



INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN (ISUDP) FOR MALABA MUNICIPALITY
(2024-2034)



APPROVAL

CERTIFIED

I certify that the plan has been prepared as per the Urban Areas and Cities Act, 2019 (amended) and Physical and Land Use Planning Act Number 13 of 2019.

SIGNATURE:..... DATE:.....

PLAN. BRIAN ABWAKU, PHYSICAL PLANNING OFFICER

SIGNATURE:..... DATE:.....

MUNICIPAL MANAGER.

RECOMMENDED

SIGNATURE:..... DATE:.....

COUNTY EXECUTIVE COMMITTEE MEMBER IN-CHARGE OF LANDS, HOUSING AND URBAN DEVELOPMENT.

APPROVAL

HANSARD NO.:..... DATE:.....

COUNTY ASSEMBLY

ENDORSED

SIGNATURE:..... DATE:.....

H.E. THE GOVERNOR

ACKNOWLEDGEMENT

The scope of work for development of this Integrated Strategic Urban Development Plan (ISUD) plan is the Malaba Central Growth node which is the principal Central Business District for Malaba Municipality and it was achieved by mapping the existing infrastructure and proposing desired future prospects. Many institutions were involved in the process and included the county departments, entities and the County Assembly. Other stakeholders who contributed, immensely, on successful completion of this plan are the members of the public from within the four wards that constitute Malaba Municipality.

This ISUDp aims to integrate all sectors to make Malaba a place that is brimming with culture, enterprise and opportunity; a place where people want to live, work, play, study and do business; a municipality where those in the greatest need are valued and supported; a place that people will be proud to call home. It has identified key policy actions, reforms, programs, and projects that the Municipality, in collaboration with the National Government, County Government and other development partners, the programs shall be implemented in line with Municipality priorities, community priorities, CIDP, Kenya 2010 constitution and the long-term objective of vision 2030 in its aspiration to become a vibrant and prosperous Municipality.

This plan is in tune with His Excellency, the Governor, Hon. Paul Nyongesa Otuoma manifesto item on urban development and aspirations of the people of Busia, and shall be a baseline in providing guidance in as far as land use planning is concerned. for providing leadership and support in the development of this plan. I also greatly appreciate the role played by the entire County Executive Committee, Chief Officers and Directors of the county departments for their invaluable contribution during the preparation of this integrated development plan.

Special gratitude goes to the entire staff of Malaba Municipality for dedicating their time in ensuring all the required information and data was availed in time. The collaborative approach between the technical staff from the departments of Lands, Housing and Urban Development for the devoted long hours in ensuring a high quality and implementable document is produced during the plan preparation process.

To all that were involved I salute you but at the same time acknowledge that the greater challenge lies in the implementation of this plan.

**Francis Asoyong,
Municipality Manager,
Malaba Municipality.**

EXECUTIVE SUMMARY

Currently Malaba town is undergoing a downward transition growth. The town was initially a transit point where trucks from the Port of Mombasa sought clearance before taking off to Uganda and has been reduced to just a one stop border post. The current state of Malaba has led to the need for an integrated urban development plan. The main purpose of the integrated urban development plan is to analyse the demographic, socio-economic, spatial and the environmental situation of Malaba town and to formulate possible strategic recommendations to address the

identified gaps. The plan covers the jurisdiction of Malaba town in Malaba Central Ward, Teso North Sub County, Busia County on the border of Kenya and Uganda. The plan establishes different thematic areas of study of Malaba town. The first is the planning context which identifies the location of Malaba which is located within Busia County, Teso North sub-county with an area of approximately 62.10km². The next thematic area is the legal institutions and framework which govern Malaba town. The legal context includes of the Constitution of Kenya, The Physical and Land Use planning Act, Physical Planning Act, Urban Areas and Cities Act, Water Act, Land Act, National Land Use Policy, Environmental Management and Co-Ordination Act, County Government Act, Kenya Vision 2030 and Big Four Agenda. The methodology entails initiation, scoping, data collection and analysis, visioning, formation of land use proposals and policies and finally the plan approval. The next thematic area is the situational analysis which looked at different issues from demography and population, economy, social infrastructure and services, energy, recreational areas and public purpose use, housing, transport and communication and zoning, land use and land use requirements. The next area of study is the analysis of the gaps relating to each sector. Following the identification of the gaps is the formulation of proposals counter the gaps which were recorded. On the basis of the findings major conclusions are drawn which inform the recommendations suggested.

Mr, Peter Khasamule Odima,
County Executive Committee Member,
Lands, Housing and Urban Development

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CHAPTER ONE: INTRODUCTION

1.0 Background of the Study

This is an integrated urban development plan for Malaba Town in Busia County, Teso North Sub County. The aim of this plan is to provide an implementation scheme of the town to steer the socio-economic development of the town. The plan identifies the major challenges hindering the growth of the town, its major economic drivers, the opportunities and resources available and provides proposals to help curb the challenges and harness the available resources and opportunities. The physical and land use planning act, urban areas and cities act, the Physical Planning handbook and other legal, policy and institutional frameworks will guide the preparation of the plan.

Malaba town is located within Busia County, Teso North sub-county along latitude 0.633 north of the equator and longitude 34.269 east of the prime meridian. Its area is approximately 166 km². The Town's major economic driver is trading activities carried out at the border.

1.1 Vision Statement

Transform Malaba town into a sustainable economic border town by the year 2029

1.2 Statement of the Problem

Malaba town is on a downward transition growth. Initially the town was a transit point where trucks from the Port of Mombasa sought clearance before taking off to Uganda. Currently, with all the clearance being done in The Port of Mombasa, the border town has been reduced to just a one stop border post. Therefore, truck drivers who used to spend time and resources in Malaba as they await truck the

clearance now do so in Uganda and as a result the economy of the border town has been jeopardized.

1.3 Objective Statement

The main objective of the plan is to analyse the demographic, socio-economic, spatial and the environmental situation and formulate possible strategic recommendations to address the identified gaps and utilize opportunities in Malaba town to transform it into an economic hub.

1.4 Specific Objectives

- i. To identify the sectoral challenges that affect development in the area;
- ii. To identify the opportunities and resources that can steer the development of the area into an economic hub;
- iii. To provide a framework that tackles the challenges and harnesses the opportunities and resources in the area to offset development;

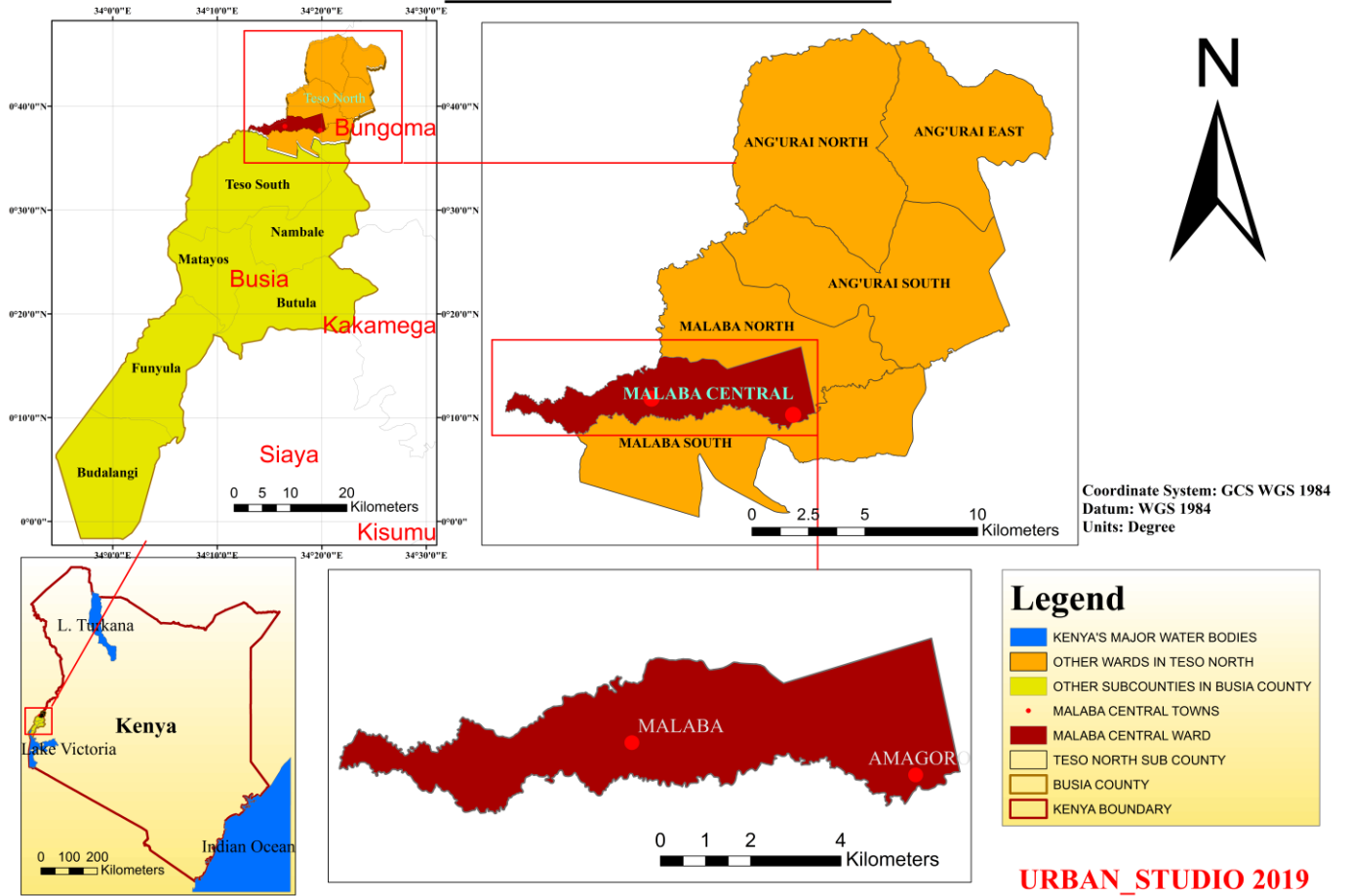
1.5 Scope of the Plan.

The plan covers the jurisdiction of Malaba town in Malaba central ward, Teso North Sub County, Busia County on the border of Kenya and Uganda. The plan is organized in Chapters. The chapters include an introductory chapter, the planning context, situational analysis, synthesis, plan proposals, implementation matrix, finance and budgeting of the formulated proposals.

CHAPTER 2: PLANNING CONTEXT

2.0 Location Context Map

CONTEXT MAP-MALABA TOWN



2.1 Legal and Policy Context

2.1.1 The Constitution of Kenya

It provides the requisite institutional framework on how to carry out spatial planning. The National Government are charged with the duty of formulating general principles of Land planning and coordination by the counties.

The constitution assigns the county governments the mandate of county planning and development, which entails the following; statistics; land survey and mapping; boundaries and fencing; housing; and electricity and gas reticulation and energy regulation.

It also mandates the National Land Commission to monitor and have oversight responsibilities over land use planning throughout the county.

2.1.2 The Physical and Land Use planning Act 2019

An act of Parliament to make provision for the planning, use, regulation and development of land and for connected purposes. The act provides for the principles, procedures and standards for the preparation and implementation of physical and land use development plans at the national, county, urban, rural and cities level. Similarly the act provides for the administration and management of physical and land use planning in Kenya as well as the procedures and standards for development control and the regulation of physical planning and land use

2.1.3 Physical Planning Act (Cap 286)

It is a repealed (in 2019) Act of Parliament to provide for the preparation and implementation of physical development plans and for connected purposes. The Parliament of Kenya enacts it. The Act provides for the responsibilities to be undertaken by whom in planning. The Director of Physical planning is mandated to

be responsible for the preparation of all regional and local physical development plans among other duties.

It provides guidelines on the processes to be undertaken during any development and the roles the relevant authorities should take up during the process. This is an important tool in this planning process since it will lay out the framework under which the planning will be done.

2.1.4 Urban Areas and Cities Act, No. 13 of 2019

It is an Act of Parliament to give effect to Article 184 of the Constitution; to provide for the, classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes. It provides provisions on the governance and management of urban areas and cities.

The Act entails Integrated Development Planning, which comprises of its objectives, provisions that the plan should align to the county government plans, adoption of the integrated development plan, how they should be prepared, its contents, submission to the county governor and annual review of the development plan. It provides that the integrated development plan should be prepared in accordance with the Third Schedule to this Act.

2.1.5 Water Act, No. 8 of 2002

It is an Act of Parliament to provide for the management, conservation, use and control of ,water resources and for the acquisition and regulation of rights to use water; to provide for the regulation and management of water supply and sewerage services; to repeal the Water Act (Cap, 372) and certain provisions of the Local Government Act; and for related purposes.

2.1.6 Land Act, No. 6 of 2012

It is an Act of Parliament to give effect to Article 68 of the Constitution, to revise, consolidate and rationalize land laws; to provide for the sustainable administration and management of land and land-based resources, and for connected purposes.

2.1.7 National Land Use Policy, No. 1 of 2017

This policy provides legal, administrative, institutional and technological framework for optimal utilization and productivity of land related resources in a sustainable and desirable manner at national, county and community levels. Its key principles informing it are efficiency, access to land use information, elimination of discrimination, equity and public benefit sharing.

2.1.8 Environmental Management and Co-Ordination Act, 1999

It provides regulations and enforcement for the overall protection and conservation of the environment in Kenya, including air quality, water pollution and regulation of toxins. It mandates the relevant authority to ensure sustainable use of hillsides, mountains and forest areas and shall control harvesting of forests and any natural resources in the region. EMCA was the basis, to which the National Environmental Management Authority was formed. The Authority is mandated to examine land use patterns to determine their impact on the quality of natural resources, as well as establish and review land use guidelines.

2.1.9 The County Government Act No. 17 of 2012

It is an Act of Parliament to give effect to Chapter 11 of the Constitution; to provide for county governments' powers, functions and responsibilities to deliver services and for connected purposes. The Act provides for the role of the executive committee in urban areas or cities planning, county planning; the objectives, principles, types of plans prepared and the roles of the relevant authorities. The county assembly is

mandated the role to approve plans, and the involvement of the county citizens in the planning process is also stated.

2.1.10 Kenya Vision 2030

It's a national long-term development blueprint to create a globally competitive and prosperous nation with a high quality of life by 2030 that aims to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens by 2030 in a clean and secure environment. The vision is anchored on three pillars; social, economic and political pillars which are aimed at guiding planning activities in the country.

2.1.11 The BeTA Mid-Term Plan(III)

It is a policy document, which will guide the development agenda of the country in the period 2022-2027. It focuses on key basic needs that are critical in uplifting the standards of living of Kenyans on the path to becoming an upper middle-income country by 2030. Prioritized is affordable and decent housing, affordable healthcare, food and nutritional security, and employment creation through manufacturing. These four sectors are expected to steer strong inclusive economic growth in the country.

2.2. Methodology

The methodology involved in the plan preparation entails;

- i. Initiation – This involves assessment of the planning needs of the area, delineation of the planning area, preparation of the Terms of Reference and concept paper, cost estimation of the plan preparation, procurement of the consultancy services and issuance of the notification of the plan.
- ii. Scoping – This will involve identification or scanning for the major social, economic and environmental issues in the area that need to be addressed by the plan. It will also entail formation of technical groups and identification of the relevant stakeholders in this process. The expected results from this step are analysis of the planning issues, opportunities and resources for social and economic development.

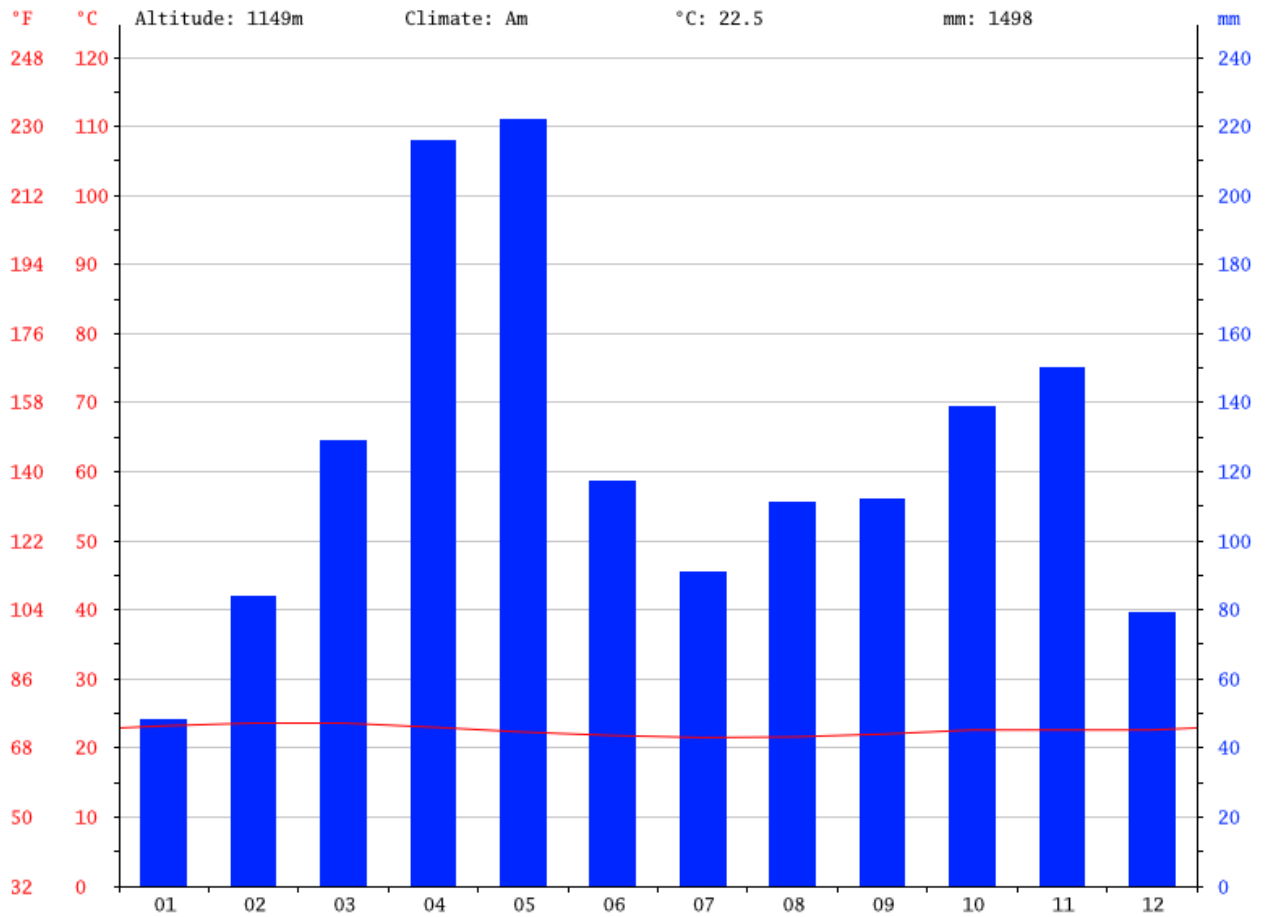
- iii. Data collection and analysis – This entails collection of the relevant spatial and socio-economic data in the planning area. The data can be identified and mapped for ease of analysis of the issues. The data will be analyzed and presented in form of graphs, maps, charts and reports.
- iv. Visioning – The local community will be involved to decide what kind of future they want. This entails answering three key questions on their present situation, what are their goals and where they want to be in future. The purpose of this step is to set objectives and goals of the plan that reflect the community's needs and their desired future.
- v. Formulation of land use proposals, which include all the relevant land uses to offset development in the area.
- vi. Formulation of development policies and measures – It involves development of policies that guide the proposed land uses in each zone.
- vii. Development of strategies and should be implementable in the key planning areas of the center.
- viii. Plan approval

CHAPTER THREE: SITUATIONAL ANALYSIS

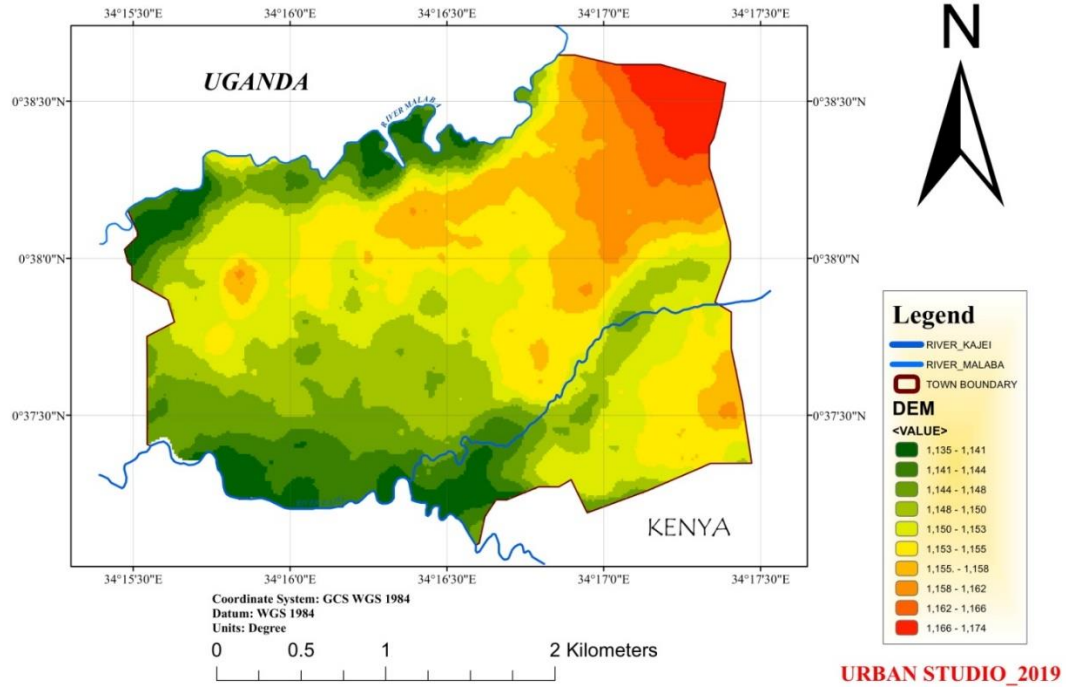
3.1. Environment and climate

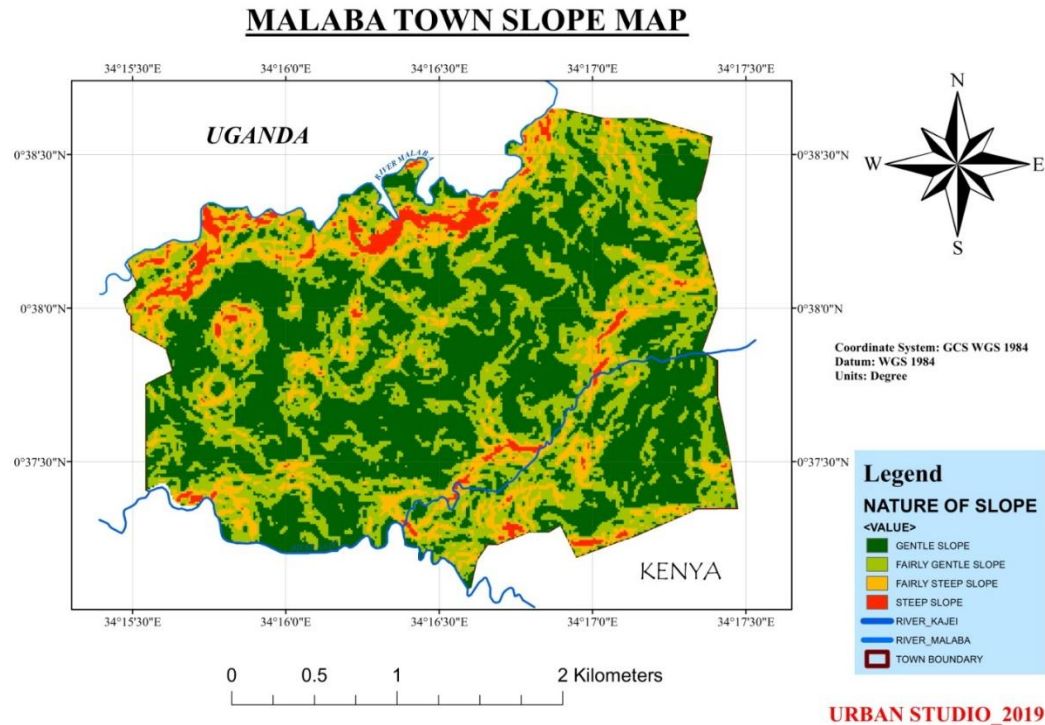
Malaba town has a tropical climate. There is significant rainfall in most of the year. The short dry spell has no effect on the overall climate. The average temperature in Malaba 22.5°C with the warmest month of the year being February with an average temperature of 23.6°C. July has the lowest average temperature of the year at 21.5°C. The driest month is January with 48mm. The most precipitation falls in

May. The difference in precipitation between the driest month and the wettest month is 174 mm. During the year, the average temperatures vary by 2.1 °C



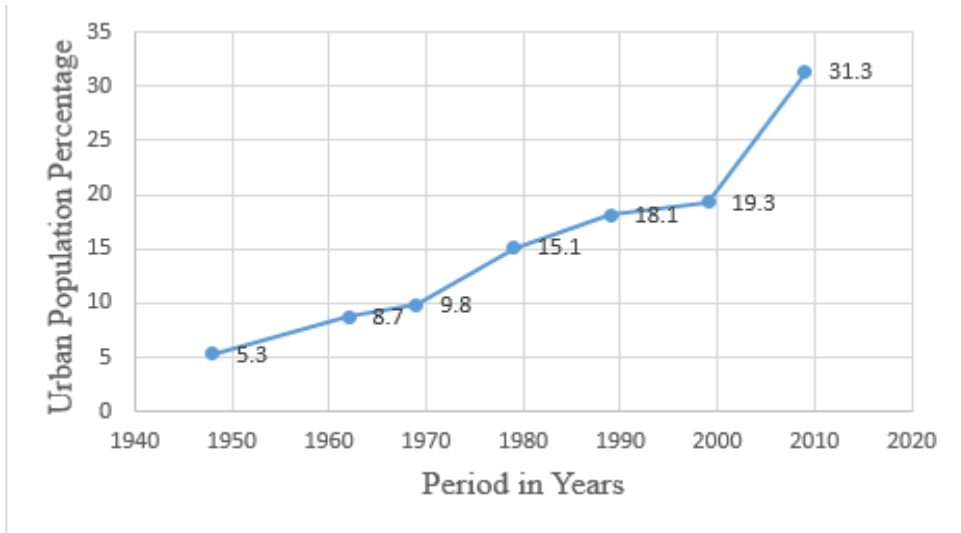
MALABA TOWN DIGITAL ELEVATION MODEL





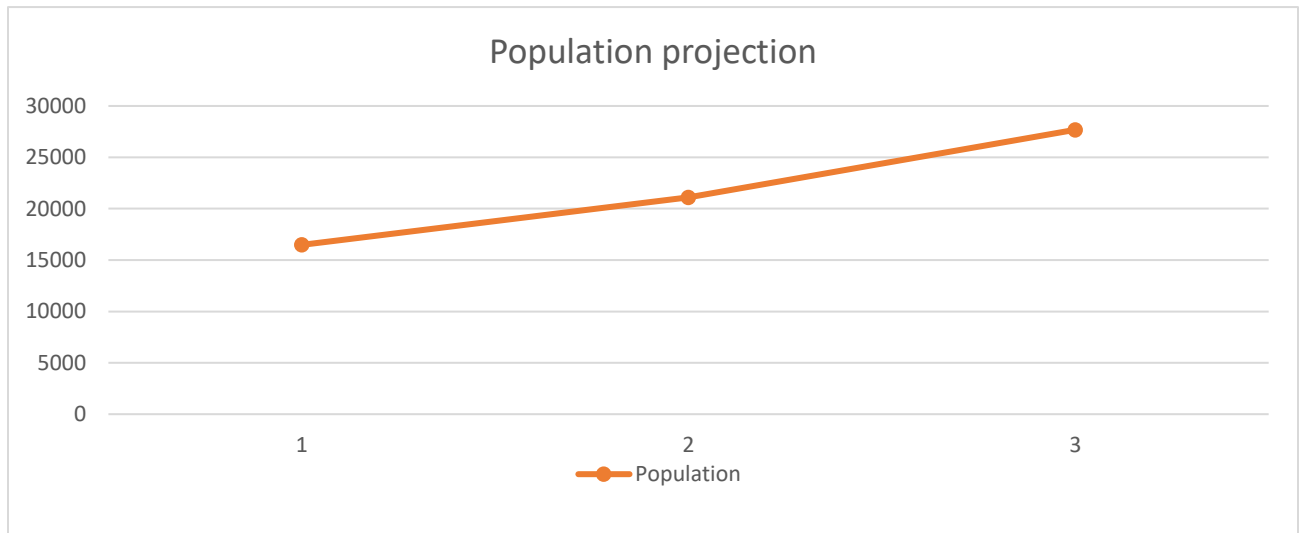
3.1 Population and demographic analysis

Population in Kenya has been growing since the Colonial time, after Independence and has continued to grow a great deal until today.



3.2. Population growth

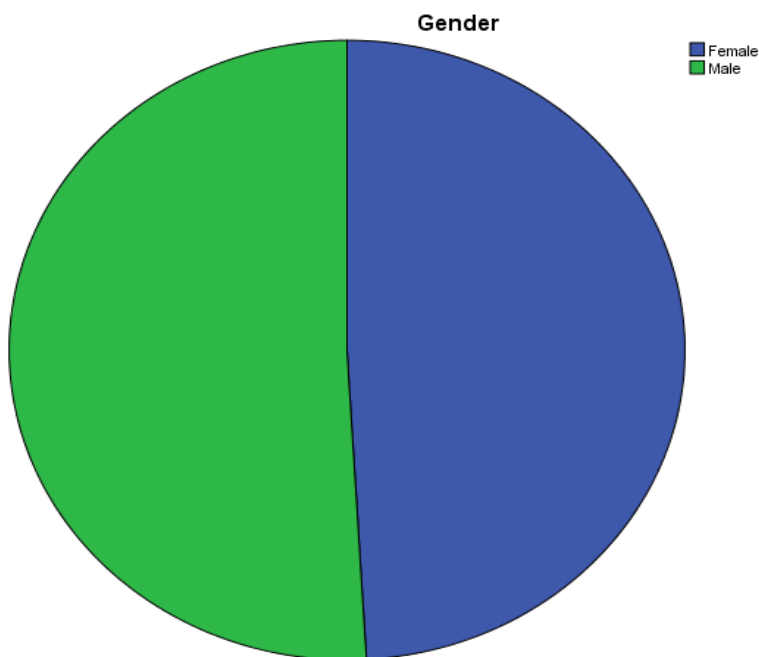
The population growth rate for Malaba town is estimated at 2.8%. This has put great pressure on socio-economic facilities; especially on health, education and land.



These increasing Malaba population trends, call for concerted efforts towards the provision of basic facilities such as housing, water and sanitation, physical and social infrastructural facilities and most importantly proper urban planning.

3.1.2. Population distribution

According to the 2009 Population and Housing Census, the town population was 16,480 consisting of 8,065 males and 8,415 females giving the population distribution of 48.9% male and 51.1 % female. The projected 2019 population was 21,096 constituting of 10,357 males and 10,739 females. The projected 2030 population is 27,680 constituting of 13,615 males and 14,065 females.



The respondents in the field 49.9% were female and 50.1% were males. This show that the female were more likely to be left or found in the household when the research was

being conducted hence making the majority.

3.1.3. Population density

Malaba town covers an area of approximately 166 Km². Administratively the town has 9 locations spread out in 4,220 households with a population density of 127 per square kilometer.

3.1.4. Migration

Malaba town like any other urban node experiences both long term and short term migration. There are emigrants who leave Malaba (Kenya) for Uganda and immigrants who come from various East African countries and other parts of the world. Internal migration is the most common type of migration in Malaba town where Kenyan citizens from various counties travel to Malaba. The pull factors to the town include access to better service provision, employment potential, research and business opportunities.

3.1.5. Household sizes

The household sizes in Malaba ranges between 5-6 people.

3.2. Economy analysis

Malaba grew as a result of economic activities that sprouted from the presence of the railway terminal, a cereal store and the Great North Road. These attracted entrepreneurs, investors and even cooperatives.

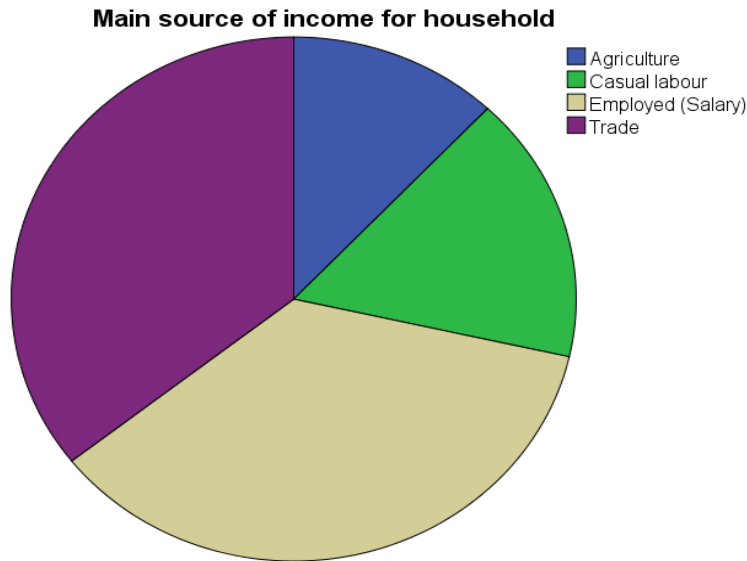
According to the National Spatial Plan 2015-2045, the major drivers of economy in Kenya are: Agriculture; Forestry and Fishing, Construction; Wholesale; and retail trade, Transport and Storage, Hospitality (Hotel and catering), Manufacturing and Finance and Insurance.

The main economic activities carried out in the town include trade, banking, hospitality and transportation. Over the past years, the overall economic situation of Malaba has been on decline due to the passive state of the railway and establishment of a one-stop border. Despite these, Malaba town has potential to grow into an economic hub serving both the Ugandan and Kenyan side. Key assets, resources and potentials that help to boost the economy of the town include: transportation, trade, Hospitality Industry, presence of the border, agriculture, finance and insurance organizations.

3.2.1. Employment

According to Busia County Integrated Plan 2018- 2022, rate of unemployment in the county stands at 66.7%. This implies that the majority of the labour force is not gainfully employed. The data from our household questionnaire indicates that only 35.9 percent of the people we interviewed get their income from formal employment. This may imply that the remaining 64.1 percent are unemployed. However, others

are self-employed. The chart below shows the sources of income for Malaba town households.



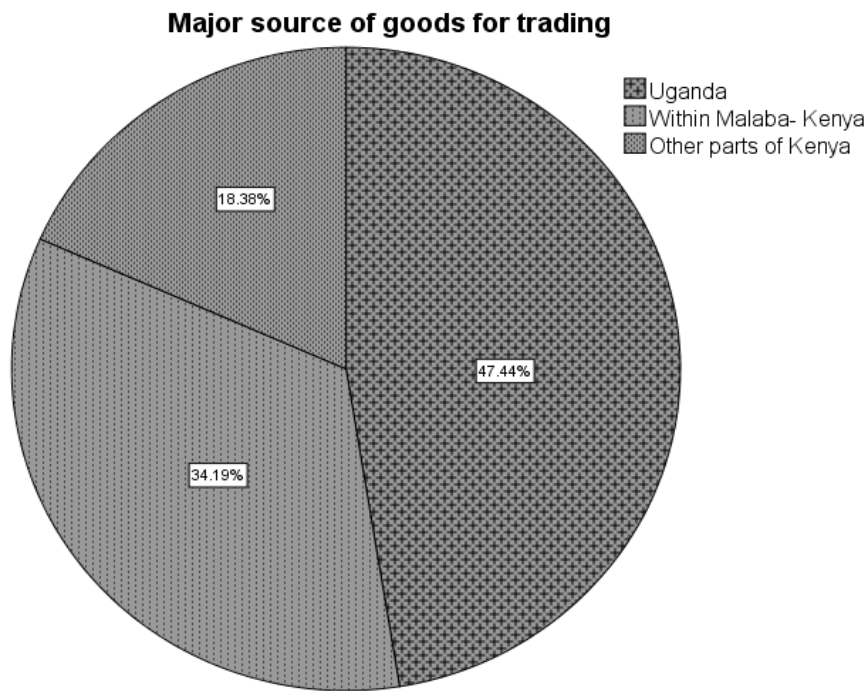
Trade is the second source of income for Malaba residents after formal employment. Casual labour and agriculture ensue down the hierarchy. Most of the residents in Malaba are employed by privately owned enterprises and a few by government institutions. The presence of truck drivers and formal employees enhances casual labour in form of laundry, babysitting and general house work.

3.2.2 Trade

Malaba being a transit and a one stop border point (OSBP) forms a good base for trading both internally and even across border. The trade sector included among others: wholesale, general retail, cereal dealers, butcheries, tire dealers, hardware

shops, electronics shops, auto spare parts, video libraries, mobile phone and phone accessories shops and one slaughter house.

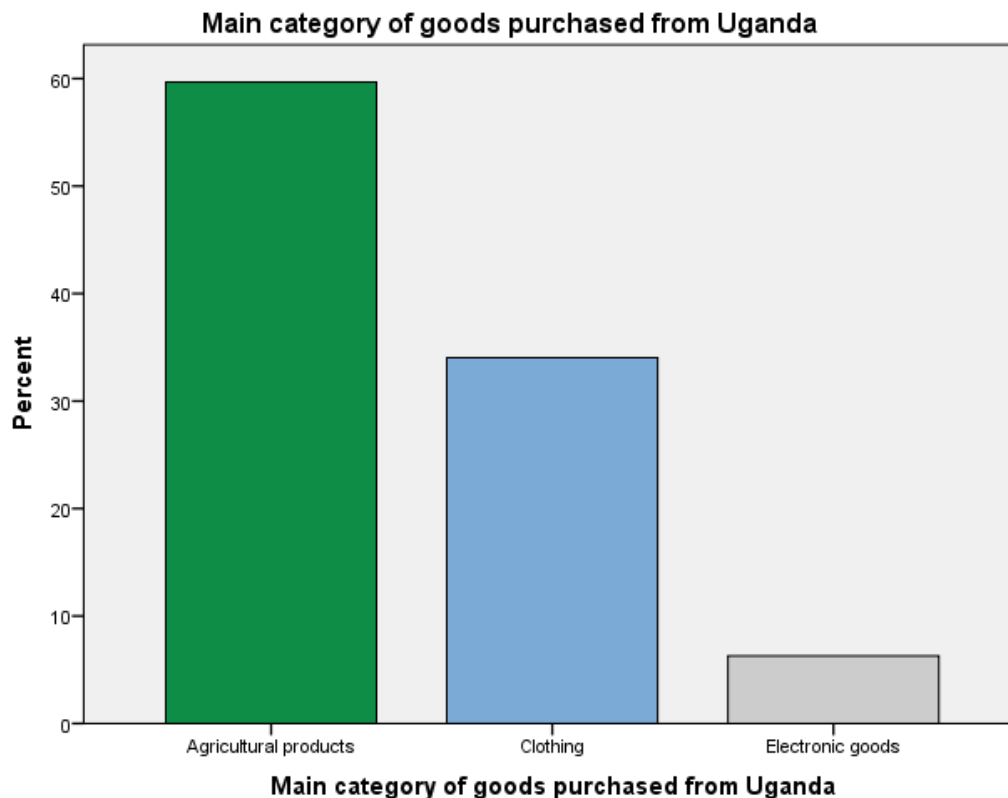
There are informal business structures alongside the road where people engaged in selling mostly clothes, electrical equipment and vegetables. The town has two supermarkets. General small retail shops form the majority of commercial buildings in Malaba town.



From our questionnaire analysis, most of the goods sold in Malaba are sourced from Uganda due to lack of factories and improved commercial agriculture in the town

and its outskirts. As a result goods from Kenya are scarce and more expensive since they are not produced nearby.

Most of the interviewees get agricultural products from Uganda. This makes up 59.69% of the goods purchased from Uganda. This indicates low agricultural activities in Malaba town and its outskirts. It is also enhanced by higher prices of agricultural products in Kenya compared to Uganda. Clothing and related goods make up 34% of the purchased items. A smaller percentage goes to electronic goods and others. This is an indicator that the traders in Malaba prefer to import items such as electronics from other parts of Kenya or other countries due preferences, quality and cost. The chart below shows major goods that are purchased from Uganda.



3.2.3. Transportation Industry

The Nairobi- Malaba railway and The Great North Road were among the major contributors of growth of Malaba as a town. Malaba is a transit town, a gateway to East and Central Africa. This being the case, many economic activities in the town revolves around the transportation sector. Transportation activities such as bodaboda, truck driving, bus and matatu operations dominate the economic sector. These activities have thrust into limelight other supporting economic activities in the hospitality industry such as hotels, bars and lodging.

3.2.4. Hospitality Industry

The service sector in the town included among others: bars and restaurants, guest houses, hotels, cyber cafes, laundry, salons/barber shops, shoe repairing, bicycle repairing, garages, clearing and forwarding, telephone bureaus and electrical shops.

3.2.5. Finance and Insurance.

Various financial institutions including micro finances operate in the town and the business community utilizes them for both business financing and savings. The town boasts of having Co-operative, Kenya Commercial Bank (KCB), Equity, and Family Bank.

The micro finance institution in the town is the Kenya Women Finance Trust (KWFT). All these contribute to the growth of the town.

3.2.6. Cooperatives

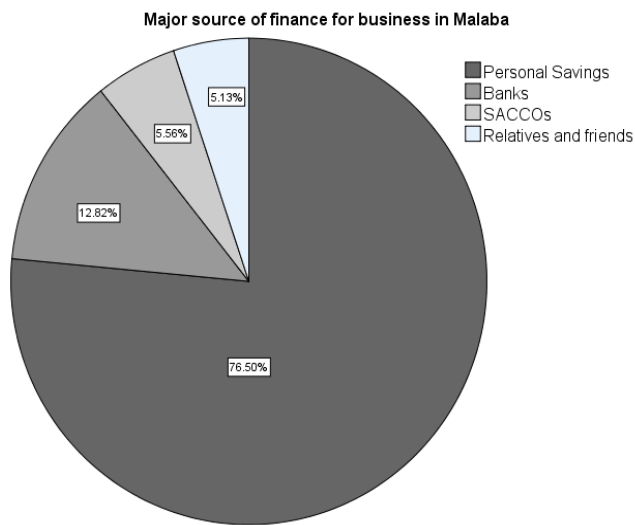
Malaba town has seven registered cooperatives. They are: Teso north youth cooperative, Malaba riders, Malaba bodaboda association, Malaba women association, Winners Sacco, Jayrose marketing cooperative dealing with cotton and Ojok housing cooperative.

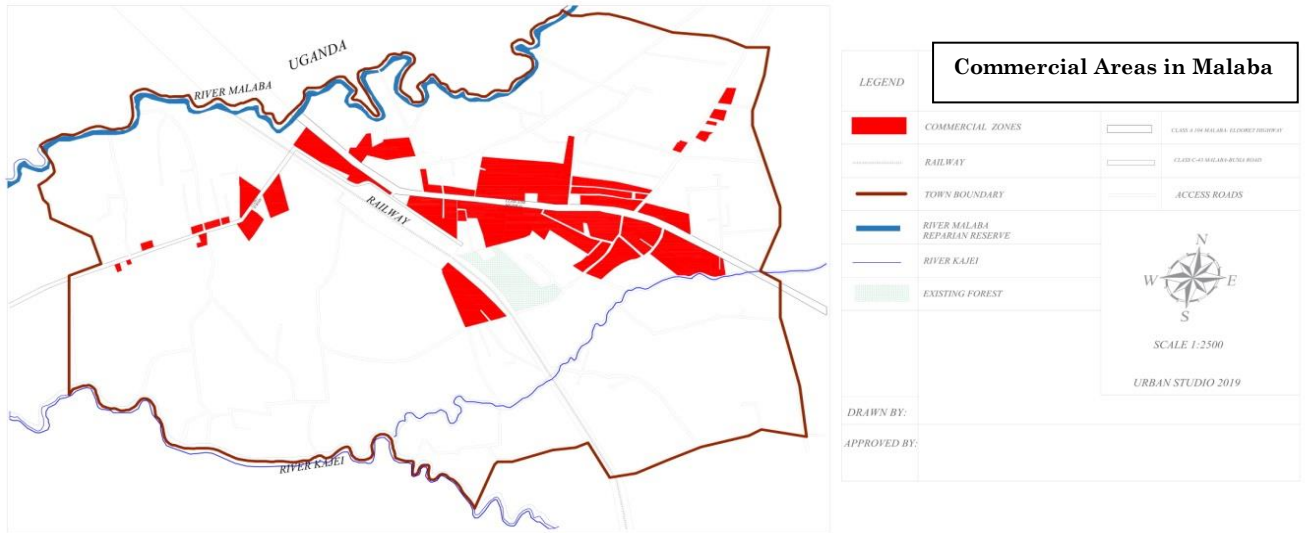
The trade office in charge of Teso North is located at the county headquarters in Busia town. The main challenges facing trade and cooperatives as stated by the trade officer are as follows:

- Insufficient fund allocation for cooperatives in the budget. The whole county was allocated six million for the financial year 2018/2019. Teso North Sub County was given only Ksh 200,000 for the loan applicants.
- Understaffing whereby the three trade officers in county handle six wards.

- Lack of facilitation of out of office work for the staff in terms of allowance and transportation means.

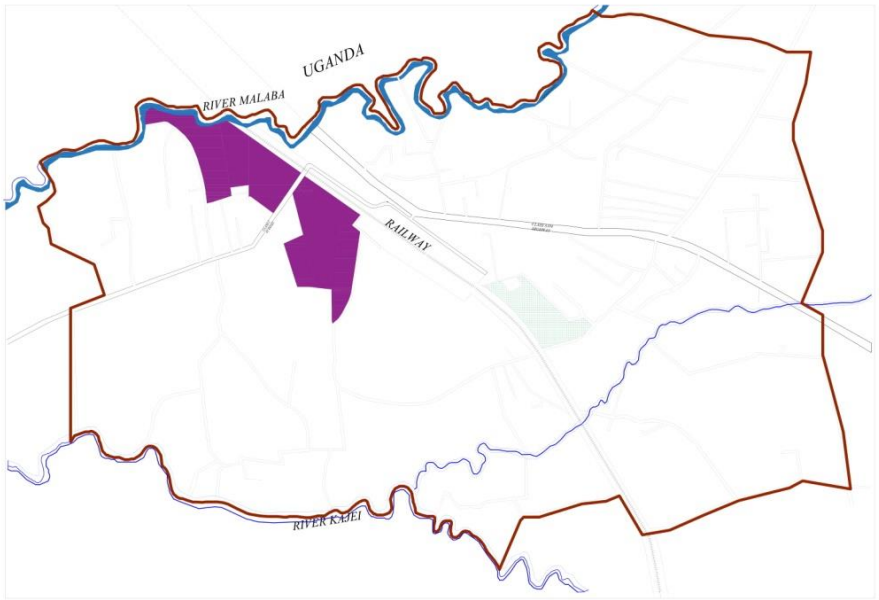
Despite the presence of banks and cooperatives in Malaba town, 76.50% of traders finance their businesses through personal savings. Banks contribute only 12.82% followed by SACCOs at 5.56%. The stringent conditions of banks limit people' access to them thus they rely on personal savings to start and improve their businesses. On the other hand, there is little awareness about creating, managing and importance of cooperatives.





3.2.7. Manufacturing

Malaba town does not have major industries. The common form of manufacturing in Malaba is the Jua kali sector. The manufacturing sector included among others, posho mills, carpentry, tins/black smith, welding, saw mill and tailoring.



LEGEND		Industrial Areas in Malaba	
	INDUSTRIAL ZONES		CLASS 4 (1M) MALABA ELIZABETH BRIDGEWAY
	RAILWAY		CLASS 10 MALABA BUS/BIKE ROAD
	TOWN BOUNDARY		ACCESS ROADS
	RIVER MALABA RIPARIAN RESERVE	 SCALE 1:2500 URBAN STUDIO 2019	
	RIVER KAJEI		
	EXISTING FOREST		
DRAWN BY:			
APPROVED BY:			

3.2.8. Mining

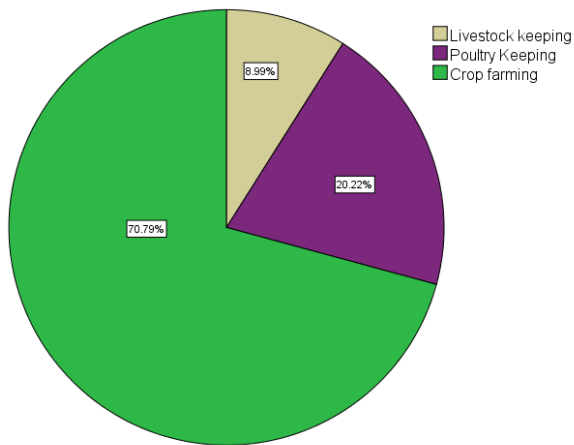
The on-going mining activities in Malaba include: sand harvesting (commonly along river banks), brick making, quarrying, and ballast mining in the hills covered by granites. There are granite rocks spread across Malaba area, which have the potential for large scale production of building stones and ballast. Malaba River has huge deposits of sand which can be exploited to generate income for the County government and the community.

3.2.9. Agriculture

Agriculture is practiced mostly in the peri-urban and rural areas of the town. Kitchen gardening is common in the residential areas. The main type of crops grown include: cowpeas, maize, beans and kales. The town residents also engage in livestock production. The major livestock kept is cattle which are grazed within the town and are a common sight along the road.

An average of 24% of the people living in Malaba practice Urban agriculture. They however, practice small scale subsistence farming. The farmers rely on traditional methods of farming and do not use new technology. Majority of the farmers practice crop farming. The main crops grown are food crops such as maize, cowpeas and kales. 20.22% keep poultry, majority of birds being free range hens. Only 8.99% of the residents keep livestock. The major livestock kept is cattle.

Major Agricultural activity practised



There is no urban and peri-urban agriculture practices such zero grazing, green houses, aquaculture, urban beekeeping, horticulture and sack gardening. The current output from agriculture is low and not sufficient to feed Malaba residents. As a result, most residents buy agricultural products from Uganda.





Forests and Agro-Forestry

Malaba does not have any extensive natural forest however there are planted forests. Most of the land has farm woodlots whose main products include firewood and charcoal as fuel, medicinal plants, and timber for construction of houses.

3.2.10. Market

Malaba town has one open air market. It is permanent as it operates on a daily basis. The market is most active in the evening and the products mostly traded are fruits and vegetables, cereals and tuber crops such as cassava, potatoes and yams.

Hawkers also operate in the market. Stalled markets are also present in the town. They deal mostly with utensils, clothes, electrical and auto spare parts.

3.2.11. The border

Malaba town is a one stop border point (OSBP). The border spurs many economic activities such as forward and clearance, hotels, guest houses, parking and motor repair garages. The border also enables trade with the neighbouring country, Uganda. However, the effects of the border to the economy are diminishing since it became a one stop border point. This means truck drivers no longer have to stop at the border as they await clearance. The result is reduced market of hospitality services as well as forward and clearance services.

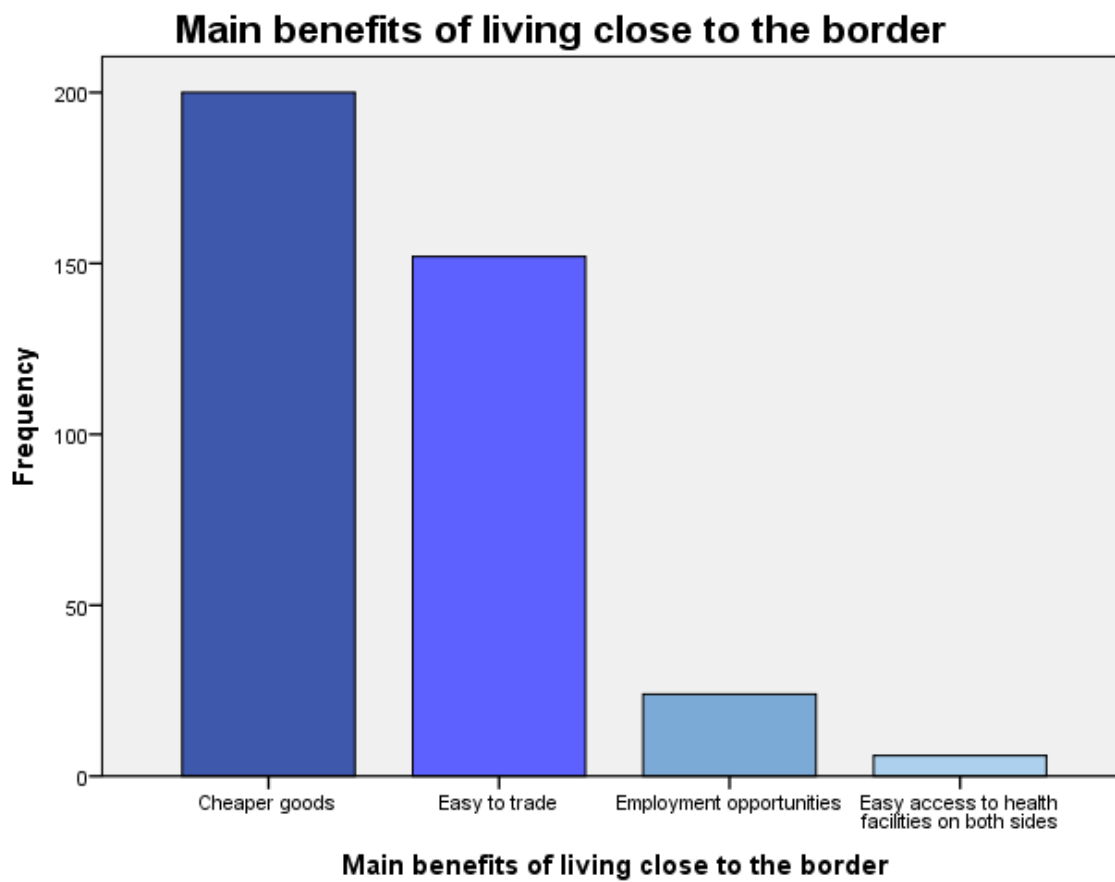


OSBP at Malaba Town



River Malaba-The Kenya Uganda border feature

The close proximity of Malaba to the border has created an impact to the economy of the town. 52.36% of the people we interviewed pointed out cheaper goods as the major benefit of living close to the border. 39.79% of the people are also able to access goods from Uganda easily with minimal cost .6.283% of the people are also able to acquire employment opportunities from the



3.2.12. Tourism

There are no significant, well-known tourist attraction sites in Malaba.

3.2.13. Storage - Cereal board

The National Cereals and Produce Board in Malaba was started in the early 80s. It has a storage capacity of 180000bags. The cereals stored are Maize, beans – it's mainly for sale- and green grams. Apart from storing cereals the NCPB also sells rice and have a mill in Sagana.

Services provided by the NCPB

- i. Serves as a strategic grain reserve by storing private and government owned cereals. It stocks cereals for the government for disaster management in case of disasters such as floods, famine or drought.
- ii. Leasing of stalls.
- iii. Provision of fumigation services and sun drying of the cereals.
- iv. Rents out houses
- v. Sell subsidized fertilizers to farmers

Maize stored by the NCPB comes from the farmers around the area and some of it is sold on commission basis. Only registered farmers can access the subsidized fertilizers. The chiefs first vet the farmers then their names are forwarded to the ward representatives who then forward the names to the CEC of Agriculture who further forwards the names to the Agricultural Officer who then gives the names back to the chief who finally forwards them to NCPB.

Challenges facing the NCPB

- i. Political interference
- ii. Farmers' complaints on the prices of the fertilizers
- iii. Millers' issues

iv. Propaganda

The board has a warehouse receipt system whereby farmers are encouraged to store their cereals at a fee during the harvest season then take the cereals back during the low season. The receipts given to the farmers can then be used to acquire loans.

The NCPB in Malaba has several partnerships such as the one with Kenya Seeds Company and Kenya Breweries Limited where they supply KBL with sorghum. It does public sensitization via barazas and also during agricultural shows.

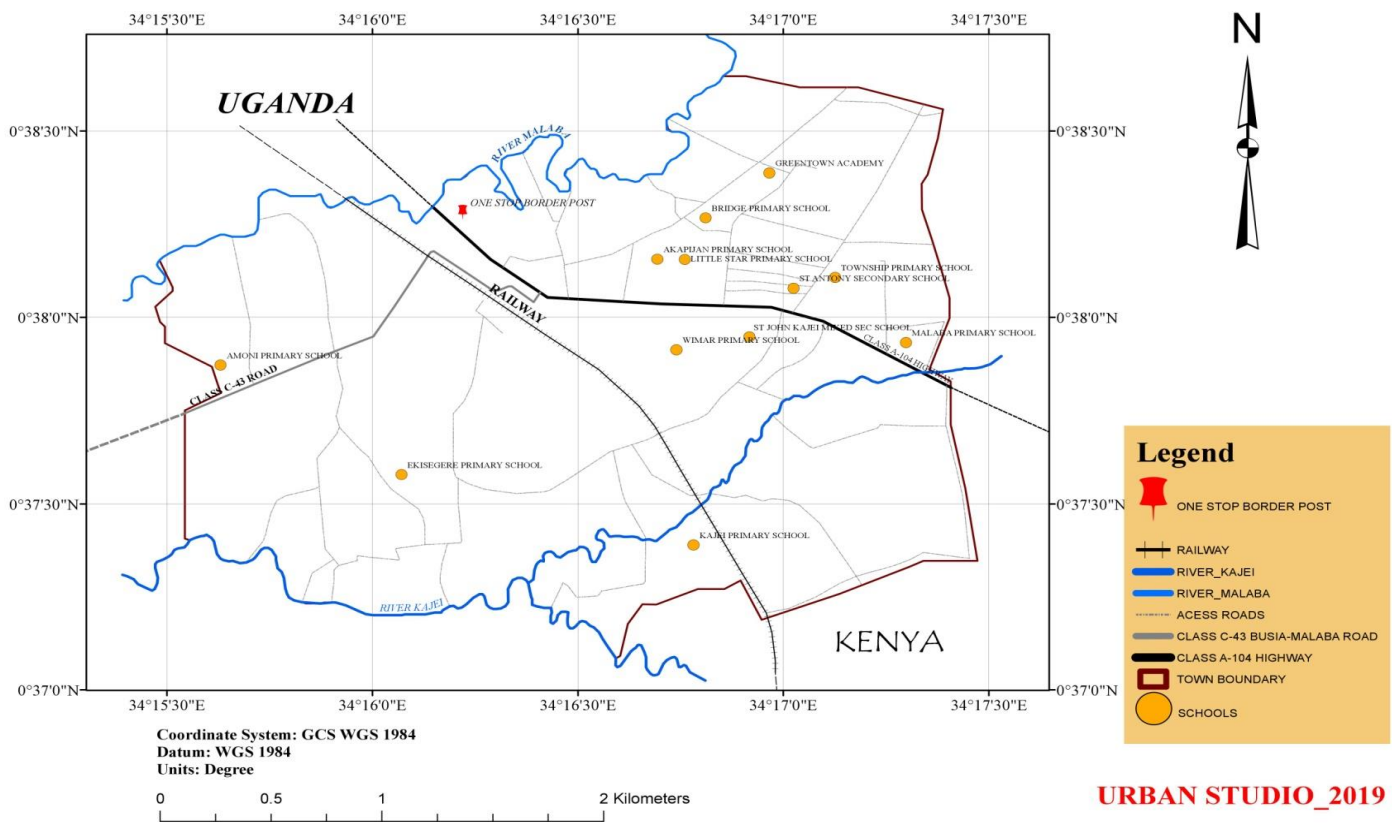
3.3 Social Infrastructure and Services Analysis

3.3.1. Education

Malaba town has a number of schools, both public and private. The county government with the assistance of local NGO's has been working to encourage and

increase enrollment and completion of school and it also ensures that the inhabitants of the town get quality education, are shielded from child trafficking and early marriages that have in the past prevented them from pursuing formal education. Malaba town has a total of 10 primary schools and 2 secondary schools.

MALABA TOWN EXISTING EDUCATIONAL FACILITIES

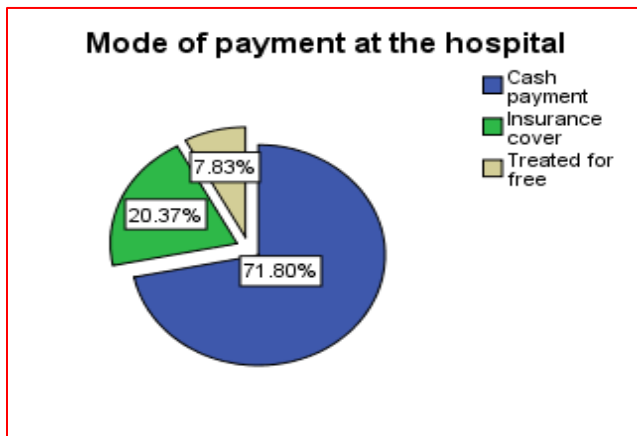


3.3.2. Health

Malaba dispensary is the only hospital in Malaba town that is owned by the government; apart from serving the residents in the town, it serves the whole Malaba area due to its proximity to the Great North road. The facility receives its finances from the County Government of Busia, through the department of Health and Sanitation. It also gets support from other non-governmental organizations such as AMPATH that is said to be supporting a public officer nurse in the dispensary. There are a number of private clinics in the town and that caters for the health needs of the people of Malaba town. Common diseases include: Malaria, Typhoid, Amoeba, Pneumonia, Tuberculosis and HIV. Some of the challenges facing health sector in Malaba town and specifically in Malaba dispensary;

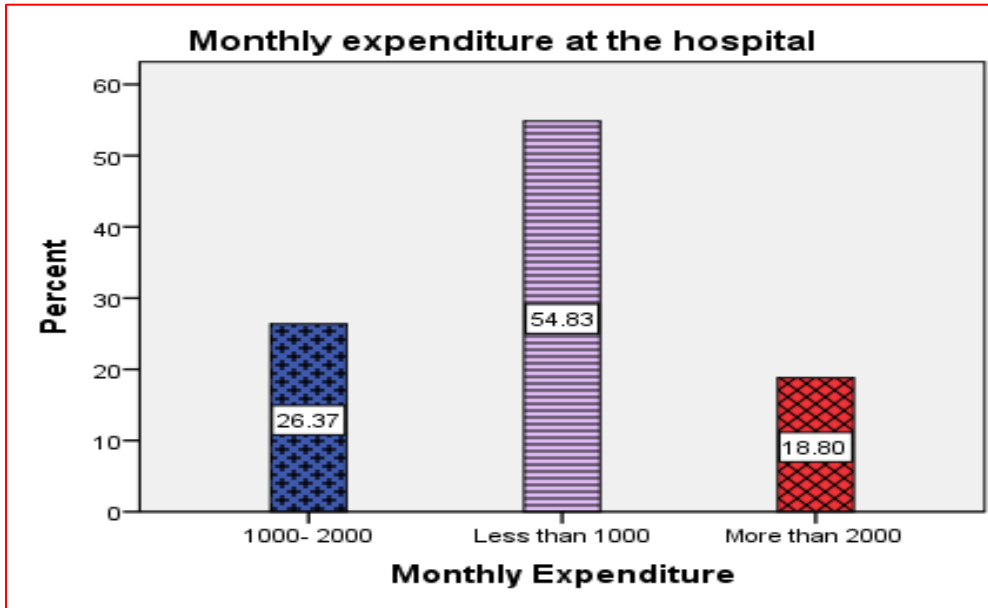
- i. Inadequate health facilities in Malaba town.
- ii. Despite casual workers being employed to do the cleaning there is a challenge on sanitation and waste management in Malaba dispensary.
- iii. Despite Malaba dispensary being said to be quiet accessible some of the residents complained that they do walk more than 4km to get to the dispensary which is supposed to be the minimum walking distance for one to access a health facility.
- iv. Malaba dispensary offer free services with only little charges maybe on registration but residents tend to wait long hours in the hospital queues that is more than 4 hours before getting the services
- v. The new dispensation that states all charges collected in the county should be put in the county revenue account CRA led to the death of FIF that is facility improvement fund where by charges collected for health were used to improve health unlike now all funds are distributed even to other needs due to the joint account.

The findings in the chart below shows that, out of the 383 respondents, 275 (71.80%) use cash as their mode of payment at the hospital, 78 (20.37%) use insurance cover whereas 30 (7.83%) are treated for free. The majority of the respondents use cash as a mode of payment to access medical services. This shows that most of the residents in Malaba town are unemployed hence unable to pay for insurance cover. Also, most of the health centers Malaba town are privately owned hence people go for cash payment.

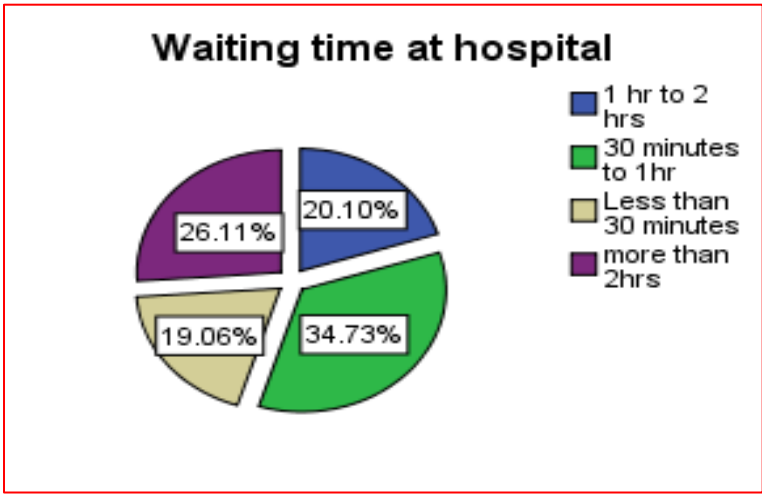


Source: Studio Data (2019)

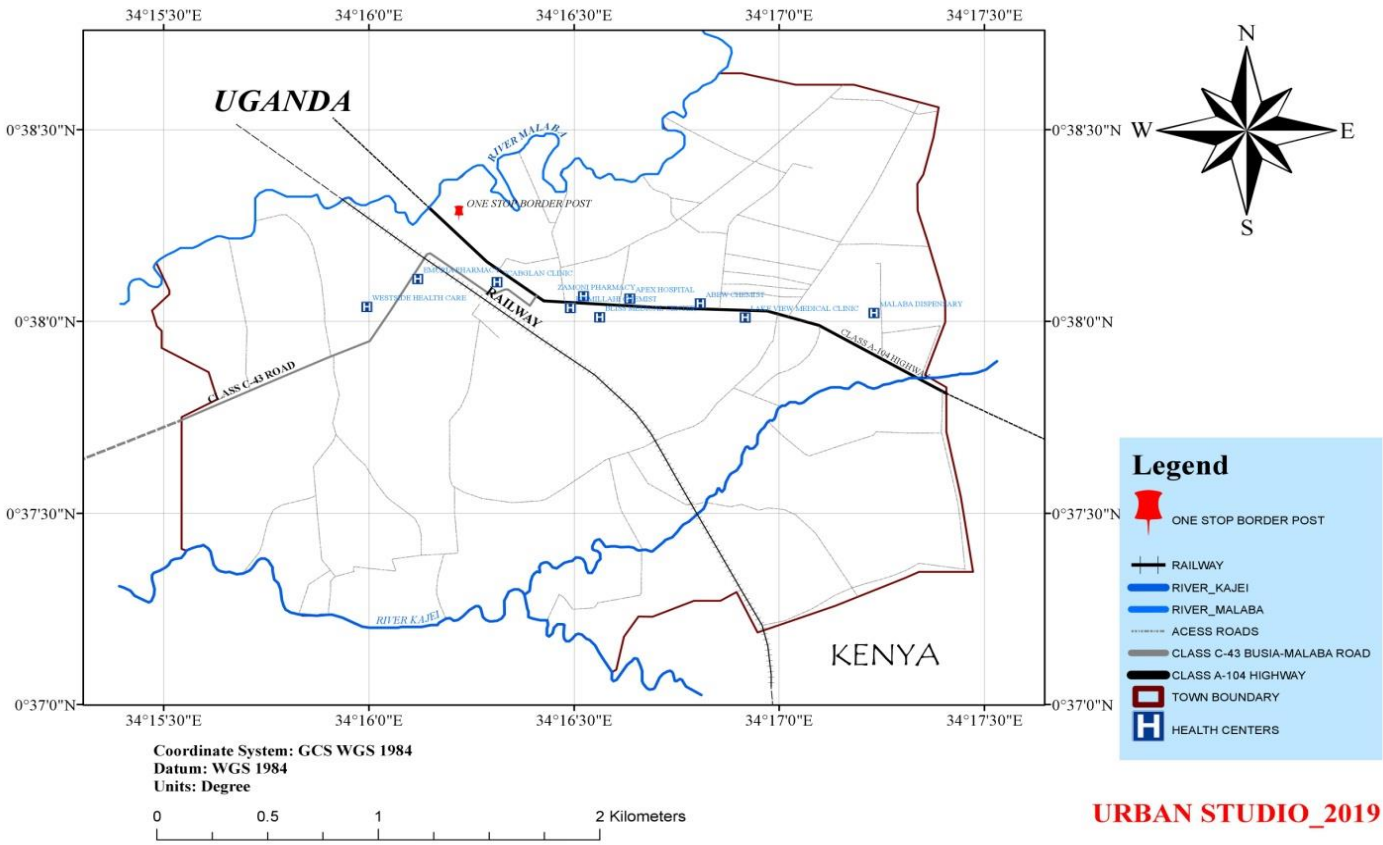
The findings in the chart below shows that, out of the 383 respondents, 101 (26.37%) pays between Kshs. 1000-2000 at the hospital, 210 (54.83%) pays less than Kshs. 1000 whereas 72 (18.80%) pays more than Kshs. 2000 to access health services. The majority of the respondents spend less than Kshs. 1000 to access medical services. This shows that a larger number of population of the people living in Malaba town go to public hospitals for cheaper treatment because their monthly expenditure on health is low due to poverty.



The findings in the table above shows that, out of the 383 respondents, 77 (20.10%) waits for 1 hour to 2 hours at hospital to be served, 133 (34.73%) waits for 30 minutes to 1 hour, 73 (19.06%) waits for less than 30 minutes whereas 100 (26.11%) waits for more than 2 hours to access health services. The majority of the respondents spend 30 minutes to 1 hour to access medical services. This shows that the population in Malaba is quite small hence the waiting time becomes smaller because there is no overcrowding in the hospital.



MALABA TOWN EXISTING HEALTH FACILITIES



URBAN STUDIO_2019

3.3.3. Water and sewage networks

Malaba town water distribution services are carried out by Busia Water and Sanitation Company (BUWASCO). Before the formation of BUWASCO two years ago, Malaba's water distribution was under the Kakamega Water and Sanitation Company. The demand of water is higher in comparison to the amount that BUWASCO is able to supply. The water demand is about 125000 cubic meters of water while the achieved supply is only 80000 cubic meters of water. This leaves behind a deficit of 45000 cubic meters of water. The average consumption of water is about 60- 100 liters of water on daily basis. Water charges and mode of payment

The water company charges the old tariff of 45 shillings per cubic meter. Payment is mainly via the pay bill or directly to the bank accounts as payment using cash is highly discouraged. When calculating water supply costs, several factors are taken into consideration. These factors include production factors such as chemicals used to treat water, electricity used for pumping and staff, maintenance costs, levies being paid to institutions such as WARMA for acquiring water from the rivers. More factors include staff salaries and infrastructural development. BUWASCO faces various challenges while recovering their input costs. These challenges include untimely payment by the water users, disconnection of power due to unpaid bills and power outages, WARMA issues, poverty which makes the people unable to pay for water connection, the tariffs have not yet been worked on thus forcing them to use the old tariffs and payment of loans taken takes a toll on the organization.

There are about 400 connection of piped water in Malaba. In terms of capacity, the manpower is present but the electricity is expensive thus putting a strain on the water supply. Water delegation to the private sector, which is profit oriented, has made water supply expensive since the organizations lack skilled personnel, the

chemicals used to treat water are expensive, logistics don't add up and the financial constraints are too many. Most of the residents in Malaba town rely on shallow wells and boreholes which are in plenty in the area. Using water from river Malakisi is not reliable because of the constraints that come with it such as failure of paying the WARMA charges for using river water hence they are barred from using the river when the fees have not been paid, a lot of expensive chemical is needed to treat water, high electricity cost and vandalism which occurs near the source and this disrupts the supply of water.

In FY 2018/19, the department has set to implement the following projects; Enhance protection of rivers with regard to intensive rehabilitation of the riparian reserve through reforestation, recovery and protection, Ensure effective liquid waste management through prevention of illegal discharge into the rivers and proper installation of sewer lines and sewer systems in urban areas and enhancing accessibility to clean, safe and affordable water through extensive installation of water pipelines across the county.

Sanitation facilities within Busia Municipality depend largely on the level of service of water supply. The Municipality has no sewer system; thus, the population is served by onsite sanitation facilities, including pit latrines and waterborne toilets that are connected to septic tanks. Furthermore, there is no excreta disposal system in Busia District in that households and institutions simply abandon filled-up pit latrines as new ones are built.

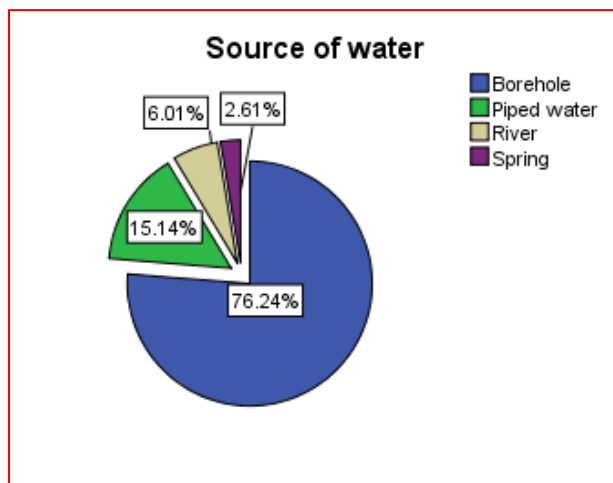
Most of these toilets are not in very good shape and inadequate to cope with the number of users, including vendors/traders, nearby local communities and visitors including vendors/traders, nearby local communities and visitors.

Solid and liquid waste management forms the biggest challenge for the county. Investment requirements are enormous and the department shall partner with relevant partners in ensuring adequate measures are put in place to effectively control town and urban waste collection that also includes our Municipal Sewerage and Sanitation.

Malaba region, despite being a cosmopolitan area and home to the cross-border town of Malaba, is facing water supply and sanitation challenges like any other urbanizing region in Kenya. Malaba is abound with booming cross-border business with Uganda, a factor that has caused an influx of migrants into the area causing a lot of stress on the available water resources and again, generating a lot of both solid waste and liquid waste. Malaba, like any other part of the country is categorized as a water scarcity region.

By 2030, global demand for energy and water is expected to grow by 40% and 50% respectively (UN-Habitat, 2016) and Busia County is taking cognizance of this fact to ensure that there is affordable and easy access to water in all its seven sub-counties, including the Malaba region. All the seven sub-counties and major urban centres have operational water schemes (CIDP, Busia, 2013-2017). The CIDP further commits to ensure that the farthest distance to any water point is approximately 1.5 km and currently accessibility to water sources is 42% to 81.6% for improved water sources. The Kenya Constitution, 2010, Articles 6(3); 174, 201 and 202 gives a clear directive of state policy that has far-reaching implication for sanitation policy. Article 6(3) directs on the formation of state organ to ensure reasonable access to sanitation services in all parts of the Republic of Kenya. Article 43b declares sanitation as a basic human right and guarantees the right of every person to “reasonable standards of sanitation. The Fourth Schedule on its part devolves most sanitation functions and services to the 47 Counties.

However, in Malaba, despite it being home to a fast growing town, nothing much has been done to construct a proper service line and water system (Ojune N., 2009). Ojune further says that 95% of population use pit latrines and that the water connection by the local authority is inadequate. Main sources of drinking water in Busia County, Malaba included are borehole, rivers, springs and piped water, standing at 46%, 19.1%, 22.3% and 12.5%, respectively. Busia County has abundant water sources such as rivers (Malaba, Malakisi, Sio and Nzoia), 237 springs and 154 shallow Wells (Busia County CIDP, 2013-2017). If these sources of water are well harnessed, and water abstraction done optimally, then Malaba will have adequate and clean water for use.



Source: Studio Data (2019)

The findings in the table above shows that, out of the 383 respondents, 292 (76.24%) use borehole, 58 (15.14%) use piped water, 23 (6.01%) use river as their source of water whereas 10 (2.61%) use spring as their source of water. The majority of the respondents uses borehole as their source of water. This shows that the residents of

Malaba town do not have access to water from Busia Water and Sewerage Company (BUWASCO). The water table is also high in the area due to presence of the river, thus, making it cheaper to dig a borehole. Water accessibility in malaba is quite a problem especially when it comes to connectivity of piped water to the households. In our findings we realized that most of the residents of malaba town indicated borehole as their main source of water.

3.3.4. Current Water and Sanitation Funding in Malaba

Ksh.700m Sewage project. (MAY 2018)

The resolution was passed at DIDC Hall in Amagoro that brought together representatives from the County and National Governments, Lake Victoria North Water Service Board, Malaba Community, Office of Teso North MP, the project consultant and other stakeholders. Busia County acting Chief Officer for Water and Sanitation Moses Weunda said the Sewage and water projects will cost Sh1.3billion and will be financed by the African Development Bank.

” The water project will supply the town and its environs 600 cubic metres of water per hour. The completion of the modern sewage and water projects will create job opportunities, development and corporate social responsibility to the community of the border town. Kaunya said the project will change the face of Malaba and bring clean water to the border town and Teso North in general, adding that the sewage works will create youth employment

Billion Malaba Water and Sanitation Project

Rift valley water and sanitation board on behalf of Lake Victoria North Water services invited sealed bids from eligible bidders for the execution of the multi-billion Malaba water Supply and Sanitation project

Achievements in Water and Sanitation in Malaba

Despite being a growing town, Malaba has had challenges in proper sewer line and piped water system. The sanitation situation in the town is very poor since more than 95% of the population still use pit latrine and worst still the water table is high. Thus, most of the residents have built cesspools while others have pit latrines. Although, the area is connected with the town council water supply system, it is not enough. Most residents have shallow wells within their homesteads, from which they get water for basic domestic use. The government has made approaches to handle the water and sanitation problem in Malaba as discussed below:- The town has a project that entails construction a Dam on River Malaba to avail residents of the area with clean and safe drinking water. Water Supply Works will entail ,New Gravity Intake about 11 km, new raw Water Gravity Pipe, new Horizontal Water Treatment Plant ,rehabilitation of existing Water treatment Plant, rehabilitation of backwash tanks, rehabilitation of storage tanks and addition of new storage tanks setting up new Water Kiosks in the area.

The Town is also set to have a Ksh 700 million sewage treatment plants with 33 acres of land needed to end the sewage challenges facing the border town. The project will be sponsored by the African Development Bank and will involve. New Waste water Treatment Plant: 4,000 m³ /day Capacity for Malaba Town, new trunk mains for sewerage and New 5nr.Ablution blocks.

A group of NGOs have partnered to build water reservoirs to hold 74,000 cubic liters in Amagoro and Malaba. The Water project will ensure 30,000 people in Malaba and 10,000 in Amagoro access clean drinking water. The pilot project is by Investing the partnership, ICS Africa sank two boreholes from which the water will be pumped and distributed. All water points have been fitted with prepaid water systems for better management. Residents will buy tokens for their prepaid cards, which they will use to fetch clean water at Sh5 per 20-litre jerry cans. Vendors sell the same jerry can at Sh20. The money collected will be used for maintenance of the water system

3.3.5 Emerging Issues

Emerging issues pertains to the current problems experienced under this sector of environment and forestry and include;

Risk of environmental pollution

The data analysis below shows that burning, 47.99%, is the most practiced method of solid waste disposal across the entire region of Teso North. This activity poses high risks of environmental pollution by air, where toxic carbon and other gaseous emissions released into the atmosphere results into health related issues as well as the formation of acidic rain which causes stunted growth of crops and the corrosion of metallic structures. In addition, these gases, majorly the carbon emission has a negative effect in the depletion of the ozone layer allowing exposure to the harmful solar radiation of the sun that triggers cancerous and malignant growth.

Land pollution as a result of solid waste disposal practice by dumping, burying, use of open dumpsites and open fields poses danger to the aesthetic quality of the environment thereby triggering environmental degradation. These solid wastes also

prove to be harmful in the form of broken glass risking injuries as well as being grounds for vector disease epidemic Studies shows that dumping and use of dumpsite is are commonly practiced after burning as a way of solid waste disposal.

Policy Framework

There is no effective policy and legal framework that regulates the management and disposal of solid waste materials. Moreover, there is minimal action against offenders of environmental policy in regards to environmental pollution.

This is coupled with the fact that the sub-county government has no policy framework of their own as they rely on the acts and regulations of the county and state government.

Governmental Support

There is insufficient support from the ministry of environment at national and county level in the provision for adequate dump collection utilities and services. This is evident as shown in the 1.57% data analysis.

This has forced the community to use other means of solid waste disposal with the major ones being burning, burying, open dumpsites and open fields, activities considered to be harmful to quality environment yet are the most commonly practiced methods. Moreover, there is inadequate support from the government in the provision of toilet facilities to those who do not have complete access to toilet facilities, thereby relieving themselves in the environment.

Nature of the Terrain

The Teso North region is generally characterized by rugged terrain with some areas being generally steep and thus construction of sewer infrastructure would be very

expensive to accommodate the transfer of wastes from flash toilets. This phenomenon has resulted into the creation of more pit latrines, most of which are situated close to boreholes and other underground water sources. The proximity of such pit latrines to these underground water sources dependent by the community poses a risk of water borne diseases especially in the rainy seasons where water and solid wastes mix and is used domestically by the community living in the slope areas.

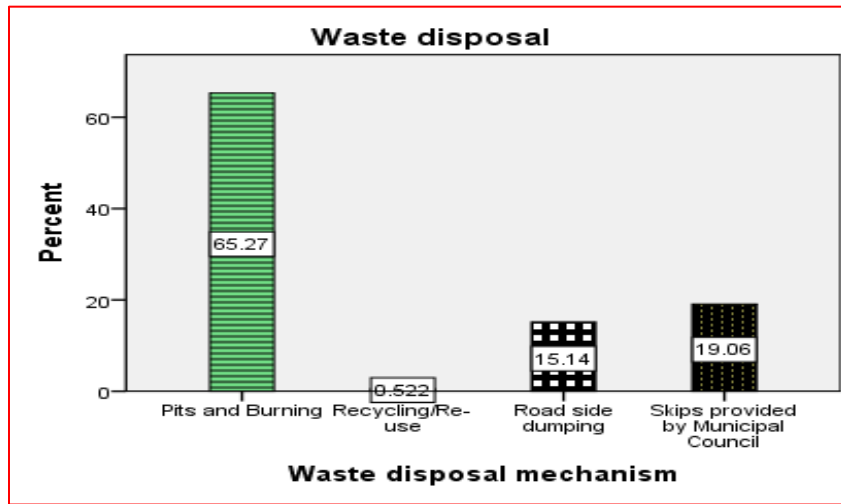
Lack of Adequate Awareness

According to the research conducted, it was discovered that most of the community in Teso North were situated in the interior of the region. Due to lack of enough information on environmental resource management and conservation, most of them have opted in using burning, open fields, dumpsites and burying as means of solid waste disposal.

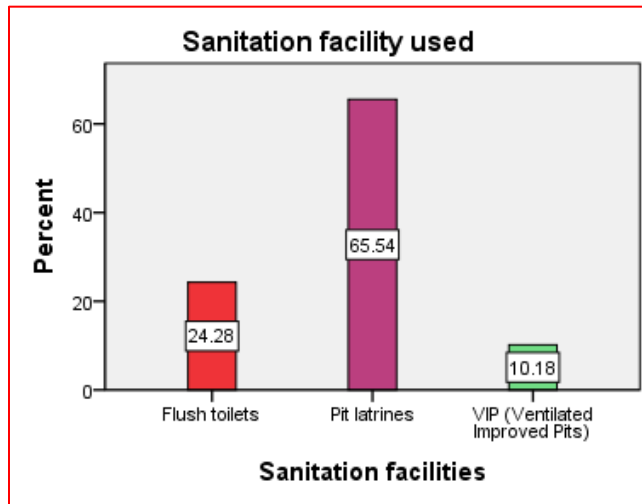
This poses a risk of environmental pollution and degradation which negatively impacts on the community as a result.

Waste Disposal

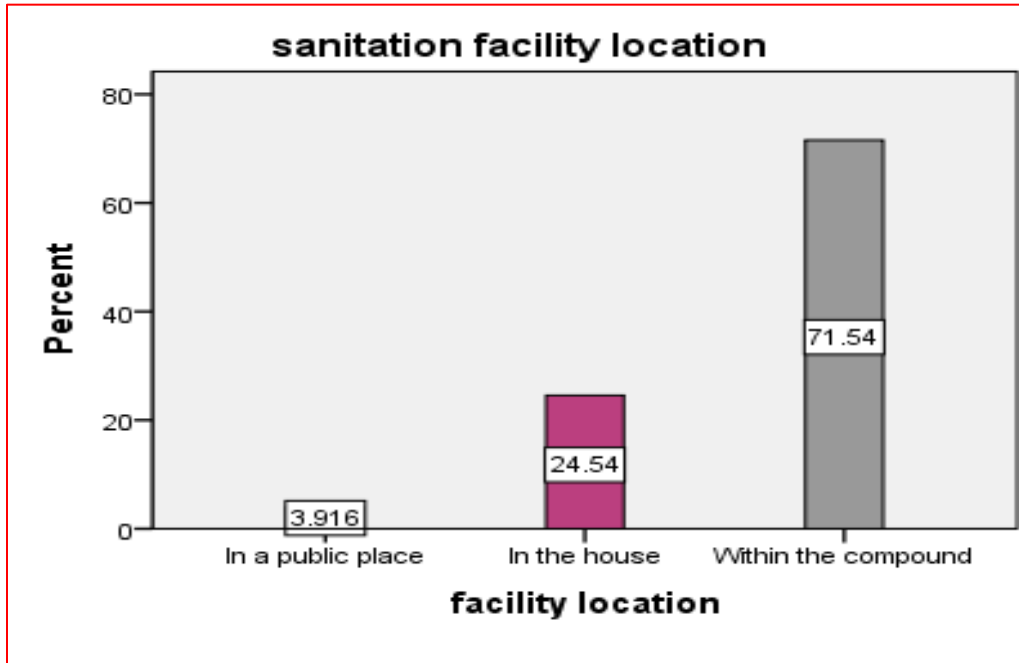
The environment of Malaba is not appealing due to the rate of both air and land pollution which is as a result of the kind of channels being used to dispose the waste/garbage. As indicated in the chart below the highest percentage is of the residents who dispose their waste and garbage in pits and burning them, while the lowest percentage of those who practice recycling/re-using.



The findings in the graph above shows that, out of the 383 respondents, 250 (65.27%) use pit and burning, 2 (0.5%) recycle/re-use their waste, 58 (15.14%) dump their waste by the road side whereas 73 (19.06%) use skips provided by the Municipal Council. The majority of the respondents collects their waste in pits and burns them after a period of time. This shows that the Malaba municipality has poor routine of collecting waste hence the residents of Malaba dispose their wastes in pits but due to few pits and dumping sites, the waste overflow and scatter around.

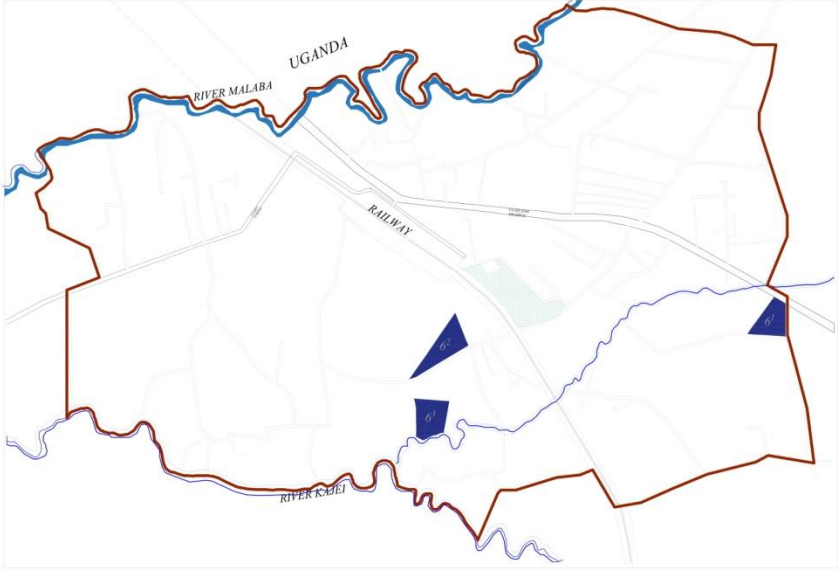


The findings in the graph above shows that, out of the 383 respondents, 93 (24.3%) use the flush toilets, 251 (65.54%) majority of people in Malaba town use pit latrines, 39 (10.2%) less people in Malaba town use ventilated improve pits.



The findings in the graph above shows that, out of the 383 respondents, 15 (3.9%) of that is located in public places, 94(24.5%) of that located in the house, 274 (71.5%) majority of the people in Malaba town locate their sanitation facility within the compound. This implies that most residents in Malaba town share sanitation facilities due to lack of proper sewer lines in Malaba town. Most of the people there are poor hence lack of enough proper sanitation facilities.

Malaba town existing and proposed public utilities



LEGEND		MALABA TOWN PROPOSED PUBLIC UTILITIES LAND USE MAP	
	DUMPSITE		CLASS C (IN MALABA) ELECTION DISTRICT
	RAILWAY		CLASS C (IN MALABA) ROAD
	TOWN BOUNDARY		ACCESS ROADS
	RIVER MALABA RIPARIAN RESERVE	 SCALE 1:2500 URBAN STUDIO 2019	
	RIVER KAJEJ		
	EXISTING FOREST		
	EFFLUENT TREATMENT PLANT		
	PROPOSED CEMETRY	DRAWN BY:	
		APPROVED BY:	

3.4. Energy

3.4.1. Household energy used for cooking

In the overwhelming majority of rural households, firewood is the principal cooking fuel, with some use of charcoal; in urban areas, households use charcoal, LPG or kerosene. Overall, 73% of the population live in rural areas, and 96% of them cook mainly with solid fuels or kerosene; while of the 27% who live in urban areas, 45% cook mainly with solid fuels or kerosene while of the 27% who live in urban areas, 45% cook mainly with solid fuels or kerosene.

In the case of Malaba which is transit boarder town at the boarder of Kenya and Uganda, the energy situation used in cooking is not different. This is evident from the data collected which shows charcoal to be the main source of cooking energy at 41.26%, followed by LPG at 36.36%, then firewood at 15.40%, kerosene at 6.79% and lastly 4.16%.

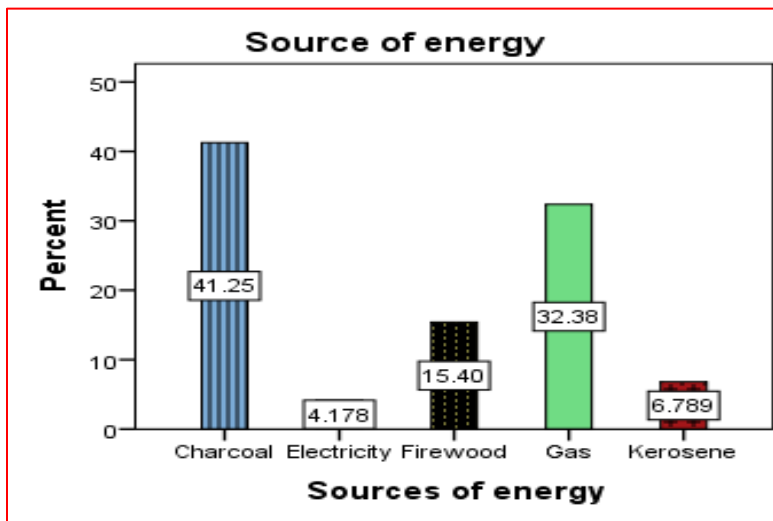
3.4.2. Household energy used for Lighting

Kerosene is the most common lighting fuel used in Kenya accounting for 69% nationally and 84% in rural areas. Electricity is used for lighting in 23% of households nationally and in 51% of urban households. There is wide disparity in electrification by county: a household in Nairobi is 36 times more likely to have electricity for lighting than a household in Turkana or Tana River County.

Over the past few years the government has really tried to electrify the whole country by increasing the connectivity of urban and rural areas into the national

grid. Despite these efforts by the government to increase electricity connectivity from the current 15% to at least 65% by the year 2022 the electricity access is still low. However, the fact that the data collected on energy in Malaba was mainly based on the household energy used for cooking, where electricity is at 4.16% is evident that Malaba town is well connected to the access of electricity.

3.4.3. Energy provision in Malaba Town



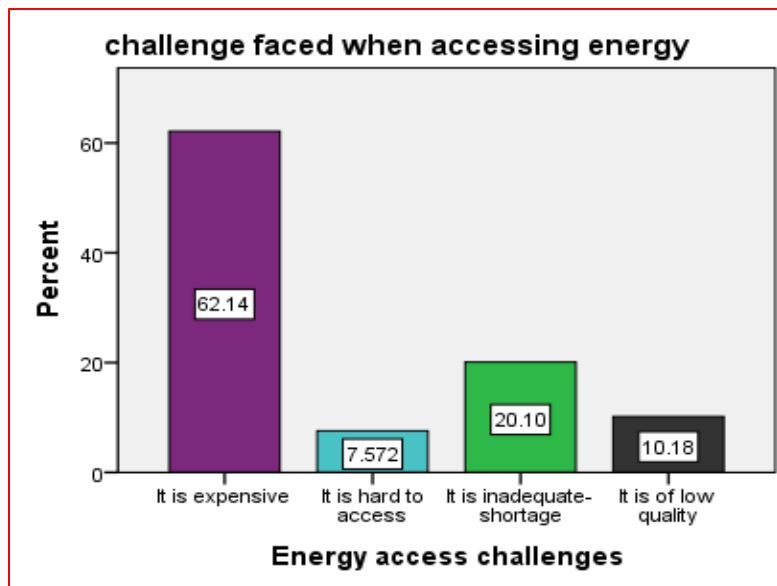
Source: Studio Data (2019)

The findings in the analysis above shows that, out of the 383 respondents, 158 (41.25%) use charcoal, 124 (32.38%) use gas, 59 (15.40%) use firewood, 26 (6.789%) use kerosene whereas 16 (4.178%) use Electricity in Malaba town. The majority of the respondents use charcoal as their main source of energy in Malaba town. This implies that there is a lot of deforestation going on within Malaba area, hence, need

to put up mechanisms to curb illegal cutting down of trees and provide other sources of energy that are environmentally friendly to the residents of Malaba town.

Challenges

However, the access to the sources of energy in Malaba comes with some challenges to the residents in terms of accessibility and consumption of the kind of energy they use. These challenges include such as: expensive price rates for electricity, inadequate and shortages of LPG, low quality of cheap accessible charcoal and lastly inaccessibility of firewood. The bar graph below the analysis of the challenges of household energy for cooking in Malaba



Source: Studio Data (2019)

The findings in the analysis above shows that, out of the 383 respondents, 238 (62.14%) complained that energy is expensive 29(7.572%) find it's hard to access to energy, 77(20.10%) it is inadequate –shortage of energy, 39(10.18) it is of low quality. This implies that, most of the residents in Malaba town use energy

(charcoal) which comes from Uganda and which is expensive due to high taxation at the border.

3.5. Recreational areas and other public purpose use

3.5.1. Sports Culture and Creative Arts

i. Museums, Heritage and Cultural Sites

Malaba town has a close proximity to the Kakapel National Monument that is a UNESCO World Heritage Site from approximately 13 km from the Town. It attracts approximately twenty thousand tourists, both foreign and domestic, in a year. The museum however needs to be further developed to fully tap the cultural tourism potential of Malaba.

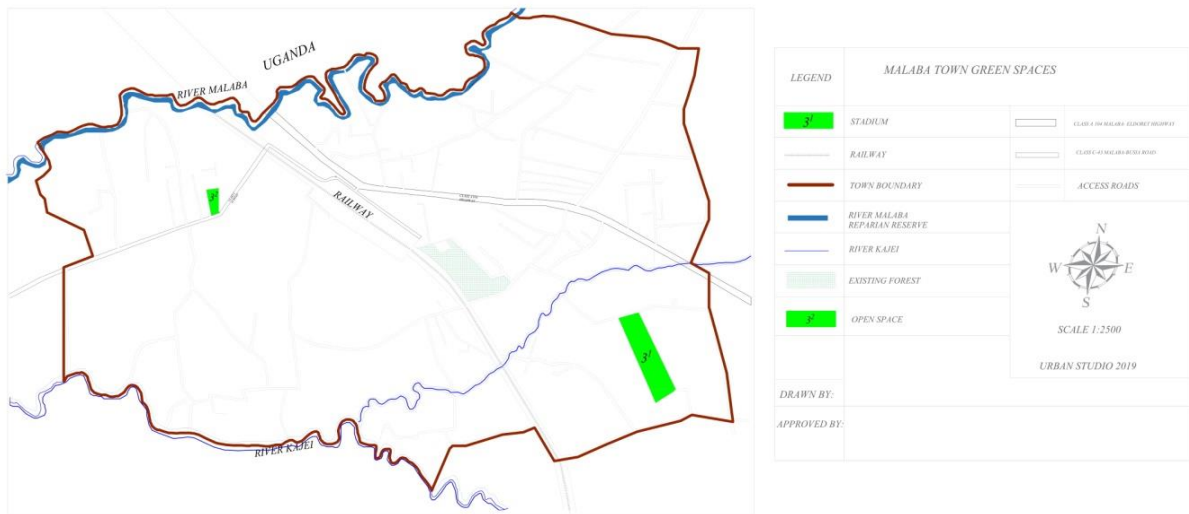
ii. Talent Academies

Malaba town, through the county government, is keen on establishing a talent academy within Malaba town to tap and nurture talents in the area, through leverage on the goodwill to promote sports and creative art by the legends. There is therefore, a need to propose a sports center.

iii. Sports Facilities

The value of sports for a community extends past the sport itself. It can play a role in bringing communities closer together, deliver social and cultural impacts, develop social capital, and reduce isolation for marginalized people. Malaba town has one

spots facility, Amagoro Stadium, located in Teso North Sub-county, about 2.3 km from the town center.



3.5.2. Situation Analysis

- i. Basketball, handball, volleyball and tennis - no facility, it's played at the general hospital
- ii. Amagoro stadium is not in a good state and needs to be rehabilitated.
- iii. There is no proper resource allocation by the county government of Busia to support sports in Malaba town.

- iv. Government officials hardly sponsor sport activities. Only individual sponsors organize tournaments and give vehicles to transport players.
- v. No leagues and only a few tournaments
- vi. Few girls play long tennis due to the dress code.
- vii. Some of the town residents designed a place for chess and checkers at the parking space in the town.

3.5.3. Clubs and guest rooms in Malaba

Malaba is a town along the road and is located in the border of Kenya and Uganda, due to congestion and delay at the border the truck jam take long especially when the shipping of goods in Mombasa arrived , the tracks transport goods to other country pass in the border of Malaba hence the growth of social amenities like clubs and hotels that enable truck drivers, people how are going to visit Malaba town, business men that are trading goods from Uganda or to Kenya relax or sleep to continue with the journey next day or tourist from other counties use the guest house or resort also they visit clubs for entertainment.

In Malaba there are some other small kiosks that offer first food to the business men/women. Some of the known guest house and clubs are Spykerz lounge Malaba, Winkers club, Club labamba, Zimak club, Korinda, River side resort among others

3.6. Housing

This chapter describes the housing state in Malaba and the policies that can be put in place to make housing more affordable to more Kenyans as stipulated in the Constitution of Kenya 2010 and the National Development Plan, Vision 2030

Strategy. Shelter is the basic human requirement. Even after 57 years of independence, the country is still grappling with the growing shelter problem, especially of the poor and most of urban dwellers.

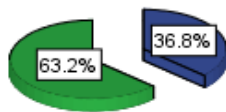
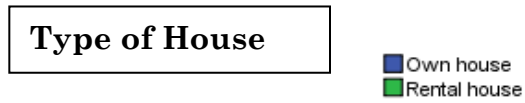
Housing conditions are an indicator of the degree to which people live in humane and modern conditions. Materials used in the construction of the floor, roof and wall materials of a dwelling unit are also indicative of the extent to which they protect occupants from the elements and other environmental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

Malaba town like any other urban area has residential zones depending on the level of income of the residents. There are high density (low income), Medium (middle income) and low density (High income) residential areas. The low density residential areas are located at the periphery of the town followed by the medium density residential areas. The two social classes can afford the transport to commute to their places of work. The high density residential areas are located nearer to the town's CBD, industrial areas and high income residential areas. Residents in these zones provide labour force in the industries, high and middle income residential areas.



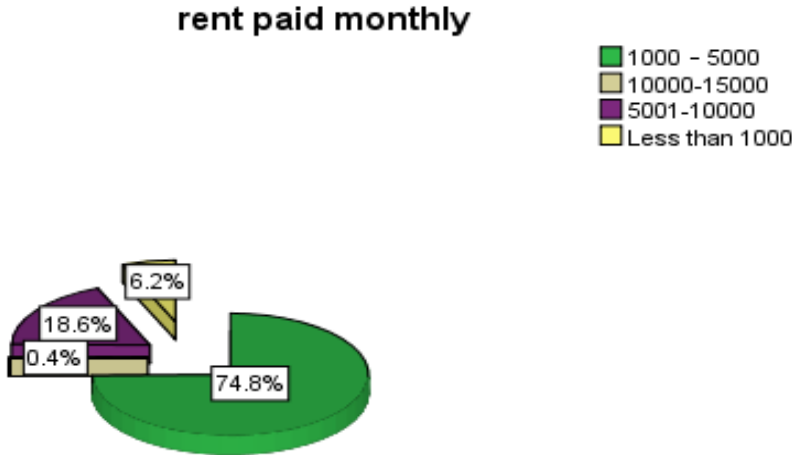
LEGEND	MALABA TOWN PROPOSED RESIDENTIAL LAND USE ZONES		
	LOW DENSITY RESIDENTIAL AREAS		RAILWAY
	MEDIUM DENSITY RESIDENTIAL AREAS		CLASS 4 INTERNATIONAL STANDARD ROAD
	HIGH DENSITY RESIDENTIAL AREAS		CLASS 400 MALABA POSTAL ROAD
	RIVER MALABA REPARATION RESERVE		ACCESS ROADS
	RIVER KAJEJ	 SCALE 1:2500 URBAN STUDIO 2019	
	TOWN BOUNDARY		
	EXISTING FOREST		
DRAWN BY:			
APPROVED BY:			

3.6.1. Types of residential areas



In Malaba, 63.2% of people live in rental house while the remaining 36.8% live in their own houses. This is a clear indication that most of the people living in this town are from outside and they are there for various reasons which may include but not limited to business activities, trading or other personal reasons. Those who owns houses have constructed in their own land mostly in the outskirts of the town.

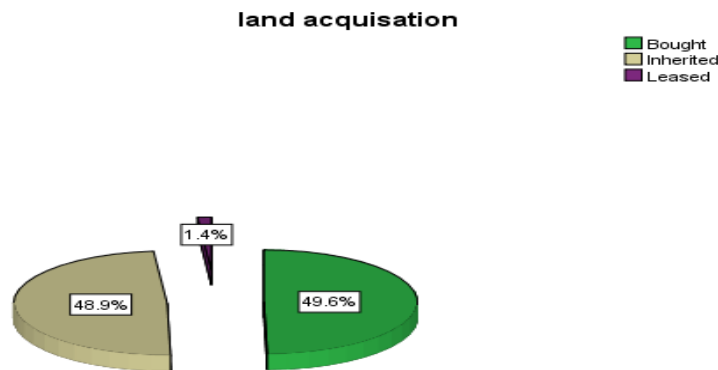
Rent Payable per Month



74.8% of those who pay rent pay between 1000 –5000 each month, 18.6% pay between 5000 –10000. 6.2% pay less than 1000 while the rest 0.4% pays between 10000 –15000. From the analysis realized most of houses in malaba town are affordable. The affordability of houses increases as you move far away from the town center, this attribute is a result of increased distance which will mean the fare

for transport rises as you move far away from town center. It can also be attributed to the nature of houses in terms of materials and their conditions and also access to basic services such as water, roads and power.

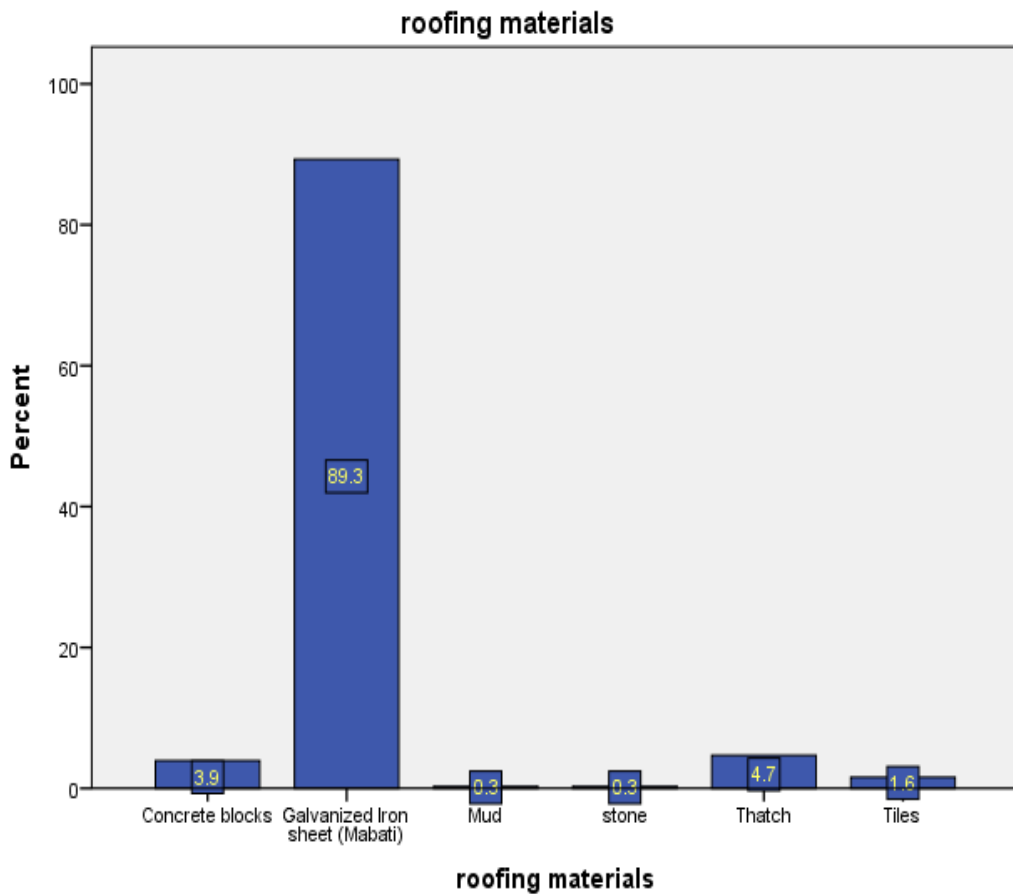
Land Acquisition



Malaba town is a 'private' town. This is because 90% of the land is on freehold land tenure system. 48.9% of the residents in this town have inherited the land while 49.6% of the residents have bought the land in which most of them have already built. The remaining 1.4% is on leased land. Those who have inherited the land are mainly the born residents of this town and are majorly located at the outskirts of the town. Those who have bought land are mainly non-residents and most of them are investors and they have bought land at the heart of town.

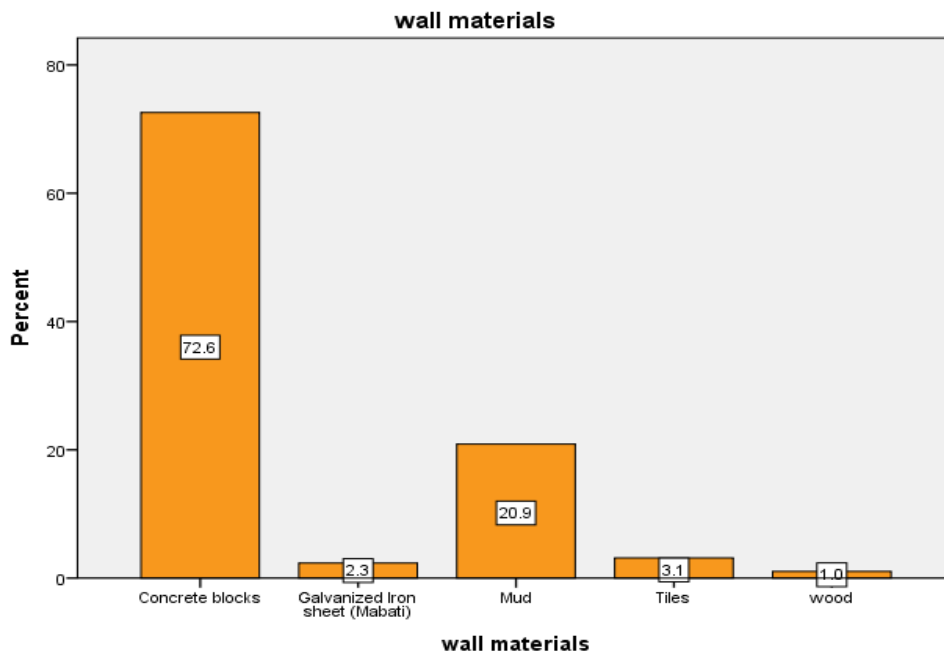
Roofing Materials

3.9% of the buildings in this town are roofed by concrete blocks, 89.3% by galvanized iron sheet (mabati), 0.3% by mud, 0.3% by the stone, 4.7% thatched and 1.6% by the tiles. It is evidence that most of houses in this town are roofed by iron sheet due to the fact that iron sheet are available and are long lasting as to compared to mud, thatch, and concrete blocks.



Wall Materials

In Malaba, most buildings are have walls made from stones (blocks) 72.6%. Stone is dominant construction wall material followed by mud at 20.9%, tiles at 3.1%, mabati at 2.3% and then wood at 1%. Those made of stones are mainly at the heart of the town while those made of mud and mabati are located far away from the town.



Housing Demand

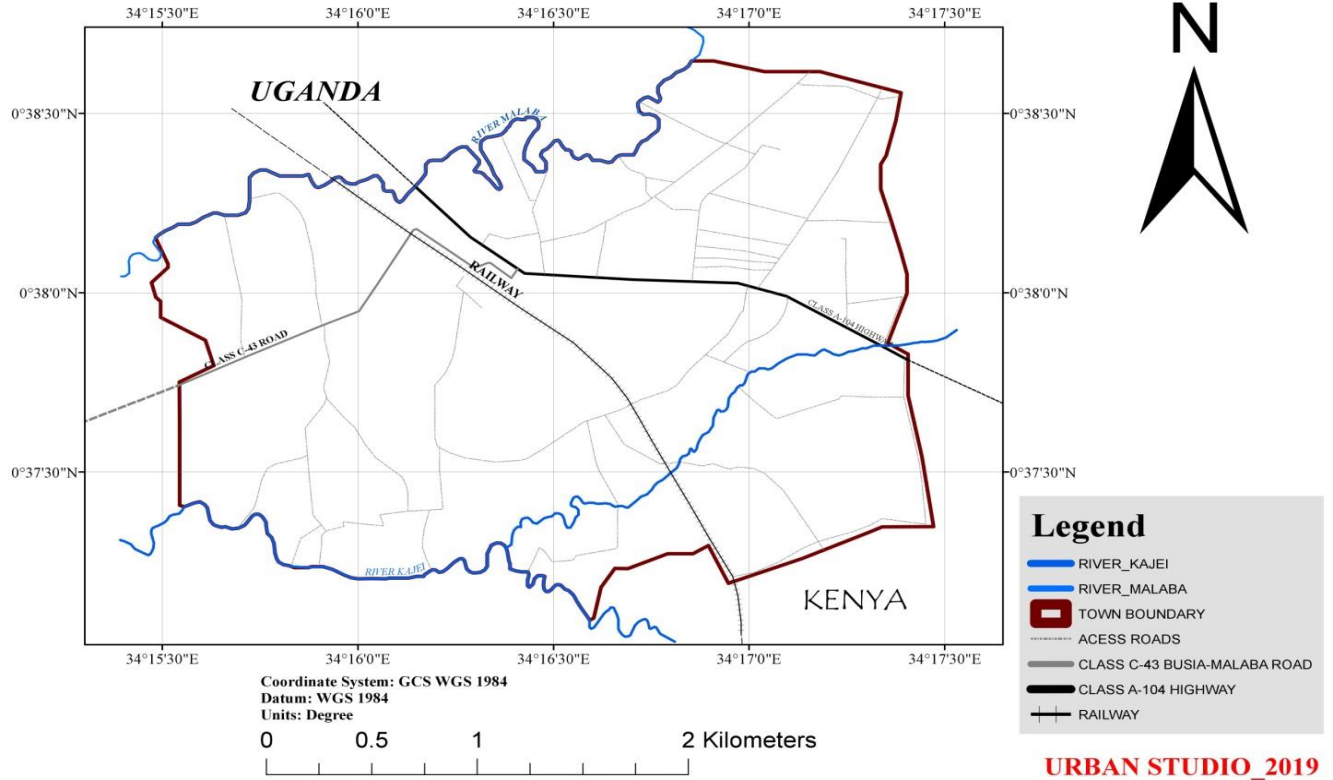
The town has so far managed to house the current population. The rent paid by majority is reasonable in the current situation, however due to expected increase in the activities at the border in near future there is need to plan for housing facilities inconsideration of the required minimum standards and also the policies managing construction.

3.7. Transport and Communication Analysis

The main road in Malaba is a Trunk road class A road which is mainly used by transit trailers into Uganda. The road design does not consider other local users such as cyclers and pedestrians thus have constant conflict between the trailer drivers and pedestrians.

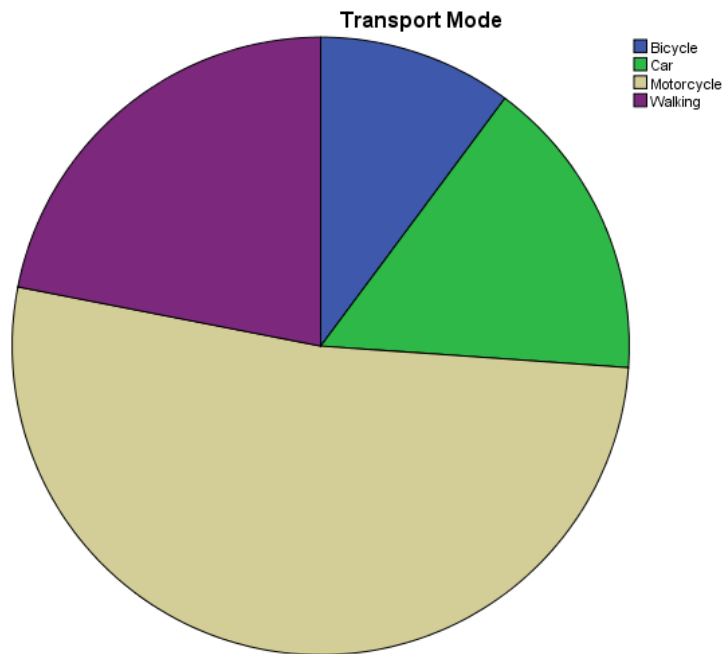
The railway is well connected all the way to Mombasa but is not utilized to its potential as a means of transport. It also needs maintenance for efficient working.

MALABA TOWN TRANSPORT CONNECTIVITY



3.7.1. Analysis of transport in Malaba town

Mode of transport analysis



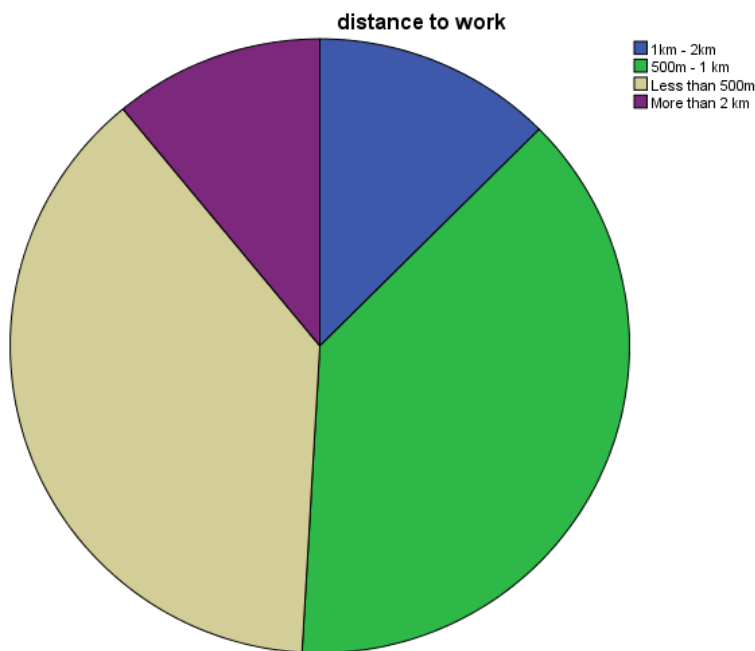
Majority of residents in malaba town; 52% use motorcycle as a mode of transport, 21.9% walk to and from their residents. 15.9% use cars and 10.2% use bicycles as a mode of transport making it the least used mode of transport.

Implication

1. Most of malaba residents use motorbikes as they are accessible and convenient.
2. Lack of PSV around malaba town therefore most people opt for motorcycles and walking as a mode of to and from their residents.

Analysis of distance to work

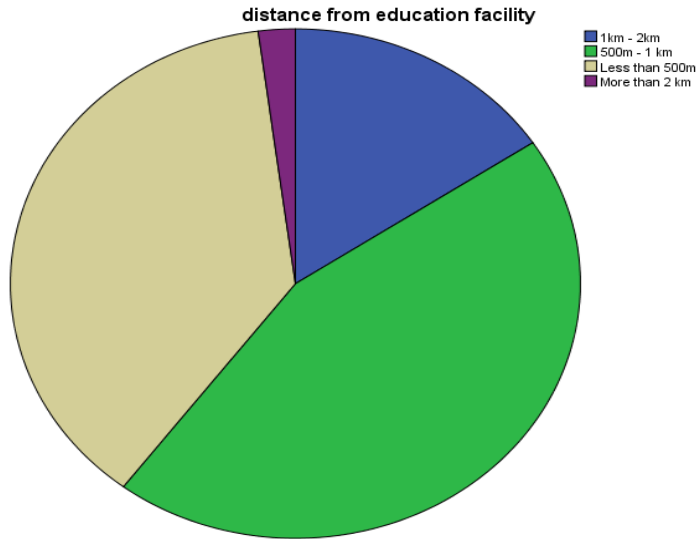
From the data collected, 38.4.% of the residents of malaba town work 500m- 1km from their place of residence, 38.1% work less then 500m from their residence, 12.5% work 1km-2km from their residence and 11% work more than 2km from their place of residence. This implies that most income generating activities are located within the area of residence.



44.6% people walk 500m-1km to education facilities, 37,6% walk less than 500m,15.7% walk 1km-2km and only 2.1% walk more than 2km

Implication

1. The schools are situated close to the residential areas

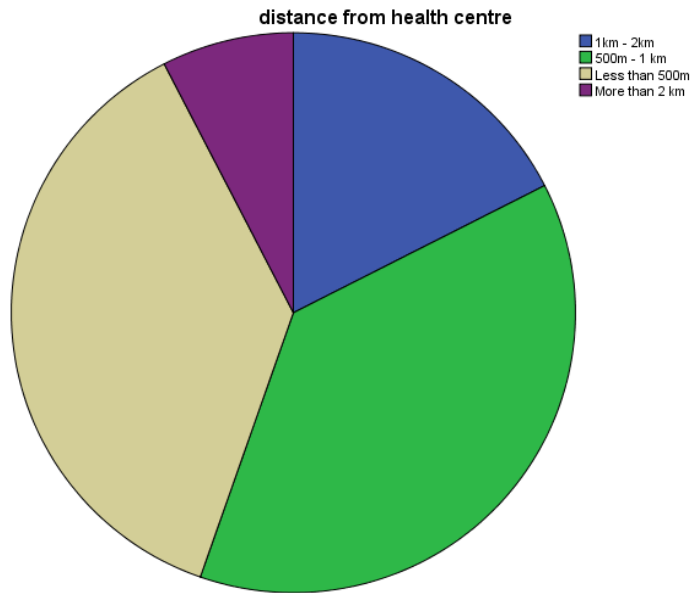


Distance from health centers

37.9% of the respondents travel 500m-1km to obtain medical services, 37.1% less than 500m, 17.5% travel 1km-2km to the health facilities and 7.6% travel ore than 2km to the health facilities.

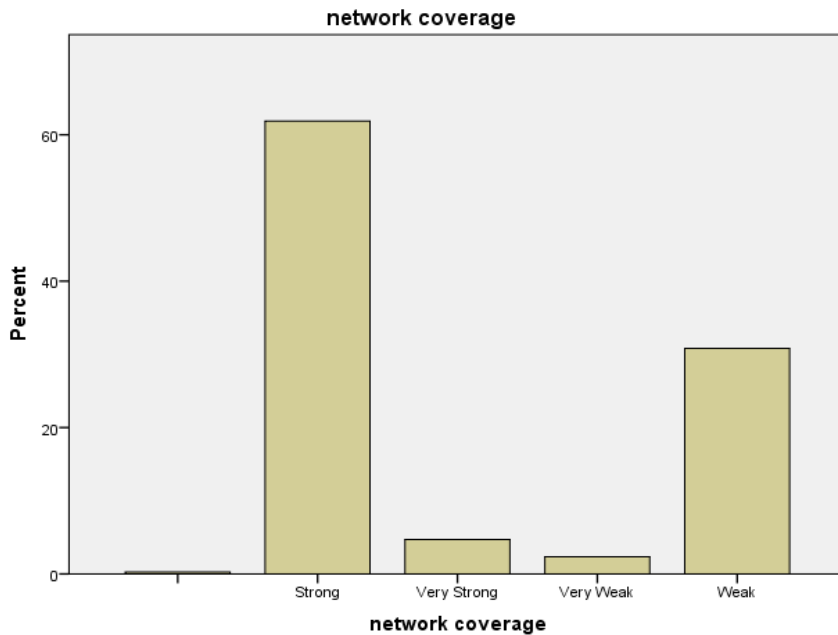
Implication

1. More health centers to be added in areas where people travel a distance of more than 2km to access the medical services.



Network coverage

61.9% of the respondents have strong network coverage, 30.8% have a weak network coverage, 4.7% experience very strong network coverage and 2.3% experience a very weak network coverage.



3.8. Zoning and Land Use

3.8.1. Zoning

Zoning is a tool used in planning by planners and relevant authorities to design use and development to be carried out on an area of land. It defines the category of land use, prescribes activities to be carried out on that land and the developments of that land within a zone. A zoning plan is an important part of the Structure plan. Zoning plans allow for a varied range of land uses which have been specified in the Local Plan. The planning authority can describe the specific considerations for a specific land which include: land coverage of a construction, the form of construction, the height of the buildings, materials to be used in the construction of the buildings, requirements for preservation of existing trees and structures, sanitation requirements and environmental requirements. The zones which have been defined in the Structure Plan determine the type of development detailed at a plot level. The types of zones in urban areas are Residential, commercial, industrial and urban

services. Developments on a certain piece of land are agreed upon with a general land classification. Those developments which do not conform to General Zoning Classification must not change the classification. A Statutory Planning Committee of the Assembly determines whether the proposed Local Plan land uses is subject to change existing zoning classification. Permission to carry out development in an area is obtained in writing form Metropolitan/Municipal/District Statutory Planning Committee. All developments are subject to the Planning Standards. Zoning includes a list of Permitted and Prohibited uses. The permitted use covers all development types approved in an area while the prohibited use covers any use not allowed in the permitted use.

3.8.2. Classification

Urban land is characterized by intensive use of land where the landscape has been changed by human activities. Structures may be present even if they are not only limited traditionally to urban areas. The different classification categories include Residential, Commercial and services, Industrial, Transportation, Communication and Utilities, Mixed Urban Use and other Urban Recreational Activities. The land uses are characterized with lands, access roads, parking lots and buildings.

Residential

The category includes single family households, multiple family households and mobile homes. The areas can be easily observed through aerial photographs through their shapes and patterns. They can also be seen due to their proximity to roads. Residential area categories are based on densities in households per unit acre. The density is determined by the use of an acre grid placed over the residential areas on the photo base map and the number of structures counted.

Commercial and Services

They are areas which contain structures predominantly for sale of products and services. They contain the main building, supporting structures like parking lots and driveways.

Commercial Strip Development: They are commercial activities which are located along major highways and access roads to cities in a single strip. They include motels, car dealers, fast food joints, and gas stations. Location along a main route of transport is key for this category. In Malaba development is majorly seen to as forming near the highway which leads to Uganda.

Transportation, Communication and Utilities

The land uses are often associated with other urban categories. They include transport routes, utilities like sewage treatment plants, power substations and communication facilities. They include: Major Roadway, Bridge over Water, Railroad facilities, Bus and Truck Terminals, Airport facilities, Port facilities, Power facilities, Water treatment facilities, Sewage treatment facilities. In Malaba

it is mainly associated with the major transport highway which leads directly to Uganda.

Land Ownership

Land in Malaba town is mainly held under leasehold and freehold tenures. The town mostly sees a dominance of leasehold tenures within the town boundaries. Land that is held under freehold system is commonly reserved for public purpose use.

Mean Holding Size

The town is faced with high population growth which has encouraged land subdivision to ensure efficient economic production with majority of the population having ownership of about 0.6ha of land.

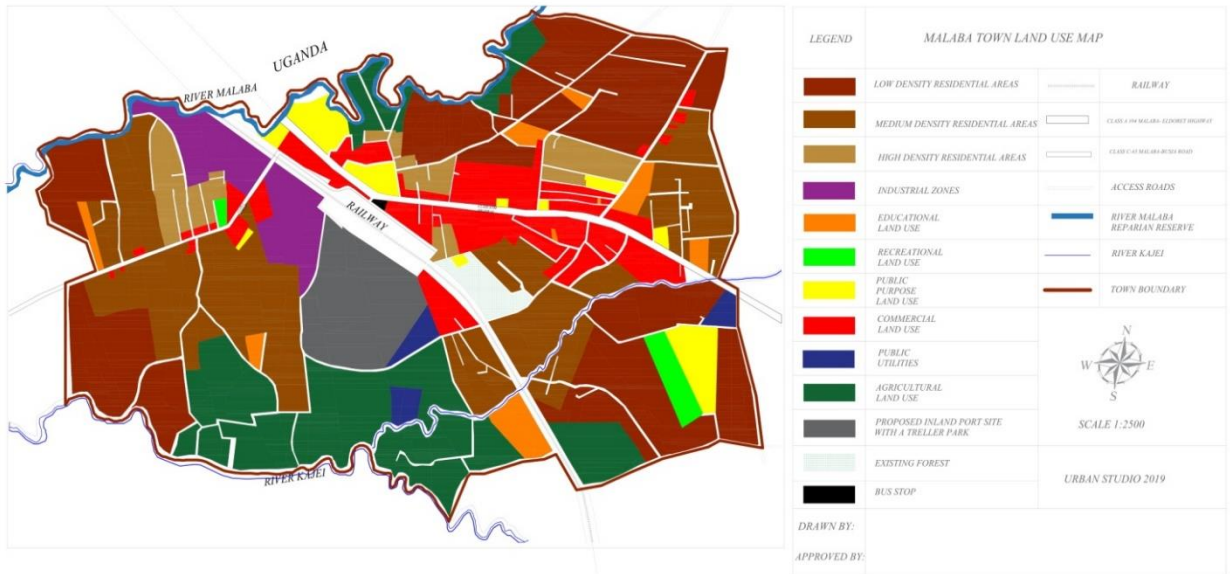
Percentage of Land with Title Deeds

Most of the land is mainly ancestral which accounts for about 91.7% which has seen demarcation with title deeds at 71.9%. Majority of land is acquired through inheritance 84.6% seen transfer of land predominantly to male children. The male land ownership percentage sits at 82.6% while female land ownership is at 8.7%.

Settlement Patterns

The pattern of settlement in Malaba town is mainly linear settlement where developments have been concentrated on major roads. There are also low forms of nuclear settlement with a typical traditional way of life.

MALABA TOWN LAND USE MAP



4. SYNTHESIS AND GAP ANALYSIS

4.1. Gaps

4.1.1. Economy

1. There are no major factories in Malaba or its outskirts.
2. Crop production is mainly subsistence not commercial
3. No high class hotels and conference centers.
4. Undeveloped tourist attraction sites, example cultural centres
5. Absence of SACCOs that target Urban Agriculture

4.1.2. Water and Sanitation

Water Scarcity

A country is categorized as water stressed if its annual renewable fresh water supplies are between 1,000 and 1,700 cubic metres per capita per annum and water scarce as its renewable fresh water supplies are less than 1,000 cubic metres. Therefore Malaba falls under this category.

Invasive species

The proliferation of invasive plants and animal species in the region including aquatic weeds and fish species are of growing concern. Weeds such as fern, water hyacinth are degrading the quality of water.

Water Quality

Water quality has an impact on both the public health and aesthetic value of water. Piped water supply is rare in Malaba. The residents use raw water from the streams and spring for domestic hence the number of people suffering from water related diseases is on the rise. The only water treatment plant which had been constructed along the Malakisi River upstream failed to work several years ago due to poor piping and lack of new technology.

Growing Population

The growing population increases the demand for water for domestic use, food security. The population growth trend has resulted in reduction of per capita water availability. The impact of climate variability and water degradation has manifested itself in food shortages, power rationing.

Pollution: of Malakisi River by human activities and agricultural products such as fertilizers. Malaba has a shallow water table and this poses a problem when it comes to sanitation since the water is easily contaminated by the pit latrines and this has brought about frequent cholera outbreaks. Water logging also makes waste disposal hard. Stagnant pools of water bring about mosquitoes that cause malaria. Exhausters are used for waste extraction around the town.

4.1.3 Energy

- i. Inconsistent power supply especially due to the common power outage which is usually inconveniencing for residents who depends heavily on grid power.
- ii. Provision of the charcoal and firewood laws on the restriction of logging provides a gap for other alternative sources of energy especially for those residents who rely heavily on the use charcoal and firewood as their sources of energy.

- iii. Due to the pollution that comes from the use of charcoal as a source of energy, it poses threat to the environment which creates a gap for more environmental friendly sources of energy.
- iv. Inadequate knowledge and access to cleaner options, such as LPG
- v. Due to lack of technology to exploit other sources of energy, it creates a gap for more innovative and advanced technology to produce cheaper and readily available sources of energy.

Opportunities

An integrated approach is needed for clean fuel, encompassing training, behaviour change and communication to the residents of Malaba. Therefore, so as to strengthen supply chains and ensure cleaner fuels, research, development and incorporating clean household energy, the following opportunities should be utilised;

- i. The use of charcoal and fire wood as the main source of energy for cooking by the residents of Malaba poses a major environmental threat especially because of the cutting down of trees. For this reason, the residents should be encouraged to use more environmental friendly sources of energy. This creates the opportunity for alternative sources such as solar energy and energy from bio-degradable sources. Also the residents should be encouraged to use clean cooking stoves with cooking competition and are also economical in terms of resource management such as use of few amount of charcoals, which will promote reduce the rate of cutting down of trees.
- ii. The common power outage creates an opportunity for the government to inject more power to the current grid which will come with more economical

benefits since most of the business in the town are run by the use of electricity. The proposed hydroelectric power along the Malakisi River, through the construction of the proposed dam (Kocholia Dam) which is a project by the World Bank, it comes at a good time since it is supposedly to focus on the production of HEP as well as irrigation. Where the project is quite viable and would transform the lives of the residents greatly. The project is at the Environmental Impact Assessment stage and the public participation which is required for the project to kick off.

- iii. Interventions to increase access. Inaccessibility is one of the challenge that people of Malaba are facing to acquire sources of energy, for this reason interventions should be made by the government so as to ensure that distribution networks are available so as to increase the access of LPG energy at affordable prices to as to help curb in the use of charcoal as the main source of energy which poses threat to the environment by cutting down of trees.
- iv. Use of Anaerobic Digestion. This is a widely used technology, used to treat wastewater sludge and organic waste because it provides volume and mass reduction of the input material. It is widely used as a renewable energy source because the process produces a methane and carbon dioxide rich biogas suitable for energy production helping replace fossil fuels. This technology can be used in Malaba through establishment of waste water treatment plant sizeable enough to accommodate the amount of waste water and organic solid waste generated there. The technology could be suitable to conserve the environment and also help in powering more street lights in the area hence enhancing the security and the economy of the town.

4.1.4. Housing

1. Most of houses are constructed using outdated technology in terms of materials.
2. The higher percentage of houses are not connected to sewer line services.
3. Majority of houses lacks or have poor sanitation.
4. Lack of implementation of housing policies thus poor housing conditions in the town.

4.1.5. Transport and Communication

Malaba lacks adequate feeder and access roads into the rest of the town causing a rise of dead land right after the first line of commercial land use happening along the A43. This land is locked out to development.

70% of available roads in Malaba are marram roads. They do not have adequate drainage and are in poor condition causing poor accessibility during rainy season.

The railway is well connected all the way to Mombasa but is not utilized to its potential as a means of transport. It also needs maintenance for efficient working.

There is no formal bus station for the many public vehicles connecting neighbouring towns to Malaba.

There is no formal public parking area for motor vehicles.

Measures To Counteract the Gaps In Transport And Communication

- i. On the A43, expansion should be made to create space for the cyclers and pedestrians
- ii. Zebra crossings should be placed strategically near junctions with feeder roads and access to manage traffic.
- iii. Road signage indicating the minimal speed limit across towns should be installed at the outskirts of Malaba town to manage the speed of oncoming vehicles.
- iv. All feeder roads should be tarmacked while all access roads would-be well-maintained marram roads with adequate draining capacity.
- v. Establish a bus station for public service vehicles near the market area.
- vi. Establish off street parking area for motor vehicles to supplement the on-street parking.
- vii. Communication gaps
- viii. Poor network connectivity
- ix. Poor electricity connection
- x. High computer illiteracy
- xi. Measures to counteract the gaps
- xii. Installation of internet to the government offices
- xiii. E- governance
- xiv. Training of digital learning and skill development
- xv. Improvement of network connectivity by increasing the network lines.

4.1.6. Land Use and Land Use Requirements

- i. Low Community Involvement
- ii. Zoning Challenges
- iii. Stringent land requirements

- iv. Change in needs of the community
- v. Inefficient Land examining bodies
- vi. Zoning maps or plans
- vii. Zoning approvals

4.1.7. Population

- i. The death rate is high, the causes of deaths varies from cancer, Anemia, Road accidents, Malaria being the highest cause, Pneumonia, Sudden deaths, HIV/AIDs, Malnutrition, TB and Hypertension just to mention a few.
- ii. Most people prefer living in the Urban Areas rather that the rural areas hence increasing the pressure on resources.
- iii. Inter-County migration hence increasing the population within Malaba, Teso North Sub-County.

CHAPTER 5: PLAN PROPOSALS

5.1. Population proposals

1. The major cause of death in Malaba town is Malaria. To reduce there should creation of awareness to the habitats of the area. This should be curbed by provision of mosquito nets, clearing of bushes, importance of reducing stagnant water among others.
2. There should be uniform distribution of resources throughout the area to reduce the pressure on the readily available resource.
3. The inter-County migration should be supervised so as to allow the locals to effectively and actively enjoy and play a part in the development and growth of Malaba town.

5.2. Proposals on Economy

5.2.1. Recommendations

1. Upgrade the existing market open air market by building shopping stalls on one side.
2. Pave the paths within the market with that are well spaced to allow permeability of water and provide stable surface for traders to walk on
3. Demarcate the market into different shopping zone: vegetable zone, cereals, clothes and fish zone.
4. Establishment of an inland port and more market spaces

5.2.2. Recommendations on urban agriculture

1. Get agricultural extension officers to educate the residents on best urban agriculture practices through seminars and cooperatives. Group based extension and training activities will enhance farmers' capacities and skills.

2. The peri-urban areas in the town has potential for practicing sack gardening and micro gardening under which residents can grow vegetables and flowers.



Figure: Examples of sack gardening

Residents can intensify production of high value ornamental plants and quality vegetables for the high income bracket population. Small scale nurseries could be set up in different peri-urban areas of the town in order to provide for vegetable seedlings, ornamental pot plants and flowers.

3. Establish green houses in peri-urban areas. This can be achieved with the support of cooperatives and the county government.
4. Conduct agricultural shows in the town to increase farmers' awareness, attract potential farmers and pioneer new ideas and skills in farming.

5.2.3. Recommendations on manufacturing

- i. Set up a maize milling industry. The mill will use maize stored in the cereal store located within the town. The amount of maize will be increased by sensitizing and training farmers in the outskirts of the town on maize

growing. Some greenhouses which we intend to set up in the town will also provide maize for the mill.

- ii. Set up a light industry within the town. The industry will deal in Jua Kali activities such as tins/black smith, carpentry and welding.

Existing Strategies to Ensure Water Supply and Sanitation in Malaba

Strategy is a plan. It is an executable of action that describes how an organization will achieve a stated mission. It is working hard to understand a customer's inherent need and then rethinking what a category of product is all about (Kenichi, 1998). Some of the specific effort being done to ensure sustainable water supply and sanitation management in Malaba is the inception of Malaba Water supply and Sanitation Project that will cost Kenya Shilling 1.3 billion to construct (The Standard Newspaper July 17, 2018). Also the construction of a multi-purpose dam at Kocholia, to be financed by the partnership of the Kenya Government, the Korean Government and the Africa Development Bank to the tune of 5 billion shillings is intended to produce 70 million cubic metres of water. Water from the dam will be used in generation of hydro-power, irrigation, livestock consumption and domestic use (Kenya Water Report, UN-water/WWAP/2006/12). On a wider perspective, construction and completion of Sio River water Supply, Bunyala Water Supply Scheme, Kachila Irrigation Scheme on River Malakisi and Angolo Water Scheme on River Malaba will definitely be a boost to water supply in Malaba region.

5.3 Proposals on Water and Sanitation

1. Public Private Partnerships.

Looks at partnerships formed amongst the community, the private developers, community based organizations, the national government and foreign investors. The community can provide land where the private developers can establish public communal toilets and septic tanks. In addition, the sub-county government can alias with non-governmental organization in provision of financial resources and other necessities for adequate toilet development.

2. Domestication of Policy and Legal Framework.

Domestication of regulations and policy framework to suite the sub-county level will be more effective in combating how the environment and solid waste disposal is managed. Moreover, environmental laws can be domesticated from the Sustainable Development Goals, the various conventions on environment at international level such as the Vienna Convention, the Kenyan Constitution Articles 42, 69 and 70 and Sector laws to sub county level. This increases the effectiveness of these laws and regulations.

3. Construction of septic tanks instead of sewer line infrastructure in areas with rugged terrain to accommodate for flash toilets.
4. Creation of awareness through mass media, weekly crusades in public squares and workshops on issues pertaining to environmental pollution, degradation, conservation and preservation. Moreover, information should be provided on efficient ways of solid waste disposal.
5. Provision of toilet utilities especially to residents in the interior who do not have access to public toilets and rely on the environment to relieve themselves.

6. Use of alternative ways of managing solid wastes which include solid recycling.
7. Design of pit latrines with respect to underground water sources (recommended distance is 20-30 meters); as well as pit latrines that utilizes the disposal of solid wastes after they are heaped in a container. These latrines do not utilize pits.

5.4. Housing Proposals

- i. Renovating houses by applying the new technology. Most houses are constructed using mud and galvanized sheet especially those located in outskirts of the town. They should be upgraded by using modern and cheaper building materials such as bricks and stones.
- ii. Connecting Houses with sewer lines. The county government through department of water and sewerage services should connect houses with sewer lines.
- iii. Implementing policies related to housing. These will ensure that houses meet the minimum requirements thus facilitating proper disposal of both solid and liquid waste by the various people who may want to construct houses in the town.
- iv. Setting up affordable rental houses. Although the town can accommodate the existing population, there is future expectation and projection of population increase in the town and therefore more houses will be needed to accommodate the rising population.

-END-