	12.0	12.7
Murang'a	16.2	14.0	15.1
Kiambu	13.6	13.7	13.7
Turkana	7.9	11.0	9.4

	Male	Female	Total
West Pokot	14.8	14.7	14.8
Samburu	7.0	10.3	8.7
Trans Nzoia	5.4	6.1	5.7
Uasin Gishu	19.9	21.2	20.5
Elgeyo-Marakwet	7.1	9.7	8.4
Nandi	3.8	4.5	4.2
Baringo	6.5	8.9	7.7
Laikipia	21.3	20.4	20.8
Nakuru	19.8	22.0	20.9
Narok	2.4	1.7	2.0
Kajiado	3.7	4.3	4.0
Kericho	9.0	7.1	8.0
Bomet	2.3	1.9	2.0
Kakamega	13.6	14.5	14.0
Vihiga	4.4	5.8	5.1
Bungoma	13.3	12.4	12.9
Busia	17.1	17.7	17.4
Siaya	14.2	14.7	14.5
Kisumu	2.4	5.0	3.7
Homabay	5.7	7.6	6.7
Migori	10.5	10.4	10.4
Kisii	3.4	2.8	3.1
Nyamira	2.9	3.8	3.3
Nairobi City	13.2	13.9	13.6



3.18.4 Total Mobile Phone Usage

Table 3.17 shows that nationally, 64.9 per cent of the population aged 3 years and above used a mobile phone in the last three months regardless of ownership with urban areas having a higher usage rate (76.4%) compared to rural areas (59.6%). There was no significant gender difference, as both males and females have nearly the same usage rate. In urban areas, mobile phone usage was higher at 76.0 per cent for females and 76.8 per cent for males, while rural areas had lower usage rates at, 60.3 per cent for males and 59.0 per cent for females. At county level, Nyandarua had the highest usage rate at 86.1 per cent, followed by Nairobi City at 81.3 per cent while the least was Tana River at 38.8 per cent, West Pokot at 43.8 per cent.

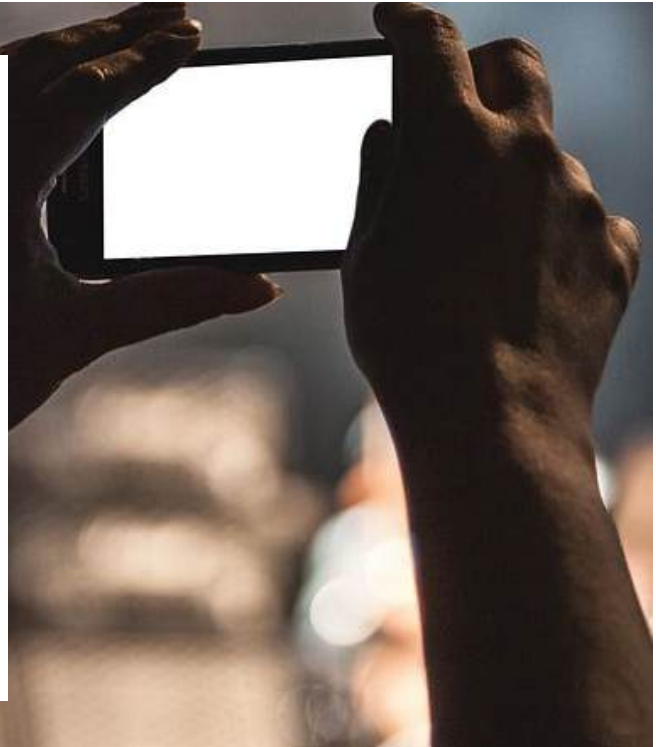
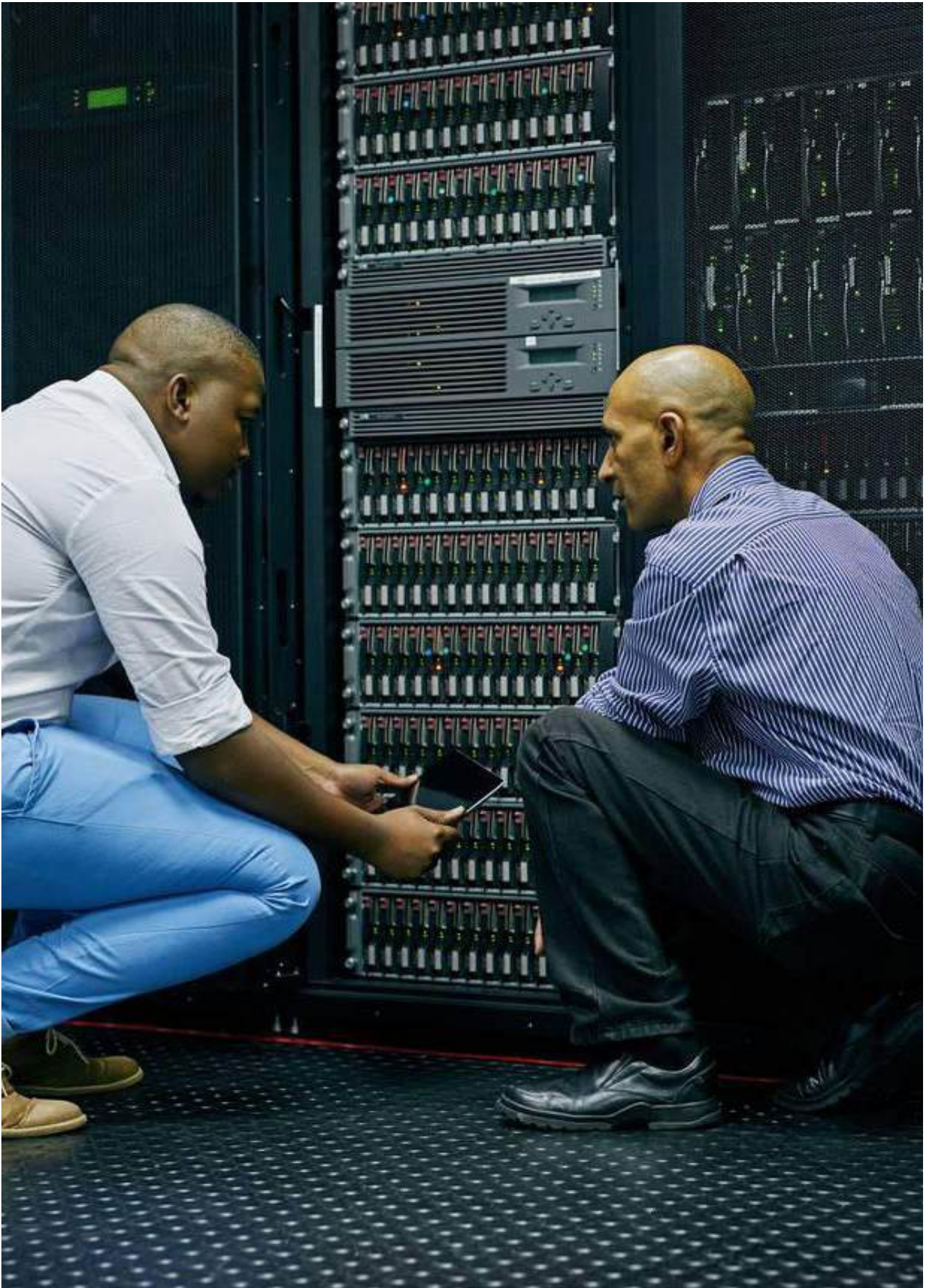


Table 3.17: Proportion of Individuals Aged 3 Years and Above who Used a Mobile Phone

	Male	Female	Total
Kenya	65.5	64.4	64.9
Urban	76.8	76.0	76.4
Rural	60.3	59.0	59.6
County			
Mombasa	68.2	67.7	68.0
Kwale	51.8	51.4	51.6
Kilifi	61.6	54.6	58.1
Tana River	45.8	32.2	38.8
Lamu	55.1	51.8	53.4
Taita-Taveta	79.5	81.2	80.4
Garissa	55.9	52.0	53.9
Wajir	54.5	51.7	53.1
Mandera	53.7	50.6	52.1
Marsabit	44.4	38.3	41.4
Isiolo	62.3	64.2	63.3
Meru	73.3	72.6	73.0
Tharaka-Nithi	70.0	70.9	70.5
Embu	73.0	71.4	72.2
Kitui	66.5	68.6	67.6
Machakos	72.2	74.8	73.5
Makueni	68.1	65.4	66.7
Nyandarua	86.4	85.8	86.1
Nyeri	81.2	76.8	79.0
Kirinyaga	77.0	78.3	77.7
Murang'a	76.4	78.4	77.4
Kiambu	74.5	77.1	75.8
Turkana	39.6	38.0	38.8

	Male	Female	Total
West Pokot	47.2	40.5	43.8
Samburu	46.7	44.2	45.4
Trans Nzoia	59.5	61.3	60.4
Uasin Gishu	78.1	77.3	77.7
Elgeyo-Marakwet	54.8	56.1	55.4
Nandi	55.8	56.9	56.4
Baringo	51.1	52.7	51.9
Laikipia	77.9	79.6	78.7
Nakuru	79.0	79.6	79.3
Narok	44.8	38.0	41.3
Kajiado	56.2	56.6	56.4
Kericho	61.0	59.6	60.3
Bomet	48.8	45.1	46.9
Kakamega	67.2	67.1	67.2
Vihiga	54.6	57.3	56.0
Bungoma	68.2	66.6	67.4
Busia	67.8	65.4	66.6
Siaya	62.6	62.7	62.7
Kisumu	58.0	56.2	57.1
Homabay	53.7	52.6	53.2
Migori	56.7	51.2	54.0
Kisii	59.8	59.5	59.7
Nyamira	60.0	61.5	60.8
Nairobi City	82.4	80.2	81.3



3.18.5 Internet Use

The report reveals notable disparities in internet usage across different counties. Nationally, 35.0 per cent of the population used the internet in the last three months preceding the survey with urban areas (56.5%) recording a higher penetration rate compared to rural (25.0%). Analysis by gender shows that nationally, 37.8 per cent of males and 32.2 per cent of females used the internet in the last three months preceding the survey as shown in Table 3.18. In urban areas, the usage was higher, with

58.4 per cent of males and 54.8 per cent of females, while in rural areas, usage rates declined to 28.3 per cent for males and 21.7 per cent for females, indicating a digital divide between urban and rural regions. The counties with the highest internet usage rates are Nairobi City (64.7%), Kiambu (54.0%), while the least counties with the lowest penetration rates were West Pokot (9.1%) followed by Turkana (12.7%).



Table 3.18: Proportion of Individuals Aged 3 Years and Above who Used Internet

	Male	Female	Total
Kenya	37.8	32.2	35.0
Urban	58.4	54.8	56.6
Rural	28.3	21.7	25.0
County			
Mombasa	49.2	44.6	46.9
Kwale	27.1	24.2	25.6
Kilifi	36.2	24.9	30.5
Tana River	21.3	9.9	15.5
Lamu	31.6	25.9	28.8
Taita-Taveta	40.2	35.0	37.6
Garissa	18.8	14.3	16.5
Wajir	27.6	20.8	24.2
Mandera	32.5	17.5	24.9
Marsabit	18.9	13.8	16.3
Isiolo	34.2	32.1	33.1
Meru	35.8	26.9	31.4
Tharaka-Nithi	34.7	32.1	33.4
Embu	37.7	36.0	36.8
Kitui	27.1	25.4	26.2
Machakos	38.1	36.6	37.3
Makueni	32.9	27.8	30.3
Nyandarua	42.7	40.5	41.6
Nyeri	52.3	48.0	50.1
Kirinyaga	37.9	35.4	36.6
Murang'a	34.9	36.7	35.8
Kiambu	50.5	57.4	54.0

	Male	Female	Total
Turkana	13.9	11.4	12.7
West Pokot	10.7	7.6	9.1
Samburu	25.4	12.5	18.9
Trans Nzoia	32.5	28.7	30.6
Uasin Gishu	50.2	34.1	42.1
Elgeyo-Marakwet	34.8	25.8	30.3
Nandi	26.5	22.3	24.4
Baringo	27.2	19.7	23.4
Laikipia	40.2	35.9	38.0
Nakuru	42.7	37.5	40.1
Narok	26.6	14.5	20.5
Kajiado	39.1	34.9	37.0
Kericho	31.9	21.0	26.4
Bomet	27.4	14.1	20.6
Kakamega	38.6	31.3	35.0
Vihiga	18.6	18.0	18.3
Bungoma	39.0	30.8	34.9
Busia	33.2	26.4	29.7
Siaya	30.3	24.5	27.4
Kisumu	36.6	30.2	33.4
Homabay	31.5	24.2	27.7
Migori	36.5	24.4	30.4
Kisii	31.1	25.1	28.1
Nyamira	31.0	22.1	26.4
Nairobi City	66.7	62.8	64.7

3.18.6 Computer Use

Table 3.19 highlights the disparities in computer usage across different counties in the last three months. Nationally, 11.6 per cent of the population used a computer, with those in urban areas (20.9%) having a higher usage compared to rural areas (7.3%) indicating limited digital engagement overall. This difference underscores the digital divide between rural and urban regions, reflecting disparities in infrastructure, access to technology, and educational resources. Analysis by gender shows that 13.1 per cent of males and 10.1 per cent of females used a computer in the last three months, indicating a gender gap in digital engagement. Analysis by counties show that computer usage was higher in Nairobi City (27.8%), followed by Nyeri (21.3%), while counties with the least usage were in Wajir (2.0%) and Mandera (3.6%).

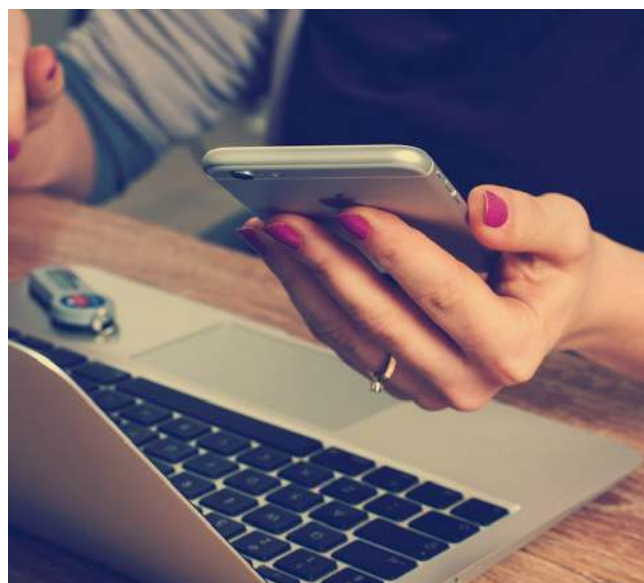


Table 3.19: Proportion of Individuals Aged 3 Years and Above who Used a Computer

	Male	Female	Total
Kenya	13.1	10.1	11.6
Urban	23.8	18.1	20.9
Rural	8.1	6.4	7.3
County			
Mombasa	18.4	12.4	15.4
Kwale	5.1	4.7	4.9
Kilifi	7.6	5.2	6.4
Tana River	5.6	1.9	3.7
Lamu	5.2	3.7	4.4
Taita-Taveta	15.0	11.8	13.4
Garissa	6.6	2.7	4.6
Wajir	2.6	1.4	2.0
Mandera	5.4	1.9	3.6
Marsabit	3.3	3.7	3.5
Isiolo	12.7	10.1	11.3
Meru	9.8	11.2	10.5
Tharaka-Nithi	13.6	10.3	11.9
Embu	15.2	11.2	13.2
Kitui	6.2	7.8	7.0
Machakos	14.0	12.9	13.5
Makueni	4.0	5.0	4.5
Nyandarua	13.9	13.3	13.6
Nyeri	23.4	19.4	21.3
Kirinyaga	13.7	11.6	12.6
Murang'a	11.8	11.6	11.7
Kiambu	16.7	12.7	14.7

	Male	Female	Total
Turkana	5.4	3.2	4.3
West Pokot	5.0	3.7	4.4
Samburu	9.2	3.7	6.4
Trans Nzoia	11.8	8.4	10.1
Uasin Gishu	13.8	8.2	10.9
Elgeyo-Marakwet	11.8	9.5	10.6
Nandi	9.1	8.6	8.8
Baringo	5.3	5.1	5.2
Laikipia	15.7	11.6	13.6
Nakuru	14.5	13.0	13.8
Narok	7.3	6.2	6.7
Kajiado	13.4	11.3	12.4
Kericho	12.6	6.8	9.6
Bomet	11.3	6.5	8.8
Kakamega	7.9	5.0	6.4
Vihiga	7.2	5.2	6.2
Bungoma	11.7	8.9	10.3
Busia	9.6	6.9	8.2
Siaya	10.9	8.0	9.5
Kisumu	18.9	12.7	15.8
Homabay	13.0	9.9	11.4
Migori	14.5	9.6	12.0
Kisii	11.1	8.4	9.8
Nyamira	15.4	9.8	12.5
Nairobi City	31.2	24.4	27.8

3.19 Smart Technologies

The integration of smart technologies into housing encompasses a range of devices and systems, such as internet connectivity, smart lighting, security systems, and home automation devices like smart plugs and smart door locks. These technologies enhance the quality of life by providing convenience, improving energy efficiency, and boosting security. The report shows that households in urban areas had a higher uptake of smart technologies. Nationally, 36.3 per cent of households had an internet connection (either mobile or fixed), and 8.8 per cent had computers. The least adopted smart technologies were smart plugs and smart door locks and garages, at 0.2 per cent and 0.4 per cent, respectively.

Table 3.20: Proportion of Households with Smart Technologies by Type

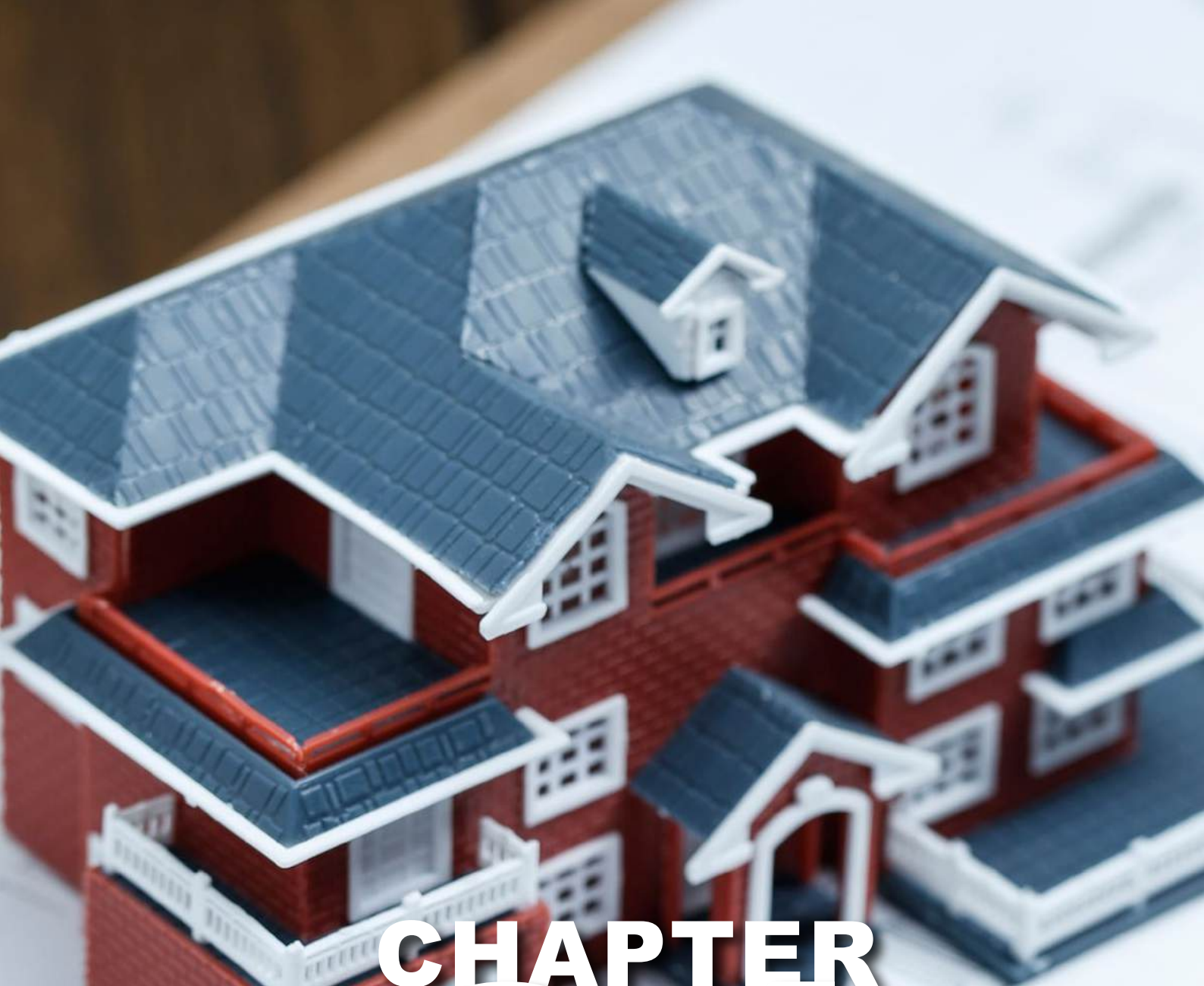
	Kenya	Rural	Urban
Total Internet connection	36.3	25.1	54.1
Fixed internet connection	7.0	0.6	17.3
Mobile Internet connection	34.9	24.9	50.6
Computer	8.8	3.0	17.9
Smart Lighting	1.7	1.3	2.4
Smart security	2.0	0.6	4.2
Smart door locks and garages	0.4	0.2	0.8
Smart plugs	0.2	0.1	0.4
CCTV	3.8	0.8	8.5

Analysis by the uptake of selected smart technologies by type of dwelling structure as shown in Table 3.21 reveals that the uptake of fixed internet (61.3%) was high in flat/apartments followed by bungalows (17.0%). Smart lighting systems were more in bungalow (52.2%), while smart security systems were more in flat/ apartments (46.8%).

Table 3.21: Proportion of Households with Smart Technologies by Type of Dwelling Structure

Type of Dwelling Structure	Fixed internet connection (e.g. Fiber optic cable etc)	Computer/ Tablet/ Laptop	Smart lighting systems	Smart security systems like alarms, cameras, smoke detectors and sensors	Smart door locks and garage door openers
Bungalow	17.0	27.9	52.2	30.2	42.4
Flat / apartment	61.3	40.9	18.4	46.8	23.3
Maisonette	5.7	5.9	9.4	12.1	24.8
Swahili/compound houses sharing facilities	9.2	16.5	17.1	6.0	5.0
Compound houses not sharing facilities	5.7	7.6	1.3	4.3	3.3
Shanty	0.0	0.1	0.0	0.0	0.0
Manyatta/traditional house/hut	0.0	0.3	1.1	0.3	0.0
Townhouse	1.2	0.9	0.4	0.3	1.2





CHAPTER 04



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Home Ownership and Tenancy

Key Findings

✓	51.8	Nationally, bungalows were the predominant type of dwelling units
✓	38.0	Nationally, urban renting households spend a higher proportion of their expenditure on rent
✓	76.5	Proportion of tenants who paid their rent directly to individuals
✓	71.8	Proportion of Kenyan tenants did not have written agreements
✓	87.4	Proportion of tenants reported to have not experienced rent increment in the last five years
✓	76.9	Proportion of tenants were not willing to purchase their current dwelling.
✓	55.5	Proportion of tenants preferring to build to build,
✓	63.1	Dwelling units tenants preferred to build/buy Bungalows at 63.1%
✓	17.1	Nairobi City was the most preferred for tenants seeking home ownership
✓	52.2	52.2% of the respondents prefer to rent because their dwellings are too far from work
✓	8.2	Nationally, 8.2 per cent of tenants have had Rent dispute.
✓	17.9	The Highest cases of rent dispute were reported in Nandi County
✓	84.0	Proportion of tenants who faced threats of eviction who were residing in urban areas.
✓	52.5	Houses acquired through one-off construction
✓	85.5	Proportion of houses which were built in less than one year
✓	19.4	Proportion of architects who were utilized in acquisition of housing

4.1 Introduction

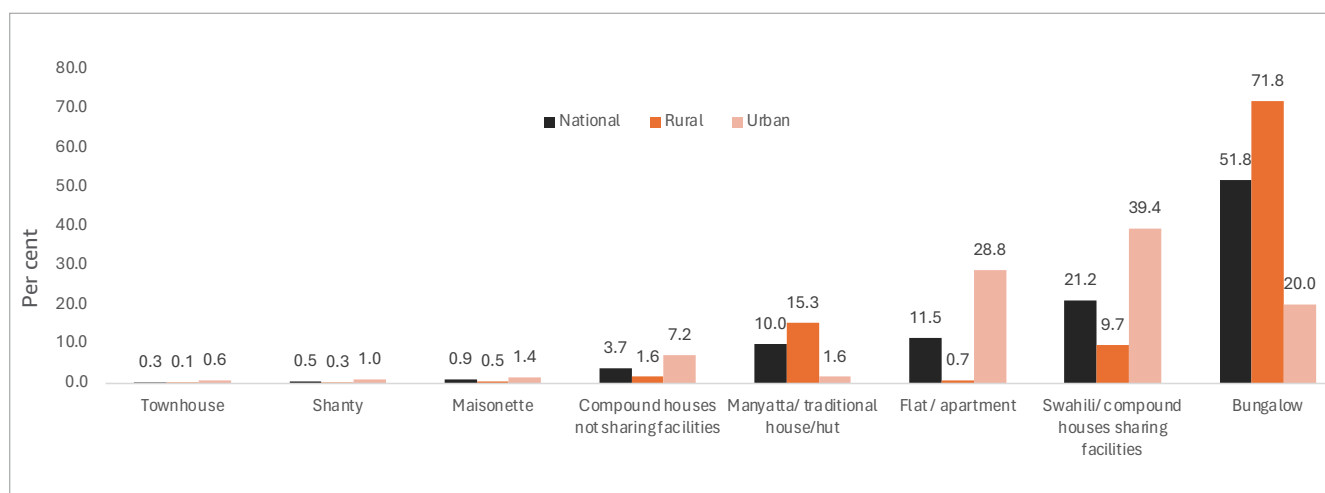
This chapter highlights the evolving housing dynamics, for both homeowners and tenants, which play a critical role in determining the market dynamics of rental and home ownership. For tenants, the discussion covers preferences of tenants, rent costs, rent-to-expenditure ratios, plans to build or buy homes, among others. For homeowners, the chapter highlights the modes of home acquisition, multiple home ownership, factors influencing construction, and the use of building professionals.

The chapter begins by analysing the distribution of dwelling structures in the country, followed by rental patterns across rural and urban areas, highlighting variations within different counties and finally the chapter gives the analysis of home ownership. The term “owners” refers to households who reside in their own houses irrespective of the mode of acquisition whereas “tenants” refers to those who pay rent either directly or indirectly to their landlords.

4.2 Distribution of Dwelling Structures

Bungalows are the predominant type of dwelling units in the country, making up 51.8 per cent of all units, followed by Swahili/compound houses with shared facilities at 21.2 per cent as shown in Figure 4.1.

Figure 4.1 Distribution of Dwelling Structures by Type and Residence



4.3 Tenancy

This section covers various aspects related to tenants in the country. Analysis includes the amount of rent paid, the rent-to-expenditure ratio, tenant preferences, rent disputes, and tenants' plans for home ownership.

4.3.1 Amount of Rent Paid by Tenants

This section looks at the different rents tenants paid, influenced by factors such as the type of housing unit, level of urbanization, available amenities, and location across various counties. It highlights both high-end properties and more affordable housing options, showing

the wide range of rental costs in urban areas. Table 4.1 shows the average rent paid by tenants across counties, dwelling types, and the number of bedrooms in urban areas. In Kajiado, a rent of Ksh 120,000 was recorded for a five-bedroom house. In Nairobi City, households paid Ksh 70,000 for a three-bedroom townhouse and Ksh 65,000 for a three-bedroom bungalow. Among the lowest rents, households in Siaya paid Ksh 1,000 for single-room Swahili/compound houses with shared facilities and no designated bedroom.

Table 4.1: Average Rent by County, Dwelling Type and Number of Bedrooms, Urban

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
Mombasa	Bungalow	1	6,000
		2	10,000
		4	30,000
	Flat / Apartment	0	6,000
		1	9,500
		2	15,000
		3	20,000
	Maisonette	2	18,000
	Swahili/Compound Houses Sharing Facilities	1	4,500
		2	6,000
	Compound Houses Not Sharing Facilities	0	6,500
		1	7,000
		2	7,400
		3	13,000
		4	16,000
	Townhouse	1	15,000
Kwale	Bungalow	1	9,000
		2	7,500
	Swahili/Compound Houses Sharing Facilities	1	4,000
		2	6,300
	Compound Houses Not Sharing Facilities	1	7,000
		2	13,000
	Townhouse	2	12,000
Kilifi	Bungalow	1	6,000
		2	9,000
		4	10,000
	Flat / Apartment	1	8,500
		2	15,000
	Swahili/Compound Houses Sharing Facilities	1	5,000
	Compound Houses Not Sharing Facilities	1	8,000
		2	15,000
Tana River	Flat / Apartment	1	5,000
	Swahili/Compound Houses Sharing Facilities	1	3,500
	Compound Houses Not Sharing Facilities	1	7,000
	Townhouse	1	11,000
Lamu	Bungalow	1	2,500
		2	5,250
	Flat / Apartment	1	5,750
		2	5,000
	Swahili/Compound Houses Sharing Facilities	1	5,500
		2	3,000
	Compound Houses Not Sharing Facilities	1	4,000
		2	6,000
	Townhouse	1	5,250
		2	5,250
Taita-Taveta	Bungalow	1	4,500
	Flat / Apartment	1	6,500
		2	12,000
		3	15,000
	Swahili/Compound Houses Sharing Facilities	1	2,250

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
		3	2,000
	Compound Houses Not Sharing Facilities	1	4,750
		2	6,000
	Townhouse	3	16,500
Garissa		2	6,000
		3	8,750
		4	8,750
	Swahili/Compound Houses Sharing Facilities	1	5,500
		2	6,000
		3	12,000
	Compound Houses Not Sharing Facilities	1	6,000
		2	6,000
		3	8,750
	Townhouse	2	12,000
Wajir	Bungalow	1	5,000
		2	5,000
	Swahili/Compound Houses Sharing Facilities	1	5,000
		2	5,000
Mandera	Bungalow	1	8,000
		3	15,000
	Swahili/Compound Houses Sharing Facilities	1	4,000
		2	5,500
		3	10,000
		4	16,000
	Manyatta/Traditional House/Hut	2	3,500
Marsabit	Bungalow	1	3,500
	Swahili/Compound Houses Sharing Facilities	1	4,000
	Compound Houses Not Sharing Facilities	1	7,000
	Townhouse	2	8,000
Isiolo	Bungalow	1	2,750
		2	8,000
		4	35,000
	Flat / Apartment	1	8,000
		2	12,500
		4	15,000
	Swahili/Compound Houses Sharing Facilities	1	5,750
		2	8,750
	Compound Houses Not Sharing Facilities	1	7,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
Meru	Bungalow	1	7,000
		2	12,500
	Swahili/Compound Houses Sharing Facilities	1	2,500
		2	5,000
	Compound Houses Not Sharing Facilities	1	7,000
		2	11,500
Tharaka-Nithi	Bungalow	2	9,500
	Flat / Apartment	1	6,250
		2	10,000
		3	16,000
	Swahili/Compound Houses Sharing Facilities	1	3,000
		2	3,000
	Compound Houses Not Sharing Facilities	1	4,750
		3	12,000
Embu	Bungalow	1	5,000
		2	5,000
		3	9,000
	Flat / Apartment	1	6,000
		2	8,000
	Swahili/Compound Houses Sharing Facilities	1	3,000
		2	3,750
	Compound Houses Not Sharing Facilities	1	3,750
		2	6,500
Kitui	Bungalow	1	4,500
	Flat / Apartment	1	10,000
		2	13,000
	Swahili/Compound Houses Sharing Facilities	1	4,000
	Compound Houses Not Sharing Facilities	1	5,000
		2	6,250
Machakos	Bungalow	1	6,000
		2	10,000
		3	9,000
	Flat / Apartment	1	5,500
		2	8,000
	Maisonette	4	35,000
	Swahili/Compound Houses Sharing Facilities	1	2,750
		2	3,500

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
	Compound Houses Not Sharing Facilities	1	4,500
Makueni	Bungalow	2	2,000
	Flat / Apartment	1	8,250
	Swahili/Compound Houses Sharing Facilities	1	3,750
		2	4,000
	Compound Houses Not Sharing Facilities	1	6,000
		2	7,000
		3	12,000
Nyandarua	Bungalow	1	2,050
		2	3,500
		4	10,000
	Flat / Apartment	1	4,750
	Swahili/Compound Houses Sharing Facilities	1	3,000
		3	3,700
	Compound Houses Not Sharing Facilities	1	4,500
		2	5,500
	Townhouse	2	8,000
Nyeri	Bungalow	4	42,000
	Flat / Apartment	1	5,000
		2	7,000
	Swahili/Compound Houses Sharing Facilities	1	3,500
	Compound Houses Not Sharing Facilities	1	5,000
		2	8,000
	Townhouse	2	8,500
Kirinyaga	Bungalow	1	5,000
		2	4,000
		3	7,250
	Flat / Apartment	1	7,500
		2	11,000
		3	12,000
	Swahili/Compound Houses Sharing Facilities	1	2,550
		2	3,750
	Compound Houses Not Sharing Facilities	1	5,500
		2	7,000
Murang'a	Bungalow	1	7,550
	Flat / Apartment	1	6,000
		2	7,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
	Swahili/Compound Houses Sharing Facilities	1	3,300
		2	10,300
Kiambu	Bungalow	3	20,000
	Flat / Apartment	1	6,000
		2	14,500
	Swahili/Compound Houses Sharing Facilities	1	3,500
		2	4,000
	Compound Houses Not Sharing Facilities	1	3,400
		2	6,500
Turkana	Swahili/Compound Houses Sharing Facilities	1	4,750
	Compound Houses Not Sharing Facilities	2	8,000
	Townhouse	1	3,000
		2	5,000
West Pokot	Bungalow	1	3,000
		2	5,500
	Swahili/Compound Houses Sharing Facilities	1	3,000
		2	3,500
	Compound Houses Not Sharing Facilities	1	6,000
		2	7,000
		3	6,000
Samburu	Bungalow	1	5,250
		2	5,000
		3	6,250
	Flat / Apartment	1	5,500
	Swahili/Compound Houses Sharing Facilities	0	3,500
		1	4,000
		2	5,250
		3	12,000
	Compound Houses Not Sharing Facilities	1	9,500
	Townhouse	1	3,000
		2	4,500

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
Trans Nzoia	Bungalow	2	6,500
	Flat / Apartment	1	7,000
		2	10,000
	Swahili/ Compound Houses Sharing Facilities	1	3,500
		2	4,000
	Compound Houses Not Sharing Facilities	1	6,500
		3	12,000
	Manyatta/ Traditional House/Hut	1	1,000
		2	2,500
Uasin Gishu	Flat / Apartment	0	4,500
		1	8,000
	Swahili/ Compound Houses Sharing Facilities	0	4,000
		1	5,000
	Compound Houses Not Sharing Facilities	0	4,750
		1	6,000
		2	9,000
Elgeyo-Marakwet	Bungalow	1	4,500
		2	5,000
		3	7,000
	Flat / Apartment	1	4,500
		2	5,000
	Swahili/ Compound Houses Sharing Facilities	1	3,000
		2	3,750
	Compound Houses Not Sharing Facilities	1	5,500
		2	7,500
	Manyatta/ Traditional House/Hut	1	3,500
	Townhouse	1	5,000
		2	5,000
Nandi	Bungalow	1	2,400
		2	8,000
	Swahili/ Compound Houses Sharing Facilities	1	3,500
		2	4,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
	Compound Houses Not Sharing Facilities	1	3,750
		2	8,500
Baringo	Bungalow	1	2,000
		2	8,000
	Flat / Apartment	1	4,550
	Swahili/ Compound Houses Sharing Facilities	1	3,000
		2	4,250
	Compound Houses Not Sharing Facilities	1	1,800
		2	6,500
Laikipia	Bungalow	1	3,000
		2	7,000
		3	20,000
	Flat / Apartment	1	6,000
		2	11,500
	Swahili/ Compound Houses Sharing Facilities	1	3,200
	Compound Houses Not Sharing Facilities	1	6,000
		2	12,500
	Townhouse	2	10,000
		3	30,000
	Flat / Apartment	1	6,000
		2	13,000
		3	14,000
	Swahili/ Compound Houses Sharing Facilities	1	4,500
		2	3,500
	Compound Houses Not Sharing Facilities	1	5,000
		2	5,350
Narok	Swahili/ Compound Houses Sharing Facilities	0	5,000
		1	4,000
		2	8,000
	Compound Houses Not Sharing Facilities	1	8,000
		2	12,000
Kajiado	Bungalow	1	4,500

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
		3	15,000
	Flat / Apartment	0	3,500
		1	8,000
		2	17,500
		3	37,500
	Maisonette	5	120,000
	Swahili/Compound Houses Sharing Facilities	0	3,000
		1	4,500
		2	4,250
		3	9,000
	Compound Houses Not Sharing Facilities	1	6,500
Kericho	Bungalow	1	3,500
	Flat / Apartment	1	5,000
		2	7,500
	Swahili/Compound Houses Sharing Facilities	1	3,700
	Compound Houses Not Sharing Facilities	1	7,000
		2	8,000
Bomet	Bungalow	1	4,000
		2	4,000
	Flat / Apartment	1	4,250
		2	5,000
	Maisonette	1	5,000
	Swahili/Compound Houses Sharing Facilities	1	2,000
		2	4,000
	Compound Houses Not Sharing Facilities	1	4,000
		2	10,000
		4	13,000
Kakamega	Bungalow	1	3,000
		2	6,000
	Flat / Apartment	1	6,500
		2	13,250
	Swahili/Compound Houses Sharing Facilities	1	3,500
		2	4,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
	Compound Houses Not Sharing Facilities	1	5,000
		2	6,500
Vihiga	Flat / Apartment	1	6,000
		2	7,000
	Swahili/Compound Houses Sharing Facilities	1	4,500
		2	5,500
	Compound Houses Not Sharing Facilities	1	6,000
Bungoma		2	4,500
	Flat / Apartment	2	15,000
	Swahili/Compound Houses Sharing Facilities	1	2,500
		2	4,500
		3	10,000
	Compound Houses Not Sharing Facilities	1	5,000
		2	6,000
		2	3,000
		3	4,000
	Flat / Apartment	2	14,000
	Swahili/Compound Houses Sharing Facilities	1	3,000
		2	5,000
	Compound Houses Not Sharing Facilities	1	6,000
		2	9,000
	Manyatta/Traditional House/Hut	1	6,500
Siaya	Bungalow	1	4,200
		2	6,000
		3	7,500
	Flat / Apartment	1	8,500
	Swahili/Compound Houses Sharing Facilities	0	1,000
		1	3,500
		2	5,000
	Compound Houses Not Sharing Facilities	1	5,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
		2	8,000
	Manyatta/ Traditional House/Hut	1	2,000
Kisumu	Bungalow	1	3,000
		2	7,750
	Flat / Apartment	1	8,500
		2	10,000
	Maisonette	2	28,000
		3	32,500
	Swahili/ Compound Houses Sharing Facilities	1	4,000
	Compound Houses Not Sharing Facilities	1	7,000
	Manyatta/ Traditional House/Hut	1	4,000
	Townhouse	1	8,000
		2	24,500
		3	28,000
Homabay	Bungalow	1	3,000
		2	5,500
	Flat / Apartment	1	8,000
		2	16,500
	Swahili/ Compound Houses Sharing Facilities	1	3,000
		2	3,400
	Townhouse	1	8,000
		2	15,000
Migori	Bungalow	3	11,000
	Flat / Apartment	2	15,750
	Swahili/ Compound Houses Sharing Facilities	1	3,000
		2	4,500
	Compound Houses Not Sharing Facilities	1	3,250
	Manyatta/ Traditional House/Hut	1	4,300
	Townhouse	2	5,500
Kisii	Bungalow	2	4,000
	Flat / Apartment	0	3,500
		1	4,250
		2	12,000
		4	15,000

County	Dwelling Type	Number of Bedrooms	Average Urban Rent
	Swahili/ Compound Houses Sharing Facilities	1	3,750
		2	5,000
	Compound Houses Not Sharing Facilities	1	3,500
		2	5,250
Nyamira	Bungalow	2	4,000
	Flat / Apartment	1	6,000
		2	7,750
	Swahili/ Compound Houses Sharing Facilities	0	3,500
		2	3,750
	Compound Houses Not Sharing Facilities	0	3,000
		1	3,250
		2	6,000
	Townhouse	1	2,500
		2	6,500
Nairobi City	Bungalow	1	13,000
		2	18,000
		3	65,000
	Flat / Apartment	0	7,500
		1	8,500
		2	15,000
		4	30,000
		5	38,000
	Maisonette	3	25,000
	Swahili/ Compound Houses Sharing Facilities	0	8,000
		1	6,000
		2	9,000
	Compound Houses Not Sharing Facilities	0	7,750
		1	9,000
		2	10,000
		3	8,500
	Shanty	1	2,500
	Townhouse	3	70,000
		2	4,500

4.3.1.1 Rent to Household Expenditure

The proportion of household expenditure on housing to total household expenditure shows that nationally, urban renting households spend a higher proportion

of their expenditure on rent compared to rural renting households at 38.0 per cent and 29.6 per cent respectively, as shown in Table 4.2.

Table 4.2: Proportion of Rent to Household Expenditure, 2024

County	Residence		
	Rural	Urban	Total
Kenya	29.6	38.0	36.9
Mombasa	0.0	34.6	34.6
Kwale	27.8	27.3	27.4
Kilifi	17.0	35.4	34.3
Tana River	20.5	22.7	22.3
Lamu	24.1	31.3	29.9
Taita-Taveta	25.3	34.0	31.5
Garissa	15.0	35.9	35.5
Wajir	73.9	32.5	38.9
Mandera	16.4	29.2	28.2
Marsabit	50.3	41.4	42.0
Isiolo	0.0	32.6	32.6
Meru	23.7	35.2	31.8
Tharaka-Nithi	27.4	38.2	35.5
Embu	30.3	36.8	35.8
Kitui	33.8	33.7	33.8
Machakos	29.5	34.9	34.6
Makueni	19.1	27.5	27.1
Nyandarua	36.0	51.7	46.8
Nyeri	30.9	40.8	38.2
Kirinyaga	27.7	29.5	29.2
Murang'a	23.4	50.3	39.8
Kiambu	29.9	36.1	34.9
Turkana	21.7	28.0	27.7

County	Residence		
	Rural	Urban	Total
West Pokot	45.3	47.1	46.9
Samburu	37.4	33.7	34.1
Trans Nzoia	43.5	43.7	43.7
Uasin Gishu	24.5	39.8	38.5
Elgeyo-Marakwet	21.6	31.6	29.4
Nandi	28.5	38.4	36.5
Baringo	10.6	26.3	25.8
Laikipia	28.7	35.1	33.8
Nakuru	24.5	34.6	33.3
Narok	19.7	48.0	43.2
Kajiado	41.5	67.4	64.7
Kericho	59.1	52.8	53.2
Bomet	30.6	33.9	33.6
Kakamega	38.9	42.5	42.0
Vihiga	31.7	33.8	33.4
Bungoma	43.4	42.5	42.8
Busia	26.1	36.9	35.4
Siaya	40.5	33.8	34.4
Kisumu	21.0	44.7	43.9
Homabay	12.7	26.1	24.7
Migori	14.9	25.4	24.5
Kisii	43.4	56.1	54.6
Nyamira	27.7	44.6	41.4
Nairobi City	0.0	38.0	38.0



4.3.2 Rent Collection Entities

The entity or organization to whom rent is paid can significantly impact various aspects of their renting experience such as: regulations, affordability, flexibility of the lease agreement, ethical guidelines, among others as presented in Figure 4.2.

Analysis shows that 76.5 per cent of tenants paid their rent directly to individuals, while 19.3 per cent paid individuals through agents, and 0.9 per cent paid their rent to private companies directly. Table 4.5 shows the rent collection entities by county.

Figure 4.2 Rent Collection Entities

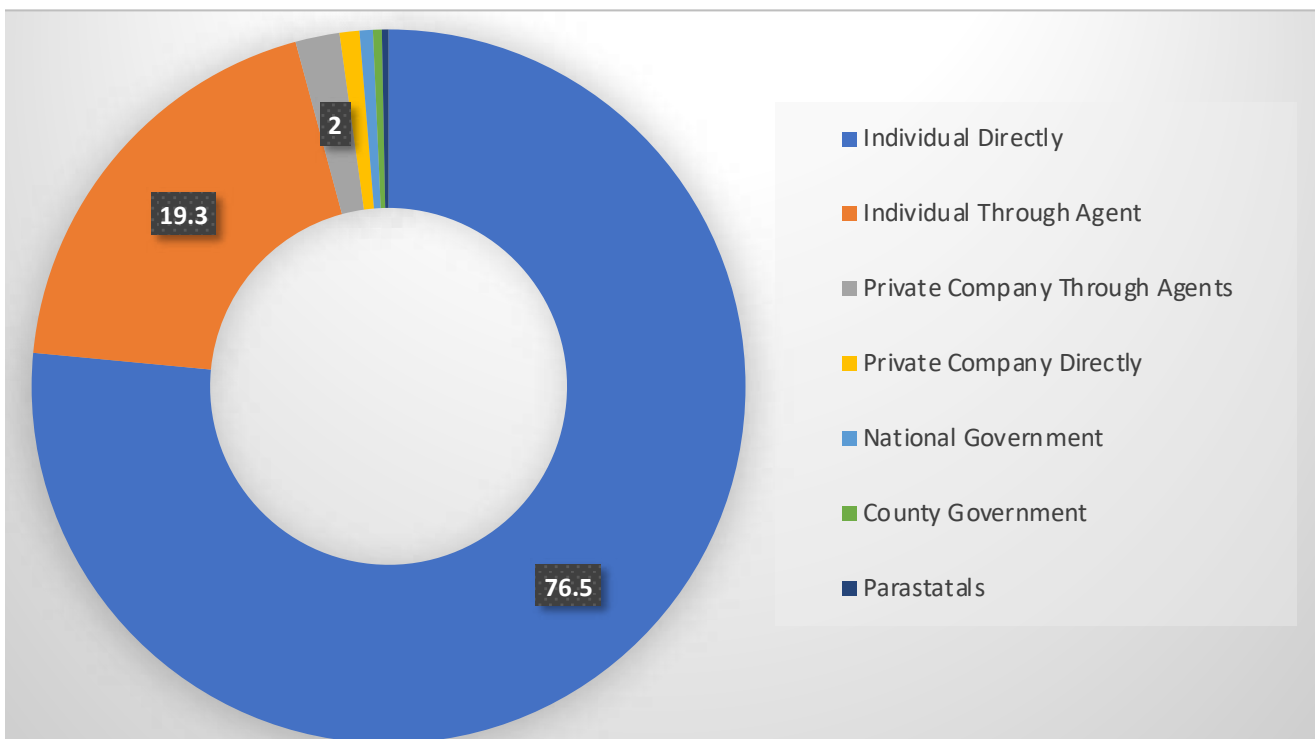


Table 4.3: Rent Collection Entities by County

County	Government	Private Company	Individual directly	Individual through Agent	Faith Based Organization
	%	%	%	%	%
Mombasa	0.0	2.6	70.0	27.5	0.0
Kwale	0.0	6.6	81.2	12.2	0.0
Kilifi	0.8	1.2	93.4	4.6	0.0
Tana River	0.0	0.8	96.9	2.3	0.0
Lamu	2.6	1.4	94.9	1.1	0.0
Taita-Taveta	11.4	0.0	83.0	5.6	0.0
Garissa	5.0	3.4	90.6	1.0	0.0
Wajir	0.0	7.2	64.2	28.6	0.0
Mandera	0.0	0.0	90.9	9.1	0.0
Marsabit	0.0	0.0	93.5	6.5	0.0
Isiolo	0.0	12.8	75.8	11.5	0.0
Meru	0.0	3.1	94.4	2.6	0.0
Tharaka-Nithi	0.0	0.0	93.0	7.0	0.0
Embu	10.7	2.7	82.6	3.5	0.5
Kitui	1.9	0.1	96.6	1.3	0.2
Machakos	5.6	1.0	70.7	22.7	0.0
Makueni	0.0	0.0	90.0	10.0	0.0
Nyandarua	0.0	4.0	85.8	10.0	0.3
Nyeri	0.8	0.9	84.3	13.2	0.8
Kirinyaga	0.0	1.5	87.4	11.1	0.0
Murang'a	0.0	0.0	95.8	3.6	0.6
Kiambu	4.3	0.3	77.0	18.3	0.0
Turkana	0.0	0.0	95.2	4.8	0.0
West Pokot	0.0	4.1	88.1	7.8	0.0
Samburu	0.0	0.0	84.6	15.4	0.0
Trans Nzoia	0.0	0.0	93.9	6.1	0.0
Uasin Gishu	0.0	2.9	71.3	25.9	0.0
Elgeyo-Marakwet	0.0	0.8	97.0	2.2	0.0
Nandi	0.0	0.7	94.8	4.5	0.0
Baringo	0.0	1.0	71.8	27.2	0.0
Laikipia	0.3	2.5	61.2	36.0	0.0
Nakuru	0.0	0.7	64.2	35.1	0.0
Narok	0.0	0.2	92.5	7.3	0.0
Kajiado	0.0	3.9	66.9	29.2	0.0
Kericho	2.5	2.6	83.0	11.9	0.0
Bomet	4.0	13.4	80.5	2.1	0.0
Kakamega	0.0	0.6	85.5	13.8	0.0
Vihiga	1.5	0.0	91.6	6.9	0.0
Bungoma	0.0	0.6	88.3	11.1	0.0
Busia	6.6	0.0	90.2	3.2	0.0
Siaya	3.0	2.9	70.8	23.3	0.0
Kisumu	0.0	4.7	86.6	8.7	0.0
Homabay	0.0	2.2	84.5	12.1	1.1
Migori	9.1	2.4	82.4	6.1	0.0
Kisii	0.0	0.0	93.2	6.8	0.0
Nyamira	0.0	1.6	89.7	8.7	0.0
Nairobi City	1.0	5.3	69.8	24.0	0.0

4.3.3 Tenancy Agreements with Landlords

Rent agreements are vital in fostering a transparent, fair, and legally protected relationship between landlords and tenants. The most basic purpose of the rent agreement is to outline the terms of the lease, including the monthly rent, maintenance and repairs of the house, security deposit on the rental, when the rent is due, among others.

Figure 4.3 and Table 4.4 present information on how many tenants in Kenya had written agreements with their landlords. Overall, 71.8 per cent of Kenyan tenants did not have written agreements, whereas only 28.2 per cent had written rent agreements. The counties of Kajiado (69.4%), Taita Taveta (50.2%), and Nairobi City (40.5%) had the highest proportion of tenants with written rent agreements. Conversely, none of the households in Mandera county had a written rent agreement.

Figure 4.3: Proportion of Tenants with Written Rent Agreements

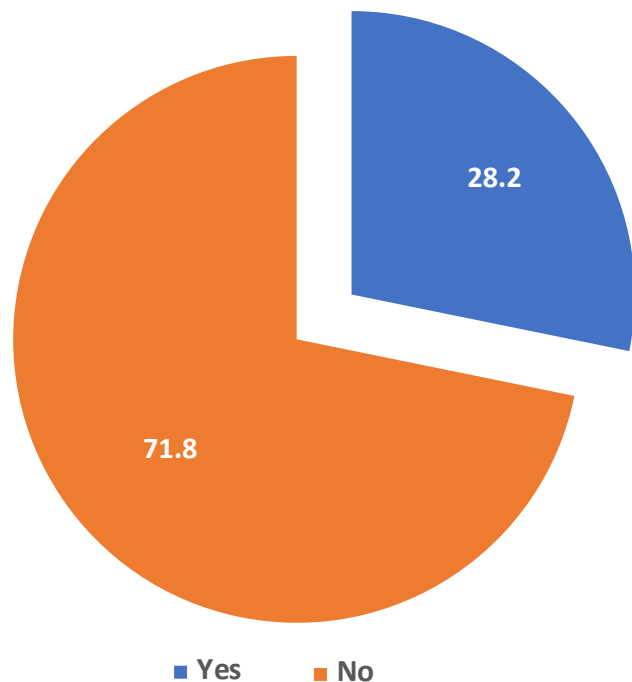


Table 4.4: Proportion of Tenants with Written Rent Agreements by County

	Per Cent
Kenya	28.2
Mombasa	23.4
Kwale	13.5
Kilifi	6.9
Tana River	3.7
Lamu	27.1
Taita-Taveta	50.2
Garissa	24.6
Wajir	39.4
Mandera	0.0
Marsabit	16.4
Isiolo	16.4
Meru	8.6
Tharaka-Nithi	12.6
Embu	24.8
Kitui	10.0
Machakos	18.1
Makueni	14.6
Nyandarua	22.0
Nyeri	21.6
Kirinyaga	22.1
Murang'a	9.2
Kiambu	37.7
Turkana	11.6
West Pokot	12.0
Samburu	7.7
Trans Nzoia	40.5
Uasin Gishu	29.3
Elgeyo-Marakwet	8.0
Nandi	18.5
Baringo	11.9
Laikipia	26.4
Nakuru	27.8
Narok	6.9
Kajiado	69.4
Kericho	15.4
Bomet	20.6
Kakamega	17.1
Vihiga	18.8
Bungoma	6.9
Busia	11.7
Siaya	8.2
Kisumu	24.8
Homabay	27.9
Migori	20.9
Kisii	12.7
Nyamira	19.0
Nairobi City	33.9

4.3.4 Rent Increments in the Last 5 Years

Information on rent increments provide insights into the performance of the housing market and economic conditions that affect housing affordability. Rent increments often reflect increases in the cost of living, including inflation rates and rising property taxes or maintenance costs. In addition, rent increases can indicate strong demand for housing in a particular area driven by factors such as population growth, job opportunities, or desirable amenities.

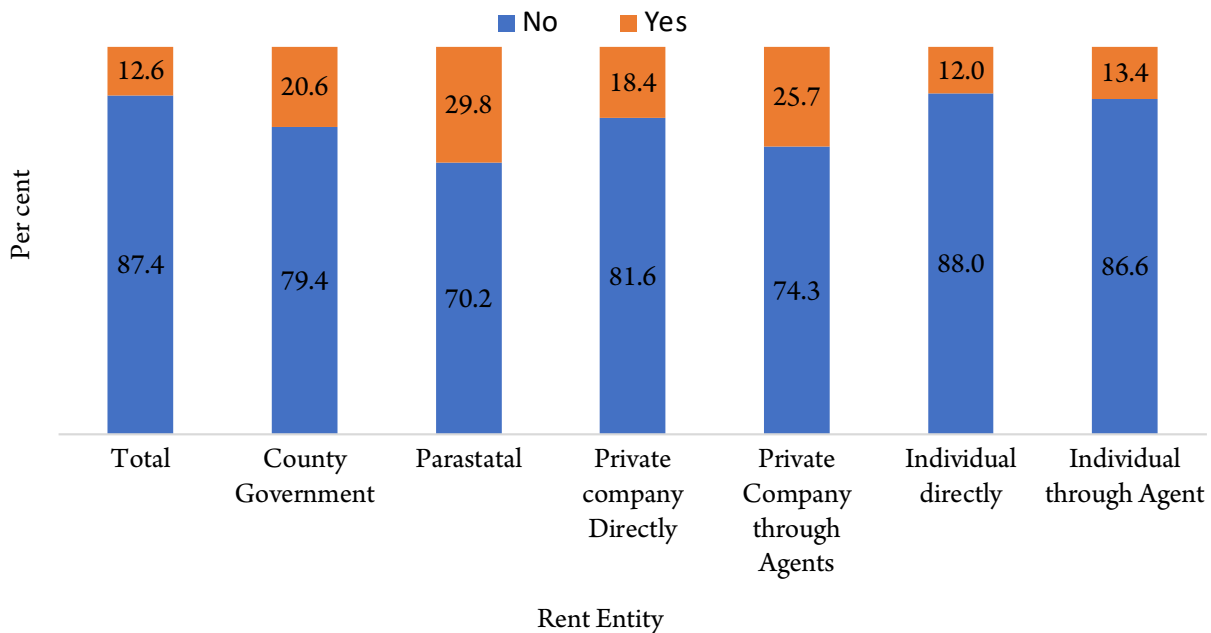
Figure 4.4 shows the per centage of tenants who had experienced rent increment from 2019 to 2023. Over the 5-year period, 87.4 per cent of tenants reported to have not experienced rent increment, whereas 12.6 per cent had experienced rent increment.

Tenants who paid rent to government entities and faith-based organization did not report rent increment. However, 13.4 per cent of those who paid rent to individuals through agents, and 12.0 per cent of those who paid to individuals directly, reported to have experienced rent increment.



Over the 5-year period, 87.4 per cent of tenants reported to have not experienced rent increment, whereas 12.6 per cent had experienced rent increment.

Figure 4.4: Per centage of Tenants Who Reported Rent Increment from 2019 to 2023

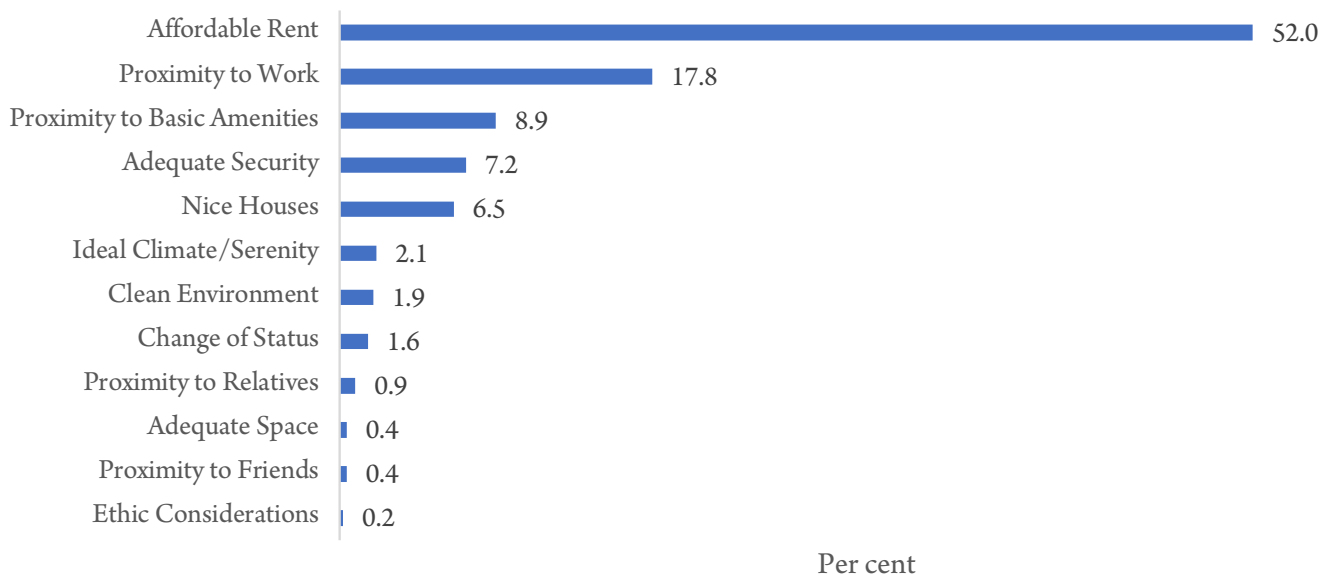


4.3.5 Factors Influencing Tenants' Choice of Neighbourhood

Factors influencing tenant's choice of neighborhood provide valuable insights to urban planners, real estate developers, and policymakers. These insights enable them to formulate policies and develop projects that align with the needs and preferences of the population.

As shown in Figure 4.5 more than half (52%) of the tenants cited affordability of rent as the main factor influencing their choice of the neighborhood. The second most cited factor, reported by 17.8 per cent of households was proximity to work.

Figure 4.5: Factors Influencing Tenants' Choice of Neighborhood



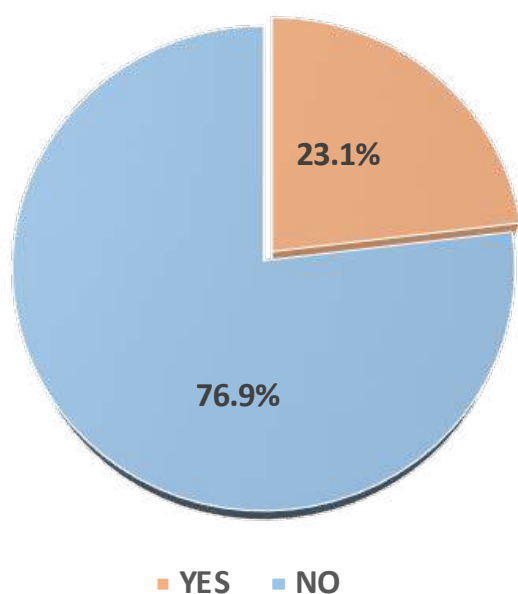
4.3.6 Preferences of Tenants

This section outlines tenants' preferences regarding various aspects of housing, including their interest in purchasing a home, desired locations for housing units, preferred types of housing, the ideal number of bedrooms, and whether they favor renting over owning their own home.

4.3.6.1 Tenants Willingness to Purchase Current Dwelling Unit

Assessing tenants' willingness to purchase the dwelling units they reside is critical in understanding their home ownership aspirations. Figure 4.6 shows that 76.9 per cent of tenants were not willing to purchase their current dwelling.

Figure 4.6: Proportion of Tenants Willing to Purchase Current Dwelling Unit



4.3.6.2 Tenants' Preferences to Build or Buy Own Dwelling Unit

Figure 4.7 presents the preference of tenants to build or buy own dwelling unit. More than half of the tenants at 55.5 per cent preferred to build, while 12.5 per cent preferred to buy, and 32.0 per cent of the tenants neither wanted to build or buy.

Figure 4.7: Proportion of Tenants Preferring to Build or Buy Own Dwelling Unit

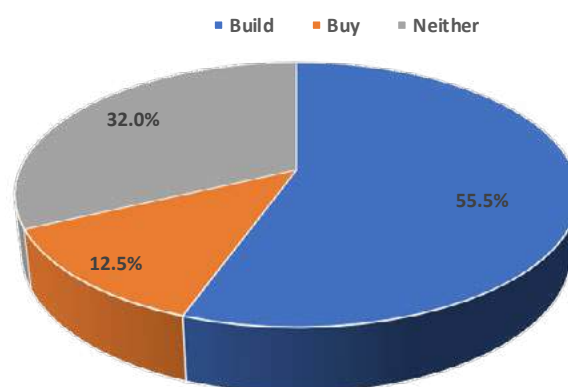


Table 4.5 presents an analysis of the type of dwelling unit tenants who prefer to build or buy for their own home. The most preferred dwelling types were Bungalows (63.1%) and Maisonnettes (23.0%).

Table 4.5: Dwelling Units Tenants Prefer to Build/Buy

Type of Dwelling	%
Bungalow	63.1
Maisonnette	23.0
Flat / Apartment	9.5
Swahili/Compound Houses Sharing Facilities	1.7
Compound Houses Not Sharing Facilities	1.7
Townhouse	0.7
Manyatta/Traditional House/Hut	0.2
Shanty	0.0
Other	0.0
Total	100

Table 4.7 presents the preferred number of bedrooms for tenants planning to build/buy. The 3-bedroom house (38.9%), 2-bedroom house (24.6%), and 4-bedroom house (19.4%) were the most preferred, while 4.1 per cent preferred a house that has 6 or more bedrooms.

Table 4.6: Number of Bedrooms Tenants Prefer to Build/Buy

Number of Bedrooms	%
3	38.9
2	24.6
4	19.4
5	8.1
1	4.7
6+	4.1

4.3.6.3 Type of Rental Units Preferred by Tenants

Table 4.7 presents preferred type of rental units for tenants. Flats/apartments (56.3%) were the most preferred type of dwelling unit among tenants followed by bungalows (20.8%). Townhouses (0.3%) were the least popular type of dwelling units.

Table 4.7: Dwelling Unit Tenants Prefer to Rent

Preferred Dwelling Unit	%
Flat/Apartment	56.3
Bungalow	20.8
Compound Houses Not sharing facilities	11.5
Swahili/Compound House Sharing Facilities	5.8
Maisonnette	4.8
Manyatta/Traditional House	0.5
Townhouse	0.3
Others	0.1

Table 4.8 presents the number of rooms tenants prefer to rent with a majority preferring a 2-bedroom house (33.9%) and one-bedroom house (31.4%).

Table 4.8: Number of Bedrooms Tenants Prefer to Rent

Number of Rooms	Per centage
2 bedroom	33.9
1 bedroom	31.4
3 bedroom	15.7
Studio	7.0
More than 3 bedroom	4.8
2 rooms	3.8
1 room	2.8
More than 3 rooms	0.5
3 rooms	0.2

4.3.6.4 Counties of Preference for Tenants Seeking Home Ownership

Table 4.9 shows counties of preference for tenants seeking home ownership. Nairobi City was the most preferred county at 17.1 per cent followed by Kiambu and Nakuru at 8.6 per cent and 6.6 per cent, respectively.

Table 4.9: Counties of Preference for Tenants Seeking Home Ownership

County	%	County	%
Mombasa	4.6	Trans Nzoia	2.4
Kwale	1.1	Uasin Gishu	3.6
Kilifi	2.4	Elgeyo-Marakwet	0.2
Tana River	0.3	Nandi	0.8
Lamu	0.1	Baringo	0.5
Taita-Taveta	0.9	Laikipia	1.7
Garissa	0.4	Nakuru	6.6
Wajir	0.1	Narok	0.9
Mandera	0.2	Kajiado	4.0
Marsabit	0.2	Kericho	0.6
Isiolo	0.4	Bomet	0.5
Meru	3.1	Kakamega	3.4
Tharaka-Nithi	0.7	Vihiga	1.7
Embu	1.3	Bungoma	2.4
Kitui	1.8	Busia	1.2
Machakos	5.1	Siaya	2.9
Makueni	1.8	Kisumu	3.1
Nyandarua	1.4	Homabay	1.5
Nyeri	1.6	Migori	1.3
Kirinyaga	1.3	Kisii	2.3
Murang'a	2.1	Nyamira	0.6
Kiambu	8.6	Nairobi City	17.1
Turkana	0.3	Total	100.0
West Pokot	0.2		
Samburu	0.6		

**17.1%**

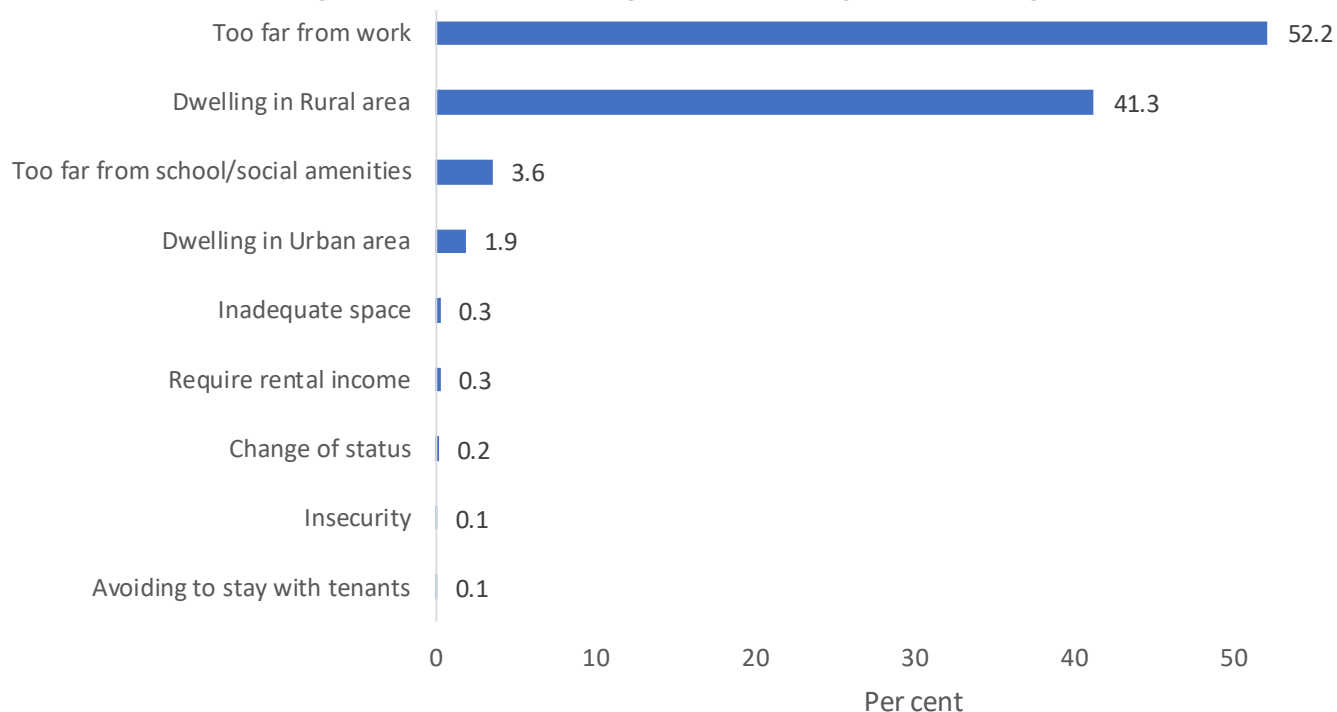
Nairobi City is the most preferred county by tenants seeking home ownership.

4.3.6.5 Reasons for Renting Instead of Residing in Own Dwelling

Some tenants own dwelling units but do not reside in them regularly. Figure 4.8 presents the reasons why tenants who owned dwelling units opted to rent instead of residing in their own dwelling. Slightly more than half

(52.2%) of the respondents preferred to rent because their dwellings were too far from work, while 41.3 per cent preferred to rent because their dwellings were in rural areas.

Figure 4.8: Reasons for Renting Instead of Residing in Own Dwelling

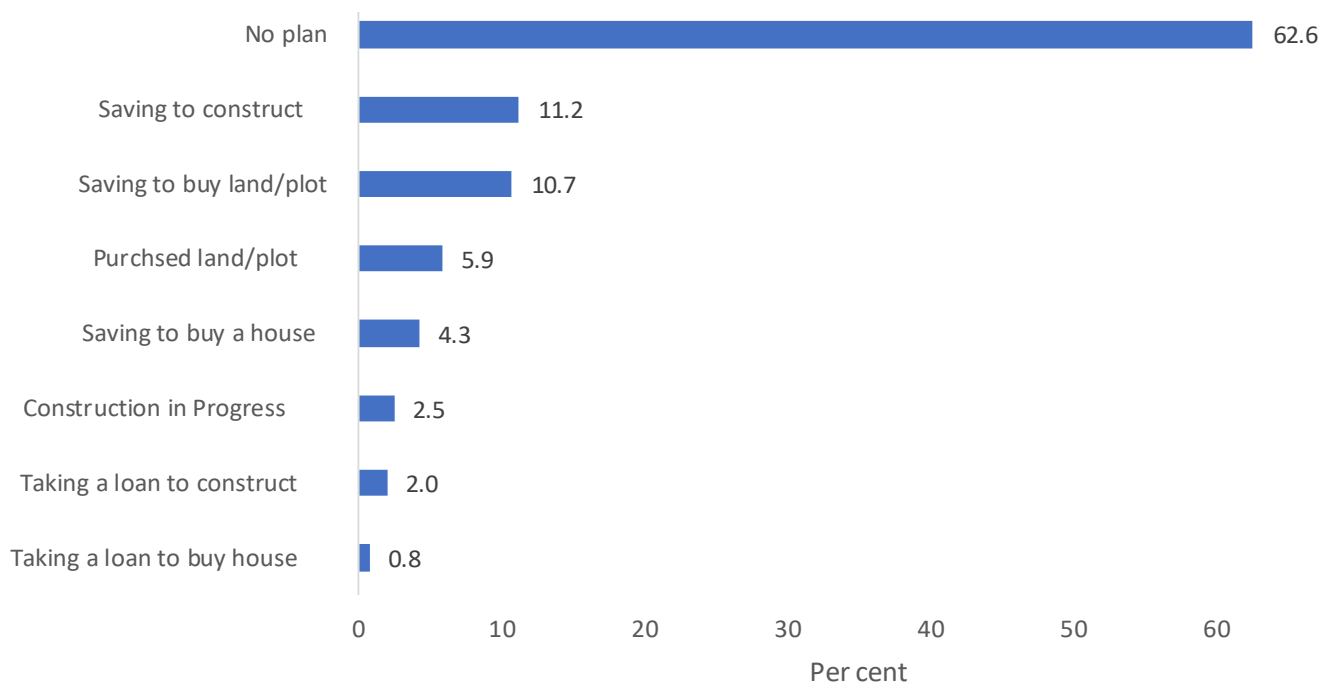


4.3.7 Plans Made by Tenants Towards Home Ownership

Figure 4.9 shows that 62.6 per cent of tenants who wanted to own homes had not made plans towards home ownership. However, 11.2 per cent were saving to construct a house, while 10.7 per cent were saving to buy land.



Figure 4.9: Plans Made by Tenants Towards Home Ownership



4.3.8 Rental Disputes and Awareness of the Rent Restriction Tribunal by Tenants

Rental disputes refer to issues arising from non-payment of rent, rent increment, eviction procedures, and the conditions of the rental property. To address these disputes, the government established a Rent Restriction Tribunal to manage and handle disputes arising between tenants and landlords. This section highlights the proportion of tenants who have had disputes with their landlords and their awareness of the existence of the tribunal.

Table 4.10 presents the proportion of tenants who have ever had a rent dispute with their landlords by county.

Nationally, 8.2 per cent of tenants have had a rent dispute with their landlord with the highest proportion in Nandi County at 17.9 per cent followed by Meru, Migori, and Nyandarua at 14.2 per cent, 13.7 per cent, and 12.9 per cent respectively. Out of the tenants who reported having had rental dispute, 12.6 per cent of tenants were aware of the Rent Restriction Tribunal. The counties with the highest proportion of Tenants who are aware of the Rent Restriction Tribunal are Mandera, Laikipia, and Kilifi counties at 86.6, 52.1, and 40.1 per cent, respectively.



Nationally, 8.2 per cent of tenants have had a rent dispute with their landlord and out of these, 12.6 per cent were aware of Rent Restriction Tribunal.

Table 4.10: Proportion of Tenants with Rent Disputes and Awareness of the Rent Restriction Tribunal by County

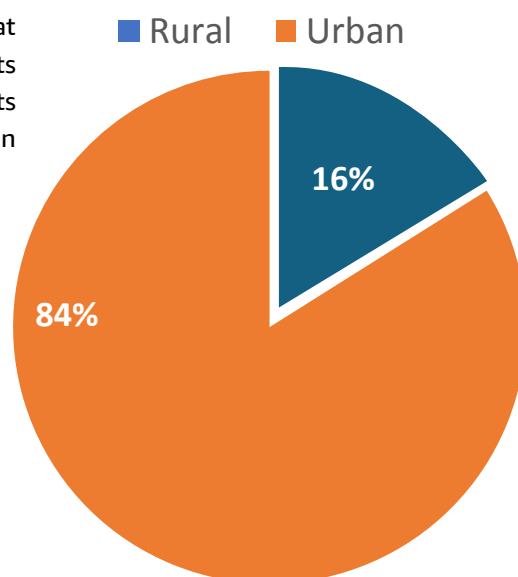
County	Ever had rental dispute	Aware of Rent Restriction Tribunal
Kenya	8.2	12.6
Mombasa	9.3	9.3
Kwale	3.9	0.0
Kilifi	2.5	40.1
Tana River	4.8	0.0
Lamu	0.0	0.0
Taita-Taveta	9.3	33.0
Garissa	1.6	0.0
Wajir	0.0	0.0
Mandera	4.3	86.6
Marsabit	10.2	0.0
Isiolo	8.7	0.0
Meru	14.2	28.3
Tharaka-Nithi	2.7	10.9
Embu	2.7	0.0
Kitui	5.0	0.0
Machakos	4.9	15.5
Makueni	5.9	0.0
Nyandarua	12.9	9.7
Nyeri	6.0	7.3
Kirinyaga	8.3	9.3
Murang'a	5.1	0.0
Kiambu	8.8	19.7
Turkana	2.1	0.0

County	Ever had rental dispute	Aware of Rent Restriction Tribunal
West Pokot	7.9	2.7
Samburu	6.3	24.8
Trans Nzoia	6.5	19.1
Uasin Gishu	8.4	4.6
Elgeyo-Marakwet	4.5	15.8
Nandi	17.9	4.7
Baringo	5.1	19.8
Laikipia	6.0	52.1
Nakuru	8.2	15.3
Narok	1.8	0.0
Kajiado	3.4	0.0
Kericho	5.6	0.0
Bomet	1.7	0.0
Kakamega	2.1	30.4
Vihiga	0.0	0.0
Bungoma	0.4	0.0
Busia	2.3	0.0
Siaya	7.9	0.0
Kisumu	7.7	32.2
Homabay	6.6	0.0
Migori	13.7	21.6
Kisii	1.8	11.1
Nyamira	1.2	0.0
Nairobi City	11.1	9.7

4.3.9 Eviction Threats

Figure 4.10 shows that the majority of tenants (84%) who faced threats of eviction were residing in urban areas.

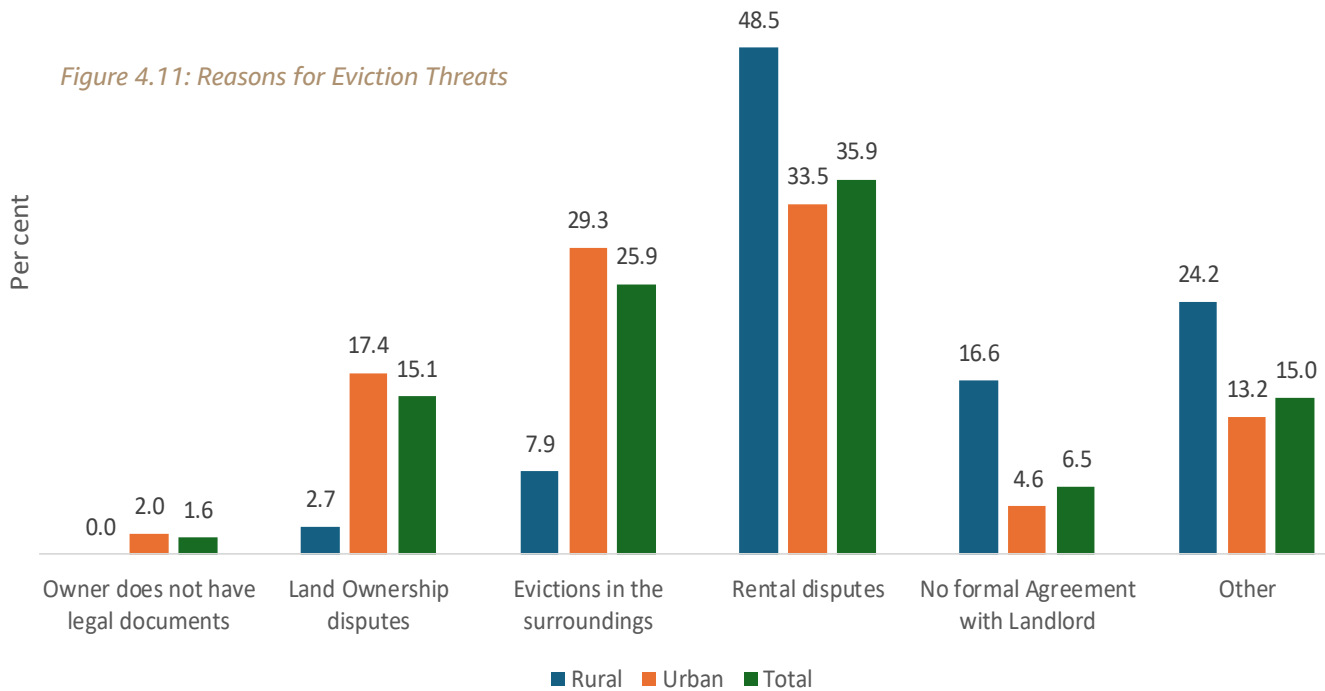
Figure 4.10: Threats of Eviction



4.3.9.1 Reasons for Eviction Threats

Figure 4.11 presents the various reasons for eviction threats, by residence, as cited by tenants. Nationally, rent dispute was cited as the most common reason with for eviction threats (35.9%), with rural and urban residence reporting 48.5 per cent and 33.5 per cent, respectively.

Figure 4.11: Reasons for Eviction Threats



4.3.10 Demolitions in the Neighborhood in the Last 5 Years

Figure 4.12 shows the occurrence of demolitions in the last 5 years. About 6.1 per cent of tenants experienced demolitions in their neighbourhood in the last five years.

Figure 4.12 Demolitions in the Neighbourhood in the Last 5 Years



4.4 Home Owners

Ownership of residential property can be in various forms, such as single ownership, joint ownership, or through entities like corporations or trusts. Owners have the right to use, sell, lease, or transfer the property, and they are responsible for its upkeep and any associated costs, such as property taxes and maintenance. This section highlights the dynamics of home ownership in the country including mode of home acquisition, financing, sources of financing, construction of homes, use of Built Environment Professionals, among others.

4.4.1. Mode of Home Acquisition

Nationally, more than half (52.8%) of the houses were acquired through one-off construction, while 27.0 per cent were constructed incrementally. Only 2.5 per cent of the homes were purchased as shown in Table 4.11.

4.4.2 Mode of Financing Home Acquisition

Table 4.12 shows the modes of financing acquisition of homes. Nationally, 91.4 per cent of home acquisitions were financed through cash/savings, while 5.5 per cent through loans. Uptake of mortgage was low across the country with less than one per cent of households reporting to have acquired their homes through mortgages.

4.4.3 Sources of Financing

Table 4.13 shows the sources of financing used by households towards home purchase or construction. Commercial Banks provided financing to majority of the households (38.7%), while Cooperatives/SACCOs were reported to have provided financing to 34.1 per cent of households. Self-help group/chama and employer schemes provided financing for purchasing/constructing houses to 15.0 per cent and 5.5 per cent of the households, respectively.



Table 4.11: Modes of Home Acquisition by County

	Purchased	Constructed One-Off	Constructed Incremental	Inherited	Gift	Bartered	From the Government	squatting	Total
	%	%	%	%	%	%	%	%	
Kenya	2.5	52.8	27	13.2	4.2	0.2	0.1	0	8,503,898
County									
Mombasa	4.7	29.3	46.8	19.2	0	0	0	0	95,292
Kwale	2.2	51.7	33.7	10.5	1.5	0	0	0.5	132,836
Kilifi	1.7	37.9	47.7	7	5.8	0	0	0	278,424
Tana River	0.8	47.3	6.8	36.4	8.6	0	0	0	52,648
Lamu	11.9	22	13.9	40.3	7.2	4.1	0.6	0	17,913
Taita-Taveta	0	47.9	39.3	9.3	3.5	0	0	0	65,589
Garissa	4.4	30.6	0	57.9	7.1	0	0	0	133,365
Wajir	2.7	16.6	0	47.1	32.8	0.7	0	0.1	135,953
Mandera	11.7	27.4	14.1	23.4	22.5	0.9	0	0	101,907
Marsabit	0.5	81.6	0.9	11.8	5.2	0	0	0	75,685
Isiolo	11	65.4	0.2	11.5	9.7	0.2	0	2	46,556
Meru	3.5	22.3	53.5	20.3	0.4	0	0	0	357,909
Tharaka-Nithi	0.1	36.5	54.1	3.9	5.5	0	0	0	97,765
Embu	1.7	62	13.6	21.4	1.3	0	0	0	157,064
Kitui	0	79.6	13.5	3.2	3.7	0	0	0	182,075
Machakos	0.5	51.7	36.4	8.9	2.5	0	0	0	296,884
Makueni	1.2	55.6	26.4	16.6	0.3	0	0	0	218,862
Nyandarua	15.1	48.8	13.8	14.8	6.9	0.5	0	0	122,427
Nyeri	0.4	57.1	20.1	14.2	8.1	0	0	0	152,147
Kirinyaga	1.3	29	40.1	26.1	3.5	0	0	0	154,059
Murang'a	0	48.5	44.9	1.4	5.2	0	0	0	301,283
Kiambu	2.9	41.7	27.7	24.6	2.7	0	0.4	0	446,620
Turkana	0.4	89	2.8	2.3	3.1	0	2.4	0	190,365
West Pokot	3.1	53.1	5.3	31.9	3.8	2.9	0	0	165,015
Samburu	0.1	93.5	3.6	1	1.8	0	0	0	71,350
Trans Nzoia	3.4	51	43.7	1.7	0.2	0	0	0	180,697
Uasin Gishu	3.6	72.1	15.9	5.4	3	0	0	0	175,284
Elgeyo-Marakwet	1	71.8	6.5	12.8	7.9	0	0	0	93,839
Nandi	1.1	42.2	50.3	5.9	0	0.5	0	0	174,117
Baringo	1.3	43.6	38.2	6.4	10.3	0.2	0	0	135,314
Laikipia	1	47.2	38.4	11.5	1.5	0.5	0	0	80,358
Nakuru	4.4	55.3	28.8	7.5	3.7	0	0	0.2	348,276
Narok	2.8	82.3	1.1	12.2	1.6	0	0	0	189,170
Kajiado	5.5	45.6	9.3	36.3	3.3	0	0	0	152,568
Kericho	1.1	32.5	46.8	18.3	1.3	0	0	0	193,003
Bomet	0.5	89.7	3.2	5	1.5	0	0	0	191,584
Kakamega	0.4	76.1	13.2	6.6	2.9	0.9	0	0	381,957
Vihiga	0.7	51.7	24.8	12.8	10	0	0	0	148,481
Bungoma	0.6	49.8	37.8	4.8	7	0	0	0	372,429
Busia	1.6	33.4	35.9	28.6	0.5	0	0	0	177,742
Siaya	0	60	39.4	0.6	0	0	0	0	210,185
Kisumu	2.7	51.8	21.8	22.5	1.2	0	0	0	213,435
Homabay	0.1	83.6	11.8	1.6	2.8	0	0	0.1	229,776
Migori	0	53.3	41.9	2	2.8	0	0	0	220,319
Kisii	0	59	28	7.2	5.8	0	0	0	302,057
Nyamira	1	58.6	16	15.4	8.9	0.1	0	0	155,409
Nairobi City	34.8	19.9	31.8	10.9	2.5	0	0	0	127,901

Table 4.12: Modes of Financing Homes Acquisition by County

	Cash / Savings	Loan	Mortgage	Donation from relatives/friends/NGO	No cost	Total
	%	%	%	%	%	
Kenya	91.4	5.5	0.2	1.2	1.6	6,961,563
County						
Mombasa	76.6	21.9	1.5	0.0	0.0	77,012
Kwale	94.6	4.9	0.0	0.5	0.0	116,313
Kilifi	92.5	6.1	0.0	1.4	0.0	242,852
Tana River	92.6	1.9	0.4	5.1	0.0	28,923
Lamu	90.0	3.5	0.0	0.0	6.5	8,567
Taita-Taveta	92.6	7.4	0.0	0.0	0.0	57,203
Garissa	100.0	0.0	0.0	0.0	0.0	46,330
Wajir	80.2	0.0	0.0	0.0	19.8	26,250
Mandera	96.9	0.0	0.0	2.5	0.6	54,012
Marsabit	98.2	0.5	0.0	1.2	0.2	62,774
Isiolo	92.3	1.1	0.0	0.0	6.6	35,649
Meru	96.4	3.6	0.0	0.0	0.0	283,833
Tharaka-Nithi	91.8	8.2	0.0	0.0	0.0	88,630
Embu	92.2	7.8	0.0	0.0	0.0	121,410
Kitui	95.8	1.4	0.0	2.7	0.0	168,492
Machakos	93.3	6.6	0.2	0.0	0.0	263,158
Makueni	97.5	2.5	0.0	0.0	0.0	181,869
Nyandarua	91.9	7.4	0.7	0.0	0.0	95,143
Nyeri	87.0	12.4	0.0	0.6	0.0	118,213
Kirinyaga	92.4	5.9	0.6	1.1	0.0	108,569
Murang'a	81.0	16.6	0.4	2.0	0.0	281,440
Kiambu	83.2	16.8	0.0	0.0	0.0	322,670
Turkana	37.2	2.4	0.0	10.4	50.0	154,105
West Pokot	99.3	0.7	0.0	0.0	0.0	101,380
Samburu	67.6	7.3	0.1	0.1	24.8	68,613
Trans Nzoia	96.7	3.3	0.0	0.0	0.0	177,230
Uasin Gishu	96.9	2.6	0.5	0.0	0.0	160,565
Elgeyo-Marakwet	94.8	5.1	0.1	0.0	0.0	74,351
Nandi	94.3	5.2	0.0	0.5	0.0	163,040
Baringo	91.3	7.6	0.0	1.1	0.0	111,787
Laikipia	86.2	9.3	0.0	4.5	0.0	67,992
Nakuru	92.2	7.8	0.0	0.0	0.0	307,394
Narok	99.4	0.6	0.0	0.0	0.0	162,978
Kajiado	73.1	4.4	0.0	10.9	11.6	91,414
Kericho	94.9	5.1	0.0	0.0	0.0	155,199
Bomet	95.0	4.9	0.1	0.0	0.0	178,995
Kakamega	99.2	0.5	0.0	0.3	0.0	342,243
Vihiga	97.3	2.7	0.0	0.0	0.0	114,591
Bungoma	94.5	2.4	0.0	3.1	0.0	328,520
Busia	99.5	0.5	0.0	0.0	0.0	126,120
Siaya	95.6	2.0	0.0	2.4	0.0	209,011
Kisumu	89.9	8.9	0.7	0.5	0.0	159,906
Homabay	91.7	1.3	0.0	7.1	0.0	215,901
Migori	94.1	5.9	0.0	0.0	0.0	209,761
Kisii	96.8	3.2	0.0	0.0	0.0	262,925
Nyamira	96.9	3.1	0.0	0.0	0.0	117,530
Nairobi City	84.2	9.7	6.1	0.0	0.0	110,696

Table 4.13: Modes of Acquisition of Homes by Owners by County, 2024

	Source of Finance							
	Co-operative/ SACCOs	Commercial Banks	Housing Finance Institution	Micro Finance Institution	Employer scheme	Self Help Group/ Chama	Family/ Friends within the country	Other
	%	%	%	%	%	%	%	%
Kenya	34.1	38.7	1.1	6.6	6.3	12.3	0.8	0.3
County								
Mombasa	17.3	56.8	0.0	14.2	0.0	5.3	6.4	0.0
Kwale	25.3	37	0.0	0.0	2.6	27.2	0.0	7.8
Kilifi	33.6	7.8	0.0	19.1	12.5	27	0.0	0.0
Tana River	10.3	89.7	0.0	0.0	0.0	0.0	0.0	0.0
Lamu	47.8	52.2	0.0	0.0	0.0	0.0	0.0	0.0
Taita-Taveta	4.5	39.3	0.0	18.6	0.0	37.6	0.0	0.0
Marsabit	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0
Isiolo	53.7	46.3	0.0	0.0	0.0	0.0	0.0	0.0
Meru	14.6	51.4	0.0	0.6	0.0	33.4	0.0	0.0
Tharaka-Nithi	44.5	37.7	0.0	3.4	0.0	14.4	0.0	0.0
Embu	33.1	14.9	0.0	19.6	0.0	32.4	0.0	0.0
Kitui	36.2	42.2	0.0	0.0	21.7	0.0	0.0	0.0
Machakos	22.9	50.6	0.0	5.0	0.0	21.5	0.0	0.0
Makueni	1.5	60.5	0.0	38	0.0	0.0	0.0	0.0
Nyandarua	62.7	20.9	0.0	0.0	2.3	14.1	0.0	0.0
Nyeri	58.5	34.1	0.0	0.0	7.4	0.0	0.0	0.0
Kirinyaga	33.9	31.8	5.9	0.0	2.9	25.6	0.0	0.0
Murang'a	42	35.3	0.0	5.7	0.4	16.7	0.0	0.0
Kiambu	56.2	9.7	0.0	0.0	27.8	6.4	0.0	0.0
Turkana	19.9	80.1	0.0	0.0	0.0	0.0	0.0	0.0
West Pokot	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0
Samburu	22.1	73	0.0	0.0	0.0	4.9	0.0	0.0
Trans Nzoia	8.7	61.6	5.8	5.8	0.0	18.1	0.0	0.0
Uasin Gishu	2.8	56.2	0.0	0.0	21.2	19.9	0.0	0.0
Elgeyo-Marakwet	24.7	30.1	0.0	32.3	4.6	8.3	0.0	0.0
Nandi	10.6	54.8	0.0	9.1	0.0	25.6	0.0	0.0
Baringo	67.9	21	0.0	2.3	0.0	8.7	0.0	0.0
Laikipia	39.9	26.9	0.0	10.4	0.0	13	9.9	0.0
Nakuru	41.1	41.6	0.0	0.0	0.0	17.3	0.0	0.0
Narok	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0
Kajiado	24.5	25.2	0.0	50.3	0.0	0.0	0.0	0.0
Kericho	65.2	27.5	0.0	0.0	0.0	7.3	0.0	0.0
Bomet	57.2	17.9	0.0	11.7	0.0	13.3	0.0	0.0
Kakamega	100	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vihiga	8.5	0.0	0.0	32.3	38.1	0.0	21.1	0.0
Bungoma	18	65.8	0.0	0.0	0.0	16.2	0.0	0.0
Busia	0.0	0.0	0.0	0.0	0.0	0.0	100	0.0
Siaya	76.9	23.1	0.0	0.0	0.0	0.0	0.0	0.0
Kisumu	45	36.3	5.5	3.4	0.0	6.6	0.0	3.2
Homabay	0.0	100	0.0	0.0	0.0	0.0	0.0	0.0
Migori	10.4	61.6	0.0	11.7	7.3	9.0	0.0	0.0
Kisii	18.7	58.4	0.0	18.6	0.0	4.3	0.0	0.0
Nyamira	61.9	17.2	0.0	15.7	0.0	5.2	0.0	0.0
Nairobi City	5.5	53.9	15.1	0.0	25.4	0.0	0.0	0.0

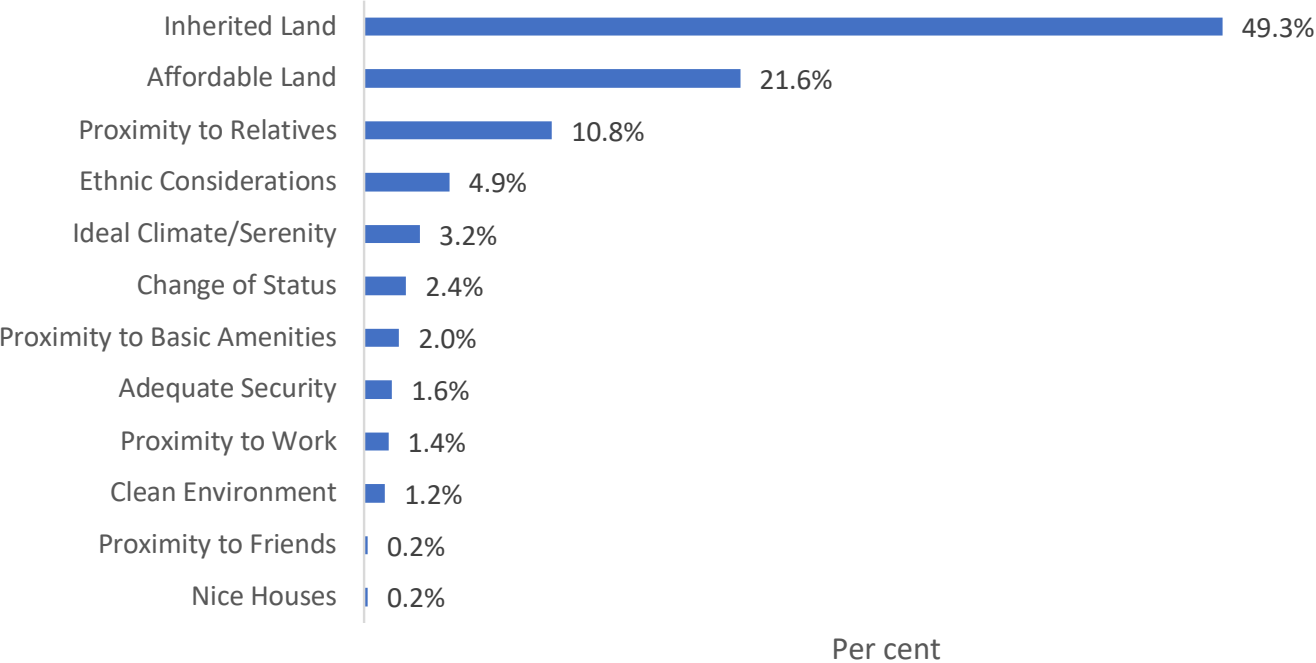
4.4.4 Construction of Houses

The process of constructing a house varies widely in the country. This section highlights the duration of construction, factors that influenced the choice of location and the use of built professionals.

4.4.4.1 Factors Influencing the Choice of Area for Homeowners

Figure 4.13 displays the main factor that influenced homeowners to build their homes at their current location. Analysis shows that 49.3 per cent of homeowners chose their home’s location primarily because they inherited the land, while 21.6 per cent opted for their location due to affordable land prices.

Figure 4.13: Factors Influencing the Choice of Area for Homeowners



4.4.4.2 Duration of Construction of Houses

Table 4.14 shows the duration of construction for houses, revealing that 85.5 per cent of houses were built in less than one year, while 3.1 per cent of houses took the longest construction duration of 7 years and above.

Table 4.14: Duration of Construction by County

	Cash / Savings	Loan	Mortgage	Donation from relatives/ friends/ NGO	No cost	Total
	%	%	%	%	%	
Kenya	91.4	5.5	0.2	1.2	1.6	6,961,563
County						
Mombasa	76.6	21.9	1.5	0.0	0.0	77,012
Kwale	94.6	4.9	0.0	0.5	0.0	116,313
Kilifi	92.5	6.1	0.0	1.4	0.0	242,852
Tana River	92.6	1.9	0.4	5.1	0.0	28,923
Lamu	90.0	3.5	0.0	0.0	6.5	8,567
Taita- Taveta	92.6	7.4	0.0	0.0	0.0	57,203
Garissa	100.0	0.0	0.0	0.0	0.0	46,330
Wajir	80.2	0.0	0.0	0.0	19.8	26,250
Mandera	96.9	0.0	0.0	2.5	0.6	54,012
Marsabit	98.2	0.5	0.0	1.2	0.2	62,774
Isiolo	92.3	1.1	0.0	0.0	6.6	35,649
Meru	96.4	3.6	0.0	0.0	0.0	283,833
Tharaka- Nithi	91.8	8.2	0.0	0.0	0.0	88,630
Embu	92.2	7.8	0.0	0.0	0.0	121,410
Kitui	95.8	1.4	0.0	2.7	0.0	168,492
Machakos	93.3	6.6	0.2	0.0	0.0	263,158
Makueni	97.5	2.5	0.0	0.0	0.0	181,869
Nyandarua	91.9	7.4	0.7	0.0	0.0	95,143
Nyeri	87.0	12.4	0.0	0.6	0.0	118,213
Kirinyaga	92.4	5.9	0.6	1.1	0.0	108,569
Murang'a	81.0	16.6	0.4	2.0	0.0	281,440
Kiambu	83.2	16.8	0.0	0.0	0.0	322,670
Turkana	37.2	2.4	0.0	10.4	50.0	154,105
West Pokot	99.3	0.7	0.0	0.0	0.0	101,380
Samburu	67.6	7.3	0.1	0.1	24.8	68,613
Trans Nzoia	96.7	3.3	0.0	0.0	0.0	177,230
Uasin Gishu	96.9	2.6	0.5	0.0	0.0	160,565
Elgeyo- Marakwet	94.8	5.1	0.1	0.0	0.0	74,351
Nandi	94.3	5.2	0.0	0.5	0.0	163,040
Baringo	91.3	7.6	0.0	1.1	0.0	111,787
Laikipia	86.2	9.3	0.0	4.5	0.0	67,992
Nakuru	92.2	7.8	0.0	0.0	0.0	307,394
Narok	99.4	0.6	0.0	0.0	0.0	162,978
Kajiado	73.1	4.4	0.0	10.9	11.6	91,414
Kericho	94.9	5.1	0.0	0.0	0.0	155,199
Bomet	95.0	4.9	0.1	0.0	0.0	178,995
Kakamega	99.2	0.5	0.0	0.3	0.0	342,243
Vihiga	97.3	2.7	0.0	0.0	0.0	114,591
Bungoma	94.5	2.4	0.0	3.1	0.0	328,520
Busia	99.5	0.5	0.0	0.0	0.0	126,120
Siaya	95.6	2.0	0.0	2.4	0.0	209,011
Kisumu	89.9	8.9	0.7	0.5	0.0	159,906
Homabay	91.7	1.3	0.0	7.1	0.0	215,901
Migori	94.1	5.9	0.0	0.0	0.0	209,761
Kisii	96.8	3.2	0.0	0.0	0.0	262,925
Nyamira	96.9	3.1	0.0	0.0	0.0	117,530
Nairobi City	84.2	9.7	6.1	0.0	0.0	110,696

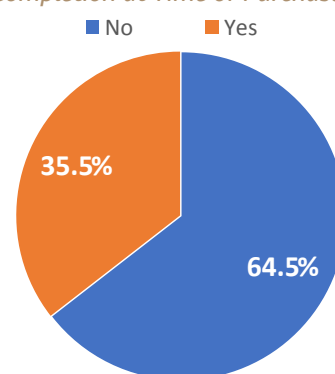




4.4.4.3 State of Completion of Houses at the Time of Purchase

Figure 4.14 illustrates the proportion of homeowners who bought homes that were incomplete or complete, including those purchased off-plan or during construction. Out of those who purchased homes, 64.5 per cent of the homes were incomplete, while 35.5 per cent were complete.

Figure 4.14: Proportion of Status of Completion at Time of Purchase



4.4.5 Use of Built Environment Professionals in Construction

Table 4.15 presents the extent of utilization of various Built Environment Professionals (BEP) in the acquisition of housing, including both purchasing and construction. The most sourced professionals while constructing were architects (19.4%), followed by electrical engineers (15.7%), and land surveyors (9.1%).

Table 4.15: Use of Built Environment Professionals in Construction

Built Environment Professionals	Per cent
Architect	19.4
Structural Engineer	7.7
Quantity Surveyor	3.6
Land Surveyor	9.1
Electrical Engineer	15.7
Mechanical Engineer	0.8
Civil Engineer	5.2
Valuer	1.7
Land scape Architect	1.4
Interior Designer	2.4
Environmental Impact Assessment & Stamp; Audit Expert	1.4
Planner	5.8
Estate Agents	0.4
Other	25.5
Total	100.0

4.4.6 Reasons for Not Utilizing Services of Built Environment Professionals

Table 4.16 indicates the main reasons for not utilizing the services of various BEPs. Overall, 65.1 per cent of households found no need to use various built

environment professionals as shown. This indicates a lack of awareness of the need of these professionals in the housing process, which is key in ensuring decent housing.

Table 4.16: Reasons for Not Utilizing Services of BEP

Built Environment Professionals	Reasons Not Used				
	High cost	Unaware	Unavailability	No need	Total
Architect	2.3	0.8	0.2	4.1	7.3
Structural Engineer	1.8	0.9	0.2	4.6	7.5
Quantity Surveyor	1.8	1.0	0.2	4.8	7.8
Land Surveyor	1.9	0.8	0.2	4.8	7.6
Electrical Engineer	1.7	0.6	0.1	4.6	7.0
Mechanical Engineer	1.4	0.9	0.2	5.5	7.9
Civil Engineer	1.6	0.8	0.2	5.3	7.8
Valuer	1.4	1.1	0.2	5.2	7.9
Land scape Architect	1.4	1.1	0.3	5.1	7.9
Interior Designer	1.5	0.9	0.2	5.3	7.8
Environmental Impact Assessment & Audit Expert	1.2	1.44	0.2	5.1	7.9
Planner	1.5	0.9	0.2	5.0	7.7
Estate Agents	1.1	0.9	0.4	5.6	7.9
Total	20.4	11.9	2.7	65.1	100.0

4.4.7 Dwelling Units Owned Elsewhere

Some homeowners own residential properties that they do not usually reside in. These properties can be utilized for various purposes such as rental homes, holiday homes, or second homes. Nationally, a homeowner owns at least two houses in other counties as shown in Table 4.17.

Analysis by counties shows that most of these additional homes were in Kiambu County, with an average of five units per homeowner, followed by Embu County, with an average of four per homeowner.

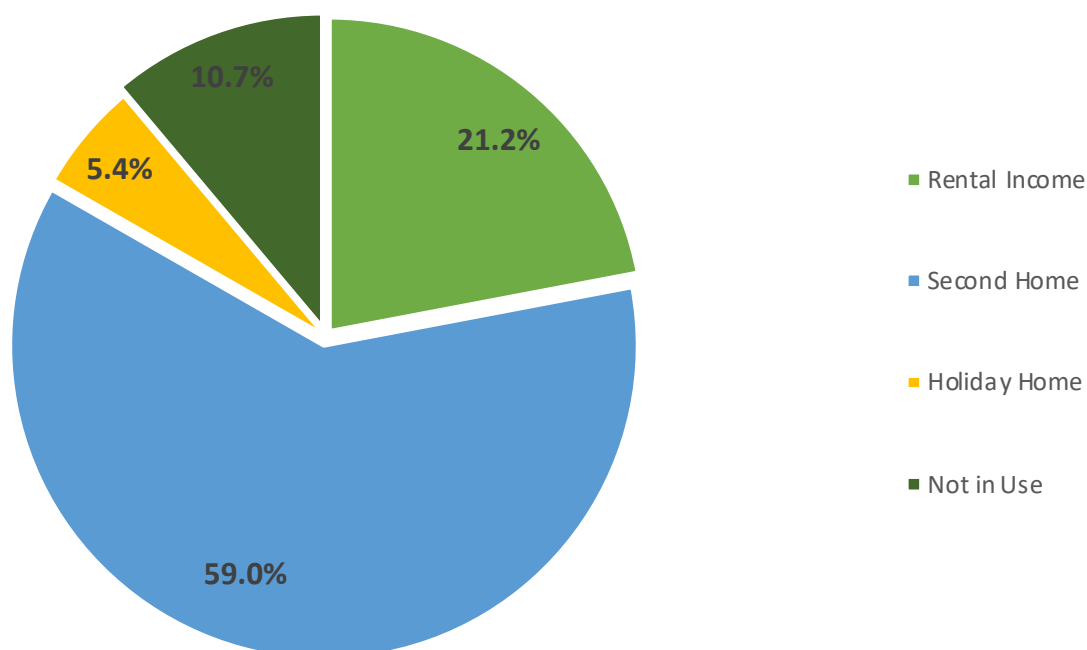
Table 4.17: Location of Additional Homes Homeowners Own Elsewhere by County

County	Mean	County	Mean	County	Mean
Mombasa	1	Makueni	1	Narok	1
Kwale	1	Nyandarua	2	Kajiado	1
Kilifi	1	Nyeri	1	Kericho	1
Tana River	1	Kirinyaga	2	Bomet	1
Lamu	1	Murang'a	2	Kakamega	1
Taita-Taveta	1	Kiambu	5	Vihiga	1
Garissa	2	Turkana	1	Bungoma	1
Wajir	1	West Pokot	1	Busia	2
Mandera	1	Samburu	2	Siaya	1
Marsabit	1	Trans Nzoia	1	Kisumu	2
Isiolo	1	Uasin Gishu	1	Homabay	2
Meru	1	Elgeyo-Marakwet	2	Migori	1
Tharaka-Nithi	1	Nandi	1	Kisii	2
Embu	4	Baringo	1	Nyamira	1
Kitui	2	Laikipia	1	Nairobi City	2
Machakos	2	Nakuru	2	Total	2

4.4.8 Current Use of Dwelling Units owned elsewhere

Figure 4.15 shows the current use of the dwelling units owned elsewhere by home owners. The report shows that 59.0 per cent of owners used them as a second home, while 21.2 per cent used them for rental income.

Figure 4.15: Current Use of Dwelling Use







CHAPTER 05



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Housing Characteristics Amenities and Adequacy

Key Findings

- ✓ Nationally, 78.8 per cent of dwelling units were classified as being of inadequate quality. The Crowding Index indicated that 68.1 per cent of dwelling units were considered fit for habitation based on the number of persons per room. Dwelling units had an average of 2 persons per room, indicating the overcrowding levels.
- ✓ The Structure Fitness index indicated that 44.1 per cent of dwelling units used durable materials for roof, wall and floor construction and were considered fit for habitation. The Water and Sanitation Fitness Index indicated that 59.7 per cent of dwelling units relied on adequate facilities for drinking water and human waste disposal while the Energy Use Fitness Index indicated that 70.1 per cent of dwelling units used unclean sources of energy for cooking and lighting.

5.1 Introduction

This chapter presents an analysis of the predominant construction material used for floors, roof, and walls for dwelling units. The chapter further presents sources of water, energy, methods of waste disposal and sanitation, consolidated housing quality index,

transport and infrastructure, and indicators on housing environs. The construction materials were classified into durable and non-durable materials. Table 5.1 shows the type of the main construction materials for the roof, wall and floor based on their durability.

Table 5.1: Durability based on the type of main construction materials of the roof, wall and floors.

Components	Construction Materials	
	Durable	Non-Durable
Floor	Parquet or polished wood Vinyl or asphalt strips Ceramic tiles Concrete/ Cement/ Terrazo Wall to wall Carpet Wood planks/shingles/ timber	Earth/sand Dung Palm/ bamboo
Wall	Concrete/Cement Stone with lime/cement Bricks Cement blocks	Cane/palm/trunks Grass/reeds Mud/cow dung Bamboo with mud Stone with mud

Components	Construction Materials	
	Durable	Non-Durable
		Uncovered adobe Plywood/Cardboard Reused wood Iron sheets Covered adobe Wood planks/ shingles/timber
Roof	Iron sheets/Decra/ Versatile Asbestos sheet Concrete/Cement Tiles	Grass / Makuti thatch/twigs Dung / mud Tin cans Canvas/Nylon/ Cartons/Card board

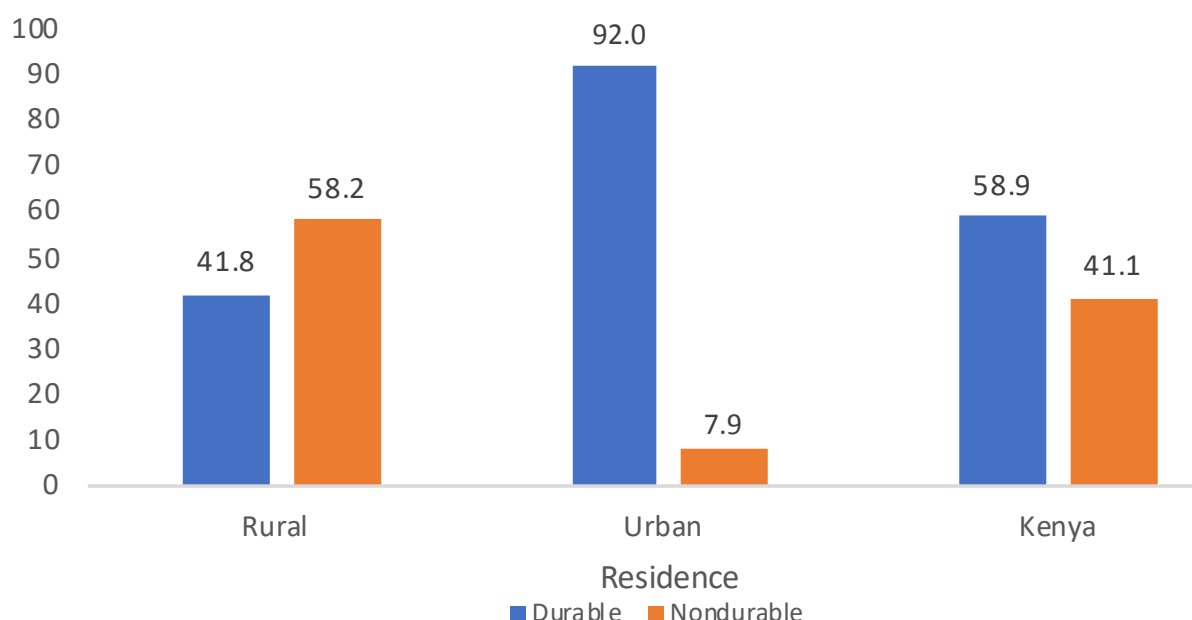
5.2 Construction Materials of Main Dwelling Units

5.2.1 Floor Material

Figure 5.1 and Table 5.2 present the per centage distribution of floor materials for the main dwelling units by Residence and County. Nationally, 58.9 per cent of dwelling units were made of durable floor materials.

Urban areas had the highest proportions of dwelling unit built with durable floor material at 92.0 per cent. The trend was different for rural areas with 41.8 per cent of dwelling units having durable floor material.

Figure 5.1: Proportion of Dwelling Units by Durability of the Main Type of Floor Material and Residence



Nairobi City, Mombasa, and Kiambu counties had the largest proportions of dwelling units with durable floor material at 94.9, 93.6 and 92.7 per cent respectively. Wajir, Mandera, Turkana, and West Pokot counties had the least proportions of dwelling with durable floor material at 28.5, 25.8, 23.9, and 20.7 per cent, respectively.

There was significant variation in the type of floor materials used in urban and rural areas. Nationally,

concrete/cement/terrazzo was the dominant floor material at 44.1 per cent, followed by earth/sand and ceramic tiles at 30.5 per cent and 13.7 per cent, respectively, as shown in Table 5.2. The rural-urban differential was noted with concrete/cement/terrazzo being the dominant floor materials in urban areas at 62.3 per cent, while earth/sand was the major floor materials used in rural areas at 42.9 per cent.

Table 5.2: Per centage Distribution of Dwelling Units by Type of Floor Material, Residence and County

	Non-Durable					Durable						
	Earth/sand	Dung	Wood planks/shingles/timber	Palm/bamboo	Sub Total	Parquet or polished wood	Vinyl or asphalt strips	Ceramic tiles	Concrete/Cement/Terrazo	Wall to wall Carpet	Sub Total	Other
Kenya	30.5	10.1	0.4	0.0	41.1	0.1	0.2	13.7	44.1	0.8	58.9	0.0
Rural	42.9	15.0	0.2	0.0	58.2	0.0	0.1	6.6	34.7	0.4	41.8	0.0
Urban	6.3	0.7	0.9	0.0	7.9	0.3	0.2	27.7	62.3	1.6	92.0	0.0
County												
Mombasa	6.2	0.2	0.0	0.0	6.4	0.0	0.0	25.1	65.7	2.9	93.6	0.0
Kwale	45.0	0.0	0.2	0.0	45.2	0.0	0.0	8.4	46.2	0.1	54.8	0.0
Kilifi	55.3	0.0	0.0	0.0	55.3	0.0	0.0	6.5	37.9	0.2	44.7	0.0
Tana River	65.6	0.0	0.0	0.0	65.6	0.0	0.0	4.7	29.5	0.3	34.4	0.0
Lamu	37.8	2.2	0.3	0.0	40.2	0.0	0.0	7.7	52.0	0.0	59.8	0.0
Taita-Taveta	30.5	0.0	0.0	0.0	30.5	0.0	0.0	8.8	60.5	0.2	69.5	0.0
Garissa	63.3	0.0	0.0	0.0	63.3	0.0	0.0	8.2	28.2	0.3	36.7	0.0
Wajir	70.8	0.0	0.4	0.2	71.5	1.7	5.0	7.3	14.3	0.2	28.5	0.0

Table 5.2: Per centage Distribution of Dwelling Units by Type of Floor Material, Residence and County (Continued)

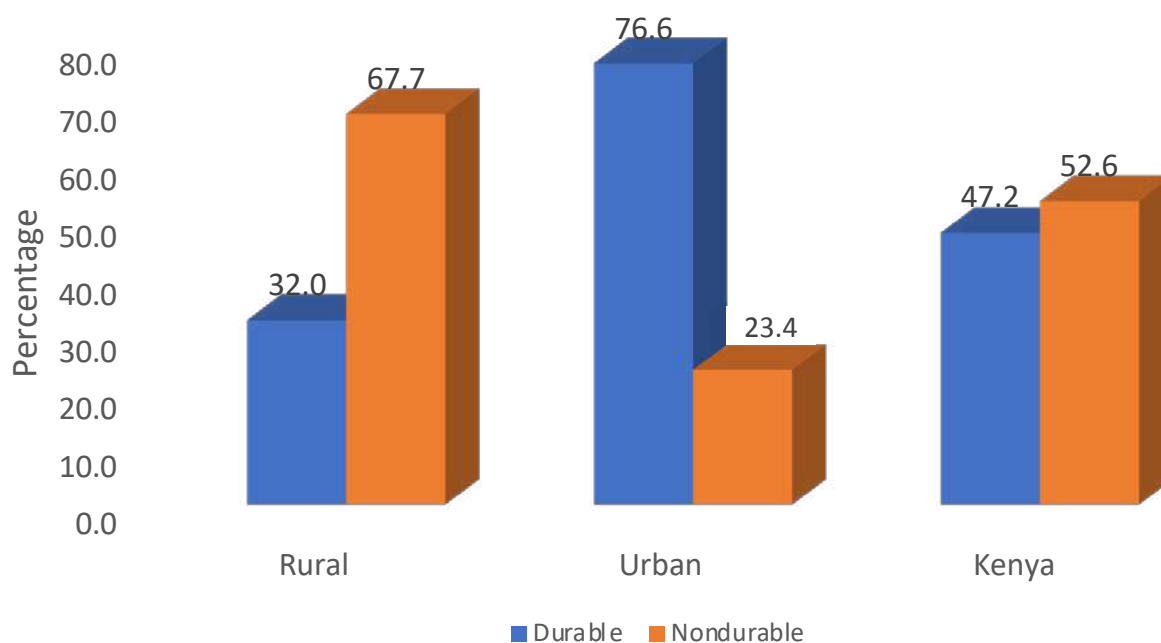
	Non-Durable					Durable						
	Earth/ sand	Dung	Wood planks/ shingles/ timber	Palm/ bamboo	Sub Total	Parquet or polished wood	Vinyl or asphalt strips	Ceramic tiles	Concrete/ Cement/ Terrazo	Wall to wall Carpet	Sub Total	Other
Mandera	74.0	0.2	0.1	0.0	74.2	0.0	0.0	2.1	23.7	0.0	25.8	0.0
Marsabit	56.4	1.1	0.0	0.0	57.5	0.0	0.0	7.0	35.5	0.0	42.5	0.0
Isiolo	56.6	0.0	0.3	0.0	56.9	0.0	0.0	17.1	24.9	1.1	43.1	0.0
Meru	46.8	1.1	0.8	0.0	48.7	0.0	0.0	7.1	41.6	2.5	51.2	0.1
Tharaka-Nithi	47.4	0.0	0.1	0.0	47.4	0.0	0.2	10.0	42.4	0.0	52.6	0.0
Embu	40.5	0.0	0.3	0.0	40.8	0.0	0.0	10.6	48.5	0.1	59.2	0.0
Kitui	42.8	0.0	0.3	0.2	43.3	0.0	0.0	9.4	47.2	0.1	56.7	0.0
Machakos	18.2	0.0	0.1	0.0	18.3	0.0	0.0	14.5	66.4	0.7	81.7	0.0
Makueni	32.2	0.0	0.0	0.0	32.2	0.1	0.0	10.3	57.4	0.1	67.8	0.0
Nyandarua	42.0	0.0	1.0	0.0	43.1	0.2	0.0	11.8	44.9	0.0	56.9	0.0
Nyeri	29.4	0.0	0.5	0.0	29.9	0.0	0.0	8.7	61.1	0.3	70.1	0.0
Kirinyaga	32.1	0.0	0.0	0.0	32.1	0.0	0.8	9.8	56.2	1.2	67.9	0.0
Murang'a	46.7	0.0	0.5	0.0	47.3	0.2	0.0	9.6	42.0	0.9	52.7	0.0
Kiambu	7.0	0.1	0.2	0.0	7.3	0.0	0.1	21.8	68.8	2.0	92.7	0.0
Turkana	75.4	0.0	0.7	0.0	76.1	0.0	0.0	2.6	21.4	0.0	23.9	0.0
West Pokot	41.7	37.7	0.0	0.0	79.3	0.0	0.0	2.2	18.5	0.0	20.7	0.0
Samburu	62.1	0.2	0.0	0.0	62.3	0.0	0.0	6.4	30.2	1.2	37.7	0.0
Trans Nzoia	51.3	4.7	0.0	0.0	56.0	0.0	0.0	6.2	37.8	0.0	44.0	0.0
Uasin Gishu	17.7	12.2	0.0	0.0	29.9	0.0	0.4	20.4	49.3	0.0	70.1	0.0
Elgeyo-Marakwet	24.2	41.9	0.5	0.0	66.5	0.0	0.0	4.7	28.6	0.2	33.5	0.0
Nandi	50.4	0.0	0.0	0.0	50.5	0.0	0.0	10.8	38.7	0.0	49.5	0.0
Baringo	26.4	35.4	1.1	0.0	62.9	0.0	0.0	2.2	34.9	0.0	37.1	0.0
Laikipia	37.4	1.0	0.2	0.0	38.6	0.0	0.0	12.3	47.8	1.3	61.4	0.0
Nakuru	31.8	5.6	0.1	0.0	37.5	0.0	0.0	14.2	48.3	0.0	62.5	0.0
Narok	39.3	21.0	0.0	0.3	60.6	0.0	0.0	6.5	31.9	1.0	39.4	0.0
Kajiado	21.8	0.3	0.0	0.0	22.1	0.0	0.7	28.0	49.3	0.0	77.9	0.0
Kericho	21.0	36.4	0.2	0.0	57.7	0.1	0.0	7.8	34.2	0.3	42.3	0.0
Bomet	25.6	36.9	0.2	0.0	62.7	0.0	1.8	5.0	30.2	0.2	37.3	0.0
Kakamega	12.2	49.3	0.0	0.0	61.5	0.0	0.1	10.8	27.6	0.0	38.5	0.0
Vihiga	28.1	34.8	0.0	0.0	63.0	0.0	0.0	8.2	27.3	1.5	37.0	0.0
Bungoma	16.4	50.4	0.0	0.0	66.8	0.0	0.0	7.8	25.4	0.1	33.2	0.0
Busia	49.9	3.4	0.0	0.0	53.3	0.0	0.0	5.5	41.3	0.0	46.7	0.0
Siaya	19.3	27.7	0.0	0.0	47.0	0.0	0.0	11.6	41.0	0.4	53.0	0.0
Kisumu	18.5	17.4	0.0	0.0	35.9	0.0	1.4	25.7	35.8	0.3	63.1	1.0
Homabay	26.5	26.5	0.0	0.0	53.0	0.0	0.0	5.8	39.2	2.0	47.0	0.0
Migori	42.6	6.5	0.0	0.3	49.3	0.0	0.0	9.1	41.2	0.0	50.3	0.4
Kisii	52.7	7.3	0.0	0.0	60.0	0.2	0.4	7.8	31.4	0.2	40.0	0.0
Nyamira	45.1	18.1	0.0	0.0	63.2	0.0	0.0	9.5	27.0	0.3	36.8	0.0
Nairobi City	2.3	0.1	2.7	0.0	5.1	0.7	0.0	35.3	56.8	2.2	94.9	0.0

5.2.2 Wall Material

The distribution of dwelling units by the type of wall material of the main dwelling, by Residence and County is as presented in Figure 5.2 and Table 5.3. Approximately, 52.6 per cent of dwelling units were made of non-durable wall materials and 47.2 per cent had durable wall materials, in Kenya.

In addition, approximately 76.6 per cent of urban households and 32.0 per cent of rural households had dwelling units made of durable wall materials. However, 67.7 per cent of rural households and 23.4 per cent of urban households used non-durable wall materials in their dwelling units.

Figure 5.2: Proportion of dwelling units by main type of wall material and residence



Nationally, among dwelling units with non-durable wall materials, 24.7 per cent used mud or cow dung, while among dwelling units with durable wall materials, 20.7 per cent used stone with lime or cement, and 19.4 per cent used concrete or cement.

In rural areas, the proportion of dwelling units with non-durable wall materials made of mud or cow dung stood at 35.5 per cent, while 13.0 per cent of the dwelling units with durable wall materials used concrete or cement.

However, in urban areas, the main type of wall materials used for dwelling units were stone with lime or cement at 35.7 per cent and concrete or cement at 33.3 per cent, as shown in Table 5.3 below.

In Nairobi City, most of the dwelling units were built with durable wall materials, with the most dominant material being concrete/ cement walls at 36.6 per cent while iron sheet was the most commonly used non-durable material for walls at 19.4 per cent.

Table 5.3: Per centage Distribution of Dwelling Units by Type of Wall Material, Residence and County

	Non-Durable													Durable				
	No walls	Cane/ palm/ trunks	Grass/ reeds	Mud/ cow dung	Bamboo with mud	Stone with mud	Uncovered adobe	Ply-wood/ Card-board	Re-used wood	Cov-ered adobe	Wood planks/ shingles/ timber	Iron sheets	Con-crete/ Cement	Stone with lime/ cement	Bricks	Cement blocks	Precast wall	Other
Kenya	0.1	1.7	1.0	24.7	3.5	1.4	1.1	0.1	0.6	1.1	8.9	8.4	19.4	20.7	5.5	1.5	0.1	0.2
Rural	0.1	2.4	1.4	35.5	4.9	1.9	1.5	0.2	0.8	1.4	12.3	5.4	12.3	13.0	6.1	0.6	0.1	0.2
Urban	0.0	0.3	0.3	3.9	0.8	0.6	0.3	0.1	0.3	0.5	2.1	14.0	33.3	35.7	4.2	3.4	0.0	0.1
County																		
Mombasa	0.0	0.0	0.0	3.6	0.2	2.1	0.0	0.0	0.0	0.0	0.0	0.8	54.7	34.2	2.9	1.5	0.0	0.0
Kwale	0.0	0.0	0.0	26.6	13.1	1.7	0.0	0.0	0.0	0.0	0.1	0.3	2.1	54.6	0.5	0.0	0.0	0.9
Kilifi	0.0	0.0	0.3	37.1	12.7	1.7	0.0	0.0	0.0	0.0	0.0	0.9	28.6	18.3	0.4	0.0	0.0	0.0
Tana River	0.0	6.0	9.3	29.0	15.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0	27.0	5.3	0.0	6.1	0.0	0.0
Lamu	0.0	0.8	0.0	36.3	8.4	0.6	0.0	0.4	0.0	0.0	0.8	0.8	35.5	14.2	1.8	0.5	0.0	0.0
Taita-Taveta	0.0	0.0	0.0	5.5	8.6	6.6	8.7	0.0	0.0	4.9	0.2	0.0	33.7	23.7	7.9	0.3	0.0	0.0
Garissa	0.5	5.8	30.1	4.3	4.3	4.4	4.3	0.5	0.0	6.4	0.0	9.0	18.3	11.2	0.1	0.8	0.0	0.0
Wajir	0.9	19.9	27.7	1.7	6.8	2.6	0.4	1.7	0.1	0.0	0.0	8.2	6.8	20.7	0.0	2.3	0.0	0.0
Mandera	0.3	16.7	21.9	5.9	19.4	0.7	0.0	0.0	0.1	0.0	8.8	1.1	9.6	13.5	0.0	1.9	0.0	0.0
Marsabit	0.6	31.9	4.4	9.8	0.8	1.2	0.2	0.3	6.6	11.9	0.0	1.0	11.6	6.9	2.5	10.1	0.0	0.1
Isiolo	0.0	9.2	0.5	5.5	24.1	0.9	0.2	1.5	4.9	0.0	10.5	4.8	11.0	20.1	0.4	6.2	0.0	0.0
Meru	0.0	0.4	0.0	4.1	0.7	1.5	0.2	0.0	1.3	1.5	62.9	0.7	1.4	24.1	1.1	0.0	0.0	0.0
Tharaka-Nithi	0.0	0.0	0.0	25.8	0.0	0.2	5.3	0.0	0.0	7.0	25.3	1.0	5.4	26.0	2.9	1.1	0.0	0.0
Embu	0.0	0.0	0.0	20.4	0.0	1.8	4.8	0.0	2.5	5.8	14.9	2.1	1.2	36.0	10.7	0.0	0.0	0.0
Kitui	0.0	0.0	0.2	0.7	5.1	0.8	15.8	0.0	0.0	2.5	0.2	1.1	35.6	21.3	15.4	1.4	0.0	0.0
Machakos	0.0	0.0	0.0	0.2	0.0	0.9	4.9	0.0	0.0	6.3	0.3	7.3	14.6	41.2	24.4	0.0	0.0	0.0
Makueni	0.0	0.0	0.0	0.5	0.5	1.7	7.2	0.0	0.0	3.2	0.0	1.0	64.3	1.8	19.6	0.2	0.0	0.0
Nyandarua	0.0	0.0	0.0	9.3	2.0	1.0	0.0	0.0	13.8	0.0	22.6	19.8	14.4	17.1	0.0	0.0	0.0	0.0
Nyeri	0.0	0.0	0.0	1.5	0.0	0.3	0.3	0.0	0.7	0.3	49.0	6.3	1.4	37.1	3.1	0.1	0.0	0.0
Kirinyaga	0.0	0.0	0.0	4.7	0.0	1.6	0.7	0.0	2.6	5.8	30.1	1.9	6.3	36.2	7.8	2.3	0.0	0.0
Murang'a	0.0	0.0	0.0	14.7	0.0	0.9	0.0	0.0	0.0	0.0	22.9	19.9	8.0	31.9	0.4	0.2	0.0	1.1
Kiambu	0.0	0.3	0.0	0.1	0.4	0.4	0.0	0.0	0.4	0.0	4.3	27.2	26.5	35.0	5.0	0.1	0.0	0.1
Turkana	0.9	50.1	4.6	9.9	11.7	0.0	0.2	3.4	0.0	0.4	0.0	9.3	0.9	2.2	0.9	4.5	0.0	1.1
West Pokot	0.0	0.3	0.4	38.1	46.6	1.0	0.0	0.0	0.0	0.0	0.2	0.1	5.8	6.3	1.1	0.1	0.0	0.0
Samburu	0.0	35.3	0.0	20.4	0.9	0.7	0.0	0.0	0.4	0.0	6.2	0.1	20.4	11.3	0.0	3.3	0.0	0.9

Table 5.3: Per centage Distribution of Dwelling Units by Type of Wall Material, Residence and County (Continued)

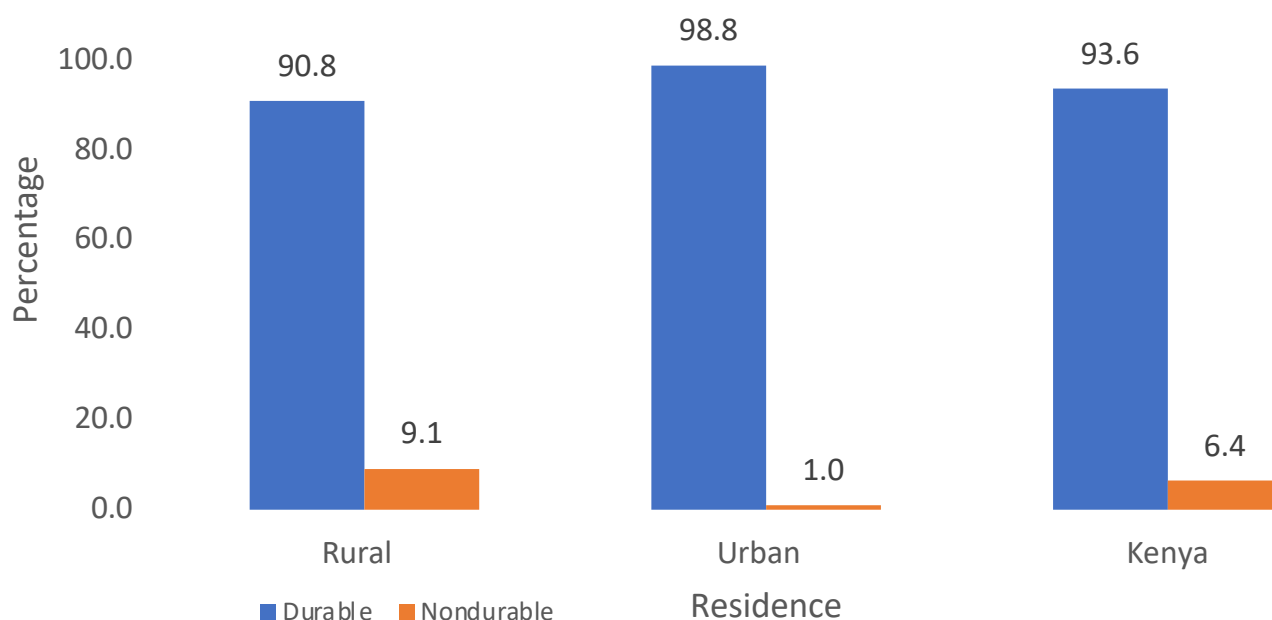
	No walls	Cane/ palm/ trunks	Grass/ reeds	Mud/ cow dung	Bamboo with mud	Stone with mud	Non-Durable							Durable				
							Uncov- ered adobe	Ply- wood/ Card- board	Re- used wood	Cov- ered adobe	Wood planks/ shin- gles/ timber	Iron sheets	Con- crete/ Cement	Stone with lime/ cement	Bricks	Cement blocks	Precast wall	Other
Trans Nzoia	0.0	0.0	0.0	60.9	0.0	3.2	0.0	0.0	0.0	0.0	0.1	1.0	23.7	3.7	4.9	2.5	0.0	0.0
Uasin Gishu	0.0	0.2	0.2	24.8	4.4	1.4	0.5	0.9	0.2	6.4	7.5	9.5	22.4	17.1	3.5	1.0	0.0	0.0
Elgeyo-Marak- wet	0.0	0.5	0.2	39.2	0.2	3.0	0.0	0.0	0.1	0.0	28.7	11.3	6.1	5.4	5.1	0.1	0.0	0.2
Nandi	0.0	0.0	0.0	62.0	0.0	2.2	0.7	0.0	0.6	0.0	0.2	1.3	8.1	14.0	10.5	0.5	0.0	0.0
Baringo	0.2	0.5	0.2	41.5	0.0	0.0	0.0	0.0	6.6	0.2	12.9	24.7	4.2	8.5	0.4	0.0	0.0	0.2
Laikipia	0.0	0.0	0.0	13.5	0.0	0.4	0.0	0.0	0.0	0.0	34.0	9.1	1.3	40.7	0.6	0.1	0.0	0.2
Nakuru	0.0	0.0	0.0	21.0	4.2	3.9	0.0	0.1	0.2	0.0	12.7	6.2	18.7	30.0	2.0	0.6	0.0	0.3
Narok	0.0	0.5	0.0	39.2	14.6	0.0	0.2	1.0	0.0	0.0	11.4	12.6	3.7	14.3	1.0	0.0	0.0	1.7
Kajiado	0.2	0.0	0.0	16.1	0.3	0.0	0.0	0.0	0.3	0.4	2.7	28.3	11.9	18.3	0.0	21.5	0.0	0.0
Kericho	0.0	0.2	0.0	43.1	0.0	0.0	0.6	0.0	0.0	0.0	24.9	8.3	3.2	4.9	14.5	0.1	0.2	0.0
Bomet	0.0	0.0	0.2	54.6	0.9	2.1	0.0	0.0	0.0	0.0	23.7	1.6	0.9	5.8	8.4	1.8	0.0	0.0
Kakamega	0.0	0.0	0.2	55.1	10.2	0.0	0.0	0.0	0.4	0.0	0.0	0.0	27.4	4.7	1.9	0.1	0.0	0.0
Vihiga	0.0	0.0	0.0	68.2	0.0	2.1	0.0	0.0	0.0	1.2	0.0	0.1	9.0	19.1	0.1	0.3	0.0	0.0
Bungoma	0.0	0.0	0.0	56.6	5.3	4.3	0.2	0.0	0.0	1.1	0.2	0.0	4.4	4.6	21.2	1.1	0.8	0.0
Busia	0.0	0.0	0.0	58.3	0.2	0.7	1.0	0.0	0.0	0.9	0.0	0.7	29.8	4.2	2.9	1.2	0.0	0.0
Siaya	0.0	0.0	0.0	45.5	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.3	43.4	4.6	2.1	0.9	0.0	0.0
Kisumu	0.0	0.0	0.0	36.9	1.3	0.8	3.3	0.0	0.0	0.9	0.0	9.0	30.4	12.0	3.0	1.5	0.8	0.1
Homabay	0.2	0.3	0.0	51.5	0.0	3.7	0.3	0.0	0.0	1.2	0.3	8.7	23.1	6.9	2.6	1.1	0.0	0.0
Migori	0.0	0.0	0.0	50.3	0.0	1.9	0.2	0.0	0.0	0.0	0.0	1.5	36.7	5.1	2.4	1.9	0.0	0.0
Kisii	0.2	0.2	0.0	64.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.8	1.6	15.8	15.9	0.1	0.0	0.0
Nyamira	0.0	0.4	0.0	55.9	0.0	6.9	0.0	0.0	0.3	0.0	0.0	0.8	11.1	7.3	16.7	0.0	0.0	0.6
Nairobi City	0.1	0.0	0.0	1.9	0.1	0.5	0.0	0.1	0.2	0.0	0.4	19.4	36.6	35.9	1.6	3.1	0.0	0.1

5.2.3 Roof Material

Table 5.4 and Figure 5.3 presents the proportion of the dwelling units by type of durable and non-durable roof

material. The bulk of the dwellings in Kenya had durable roofing materials at 93.6 per cent.

Figure 5.3: Proportion of dwellings by main type of roof material and residence



Kiambu County had the highest proportion of dwelling units with durable roof material in contrast to Turkana County that had the lowest proportion at 34.9 per cent. Only three counties had majority of their dwelling units made of non-durable roofing materials. These were Turkana, West Pokot, and Wajir at 46.3, 52.4 and 64.0 per cent, respectively.

Iron sheets/dekra/versatile constituted main roofing material in Kenya at 87.0 per cent with grass/makuti/thatch/twigs and concrete/cement coming in second and third at 5.8 per cent and 5.5 per cent respectively. This trend is reflected in both rural and urban areas. In Nairobi City County however, iron sheets/dekra/versatile were the main roofing material at 61.6 per cent followed by concrete/cement at 36.1 per cent as shown in table 5.4.



Table 5.4: Per centage Distribution of Dwelling Units by Type of Roof Material by Residence and County

	Non Durable				Durable						Other
	Grass / Ma- kuti thatch/ twigs	Dung / mud	Tin cans	Sub total	Iron sheets/ Decra/Ver- satile	Asbestos sheet	Concrete/ Cement	Tiles	Canvas/ Nylon/ Cartons/ Cardboard	Sub total	
Kenya	5.8	0.5	0.1	6.4	87.0	0.2	5.5	0.3	0.5	93.6	0.1
Rural	8.3	0.7	0.1	9.1	89.4	0.2	0.5	0.1	0.6	90.8	0.0
Urban	0.9	0.0	0.0	1.0	82.4	0.3	15.3	0.7	0.2	98.8	0.1
County											
Mombasa	0.2	0.0	0.0	0.2	88.9	0.0	10.6	0.0	0.3	99.8	0.0
Kwale	17.6	0.0	0.0	17.6	82.1	0.0	0.3	0.0	0.0	82.4	0.1
Kilifi	20.4	0.0	0.0	20.4	75.3	0.1	4.0	0.3	0.0	79.6	0.0
Tana River	31.7	0.1	0.0	31.8	66.7	0.4	1.0	0.0	0.0	68.2	0.0
Lamu	8.5	0.3	0.0	8.8	75.6	0.0	14.8	0.0	0.8	91.2	0.0
Taita-Taveta	0.4	0.0	0.5	0.9	97.2	0.2	1.7	0.0	0.0	99.1	0.0
Garissa	37.0	0.0	0.3	37.3	61.7	0.3	0.5	0.3	0.0	62.7	0.0
Wajir	45.6	0.4	0.3	46.3	50.8	0.4	0.0	0.2	2.4	53.7	0.0
Mandera	24.2	0.4	0.3	24.8	74.4	0.0	0.1	0.0	0.7	75.2	0.0
Marsabit	34.6	0.8	1.1	36.5	51.7	0.8	0.7	0.0	10.2	63.5	0.0
Isiolo	2.1	0.0	0.3	2.4	82.6	0.0	1.5	0.0	13.6	97.6	0.0
Meru	1.0	0.0	0.2	1.2	97.9	0.0	0.7	0.1	0.2	98.8	0.0
Tharaka-Nithi	0.0	0.4	0.0	0.4	97.3	0.0	2.3	0.0	0.0	99.6	0.0
Embu	0.5	0.2	0.0	0.8	95.4	0.4	3.1	0.4	0.0	99.2	0.0
Kitui	0.5	0.0	0.0	0.5	97.0	0.0	2.6	0.0	0.0	99.5	0.0
Machakos	0.3	0.0	0.0	0.3	94.7	1.1	2.7	1.1	0.1	99.7	0.0
Makueni	0.2	0.0	0.0	0.2	99.3	0.0	0.5	0.0	0.0	99.8	0.0
Nyandarua	0.0	0.2	0.0	0.2	98.1	0.0	1.3	0.4	0.0	99.8	0.0
Nyeri	0.8	0.1	0.0	0.8	96.2	0.8	2.2	0.0	0.0	99.2	0.0
Kirinyaga	0.3	0.0	0.0	0.3	98.1	0.0	0.9	0.6	0.0	99.7	0.0
Murang'a	0.8	0.1	0.0	0.9	97.9	0.0	1.1	0.1	0.0	99.1	0.0
Kiambu	0.0	0.0	0.0	0.0	91.6	0.7	7.5	0.2	0.0	100.0	0.0
Turkana	63.6	0.0	0.5	64.0	31.9	1.4	0.0	0.0	1.6	34.9	1.1
West Pokot	50.8	1.6	0.0	52.4	47.3	0.1	0.2	0.0	0.0	47.6	0.0
Samburu	13.8	9.0	0.0	22.9	43.9	0.0	0.9	0.0	30.5	75.3	1.8
Trans Nzoia	0.3	1.4	0.0	1.7	96.8	0.0	0.8	0.7	0.0	98.3	0.0
Uasin Gishu	0.9	0.0	0.1	1.0	97.5	0.0	1.3	0.0	0.2	99.0	0.0
Elgeyo-Marakwet	19.5	0.4	0.0	19.9	79.6	0.0	0.0	0.3	0.0	79.9	0.2
Nandi	1.0	0.0	0.0	1.0	98.3	0.0	0.7	0.0	0.0	99.0	0.0
Baringo	14.4	1.6	0.0	16.0	83.6	0.0	0.3	0.1	0.0	84.0	0.0
Laikipia	3.3	0.0	0.0	3.3	94.8	0.0	1.7	0.0	0.2	96.7	0.0
Nakuru	1.7	0.0	0.3	2.0	96.4	0.1	1.1	0.2	0.1	98.0	0.0
Narok	15.2	0.0	0.0	15.2	83.8	0.0	0.1	0.0	0.9	84.8	0.0
Kajiado	4.8	8.3	0.0	13.1	78.0	0.0	7.3	0.0	1.6	86.9	0.0
Kericho	3.0	0.2	0.0	3.2	96.4	0.0	0.0	0.4	0.0	96.8	0.0
Bomet	6.5	0.4	0.0	6.9	90.1	2.9	0.0	0.0	0.0	93.1	0.0
Kakamega	1.3	1.9	0.0	3.1	95.9	0.0	0.9	0.0	0.0	96.9	0.0
Vihiga	0.0	0.3	0.0	0.3	99.2	0.3	0.2	0.0	0.0	99.7	0.0
Bungoma	3.0	0.2	0.0	3.3	96.5	0.0	0.0	0.0	0.2	96.7	0.0
Busia	6.1	0.0	0.0	6.1	93.2	0.5	0.0	0.0	0.2	93.9	0.0
Siaya	3.2	0.3	0.0	3.5	96.0	0.0	0.3	0.0	0.2	96.5	0.0
Kisumu	0.4	0.5	0.2	1.1	96.6	0.0	2.3	0.0	0.0	98.9	0.0
Homabay	1.1	0.9	0.0	2.0	97.7	0.0	0.3	0.0	0.0	98.0	0.0
Migori	1.6	0.0	0.0	1.6	94.0	1.4	3.0	0.0	0.0	98.4	0.0
Kisii	1.3	0.2	0.0	1.5	97.9	0.0	0.7	0.0	0.0	98.5	0.0
Nyamira	0.8	0.0	0.0	0.8	99.2	0.0	0.0	0.0	0.0	99.2	0.0
Nairobi City	0.0	0.0	0.0	0.0	61.6	0.1	36.1	1.6	0.2	99.5	0.5

5.3 Dwelling Spaces

Figure 5.4 provides the average number of persons per room for various counties and types of residence. On average both rural and urban areas had an average of 2 persons per room. There are 29 counties with an average of 2 persons per room, while those with 3 persons per room are 14. Counties with 4 persons per room included

Elgeyo-Marakwet and Baringo, while Mandera and Marsabit had an average of 5 persons per room. The Counties with 2 persons per room generally have a lower crowding indicator, which suggests better housing adequacy in terms of space per individual.

Figure 5.4: Average Number of Persons per Room by Residence and County

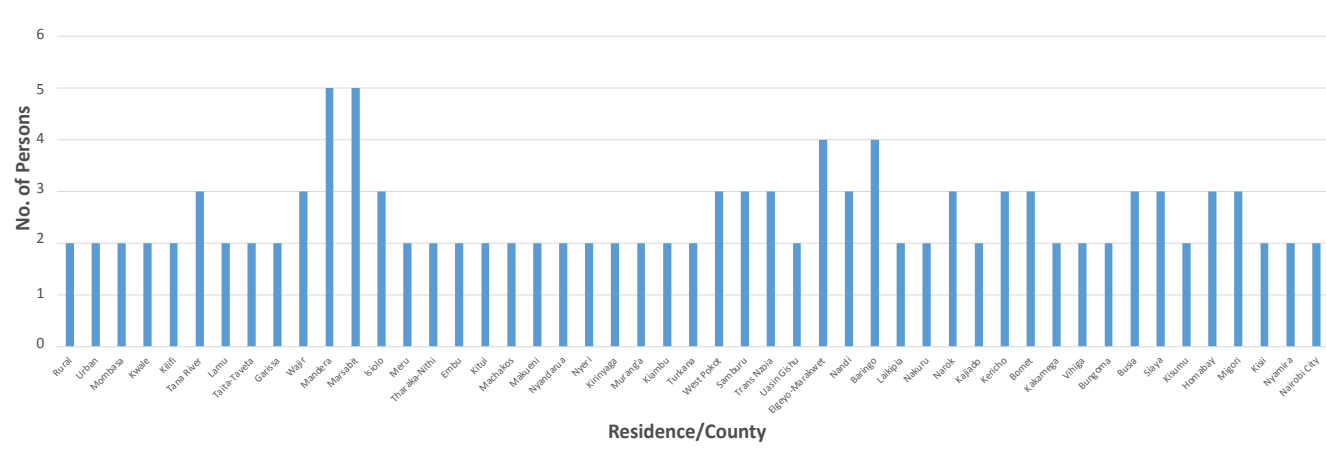


Table 5.5 presents the mean area per person by different household sizes. Households with 1-2 persons had a mean area per person of 31.0 Sq. meters, while those with 11+ persons had a mean area per person of 4.6

Sq. meters. The survey results show that mean area per person reduces with increase in household size revealing an inverse relationship.

Table 5.5: Distribution of Households by Average Area Per Person and HH Size

HH size categories	Average area per person(Sq.M)	Number of Households
1-2 persons	31.0	4,736,065
3-4 persons	16.9	4,658,381
5-6 persons	11.5	3,072,520
7-8 persons	7.8	1,063,422
9 -10 persons	5.9	267,424
11+ persons	4.6	88,315
Total	19.4	13,886,126



5.4 Energy

5.4.1 Cooking and Lighting

Access to clean energy for cooking and lighting is pivotal for improving rural and urban areas' quality of life, health, and economic development. In rural regions, most households relied on unclean energy sources such as biomass (firewood, wood, agriculture residue, and kerosene) for cooking due to its availability and low cost. However, this dependence has a negative impact on health and the environment:

- **Health Impacts:** Using unclean fuels produces indoor air pollution, leading to respiratory illnesses, cardiovascular diseases, and eye problems. Women and children are particularly vulnerable as they spend more time near cooking areas.
- **Environmental Impacts:** Deforestation, land degradation, and increased carbon emissions directly result from using unclean fuel for cooking.

5.4.2 Sources of Cooking fuel

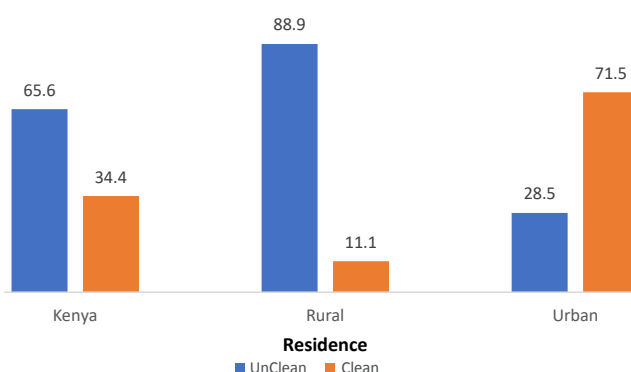
The 2023/2024 Kenya Housing Survey provided comprehensive information about the main types of cooking fuel used by households across the country. Ensuring access to clean fuel is a key target of Sustainable Development Goal indicator 7.1.2 on energy. The data is categorized into clean and unclean fuel as shown in Table 5.6 below

Table 5.6: Categorization of the Main Type of Cooking Fuel

Category	Type of Fuel
Clean	Electricity LPG (gas) Biogas Ethanol
Unclean (Smoky)	Firewood Wood Charcoal Agriculture Crop Residue Paraffin

Nationally, 34.4 per cent of households used clean fuels, with LPG being the most common, while 65.6 per cent of households relied on unclean fuels, primarily firewood and charcoal. Heavy dependence on unclean energy was prevalent in rural areas, where 88.9 per cent of households relied on it, while only 11.1 per cent used clean fuel. In contrast, over half of the households in urban areas used clean energy. Specifically, 71.5 per cent of urban households relied on clean energy, while 28.5 per cent depended on unclean energy, as shown in Figure 5.5.

Figure 5.5 Distribution of Households by Cooking Fuel Categories and Residence



There were significant differences in the proportion of households that primarily relied on clean fuels and technologies for cooking across counties. Nairobi City led with 95.1 per cent, followed by Kiambu at 70.0 per cent, Kajiado at 56.0 per cent, Mombasa at 50.3 per cent, and Uasin Gishu at 42.3 per cent, all higher than the national average of 34.4 per cent. Mandera County had the lowest per centage, with only 1.2 per cent of the population primarily relying on clean fuels and technologies for cooking. This was followed by Wajir at 2.2 per cent, Garissa at 2.7 per cent, and Turkana at 3.2 per cent as shown in Figure 5.6.

Figure 5.6 Per centage distribution of Households relying on clean fuels and technologies by county

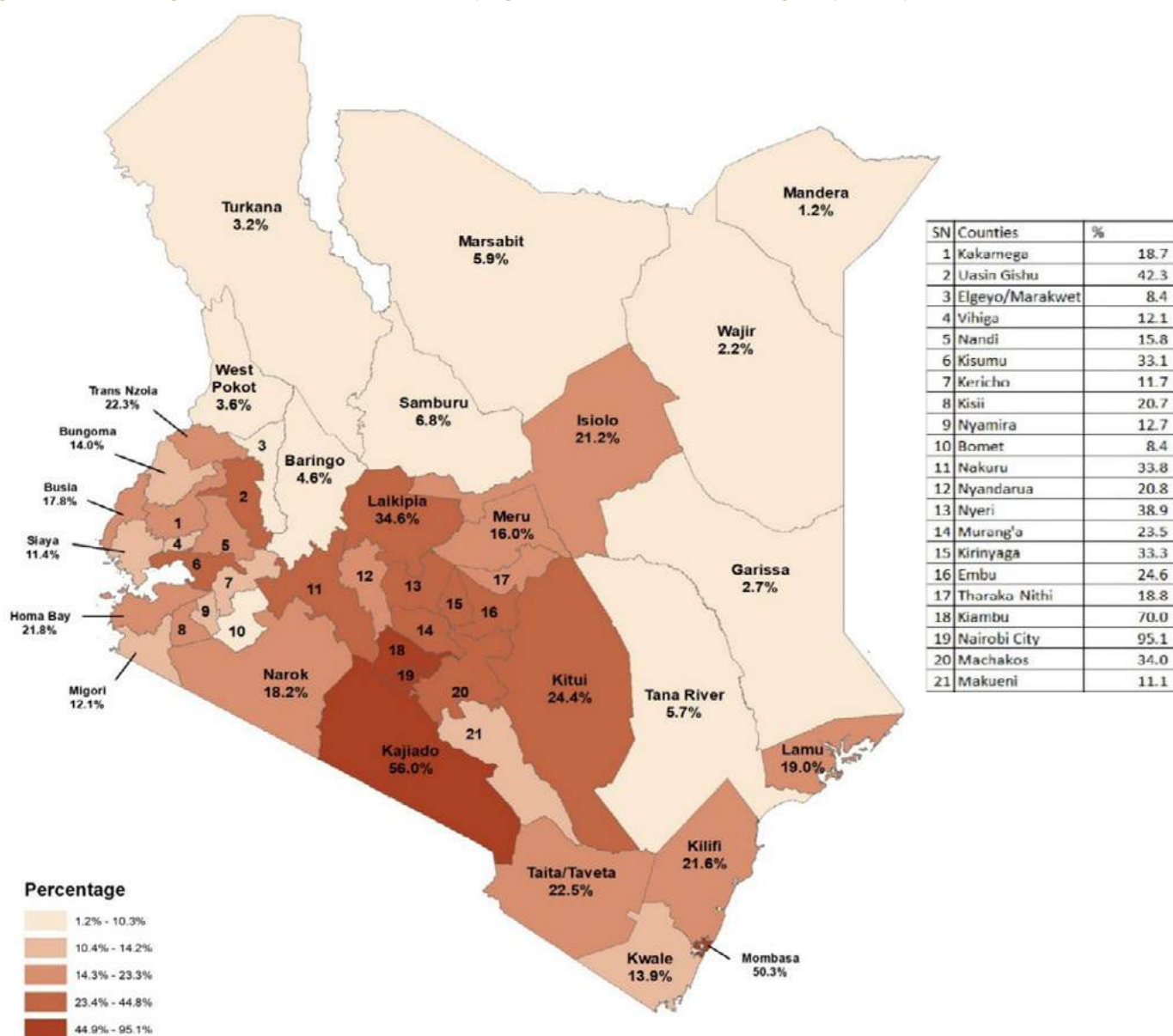


Table 5.7 Presents the distribution of households by main source of cooking fuel by residence and county. The most common types of fuel used for cooking by households were unclean sources such as firewood, charcoal, and paraffin, at 53.4 per cent, 10.8 per cent and 0.3 per cent, respectively. The use of firewood as cooking fuel by households was high in rural areas at 81.1 per cent. This often poses environmental challenges including increased deforestation and land degradation. In urban areas, 64.2 per cent of households used Liquefied Petroleum Gas (LPG) as the main cooking

fuel. Other commonly used cooking fuels by urban households included charcoal and firewood at 16.9 per cent and 9.4 per cent respectively.

Across the counties, West Pokot, Bomet, Mandera, and Wajir had high proportions of households using Firewood as the main cooking fuel. Nairobi City, Kiambu, and Kajiado reported high proportions of households using LPG for cooking. High proportions of households using Charcoal were in Mombasa, Tana River, and Lamu Counties as shown in Table 5.7.

Table 5.7: Per centage Distribution of Households by Main Source of Cooking Fuel, Residence and County

	Clean						Unclean								Number of Households				
	Electricity connection from main grid (KPLC)	Electricity connection from a mini grid (private)	Electricity connection from generator	Electricity connection from a solar system/panels	Bio-gas	LPG (gas)	Ethanol	Sub-Total	Firewood and products of wood	Processed biomass (pellets) or wood-chips	Char-coal	Agricultural crop residue	Animal dung/waste	Not Applicable		Paraffin/Kerosene	Sub-Total	Other	
	Kenya	1.3	0.0	0.0	0.2	0.4	30.7	1.8	34.4	53.4	0.1	10.8	0.1	0.0	0.7	0.3	65.4	0.2	13,886,126
	Rural	0.7	0.0	0.0	0.3	0.3	9.6	0.2	11.1	81.1	0.1	6.9	0.1	0.0	0.6	0.1	88.9	0.0	8,519,926
	Urban	2.3	0.0	0.0	0.1	0.6	64.2	4.4	71.5	9.4	0.0	16.9	0.0	0.0	0.9	0.7	28.0	0.5	5,366,201
County																			
	Mombasa	0.4	0.0	0.0	0.0	1.4	45.6	2.9	50.3	6.3	0.0	37.6	0.0	0.0	2.4	0.0	46.3	3.5	405,415
	Kwale	0.2	0.0	0.0	0.3	0.0	12.8	0.6	13.9	55.0	0.1	28.3	0.0	0.0	2.3	0.0	85.7	0.4	183,739
	Kilifi	1.7	0.0	0.0	0.0	0.0	19.6	0.2	21.6	62.0	0.0	13.2	0.0	0.0	2.5	0.0	77.7	0.7	407,221
	Tana River	0.7	0.0	0.0	0.0	0.0	5.0	0.0	5.7	56.2	0.0	37.0	0.0	0.0	0.4	0.0	93.7	0.6	74,962
	Lamu	0.7	0.0	0.0	0.0	0.1	18.2	0.0	19.0	44.8	0.0	34.2	0.0	0.0	2.1	0.0	81.0	0.0	40,543
	Taita-Taveta	0.0	0.0	0.0	0.2	0.7	20.4	1.2	22.5	55.3	0.0	20.1	0.0	0.0	0.9	0.5	76.9	0.6	108,463
	Garissa	1.3	0.1	0.0	0.0	0.0	1.3	0.1	2.7	60.3	0.5	36.3	0.0	0.0	0.1	0.1	97.3	0.0	180,468
	Wajir	0.5	0.0	0.0	0.0	0.0	1.7	0.0	2.2	86.9	0.9	9.1	0.0	0.0	0.9	0.0	97.8	0.0	152,058
	Mandera	0.5	0.0	0.0	0.0	0.0	0.7	0.0	1.2	87.4	0.0	7.2	0.0	0.0	4.0	0.0	98.6	0.2	167,096
	Marsabit	1.0	0.0	0.0	0.1	0.0	4.8	0.0	5.9	83.4	0.4	9.2	0.0	0.0	1.1	0.0	94.1	0.0	87,421
	Isiolo	2.3	0.0	0.0	0.3	0.0	18.6	0.0	21.2	54.1	0.3	24.4	0.0	0.0	0.0	0.0	78.8	0.0	63,947
	Meru	0.6	0.0	0.0	0.0	0.6	14.8	0.0	16.0	71.4	0.0	10.7	0.0	0.0	1.9	0.0	84.0	0.0	463,535
	Tharaka-Nithi	0.7	0.1	0.0	0.3	1.6	16.2	0.1	18.8	72.9	0.4	6.7	0.0	0.0	1.2	0.0	81.2	0.0	120,886
	Embu	0.7	0.0	0.0	0.0	0.9	22.9	0.0	24.6	71.6	0.0	3.7	0.0	0.0	0.1	0.0	75.4	0.0	199,046
	Kitui	0.0	0.0	0.0	0.0	0.2	23.9	0.3	24.4	64.1	0.0	10.9	0.0	0.0	0.6	0.0	75.6	0.0	275,514
	Machakos	0.0	0.0	0.0	0.2	0.2	32.6	0.9	33.8	57.6	0.0	7.8	0.0	0.0	0.0	0.7	66.2	0.0	430,469
	Makueni	0.3	0.0	0.0	0.4	0.0	10.3	0.0	11.1	79.2	0.0	8.7	0.0	0.0	0.9	0.1	88.9	0.1	257,105
	Nyandarua	1.0	0.0	0.0	0.0	0.4	19.2	0.2	20.8	68.9	0.0	10.1	0.0	0.0	0.3	0.0	79.2	0.0	198,250
	Nyeri	4.7	0.0	0.3	0.6	1.1	32.2	0.1	38.9	52.6	0.0	6.8	0.0	0.3	0.7	0.1	60.5	0.5	270,743
	Kirinyaga	0.5	0.0	0.0	0.0	0.4	31.8	0.6	33.3	59.1	0.0	7.0	0.0	0.0	0.4	0.0	66.5	0.2	217,216
	Murang'a	1.1	0.0	0.0	0.0	0.4	21.6	0.3	23.5	72.9	0.0	2.4	0.0	0.0	0.7	0.5	76.5	0.0	385,599
	Kiambu	0.2	0.0	0.0	0.0	0.5	66.4	3.0	70.0	25.0	0.2	3.1	0.0	0.0	0.7	1.1	30.0	0.0	997,101

Table 5.7: Percentage Distribution of Households by Main Source of Cooking Fuel, Residence and County (Continued)

	Clean						Unclean								Number of Households				
	Elec- tricity connec- tion from main grid (KPLC)	Electric- ity con- nection from a mini grid (private)	Electricity connec- tion from generator	Elec- tricity connec- tion from a solar system/ panels	Bio- gas	LPG (gas)	Ethanol	Sub- Total	Firewood and products of wood	Pro- cessed biomass (pel- lets) or wood- chips	Char- coal	Agri- cultural crop residue	Animal dung/ waste	Not Appli- cable		Paraf- fin/Ker- osene	Sub-To- tal	Other	
Turkana	0.0	0.0	0.0	0.0	0.0	3.2	0.0	3.2	78.6	0.0	18.0	0.0	0.0	0.0	0.1	0.0	96.8	0.0	219,588
West Pokot	0.1	0.0	0.0	0.3	0.0	3.2	0.0	3.6	89.0	0.5	6.1	0.1	0.7	0.0	0.0	0.0	96.4	0.0	183,115
Samburu	0.4	0.0	0.0	0.0	0.0	6.4	0.0	6.8	62.2	0.0	30.9	0.0	0.0	0.0	0.1	0.0	93.2	0.0	95,708
Trans Nzoia	2.5	0.0	0.0	0.0	3.2	16.4	0.1	22.2	63.3	0.5	13.3	0.0	0.0	0.0	0.6	0.0	77.8	0.0	266,538
Uasin Gishu	2.5	0.0	0.0	0.2	0.2	38.5	0.9	42.3	45.9	0.0	11.2	0.3	0.0	0.0	0.3	0.0	57.7	0.0	351,899
Elgeyo-Marakwet	1.4	0.0	0.0	0.0	0.0	6.9	0.0	8.3	84.9	0.0	6.3	0.0	0.0	0.0	0.4	0.0	91.6	0.0	110,356
Nandi	2.4	0.0	0.0	0.0	0.0	12.4	1.0	15.8	78.7	0.0	5.1	0.0	0.0	0.0	0.4	0.0	84.2	0.0	226,515
Baringo	0.1	0.0	0.0	0.5	0.0	3.9	0.0	4.6	84.6	0.0	10.3	0.0	0.0	0.0	0.4	0.0	95.4	0.0	157,303
Laikipia	2.1	0.0	0.0	0.3	0.4	31.0	0.8	34.6	51.5	0.0	13.5	0.2	0.0	0.0	0.3	0.0	65.4	0.0	154,631
Nakuru	1.2	0.0	0.0	0.0	0.8	32.9	0.8	35.7	41.0	0.0	21.5	0.4	0.0	0.0	1.2	0.1	64.3	0.0	673,026
Narok	0.8	0.0	0.0	0.0	0.0	17.5	0.0	18.2	61.4	0.0	20.3	0.0	0.0	0.0	0.1	0.0	81.8	0.0	263,863
Kajiado	3.0	0.0	0.0	0.2	0.0	51.8	1.0	56.0	24.6	0.0	18.9	0.0	0.0	0.0	0.5	0.0	44.0	0.0	371,234
Kericho	0.1	0.0	0.0	0.0	0.4	10.8	0.3	11.7	80.6	0.3	5.9	0.0	0.0	0.0	1.2	0.0	88.0	0.4	233,615
Bomet	2.1	0.0	0.0	0.0	0.0	6.3	0.0	8.4	88.2	0.3	3.1	0.0	0.0	0.0	0.0	0.0	91.6	0.0	219,222
Kakamega	0.4	0.0	0.0	0.2	0.0	17.8	0.3	18.7	75.3	0.0	5.3	0.0	0.0	0.0	0.6	0.1	81.3	0.0	484,205
Vihiga	0.4	0.0	0.0	0.6	0.0	11.0	0.0	12.0	85.2	0.0	2.7	0.0	0.0	0.0	0.1	0.0	88.0	0.0	160,520
Bungoma	0.6	0.0	0.0	0.0	0.0	13.3	0.2	14.0	77.1	0.1	8.8	0.0	0.0	0.0	0.0	0.0	86.0	0.0	470,168
Busia	1.3	0.0	0.0	4.1	0.0	12.3	0.1	17.8	67.5	0.0	12.5	0.0	0.0	0.0	2.1	0.0	82.1	0.1	216,855
Siaya	0.1	0.0	0.0	0.4	0.0	10.3	0.6	11.4	74.1	0.0	14.2	0.0	0.0	0.0	0.3	0.0	88.6	0.0	247,647
Kisumu	1.1	0.0	0.0	0.0	0.0	29.0	3.0	33.1	48.9	0.0	16.0	1.2	0.0	0.0	0.5	0.0	66.6	0.2	338,619
Homabay	1.5	0.0	0.0	2.5	1.1	16.7	0.0	21.8	68.6	0.4	7.8	0.3	0.1	1.0	0.0	0.0	78.2	0.0	270,043
Migori	1.6	0.0	0.0	0.3	0.0	9.1	1.0	12.1	67.0	0.3	20.2	0.0	0.0	0.0	0.4	0.0	87.9	0.0	267,547
Kisii	1.8	0.0	0.0	0.0	0.0	18.5	0.4	20.7	78.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	79.3	0.0	371,985
Nyamira	1.0	0.0	0.0	0.0	0.0	11.7	0.0	12.7	84.7	0.0	2.3	0.0	0.0	0.0	0.0	0.3	87.3	0.0	183,594
Nairobi City	3.3	0.1	0.0	0.1	0.7	81.0	10.0	95.1	0.2	0.1	2.7	0.0	0.0	0.0	0.2	1.3	4.5	0.3	1,661,533

5.4.3 Cooking Appliances and Technologies

Table 5.8 shows the per centage distribution of households based on the primary type of cooking appliance by residence and county. Nationally, 33.3 per cent of households used appliances powered by clean fuels. This included LPG at 31.6 per cent and ethanol stoves at 1.7 per cent. The three-stone stove/open fire which uses unclean energy was used as the primary cooking appliance by 49.7 per cent of households.

In urban areas, LPG was more commonly used at 65.6 per cent. In rural areas, only 10.6 per cent of households used clean fuels, while 89.4 per cent relied on unclean

fuels. The predominant unclean fuels used were the three stone stove/open fire at 75.3 per cent, followed by improved fire wood jiko at 6.4 per cent. Across the counties, Bomet, Mandera, Marsabit, and Nyamira had high proportions of households using three stone stoves/open fire as the main cooking appliance. Nairobi City, Kiambu, and Mombasa reported high proportions of households using electric, LPG, or biogas cookers as the main cooking appliance. High proportions of households using “ordinary charcoal jiko” as the cooking appliance were found in Mombasa, Tana River, and Garissa Counties.

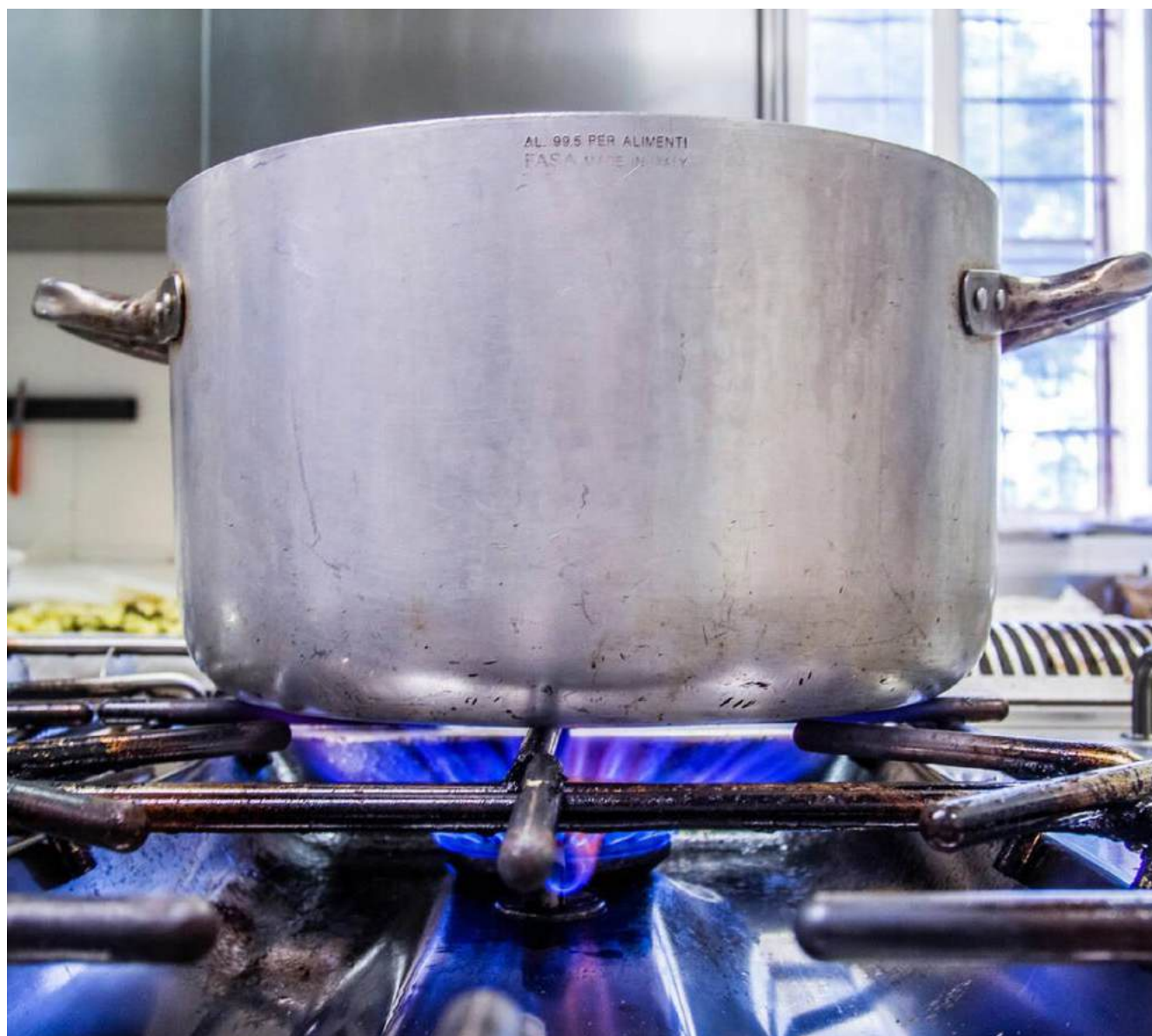


Table 5.8: Per centage Distribution of Households by Primary type of Cooking Appliance, Residence and County

	Clean					Unclean							Subtotal
	Electric/ LPG/Bio- gas Cooker	Electric pressure Cooker	Air fryer	Jiko Koko (Ethanol)	Subtotal	Kero- sene Stove	Ordinary Charcoal Jiko	Improved Charcoal Jiko	Improved Firewood Jiko	Moveable Firepan	Three stone stove/open fire	Other	
Kenya	31.6	0.0	0.0	1.7	33.3	0.9	9.7	1.9	4.3	0.1	49.7	0.1	66.7
Rural	10.3	0.0	0.0	0.2	10.6	0.1	6.4	1.2	6.4	0.1	75.3	0.0	89.4
Urban	65.6	0.0	0.0	3.9	69.5	2.3	14.9	3.1	0.8	0.3	8.9	0.1	30.5
County													
Mombasa	48.9	0.0	0.0	2.0	50.9	4.1	37.3	1.2	0.5	0.0	5.7	0.2	49.1
Kwale	13.1	0.0	0.0	0.6	13.7	0.4	26.4	2.6	3.5	0.0	53.4	0.0	86.3
Kilifi	21.8	0.0	0.0	0.0	21.8	0.5	12.3	1.0	0.5	0.4	62.5	1.0	78.2
Tana River	3.9	0.0	0.0	0.0	3.9	0.0	37.8	2.4	1.0	0.0	54.4	0.6	96.1
Lamu	19.2	0.0	0.0	0.0	19.2	0.0	31.4	3.0	12.5	0.0	34.0	0.0	80.8
Taita-Taveta	21.3	0.0	0.0	0.5	21.8	1.9	14.3	5.6	9.1	0.0	47.2	0.0	78.2
Garissa	1.6	0.0	0.0	0.1	1.7	0.0	36.4	1.6	0.5	0.8	58.9	0.0	98.3
Wajir	1.7	0.0	0.0	0.0	1.7	0.0	4.5	5.8	18.5	0.3	69.0	0.0	98.3
Mandera	0.8	0.0	0.0	0.0	0.8	0.0	5.4	1.8	0.6	0.0	91.3	0.2	99.2
Marsabit	4.9	0.0	0.0	0.3	5.2	0.0	9.3	0.4	0.0	0.0	84.3	0.8	94.8
Isiolo	18.6	0.0	0.0	0.0	18.6	0.0	13.6	9.9	5.7	0.0	52.1	0.0	81.4
Meru	16.3	0.0	0.0	0.0	16.3	0.0	9.6	0.7	6.6	0.0	66.8	0.0	83.7
Tharaka-Nithi	19.3	0.0	0.0	0.0	19.3	0.1	4.8	1.9	7.9	0.0	65.9	0.0	80.7
Embu	24.9	0.0	0.0	0.0	24.9	0.0	3.4	0.6	6.8	0.0	64.3	0.0	75.1
Kitui	24.2	0.0	0.0	0.0	24.2	0.4	7.9	3.1	12.9	0.0	51.4	0.0	75.8
Machakos	32.5	0.0	0.0	1.4	33.9	0.7	3.6	4.1	10.6	0.0	47.1	0.0	66.1
Makueni	9.8	0.0	0.0	0.0	9.8	0.3	9.7	1.1	14.8	0.0	64.2	0.1	90.2
Nyandarua	20.3	0.0	0.0	0.2	20.5	0.0	8.9	1.1	4.8	0.0	64.7	0.0	79.5
Nyeri	36.1	0.0	0.0	0.1	36.3	0.1	4.6	1.9	2.5	0.0	54.2	0.5	63.7
Kirinyaga	32.9	0.0	0.0	0.7	33.6	0.2	5.9	0.7	4.4	0.0	55.2	0.0	66.4
Murang'a	23.2	0.0	0.0	0.3	23.5	0.5	2.5	0.4	10.1	0.0	63.0	0.0	76.5
Kiambu	66.9	0.0	0.0	3.0	69.9	1.1	2.5	1.0	2.9	0.0	22.6	0.0	30.1
Turkana	3.2	0.0	0.0	0.0	3.2	0.0	15.0	3.0	0.7	0.0	78.1	0.0	96.8
West Pokot	3.0	0.9	0.9	0.0	3.9	0.0	6.2	1.6	34.0	0.0	54.2	0.0	96.1
Samburu	6.5	0.0	0.0	0.0	6.5	0.0	20.7	9.3	1.0	0.0	62.4	0.0	93.5
Trans Nzoia	21.5	0.0	0.0	0.1	21.6	0.0	11.9	2.7	1.5	0.0	62.3	0.0	78.4

Table 5.8: Per centage Distribution of Households by Primary type of Cooking Appliance, Residence and County (Continued)

	Clean					Unclean							
	Electric/ LPG/Bio- gas Cooker	Electric pressure Cooker	Air fryer	Jiko Koko (Ethanol)	Subtotal	Kero- sene Stove	Ordinary Charcoal Jiko	Improved Charcoal Jiko	Improved Firewood Jiko	Moveable Firepan	Three stone stove/open fire	Other	Subtotal
Uasin Gishu	40.9	0.0	0.0	0.9	41.8	0.0	8.6	2.9	7.7	0.2	38.8	0.0	58.2
Elgeyo-Marakwet	10.0	0.0	0.0	0.0	10.0	0.1	14.2	3.9	5.3	0.0	66.5	0.0	90.0
Nandi	11.7	0.0	0.0	1.3	13.0	0.3	4.7	0.7	13.3	0.0	67.9	0.0	87.0
Baringo	4.1	0.0	0.0	0.0	4.1	0.0	5.7	4.2	1.6	0.0	84.5	0.0	95.9
Laikipia	32.9	0.0	0.0	0.5	33.4	0.2	13.6	0.4	2.1	0.0	50.3	0.0	66.6
Nakuru	32.9	0.0	0.0	0.8	33.7	0.1	19.3	3.1	2.1	2.2	39.4	0.0	66.3
Narok	18.2	0.0	0.0	0.0	18.2	0.0	18.5	1.7	10.2	0.0	51.2	0.2	81.8
Kajiado	36.2	0.8	0.0	5.8	42.8	0.2	22.6	9.9	0.3	0.0	24.1	0.0	57.2
Kericho	11.6	0.0	0.0	0.3	11.9	0.0	5.5	0.3	0.3	0.0	81.5	0.4	88.1
Bomet	6.4	0.0	0.0	0.0	6.4	0.0	2.3	0.8	1.0	0.0	89.5	0.0	93.6
Kakamega	18.4	0.0	0.0	0.3	18.8	0.1	4.7	0.7	3.4	0.0	72.3	0.0	81.2
Vihiga	11.1	0.0	0.0	0.0	11.1	0.0	1.2	1.5	3.8	0.0	82.4	0.0	88.9
Bungoma	13.3	0.0	0.0	0.0	13.3	0.2	8.2	1.0	4.1	0.0	73.2	0.0	86.7
Busia	13.3	0.3	0.0	0.0	13.6	0.1	12.8	0.9	0.0	0.0	72.5	0.1	86.4
Siaya	10.4	0.0	0.0	0.6	11.0	0.0	12.4	1.9	1.8	0.0	72.9	0.0	89.0
Kisumu	28.0	0.0	0.0	6.0	34.0	0.5	13.1	1.7	1.2	0.0	49.2	0.2	66.0
Homabay	18.6	0.0	0.0	0.0	18.6	0.0	5.3	2.3	5.8	0.0	67.9	0.0	81.4
Migori	10.8	0.0	0.0	0.5	11.3	0.1	18.4	2.8	2.0	0.0	65.5	0.0	88.7
Kisii	24.2	0.0	0.0	0.4	24.6	0.0	2.4	0.4	3.0	0.3	69.2	0.0	75.4
Nyamira	11.6	0.0	0.0	0.0	11.6	0.6	2.1	0.2	0.0	0.0	85.5	0.0	88.4
Nairobi City	84.6	0.0	0.0	7.2	91.8	5.0	2.3	0.6	0.0	0.0	0.4	0.0	8.2

5.4.4 Sources of Energy for Lighting

Transitioning to clean energy for lighting is a crucial and impactful measure in the fight against climate change. By adopting clean energy solutions, like solar lights, we can effectively reduce our dependency on fossil fuels and minimize our carbon footprints. Clean energy for lighting reduces indoor air pollution, which is often caused by the use of kerosene lamps and other polluting light sources. Reducing air pollution lowers the risk of respiratory illnesses and other health issues, thus improving overall health and well-being. The data is categorised into clean and unclean energy sources for lighting as shown in Table 5.9. The table also presents data in line with SDG indicator 7.1.1 on proportion of population with access to electricity (Grid Only).

Table 5.9: Categorization of the Main Type of Lighting Fuel

Category	Type of Fuel
Clean	Electricity Solar Battery Biogas Ethanol
Unclean (Smoky)	Kerosene Charcoal Wood Candle

5.4.5 Main Source of Lighting

Nationally, 95.4 per cent of households used clean energy sources for lighting. In urban and rural areas, clean lighting sources were reported at 97.5 per cent and 94.0 per cent respectively. The most common source of household lighting by residence is Electricity from the main grid (KPLC), Solar charged batteries, and Electricity from solar systems/panels, at 57.7 per cent, 29.4 per cent, and 7.8 per cent, respectively. The use of the solar charged battery was higher in rural areas at 44.8 per cent followed by electricity from the main grid (KPLC) at 36.9 per cent as shown in Table 5.10. The per centage of rural households relying on unclean fuel such as paraffin lamps, wood, and candle as a source of lighting was 6.0 per cent compared to 2.5 per cent in urban areas.

Counties that registered high proportions of households using electricity for lighting from the main grid were Nairobi City, Kiambu, Mombasa, and Muranga. Most households in West Pokot, Mandera, Turkana, and Mandera reported battery lamps/torches.

Usage of paraffin as a source of lighting was common in, Vihiga, Nyamira, and Kisii Counties, while wood fuel was predominant among households in Turkana, West Pokot, and Marsabit counties.



Table 5.10: Per centage Distribution of Households by Main Source of Lighting and Residence/ County

	Clean								Unclean							Number of household
	Elec- tricity connec- tion from main grid (KPLC)	Elec- tricity con- nec- tion from a mini grid (private)	Elec- tricity con- nec- tion from genera- tor	Electricity connec- tion from a solar system/ panels	Solar Charged Battery/ Torch/ Spot- light/ lamp	Elec- tricity con- nec- tion from wind	Bio- gas	Subto- tal	Kero- sene or Paraffin	Char- coal	Wood	Candle	None	Other	Sub- total	
Kenya	57.7	0.4	0.1	7.8	29.4	0.1	0.0	95.4	2.8	0.1	0.4	0.9	0.2	0.2	4.6	13,886,126
Rural	36.9	0.1	0.1	12.0	44.8	0.1	0.0	94.0	3.9	0.1	0.7	0.8	0.3	0.2	6.0	8,519,926
Urban	90.7	0.9	0.0	1.1	4.8	0.0	0.0	97.5	1.0	0.1	0.0	1.2	0.1	0.1	2.5	5,366,201
County																
Mombasa	83.4	0.0	0.2	2.1	6.9	0.0	0.0	92.7	4.1	0.2	0.0	3.0	0.0	0.0	7.3	405,415
Kwale	55.0	0.0	0.0	27.8	10.8	0.0	0.0	93.5	4.4	0.0	0.0	1.7	0.3	0.0	6.5	183,739
Kilifi	43.0	0.0	0.0	9.2	37.2	0.0	0.0	89.4	5.9	0.6	0.5	2.1	0.0	1.5	10.6	407,221
Tana River	43.0	0.0	0.0	0.6	49.5	0.0	0.3	93.5	5.7	0.4	0.1	0	0.2	0.0	6.5	74,962
Lamu	52.3	0.0	0.0	8.8	34.6	0.0	0.0	95.7	0.7	0.3	0.7	2.6	0.0	0.0	4.3	40,543
Taita-Taveta	61.6	0.0	0.0	4.4	28.9	0.3	0.0	95.2	4.2	0.0	0.0	0.6	0.0	0.0	4.8	108,463
Garissa	34.1	1.5	2.2	4.1	56.1	0.0	0.0	98.0	0.0	0.6	0.0	0.2	1.1	0.1	2.0	180,468
Wajir	24.3	0.2	0.0	4.5	70.4	0.0	0.0	99.4	0.0	0.1	0.3	0	0.2	0.0	0.6	152,058
Mandera	23.9	0.1	0.0	0.0	75.9	0.0	0.0	99.8	0.0	0.0	0.0	0	0.2	0.0	0.2	167,096
Marsabit	34.2	0.0	0.0	0.1	56.4	0.4	0.3	91.4	0.0	0.1	3.4	0.3	4.8	0.0	8.6	87,421
Isiolo	50.1	0.0	0.0	8.0	40.8	0.0	0.0	98.9	0.2	0.0	0.2	0.7	0	0.0	1.1	63,947
Meru	52.2	0.0	0.0	14.6	22.3	0.0	0.0	89.1	7.4	0.0	0.8	2.1	0.7	0.0	10.9	463,535
Tharaka-Nithi	52.3	0.1	0.0	23.1	20.1	0.0	0.0	95.6	3.6	0.0	0.3	0.5	0.0	0.0	4.4	120,886
Embu	53.4	0.0	0.0	10.2	26.4	0.0	0.0	90.0	6.4	0.0	2.1	1.5	0.0	0.0	10.0	199,046
Kitui	36.3	0.0	0.0	9.9	51.9	0.2	0.0	98.2	1.4	0.0	0.2	0	0.0	0.2	1.8	275,514
Machakos	45.4	0.0	0.2	27.3	23.2	0.0	0.0	96.1	3.4	0.0	0.0	0.6	0.0	0.0	3.9	430,469
Makueni	25.2	0.0	0.0	40.4	28.8	0.0	0.0	94.4	5.4	0.0	0.0	0	0.0	0.3	5.6	257,105
Nyandarua	64.4	0.0	0.0	3.5	25.6	0.0	0.0	93.4	4.7	0.1	0.0	1.7	0.0	0.0	6.6	198,250
Nyeri	83.3	0.1	0.0	1.8	5.8	0.0	0.0	91.1	6.1	0.3	0.3	1.8	0.0	0.5	8.9	270,743
Kirinyaga	79.2	0.0	0.0	3.1	7.8	0.1	0.0	90.3	7.5	0.2	0.0	2.0	0.0	0.0	9.7	217,216
Murang'a	84.2	0.0	0.0	3.4	5.6	0.0	0.0	93.3	4.4	0.4	0.0	2.0	0.0	0.0	6.7	385,599
Kiambu	93.6	0.7	0.0	0.0	2.8	0.0	0.0	97.0	1.1	0.0	0.0	1.0	0.2	0.8	3.0	997,101
Turkana	9.8	0.0	0.0	1.4	71.1	0.0	0.0	82.3	0.1	0.0	12.0	0.2	4.7	0.6	17.7	219,588
West Pokot	15.7	0.0	0.0	1.2	77.4	0.7	0.0	95.0	0.3	0.0	4.3	0.4	0.0	0.0	5.0	183,115

Table 5.10: Per centage Distribution of Households by Main Source of Lighting and Residence/ County (Continued)

	Clean								Unclean						Number of household	
	Elec- tricity connec- tion from main grid (KPLC)	Electric- ity con- nec- tion from a mini grid (private)	Elec- tricity con- nec- tion from genera- tor	Electricity connec- tion from a solar system/ panels	Solar Charged Battery/ Torch/ Spot- light/ lamp	Elec- tricity con- nec- tion from wind	Bio- gas	Sub- total	Kero- sene or Paraffin	Char- coal	Wood	Candle	None	Other		Sub- total
Samburu	28.3	0.2	0.3	0.4	67.6	0.0	0.0	96.8	0.1	0.3	2.2	0.4	0.1	0.1	3.2	95,708
Trans Nzoia	47.6	0.1	0.0	6.0	41.1	0.0	0.0	94.8	2.9	0	0.1	0.8	1.3	0.0	5.2	266,538
Uasin Gishu	72.0	0.2	0.0	6.4	20.0	0.0	0.0	98.7	0.6	0	0	0.7	0.0	0.0	1.3	351,899
Elgeyo- Marakwet	37.8	0.4	0.0	9.3	52.1	0.0	0.0	99.5	0	0.1	0.3	0.1	0.0	0.0	0.5	110,356
Nandi	50.5	0.0	0.0	6.2	41.2	0.0	0.0	97.8	1.8	0	0	0.4	0.0	0.0	2.2	226,515
Baringo	36.5	0.1	0.0	9.6	48.4	0.0	0.0	94.6	0.3	0	2.1	0.5	0.1	2.3	5.4	157,303
Laikipia	53.8	0.2	0.0	13.9	27.4	0.0	0.0	95.3	2.7	0.4	0.5	0.9	0.3	0.0	4.7	154,631
Nakuru	68.0	0.1	0.0	8.2	21.4	0.0	0.0	97.8	1.1	0	0.1	1.1	0.0	0.0	2.2	673,026
Narok	27.9	0.0	0.3	36.8	32.6	0.3	0.0	97.9	0.9	0	0.2	0.9	0.0	0.0	2.1	263,863
Kajiado	73.4	0.0	0.0	3.4	22.3	0.0	0.0	99.1	0	0.5	0	0.1	0.4	0	0.9	371,234
Kericho	46.3	0.7	0.0	10.5	41.3	0.3	0.0	99.0	0.9	0	0	0.1	0	0	1.0	233,615
Bomet	37.0	0.0	0.0	3.4	59.2	0.3	0.0	99.9	0	0.0	0	0.0	0	0	0.1	219,222
Kakamega	39.8	0.3	0.0	10.1	45.5	0.3	0.0	96.0	3.4	0.2	0	0.3	0	0	4.0	484,205
Vihiga	43.4	0.0	0.0	12.6	30.9	0	0.0	86.8	13.2	0	0	0	0	0	13.2	160,520
Bungoma	32.7	0.0	0.0	11.3	51.9	0.3	0.0	96.3	3.4	0	0.3	0	0	0	3.7	470,168
Busia	30.9	0.0	0.0	1.9	63.1	0.0	0.0	95.9	2.9	0	0	0.9	0.3	0	4.1	216,855
Siaya	27.4	0.0	0.0	4.2	66.5	0.0	0.0	98.1	1.8	0.1	0	0.1	0	0	1.9	247,647
Kisumu	57.2	0.0	0.0	7.6	30.8	0.0	0.0	95.6	3.1	0	0	0.9	0.4	0	4.4	338,619
Homabay	20.3	0.1	0.4	13.3	64.9	0.0	0.0	98.9	0.6	0.1	0	0.3	0.1	0	1.1	270,043
Migori	32.2	0.1	0.0	19.1	43.1	0.0	0.0	94.5	3.4	0	0	2.2	0	0	5.5	267,547
Kisii	55.0	0.5	0.0	0.3	34.5	0.0	0.0	90.2	8.9	0	0	0.6	0.2	0	9.8	371,985
Nyamira	54.5	0.0	0.0	1.8	29.4	0.0	0.0	85.7	13.0	0	0	0.9	0.4	0	14.3	183,594
Nairobi City	95.2	2.4	0.0	0.3	0.6	0.0	0.0	98.5	0.4	0	0	1.1	0.1	0	1.5	1,661,533

The proportion of the households with access to electricity from the main grid was 91.0 per cent in urban areas compared to 37.3 per cent in rural areas. The percentage of rural households not connected to electricity from the main grid was 62.7 per cent compared to 9.0 per cent in urban areas as shown in Table 5.11.

The counties that had the highest proportion of households using electricity for lighting from the main grid were Nairobi City, Kiambu, Mombasa, Muranga, and Nyeri. On the other hand, the majority of the population not connected to electricity from the main grid were in West Pokot, Homabay, and Turkana as illustrated in Table 5.11.

Table 5.11: Per centage Distribution of Households Connected to Electricity from the Main Grid by Residence and County

Region	Connected to Electricity	Not connected to Electricity	Number of Households
Kenya	58.1	41.9	13,886,126
Rural	37.3	62.7	8,519,926
Urban	91.0	9.0	5,366,201
County			
Mombasa	82.9	17.1	405,415
Kwale	49.5	50.5	183,739
Kilifi	35.7	64.3	407,221
Tana River	40.1	59.9	74,962
Lamu	46.4	53.6	40,543
Taita-Taveta	59.3	40.7	108,463
Garissa	33.6	66.4	180,468
Wajir	21.7	78.3	152,058
Mandera	24.8	75.2	167,096
Marsabit	37.1	62.9	87,421
Isiolo	47.0	53.0	63,947
Meru	48.8	51.2	463,535
Tharaka-Nithi	53.0	47.0	120,886
Embu	49.4	50.6	199,046
Kitui	22.1	77.9	275,514
Machakos	42.2	57.8	430,469
Makueni	23.4	76.6	257,105
Nyandarua	64.6	35.4	198,250
Nyeri	87.1	12.9	270,743
Kirinyaga	79.5	20.5	217,216
Murang'a	87.3	12.7	385,599
Kiambu	95.1	4.9	997,101
Turkana	9.0	91.0	219,588
West Pokot	14.8	85.2	183,115

Region	Connected to Electricity	Not connected to Electricity	Number of Households
Samburu	22.9	77.1	95,708
Trans Nzoia	43.5	56.5	266,538
Uasin Gishu	66.1	33.9	351,899
Elgeyo-Marakwet	37.1	62.9	110,356
Nandi	48.7	51.3	226,515
Baringo	34.0	66.0	157,303
Laikipia	47.0	53.0	154,631
Nakuru	65.4	34.6	673,026
Narok	23.6	76.4	263,863
Kajiado	63.9	36.1	371,234
Kericho	45.3	54.7	233,615
Bomet	34.3	65.7	219,222
Kakamega	38.7	61.3	484,205
Vihiga	45.1	54.9	160,520
Bungoma	30.6	69.4	470,168
Busia	29.5	70.5	216,855
Siaya	24.0	76.0	247,647
Kisumu	56.7	43.3	338,619
Homabay	20.1	79.9	270,043
Migori	30.8	69.2	267,547
Kisii	54.3	45.7	371,985
Nyamira	58.2	41.8	183,594
Nairobi City	95.2	4.8	1,661,533

Figure 5.7 presents reasons why households are not connected to electricity from the main grid. The majority of households (47%) reported that the absence of electricity connections in their area is the reason they are not connected to the main grid. This indicates a significant gap in the infrastructure and distribution of

the main grid electricity network. Approximately one-third of the households cited financial constraints as the main barrier to obtaining a connection, suggesting that the initial costs associated with setting up a connection are prohibitively high for many households.

Figure 5.7: Reasons why Households are not Connected to Electricity from the Main Grid

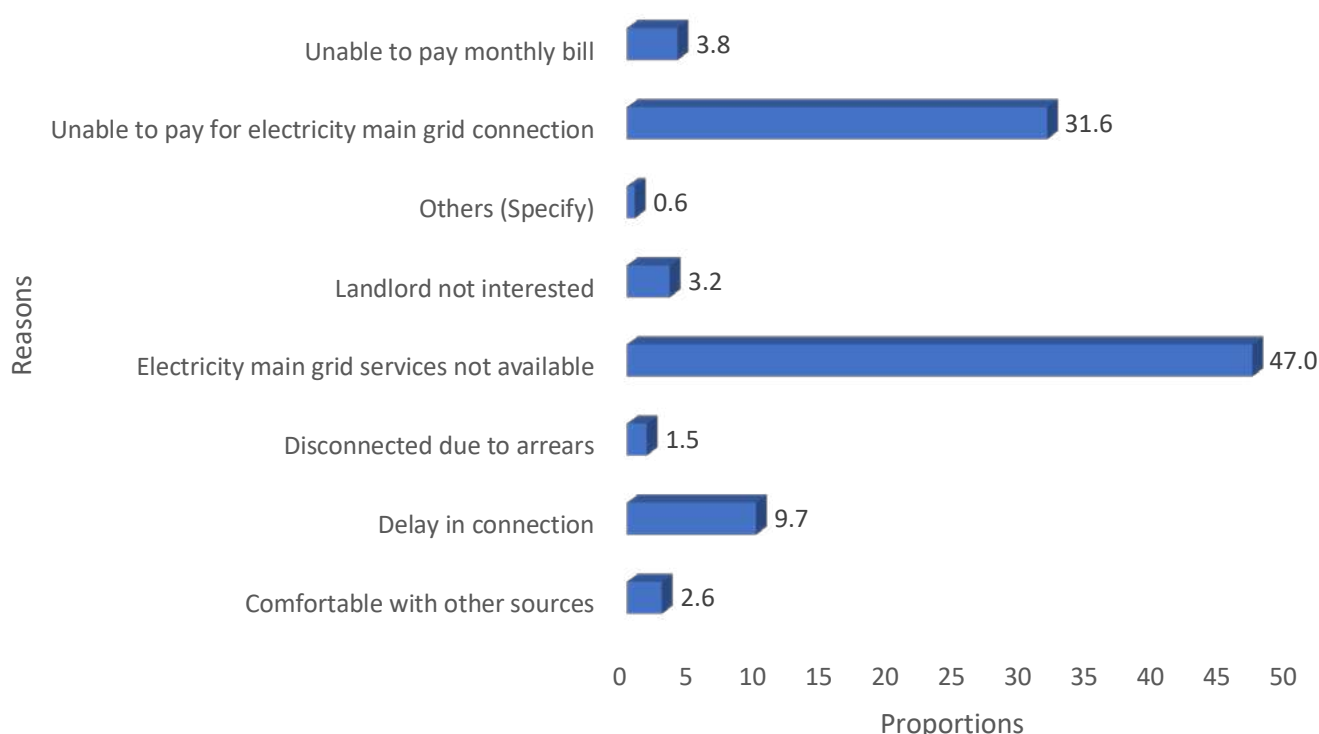


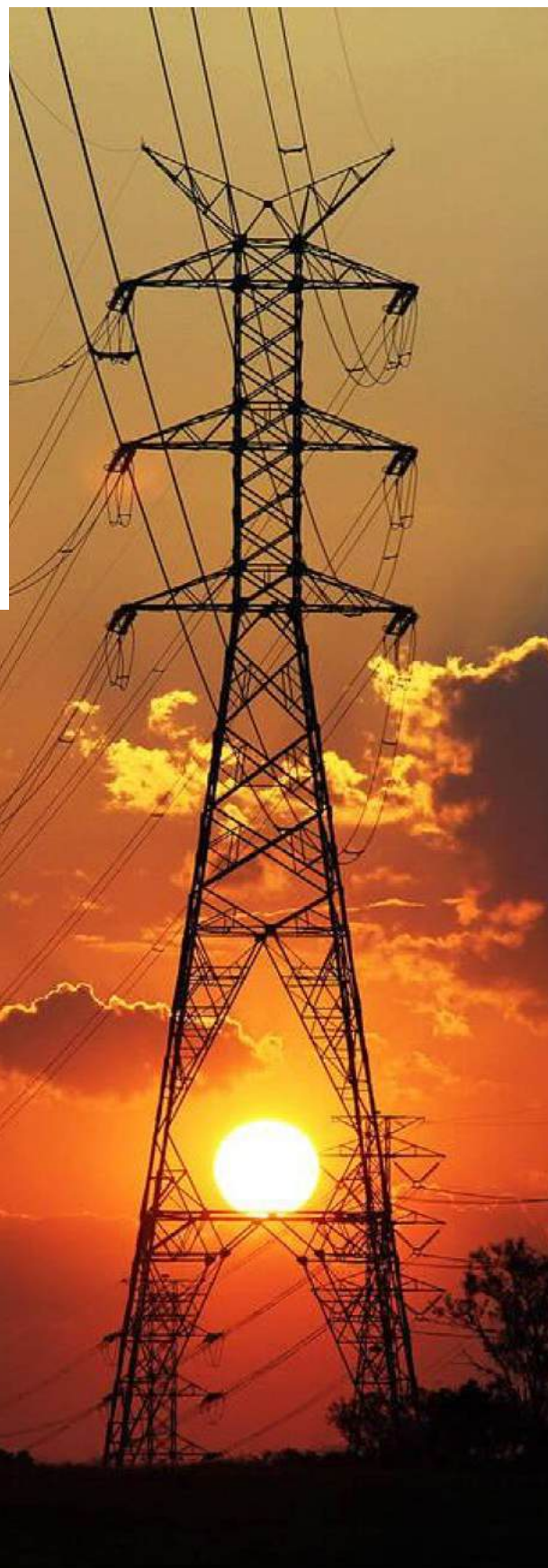
Table 5.12 presents overall statistics on connection to electricity for different types of dwelling units. Flats/ Apartments had the highest rate of connection to the main grid, with 98.6 per cent of units connected. Maisonettes and town houses also had high electricity connection, with 91.6 per cent of units connected. A majority of bungalows lacked electricity with 55.6 per cent of units not connected, while 44.4 per cent had electricity. The proportion of Swahili/compound houses sharing facilities that reported being connected to the main grid was 83.5 per cent. Compound houses that do not share facilities had relatively high connection to the main grid at 88.3 per cent. 47.4 per cent of shanties were not connected to the main grid. Traditional houses or huts had the least connection to the main grid, with 85.3 per cent of dwelling units not connected.



More than half of the households reported that the primary reason for not being connected to the main grid was the unavailability of electricity services in their area at 47.0 per cent.

Table 5.12: Per centage Distribution of Households Connected to Electricity on the Main Grid by Type of Dwelling Unit

Dwelling Type	%	Total
Bungalow	44.4	7,193,556
Flat / Apartment	98.6	1,599,978
Maisonette	91.6	120,038
Swahili/Compound Houses Sharing Facilities	82.7	2,943,127
Compound Houses Not Sharing Facilities	88.3	519,198
Shanty	52.6	75,686
Manyatta/Traditional House/Hut	14.7	1,388,240
Townhouse	91.6	46,303



5.5 Access and Sources of Water

Water is an essential commodity for life and plays a critical role in many aspects of human existence. Access to clean and sufficient water is crucial for maintaining a high-quality life and supporting the efficient functioning of modern households. For this survey, the categories for the main sources of water was classified into improved and unimproved sources as shown in Table 5.13 below:

Table 5.13: Categories of Main Sources of Water

Category	Main Sources of Water
Improved	Public Water Companies Private Water Companies Tubewell/Borehole(Owned) Tube well/Borehole(Community) Dug well(protected) Water from Spring) Rainwater Packaged Bottled Water
Unimproved	Dug Well(Unprotected) Water from Spring(Unprotected) Surface Water(River,Lake,Dam,etc)

5.5.1 Distribution of Households by Access to Main Source of Drinking Water

Universal access to safe drinking water is a fundamental human right and a bedrock of public health. It is crucial to choose clean and safe drinking water sources to avoid contaminants and ensure wellbeing in general. The objective of SDG target 6.1 is to ensure that everyone has universal and fair access to safe and affordable drinking water. Table 5.14 presents the distribution of households by their main source of drinking water, residence, and county. Nationally, 73.5 per cent of households had access to improved sources of drinking water with 66.4 per cent in rural areas and 96.7 per cent in urban areas. County level analysis shows all households in Mombasa county had access to improved sources of drinking water, while West-Pokot and Elgeyo-Marakwet had the lowest percentages of households with access to drinking water from improved sources at 25.8 per cent and 34.1 per cent respectively.



Table 5.14: Per centage Distribution of Households by Access to Main Source of Drinking Water

		Improved							Unimproved						
	Number of Households	Public Water Companies	Private Water Companies	Tube Well/ Borehole (Owned)	Tube Well/ Borehole (Community)	Dug Well (Protected)	Water from Spring (Protected)	Rain/ Harvested Water	Pack- aged Bottled Water	Sub- to- tal	Water from- Spring (Unpro- tected)	Dug Well (Un- pro- tected)	Surface Water (River/ Dam/Lake/ Pond/ Stream/ Ca- nal/Irrigation Channel)	Sub- total	Other
Residence		per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent	per cent
Kenya	13,886,126	27.2	8.0	7.2	10.7	4.6	6.7	9.2	4.6	78.1	3.2	1.7	16.7	21.6	0.4
Rural	8,519,926	12.9	3.9	7.6	12.8	6.0	10.1	12.5	0.6	66.4	4.8	2.7	25.9	33.3	0.3
Urban	5,366,201	49.9	14.5	6.6	7.3	2.2	1.3	3.9	11.0	96.7	0.6	0.2	2.2	2.9	0.4
County															
Mombasa	405,415	6.4	80.8	4.0	1.9	1.7	0.2	0.6	4.4	100.0	0.0	0.0	0.0	0.0	0.0
Kwale	183,739	19.3	11.3	7.2	21.0	7.7	0.9	2.4	3.6	73.4	2.5	6.9	17.2	26.6	0.0
Kilifi	407,221	53.2	18.7	2.0	2.8	0.3	0.0	0.5	3.1	80.5	3.5	3.8	12.1	19.5	0.0
Tana River	74,962	10.1	5.1	10.4	26.9	0.2	0.6	0.0	0.6	54.0	0.7	0.0	45.3	46.0	0.0
Lamu	40,543	19.7	22.1	13.6	20.0	3.9	0.0	4.6	7.8	91.7	0.0	7.8	0.0	7.8	0.5
Taita-Taveta	108,463	56.3	2.7	5.8	7.2	1.0	11.1	4.3	0.4	88.7	1.2	0.5	8.4	10.1	1.3
Garissa	180,468	29.4	9.3	0.0	36.3	0.7	0.0	0.0	0.1	75.8	0.0	11.4	12.6	24.0	0.1
Wajir	152,058	7.7	0.1	2.1	55.0	19.5	0.0	1.0	0.1	85.4	0.0	0.1	10.3	10.3	4.3
Mandera	167,096	2.5	5.1	4.9	32.7	4.4	0.0	0.0	0.0	49.7	0.4	0.0	49.1	49.5	0.8
Marsabit	87,421	0.2	1.7	8.1	28.6	2.0	1.7	23.6	0.0	66.0	2.4	1.9	29.7	34.0	0.0
Isiolo	63,947	41.0	0.0	1.6	28.5	3.8	0.0	0.3	2.8	78.1	0.0	4.5	16.7	21.2	0.7
Meru	463,535	13.1	8.1	3.1	17.3	0.6	2.5	5.6	1.8	52.0	1.7	0.6	45.1	47.4	0.6
Tharaka-Nithi	120,886	39.4	17.5	0.0	0.0	0.4	0.2	1.0	0.9	59.3	0.8	2.7	37.1	40.7	0.0
Embu	199,046	59.2	0.2	3.6	3.0	4.4	0.0	7.4	0.0	77.9	0.0	1.2	20.8	22.1	0.0
Kitui	275,514	20.2	11.8	2.8	8.6	1.8	0.0	7.1	5.5	57.7	0.8	1.6	39.7	42.1	0.2
Machakos	431,218	4.8	16.6	13.4	11.0	0.8	3.2	22.5	7.4	79.7	3.3	1.0	16.0	20.3	0.0
Makueni	257,105	17.1	6.3	3.9	6.0	2.0	1.4	18.7	1.8	57.3	11.8	4.0	25.4	41.2	1.5
Nyandarua	198,250	31.2	3.4	6.7	12.4	22.1	0.3	18.2	0.7	95.0	0.6	0.0	4.5	5.0	0.0
Nyeri	270,743	59.5	2.2	2.1	0.8	4.2	1.1	20.4	0.1	90.3	3.9	0.4	5.4	9.7	0.0
Kirinyaga	217,216	43.4	17.1	6.5	3.0	3.6	0.3	1.1	1.2	76.1	0.0	0.1	23.4	23.6	0.3
Murang'a	385,599	48.8	1.1	3.7	1.8	1.7	2.9	20.6	1.3	81.8	0.0	0.2	17.2	17.4	0.8

Table 5.14: Per centage Distribution of Households by Access to Main Source of Drinking Water (Continued)

		Improved										Unimproved			
	Number of Households	Public Water Companies	Private Water Companies	Tube Well/Borehole (Owned)	Tube Well/Borehole (Community)	Dug Well (Protected)	Water from Spring (Protected)	Rain/Harvested Water	Pack-aged Bottled Water	Sub-total	Water from Spring (Unprotected)	Dug Well (Unprotected)	Surface Water (River/Dam/Lake/Pond/Stream/Canal/Irrigation Channel)	Sub-total	Other
Kiambu	997,101	53.5	8.2	9.9	5.5	4.7	0.1	7.0	6.4	95.1	0.7	0.0	4.0	4.7	0.1
Turkana	219,588	13.6	1.2	0.5	38.8	0.4	0.0	0.0	0.1	54.6	0.4	19.7	24.7	44.8	0.6
West Pokot	183,115	1.9	1.9	2.8	12.3	1.2	5.5	0.0	0.2	25.8	43.3	0.6	29.9	73.8	0.4
Samburu	95,708	4.2	2.4	12.6	30.8	0.4	0.6	2.8	4.0	57.8	0.2	0.8	39.8	40.9	1.3
Trans Nzoia	266,538	17.5	1.2	40.8	7.7	0.6	16.0	0.6	0.1	84.7	5.2	0.0	10.1	15.3	0.0
Uasin Gishu	351,899	47.5	0.7	18.4	7.0	9.4	1.6	2.2	0.8	87.6	3.6	4.1	4.6	12.4	0.0
Elgeyo-Marakwet	110,356	10.0	3.9	2.4	0.7	11.1	4.3	1.1	0.5	34.1	3.2	10.3	50.7	64.2	1.7
Nandi	226,515	9.4	6.3	7.8	3.8	15.7	4.9	3.6	0.1	51.7	3.4	7.1	37.8	48.2	0.1
Baringo	157,303	13.3	1.0	3.0	25.0	4.1	0.3	8.4	0.3	55.5	2.2	1.4	40.4	44.1	0.5
Laikipia	154,631	39.6	3.0	18.8	5.9	0.5	0.0	10.4	0.0	78.2	1.4	0.2	18.1	19.7	2.1
Nakuru	673,026	23.5	4.0	15.0	6.6	5.0	0.7	22.1	12.2	89.2	2.0	0.1	8.7	10.8	0.0
Narok	263,863	7.4	2.4	5.8	8.3	0.7	0.0	41.9	3.6	70.0	1.5	0.4	28.1	30.0	0.0
Kajiado	371,234	21.6	9.9	9.2	35.0	1.0	0.4	4.8	4.6	86.5	0.4	0.0	12.0	12.4	1.2
Kericho	233,615	14.8	0.8	4.5	8.6	6.2	4.3	7.2	0.4	46.8	4.7	2.3	46.2	53.2	0.0
Bomet	219,222	2.1	5.8	1.6	3.8	1.8	0.6	37.4	0.5	53.6	1.8	1.9	42.6	46.4	0.0
Kakamega	484,205	11.4	0.7	14.3	7.2	6.6	52.8	1.3	0.4	94.7	4.5	0.3	0.0	4.8	0.6
Vihiga	160,520	4.8	0.1	2.2	4.8	4.2	60.4	7.4	0.1	84.1	8.2	0.3	7.4	15.9	0.0
Bungoma	470,168	16.0	0.1	8.6	12.1	12.8	19.7	0.4	0.2	69.8	18.6	3.8	7.8	30.2	0.0
Busia	216,855	2.6	3.9	10.0	33.7	21.7	5.9	1.7	2.1	81.6	5.3	1.5	11.3	18.1	0.3
Siaya	247,647	11.6	4.6	4.7	8.4	7.1	2.1	35.0	0.2	73.7	0.1	1.4	24.9	26.3	0.0
Kisumu	338,619	41.8	1.5	5.4	3.9	17.8	0.5	13.8	0.0	84.8	0.0	2.7	12.3	15.0	0.2
Homabay	270,043	6.4	6.6	2.6	9.5	4.2	12.0	20.8	0.6	62.8	3.2	0.3	33.7	37.2	0.1
Migori	267,547	3.6	1.0	1.7	6.2	6.8	2.8	30.5	1.2	53.7	7.6	3.7	35.0	46.3	0.0
Kisii	371,985	2.3	1.8	0.9	1.5	3.6	44.6	8.5	1.0	64.2	2.2	0.0	32.7	34.9	0.9
Nyamira	183,594	0.8	0.0	0.1	2.3	0.7	54.8	15.9	0.7	75.4	3.8	0.0	20.8	24.6	0.0
Nairobi City	1,661,533	55.5	8.9	5.6	9.0	0.3	0.0	0.4	19.7	99.4	0.2	0.0	0.0	0.2	0.4

5.5.2 Distribution of Households by Access to Main Source of Water for Other Uses

Table 5.15 presents findings on the main source of water used by households for other uses such as cooking and washing. About three quarters of households in Kenya have access to water for other uses from improved sources. Regarding residence, 62.6 per cent of households in the rural areas access water for other

uses from improved sources compared to 95.7 per cent of their urban counterparts. In West Pokot, Elgeyo-Marakwet, Bomet, and Migori counties, less than half of the households have access to water for other uses from improved sources at 25.2, 31.3, 33.8, and 37.8 per cent, respectively.



Table 5.15: Per centage Distribution of Households by Access to Main Source of Water for Other Uses

			Improved						Unimproved				Others		Don't Know/Unsure	
	Number of Households	Public Water Companies	Private Water Companies	Tube Well/ Borehole (Owned)	Tube Well/ Borehole (Community)	Dug Well (Protected)	Water from Spring (Protected)	Rain/ Harvested Water	Pack- aged Bottled Water	Sub- total	Water from- Spring (Unpro- tected)	Dug Well (Un- pro- tected)	Surface Water (River/ Dam/ Lake/ Pond/ Stream/ Ca- nal/ Irrigation Channel)	Sub- total		
Kenya	13,886,126	27.3	5.6	11.2	12.6	6.9	4.8	6.9	0.1	75.4	2.9	2.3	18.6	23.8	0.5	0.3
Rural	8,519,926	12.4	3.6	9.2	12.6	8.3	7.2	9.3	0.0	62.6	4.5	3.5	28.8	36.8	0.5	0.0
Urban	5,366,201	51.0	8.6	14.4	12.7	4.5	1.0	3.2	0.3	95.7	0.3	0.4	2.5	3.2	0.4	0.8
County																
Mombasa	405,415	5.9	30.1	31.5	20.2	11.1	0.2	0.6	0.2	99.8	0.0	0.0	0.0	0.0	0.0	0.2
Kwale	183,739	18.5	9.3	8.7	24.1	9.3	0.6	1.5	0.0	72.0	2.7	6.5	18.3	27.5	0.5	0.0
Kilifi	407,221	49.2	16.0	2.1	6.9	0.0	0.0	0.3	0.2	74.7	3.3	5.1	13.4	21.8	3.5	0.0
Tana River	74,962	9.6	4.0	11.1	24.8	1.2	0.5	0.0	0.0	51.1	0.1	0.4	48.4	48.9	0.0	0.0
Lamu	40,543	18.7	15.3	18.4	25.4	4.0	0.0	0.8	5.6	88.2	0.1	9.0	0.0	9.1	2.7	0.0
Taita- Taveta	108,463	54.2	1.6	6.1	11.0	1.2	10.9	4.1	0.0	89.0	0.7	0.2	8.6	9.5	1.5	0.0
Garissa	180,468	28.9	9.6	0.3	37.1	0.8	0.0	0.0	0.0	76.6	0.0	10.7	12.5	23.3	0.1	0.0
Wajir	152,058	7.6	0.2	2.9	53.9	19.1	0.0	1.0	0.1	84.9	0.0	0.6	10.3	10.8	4.3	0.0
Mandera	167,096	2.8	5.1	5.0	31.2	4.9	0.0	0.0	0.0	49.0	0.0	0.3	49.5	49.8	1.0	0.2
Marsabit	87,421	0.0	1.7	8.1	30.2	1.9	1.7	23.3	0.3	67.1	0.9	2.0	29.9	32.9	0.0	0.0
Isiolo	63,947	42.6	0.1	3.0	28.6	3.8	0.0	0.0	0.0	78.2	0.0	4.5	16.7	21.2	0.6	0.0
Meru	463,535	13.6	8.4	3.4	16.4	0.6	2.4	4.3	0.0	49.1	1.8	1.0	47.5	50.3	0.6	0.0
Tharaka- Nithi	120,886	39.0	17.6	0.3	1.2	1.6	0.2	0.5	0.0	60.5	0.3	2.3	36.9	39.5	0.0	0.0
Embu	199,046	59.5	0.0	3.0	4.1	3.9	0.0	5.8	0.0	76.2	0.0	2.1	21.7	23.8	0.0	0.0
Kitui	275,514	17.6	11.5	4.4	10.5	3.7	0.0	3.8	0.0	51.5	1.0	1.6	45.7	48.3	0.2	0.0
Machakos	430,469	6.5	13.9	19.9	11.3	0.9	2.7	17.5	0.0	72.8	2.5	1.4	23.1	27.0	0.2	0.0
Makueni	257,105	17.1	3.7	4.6	10.6	3.0	2.2	11.8	0.1	53.1	11.2	3.9	29.9	45.0	1.4	0.5
Nyandarua	198,250	32.4	3.5	6.4	11.2	23.9	0.0	17.1	0.1	94.6	0.6	0.0	4.9	5.4	0.0	0.0
Nyeri	270,743	62.1	2.2	2.5	0.8	4.2	1.4	16.6	0.0	89.7	4.0	0.0	6.3	10.3	0.0	0.0
Kirinyaga	217,216	41.0	17.7	6.3	3.1	4.6	0.4	1.2	0.0	74.3	0.0	0.4	25.1	25.6	0.0	0.1
Murang'a	385,599	46.9	1.4	7.2	3.2	2.9	2.9	16.6	0.0	81.0	0.0	0.2	18.0	18.2	0.4	0.5
Kiambu	997,101	54.0	8.6	13.3	5.2	4.4	0.0	4.2	0.3	90.0	1.0	0.0	5.4	6.4	0.3	3.4

Table 5.15: Per centage Distribution of Households by Access to Main Source of Water for Other Uses (Continued)

	Number of Households	Improved								Unimproved				Others	Don't Know/Unsure
		Public Water Companies	Private Water Companies	Tube Well/Borehole (Owned)	Tube Well/Borehole (Community)	Dug Well (Protected)	Water from Spring (Protected)	Rain/Harvested Water	Packaged Bottled Water	Sub-total	Water from Spring (Unprotected)	Dug Well (Unprotected)	Surface Water (River/Dam/Lake/Pond/Stream/Canal/Irrigation Channel)		
Turkana	219,588	13.7	1.2	0.5	40.1	0.3	0.0	0.0	0.0	55.8	0.0	18.4	25.8	44.2	0.0
West Pokot	183,115	1.6	1.4	2.9	10.8	1.2	7.2	0.0	0.0	25.2	42.2	0.6	31.7	74.5	0.4
Samburu	95,708	5.7	1.3	13.9	30.2	0.6	0.4	2.6	0.6	55.3	0.0	1.2	41.6	42.8	1.9
Trans Nzoia	266,538	18.1	1.5	40.6	7.5	0.6	17.6	0.3	0.0	86.2	4.1	0.0	9.7	13.8	0.0
Uasin Gishu	351,899	30.5	0.0	26.2	12.9	16.2	1.2	0.8	0.0	87.9	2.7	5.2	4.2	12.1	0.0
Elgeyo-Marakwet	110,356	7.2	2.8	2.4	1.3	15.5	1.5	0.5	0.0	31.3	3.0	9.6	54.0	66.7	2.1
Nandi	226,515	9.9	5.0	10.0	3.7	16.3	4.6	3.3	0.0	52.8	2.9	7.4	36.9	47.2	0.0
Baringo	157,303	13.0	0.7	3.2	24.5	5.3	0.3	6.6	0.0	53.6	1.5	1.4	42.7	45.6	0.8
Laikipia	154,631	40.0	3.6	20.2	7.1	0.5	0.0	7.0	0.0	78.3	1.3	0.0	18.3	19.6	2.1
Nakuru	673,026	31.3	3.2	20.6	6.8	7.4	0.7	15.8	1.3	87.1	2.3	0.1	10.3	12.8	0.2
Narok	263,863	10.4	2.3	5.9	9.7	0.7	0.0	34.9	0.0	63.9	1.5	0.4	34.2	36.1	0.0
Kajiado	371,234	21.8	7.8	11.2	37.3	2.0	0.4	5.5	0.0	86.1	0.0	0.0	12.2	12.2	0.8
Kericho	233,615	14.3	1.2	5.1	9.0	10.0	3.8	8.1	0.0	51.5	2.8	5.1	40.6	48.5	0.0
Bomet	219,222	2.2	5.9	9.3	5.3	3.0	1.3	6.8	0.0	33.8	1.6	11.1	53.6	66.2	0.0
Kakamega	484,205	8.6	0.6	19.9	5.2	5.2	37.5	16.7	0.0	93.6	5.1	0.6	0.2	6.0	0.3
Vihiga	160,520	4.0	0.0	1.8	4.1	4.0	51.2	19.2	0.0	84.4	7.9	0.7	7.1	15.6	0.0
Bungoma	470,168	14.7	0.1	11.1	12.4	21.3	4.6	0.4	0.0	64.7	17.6	8.8	8.9	35.3	0.0
Busia	216,855	2.4	0.8	12.4	24.5	29.6	2.8	1.3	0.0	73.8	3.4	2.3	20.6	26.2	0.0
Siaya	247,647	10.8	2.5	6.2	7.8	8.2	2.0	23.0	0.1	60.5	0.7	2.0	36.8	39.5	0.0
Kisumu	338,619	39.8	2.0	6.5	5.9	19.8	0.7	5.8	0.0	80.5	0.2	2.9	15.9	19.0	0.2
Homabay	270,043	6.1	6.9	5.2	7.7	6.6	9.3	6.7	0.3	48.8	4.7	2.2	44.0	50.9	0.0
Migori	267,547	1.5	0.8	4.8	5.6	17.2	1.9	5.3	0.1	37.2	5.8	6.4	50.6	62.8	0.0
Kisii	371,985	1.6	1.9	0.6	0.9	21.4	29.8	12.1	0.0	68.2	0.7	1.3	29.4	31.4	0.4
Nyamira	183,594	1.6	0.0	5.0	2.5	19.5	36.9	17.4	0.0	82.9	3.0	0.9	13.1	17.0	0.1
Nairobi City	1,661,533	60.0	4.5	16.2	17.8	0.5	0.0	0.2	0.0	99.4	0.0	0.0	0.0	0.0	0.5

5.5.3 Average Time Taken to Fetch Water

As illustrated in figure 5.7, for households without piped water in the dwelling, the national average time taken to fetch water for drinking was 26 minutes. The distribution

for this population was half an hour for rural areas and 13 minutes for urban areas. More information for county level analysis is presented in appendix 1.1.

Figure 5.8: Average Time Taken to Fetch Drinking Water

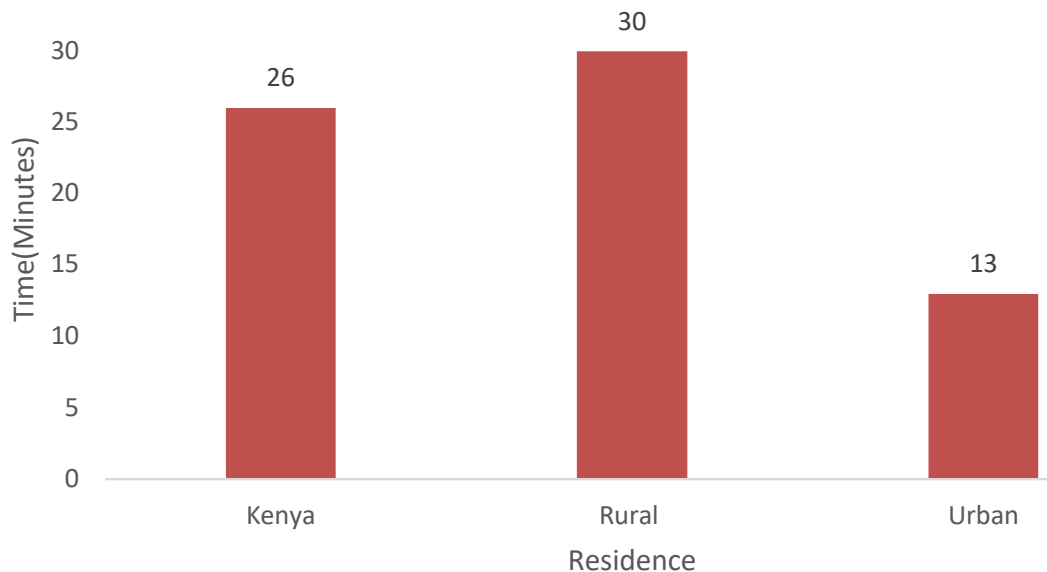
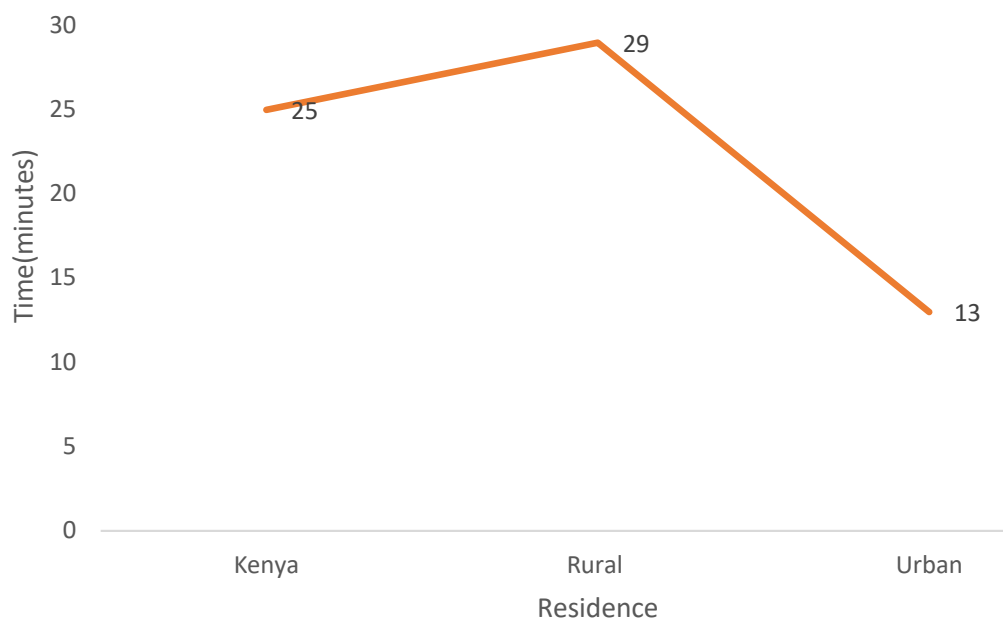


Figure 5.8 shows that the nationally the average time taken to fetch water for other uses was 25 minutes. While the average time taken in rural areas was 29 minutes and 13 minutes for urban areas. Distribution by counties is shown in Appendix 1.2

Figure 5.9: Average time taken to fetch water for other uses



5.5.4 Distribution of Persons Fetching Water by Residence, Counties, and Sex

Table 5.16 and Table 5.17 provide details of the distribution of persons fetching drinking water and water for other uses, respectively, based on their residence, sex, and counties. According to the survey, there was a

relatively equal proportion of males and females who fetched water for drinking and other purposes, at both the national level and across all counties. This proportion remains consistent for both rural and urban areas.

Table 5.16: Distribution of Persons Fetching Drinking Water by Residence, Counties, and Sex

Residence	Male		Female	
	Number	Per cent	Number	Per cent
Kenya	14,815,218	49.6	15,082,017	50.4
Rural	11,991,010	49.5	12,234,184	50.5
Urban	2,824,209	49.8	2,847,833	50.2
County				
Mombasa	484,711	50.0	484,948	50.0
Kwale	316,688	48.6	334,297	51.4
Kilifi	567,080	51.3	539,191	48.7
Tana River	140,621	51.8	130,698	48.2
Lamu	39,052	51.5	36,782	48.5
Taita-Taveta	91,929	51.9	85,177	48.1
Garissa	176,935	52.3	161,583	47.7
Wajir	276,776	50.1	275,961	49.9
Mandera	167,336	53.6	144,939	46.4
Marsabit	169,043	51.2	161,320	48.8
Isiolo	80,263	51.9	74,387	48.1
Meru	349,706	47.6	384,708	52.4
Tharaka-Nithi	97,599	49.9	97,845	50.1
Embu	109,158	50.2	108,436	49.8
Kitui	471,363	47.5	520,192	52.5
Machakos	493,690	50.3	488,282	49.7
Makueni	350,383	48.4	373,251	51.6
Nyandarua	121,467	48.2	130,595	51.8
Nyeri	37,521	48.7	39,482	51.3
Kirinyaga	82,998	49.3	85,269	50.7
Murang'a	130,374	50.3	128,796	49.7

Residence	Male		Female	
	Number	Per cent	Number	Per cent
Kiambu	210,149	52.5	190,429	47.5
Turkana	432,508	47.3	482,665	52.7
West Pokot	301,177	51.6	282,786	48.4
Samburu	147,360	50.6	143,627	49.4
Trans Nzoia	447,025	49.9	449,137	50.1
Uasin Gishu	347,475	47.2	389,207	52.8
Elgeyo-Marakwet	118,597	48.1	128,123	51.9
Nandi	337,594	49.9	338,611	50.1
Baringo	268,511	51.5	253,164	48.5
Laikipia	138,026	52.6	124,140	47.4
Nakuru	519,909	49.4	532,368	50.6
Narok	352,692	51.4	333,455	48.6
Kajiado	302,287	50.2	299,438	49.8
Kericho	343,728	50.3	339,357	49.7
Bomet	269,283	48.9	281,157	51.1
Kakamega	891,196	49.8	897,136	50.2
Vihiga	266,892	49.9	267,923	50.1
Bungoma	743,549	48.1	801,033	51.9
Busia	423,886	48.7	445,710	51.3
Siaya	294,087	49.2	303,299	50.8
Kisumu	359,457	48.6	380,728	51.4
Homabay	427,909	48.0	463,234	52.0
Migori	418,582	49.2	432,419	50.8
Kisii	588,563	49.9	590,139	50.1
Nyamira	282,128	48.8	295,800	51.2
Nairobi City	827,956	49.3	850,794	50.7

Table 5.17: Distribution of Persons Fetching Water for Other Uses by Residence, Counties and Sex

Residence	Sex			
	Male		Female	
	Number	Per cent	Number	Per cent
Kenya	14,784,383	49.4	15,137,808	50.6
Rural	12,335,434	49.2	12,719,409	50.8
Urban	2,448,949	50.3	2,418,400	49.7
County				
Mombasa	349,921	52.6	315,107	47.4
Kwale	325,547	48.6	344,044	51.4
Kilifi	567,549	51.5	534,767	48.5
Tana River	142,111	51.6	133,139	48.4
Lamu	41,124	50.9	39,744	49.1
Taita-Taveta	85,645	51.2	81,750	48.8
Garissa	181,836	52.4	165,299	47.6
Wajir	275,428	50.0	274,914	50.0
Mandera	168,333	53.6	145,559	46.4
Marsabit	171,489	51.4	162,037	48.6
Isiolo	80,334	52.1	73,774	47.9
Meru	346,650	47.8	378,868	52.2
Tharaka-Nithi	96,140	50.3	95,072	49.7
Embu	115,969	49.9	116,649	50.1
Kitui	481,999	47.2	538,644	52.8
Machakos	486,592	51.5	457,914	48.5
Makueni	376,520	48.4	400,972	51.6
Nyandarua	126,114	48.5	133,726	51.5
Nyeri	44,713	47.9	48,611	52.1
Kirinyaga	90,496	48.4	96,594	51.6
Murang'a	150,564	50.3	148,842	49.7
Kiambu	216,205	53.0	191,874	47.0

Residence	Sex			
	Male		Female	
	Number	Per cent	Number	Per cent
Turkana	439,669	47.6	483,905	52.4
West Pokot	297,256	51.6	279,300	48.4
Samburu	147,985	50.5	144,883	49.5
Trans Nzoia	449,475	49.9	451,296	50.1
Uasin Gishu	382,826	46.9	433,281	53.1
Elgeyo-Marakwet	129,456	48.3	138,531	51.7
Nandi	331,222	49.6	336,086	50.4
Baringo	267,759	51.4	253,639	48.6
Laikipia	143,067	52.4	130,046	47.6
Nakuru	500,853	48.7	527,466	51.3
Narok	384,526	49.0	401,008	51.0
Kajiado	299,982	49.3	308,532	50.7
Kericho	336,917	49.9	337,754	50.1
Bomet	409,649	48.8	428,961	51.2
Kakamega	772,251	49.5	788,763	50.5
Vihiga	240,488	50.2	238,130	49.8
Bungoma	735,876	47.8	805,120	52.2
Busia	424,280	48.4	452,034	51.6
Siaya	355,330	49.5	362,916	50.5
Kisumu	385,657	48.0	417,809	52.0
Homabay	483,023	47.6	532,158	52.4
Migori	504,642	48.6	534,409	51.4
Kisii	544,695	49.3	560,335	50.7
Nyamira	281,745	48.3	301,582	51.7
Nairobi City	614,474	50.1	611,962	49.9

5.5.5 Proportion of Households with Piped water

As illustrated in Table 5.18, the national proportion of households with piped water was 44.9 per cent. In rural areas the proportion was 26.6 per cent, while in urban areas it was 73.8 per cent. Counties such as Marsabit and

Nyamira had the lowest per centage of households with access to piped water, with only 4.8 per cent and 7.1 per cent, respectively.

Table 5.18: Proportion of Households with Piped Water by County

	Without Piped Water	With Piped Water	Number of Households
Kenya	55.1	44.9	13,886,126
Rural	73.4	26.6	8,519,926
Urban	26.2	73.8	5,366,201
County			
Mombasa	39.5	60.5	405,415
Kwale	66.1	33.9	183,739
Kilifi	29.2	70.8	407,221
Tana River	65.3	34.7	74,962
Lamu	69.1	30.9	40,543
Taita-Taveta	27.1	72.9	108,463
Garissa	53.6	46.4	180,468
Wajir	58.6	41.4	152,058
Mandera	88.1	11.9	167,096
Marsabit	95.2	4.8	87,421
Isiolo	25.5	74.5	63,947
Meru	40.8	59.2	463,535
Tharaka-Nithi	37.4	62.6	120,886
Embu	39.8	60.2	199,046
Kitui	86.3	13.7	275,514
Machakos	83.0	17.0	430,469
Makueni	85.6	14.4	257,105
Nyandarua	41.8	58.2	198,250
Nyeri	26.8	73.2	270,743
Kirinyaga	24.4	75.6	217,216
Murang'a	34.5	65.5	385,599
Kiambu	19.0	81.0	997,101

	Without Piped Water	With Piped Water	Number of Households
Turkana	77.5	22.5	219,588
West Pokot	77.4	22.6	183,115
Samburu	91.3	8.7	95,708
Trans Nzoia	78.0	22.0	266,538
Uasin Gishu	47.5	52.5	351,899
Elgeyo-Marakwet	42.6	57.4	110,356
Nandi	64.5	35.5	226,515
Baringo	67.0	33.0	157,303
Laikipia	42.4	57.6	154,631
Nakuru	60.1	39.9	673,026
Narok	87.9	12.1	263,863
Kajiado	48.0	52.0	371,234
Kericho	68.1	31.9	233,615
Bomet	91.5	8.5	219,222
Kakamega	84.4	15.6	484,205
Vihiga	89.8	10.2	160,520
Bungoma	78.4	21.6	470,168
Busia	85.7	14.3	216,855
Siaya	77.7	22.3	247,647
Kisumu	55.7	44.3	338,619
Homabay	82.7	17.3	270,043
Migori	86.7	13.3	267,547
Kisii	91.8	8.2	371,985
Nyamira	92.9	7.1	183,594
Nairobi City	17.4	82.6	1,661,533

5.5.6 Sustainable Development Goals Ladder for Drinking Water Services

Definition

Safely Managed

Drinking water from an improved source that is accessible on premises, available when needed and free from faecal and priority chemical contamination.

Basic

Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing.

Limited

Drinking water from an improved source, for which collection time exceeds 30 minutes for a round trip, including queuing.

Unimproved

Drinking water from an unprotected dug well or unprotected spring.

Surface Water

Drinking water directly from a river, dam, lake, pond, stream, canal or irrigation canal.

Table 5.19 shows the drinking water service ladder by residence and county. Nationally the highest per centage of drinking water falls under At Least Basic Service at 69.5 per cent. Urban areas had the highest proportion of the population using at least basic service at 94.3 per cent. Data on safely managed was not reported as the water was not tested.

Table 5.19: Drinking Water Service Ladder by Residence and County

	At least Basic Service	Limited Service	Unimproved	Surface Water	Number of Persons
Kenya	69.5	5.1	5.4	19.9	51,525,585
Rural	58.0	6.7	7.5	27.8	35,150,632
Urban	94.3	1.7	0.9	3.0	16,374,954
County					
Mombasa	98.2	1.5	0.3	0.0	1,311,860
Kwale	67.1	2.9	9.4	20.6	944,464
Kilifi	74.1	3.6	9.7	12.6	1,577,335
Tana River	47.5	6.0	1.0	45.6	352,549
Lamu	89.8	5.3	4.4	0.4	167,332
Taita-Taveta	74.4	14.5	1.8	9.3	363,990
Garissa	78.0	0.7	12.0	9.3	927,031
Wajir	79.8	7.0	0.0	13.2	870,636
Mandera	47.6	2.7	0.5	49.2	959,236
Marsabit	42.5	22.3	4.6	30.6	515,292
Isiolo	72.2	3.8	4.9	19.2	315,937
Meru	49.7	3.8	2.4	44.1	1,625,982
Tharaka-Nithi	55.3	0.2	3.8	40.8	416,383
Embu	75.6	1.7	1.0	21.8	648,425
Kitui	34.0	11.4	3.6	51.0	1,229,790
Machakos	69.9	8.9	4.5	16.7	1,487,758
Makueni	46.3	10.1	16.4	27.2	1,042,300
Nyandarua	90.6	3.8	0.8	4.8	695,531
Nyeri	88.4	0.0	5.2	6.4	835,408
Kirinyaga	73.2	0.4	0.1	26.3	653,112
Murang'a	84.1	0.7	0.2	15.1	1,112,288
Kiambu	93.9	0.9	0.8	4.3	2,652,880
Turkana	41.5	14.2	22.3	22.0	1,022,773
West Pokot	19.9	6.4	42.8	30.9	676,326
Samburu	35.2	19.6	1.3	43.9	348,298
Trans Nzoia	76.4	5.6	5.4	12.6	1,069,039
Uasin Gishu	83.7	1.8	8.7	5.8	1,257,330
Elgeyo-Marakwet	31.9	1.2	12.1	54.8	495,239
Nandi	48.9	1.0	9.8	40.3	951,460
Baringo	43.5	9.4	2.7	44.4	733,333
Laikipia	69.1	1.0	2.4	27.5	561,223
Nakuru	84.4	3.0	2.5	10.1	2,347,849
Narok	60.4	5.3	1.8	32.5	1,284,204
Kajiado	71.2	8.9	0.3	19.7	1,268,261
Kericho	43.2	0.6	9.7	46.6	954,896
Bomet	47.8	2.0	4.5	45.7	939,761
Kakamega	88.5	6.5	4.4	0.6	2,002,435
Vihiga	79.4	2.7	9.7	8.2	625,765
Bungoma	67.3	4.1	20.3	8.3	1,786,973
Busia	69.1	12.4	5.8	12.6	968,763
Siaya	67.5	1.9	1.2	29.3	1,059,458
Kisumu	79.5	2.9	2.7	14.9	1,248,474
Homabay	50.7	11.4	3.2	34.7	1,231,659
Migori	49.1	1.9	11.8	37.2	1,234,082
Kisii	46.4	15.0	2.4	36.2	1,344,907
Nyamira	52.1	23.8	4.7	19.4	657,502
Nairobi City	97.7	1.6	0.2	0.5	4,750,056

5.6 Human Waste Disposal

Proper disposal of human waste is essential for human health and well-being, as it helps prevent the spread of disease-causing germs and protect the environment. It is a critical aspect of infrastructure in both urban and rural settings across the globe. The survey provides insight on the main modes of human waste disposal, categorized into Improved and Unimproved methods as shown in the analysis below;

Table 5.20: Categories of Main Modes of Human Waste Disposal

Category	Mode
Improved	Flush to Main sewer
	Flush to Septic tank
	Flush to Cess pool
	Flush to pit latrine
	Ventilated Improved Pit(VIP) latrine
	Flush to Don't Know where
	Pit latrine covered
	Biodigester
	Composting toilet
Unimproved	Pit Latrine without slab/ Open pit
	Bucket Toilet
	Hanging toilet/ Hanging latrine
	No facility/Bush/Field

5.6.1 Main Mode of Human Waste Disposal

Table 5.21 presents the percentage distribution of households by category of toilet facility mainly used. Survey results show that 93.4 per cent of the urban household have access to an improved toilet facility. However, some counties like Turkana, Mandera, Marsabit, and Wajir registered high numbers of households using unimproved toilet facilities, with percentages of 72.6, 72.5, 67.9 and 63.6 respectively.

As shown in the Table 5.21 below, majority of the households (39.1%) reported to using pit latrine with slab as the main mode of human waste disposal. The proportion of households that reported having no toilet was 5.6 per cent. Turkana, Wajir, Tana River, Marsabit and Samburu counties reported the highest proportion of households that lacked toilets at 65.6, 50.2, 49.8, 44.5, 41.8 per cent, respectively.

93.4%

Survey results show that 93.4 per cent of the urban households have access to an improved toilet facility. However, some counties like Wajir, Mandera, Marsabit, and Turkana registered high numbers of households using unimproved toilet facilities



Table 5.21: Per centage Distribution of Households by Category of Toilet Facility

	Improved										Unimproved					
	Flush to Piped Sewer System	Flush to Septic tank	Flush to Pit/Latrine	Flush to Cess pool	Flush to Don't know where	Ventilated Improved Pit (VIP) Latrine	Pit latrine with slab	Composting toilet	Biogas digester	Sub-Total	Pit Latrine without slab/Open pit	Bucket Toilet	Hanging toilet/Hanging latrine	No facility/Bush/Field	Sub Total	Others
Kenya	8.9	8.3	3.8	0.2	0.6	10.5	39.1	0.2	0.0	71.7	22.4	0.2	0.1	5.6	28.2	0.1
Rural	0.4	2.5	2.5	0.1	0.1	10.7	43.9	0.3	0.0	60.5	31.2	0.0	0.1	8.1	39.4	0.1
Urban	25.5	19.6	6.4	0.4	1.7	10.0	29.8	0.1	0.1	93.4	5.3	0.5	0.0	0.7	6.4	0.1
County																
Mombasa	11.2	41.6	25.6	0.4	0.0	0.0	17.2	0.0	0.0	96.0	3.4	0.6	0.0	0.0	4.0	0.0
Kwale	4.4	11.7	17.1	0.0	0.1	0.5	34.2	0.0	0.1	68.1	21.0	0.4	0.0	9.5	30.9	0.9
Kilifi	1.3	21.9	9.2	0.3	0.4	2.8	34.6	0.0	0.0	70.5	15.1	0.0	0.0	14.4	29.5	0.0
Tana River	0.6	1.8	6.3	0.3	0.2	8.4	22.5	0.0	0.0	40.1	9.7	0.0	0.4	49.8	59.9	0.0
Lamu	0.0	0.6	28.2	0.0	0.0	8.3	30.4	0.0	0.0	67.5	26.8	0.0	0.7	5.1	32.5	0.0
Taita-Taveta	5.3	9.6	4.2	0.0	0.0	7.8	66.1	0.0	0.0	93.0	6.7	0.0	0.0	0.2	7.0	0.0
Garissa	0.9	2.1	31.1	0.0	0.0	0.0	38.2	0.0	0.0	72.4	5.5	0.0	0.0	22.1	27.6	0.0
Wajir	0.1	3.8	1.4	0.6	0.1	0.2	29.5	0.4	0.2	36.4	4.5	9.0	0.0	50.2	63.6	0.0
Mandera	0.0	0.1	0.2	0.0	0.0	7.6	17.2	0.0	0.0	25.2	48.9	0.0	0.0	23.6	72.5	2.3
Marsabit	0.0	0.1	1.3	0.0	0.0	0.0	30.7	0.0	0.0	32.1	23.1	0.0	0.3	44.5	67.9	0.0
Isiolo	3.4	10.8	2.1	0.3	0.0	11.5	36.6	0.0	0.0	64.7	4.9	0.0	0.0	29.7	34.6	0.7
Meru	0.4	5.4	0.1	0.0	0.0	14.3	44.4	0.0	0.0	64.6	34.8	0.0	0.0	0.6	35.4	0.0
Tharaka-Nithi	0.7	4.5	4.8	0.0	0.9	12.3	64.2	0.0	0.1	87.4	11.4	0.0	0.0	1.2	12.6	0.0
Embu	3.5	5.5	4.7	0.0	1.0	3.4	75.4	0.0	0.0	93.4	6.0	0.0	0.0	0.6	6.6	0.0
Kitui	0.2	3.5	0.7	0.0	0.1	14.7	55.8	0.0	0.0	75.1	19.9	0.0	0.0	4.9	24.8	0.1
Machakos	4.5	8.2	2.4	0.5	0.1	18.8	52.9	0.0	0.1	87.5	10.1	0.0	0.3	2.1	12.5	0.0
Makueni	0.2	2.0	0.0	0.1	0.0	1.4	66.7	0.3	0.0	70.6	27.6	0.0	0.0	1.8	29.4	0.0
Nyandarua	1.7	8.2	2.8	0.0	0.0	11.4	23.9	0.0	0.0	48.0	51.7	0.0	0.0	0.2	52.0	0.0
Nyeri	0.6	14.9	7.4	0.0	0.1	10.5	39.4	0.0	0.5	73.4	26.0	0.0	0.0	0.6	26.6	0.0
Kirinyaga	0.6	6.8	5.9	0.0	0.0	13.0	43.1	0.0	0.0	69.5	30.5	0.0	0.0	0.0	30.5	0.0
Murang'a	0.2	5.5	4.3	0.4	0.1	6.7	72.3	0.0	0.2	89.7	9.7	0.0	0.0	0.5	10.3	0.0
Kiambu	8.4	21.5	3.8	0.0	1.8	20.0	43.3	0.1	0.0	99.0	1.0	0.0	0.0	0.0	1.0	0.0
Turkana	0.0	0.9	0.0	0.0	0.1	10.6	15.2	0.0	0.0	26.8	7.0	0.0	0.0	65.6	72.6	0.6
West Pokot	0.0	1.7	1.5	0.0	0.0	5.4	60.0	0.0	0.0	68.5	18.5	0.0	0.0	13.0	31.5	0.0

Table 5.21: Per centage Distribution of Households by Category of Toilet Facility (Continued)

	Improved										Unimproved					
	Flush to Piped Sewer System	Flush to Septic tank	Flush to Pit/Latrine	Flush to Cess pool	Flush to Don't know where	Ventilated Improved Pit (VIP) Latrine	Pit latrine with slab	Composting toilet	Biodigester	SubTotal	Pit Latrine without slab/Open pit	Bucket Toilet	Hanging toilet/Hanging latrine	No facility/Bush/Field	Sub Total	Others
Samburu	0.1	0.9	0.4	0.0	0.0	17.4	24.7	0.0	0.0	43.4	14.8	0.0	0.0	41.8	56.6	0.0
Trans Nzoia	1.5	6.1	2.2	0.0	0.6	0.7	45.7	0.0	0.0	56.8	43.2	0.0	0.0	0.0	43.2	0.0
Uasin Gishu	9.1	13.4	1.4	0.0	0.5	20.6	31.9	0.0	0.0	76.9	22.8	0.0	0.0	0.3	23.1	0.0
Elgeyo-Marakwet	0.1	1.0	0.1	0.0	0.0	5.6	37.4	0.0	0.0	44.1	55.4	0.0	0.0	0.5	55.9	0.0
Nandi	1.0	3.7	0.7	0.0	0.0	26.9	18.1	0.0	0.0	50.4	49.6	0.0	0.0	0.0	49.6	0.0
Baringo	0.2	2.4	0.4	0.1	0.0	28.7	34.8	0.0	0.0	66.6	10.7	0.0	0.4	21.5	32.5	0.9
Laikipia	6.0	11.4	1.1	0.7	0.0	6.0	60.5	0.0	0.3	85.9	10.3	0.0	0.0	3.8	14.1	0.0
Nakuru	7.0	10.7	6.6	0.0	0.3	11.7	31.1	0.1	0.0	67.5	32.1	0.0	0.0	0.4	32.5	0.0
Narok	0.0	1.9	1.4	0.0	0.3	0.2	43.1	0.1	0.0	47.0	36.5	0.0	0.2	16.3	53.0	0.0
Kajiado	0.3	12.4	1.7	1.9	8.0	0.9	56.6	0.0	0.0	81.8	0.2	0.0	0.9	16.7	17.8	0.4
Kericho	1.2	1.1	1.4	0.4	0.3	0.0	46.2	0.0	0.0	50.6	48.5	0.0	0.0	0.9	49.4	0.0
Bomet	0.6	0.5	0.1	0.6	0.0	19.0	19.4	0.0	0.0	40.2	59.0	0.0	0.0	0.9	59.8	0.0
Kakamega	1.1	5.9	0.9	0.0	0.0	34.1	20.3	3.7	0.0	66.0	34.0	0.0	0.0	0.0	34.0	0.0
Vihiga	2.0	0.4	0.4	0.0	0.0	30.6	51.5	0.0	0.0	84.9	15.1	0.0	0.0	0.0	15.1	0.0
Bungoma	0.4	5.2	2.3	0.2	0.0	1.0	50.2	0.0	0.0	59.3	40.0	0.0	0.0	0.7	40.7	0.0
Busia	1.0	0.3	2.9	1.8	0.2	0.0	73.4	0.0	0.0	79.6	20.0	0.0	0.0	0.4	20.4	0.0
Siaya	2.1	1.6	1.0	0.0	0.0	18.5	54.0	0.0	0.0	77.3	15.7	0.0	0.0	7.0	22.7	0.0
Kisumu	8.3	5.9	3.3	0.0	0.0	6.6	55.6	0.0	0.3	79.9	16.6	0.0	0.0	2.1	18.8	1.3
Homabay	0.5	0.9	1.0	0.3	0.0	8.6	29.6	0.0	0.0	40.8	53.1	0.1	0.0	5.2	58.4	0.8
Migori	1.5	4.3	0.5	0.0	0.0	10.2	18.6	0.2	0.0	35.4	51.1	0.0	0.7	12.6	64.4	0.2
Kisii	0.0	4.9	0.5	0.0	0.0	17.7	40.4	0.0	0.0	63.4	36.2	0.0	0.0	0.4	36.6	0.0
Nyamira	0.9	0.3	3.0	0.0	0.2	2.8	52.2	6.2	0.1	65.5	34.3	0.0	0.0	0.3	34.5	0.0
Nairobi City	63.8	10.2	3.7	0.3	2.1	5.2	12.0	0.1	0.0	97.5	1.9	0.6	0.0	0.0	2.5	0.1

5.6.2 Shared Human Waste Disposal Facilities

Sharing of human waste disposal facilities increases the risk of spreading infections or illnesses if hygiene practices are not strictly followed. Table 5.22 shows the proportion of households that reported sharing toilet facilities. The findings indicate that 36.5 per cent

of households that had access to a toilet facility shared it with other households. There is a higher per centage of sharing in urban areas, with a rate of 58.1 per cent, compared to rural areas, where the per centage stands at 24.5 per cent.

Table 5.22: Proportion of Households Sharing Toilet Facilities by Residence and County

	Not sharing	Sharing		Not sharing	Sharing
Kenya	63.5	36.5	Turkana	40.2	59.8
Rural	75.5	24.5	West Pokot	71.4	28.6
Urban	41.9	58.1	Samburu	32.1	67.9
County			Trans Nzoia	75.8	24.2
Mombasa	37.5	62.5	Uasin Gishu	73.3	26.7
Kwale	67.5	32.5	Elgeyo-Marakwet	81.3	18.7
Kilifi	57.8	42.2	Nandi	80.5	19.5
Tana River	32.6	67.4	Baringo	76.2	23.8
Lamu	78.6	21.4	Laikipia	68.3	31.7
Taita-Taveta	62.9	37.1	Nakuru	63.0	37.0
Garissa	66.7	33.3	Narok	61.2	38.8
Wajir	75.1	24.9	Kajiado	47.7	52.3
Mandera	51.1	48.9	Kericho	86.0	14.0
Marsabit	48.3	51.7	Bomet	85.7	14.3
Isiolo	46.5	53.5	Kakamega	78.1	21.9
Meru	75.7	24.3	Vihiga	74.3	25.7
Tharaka-Nithi	79.1	20.9	Bungoma	71.9	28.1
Embu	79.5	20.5	Busia	71.0	29.0
Kitui	65.5	34.5	Siaya	65.6	34.4
Machakos	67.2	32.8	Kisumu	63.7	36.3
Makueni	81.5	18.5	Homabay	71.5	28.5
Nyandarua	80.7	19.3	Migori	52.7	47.3
Nyeri	63.0	37.0	Kisii	76.7	23.3
Kirinyaga	67.1	32.9	Nyamira	82.5	17.5
Murang'a	69.7	30.3	Nairobi City	39.0	61.0
Kiambu	37.7	62.3			

5.6.3 Distribution of Households with Handwashing Facility

Handwashing is a crucial practice for maintaining personal hygiene and preventing the spread of infectious diseases. It requires thorough washing of hands with soap and water. As illustrated in Table 5.23, 50.8 per cent of households did not have a handwashing facility. Further, 23.8 per cent of households had a proper and

hygienic facility with both soap and water. Counties such as Kwale, Narok, and Kajiado, had more than 80 per cent of households lacking a handwashing facility. The proportion of households with hand washing facilities with both soap and water is 28.8 per cent in urban areas and 20.7 per cent in rural areas.

Table 5.23: Per centage Distribution of Households with a Handwashing Facility

	Total	Yes, Soap/ detergent and Water	Yes, Soap/ detergent Only	Yes, Water Only	No	Others
Kenya	13,886,126	23.8	2.5	22.9	50.8	0.0
Rural	8,519,926	20.7	1.7	25.5	52.1	0.0
Urban	5,366,201	28.8	3.8	18.7	48.6	0.1
County						
Mombasa	405,415	25.8	8.3	13.0	52.9	0.0
Kwale	183,739	11.0	1.1	3.2	84.8	0.0
Kilifi	407,221	11.3	0.3	26.9	61.5	0.0
Tana River	74,962	11.2	1.3	29.9	57.6	0.0
Lamu	40,543	3.0	4.3	34.8	58.0	0.0
Taita-Taveta	108,463	87.2	0.3	4.1	8.4	0.0
Garissa	180,468	5.6	1.8	67.4	25.2	0.0
Wajir	152,058	7.9	4.7	52.4	35.0	0.0
Mandera	167,096	0.0	0.9	33.3	65.7	0.0
Marsabit	87,421	0.2	0.7	35.5	63.6	0.0
Isiolo	63,947	14.4	3.7	7.6	74.4	0.0
Meru	463,535	39.2	1.1	36.9	22.8	0.0
Tharaka-Nithi	120,886	20.1	1.4	18.8	59.7	0.0
Embu	199,046	21.6	1.3	21.7	55.4	0.0
Kitui	275,514	18.8	0.3	3.0	77.9	0.0
Machakos	430,469	9.7	1.5	9.6	79.2	0.0
Makueni	257,105	33.2	1.6	22.8	42.3	0.1
Nyandarua	198,250	39.3	4.5	49.2	7.0	0.0
Nyeri	270,743	22.7	2.0	42.4	32.9	0.0
Kirinyaga	217,216	39.1	1.7	26.9	32.3	0.0
Murang'a	385,599	34.6	1.2	43.6	20.5	0.0
Kiambu	997,101	18.0	3.7	36.6	41.7	0.0
Turkana	219,588	7.8	0.6	9.8	81.7	0.0
West Pokot	183,115	6.6	4.3	44.3	44.8	0.0
Samburu	95,708	47.5	0.3	13.8	38.4	0.0
Trans Nzoia	266,538	8.1	1.0	27.3	63.6	0.0
Uasin Gishu	351,899	26.5	0.2	20.4	52.8	0.0
Elgeyo-Marakwet	110,356	37.0	9.9	14.8	38.4	0.0
Nandi	226,515	77.1	3.9	17.6	1.4	0.0
Baringo	157,303	4.8	1.2	16.3	77.6	0.0
Laikipia	154,631	28.4	18.7	38.1	14.7	0.0
Nakuru	673,026	23.6	1.2	11.5	63.6	0.0
Narok	263,863	6.8	0.9	3.8	88.4	0.1
Kajiado	371,234	10.6	1.3	7.9	80.2	0.0
Kericho	233,615	19.1	1.1	7.7	72.1	0.0
Bomet	219,222	12.0	1.6	34.4	52.1	0.0
Kakamega	484,205	51.8	0.6	17.3	30.3	0.0
Vihiga	160,520	27.3	0.3	18.8	53.5	0.0
Bungoma	470,168	4.8	3.5	45.9	45.8	0.0
Busia	216,855	77.0	1.9	16.5	4.6	0.0
Siaya	247,647	23.8	0.6	8.3	67.4	0.0
Kisumu	338,619	14.6	3.0	42.6	38.7	1.1
Homabay	270,043	6.0	3.1	21.3	69.6	0.0
Migori	267,547	25.2	0.5	14.0	60.3	0.0
Kisii	371,985	4.0	2.3	25.4	68.4	0.0
Nyamira	183,594	27.4	2.3	26.5	43.8	0.0
Nairobi City	1,661,533	33.0	4.2	8.8	54.0	0.0

5.7 Adequacy of Housing Index

Adequate housing is defined as the one that at a minimum, meet the following criteria:

1. Legal security of tenure, which guarantees legal protection against forced evictions, harassment and other threats.
2. Availability of services, materials, facilities and infrastructure: including safe drinking water, adequate sanitation, energy for cooking, heating, lighting, food storage or refuse disposal;
3. Affordability: housing is not adequate if its cost threatens or compromises the occupants' enjoyment of other human rights;
4. Habitability: housing is not adequate if it does not guarantee physical safety or provide adequate space, as well as protection against the cold, damp, heat, rain, wind, other threats to health and structural hazards;
5. Accessibility: housing is not adequate if the specific needs of disadvantaged and marginalized groups are not taken into account (such as the poor, people facing discrimination; persons with disabilities, victims of natural disasters);
6. Location: housing is not adequate if it is cut off from employment opportunities, health-care services, schools, childcare centers and other social facilities, or if located in dangerous or polluted sites or in immediate proximity to pollution sources; and

7. Cultural adequacy: housing is not adequate if it does not respect and take into account the expression of cultural identity and ways of life.

5.7.1 Consolidated Housing Quality Index (CHQI)

The survey used four standalone indices: Crowding Index, Fitness of Structure Index, Water and Sanitation Fitness Index and, Energy Use Fitness Index; to compute a Consolidated Housing Quality Index.

These indicators are defined as follows:

1. **Crowding:** A dwelling is considered crowded if the number of person per habitable room is greater than two.
2. **Fitness of Structure:** A dwelling is considered fit for habitation if all three of the building's envelopes (roof, wall, floor) are made of durable materials.
3. **Water and Sanitation Fitness:** A dwelling is considered fit for habitation if it uses improved sources of water supply and improved means of human waste disposal.
4. **Energy Use Fitness:** A dwelling is considered fit for habitation if occupants use clean fuel for both lighting and cooking.
5. **Consolidated Housing Quality:** This is computed using dwelling fitness each of the above measures.

Table 5.24 presents the re-codes used in generating the Consolidated Housing Quality Index for this survey.

Table 5.24: Scorecard for Dwelling Fitness

Variable Name	Variable Code	Code 1 for "Fit" if:	Option Code	Else, Code 0 for "Unfit" if:	Option Code
Number of Persons per room (NPPR)					
		if NPPR <=2		if NPPR >2	
Floor	Durable			Non-Durable	
	Parquet or polished wood		05	Earth/sand	01
	Vinyl or asphalt strips		06	Dung	02
	Ceramic tiles		07	Palm/ bamboo	04
	Concrete/ Cement/Terrazo		08		
	Wall to wall Carpet		09		
	Wood planks/shingles/timber		03		
Wall	Durable			Non-Durable	
	Concrete/Cement		11	No walls	01
	Stone with lime/cement		12	Cane/palm/trunks	02
	Bricks		13	Grass/reeds	03
	Cement blocks		14	Mud/cow dung	04
				Bamboo with mud	05
				Stone with mud	06
				Uncovered adobe	07
				Plywood/Cardboard	08
				Reused wood	09
				Iron sheets	10
				Covered adobe	15
				Wood planks/shingles/ timber	16
Roof	Durable			Non-Durable	
	Iron sheets/Decra/Versatile		03	Grass / Makuti thatch/ twigs	01
	Asbestos sheet		05	Dung / mud	02
	Concrete/Cement		06	Tin cans	04
	Tiles		07	Canvas/Nylon/Cartons/ Card board	08
Cooking Fuel	Clean		Code	Unclean (Smoky)	
	Electricity		1,2,3,4	Firewood	9
	LPG (gas)		7	Wood	10
	Biogas		6	Charcoal	11
	Ethanol		8	Agriculture Crop Residue	12
				Paraffin	13
Type of Toilet Facility	Improved			Unimproved	
	Flush to Main sewer		1	Pit Latrine without slab/ Open pit	8
	Flush to Septic tank		2	Bucket Toilet	11
	Flush to Cess pool		3	Hanging toilet/ Hanging latrine	12
	Flush to pit latrine		4	No facility/Bush/Field	13

Variable Name	Variable Code	Code 1 for "Fit" if:	Option Code	Else, Code 0 for "Unfit" if:	Option Code
		Ventilated Improved Pit(VIP) latrine	5		
		Flush to Don't Know where	6		
		Pit latrine covered	7		
		Biodigester	9		
		Composting toilet	10		
Main Source of Water		Improved		Unimproved	
		Public Water Companies	1	Dug Well(Unprotected)	6
		Private Water Companies	2	Water from Spring(unprotected)	8
		Tube well/Borehole(Owned)	3	Surface water(River, Dam,Lake,Pond,stream,-canal,irrigation channel	10
		Tube well/Borehole(Community)	4		
		Dug well (Protected)	5		
		Water from Spring(Protected)	7		
		Rainwater	9		
		Packaged Bottled water	11		
Type of Lighting		Clean		Unclean	
		Electricity	1,2,3,4,6	Paraffin	8
		Solar cahrged Battery/Torch/Spotlight Lamp	5	Charcoal	9
		Biogas	7	Wood	10
				Candle	11
Number of Persons per room (NPPR)		if NPPR <=2		if NPPR >2	

5.7.2 Dwelling Fitness Results

Figure 5.9 and Table 5.25 shows the distribution of persons per habitable room by residence and county. Nationally, 68.1 per cent of dwelling units were considered fit for habitation in terms of the number of persons per room whereas 31.9 per cent were unfit for habitation. This trend is replicated in both rural and urban areas, as shown in the figure below with fit dwelling units in rural areas at 65.7 per cent compared to 71.9 per cent in urban areas.

At county level, more than 80 per cent of the residents of Vihiga, Kirinyaga, Nyeri, Kakamega, Embu, Laikipia, Taita-Taveta, and Nyandarua live in dwelling units that are considered fit for habitation (not crowded). On the other hand, West Pokot (72.0%), Marsabit (78.7%), Wajir (80.2%), Mandera (79.9%) live in crowded conditions with proportions of more than 70 per cent of dwelling units considered unfit for habitation.

Figure 5.10: Number of Persons per Habitable Room

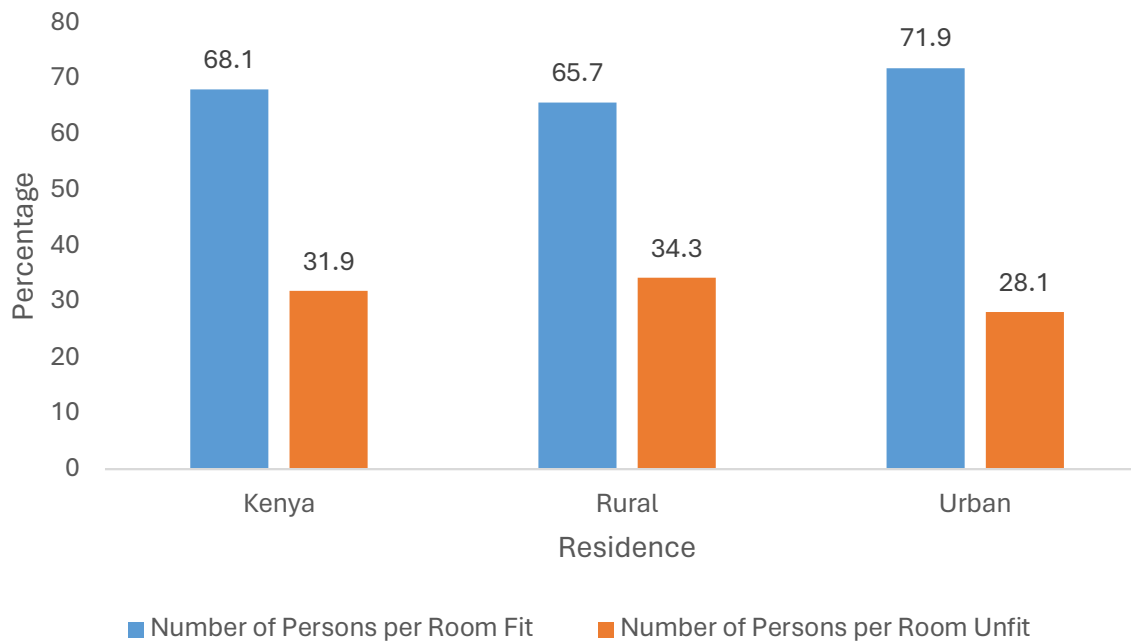


Table 5.25: Distribution of Persons per Habitable Room by Residence and County (Fit and Unfit)

	Fit	Unfit
Kenya	68.1	31.9
Rural	65.7	34.3
Urban	71.9	28.1
County		
Mombasa	69.3	30.7
Kwale	65.5	34.5
Kilifi	74.4	25.6
Tana River	41.8	58.2
Lamu	78.2	21.8
Taita-Taveta	83.5	16.5
Garissa	44.0	56.0
Wajir	19.8	80.2
Mandera	20.1	79.9
Marsabit	21.3	78.7
Isiolo	45.7	54.3
Meru	58.1	41.9
Tharaka-Nithi	76.2	23.8
Embu	86.5	13.5
Kitui	66.2	33.8
Machakos	81.4	18.6
Makueni	77.5	22.5
Nyandarua	83.8	16.2
Nyeri	85.2	14.8
Kirinyaga	89.6	10.4
Murang'a	78.8	21.2
Kiambu	80.4	19.6

	Fit	Unfit
Turkana	22.4	77.6
West Pokot	28.0	72.0
Samburu	50.2	49.8
Trans Nzoia	61.9	38.1
Uasin Gishu	71.2	28.8
Elgeyo-Marakwet	51.2	48.8
Nandi	73.0	27.0
Baringo	37.6	62.4
Laikipia	83.8	16.2
Nakuru	72.5	27.5
Narok	54.5	45.5
Kajiado	75.3	24.7
Kericho	56.0	44.0
Bomet	54.5	45.5
Kakamega	87.3	12.7
Vihiga	89.8	10.2
Bungoma	70.3	29.7
Busia	65.7	34.3
Siaya	68.1	31.9
Kisumu	79.5	20.5
Homabay	55.8	44.2
Migori	58.2	41.8
Kisii	78.0	22.0
Nyamira	79.2	20.8
Nairobi City	65.2	34.8

Table 5.26 presents structure fitness by residence and county. Nationally, 44.1 per cent of dwelling units used durable materials for roof, wall, and floor and are considered fit for habitation. In rural areas, 27.9 per cent of dwelling units were fit for occupation in terms of materials used for construction, while in urban areas 75.6 per cent of dwelling were fit.

Table 5.26: Structure Fitness by Residence and County

County/Residence	Fit	Unfit
Kenya	44.1	55.9
Rural	27.9	72.1
Urban	75.6	24.4
County		
Mombasa	91.7	8.3
Kwale	49.7	50.3
Kilifi	41.3	58.7
Tana River	32.0	68.0
Lamu	48.1	51.9
Taita-Taveta	61.1	38.9
Garissa	27.5	72.5
Wajir	23.6	76.4
Mandera	23.3	76.7
Marsabit	27.2	72.8
Isiolo	29.5	70.5
Meru	25.0	75.0
Tharaka-Nithi	32.9	67.1
Embu	42.5	57.5
Kitui	53.8	46.2
Machakos	65.3	34.7
Makueni	64.5	35.5
Nyandarua	31.0	69.0
Nyeri	39.0	61.0
Kirinyaga	47.3	52.7
Murang'a	37.4	62.6
Kiambu	66.2	33.8

County/Residence	Fit	Unfit
Turkana	8.3	91.7
West Pokot	13.0	87.0
Samburu	29.8	70.2
Trans Nzoia	33.2	66.8
Uasin Gishu	43.8	56.2
Elgeyo-Marakwet	15.1	84.9
Nandi	32.4	67.6
Baringo	12.9	87.1
Laikipia	41.8	58.2
Nakuru	50.2	49.8
Narok	19.2	80.8
Kajiado	51.5	48.5
Kericho	22.5	77.5
Bomet	16.2	83.8
Kakamega	33.6	66.4
Vihiga	28.3	71.7
Bungoma	27.3	72.7
Busia	35.4	64.6
Siaya	47.1	52.9
Kisumu	46.2	53.8
Homabay	30.1	69.9
Migori	42.2	57.8
Kisii	32.2	67.8
Nyamira	34.2	65.8
Nairobi City	77.1	22.9

In regards to energy use, 70.1 per cent of dwelling units in Kenya used clean energy as shown in Table 5.27. In rural areas, 90.6 per cent of dwelling units were using unclean sources of energy for both cooking and lighting as shown in Table 5.27. In urban areas, however, 69.7 per cent of dwelling units used clean source of energy for cooking and lighting. At county levels, Nairobi and Kiambu had the highest proportion of dwellings using clean energy at 95.2 per cent and 65.8 per cent respectively.



Table 5.27: Energy Use Fitness by County

	Clean	Unclean/ smoky
Kenya	29.9	70.1
Rural	9.4	90.6
Urban	69.7	30.3
County		
Mombasa	47.1	52.9
Kwale	12.7	87.3
Kilifi	19.8	80.2
Tana River	6.0	94.0
Lamu	18.0	82.0
Taita-Taveta	20.8	79.2
Garissa	2.7	97.3
Wajir	2.2	97.8
Mandera	1.1	98.9
Marsabit	5.7	94.3
Isiolo	20.7	79.3
Meru	12.4	87.6
Tharaka-Nithi	14.6	85.4
Embu	21.6	78.4
Kitui	18.2	81.8
Machakos	30.2	69.8
Makueni	9.1	90.9
Nyandarua	18.0	82.0
Nyeri	36.9	63.1
Kirinyaga	29.2	70.8
Murang'a	19.0	81.0
Kiambu	65.8	34.2

	Clean	Unclean/ smoky
Turkana	3.1	96.9
West Pokot	2.7	97.3
Samburu	6.1	93.9
Trans Nzoia	20.0	80.0
Uasin Gishu	36.0	64.0
Elgeyo-Marakwet	6.1	93.9
Nandi	12.8	87.2
Baringo	3.1	96.9
Laikipia	32.8	67.2
Nakuru	29.7	70.3
Narok	15.3	84.7
Kajiado	55.9	44.1
Kericho	8.0	92.0
Bomet	6.7	93.3
Kakamega	17.4	82.6
Vihiga	11.5	88.5
Bungoma	11.2	88.8
Busia	15.9	84.1
Siaya	9.9	90.1
Kisumu	33.3	66.7
Homabay	20.6	79.4
Migori	10.5	89.5
Kisii	16.1	83.9
Nyamira	11.8	88.2
Nairobi City	95.2	4.8

Table 5.28 presents the proportion of dwelling units that used improved sources of drinking water and improved toilet facilities. Nationally, 59.7 per cent of dwelling units got water from improved sources of drinking water and used improved toilet facilities. In urban and rural areas, 91.0 per cent and 43.5 per cent of dwelling units used improved sources of drinking water and improved

toilet facilities, respectively. At the county level, Nairobi City and Mombasa had the highest proportion for water and sanitation fitness at 96.9 per cent and 96.0 per cent, respectively. Turkana, Mandera, West Pokot, and Elgeiyo-Marakwet counties had the highest proportion of dwelling units that had unimproved sources of drinking water and toilet facilities.



Table 5.28: Water and Sanitation Fitness by County

	Improved	Unimproved
Kenya	59.7	40.3
Rural	43.5	56.5
Urban	91.0	9.0
County		
Mombasa	96.0	4.0
Kwale	53.0	47.0
Kilifi	60.5	39.5
Tana River	28.7	71.3
Lamu	62.2	37.8
Taita-Taveta	82.4	17.6
Garissa	61.1	38.9
Wajir	34.5	65.5
Mandera	16.2	83.8
Marsabit	24.0	76.0
Isiolo	61.5	38.5
Meru	33.9	66.1
Tharaka-Nithi	50.6	49.4
Embu	70.8	29.2
Kitui	45.2	54.8
Machakos	70.7	29.3
Makueni	43.1	56.9
Nyandarua	46.1	53.9
Nyeri	69.1	30.9
Kirinyaga	57.1	42.9
Murang'a	74.1	25.9
Kiambu	94.5	5.5
Turkana	14.4	85.6
West Pokot	17.3	82.7
Samburu	34.1	65.9
Trans Nzoia	49.7	50.3
Uasin Gishu	69.5	30.5
Elgeyo-Marakwet	18.0	82.0
Nandi	30.5	69.5
Baringo	39.3	60.7
Laikipia	70.7	29.3
Nakuru	63.9	36.1
Narok	39.6	60.4
Kajiado	79.7	20.3
Kericho	31.0	69.0
Bomet	24.3	75.7
Kakamega	63.7	36.3
Vihiga	71.8	28.2
Bungoma	49.1	50.9
Busia	64.6	35.4
Siaya	59.8	40.2
Kisumu	69.0	31.0
Homabay	28.2	71.8
Migori	27.4	72.6
Kisii	48.5	51.5
Nyamira	46.0	54.0
Nairobi City	96.9	3.1

5.7.3 Consolidated Housing Quality Index (CHQI Indicator)

Results of the CHQI indicator shows that, 78.8 per cent of dwelling units in Kenya were of inadequate quality. This proportion is higher for dwelling units in rural areas at 93.7 per cent as compared to 55.1 per cent for those in urban areas as presented in Table 5.29. Mandera, Wajir, West Pokot, Turkana, Bomet, Marsabit, Garissa, had the highest proportions of dwelling units that were of inadequate quality. While Nairobi City, Kajiado, Mombasa, and Kiambu had the highest proportions of adequate quality dwelling units.



Table 5.29: Consolidated Housing Quality Index by Residence and County

	Adequate Dwelling Unit	Inadequate Dwelling unit
Kenya	21.2	78.8
Rural	6.3	93.7
Urban	44.9	55.1
County		
Mombasa	37.6	62.4
Kwale	9.6	90.4
Kilifi	18.3	81.7
Tana River	3.1	96.9
Lamu	13.1	86.9
Taita-Taveta	17.5	82.5
Garissa	2.2	97.8
Wajir	1.4	98.6
Mandera	0.1	99.9
Marsabit	1.5	98.5
Isiolo	12.3	87.7
Meru	4.5	95.5
Tharaka-Nithi	14.2	85.8
Embu	19.9	80.1
Kitui	18.3	81.7
Machakos	19.0	81.0
Makueni	7.8	92.2
Nyandarua	13.6	86.4
Nyeri	20.9	79.1
Kirinyaga	21.6	78.4
Murang'a	16.2	83.8
Kiambu	45.5	54.5

	Adequate Dwelling Unit	Inadequate Dwelling unit
Turkana	1.6	98.4
West Pokot	2.2	97.8
Samburu	4.6	95.4
Trans Nzoia	15.4	84.6
Uasin Gishu	28.6	71.4
Elgeyo-Marakwet	3.7	96.3
Nandi	6.5	93.5
Baringo	2.5	97.5
Laikipia	26.2	73.8
Nakuru	26.7	73.3
Narok	8.6	91.4
Kajiado	36.4	63.6
Kericho	6.6	93.4
Bomet	2.4	97.6
Kakamega	16.4	83.6
Vihiga	9.0	91.0
Bungoma	8.8	91.2
Busia	10.2	89.8
Siaya	9.2	90.8
Kisumu	21.5	78.5
Homabay	7.5	92.5
Migori	6.6	93.4
Kisii	12.7	87.3
Nyamira	7.0	93.0
Nairobi City	51.8	48.2

5.8 Transport, Infrastructure and Housing Environs

5.8.1 Transport and Infrastructure

This section offers insights on how residents access essential services, basic infrastructure and amenities. Access to basic amenities reflects quality of life and plays a crucial role in choosing a place to live. It also shows the status of SDG indicators 9.1.1, 11.2.2 and 11.7.1. Table 5.30 presents the average distances in kilometers from dwellings to various facilities by counties and residence. Nationally, places of worship were the closest social amenity with an average distance of 0.6 kilometres while recreation centres were the furthest at 6.0

kilometres from the dwellings. On average, residents in the rural areas travelled longer distances to access basic amenities compared to residents in urban areas. Analysis by county showed that residents of Kitui, Samburu, and Narok travelled longer distances in kilometres to access recreation centers (29.4, 37.2, and 42.2 respectively) and social halls (23.5, 9.7, and 30.2 respectively). Residents in Tana River travelled the longest distance to the nearest secondary school, police station and shopping centre at 14.0 kilometres, 14.9 kilometres, and 11.2 kilometres respectively. Wajir residents travelled the longest distance to the nearest health facility at 6.7 kilometers.

Table 5.30: Average Distance from Dwelling Units to Social Amenities (kms)

Residence/ County	Primary School	Secondary School	Police Station	Health Facility	Bus Stop	Shopping Centre	Worship Centre	Recreation Centre	Market Place	Social Hall	Pick up Drop off	All Weather Season road
Kenya	1.1	2.4	3.6	2.3	2.4	1.6	0.6	6.0	3.4	5.4	1.0	1.8
Rural	1.3	3.1	4.9	3.0	3.4	2.1	0.8	8.2	4.5	7.2	1.4	1.7
Urban	0.7	1.2	1.6	1.2	0.9	0.7	0.3	2.5	1.7	2.4	0.4	1.9
County												
Mombasa	0.6	1.2	1.6	1.0	0.9	0.7	0.2	1.8	1.9	1.6	0.2	2.0
Kwale	1.1	3.3	4.9	2.6	3.4	1.4	1.0	16.6	3.5	14.6	0.8	1.7
Kilifi	1.1	2.4	5.9	2.5	2.7	2.0	0.8	4.6	3.3	6.2	1.8	1.9
Tana River	1.2	14.0	14.9	5.4	11.7	11.2	0.8	8.6	8.4	8.9	1.4	1.4
Lamu	0.8	1.0	1.2	1.2	1.6	0.6	0.5	0.0	0.9	0.5	0.5	2.0
Taita-Taveta	1.0	1.8	2.5	1.6	1.7	0.6	0.4	1.3	2.6	2.1	0.1	1.9
Garissa	0.6	7.3	7.2	2.0	0.8	1.6	0.6	1.7	3.7	4.1	0.6	2.0
Wajir	0.8	8.2	7.8	6.7	2.3	5.9	0.5	3.7	6.9	7.7	1.1	1.9
Mandera	0.9	4.8	5.0	3.7	1.4	2.0	0.5	1.3	6.6	2.5	0.7	1.8
Marsabit	0.9	6.1	3.8	1.8	6.6	7.0	2.0	0.9	2.5	3.5	2.2	1.5
Isiolo	1.3	5.2	6.3	2.6	2.9	2.6	1.5	2.4	6.9	6.5	1.1	1.8
Meru	1.2	1.9	2.4	2.1	1.8	1.2	0.6	9.5	2.5	7.4	0.8	1.7
Tharaka-Nithi	1.1	2.2	4.0	2.4	4.1	1.2	0.5	4.2	4.3	8.0	1.6	1.8
Embu	1.7	2.5	7.1	4.0	3.1	1.3	1.2	8.3	6.0	4.7	1.5	1.7
Kitui	1.1	2.7	3.8	2.3	2.4	1.0	0.7	29.4	5.7	23.5	1.3	1.8
Machakos	1.5	2.2	4.4	4.0	4.5	1.2	1.2	12.6	4.9	9.4	3.1	1.8
Makueni	1.2	2.2	3.5	2.4	2.2	1.2	0.7	5.2	5.2	6.2	1.8	1.4
Nyandarua	1.1	1.9	2.6	2.9	1.8	1.3	0.7	0.7	3.2	2.2	1.3	1.5
Nyeri	1.1	1.3	1.7	1.7	1.9	0.7	0.6	1.1	2.4	1.2	0.6	1.9
Kirinyaga	1.2	1.7	2.7	2.4	2.2	0.6	0.5	3.5	3.3	2.7	1.2	1.8
Murang'a	1.6	2.3	2.4	2.6	2.1	1.5	0.8	5.8	4.4	3.5	1.9	1.7
Kiambu	0.8	1.6	1.6	1.8	1.1	1.1	0.4	3.6	2.5	2.9	0.4	1.9
Turkana	1.4	9.9	13.7	4.4	5.5	4.7	1.0	2.8	13.4	3.4	1.1	1.3
West Pokot	2.1	2.9	7.6	3.5	2.9	2.6	1.7	10.3	7.1	5.3	1.2	1.6
Samburu	1.6	5.1	7.9	3.2	10.5	4.1	1.4	37.2	9.7	9.2	2.4	1.3
Trans Nzoia	1.3	1.7	3.2	2.2	4.2	1.9	0.6	6.5	1.1	6.1	1.4	1.7
Uasin Gishu	0.8	1.8	3.2	2.1	1.1	0.9	0.5	10.7	3.2	11.4	0.8	1.8
Elgeyo- Marakwet	1.0	2.1	5.2	3.1	7.7	1.8	0.8	19.8	6.1	17.8	1.1	1.5
Nandi	1.0	1.7	3.6	2.1	1.8	1.1	0.6	2.5	4.2	2.4	1.1	2.0
Baringo	1.5	2.7	6.3	2.5	4.2	2.2	1.2	7.6	7.1	6.3	3.1	1.6
Laikipia	2.2	4.4	3.7	2.4	4.0	2.9	1.1	3.3	5.1	3.1	1.8	1.9
Nakuru	1.2	1.6	2.9	2.2	1.6	1.5	0.5	3.3	2.3	3.0	0.3	1.9
Narok	2.2	6.0	9.9	5.2	7.7	2.2	1.2	42.2	7.7	30.2	1.1	1.5
Kajiado	1.9	6.7	8.5	5.3	5.1	2.7	0.7	7.1	7.0	13.1	4.0	1.6
Kericho	1.1	1.9	3.6	2.2	2.7	2.1	0.5	0.3	3.8	0.3	0.2	2.0
Bomet	1.0	1.5	3.5	1.7	3.1	1.5	0.6	2.1	4.2	2.3	2.4	1.8
Kakamega	0.9	1.5	2.1	2.0	1.4	0.9	0.5	2.5	1.3	2.6	0.4	2.0
Vihiga	0.8	1.1	2.0	1.1	3.4	1.0	0.3	4.2	2.7	3.2	0.2	1.8
Bungoma	0.9	1.3	2.1	1.6	2.2	1.4	0.4	6.3	1.5	5.1	0.4	1.8
Busia	0.7	1.3	2.1	1.5	1.6	1.0	0.6	0.1	1.9	0.1	0.2	1.9
Siaya	0.8	1.5	2.9	2.2	2.9	1.7	0.3	3.3	2.0	2.9	1.5	1.6
Kisumu	0.6	0.9	1.6	1.1	1.2	0.9	0.3	0.9	1.1	1.0	0.7	1.7
Homabay	1.2	2.0	4.3	2.1	2.7	1.7	0.6	4.7	1.6	5.1	1.3	1.9
Migori	1.2	1.7	3.5	2.5	3.6	1.3	0.6	1.5	2.0	1.4	0.4	1.5
Kisii	0.9	1.4	2.8	2.1	1.4	1.5	0.7	3.4	2.2	1.5	0.4	1.9
Nyamira	1.0	1.7	2.2	1.7	2.3	1.1	0.8	1.5	2.1	1.4	0.9	1.9
Nairobi City	0.4	0.8	1.2	0.8	0.5	0.8	0.2	2.1	1.4	1.7	0.4	1.9

5.8.2 Type of Access Road

The quality and condition of road used by households to access their dwellings influences the ease of mobility and potentially the value of the property. Table 5.31 shows the type of access roads to the dwellings by residence. Overall, 58.5 per cent of dwellings were accessed via earth roads, 29.5 per cent by gravel/murram road, and 12.0 per cent by bitumen/paved/cabro roads. Dwellings in the rural areas were mainly accessed through earth roads at 64.5 per cent. Urban areas had a higher per centage of bitumen/paved/cabro roads at 21.1 per cent compared to the rural areas at 6.2 per cent.

Table 5.31: Per centage Distribution of Households by Type of Access Road Leading to Dwelling Units by Residence

Residence	Bitumen/ Paved/ Cabro	Gravel/ Murram	Earth
Kenya	12.0	29.5	58.5
Rural	6.2	29.3	64.5
Urban	21.1	29.8	49.2



The quality and condition of road used by households to access their dwellings influences the ease of mobility and potentially the value of the property.

5.8.3 Street Lighting

Streetlights/High mast lighting provide lighting which increase safety, security, and enhance mobility for residents. Results from the survey indicate that 22.6 per cent of the dwellings in the country have streetlights/high mast lighting in their access roads. Street lighting for dwellings in urban areas was higher at 47.6 per cent compared to the rural areas at 6.8 per cent. Nairobi City was leading with 75.4 per cent of the residents reporting that they have streetlights/high mast lighting while Vihiga County had the lowest coverage of streetlights at 2.4 per cent as shown in Table 5.32.



Table 5.32: Per centage Distribution of Households by Street Lighting/High Mast Lighting for Access Road to Dwelling Units by Residence

Residence	Availability of Street Lighting/High Mast Lighting	Total
Kenya	22.6	13,886,126
Rural	6.8	8,519,926
Urban	47.6	5,366,201
County		
Mombasa	56.6	405,415
Kwale	4.0	183,739
Kilifi	4.7	407,221
Tana River	4.2	74,962
Lamu	18.0	40,543
Taita-Taveta	23.6	108,463
Garissa	10.3	180,468
Wajir	3.8	152,058
Mandera	4.3	167,096
Marsabit	6.5	87,421
Isiolo	5.6	63,947
Meru	15.4	463,535
Tharaka-Nithi	9.4	120,886
Embu	12.3	199,046
Kitui	10.3	275,514
Machakos	11.8	430,469
Makueni	5.2	257,105
Nyandarua	23.2	198,250
Nyeri	34.4	270,743
Kirinyaga	11.7	217,216
Murang'a	18.2	385,599
Kiambu	36.3	997,101

Residence	Availability of Street Lighting/High Mast Lighting	Total
Turkana	7.0	219,588
West Pokot	4.2	183,115
Samburu	14.5	95,708
Trans Nzoia	11.9	266,538
Uasin Gishu	37.7	351,899
Elgeyo-Marakwet	7.2	110,356
Nandi	11.3	226,515
Baringo	9.0	157,303
Laikipia	16.4	154,631
Nakuru	25.3	673,026
Narok	7.8	263,863
Kajiado	4.9	371,234
Kericho	11.1	233,615
Bomet	10.1	219,222
Kakamega	8.4	484,205
Vihiga	2.4	160,520
Bungoma	8.3	470,168
Busia	5.4	216,855
Siaya	4.1	247,647
Kisumu	13.0	338,619
Homabay	9.7	270,043
Migori	6.4	267,547
Kisii	4.2	371,985
Nyamira	7.3	183,594
Nairobi City	75.4	1,661,533

5.8.4 Utilities Provided by Government

Table 5.33 shows distribution of various utilities provided by the government in rural and urban areas. Urban areas are far better equipped with street lighting (54.8% in urban areas vs. 8.9% in rural areas), pedestrian pathways (18.4% vs. 4.6%), drainage systems (34.6% vs. 6.8%), sewerage systems (35.2% vs. 1.9%), water supply (59.9% vs. 23.5%), and garbage collection services (20.3% vs. 3.8%). These findings indicate a stronger infrastructure and service provision focus on urban areas. Road infrastructure is better in urban areas at 76.8 per cent compared to rural areas at 59.6 per cent. Urban areas also offer more recreation facilities, such as parks and public spaces (15.8% in urban areas vs. 7.8% in rural areas), emphasizing the availability of recreational amenities in urban areas.

Table 5.33: Per centage Distribution of Households by Utilities Provided by the Government by Residence

Utilities Provided by Government	Rural	Urban
Street lighting	8.9	54.8
Pedestrian Pathways	4.6	18.4
Cycling Pathways	3.0	7.1
Drainage	6.8	34.6
Sewerage	1.9	35.2
Water	23.5	59.9
Roads	59.6	76.8
Health facilities/Hospitals	66.3	66.9
Garbage Collection	3.8	20.3
Recreation Facility(Parks, Public Space)	7.8	15.8

The analysis of functional utilities provided by the government in rural and urban areas is shown in Table 5.34. Urban areas had a higher coverage of functional street lighting (91.0% in urban areas vs. 73.7% in rural areas), functional pedestrian pathways (96.7% vs. 84.8%), functional drainage systems (85.1% vs. 76.6%), functional sewerage systems (88.4% vs. 56.5%), functional water supply (90.4% vs. 84.1%), and functional garbage collection services (89.3% vs. 59.7%). These findings indicate that urban areas have a more robust infrastructure and better service provision. Rural areas have a lower per centage of functional cycling pathways (78.4% in rural areas vs. 96.2% in urban areas) and health facilities or hospitals (94.8% vs. 97.0%). Roads are slightly less functional in rural areas (93.9%) compared to urban areas (96.1%). Urban areas also offer more functional recreation facilities, such as parks and public spaces (92.4% in urban areas vs. 80.9% in rural areas), reflecting a greater emphasis on recreational facilities in urban areas.

Table 5.34: Per centage Distribution of Households by Functionality of Utilities Provided by the Government

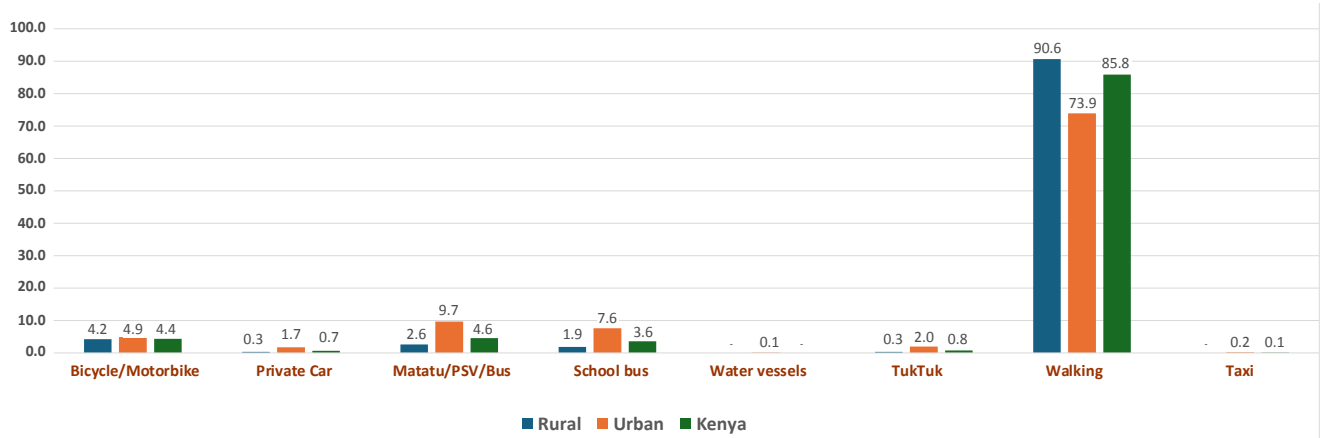
Functional Utilities	Rural	Urban
Street lighting	73.7	91.0
Pedestrian Pathways	84.8	96.7
Cycling Pathways	78.4	96.2
Drainage	76.6	85.1
Sewerage	56.5	88.4
Water	84.1	90.4
Roads	93.9	96.1
Health facilities/Hospitals	94.8	97.0
Garbage Collection	59.7	89.3
Recreation Facility(Parks, Public Space)	80.9	92.4

5.8.5 Main Mode of Transport to School.

In Kenya, walking is the primary mode of transport for students going to day-schools as shown in fig 5.11. Nationally, 85.8 per cent students/pupils walk to school with rural and urban at 90.6 and 73.9 per cent, respectively. The other common modes of transport to school include using public transport like matatus, boda-bodas and school buses at 4.6 per cent, 4.4 per cent, and 3.6 per cent respectively.



Figure 5.11: Main Mode of Transport to School for Day Scholars



5.8.6 Mode of Transport to Work.

Figure 5.12 outlines the different modes of transport used to commute to work in Kenya, disaggregated by rural and urban areas. Walking was the predominant mode of transport to work, with 72.7 per cent of Kenyans walking to work, with rural areas recording the highest percentage (82.5%) compared to urban areas (53.4%). Public Transport (Matatu/PSV/Bus) was more common

in urban areas (26.7%) compared to rural areas (4.9 %). The use of Boda-bodas (Bicycles and Motorbikes) was popular in both rural and urban areas at 10.4 per cent and 10.9 per cent, respectively. Private Cars were more commonly used in urban areas at 6.0 per cent and 1.4 per cent in rural areas.

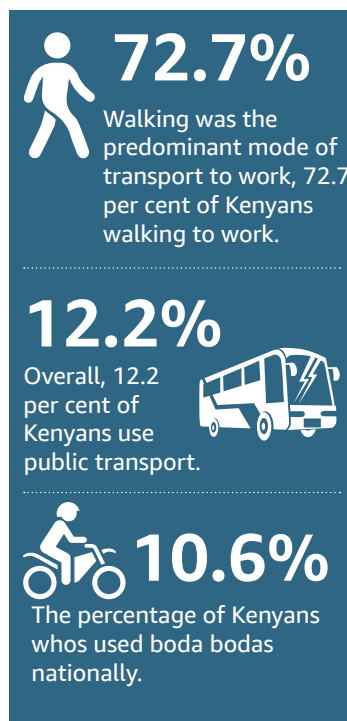
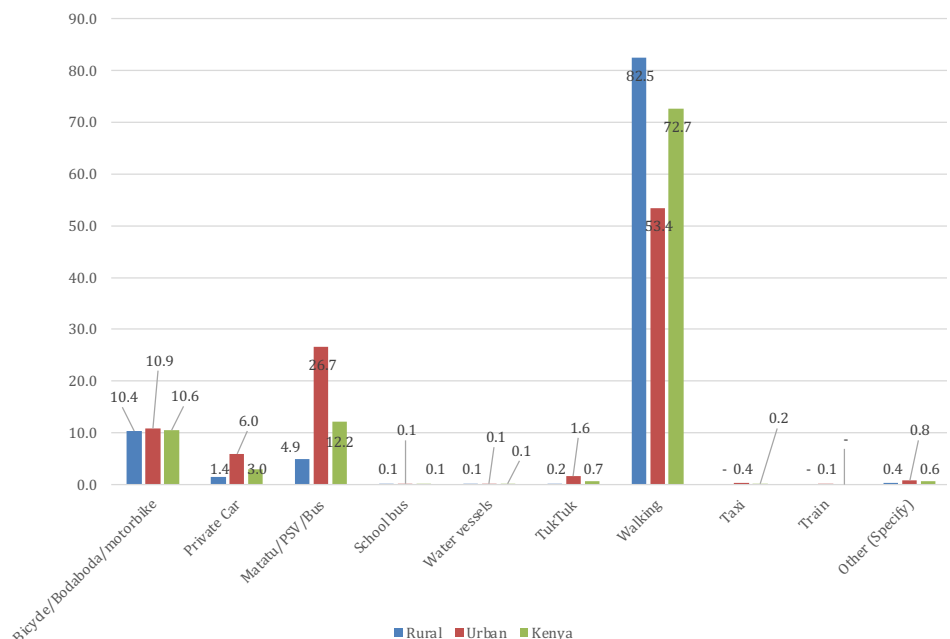


Figure 5.12: Main Mode of Transport to Work



5.8.7 Housing Environs

Housing is not merely about providing shelter; it is deeply intertwined with the surrounding environment and the specific characteristics of its location. For this survey, housing environs include natural elements like topography, proximity to riparian land, perception on pollution severity, solid waste disposal, and membership to resident associations. These environs are crucial factors in housing, affecting the quality of life, property value, and overall satisfaction of residents.

5.8.8 Land Terrain

Housing is influenced by the topography of the land. The location of a dwelling unit affects its stability, accessibility, scenery, drainage, building costs, and proneness to natural hazards. Table 5.35 displays the distribution of residential units by topography, residence, and county. Nationally, 51.3 per cent of dwelling units were located on plain/flat ground, while 36.2 per cent positioned on slightly sloppy terrain. Garissa County had 96.6 per cent of its housing units on flat/plain terrain, while 40.1 per cent of dwelling units in Elgeyo-Marakwet county were on sloppy terrain.

Table 5.35: Proportion of Dwelling Units by Land Terrain

County	Plain/ Flat	Slightly slopy	Slopy	Steep
Kenya	51.3	36.2	9.9	2.7
Mombasa	72.5	22.3	3.6	1.6
Kwale	60.0	28.9	9.1	2.0
Kilifi	58.8	31.9	7.2	2.1
Tana River	93.6	5.3	0.8	0.3
Lamu	70.5	28.3	0.8	0.3
Taita-Taveta	53.5	28.6	14.4	3.5
Garissa	96.6	2.7	0.2	0.5
Wajir	92.2	0.1	7.4	0.3
Mandera	81.6	14.5	3.4	0.5
Marsabit	66.4	27.0	3.7	2.8
Isiolo	78.0	19.4	1.7	0.8
Meru	40.7	39.2	15.1	4.9
Tharaka-Nithi	64.5	22.4	9.1	4.0
Embu	42.4	36.6	11.6	9.3
Kitui	59.3	37.7	2.4	0.6
Machakos	34.9	39.5	22.0	3.7
Makueni	49.8	33.9	14.4	1.9
Nyandarua	47.6	34.0	17.4	1.0
Nyeri	36.0	44.7	17.3	2.0
Kirinyaga	46.4	35.9	10.9	6.8
Murang'a	23.4	47.7	17.7	11.2
Kiambu	66.8	25.5	7.7	0.0
Turkana	59.6	37.5	2.3	0.6
West Pokot	33.7	36.0	24.2	6.1

County	Plain/ Flat	Slightly slopy	Slopy	Steep
Samburu	69.2	21.6	8.6	0.7
Trans Nzoia	34.2	47.6	13.3	4.8
Uasin Gishu	51.3	42.3	5.9	0.5
Elgeyo-Marakwet	2.7	30.9	40.1	26.4
Nandi	10.2	68.2	17.1	4.5
Baringo	52.6	40.9	6.5	0.0
Laikipia	53.6	39.1	5.6	1.7
Nakuru	48.6	34.5	14.0	2.9
Narok	38.1	51.2	7.7	3.0
Kajiado	54.7	31.1	11.9	2.3
Kericho	64.0	27.7	8.3	0.0
Bomet	53.1	28.4	14.8	3.7
Kakamega	27.8	59.9	10.0	2.3
Vihiga	37.6	43.5	13.4	5.4
Bungoma	53.1	37.3	8.3	1.2
Busia	79.6	16.1	2.1	2.2
Siaya	27.9	63.9	8.2	0.0
Kisumu	65.6	29.3	3.8	1.3
Homabay	11.0	46.8	26.3	15.8
Migori	48.8	42.7	8.4	0.1
Kisii	21.5	68.1	9.1	1.3
Nyamira	18.2	50.2	26.6	4.9
Nairobi City	67.0	30.6	2.3	0.1

5.8.9 Proximity of Dwellings to Potential Hazards

The survey highlights significant differences in average distances to various hazard risks between rural and urban areas and across different counties. Rural areas generally exhibited shorter average distances to natural features such as rivers/lakes at 727 metres swamps at 502 metres and wetlands at 342 metres, indicating

closer proximity to these potential natural hazards. Urban areas had shorter average distances to man-made hazards like dumpsites at 345 metres, factories at 1,276 metres, and busy roads at 223 metres compared to rural areas as shown in Table 5.36.

Table 5.36: Proximity of Dwellings to Potential Hazards in Metres

Residence	River/Lake	Swamp	Wetland	Quarry	Dumpsite	Factory/ Industry	Forest	Bars and Night Clubs	Worship centres	Airport	Busy Road
Kenya	677	517	321	1,440	332	1,620	1,195	431	340	1,749	303
Rural	727	502	342	1,563	207	1,867	1,236	697	444	2,047	418
Urban	727	551	282	1,236	345	1,276	1,052	317	246	1,589	223
County											
Mombasa	100	177	427	331	710	607	173	303	180	2,682	207
Kwale	501	175	295	1,021	128	941	526	343	283	600	172
Kilifi	1,003	.	133	3,114	1,625	1,493	189	254	358	300	355
Tana River	1,090	214	41	.	263	100	444	622	367	2,000	333
Lamu	1,536	37	.	.	160	.	47	363	120	883	19
Taita-Taveta	307	.	333	200	107	.	251	130	135	.	86
Garissa	714	.	.	.	.	.	.	.	194	350	126
Wajir	.	477	.	.	.	.	.	.	478	300	30
Mandera	1,591	1,750	.	.	675	.	.	300	430	1,000	242
Marsabit	347	.	.	.	.	.	253	.	180	.	70
Isiolo	248	.	.	.	.	100	.	71	213	.	50
Meru	456	550	700	752	238	1,031	1,460	435	340	.	195
Tharaka-Nithi	688	500	188	2,275	575	1,193	1,440	300	354	.	222
Embu	899	250	403	1,795	100	1,490	2,022	778	717	.	489
Kitui	387	.	.	.	441	.	165	140	204	.	320
Machakos	406	792	144	800	98	445	325	158	256	960	191
Makueni	485	300	296	.	517	10,000	333	225	241	.	442
Nyandarua	1,152	357	30	3,295	142	1,500	1,766	735	475	.	272
Nyeri	869	525	200	1,169	831	1,560	1,471	524	523	.	745
Kirinyaga	587	925	360	869	279	1,638	629	371	375	.	327
Murang'a	777	583	424	1,304	432	2,695	2,499	785	594	.	196
Kiambu	411	0	348	750	400	374	303	308	215	.	193
Turkana	1,054	.	.	.	.	.	.	252	306	800	218
West Pokot	504	480	.	.	340	.	536	446	473	1,633	372
Samburu	320	312	42	100	105	.	359	146	304	203	90
Trans Nzoia	627	847	473	5,740	403	3,067	4,297	629	403	3,167	604

Table 5.36: Proximity of Dwellings to Potential Hazards in Metres (Continued)

Residence	River/Lake	Swamp	Wetland	Quarry	Dumpsite	Factory/ Industry	Forest	Bars and Night Clubs	Worship centres	Busy Road	Busy Road
Uasin Gishu	428	302	271	933	.	837	1,512	258	217	.	120
Elgeyo- Marakwet	557	570	541	833	1,150	.	1,021	318	439	.	251
Nandi	535	752	644	2,496	.	1,918	1,592	1,115	482	.	668
Baringo	805	.	.	683	250	293	619	87	288	.	172
Laikipia	611	410	367	672	1,500	755	751	305	359	1,500	201
Nakuru	610	556	321	1,074	441	497	519	239	232	.	269
Narok	605	346	62	512	89	.	541	216	502	7,000	909
Kajiado	1,343	.	400	3,338	.	2,667	1,651	788	490	.	1,193
Kericho	431	645	.	1,203	803	677	1,020	307	406	.	288
Bomet	666	780	476	544	325	342	859	396	471	3,000	429
Kakamega	329	98	153	364	.	.	478	184	190	.	122
Vihiga	197	.	.	50	.	388	250	327	276	.	273
Bungoma	1,131	329	404	1,450	520	4,931	2,664	705	362	.	259
Busia	487	179	179	930	50	.	550	241	278	.	227
Siaya	1412	125	183	525	176	.	110	628	227	.	107
Kisumu	222	143	143	386	162	631	138	215	157	375	112
Homabay	598	489	117	1,669	178	3,000	4,000	1,360	310	.	164
Migori	509	174	87	1,188	44	658	302	268	281	.	143
Kisii	321	150	.	733	67	3,000	450	178	242	1,000	78
Nyamira	1,101	425	1,375	886	.	2,633	1,217	695	715	.	216
Nairobi City	384	110	57	397	249	451	1,345	220	146	6,570	199

Table 5.37 shows distribution of households' locality to areas prone to flooding & mudslides. Nationally, 19.7 per cent of households lived in areas prone to flooding, while 13.7 per cent of households lived in areas likely to experience mudslides. Distribution by residence showed

that more households in urban areas were prone to flooding compared to rural areas. Households in the rural areas were more prone to mudslides than in the urban areas.

Table 5.37: Per centage of Households in Areas Prone to Flooding & Mudslides by Residence

Residence	Flooding			Mudslides		
	Yes	Yes, Severe	Yes, Mild	Yes	Yes, Severe	Yes, Mild
Kenya	19.7	6.9	12.8	13.7	4.8	8.9
Rural	18.0	5.2	12.8	14.8	4.4	10.3
Urban	22.3	9.6	12.8	12.0	5.4	6.7



5.9 Solid Waste Disposal

Solid waste disposal is a critical aspect of environmental management. Solid waste can either be organic or inorganic. Organic waste consists of biodegradable materials that were once part of a living organism and undergo rapid decomposition. It includes food waste, yard trimmings, and other natural materials that can easily decompose and serve as a nutrient-rich soil amendment. Inorganic waste refers to waste materials that do not contain organic compounds. These substances are generally resistant to decomposition by microorganisms. Examples of inorganic waste include glass, aluminum cans, dust, and metals.

Figure 5.12 shows how households dispose of their solid wastes. Nationally, the main method of households' solid waste disposal was burning the solid waste in the open at 36.8 per cent followed by dumping in a pit at 28.6 per cent. Notably, 7.5 per cent and 2.8 per cent of households in Kenya dispose of their solid waste by dumping in the compound and dumping in the street, vacant plot or drainage respectively. This means one in ten households (10.3%) in Kenya dispose of their solid waste inappropriately.

Figure 5.13: Primary method of Solid Waste Disposal

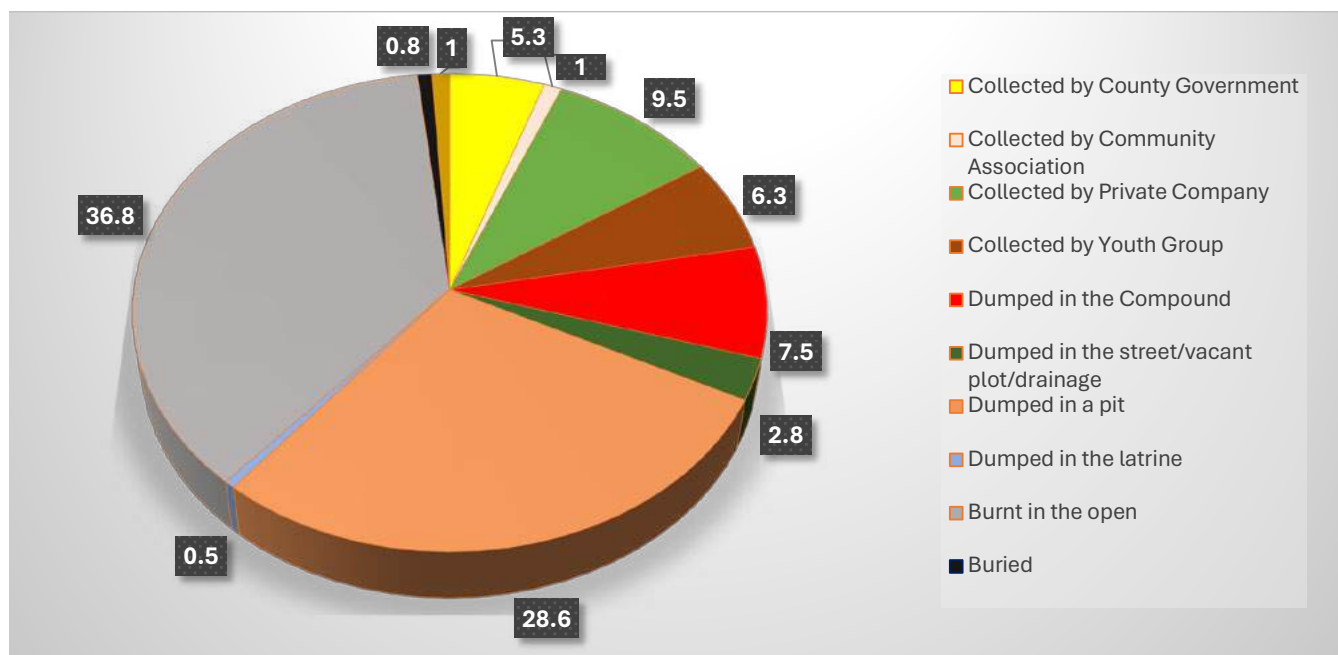


Table 5.38 shows the primary method of waste disposal used by households by residence. The most common method of waste disposal in the rural area was burning in the open at 48.2 per cent while in urban areas was collected by private company at 23.4 per cent.

Table 5.38: Per centage Distribution of Households by Primary Method of Waste Disposal by Residence

	Collected by County Government	Collected by Community Association	Collected by Private Company	Collected by Youth Group	Dumped in the Compound	Dumped in the street/vacant plot/drainage	Dumped in a pit	Dumped in the latrine	Burnt in the open	Buried	Others
Kenya	5.3	1.0	9.5	6.3	7.5	2.8	28.6	0.5	36.8	0.8	1.0
Rural	0.7	0.2	0.7	0.1	9.6	1.7	35.9	0.6	48.2	1.1	1.1
Urban	12.6	2.3	23.4	16.3	4.0	4.5	17.0	0.3	18.6	0.3	0.7

The frequency of waste collection from the households by County Governments, community associations, private companies or by youth groups is as shown in Table 5.39. The frequency of waste collection was daily, twice a week, weekly, or monthly. Nationally 73.3 per cent of households reported that their waste was collected on a weekly basis, 19.2 per cent twice a week, 3.6 per cent daily and 3.8 per cent monthly. Three in four households (74.5%) in the urban areas and 49.0 per cent of the households in the rural areas had their solid

waste collected on a weekly basis. More than half of the households in Tharaka-Nithi (53.7%) reported that their waste was collected daily, while 63.9 per cent of household in Embu, 71.1 per cent in Makueni and 71.7 in Homabay County reported that their solid waste was collected twice a week. More than half of the households in Wajir (57%) and Muranga (55.2%) counties reported that their solid waste was collected once a month.

Table 5.39: Per centage Distribution of Households by Frequency of Waste Collection by County

	Daily	Twice a week	Weekly	Monthly
Kemya	3.6	19.2	73.3	3.8
Rural	8.1	16.4	49.0	26.5
Urban	3.4	19.4	74.5	2.7
County				
Mombasa	14.6	35.3	48.7	1.3
Kwale	9.9	6.3	72.4	11.3
Kilifi	10.3	26.4	63.3	-
Lamu	14.7	34.2	51.1	-
Taita-Taveta	2.3	39.2	49.3	9.3
Garissa	2.9	7.2	90.0	-
Wajir	-	1.3	41.7	57.0
Mandera	-	5.6	88.9	5.5
Marsabit	-	35.7	64.3	-
Isiolo	2.4	18.8	78.8	-
Meru	1.1	14.0	83.3	1.7
Tharaka-Nithi	53.7	13.3	32.1	0.8
Embu	-	63.9	36.1	-
Kitui	45.1	41.9	12.0	1.0
Machakos	5.3	40.6	48.8	5.3
Makueni	22.6	71.1	4.5	1.8
Nyandarua	3.6	34.9	56.8	4.8
Nyeri	6.2	25.4	58.0	10.3
Kirinyaga	1.8	11.4	67.9	18.9
Murang'a	-	6.1	38.8	55.2
Kiambu	-	7.6	84.1	8.3

	Daily	Twice a week	Weekly	Monthly
Turkana	28.6	28.6	42.9	-
West Pokot	10.4	4.5	82.9	2.3
Samburu	3.3	28.0	66.9	1.7
Trans Nzoia	-	1.7	98.3	-
Uasin Gishu	-	31.2	65.6	3.2
Elgeyo-Marakwet	4.6	48.7	29.5	17.2
Nandi	19.7	38.7	37.0	4.6
Baringo	3.3	9.7	53.8	33.2
Laikipia	5.2	24.6	70.2	-
Nakuru	0.6	6.6	86.5	6.2
Narok	8.1	50.2	41.2	0.6
Kajiado	-	21.1	78.9	-
Kericho	2.5	38.9	52.3	6.3
Bomet	-	25.5	73.9	0.6
Kakamega	12.0	14.4	71.1	2.4
Vihiga	-	3.3	96.7	-
Bungoma	-	4.7	80.6	14.7
Busia	-	-	95.6	4.4
Siaya	-	-	87.7	12.3
Kisumu	-	1.4	86.3	12.4
Homabay	3.4	71.7	24.8	-
Migori	-	17.6	82.4	-
Kisii	9.1	9.8	81.1	-
Nyamira	7.3	26.9	43.7	22.0
Nairobi City	2.1	17.2	79.6	1.1

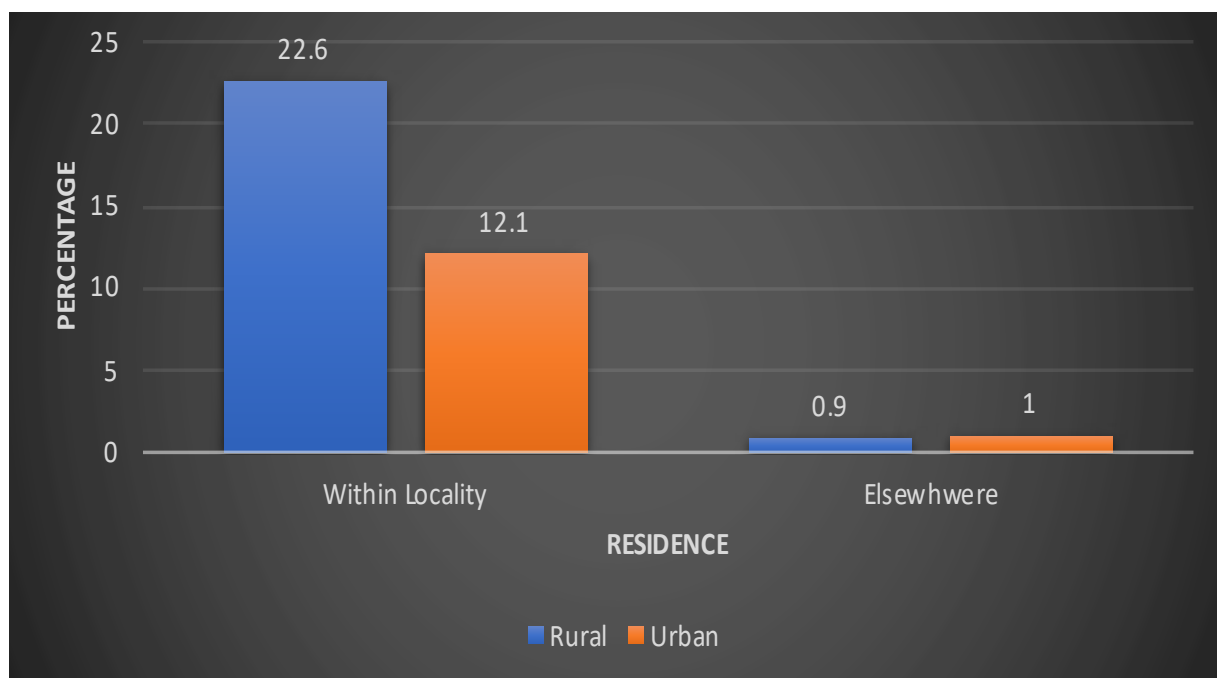
5.10 Membership to Associations

Resident associations are groups that are formed by residents of an area to commune together and protect the interests of the area within which they reside.

Figure 5.13 shows the proportion of households which reported to be members of residence association.

In rural areas, 22.6 per cent of household members were members of local associations, compared to 12.1 per cent in urban areas. Residents with membership to associations elsewhere was 1.0 per cent in urban areas and 0.9 per cent in rural areas respectively.

Figure 5.14: Membership to Associations by Locality





CHAPTER 06



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Housing Awareness and Perceptions

Key Findings

- Overall, 87.6 per cent of respondents reported that they felt comfortable with the residence they were occupying at the time of the survey, 60.5 per cent felt secure in their neighbourhoods at night and 15.4 per cent reported to have been victims of crime.
- Survey results show that 75.9 per cent and 83.0 per cent of those interviewed were not aware of the rules and regulations in the building sector and the minimum housing requirement respectively. Further, 45.2 per cent of respondents were of the opinion

that government/ public agencies should regulate interest rates on housing loans and mortgages.

- Overall, 53.5 per cent of respondents indicated that they were aware of the affordable housing program. Nationally, 7.7 per cent of respondents reported that they were aware of the stamp duty exemption for first time homebuyers. Nationally, 11.3 per cent of the respondents were aware of the affordable housing relief with 16.2 per cent of those who were aware of the affordable housing relief reported to have benefitted from the incentive.

The 2023/24 Kenya Housing Survey collected data on respondents' perceptions of their current dwelling's comfort and security as well as their awareness of various housing aspects and regulations. One individual aged 18 years and above among the usual household members was randomly selected to respond to specific awareness questions. This chapter presents survey findings on awareness and perceptions on housing aspects.

6.1 Comfort in Dwellings

Dwellings are a complex socio-material arrangement that serve more than just financial purposes; they also have a functional role, requiring them to provide

comfort. While comfort is a subjective concept, it can be defined as the state of fully enjoying one's current circumstances, where the present moment is perfectly satisfying, free from worries about the future or the need for significant sacrifices to achieve this state. The survey sought to ascertain the level of comfort of respondents in their dwellings. Overall 87.6 per cent of respondents aged 18 years and above reported that they felt comfortable with the residence they were occupying at the time of the survey. As shown in Table 6.1, 91.8 per cent of the target population in rural areas and 79.7 per cent of the target population in urban areas reported that they were comfortable with their current residence.

Table 6.1: Proportion of Individuals Aged 18 years and Above who Reported they were Comfortable with their Current Residence

	Not Comfortable	Comfortable	Not Stated	Total
Kenya	12.3	87.6	0.1	28,185,053
Rural	8.2	91.8	0	18,531,386
Urban	20.1	79.7	0.2	9,653,667
County				
Mombasa	20.2	79.8	0	782,450
Kwale	12.2	87.8	0	517,666
Kilifi	9.9	90.1	0	858,379
Tana River	29.6	70.4	0	158,531
Lamu	4.3	95.7	0	103,172
Taita-Taveta	5.2	94.8	0	212,006
Garissa	1.4	98.6	0	497,232
Wajir	4.4	95.6	0	446,582
Mandera	14.4	85.6	0	360,427
Marsabit	2.2	97.8	0	236,235
Isiolo	3.7	96.3	0	140,195
Meru	17.4	82.6	0	965,240
Tharaka-Nithi	10.8	89.2	0	234,659
Embu	16.5	83.5	0	423,095
Kitui	7.1	92.9	0	675,990
Machakos	11.9	88.1	0	906,382
Makueni	7.3	92.7	0	651,569
Nyandarua	15.6	84.4	0	403,392
Nyeri	6.9	93.1	0	529,451
Kirinyaga	10.0	90.0	0	418,563
Murang'a	7.3	92.7	0	648,880
Kiambu	14.8	84.1	1.2	1,562,302
Turkana	9.8	90.2	0	393,839
West Pokot	9.1	90.9	0	301,155
Samburu	5.2	94.8	0	134,807
Trans Nzoia	7.5	92.2	0.3	589,829

	Not Comfortable	Comfortable	Not Stated	Total
Uasin Gishu	4.9	95.1	0	723,932
Elgeyo-Marakwet	10.5	89.5	0	246,373
Nandi	2.5	97.5	0	538,299
Baringo	9.5	90.5	0	339,062
Laikipia	18.2	81.8	0	330,961
Nakuru	13.2	86.8	0	1,281,346
Narok	4.2	95.8	0	581,781
Kajiado	27.0	73.0	0	753,613
Kericho	3.2	96.8	0	528,064
Bomet	5.6	94.4	0	496,555

	Not Comfortable	Comfortable	Not Stated	Total
Kakamega	2.2	97.8	0	1,145,830
Vihiga	1.9	97.7	0.4	350,577
Bungoma	11.7	88.0	0.3	896,366
Busia	2.6	97.4	0	505,047
Siaya	6.3	93.7	0	550,475
Kisumu	12.4	87.4	0.2	672,041
Homabay	2.8	97.2	0	523,438
Migori	18.6	81.4	0	521,546
Kisii	6.8	93.2	0	766,133
Nyamira	12.5	87.5	0	325,375
Nairobi City	31.0	69.0	0	2,956,206

6.2 Neighbourhood Safety

Table 6.2 provides proportions of persons aged 18 years and above who felt secure in their neighbourhood at night. Nationally, 60.5 per cent of respondents aged 18 years and above reported that they felt secure in their

neighbourhoods at night. In rural areas, 64.6 per cent of the adult population and 52.6 per cent of adults in urban areas reported that they felt secure at night.

Table 6.2: Proportion of Persons Aged 18 years and Above who Felt Secure in their Neighbourhood at Night

	No	Yes	Not Stated	Respondent Count
Kenya	28.1	60.5	11.4	28,185,053
Rural	25.3	64.6	10.1	18,531,386
Urban	33.5	52.6	13.9	9,653,667
County				
Mombasa	36.4	40.2	23.4	782,450
Kwale	10.7	76.9	12.4	517,666
Kilifi	7.6	85.8	6.6	858,379
Tana River	22.3	69.8	7.9	158,531
Lamu	19.7	72.2	8.2	103,172
Taita-Taveta	16	82.1	1.9	212,006
Garissa	11.8	82.1	6.1	497,232
Wajir	26.7	64.2	9.0	446,582
Mandera	9.1	76	14.9	360,427
Marsabit	27.3	72.5	0.2	236,235
Isiolo	47.1	52.1	0.8	140,195
Meru	36.9	51.6	11.5	965,240
Tharaka-Nithi	21.4	73.8	4.8	234,659
Embu	21.6	66.7	11.7	423,095
Kitui	27.4	71.4	1.2	675,990
Machakos	28.6	62.3	9.1	906,382
Makueni	17.9	57.5	24.6	651,569
Nyandarua	34.4	60.8	4.8	403,392
Nyeri	13.9	75.8	10.3	529,451
Kirinyaga	22.5	61.4	16.1	418,563
Murang'a	25.1	70.3	4.7	648,880
Kiambu	32.7	48.4	18.9	1,562,302

	No	Yes	Not Stated	Respondent Count
Turkana	28.2	68.1	3.6	393,839
West Pokot	3.3	89.4	7.2	301,155
Samburu	48.4	48.8	2.8	134,807
Trans Nzoia	42.9	41.2	15.9	589,829
Uasin Gishu	21.1	74.9	4.0	723,932
Elgeyo-Marakwet	15.0	84.5	0.5	246,373
Nandi	19.3	71.7	9.0	538,299
Baringo	27.4	65.6	7.0	339,062
Laikipia	25.6	28.2	46.2	330,961
Nakuru	33.0	54.8	12.2	1,281,346
Narok	9.6	89	1.4	581,781
Kajiado	72.4	24	3.7	753,613
Kericho	12.8	75.9	11.3	528,064
Bomet	2.0	93.1	4.9	496,555
Kakamega	42.3	47.7	10.0	1,145,830
Vihiga	56.9	24.6	18.5	350,577
Bungoma	36.3	55.9	7.8	896,366
Busia	18.9	54.0	27.0	505,047
Siaya	31.0	55.5	13.5	550,475
Kisumu	30.1	47.9	22.0	672,041
Homabay	7.4	83.3	9.3	523,438
Migori	39.9	40.3	19.8	521,546
Kisii	33.9	61.3	4.8	766,133
Nyamira	31.1	66.2	2.7	325,375
Nairobi City	32.3	54.3	13.4	2,956,206

6.3 Incidence of Crime

Table 6.3 illustrates the proportion of individuals aged 18 years and above who fell victim to crime within their locality over the 12 months preceding the survey, by residence and county. Nationally, 15.4 per cent of

respondents reported being victims of crime. In urban and rural areas, 17.6 per cent and 14.3 per cent of respondents, respectively, reported that they had been victims of crime.

Table 6.3: Proportion of Persons aged 18 years and Above who have been Victims of Crime within their Locality in the 12 months Preceding the survey.

	No	Yes	Not Stated	Respondent Count
Kenya	84.5	15.4	0.1	28,185,053
Rural	85.7	14.3	0	18,531,386
Urban	82.2	17.6	0.2	9,653,667
County				
Mombasa	85.3	14.7	0	782,450
Kwale	95.3	4.7	0	517,666
Kilifi	87.9	12.1	0	858,379
Tana River	89.9	10.1	0	158,531
Lamu	97.3	2.7	0	103,172
Taita-Taveta	75.5	24.5	0	212,006
Garissa	92.5	7.5	0	497,232
Wajir	88.9	11.1	0	446,582
Mandera	95.8	4.2	0	360,427
Marsabit	96.0	4.0	0	236,235
Isiolo	83.0	17.0	0	140,195
Meru	70.2	29.8	0	965,240
Tharaka-Nithi	80.3	19.7	0	234,659
Embu	85.4	14.6	0	423,095
Kitui	84.3	15.7	0	675,990
Machakos	82.2	17.8	0	906,382
Makueni	97.1	2.9	0	651,569
Nyandarua	86.0	14.0	0	403,392
Nyeri	73.7	26.3	0	529,451
Kirinyaga	75.1	24.9	0	418,563
Murang'a	70.8	29.2	0	648,880
Kiambu	86.4	12.4	1.2	1,562,302

	No	Yes	Not Stated	Respondent Count
Turkana	90.4	9.6	0	393,839
West Pokot	94.5	5.5	0	301,155
Samburu	89.9	10.1	0	134,807
Trans Nzoia	85.4	14.2	0.3	589,829
Uasin Gishu	80.4	19.6	0	723,932
Elgeyo-Marakwet	87.6	12.4	0	246,373
Nandi	83.3	16.7	0	538,299
Baringo	91.9	8.1	0	339,062
Laikipia	69.3	30.7	0	330,961
Nakuru	85.2	14.8	0	1,281,346
Narok	93.9	6.1	0	581,781
Kajiado	88.4	11.6	0	753,613
Kericho	99.2	0.8	0	528,064
Bomet	93.7	6.3	0	496,555
Kakamega	84.6	15.4	0	1,145,830
Vihiga	95.4	4.3	0.4	350,577
Bungoma	90.3	9.4	0.3	896,366
Busia	91.5	8.5	0	505,047
Siaya	73.2	26.8	0	550,475
Kisumu	84.9	14.9	0.2	672,041
Homabay	85.6	14.4	0	523,438
Migori	82.5	17.5	0	521,546
Kisii	79.5	20.5	0	766,133
Nyamira	90.6	9.4	0	325,375
Nairobi City	75.5	24.5	0	2,956,206

6.4 Awareness of Rules and Regulations in the Building Sector

The building and construction sector is governed by rules and regulations found in a variety of publications. These laws govern the payment of fees, obtaining pre-construction approvals, development controls and zoning regulations; and obtaining building permits and certificates of occupation. The key publications include, but are not limited to, the Physical and Land Use Planning Act, 2019, the Building Code, the Planning and Building Regulations, 2009, the National Building Regulations, 2015, and the Environmental Management and Coordination Act, 1999.

Table 6.4 presents the proportion of persons aged 18 years and above who were aware of the rules and

regulations in the building sector. Nationally, 75.9 per cent of the target population were not aware of the rules and regulations in the building sector. In rural and urban areas, 79.5 per cent and 69.1 per cent respectively of respondents were not aware of the rules and regulations in the building sector.



75.9%

Nationally, 75.9 per cent of the target population were not aware of the rules and regulations in the building sector

Table 6.4: Proportion of Persons Aged 18 years and Above who were aware of the Rules and Regulations in the Building Sector

	Not Aware	Aware	Not Stated	Respondent Count
Kenya	75.9	24.0	0.1	28,185,053
Rural	79.5	20.5	0	18,531,386
Urban	69.1	30.7	0.2	9,653,667
County				
Mombasa	74.5	25.5	0	782,450
Kwale	89.7	10.3	0	517,666
Kilifi	83.6	16.4	0	858,379
Tana River	79.2	20.8	0	158,531
Lamu	96.2	3.8	0	103,172
Taita-Taveta	66.1	33.9	0	212,006
Garissa	98.0	2.0	0	497,232
Wajir	97.5	2.5	0	446,582
Mandera	96.7	3.3	0	360,427
Marsabit	88.8	11.2	0	236,235
Isiolo	85.7	14.3	0	140,195
Meru	78.8	21.2	0	965,240
Tharaka-Nithi	83.4	16.6	0	234,659
Embu	79.0	21.0	0	423,095
Kitui	92.2	7.8	0	675,990
Machakos	73.4	26.6	0	906,382
Makueni	52.4	47.6	0	651,569
Nyandarua	71.6	28.4	0	403,392
Nyeri	67.2	32.8	0	529,451
Kirinyaga	63.4	36.6	0	418,563
Murang'a	72.6	27.4	0	648,880
Kiambu	66.9	31.9	1.2	1,562,302

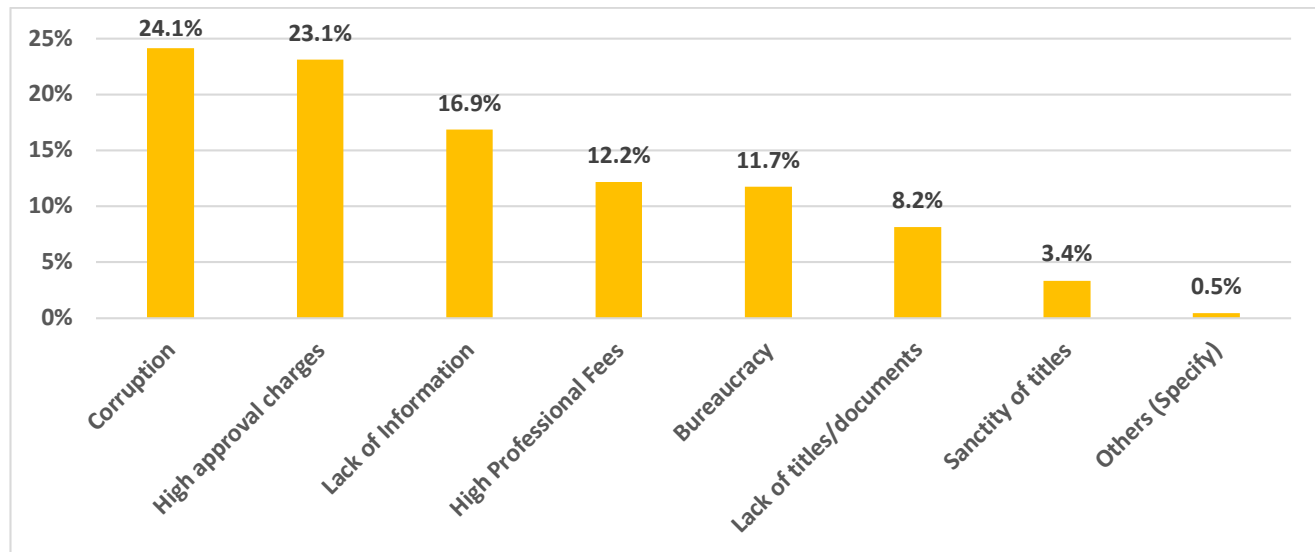
	Not Aware	Aware	Not Stated	Respondent Count
Turkana	73.9	26.1	0	393,839
West Pokot	95.0	5.0	0	301,155
Samburu	76.9	23.1	0	134,807
Trans Nzoia	82.4	17.3	0.3	589,829
Uasin Gishu	77.9	22.1	0	723,932
Elgeyo-Marakwet	79.2	20.8	0	246,373
Nandi	82.5	17.5	0	538,299
Baringo	71.1	28.9	0	339,062
Laikipia	69.7	30.3	0	330,961
Nakuru	48.7	51.3	0	1,281,346
Narok	84.2	15.8	0	581,781
Kajiado	93.0	7.0	0	753,613
Kericho	89.6	10.4	0	528,064
Bomet	75.0	25.0	0	496,555
Kakamega	82.8	17.2	0	1,145,830
Vihiga	94.9	4.7	0.4	350,577
Bungoma	86.5	13.2	0.3	896,366
Busia	82.0	18.0	0	505,047
Siaya	64.7	35.3	0	550,475
Kisumu	74.3	25.6	0.2	672,041
Homabay	85.0	15.0	0	523,438
Migori	37.1	62.9	0	521,546
Kisii	72.4	27.6	0	766,133
Nyamira	73.8	26.2	0	325,375
Nairobi City	69.7	30.3	0	2,956,206

6.5 Challenges Associated with the Implementation of Regulations in the Building Sector

Amongst the respondents who were aware of the rules and regulations in the building sector, 24.1 per cent and 23.1 per cent cited the sanctity of titles and corruption

as the main challenges associated with implementing rules and regulations in the building sector.

Figure 6.1: Challenges associated with the Implementation of Regulations in the Building Sector



6.6 Awareness on the Minimum Housing Requirement

The housing policy sets out the minimum requirements for adequate housing as one with sufficient privacy; space- a minimum floor space of seven square meters per member of the household; accessibility; adequate security; security of tenure; structurally stable; adequate lighting, heating and ventilation; adequate basic infrastructure; cultural adequacy; suitable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities.

Table 6.5 presents the proportion of adult population who were aware of the minimum housing requirement. The survey revealed that nationally, 83.0 per cent of respondents were not aware of the minimum housing requirement. Makueni County had the highest proportion of respondents at 58.9 per cent that were aware of the requirement.



Table 6.5: Proportion of Persons Aged 18 years and Above who are Aware of the Minimum Housing Requirement

	Not Aware	Aware	Not Stated	Respondent Count
Kenya	83.0	16.9	0.1	28,185,053
Rural	83.9	16.1	0	18,531,386
Urban	81.3	18.5	0.2	9,653,667
County				
Mombasa	74.8	25.2	0	782,450
Kwale	95.9	4.1	0	517,666
Kilifi	87.8	12.2	0	858,379
Tana River	81.3	18.7	0	158,531
Lamu	97.8	2.2	0	103,172
Taita-Taveta	77.6	22.4	0	212,006
Garissa	97.5	2.5	0	497,232
Wajir	96.3	3.7	0	446,582
Mandera	97.3	2.7	0	360,427
Marsabit	90.5	9.5	0	236,235
Isiolo	91.0	9.0	0	140,195
Meru	88.2	11.8	0	965,240
Tharaka-Nithi	94.8	5.2	0	234,659
Embu	83.2	16.8	0	423,095
Kitui	65.5	34.5	0	675,990
Machakos	75.5	24.5	0	906,382
Makueni	41.1	58.9	0	651,569
Nyandarua	83.1	16.9	0	403,392
Nyeri	74.7	25.3	0	529,451
Kirinyaga	82.4	17.6	0	418,563
Murang'a	76.5	23.5	0	648,880
Kiambu	88.4	10.4	1.2	1,562,302

	Not Aware	Aware	Not Stated	Respondent Count
Turkana	77.2	22.8	0	393,839
West Pokot	96.8	3.2	0	301,155
Samburu	64.1	35.9	0	134,807
Trans Nzoia	70.2	29.5	0.3	589,829
Uasin Gishu	86.7	13.3	0	723,932
Elgeyo-Marakwet	92.8	7.2	0	246,373
Nandi	88.1	11.9	0	538,299
Baringo	92.9	7.1	0	339,062
Laikipia	72.4	27.6	0	330,961
Nakuru	79.3	20.7	0	1,281,346
Narok	82.4	17.6	0	581,781
Kajiado	94.0	6.0	0	753,613
Kericho	93.9	6.1	0	528,064
Bomet	76.2	23.8	0	496,555
Kakamega	98.7	1.3	0	1,145,830
Vihiga	95.8	3.8	0.4	350,577
Bungoma	97.5	2.2	0.3	896,366
Busia	89.9	10.1	0	505,047
Siaya	62.4	37.6	0	550,475
Kisumu	55.5	44.3	0.2	672,041
Homabay	90.0	10.0	0	523,438
Migori	79.4	20.6	0	521,546
Kisii	80.8	19.2	0	766,133
Nyamira	63.2	36.8	0	325,375
Nairobi City	84.5	15.5	0	2,956,206

Table 6.6 shows the proportion of respondents who were aware of the minimum housing requirements and considered them useful. Nationally, 90.8 per cent of those aware of these housing requirements reported that they considered them useful.



90.8%

The per centage of those aware of these housing requirements who considered them useful.

Table 6.6: Proportion of Persons Aged 18 years and Above who Consider the Minimum Housing Requirement Useful

Residence/County	Not Aware	Aware	Respondent Count
Kenya	9.2	90.8	4,770,545
Rural	9.0	91.0	2,985,581
Urban	9.4	90.6	1,784,963
County			
Mombasa	6.8	93.2	197,156
Kwale	37.1	62.9	21,170
Kilifi	4.1	95.9	104,402
Tana River	29.3	70.7	29,649
Lamu	8.6	91.4	2,225
Taita-Taveta	3.1	96.9	47,393
Garissa	4.9	95.1	12,379
Wajir	13.1	86.9	16,569
Mandera	2.1	97.9	9,688
Marsabit	15.0	85.0	22,528
Isiolo	18.8	81.2	12,617
Meru	10.5	89.5	113,632
Tharaka-Nithi	5.6	94.4	12,285
Embu	21.0	79.0	70,990
Kitui	21.9	78.1	233,318
Machakos	4.5	95.5	222,290
Makueni	2.8	97.2	383,958
Nyandarua	15.6	84.4	68,101
Nyeri	6.6	93.4	133,818
Kirinyaga	12.6	87.4	73,871
Murang'a	3.8	96.2	152,605

Residence/County	Not Aware	Aware	Respondent Count
Kiambu	16.0	84.0	163,168
Turkana	21.9	78.1	89,663
West Pokot	55.1	44.9	9,626
Samburu	4.4	95.6	48,448
Trans Nzoia	5.3	94.7	173,981
Uasin Gishu	6.4	93.6	96,159
Elgeyo-Marakwet	20.4	79.6	17,782
Nandi	11.3	88.7	63,891
Baringo	19.8	80.2	24,243
Laikipia	6.2	93.8	91,251
Nakuru	10.1	89.9	265,230
Narok	7.5	92.5	102,139
Kajiado	24.8	75.2	45,228
Kericho	6.2	93.8	32,456
Bomet	2.8	97.2	118,411
Kakamega	11.2	88.8	14,339
Vihiga	10.1	89.9	13,219
Bungoma	5.5	94.5	20,128
Busia	39.4	60.6	51,255
Siaya	2.2	97.8	206,918
Kisumu	4.4	95.6	297,612
Homabay	4.8	95.2	52,364
Migori	23.4	76.6	107,321
Kisii	9.1	90.9	146,898
Nyamira	2.5	97.5	119,781
Nairobi City	7.2	92.8	458,394



6.7 Rent Regulation

Rent control programs aim to limit how much landlords can charge for leasing or renewing a lease to keep housing affordable for lower-income residents. Proponents argue that rent control helps people with moderate incomes and elderly residents on fixed incomes stay in their homes, especially as rising prices from gentrification threaten their ability to afford housing. They also believe that rent control is necessary because rental prices are often increasing faster than wages, and controlling rent can prevent sudden, unaffordable hikes, allowing families to live without fear of displacement. Additionally, they claim that communities become safer and more stable with a core group of long-term residents.

In contrast, opponents argue that rent control reduces the availability of quality housing, as landlords may convert properties to other uses to avoid profit-limiting

regulations. They claim that rent control discourages investment in new rental properties and leads to poor maintenance of existing buildings due to limited financial returns for landlords.

Table 6.7 presents the proportion of respondents who reported that the government / agencies should regulate rent. Nationally, 37.6 per cent of the respondents reported that government/public agencies should regulate house rent.

Table 6.8 presents the distribution of respondents on the opinion that government/public agencies should regulate interest rates on housing loans and mortgages. Nationally, 45.2 per cent of the respondents were of the opinion that government/ public agencies should regulate interest rates on housing loans and mortgages.



Table 6.7 Proportion of Adult Population who think that Government/Public Agencies Should Regulate Rent

	No	Yes	Respondent Count
Kenya	62.4	37.6	28,185,053
Rural	64.2	35.8	18,531,386
Urban	59.0	41.0	9,653,667
County			
Mombasa	71.8	28.2	782,450
Kwale	84.0	16.0	517,666
Kilifi	56.3	43.7	858,379
Tana River	63.7	36.3	158,531
Lamu	46.8	53.2	103,172
Taita-Taveta	74.7	25.3	212,006
Garissa	90.3	9.7	497,232
Wajir	91.9	8.1	446,582
Mandera	17.7	82.3	360,427
Marsabit	87.8	12.2	236,235
Isiolo	96.4	3.6	140,195
Meru	68.9	31.1	965,240
Tharaka-Nithi	52.2	47.8	234,659
Embu	70.1	29.9	423,095
Kitui	67.2	32.8	675,990
Machakos	32.3	67.7	906,382
Makueni	22.6	77.4	651,569
Nyandarua	46.2	53.8	403,392
Nyeri	65.3	34.7	529,451
Kirinyaga	44.9	55.1	418,563
Murang'a	64.0	36.0	648,880
Kiambu	71.7	28.3	1,562,302

	No	Yes	Respondent Count
Turkana	88.5	11.5	393,839
West Pokot	72.8	27.2	301,155
Samburu	54.8	45.2	134,807
Trans Nzoia	34.5	65.5	589,829
Uasin Gishu	62.4	37.6	723,932
Elgeyo-Marakwet	57.3	42.7	246,373
Nandi	41.7	58.3	538,299
Baringo	63.9	36.1	339,062
Laikipia	30.3	69.7	330,961
Nakuru	60.3	39.7	1,281,346
Narok	67.1	32.9	581,781
Kajiado	82.1	17.9	753,613
Kericho	61.8	38.2	528,064
Bomet	58.4	41.6	496,555
Kakamega	87.8	12.2	1,145,830
Vihiga	78.7	21.3	350,577
Bungoma	70.7	29.3	896,366
Busia	91.4	8.6	505,047
Siaya	78.2	21.8	550,475
Kisumu	62.5	37.5	672,041
Homabay	69.1	30.9	523,438
Migori	32.3	67.7	521,546
Kisii	54.5	45.5	766,133
Nyamira	52.3	47.7	325,375
Nairobi City	53.8	46.2	2,956,206



Table 6.8: Percentage Distribution on the Opinion that Government/Public Agencies should Regulate Interest Rates on Housing Loans and Mortgages

	No	Yes	Not Stated	Respondent Count
Kenya	54.6	45.2	0.1	28,185,053
Rural	56.6	43.4	0.1	18,531,386
Urban	50.9	48.9	0.2	9,653,667
County				
Mombasa	71.1	28.9	0	782,450
Kwale	66.9	33.1	0	517,666
Kilifi	51.1	48.9	0	858,379
Tana River	72.0	28.0	0	158,531
Lamu	47.0	53.0	0	103,172
Taita-Taveta	60.5	39.5	0	212,006
Garissa	81.6	18.4	0	497,232
Wajir	92.0	8.0	0	446,582
Mandera	36.0	64.0	0	360,427
Marsabit	88.5	11.5	0	236,235
Isiolo	95.0	5.0	0	140,195
Meru	39.3	60.7	0	965,240
Tharaka-Nithi	44.0	56.0	0	234,659
Embu	72.2	27.8	0	423,095
Kitui	65.0	35.0	0	675,990
Machakos	27.9	72.1	0	906,382
Makueni	26.6	73.4	0	651,569
Nyandarua	39.8	60.2	0	403,392
Nyeri	53.7	46.3	0	529,451
Kirinyaga	38.0	62.0	0	418,563
Murang'a	29.1	70.9	0	648,880
Kiambu	54.4	44.5	1.2	1,562,302
Turkana	61.0	39.0	0	393,839
West Pokot	65.8	34.2	0	301,155
Samburu	38.0	62.0	0	134,807
Trans Nzoia	30.7	68.9	0.3	589,829
Uasin Gishu	59.0	41.0	0	723,932
Elgeyo-Marakwet	53.6	46.4	0	246,373
Nandi	38.5	61.5	0	538,299
Baringo	49.1	50.9	0	339,062
Laikipia	26.3	73.7	0	330,961
Nakuru	47.1	52.9	0	1,281,346
Narok	64.7	35.3	0	581,781
Kajiado	83.4	16.6	0	753,613
Kericho	57.1	42.9	0	528,064
Bomet	55.1	44.9	0	496,555
Kakamega	93.6	6.4	0	1,145,830
Vihiga	44.1	55.5	0.4	350,577
Bungoma	50.4	49.3	0.3	896,366
Busia	83.1	16.9	0	505,047
Siaya	78.7	21.3	0	550,475
Kisumu	54.9	44	1.1	672,041
Homabay	63.3	36.7	0	523,438
Migori	29.0	71.0	0	521,546
Kisii	44.3	55.7	0	766,133
Nyamira	54.3	45.7	0	325,375
Nairobi City	47.6	52.4	0	2,956,206

6.8: Affordable Housing Program

Kenya is required to uphold economic and social rights, such as the right to sufficient housing, as a party to the International Covenant on Economic, Social, and Cultural Rights (ICESCR). Economic and social rights are expressly provided for in Kenya's Constitution, Article 43. Sub-article (1)(b) explicitly states that every person has the right to accessible and adequate housing and (to) reasonable standards of sanitation. To ensure that low- and middle-income households have access to adequate and affordable housing, the government launched the Affordable Housing Program (AHP), an ambitious initiative that aims to enable the building of 200,000 affordable housing units annually.

Table 6.9 presents the proportion of respondents who were aware of the affordable housing scheme/program. Nationally, 53.5 per cent of the respondents indicated that they were aware of the affordable housing program. Under the AHP, the government has provided incentives to encourage and eventually increase homeownership for Kenyans. These include: -

- 01. Stamp duty exemption for first-time homebuyers:** Stamp duty is charged on the market value of the property at the rate of four per cent in towns and two per cent in rural areas. Currently, the exemption from stamp duty applies to first-time homebuyers of approved affordable housing units. This strategy is aimed at reducing the cost of home ownership.
- 02. Affordable Housing relief at 15% of employee contributions:** "The amount of affordable housing relief is 15% of gross contributions to an Affordable Housing Scheme up to a maximum of KSh 9,000 per month and not exceeding Sh108,000 per annum,".
- 03. Tax deductibility of interest paid on Housing Loans:** Effective 1 January 2017, interest payments on loans borrowed for the purposes of improvement or construction of residential premises are deductible, subject to a limit of KES 300,000 per annum (or KES 25,000 per month).

Table 6.9: Per centage of Respondents Aware of Affordable Housing Program

	Not Aware	Aware	Not Stated	Respondent Count
Kenya	46.4	53.5	0.1	28,185,053
Rural	49.7	50.3	0	18,531,386
Urban	40.1	59.7	0.2	9,653,667
County				
Mombasa	39.4	60.6	0	782,450
Kwale	73.1	26.9	0	517,666
Kilifi	43.3	56.7	0	858,379
Tana River	54.5	45.5	0	158,531
Lamu	93.5	6.5	0	103,172
Taita-Taveta	43.7	56.3	0	212,006
Garissa	89.3	10.7	0	497,232
Wajir	95.2	4.8	0	446,582
Mandera	90.1	9.9	0	360,427
Marsabit	73.4	26.6	0	236,235
Isiolo	92.8	7.2	0	140,195
Meru	44.0	56.0	0	965,240
Tharaka-Nithi	69.6	30.4	0	234,659
Embu	35.3	64.7	0	423,095
Kitui	61.5	38.5	0	675,990
Machakos	50.3	49.7	0	906,382
Makueni	24.0	76.0	0	651,569
Nyandarua	53.9	46.1	0	403,392
Nyeri	36.3	63.7	0	529,451
Kirinyaga	50.9	49.1	0	418,563
Murang'a	29.3	70.7	0	648,880
Kiambu	46.8	52.1	1.2	1,562,302

	Not Aware	Aware	Not Stated	Respondent Count
Turkana	75.2	24.8	0	393,839
West Pokot	75.5	24.5	0	301,155
Samburu	67.1	32.9	0	134,807
Trans Nzoia	20.7	79.0	0.3	589,829
Uasin Gishu	48.8	51.2	0	723,932
Elgeyo-Marakwet	64.5	35.5	0	246,373
Nandi	31.6	68.4	0	538,299
Baringo	31.1	68.9	0	339,062
Laikipia	18.6	81.4	0	330,961
Nakuru	21.1	78.9	0	1,281,346
Narok	66.3	33.7	0	581,781
Kajiado	79.7	20.3	0	753,613
Kericho	41.9	58.1	0	528,064
Bomet	66.2	33.8	0	496,555
Kakamega	21.3	78.7	0	1,145,830
Vihiga	34.4	65.2	0.4	350,577
Bungoma	35.9	63.8	0.3	896,366
Busia	17.8	82.2	0	505,047
Siaya	40.9	59.1	0	550,475
Kisumu	39.9	59.9	0.2	672,041
Homabay	65.3	34.7	0	523,438
Migori	23.0	77.0	0	521,546
Kisii	59.1	40.9	0	766,133
Nyamira	66.8	33.2	0	325,375
Nairobi City	38.4	61.6	0	2,956,206

6.8.1 Stamp Duty Exemption for First-Time Homebuyers

Table 6.10 presents the proportion of respondents who were aware of stamp duty exemption for first time buyers for approved affordable housing. Nationally, 7.7 per cent of respondents reported that they were aware

of the stamp duty exemption for first time homebuyers.

In Table 6.11, 11.9 per cent of the respondents who were aware of the stamp duty exemption benefited from the same.

Table 6.10: Percentage of Respondents Aware of Stamp Duty Exemption

Residence/County	Not Aware	Aware	Respondent Count
Kenya	92.3	7.7	15,089,434
Rural	93.2	6.8	9,324,213
Urban	90.8	9.2	5,765,221
County			
Mombasa	96.4	3.6	474,336
Kwale	95.9	4.1	139,028
Kilifi	96.4	3.6	487,050
Tana River	88.1	11.9	72,067
Lamu	60.4	39.6	6,713
Taita-Taveta	93.0	7.0	119,358
Garissa	96.9	3.1	53,233
Wajir	90.8	9.2	21,644
Mandera	88.7	11.3	35,513
Marsabit	76.1	23.9	62,937
Isiolo	78.5	21.5	10,064
Meru	96.6	3.4	540,121
Tharaka-Nithi	95.4	4.6	71,236
Embu	83.2	16.8	273,715
Kitui	98.2	1.8	259,975
Machakos	97.3	2.7	450,376
Makueni	96.4	3.6	495,460
Nyandarua	91.3	8.7	186,155
Nyeri	94.1	5.9	337,231
Kirinyaga	88.5	11.5	205,572
Murang'a	88.9	11.1	458,816
Kiambu	85.6	14.4	813,714
Turkana	86.0	14.0	97,607
West Pokot	97.3	2.7	73,787
Samburu	88.8	11.2	44,316
Trans Nzoia	95.3	4.7	465,777
Uasin Gishu	92.6	7.4	370,308
Elgeyo-Marakwet	84.5	15.5	87,408
Nandi	89.9	10.1	368,373
Baringo	94.2	5.8	233,595
Laikipia	91.4	8.6	269,496
Nakuru	95.8	4.2	1,010,856
Narok	91.8	8.2	196,209
Kajiado	89.9	10.1	153,171
Kericho	91.8	8.2	306,891
Bomet	61.1	38.9	167,639
Kakamega	99.2	0.8	901,815
Vihiga	98.6	1.4	228,523
Bungoma	96.9	3.1	572,017
Busia	98.6	1.4	415,128
Siaya	96.9	3.1	325,458
Kisumu	80.7	19.3	402,622
Homabay	78.8	21.2	181,738
Migori	83.6	16.4	401,334
Kisii	91.0	9.0	313,318
Nyamira	85.8	14.2	108,031
Nairobi City	91.3	8.7	1,819,702



Nationally, 7.7 per cent of respondents reported that they were aware of the stamp duty exemption for first time homebuyers.

Table 6.11: Proportion of Respondents who Benefitted from Stamp Duty Exemption

Residence/County	Did not Benefit	Benefitted	Respondent Count	Residence/County	Did not Benefit	Benefitted	Respondent Count
Kenya	88.1	11.9	1,162,881	Turkana	97.7	2.3	13,675
Rural	86.1	13.9	630,378	West Pokot	94.5	5.5	1,995
Urban	90.6	9.4	532,504	Samburu	100.0	-	4,979
County				Trans Nzoia	88.3	11.7	21,900
Mombasa	83.3	16.7	16,945	Uasin Gishu	89.4	10.6	27,344
Kwale	44.0	56.0	5,635	Elgeyo-Marakwet	95.7	4.3	13,511
Kilifi	100.0	-	17,717	Nandi	86.6	13.4	37,193
Tana River	64.2	35.8	8,606	Baringo	100.0	-	13,588
Lamu	85.7	14.3	2,661	Laikipia	95.1	4.9	23,298
Taita-Taveta	86.7	13.3	8,355	Nakuru	100.0	-	42,627
Garissa	100.0	-	1,643	Narok	67.5	32.5	16,059
Wajir	5.0	95.0	1,980	Kajiado	65.9	34.1	15,438
Mandera	92.3	7.7	4,022	Kericho	97.8	2.2	25,108
Marsabit	13.8	86.2	15,045	Bomet	84.5	15.5	65,201
Isiolo	93.4	6.6	2,166	Kakamega	100.0	-	7,088
Meru	100.0	-	18,159	Vihiga	82.0	18.0	3,280
Tharaka-Nithi	97.3	2.7	3,299	Bungoma	60.7	39.3	17,809
Embu	91.8	8.2	45,881	Busia	95.4	4.6	5,655
Kitui	100.0	-	4,733	Siaya	64.7	35.3	9,995
Machakos	79.6	20.4	11,998	Kisumu	83.6	16.4	77,565
Makueni	88.7	11.3	17,766	Homabay	82.6	17.4	38,486
Nyandarua	100.0	-	16,151	Migori	97.3	2.7	66,002
Nyeri	85.5	14.5	19,785	Kisii	95.9	4.1	28,204
Kirinyaga	80.8	19.2	23,590	Nyamira	61.4	38.6	15,359
Murang'a	91.3	8.7	50,767	Nairobi City	96.1	3.9	157,620
Kiambu	89.3	10.7	116,998				

6.8.2 Affordable Housing relief

Table 6.12 presents the proportion of respondents who were aware of the affordable housing relief. Nationally, 11.3 per cent of the respondents were aware of the affordable housing relief.

Table 6.12: Percentage of Respondents Population Aware of Affordable Housing Relief

Residence/County	Not Aware	Aware	Respondent Count
Kenya	88.7	11.3	15,089,434
Rural	90.1	9.9	9,324,213
Urban	86.5	13.5	5,765,221
County			
Mombasa	96.4	3.6	474,336
Kwale	82.4	17.6	139,028
Kilifi	95.8	4.2	487,050
Tana River	83.2	16.8	72,067
Lamu	53.2	46.8	6,713
Taita-Taveta	94.4	5.6	119,358
Garissa	90.2	9.8	53,233
Wajir	71.7	28.3	21,644
Mandera	84.2	15.8	35,513
Marsabit	76.5	23.5	62,937
Isiolo	61.6	38.4	10,064
Meru	97.3	2.7	540,121
Tharaka-Nithi	94.3	5.7	71,236
Embu	67.6	32.4	273,715
Kitui	97.5	2.5	259,975
Machakos	96.9	3.1	450,376
Makueni	97.8	2.2	495,460
Nyandarua	87.6	12.4	186,155
Nyeri	92.0	8.0	337,231
Kirinyaga	76.3	23.7	205,572
Murang'a	92.4	7.6	458,816
Kiambu	68.1	31.9	813,714

Residence/County	Not Aware	Aware	Respondent Count
Turkana	80.0	20.0	97,607
West Pokot	98.0	2.0	73,787
Samburu	90.1	9.9	44,316
Trans Nzoia	81.4	18.6	465,777
Uasin Gishu	91.5	8.5	370,308
Elgeyo-Marakwet	83.0	17.0	87,408
Nandi	78.8	21.2	368,373
Baringo	84.5	15.5	233,595
Laikipia	91.2	8.8	269,496
Nakuru	95.0	5.0	1,010,856
Narok	70.0	30.0	196,209
Kajiado	86.5	13.5	153,171
Kericho	81.1	18.9	306,891
Bomet	57.7	42.3	167,639
Kakamega	99.2	0.8	901,815
Vihiga	99.3	0.7	228,523
Bungoma	91.2	8.8	572,017
Busia	99.9	0.1	415,128
Siaya	98.2	1.8	325,458
Kisumu	83.7	16.3	402,622
Homabay	85.2	14.8	181,738
Migori	88.4	11.6	401,334
Kisii	84.8	15.2	313,318
Nyamira	79.2	20.8	108,031
Nairobi City	87.9	12.1	1,819,702

6.8.3 Tax Deductibility of Interest Paid on Housing Loans

Table 6.13 presents the percentage of respondents who are aware of tax deductibility from housing loans. Nationally, 4.5 per cent of the respondents were aware of the tax deductibility of interest paid on housing loans.

Table 6.13: Percentage of Respondents Aware of Tax Deductibility paid on Housing Loans

	Not Aware	Aware	Respondent Count
Kenya	95.5	4.5	15,089,434
Rural	95.6	4.4	9,324,213
Urban	95.5	4.5	5,765,221
County			
Mombasa	98.7	1.3	474,336
Kwale	95.5	4.5	139,028
Kilifi	98.3	1.7	487,050
Tana River	92.4	7.6	72,067
Lamu	99.1	0.9	6,713
Taita-Taveta	96.4	3.6	119,358
Garissa	93.9	6.1	53,233
Wajir	77.4	22.6	21,644
Mandera	98.8	1.2	35,513
Marsabit	79.5	20.5	62,937
Isiolo	94.8	5.2	10,064
Meru	99.0	1.0	540,121
Tharaka-Nithi	97.4	2.6	71,236
Embu	96.4	3.6	273,715
Kitui	99.4	0.6	259,975
Machakos	98.8	1.2	450,376
Makueni	99.5	0.5	495,460
Nyandarua	93.0	7.0	186,155
Nyeri	95.1	4.9	337,231
Kirinyaga	83.6	16.4	205,572
Murang'a	97.7	2.3	458,816
Kiambu	98.2	1.8	813,714

	Not Aware	Aware	Respondent Count
Turkana	94.7	5.3	97,607
West Pokot	99.0	1.0	73,787
Samburu	94.5	5.5	44,316
Trans Nzoia	87.6	12.4	465,777
Uasin Gishu	94.0	6.0	370,308
Elgeyo-Marakwet	89.1	10.9	87,408
Nandi	90.9	9.1	368,373
Baringo	98.8	1.2	233,595
Laikipia	92.4	7.6	269,496
Nakuru	97.9	2.1	1,010,856
Narok	90.7	9.3	196,209
Kajiado	91.5	8.5	153,171
Kericho	93.1	6.9	306,891
Bomet	58.7	41.3	167,639
Kakamega	99.9	0.1	901,815
Vihiga	99.5	0.5	228,523
Bungoma	96.4	3.6	572,017
Busia	99.9	0.1	415,128
Siaya	99.7	0.3	325,458
Kisumu	92.0	8.0	402,622
Homabay	88.8	11.2	181,738
Migori	95.2	4.8	401,334
Kisii	97.6	2.4	313,318
Nyamira	90.2	9.8	108,031
Nairobi City	94.8	5.2	1,819,702





CHAPTER 07



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Housing Finance

7.1 Introduction

Access to finance is a major limiting factor in housing development. The sources of funds for shelter are few and the lending institutions may not have realized their full capacity in providing finances to support housing development. Qualifying terms for mortgages are still too stringent even though housing is still in short supply. Inability to finance house loans, low affordability due to poverty, high perceived interest rates on mortgages, absence of graduated payments of mortgages and lack of access to the large deposits of retirement benefit funds are some of the factors that hinder housing development in Kenya.

On the demand side, the barriers to housing finance include high interest rates, fluctuating interest rates, formal documentation needs, informality as well as informal income sources and inadequate collateral especially for the low-income earners which makes them less appealing to financial institutions thus limiting access to finances. This notwithstanding, Kenya's financial sector plays a pivotal role in housing development through provision of finances through credit and saving platforms geared specifically for housing. The 2023/24 KHS sought to collect information on housing development financing with focus on respondents within the housing development sector. These include commercial banks, microfinance banks, SACCOS and other institutions that provide finance for housing development.

This chapter explores the contribution of the targeted financial institutions to housing development, focusing on savings products tailored for housing, loan offerings, interest rates, specialized mortgage products, loan portfolios, non-performing loans, recovery processes, barriers to lending, financial incentives and challenges in loan recovery. A total of 341 against 413 targeted financial institutions responded to the survey. A total of 92.8 per cent of MFBs, 81.7 per cent of SACCOS and 86.8 per cent of Commercial Banks responded to the survey.



Key findings

- ✓ Approximately **33.4** per cent of financiers have savings products aimed at land purchase, while **20.9** per cent focus on savings for incremental building. Only **10.0** per cent of surveyed financiers have a savings product for mortgage.
- ✓ Among commercial banks **38.9** per cent reported having savings products specifically designed for mortgages while 34.2 per cent of SACCOS have saving products designed for land purchase.
- ✓ The primary housing finance products for commercial banks is mortgage finance at **86.1** per cent, for MFBs construction finance for rental units is the primary product at **53.8** per cent while for the SACCOS it is land acquisition at **60.8** per cent.
- ✓ As at December 2023, the proportion of housing Non-Performing Loans (NPLs) to total housing loans was **12.7** per cent. Micro-Finance Banks (MFBs) reported a proportion of **24.0** per cent, commercial banks **15.3** per cent and SACCOS **3.9** per cent of housing NPLs.
- ✓ The average interest rate for mortgage loans in 2023 was **13.0** per cent, commercial banks reported an average interest rate of **14.0** per cent, while SACCOS reported a slightly lower rate of **12.0** per cent.
- ✓ The lack of long-term capital is the main barrier to lending by financiers suggesting that financiers may lack adequate long-term capital to expand their lending activities.

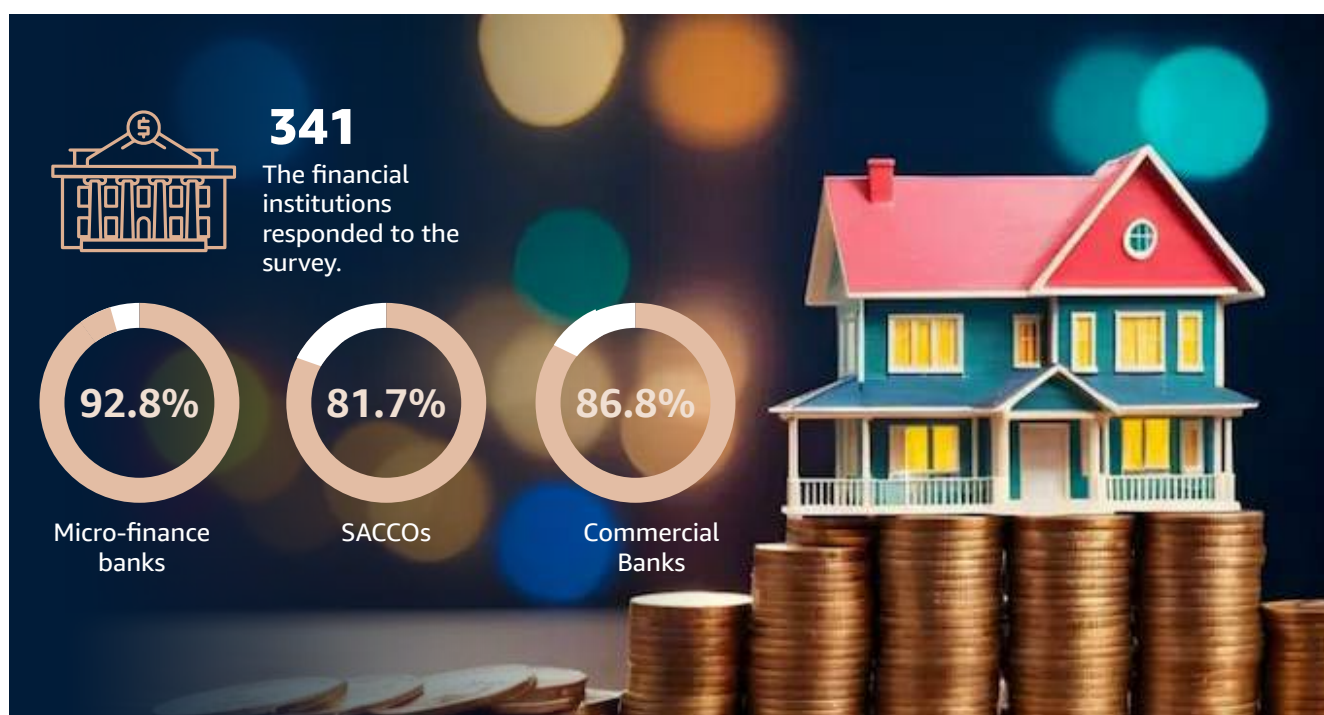
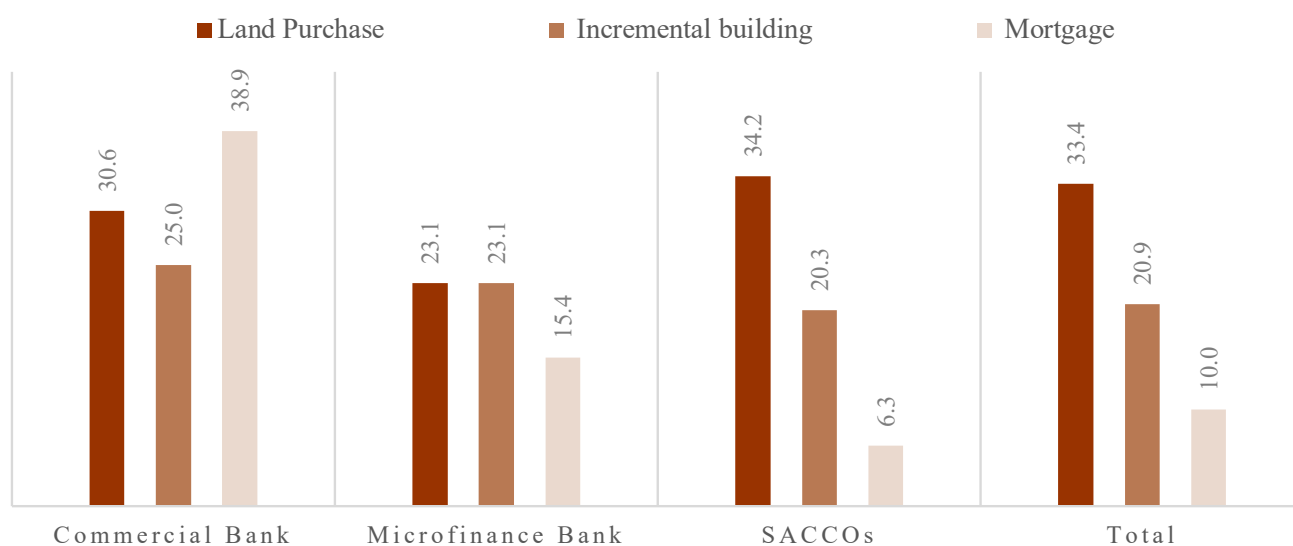
7.2 Saving Products for Housing

Financial institutions offer different savings products to customers. These savings products are defined by their purpose, mode of access and utilization. The survey sought to establish whether financial institutions offer housing financing saving products specifically geared towards land purchase, incremental building and mortgages. The survey findings indicate that a majority of surveyed financiers offer savings products tailored for specific housing needs. Specifically, 33.4 per cent of

financiers have savings products for land purchase, while 20.9 per cent have a saving product for incremental building. Only 10.0 per cent of surveyed financiers had a savings product for mortgage.

The survey findings also indicate that 38.9 per cent of commercial banks and 34.2 per cent of SACCOs have saving products specifically designed for mortgages and land purchase, respectively, as shown in Figure 7.1.

Figure 7.1: Proportion of financial institutions with saving products for housing



7.3 Loan Products for Housing

The survey categorized loan products for housing development into several types: purchase of rental properties, graduated loans, mortgages, construction, and land acquisitions. Financial institutions were asked whether they provide loans for various housing products. Among these products, land acquisition was the most commonly provided, with 61.1 per cent of financiers

offering such loans as shown in Figure 7.2a. Only 3.7 per cent of financiers provided graduated loans.

The primary housing products for commercial banks, MFB's and SACCOs, is mortgage finance, construction finance for rental units and land acquisition at 86.1, 53.8, and 60.8 per cent, respectively.

Figure 7.2 (a): Provision of loan products

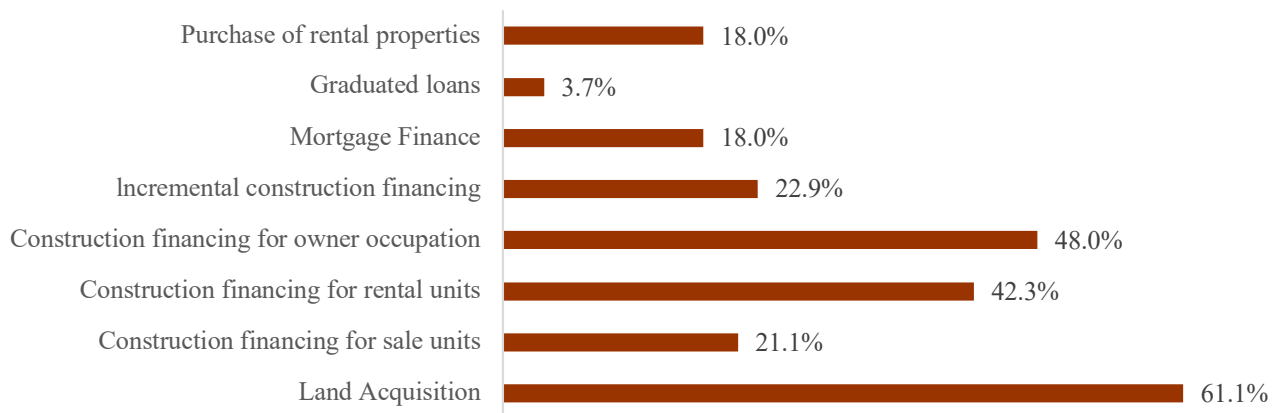
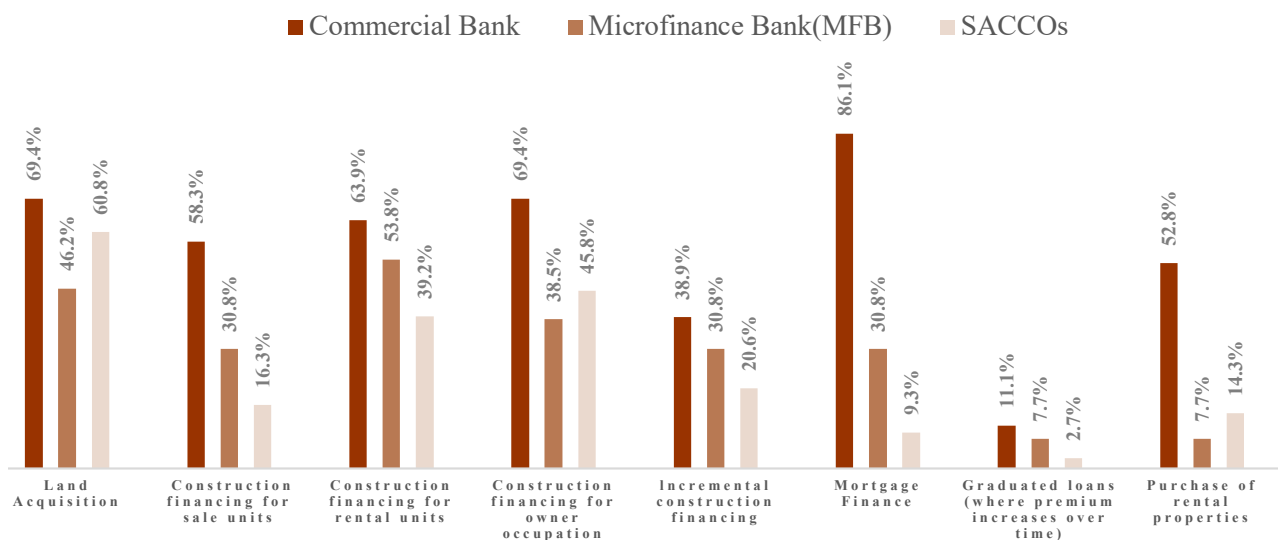


Figure 7.2 (b) Provision of loan products for construction/housing among financiers

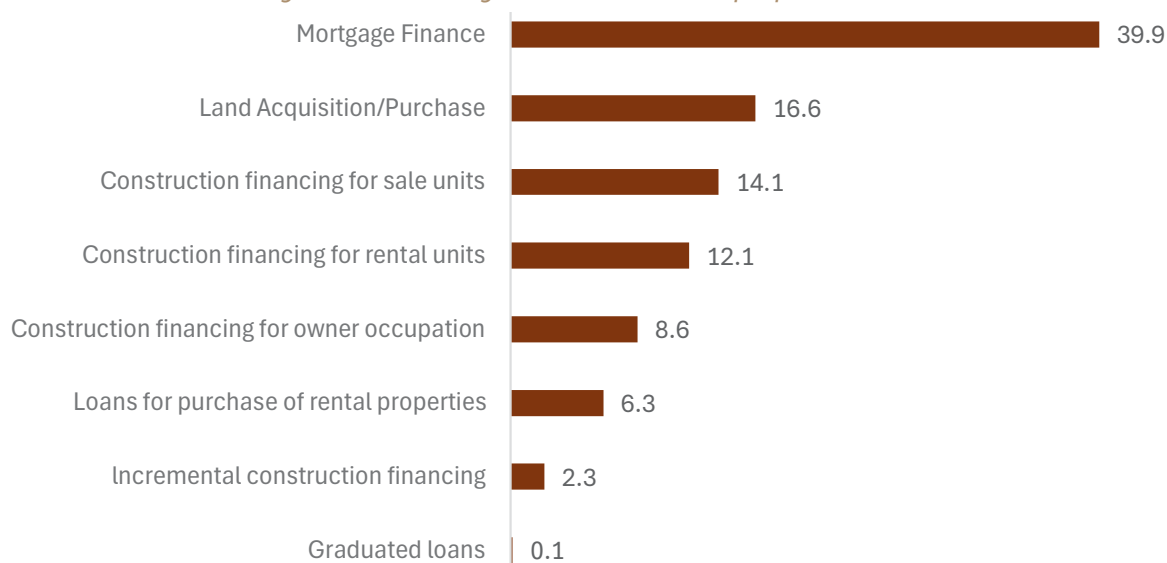


7.4 Housing Loans Issued in 2023

Financial institutions offer housing development financing with various terms for different specific housing categories and housing delivery modes. The 2023/24 Housing Survey collected information on different types and structure of loan financing towards housing, including purpose and mode of financing. The survey findings indicate that mortgages offered by financiers

provide a significant share of credit advanced for the purposes of housing development at 39.9 per cent with different financial institutions offering different terms on this type of credit facility. Housing loans offered for the purposes of land acquisition accounted for 16.6 per cent of value of loans on housing while loans advanced for construction of sale units was at 14.1 per cent.

Figure 7.3 Per centage of the value of loan per products

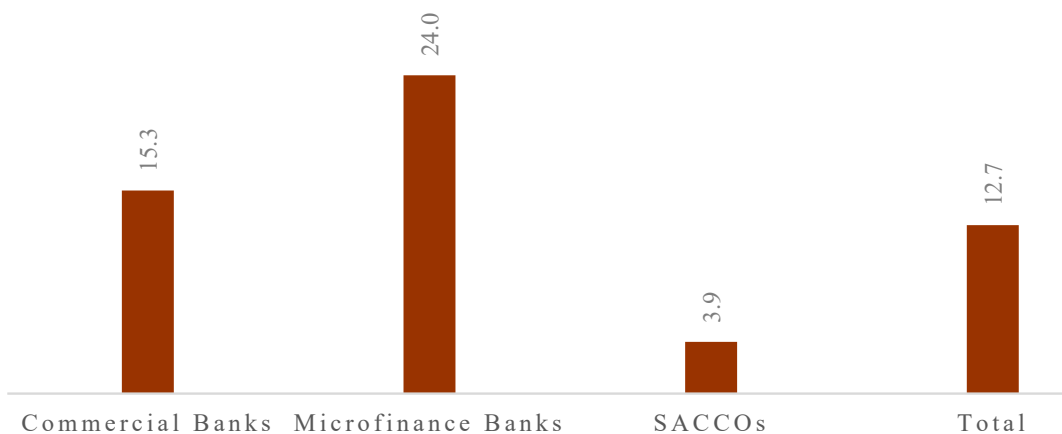


7.5 Non-Performing Loans

Non-performing loans (NPLs) pose a threat to financial institutions through reduction in interest income, operating profits and capitalization levels. NPLs also reduce the financial institution's loanable funds, leaving potential borrowers with limited options to get loans from and expose borrowers to vulnerabilities occasioned by stringent measures put in place by financial institutions to recover loans. On this veil, the survey

collected information to establish the proportion of housing loans that were non-performing as at December 2023. As at December 2023, financiers reported that the proportion of housing NPLs to total housing loans was 12.7 per cent. MFBs reported a proportion of 24.0 per cent, Commercial banks 15.3 per cent and SACCOs 3.9 per cent of housing NPLs as shown in Figure 7.4.

Figure 7.4: Proportion of housing NPLs to total housing loans



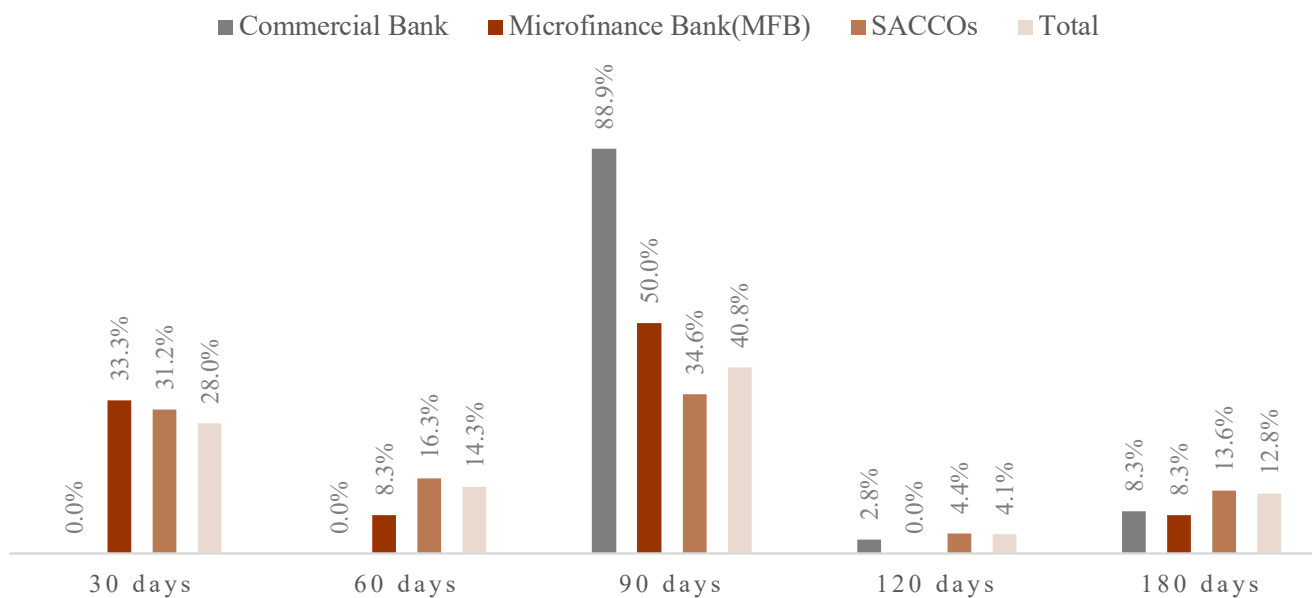
7.6 Categorization of a loan as Non – Performing

Different financiers define a loan as non-performing after a specified number of days past its due date. However, this is not uniform across the different financiers. The survey sought to find out the number of days after the due date a loan is considered non-performing. This was done to gauge the risk of default.

The survey findings indicate that 40.8 per cent of financiers consider a loan non-performing when it is ninety days past due date as shown in Figure 7.5. However, there is a variation in the number of days a loan is considered non-performing across financial institutions. Specifically, 88.9 per cent of commercial banks, 50.0 per cent of MFBs and 34.6 per cent of SACCOs consider a loan non-performing when it is ninety days past the due date.



Figure 7.5: Number of days after due date a loan is declared Non-Performing

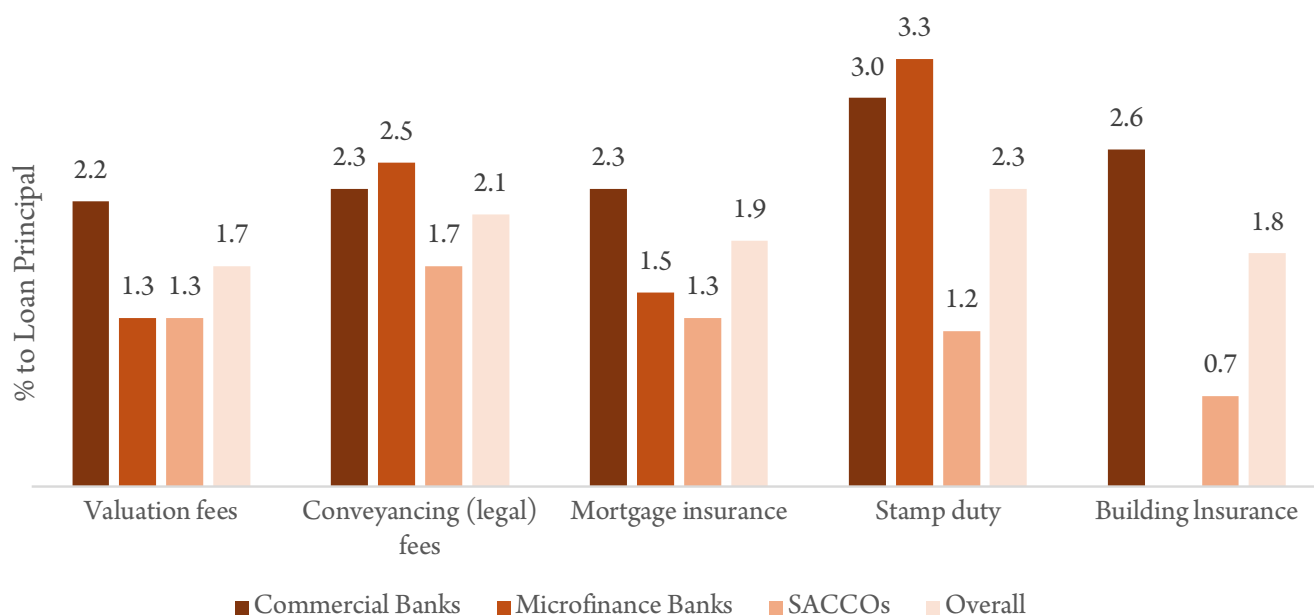


7.7 Average Rates of fees charged on Mortgage

The survey sought to establish the per centage charged on the loan principal when providing financing to mortgage borrowers. Among all types of financiers, stamp duty fee charged on mortgage loan attracts the highest per centage to the loan principal at 2.3 per cent,

with average rate charged by commercial banks being the highest at 3.3 per cent. Conveyance/legal fees charged by microfinance banks on mortgage borrowers attracts a rate of 2.5 per cent while that charged by SACCOs attracts a rate of 1.7 per cent.

Figure 7.6: Average Rate of fees charged on Mortgage

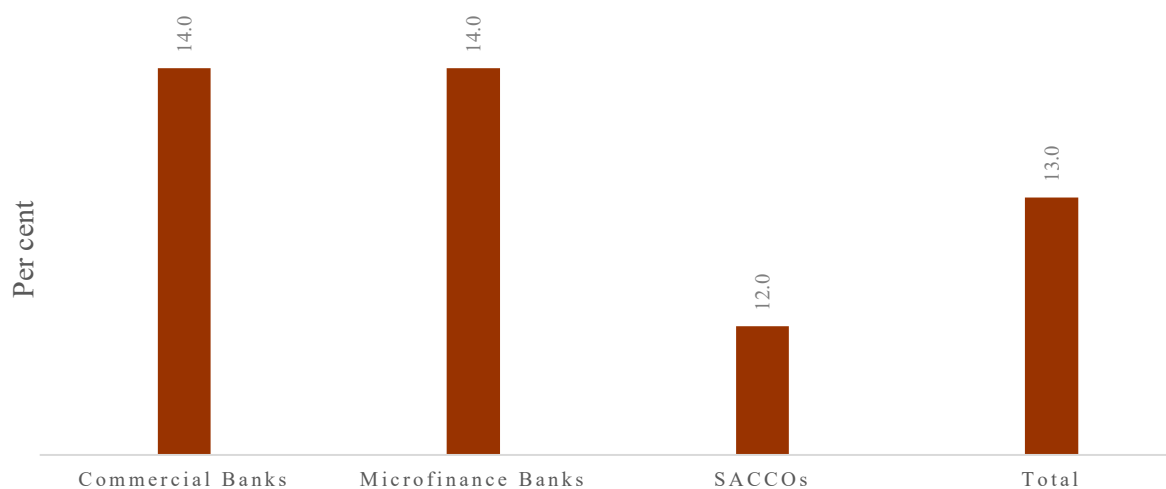


7.8 Interest Rates

To determine the affordability of mortgage loans and potential barriers to their uptake, the survey collected information on the average cost of mortgage loans. The average interest rate for mortgage loans, was 13.0 per

cent as indicated in Figure 7.7. Commercial banks and Microfinance Banks reported an average interest rate of 14.0 per cent, while SACCOs reported a slightly lower rate of 12.0 per cent.

Figure 7.7: Average Interest Rate for Mortgage



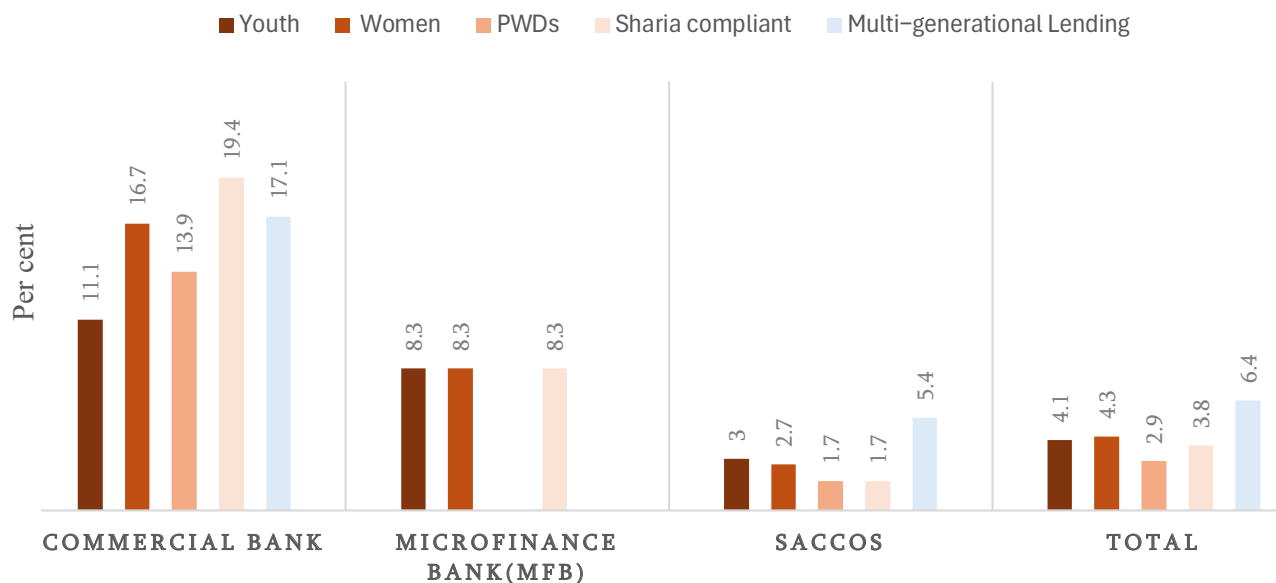
7.9 Availability of Mortgage Products to Special Groups

The survey sought to establish the availability of construction, housing, and mortgage products tailored for special groups such as youths, women, and persons living with disabilities (PWDs). Further, the survey sought to find out whether financiers provide Shariah-compliant mortgage products as well as multi-generational lending options which allow households to repay loans over multiple generations.

The survey findings indicate that multi-generational lending was the most prevalent among these specialized products, with 6.4 per cent of financiers indicating to be offering such products specifically for this target group.

Specialized mortgage products for women, youth and PWDs was provided by 4.3 per cent, 4.1 per cent, and 3.8 per cent respectively. However, products specifically designed for PWDs were low, with only 2.9 per cent of financiers offering them as shown in Figure 7.8.

Figure 7.8: Availability of Mortgage Products to Special Groups

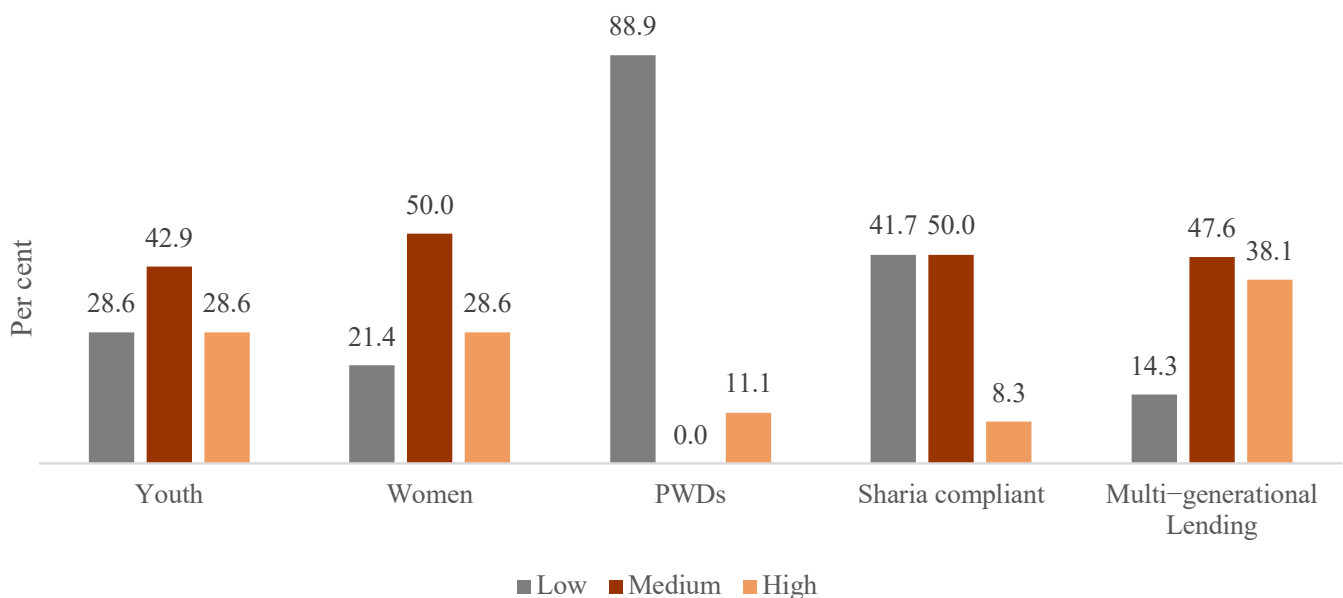


7.10 Demand for Housing/Mortgage Products by Special Groups

Survey findings indicated there was medium demand for financial products for the women and youth at 50.0 per cent and 42.9 per cent as shown in figure 7.9



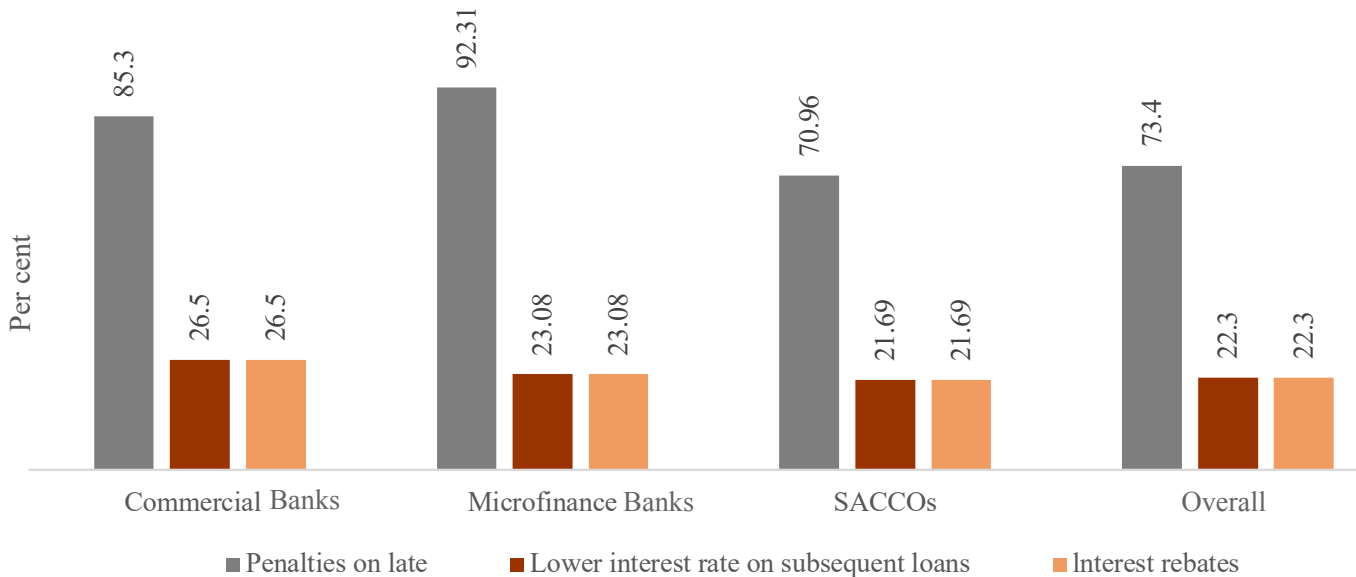
Figure 7.9: Demand for Housing/Mortgage Products by Special Groups



7.11 Measures used to encourage timely repayment of loans

As shown in Figure 7.10 financiers encourage timely repayment of loans by applying penalties on late repayments, with 73.4 per cent of total financiers indicating its utilization. Other measures include lowering interest rates on subsequent loans and offering interest rebates at 22.3 per cent.

Figure 7.10: Measures Used to Encourage Timely Repayment of Loans

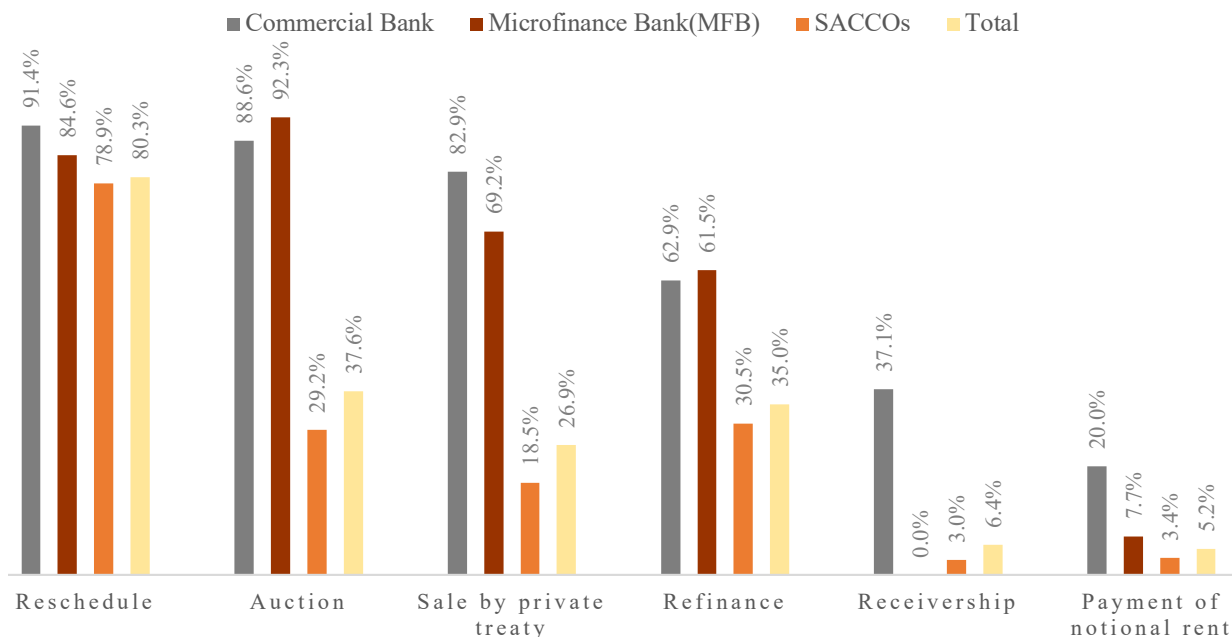


7.12 Recovery Processes for Non-Performing Loans

The survey sought to establish the use of various strategies to recover non-performing loans (NPLs), including rescheduling, property auctioning, private treaty sales, refinancing with other institutions, receivership, and payment of notional rent.

Loan rescheduling was used by 80.3 per cent of financial institutions. Most Commercial banks and MFBs use property auction and sale by private treaty as a way of recovering non-performing loans.

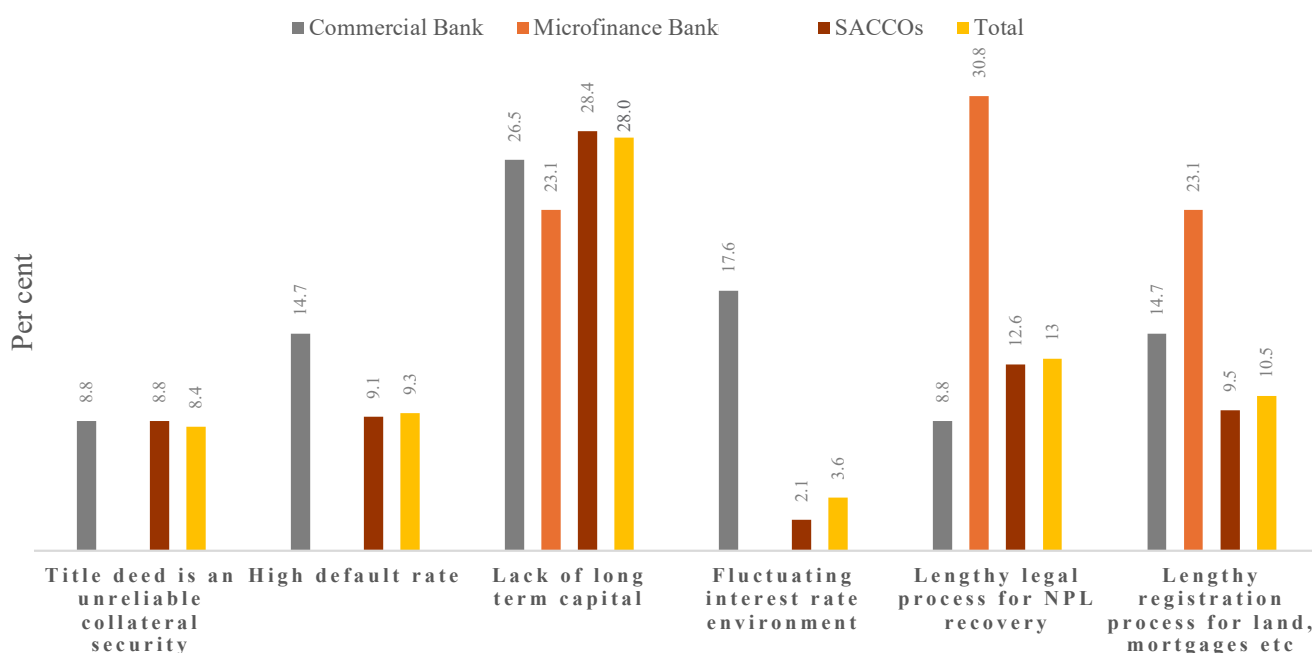
Figure 7.11: Recovery Processes for Non-Performing Loans



7.13 Barriers to Lending for Mortgage and Construction Financing

The survey sought to identify the primary barriers to lending by financiers. The lack of long-term capital was the main barrier identified by financiers, as indicated in Figure 7.12.

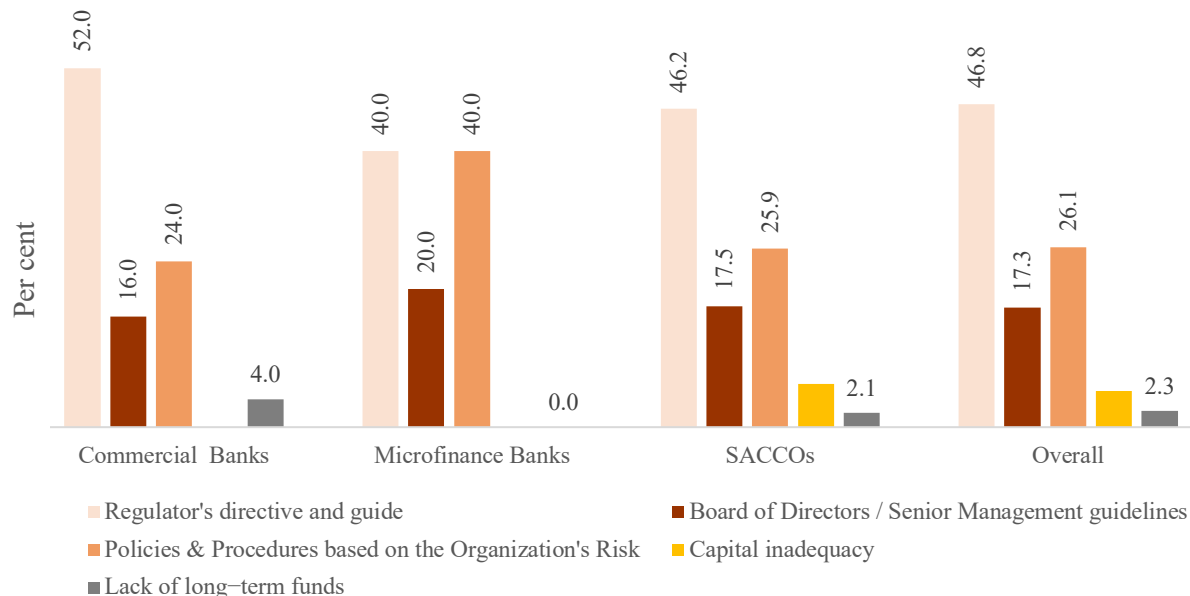
Figure 7.12: Key barriers to lending



7.14 Funding Restrictions

This survey sought to identify key restrictions on the amount of funding channeled towards financing of housing (construction and mortgages). As shown in Figure 7.13, regulators directives and guides, policies and procedures based on the organization's risk were the most significant reasons for restrictions on the amount of funding that can be channeled towards financing of housing.

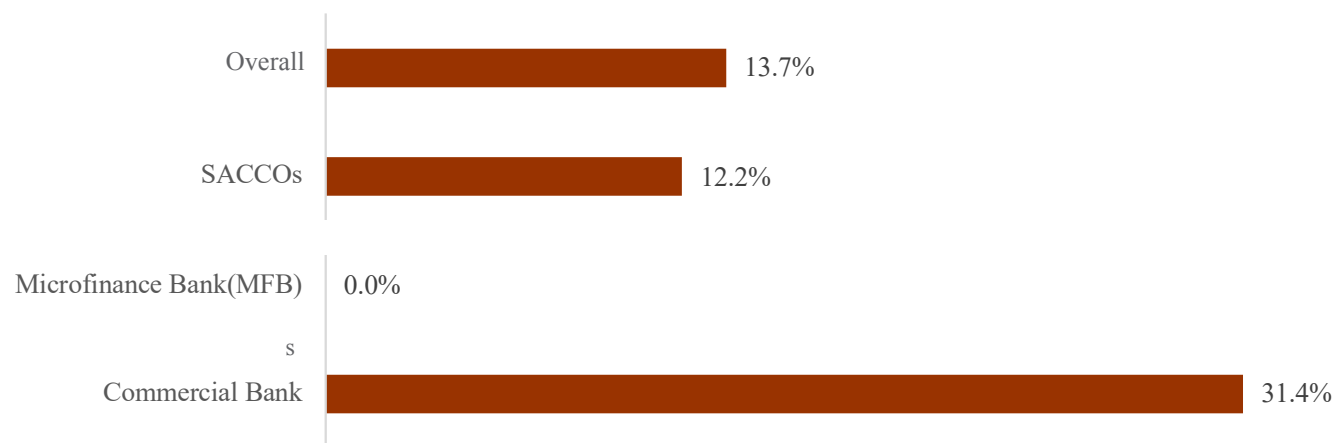
Figure 7.13: Funding Restrictions



7.15 Financial Incentives

Financiers provided information on whether they provide incentives to borrowers for housing loans. Approximately 13.7 per cent of financiers indicated they have such incentives in place as shown in Figure 7.14.

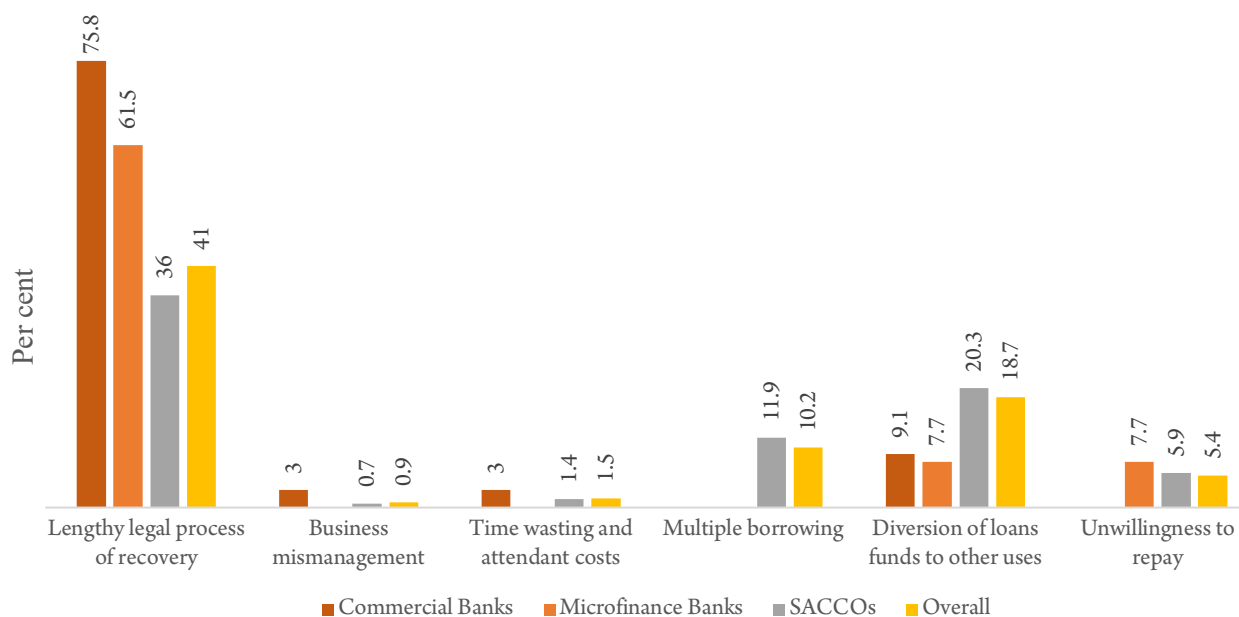
Figure 7.14: Incentives to lend

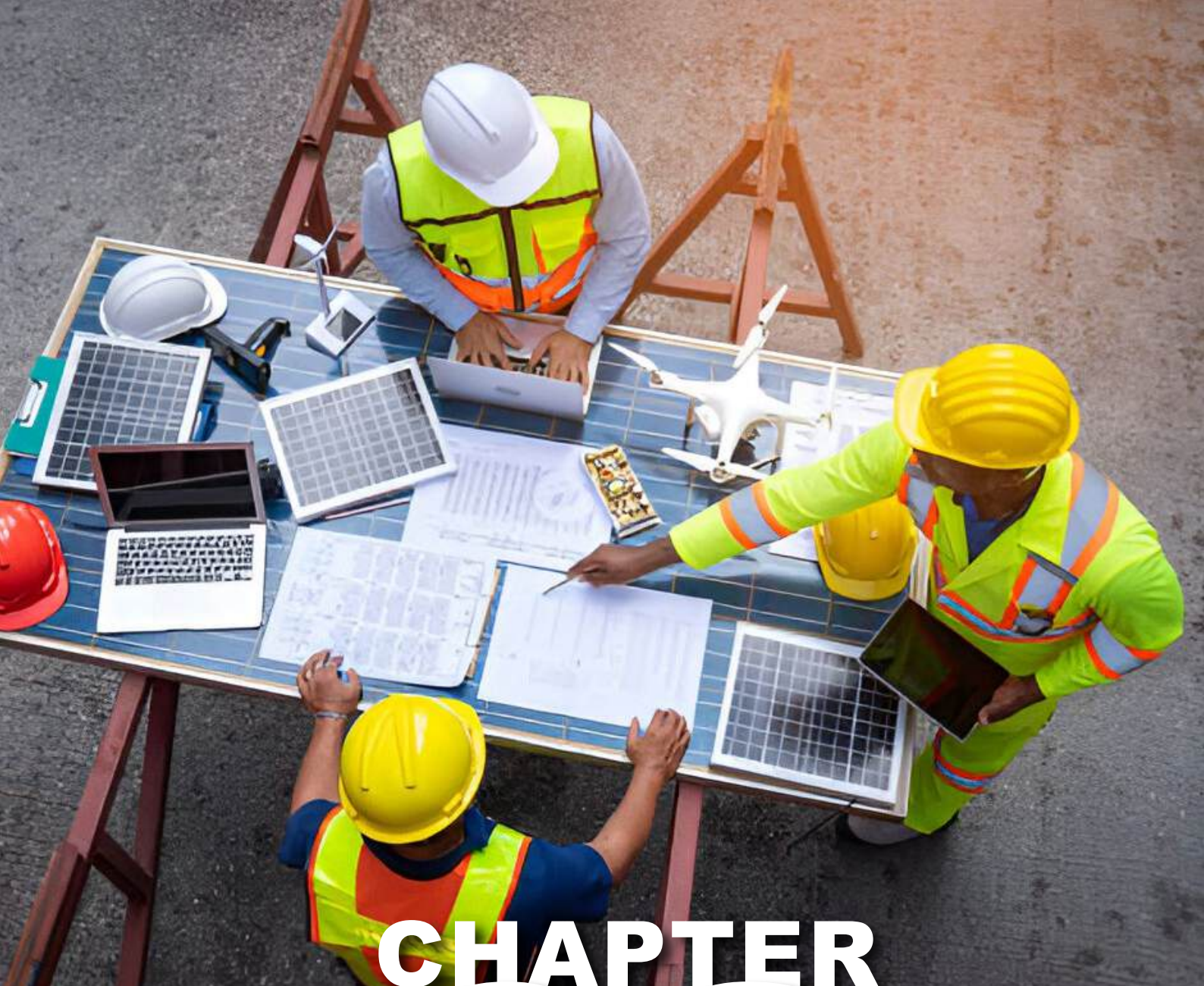


7.16 Challenges in Loan Recovery

Financiers identified the key challenges to recovering housing construction and mortgage loans as: lengthy legal process of recovery, business mismanagement, time wastage and associated costs, multiple borrowing, diversion of funds to other uses, and borrower unwillingness to repay, among others as shown in Figure 7.15.

Figures 7.15: Challenges in recovering housing construction and mortgage loans





CHAPTER 08



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Housing Development and Property Prices

Key Findings

About **66.0** per cent and **35.9** per cent of housing developers reported that county governments and NEMA, respectively take too long to grant approvals for housing development.



County governments charge high fees for housing development approvals as reported by **56.6** per cent of housing developers. Further, **64.2** per cent and **62.3** per cent of housing developers reported that NCA and NEMA, respectively charge reasonable fees.



About **67.9** per cent of housing developers feel approval process for housing development at NEMA is reasonably efficient while **66.0** per cent feel the approval process at NCA is reasonably efficient.



Awareness of the available alternative building technologies is high among developers, an indication that the same technologies may be in use by the developers.



Land availability (**94.1%**), future returns (**88.2%**), access to materials (**82.4%**) and access to infrastructure and services (**64.7%**) are among the key factors used to select areas for housing development.



While **69.1** per cent of housing developers are aware of the VAT exemption on construction inputs, only **10.5** per cent of those that were aware of the incentive reported that they benefited from these VAT exemptions.



The average sale price for a two, three and four-bedroom bungalow was **KSh 19.3, KSh 19.5 and KSh 49.9 million**, respectively in 2023, while the average sale price of a three-bedroom maisonette, apartment and townhouse was KSh 20.9 million, KSh 19.4 and KSh 23.3 million, respectively.



Average prices for various types of residential properties are generally high in Nairobi Upper, Kilifi and Mombasa regions compared to other regions of the country. Prices of stand-alone properties are higher than those of apartments of equal number of bedrooms.



8.1: Introduction

The rapid growth of Kenya's population and the high rate of urbanization has contributed to increased demand for housing especially in the urban areas. Majority of the housing units are supplied by the private sector who have adopted various housing development and financing models which include site and service schemes, incremental housing development, tenant purchase, own financing, joint ventures, public private partnership and off-plan developments among others. Housing developers are companies or individuals involved in the planning, construction and sale of residential properties. They play a key role in shaping communities and urban landscapes by creating housing options ranging from single-family homes to large apartment complexes.

This chapter explores the extent to which housing developers, adhere to development control requirements, engage professionals in the sector, contract delivery models and knowledge of alternative building materials and technologies, as well as awareness and usage of various incentives available to encourage housing development.

Further, real estate indicators play a pivotal role in informing financial stability, economic policy decision making, and in the compilation of national accounts statistics where they are used as a deflator for the balance sheet and fixed capital formation. The International Monetary Fund Financial Soundness Indicators (FSIs) Guide (IMF, 2019) identifies real estate markets as an important source of indicators relevant for both financial and non-financial sectors. In Kenya, house purchases and rents constitute a high proportion of urban and peri-urban household expenditures. On this account, the 2023/24 Kenya Housing Survey included a component of real estate activities where information on property prices was collected. This chapter also presents the analytical results of the residential property prices from the survey.

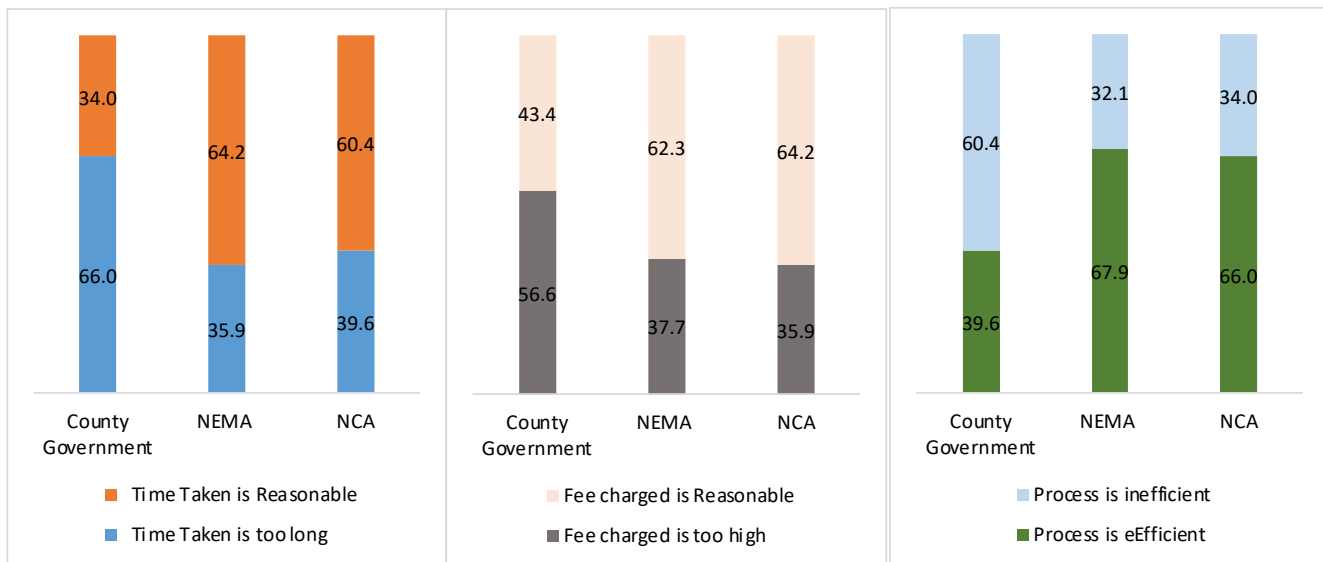
8.2 Housing Development

8.2.1 Compliance to Housing Development Control Requirements

Housing developers are required to obtain four mandatory construction approvals for construction: Architectural plan approval; Structural plan approval; Environmental Impact Assessment (EIA) License/National Environment Management Authority (NEMA) approval, and National Construction Authority (NCA) project registration. These approvals are granted by County governments, NEMA, and NCA. The survey sought to establish the developers' experiences while seeking approvals from these institutions in terms of time taken, fees charged, and the efficiency of the process of obtaining approvals.

As shown in Figure 8.1, 66.0 per cent reported that county governments take too long to grant approvals for housing development while 64.2 per cent reported that NEMA takes a reasonable amount of time to grant approvals. The survey also revealed that county governments charge high fees for these approvals as reported by 56.6 per cent of housing developers while 64.2 per cent and 62.3 per cent of developers reported that NCA and NEMA charge reasonable fees, respectively. Compared to NEMA and NCA, county governments take too long to grant building approvals and charge higher fees. The approval processes are also inefficient. To promote Housing Development county governments need to modernise building applications approval processes to enhance efficiency, reduce time taken and attendant costs.

Figure 8.1: Rating of time taken, fee charged and efficiency of approval process for housing development (%)



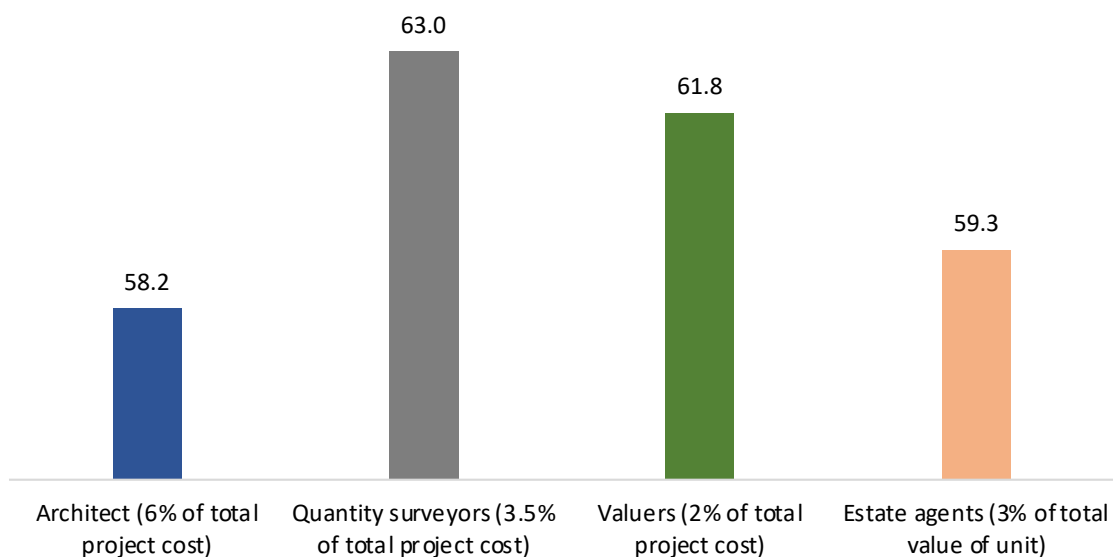
8.2.2 Engagement of Built Environment Professionals by Housing Developers

8.2.2.1 Professional fees

The minimum fee charged by building professionals is stipulated in various Acts of parliament. The Architects and Quantity Surveyors Act (Cap 525) sets professional fees for Architects at 6 per cent of the total cost of the project and professional fees for Quantity Surveyors at 3.5 per cent of the total cost of the project. On the other hand, the Valuers Act (Cap 532) sets professional fees for valuers at 2 per cent of

the total cost of the project and the Estates Agents Act (533) sets professional fees for agents at 3 per cent of the total value of the unit. The survey sought to establish if these fees are considered by developers as commensurate to the services that these professionals offer. As indicated in Figure 8.2, 63.0 per cent of housing developers feel that fees paid to quantity surveyors is equivalent to the services they provide.

Figure 8.2: Proportion of developers who consider stipulated professional fees as equivalent to services provided by various built environment professionals





8.2.2.2 Negotiation of Professional Fees

Although the fees for various professionals are stated by law, housing developers may negotiate these fees. The survey results indicate that more than half of housing developers negotiate fees with architects at 80.0 per cent, quantity surveyors at 75.9 per cent, and valuers at 67.3 per cent and estate agents at 64.8 per cent (Figure 8.3). Among those who negotiate professional fees the negotiation occurs very often as shown in Figure 8.4.



6%

The Architects and Quantity Surveyors Act (Cap 525) sets professional fees for Architects at 6% of the total cost of the project

3.5%

Professional fees for Quantity Surveyors at 3.5% of the total cost of the project.

Figure 8.3: Proportion of housing developers who negotiate professional fees by type of profession

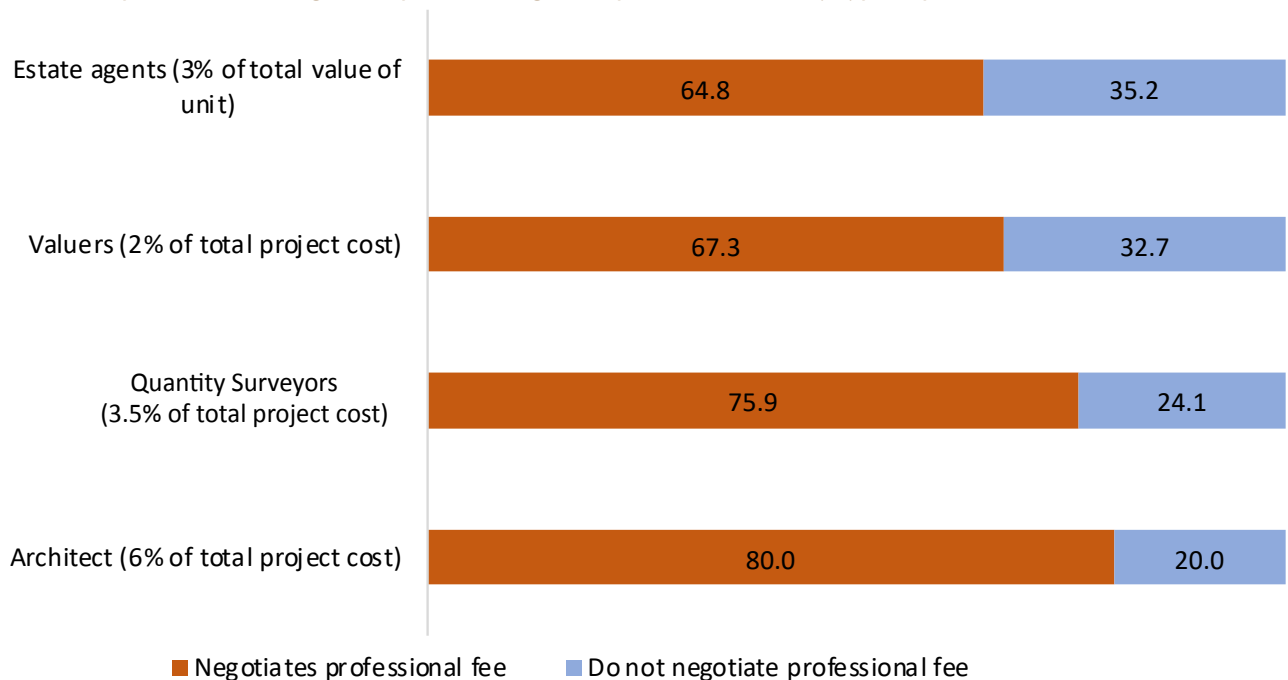
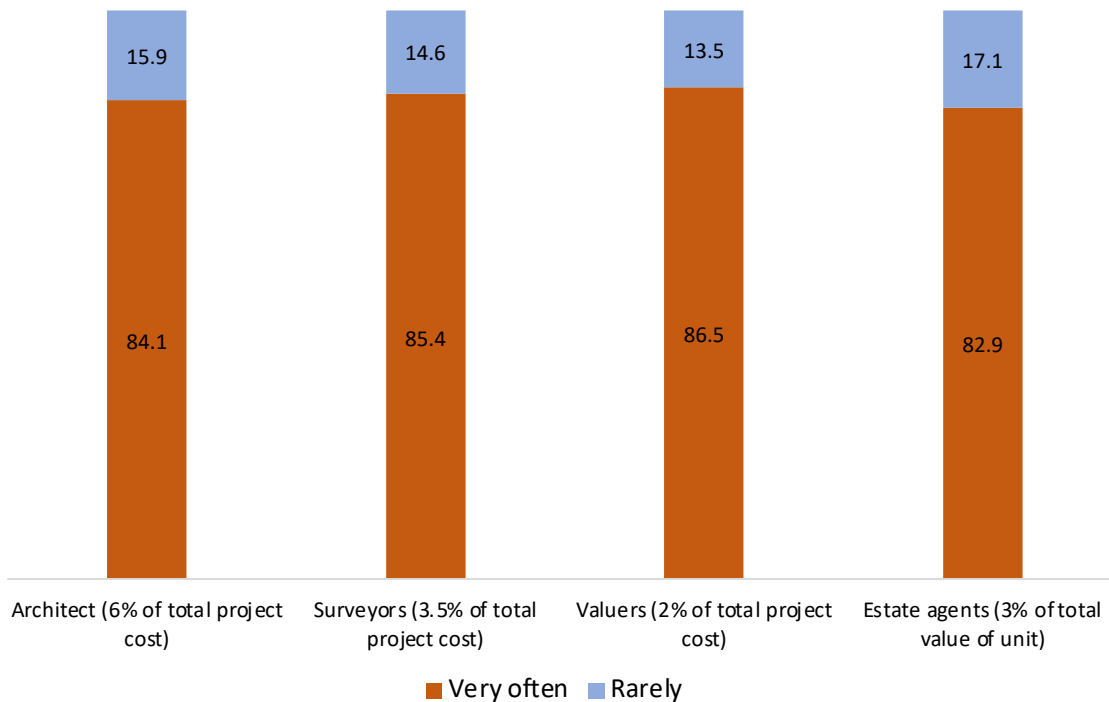


Figure 8.4: Distribution of housing developers by frequency of negotiating professional fee by type of profession (%)



More than half of the housing developers regard the stipulated professional fees as equivalent to the services provided. This encourages the use of such professionals leading to quality and safe housing development projects. Despite this majority of housing developers frequently negotiate the stipulated professional fees when they engage the BEPs.

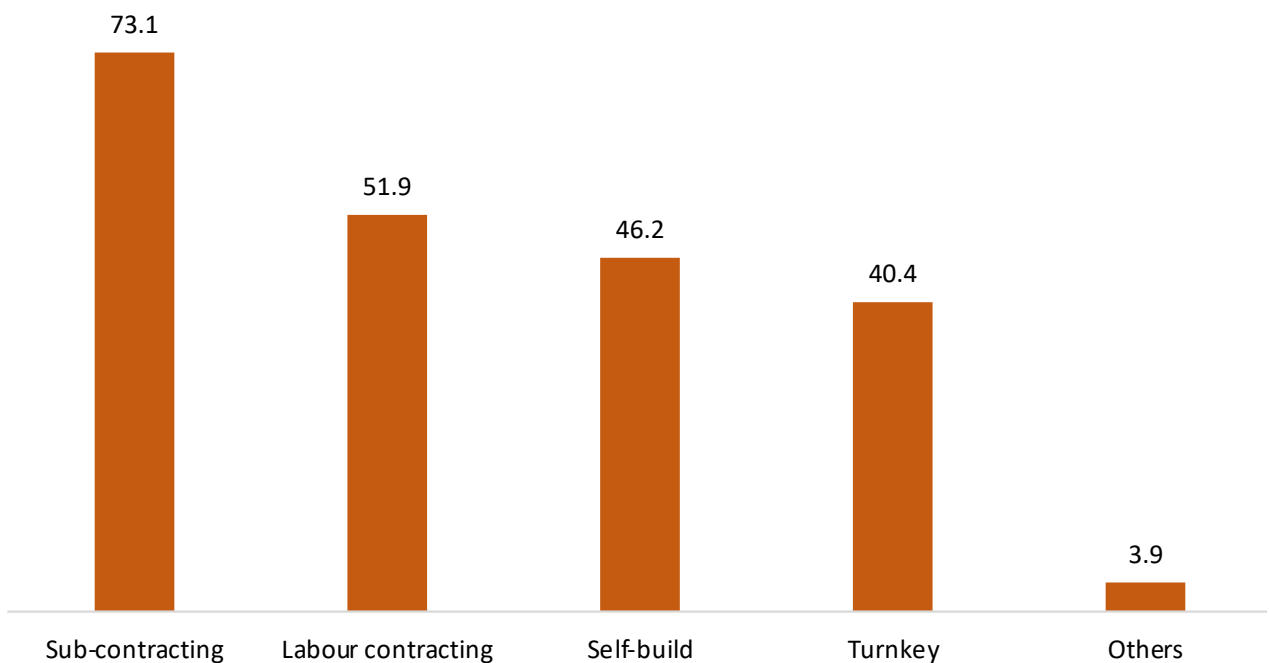
8.2.3 Usage of various forms of contracting in housing development

The survey sought to establish the various forms of contracting that are used by housing developers. Figure 8.5 indicates that 73.1 per cent of developers use sub-contracting, 51.9 per cent use labour contracting, and 46.2 per cent do self-build. Less than half of housing developers use turnkey as a form of contracting in housing development.





Figure 8.5: Distribution of developers by usage of various forms of contracting in housing developments (%)

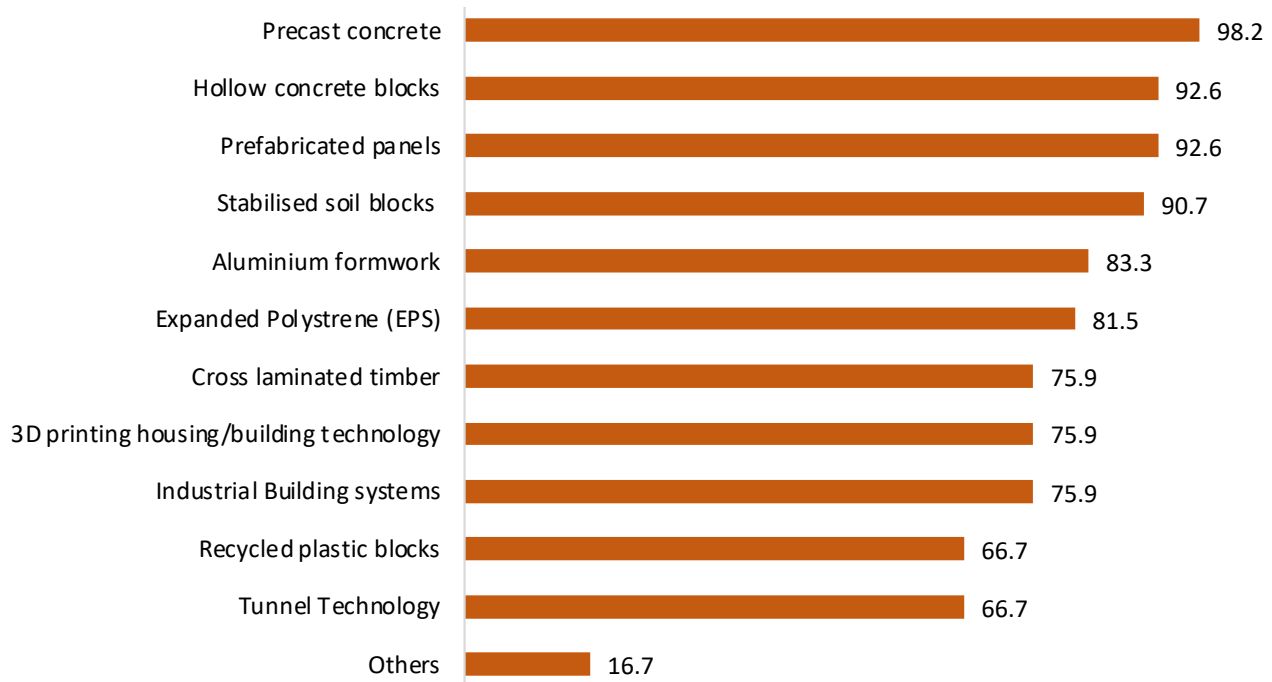


8.2.4 Alternative Building Technologies

Alternative Building Technologies (ABTs) are innovative construction methods and materials that differ from conventional building practices. ABTs focus on improving sustainability, efficiency, and cost-effectiveness in the construction process of buildings. The use of ABTs is necessitated by the increasing demand for housing units for the growing population and also hastens housing development. In addition, ABTs are also easier and cheaper to build compared to traditionally built houses using bricks and mortar.

The survey sought to establish whether housing developers were aware of these ABTs. As shown in Figure 8.6, 98.2, 92.6, 92.6, 90.7 and 83.3 per cent of developers are aware of precast concrete, hollow concrete blocks, and prefabricated panels, stabilized soil blocks and aluminum form works, respectively. Additionally, 66.7 per cent of developers are aware of recycled plastic blocks and tunnel technology.

Figure 8.6: Awareness of alternative building technologies by housing developers (%)



Stabilised soil blocks

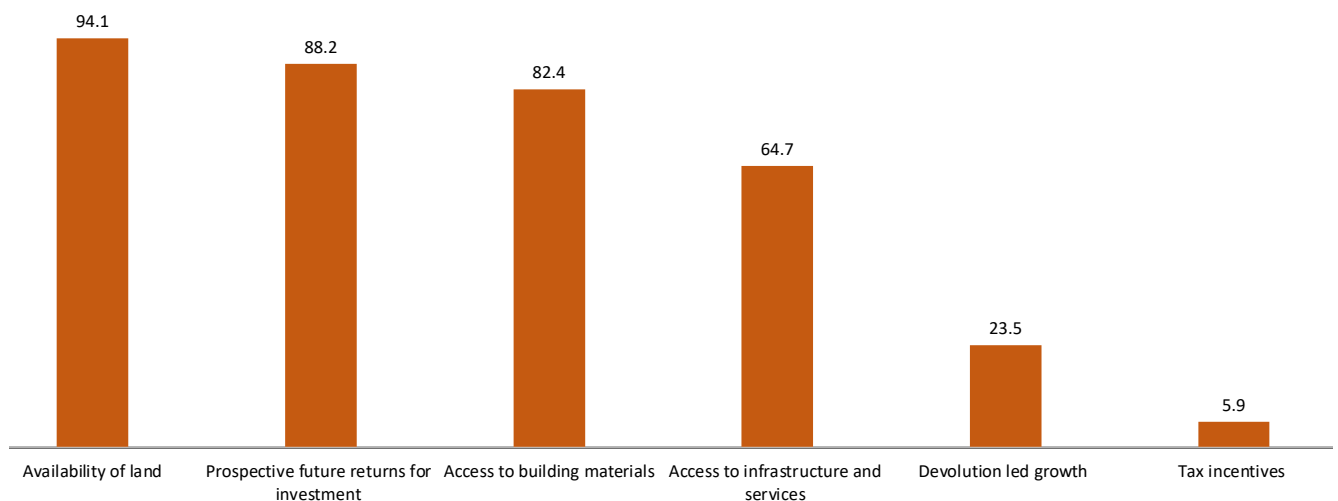


8.2.5 Choice of Area for Housing Development

The survey sought to establish factors that are considered in the choice of area for housing development. Figure 8.7 shows that land availability, 94.1 per cent, future returns 88.2 per cent, access to materials 82.4 per cent, and access to infrastructure and services 64.7 per cent

are the topmost factors that influence the choice of area for housing development. In addition, 23. per cent and 5.9 per cent of housing developers consider devolution led growth and the tax incentives in choosing areas for housing development.

Figure 8.7: Factors Influencing Choice of Area for Housing Development (%)

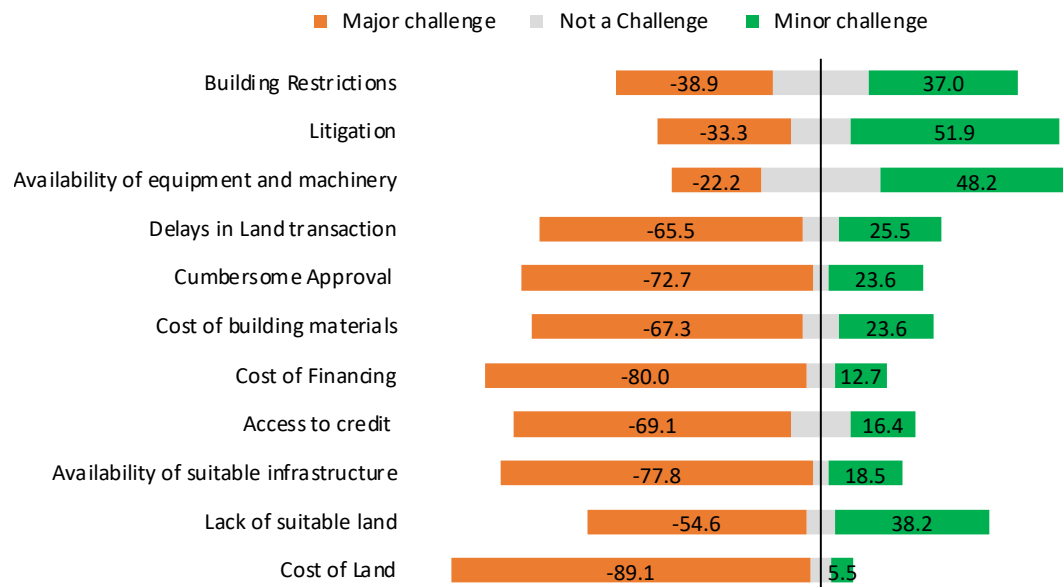


8.2.6 Perceived Challenges in Housing Development in Kenya

The survey sought to find out the challenges in housing development from the developers' perspective. The cost of land in Kenya was reported to be a major challenge by 89.1 per cent of developers followed by cost of financing at 80.0 per cent, and unavailability of suitable

infrastructure at 77.8 per cent. The cumbersome nature of approval processes from relevant authorities was also cited to be a challenge at 72.7 per cent as well as access to credit at 69.1 per cent and delays in land transaction at 65.5 per cent.

Figure 8.8: Challenges to housing development in Kenya (%)



8.2.7 Incentives to Housing Development

To meet the increasing demand for housing in Kenya, the government has put in place a number of interventions to spur growth of the housing development sector, which includes the affordable housing scheme in the Bottom-Up Transformation Agenda (BETA). The survey sought to assess the level of awareness of some of these incentives among housing developers and whether they have benefited from them.

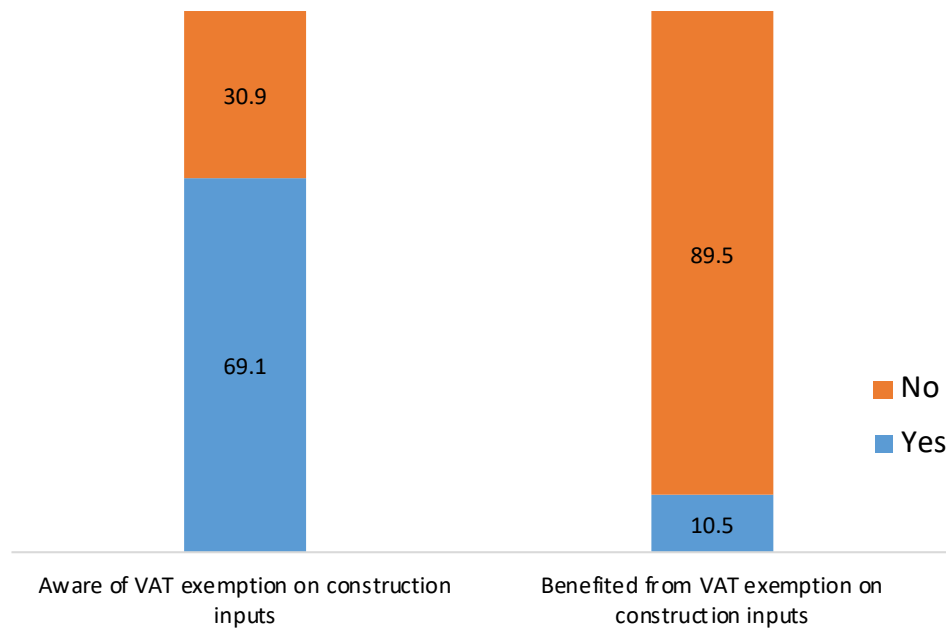
8.2.7.1 VAT exemption on all construction inputs under affordable housing programme

Under the affordable housing programme, the government has granted a VAT exemption on all construction inputs. As indicated in Figure 8.9, 69.1 per cent of housing developers reported that they are aware of the VAT exemption on construction inputs. However, only 10.5 per cent of the developers that were aware of the incentive, reported that they benefited from these VAT exemptions.



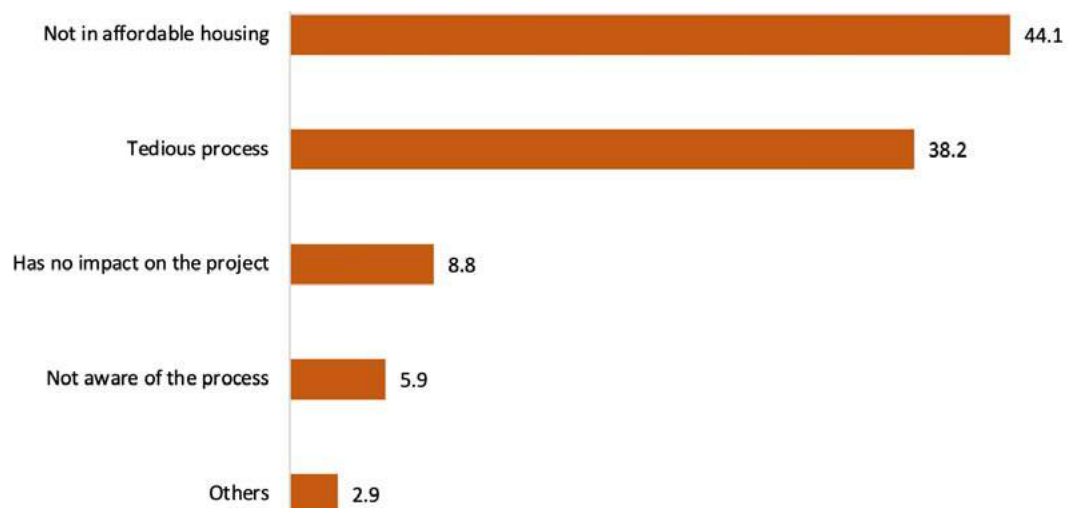
About 69.1 per cent of housing developers are aware of VAT exemption on construction inputs. Of this, only 10.5 per cent have benefitted from the exemption.

Figure 8.9: Proportion of housing developers who are aware of VAT exemption on construction inputs and proportion of housing developers that have benefitted from the exemption



Housing developers that are aware of the incentive of VAT exemption on construction inputs but have not benefitted from the incentive were asked about reasons for not benefiting. As shown in Figure 8.10, 44.1 per cent of housing developers stated that they are not in the affordable housing scheme and therefore could not benefit from the VAT, while 38.2 per cent reported that the process of obtaining this VAT exemption is tedious. About 8.8 per cent of developers reported that VAT exemption on construction inputs has no impact on the project.

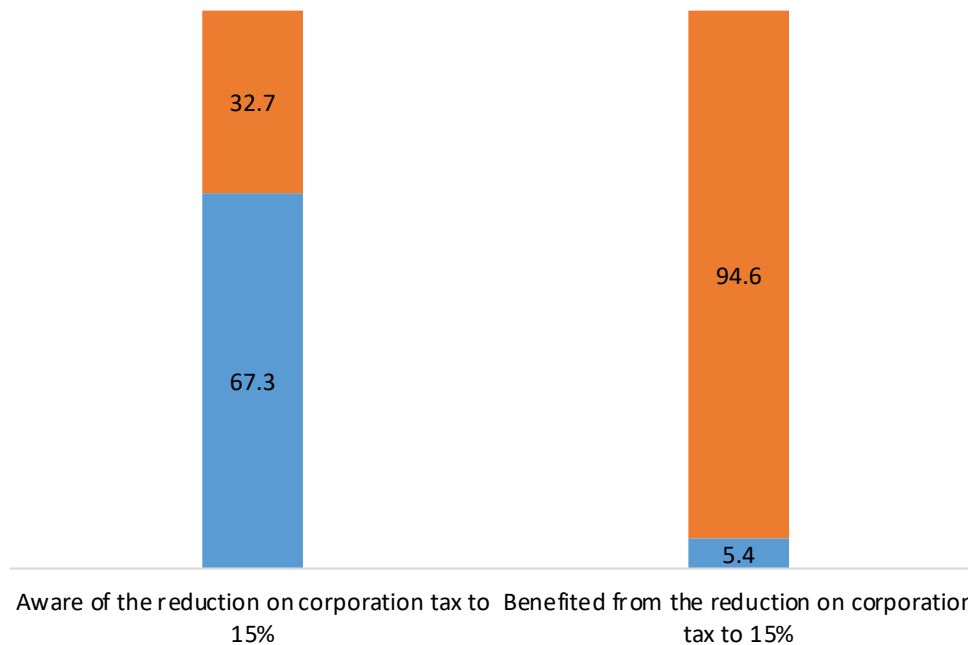
Figure 8.10: Reasons why housing developers do not benefit from VAT exemption on all construction inputs under affordable housing scheme (%)



8.2.7.2 Reduction of Corporation tax to 15 per cent in the year of income

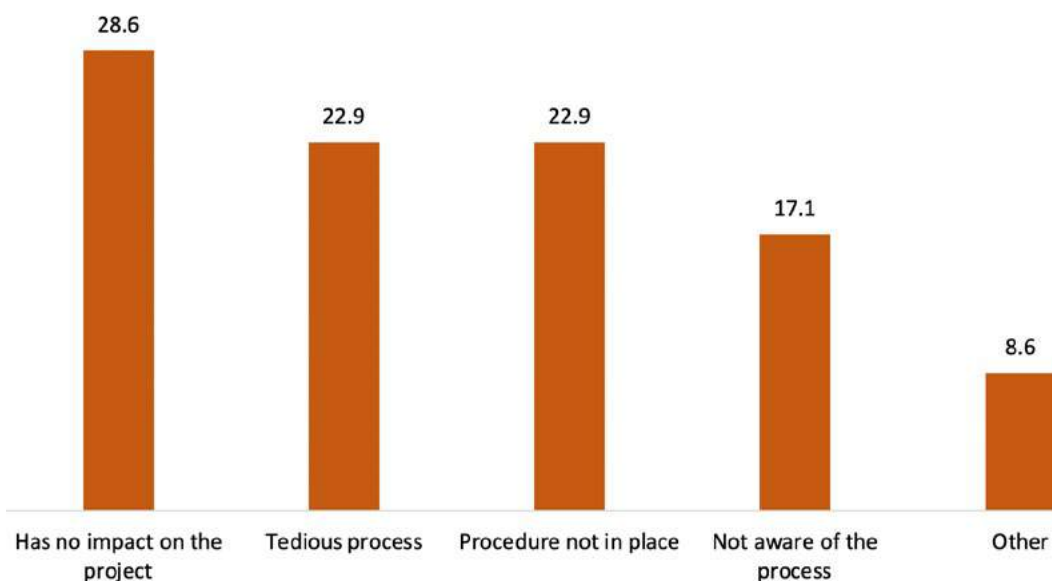
The Government reduced corporation tax to 15 per cent in the year of income for the construction of at least 100 residential units. Figure 8.11 shows that 67.3 per cent of housing developers are aware of this incentive, but only 5.4 per cent have benefited from it.

Figure 8.11: Proportion of housing developers who are aware of the reduction on corporation tax to 15% in the year of income for construction of at least 100 residential units



Reasons cited by housing developers for not benefiting from the incentive on reduction of corporation tax to 15 per cent include incentive, not having impact on projects at 28.6 per cent, tedious process to get the incentive and lack of proper procedure not being in place at 22.9 per cent as shown in Figure 7.14.

Figure 8.12: Reasons for not benefitting from the reduction on corporation tax to 15% in the year of income by housing developers (%)





8.3 Residential Property Prices

8.3.1 Average sale prices of residential properties

The average sale prices for residential properties are presented in **Table 8.1**. Residential properties in the market in 2023 were largely in urban areas and their prices varied depending on location, unique characteristics of properties such as number of bedrooms, gross floor areas, land size of stand-alone units, floor area of flats and apartments. Other attributes which influence property prices include environmental factors, safety levels and existing physical and social infrastructure such as sewerage and drainage systems, roads, public transport, health centers, education centers and other social services. The average property prices were weighted based on the number of properties of similar characteristics per region to remove the random noise in the prices.

As indicated in **Table 8.1**, the weighted national average sale price for a two-, three- and four and above -bedroom bungalow was KSh 14.1, KSh 19.5 and KSh 49.9 million, respectively. The sale price of a three-bedroom maisonette was KSh 20.9 million while that of a three-bedroom apartment and townhouse was KSh 12.4 million and KSh 17.3 million, respectively. The sale price of a three-bedroom maisonette, apartment and townhouse was KSh 20.9 million, KSh 13.5 and KSh 23.3 million, respectively. Across all categories of residential properties, the prices of properties increased with the size of the property given by the number of bedrooms. The prices of stand-alone properties such as bungalows, maisonette and town house were higher compared to the prices of flats and apartments.



The International Monetary Fund Financial Soundness Indicators (FSIs) Guide (IMF, 2019) identifies real estate markets as an important source of indicators relevant for both financial and non-financial sectors.

Table 8.1: Average sale price of residential properties

Type of Property	Weighted Average Sale Price (KSh)
Bungalow two bedroom	14,152,209
Bungalow three bedroom	19,503,003
Bungalow four and above bedroom	49,969,590
Masionette three bedroom	20,883,333
Masionette four and above bedroom	95,979,797
Flat/Apartment bedsitter/studio	4,730,475
Flat/Apartment one bedroom	6,440,393
Flat/Apartment two bedroom	7,874,312
Flat/Apartment three bedroom	13,491,787
Flat/Apartment four and above bedroom	46,407,688
Town house-one bedroom	14,050,000
Town house-two bedroom	17,349,939
Town house-three bedroom	23,260,606
Town house-four and above bedroom	61,144,495
Town House-four and above bedrooms	61,144,495

BUNGALOW

2 BEDROOM

Kes.
19.3



3 BEDROOM

Kes.
19.5



4 BEDROOM

Kes.
49.9



TOWN HOUSE

Kes.

17.3



MAISONETTE

2 BEDROOM

Kes.
13.5



APARTMENT

2 BEDROOM

Kes.
12.4





8.3.2 Average sale prices of residential properties by region

The price for residential properties by type and region are shown in Table 8.2. For effective analysis, the data collected is subdivided into eleven regions based on geographic location, similar characteristics and prices. The regions include Mombasa consisting of all areas within Mombasa County; Kilifi consisting of all areas within Kilifi County; Other Coast consisting of Kwale, Lamu and Taita Taveta Counties; and Machakos; Kiambu and Kajiado Counties. Nairobi County is divided into four sub-regions consisting of Nairobi Upper; Nairobi Upper Middle; Nairobi Middle and Nairobi Lower. Nairobi Upper sub-region consists of areas such as Runda, Karen, Muthaiga, Lavington and similar areas. Nairobi Upper Middle region consists of areas such as Kilimani, Kileleshwa, Highridge, South B, Garden Estate, South C, Upper Hill, Westlands, Riverside, and other areas of similar status while Nairobi Middle region consists of areas like Kasarani, Donholm, Kamulu, Ruai, Buruburu,

and Madaraka. Nairobi Lower region consists of areas such as Ngara, Makadara, Kawangware, and Kibra, among other areas of similar status. However, the survey collected fewer properties in Other Coast, Other Counties and Kilifi regions whose prices exhibited wide variations.

a) Bungalow

As shown in table 8.2, the average sale price of a two - bedroom bungalow was KSh 16.7 million in Mombasa, KSh 11.2 million in Nairobi Middle and lowest in Kajiado at KSh 2.9 million. Similarly, the price of a three-bedroom bungalow was highest in Nairobi Upper at KSh. 89.8 million followed by Nairobi Upper Middle region at KSh. 34.4 million and the lowest in Machakos at KSh 6.0 million. On the other hand, the price of a four and above bedroom bungalow was highest in Nairobi Upper region at KSh 91.4 million and lowest in Nairobi Lower at KSh 8.1 million.

d) Town houses



CHAPTER 09



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Built Environment Professionals

9.1 Introduction

Built Environment Professionals (BEPs) sit at the center of housing development through design, engineering, construction, surveying, management and planning of housing projects or spaces where people live, work and play as well as ensuring safety, conducive and healthy living environment. These professionals include valuers, architects, physical planners, engineers (civil/ structural/ mechanical/ electrical), building surveyors and land surveyors. The 2023/24 KHS sought to find out the role of BEPs in promoting housing development, affordability, competitiveness and promotion of general economic growth through reduced cost of housing. The survey also sought to establish ways and means of improving housing conditions and the challenges facing housing development in Kenya. Information on various housing aspects and regulations was collected from various professionals who participated in the survey and were drawn from registration and professional bodies.

Key Findings

- 82.5% of surveyed Built Environment Professionals advise their clients to use alternative building technologies and materials.
- Of the Built Environment Professionals that advise their clients on the usage of alternative building materials and technologies, 34.8% advise their clients to use solar energy systems
- 25.3% of Built Environment Professionals have clients who prefer to go through the building approval process.
- Lengthy approval process (41.7%) and cost (40.5%) and the top reasons why some people do not go through the building approval process.
- Lowering the cost of construction materials (53.2%) and provision of tax incentives and concessions (50.0%) are main ways to reduce the cost of housing construction.
- High cost of finance (23.3%), high cost of building materials (20.0%), high cost of land (17.8%) are the main challenges to housing development.
- The use of unqualified professionals for construction (72.3%), use of unqualified professionals for supervision (66.0%) and use of sub-standard materials (59.6%) are the top reasons why buildings under construction collapse.

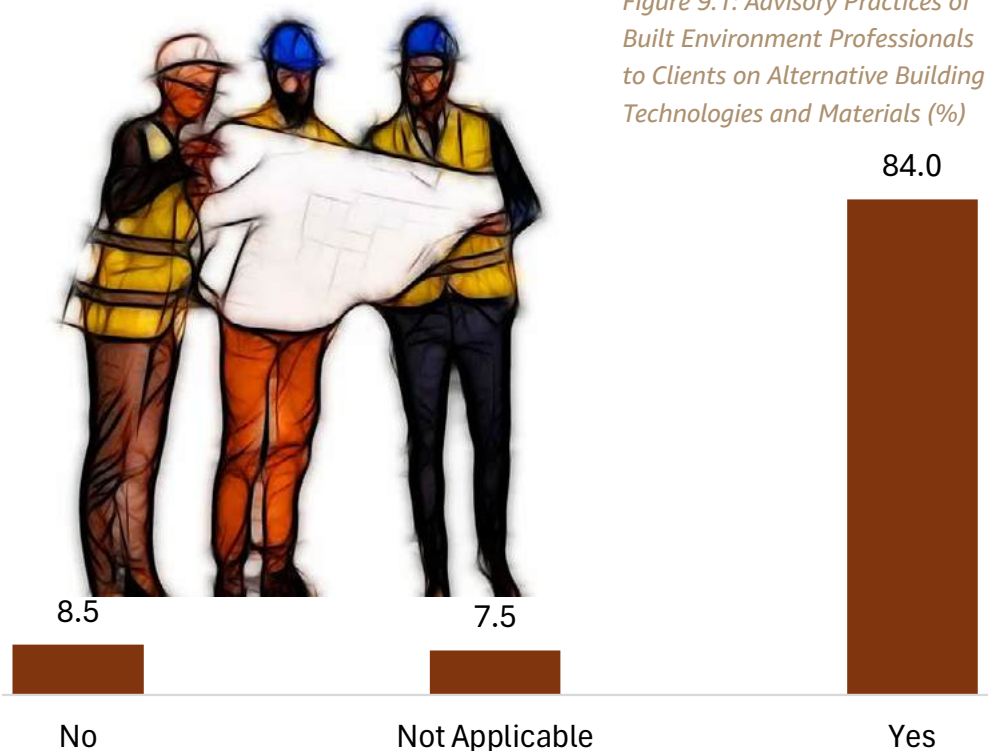


9.2 Advisory Practices of Built Environment Professionals to Clients on Alternative Building Technologies and Materials

The use of alternative technology in construction enhances delivery of high-quality buildings and value for resources. The survey sought to establish whether Built Environment Professionals advise their clients on usage of alternative materials

and technologies. As shown in Figure 9.1, among the Built Environment Professionals who responded to the survey, 84.0 per cent reported that they advise their clients to use alternative building technologies and materials.

Figure 9.1: Advisory Practices of Built Environment Professionals to Clients on Alternative Building Technologies and Materials (%)

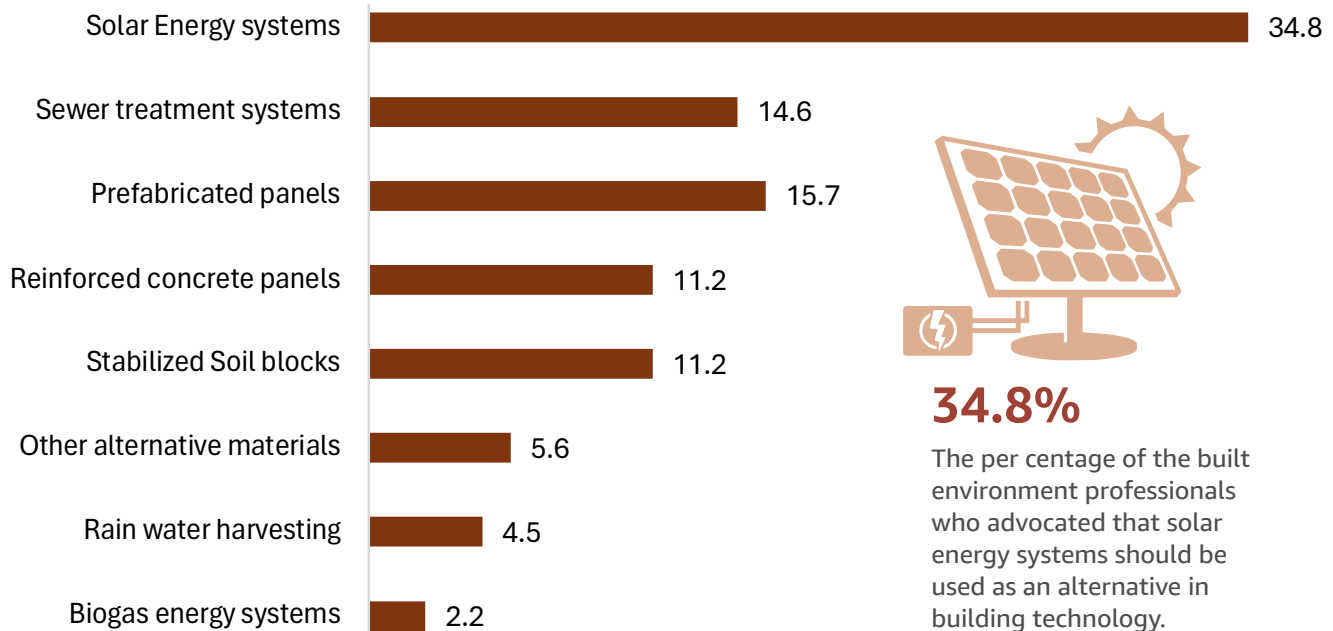


9.3 Alternative Building Technologies and Materials Advocated for use by Built Environment Professionals

Among the Built Environment Professionals that advise their clients on the usage of alternative building materials and technologies, 34.8 per cent advise their clients to use solar energy systems, 14.6 per cent advise their clients to use sewer treatment systems and 15.7 per cent advise their clients to use prefabricated panels. Further, 11.2 per cent advise their clients to use reinforced concrete panels and stabilized soil blocks. On the other hand, only 2.2 per cent of the Built Environment Professionals advise their clients to use biogas energy systems as an alternative energy source in housing development. This shows there is preference towards the use of solar energy systems compared to other alternative building materials and technologies.



Figure 9.2: Alternative Building Technologies and Materials Advocated for use by the Built Environment Professionals (%)

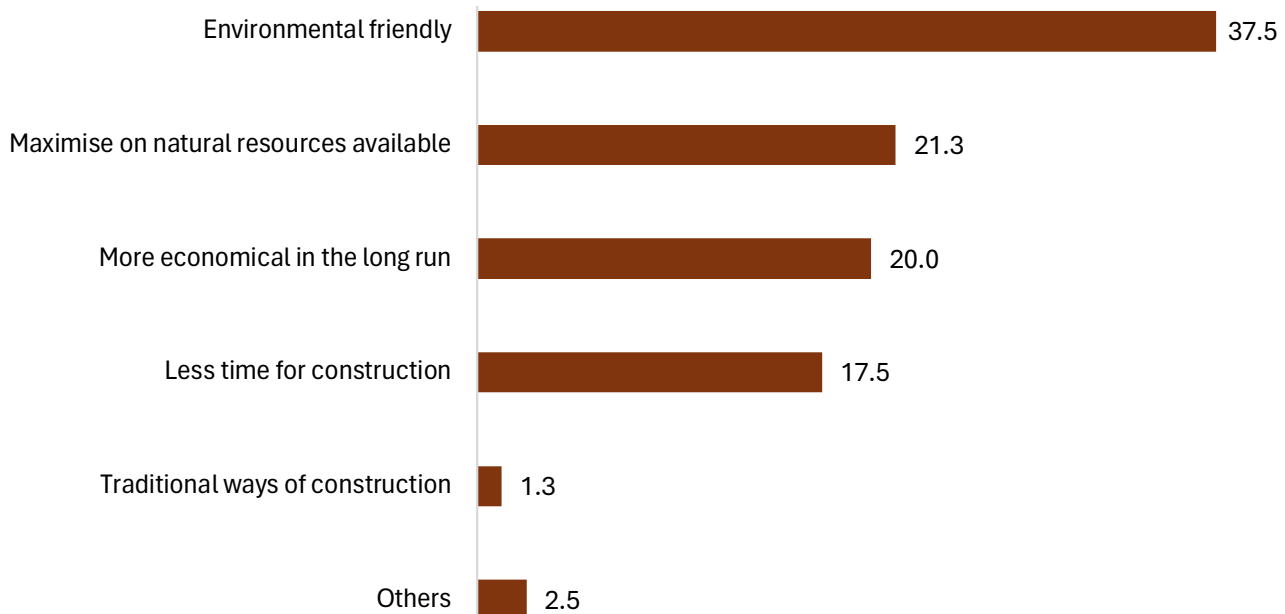


9.4 Reasons for Alternative Building Technologies and Materials

There are varied reasons why BEPs advise their clients to use different alternative building materials and technologies. As shown in Figure 9.3, 37.5 and 21.3 per cent of the Built Environment Professionals advise their clients to use alternative building materials and

technologies since they are environmentally friendly and to maximize on the available natural resources, respectively. Further, 20.0 per cent of the professionals advocate the use of alternative building materials and technologies because they are more economical in the long run.

Figure 9.3: Reasons for Use of Alternative Building Technologies and Materials (%)



9.5 Adherence to Building Approval Process

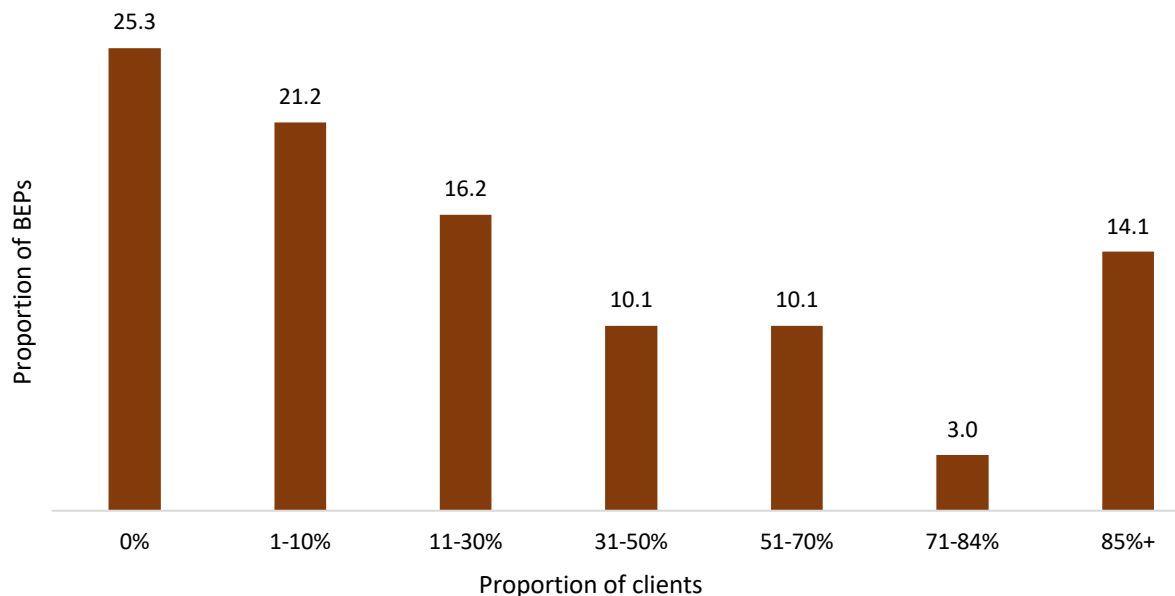
The Physical and Land Use Planning Act 2019, Urban Areas and Cities Act, 2011, and the County Governments Act, 2012 put emphasis on development control to ensure all physical developments obtain the necessary development permits. Development control consists of managing or regulating the carrying out of any works on land or making any material changes in the use of any land or structures and ensuring that operations on land conform to spatial development plans. The approvals may be sought by individuals, groups, or corporate entities. These regulatory frameworks aim to ensure orderly physical and land use development, optimal land use, protection and conservation of the environment, enhance land administration, and uphold health and safety standards.

The survey sought to establish from the

various Built Environment Professionals the proportion of their clients who do not prefer to go through the building approval process as stipulated by the various legislations and policies. The findings of the survey indicate that 25.3 per cent of the Built Environment Professionals reported that their clients prefer to go through the building approval process. On the other hand, 14.1 per cent of the BEPs have more than 85% clients who do not want to go through the approval process as shown in figure 9.4.



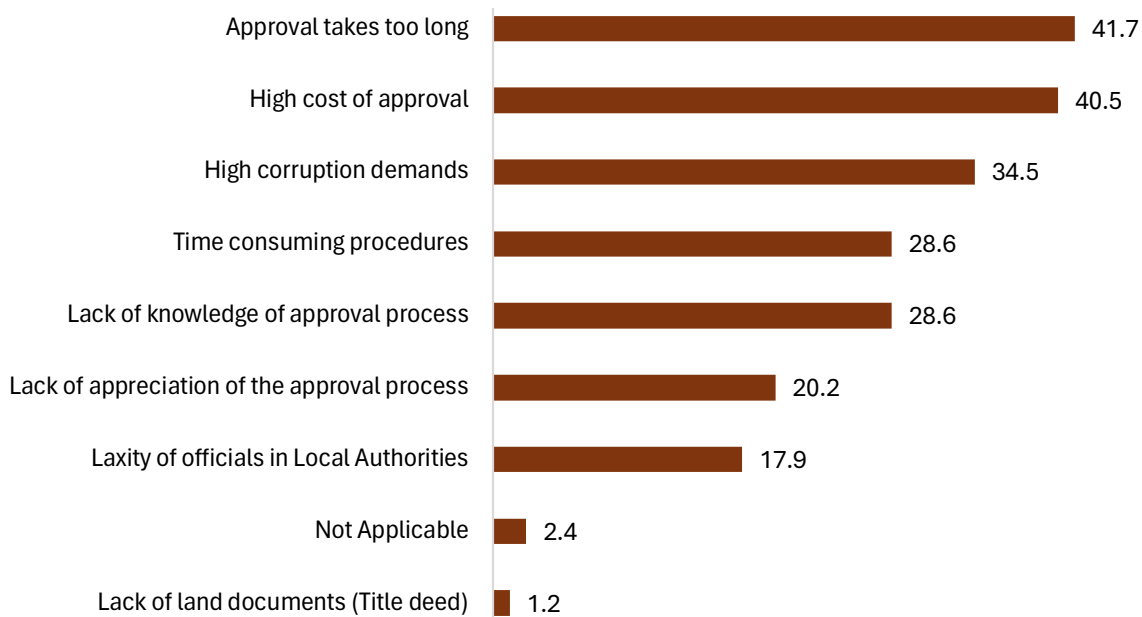
Figure 9.4: Compliance with Building Approval Process by Clients of Built Environment Professionals (%)



Among the clients of the Built Environment Professionals who do not prefer (decline) to go through the official building approval process, the Built Environment Professionals believe they do so because the approval process takes too long (41.7%), the approval process is costly (40.5%) and there is rampant corruption in

the approval process (34.5%) as indicated in figure 9.5. Further, 28.6 per cent of the Built Environment Professionals believe that their clients decline to go through the official building approval process due to lack of knowledge of the approval process.

Figure 9.5: Reasons not seeking official building approval (%)



9.6 Steps to Reduce the Cost of Housing Construction

There is a mismatch between supply and demand of houses in Kenya, partly on account of high construction cost and the attendant sale or rent prices. Therefore, reducing the cost of housing development is crucial for addressing a wide range of issues, including affordability, increased supply, low demand for houses, economic growth, competitiveness, among other benefits. The survey collected information from the Built Environment Professionals on the steps that can be taken to reduce the cost of housing construction in Kenya. The results presented in figure 9.6 indicate that the top five steps to reduce the cost of housing construction are: lowering the cost of construction materials (53.2%), provision of tax incentives and concessions (50.0%), enhancing adequate infrastructure (39.4%), availing affordable construction materials (39.4%) and necessary government subsidies (25.5%).



25.3%

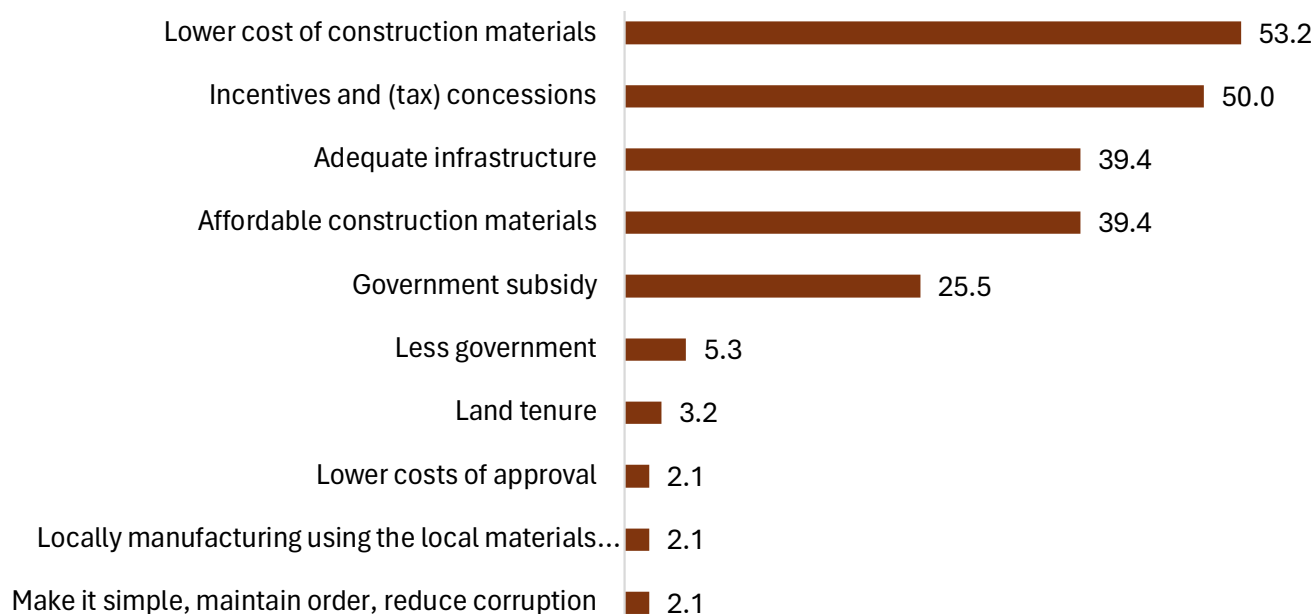
The proportion BEPs who reported that their clients prefer to go through the building approval process.



52.2%

The proportion of quantity Surveyors with indemnity cover.

Figure 9.6: Views of Built Environment Professionals on steps to reduce the cost of housing construction (%)



12.9%



The per centage of BEPs who were of the opinion that clear rules and regulations contribute to effectiveness of registration boards.

50%



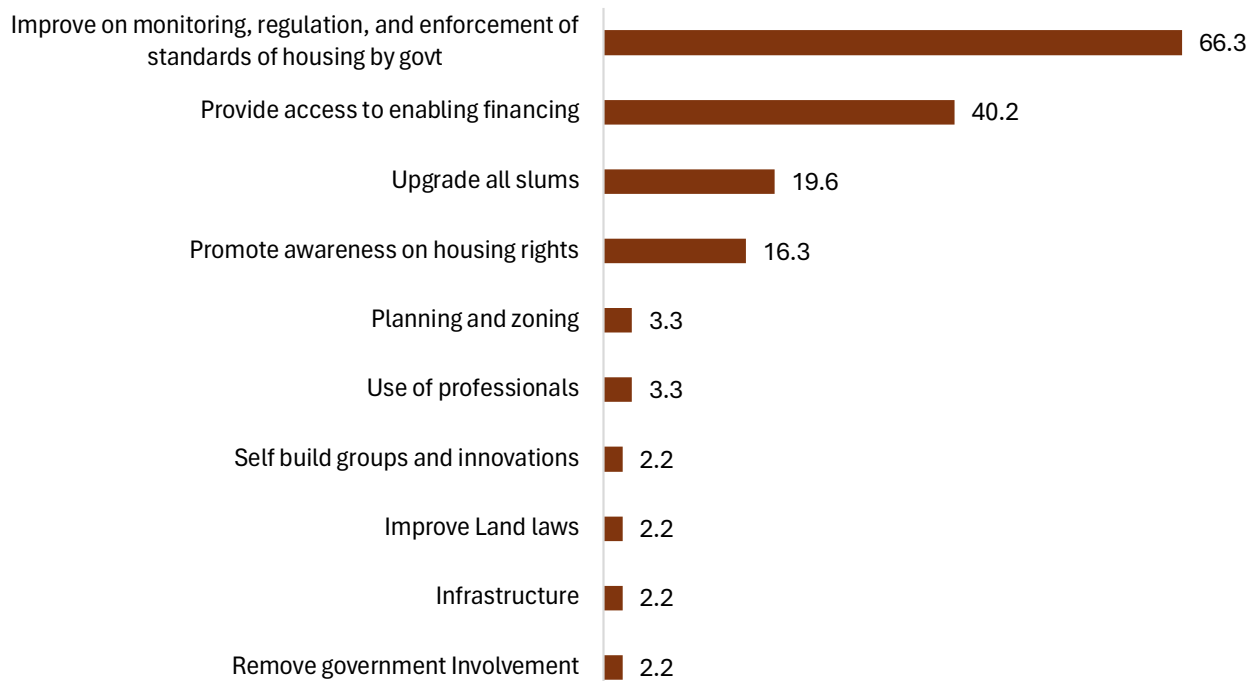
The Built Environment Professionals reported that incentives and tax concessions, could lower the housing development costs.

9.7 Steps to Improve Housing Conditions

Living in a low-quality house can pose health and safety concerns to the occupants. Due to unfavorable economic situations, people must choose between residing in a substandard house with lower cost or paying more for a modest home/ house. The quality of a house is in part dependent on the expertise of professionals, construction materials used and maintenance of the property, among other factors. The survey sought to collect information from Built Environment Professionals on their views on the steps that can be put in place to improve housing conditions, thus improving the quality of housing.

The findings in figure 9.7 indicate that the top four steps to improve housing conditions are: improving on monitoring, regulation and enforcement of standards of housing by the government (66.3%), providing access to enabling financing (40.2%), upgrading of all slums (19.6%) and promotion of awareness on housing rights (16.3%). This aligns well with the Government's programme on affordable housing that also seeks to upgrade slums and avail housing units to the population at affordable prices.

Figure 9.7: Steps to improve housing conditions (%)

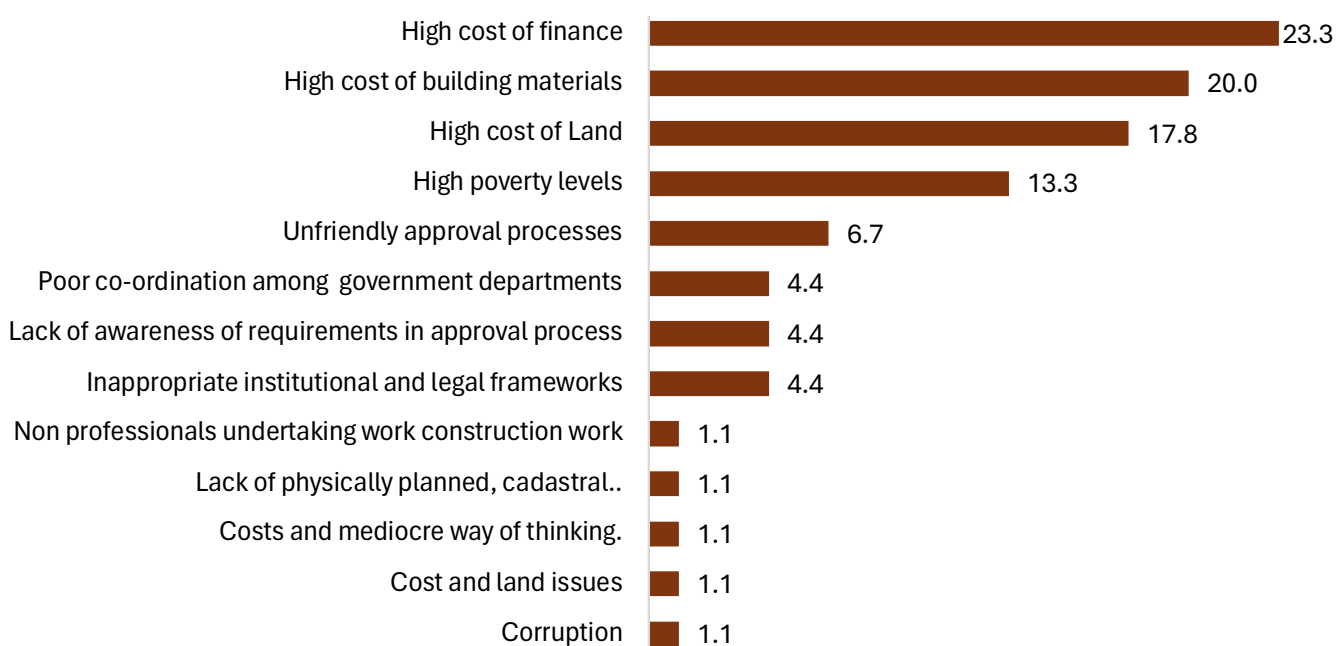


9.8 Challenges Facing Housing Development

The housing sector has not realized its full potential, partly on account of several challenges that the sector continues to face. The survey sought to collect the views of Built Environment Professionals on the key challenges facing the sector. The results in figure 9.8 indicate that the Built Environment Professionals regard high cost of finance (23.3%) as the topmost challenge facing the

housing sector in Kenya. These results corroborate with the findings in chapter 7 which indicate that affordability is the main issue on accessing housing finance. The other challenges identified by the professionals include high cost of building materials (20.0%), high cost of land (17.8%) and high poverty levels (13.3%), which reduce people's ability to purchase or develop houses.

Figure 9.8: Challenges facing housing development (%)



To overcome the challenges in housing development, the Built Environment Professionals indicated that there is need to reduce high interest rates (16.7%), create tax incentives (14.4%) and use alternative appropriate building technologies and materials (13.3%). Further, a review of the institutional and legal frameworks that govern housing development in Kenya (12.2%) and subsidizing cost of materials (11.1%) would ease the approval process and reduce the cost of building materials and construction projects thus promoting housing development in Kenya (table 9.1).

Table 9.1: Measures to Overcome Challenges Facing Housing Development (%)

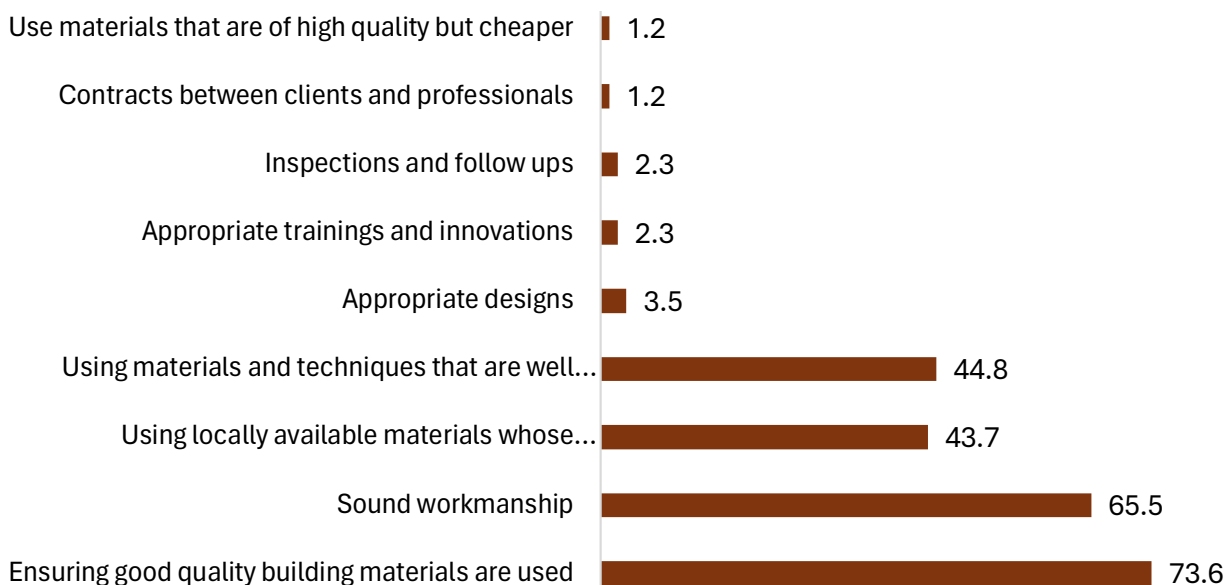
S/No.	Measures	Per centage
1	Reduce high interest rates	16.7
2	Create tax incentives	14.4
3	Use alternative appropriate building technologies and materials	13.3
4	Review institutional and legal frameworks	12.2
5	Subsidize cost of materials	11.1
6	Create a 'one-stop-shop' approval process	7.8
7	Set aside more land	7.8
8	Benchmark property development process	2.2
9	Increase household income	2.2
10	Promote awareness of approval requirements	2.2
11	Proper exposure of the people	2.2
12	Reduce land-related transfer costs	2.2
13	Create on-line approval facility	1.1
14	Empower Communities	1.1
15	Government should implement the infrastructure required	1.1
16	Mechanism to reduce poverty	1.1
17	Zero rate construction materials	1.1

9.9 Ways to Reduce Maintenance Cost of Buildings/ Homes

The survey sought to establish from the Built Environment Professionals ways that can be put in place to reduce the cost of maintaining buildings or homes given that buildings depreciate over time thus reducing the quality of houses/ homes. The results presented in figure 9.9 indicate that ensuring use of good quality building materials (73.6%) and sound workmanship (65.5%) are

the topmost ways to reduce the cost of maintenance of buildings or homes. Other ways to reduce maintenance cost include using materials and techniques that are well understood by local workmen/artisan (44.8%) and using locally available materials whose replacement parts are locally available (43.7%).

Figure 9.9: Ways to Reduce Maintenance Cost of Buildings/Homes (%)





9.10 Reasons for Collapse of Buildings under Construction

In the recent past, Kenya has recorded several cases of buildings under construction collapsing even after getting necessary approvals from the relevant authorities. The survey sought to get views of the Built Environment Professionals on why such buildings collapse. The results presented in figure 9.10 reveal that

use of unqualified professionals for construction (72.3%), use of unqualified professionals for supervision (66.0%) and use of sub-standard materials (59.6%) are the top three reasons why buildings under construction collapse. Other reasons include hurried construction (44.7%) and faulty building designs (33.0%) among others.

Figure 9.10: Reasons why buildings under construction collapse (%)



9.11 Reasons why Approved Buildings Get Demolished by the Government

Despite buildings undergoing all the necessary steps in the approval process, some buildings still get demolished by the relevant authorities. The survey sought to find out from the Built Environment Professionals why this happens, and the results are presented in figure 9.11. The results indicate that corruption (59.6%), cutting

corners on approvals procedures by clients (58.5 %), use of unregistered professionals (51.1%) and poor coordination in the approval process (47.9%) as the main reasons buildings get demolished by authorities despite undergoing the necessary approvals.

Figure 9.11: Reasons why buildings get demolished by the Government (%)



9.12 Professional Bodies for BEPs

Professional bodies in any sector play a pivotal role in maintaining the integrity and progression of various fields, providing access to sector-specific resources, relevant certifications or professional qualifications, lobbying for interests within the sector, professional advice, work experience and job opportunities, events and networking, and recognition of professionalism. The survey asked the Built Environment Professionals

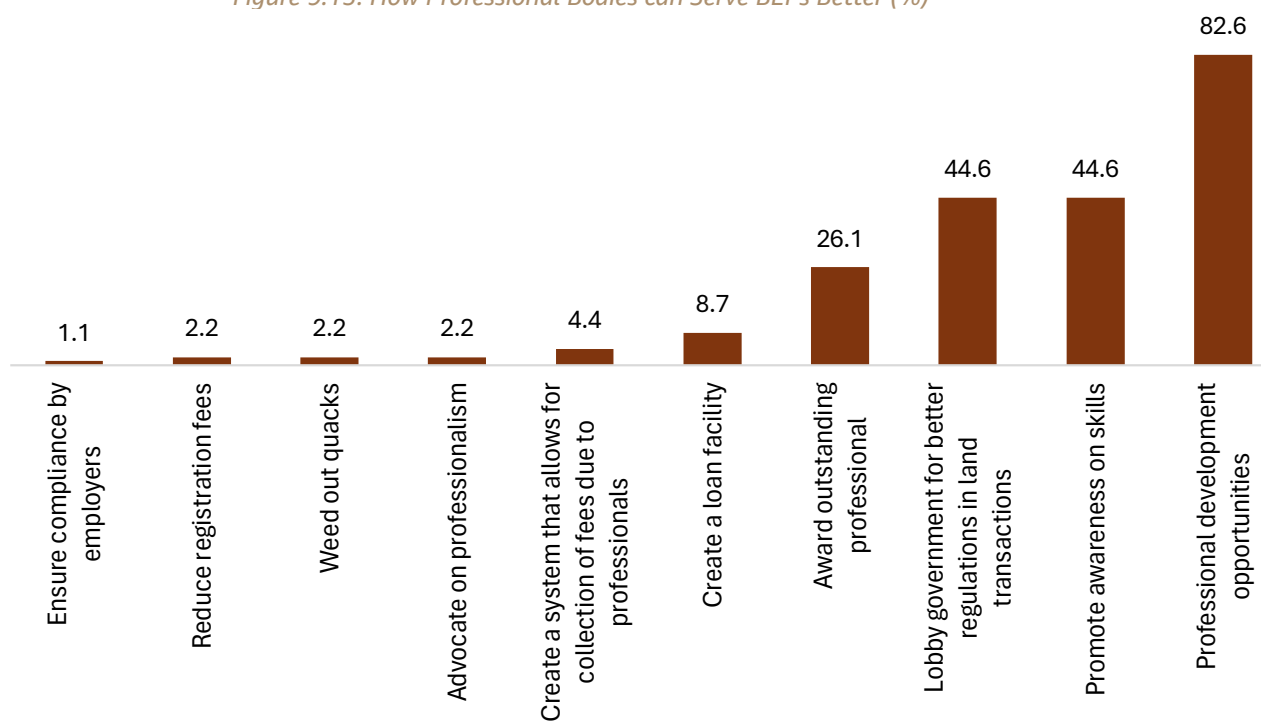
the benefits they derive from their professional bodies. The results in Figure 9.12 show that 76.9 per cent of BEPs consider registration and licensing of professionals as the greatest benefit while 65.9 per cent consider direction in professional practice as one of the benefits. Networking at 1.1 per cent was considered the least important benefit of professional bodies.

Figure 9.12: Benefits Received by BEPs from Professional Bodies (%)



Further, the survey sought the opinions of BEPs on how they can be served better by their professional bodies. The results in figure 9.13 indicate that availing professional development opportunities is the most significant way the professional bodies can serve them better at 82.6 per cent, followed by promoting awareness in skills and lobbying government for better regulations in land transaction both at 44.6 per cent.

Figure 9.13: How Professional Bodies can Serve BEPs Better (%)

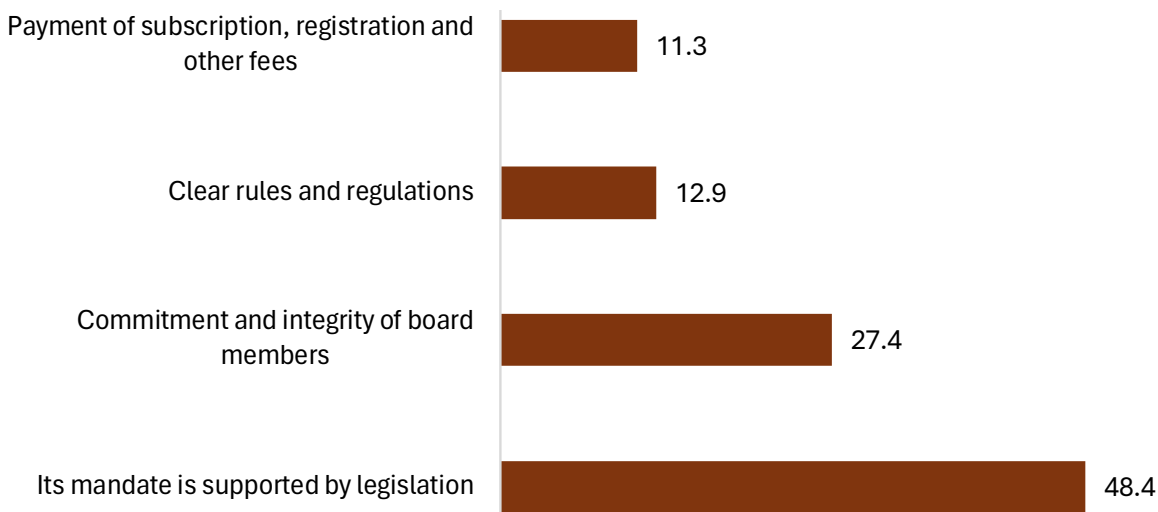


9.13 Effectiveness of Registration Boards for BEPs

Registration Boards within the construction and building industry assist in regulating the registered professionals through training, registration and enhancement of discipline and ethical practices among members. Out of the professionals who took part in the survey, 70.8 per cent reported that their registration boards are effective

in enforcement of regulations and discipline. This is on account of their mandates being supported by relevant legislations (48.4%), commitment and integrity of board members (27.4%) as well as having in place clear rules and regulations (12.9%) as shown in figure 9.14.

Figure 9.14: Reasons for Effective Registration Boards (%)



Among the BEPs who reported that their registration boards were not effective, 41.9 per cent believe strengthening enabling institutional and legal frameworks (41.9%) and integrity of board members (9.7%) are the surest ways to enhance effectiveness of their registration boards as shown in Figure 9.15.

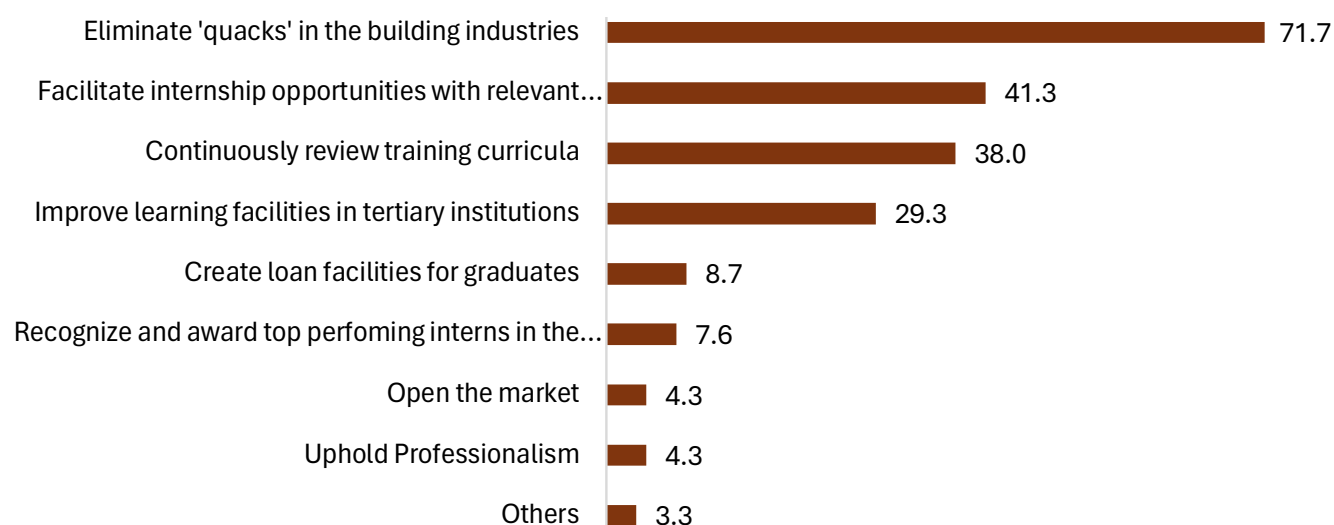
Figure 9.15: Measures to Enhance Effectiveness of Registration Boards of BEPs (%)



To better the performance of the professionals in the housing sector and support housing development, the survey sought to establish what can be done to help housing sector professionals deliver better in housing production. As shown in figure 9.16, instilling professionalism through elimination of unqualified

professionals/ quacks (71.7%), offering internship opportunities to junior professionals (41.3%) and continuous review of the training curricula (38.0%) would equip professionals with the necessary skills and knowledge to deliver on housing

Figure 9.16: Ways to improve service delivery of housing sector professionals (%)

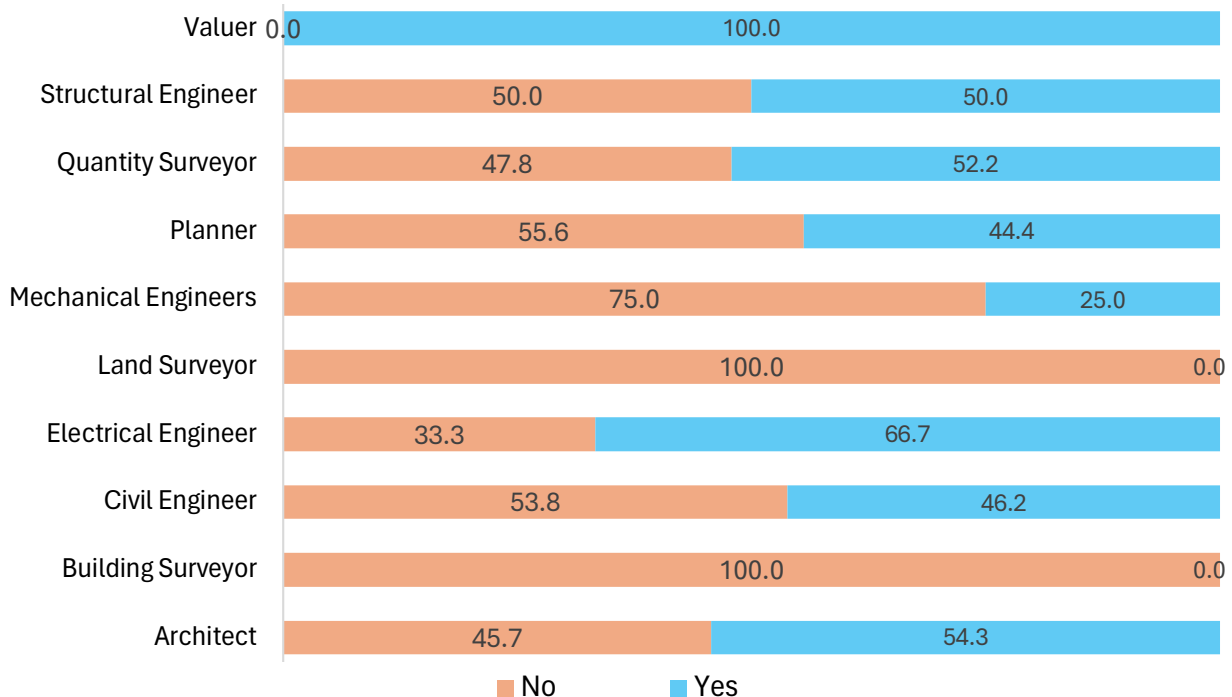


9.14 Professional Fees Structure and Indemnity Cover

Indemnity cover is designed to protect professionals and businesses from financial losses due to claims made against them for negligence, errors, or omission in the provision of their services. The survey sought to know the proportion of professionals who take indemnity cover

to cushion themselves from losses occasioned by the above-mentioned factors. The survey results show that all valuers who were enumerated have indemnity cover while none of Land Surveyors and Building Surveyors have indemnity cover as indicated in figure 9.17.

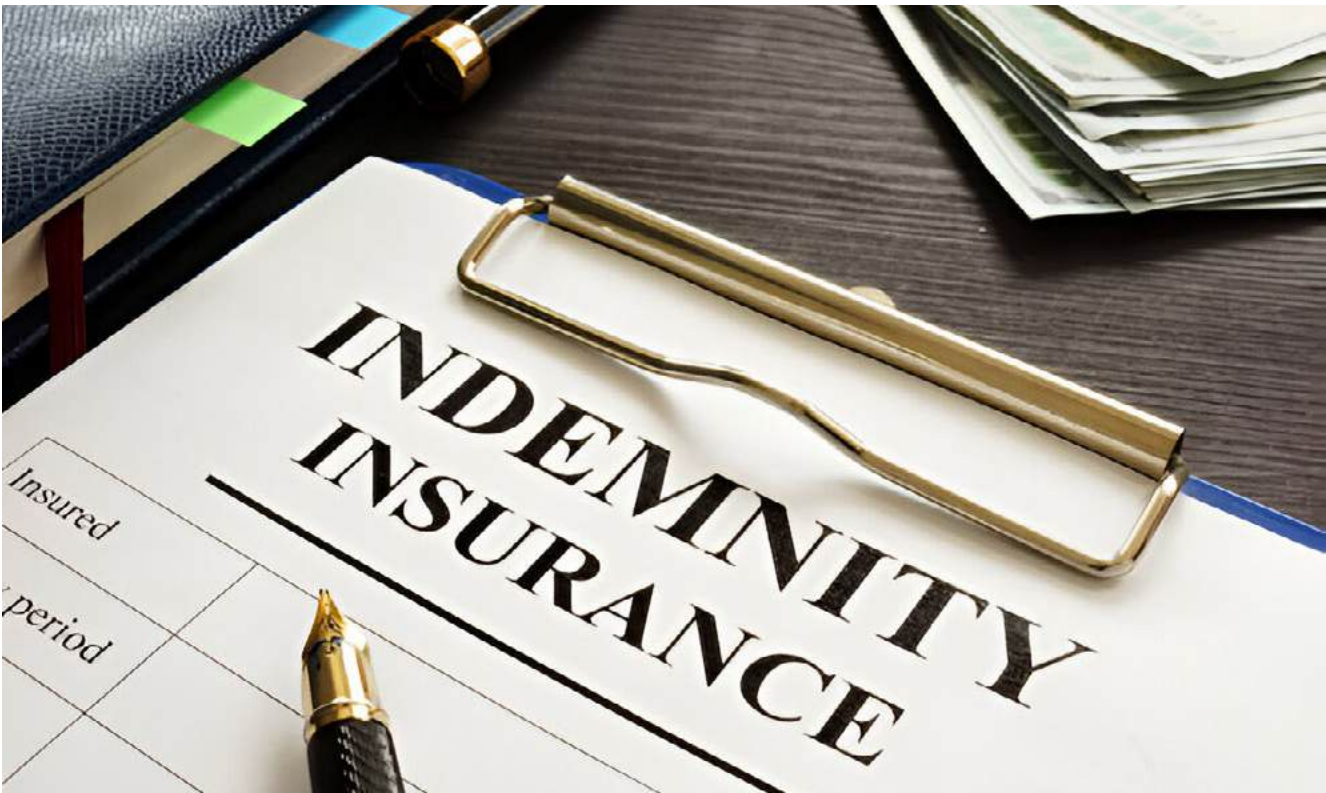
Figure 9.17: Proportion of BEPs with Indemnity Cover



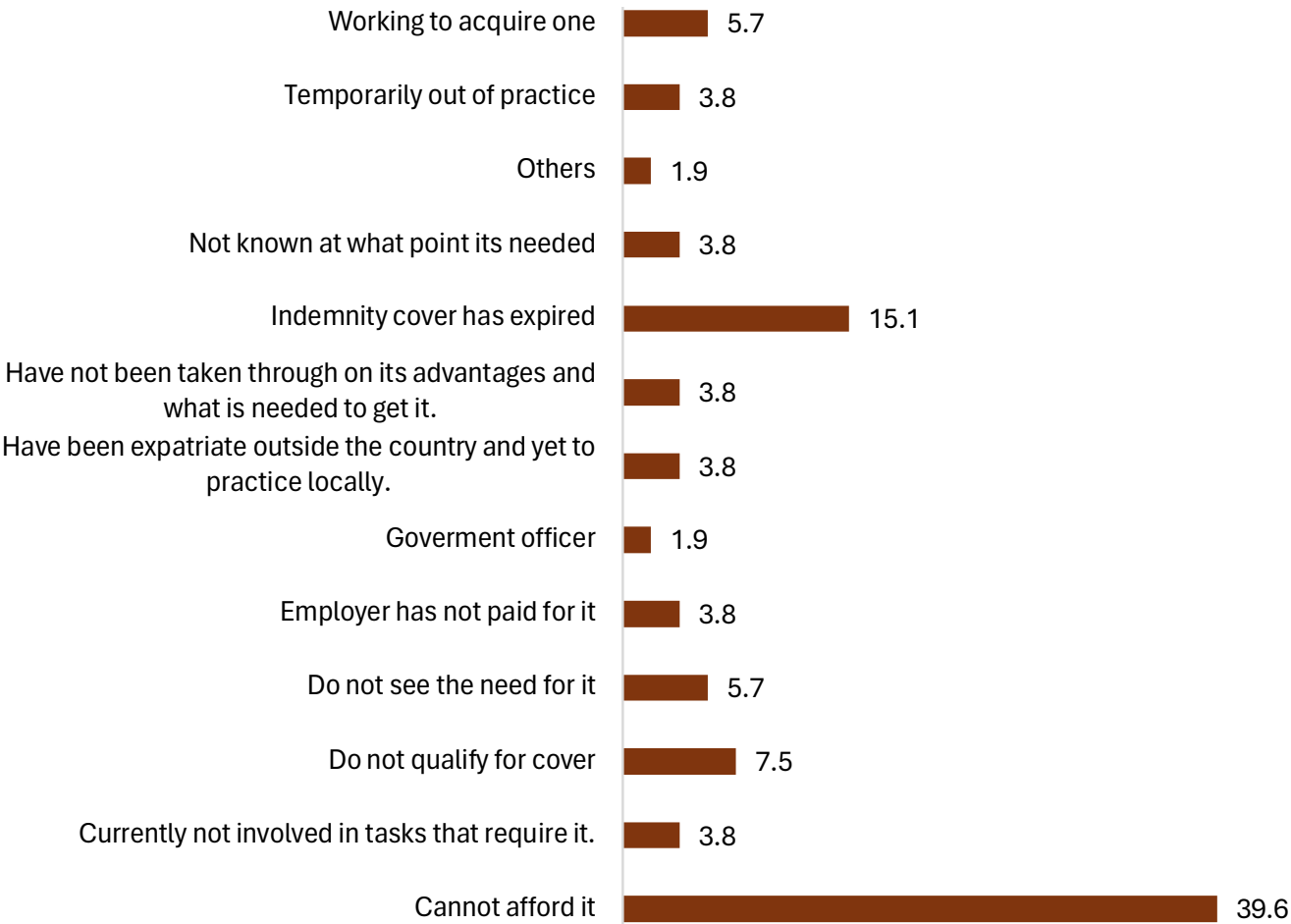
The Built Environment Professional who did not have indemnity cover highlighted various reasons. The most common reason that BEPs gave for not taking indemnity cover lack of affordability (39.6%). Other reasons include expiry of existing cover (15.1%), lack of qualification for the cover (7.5%) while 5.7 per cent of BEPs indicated they are working to acquire one.



Indemnity cover is designed to protect professionals and businesses from financial losses due to claims made against them for negligence, errors, or omission in the provision of their services.



9.18: Barriers to Indemnity Cover Adoption among Built Environment Professionals

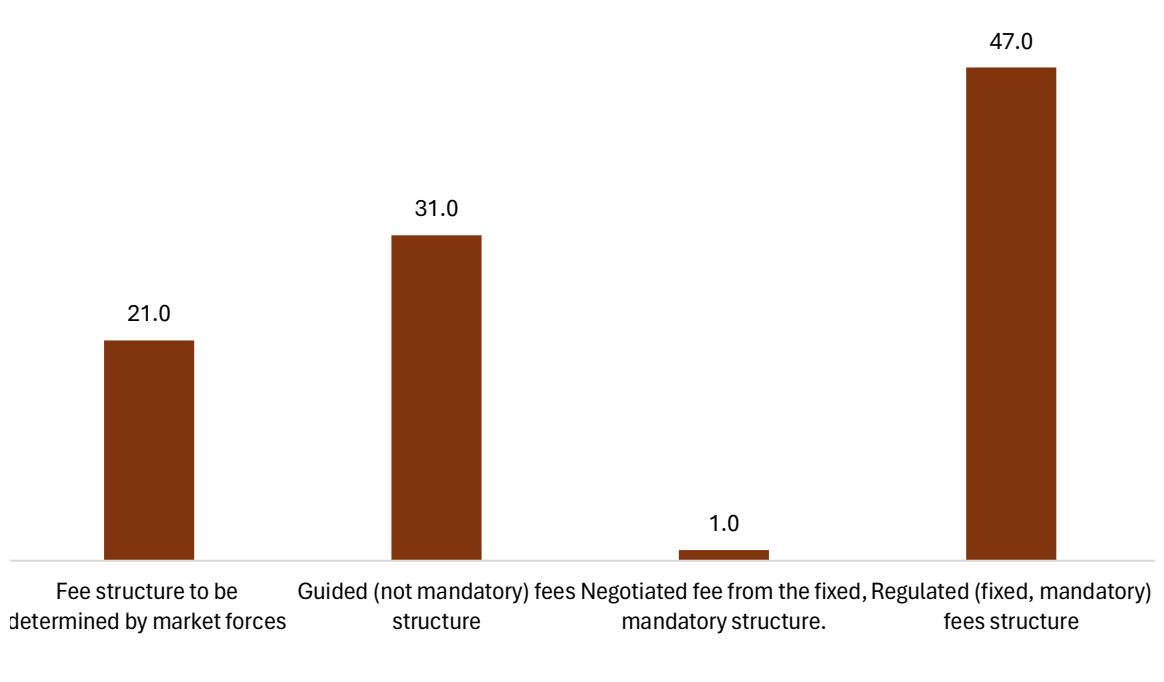


9.15 Preferred Fee Structure

A professional fee is payment made to experts for their services and reflects the cost of their expertise, time and efforts in delivering a specialized service. The 2023/2024 KHS sought to establish the preferred fee structure by Built Environment Professionals. As shown in figure 9.19, 47.0 per cent of BEPs prefer regulated (fixed,

mandatory) fee structure, 31.0 per cent prefer guided (not mandatory) fee structure while 21.0 per cent prefer a fee structure where the fee is determined by market forces. A paltry 1.0 per cent prefer negotiated fee from fixed, mandatory structure.

Figure 9.19: Distribution of Built Environment Professionals by Preferred Fee Structure (%)





CHAPTER 10



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Institutional and Regulatory Framework

Key Findings



- ✓ Counties recorded Housing Building Plan Approvals rate of 99.6 per cent in 2023, an improvement from the 81.2 per cent recorded in 2022.



- ✓ The number of applications for change of user from residential to other uses increased by 13 per cent to 2,300 in 2023.



- ✓ The total number of slums across the country stands at 392 with 38.1 per cent of the counties reporting the existence of slums within their jurisdictions.



- ✓ The most significant intervention by counties in improving informal/slum settlements is regularization of tenure as indicated by 90.9 per cent of the responses by the counties.



- ✓ There were 6,994 housing construction license applications to NEMA with 5,472 of them (78.2 per cent) getting approval in 2023. In 2022, NEMA received a total of 7,186 license applications countrywide, out of which 5,472 (74.3 per cent) applications were approved and licensed.



- ✓ A total of 142,290 land transfer applications were received across the country in 2023. Out of these applications received, 120,370 were successfully processed, indicating an overall processing rate of approximately 84.60 Per cent.



- ✓ Samburu, Laikipia and Trans Nzoia processed all land transfer applications received in 2023.

10.1 Introduction

The high rate of urbanization in Kenya has led to increased demand for housing development, and real estate activities. This necessitates the need for a robust legal and institutional framework in order to realize the right to adequate housing as enshrined in Article 43 (1b) of the Constitution of Kenya (CoK) 2010. This chapter presents information on land use planning, development control and professionals therein, housing development, and allocation of resources for housing.



10.2 County Governments

10.2.1 Housing Building Plan Approval

Development control encompasses both procedural framework and operational necessity in overseeing physical developments across urban, semi-urban, and rural areas, as stipulated by the Physical and Land Use Planning Act 2019, Urban Areas and Cities Act, 2011, and the County Governments Act, 2012. These Acts require that all physical developments acquire development permits, which may be sought by individuals, groups, or corporate entities.

These regulatory frameworks aim to ensure orderly physical and land use development, optimal land use, protect and conserve the environment, enhance land administration, and uphold health and safety standards. Moreover, regulatory bodies generate revenue through their oversight of development activities.

Development of formal housing, especially in urban and semi-urban areas, plays a crucial role in economic activities. Developers are required to apply for development approvals and follow the approved project plans on land designated for housing. This process includes zoning land for residential purposes and other uses, securing the required approvals, and executing projects in accordance with the development control

plans.

The survey collected data from County Governments on the number of applications and approvals for building plans, change of user, and extension of user. The survey observed that development control by county governments emphasize the coordination of the housing building plan approval process. This includes managing applications for changes in land use, extensions of existing uses, and addressing various challenges in development control. Effective development control ensures that urban growth is managed sustainably and efficiently, benefiting both the community and the environment.

In total, 11,142 and 15,436 applications for approval of building plans were made across the country in 2023 and 2022, respectively. A total of 12,356 and 13,347 applications were approved in 2023 and 2022, respectively, as shown in Table 10.1. Nairobi City County government received and approved the highest number of applications for building plans (3,312) in 2022. Machakos county government received and approved the highest number of applications, that is, 1,600 and 1,500 respectively, in 2023.



Table 10.1: Number of Building Plans Applications Received and Approved

County	Number of Building Plans Applications received		Number of Building Plans Approved	
	2022	2023	2022	2023
Mombasa	695	762	450	600
Kwale	..	..	..	..
Kilifi	9	..	..	686
Tana River	..	..	..	..
Lamu	70	80	60	70
Taita-Taveta	..	..	..	..
Garissa	53	47	40	32
Wajir	21	23	21	14
Mandera	6	4	5	4
Marsabit	3	3	3	3
Isiolo	16	13	12	10
Meru	34	18	34	18
Tharaka-Nithi	121	143	113	137
Embu	176	161	150	139
Kitui	40	50	40	50
Machakos	1,100	1,600	1,030	1,500
Makueni	180	200	162	181
Nyandarua	376	296	323	268
Nyeri	256	229	256	229
Kirinyaga	170	173	150	167
Murang'a	400	500	392	490
Kiambu	..	..	830	1,256
Turkana	33	39	30	38
West Pokot	21	30	21	28
Samburu	12	10	16	17
Trans Nzoia	90	59	90	59
Uasin Gishu	937	788	937	788
Elgeyo-Marakwet	51	44	48	44
Nandi	54	98	36	67
Baringo	90	110	85	100
Laikipia	235	261	225	250
Nakuru	1,168	636	968	577
Narok	264	194	258	186
Kajiado	661	483	610	470
Kericho	2,022	30	10	15
Bomet	40	45	40	45
Kakamega	523	592	523	592
Vihiga	404	284	381	269
Bungoma	296	326	296	326
Busia	394	462	372	401
Siaya	58	71	..	60
Kisumu	522	684	519	592
Homabay	240	300	240	300
Migori	168	202	159	192
Nyamira	115	132	100	126
Nairobi City	3,312	960	3,312	960
Total	15,436	11,142	13,347	12,356

.. Data not available

Information on building plan approval by type of building is presented in Table 10.2. Survey results show that approval for applications received for the category "Housing Only" were the highest in 2022 and 2023, accounting for 61.4 per cent and 67.9 per cent, respectively.

Table 10.2: Building Plans Applications Received and Approved by Building Type

	"Building applications received"		"Building applications approved"	
	2022	2023	2022	2023
Total (Number)	15,436	11,142	13,347	12,356
Housing Only	61.4	67.9	53.0	57.8
Commercial Only	15.2	16.8	13.8	13.5
Warehousing	3.0	3.4	2.7	2.8
Others	8.0	11.1	7.5	8.5
Mixed Use	12.5	0.8	23.0	17.4

10.2.2 Digitization of Building Applications

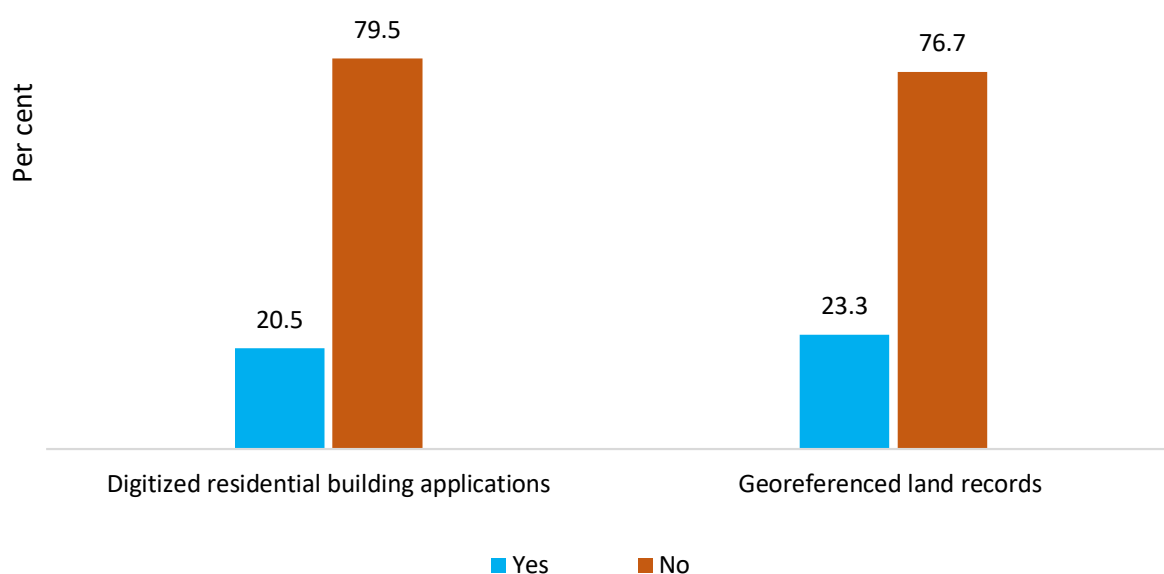
The digitization of building applications ensures modernizing and streamlining of the construction and development approval processes. It has the potential

to increase productivity, increase efficiency, improve service provision, and enable a more sustainable building application process. Digitization of the application and approval process also enhances accountability, transparency, and accessibility.

The Land Act of 2012 requires that all land be georeferenced and authenticated. Georeferencing enables accurate property identification and registration of land titles. It also helps with identification of property for valuation and laying out of service infrastructure such as water and sewerage systems, and roads. Georeferenced maps also eliminate the disparity that usually appears between sizes of parcels of land laid on the ground and those stated on title deeds.

The survey collected data from county governments on digitization of building applications and georeferencing of land records. As shown in Figure 10.1, 20.5 per cent of the counties reported that they have digitized residential building applications while 23.3 per cent of counties have georeferenced land records.

Figure 10.1: Proportion of Counties that have Digitized Residential Building Applications and Georeferenced Land Records

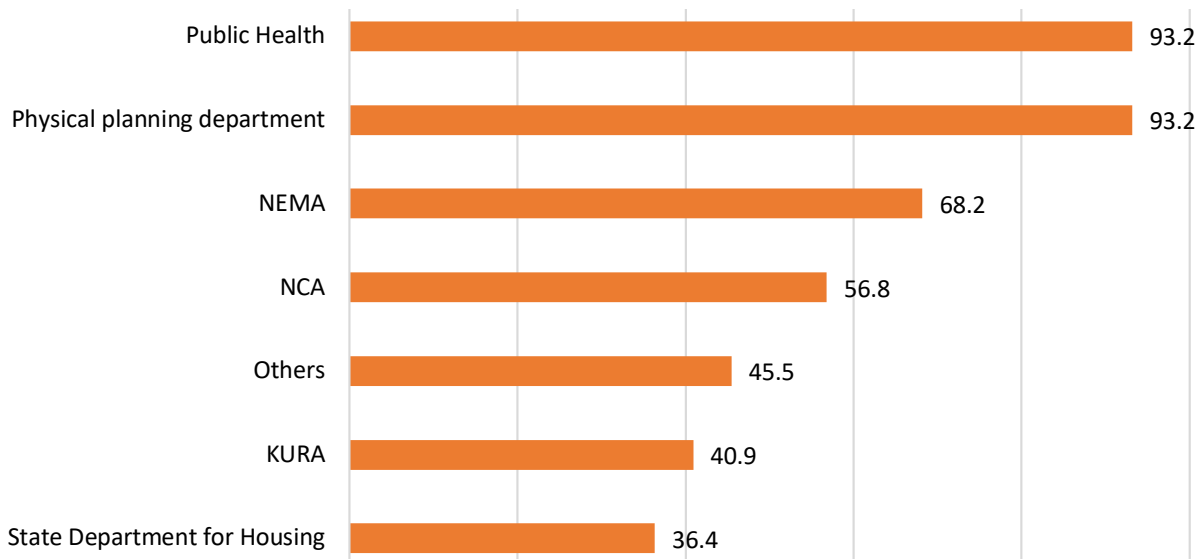


10.2.3 Institutions consulted by County Governments for Residential Building Applications

An effective institutional and regulatory framework is crucial for policy formulation and implementation towards delivery of housing services. County Governments work in collaboration with other Ministries, Departments, and Agencies (MDAs) such as the State Departments for Housing, Public Health, Physical Planning, the National Environmental

Management Authority (NEMA), National Construction Authority (NCA), Kenya Urban Roads Authority (KURA), and others to ensure all applications conditions and considerations are met before any approvals. The Departments for Public Health and Physical Planning Department were consulted by most counties as shown in Figure 10.2.

Figure 10.2: Institutions Consulted in Residential Building Applications by Counties (%)



10.2.4 Duration for Obtaining Building Approvals

County governments are responsible for controlling all types of development within their areas of jurisdiction. When a development application is submitted, it can be approved as presented, approved with conditions requiring amendments to architectural designs, or rejected for specific reasons such as conflict over ownership or existing Zoning regulations, use of unregistered professionals, failure to clear annual land rates, or others. Survey findings indicate that county Governments take between 1 and 50 days to approve building plans. Thirty counties took 14 days and below to grant building approval as shown in Table 10.3.

Table 10.3: Duration for Obtaining Building Approvals

County	Number of days		Number of days
Mombasa	30	Samburu	5
Kwale	..	Trans Nzoia	30
Kilifi	30	Uasin Gishu	7
Tana River	..	Elgeyo-Marakwet	30
Lamu	30	Nandi	14
Taita-Taveta	14	Baringo	6
Garissa	4	Laikipia	21
Wajir	14	Nakuru	50
Mandera	7	Narok	30
Marsabit	1	Kajiado	14
Isiolo	7	Kericho	7
Meru	10	Bomet	3
Tharaka-Nithi	14	Kakamega	30
Embu	14	Vihiga	14
Kitui	14	Bungoma	5
Machakos	14	Busia	14
Makueni	30	Siaya	14
Nyandarua	21	Kisumu	30
Nyeri	21	Homabay	4
Kirinyaga	14	Migori	14
Murang'a	30	Nyamira	4
Kiambu	30	Nairobi City	14
Turkana	3	Total	16
West Pokot	2	.. Data not available	

10.2.5 Reasons for Rejecting Building Approval

The survey sought to find out reasons why county governments reject applications for housing developments as shown in Figure 10.3. The most common reason for rejecting approval for housing development was conflict over land ownership at 81.8 per cent. Other common reasons for rejecting approval are conflict with existing zoning regulations and use of unregistered professionals, each at 77.3 per cent. The plot ratio and lack of adequate services ranked lowest in the list of reasons at 63.6 per cent for rejecting approvals.



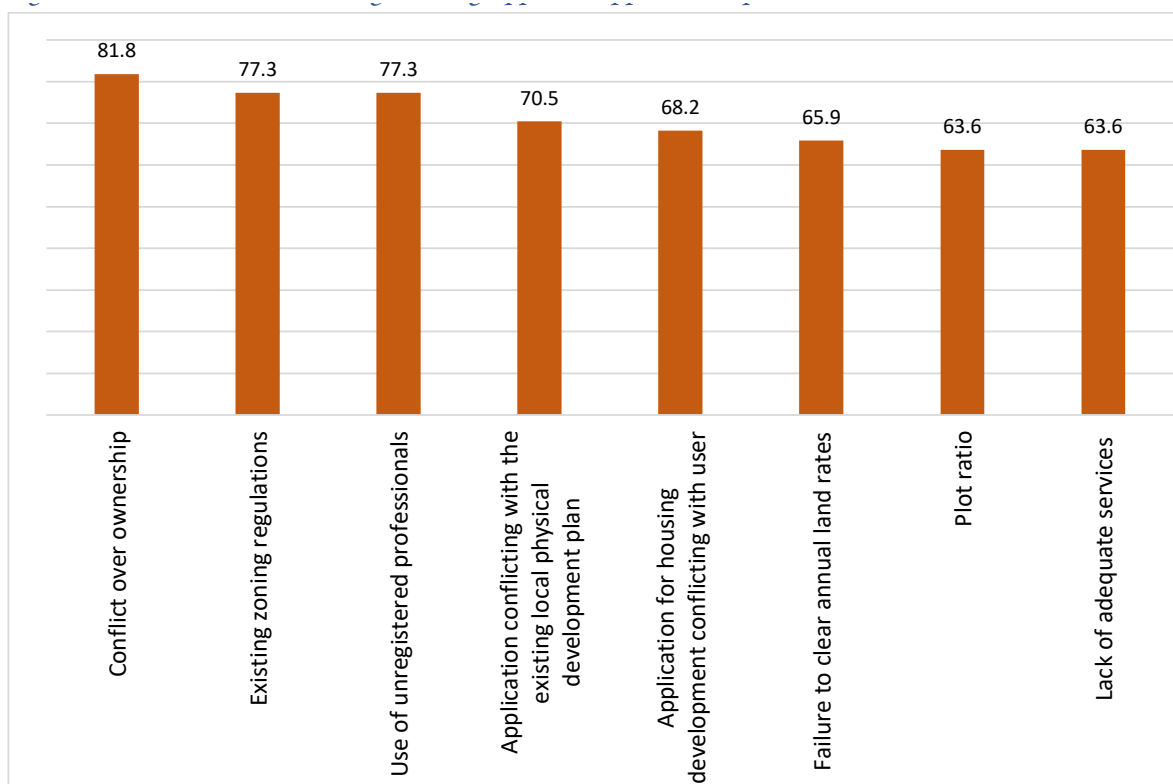
81.8%

Housing development approvals were declined due to conflict over land ownership.

77.3%

Other common reasons for rejecting approval are conflict with existing zoning regulations and use of unregistered professionals.

Figure 10.3: Reasons for Rejecting Building Approval Applications (%)

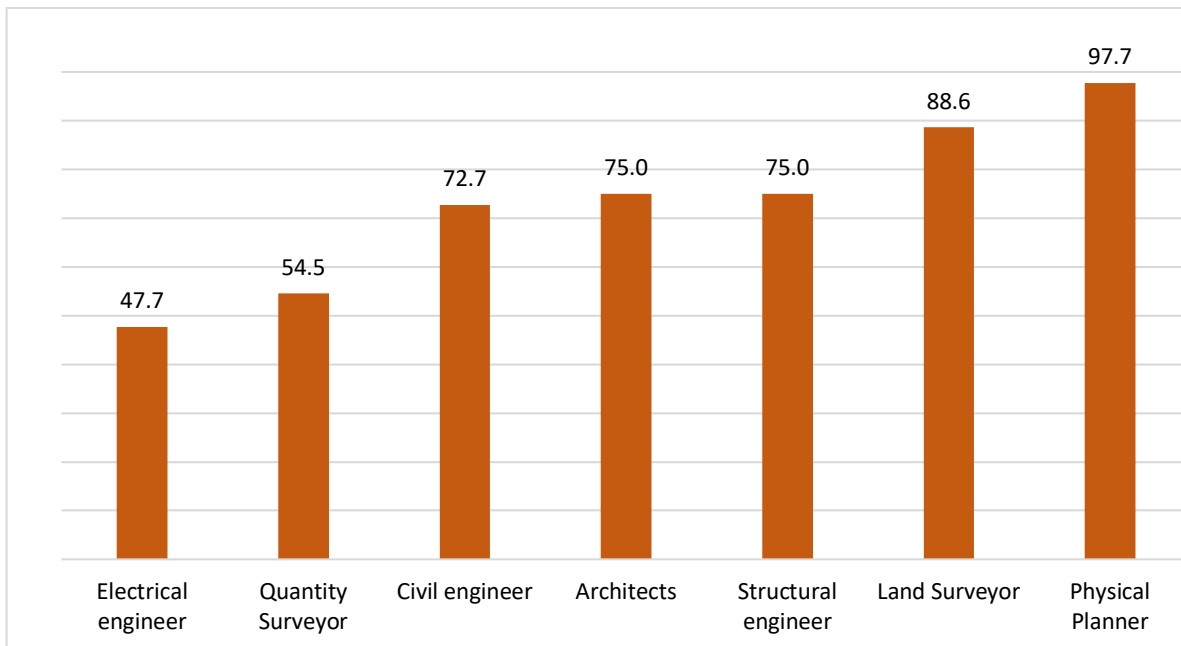


10.2.6 Built Environment Professionals at County Governments

The building construction industry is a wide industry that encompasses many professionals. These professionals in the county governments are responsible for ensuring developers maintain adequate standards and review building or planning permit applications. The survey sought to establish whether county governments have the required built environment professionals.

The findings of the survey in Figure 10.4 indicate that 97.7 per cent of the counties have physical planners, 88.6 per cent have land surveyors, 75.0 per cent have structural engineers and architects. In addition, 72.7 per cent have civil engineers, 54.5 per cent quantity surveyors, and 47.7 per cent electrical engineers amongst their staff.

Figure 10.4: Proportion of Counties with Built Environment Professionals in their Staff Establishment



10.2.7 Approval of Change of User and Extension of User

Article 40 of the Constitution of Kenya, 2010 gives citizens the right to own land or property albeit with certain restrictions, one of them being that the land can only be used for the specific use approved by the authorities in the Local Physical Land Use Development Plans and as stipulated in the ownership documents. The specific uses that are usually approved include residential, commercial, agricultural, industrial, quarry and even national heritage uses. The county governments are responsible for approving change of user. This involves the change of user of a property from one category to another or the extension of user.

10.2.7.1 Factors considered in approving change of user and extension of user applications.

The survey sought to establish the factors county governments consider when determining approvals for applications for change of user or extension of user. As shown in Figure 10.5, 93.2 per cent of counties consider local physical and land use development plans in determining approvals for the change or extension of user. Further, it is estimated that 90.9 per cent of counties consider area zoning regulations and the existing use of the land before approval of change of user. On the other hand, only 36.4 per cent of counties consider emerging technologies as a determinant in the approval of change of user or extension of user applications.



90.9%

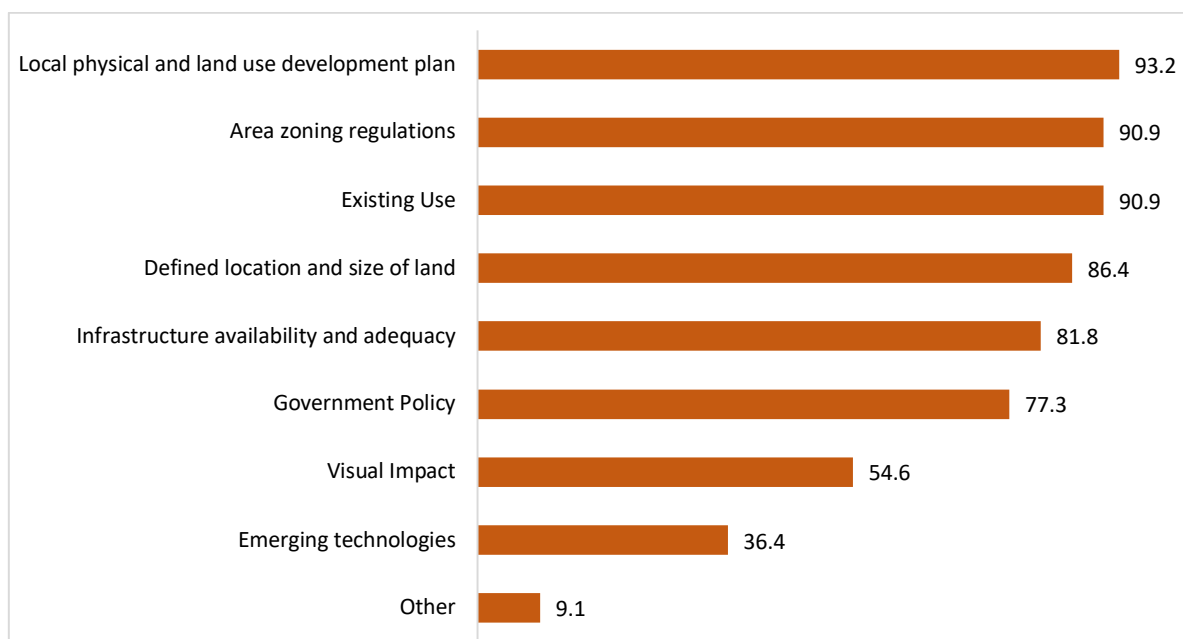
The per centage most counties consider area zoning regulations and the existing use of the land before approval of change of user.



93.2%

Per centage of counties that consider local physical and land use development plans in determining approvals for the change or extension of user

Figure 10.5: Proportion of Counties by Factors Considered in Approving Change of User or Extension of User Applications



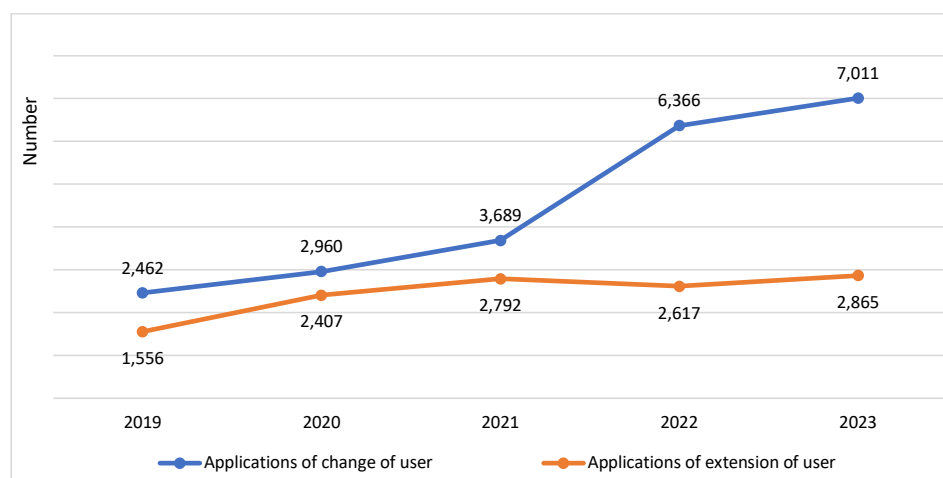
10.2.7.2 Number of Applications for Change of User and Extension of User Received

County Governments are mandated by law to undertake land use plans which entails designating, evaluating, zoning and organizing the present and future use and development of land in all their jurisdiction. The main land uses in Kenya are commercial, residential, industrial and agricultural. The survey sought to establish the number of change of user and extension of user as well as their trends since they affect housing development and delivery.

the applications for change of user and extension of user over the years. The number of change of user applications increased from 2,462 in 2019 to 7,011 in 2023. The number of applications for extension of user increased from 1,556 in 2019 to 2,865 in 2023. Over the reference period, the number of change of user applications has been higher than the number of applications for extension of user. The number of applications for change of user and extension of user by county is indicated in Table 10.4.

Figure 10.6 indicates that there has been an increase in

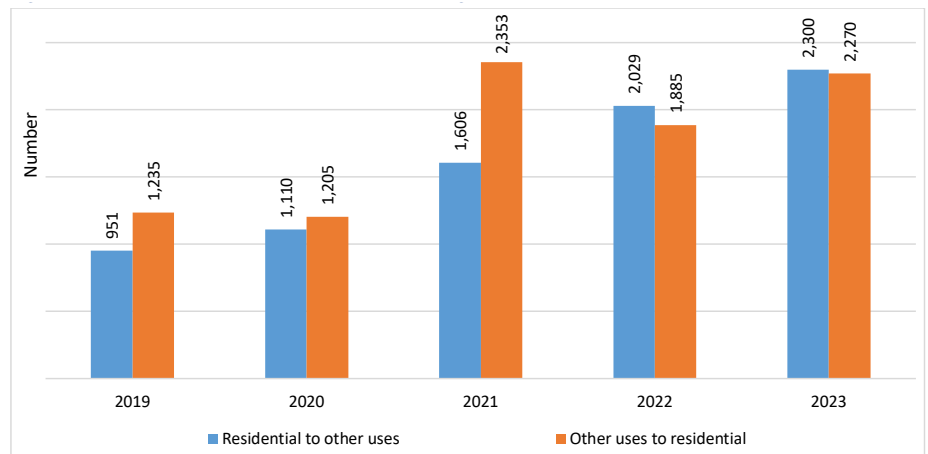
Figure 10.6: Total Number of Applications for Change of User and Extension of User



10.2.7.3 Total Number of Applications for Change of User by Purpose

There have been more applications for change of user from residential to other uses compared to applications for change of user from other uses to residential in 2022 and 2023. (Figure 10.7).

Figure 10.7: Total Number of Applications of Change of User Applications by Purpose



The number of change of user applications

2,462

7,011

2023

2019

2,865

1,556

Applications for extension of user



Table 10.4: Number of Applications Received for Change of User by County

10.2.8 Completion Certificates

This survey sought to understand whether county governments monitor the construction process to completion levels and whether they are satisfied that the plans are implemented as approved.

10.2.8.1 Completion Certificate Applications Received and Completion Certificates Issued by Type of Building

As indicated in Table 10.5, there were a total of 2,990 and 2,930 completion certificates applications in 2022 and 2023, respectively. Out of these applications, a total of 1,750 and 2,137 completion certificates were issued in 2022 and 2023, respectively. Most completion certificate applications received and issued were for residential housing only, followed by commercial buildings.



2,137

The number of completion certificates issued in 2023.

Table 10.5: Number of Completion Certificate Applications Received and Issued, by Type of Building

	Number of completion certificate applications received		Number of completion certificates issued		Proportion of completion certificates issued	
	2022	2023	2022	2023	2022	2023
Number						
Commercial Only	351	546	288	347	82.1	63.6
Housing Only	2,263	1,768	1,145	1,380	50.6	78.1
Mixed Use	214	429	204	327	95.3	76.2
Warehousing	162	187	113	83	69.8	44.4
Total	2,990	2,930	1,750	2,137	58.5	72.9
Proportion						
Commercial Only	11.7	18.6	16.5	16.2		
Housing Only	75.7	60.3	65.4	64.6		
Mixed Use	7.2	14.6	11.7	15.3		
Warehousing	5.4	6.4	6.5	3.9		
Total	100.0	100.0	100.0	100.0		
Mixed Use	12.5	0.8	23.0	17.4		
Total	100.0	100.0	100.0	100.0		

10.2.8.2 Completion Certificate Applications Received and Issued by County

Machakos, Homa Bay, and Nairobi City counties received most of the applications with 1500, 520, and 428 applications, respectively in 2023 as indicated in Table 10.6. The number of completion certificates issued in both years is highest in the same counties.



Table 10.6: Completion Certificate Applications Received and Issued, by County

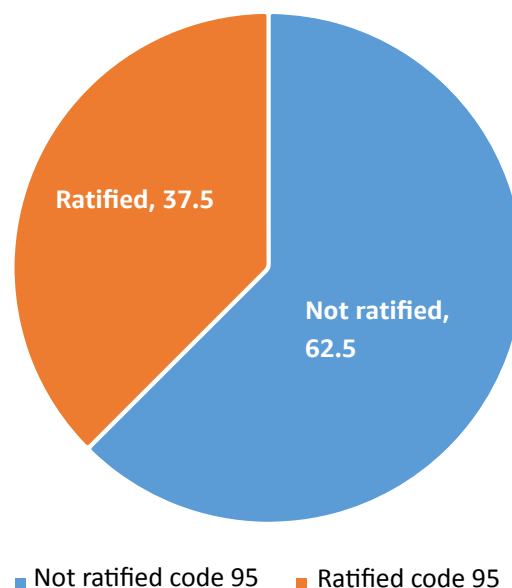
	Number of completion certificate applications received		Number of completion certificates issued	
	2022	2023	2022	2023
Mombasa	..	..	..	..
Kwale	..	..	..	..
Kilifi	..	..	..	..
Tana River	14	23	10	20
Lamu	..	..	..	..
Taita-Taveta	..	..	..	..
Garissa	..	..	..	..
Wajir	..	..	..	..
Mandera	1	2	1	2
Marsabit	..	..	..	..
Isiolo	1	..	1	..
Meru	34	18	34	18
Tharaka-Nithi	..	..	..	..
Embu	..	..	..	..
Kitui	7	7	7	7
Machakos	1,030	1,500	331	720
Makueni	..	..	..	..
Nyandarua	..	..	..	..
Nyeri	..	..	..	..
Kirinyaga	1	2	..	..
Murang'a	..	..	..	..
Kiambu	..	..	..	..
Turkana	23	29	23	29
West Pokot	..	..	..	..

	Number of completion certificate applications received		Number of completion certificates issued	
	2022	2023	2022	2023
Samburu	..	..	..	..
Trans Nzoia	61	46	131	141
Uasin Gishu	..	..	..	..
Elgeyo-Marakwet	48	44	42	55
Nandi	96	164	65	147
Baringo	..	..	..	..
Laikipia	..	..	..	..
Nakuru	..	..	..	..
Narok	..	..	..	..
Kajiado	71	73	70	73
Kericho	3	6	3	3
Bomet	25	26	20	25
Kakamega	..	..	..	..
Vihiga	..	..	..	..
Bungoma	30	39	30	39
Busia	..	..	..	..
Siaya	..	..	..	..
Kisumu	..	..	..	..
Homabay	400	520	384	519
Migori	..	..	..	..
Nyamira	12	3	12	3
Nairobi City	1133	428	586	336
Total	2,990	2,930	1,750	2,137
.. Data not available				

10.2.9 Ratification of Building Code

Development in the building industry is a dynamic process. With passage of time, new materials and technologies become available, design methods are refined and innovative building systems and technologies are introduced. As a result, Code 95 was introduced in 1995 to promote housing standards and procedures, promote cost effective buildings, promote innovative designs, encourage use of local materials and put emphasis on performance rather than specific construction materials and therefore these by-laws play a critical role in the built environment. As shown in Figure 10.8, only 37.5 per cent of counties have ratified Code 95.

Figure 10.8: Proportion of Counties that have Ratified Building Code 95 (revised building by-laws)

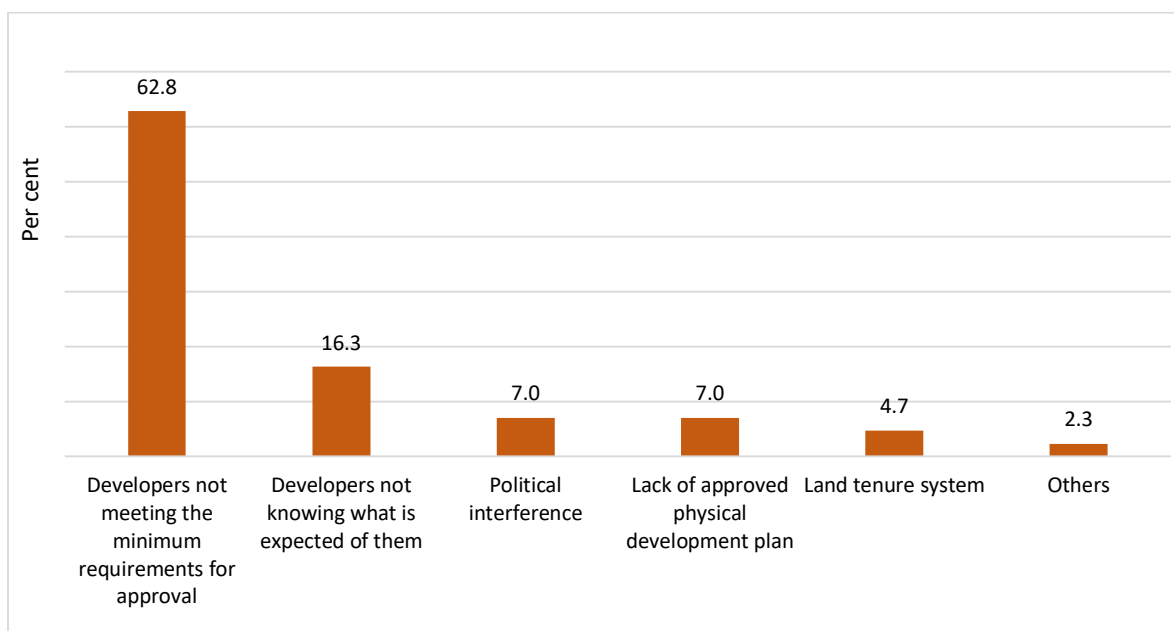


10.2.10 Challenges in Building Approval Process

County governments recognize the importance of supporting housing development in meeting housing needs of the increasing population. The survey findings highlight the main challenges counties face while approving applications for residential development. As shown in Figure 10.9, 62.8 per cent of counties identified

'developers not meeting the minimum requirements for approval' as the most significant challenge. A further 16.3 per cent of the counties identified failure by 'developers to know what is expected of them' in applications for approvals as a challenge in approval process.

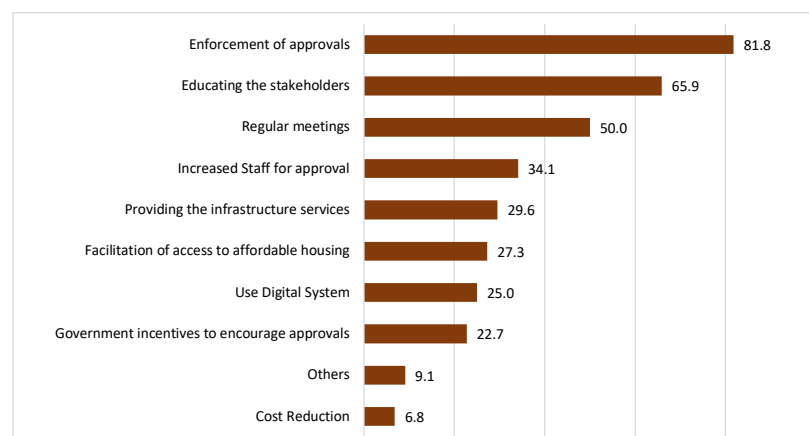
Figure 10.9: Main Challenges Encountered by Counties in Residential Building Approvals process



10.2.11 Measures to Address Challenges in Approval of Residential Buildings

The survey sought to find the use of various measures to address challenges faced by counties in approving residential building applications. About 82 per cent of counties reported enforcement of approvals as a measure to address these challenges. Stakeholder education and holding regular meetings were cited by 65.9 per cent and 50.0 per cent of counties, respectively as measures put in place to address the challenges they face while approving applications for buildings. (Figure 10.10)

Figure 10.10: Proportion of Counties by Measures put in place to Address Challenges in Residential Buildings Approval



10.2.12 Slum/Informal Settlements Improvement

Slums/informal settlements are usually a product of inadequate housing due to rapid rural to urban migration, economic stagnation, high unemployment rate and poor planning among others. The total number of slums reported across the counties stand at 392 as shown in Table 10.7, with 38.1 per cent of the counties reporting the existence of slums within their jurisdictions.

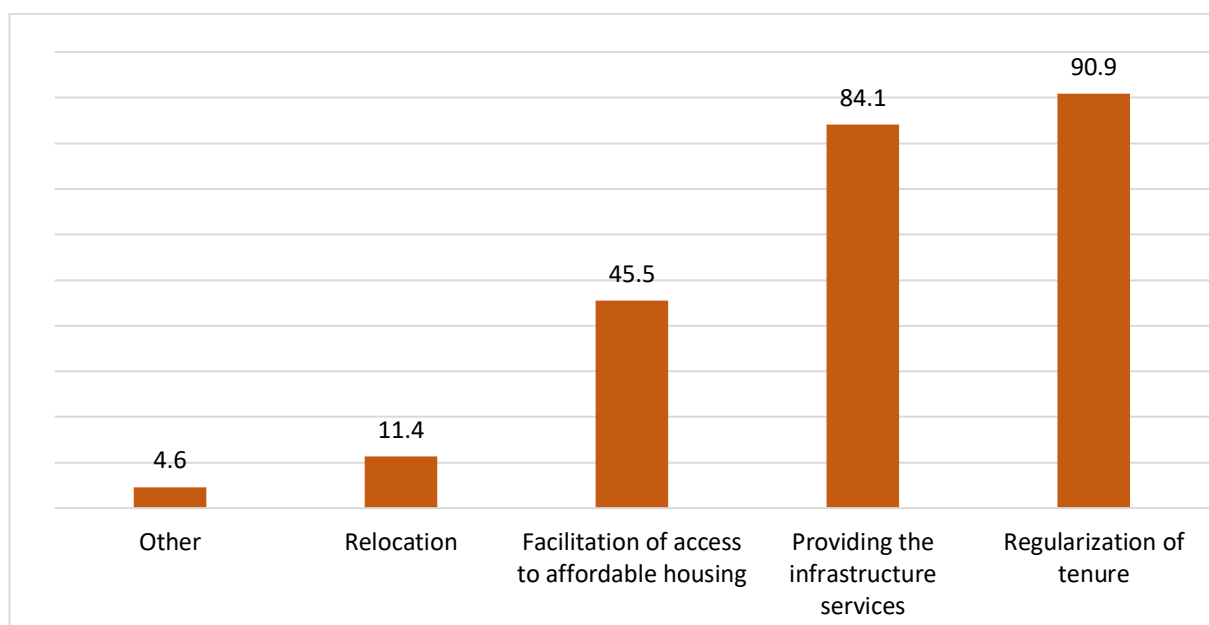
Table 10.7: Proportion of Counties with Informal Settlements/Slums, and their Number by Type of Jurisdiction Area

Jurisdiction Area	Proportion of counties with informal settlements/slums	Number of informal settlements/ slums
Market Centre	30.6	183
Town	30.6	34
Municipality	76.3	154
City	13.5	21
Total	38.1	392

Figure 10.11 shows the measures taken by counties to improve informal/slum settlements. The most significant intervention by counties in improving informal/slum settlements is regularization of tenure as indicated by 90.9 per cent of the responses by the counties.

The main target of regularization of tenure is usually unallocated public land, such as untitled land. 84.1 per cent of counties provide infrastructure services to slums and informal settlements as a way of improving those areas, 45.5 per cent of the counties facilitate housing while 11.4 per cent relocate the slum residents.

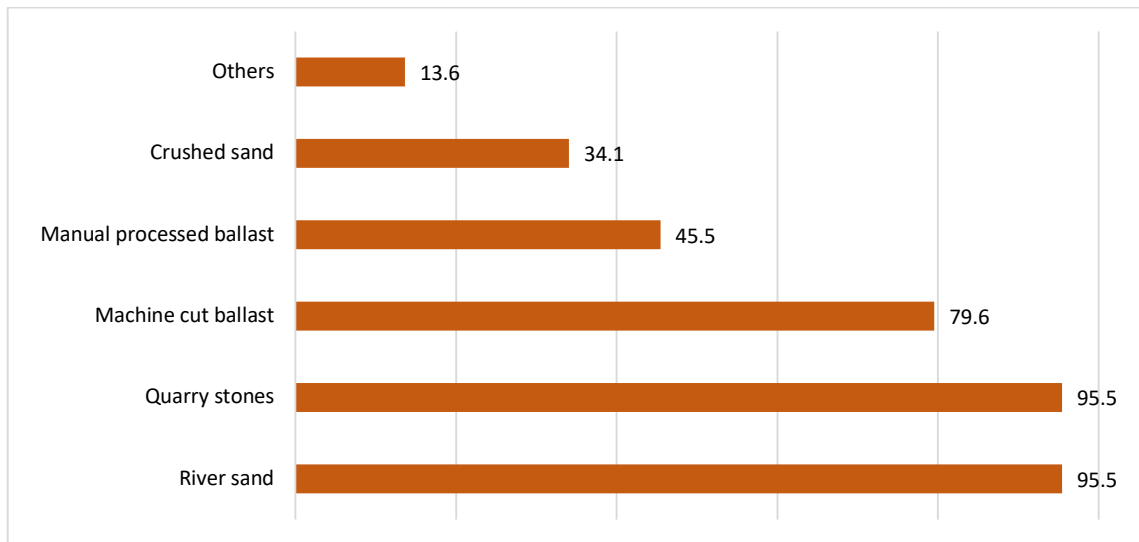
Figure 10.11: Proportion of Counties by Measures Taken to Improve Informal/Slum Settlements



10.2.13 Raw Materials for Foundation and Walling

The survey sought to find out the type of raw materials used at counties for foundation and walling. As seen in Figure 10.12 below, 95.5 per cent of the counties responded that river sand and quarry stones are the most used raw materials

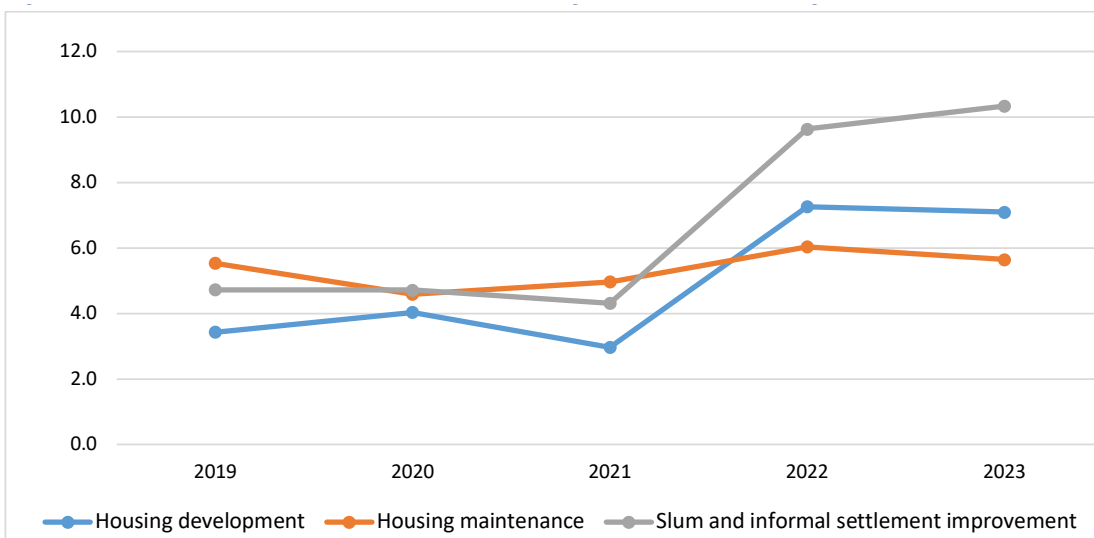
for foundation and walling. Further, 79.6 per cent of counties reported that the use of machine cut ballast, 45.5 per cent use manual processed ballast and 34.1 per cent use crushed sand as raw materials for foundation and walling.

Figure 10.12: Proportion of Counties Raw materials Commonly Used for Foundation and Walling

10.2.14 County Government Budget Devoted to Housing

The survey sought to establish the proportion of the county governments' budget that is devoted to development and maintenance of county housing stock as well as improving the informal/slum settlements. Budgetary allocation for housing development and slum and informal

settlement improvement has more than doubled from 2019 with an allocation of 3.4 per cent and 4.7 per cent, respectively to 7.1 per cent and 10.3 per cent, respectively in 2023 as indicated in Figure 10.13. No substantial change in budgetary allocation was recorded for housing maintenance.

Figure 10.13: Proportion of County Government Budget Devoted to Housing

10.2.15 Local Physical and Land Use Development Plans

The Physical and Land Use Planning Act, 2019 defines local physical and land use development plans as plans for the area or part thereof of a city, municipality, town or urban center and includes a plan with reference to any rural area, trading or market center. These jurisdiction areas are required to follow the regulations stipulated in the Physical and Land Use Planning Act, 2019 when coming up with their development plans.

Table 10.8 shows the number of local physical and land use development plans developed by various jurisdiction areas vis a vis the development that have been approved. Out of the total 794 development plans, only 348 of them have been approved, which is less than half of them. Towns have the most development plans at 630 with only 235 of them having been approved.

Table 10.8: Number of Local Physical and Land Use Development plans by jurisdiction area

Jurisdiction Area	Total number of local physical and land use development plans	Number of approved local physical and land use development plans
Town	630	235
Municipality	116	86
City	48	27
Total	794	348

Table 10.9 presents the number of local physical and land use development plans by jurisdiction area and county. The towns in Baringo County reported to have the most development plans with a total of 145. All the city development plans were approved except for Nairobi which had 126 development plans and 79 were approved.



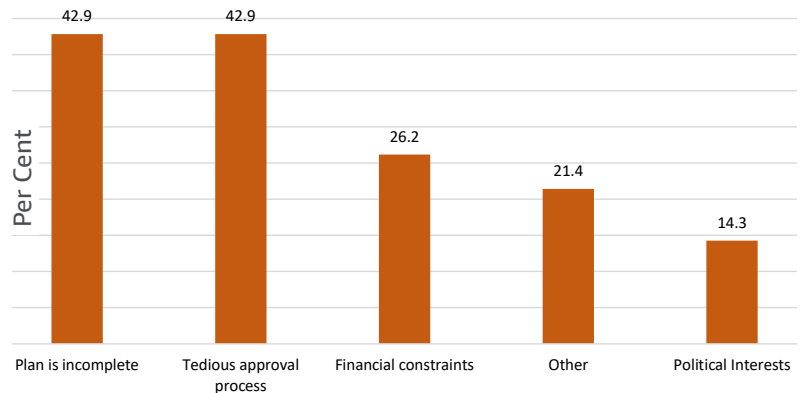
Table 10.9: Number of Local Physical and Land Use Development Plans by Jurisdiction Area and County

	Town		Municipality		City	
	Total number of local physical and land use development plans	Number of approved local physical and land use development plans	Total number of local physical and land use development plans	Number of approved local physical and land use development plans	Total number of local physical and land use development plans	Number of approved local physical and land use development plans
Mombasa	..	..	..	..	..	..
Kwale	..	..	..	..	..	..
Kilifi	30	5	5	5	..	..
Tana River	..	..	..	..	..	..
Lamu	..	..	1	1	..	..
Taita-Taveta	3	3	1	1	..	..
Garissa	8	..	5	..	..	..
Wajir	7	..	1	1	..	..
Mandera	3	1	..	..	..	..
Marsabit	2	2	4	2	..	..
Isiolo	..	..	7	1	..	..
Meru	..	..	..	..	..	..
Tharaka-Nithi	1	1	1	1	..	..
Embu	..	..	..	..	..	..
Kitui	..	..	2	2	..	..
Machakos	20	20	4	4	..	..
Makueni	23	23	2	2	..	..
Nyandarua	4	..	1	..	..	..
Nyeri	..	..	..	..	..	..
Kirinyaga	..	..	..	..	..	..
Murang'a	3	..	1	..	..	..
Kiambu	..	..	..	..	..	..
Turkana	7	..	2	..	..	..
West Pokot	15	3	2	..	..	..
Samburu	30	5	1	1	..	..
Trans Nzoia	73	24	1	1	..	..
Uasin Gishu	30	17	1	1	..	..
Elgeyo-Marakwet	67	7	1	1	..	..
Nandi	1	..	2	1	..	..
Baringo	145	20	1	1	..	..
Laikipia	40	11	2	2	..	..
Nakuru	29	29	4	2	1	1
Narok	11	11	2	2	..	..
Kajiado	5	5	3	3	..	..
Kericho	4	2	2	2	..	..
Bomet	4	4	5	5	..	..
Kakamega	3	3	2	2	..	..
Vihiga	..	..	..	..	..	..
Bungoma	10	1	2	2	..	..
Busia	10	10	2	2	..	..
Siaya	..	4	..	3	..	..
Kisumu	..	..	..	..	1	1
Homabay	1	1	3	2	..	..
Migori	..	..	..	..	..	..
Nyamira	3	1	1	1	..	..
Nairobi City	..	..	..	..	126	79
Total	592	213	74	54	128	81
.. Data not available						

10.2.16 Reasons for Low Approval of Local Physical and Land Use Development Plans

Counties provided reasons for low approval rates of development plans. Incomplete and tedious approval processes were each cited by 42.9 per cent while financial constraints were cited by 26.2 per cent of counties. Political interests were cited by 14.3 per cent of counties as a reason for not approving development plans as shown in Figure 10.14.

Figure 10.14: Reasons Why Counties do not Approve Local Physical and Land use Development Plans



10.2.17 Area of Approved Development Plans

The survey sought to determine the area of planned land as well as land designated for residential purposes and their approval status as at 2024. Figure 10.15 below shows the reported area of land in hectares that has been approved for local physical and land use development plans and residential land use by jurisdiction. For towns, 1,731,500 hectares of the land planned for local physical and land use development plans have been approved

and 67,500 hectares were approved for residential land use. For cities, 29,700 hectares of the land planned for local physical and land use development plans and 9,700 hectares of land planned for residential land use was approved. For municipalities, 307,700 hectares of the land planned for local physical and land use development plans and 180,900 hectares of land planned for residential land use was approved.

Figure 10.15: Area of Approved Local Physical and Land Use Development Plans and Residential land use by jurisdiction

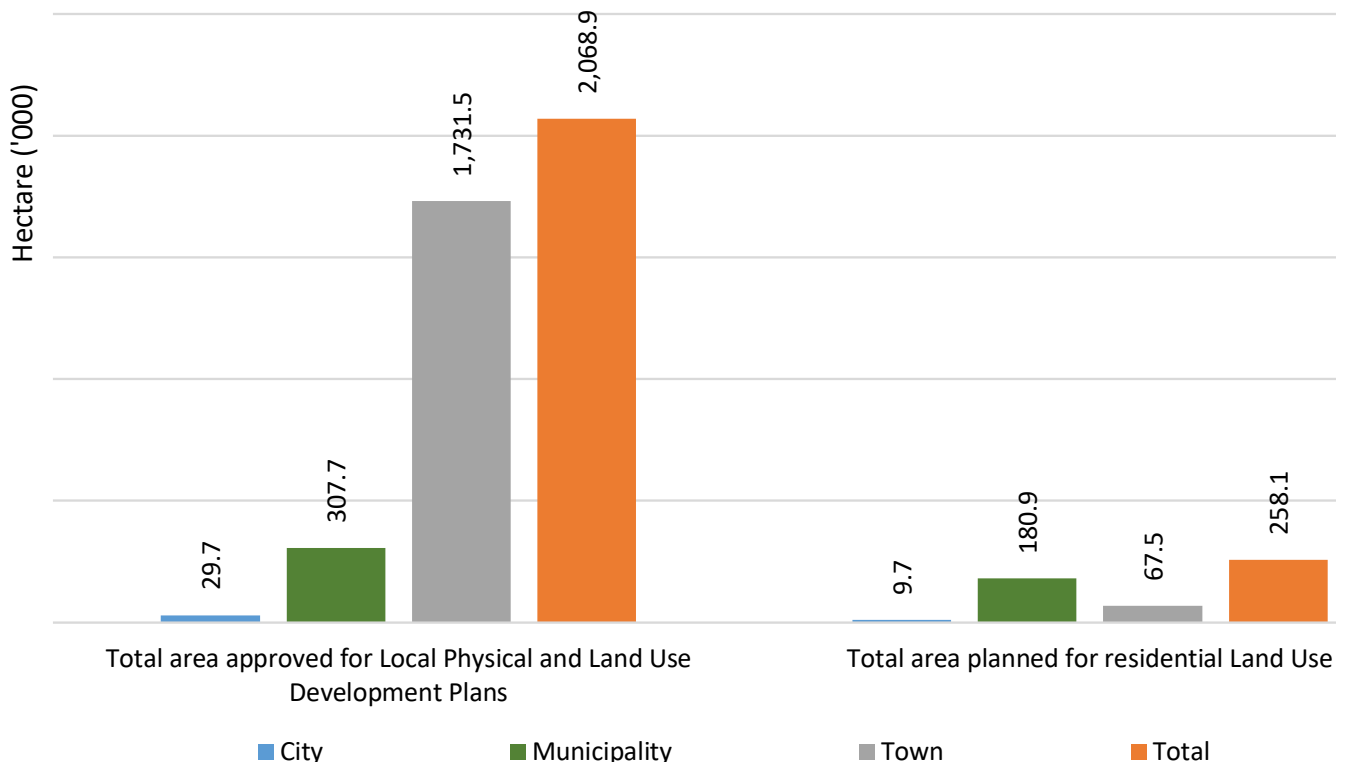
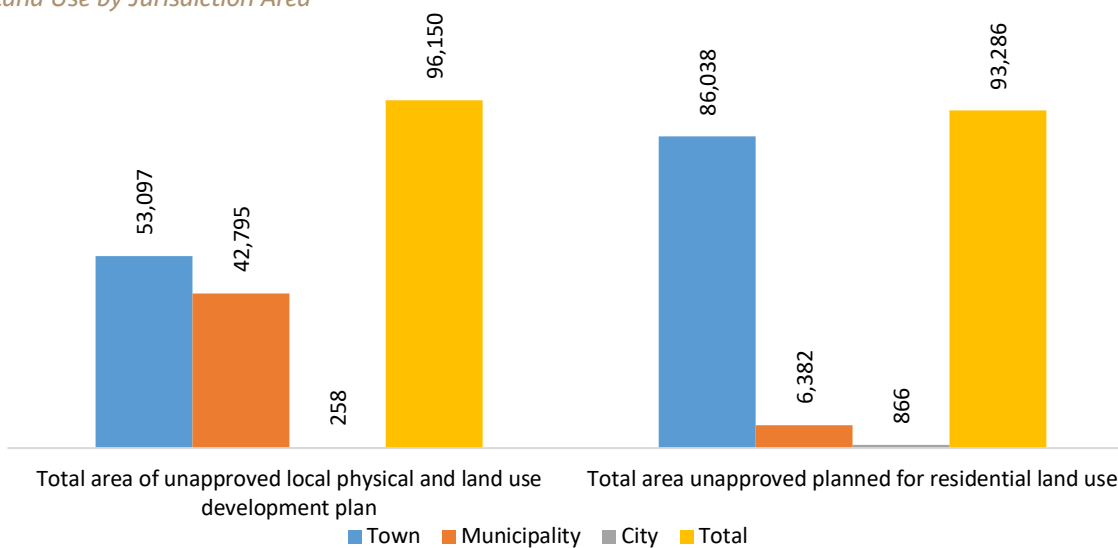


Figure 10.16 shows the area of land in hectares that has not been approved for local physical and land use development plans and residential land use. For towns, 53,097 hectares of the land planned for local physical and land use development plans and 86,038 hectares of land planned for residential land use was unapproved. For municipalities, 42,795 hectares of the land planned for local physical and land use development plans while 6,382 hectares of land planned for residential land use was unapproved. For cities, 258 hectares

of the land planned for local physical and land use development plans and 866 hectares of land for residential land use was unapproved. For municipalities, 42,795 hectares of the land planned for local physical and land use development plans while 6,382 hectares of land planned for residential land use was unapproved.

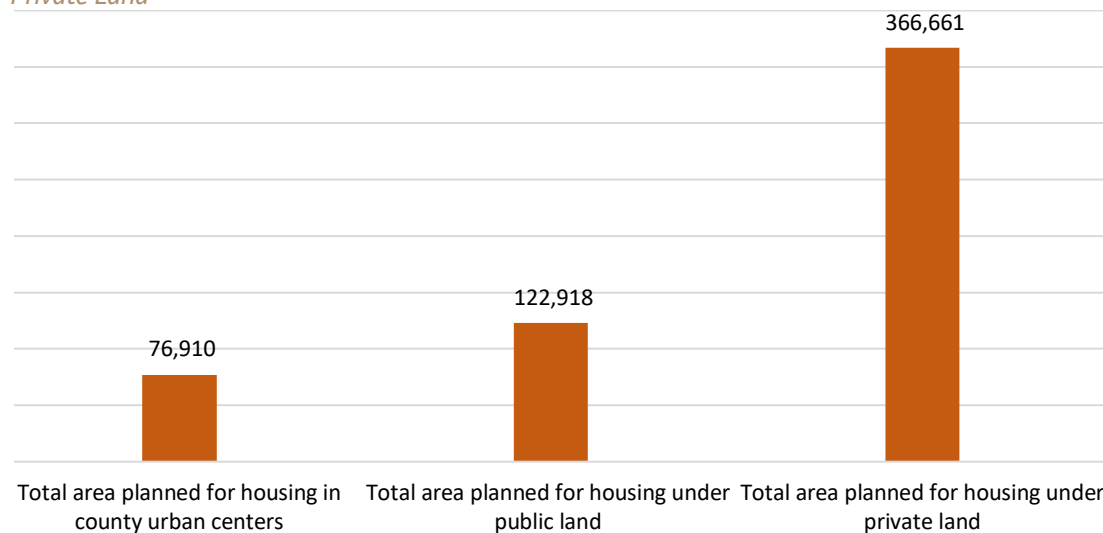
Figure 10.16: Area of Unapproved Local Physical and Land Use Development Plans and Residential Land Use by Jurisdiction Area



10.2.18 Area Planned for Housing

Figure 10.17 shows the total area of land that has been planned for housing in urban centers, under public and private land. Private land has the most hectares planned for housing at 366,661 hectares followed by public land at 122,918 hectares. The land in urban centers planned for housing stood at 76,910 hectares.

Figure 10.17: Total Area (hectares) Planned for Housing in County Urban Centers, Under Public and Private Land

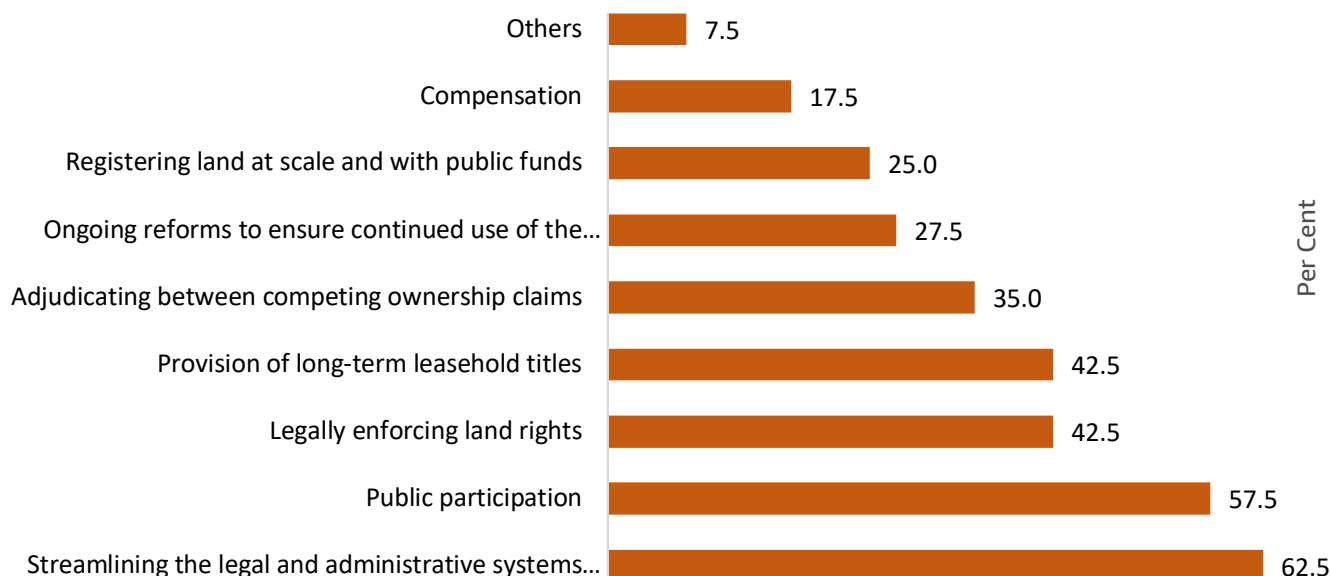


10.2.19 Freehold Titles and Residential Housing Development in Urban Areas

Freehold land is land that is held in perpetuity and is free from any holding charges. However, ownership of freehold land does not mean that the owner can carry out unplanned development. It is therefore the duty of the county governments to release any freehold land for the purpose into which owners intend to use it for. In this survey, county governments were asked the steps they have taken to release urban land under freehold title for residential housing development. As can be seen in Figure 10.18, 62.5 per cent of counties are streamlining the legal and

administrative systems that govern land as a way of releasing the land under freehold title. 57.5 per cent of counties have taken the public participation route. 42.5 per cent of counties provide long-term leasehold titles and legally enforce land rights in order to release urban land under freehold for residential housing development. 35.0 per cent of counties take the step of adjudicating disputes over ownership claims. Only 17.5 per cent of counties report that they compensate land owners in a bid to release the urban freehold land for housing development.

Figure 10.18: Steps taken by county governments to facilitate release of urban land under freehold title for residential housing development



366,661
hectares

Private land that
has been planned
for housing

122,918
hectares

Public land that
has been planned
for housing

10.2.20 Control measures for development in areas planned for residential housing development

It is no secret that some areas that have been set aside for residential housing development have been used for other purposes. This not only disrupts the local physical and land use development plans of the jurisdiction area, but it also reduces land meant for housing development. This survey sought to find out the measures counties are planning to take to curb this problem. Table 10.10 shows

that 83.3 per cent of counties plan to regulate development on land. 81.0 per cent of counties plan to prepare development control tools such as area zoning and transportation planning and granting development approval or rejection. Only 38.1 per cent of counties plan to do environmental audits and monitoring to control developments in areas meant for residential housing.



Table 10.10: Measures Taken by County Governments to Control Development in Areas Planned for Residential Housing Development

No.	Measure	Per centage
1	Regulate development on land	83.3
2	Preparation of development control tools e.g. Area zoning plans, action plans, transport plans etc	81.0
3	Granting development approval or rejection	81.0
4	Guide development to align to policies, standards and to achieve the desired outcome	78.6
5	Processing Applications	78.6
6	Promoting orderly development and esthetics	76.2
7	Provision and implementation of an approved physical and land use development plan	66.7
8	Managing and coordinating housing development activities within the county	59.5
9	Public participation	57.1
10	Protecting and maintaining space meant for housing development	57.1
11	Optimal usage	50.0
12	Efficiently use of land	50.0
13	Environmental audit and monitoring	38.1
14	Others	2.4

10.3 Water and Sewerage Service Providers

The enactment of the Water Act 2002 created new institutions (water companies) to manage water resources in Kenya. The Companies took over the provision of water and sewerage services from their respective municipal councils and subsequently the Counties after the promulgation of the Constitution of Kenya 2010. Their main mandate is to provide water and sewerage services, and for development and management of the related infrastructure and facilities, within their water supply jurisdiction.

10.3.1 Water Connection

In the year 2023 and 2022 Water and Sewerage Service Providers (WSSPs) in the country received a total of 78,220 and 80,484 water connection applications, respectively as shown in Table 10.11. This comprised a total of 52,774 and 62,328 residential buildings water connection applications for the year 2023 and 2022 respectively and a total of 9,686 and 13,658 mixed use water applications in 2023 and 2022 respectively. WSSPs in Kiambu received more license applications for water connection where a total of 9,592 and 9,877 applications were received in 2023 and 2022, respectively.

Table 10.11: Number of Applications for Water Connections Received in 2022 and 2023 by County and Type of Building

	Number of applications received for water connection		Number of applications received for water connection for residential buildings		Number of applications received for water connection for mixed use buildings	
	2022	2023	2022	2023	2022	2023
Mombasa	1,600	1,820	1,220	1,430	380	450
Kwale	1,518	1,208	1,502	1,168	16	20
Kilifi	3,086	1,757	..	..	..	..
Tana River	160	75	123	65	5	3
Lamu	50	50	40	10	..	..
Taita-Taveta	1,933	1,640	1,754	1,544	179	96
Garissa	300	382	258	320	42	62
Wajir	102	426	102	426	..	..
Mandera	910	840	893	158	684	6
Marsabit	80	200	18	50	..	..
Isiolo	345	457	344	450	1	7
Meru	1,475	1,480	1,212	1,013	255	241
Tharaka-Nithi	1,273	1,069	1,131	218	..	..
Embu	4,491	4,166	4,255	3,971	236	195
Kitui	629	569	371	338	258	231
Machakos	1,132	1,039	797	571	170	152
Makueni	450	420	285	291	..	..
Nyandarua	981	786	803	661	96	89
Nyeri	4,485	5,000	3,725	4,185	304	259
Kirinyaga	1,856	1,302	148	1,158	-	-
Murang'a	7,119	7,059	6,349	5,178	721	842
Kiambu	9,877	9,592	7,202	6,572	2,195	2,227
Turkana	256	576	215	526	41	50
West Pokot	652	232	637	5	..	..
Samburu	180	220	12	28	168	192
Uasin Gishu	2,681	2,682	2,598	2,576	83	106
Elgeyo-Marakwet	8,280	8,580	5,880	6,140	1,200	1,220
Nandi	387	261	327	126	..	..
Baringo	737	833	730	801	7	32
Laikipia	2,963	2,104	2,868	1,139	27	19
Nakuru	3,542	2,802	3,083	2,392	414	395
Narok	58	43	12	9	31	28
Kajiado	479	562	466	533	170	29
Kericho	422	354	275	231	147	123
Bomet	852	767	639	574	213	192
Kakamega	2,148	3,440	1,464	1,814	224	201
Vihiga	..	251	..	250	..	..
Bungoma	1,539	1,448	1,397	1,404	142	38
Busia	397	456	204	351	193	105
Siaya	1,683	979	1,625	939	251	270
Kisumu	2,991	3,440	2,056	977	2	..
Homabay	1,052	352	1,005	227	47	125
Migori	89	786	69	726	20	60
Nairobi City	5,244	5,715	4,234	1,229	4,736	1,621
Total	80,484	78,220	62,328	52,774	13,658	9,686

.. Data not available

10.3.2 Sewer Connection

WSSPs in the country received a total of 12,600 and 12,621 sewer connection applications in the year 2023 and 2022 respectively as shown in Table 10.12. There was a total of 8,552 residential buildings sewer connection applications in the year 2022 and a total of 7,167 mixed use sewer connection applications in 2023.

Table 10.12: Number of Applications Received for Sewer Connection and Proportion of Sewer Coverage by county

	Number of applications received for sewer connection	Number of applications received for sewer connection	Number of applications received for sewer connection for residential buildings	Number of applications received for sewer connection for mixed use buildings	Per centage of sewer coverage	Per centage of sewer coverage
	2022	2023	2022	2023	2022	2023
Mombasa	5	101	5	4	29.0	31.0
Kwale	..	..	..	..	..	..
Kilifi	..	..	..	..	..	..
Tana River	..	..	..	..	..	..
Lamu	..	..	..	..	..	..
Taita-Taveta	..	2	..	..	..	2.0
Garissa	53	44	53	44	26.0	25.0
Wajir	..	..	..	..	..	..
Mandera	..	..	..	..	..	..
Marsabit	..	..	..	..	..	..
Isiolo	27	24	20	6	18.0	21.0
Meru	9	11	9	1	2.3	2.3
Tharaka-Nithi	..	..	..	..	..	..
Embu	1,817	543	1,705	47	14.0	14.0
Kitui	3	4	1	3	2.5	2.5
Machakos	113	123	74	18	7.9	9.9
Makueni	..	..	..	..	..	..
Nyandarua	495	224	297	104	..	..
Nyeri	801	813	461	515	20.3	21.3
Kirinyaga	..	..	..	..	..	..
Murang'a	400	510	100	300	4.8	5.0
Kiambu	601	1,531	374	718	3.6	18.3
Turkana	..	..	..	..	..	..
West Pokot	..	..	..	..	..	..
Samburu	..	..	..	..	..	..
Uasin Gishu	180	200	162	20	32.0	32.0
Elgeyo-Marakwet	1,200	1,220	..	..	..	..
Nandi	11	13	9	9	1.0	1.0
Baringo	..	..	..	..	..	..
Laikipia	406	408	246	55	25.0	25.0
Nakuru	651	702	447	235	19.3	20.7
Narok	62	51	4	6	1.0	2.0
Kajiado	..	..	..	..	..	..
Kericho	120	70	80	20	17.0	17.0
Bomet	120	130	90	98	15.0	17.0
Kakamega	200	312	140	148	6.5	7.0
Vihiga	..	..	..	..	..	..
Bungoma	..	..	..	..	..	..
Busia	36	32	22	15	2.0	2.0
Siaya	12	16	10	9	4.0	4.0
Kisumu	77	103	27	50	62.3	62.3
Homabay	30	28	14	16	47.0	52.0
Migori	..	..	..	..	..	..
Nairobi City	5,192	5,385	4,202	4,726	27.5	34.0
Total	12,621	12,600	8,552	7,167	8.6	10.3

.. Data not available

10.3.3 Plans to increase water and sewerage coverage to residential neighbourhoods

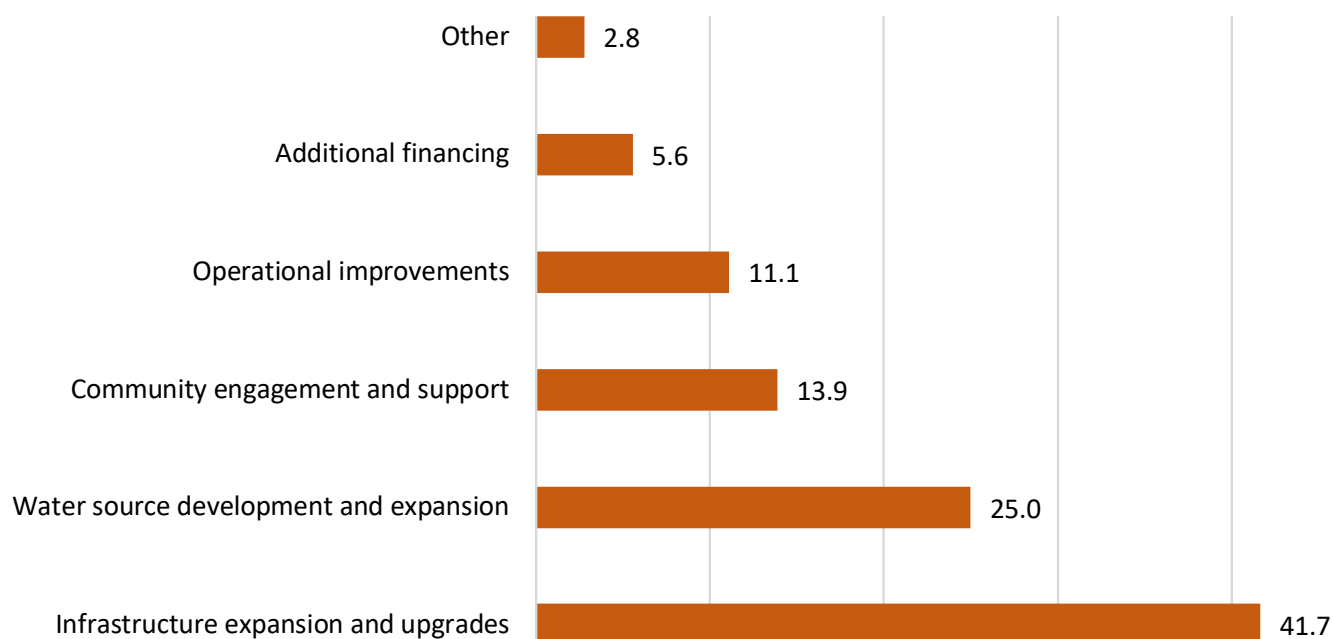
An increase in water and sewerage coverage in residential areas is instrumental in improving the quality of lives of the population. Therefore, increase of water and sewerage is of paramount importance to WSSPs and this survey explores the plans they have put in place to achieve this goal.

10.3.3.1 Plans to increase water coverage

Survey findings indicate that 41.7 per cent of WSSPs chose to expand and upgrade infrastructure, 25.0 per cent will use water source development and expansion, 13.9 per cent plan to rely on community engagement and support and 11.1 per cent of WSSP plan to improve their operations in order to increase water coverage. Only 5.6 per cent of WSSP have additional financing as part of their plans to increase water coverage. This is shown in Figure 10.19.



Figure 10.19: Plans to increase water coverage, per cent

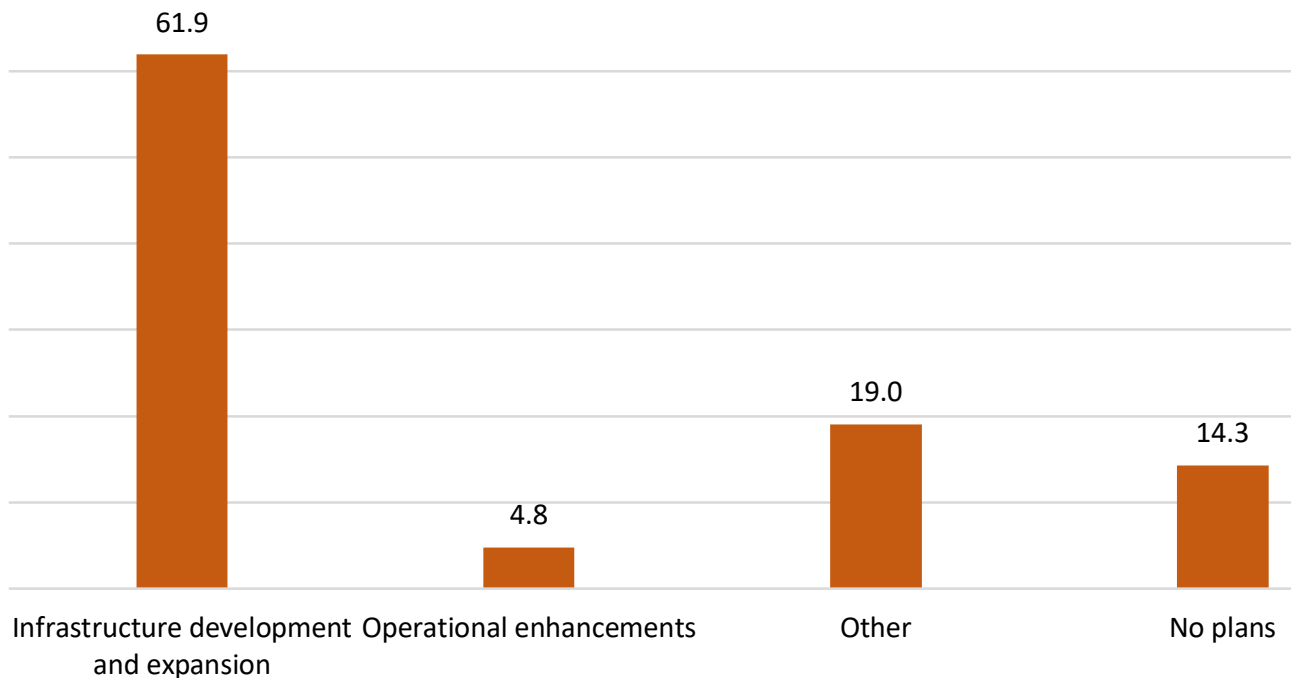


10.3.3.2 Plans to increase sewer coverage

To increase sewer coverage, 61.9 per cent of WSSPs planned to use infrastructure development and expansion while 4.8 per cent plan to use operational enhancements.

However, 14.3 per cent of WSSPs reported that they have no plans put in place to increase sewer coverage as shown in figure 10.20.

Figure 10.20: Plans by Water and Sewerage Service Providers to increase sewer coverage, per cent



10.3.4 Time taken and cost for residential and water connection.

Table 10.13 shows that the charges for water connection were different for various providers per county. The average cost for water and sewer connection was KSh 6,473 and KSh 6,085, respectively. Machakos County has the highest cost for water connection at KSh 21,700 while Meru has the highest cost for sewer connection at KSh 25,133. On the other hand, the cost for water and sewer connection is lowest in Wajir and Mombasa

Counties at KSh 1,000 and KSh 1,900, respectively.

The survey result shows that once an application has been made and all the requirements are met it takes counties an average of 2 and 6 days to connect sewerage and water, respectively. However, across counties it takes between 1 day and 24 days to connect water and between 1 day and 21 days to connect sewerage.



Table 10.13: Time Taken and Cost for Residential Water and Sewer connection

	Time taken to get water connection (Days)	Time taken to get sewer connection (Days)	"Cost for water connection (KSh)"	"Cost for sewer connection (KSh)"
Mombasa	5	5	2,500	1,900
Kwale	10	..	10,000	..
Kilifi	5	..	10,000	..
Tana River	2	..	5,000	5,000
Lamu	3	..	5,000	..
Taita-Taveta	21	21	2,500	2,500
Garissa	7	7	2,500	3,000
Wajir	1	..	1,000	..
Mandera	8	..	12,000	..
Marsabit	4	..	8,700	..
Isiolo	3	3	5,200	2,500
Meru	5	2	2,500	25,133
Tharaka-Nithi	10	..	10,000	12,100
Embu	2	..	12,470	5,000
Kitui	18	11	15,500	13,500
Machakos	4	3	21,700	10,800
Makueni	5	..	13,000	..
Nyandarua	5	1	11,000	7,500
Nyeri	7	2	2,500	2,500
Kirinyaga	11	..	10,000	..
Murang'a	8	0	2,500	2,500
Kiambu	4	3	2,500	5,000
Turkana	3	..	2,000	..
West Pokot	3	..	3,200	..
Samburu	2	..	4,500	..
Uasin Gishu	14	3	5,000	5,000
Elgeyo-Marakwet	5	..	4,000	..
Nandi	14	1	5,715	2,500
Baringo	6	..	2,600	..
Laikipia	5	8	10,004	5,634
Nakuru	4	6	5,585	5,313
Narok	5	7	5,000	5,000
Kajiado	3	0	6,695	..
Kericho	3	1	5,000	5,000
Bomet	24	3	2,500	2,500
Kakamega	7	4	1,600	2,500
Vihiga	7	..	5,000	..
Bungoma	7	7	5,000	7,500
Busia	1	1	2,000	5,500
Siaya	7	7	5,000	7,500
Kisumu	3	3	12,550	5,000
Homabay	2	2	5,000	5,000
Migori	1	..	8,800	..
Nairobi City	7	4	10,000	7,500
Total	6	2	6,473	6,085
.. Data not available				

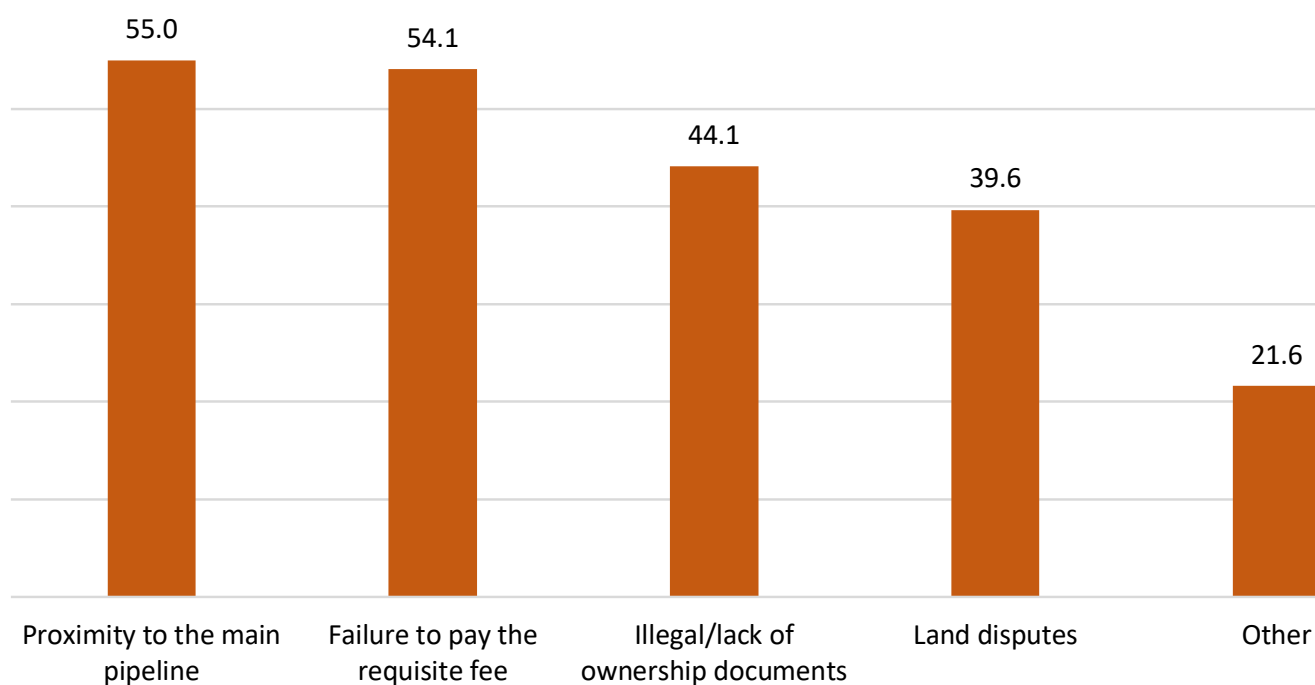
10.3.5 Approval for Water and Sewerage Connection

When a development application is submitted, it can be approved as presented, approved with conditions requiring amendments, or rejected for specific reasons.

10.3.5.1: Reasons for Declining Approval for Water and Sewerage Connections

The survey sort to establish why approval for most water and sewerage connections are declined. The findings indicate that 55.0 per cent of the requests are declined because they are far from the main pipeline, 54.1 per cent fail to pay the requisite fee, 44.1 per cent lack ownership documents while 39.6 per cent is due to land disputes as shown in Figure 10.21.

Figure 10.21: Reasons for Declining Water and Sewerage Connections

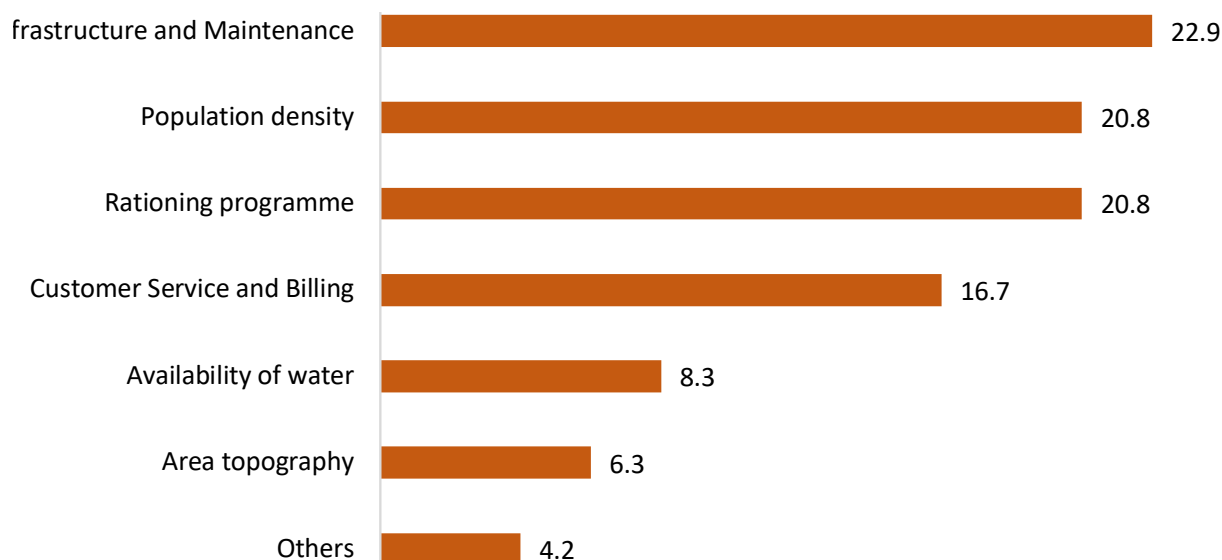


10.3.5.2 Distribution of tap water to residential areas

Due to inadequate water supply, WSSPs employ various strategies to ensure fair distribution of water to all residential areas. Infrastructure and maintenance was cited by 22.9 per cent of WSSPs as a factor in water distribution. Other factors cited that were considered were: Population density and rationing programme -20.8 per cent, customer service and billing-16.7 per cent and availability of water at 8.3 per cent (Figure 10.22).



Figure 10.22: Factors Considered in Fair Distribution of Tap Water to Residential Areas

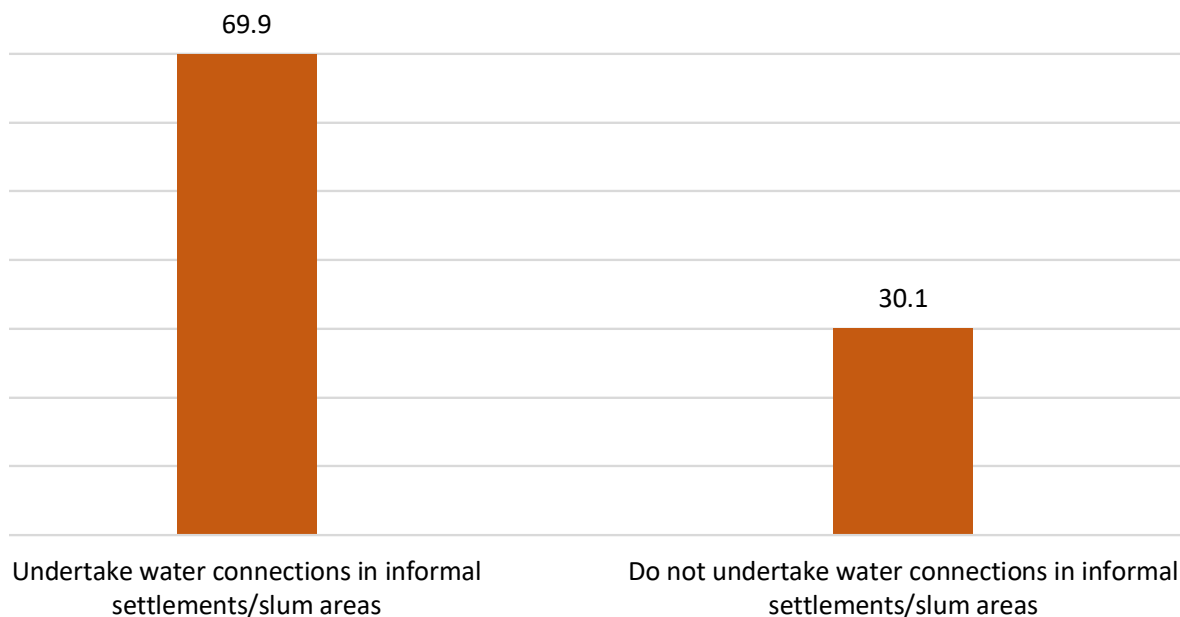


10.3.6 Water and sewerage connection in informal/slum areas

One of the main characteristics of informal/slum areas is lack of clean water supply and poor sanitation. The survey collected information on whether WSSPs undertake water and sewerage connections in informal/slum areas in line with SDG Goal 6 on 'clean water and sanitation' which

aims to achieve universal and equitable access to safe and affordable drinking water as well as equitable sanitation and hygiene for all by the year 2030. The survey results indicate that 69.9 per cent of WSSPs that undertakes water connection in informal/ slum areas as shown in Figure 10.23.

Figure 10.23: Proportion of water and sewerage service providers that undertake water connections in informal settlements/slum areas



10.3.7 Volume of water supplied to residential areas

The survey sought to establish the volume of water that was supplied to residential areas. This information is key in estimating both the demand and supply of water to residential areas. Table 10.14 shows that there was a general increase in the volume of water supplied to

the residential areas between 2022 and 2023 across all counties. The total volume of water supplied to residential areas increased from 201.7 million cubic meters in 2022 to 209.1 million cubic meters in 2023, with Nairobi County leading in both years.

Table 10.14: Volume of Water Supplied to Residential Areas in 2022 and 2023, Cubic Meters

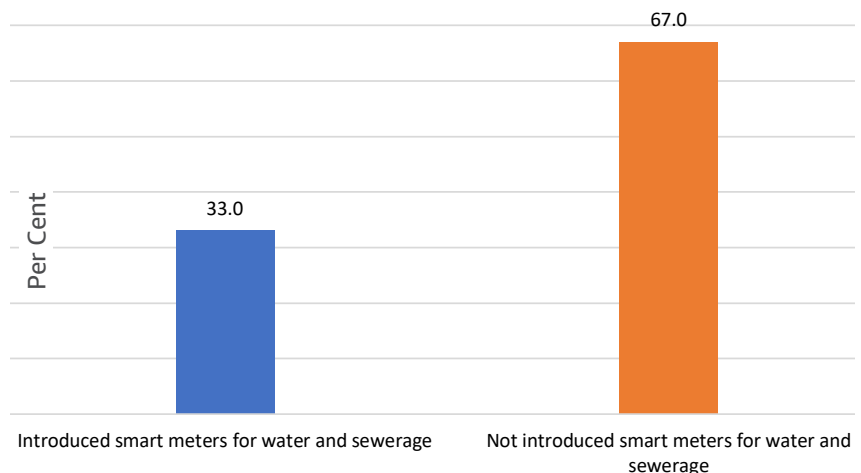
	2022	2023
Mombasa	5,927,972	5,947,731
Kwale	2,470,000	3,610,000
Kilifi	597,782	562,336
Tana River	650,881	476,954
Lamu	21,247	259,444
Taita-Taveta	3,371,399	3,332,827
Garissa	3,000,000	3,500,000
Wajir	368,064	720,168
Mandera	545,420	534,095
Marsabit	67,200	86,400
Isiolo	1,685,549	1,507,078
Meru	3,734,969	3,783,438
Tharaka-Nithi	6,210,781	6,135,266
Embu	2,169,073	2,459,134
Kitui	2,206,388	2,165,073
Machakos	1,363,657	1,108,339
Makueni	1,402,809	1,550,656
Nyandarua	2,974,399	2,968,003
Nyeri	11,447,155	10,897,940
Kirinyaga	2,729,969	2,752,087
Murang'a	12,950,265	13,583,042
Kiambu	13,097,664	15,458,490
Turkana	901,274	974,959

	2022	2023
West Pokot	72,359	220,834
Samburu	407,392	423,200
Uasin Gishu	6,767,088	6,846,588
Elgeyo-Marakwet	1,693,500	1,718,160
Nandi	1,492,947	1,350,454
Baringo	804,330	931,857
Laikipia	4,037,946	4,009,324
Nakuru	11,571,992	12,442,510
Narok	455,119	366,802
Kajiado	1,655,255	1,347,061
Kericho	3,212,742	3,431,086
Bomet	2,005,094	1,237,626
Kakamega	3,869,694	4,180,446
Vihiga	1,015,284	1,587,458
Bungoma	3,401,445	4,252,581
Busia	896,432	996,774
Siaya	3,000,000	3,000,000
Kisumu	65,147	69,225
Homabay	292,765	275,321
Migori	125,606	214,617
Nairobi City	75,005,644	75,825,236
Total	201,741,698	209,100,620

10.3.8 Smart Meters for Water and Sewerage

Smart water meter helps identify inefficiencies and patterns in water consumption as they are equipped with Internet of Things (IoT) sensors, which regularly track the water usage of each individual consumer. Given the increasing demand for water, WSSPs have to embrace technology for efficiency to meet this demand. As shown in Figure 10.24, the survey results revealed that 33.0 per cent of WSSPs have introduced smart meters.

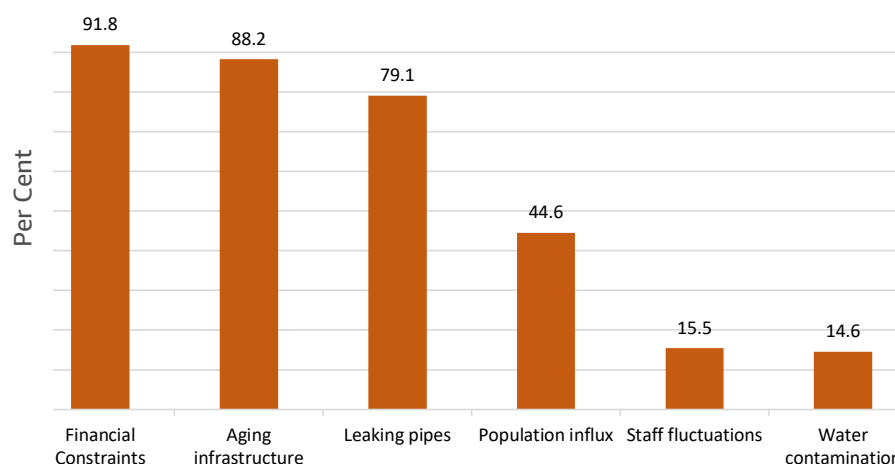
Figure 10.24: Introduction of Smart Meters for Water and Sewerage



10.3.9 Challenges Faced by WSSPs in Facilitating Supply of Water

The survey found that the main impediments to facilitating the supply of water as shown in Figure 10.25 is financial constraints at 91.8 per cent, aging infrastructure at 88.2 per cent and leaking pipes at 79.1 per cent. Other factors that hinder effective supply of water include population influx at 44.6 per cent, staff fluctuation at 15.5 per cent and contamination of water at 14.6 per cent.

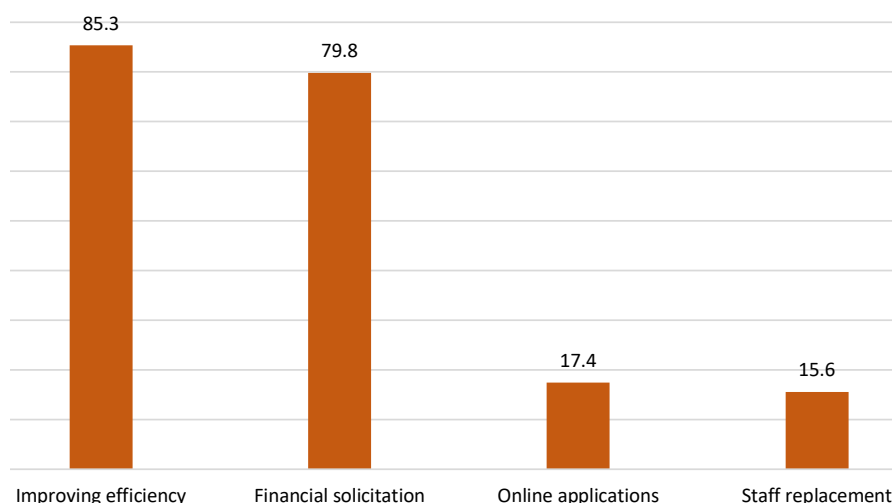
Figure 10.25: Challenges Encountered by WSSPs in Facilitating Supply of Water



Opinion of WSSPs on Rain Water Harvesting

- ✓ Overall water companies encourage harvesting of water as it reduces water production costs and ease the pressure during rainy seasons. Additionally, environmentally water harvesting helps reduce erosion, conserve resources, and decrease extraction from surface and underground sources. Many water companies view water harvesting as a viable strategy to increase water access and meet rising demand, with applications in irrigation and water shortage mitigation.
- ✓ Some of the challenges in water harvesting cited by water companies include contamination risks if not managed correctly and the high initial infrastructure costs. Mitigation measures cited to address the challenges include better storage and conservation strategies, government intervention to build dams, and public education to increase adoption. Regional variations show differing levels of adoption of water harvesting, with some counties benefiting greatly and others hindered by different weather conditions with ASAL areas facing insufficient rain water.

Figure 10.26: Measures to Address Challenges Encountered by Water and Sewerage Companies Providers in Water Delivery



10.3.10 Strategies for efficient water supply

To meet the increasing demand for water, WSSPs have employed various strategies to address challenges they encounter in water supply. Some of the strategies that have been adopted include enhancing efficiency at 85.5 per cent and financial solicitation at 79.8 per cent, as presented in Figure 10.26.

10.4 National Environment Management Authority (NEMA)

The National Environment Management Authority (NEMA) was established under the Environmental Management and Co-ordination Act No. 8 of 1999 (EMCA) as the principal agency of the Government for the implementation of all policies relating to environment and to ensure sustainable management of the environment through exercising general supervision and coordination over matters relating to the environment and; to be the principal instrument of government in the implementation of all policies relating to the environment. In performing its mandate, the agency approves development projects through licensing to ensure adherence to set environmental management guidelines. Housing development is influenced, and has an impact on the environment. The survey sought to highlight the factors that affect licensing of housing projects by NEMA.

10.4.1 Housing Development Licences Processed by NEMA

A key aspect of environmental monitoring is the review of Environmental Impact Assessment (EIA) reports for housing projects and Environmental Management Plans. This is achieved through applications, approvals and licensing of housing projects by NEMA. Nationally, 6,994 license applications were received with 5,472 (78.2 per cent) getting approval in 2023 as shown in Table 10.15. In 2022, a total of 7,186 license applications were received countrywide, out of which 5,338 (74.3 per cent) applications were approved and licensed.

The authority received more license applications for housing development projects in Nairobi City County where 3,074 and 3,230 applications were received in 2023 and 2022, respectively. In the same period, 2,002 and 2,012 applications for housing in Nairobi City County were licensed in 2023 and 2022, respectively.



Table 10.15: Number and Proportion of Licensing Applications for Housing Development Projects Received and Licensed by NEMA in 2022 and 2023

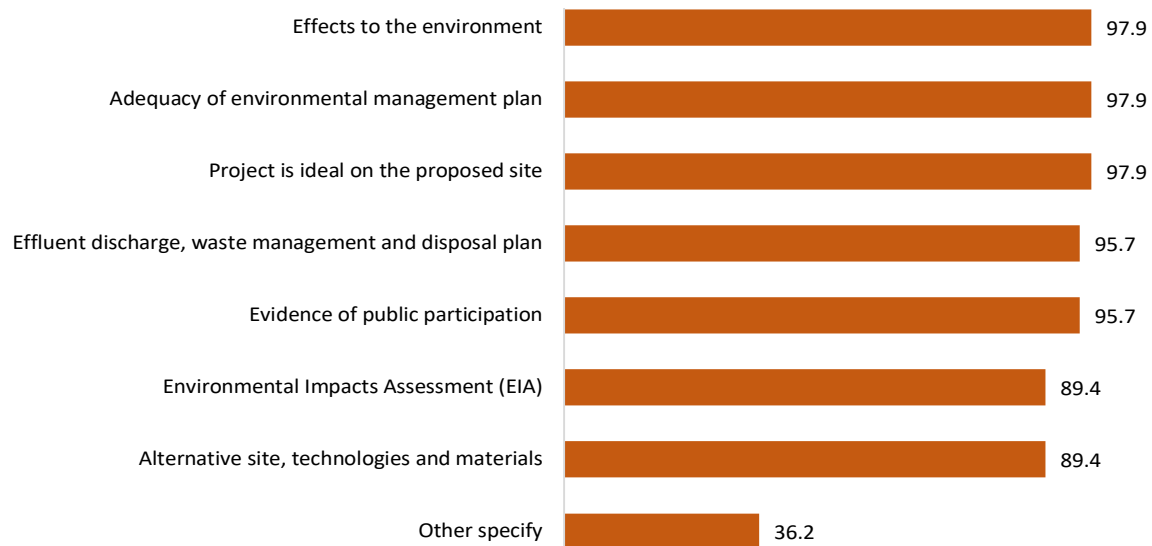
	Number of license applications for housing development received		Number of applications for housing development licensed		Proportion of applications for housing development licensed	
County	2022	2023	2022	2023	2022	2023
Mombasa	112	174	103	167	92.0	96.0
Kwale	113	184	103	174	91.2	94.6
Kilifi	..	83	..	72	..	86.7
Tana River	7	8	7	8	100.0	100.0
Lamu	26	31	26	31	100.0	100.0
Taita-Taveta	20	16	15	12	75.0	75.0
Garissa	2	5	..	3	..	60.0
Wajir	31	32	30	32	96.8	100.0
Mandera	6	6	5	5	83.3	83.3
Marsabit	13	18	12	14	92.3	77.8
Isiolo	39	37	34	37	87.2	100.0
Meru	84	95	70	85	83.3	89.5
Tharaka-Nithi	46	54	41	41	89.1	75.9
Embu	169	151	131	123	77.5	81.5
Kitui	98	54	61	44	62.2	81.5
Machakos	233	220	220	215	94.4	97.7
Makueni	45	30	29	24	64.4	80.0
Nyandarua	69	40	62	38	89.9	95.0
Nyeri	59	68	50	59	84.7	86.8
Kirinyaga	140	91	121	84	86.4	92.3
Murang'a	135	90	125	72	92.6	80.0
Kiambu	449	287	303	243	67.5	84.7
Turkana	27	22	27	13	100.0	59.1
West Pokot	29	31	29	31	100.0	100.0
Samburu	22	13	11	4	50.0	30.8
Trans Nzoia	72	52	71	48	98.6	92.3
Uasin Gishu	53	112	47	101	88.7	90.2
Elgeyo-Marakwet	22	45	21	43	95.5	95.6
Nandi	13	13	13	11	100.0	84.6
Baringo	30	44	25	32	83.3	72.7
Laikipia	17	42	13	30	76.5	71.4
Nakuru	613	501	515	458	84.0	91.4
Narok	117	166	105	121	89.7	72.9
Kajiado	151	281	130	236	86.1	84.0
Kericho	40	36	39	36	97.5	100.0
Bomet	17	30	17	30	100.0	100.0
Kakamega	106	98	76	74	71.7	75.5
Vihiga	158	123	130	115	82.3	93.5
Bungoma	63	103	48	83	76.2	80.6
Busia	42	37	40	33	95.2	89.2
Siaya	58	50	46	35	79.3	70.0
Kisumu	167	117	134	113	80.2	96.6
Homabay	143	138	127	125	88.8	90.6
Migori	37	25	30	25	81.1	100.0
Kisii	17	30	46	55	270.6	183.3
Nyamira	46	37	38	35	82.6	94.6
Nairobi City	3,230	3,074	2,012	2,002	62.3	65.1
Total	7,186	6,994	5,338	5,472	74.3	78.2
.. Data not available						

10.4.2 Factors Considered in Licensing Housing Development Projects

Various factors are considered in the licensing of housing development projects. The survey results in figure 10.27 indicate that over 95.0 per cent of the Authority's County offices reported high consideration for: project's effect on the environment; adequacy of environmental management plan; project proposed

site; effluent discharge; as well as evidence of public participation. Other factors that are considered in licensing housing development projects are environmental impact assessment and availability of alternative sites, technologies and materials to be used in the housing project all at 89.4 per cent.

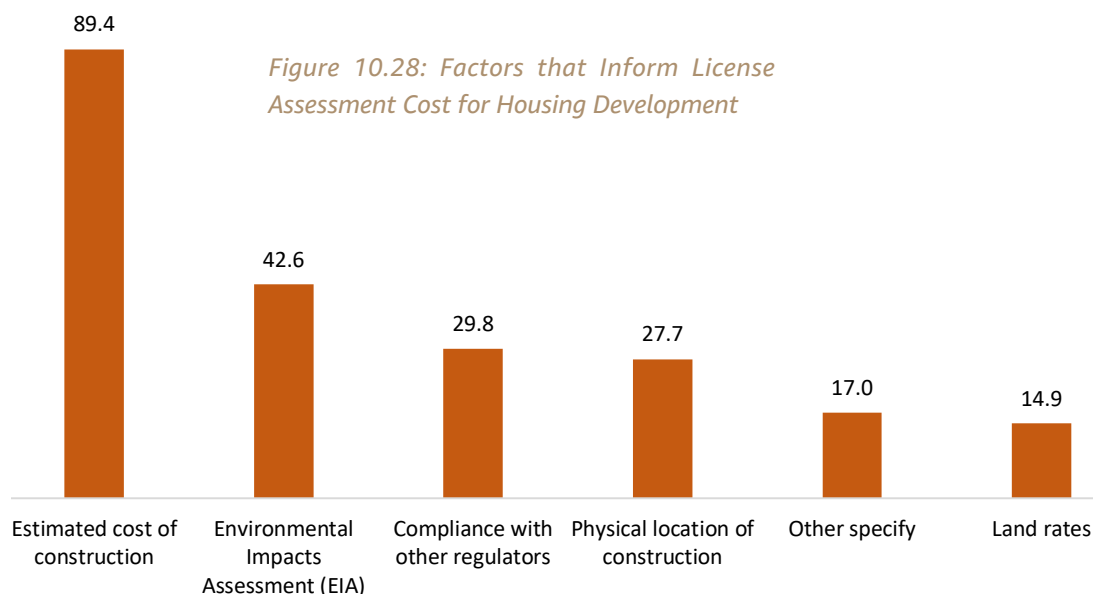
Figure 10.27: Factors Considered in Licensing Housing Development Projects



10.4.3 Factors that Inform License Cost for Housing Development

In determining the cost of a license for a housing development project, the Authority considers various elements. As indicated in Figure 10.28, the estimated construction cost was cited by 89.4 per cent of NEMA offices as the main factor that determines the cost of the license followed by

environmental impact assessment (EIA) (42.6%), compliance with other regulators (29.8%) and the physical location of the housing development project (27.7%). Land rate is the least factor that is considered in assessing the cost of licenses for housing development projects.



10.4.4 Average time taken to process and license housing development projects from NEMA

The survey sought to establish the turnaround time for processing housing development licenses from NEMA. Information on turnaround time is presented by county in Table 10.16. Overall, it takes an average of 20 days to get a license, but the time varies across counties. Kwale, Tana River,

Marsabit, Embu, West Pokot and Siaya counties take the least time to process and license housing development applications at five (5) days while Trans Nzoia (40 days) and Kisii (38 days) counties had the longest time to process and approve housing development projects.

Table 10.16: Average Time Taken to Process and License Housing Development Projects from NEMA

	Number of days		Number of days
Mombasa	21	Samburu	21
Kwale	5	Trans Nzoia	40
Kilifi	14	Uasin Gishu	21
Tana River	5	Elgeyo-Marakwet	13
Lamu	21	Nandi	20
Taita-Taveta	19	Baringo	13
Garissa	21	Laikipia	30
Wajir	21	Nakuru	30
Mandera	21	Narok	21
Marsabit	5	Kajiado	35
Isiolo	21	Kericho	21
Meru	21	Bomet	13
Tharaka-Nithi	13	Kakamega	21
Embu	5	Vihiga	13
Kitui	30	Bungoma	16
Machakos	30	Busia	21
Makueni	21	Siaya	5
Nyandarua	15	Kisumu	21
Nyeri	21	Homabay	26
Kirinyaga	13	Migori	21
Murang'a	17	Kisii	38
Kiambu	30	Nyamira	21
Turkana	26	Nairobi City	21
West Pokot	5	Average	20

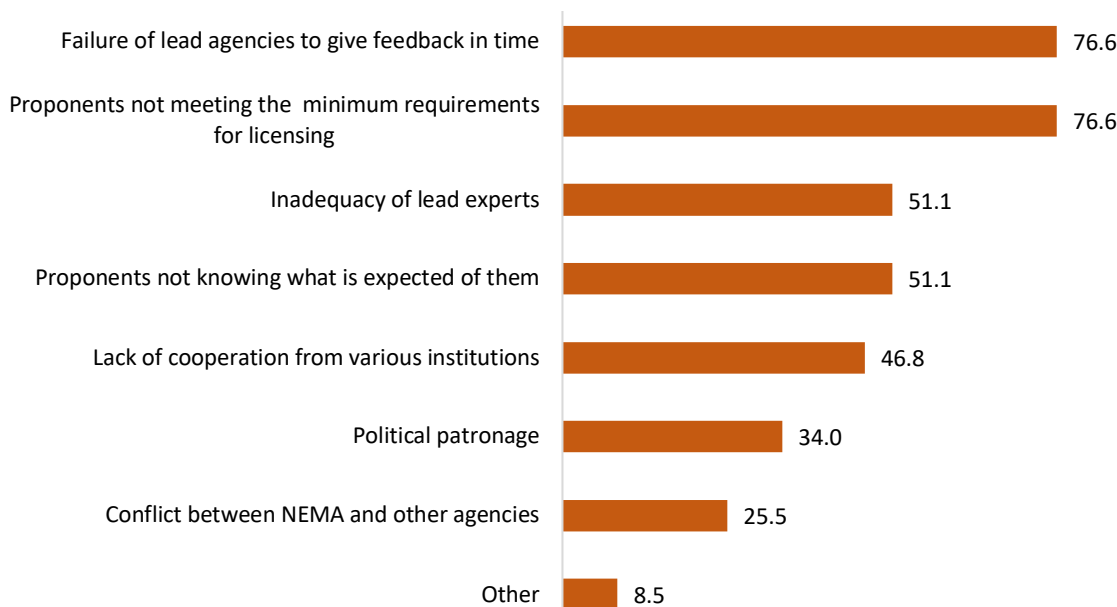


10.4.5 Challenges faced by NEMA in licensing housing development projects

The survey sought to establish the challenges that impact licensing processes by NEMA. As shown in Figure 10.29, the top most challenges faced by NEMA are failure by lead agencies to give feedback in time (76.6%), failure by proponents to

meet minimum requirements of licensing (76.6%), inadequacy of lead experts (51.1%) and failure by proponents to know their expectations with regards to licensing and lack of cooperation from other institutions (46.8%).

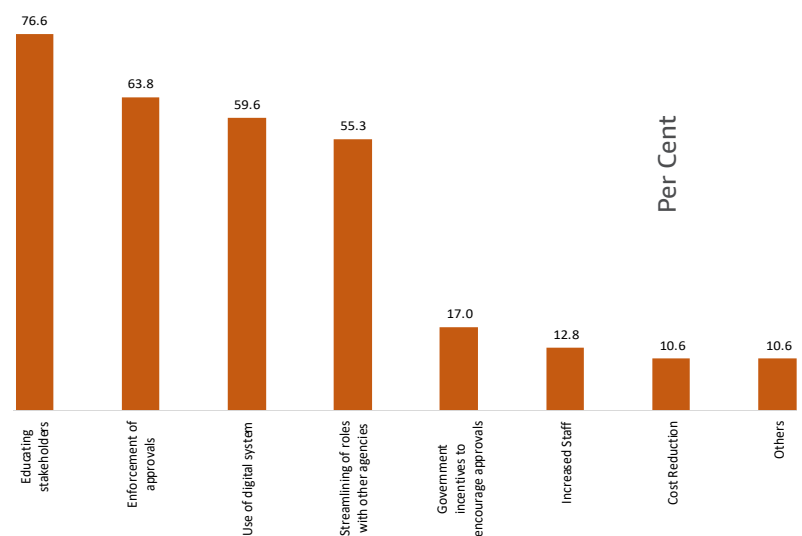
Figure 10.29: Main Challenges in the Licensing Process by NEMA (%)



10.4.6 Licensing Challenges Mitigation Measures

To address the challenges in the licensing process, NEMA uses various measures including; educating stakeholders (76.6%), enforcement of approvals (63.8%), use of digital systems (59.6%) and streamlining of roles with other agencies (55.3%), as shown in Figure 10.30. Other measures employed by the Authority to address challenges include cost reduction (10.6%), increasing the number of employees (12.8%) and relying on government incentives to encourage application and approvals.

Figure 10.30: Measures Used to Address Licensing Challenges in Housing Projects



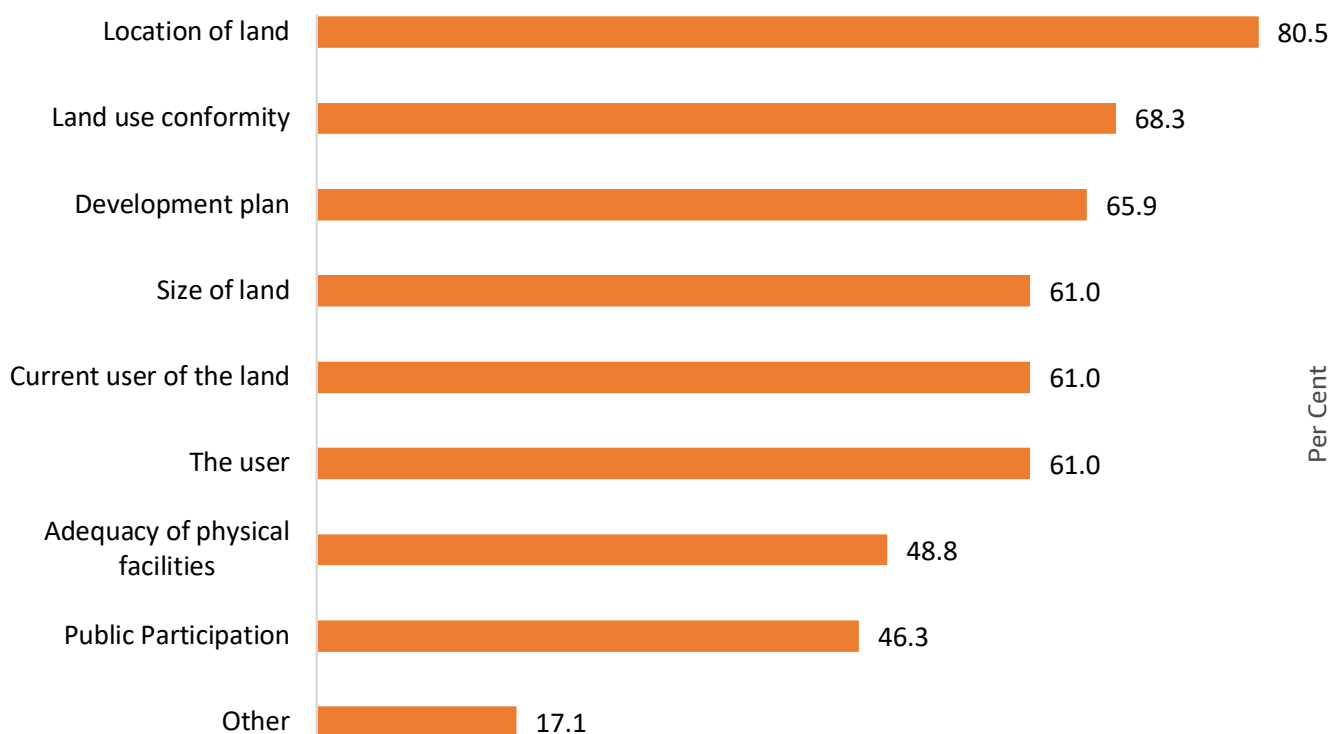
10.5 Land Administration

10.5.1 Land Transfer

The survey sought to find the factors considered in allocating leasehold land for housing development projects by land offices. Factors such as geographical location, conformity with land use plans, development planning, and community engagement play pivotal roles in ensuring sustainable and equitable land use practices. The geographical location of the land emerged as the most significant factor considered in allocating leasehold land for housing development as reported by 80.5 per cent of the respondents, as shown in Figure 10.31. Land use conformity was cited 68.3 per cent of the respondents.



Figure 10.31: Proportion of Respondents by Factors Considered in Allocating Leasehold Land for Housing Development



10.5.2 Applications for Land Transfers Received and Processed in 2023

Efficient land transfer processing systems and resource management is important to meet the demand for timely and transparent service delivery in land transactions. Nationally, a total of 144,106 land transfer applications were received in 2023 of which 129,076 were successfully processed. Counties with notably high volumes of applications received were: Kajiado (50,123), Machakos (15,991), and Nakuru (11,721). Samburu, Laikipia and Trans Nzoia processed all the applications they received (Table 10.17).

Table 10.17: Number and Proportion of Applications for Land Transfer Received and Processed in 2023

County	Number of applications received for land transfer in 2023	Number of applications for land transfer processed in 2023	Proportion of applications for land transfer received and processed in 2023
Mombasa	1,200	1,100	91.7
Kwale	5,000	5,000	100.0
Kilifi	..	..	..
Tana River	..	..	..
Lamu	67	67	100.0
Taita-Taveta	620	605	97.6
Garissa	..	..	..
Wajir	20	..	..
Mandera	1,500	25	1.7
Marsabit	150	150	100.0
Isiolo	56	51	91.1
Meru	14	..	..
Tharaka-Nithi	3,421	3,203	93.6
Embu	8,000	7,100	88.8
Kitui	2,500	2,400	96.0
Machakos	15,991	14,820	92.7
Makueni	5	..	..
Nyeri	4,164	307	7.4
Kirinyaga	3,000	50	1.7
Murang'a	3,426	41	1.2
Kiambu	1,680	1,200	71.4
Turkana	368	340	92.4

County	Number of applications received for land transfer in 2023	Number of applications for land transfer processed in 2023	Proportion of applications for land transfer received and processed in 2023
West Pokot	238	191	80.3
Samburu	1,848	1,848	100.0
Trans Nzoia	2,786	2,786	100.0
Uasin Gishu	2,500	2,400	96.0
Elgeyo-Marakwet	50	30	60.0
Nandi	1,600	1,340	83.8
Laikipia	3,448	3,448	100.0
Nakuru	11,721	11,525	98.3
Narok	386	386	100.0
Kajiado	50,123	45,351	90.5
Bomet	243	121	49.8
Kakamega	..	6,886	..
Vihiga	1,130	1,030	91.2
Bungoma	3,000	2,000	66.7
Busia	5,040	4,765	94.5
Siaya	1,852	1,743	94.1
Kisumu	4,695	4,587	97.7
Homabay	7	..	..
Migori	2,250	2,180	96.9
Nyamira	7	..	..
Nairobi City	..	..	..
Total	144,106	129,076	89.6

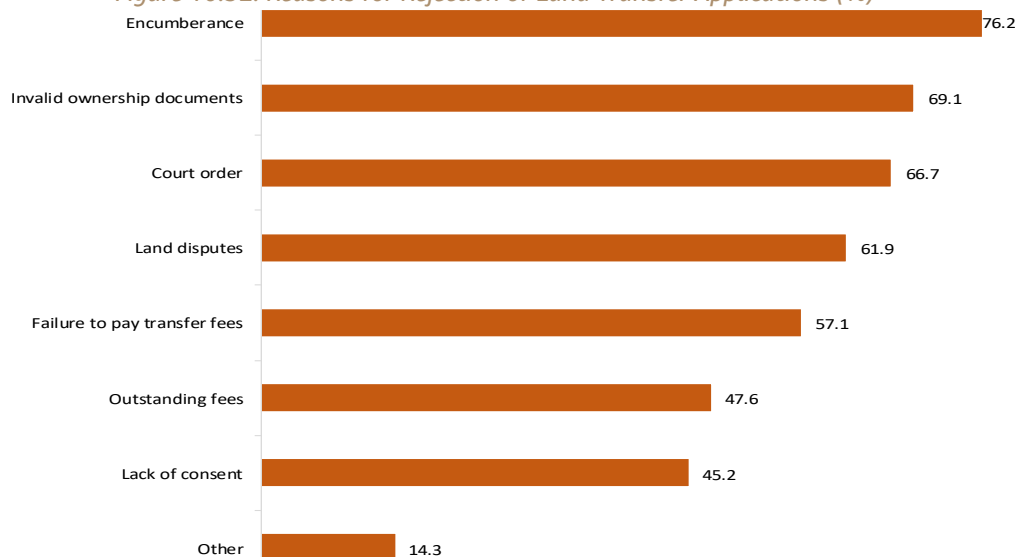


10.5.3 Reasons for Rejection of Land Transfer Applications

The survey sought to find out the reasons for rejection in approval of land transfer applications. The most prevalent issues contributing to application denials include land disputes, encumbrances, failure to pay transfer fees, invalid ownership documents, and lack of consent, court orders, and outstanding fees. As shown in figure 10.32,

encumbrances were mentioned by 76.2 per cent of the respondents. The other factor that seemed to have a higher impact is invalid ownership documents, cited by 69.1 per cent of respondents. Issues with authenticity or completeness of documents hinder the verification process necessary for approving land transfers.

Figure 10.32: Reasons for Rejection of Land Transfer Applications (%)

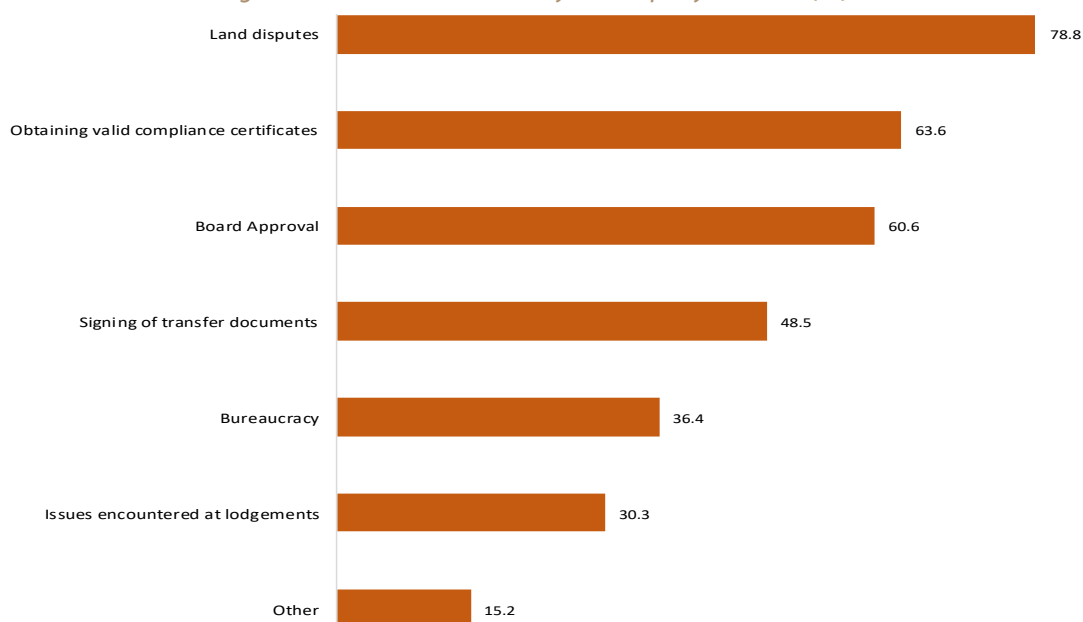


10.5.4 Reasons for delays in property transfer

The survey identified land disputes and obtaining valid compliance certificates as the most prevalent reasons for delays in property transfer at 78.8 per cent and 63.6 per cent, respectively.

The need for board approval and signing of transfer documents were also reported by 60.6 per cent and 48.5 per cent of respondents, respectively (Figure 10.33).

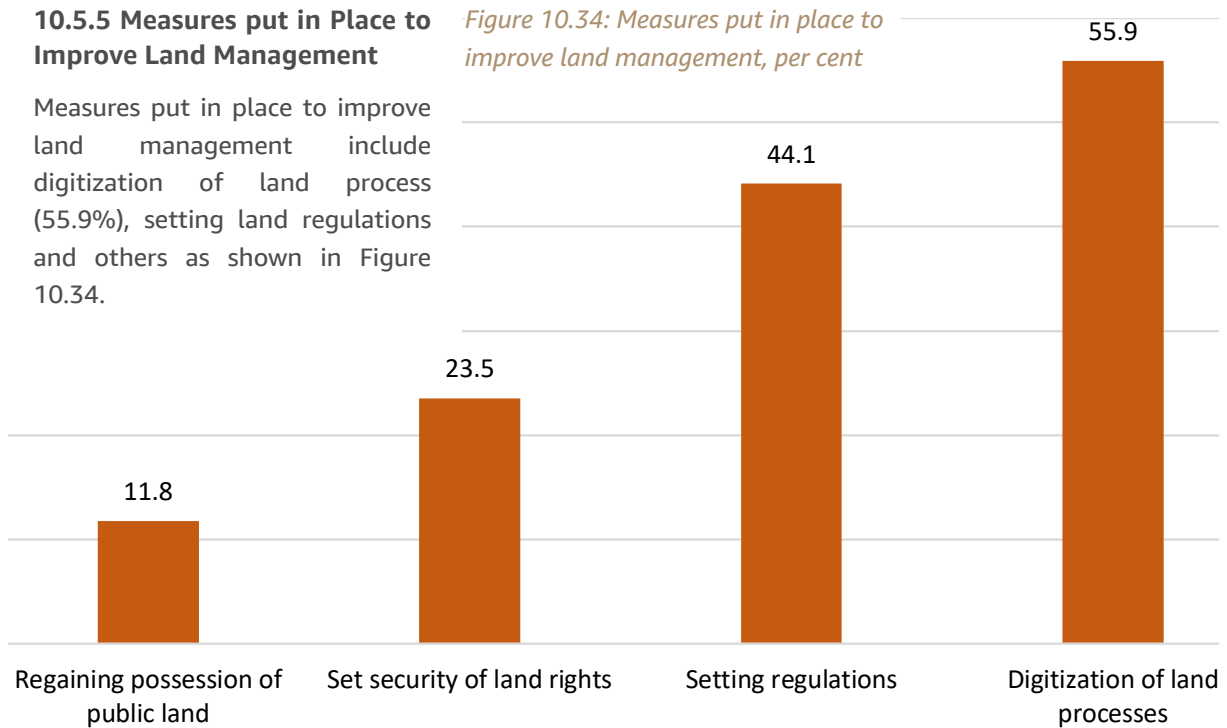
Figure 10.33: Reasons for Delays in Property Transfer (%)



10.5.5 Measures put in Place to Improve Land Management

Measures put in place to improve land management include digitization of land process (55.9%), setting land regulations and others as shown in Figure 10.34.

Figure 10.34: Measures put in place to improve land management, per cent

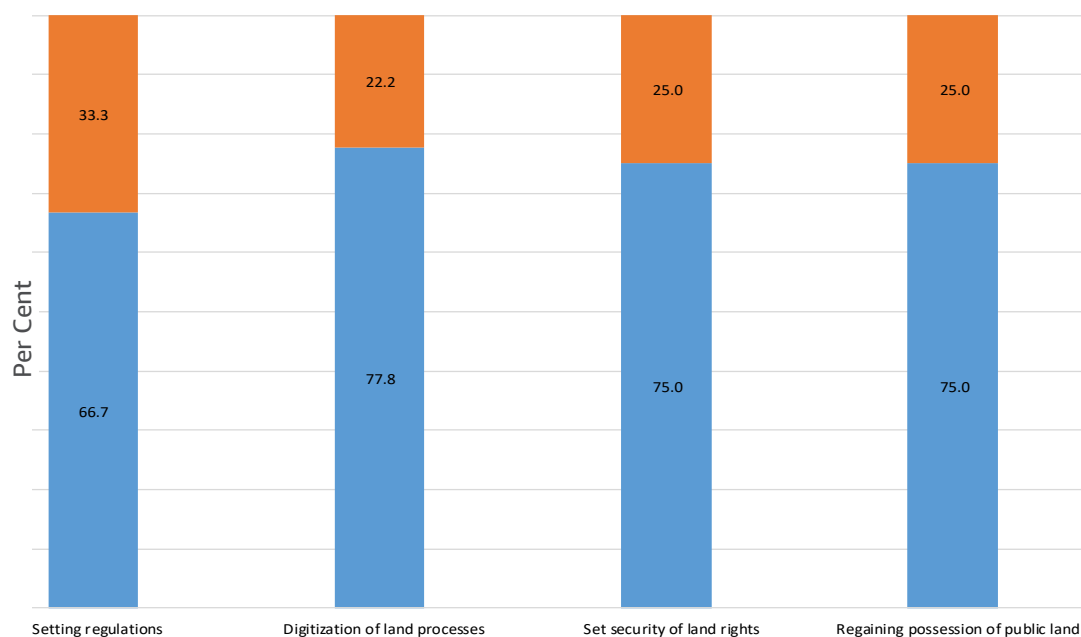


10.5.6 Impact of Land Management Measures on land transfer process

The implementation of land management measures has significantly impacted the land transfer process in various counties. From the survey 77.8 per cent of the respondents felt that digitization of land processes has a high impact

on land transfer process while 22.2 per cent felt it would have medium impact. Digitization of land has eased verification of documents and receipts, faster retrieval of records and increased accountability (Figure 10.35).

Figure 10.35: Impact of land management measures on land transfer process.





CHAPTER 11



Land Use and Security of Tenure

Key Findings

- ✓ The most common form of land ownership documentation is the title deed at 66.0 per cent while 15.9 per cent of parcels lack formal documentation.
- ✓ Land is mainly acquired through inheritance (53.5%), purchase (31.0%), and family allocation (8.6%).
- ✓ Land is predominantly used for agriculture (47.2%) and residential purposes (47.1%), with a small proportion (3.4%) reserved for future development.

11.1 Introduction

Land is a key component in the provision of housing and has various uses such as agricultural, residential, commercial and industrial. Land ownership and secure use rights are foundational elements in the context of housing, playing a critical role in individual well-

being, economic stability and community development. Security of tenure ensures that individuals and families can access, use and develop land without fear of eviction or dispute.



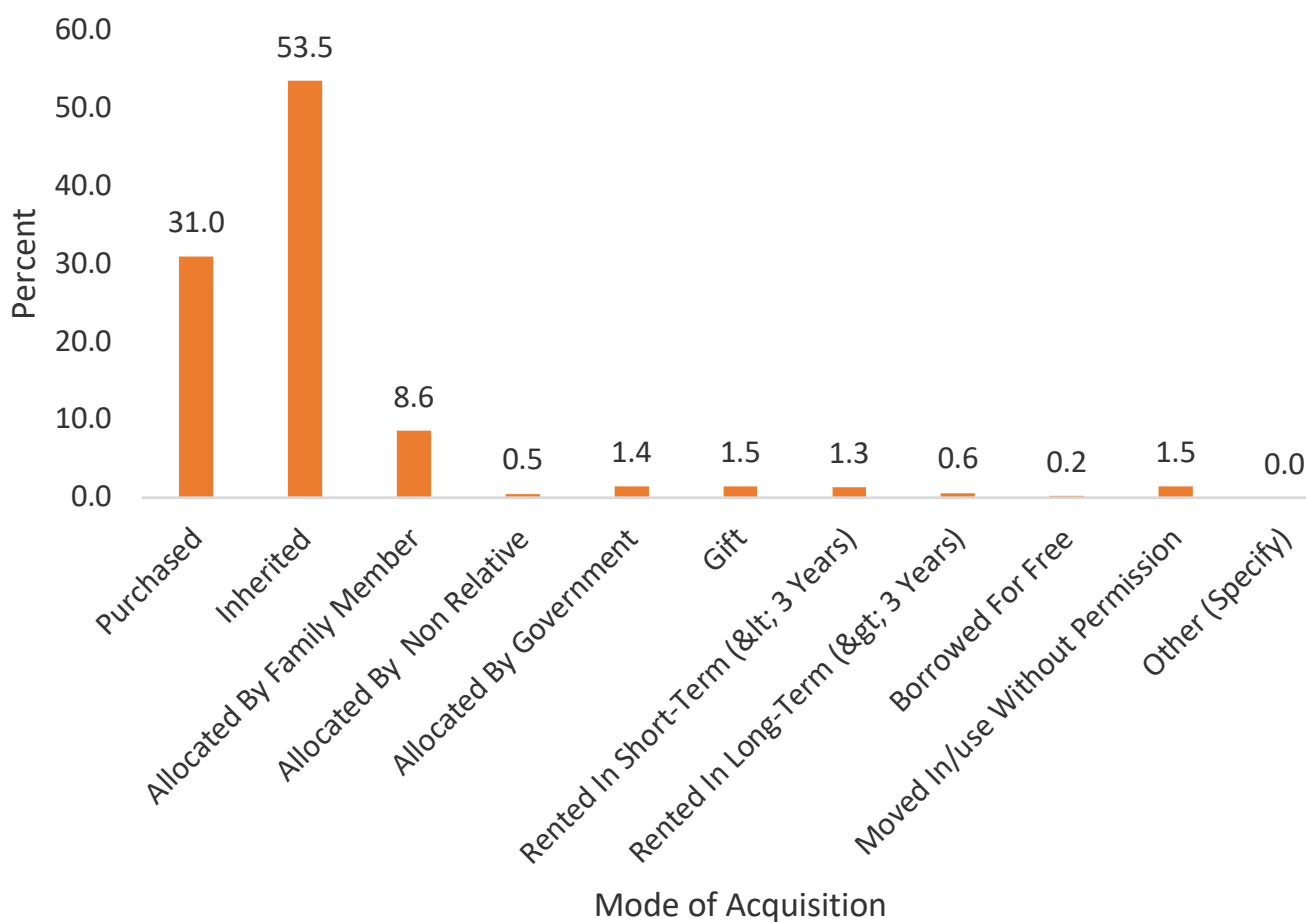
This chapter outlines the various components of security of tenure and land use.

11.2 Land Acquisition and Ownership Rights

There are several ways one can legally acquire land and use rights which include inheritance, purchase, allocation by family members or non-relatives, allocation by government, gift, renting and borrowing. The findings also indicate the percentage that have secure land tenure rights, in accordance with SDG indicator 1.4.2.

Figure 11.1 presents the various methods through which land parcels were acquired. About half of the land parcels were acquired through inheritance (53.5%). This was followed by land purchase (31.0%) and allocation by family members (8.6%).

Figure 11.1: Acquisition of Land Use or Ownership Rights



Land ownership and secure use rights are foundational elements in the context of housing, playing a critical role in individual well-being, economic stability and community development.

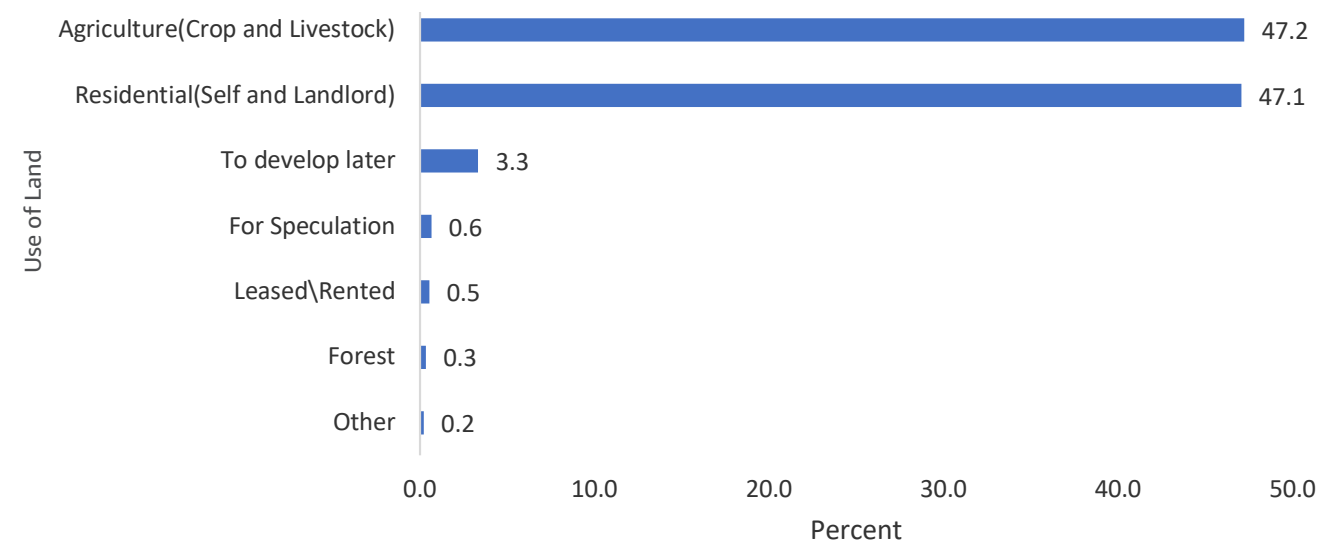
11.3 Use of Land Parcels

Land parcels in Kenya serve a variety of critical functions that are essential for the country’s socio-economic development and environmental sustainability.

Figure 11.2 presents the distribution of various use of land

parcels. Agricultural (Crop & Livestock) and residential use dominated the use of parcels at 47.2 per cent and 47.1 per cent, respectively. A small proportion of 3.3 per cent of the parcels were kept aside to be developed later.

Figure 11.2: Distribution of Various Types of Land Use in Kenya



11.4 Land Ownership Documents

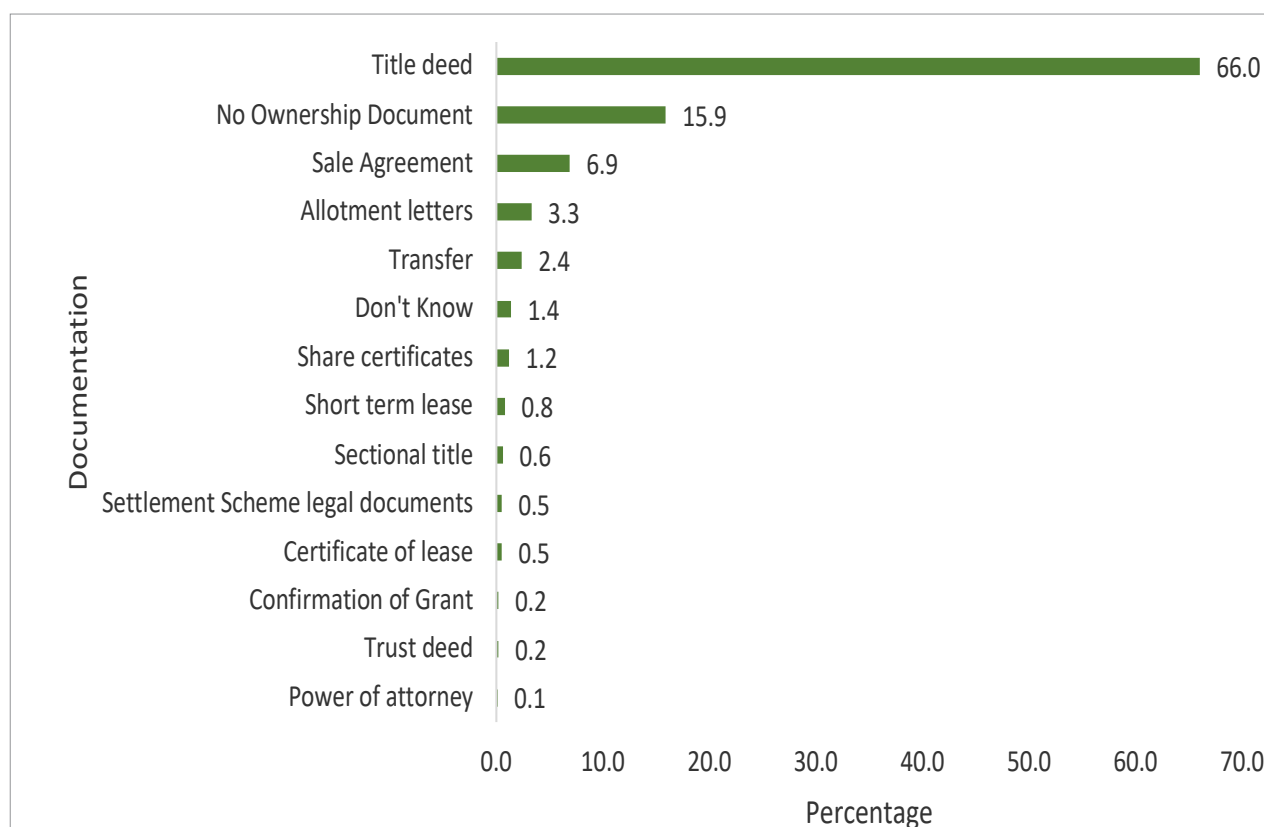
Land ownership documents in Kenya are critical for establishing legal rights, promoting secure tenure, and facilitating economic development.

Figure 11.3 illustrates the different types of ownership documents held for the land parcels. Parcels with title deeds accounted for 66.0 per cent of all land parcels while 1.3 per cent had lease documents.(Certificate of

lease and short term lease). In addition, 6.9 per cent of all parcels had sale agreements, 3.3 per cent had allotment letters, and 1.2 per cent had share certificates. However, 15.9 per cent of parcels lacked ownership documents.

In summary 82.7 per cent of land parcels had legally recognised documents while 17.3 per cent had none or other.

Figure 11.3: Proportion of Land Documents for Parcels



11.5 Perception of tenure security

Perception of tenure security refers to the extent to which individuals feel confident that they will not be unjustly evicted or lose rights of their land. Table 11.2 presents the perception of whether the population could involuntarily lose their land ownership or use rights. Nationally, 91.8 per cent of the population were not likely to involuntarily lose their land ownership or use rights 0.8 per cent felt that they were likely to involuntarily lose ownership or rights of their parcels.

Table 11.1: Likelihood to involuntarily lose ownership or use rights

Likelihood	Per cent
Not at all Likely	91.8
Slightly Likely	4.4
Moderately Likely	1.5
Very Likely	0.9
Extremely Likely	0.8
Don't Know	0.7

11.6 Reasons for Involuntarily Losing Ownership or Use Rights

Intra Family issues posed the highest threat to involuntarily losing ownership or user rights for parcels of land at 38.6 per cent. Whereas government pronouncements were at 16.5 per cent.

Table 11.2. Reasons for the Likelihood of Involuntarily Losing Ownership or Use Rights

Reason	Per cent
Death of spouse	5.6
Intra-family	38.6
Divorce	1.1
Government pronouncement (e.g., compulsory acquisition etc.)	16.5
Corruption in land administration system (e.g., forgery of documents etc.)	15.7
Community/ other conflicts	13
Election Violence	0.6
Expiry of Lease Period	6.6
Lack of title deed	2
Floods from the lake	0.1
Loan Recovery	0.2





CHAPTER 12



2023/24 KENYA HOUSING
SURVEY BASIC REPORT

Land Consumption Rate and Green Space

Key Findings

Land Consumption rate

- ✓ On average the four counties recorded an increase in built-up area at 34.45 per cent with Nakuru County leading at 47.1 per cent followed by Kisumu County at 46.5 per cent, Mombasa County at 29.9 per cent and Nairobi City County at 14.3 per cent.

Green Space Area

- ✓ The four counties recorded a reduction in green space area from the year 2016 to 2023 by an average of 21.75 per cent with Nairobi City County leading at 42.2 per cent, followed by Nakuru County at 26.3 per cent, Kisumu County at 14.6 per cent and Mombasa County at 3.9 per cent.

12.1 Introduction

Land consumption rate, which measures land conversion from natural or agricultural uses to urban or built-up uses, along with preservation of green spaces, are important indicators of sustainable urban development. Green space refers to areas of vegetation in urban settings, such as parks, gardens and greenways. Comparison of remote sensing data with housing surveys offers a detailed view of land use in urban areas. Geospatial tools were used to examine built-up extents and green spaces between 2016 and 2023 in Nairobi City, Mombasa, Kisumu and Nakuru counties. The choice of the four counties was informed by the high rate of land consumption as these counties host the cities. For a significant spatial change, a minimum of a 2-year interval was adopted.

High built-up extents generally correspond to all the higher housing density and more multi-storey buildings or apartments and infrastructure (roads and airports). In contrast, areas with low built-up extents may indicate lower-density housing like stand-alone houses. By overlaying built-up extent data with survey responses, planners can assess whether densely populated areas are adequately served by infrastructure and public services. Proximity to green spaces often correlates higher satisfaction levels. Analysis can reveal disparities in access to green spaces, identifying areas where urban

greening efforts are needed. Green spaces typically increase property values and attract high-income residents. Mapping these areas against socioeconomic data can reveal patterns of inequality and inform equitable urban development policies. This chapter addresses SDG indicator 11.7.1-Average share of the built-up area of cities that is open space for public use for all.

12.2 Methodology

Sentinel-2 captures imagery at a resolution of 10 meters across 13 spectral bands with swath width of 290 kilometers. This technology enables differentiation between various land cover types, such as built-up area and vegetation, allowing for detailed analysis of land use changes. This is crucial for mapping, monitoring urban growth and computing land consumption.

The data was extracted from the Sentinel-2 satellite data repository for the years 2016, 2018, 2020 and 2023 using a Java Application Programming Interface (API) script on Google Earth Engine (GEE). Atmospheric corrections were carried out to remove pixels which had more than 10 per cent cloud cover automatically by the script. Training the model was carried out by collecting training samples for various land cover classes such as built-up areas, bare land, water bodies and vegetation,

utilizing a false color composite for visual interpretation and referencing existing land cover maps to aid land use and land cover classification. Spectral indices like NDVI (Normalized Difference Vegetation Index) and NDBI (Normalized Difference Built-up Index) were executed to improve classification accuracy. Using the collected samples, the script was re-run to accommodate the improvement and produce a more accurate imagery. The results were validated using high-resolution google satellite imagery.

12.3 Land Consumption Rate

Land consumption rate (LCR) is a key indicator of urban sprawl and land use efficiency. High land consumption rates often indicate extensive urban sprawl which can lead to the loss of agricultural land, green spaces, and natural habitats significantly affecting sustainability, biodiversity and climate change mitigation. Land

consumption rate is computed using the formula below.

$$LCR(\%) = \frac{V_{present} - V_{base}}{V_{base}} * \frac{1}{T}$$

Where;

V Present = Total built up area in current year

V Base = Total built up area in base year

T = Number of years between the two measurement periods

Table 12.1 presents information on the built-up area and land consumption rate in the four counties of Nairobi City, Mombasa, Kisumu and Nakuru. Overall, Nakuru County presented the highest per centage change of built-up area between 2016 and 2023 while Nairobi City County had the lowest.



Table 12.1: Land Consumption Rate, 2016-2023

County	Nairobi City		Mombasa		Kisumu		Nakuru	
Year	Built Up Area (KM ²)	LCR	Built Up Area (KM ²)	LCR	Built Up Area (KM ²)	LCR	Built Up Area (KM ²)	LCR
2016	242.45	-	75.88	-	338.77	-	623.16	-
2018	243.81	-	80.74	0.03	411.08	0.11	643.45	0.02
2020	263.43	0.04	88.46	0.04	430.20	0.02	702.42	0.04
2023	277.11	0.02	98.58	0.03	496.33	0.05	916.55	0.10

Nairobi City County recorded an increase in the built-up area from 242.45 Km² in 2016 to 277.11 Km² in 2023, an increase of 14.3 per cent. Figure 12.1 shows Nairobi City County built-up area from 2016 to 2023.

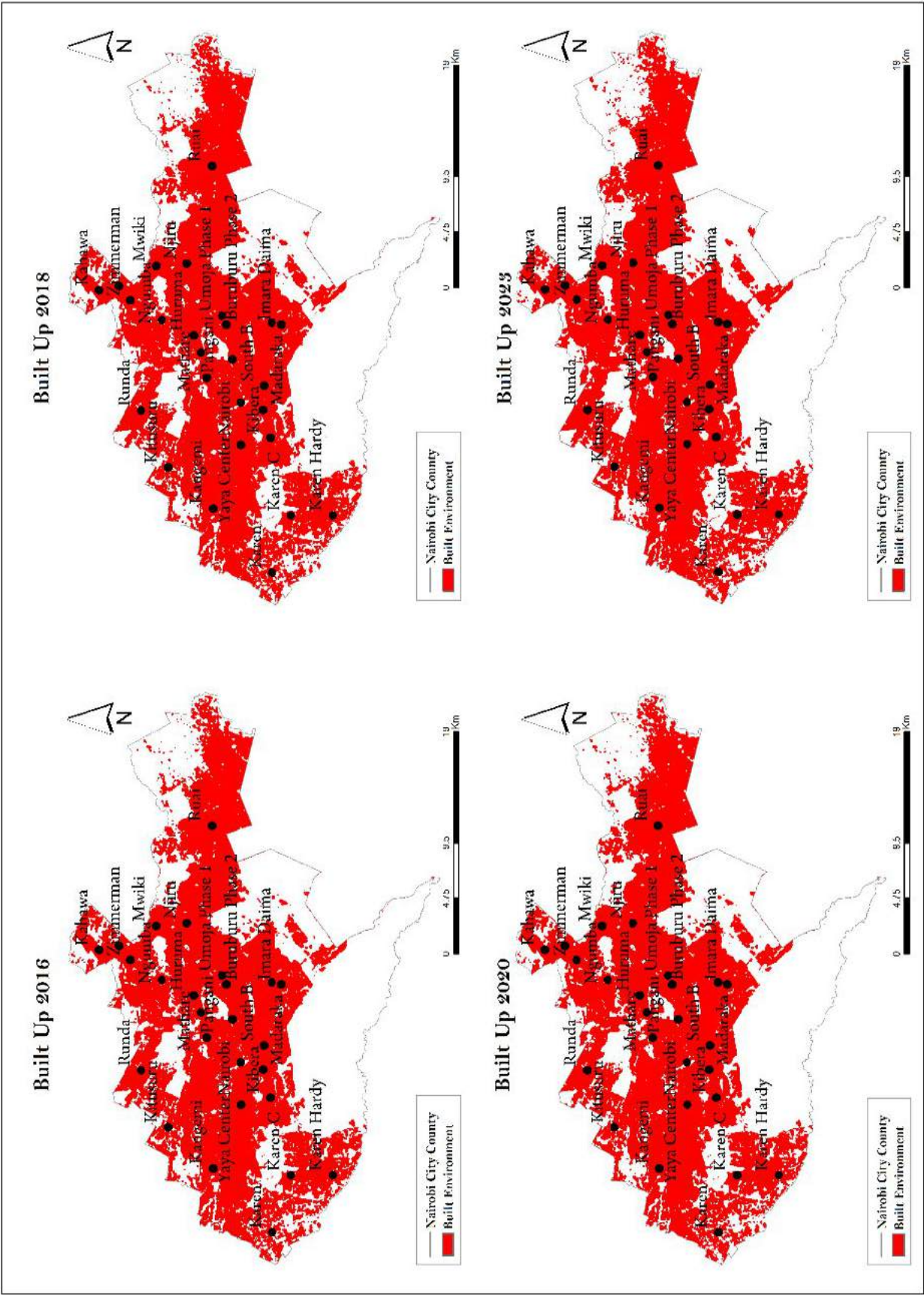
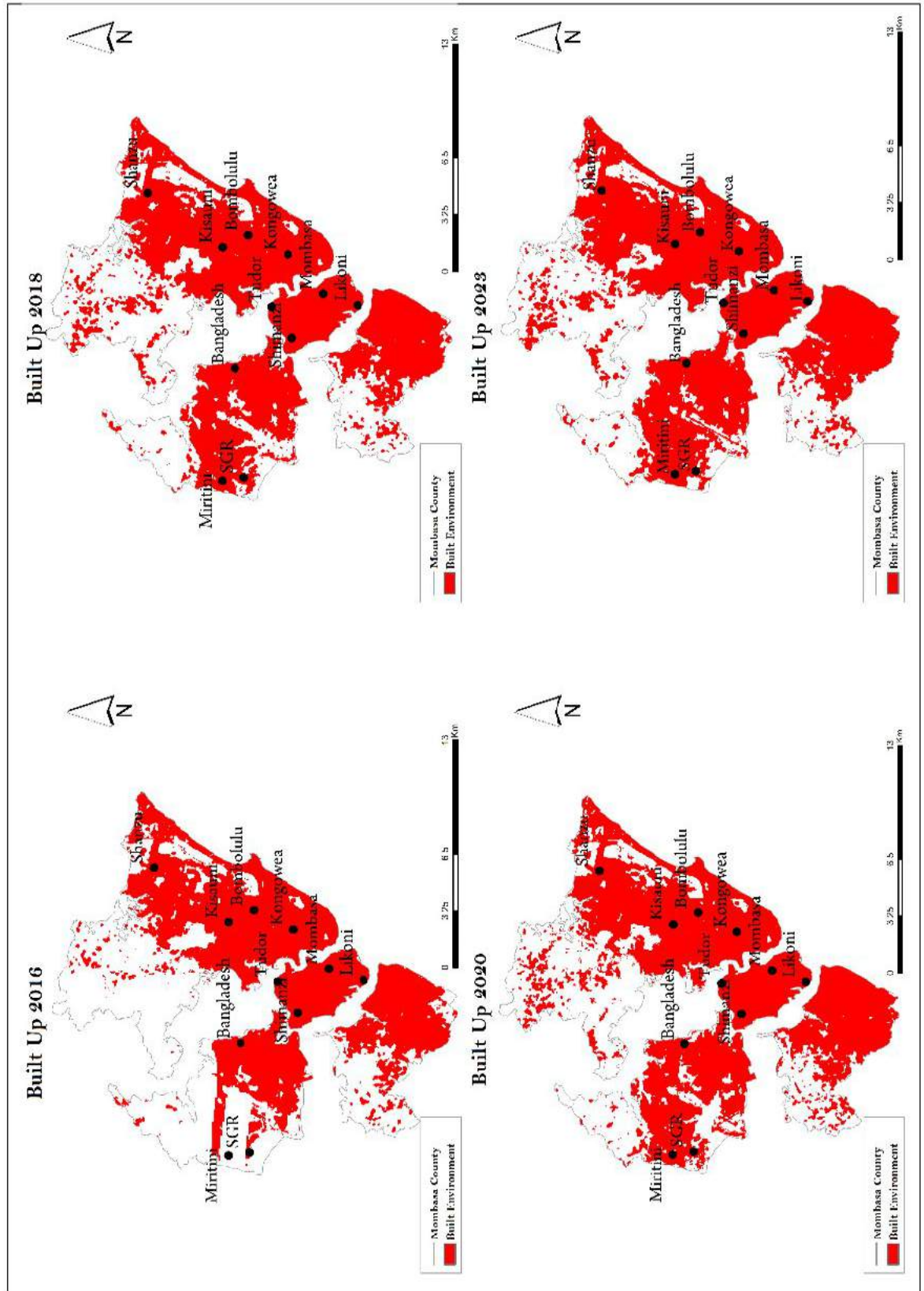


Figure 12.1: Nairobi City County Built-up Areas

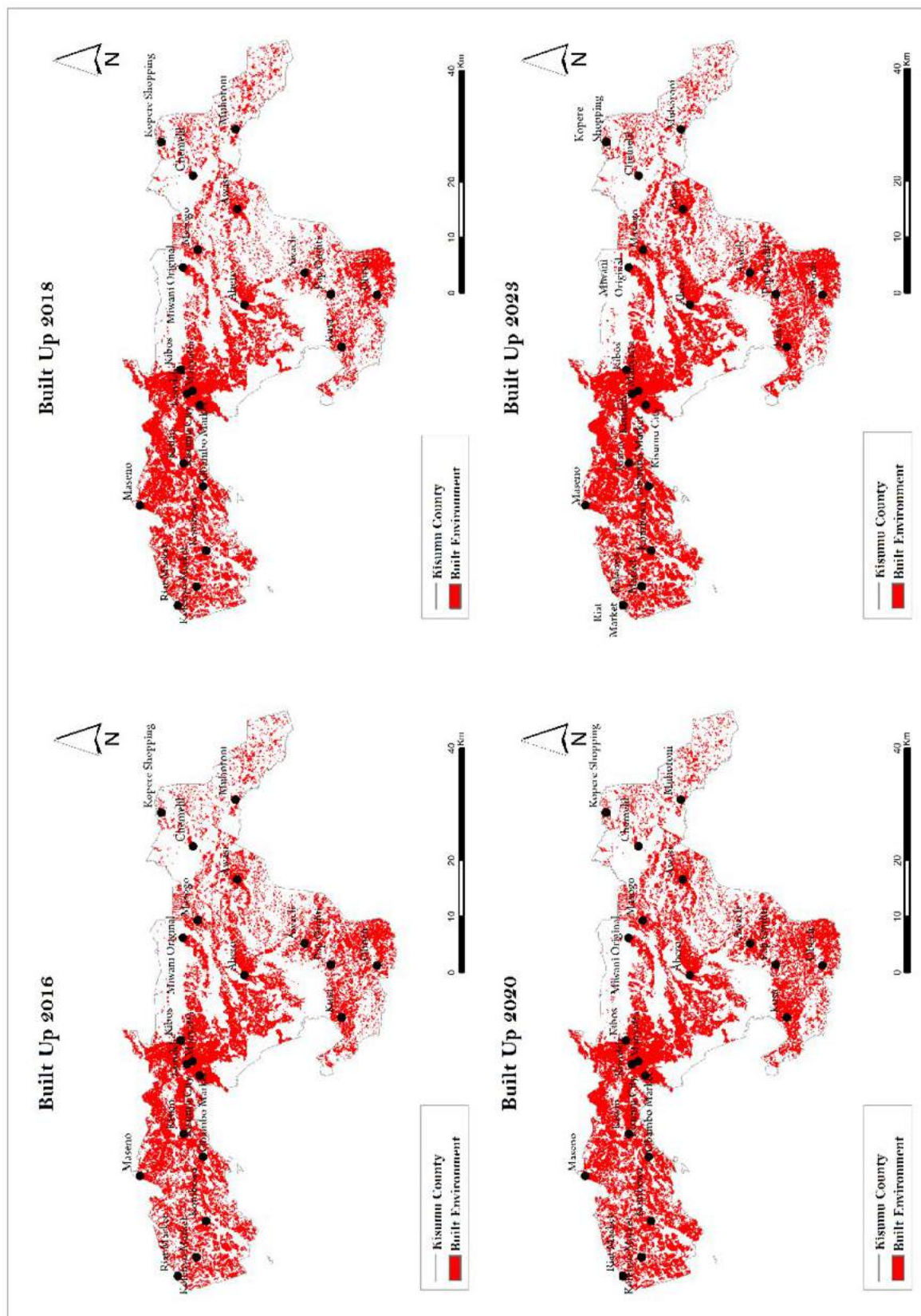
Mombasa County recorded an increase in the built-up area from 75.88 Km² in 2016 to 98.58 Km² in 2023, a 29.9 per cent increase. Figure 12.2 shows Mombasa County built-up area from 2016 to 2023.

Figure 12.2: Mombasa County Built-up Areas



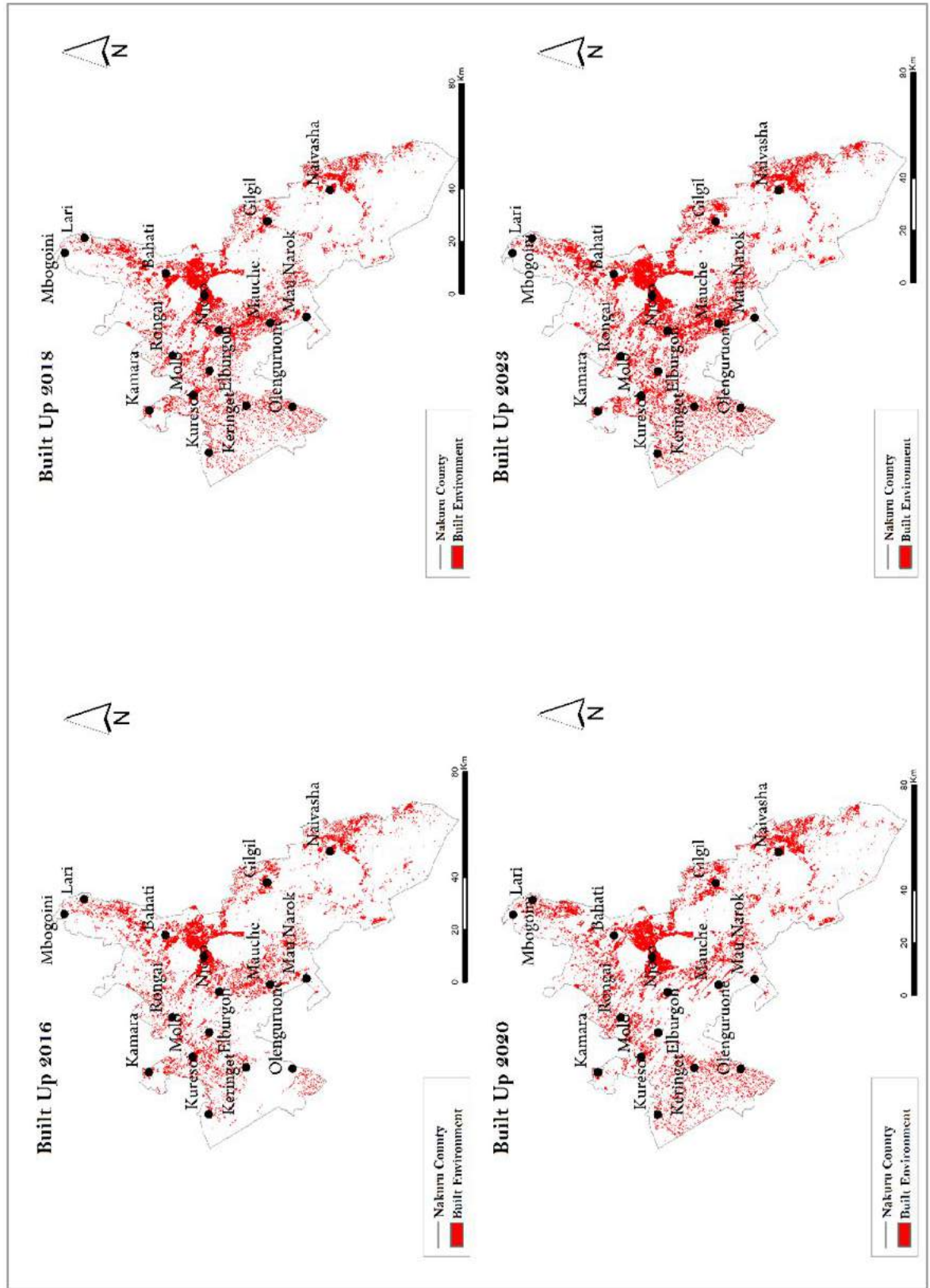
Kisumu County recorded an increase in the built-up area from 338.77 Km² in 2016 to 496.33 Km² in 2023, a 46.5 per cent increase. Figure 12.3 shows Kisumu County built-up area from 2016 to 2023.

Figure 12.3: Kisumu County built-up areas



Nakuru County recorded an increase in the built-up area from 623.16 Km² in 2016 to 916.55 Km² in 2023, a 47.1 per cent increase. Figure 12.4 shows Nakuru County built-up area from 2016 to 2023.

Figure 12.4: Nakuru County Built-up Areas



12.4 Green Spaces

Green spaces (parks, forests, road side vegetation) are vital for urban sustainability and residents' well-being. They play a crucial role in urban environments by providing recreational areas for residents, promoting physical activity and improving overall quality of life. However, as cities become more densely populated, green spaces are often reduced in favor of built-up areas. This can have negative effects on public health and well-being.

Table 12.2 shows green spaces coverage from 2016 to 2023 for Nairobi City, Mombasa, Kisumu and Nakuru counties. There was a notable change in green spaces in the year 2020 characterized by high rainfall experienced in January 2020.

Table 12.2: Area Occupied by Green Spaces, 2016-2023

Green Space KM²

	Nairobi City	Mombasa	Kisumu	Nakuru
2016	418.39	57.37	1,740.78	5,313.84
2018	149.78	60.65	1,286.53	3,776.72
2020	359.78	96.16	1,858.21	5,192.65
2023	242.02	55.13	1,485.91	3,914.75

The per centage reduction of green space area is computed as follows:

$$\Delta GSA = \frac{GSA_{CY} - GSA_{BY}}{GSA_{BY}} \times 100$$

Where:

ΔGSA =Percentage Change in Green Space Area

GSA_{CY} =Green Space Area for Current Year

GSA_{BY} =Green Space Area for Base Year

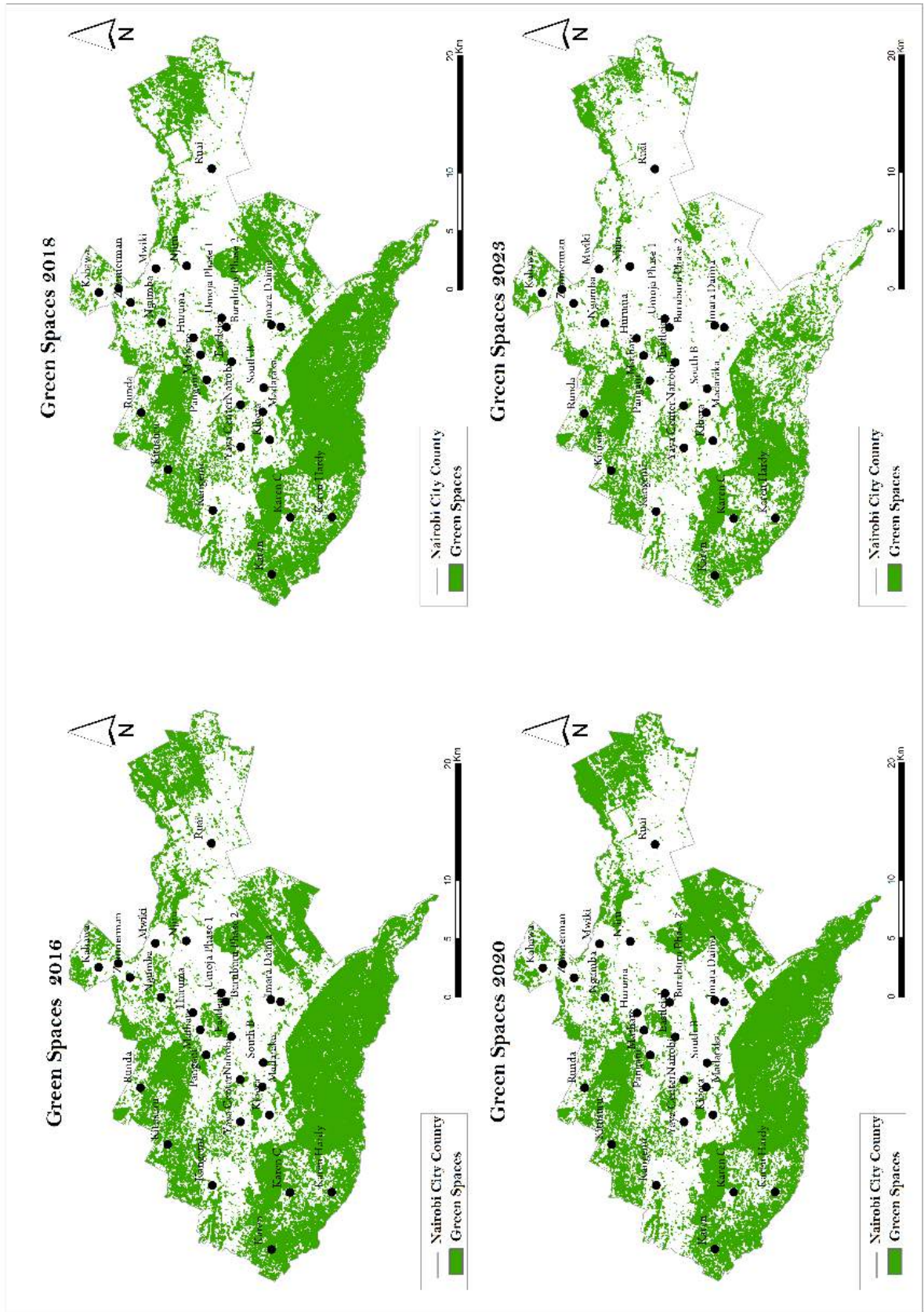


Green spaces (parks, forests, road side vegetation) are vital for urban sustainability and residents' well-being.



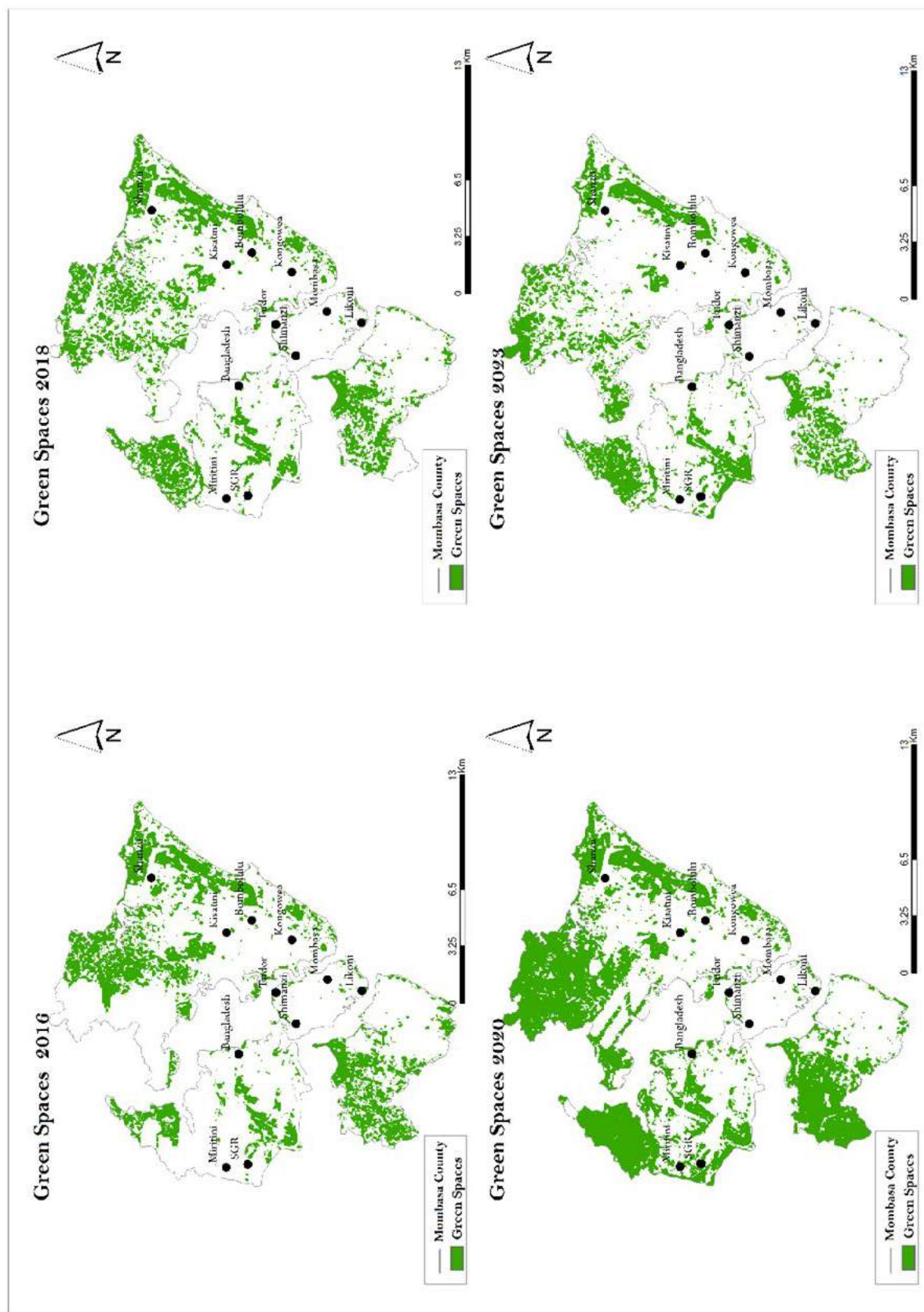
Nairobi City County recorded a 42.2 per cent reduction in green space area from the year 2016 to the year 2023. Figure 12.5 shows Nairobi City County green space area from 2016 to 2023.

Figure 12.5: Nairobi City County Green Spaces



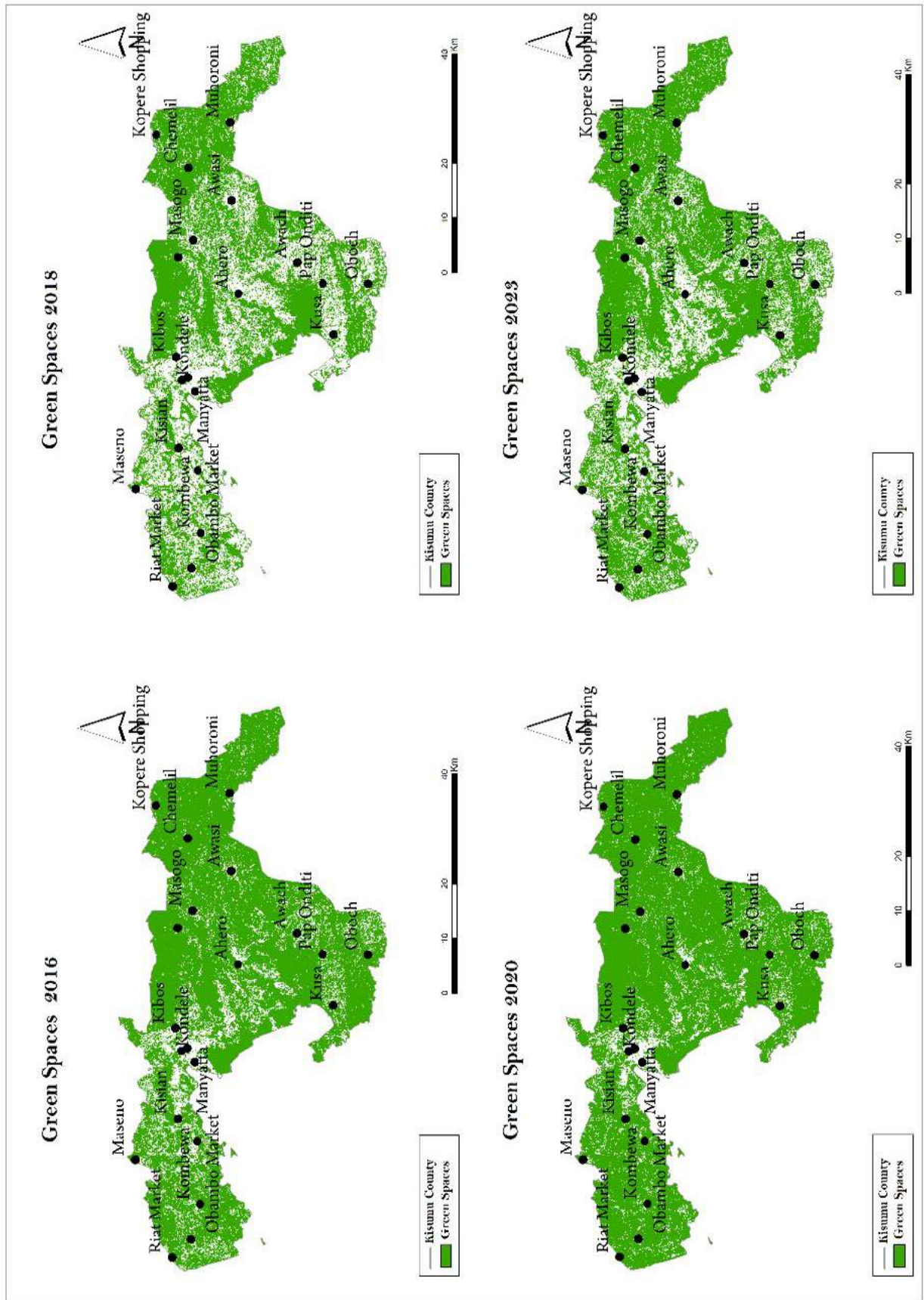
Mombasa County recorded a 3.9 per cent reduction in green space area from the year 2016 to 2023. Figure 12.6 shows Mombasa County green space area from 2016 to 2023.

Figure 12.6: Mombasa County Green Spaces



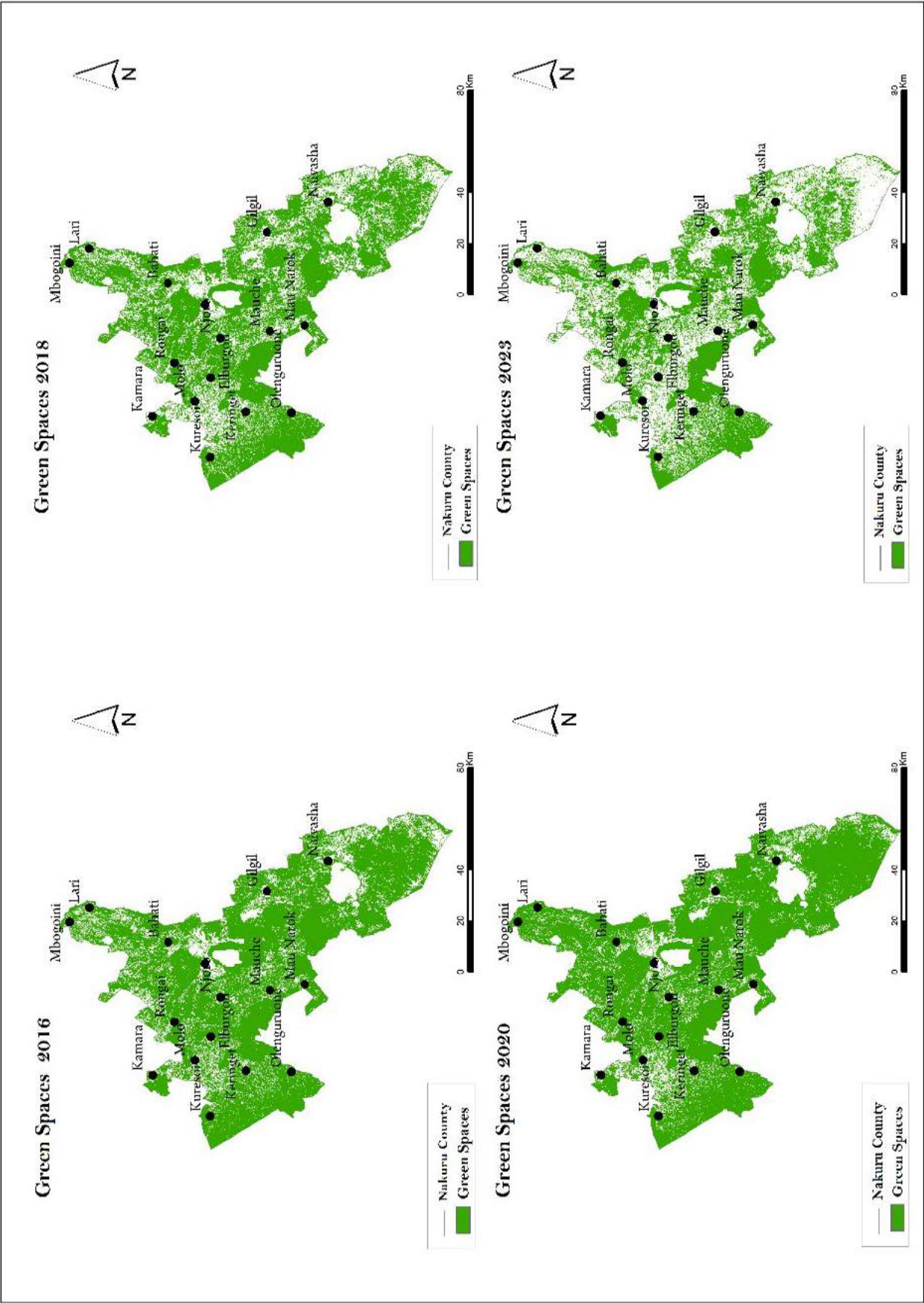
There was significant decline in green space area by 14.6 per cent between 2016 and 2023.
Figure 12.7 shows Kisumu County green space area from 2016 to 2023.

Figure 12.7: Kisumu County Green spaces



Between the year 2016 and 2023 Nakuru county green space area declined by 26.3 per cent. Figure 12.8 shows Nakuru County green space area from 2016 to 2023.

Figure 12.8: Nakuru County Green Spaces



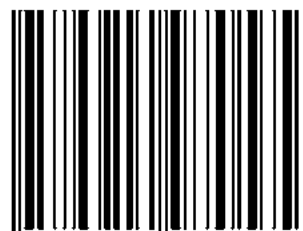


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