



WAKISO DISTRICT LOCAL GOVERNMENT

PHYSICAL DEVELOPMENT PLAN (2018-2040)

DRAFT REPORT- MAY 2017



PREPARED BY: SAVIMAXX LIMITED

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"...Further linking the environment to economic development"

SAVIMAXX LIMITED
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2nd May 2017

The Chief Administrative Officer,
Wakiso District Local Government,
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Email: wakisodlc@yahoo.co.uk
Website: www.wakiso.go.ug
Attention:
Head Natural Resources

Thru:
Senior Physical Planner

Dear Sir/Madam:

Re: PREPARATION OF WAKISO DISTRICT PHYSICAL DEVELOPMENT PLAN 2018 - 2040.

We are pleased to deliver our Draft Report following an intense fifteen months of data collection, situation analysis, conceptual modelling which have resulted into this report. The consultant believes that the client will swiftly review the report and make comments before we embark on the second stakeholder consultation which is due in August 2017.

This is therefore to submit 3 hard copies in A4 size and a soft copy of the Draft Report.

We are ready to present the Report and discuss any items that may require further clarification. We look forward for the date and timing of presenting the Report to stakeholders and appreciate your continued support in the process.

Yours sincerely,

Joseph Ssemambo

Lead Consultant

ACKNOWLEDGEMENTS

Savimaxx Limited would like to acknowledge the kind assistance granted to them by the staff of Ministry of Lands, Housing and Urban Development, Ministry of Local Government, Wakiso District Local Government, the three Municipalities (Entebbe, Nansana & Kira), seven Sub-counties (Wakiso, Mende-Kalema, Kakiri, Masulita, Namayumba, Kasanje and Bussi) and the eight Town Councils (Wakiso, Kakiri, Kajjansi, Katabi, Kyengera, Kasangati, Namayumba and Kajansi. In addition we wish to thank the many officials and residents of Wakiso District who so generously and patiently gave their time and shared with us their insights into the current status and future development of their localities and the entire district.

Any errors of fact or interpretation are ours.

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List of Acronyms

ADB	African Development Bank
CAD	Computer Aided Design
CAO	Chief Administrative Officer
CAP	Chapter
CBOs	Community Based Organizations
DEM	Digital Elevation Model
EIAs	Environmental Impact Assessments
ERA	Electricity Regulation Authority
ERT	Energy for Rural Transformation
GIS	Geographical Information Systems
GOU	Government of Uganda
GPS	Global Positioning Systems
HH	House Hold
HHS	House Hold Survey
ICT	Information, Communication and Technology
IT	Information Technology
km	Kilometre
LCs	Local Councils
LG	Local Government
LGA	Local Government Act
LGDP	Local Government Development Plans
LGs	Local Governments
MASL	Metres Above Sea Level
MCS	Monitoring, Control and Surveillance
MEMD	Ministry of Energy and Mineral Development
MoLHUD	Ministry of Lands, Housing and Urban Development
MZOs	Ministerial Zonal Offices
NDP	National Development Plan
NEA	National Environment Act
NEMA	National Environment Management Authority
NGOs	Non-Government Organizations
NPDP	National Physical Development Plan
NPPB	National Physical Planning Board
NWSC	National Water and Sewage Corporation
PDP	Physical Development Plan
PPA	Physical Planning Act
PPCs	Physical Planning Committees
PPP	Private Public Partnership
REA	Rural Electricity Agency
REB	Rural Electrification Board
REF	Rural Electrification Fund
RPDP	Regional Physical Development Plans
SAS	Senior Assistant Secretary
SIPs	Sector Investment Plans
SWOT	Strengths Weaknesses Opportunities and Threats
TC	Town Council
ToR	Terms of Reference
TPC	Technical Planning Committee
UBOS	Uganda Bureau of Statistics
UCC	Uganda Communication Commission
UEB	Uganda Electricity Board
UEGCL	Uganda Electricity Generation Company Limited
UETCL	Uganda Electricity Transmission Company Limited

UNHCR	United Nations Refugee Agency
UNRA	Uganda National Roads Authority
URECL	Uganda Rural Electrification Company Limited
UTL	Uganda Telecom
VIP	Ventilated Improved Pit latrines

Executive summary

This report is a result of a study of Wakiso District which will result into the preparation of a physical development plan. This study was conducted by SAVIMAXX LTD which was contracted in March 2016 to prepare the physical development plan.

Wakiso is one of the most rapidly urbanising districts in Uganda. It has not had an up to date planning scheme despite the current urban sprawl and extension into the rural areas of the district. The district has got a combination of both fast growing urban areas like those close to Kampala City and along the highways like Bombo, Masaka, Hoima, Mubende, Mityana and Jinja roads connecting to the entire country and beyond. The biggest challenge the district faces is the unplanned, uncoordinated, un-gazetted and uncontrolled physical developments taking place especially in the upcoming peri-urban areas of the district which is due to increasing influx of people from Kampala, the Capital City of Uganda. This study report forms the basis for the preparation of the physical development plan, which will be the guiding instrument for orderly development in the district for the next 20 years.

The Wakiso District planning area lies in the central region of Uganda bordering Kampala, Mpigi, Mityana Districts in the West, Luwero, Nakaseke Districts in the North, Mukono in the east and Kalangala in the South. It lies along the Latitude 0° 10' South and 1° 00' South, Longitude 32° 01' East and 32° 52' East and it covers a total area of 2,807.75km². Wakiso District is divided into two categories of administrative levels namely; rural and urban settings. The rural areas have two administrative units namely the Counties (none political) and Sub-county Councils which are political. The other category is the urban set up which is comprised also of two administrative units namely; Municipal Councils and Town Councils (which are both political).

A socio-economic survey was undertaken as a first step in the physical planning process. Standard methods of socio-economic survey using structured questionnaires, key informant interviews, direct field observations and a reconnaissance survey were undertaken. A total of 15,000 households were randomly sampled using a Global Positioning System (GPS) to represent the entire district. Remote Sensing techniques and GIS were also utilised in spatial data capture, analysis and presentation techniques. A satellite Image (Geo-eye 50 cm resolution of July 2014) was used for land use and land cover mapping for the planning area followed by 'ground verification' to ensure accurate representation of land use cover and developments of the area. Participatory methods were also used in analysis of the existing situation in Wakiso District. Nine consultative meetings were held between the Consultant and the Wakiso District Council Officials (both administrative staff and elected representatives) and other key stakeholders from central government and private sector to discuss the problems and future potential of the district. The collected data was analysed with use of statistical package for social scientist (SPSS), content analysis for qualitative and narrative data. For spatial data, GIS was utilised to perform standard spatial analyses. Software such as Arc map 10.1, Arc view 3.2a, AutoCAD 16, were used to generate a number of thematic map of the planning area.

Wakiso got its district status in 2001. It was carved out of Mpigi District. It is situated in Central Uganda and has a unique location because it forms a crescent round Kampala, the Capital City of Uganda. It is therefore used as a dormitory for people who work in Kampala but resided in the district. The District of Wakiso is experiencing a rapid growth of 3.3% per annum (National Census, 2014). Such a rapid rate of growth has overwhelmed the district authorities. They cannot keep pace with the ever growing demand for housing, employment, services and utilities. The challenges of growth, development and servicing on Kampala, have triggered a sprawl of growth of urban centres in Wakiso and some are growing even faster than Kampala. The district's demographic growth has historically been based on the combination of natural growth and in-migration. However, the 2014 Population and Housing Census indicates that the natural growth has fallen due to declining fertility rates but in-migration has superseded natural growth.

There are several policy and legal instruments guiding the preparation of the Physical Development Plan, its implementation and development in Wakiso District. The most fundamental legal basis of land management and land issues is the 1995 constitution of Uganda, which stipulates that Land in Uganda belongs to the people of Uganda and be shall vested in them in accordance with the land tenure systems provided for in the Constitution in Article 237 Clause (1). The Local Government Act empowers a District Council to prepare and/or to cause preparation of planning schemes that would guide development in that council. The Physical Planning Act 2010 (Part 3, Section 25 Sub section 1) empowers District Physical Planning committees to cause the preparation of district physical development plans. Therefore the preparation of this physical development plan is based on the provision of the Local Government Act and the Physical Planning Act. The Local Government Act

notwithstanding and such planning scheme would become law only after being endorsed by the National Physical Planning Board mandated by the Physical Planning Act 2010. Similarly the development plan is to be based on The Public health Act while the plan is envisaged to be the instrument for guiding development in the District council. These legal and policy instruments form a basis for the policy recommendations of the study and the physical development plan.

The administrative structure of Wakiso District is made up of two arms comprised of the political leadership and the technical management. The political arm is comprised of the Executive headed by the Chairperson and the policy body is the District Council. The Council has several committees including Health, Finance and Planning, Production, Works and Social Services. The second arm is the management arm comprises of the technical staff headed by the Chief Administrative Office (CAO). There are five key departments and in each there are sections. They include; Management and support Services, Finance and Planning, Production and Marketing, Technical Services and Works in which physical planning belongs and the Department of Administration. Wakiso District is divided into three administrative categories namely; Municipalities, Town Councils and Sub Counties covering a total area of approximately 2,807.75km². This land is managed under multiple tenure system where by 70% of it is privately owned which significantly affects meaningful planning in the area.

According to population census of 2014, Wakiso District has a total population of 2,007,700 with a household size of 1,970,859. It is also estimated that 47.45% of this population are males while 52.55% are females, with a growth rate of (3.3%). The inhabitants of Wakiso District like many other districts in Uganda are heterogeneous, a mixed up of different tribes although majorities are Baganda, natives of the area. The common language spoken in the district is Luganda.

Findings show that the district landscape belongs to Buganda surface classification. The district is divided into two main topographic zones, the Lake Victoria Zone and the High Land Zone (Central and Northern Hills). It is also endowed with adequate surface and sub-surface water reserves with numerous stream, rivers and wetlands. Its climate is warm and wet with relatively high humidity. The soils are of high productivity and are mainly laterite, sandy and clays.

Spatial analysis showed that the built up environment of the district is rapidly increasing following major road transportation networks. There has been significant change which has been noticed since 2000 whereby the percentage change was noted from 28 – 68 % in a period of 15 years. This is because the district is at the central most important point of the central region which is also the highly developed area in the country.

The economy of the district majorly depends on salary/wage earnings from workers who reside in the district, agriculture, trade and to some small extent tourism activities. The land holding falls in two major categories Mailo and Freehold. This has a lot of impact on the trends, level of development and generally land use in the area. The housing condition was majorly characterised by permanent structures which were dominated by tenements, although slums or informal settlements have very poor housing made of temporally construction materials like mud and wattle, cardboard, carton boxes and polyethylene paper. The development trends were also highly influenced by real estate development which has significantly escalated the cost of land in the district but at the same time transformed the landscape in many areas.

In terms of services the district is well equipped with health and education services although the quality of the services offered leaves a lot to be desired. There were also very few areas which still had deficiencies in terms of these social amenities. The district however has a problem of many places of worship which to the majority of the residents complained but noise pollution from the loud speakers as preachers try to attract flock. In terms of transportation the district is served mostly by road transport. The conditions of these roads however also leave a lot to be desired as they were noted to be in poor condition and they had problems of connectivity. In terms of water supply it was noted that the districts still have a lot to do in terms of coverage and quality of water sources. Other areas that requires improvement included; accessibility to renewable clean energy and sanitation.

Emerging issues

The population of Wakiso is structured (Younging) in similar way as the population of Uganda and other developing countries. The population is high between 4 and 39 years of age. The implication of this distribution is high demand for services, housing and employment. This also correlates with the survey findings in which a significant proportion of the population was employed in jobs that would otherwise be categorized as disguised employment. Given that a significant number of the people in Wakiso are youth, it is important that strategies for employment creation designed to cope up with the population growth rate. The analysis of the survey carried out in Wakiso indicated that a sizeable proportion of the residents don't have stable incomes since

majority are self-employed. Youth are engaged in petty trade and their small businesses have small capital. The situation is further exacerbated by lack of access to finance because of the exorbitant bank interest rate which is at 25%. The predominating economy is the salary/wage earns by workers, informal sector supplemented by subsistence agriculture and limited commercial farming. The socio-economic study results indicated high levels of unemployed and poverty.

Housing was analysed in terms of quality and stock available for the population. The quality of housing in the district is generally good in terms of space available for residence. The only exception is in the informal settlements (slums) found in Bunamwaya Nfuufu, Kasenyi, Katooke, Jinja karoli, Ndeje, Kisimu, Nabweru, Nansana,) where temporary construction materials are used and the housing units are crabbed together. The number of rooms for housing is the basis for this analysis. This is because housing nature is predominantly permanent as indicated by the socio economic survey. Therefore the problem is mainly in the single roomed housing units found slums, which encourage horizontal rather than vertical development. Given the ever increasing population, in the future this type of horizontal expansion poses a threat to space availability for infrastructure service delivery for roads, water, telecommunication, sewage, rail link and drainage.

Compared to other districts in Uganda, Wakisso District is well off in terms of numbers and distribution of social services. The challenge was visible in terms of quality of service delivery and in some instances accessibility of these services. Other services such as community and cultural centres are so inadequate yet the ones in abundance like institutions (educational, health, religious) require proper management and rehabilitation of the physical infrastructure.

From the survey, it was imminent that infrastructure like roads, drainage, power, telecommunication, sewage and water supply network need improvement and rehabilitation in places where they already exist and a “Marshall Plan” is urgently needed where they don’t exist. Roads were in bad condition with a lot of pot holes, dust, galley erosion and had issues of poor connectivity and traffic jams in some areas. Wakisso District is lucky to have the only international airport in Uganda. It also has all the major arterial roads and a railway that links her to the neighbouring districts, other parts of the county and the rest of the East African region. Therefore, there is an urgent need to carry out a physical development plan so that rehabilitation, improvement and expansion of these key infrastructural services are enhanced to develop the district and improve on the wellbeing of the people. This will assist the district to match with the rest of the country into a middle income country by 2020. Electricity is well distributed in areas near Kampala City. The hard to reach areas like the islands in Bussi and rural areas like Masuliata, Namayumba and Busukuma had no rural electrification. The main complaint on electricity from the household survey was of connectivity due to affordability issues. The water supply network was below the national average. There was no running water in the laid pipes in many areas, drainage channels are highly clogged with silt, solids especially plastics and are poorly maintained causing flooding in low lying areas when it rains.

Human excreta and solid waste management are key components in an urbanising environment and where human activities take place. Unfortunately in Wakisso District there is no proper solid waste management plan. The only existing landfill cannot be accessed by the district although it is located in the district, it belongs to Kampala City. In areas where there is a semblance of dumping sites, they are poorly managed. About 95% of the generated waste in the district is individually managed and this has caused a lot of environmental and sanitation challenges. Garbage is sometimes privately collected and taken to gazetted sites, dumped along the road side, thrown in the back yard to decompose, scatter in the gardens as manure and plastics are openly burnt. This pollutes the air. For human excreta Wakisso has not recognised sewage management system. Sewage system only exists in Entebbe Municipality, Namugongo Martyrs Shrine and housing estates constructed by National Housing and Construction Company Limited. Over 85% of the people use pit latrines which are not sustainable in a highly urbanising environment. Likewise to address the threat on people’s health due to improper human waste management, proper network for management of these wastes need to be created and extended to those areas where it is lacking. A sewage management plan is also necessary and it’s time to identify potential sites for sewage pounds to serve the unserved areas but rapidly urbanising.

Planning and all associated activities require personnel and human resource capacity to manage the process. Wakisso was found to be in short fall in terms of personnel to handle planning and enforcement issues yet efforts are being made to deliberately urbanize it. Wakisso needs to find ways of recruiting technical personnel related to planning and implementation of the plans.

Conclusion

In conclusion, Wakisso District exhibits fast growth process due to various factors but it also has inherent social, economic, environmental and urban management problems that are common in many urbanizing districts of Uganda. Leveraging its

capital base, natural resource base, cultural resources and heterogeneous population, Wakiso has the potential to transform into a vibrant metropolis given its strategic location in region coupled with the dynamic population and available natural resources. This implies that with such a strategy, related sectors of housing, social services, infrastructure, capacity development, education and awareness would have to be pursued for realization of proper urban development in Wakiso district.

Strategies and recommendations

Some of the strategies envisaged in this pla includes: Regulate the level of development on steep topography (40% on the upper side and 5% on the lower side; Restoration of all the natural gazette forests in the district; Regulate and enforce the protection of ecologically sensitive areas; Promote the use of subsidized renewable alternative energy sources; Review the current structure of the district with a lens of a city status and create a structure commensurate with current development trends; Provide planned and serviced land to facilitate and attract investment in the key activities supportive to the housing sector; Providing and/or upgrading infrastructure (water, sewage, electricity, roads, lighting, etc.); Reduce the burden of education and health expenses to the household budget for a good number of district residents who can't afford it; The need to streamline the land tenure and land market in Wakiso through fast-tracking physical planning and development control to avoid formation of informal settlements, urban sprawl; Establish a tourism office in the district to manage and coordinate tourism activities; Prepare a tourism master plan for the district to fully evaluate the potential for tourism and how it should be managed; Establish tourist information centres in the district; Provide employment centre e.g. industrial parks, improving markets, areas of small scale enterprises etc; development of hierarchy of interconnecting transport modes of transfer to ease movement of goods and services; NWSC Should take over water and sewerage supply, operations and maintenance Wakiso District; establishment of potential development zones to focus on ie education, industrial development, commercial agriculture, tourist and fishing industry.

Part I

Chapter One

1.0 Introduction and Background

1.1 Introduction

This assignment is being executed according to the contract for consultancy services for Preparation of the Wakiso District Physical Development Plan. The consultancy services are contracted out by the Wakiso District Local Government ("The Client") and provided by Savimaxx Limited ("The Consultant").

This report integrates and presents the Consultant's findings and recommendations regarding: -

- i. The legal and institutional framework;
- ii. The current status of the planning area within Wakiso District and the Greater Kampala Metropolitan Area (GKMA);
- iii. Primary functions now and in the future and implications on the development trends;
- iv. The Districts comparative advantage at the local, within the Metropolitan area, at the regional level, the implications on the spatial development of the district and position in the metropolitan area;
- v. Key sector analysis, empiric findings and conclusions;
- vi. Development trends and scenarios;
- vii. Stakeholder engagement and feedback on the visioning, goals and specific targets;
- viii. Physical and spatial planning framework;
- ix. Institutional and sector technical oversight, input and directions;
- x. Planning projections and investment projects/action areas;
- xi. Written provisions and strategies for implementation.

1.2 Structure and Content of the Report

The report is divided into eight (8);

- i. Introduction and background
- ii. The policy, legal and institutional framework;
- iii. Sector reports
- iv. Development trends and scenarios
- v. Development goals targets and policies
- vi. Physical and spatial plan
- vii. Planning projects and action areas

1.3 Background to the Project

Uganda is experiencing rapid urbanization which necessitated the declaration of the entire country a planning area (Physical Planning Act of 2010). For a long time, Uganda's urban hierarchy has been characterized by the strong dominance of the primary city, the Greater Metropolitan Kampala, with a population of 1,516,210 (National Census, 2014) and accounting for about 50% of the country's GDP. However, in line with established international experience, as urbanization deepens, this pattern is starting to shift. The greater metropolitan area surrounding Kampala, which is primarily Wakiso District, is experiencing physical development of significant proportions. The economic growth rate of the area surrounding Kampala now exceeds that of Kampala city itself. The District of Wakiso has begun to play a more significant role in both the national and the East African regional economies. This has resulted into the shifting of the district's investment and institutional needs accordingly.

The District of Wakiso is experiencing a rapid growth rate of 3.3% per annum (National Census, 2014). Such a rapid rate of growth has overwhelmed the district authorities. They cannot keep pace with the ever growing demand for housing, employment, services and

utilities. The challenges of growth, development and servicing on Kampala, the Capital City of Uganda have triggered a sprawl of growth of urban centres in Wakiso and some are growing even faster than Kampala. The district's demographic growth has historically been based on the combination of natural growth and in-migration. However, the 2014 Population and Housing Census indicated that the natural growth has fallen due to declining fertility rates but in-migration has continued and has actually more than doubled.

The district's population is projected to reach approximately 4.5 million by around 2040. To this horizon, planning must accommodate at least 6 million to ensure a minimal reserve for both external influxes and implementation constraints. The district is clearly a constituent of the Greater Kampala metropolis. The district's future growth, over the coming decade and particularly over the coming generation will be determined by national rural-urban migration patterns. All indicators are that rural to urban in-migration is increasing by 5% per annum; in fact, it may well accelerate to 30% by 2035 hence the very rapid on-going urbanisation in the Wakiso and the Greater Metropolitan Area of Kampala and indeed in Uganda as a whole. In all circumstances Wakiso District is taking over from Kampala in serving as a magnet for rural-urban migration given proximity and almost similar levels of service and opportunities of scale that are unavailable in any other part of the country (Lwasa et al 2002). As such, without intervention by government on the national scale, in-migration to Wakiso and the metropolitan area is expected to accelerate as the carrying capacities of the rural areas reach their limits and as the impacts of universal education begin to influence the aspirations and expectations of the younger generation.

Wakiso District today lacks adequate housing, service and infrastructural capacity. It is overwhelmed by the on-going flow of migrants at present rates. The district therefore totally lacks the capacity to cater for accelerated population growth precipitated by in-migration. The district is inevitably urbanizing and integrating into the metropolis of Kampala with at least 6 million people, but unless migration is controlled it will probably grow to some 10.5 million by 2040. This growth is taking place in an area with deficient housing, unplanned settlements, inadequate social amenities and no serious semblance of quality of life.

The Greater Kampala Metropolitan Physical Development Framework advocated for national/government interventions and physical planning interventions regarding these challenges. At the national scale, intervention pointers target intensive intervention to reduce fertility rates and an integrated national Urban-Rural Development Policy and Plan to address and reverse the expected mass migration to absorb and siphoning off the bulk of migration before it reaches the centre of the metropolitan area. The district of Wakiso requires strategic physical development planning interventions for the growth points in the District to provide for the required services and infrastructure to cater for the ever growing population.

The District therefore needs a Physical Development Planning Framework to guide the ever increasing un guided physical developments in form of larger-scale, strategic infrastructure, social and economic investment to improve the efficiency of the rural and urban markets and other systems that operate within and to enhance the agglomeration of economies that lie at the heart of urban and local productivity. The Wakiso District Strategic Physical Development Plan policy and sector strategies must supplement the Regional East African integration strides, the national economic growth strategies to address the future rural-urban migration to the major metropolis.

The District also needs to develop the sorts of systems and human resource capacities to effectively plan and implement the Physical Development Plan, execute such infrastructure projects, manage and regulate the increasingly complex built environments, generate and

administer the resources that are required to sustain these activities within the provided land use planning policy framework.

1.4 Scope of Work and Objectives of the Assignment

1.4.1 Scope of work

The ToR defined the scope of the assignment as the development of a Strategic Physical Development Plan for the entire Wakiso District covering an area of 2,807.75km². The area is divided into three administrative levels i.e. Sub-county Councils which are typically rural by nature namely; Masulita, Namayumba, Mende-Kalema, Kakiri, Wakiso, Kasanje and Bussi; urban councils which is sub categorised into two administrative units namely; Municipal Councils like; Entebbe, Nansana, Makindye-Sabagabo and Kira and Town Councils of Kasangati, Kakiri, Namayumba, Masulita, Kajansi, Kyengera, Katabi and Wakiso.

The analysis determines the growth pattern of the district, unique user distributions and regional linkage & existential justifications, the special elements, the form, economic backbone and significance vis-à-vis the emerging potential, significance in the Metropolitan Area, region and national economy. Therefore, in addition to the project objectives described above, a number of Strategic Objectives have been developed to guide the preparation of Wakiso District Physical Development Plan (WPDP).

1.4.2 Objective of the assignment

The overall objective of the assignment encompasses the cardinal Physical Planning concerns of the District Local Government; the statutory interventions undertaken by the MoLHUD as by Statutory Instrument no. 23 of 2008; and the provisions of the Physical Planning Act 2010; hence the assignment requirement is:

“To prepare a Strategic Physical Development Planning Framework to guide the orderly physical and sustainable development in the District over the next 23 years through a participatory process”

1.4.3 Specific Objectives

The initiative is considered particularly important to maximize positive impacts and minimize negative impacts. The Specific Objectives of the Assignment include: -

- i. Adoption of appropriate physical development planning approaches to maintain the integrity of the district; IEC Strategy for engagement of the private and public stakeholders during the preparation and subsequent implementation of the PDPs; ecological integrity of the biophysical environment; the integrity of the cultural landscape: - including traditional economic activities; significant historical and archaeological sites and the form and social character of the local (indigenous) people;
- ii. Formulation of a Physical Development Plan that is compatible and complementary to the socio-economic aspirations of the people in the District and the region and the development policies and aspirations of the country at large.
- iii. Plan to ensure and safeguard sustainable land use in the District (suitable use for affordable housing, urban agriculture, industrial developments et cetera) in future.
- iv. Articulation of Strategic Actions that is necessary to enhance sustainable development of the district using the available resources; (Investment Plan reflecting priority intervention areas and a phased Action Plan with indicative costing for implementation of the identified investment projects).

- v. Provide frameworks for the sustainable implementation and compliance to the new District PDP (study existing planning standards and development control guidelines, and assess their appropriateness to the district, suggest appropriate strategies and measures for enforcement of planning standards and development controls for the implementation of the PDP).

1.5 Planning Horizon

During the Inception Phase it became apparent that Wakiso District was growing at a rapid pace. At one time it was reported to grow at 15%. This rate was very high resulting from the high number of people seeking accommodation in the District from different parts of the country. The rate of growth is likely to remain high because people who come to the District have become permanent residents.

Wakiso District is the most strategically developing district in Central Uganda. It is very well placed to act as a dormitory area for transit hub for Kampala the Capital City of Uganda, hence hastening its growth rate. Therefore such growth rate may not be adequately tackled in a short time planning horizon. Never-the-less in these circumstances, the 20 year planning period will suffice as also emphasized more during the consultative workshops held in the district. Secondly it was found paramount that the national planning horizon is targeting 2040 and as such it would make sense to tag the Wakiso District Physical Development plan horizon to that

of the national planning horizon which is 2040.

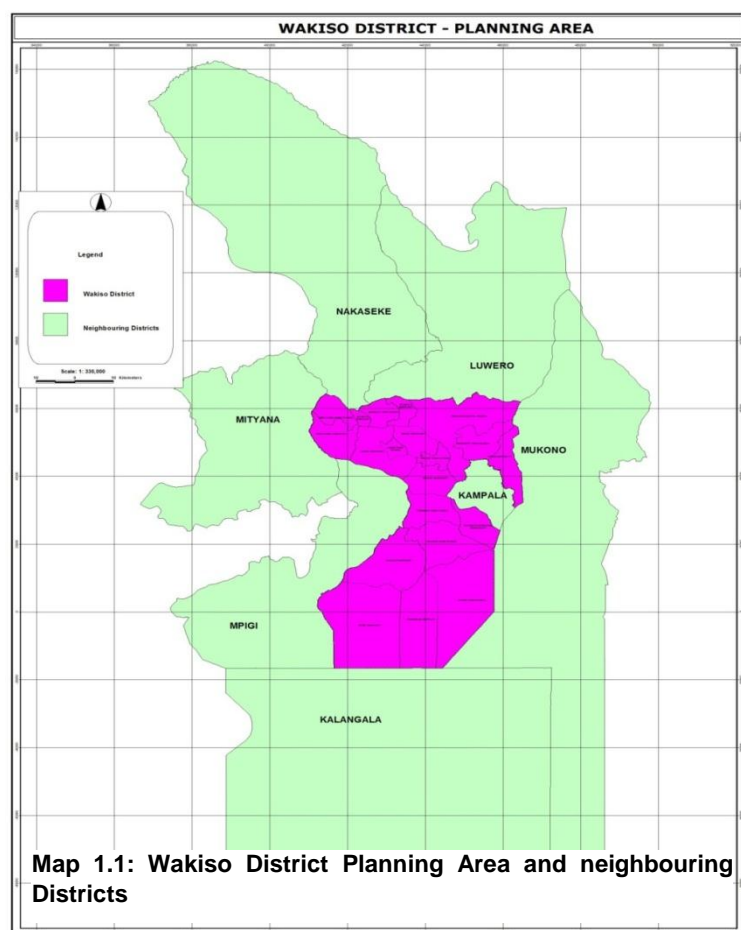
Hence, in this report, the Consultant will consider the planning period of 20 years. However, recommendations for short term (5years), medium term (about 10years) and long term (above 10 years) will be expounded.

1.6.0 Planning Area Boundary and Urbanization Trends in Uganda:

1.6.1 Planning Area;

The planning area forms a semi crescent around Kampala which is the capital city of Uganda. In the West is bordered by Mpigi and Mityana districts; in the North by Luwero and Nakaseke districts; Mukono district in the East and Kalangala district to the South (Map 1.1). The altitude level was (minimum a.s.l) 900 metres and

(maximum a.s.l.) 1,340 metres. It covers a total area of 2,807.75km² of which 964.km² was under water and swamps. The district came into existence by an Act of Parliament in November 2000. It was carved out of Mpigi District; taking away Busiro and Kyaddondo Counties.



Map 1.1: Wakiso District Planning Area and neighbouring Districts

1.7.0. Urbanization trends and the evolution of planning paradigms in Uganda

Urbanisation rate in Uganda is relatively low compared to other East African countries such as Kenya and Tanzania. The roots of urbanization in Uganda can be traced back since the 1890s when the European footprint in the country started to be felt. With the building of the Uganda railway, economic and administrative centres were established. Persistent rural poverty that causes people to migrate to urban areas with the hope of improving their livelihood partly explains the urban population growth rate of 5% for some districts in Uganda. For example, the decline in the urbanization rate of the Eastern Region is partly due to out-migration from these districts to other districts in search for employment.

The remarkable economic growth and political stability over the last three decades have led to the expansion of the existing urban centres. In particular Kampala and the growing of hundreds of other small trading centers in the countryside, particularly along major highways and major road junctions like in the case of Wakiso District. Policies for the economic transformation in Uganda, which has been mainly, pursued from and around the urban areas for example industrialization, are partly responsible for urban expansion.

Political/civil strife/insurgency (insecurity) is another factor that has led to the increased urbanization rate in some parts of Uganda like Gulu, Wakiso and Lira Districts. Insecurity displaced a number of people, resulting into a large influx of the population moving from rural areas where there was insurgency and relocating to urban areas for protection. This was the case in Wakiso District during the protracted guerrilla war which brought the NRM government into power, where many people run away from the rural areas of the district and the other neighbouring districts within the “Luwero Triangle” and settled in the upcoming trading centres within the district and never went back.

Population dynamics manifested in urban population growth and internal migration (especially rural to urban), are by far the most significant causes of urban expansion (Matagi, 2001; Lwasa *et al* 2002). This spatial pattern has continued to date. The urban centres created ‘pressure zones’ as occasioned by demographic shifts from rural areas to urban centres thus creating pressure on the existing facilities and infrastructure. It is therefore imperative to point out that the railway line accelerated urban growth; more so of the urban centres in the Western, Eastern and Northern parts of the country such as Tororo, Soroti, Lira, Gulu and Kasese. Later, the colonial government also set up administrative centres in various parts of the country to stabilize most settlements, which laid foundation for the earlier growth of urban centres like in Entebbe. In later years, urbanization in the country has also been influenced by long distance truck drivers who often use them as stopovers during their journey.

Uganda’s rapid urbanization is happening in the face of widespread poverty, shrinking present economies and resources for rural areas. The level of urbanization in the year 2014 was rated at 20.7%, with an annual urban growth rate of 5.2%. In 1969, the city of Kampala with 100%, Jinja 25.6% and Wakiso 8.1% were above the national average of 6.6% while five districts including Wakiso had urbanization rate above the national average of 7.4% by the year 1980. In 1991 six districts had urbanization rate of 11.3% above the national average while in 2002 seven districts like Kampala, Mukono, Busia, Jinja, Wakiso, Kitgum and Nebbi had rates above 12.2% the national urbanization level. The proportion of urban dwellers increased overtime from 6.6% in 1969 to 12.2% in 2002. Further to that, the urban growth in Uganda registered a growth rate of 8.2% between the years 1959 and 1969, 3.9% between the years 1969 and 1980, 5.8% between the years 1980 and 1991 and 4.6% between the years 1991 and 2000.

Between 1991 and 2002 Mukono District showed the highest growth rate of 15.9%, while Soroti District showed the lowest rate of 0.1%. The highest growth rates were registered in Kitgum 10.3%, Lira 10.1%, Wakiso 6.6% and Kasese 9.0%. This is partly attributed to insecurity which was forcing the rural population to move from rural areas to towns, which were considered then relatively more secure. The remarkable economic growth over the last decade as well as political stability have led to expansion of the urban centres and the sprouting up of hundreds of small trading centres in the countryside particularly along highways and major road junctions. The creation of new districts and other lower administrative councils also had its share in jump starting new urban centres more so in Wakiso District.

1.7.1 Urbanization trends in Uganda 1969 to 2014

There is no universally accepted definition of an urban area. In Uganda, the definition of urban areas has been changing over time. During the 1960s, 1980s and 1990s, Censuses defined urban areas to include gazetted urban centres (City, Municipalities and Town Councils) and gazetted Trading Centres. However, the 2002 and 2014 Censuses defined urban areas to include only the gazetted urban centres (City, Municipalities, Town Councils and Town Boards). In August 2016, there were 259 urban centres in Uganda as shown in Table 1.1. These include one Capital City, 33 Municipalities, 163 Town Councils and 62 Town Boards.

Table 1.1 gives number of urban centres by type and urban population based on the Censuses held in 1969, 1980, 1991, 2002 and 2014. However, the urban areas are as by August 2016. The urban population increased overtime from about 600,000 in 1969 to nearly three (3) million in 2002, a fivefold increase in 33 years. The period 1991 – 2002 saw a more rapid increase in the urban population, more than doubling from three (3) million to over seven (7) million. This increase is partly because of natural population increase, an increase in the number of urban centres from 75 in 2002 to 259 in 2016 and expansion in the geographical area of some urban centres.

Table 1.1: Number of Urban Centres by type, Census Year and Urban Population (1969 – 2014)

<i>Index</i>	<i>1969</i>	<i>1980</i>	<i>1991</i>	<i>2002</i>	<i>2014*</i>
Total Urban areas	N/A	41	67	75	259
City	N/A	1	1	1	1
Municipality	N/A	2	13	13	33
Town councils	N/A	34	33	61	174
Town boards	N/A	4	20	20	62
Total urban Population.	634,952	938,287	1,669,653	2,921,981	7,425,864

Source: UBOS, National Population and Housing Census, 2014

**The population for 2002 excludes the population enumerated in Town boards, while the urban centres indicated in 2014 are as of March 2016.*

What is clear is that the major urban areas in the country fall within what could be described as the “urban corridor,” a result of the then established colonial infrastructure development especially the construction of the Kenya-Uganda Railway.

From 1950s up to early 1980s, the focus on development in Uganda was based on rural areas due to the presumption among the social policy architects, urban managers and researchers that urban areas were better off in terms of social and economic infrastructure than rural areas. The ideology was to promote balanced growth.

The British colonial government regulated the planning and administration of almost all of the urban areas in Uganda under the Urban Authorities Act 1958, which was later amended to Urban Authorities Act, 1964 and repealed in 1996. During this era, the British virtually ignored

the pre-existence of well-established and sophisticated human settlements and local governance or urban administrative systems, which had in many cases been in existence long before their arrival (MLWE, 2002).

Most of the planning policies and outline schemes created segregation in income levels and racial groups, with much focus on the upper and middle income groups as opposed to the low income groups. The implication of this colonial and post-colonial framework was that the emerging urban authorities were empowered to initiate urban plans, coordinate and facilitate construction of public utility services as well as conserve and develop the resources in the areas of their jurisdiction. This left them with full responsibility of urban development control and service delivery alongside population increase and facilitating investment in the infrastructure development under a decentralized form of governance. However research shows that in Africa that there is a mismatch between service provision under decentralization system of governance and the resource spent by urban councils to provide services. As a result, urban local councils on one hand are pretending to be providing services and on the other hand the central governments have relaxed under the pretext that local councils have the responsibility to provide such services (Ssemambo 2010).

However, urban authorities have not been able to respond to the above challenges of urbanization, consequently leading to unprecedented pressure on infrastructure like water supply, residential facilities and sanitation services. In case of the road network, this has not changed since the colonial times; traffic volumes have increased causing traffic jams. This has cascaded effect such as; slow vehicular speed, traffic delays, exhaust fumes that pollutes the environment and waste of fuel in the traffic jams.

It is because of this that most urban centres in Uganda have developed without proper urban planning and development control mechanisms. The situation is even worse in rural districts where there is virtually no planning at all. Consequently, the informal settlements which have emerged are not recognized by urban authorities due to their non-conformity with development regulations. Because they are incapacitated, urban authorities have also tended to ignore these settlements when it comes to the provision of the necessary social and physical infrastructure services such as water, refuse collection, electricity, roads and sewage disposal.

Between the 1970s and the 1980s, the political turmoil led to the total collapse of the whole of Uganda's economy. Subsequently the industrial sector collapsed, major property owners in the country were expelled which led to the decline in institutional capacity of the urban authorities. By the year 1979 the economy was in total doldrums with income per capita of 120 US\$ as compared to the income per capita of over 450US\$ in the 1970 (MFED, 1987). However, the population growth in the urban centre's remained on course and the single most important characteristic that can describe this period in Uganda's urban history is the urbanized poverty.

1.7.2. Historical developments and urbanization of Wakiso District

Wakiso District owes its origin to the effects of the administrative adjustment under the government decentralization policy of taking services nearer to the people. Originally the district was part of the greater Mpigi District which was typically a rural region with local residents commonly practicing substance agriculture. It is an area which houses most of the palaces of the former Kings of Buganda and the Colonial Administrative Capital (Entebbe) and as such there is presence of both administrative and residential development spatial patterns in wakiso. The major planning intervention of the District was done in 2008 and by then the District had now been identified as the administrative unit for location of most of the Central Government Ministries and other agencies.

The above stated events quickly placed the District on the receiving end, transforming it into a convenient location for those migrating from the rural areas impacting significantly on land use pattern. As a result, development which started in a ribbon form along major roads, has now spread organically all over the district but in an uncontrolled pattern.

1.8.0 The Wakiso Development Challenge

The population census of 2014 revealed 7% of the Ugandan population was living in Wakiso District whose population is currently at 2,007,700, growth rate of 4.9% and the mean house hold size of 4.6 persons per house hold. This indicates that the level of service delivery has to increase to match with the increasing population. The same Population and Housing Census also established that the District was the most populated in the country. Since the inception of Wakiso District in 2001 to date, the rate of physical developments has more than quadrupled. Urban trends are taking over the rural setting with no significant planning intervention depicting organic growth (unguided growth).

The district being a major component of the Greater Kampala Metropolitan area depicts and presents special urban challenges of this locality especially those related to infrastructure and service requirements. Wakiso in particular has been diagnosed as an area of high urbanism characterized majorly with “brown agenda”. It is anticipated that Wakiso District will further experience high growth rates and levels of invasion succession of both urban and the rural hinterland which would urgently need proper planning guidance in order to have positive impacts on the district economy and standards of living of the local people. Decisions are being made about locations for specific key development facilities, land uses, processing centres, related industrial establishments, improved road network as well as related settlement growth patterns including residential, commercial, industrial and social and economic amenities. All of these will be impacted on in various ways by the districts spatial location. Consequently, Wakiso District Local Government recognizes the need for the District Physical Development Plan to provide a guiding framework for the district covering a period of 22 years (2018 to 2040) matching with the national vision of 2040.

Chapter Two

2.0 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

2.1.0. Policy Framework

The policy framework that guides physical planning in Uganda is embedded in a number of national policies. National, District, Urban and Local Physical Development Plans (PDPs) are prepared within a solid umbrella policy context including the Vision 2040, the Second National Development Plan 2015/16 – 2019/20 and key other government policies. Direction provided by all of these policies guides the preparation of PDPs as the first supporting physical planning framework within an area of jurisdiction. Preparation of PDPs is also done with the knowledge that it must integrate into the broader National and Regional Physical and Economic Development Plans.

2.1.1. The Uganda's Vision 2040

The Vision 2040 is Uganda's key development framework. The preparation of National, District, Urban and Local PDPs is guided by the objective of the Vision 2040 that aims at ensuring "A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years". The physical planning process for the transformation of Wakiso District was carried out through a thorough analysis of the local, regional and national situation to guarantee careful planning and commitment of the district's resources.

2.1.2. The Second National Development Plan (NDP II) - 2015/16 – 2019/20

The NDP II provides the Governments' strategy to pursue urbanization as a broad strategy to guarantee transformation of the economy from a Peasant to a Modern and Prosperous Country. This is in recognition that the sector will also promote optimal and organized land use for urban development; improve urban infrastructure services and utilities; create an inclusive policy and regulatory framework for urban development; develop environmentally resilient urban entities; and increase availability of and access to land for urban expansion and investment.

Wakiso District is no doubt a key integral part of the Greater Kampala Metropolis which plays a key role in the national economic development. Much of the District is urbanized. The above provisions are in recognition of the important role that urban areas play in national development as engines of growth and centers of investment, employment, education, knowledge and technology transfer, and ready markets for industrial and agricultural products.

2.1.3. Physical Planning Policy

There are basically four policies that directly relates to physical planning activities in Uganda which are operational. They include; the National Land use Policy (2006) National Land Policy (2013), the National Environment Management Policy (1994) and the National Policy for the Conservation and Management of Wetland Resources (1995). The other policies which may relate to physical planning are in draft form and as such they are not referred to in this report although the drafts were reviewed. They include; the National Housing Policy and the National Urbanization Policy.

a) The Uganda National Land Policy (2013)

The policy focus is on the key factor of development, land, which continues to be a critical factor as it is the most essential pillar of human existence and national development. Land use planning and regulation is one of the tools identified in the policy as the key to management of land under any tenure to enable the local governments, communities and individuals determine, in advance, the direction and rate of progression of land sector activities of the area.

The Policy under strategy 30 advocates for governments appropriate holding and management of natural resources. The policy calls for an open policy on information to the public and seek consent of communities and local governments concerning prospecting and mining of these resources. The Wakiso District physical planning process takes into account of the above requirements.

b) The National Environment Management Policy (1994)

The National Environment Management Policy overall goal is sustainable social and economic development which maintains or enhances environmental quality and resource productivity on a long term basis to meet the needs of the present without compromising the ability of the future generations to meet their own needs. It also advocates for integration of environmental concerns in all development oriented policies, planning and activities at national, district and local levels, with participation of the people.

c) The National Land use Policy (2006)

A Land Policy is a systematic framework for addressing the role of land in national development, land ownership, distribution, utilization, alienability, management and control. A National Land Use Policy, on the other hand, is an integral element of the National Land Policy. The aim of a National Land Use Policy is to provide general guidance on optimal and sustainable utilization of land, and is based on the analysis of soil types, topographic features, and agro-ecological considerations, as well as social and demographic factors. Importantly, the Land Use Policy must address the various use categories and the conflicts that arise from competing demands for which the Wakiso PDP intends to address.

d) The National Policy for the Conservation and Management of Wetland Resources (1995)

This policy aims at curtailing the rampant loss of wetland resources and ensuring that benefits from wetlands are sustainable and equitably distributed to all people of Uganda. It also calls for sustainable use of wetlands. The Wakiso District PDP identifies and puts into perspective the key policy goals and objectives to provide a framework for implementing the policy at the both urban and rural levels and ensure that wetland related issues are adequately incorporated into the district PDP.

e) National Policy on Tourism Development

In executing its mandate, the ministry is guided and regulated by a number of policies, laws, regulations and guidelines. Notable of these are; Constitution of the Republic of Uganda (1995), Tourism policy (2014), Tourism Act (2008), Uganda Wildlife Act (2000), Historical Monuments Act (1967) as well as the Universities and other Tertiary Institutions Act (2001). All these policies and Acts mandate the Ministry of Tourism, Wildlife and Antiquities (MTWA) in conjunction with the sector Agencies to set policy, oversee, monitor and coordinate the tourism sector development.

Specifically the Government's roles are to: (i) formulate medium to long-term tourism policy,

plan for tourism development, and regulate tourism activities through legislation, licensing and classification; (ii) monitor performance on quality, safety and targets; (iii) facilitate tourism development by providing the infrastructure, economic, regulatory, fiscal and political environment that encourages investment and orderly growth; and (iv) ensure adequate funding for the marketing of Uganda as an attractive tourist destination.

The tourism sector is guided and supervised by at least seven Government institutions that work closely with a number of private sector institutions spread across the country. The mainstream government institutions in charge of tourism are: Ministry of Tourism, Wildlife and Antiquities, Uganda Tourism Board (UTB), and Uganda Wildlife Authority (UWA). Other government institutions that support tourism are the Uganda Investment Authority (UIA) – for investment promotion, Ministry of Education and Sports (MOES) – for tourism-related training, Ministry of Works and Civil Aviation Authority - for Airline development and regulation, Ministry of Health, Ministry of Works and UNRA - for Tourism Roads.

At the local government level, all district governments are mandated to offer front-end service delivery in all sectors including tourism, however the sector continues to lack effective representation within the local government structures.

Guiding Sector Policy

The Tourism Development is guided by the National Tourism Policy 2014 whose objective is to ensure the delivery of a step-change in the development and functioning of the tourism industry, in order to realize Uganda's great but unexploited potential as a major tourist destination. The Policy emphasizes that by 2024, Uganda should offer a broad and enticing range of tourism products and activities, based on its wealth of natural assets and its rich cultural heritage. The tourism sector should have evolved into a major and sustainable source of revenue and employment across the country, thereby making a substantial contribution towards overall social and economic development. In order to reinforce the aspirations of the tourism policy, the tourism development master plan (2014-2024) identifies the following as 10-year development objectives for tourism in Uganda:

- i. To develop and diversify the tourism products and services
- ii. To develop tourism infrastructure and facilities
- iii. To promote and market the destination in national, regional and international markets
- iv. To develop human resource and institutional capacity for the tourism sector
- v. To enhance regulation, coordination and management of the tourism sector
- vi. To promote safety and security of tourists and tourism assets
- vii. To promote local, regional and global partnerships for tourism development
- viii. To promoting conservation of natural and cultural heritage resources
- ix. To promote community involvement and enterprise development in the tourism economy

2.2 Legal and Institutional Framework

In Uganda, the legal and institutional framework for physical planning is enshrined in a number of laws and regulations. The Ugandan institutional framework is the totality of public and quasi-public agencies involved in conceiving, formulating and implementing physical development plans. Physical planning is a legal activity in Uganda, whether planning is at the lowest level or the highest level of government; there is no planning activity that is carried outside this legal and institutional framework. As such, there are several policy and legal instruments, which guided the preparation of the Wakiso District Physical Development Plan and form a basis for its implementation and development.

This policy and legal instruments are reviewed, for purposes of formulating a basis for policy recommendations of the plan and includes the following: -

2.2.1. The Constitution of the Republic of Uganda

The Constitution of Uganda, which was promulgated in 1995 is the supreme law of Uganda and forms the apex of the legal framework. Article 190 provides for the District Councils to prepare comprehensive and integrated plans. The Government as determined by laws of Parliament, holds in trust for the people and protects, natural lakes, rivers, wetlands, forest reserves, game reserves, national parks and any land to be reserved for ecological and tourist purposes for the common good of all citizens, which can best be done by producing PDPs. This legal framework is useful for further highlighting the roles of the Local Governments at all levels in land management and conservation of environmentally sensitive areas.

The National Constitution also underscores the importance of physical planning as a way of harmonizing the diverse needs for human settlement, production and conservation, by adopting best practice in land utilization for purposes of growth in the agricultural, industrial, and technological sectors, taking into account population trends, without losing control over the structuring of land tenure systems. The most fundamental article empowering physical planning in the 1995 Constitution of Uganda is Article 237 (7) whereby Parliament is mandated to make laws that enable urban authorities to enforce and implement planning; and Article 242, Local Governments are empowered to plan and regulate the use of land under the decentralized system of governance.

In line with the provisions of the Constitution, parliament has put in place the necessary legal framework to provide guidance for carrying out planning and ensuring compliance and regulation of land use in Uganda.

2.2.2. The Local Government Act (CAP 243)

This Act provides for the system of local governments based on the district. Under the districts there are lower local governments and administrative units. The Act provides different functions at the different levels of Local Governments. The Act gives Districts autonomy but not independency to prepare their own Physical Development Plans within the National Planning Framework. Section 36 part (3) and part (2) in the second schedule No.5 (vi and xi), gives functions and services for which District Councils are responsible for such as district project identification, district development planning and physical planning.

Part IV of the local Government Act sections 30 (2), 31 - 36 (2) also provides the functions and services that the district is mandated to perform as specified under Part 2 of the Second Schedule. The Act defines the planning authority in the district as the District Council and how it shall carry out planning in relation to guide lines of the National Planning Authority.

2.2.3. The Physical Planning Act 2010

The Physical Planning Act on the other hand is one of the many laws that have emphasized the Legality of Physical Planning in Uganda. It's a principle statutory instrument governing physical planning in Uganda. The planning process followed to prepare PDPs is greatly provided for under this Act.

Under Part I Section 3 of the Act, it declares the entire country a planning area. This means that by the provisions of this Act, Wakiso District is a planning area. For any declared planning area, an outline scheme and/or a Physical Development Plan are by this law required to be formulated. However, this system looked at the local governments in this case Wakiso District Council as agents of the Central Government which is mandated to prepare the plan and submit it to the National Physical Planning Board for approval.

The Physical Planning Act 2010, 6 (1) (i), Section 25 – 29 stipulates the content, preparation and approval process of the District PDPs. The consultation processes during the situation analysis process have been aligned to the legal requirements as stipulated in the Act.

2.2.4. The Land Act (CAP 227)

The Land Act was enacted in order to implement the constitutional provisions on land ownership and management. Articles 237 (8) and (9) guarantee security of occupancy of lawful and bona fide occupants of 'Mailo' land and other registered land and oblige parliament to enact a law regulating the relationship between them and registered owners of the land they occupy. The implication of this Act in relation to the physical plan is such that once the zoning is done and the plan becomes law, the owners have to conform to the approved plans no matter their land rights held. It is thus the responsibility of the District Land Board to enforce this.

Part III Section 46 of the same Act, emphasizes that use of land must comply with the Physical Planning Act and any other relevant laws concerning planned land use. The Act also provides for the protection of fragile ecosystems such as natural lakes, rivers, ground water, natural ponds, natural springs, wetlands and other land reserved for ecological and touristic purposes for the common good of the citizens of Uganda.

2.2.5. The National Environment Act (CAP 153)

According to this Act, Part VII Sections 34 to 55 outlines all the relevant environmental management mandates of NEMA in collaboration with the Government and Local Governments. The Act stipulates the mandate of the National Environment Management Authority (NEMA) as "the principal Agency in Uganda responsible for the management of the environment by coordinating, monitoring, regulating, and supervising all activities in the field of environment". More specifically sections 49 and 46 concern land use planning and forest resource management, in particular section 7 (b) under Part III specifies that NEMA;

Therefore the physical plan of Wakiso District Local Government/Council must relate to this Act by incorporating environmental concerns in the planning area. This plan is prepared with environmental concerns taken into account as specified by the Act.

2.2.6. The Wildlife Act, 1996

This Act provides for sustainable management of wildlife and consolidates all efforts to conserve wildlife in the country by establishing a monitoring and supervisory body- Uganda Wildlife Authority. This Act is important in the preparation of the District Physical Development Plan as the District is part of the Central Region, which is rich in wildlife and conservation areas.

2.2.7. The Forest Act, 1999

This Act provides for the protection, management and proper utilization of forest resources. Section 3 of the Act empowers the minister by statutory order to declare any area to be a central forest reserve or a local forest reserve or to have an adequate forest estate after instituting such inquiries, as he or she may deem fit. Section 9(2) empowers the local authority with the approval of the minister to make rules for protection, management and utilization of any forest reserve within its area of jurisdiction. The act is critical to the district PDP given that such fragile environments are under extreme pressure in Wakiso District due to the population explosion and the fragile land tenure system in the country that puts pressure on such lands.

2.2.8 The Petroleum Supply Act, 2003 and the Petroleum Exploration and Production Act,

The District is part of the area to accommodate the planned oil and gas infrastructure for the country. The Petroleum Supply Act provides for the supervision, monitoring, importation, exportation, transportation, processing, supply, storage, distribution and marketing of petroleum products. The Act mandates the Minister in charge of the petroleum sector to provide the licensing and control of activities and installations, for the safety and protection of public health and the environment in petroleum supply operations and installations.

Of critical importance are the oil pipeline details, land requirements and planning requirements within Wakiso District.

2.3 Planning Regulations

i. The Physical Planning Regulations

The Physical Planning Regulations give full effect to the Physical Planning Act 2010. Without them, the Act would not be fully implementable.

ii. The National Physical Planning Standards and Guidelines 2011

The National Physical planning Standards and Guidelines are intended to guide both the formulation implementation of the PDPs, with the basic aim of ensuring that spatial developments take place in an orderly, coordinated and efficient manner. They provide clear verifiable minimum standards for development activities. They also provide guidelines on zoning, sub-division, housing design and standards. The situation analysis of the trends and challenges of physical development in Wakiso District has been carried out with guidance and reference to the National Physical Planning Standards and Guidelines.

iii. The National Environment (Audit) Regulations 2009:

These Regulations prohibit the carrying out of environment audits without due certification and registration, except if the person is an environmental inspector. The Regulations also provide for the preparation of environmental audit reports; require owners or operators of facilities whose activities are likely to have a significant impact on the environment to establish environmental management systems; provide for enforcement environmental audits; and encourage voluntary environmental audits and compliance agreements to aid facility compliance to environmental requirements. The guidelines will provide input in the Wakiso District PDP and formulation of enforcement of compliance frameworks.

iv. The National Environment (Minimum Standards for Management of Soil Quality) Regulations:

These Regulations have been reviewed to provide guidance regarding the minimum soil quality standards to maintain, restore and enhance the inherent productivity of the soil in the long term; to establish minimum standards for the management of the quality of soil for specified agricultural practices; to establish criteria and procedures for the measurement and determination of soil quality; and to issue measures and guidelines for soil management.

v. The National Environment (Minimum Standards for Discharge of Effluents into Water or Land) Regulations:

These Regulations prohibit discharge of effluent or waste on land or into the aquatic environment contrary to established standards and without a waste discharge permit. They also provide for sampling of effluent and waste water analysis. The district and the entire

metropolitan area are at crossroads with regard to effluent or waste management. The local urban and local government entities within the district do not have in place effluent and waste management strategies yet the influx and footprint of industrial activities is clearly very significant. Engagement with administrators of the entities indicated challenges in solid waste management processes right from collection up to disposal.

vi. The National Environment (wetlands, River banks and Lakeshores Management) Regulations:

These Regulations have been reviewed to provide guidance regarding regulations for the protection of wetlands; their conservation and wise use; inventorying of wetlands; and wetland use permits for regulated activities, protection zones for riverbanks and lakeshores. The protection zone with regard to wetlands, riverbanks, lakeshores and forests is defined in the regulations. The consultant's analysis was to verify compliance enforcement processes and challenges, institutional linkages and support processes and the requirements that will constitute a critical input in the formulation of frameworks for compliance during enforcement of the PDP.

vii. The National Environment (Noise Standards and Control) Regulations:

These Regulations have been reviewed to provide guidance into regulations for maintenance of a healthy environment for all people in Wakiso, the tranquility of their surroundings and their psychological well-being by regulating noise levels; and generally to elevate the standards of living of the people by prescribing acceptable noise levels for different facilities and activities. The review was carried out to extract provisions and input in the frameworks for compliance during enforcement of the PDP.

viii. The National Environment Impact Assessment Regulations, 1998:

These Regulations have been reviewed to provide guidance into regulations and processes for environmental impact assessment (EIA) process, including project briefs and environmental impact studies. The Regulation provide for EIA review processes, including invitation of general public comments and public hearings and rejection or cancellation of an EIA certificate.

ix. The National Environment Waste Management Regulation, 1998:

These Regulations have been reviewed to provide guidance into regulations for management of all categories of hazardous and non-hazardous waste. They cover movement of hazardous waste into and out of Uganda, its storage and disposal. The Regulations also provide for conditional licensing of transportation of waste from one district to another. The Regulations prohibit the disposal of untreated waste into the environment. The review of the regulations was carried out to extract provisions and input in the frameworks for compliance during enforcement of the PDP.

x. The National Environment Hilly and Mountainous Areas Regulations:

These Regulations have been reviewed to provide guidance into regulations for sustainable utilization and conservation of resources and the mountainous and hilly area. The District Councils are permitted to make bye laws for the protection of mountainous and hilly areas which are at risk of environmental degradation.

xi. Ordinances and Bylaws

Local Governments have the prerogative to formulate and implement ordinances and by-laws for the purpose of better service provision. Such instruments may include further clarification of processes in land use regulation and enforcement compliance. Review was carried out

where these instruments were available to extract provisions and input in the frameworks for compliance during enforcement of the PDP.

xii. Uganda's National Environmental Action Plan (NEAP)

The Uganda National Environment Action Plan (NEAP) seeks to promote and implement sound environmental policy. The NEAP represents the culmination of a series of initiative's and activities coordinated by the National Environment Management Authority (NEMA). It is the Master Plan for the management of the environment in Uganda and contains a National Environment Policy, Framework, Environmental Legislation and Environment Strategy. The NEAP consists of Sectoral Plans for the Medium and Long Term intended to lead to sustainable development in Uganda. The plan has been essential in ensuring compliance for the planning of the towns and now the district environmental aspects.

xiii. Wakiso District Environment Action Plan (DEAP)

The District DEAP is the basis for integrating environmental concerns in formulation and implementation of District Development Plans and programs so as to ensure environmental mainstreaming in the District, Urban and local planning and physical development processes.

The DEAP therefore recognizes the critical role of relevant line Ministries, Departments and Agencies as well as Civil Society Organizations, Communities, Development Partners and other stakeholders in coordinating their actions for the preservation, conservation and sustainable use of the environment and natural resources hence the need for harmonizing the management of environment and natural resources in Wakiso District.

xiv. The Greater Kampala Metropolitan Physical Development Framework (2013)

The planning area of Wakiso District Local Government falls within the Greater Kampala Metropolitan area. The Greater Kampala Metropolitan Physical Development Framework (2013) identifies the development challenge of the continued unplanned and disorganized growth and sprawl. The Greater Kampala Metropolitan Physical Development Framework suggests remedies to address such challenges which affects or relates very well with Wakiso District development challenges.

2.4.0 Institutional Framework

The Government has over the years equally put in place a hierarchy of planning institutions and bodies for policy alignment, planning, implementation and monitoring of the Physical Development Planning process at national, regional and local levels. These institutions are enshrined in Acts of Parliament, policies, guidelines and standards guiding the planning and implementation of plans at all government levels in Uganda.

2.4.1. The Directorate of Physical Planning and Urban Development

At National level, the Physical Planning Directorate in the Ministry of Land Housing and Urban Development (MoLHUD) is responsible for carrying out National land-use plans and policies with contributions from other related ministries and departments. The bodies, their structure, powers and responsibilities, are defined in the Physical Planning Act (2010). Currently the Minister of Lands, Housing and Urban Development approves recommended plans by the National Physical Planning Board (NPPB). Any amendments and variations in PDPs cannot be permitted without approval from the Ministry NPPB.

2.4.2. National Physical Planning Board

Section 4 – 6 of the Physical Planning Act establishes and defines the composition and functions of the National Physical Planning Board. Section 6 (1) a – n; defines the functions of

the board in overseeing and coordinating the execution of the physical planning mandate at the national, regional, district, urban and local levels. The Act also defines a hierarchy of Physical Development Plans, the institutions and bodies required to prepare, approve and amend these plans and the overbearing role of the board.

The mandate, processes and the institutions that relate with the board in the planning, approval, amendments of PDPs are a critical component for the Wakiso District physical planning process.

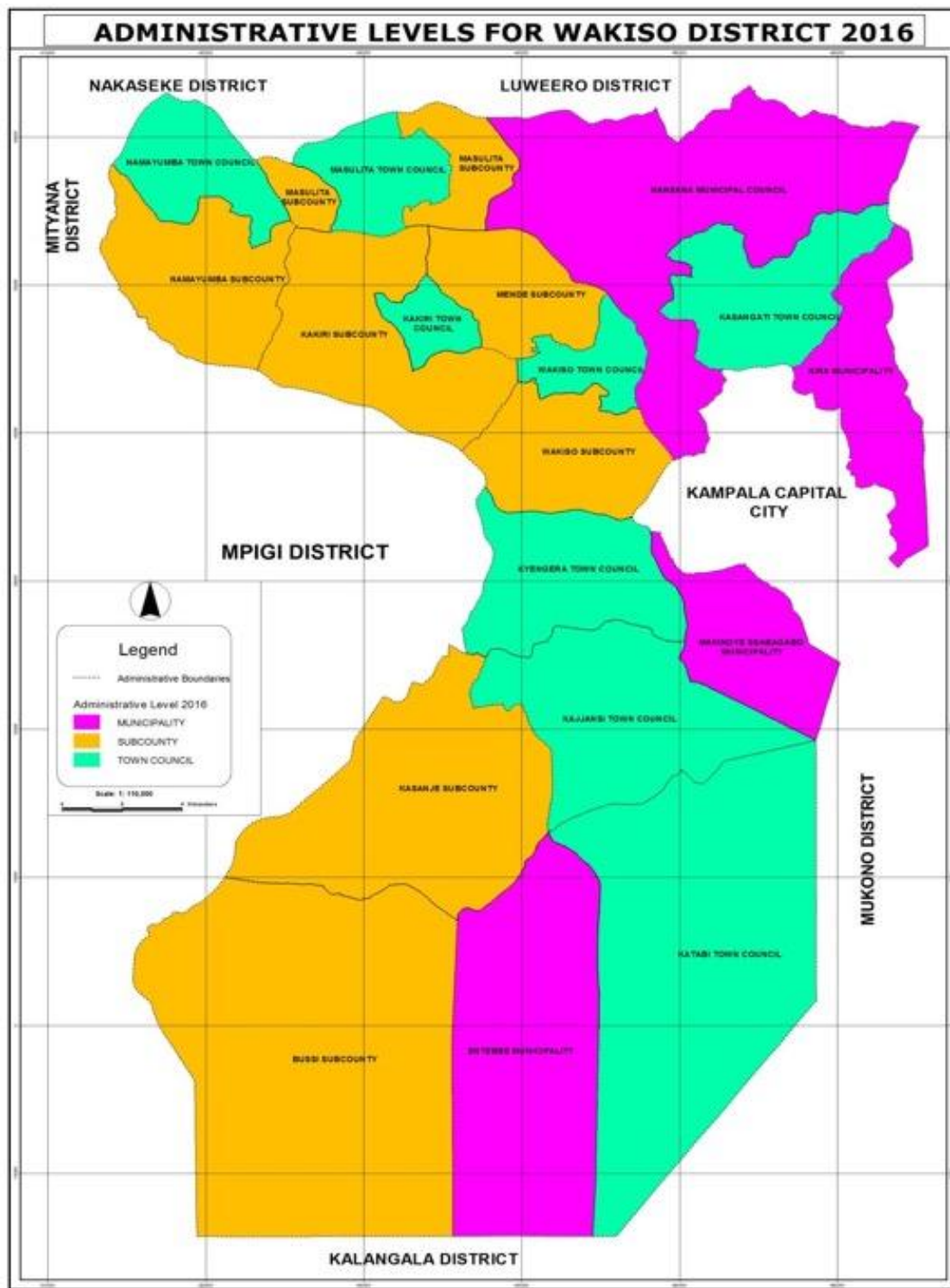
2.4.3. District Physical Planning Committee

The Physical Planning Act (2010) under Section 9 provides for the composition of the District Physical Planning Committee (DPPC) while Section 10 and 25 (1) stipulates the functions of the same committee and defines the key actors in the process. The mandate, processes and institutions that relate with the DPPC in the planning, approval, and amendments of the district PDP will definitely relate to critical component of the development control in the district.

2.4.4 Administrative set up of Wakiso as of 2016

Wakiso District is divided into two categories of administrative levels namely; rural and urban set up. The Rural has two administrative units namely the Counties of Kyaddondo and Busiro (these are not political but they serve mainly the Buganda administrative structures) and Sub County Councils namely; Masulita, Namayumba, Mende - Kalema, Kakiri, Wakiso, Kasanje and Bussi (which are political and functional planning entities).

The other category is the urban set up which is comprised also of two administrative units namely the Municipal Councils of Entebbe, Nansana and Kira, which are political and planning entities. The other administrative unit comprises of eight Town Council of Kasangati, Kakiri, Namayumba, Masulita, Kajansi, Kyengere, Katabi and Wakiso which are also political and planning entities (Map 2.1). Under the sub county level, there are lower administrative councils namely; parish and councils. For the Urban category, under municipalities there are Divisions, Wards and Cell Councils. Division Councils are administrative entities with in the Municipalities and they are equivalent to the Town Councils in the urban and/or the Sub Counties in the rural settings (Figure 2.1).



Map 2.1: Administrative hierarchy of Wakiso District as of 2016

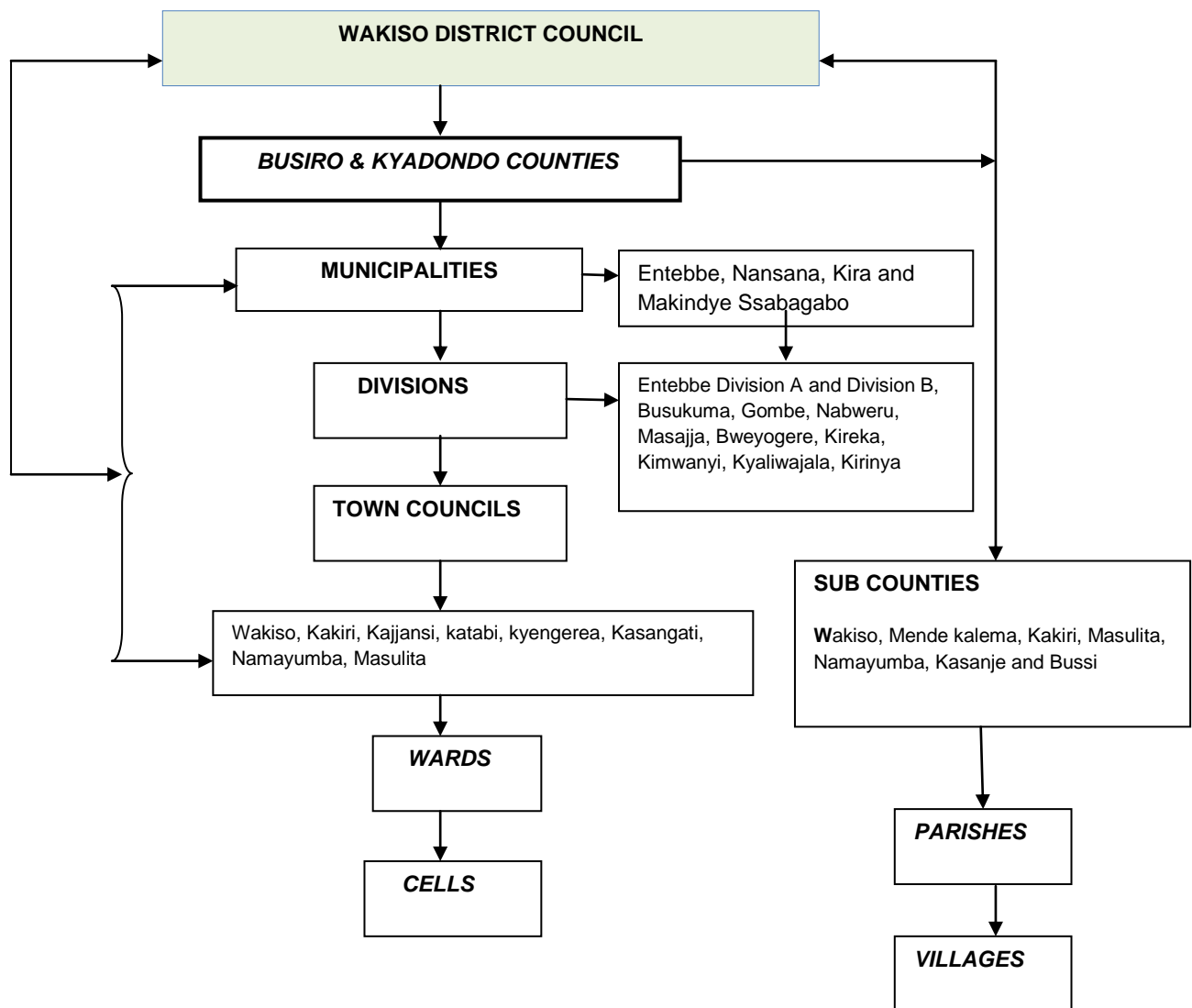


Figure 2.1: Administrative Setup of Wakiso District 2016

2.4.4.1. Institutional Structure and Physical Planning Function at Sub-county

The national and local physical planning institutional structures and processes directly impact on the planning, management and implementation of the PDP. Implementation of the PDP requires development of the detailed plans and mechanisms for actual implementation of the recommended components of the PDP. This will obviously fall on the District and the newly created entities in the District with the involvement of a complete cross-section of other government ministries and agencies, the private sector and affected communities in the district.

With decentralization policy, local authorities are mandated to prepare structure and detailed plans in their areas of jurisdiction. However, approval of these plans is a sole responsibility of the line Ministry with technical advice from the National Physical Planning Board. The role of the Department and the Board however remains in preparation of national and regional plans.

Officially the designated urban areas in Wakiso District include three (3) Municipalities, eight (8) Town Councils and the seven (7) sub-counties which are of rural nature. The planning and management within the district relies on the integrated coordination and collaboration of these local governments under the guidance of the national government. This PDP will provide a tool to strengthen that cooperation. District level local government officials are employees of the

national government and provide local representation. The Wakiso District PDP is the first of series of District Physical Development Plans and the concept of district coordination of the lower Councils is worth considering as an implementation and monitoring body at that level.

2.4.4.2. Structure and Activities of the Natural Resources Department at the District

Physical Planning according to the Wakiso District Structure is a domain of the Natural Resources Department. The current structure and staffing relating to physical planning at the District indicated serious challenges. At the Municipal, Town Council, Town Board and Sub-County levels, the staffing requirements are enshrined in the structure stipulated by the Ministry of Public Service Job Descriptions and Specifications for Jobs in Local Governments. The required staff in the newly created local governments was not found in place. However, the structure at the district and sub-county is responsible for services and requirements in line with the physical planning and land management mandates. The rate of urbanization in the district has been increasing yet the staffing structure has remained fixed. The Natural Resources Department has found it increasingly difficult to meet the demand for planning for physical development and management of the process and services because of the above described scenario.

2.4.4.3. Structure and Responsibilities of Physical Planning Section

In Wakiso District, the physical planning section is manned by one Senior Physical Planner and one Physical Planner all housed at District Council headquarters. All the (4) Municipalities physical planning departments are being manned by a physical planner each. However, the Eight (8) Town Councils and seven (7) sub-counties do not have physical planners to manage the planning and development process. The staffing requirements for inspection and enforcement of compliance in the entities were found gravely lacking. The main physical planning, management and enforcement of compliance requirements in the district, urban and the local entities will entail both the core activities and business processes including the following;

- a. Prepare of urban and local PDPs, detailed plans and action plans in conformity with the district PDP and the Metropolitan Physical Development Framework;
- b. Supervise, guide development and enforce compliance activities to ensure observance of planning standards and guidelines;
- c. Piecemeal planning, research and demographic analysis;
- d. Prepare plans for land subdivision and consolidation
- e. Facilitate the process of land surveying
- f. Process and approve planning of land surveys
- g. Support the development of a modern urban and district Land Information System (LIS)
- h. Custodian, maintain and updating of topographic and cadaster maps
- i. Process applications for development in coordination with other sectors
- j. Undertake inspections of sites
- k. Monitor development activities

Part II

Chapter Three

3.0 Sector Reports – Analysis and Recommendations

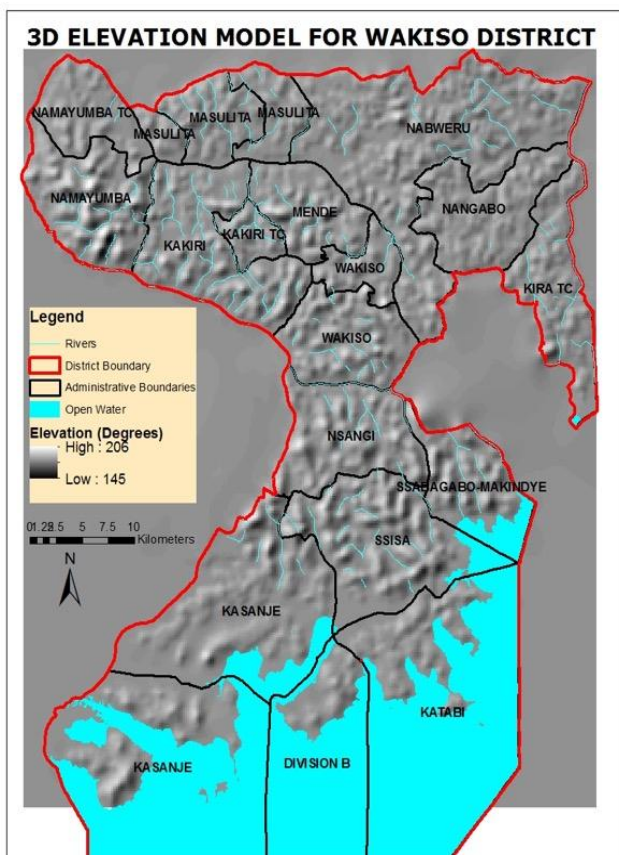
3.1. Introduction

This chapter gives the analysis of all the sectors affecting development of Wakiso District and suggests recommendations and proposals for improving the current situation. The sectors include; Geographical characteristics and development trends of Wakiso District, Institutional structure and physical planning function, social and demographic structures, environmental and natural resources, land tenure and values, economic sustainability and development, housing and settlement patterns, social services and facilities, infrastructure and utilities, tourism culture and recreation, land use and development patterns.

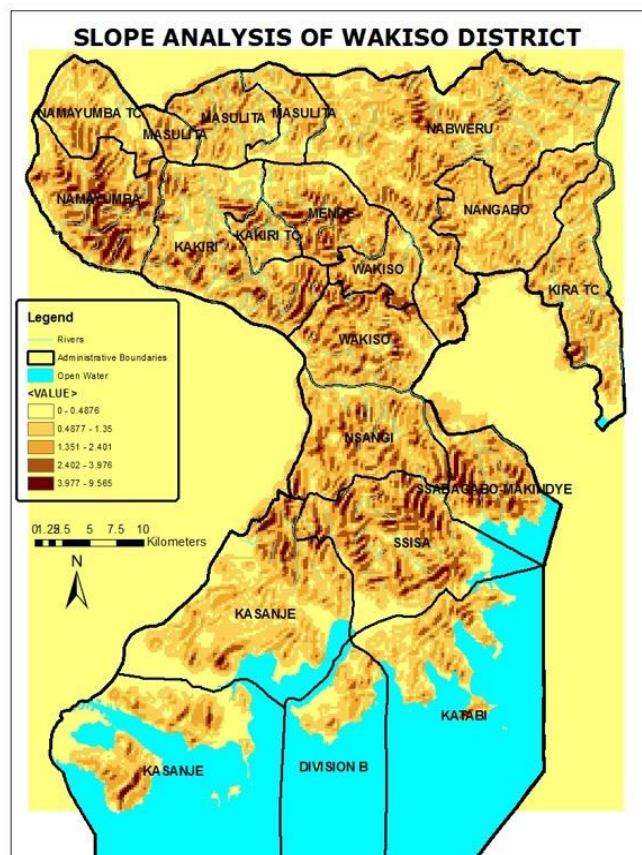
3.2 Report on Geographical characteristics and development trends of Wakiso District

3.2.1 Topography

Wakiso District landscape belongs to Buganda catena surface classification. The district is divided into two main topographic zones, the Lake Victoria zone and the high land zone (central and northern hills). The high land zone is characterized by isolated flat-topped hills with steep slopes in some areas, often merging abruptly into long and gentle pediments, which are usually dissected by relatively broad valleys (see maps 3.1 and 3.2). It lies at an approximate range of about 900 to 1,340 meters above sea level. The physical survey revealed that most of these hill tops are being excavated for construction of various housing developments. This has increased surface runoffs, escalating flooding of the low lying areas in the district because of clearing the vegetation cover on these hill tops.



Map 3.1: Wakiso District Elevation Model



Map 3.2: Slope Analysis for Wakiso District

Wakiso District is generally endowed with adequate surface and sub-surface water reserves with numerous streams, rivers and wetlands, both permanent (Lubugi, Namanve) and seasonal. Minor valleys have distinct seasonal swamps and rivers. The water tables along these swamps are quite high and are suitable for sinking shallow wells which are commonly used as sources of water for domestic use especially in the rural part of Wakiso. Sub-surface water reserves occur in fissures and aquifers of the rocks in the district. This was indicated by the number of boreholes, spring wells, tube wells and shallow wells, which have been drilled to harvest water for domestic supply.

3.2.3 Climate, rainfall and humidity

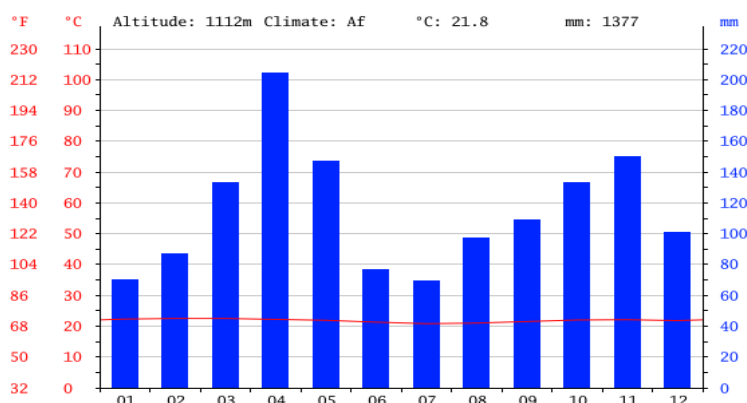
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(ITCZ). Therefore, this gives the double peak rainfall exhibited in all the climatic parameters. The combined effect of the location of the district and the ITCZ results into a modified Afro-tropical Climate. The mean diurnal maximum temperatures range between 18° and 35°C while the corresponding minimum diurnal range is 8°C and 25°C. Cloudiness and rainfall affects temperatures slightly in the district.

There are two wet seasons running from April to May and September to November. The principal rainfall peak is in April while the minor one is in November. The dry months are January - February and June - August (Fig. 3.1). The mean annual rainfall is 1320mm, although in the Lake Zone it is between 1750 and 2000mm.

Figure 3.1: mean annual rainfall for Wakiso District



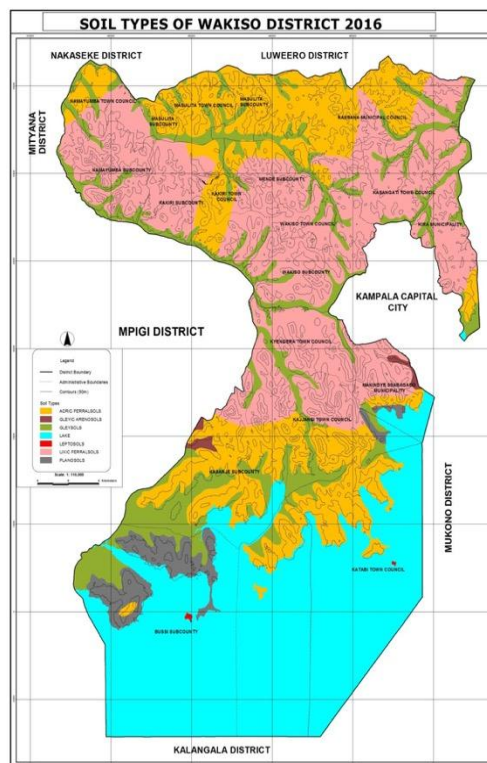
Source: Metrological Department Entebbe

3.2.4 Soils

The soils of Wakiso are generally of high productivity and are mainly sandy clay soils. The dominant soils types are red gravely loams with occasional murram, reddish brown sandy loam on red clay loam and yellowish sands with quartz grave (Map 3.4). The soils in the wetlands include grey sands whose parent material is alluvium and hill wash, grey coarse sand from lake deposits, black and grey clays from river alluvium and peat sands and clay formed from papyrus residue and river alluvium. Wakiso district soils are generally of high farming productivity although most of it has been turned into the built up environment compromising on the role the national food basket Wakiso has been playing over years.

3.2.5 Vegetation

The vegetation of the district follows the existing rainfall and relief pattern. It is a relic of the original vegetation where there are remnants of communities related to the savanna woodland climax and the fire climax tree savanna, particularly on the hills. The area was once covered by forests prior to the introduction of agriculture. Because, of the intensification of



Map 3.4: Wakiso District Soil Types –

agricultural activities and rapid urbanisation, vegetation has greatly changed to secondly vegetation.

3.2.6 Fauna

At the advent of colonisation in 1890 the district was awash with wild game like elephants, lions, leopards, hyenas, zebras, wild pigs and the famous impala (Kampala is named after the animal which was seen grazing in numerous herds by the early European Explorers). But due to anthropogenic activities such as sport hunting by the Colonial Administrators and tradition hunting by the natives in the earlier 19th Century, coupled with the current rate of deforestation, cultivation, draining of swamps and urbanization have disseminated wild game in the district. Now remnants of wildlife are seen in the remaining natural forests, bushland and wetlands, which are acting as a refugia. Local communities report on the occurrence of the Common Rats, Giant Otter Shrew, Vervet and Red tailed monkeys.

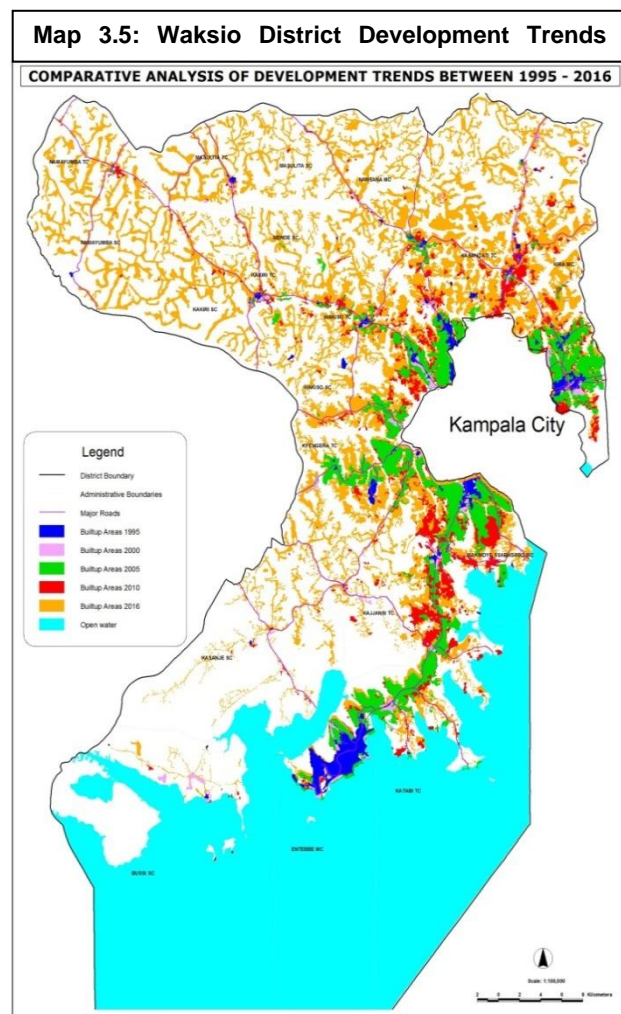
The district has 300 species of birds and 200 species of butterflies (Akwetaireho, 2009). Many of these have their habitats in wetlands which are refugia. These include globally threatened species such as; bushbuck and Blue Shallow; Shoebill, Papyrus Yellow Warbler, Spur winged geese, Goliath Herons, Pigmy Geese, African Jacana and several lesser Jacana (*Microparra capensis*). The site also supports congregatory and migratory species namely Gull-billed Terns, Whiskered Terns, White winged Black Terns, and the Grey-headed Gulls.

3.2.7 Trends of physical development in Wakiso District between 1995 and 2016

The built up area for Wakiso District has been rapidly increasing following arterial transportation networks (Map 3.5), between 1995 and 2016. In 1995, developments were minimal and were commonly found along Entebbe, Jinja and Bombo highways. They were covering an area of about 3,054.7 hectares. In 2000, the analysis of the satellite images shows that more developments emerged along Hoima, Entebbe and to a lesser extend along Bombo Road. By then it was covering approximately 4,262.6 hectares, noting almost a doubled increase in the built up environment.

In the period between 2000 and 2005, there was development explosion. Development was about three times higher in 2000 covering approximately 14,933.3 hectares. This took place especially along Entebbe, Masaka, Mityana, Hoima, Bombo and Nakawuka roads. It also indicated that developments started to fill the land between these major roads cases in point were along Jinja and Masaka roads.

In 2010, there was visible spatial extension of the built up area mainly along Gayaza and Entebbe roads but at the same time there were significant pockets of development coming up far away from the centre especially along Hoima, Nakawuka and Bombo roads. There was also isolated developments



infilling land between all major roads radiating from Kampala (Map 3.5). The built-up area in 2010 was approximately 18,843.5 hectares. To date (2016) trend of development tripled that of 2010 covering an area of 62,315.7 hectares. See the percentage change in the built up from 1995 to 2016 in table 3.1. Note that the development trend for 2016 contains therein the low density residential and institutional areas which still have a lot of unbuilt land. Also important to note is that development in the district has taken a finger like protrusion pattern which in a way can affect new major development projects in the district due to lack of consolidated land.

Table 3.1: Percentage change in the built up area between 1995 -2016

<i>Year</i>	<i>Coverage (Ha)</i>	<i>Percentage change</i>
1995	3,054.7	-
2000	4,262.6	39.5
2005	14,933.3	250.3
2010	18,843.5	26.2
2016	62,315.7	230.7

3.2.8 Wakiso District Form

The District's structure reflects its tradition and history; the impacts of natural constraints (drainage, morphology, rivers, valleys, hills and rock outcrops, etc.); the significance of the radial primary/international; national and local transportation corridors to-from and through the district to the Capital City; its linkage to the hinterland and the resultant settlement patterns. Primarily, the district topography and drainage define the districts form and settlement pattern.

The district development pattern and image reflects an area that is in transition but fast losing its attractiveness and identity provided by its topography, natural features, culture and traditional history. The trend has allowed, sometimes even unknowingly promoted the following;

- i). The emergence of unplanned developments everywhere
- ii). Intolerable densification of informal settlements leading to slum conditions in some locations
- iii). The uncontrolled degradation of its natural assets (wetlands, forests, views, springs, etc.)
- iv). Failure to sustainably exploit natural, topographical and comparative economic advantages in the region and country
- v). Development without planned and adequate infrastructure and services
- vi). Existing infrastructure degradation to the point where many need to be redeveloped from the scratch.
- vii). Unstructured local economy with no clear basis; very limited employment opportunities, lacking significant productive and high value added sectors.
- viii). Unemployment that is high reflected through high poverty levels.

3.2.9 District Primary Structure

The primary structure depicted is nucleated settlement but spreading radially and gradually from the City core and eventually radiating out into and through the district along the primary movement routes which have an opening for radiated settlement.

The district settlement pattern is concentrated along the central radial spines from the Kampala central City core which appears like the central nervous system or arterial system. The radial road network concentrates almost all activities of significance. Most developments, settlements, economic activities, services and amenities are concentrated along the arterial spine roads that appear constricted between the dictates of the hills and valleys. One can conclude that the district structure takes both the concentric and wedge shaped patterns.

3.2.10 Influences on the General Settlement Pattern

The settlement pattern in the district bears influence and dictates from;

- District topography and drainage
- City of Kampala, the neighbouring districts and urban centres
- Influence of in-migration
- Its history, cultural and administrative dictates

(a). Natural Dictates of Topography and Drainage

The district is divided into two main topographic zones that have influenced its form, settlement and development patterns;

- i). The high land zone (central and northern hills), characterized by isolated flat-topped hills with steep slopes in some areas, often merging abruptly into long and gentle pediments, which are usually dissected.
- ii). The low lying Lake Victoria zone, defined by the three district water catchment areas namely; Kafu, Kyoga and Victoria.

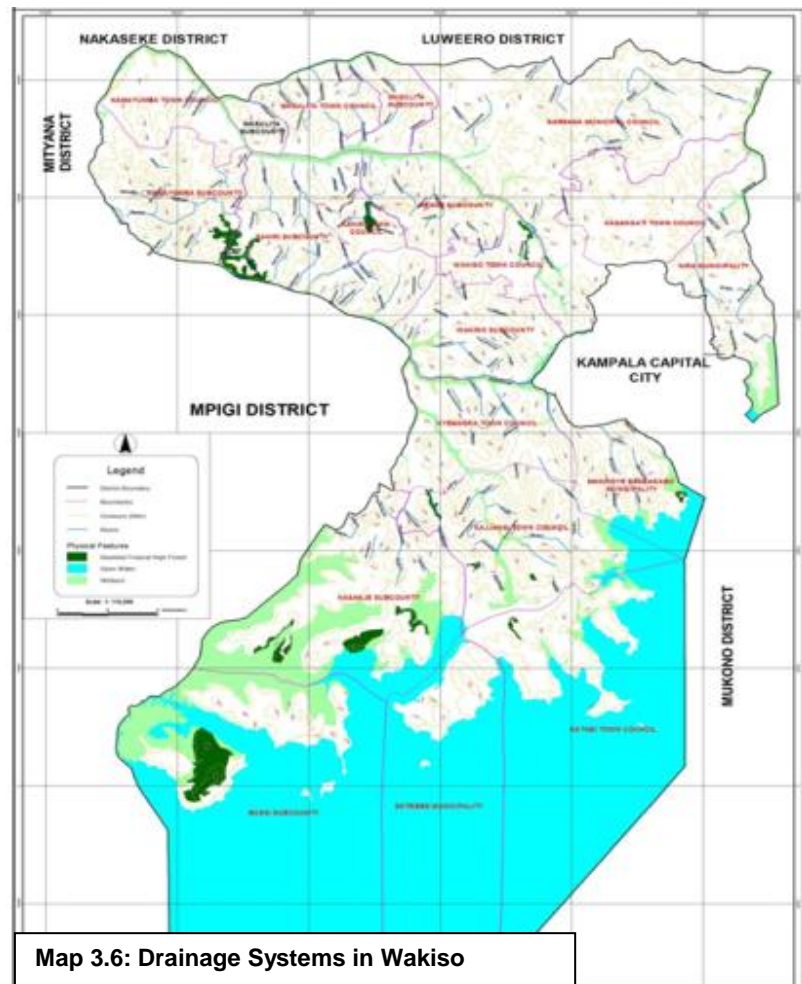
The drainage, topography, rivers, Lake Victoria, its catchments provides a unique natural landscape with numerous vistas (Map 3.6). However, these are rarely appreciated or protected and frequently built upon, often hidden and degraded by development.

The settlement pattern is in preference of the gentle sloppy land respecting the valley for farming, preservation of the valleys. There is emerging rampant reclaiming, intensive cultivation, excavation and construction, all which are exhibiting cases of environmental degradation in the valleys.

(b). Influence and pressure from the City of Kampala and Neighboring urban centers

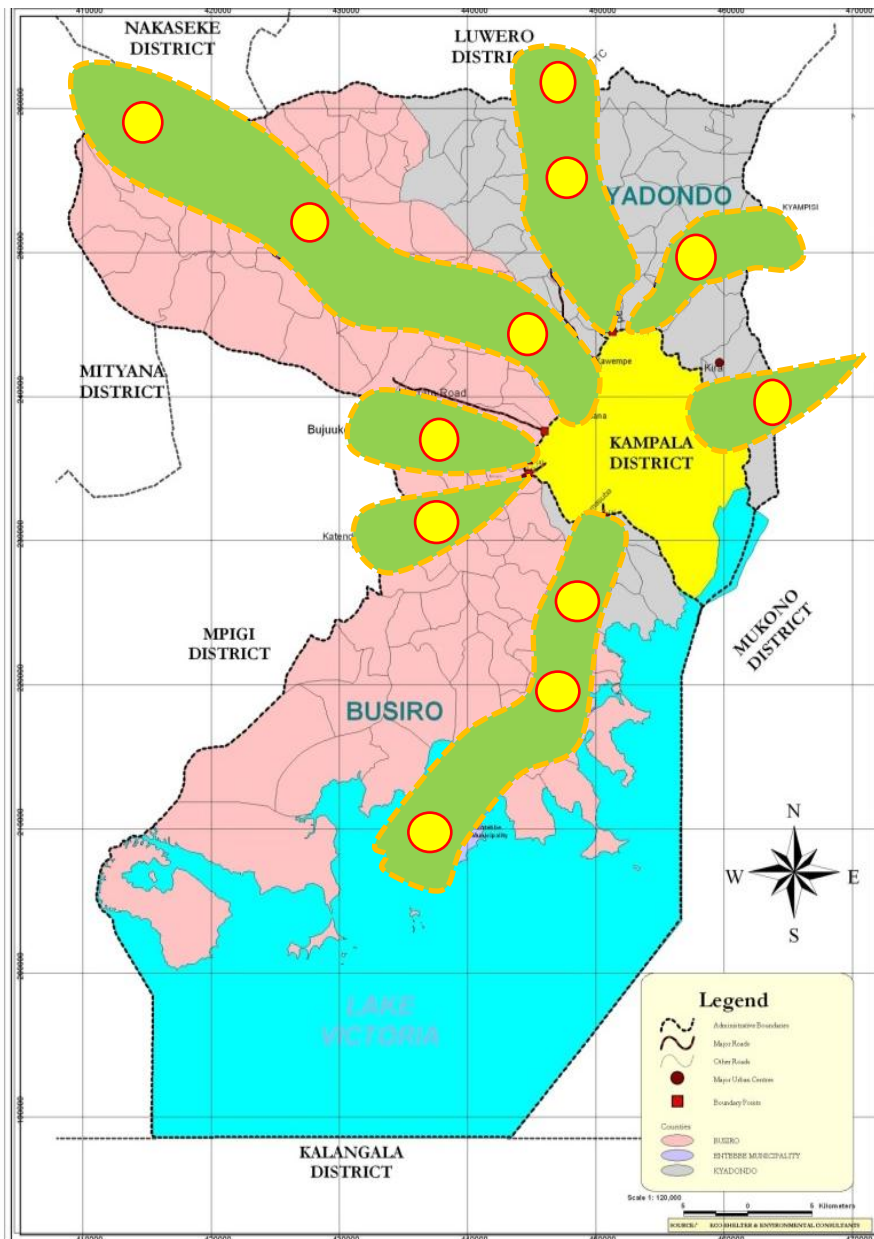
The city pressure can vividly be felt in the immediate outlying areas to the city boundary. In this area, the development pattern has tended to be concentric from the City establishment that acts as the main core. Physical development extends into Wakiso district radiating along the primary movement routes originating from the city centre. These key routes radiate from the City core, dissect and extend through the District, They include;

- The international links which include; Entebbe corridor, Jinja high way to the East and Kenya, Masaka highway to the South and Tanzania including Rwanda and DRC and Bombo high way to the North and Southern Sudan.



Map 3.6: Drainage Systems in Wakiso

- National link highways which include; Gayaza – Kalagi road, Mubende link to Fort Portal and Kasese; Hoima highway to the oil city, the oil & gas production sites and the refinery area
- Local link roads such as; Gayaza –Ziobwe road, Busabala link to Lake Victoria Sisa link; Katosi link; e.t.c.



The concentric development pattern depicts development rings of varying intensity of settlements and investments. There is significant densification in areas near/around Kampala along the North Eastern corridors steadily declining to less pronounced finger like protrusions towards the periphery and rural enclaves at the outer boundary of the District. Map 3.7 illustrates the development pattern following a wedge shaped pattern. Map 3.8 illustrates further the development pattern of the district following a concentric pattern.

Map 3.7 Wedge shaped pattern model

Legend

- District Boundary
- Administrative Boundaries
- Major Roads
- Builtup Areas 1995
- Builtup Areas 2000
- Builtup Areas 2005
- Builtup Areas 2010
- Builtup Areas 2016
- Open water

Ring One - MCS

Ring Two - TCs & SCs

Ring Three - SCs and Rural

Kampala City

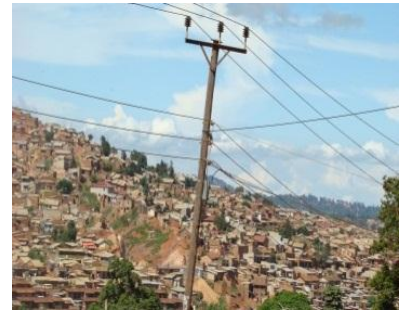
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2 0 2 4 6 8 Kilometer

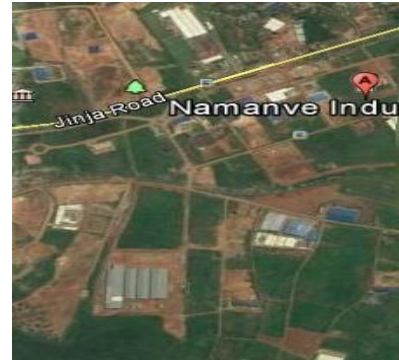
Ring 1: Immediate neighbouring with KCCA

This is an area generally of high density residential development; it is characterised by very poor, if any, infrastructural development. There exists a road around which development is occurring which was majorly commercial. It had very limited services and very limited intensity of activity beyond the village markets. It is an area of high urbanism (housing the municipalities and the big Town Councils) and has the highest density. This area has similar characteristics with the immediate neighbourhoods within the Kampala City Suburbs. The immediate ring 1 neighboring with Kampala City contribute one-third of the entire GKMA economy or some 15% of the national economy and house significant economic activities (KPDP Final Report)



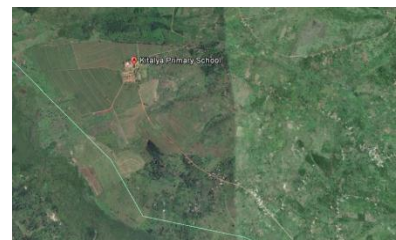
Ring 2; Urban Peripheral Towns

The peripheral towns are in transition undergoing urbanization and densification although at a lower rate compared to ring 1. As such economic activity was generally limited to a mix of local services, both formal but primarily informal low order commerce and agriculture with some limited processing of agricultural products. There was limited infrastructural development apart from the road around which development is occurring; very limited services and very limited intensity of activity beyond the Sub-County and Town Council administration, shopping centres and village markets.



Ring 3; Rural Periphery

This area still constitutes area housing primarily residential and agricultural activities. The settlement pattern is largely that of the rural village with some individual farming households, large scale farms and some institutions dotted around the landscape (e.g. Kitalya, Kigo Prisons, e.t.c.).



3.2.11 Role and significance of Wakiso District

Wakiso District serves multiple roles and functions of critical importance to the Kampala Metropolitan Area, the Capital City of Uganda, the Central Region and Uganda as a whole as well as to its inhabitants. The key roles of the district include inter alia;

- i. Centrality, regional influence and comparative advantage of Wakiso District
- ii. District functionality and comparative advantages
- iii. Service growth and urbanisation
- iv. Gateway to showcase Uganda
- v. Engine of economic growth for the country
- vi. Home and living environment
- vii. Tourism hub
- viii. National Dormitory

These roles and functions directly or indirectly influence physical development and they also have an influence on the physical development trends.

3.3 Report on Institutional Structure and Physical Planning Function

3.3.1 Introduction

The institutional analysis of Wakiso District was very important in the development of the District Physical Development Plan. This is because it gives a broad perspective of the district organizational and management capacity, the legal framework and the institutional linkages. It provides detail assessment of the district strengths, weaknesses, opportunities and threats. It brings out deficiencies, identifies institutional gaps, and informs recommendations that are made to guide the implementation of the Physical Development Plan.

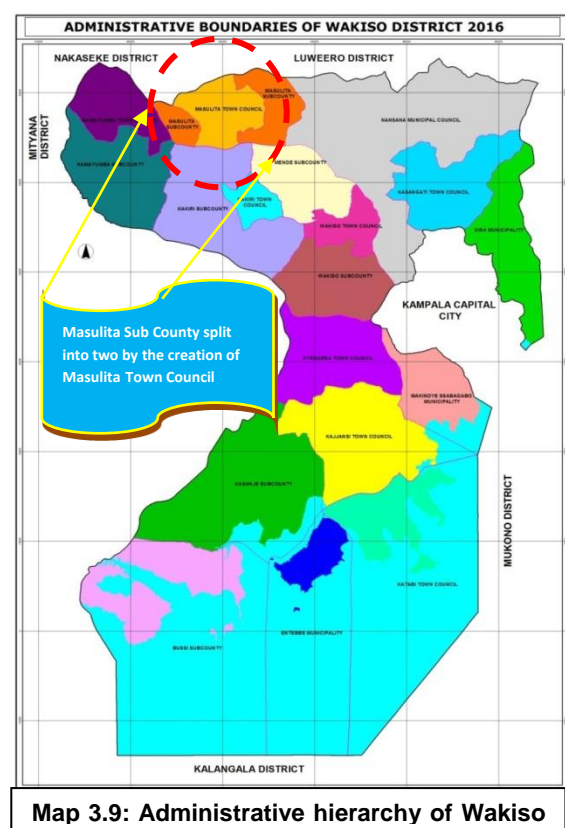
The over-arching institutional requirements for the implementation of the District PDP is that the organizational and management capacity, the legal framework and the institutional structures should be aligned with the task at hand so as to ensure that there is adequate capacity to carry out and translate the District PDP at all lower levels and enforce compliance to the PDP requirements and planned land use.

The District Institutional Vision for 2040 was that the District and all Lower Councils have in place organizational and management capacity and institutional requirements (staffing structures, facilities and tools) for the development, implementation of PDP and to enforce compliance with planned land use.

3.3.2 Administrative set up of Wakiso as of 2016

Wakiso District is divided into two categories of administrative levels namely; rural and urban set ups. The rural has two administrative units namely the Counties of Kyaddondo and Busiro (these are not political but they serve mainly the Buganda administrative structures) and Sub county Councils namely; Masulita, Namayumba, Mende - Kalema, Kakiri, Wakiso, Kasanje and Bussi (which are political and planning entities).

The other category was the urban set up which is comprised of two administrative units namely three Municipal Councils of Entebbe, Nansana, Makindye-Ssabagabo and Kira, which are political and planning entities. The other administrative unit were comprised of eight Town Council of Kasangati, Kakiri, Namayumba, Masulita, Kajansi, Kyengere, Katabi, Wakiso which are also political and planning entities (Map 3.9). At the Sub County level, there are lower administrative councils namely; parish and village councils. For the Urban category, under municipalities you have Division, Ward and Cell Councils. Division Councils are administrative entities with in the Municipalities.



At the lower administrative level, the District has 146 Parishes and 704 Villages. It should be noted that the counties, parishes and villages are administrative units with no planning mandate while the Sub Counties/Town Councils and Municipal Divisions are Lower Local Governments with planning mandate. The Municipality and Town Councils are self-accounting and corporate bodies.

It was noted that during the recent administrative adjustments, some disjointed administrative units were carved out of the existing administrative units creating some distortions in their

boundary structures. For example in Masulita Sub County, one has to go through Masulita Town Council to offer services to the other part of Masulita Sub County. This makes provision of service delivery quite very difficult. The newly established urban administrative units also did not consider the existing population density where by some areas which still have rural physical characteristics are today urbanised like parts of former Gombe and Busukuma Sub Counties in today's Nansana Municipality and yet those which have significant urban tendencies like Wakiso Sub County are still treated as rural areas as illustrated in Map 3.9.

3.3.3 District Administration, Governance and Leadership Structure

Administratively the district is divided into two parts the political and the management units. The political part comprises of the District Chairperson who is the political head of the district and district Councilors. There are also the Municipal Mayors and Councilors Sub County Chairpersons and Councilors, Division Chairpersons and Councilors, Parish/Ward councils and Village/Cell Councils (Figure 2.1). On the Management side, it is headed by the Chief Administrative Officer (CAO) at the district level, Town Clerks (TC) at the Municipal and Town Council levels, Senior Administrative Secretary (SAS) for Sub County all supported by Heads of Departments namely; Administration, Finance, Works and technical services, Natural resources, Internal Audit, Education and sports, Health and environment and Production.

At the District level, the administrative hierarchy is similar to that of the Municipal Council. There is a District Council, which is also served by an Executive Committee and a number of Sector Committees (although the number of these Sector Committees varies from each administrative unit). The Chief Executive at the District level is the CAO who works together with a cadre of other Technical Staff, to implement Council's decisions through a Technical Planning Committee (TPC).

3.3.4 Administration, Governance and Leadership Analysis

Local government leadership structures are provided for in the Local Government Act Cap. 243. The planning and service delivery in the local governments follows the structures as created by the Act. Whereas the cadres of leadership at the Sub-County and Town Council levels are generally fair and adequate, there is inadequate leadership at the Ward and/or Village levels. The administration at the village and/or Ward levels is very crucial for proper physical planning and implementation. The administrative set up at these levels comprised of the Chairperson of the village (LC1) and the Parish Chief. It is at these levels that land transactions and physical development on land start.

It was reported that the local village administration is stale and non-functional and this is contributing to some of the physical development challenges being experienced in the district. The weaknesses of the Local Council system is attributed to prolonged delay in electing new office bearers giving rise to vacant positions and in some cases care taker individuals with very little authority or commitment.

There also exist a parallel administration of the Buganda Kingdom which is similar to the local government system, but their functions are mostly inclined to His Royal Highness the Kabaka's land. This parallel administration is found in some instances to cause conflict with the local governments in as far land use planning and management is concern. Linkages and coordination between the technical staff, the political leaders and the Buganda Government is not effective enough to facilitate coordinated physical development of the district. There was found to be lack of institutional linkages between other state agencies like NWSC, UMEME, NFA, UNRA, KCCA, the neighbouring district local governments of Mukono, Mpigi and Luwero. Each of these agencies and local governments seems to be planning and implementing its development programmes in the district with little or no linkage or coordination with the district. Although these institutions are autonomous, they are not independence, and there is need for policies to harmonise their operations.

There were reported cases of overstepping of mandates and roles between the political leaders and technical staff giving rise to conflict. Corruption was reported to be at a higher level in all the local governments. A case in point is the enforcement of building regulations or activities in protected ecological zones like wetlands. It was also found that the newly elected leaders were not yet inducted on their roles and responsibilities, however, some of the local governments were organizing their internal induction for the elected leaders.

3.3.5 District Structure and Staffing

The local governments operate on an approved structure according to their levels as guided by the Ministries of Local Government and Public Service, but generally these structures were found to be operating below half the approved staff structure. In some lower local governments in the district, the approved structure is not commensurate with the work load, leading to work overload on the available staff. The Sub Counties and Town Councils are the most affected with glaring lack of staff. Across all the local governments in Wakiso District, good numbers of staff are in acting capacity with majority being in the recently created Municipalities of Makindye-Ssabagabo, Nansana and Kira and Town Councils of Kyengera and Kajjansi. It was noted that lack of staff is forcing the existing staff to multi-task which compromises their effectiveness and quality of work. The inadequate level of staffing is exacerbated by high turnover of staff especially in the municipal councils.

(a) Staffing Levels at the District Headquarters

Table 3.2 shows the staffing levels at the district headquarters which is based on Model 3 of the public service structure. A total of 61 positions are vacant and the worst hit departments were Works and Administration. However, it was reported that all the most critical posts have been submitted to Ministry of Public Service for consideration in the recruitment plan.

Table 3.2: Staffing situation at the district headquarters as at February 2015

Department	Approved No. of posts	Filled	Distribution By sex		Vacant
			Male	Female	
1. Administration	40	23	10	13	17
2. Finance	23	21	8	13	2
3. Education(DEO's Office)	17	13	10	3	4
4. Production	22	21	16	5	1
5. Works	33	15	12	3	18
6. Community Based Services	9	6	5	1	3
7. Natural Resources	30	22	12	10	8
8. Health (DHO's Office)	11	7	3	4	4
9. Council & Statutory Bodies	9	9	1	8	0
10. Planning Unit	7	6	4	2	1
11. Internal Audit Unit	11	8	5	3	3
12 Procurement unit	3	3	2	1	0
Total	215	154	88	66	61

Source: District Development Plan 2015/16-2019/20

(b) Staffing Levels in Lower Local Governments

The total staffing in the Town Councils and Sub Counties was 355 of which 212 are males and 143 are females (Table 3.3). They included the Town clerks, Sub county Chiefs, Parish Chiefs, Finance staff, Community Development Officers, Extension and support staff among others. There were 421 vacant posts that exist in health centres and 81 vacant posts in primary schools. Some sub counties had many vacant posts for parish chiefs. However, it was reported that the filling of the most critical posts was being done gradually.

Table 3.3: Wakiso District staffing situation at the lower local governments as at February 2016.

Town Council/ Sub County	Approved of posts	No.	Filled	Distribution By sex		Vacant
				Male	Female	
Katabi		16	14	10	4	2
Makindye		18	16	9	7	2
Masuliita		22	7	5	2	15
Nabweru		15	10	5	5	5
Namayumba		21	8	6	2	13
Nangabo		20	15	8	7	5
Nsangi		21	17	11	6	4
Ssisa		22	18	11	7	4
Wakiso		18	17	10	7	1
Kasanje TC		19	9	5	4	10
Kakiri		19	11	5	6	8
Busukuma		19	12	7	5	7
Gombe		22	16	12	4	6
Bussi		16	7	7	0	9
Mende		17	9	7	2	8
Kira TC		89	41	26	15	48
Wakiso TC		55	37	19	18	18
Nansana TC		48	35	17	18	13
Kakiri TC		48	29	20	9	19
Namayumba TC		44	15	6	9	29
Masuliita TC		44	12	6	6	32
Sub total for Local Governments		613	355	212	143	263
Wakiso H/cs		958	628			330
Health Workers		1,148	744	350	373	404
Entebbe Hospital		190	116			74
Primary Teachers		2,721	2,645	896	1,749	76
Total		5,630	4,488	1,458	2,265	1,147

Source: District Development Plan 2015/16-2019/20

(c) Analysis of Capacity of Staff

The district physical planning institutional structure and capacity challenges above will directly impact on the planning, management and implementation of the PDP in the district. Implementation of the PDP will require preparation of strategic plans for all the local councils in the district. Development of the detailed plans and mechanisms for actual implementation of the recommended components of the PDP will obviously fall on the District with the involvement of a complete cross-section of other government ministries and agencies, the private sector and affected communities in the district.

The structure provides for the key positions of Senior Land Management Officer, Registrar of Titles, Land Valuer, Senior Physical Planner, Physical Planners, Staff Surveyor, Surveyor and Land Supervisor. These positions are at the district headquarters and they are filled with the appropriate personnel, however, they are few and therefore thin on the ground to cover the entire district. The municipalities have similar positions and the same for the Town councils, but they are not yet filled apart from those at Makindye Sabagabo, Nansana and Kira Municipalities. The newly created town councils still do not have the required number and category of staff for effective service delivery. There are no Enforcement staffs both at the district and sub county levels and yet they are very important in the physical development process of the district.

Shortage of technical staff makes it increasingly hard to offer technical guidance to all developers especially in the Sub counties which are rapidly urbanizing. For example, currently the district has only two Physical Planners for the seven sub counties and eight Town Councils. Municipalities like Nansana and Makindye – Sabagabbo each has only one Physical Planner yet they are very big in size.

3.2.6 District Staffing and Linkage with Physical Planning Institutional Structures

This section of the report presents a detailed review of Wakiso District institutional framework, current status and trends over the period 2018 to 2040. It presents the district institutional status, challenges and identifies areas that need to be addressed over the period 2018 –2040. It is structured around the district's technical, management and organizational capacity to implement the Physical Development Plan 2018-2040 as well as setting the vision and mission of the District Physical Development Plan. It outlines the outcomes of the consultations and the analysis of the current situation, conclusion, the objectives for the institution sector and appropriate recommendations.

3.2.6.1 The PDP preparation Process

The PDP preparation process proceeds within the institutional framework and hierarchy of the planning process for the required policy alignment and streamlining of the planning, implementation and monitoring of the Physical Development Planning process at national, regional and local level. These institutions are enshrined in the Acts of Parliament, Policies, Regulations, Guidelines and Standards used to guide the physical planning, implementation and compliance monitoring at all levels of government in Uganda. They constitute a totality of public and quasi-public agencies involved in conceiving, formulating and implementing Physical Development Plans. The PPA 2010, PHA Cap 281, BCA 2013 are the key Acts of Parliament that define the key institutions and players in the developing of PDPs and enforcement of development control. They provide direction on how broader state and local planning policies will be achieved or implemented. The Physical Planning Act 2010 stipulates the key institutions that include;

- i. Key Government Line Ministries
- ii. The National Physical Planning Board;
- iii. District Physical Planning Committees;
- iv. Urban Physical Planning Committees
- v. Local Physical Planning Committees (sub-county councils)
- vi. National, District and Local Land Management bodies, institutions and local committees
- vii. The hierarchy of the planning process.

The key Ministries in charge of formulation of policy and physical planning oversight;

- a. Ministry of Lands Housing and Urban Development for policy and oversight
- b. Ministry of Local Government for local government governance issues and processes
- c. Ministry of Public Service for institutional and staffing structural requirements for enforcement of compliance
- d. Compliance and enforcement supportive ministries and institutions; Ministry of Water and Environment; National Environment Management Authority; security agencies; government land sector agencies; etc.

3.2.6.2 Local Governments Mandated with Physical Planning Function in Wakiso District

The Local Governments mandated with physical planning function in Wakiso District include the following;

- i. Wakiso District Local Governmentn(charged with preparation of District Physical Development Plans and oversight on lower councils)
- ii. *Seven (7) Sub-county Councils namely;* Masulita, Namayumba, Mende Kalema, Kakiri, Wakiso, Kasanje and Bussi; (charged with preparation of Local Physical Development Plans)
- iii. *Urban – four (4) Municipal Councils of;* Entebbe, Nansana, Makindye-Sabagabo and Kira (charged with preparation of Municipal/urban Physical Development Plans)
- iv. *Urban – eight (8) Town Councils of;* Kasangati, Kakiri, Namayumba, Masulita, Kajansi, Kyengera, Katabi and Wakiso (charged with preparation of town/urban Physical Development Plans).

There is no regional local government. The physical planning mandate for the regional development plan is a function of the NPPB. Physical planning and management in the district relies on the integrated coordination and collaboration of these smaller local government authorities under the guidance of the national government.

The District Physical Development Plan fall directly under the Regional and National Physical Development Plans, but the two umbrella plans are not yet in place and are being fastracked by the MoLH&UD. The district plan will later on be integrated in the national and regional plans. The District PDP focus was integrated in the existing individual Municipal and Town Council's Structure Plans, unique Action Area Plans and Special Economic Development Plans.

3.2.6.3 Structure, Responsibilities and Performance of the District Physical Planning Function

The main requirements of the section in the district entail both the core activities and business processes including the following;

- i. Preparation of Strategic Plans, Detailed Plans and Action Plans in conformity with the District PDP and Economic Development Plans;
- ii. Supervise and guide compliance processes in all the lower local councils in the district to ensure compliance with planning standards, guidelines and national compliance framework;
- iii. Support the development of a modern local, urban and district Land Information System (LIS)
- iv. Custody and maintenance of planning and land management records

The Development Control process was currently plagued with several shortcomings –

- i. The District, (urban and rural) Councils are not equipped for this role. They lack updated information like updated cadaster and topographic maps and high resolution satellite images. They also lacked facilities, and human & operational resources.
- ii. The fulfillment of bureaucratic processes takes most of the time of the sector officers, constraining their ability to do more technically oriented work.
- iii. The department does not have means and logistics to prevent or deal with mandated roles and functions.
- iv. Formal requirements are often beyond capability of client (requirement of a registered architect, need of a property certificate in an area whose detailed schemes have not yet received cadastral input, the high license fees, excessive bureaucratic formalities given the lack of planning data to base on in office, and lack of an updated building code).
- v. The formal licensing processes are difficult and may not be complied by the new controlling authorities and population, who prefer to build small and inexpensive buildings without bothering to apply for a license.
- vi. The other obstacle is the land tenure syatem in the region that facilitates non-compliance.

3.2.6.4 Organisational and Administrative Capacity

The analysis of the organisational and administrative capacity of Wakiso District Local Government showed significant disparity in the human and technical capacity of the district if it was to implement the Physical Development Plan developed. The staffing positions at all levels of the local governments are determined by the Ministries of Public Service and Finance and they base their choice on one key factor, the national resource envelope and approved human resource structure, not the needs of the local governments. It was implemented based on the availability of resources. Implementing the Physical Development Plan requires new staff structure with additional categories of staff which may not fit in the current structure arrangement.

Whereas staffing at the district and municipality levels was above 80%, those at the Sub counties and Town Councils levels were below 58%. Some newly created Municipalities like Makindye Ssabagabbo are in dire need of new structure and fresh recruitment of staff. The staff capacity in terms of training was also found wanting. The local government staffs at

various levels needs to be trained in the appropriate skills in order to cope up with the implementation of the Physical Development Plan.

3.2.6.5 Tools and Equipment

At both the district and lower local governments there was generally lack of office space, tools and equipment for staff to perform their duties. Common tools and equipment that are conspicuously lacking include computers and printers, motor vehicles and motorcycles, fuel, physical planning tools like drawing tables and pens and materials, office furniture and fittings amongst others. The lack of tools and equipment generally hamper the staff to deliver services.

There was generally lack of tools and office equipment to facilitate physical planning. Physical planning tools and equipment are diverse and there was apparent lack of tools and equipment at all levels; with the lower local governments worst affected. Apart from tools and equipment, there were dire need for physical structures at the lower local governments, namely office accommodation and transport means. For the local government to function well and deliver services it must have the required tools and equipment. It must have adequate staff with appropriate skills to deliver services.

In some local government e.g. Makindye Ssabagabo Municipality, Masulita Town Council there was dire need for office space. The following local governments were either in urgent need for office buildings or repair and improvement of the existing ones: Makindye-Sabagabo Municipality, Namayumba Town Council and Masulita Town Council.

3.2.7 Strategies to Improve on the Human Resource Situation

According to the development plan, during the next five years the district will pursue the following strategies to improve on the human resource situation.

- Strengthen the human resource capacity at the District, Town Council and Sub-county levels.
- Continuous sensitization and mentoring will be used to address delays in implementation guidelines.
- Continued advocacy for the speedy implementation of the restructuring programme.
- Timely integration of Central Government activities and programmes with District and Lower Local Government annual work plans for proper coordination.
- To cascade ROM to departments and lower government.
- To introduce contract performance management of all staff as a way of improving service delivery
- To equip departments with the necessary tools.

The district as a way of improving the performance of the physical planning function needs to Attend to the following issues;

(a). Physical Development Plan Interventions

Three basic interrelated and mutually supporting initiatives should be implemented to improve the efficiency and performance of the District and Lower Councils and specifically the Natural Resources Department performance:

- a. The establishment of a district and Municipal Geographic Information System (GIS).
- b. Simplification of local planning and development procedures
- c. Re-engineering the structure, staffing and institutional process towards the task at hand.

(b). The Need for a District and Municipal Geographic Information System (GIS).

There is need to establish a modern but simple GIS unit to support all physical planning and land management information requirements. It would combine information obtained from cadastral and topographic maps (Surveying Department), land tenure and land administration systems, road and infrastructure networks, and financial and statistical information (from

external sources) to support the information needed for detailed physical planning, development control, land management and revenue enhancement, allowing easy and fast planning information searches and information processing.

(c). Simplification of local planning and development control procedures

One of the critical issues the newly created councils have to face is the need to regularize land tenure in the large unplanned/un-surveyed land (kibanja) areas and those belonging to the various land agencies. A system to facilitate the occupation and development of these lands in a less haphazard way should be conceived, negotiated and implemented with the local owners and the various land agencies, which could and should be responsible for regularizing development within their areas. In low-income areas, development and occupation should be guided by very simple and easily complied requirements, which could be restricted to basic, essential precautions related to public safety (like simple planned land holdings/boundaries with basic infrastructure, health, sanitation, accessibility, and fire precautions).

(d) Physical Plans for the New Urban Councils and Development Control Requirements

These are essential urban activities for which the Planning Section is responsible hence should be strengthened. These include;

- i. The Physical Planning Section should strengthen and focus its work on supervision and enforcing physical planning issues (such as PDPS and Detailed Plans) in the new councils
- ii. The Physical Planning Section should also establish and implement special procedures related to planning, land partition (subdivision) and building in the “informal town” areas (mostly the informal and/or unplanned areas) and perform its overall urban planning role, such as implementing and monitoring the District PDP and promoting the development and implementation of Action Plans.
- iii. Simplifying the licensing and development application processes by electronic system will free the staff of the physical planning and the development control sections to engage in comprehensive planning issues of dealing with planning and building issues in the district and lower councils, preparation of simplified planning and building regulations for the unplanned areas.

(e). Need for Re-engineering the District and Lower Councils staffing structure and institutional process

The local government structures are approved by the Ministry of Public Service, and Local Governments. The foregoing analysis indicates that the structures at Wakiso District Local Government and the lower local governments provides no match to the required numbers for the mandate, human and technical capacity if the District is to implement the Physical Development Plan that is being developed. Therefore there is need to address the following;

- i. Key ministries of Public Service, Local Governments and MoLH&UD must critically review the current District, urban and sub-county council official staffing structures, job descriptions and specifications especially for physical planning with the objective of revising upwards to provide adequate provisions in line with the legal requirements and the renewed mandate.
- ii. Physical Planning at the district and in the newly created councils must be institutionalized as the avenue through which land use planning, management and physical development decisions are initiated, processed and coordinated. All key agencies should be co-ordinated through the physical planning domain.
- iii. There is need to carry out public awareness campaigns in all councils about the physical planning mandate and related processes beginning with key decision makers.
- iv. Preparation of councils PDPs, detailed and local physical development plans was a priority. This is the level of planning that really begins to locate, control, integrate and provide services for specific developments in line with the District PDP zoning requirements.

- v. Political will, awareness and resource provision to facilitate the effective and sustainable implementation of Physical Planning activities in the district.
- vi. Urgent capacity building and institutionalization of Development Control at all levels of Councils governance and administration is required to halt current unsustainable ad hoc/haphazard urban development, natural area encroachments, and general environmental/natural resource degradation.

(f). Institutional Requirements and Required Government Support

The analysis of the physical planning process and compliance requirements, development and enforcement of compliance in government planning institutions and local council authorities during the planning process, implementation of PDPs and development management identified a range of issues regarding the challenges in undertaking of statutory planning activities by government institutions and local councils. The challenges cut across the whole spectrum if enforcement of compliance to requirements during PDPs preparation, modification of PDPs, detailed planning schemes preparation, processing of planning and development permit applications and the control of breaches to controls.

The PDP provides the requirements and in some cases provides number of recommendations on processes, tools that individual authorities can use to ensure compliance to processes and controls. However the extent and significance of these issues, coupled with the range of challenges identified by councils themselves, suggests that a multi-pronged system-wide approach is needed to raise the overall standard of statutory planning and compliance in councils. This approach should be coordinated by the Department of Physical Planning and Urban Development in the MoLH&UD in partnership with other key government ministries, institutions and with the district and the lower local governments. The aims of this approach are to have in place:

- i). The District, Sub-counties and all other Urban Councils with the relevant staffing structure and staff of the right caliber with the minimum standards of knowledge, skills and competencies required to effectively manage and administer the physical planning process, the implementation of the approved District PDP, Local Detailed Planning Schemes and achieve compliance with all legislative requirements.
- ii). Minimum state-wide standards to be met by all councils for the assessment of planning permit applications and PDP and detailed planning scheme amendments.
- iii). Rigorous quality assurance procedures within planning departments to ensure that the requirements of the District PDP, Detailed Planning Schemes and the Physical Planning Act have been met and that senior officers responsible for overseeing key decisions have the requisite capabilities for effectively carrying out their quality assurance role.
- iv). Reporting arrangements to provide assurance to council, the local community and the Minister for Planning that each council has administered its planning responsibilities in accordance with the Act, Regulations and the PDPs in place.
- v). Identify and seek for required government support to planning institutions, urban and local authorities to ensure requirements for delivering on their physical planning mandates, orderly management and compliance to approved PDPs.

The above approach is focused on putting in place some immediate strategies in response to concerns raised above. However these should complement rather than preclude any further developments. The staffing structure at the District, Sub-county and Urban Councils is reviewed in light of this mandate to shed light on the institutional and staffing structural requirements to enable implementation of the District PDP.

(g). Ordinance and By-Laws

The Local Government Act Cap 243 gives powers to local governments to make By-Laws and Ordinances to address some local governance and administration challenges. These challenges are related to land use, sanitation, utilities services and trade order in the

community. There was no Ordinance or By-Laws in place in all the local governments in Wakiso District to support physical planning or to address the challenges of physical development that they are facing.

However, in some local governments there exist draft by-laws which have not yet been approved by the Ministry of Justice and Constitutional Affairs. Due to the long process of having the bylaws and ordinance approved, some local governments are already implementing the draft laws; which is illegal. All the local governments are using existing planning laws to manage physical development in their areas of jurisdictions, which laws sometimes are misinterpreted. There is need for central government and local governments to support each other in the process of developing and enforcing these regulations. Short of that urban challenges will continue to escalate in our communities as it is the case today.

3.3 Report on Social and demographic structure for Wakiso District.

3.3.1 Introduction

This part of the report examines the demographic trends, densities, social services, institution distribution, housing condition and projections, population and social services projections for Wakiso District.

3.3.2 Population Trends, Distribution and Densities

Wakiso is the most populous district in Uganda; housing 5.8% of Uganda's population (NHPC2014). The district's population has been increasing drastically, with a total population of 1,997,418 people (table 3.4) and a population density of 1,060 people per square kilometre. Comparatively, in 2002, the district had a total population of 907,988 people, population density of 560 people per square kilometre and a growth rate of 4.1 % (NHPC 2002). The difference in population between 2002 and 2014 transcended into a population growth rate of 6.6 % (NHPC 2014). This means that in a period of about ten years the densities doubled.

Table 3.4: Population Size of Wakiso District by sex

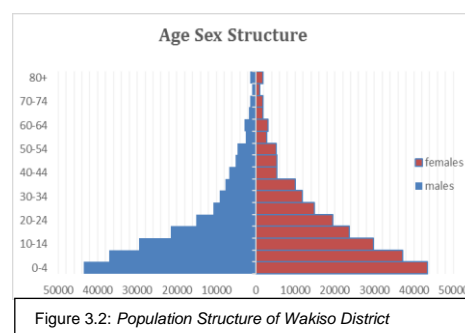
Sex	1991		2002		2014	
	POP	%	POP.	%	POP.	%
MALE	279,866	49.7	440,534	48.5	949,035	48.0
FEMALE	283,021	50.3	467,454	51.5	1,048,383	52.0
BOTH	562,887	100.0	907,988	100.0	1,997,418	100.0
SEX RATIO		98.8		90.2		90.5

Source: Wakiso DDP 2015/16-2019/20

The district's population structure was similar to the national structure where 50.7% of the population was female, and still similar to most (82.8%) of the urban centres in the central region of the country where the female population was higher than the male.

The district population was relatively young (figure 3.2), 46% were children below 18 years, 2.3% 60 years and above while 20 to 59 years constituted 45.3%. The implications of this age structure are three fold;

- Pointer to a high dependence ratio deduced at 48.4 dependents to 100 persons of economic active age according to the 2014 census report. This could be an indicator of the scale and impact of rural urban immigration of young people in the district. This high influx into the district (from others districts especially the rural districts), of working age group provides the



district with a big active workforce. This offers an opportunity for economic growth if well tapped.

- On the other hand, there was need to pay exceptional attention to national and district expenditure and planning for age specific social services such as appropriate health, education, recreation, suitable and affordable housing and unique social protection programs.
- Finally, there was glaring need to plan for suitable employment centres and work spaces since the Social economic survey revealed serious challenge of under employment and unemployment. The population pyramid above presents a broad –based pattern typical of developing countries, and it depicts potential of a high labour force

3.3.3 Population distribution

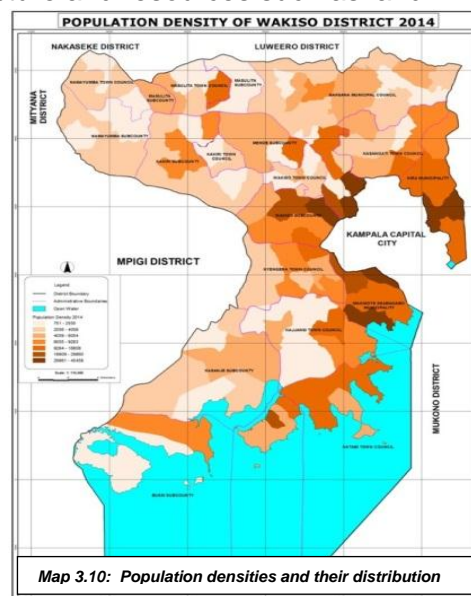
Population in wakiso was unevenly distributed with the urban centers taking the bulk of the residents. Nansana Municipality with a population of 365,857 was the most populated municipality in Uganda. Kira Municipality (317,428) and Makindye Ssabagabo (282,664) are also highly populated urban centres in contrast with the sub counties of Masulita (10,714), Mende-Kalema (14,589) and Namayumba Town Council (15,144) respectively, which have the least population in the district.

Analysis of the relationship between the population of the respective local governments and number of households per local government established the average household size at 3.9 persons per household in 2014 as opposed to average household size of 4.1 in 2002. The shrinking household size was typical of a highly urbanizing environment. The fact that average household size has reduced against the backdrop of rapid population growth implies increase in the number of settlements in the district and by inference increase in the population density without corresponding increase in services and infrastructure and resources such as land.

3.3.4 Population densities

The population density for Wakiso district has been progressively increasing in the last decade and Wakiso district had the highest population density of 1060 persons per sq. KM according to the NPHC 2014.

Population densities of the respective local governments as reflected in in Map 3.10. Below are indicative of the settlement patterns in the district. Makindye Ssabagabo Municipality had the highest concentration of settlements in 2014, closely followed by Kira Municipality. It is worth noting that although Nasana Municipality has the highest population in the district, concentration of settlements therein has been diluted by the presence of a large expanse of land which is seemingly rural that constitute part of the local government. By comparison, population density of a rural sub-county like Wakiso far exceeds that of Nansana Municipality. It would therefore be prudent for Wakiso Sub County to be accorded attention and benefits extended to urban areas as population density is one of the key indicators of urbanization.



Population density between the year 2002 and 2014 has more than doubled in majority of the local governments: specifically Katabi Town Council from 128 p/sq.Km to 963 p/sq.Km, Wakiso SC from 407p/sq.Km to 827p/sq.Km, Kyengera Town Council from 333 p/sq.Km to 890 p/sq.Km, Wakiso Town Council from 201p/sq.Km to 827p/sq.Km, Kira Municipality from 653 p/sq.Km to 1670 p/sq.Km and Makindye Municipality from 899 p/sq.Km to 1670 p/sq.Km. To a great extent, the level of development in many of these localities has not been done in accordance to physical planning guidelines and requirements and as such they are coming up haphazardly.

3.3.5 Migration

UN projections of world populations shows that by the year 2050, the world's urban population will be almost double from 3.4 billion in 2009 to 6.3 billion in 2050 and most of this will be in the developing world: from 2.5 billion in 2009 to 5.2 billion in 2050 compared to urban growth in developed world from 0.9 billion in 2009 to 1.1 billion in 2050.

In Sub-Saharan Africa, urban population was increasing at a terrific pace and in Uganda; urban population was increasing more rapidly than the national average. In 2002, the urban population was at 2,921,981 but by 2014 (table 3.5) it had more than doubled and was 7,425,864.

Some of the drivers of rapid population growth and urbanisation rural-urban migration where people move in search of employment opportunities, better social amenities and land use reclassification from rural to urban. Uganda's rapid urbanization was happening in the face of widespread poverty, shrinking economies and resources for rural areas.

The remarkable economic growth over the last decade as well as political stability have led to expansion of the urban centres and the sprouting up of hundreds of small trading centres in the countryside particularly along highways and major road junctions. The creation of new districts and other lower administrative councils also had its share in jump starting new urban centers more so in Wakiso District. Currently, the Wakiso District has a total of five municipalities, three of which, Kira, Nansana and Ssabagabo – Makindye, are recently (2016) elevated to that status and seven Town Councils.

Table 3.5: Wakiso District Urbanisation Trends, 2002 And 2014

	2002				2014			
Local Govt	M	F	T	%	M	F	T	%
Municipalities	28,900	28,618	57,518	6.1	453,659	511,895	965,554	48.3
Town Councils	8,160	8,542	16,702	1.7	291,021	319,205	610,226	30.6
Sub Counties	425,217	457,843	883,060	92.2	204,355	217,283	421,638	21.1
TOTAL	462,227	495,003	954,230	100.0	949,035	1,048,383	1,997,418	100.0

Source: NHPC 2014 Report – Central Region and NHPC 2002

Wakiso's population was 1,997,418 people in 2014 and is projected to reach 2,419,583 in 2017, 2,930,975 by 2020 and 10,523,404 in 2040 if it were to grow at the annual population growth rate established by the NPHC 2014 of 6.6% and if in- migration persists at the current pace.

Rapid urbanisation majorly caused by rural – urban migration can become a resource if well managed instead of being a burden. However in the case of Wakiso District like in most sub Saharan African countries, rapid urbanisation has led to increased demand for social services (like schools, hospitals, day care facilities for children, play grounds, markets, employment, housing, infrastructure and land for housing) placing strain on the already stretched public services and infrastructure. Specifically, it has stripped the responsible authorities of their ability to provide for the population basic needs like decent and affordable housing, adequate and well maintained infrastructure, quality education and healthcare plus a lot of other detrimental consequences such as pollution, increased crime rate, psychological stress that results from traffic jams, high living costs and over taxes and generally decline in quality of life.

Wakiso attracts migrants from both rural and urban areas and it is taking over Kampala in attracting new migrants, given its proximity to the city, relative availability of land for settlement compared to Kampala and the almost similar level of services and opportunities that are unavailable in the area.

The district has on several occasions faced mass in-migration as a result of redevelopment initiatives in Kampala. 1,750 households were evicted from Nakawa and Naguru Housing estates and majority of these found respite in Wakiso, thus the creation of Kasokoso slum in Kireka Parish and 'the lost city' in Bukasa ward, Kirinya parish all in Kira Municipality. This drastic demographic shift also led to haphazard densification in Bweyogerere, Kireka and Kira parishes in the same municipality. Kampala is slowly turning into a commercial city as residential areas such as Kansanga, Kabalagala, Nakasero, Kamwokya, Naguru and Kololo are subjected to gradual change of user from residential to offices, entertainment areas and shopping malls. Many of those displaced by this change have found solace and peaceful environment in Wakiso and thus settled there.

3.3.6 Urban Poverty and Slums

Urban poverty is a concept that was slowly but steadily creeping into Wakiso district brought about as a result of disproportionate rapid urbanization vis-à-vis the social and infrastructural services in place. This skewed development has rendered the district authorities unable to cope with the basic needs of the population to levels that guarantee acceptable quality of life, who have in turn have resorted to diverse coping mechanisms for survival. According to the Poverty Status Report 2014, urban poverty still reigns as a result of high levels of youth unemployment, gender inequalities, lack of access to basic services and low economic development. The urban poor are far more deprived and vulnerable than their rural counterparts as livelihood in urban areas are based on a cash economy. Poverty was not only limited to income but was also exhibited in household deprivation in critical measures of wellbeing such as quality education, health, access to public utilities, housing conditions and access to information.

A good portion of Wakiso was rural and this has in addition been subjected to climatic shocks pests, plant and animal disease which have resulted into food insecurity and price fluctuation.

Poverty in the district was manifested in the following indicators: Slums and informal settlements, Inability to access basic services, High level of vulnerability, Inability to access basic needs of life, Crime, violence and insecurity. High food prices leading to malnutrition, Tenants occupying substandard residences and Homelessness including street children.

3.3.7 Slums

Goal number 7 of the sustainable Development Goals is to improve the lives of at least 100 million slum dwellers by 2020¹ Uganda targeted to uplift at least 1,000,000 people from the appalling depressed physical conditions prevailing for people living in slums by 2020. What was evident was that poverty was the major driver of slum development in Uganda and this was intertwined with rapid urbanization which has not been matched with capacity to plan and manage urban growth. Thus growth of slums has become synonymous to urbanization process in Uganda.

Rapid urbanization has led to deplorable living conditions for the urban poor in the district (slums). These areas have poor sanitation, inadequate housing, contaminated drinking water sources, poorly managed human excreta and solid waste disposal, water pollution and reduction in ecological services. Due to the deplorable living conditions in the slums, the populace therein was vulnerable to flooding during the rains and communicable diseases like cholera, dysentery and typhoid. Each local government in Wakiso has one or more settlements that qualify to be called slums but some of the prominent ones are located in Nansana Municipal Council, Kyengera Town Council, Makindye, -Ssabagabo Municipality, Wakiso Town Council, Wakiso Sub county, Entebbe Municipality and Kira Municipality (Kisimu,

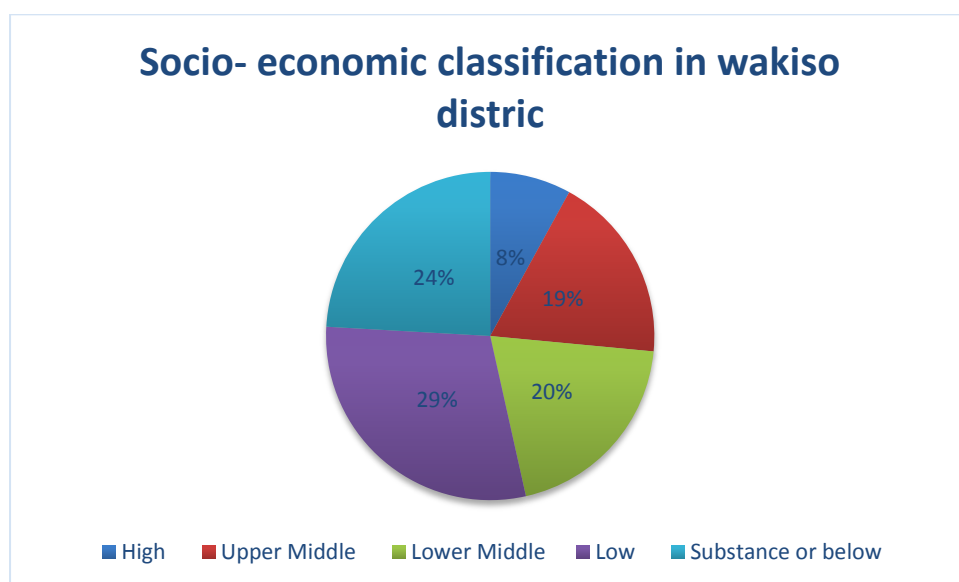
Kitooro Kazo, Maganjo, Kireka, Bweyogerere, Bunamwaya Nfufu and Kasokoso). Obstacles to access land and housing push large numbers of poor families to informal, often illegal land development processes under pathetic and unacceptable conditions.

The Government of Uganda in partnership with development agencies and NGOs has attempted to embark on slum upgrading initiatives in a bid to alleviate the appalling situation, but in doing this care must be taken to address the root cause of urban poverty because development of slums was only a symptom of urban poverty and the multiple land tenure systems in urban centres, among others.

3.3.8 Socio- Economic Structure of Wakiso District.

Wakiso's population was found to be an amalgamation of the indigenous people and the constant wave of immigrants from all over the country who engage in numerous economic activities and in the process constantly struggling to climb the socio-economic ladder. The most dominant class of people in Wakiso is with low class as illustrated in figure 3.3.

Figure 3.3 Socio economic classifications in Wakiso District



The high and upper middle class comprises mostly the working class of salary earners in parastatals, public service officers, affluent private sector institutions and the formal sector with stable income and majority living in owner-occupied residences or high end apartments. Majority of the population was in the subsistence and low socio-economic class with household heads working in the informal sector, unemployed, subsistence farmers, daily labourers and single mothers. These mostly reside in inadequate and pathetic housing and environmental conditions which are deplorable and hush. All local governments of Wakiso host such informal settlements which depict high levels of urban poverty and deprivation. Majority of the high socio-economic class reside in relatively organised and better serviced neighbourhoods such as Naalya, Lubowa, Bwebajja Entebbe and a host of high end residential areas.

3.3.9 Gender Issues

Gender is expected disposition and behaviour that society culturally assigns to each sex. In many parts of the world, women according to culture, norms and traditions have been denied some roles, rights and responsibilities based on their perceived role in society. In Uganda, gender inequality was deeply rooted in the history and traditions of the many ethnical groups that make up the country. Women are usually the poorest in society with no access to sources of production and many cultures discriminate women in areas of adoption, marriage divorce and inheritance. The Government of Uganda has done a lot through legislation and rigorous

sensitisation to promote the gender equality and empowerment of women and the girl child was still lacking.

However, the situation prevailing in Wakiso district was a pointer that a lot still needs to be done. Wakiso District has the highest number of women in the entire country, but the social economic survey established that women only 20.2% of the houses were owned by women. Women were exposed to incidences of domestic violence, and 12.2% of households were headed by single mothers. Efforts have been made to emphasise gender mainstreaming in all government programs within the district. However, a lot needs to be done and due to lack of skills, women and the youth were predominantly engaged in informal trade like markets, stone quarrying, and roadside petty trade. There is therefore need to pay special attention to programs geared towards women empowerment specifically single mothers in areas of property ownership, encouraging them to undertake adult learning (FAL), vocational training and micro—business training.

Since majority of the market vendors that work in markets in the district are women, there was need to locate markets in the neighbourhoods and also to establish pre-primary and day care centres at work places to give single mothers a chance to work.

3.3.10 Disability and Orphan hood

According to the NPHC 2014, 7.4% of children in Wakiso were orphans thus vulnerable. Wakiso District works in partnership with several NGOs and CBOs which offer OVC support services. In addition, there are 131 orphanages in the district, although only 16.8% of these are accredited with the necessary approvals to operate; a fact which could be pointer to possible commercialisation of this service and lack of regulation.

6.4% of households in Wakiso had family members with disabilities, however the observable trend is disability prevalence rate is higher in rural to avoid stigma and the difficulties associated with the fact urban life. Authorities in urban areas in Wakiso have not adequately adopted government policy of inclusive growth and development to be able to attract and absorb the disabled in urban life.

3.3.11 Projections for Population and Services

The consultants identified and analysed the long term sustainable development for Wakiso district based on three development scenarios. They are:-

- Business as usual with the ongoing population growth trend at 6.6% annual growth, accelerated in migration resulting into distinctive mismatch between service delivery and population explosion. This scenario also takes into consideration of the spillage of demand for services from the neighbouring districts of Kampala, Mpigi, Mukono, Mityana and a host of others since this was the situation obtaining.
- The ideal scenario where it was assumed that population influx would begin to subside as surrounding districts of Mukono, Mityana, Mpigi and Luwero benefit from the integrated rural- urban development planning, with improved services and infrastructure extended to these districts and urbanisation beginning to set therein. Annual population growth in this scenario was set at 3.3% which is the average urban population growth rate (Table 3.6).
- The third was the best case scenario; whereby focused and deliberate interventions can result into a district that develops in a sustainable, orderly and balanced manner. This is determined at a mid-point annual population growth rate of 5%. Based on the above, alternative development are projected to be as follows:

Table 3.6: Wakiso Population Projections by Growth Senarios

Growth Assumption	2017	2020	2040
Business as usual - (6.6%)	2,419,582	2,930,975	10,523,310
Ideal scenario - (3.3%)	2,201,760	2,427,007	4,645,937
Best case scenario - (5%)	2,312,261	2,676,732	7,014,612

Using the criteria of threshold in projection of provision of social services, parameters outlined in the National Physical Planning Standards and Guidelines were used to determine the approximate number of health facilities and school requirements for the respective projected years.

3.3.12 Conclusion

Wakios has undergone rapid population growth at an annual rate of 6.6% between 2002 and 2014, with women consistently higher than men at a rate in tandem with the national trend and a population density which has almost doubled in a period of one decade. This tremendous demographic shift has been majorly attributed constant influx of immigrants from all districts of the country and beyond, and rapid natural population growth despite reduction in total fertility rate at the national level, overwhelming service delivery and decline in quality of life in the entire district. Established POP growth and development, immigration, urban poverty, slums poor services (basic) unsanitary conditions.

Wakiso was faced with serious challenge of both rural and urban poverty. The influx of majorly the youth deprive rural areas of potential labour vital for rural development whereas rural-urban migration has been the major cause of rapid urbanisation which has resulted into challenges that have rendered service delivery ineffective, leading to sprouting of informal settlements among others and lowering the quality of life in the district. There was need for national initiatives to control population explosion and reduce on immigration.

As Wakiso's population becomes more complex and cosmopolitan in nature due to a mix of norms, cultures and traditions resulting from the high volumes of migrants from all over the country and beyond, community structures have disintegrated thus the need for structural initiatives to mold the community to ensure social stability, safety and cohesion. This calls for an expansive distribution of community centres and delivery of community development initiatives. There was limited access to community centres and the role of this service was relatively unappreciated by majority of the populace. Religious institutions have filled in the gap of provision of this service, but there was need for improvement.

The district has made considerable achievements towards gender parity, equality and representation in decision making and ensuring that all district planning initiatives are gender mainstreamed. Significant progress has also been registered towards promotion of gender empowerment through FAL classes and economic empowerment of women. However, women headed households especially in the urban informal settlements need specific interventions.

Disability and OVC issues have been given considerable attention as evidenced by presence of a total of 41 Orphanages and Special needs schools that exist in Wakiso. However, it was apparent that majority of PWDs have been relegated to the rural areas due to lack of conducive specialised requirements that would guarantee their comfortable integration into urban livelihood.

Wakiso has the potential and capacity to be the leading education destination for majority of the districts in Uganda and beyond. Already the district has infrastructure in place thus the need to improve upon it, put in place services where they are lacking, improve upon the quality of the service, especially those offered by public institutions and the need to make the revamped system affordable to benefit the population of Wakiso as well.

The social and economic impacts of improved health services on the individual, family and the country as a whole have significant multiplier impact on community development and

integration. Health services in the district still lack in terms of quality of service, equitable distribution and affordability. The district has Cultural artefacts and institutions with potential to pioneer it into the virgin and lucrative industry of cultural tourism.

3.3.13 Recommendations

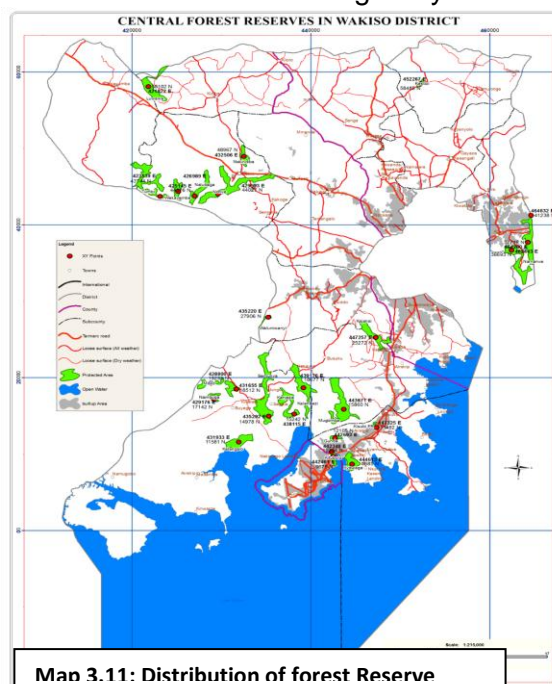
In order to improve the socio economic situation in Wakiso district, the consultant suggests interventions in the following areas;

- At the national level through integration of urban and rural development programs. Both the urban and rural areas should be accorded equitable attention in infrastructure development, social service delivery and livelihood programs.
- Reduce the burden of education and health expenses to the household budget for a good number of district residents who can't afford it.
- Plan for additional public vocational/tertiary institutions and sensitisation emphasising change in mind-set on vocational education.
- Construction of staff accommodation for education and health institutions in hard to reach areas.
- Create enabling environment for health care providers to expand quality services to rural areas.
- Strict, consistent and transparent supervision of both public and private education and healthcare services.
- In view of predictable population explosion, plan for phased construction of health facilities giving specific attention to the areas that lack services, and promote provision of age specific health service products e.g. for the youth, children and the aged.

3.4.0 Report on Environment and Natural Resources Systems

3.4.1 Forests in Wakiso District

Forests in Wakiso District are varied. It ranges from medium altitude evergreen forests, through medium altitude moist semi-deciduous forests, savanna woodland with trees and shrubs and wetland forests. Forests are found on both private land and protected forest reserves. The district has 19 gazetted forest reserves with a total area of 6,773ha, of which 79.6% was under natural forest cover and 20.4% was under plantation development. Seventeen of the reserves are Central Forest Reserves managed by National Forest Authority, these are, Nalubaga, Nakindiba, Tumbi, Wakayembe, Luwawa, Kanjaza, Kalandazi, Kalangalo, Mako, Semunya, Walumwanyi, Mugomba, Kitubulu, Kyewaga, Kajjansi, Kasozi, Namanve, Nonve (Map 3.11). There are also two Local Forest Reserves managed by District Forest Services, they include; Nambuga and Gunda.



Man 3.11: Distribution of forest Reserve

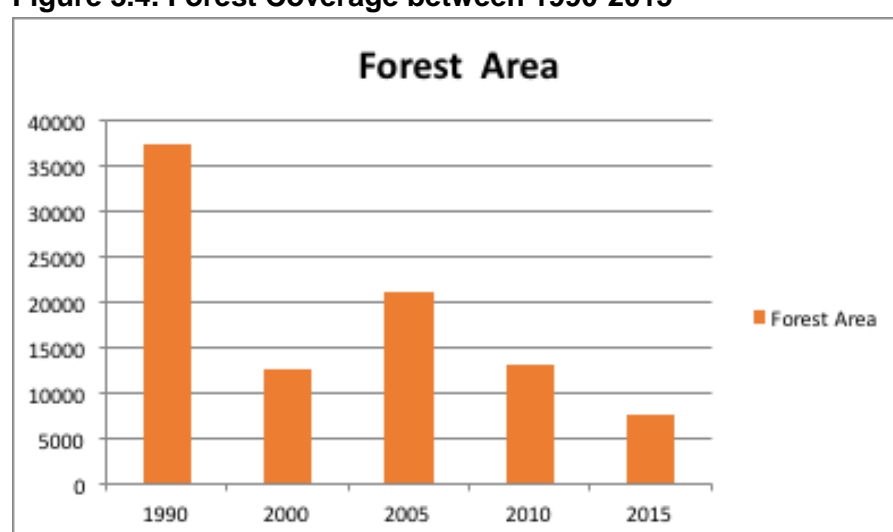
3.4.1.1 Status of forest reserves in the district

Biomass inventories of forests in Wakiso have been undertaken since 1990. The results show that there has been a steady decrease in forest coverage from 37,512Ha in 1990 to 7,603Ha in 2015 (Table 3.7 and Figure 3.4). This means the district lost 79% of its forest cover in 20 years.

Table 3.7: Forest Coverage in Wakiso between 1990 and 2015

Year	Forest Area/HA	Change in Coverage/HA	%ge change
1990	37,511.7	-	-
2000	12,670.3	-24,841.4	7%
2005	21,065.0	+8,394.7	13%
2010	13,202.6	-7,862.4	7%
2015	7,603.1	-5,599.9	8%

Figure 3.4. Forest Coverage between 1990-2015



3.4.1.2 The rate of deforestation

A further analysis of the rate of deforestation show that between 1990-2000 there was 7% deforestation; between 2000-2005 forest coverage was instead increased by 13%; between 2005-2010 deforestation rate was 7% and between 2010-2015 deforestation was 8%. The increase in the years 2000-2005, can be explained by the fact that this is the period when National Forestry Authority had been established (2000) and there was serious campaign and/or encouragement of private tree planting in its forest reserves. This high rate of forest encroachment can also be related to the demand for housing development which correlates very well with the rapid development trends.

3.4.1.3 Drivers of deforestation in Wakiso District

The main drivers of deforestation in the district are: illegal forest activities such as felling trees for timber; fuel wood and charcoal. This was followed by encroachment in gazetted forest reserves and land conversion from forests to artisanal agriculture farmland on privately owned forests. Urbanization was the other factor that was causing the disappearance of Wakiso forests. The pressure on the forest reserves was due to high population density around the forests, which was caused by a spillover from people emigrating from Kampala, the primate city to the surrounding peri-urban area of Wakiso. Because the new immigrants do not have skills needed to survive in the primate city and fueled by abject poverty this forces them to cut trees for survival. This was followed by encroachment where the land was converted into small

peasantry farm holdings for subsistence farming. Finally, the sprawling urbanization diminishes the remaining forest cover on privately owned land.

3.4.1.4 Afforestation, stopping encroachment, checking land conversion and stopping sprawling urbanization

Deforestation in Wakiso District can be reversed by afforestation. This was demonstrated by what took place in between the years 2000-2005. Allocation of gazetted forests to private tree planters increased forest coverage. The district can tap on various national interventions like Farm Income Enhancement and Forest Conservation Project implemented by the Ministry of Water and Environment; funded by African Development Bank and Catchment Management Project also implemented by the Ministry of Water and Environment; funded by the World Bank. The district should encourage tree planting on private land by encouraging agroforestry, demonstration plots of afforestation and setting up tree nurseries. The district natural resources department should be strengthened to enforce forest laws and related regulations. In this way encroachment and land conversion from forests, to agriculture and human settlements (urbanization) can be checked. The enforcement of a District Physical Development Plan, which has well designated areas for urban development, will stop sprawling urbanization. The District Physical Plan calls for the restoration of all natural forests to its former status.

3.4.2 Wetlands of Wakiso District

Wetlands in Wakiso District comprises of 10% (28,179 ha) of the total land area (280,772 Ha). There are evenly distributed in the district, with two distinct types, that is, lacustrine wetlands in the South along the shores of Lake Victoria and riverine wetlands found in the north along River Manyaya drainage basin.

Wetlands are intertwined with the topography of the district and they offer a number of intrinsic ecosystem and societal services. From an ecological point of view they regulate water quality of surface waters, main water table, control floods, stabilize lake shoreline and river bank from erosion, moderate local climate, participate in nutrient cycling, nitrogen fixation, carbon sequestration, soil formation and are a refugia of endangered wildlife like the antelope Satunga (MWE, 2015; Matagi, 1998). From socio-economic point of view wetlands, they support the livelihoods of communities that live in close proximity to them. They provide food (crops and fish), water supply for domestic and livestock consumption, materials for handicraft, clay for making bricks and pots, sand for construction, medicinal plants and are source of food security in drought conditions (MWE, 2015; Kakuru *et al* 2013; Turyahabwe *et al* 2013; Wasswa *et al* 2013).

Kakuru *et al* (2013) carried out an estimation of economic values of Uganda wetlands and found that wetlands contributed US\$ 1.7 billion per Ha per year for water regulation and US\$ 7 million per Ha per year for water recharge. In economic terms, the value of Uganda's wetlands for livestock pastures was about US\$ 4.24 million and for domestic water use was estimated at US\$ 34 million per year. Turyahabwe *et al* (2013) notes that wetlands in Wakiso District contribute about UGX 1,190,496 (approximately US \$ 432) per year to the livelihood of the communities that practice substance agriculture.

The economic contribution of the Wakiso District wetlands was at a minimum estimated at US \$ 96,315,822 per year; hence there was no other better economic use other than their immediate conservation. Therefore, all solutions should be geared towards their wise use and conservation. These solutions should include but not limited to the following;

- (i) Strengthen the Natural Resources Department and in particular the Wetland section through more financial support, recruitment of enforcement officers and provision of logistics for rapid response;
- (ii) Public sensitization on the economic value of conserving wetlands vis-a-vis their conversion to other anthropogenic uses like agriculture, human settlements and industries;
- (iii) Demarcation of wetland boundaries;
- (iv) Enforcement of existing national and local authority policy, legal and institutional framework on wetlands;
- (v) Strengthening inter-sectoral collaboration of stakeholders who enforce wetland laws like NEMA, the Wetland Management Department, Uganda Land Commission, District Land Boards, Buganda Kingdom among others;
- (vi) Expulsion and banishment of wetland encroachers;
- (vii) Enactment of district ordinances on wetlands;
- (viii) Development of land use plans that integrate economic values of wetlands;
- (ix) Use of economic incentives and disincentives such as fines, bonds, fees, tradable permits and taxes against unsustainable wetland utilization practices;
- (x) Restoration of already degraded wetlands in the district
- (xi) Improving urban planning by creating sustainable urban areas within the district.
- (xii) Solid Waste Management in Wakiso District. Wakiso District has a serious solid waste problem (Mukisa, 2009). Our findings show that there was no sorting of waste at the source of generation (household, industries and commercial premises). In rural areas of the district solid waste was dumped in the back yard, while indiscriminate dumping was done in urban and peri-urban areas. In highly urbanized areas of the district dumping was done in the wetlands, open drains, streams, and roadside and along the railway line. This impacts the aesthetic beauty of the district, blocks drainage, streams and definitely degrades the wetlands.
- (xiii) Wakiso has a population of 1,997,418 (Census, 2014) people; It was estimated that the average per capita waste generation rate was 0.492 kg/day and produced 1,100 tons/day or 33,000 tons/months of solid waste. If all these end up in wetlands without intervention, the outcome will be catastrophic.

3.4.3 Soils in Wakiso

Soil is the uppermost layer of the earth's crust, directly influencing man's development efforts in food/fibre production, infrastructure, industry and many other needs. Being a product of nature, soil is a dynamic ecosystem. Therefore, its sustainable management requires knowledge of its history, geography, properties and use potential. Different soil categories/types require a multifaceted development strategy in order to optimise their agricultural and other human needs output while at the same time minimizing risks of mismanagement to avoidable catastrophes.

3.4.3.1 Results and Discussion on Soils in Wakiso

Soils of Wakiso District, like most of Uganda, vary a lot and bear direct relationship to relief and their positions on the landscape. Consequently, they are classified as "Catena" sequences and associations (Milne, 1953; Radwanski, 1960). Although this makes generalised soil classification and mapping for regional level zoning difficult (Isabirye *et al* 2004), it is the best for large scale (detailed and semi-detailed) mapping and land use planning at district, community and farm levels. It enables zoning for integrated development and diversification of enterprises which are recommended for sustainability of agro-ecosystems. Zoning within a district will benefit from this level of soil mapping, especially the details captured in the reconnaissance surveys of the 1950s. Translation of the Radwanski (1960) soil names into a modern soil classification system like the World Reference Base (WRB) of 2015 will be improved as soon as updated field and laboratory data become accessible.

There are six groups of soil in Wakiso District details are discussed below and summarised in Table 3.8 and illustrated in map 3.12.

The most dominant soil group, covering approximately 60% of the land area (30% of total district area) is what has been classified as **“Black red sandy clay loams”** or **Buganda Catena in association with Mirambi Catena** (Randwanski, 1960), generalised as “Ferrallitic soils that are predominantly reddish sandy clay Loam” (GoU, 1964) or Lixic Ferralsols (Isabirye *et al*, 2004 or Rhodic Ferralsols (Tumuhairwe *et al* In press). This group of soils occurs on flat-topped hills and ridges of most summits of which have indurated sheets of laterite or murram and the slopes are long with 3 clear pediments, each with different soil profile characteristics. This is illustrated in **Figure 3.5** below.

The summits have very shallow soil developed from laterite and/or quartzites, thus very gravelly sandy loams with low water holding capacity and are deficient in phosphorus. The upper pediments have well developed deep red or reddish brown loams and clay loams, associated in some parts with quartz stonelines. The sub-soils of variable thicknesses are generally deep and loamy with little or no horizonation. These are now called “Rhodic Ferralsols”. Middle pediments are generally “Buganda Clay Loams” characterized by thin, dark top soil with granular to crumbly firm structure over yellowish red clay loam subsoil, slightly stained with humus, a sub-angular blocky structure and increasingly friable, transiting to a structureless lateritic C horizon. The soils here are well drained with less gravel and are less acidic than the valleys or upper pediments but generally have lower supplies of available potassium and phosphorus. The nutrient exchange capacity is much higher than the loams uphill and thus more responsive to fertilizer use.

The lower pediments have the “Buganda Ferruginized” soils at the edge of a relatively steeper slope break, leading into the valley. The profile is shallower due to accelerated erosion and the lateritic C is closer to the surface. Although clay content is high (40-68%) the soil is poorer in all plant nutrients, acidity is high and internal drainage is becoming impeded. Table 3.9 gives a summary of soil classification in Wakiso District.

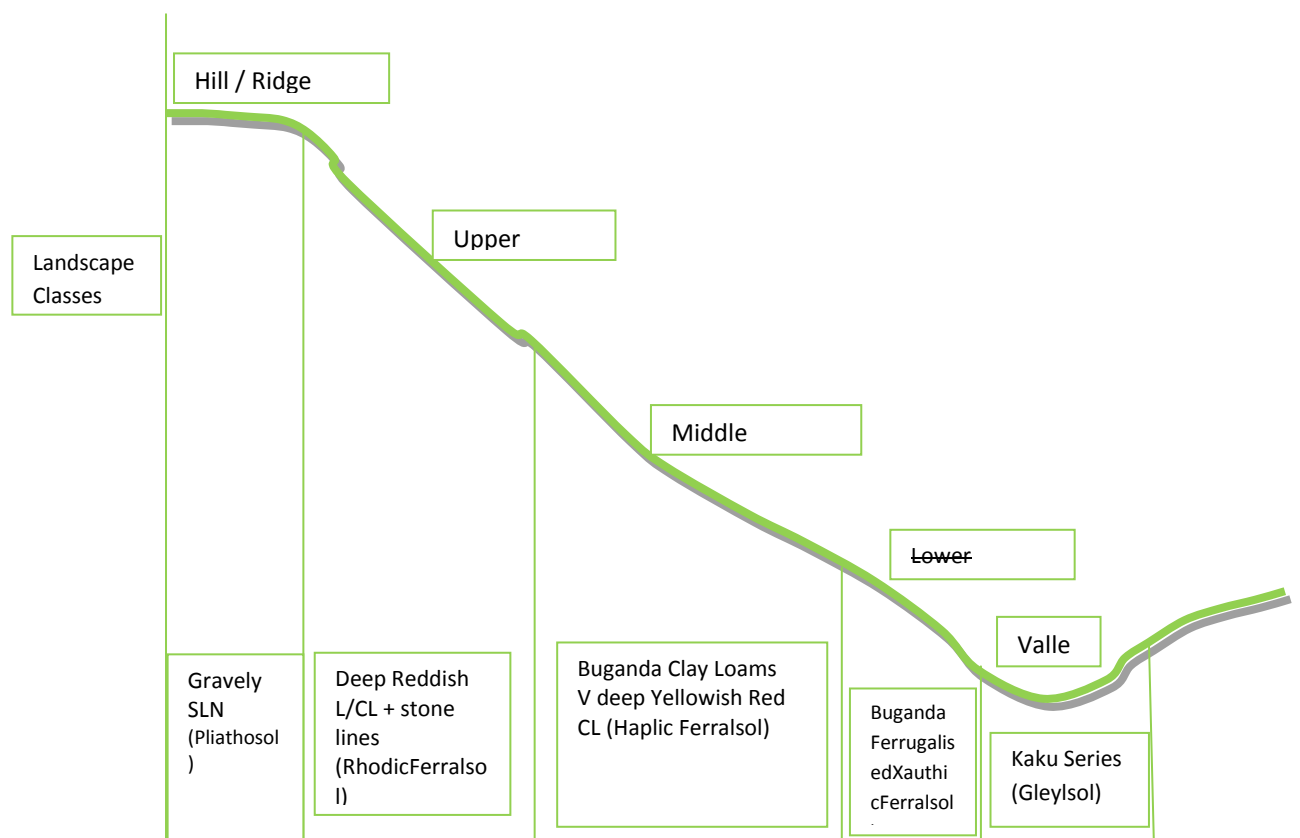
Table 3.9 soil classification for wakiso

Soil type/name	Characteristics	Specific location	Fertility levels	Possible products (crops mainly) recommended	Remarks /Management requirements
Buganda/ Mirambi Catena: 1. Plinthosol + Plinthic Ferralsols	Very gravely & shallow over laterite	Hill/ ridge tops in Central Wakiso	Low + P & water deficiencies	Pasture grasses & legumes, trees + shallow rooted annual crops e.g. Ground nuts	Judicial use of fertilizers & fallowing, irrigation & water conservation
Buganda/Mirambi Catena: 2. Lixic /Rhodic Ferralsols	Deep, reddish clay loams, well drained, but likely Mn toxicity	Hill/ridge slopes in Central Wakiso	Moderate	Most Annual & Perennial crops & trees e.g. Robusta coffee, spices, flowers, horticulture, vanilla, cocoa, maize, beans	Judicial use of fertilizers, fallowing, irrigation, rotation + soil & water conservation technologies
Kaku Series (Gleysols)	Permanently waterlogged (swamp)	Valleys/ Low-lying river beds with underground water rising to/near surface	High but gets acidic if over-drained	Cocoyams, Paddy rice, Sugar canes, Vegetables, fodder & Fish ponds, some Sweet Potatoes	Well designed & regulated draining /liming
Lukaya Catena (Acric Ferralsols)	Shallow, stony, loamy, yellowish, well drained, acidic	Gently rolling ridges in Northern Wakiso	Medium - Low	Annual crops especially Cassava, Groundnuts, cereals, sweet potatoes & pastures	Well designed crop rotation, fertilizer use, fallowing, irrigation & soil/ water conservation regimes
Leptosols	Very shallow and rocky	Escarments on very sharp hill/ridge slopes, river banks scattered in district & Lake Victoria Islands	Variable but very fragile (surface rock &/or steepness)	Trees that allow undergrowth, Fodder legumes & grasses + water harvesting channels	Maintaining soil surface cover + Runoff diversion/absorption trenches
Sango & Kateera Series (Planosols)	Layered structureless sands on clay or laterite /rock	Lake Victoria shores	Very Low - Nil	Sand for fishing and recreation beaches, Green houses + mining for construction	Specialized management for each selected agricultural activity

Major soil types bracketed are field based WRB Soil classes by Tumuhairwe et al 2017

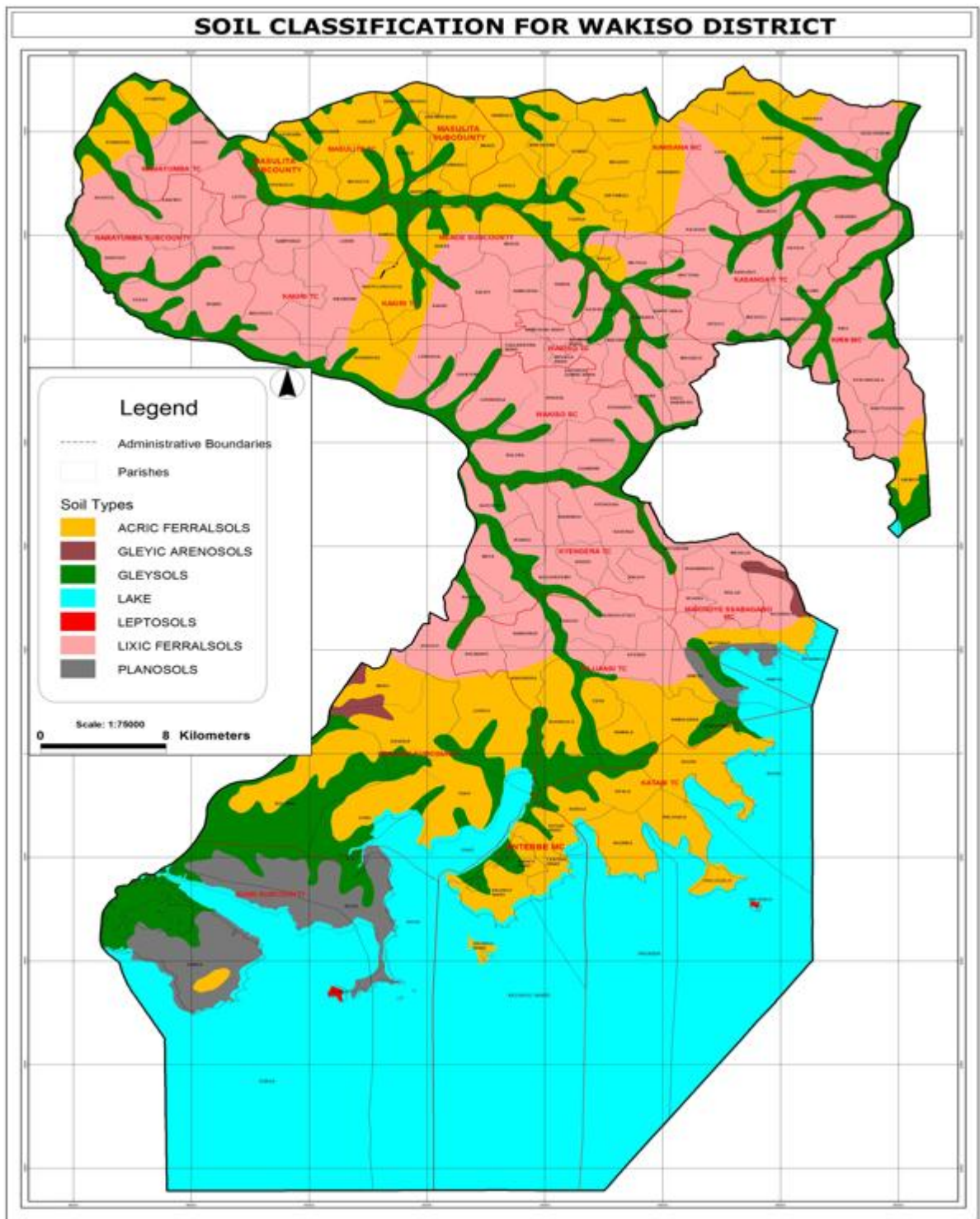
Agricultural potential of Buganda **Catena soil** is generally medium because the larger part of the catena (70-80%) is on the long middle slopes, which are mostly clay loams with moderate rooting volume, good drainage and thus suitable for both seasonal and perennial crops, trees and pastures/fodder. They also respond well to fertilisers, irrigation and soil/ water conservation technologies. The **main constraints** of this soil group include P- fixation and rapid decline of essential nutrients. Others include abundance of iron concretions (murram) on hill tops, shallow sub-soils (<20cm) presence of stones in some slopes and general susceptibility to drought and soil erosion.

Figure 3.5: Illustration of a soil “Catena” Sequence e.g. Buganda Catena



Management recommendations include well designed rotational and fallowing systems, judicious use of fertilizers, seasonal/ supplemental irrigation plus soil and water conservation technologies (contour bands/trashlines /trenches, cover crops and mulching). Arable farming of hill tops require shallow rooted seasonal crops like cereals, ground nuts, onions and peas, fruit trees or pastures, all with regular fertilizers, supplemental irrigation and water conservation measures. The deeper pediments where slopes are gentle (about 8% or less) have supported a wide range of annual and perennial crops for 30-100years with professionally designed soil erosion control contour bands/trenches, mulching and adequate fallowing (resting for 5-10 years between cultivation intervals of 3-5years). These are common practices at the National Agricultural Research Stations of Kawanda, Namulonge and Kabanyolo all located in the district. Inadequate fallowing, frequent trash/bush burning and poor soil erosion control lead to “Lunyu” conditions associated with increased acidity and near to zero crop yields, as has often been observed/ reported on many fields of peasant farmers in the district.

Mirambi Catena are brown deep sandy loams, similar to “Buganda Catena” soils on similar landscapes & climate except that Mirambi has less favourable physical properties, namely higher content of gravel, less stable structure, lower content of humus and generally shallower sub-soils. Consequently, long and continuous cultivation leads to more rapid loss of inherent fertility.



Map 3.12 Soils of Wakiso District

Other associates are the “**Red and Black sandy clays**” which occasionally have high exchangeable manganese, the concentrations of which may reach levels toxic to some crops.

Table 3.8: Soil Characteristics of Wakiso District

Soil type/name	Characteristics	Specific location	Fertility levels	Possible products (crops mainly) recommended	Remarks /Management requirements
Buganda/ Mirambi Catena: Plinthosol + Plinthic Ferralsols	Very gravely & shallow over laterite	Hill/ ridge tops in Central Wakiso	Low + P & water deficiencies	Pasture grasses & legumes, trees + shallow rooted annual crops e.g. Ground nuts	Judicial use of fertilizers & fallowing, irrigation & water conservation
Buganda/Miramibi Catena: Lixic /Rhodic Ferralsols	Deep, reddish clay loams, well drained, but likely Mn toxicity	Hill/ridge slopes in Central Wakiso	Moderate	Most Annual & Perennial crops & trees e.g. Robusta coffee, spices, flowers, horticulture, vanilla, cocoa, maize, beans	Judicial use of fertilizers, fallowing, irrigation, rotation + soil & water conservation technologies
Kaku Series (Gleysols)	Permanently waterlogged (swamp)	Valleys/ Low-lying river beds with underground water rising to/near surface	High but gets acidic if over-drained	Coco yams, Paddy rice, Sugar canes, Vegetables, fodder & Fish ponds, some Sweet Potatoes	Well designed & regulated draining /liming
Lukaya Catena (Acric Ferralsols)	Shallow, stony, loamy, yellowish, well drained, acidic	Gently rolling ridges in Northern Wakiso	Medium - Low	Annual crops especially Cassava, Groundnuts, cereals, sweet potatoes & pastures	Well designed crop rotation, fertilizer use, fallowing, irrigation & soil/ water conservation regimes
Leptosols	Very shallow and rocky	Escarments on very sharp hill/ridge slopes, river banks scattered in district & Lake Victoria Islands	Variable but very fragile (surface rock &/or steepness)	Trees that allow undergrowth, Fodder legumes & grasses + water harvesting channels	Maintaining soil surface cover + Runoff diversion/absorption trenches
Sango & Kateera Series (Planosols)	Layered structureless sands on clay or laterite/rock	Lake Victoria shores	Very Low - Nil	Sand for fishing and recreation beaches, Green houses + mining for construction	Specialized management for each selected agricultural activity

The second and most widespread soil group is the “Grey Humose Clays” (Fig.3.5) called “Kaku Series” (Radwanski, 1960), equivalent to Gleysols in FAO/WRB Soil Classification systems (Isabirye *et al*, 2004). They are developed under permanently waterlogged conditions in river beds and valleys by alluvial deposits brought by runoff water and illuviation from surrounding uplands. They are grey in colour due to high carbon content and reduced state of Iron compounds. In terms of plant nutrients, Kaku Series are naturally rich in Organic Carbon, Available Phosphorus and exchangeable bases. Unfortunately, acidity and exchangeable Sodium are undesirably high.

Agricultural potential of Kaku Series is low because of water logging, acidity and salinity. Skilled design and management of drainage systems can enable growth of high value crops like coco yams, vegetables, rice and sugar cane and probably aquaculture. **Management emphasis** is to avoid excessive draining which would cause increased acidity that would destroy both crops and fish. Secondly it is important to maintain adequate upstream and downstream water supplies for other developments like aquaculture, domestic, industry and livestock requirements.

Closely associated with Kaku Series are **LEPTOSOLS** (FAO), which are “**Shallow skeletal loams often on steep slopes**” (Fig.3.5) atescarpments of river banks and some islands of Lake Victoria. Other Leptosols have been sited on very steep slopes of some hills within the Buganda and Mirambi Catena area, though not mapped on this coarse scale of 1:250,000. Leptosols have very limited agricultural value except risky light grazing and trees. In such steep landscape positions, Leptosols are better preserved under natural vegetation for catchment stability. Currently some rocks, boulders and stones are being extracted/mined for the construction industry.

Most of the northern quarter of upland Wakiso District (about 20%), excluding water bodies, is dominated by “**Yellowish red Loams with very slight or no laterisation**” namely “**Lukaya Catena**” in association with “**Mirambi Catena**” (Fig.3.5). The Lukaya Catena occurs on gently rolling ridges with hill pediments that are not as well marked as in Buganda and Mirambi catenas. There are no sharp slope breaks. Their catenary sequence consist of shallow quarzitic, boulderly, loamy soils on the crests, brown to yellow-brown loams on slopes underlain by distinct stonelines resting on pale pink/grey/yellowish micaceous weathered rock. The footslopes have a mottled lateritic horizon just below the stone line. These soils are well drained but lack the red colour implying that the parent rocks lacked iron bearing minerals. These are equivalent to Xanthic Ferralsols.

Analytical data from representative profiles show medium to low fertility levels (OM, P, Bases) localized in a thin surface layer with subsoil being very acidic and extremely deficient in plant nutrients (Radwanski, 1960).

Agricultural potential of Lukaya Catena soils is generally inferior to Buganda and Mirambi catenas. Although coffee and bananas are grown, yields are very low. Lukaya Catena is best suited to annual crops like cereals, ground nuts and tobacco but still requiring well designed fertilizer and irrigation regimes to reach commercial production levels.

On the low-lying flat and gently undulating shore plains of Lake Victoria are “**Dark brown grey sandy clay loams**” (Fig.1) called “**Sango Series and Kateera Series**” generalized as **PLANOSOLS** (Isabirye *et al*, 2004); developed from parent materials built up from lake deposition. The small scale of mapping used here does not capture enough details to separate these 2 Soil Series and their variants. General profile characteristics by having several layers of structureless and loose coarse sand with variations in colour and different quantities of quartz gravel, with and without mottles. They are overlain by very thin surface horizons ranging from continuous to discontinuous, weakly developed granular to sub-angular structure. Profiles of the deeper variants go up to 250 cm with up to 8 layers over rounded quartz stones and the shallower variants, among the Kateera series go up to 130cm comprising of 4-5 layers over clay or ferruginized or indurated laterite.

Agricultural potential of Sango series is limited by poor fertility because exchangeable bases are leached out and internal drainage is excessive. The Kateera Series have slightly better water holding capacity and are often planted with perennial crops, but yields of coffee are low while crop failure for banana is common due to poor internal drainage and low nutrient supply. Both Sango and Kateera soils are associated with presence of horizontal benches of massive hard laterite which hinder drainage and root growth.

Other soil related resources

It is worth noting that Wakiso District is also naturally endowed with **fresh water bodies** that are widely and evenly distributed. In addition to a big part of Lake Victoria in the south, there is a big network of rivers. Farmers near these permanent fresh water sources already practice irrigation of different scales and methods to sustain a regular supply of fruits, vegetables, coco yams and sugarcane to the lucrative markets of rapidly growing urban centres, institutions and agro processing industries among others. This improves productivity but the constraint is the rudimentary **technologies for water harnessing, drainage and irrigation**.

Similarly, opportunities for **Aquaculture** on and around the fresh waters are worth noting, analyzing and developing. In addition to water for agriculture and agro-processing, the general demand for **domestic and industrial water** in Wakiso is rapidly growing and technologies for harnessing this rich natural resource is paramount in view of current trends in climate change, urbanization, population growth, commercialization, industrialisation and other socio-economic transformations.

3.4.3.2 Conclusions and Recommendations

Wakiso is among the most naturally endowed districts in terms of soil and water resources, climate and location that favour diversification and intensification of agriculture, aquaculture, silviculture and marketing of fresh & processed foods and by-products of high value, for all year around supply to local and foreign, urban & peri-urban markets. About 80% of the land area is suitable for many perennial crops including Arabic Coffee, fruits like avocado, mangoes, Guava, Pawpaws, Fenny, Cocoa, and Bananas (cooking, beer and dessert types).

Dairy and poultry farming as well as horticulture, floriculture and seasonal grain crops like maize, beans and groundnuts which are already being grown for food security and local commercial markets. Spices like ginger and lemon grass are commonly grown by a few commercial farmers in the district. Chilies often grow wild in fallows and voluntarily in gardens and most farmers use them while some sell them on local markets. The wetlands with Gleysols soils are also of great potential for water demanding crops and also for offseason production of the high value crops mentioned above especially horticulture and floriculture.

There is great potential for the gazetted commercial crops for wealth creation. Highlighted for sustainability of these enterprises is the need to appreciate the crucial balance between potential and fragility of the soils, followed by use of professionally designed soil and water conservation technologies and judicious use of agro-inputs. Second is the importance of acquiring updated soil data and professional guidance on site –specific situations per proposed development project. It is worth noting that most of the laboratory data used to assess agricultural potential is of 1957-1959. Significant changes are expected resulting from usage and management over the many decades. Similarly, expectations and enterprise projections also change with socio-economic and environmental transformations.

3.5.0 Report on Land Tenure and Values in Wakiso District

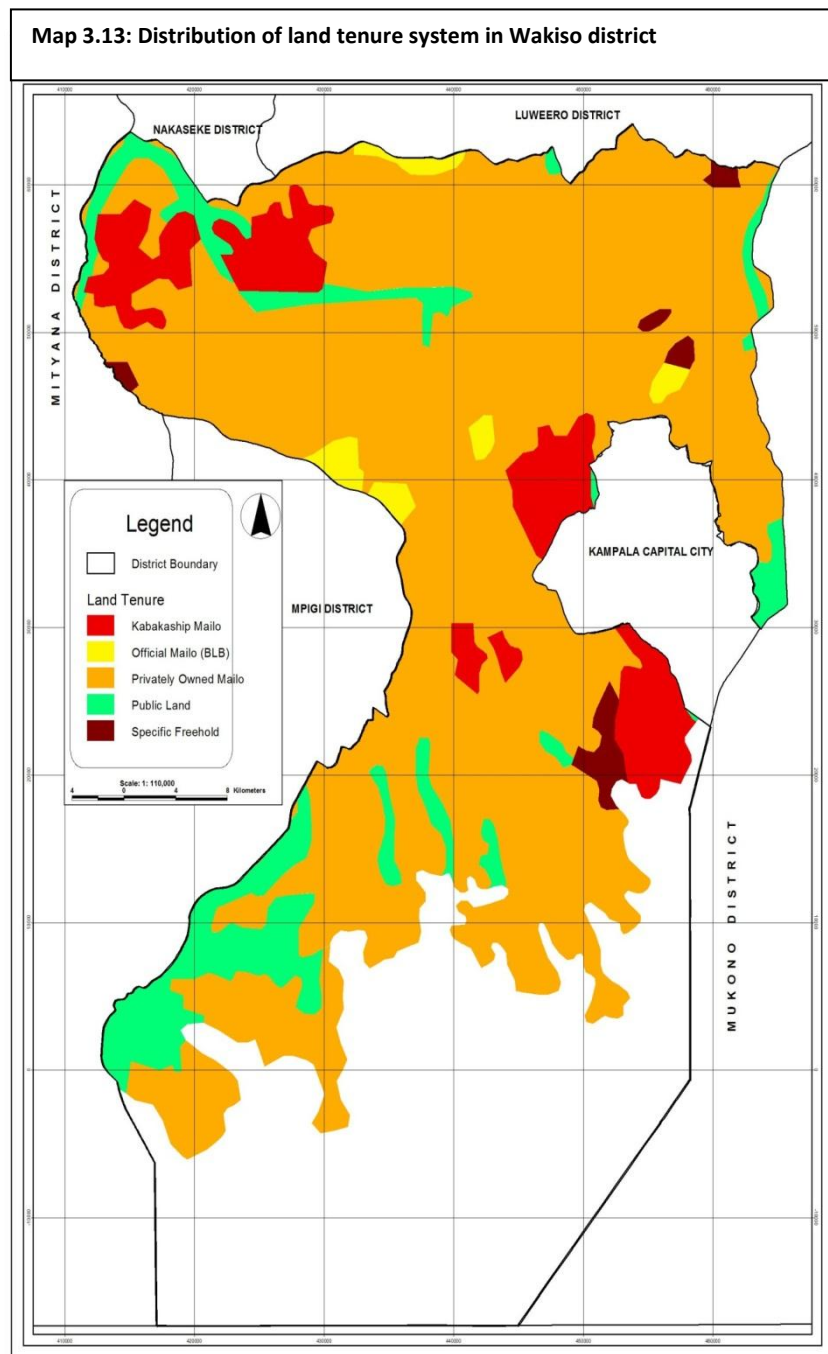
3.5.1 Land Tenure

The government treats land as the most basic resource in terms of the space it provides, the environment it contains and supporting capital it represents and generates. It is a commercial asset that can be used and traded, a critical factor of production and an essential part of the national patrimony. Hence land is the most essential pillar of human existence and national development. It is usually a political issue with potential to be volatile. In this regard, its control, management and use are treated as a critical factor in this plan.

In Uganda land holdings falls under 4 broad categories which include; Mailo (with a lot of bonified occupants), public, customary and freehold. In colonial era, the colonial historical

legacy created individualized ownership rights (Mailo and Freehold) in Buganda Kingdom superseding indigenous land rights (customary). Mailo tenure was introduced in Buganda in 1900 agreement. Subsequently in 1967, the constitution transformed some land into public land that is, freehold tenures held by religious bodies for example in Gayaza (Map 3.13). Leasehold system of land ownership is one, which grants the lease exclusive usage and possession of the land for a specified period of time. Customary tenure is the oldest system in the district mostly occupied by majority of the people. This duality resulted into land tenures whose maintenance has turned cumbersome and confusing. The multiple and complex land tenure system has had significant implications to the level and trend of development in the district. Some of the identified development challenges that come with this system include inter alia: -

- Land fragmentation which affects optimum land utilisation,
- Land rights and compensation costs make physical planning and service delivery very difficult and expensive,
- The biggest percentage of developments in the district are unplanned, developments grow organically resulting into 'rich-man' slums and distortion of the aesthetics of the area,
- There was a growing invasion - succession where land use practices (agriculture taken over by residential and industrial, residential taken over by commercial) as a result of individual owners selling un specified size of land whenever there was personal need,
- Potential for agricultural land use was threatened by the ever increasing unguided built up areas. Growing number of absentee land lords especially in the islands of Bussi creates a lot of land speculation which at times deters organized physical development.



In Wakiso District specifically land holding falls in three broad categories namely; Mailo, Public and Free hold (Table 3.9). Public tenure comprises of reserve areas such as forests and wetlands. It also entails Leasehold rural and urban. This category of tenure occupies 19,920 Ha which is 1.3% of the total planning area.

The second category is private Mailo which was commonly owned by individuals. This land covers the biggest percentage (77.2%) which is 149,489.6 Ha of land. This tenure category had a lot of negative implications to physical planning whereby there are multiple owners some of which are invisible. When it comes to selling land they sale as pleased, without any due consideration of planning standards hence the occurrence of the current situation where small and uphazard developments on plots have emerged.

There was also official Mailo which was majorly owned by Buganda Land Board. This covers an area of 3,250.7 Ha (1.7%) of the total district land. This would be easier to plan if the district authority can engage the landlord but the challenge was that there are many squatters who buy and sale unregistered plots whenever need arise. These also are responsible for the current urban sprawl seen in the district. There was also Kabakaship Mailo under this category which was basically owned by the King of Buganda and the Loyal Family. This at the moment was not well developed apart from hosting the traditional sites and other cultural installations for the Buganda Kingdom. It covers an area of approximately 18,109.5 Ha of land which was 9.4% of the entire district. The last category was the specific Freehold tenure, this covers an area of 2,750 Ha (1.4%) and it was mainly owned by religious institutions and some private individuals.

Table 3.9 Land tenure coverage in percentage for Wakiso District

<i>Type</i>	<i>Hectares</i>	<i>Percentage</i>
Kabakaship Mailo	18,109.5	9.4
Official Mailo (Buganda Land Board)	3,260.7	1.7
Privately Owned Mailo	149,489.6	77.2
Public Land	19,920.0	10.3
Specific Freehold	2,750.0	1.4
TOTAL	193,529.8	100.0

Source: Field survey

According to the socio-economic survey, the most profound type of land holding were Kibanja holders (53.4%) followed by Private Mailo land ownership (28.1%). Freehold land ownership was witnessed among 10.7% of the surveyed households in the district. Most Kibanja owners were residents of Nansana Municipality (21.6%), Kyengera Town Council (13.6%), and Makindye Ssabagabo Municipality (12.9%).

3.5.2 The Challenge and Possible Interventions on land tenure in Wakiso

The Greater Kampala Metroploitan Area Development Framework highlits the land tenure system in the metropolitan area as one of the major impediments to the development of the area, impacting on multiple fields and in numerous ways listed to include:

- a) Limiting the supply of land for housing, public infrastructure and utility services, economic activity, particularly for activities requiring large parcels and/or concentrations of activity (e.g. primary institutions, industrial and business zones, etc.);
- b) Allows and encourages land speculation and distorting the Property Markets;

- c) Limits the supply of developable land and consequently directs development to only where land was available, thereby distorting the spatial structure on the metropolitan, district and local (parish and neighbourhood) scales included;
- d) Disjointed, unplanned, leap-frog and sprawling development on the peri-urban and periphery;
- e) Allows uneven and concentration of middle-order functions and activities (markets, schools, clinics, etc.) in and around the City Centre;
- f) Facilitating intolerable densities in Inner-city slums and informal neighbourhoods;
- g) The challenge of the growth of small scale residential or industrial developments lacking continuity and hence not achieving local thresholds;
- h) Encouraging encroachment into marginal lands, environmentally sensitive areas, public lands including roads and rights of way;
- i) Allows low value and poor housing, minimal, if any, maintenance of most properties given tenure insecurity;
- j) Requiring enormous financial resources to enable land acquisition for infrastructural development and public service facility provision, effectively restricting infrastructural and service provision in areas beyond the arterials;
- k) Constricting and limiting local initiative and entrepreneurship by limiting access to mortgage finance for most home owners with unregistered properties;
- l) The most significant factor complicating and delaying the planning and implementation of assorted projects, both public and private, often even scuttling projects; deterring foreign investors; and much more.

3.5.3 Land Values

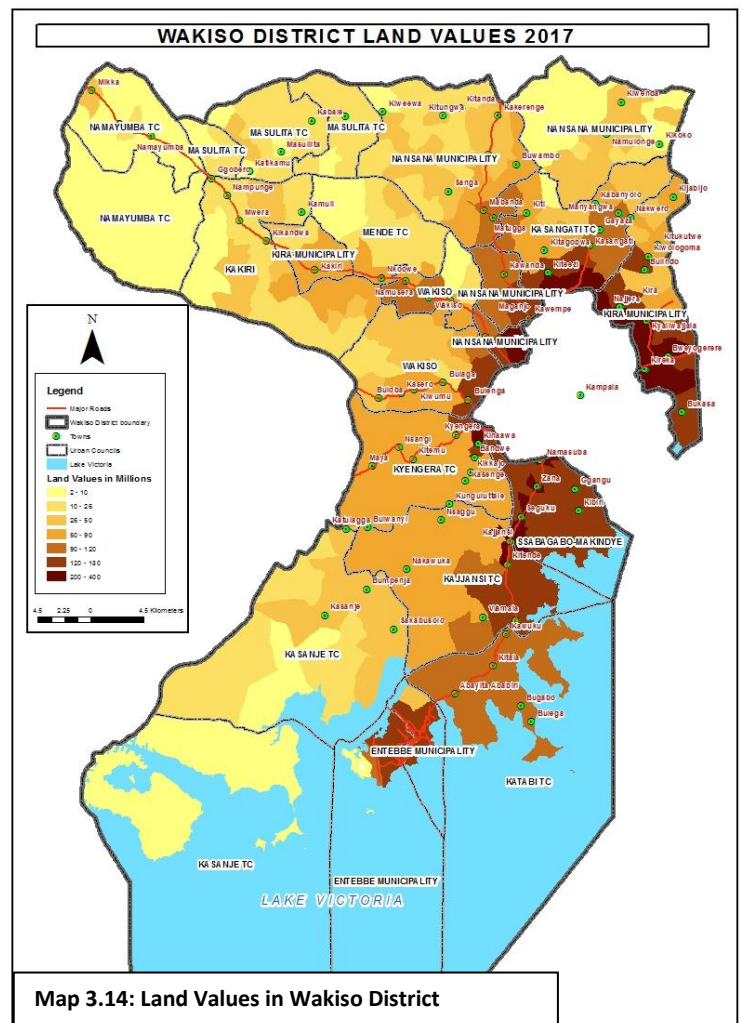
Land Values can be described as the value of a property including all its improvements and upgrades. It is estimated in accordance to location, socio-economics, government regulations, desirability for residents as a place to live, vicinity to social services and recreational facilities, roadway accessibility and distance to trade establishments. Land values increase when demand for land exceeds the supply of available land, or if a particular piece of land has intrinsic value greater than neighboring areas. It was important to understand the trend of Land Values in Wakiso District in order to link Land Values to Land use and its effects to the District Physical Development Plan.

Land is a basic factor of urban development. Under functioning land markets, land will be allocated to the highest bidder and land use changes will be mediated by market determined land prices. In theory, this should lead to the most efficient use of land. In Wakiso District, the story was quite different. Social, economic and political constraints, unclear land rights, insufficient land supply and unregulated land markets have resulted in an unplanned and uncontrolled urban structure, with land use patterns that are both inefficient and inequitable.

3.5.4 Demographic pressure, urbanization and demand for land for housing

According to the National Census carried out by UBOS in 2014, Uganda is a country of 34.86 million inhabitants with 17.3% of the population urbanized in 2017. Wakiso District has been absorbing a very large share of the rural-urban migration that, adding to an already high natural population growth results in strong demographic pressure and a young population. On the basis of the 2014 population census Wakiso District was the most populated district with 1,997,418 people. Even if the overall annual rate of population growth during the next twenty years remains constant, the population of Wakiso is estimated to shoot further. On this basis, assuming that the average household size and land consumption remain unchanged, an additional 5,200 ha of urban land will be required by 2030 to cope with the demand for residential land and nearly 12,000 ha by 2040. This would thus require a sharp increase in the provision of land for housing.

The demand for land for housing has increased as a response to the steady increase, until recently, in the incomes of urban households, the emergence of urban middle classes which nevertheless remain fairly small, changes in urban family structure and norms, and a willingness on the part of low-income urban tenants to access land ownership in peri-urban areas, in a context where rents for low-standard and un-serviced housing are quite high. Other financial and economic factors have also played a role in stimulating the demand for land: because of weak savings institutions, or the scarcity of opportunities for investment, and in a context of limited social protection, holders of monetary assets and idle funds view land as a profitable and inflation-proof investment. With the development of the market economy, land can also be seen as an asset that allows access to mortgage finance. Speculative investments have a strong impact on the demand for land. Land market activity in Wakiso was partly driven by speculative strategies as many investors look for urban plots to buy, expecting a price increase with their future incorporation into the urban area, or, following improvement of the tenure status of the land.



In spite of the difficulties in buying and selling land, the land and property market in Wakiso remains very active. There was a considerable amount of buying and selling of land going on, both formal transactions of titles that involve contracts and registration, as well as many more informal transactions involving use rights and sub-leasing, most of which are not recorded and formalized in terms of a contract. Despite the robust activity in the formal land market, most purchases, sales and leases are taking place on relatively small parcels of land, usually less than half an acre especially in areas close to Kampala City, since there was relatively little serviced land available in larger acreage that was suitable for residential development bigger chunks are therefore purchased for agricultural use especially in areas further away from the main City and along major highways.

3.5.5 Increases in land prices in wakiso

Over the years, there has been a steady increase in land prices in the urban and peri-urban areas of Wakiso District, which was further stimulating the demand for land due to expectations of further increases.

In theory, land prices are expected to be related to physical characteristics such as plot size, location (physical accessibility of the city center) and availability of services (water or electricity), as well as to tenure status and associated security.

The land market in Wakiso displays the patterns that could be expected from any land market: prices decrease with distance from Kampala Capital City and major towns as well as major road infrastructure (Map3.14), and increase for serviced plots. The market values for

residential plots are more than agricultural plots. More agricultural plots are purchased in peri urban areas except for a few rear cases. Plots with secure forms of tenure are on average more expensive than plots with less secure forms of tenure.

The cost of land itself in Wakiso District has also been escalating rapidly, significantly affecting its affordability by the majority of the population. In 2013, land in the desirable Mutundwe area, most of which was fairly well-serviced sold on average at 100,000,000/= per acre. By 2016, the average price had risen about four fold, to 400,000,000 per acre. In Entebbe area, land was selling at about 60,000,000/= per acre in 2013. It is now selling at 300,000,000/=. In the less well-serviced areas of Nabweru, Masajja among others, an acre was selling at 80,000,000/= in 2002 but now fetching about 140,000,000 (Table 3.10). These areas are all parts of Wakiso District that are reasonably close in to the main Kampala Capital City.

A bit further out in the suburbs, land prices decrease somewhat but are still fairly high depending on how close to a major town or major road the parcels are located. On the main Hoima road outside the Kampala City limits, one acre was sold between 40,000,000/= - 120,000,000/= while similar land sizes are somewhat less expensive on the same main road outwards towards Mpigi District along Masaka and Mityana roads. A number of real estate developer, are offering serviced plots in several new development areas all over Wakiso for an acre between 40,000,000/= to 120,000,000/= depending on the location.

Table 3.10: Land Value Comparisons

Area	Value in UGX.	
	2013	2017
Mutundwe	100,000,000/=	400,000,000/=
Entebbe	60,000,000/=	300,000,000/=
Masajja	80,000,000/=	140,000,000/=
Nansana	40,000,000/=	120,000,000/=
Namayumba	600,000/=	4,000,000/=

Source: Field Survey

Clearly, land values are a function of what was on in the district. Land values are higher in larger, denser places because that land was serviced with infrastructure and more packed with people and more economic activity.

3.5.6 Conclusion

While this was far from an exhaustive analysis, it can be reasonably concluded that there was a very limited amount of vacant land of a size sufficient for multi-family residential development within the city limits of Kampala, therefore many people are scrambling for land in Wakiso District which was termed as Kampala's dormitory. This therefore calls to fast-tracking planning for development control to avoid formation of informal settlements and urban sprawl. The consultant is aware that land tenure is complex and has a serious impact on the way land is being developed in Wakiso District. The multiple and complexity of this tenure directly influence the quality and what is to be done on any piece of land in the district. It was also noted that some tenures (private Milo and public land) were more receptive to development than others.

3.5.7 Possible interventions to improve land management in Wakiso

The future of the District interventions and strategies to sort out the structural, planning and economic impefections is dependent on the urgent resolution of the primary shortfalls in the tenure system and the bottlenecks in the management of land registration including:

- The need to resolve the Dual Ownership and Tenure Insecurity - in a manner that enables, indeed encourages, maintenance, upgrading and/or development and/or redevelopment of the specific property;
- Successful development and implementation of the LIS in the metropolitan region
- Ensuring Land Information accessibility and transparency;
- Effect on-the ground Land Regularisation to facilitate physical planning;

- v. Definition, statutory approval and implementation of an effective, economic Land Acquisition System for infrastructure and public service provision - with a combination of stream-lined compulsory acquisition procedures, reasonable compensation (financial or other), effective property taxation, investment recovery fees, property allocation mechanisms and/or alternative mechanisms, at the national, district and urban (municipal and town levels);
- vi. Definition and implementation of an effective, economic land readjustment and/or land swap mechanisms to enable reorganisation and structuring of existing low to moderate density neighbourhoods and the provision of infrastructure, utilities, service facilities and public open space at the neighbourhood level;

3.6.0 Report on Local Economic Sustainability and Development

3.6.1 Introduction

Local Economic Development is a process of strategic planning through partnerships between local governments, the business community and NGOs. More so, it's a process by which public, business and non – governmental sector partners work collectively to create better conditions for economic growth and employment generation. LED is a thus about community continually improving their investment climate and business enabling environment to enhance their competitiveness, retain jobs and improve incomes. Its objectives are to stimulate investments that will promote sustained high growth in a local community.

LED focuses on the region's potential and identifies specifically what local stakeholders can and need to do to ensure their local community reaches its potential. In this context, Local Economic Development assesses a community's comparative advantage, identifies new or existing market Opportunities for businesses, and reduces obstacles to business expansion and creation. LED activities should have an impact on the economic viability of the entire district and surrounding region not just a particular sector of the local economy.

3.6.2 Background

Uganda is endowed with significant natural resources, including ample fertile soils, regular rainfall, and mineral deposits, therefore, it is thought this that Uganda could feed the whole of Africa if it were commercially farmed (Giles Bolton). However, Uganda is counted amongst the poorest countries with GDP USD 22.3billion (2013). Nevertheless the economy of Uganda has great potential, and it appeared poised for rapid economic growth and development. Uganda's predominant mineral occurrences are gold, tungsten, tin, beryl, and tantanlite in the south; tungsten, clay, and granite between latitude zero and two degrees north; gold, mica, copper, limestone, and iron in northern Uganda; while oil was discovered in the albertine region of western Uganda.

Agriculture is still the dominant sector of the economy, about 45% of total Gross Domestic Product (GDP) and over 90% of Uganda's export earnings are derived from the agricultural sector. Agricultural products supply nearly all Uganda's foreign exchange earnings, with coffee alone accounting for about 27% of the country's exports in 2002. Exports of apparel, hides, skins, vanilla, vegetables, fruits, cut flowers, and fish are growing, and cotton, tea, and tobacco continue to be mainstays.

The absolute and relative weakness of the national economy is clearly reflected in Kampala, underlying the abject levels of poverty in the City. These weaknesses are readily evident in all spheres of life and in most areas of the City. Given that Wakiso forms a crescent around Kampala and there is a trickle-down effect of activities in Kampala it is highly possible that also the effects of urban poverty trickle down in Wakiso District.

3.6.3 Competitiveness and Competitive Advantage

Wakiso district is strategically situated in central Uganda. It forms a crescent around Kampala City the capital of Uganda. The major roads radiating from Kampala, the capital city, to other parts of the country and even neighbouring countries such as Kenya, Rwanda, Sudan, Tanzania and DR. Congo all go through Wakiso. The major airport (Entebbe International airport) was also located in Wakiso district. This set up and location has had a great impact on Wakiso's economy.

Transportation was a major factor contributing to economic growth and development of Wakiso. As such the road network and their state are key to development. As mentioned above, the major arteries of road transportation to and from Kampala go through Wakiso district. This has resulted into urban areas developing along the main roads, impacting on economic activities in the district. The examples of urban areas along Hoima road from the Northern by Pass corridor through Nansana to wakiso; along Jinja road from Kireka to Bweyogerere; along Gulu road from Kawempe through Maganjo, Kagoma, Kawanda to Mattugga; along Masaka – Mbarara road from Kyengera through Kitemu, Nabbingo to Nsangi and along gayaza –Ziribwe road from Kasangati, Namulonge and Kiwenda. While these developments have had negative impacts, on the other hand they have had positive impacts which can be harness to foster economic development. The high population has provided market within a concentrated area for many products. Enterprises in these areas have provided employment opportunities.

A good road network is key to smooth flow of trade. Wakiso District has a good road network only next to Kampala. Wakiso has a total of 419Km of National roads (majority of which form the major corridors out of Kampala) 45.8% of which are paved, and the 55% was well maintained gravel roads. The secondary roads are 1,211Km in length with 27% well maintained gravel roads, 3% are paved and the rest (777Km) are earth roads. A good number of these roads are interconnecting the urban centres and form good interlinks in the district, example of these was the link connecting Jinja road to Hoima road, from Kireka, through Kyaliwajala, Kira, Kasangati, Kiti, Matugga to Nansana. Although, a good number of the roads are not paved (only 7% of the total road network in the district is paved), the existence of the network was a big advantage since many are motorable and can easily be improved.

The government has intervened in various transport facilities such as the Air Transport. The government of recent through Civil Aviation authority was renovating the Airport, various economic activities are being done at the airport and these provide employment opportunities to the many stakeholders such as pilots, air hostesses, engineers, flight attendants, drivers, baggage handlers, cleaners etc. Also city cabs and Airport taxis and other taxi operating companies exist in the district and these offer employment opportunities to the many unemployed masses which brings the trickle down effect of economic development.

Wakiso's proximity to the city gives it a competitive advantage over other districts in Uganda. Many services in Kampala can easily trickle into Wakiso while others can easily be accessed from Kampala. In social economic survey carried out in Wakiso, piped water coverage was about 61%, while safe water coverage was 70% in the district. Access to electricity for lighting was 75%. These figures imply that these facilities are available and can easily be accessed. Government offices and departments can easily be accessed in Kampala and Wakiso itself. These commodities and services are key to business opening and operations. Their ready availability makes Wakiso more competitive to attract business than any other district.

3.6.4 Entrepreneurship

Entrepreneurship is the process of designing, launching and running a new business. In modern times, entrepreneurship is considered to be very essential in the economic growth and development of an economy. According to the African Development Bank (1999), one of the main constraints in East Africa's economic development was a relatively low industrial resource base including the shortage of indigenous entrepreneurs.

At the time when economies are moving away from the notion of poverty alleviation (where government processes are more paternal ready to provide) to wealth creation where process focus on business, it is critical to develop policies that will support entrepreneurship. According to Landes, (1998) where entrepreneurship exists in plenty, it has played an important role in economic growth, innovation, and competitiveness and it may also play a role, over time in poverty alleviation.

Fortunately Ugandans have a high entrepreneurship spirit. In the Global Entrepreneur Monitor (GEM) 2012 survey Uganda was rated at 28% new business formation rate, the highest in the world. In the same survey, 69% of Ugandans said they have the skills to run a business and 64% saw opportunities to start a business in the near future. The report reveals further that over 90% of young people would prefer to be running their own businesses as a career choice. Government has put up several policies and programmes to support the youth although these fail to reach the target. In the study 89% of the young entrepreneurs had not received any assistance from any government programmes (GEM 2012).

The study (GEM) also revealed that women are almost as likely to be in early stage entrepreneurship as men, rated at 35.5% while for men at 36%. However, the types of business both could be involved maybe quite different. In another study by BeadforLife, an organisation building entrepreneurship in poverty stricken women in Uganda, show that it has injected substantial revenue into Ugandan communities by buying and selling beads, and has trained an estimated 45,500 women to start 3,250 businesses ranging from vegetable stalls, hair salons to restaurants. 81 percent of these businesses have remained open after two years, compared to an 80 percent failure rate for businesses in Uganda as a whole.

The GEM study revealed that the early stage entrepreneurship activity was slightly higher in the urban areas at 36.6% than in rural areas at 35.2%. It was not possible to get statistics to assess entrepreneurship in Wakiso District. However, Central region rate where Wakiso is located was at 39.2%, which is second to western region 41.1%, and higher than Kampala 37.2%, East 31.25 and North 30.4%.

However, according to GEM Young entrepreneurs in particular have generally low growth expectations and few innovate or vary product lines. Creating an additional business was more common than expanding an existing one, meaning many businesses remain small scale and informal. Entrepreneurs prefer to stay informal so as to avoid taxes and registration costs. This condition related well with the situation in Wakiso District. This has the implication on missing opportunities, like bidding for government contracts that could offer financial security and a path for growth.

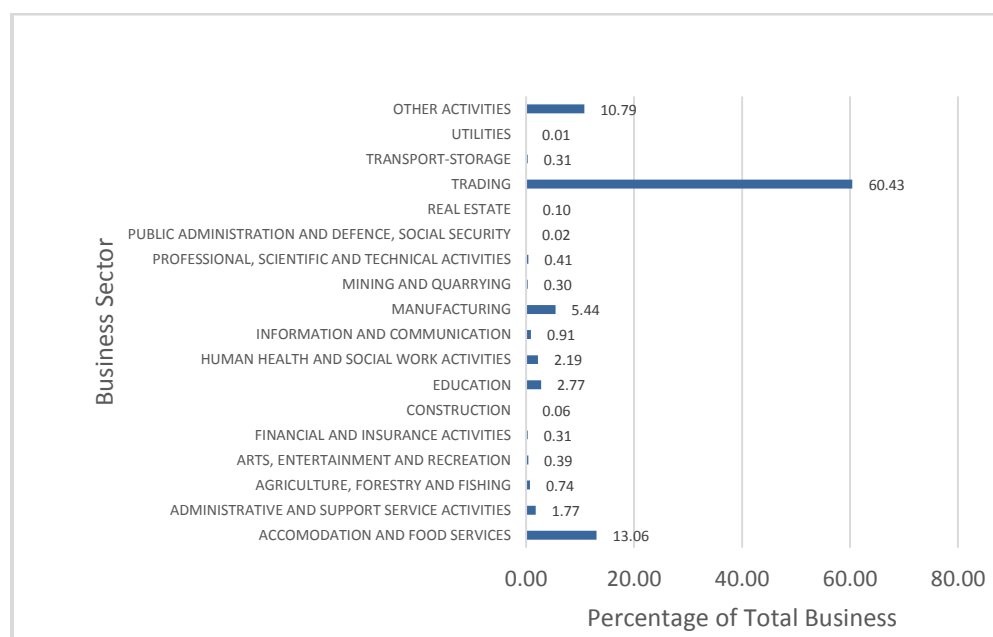
Nevertheless, the figures give a rosy picture of the entrepreneurship potential in the country. A high entrepreneurship spirit of the country was an asset. Jobs are created and unemployment reduced leading to growth and development.

3.6.5 Business sectors, Employment and Income

The major employment centres in the district are the towns and trading centres. In these, trading activities (whole sale, retail and petty trading), manufacturing; small scale industries such as carpentry and metal workshops; services such as hair dressing, hoteirng are concentrated (Map 3.13).

The Census of Business Establishment 2010/11 by Uganda Bureau of Statistics revealed that there were 55,759 registered business units in Wakiso District. The biggest sector was Trade with slightly more than 60% of the business, followed by Accommodation and Food Services 13% and Manufacturing 6 % (Figure 3.6).

Figure 3.6: Business in Sector as Percentage of Total Business



Source: UBOS, Census of Business Establishments 2010/11

The Business Census 2010 revealed further that the majority of the business entities were small scale business with annual turn over of less than 5millions that is 75%. This could also be concluded from the average employees per business sector, which were 2 persons per business (Table 3.12). Also 19% of the businesses recieved between 5 and 10millions. The remaining 6% of the businesses recieved above 5millions.

As already mentioned, the major sector in the district was trade which accounts for 39% of the businesses and employing 60% of the employees. The trade activities range from wholesale trade and retail trading. The commodities of trade include; manufactured products including, general mechandise such as sugar, soft drinks, clothings and building materials like cement, iron sheets and iron bars; Agriculture produce including maize, beans, soya and other produce. Many of these activities are carried out in the many trading centres such as Kireka, Kyaliwajala, Kasangati and Matugga. Others include; Namasuba, Kasajjansi, Bayitababiri and Entebbe; Nansana and Wakiso trading centres (Map 3.15).

While the Education sector had only 2.8% of the business enterprises, it employed only 17% of the employees. The many education insititutions include; Nursery schools, Primary schools, secondary schools and tertiary institutions offered employment to many including teachers, cooks, security personnel and others. Many of these institutions are located in or close to the trading centres.

Accomodation and food Services sector had 13% of business enterprises, and it employed 12% of the employees. The many hotels and restuarants in the district in the many trading centres offered employment to the population.

The manufacturing sector was another remarkable sector in the district. This sector had 6% of the businesses in the sector and employed 10% of the employees in the district. The major

manufacturing areas were sanga, Kiryamuli and Namanve in Nansana Municipality and Kito in Kira Municipality. The Manufacturing sector includes big manufacturing companies, medium and scale manufacturing. The products included soft drinks production such as Food processing like Maganjo Grain Millers, roofing limited.

Map 3.15: Major Employment Centres in Wakiso District(Towns/Trading and Industrial Centres)

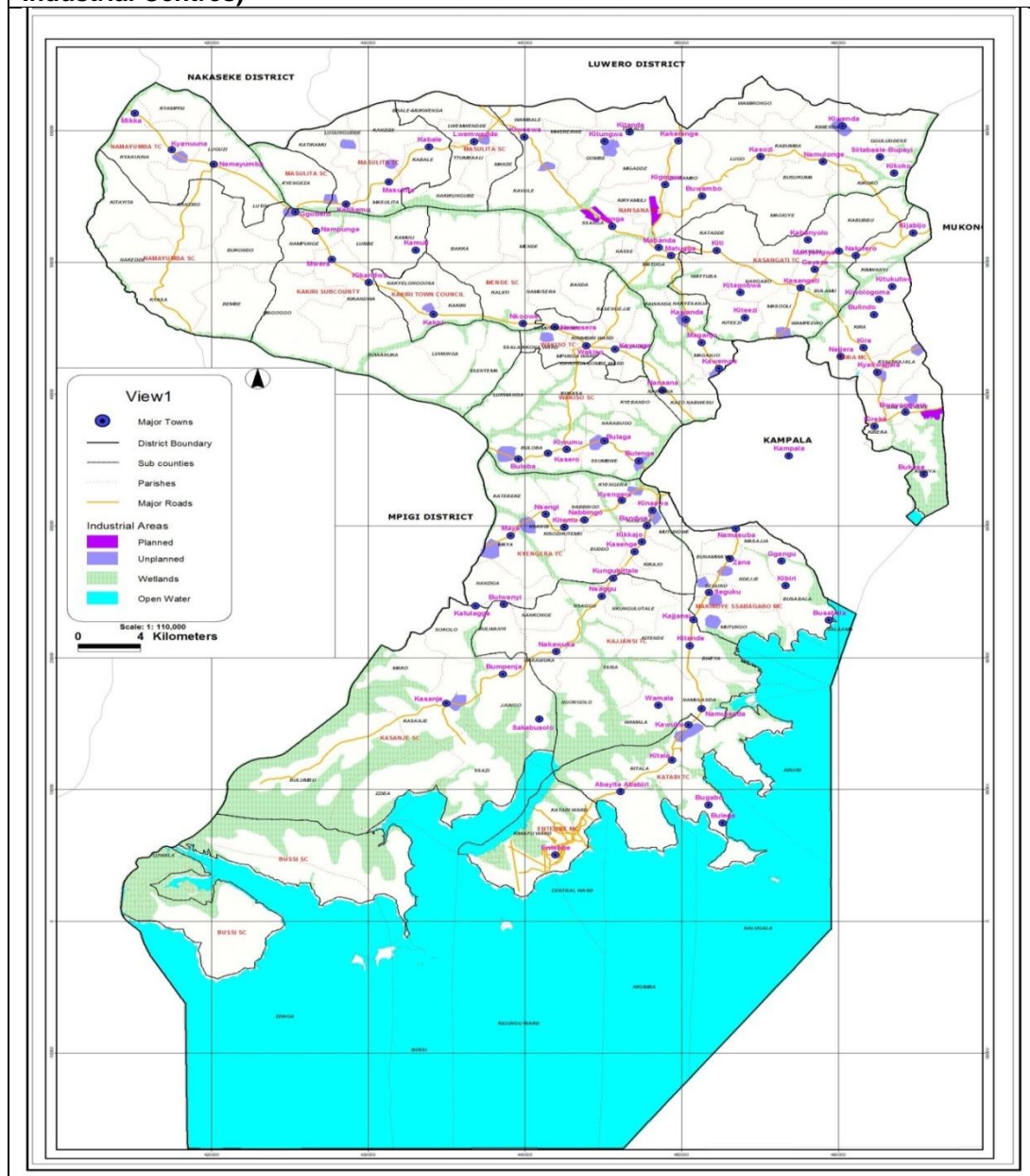


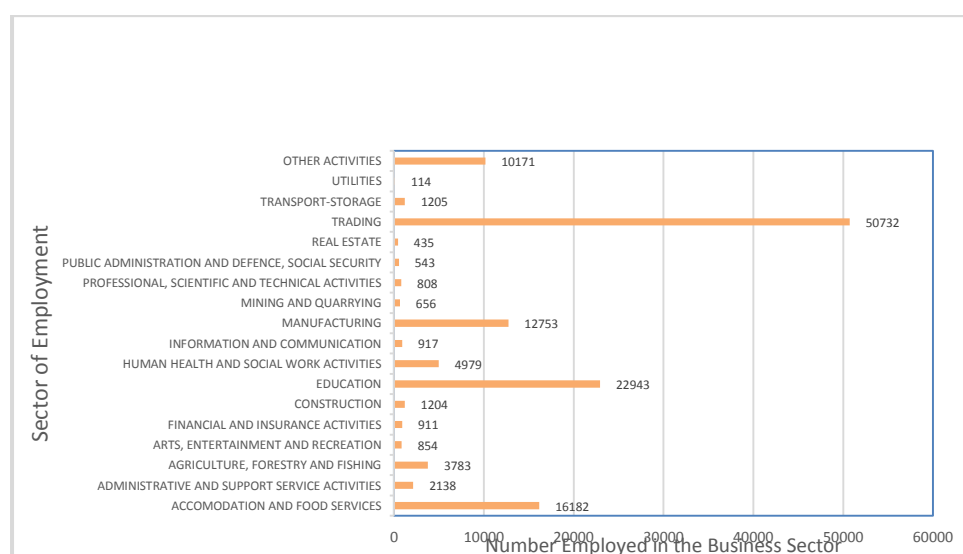
Table 3.12: Average Employment by Sector

Business Sedor	Number of Business	Number Employed	Average Employment Size
Accomodation And Food Services	7,281	16,182	2
Administrative And Support Service Activities	985	2,138	2
Agriculture, Forestry And Fishing	414	3,783	9
Arts, Entertainment And Recreation	219	854	4
Financial And Insurance Activities	173	911	5
Construction	34	1,204	35
Education	1,542	22,943	15
Human Health And Social Work Activities	1,222	4,979	4
Information And Communication	507	917	2
Manufacturing	3,034	12,753	4
Mining And Quarrying	165	656	4
Professional, Scientific And Technical Activities	228	808	4
Public Administration And Defence, Social Security	9	543	60
Real Estate	55	435	8
Trading	33,693	50,732	2
Transport-Storage	175	1,205	7
Utilities	7	114	16
Other Activities	6,016	10,171	2
Total	55,759	131,328	2

Source:UBOS, Census of Business Establishments 2010/11

The 55,759 registered business unit employed 131,328 people (Table 3.11). The average employment by a business unit was 2 people per business. Public Administration, Defence and Social Security had the highest average of 60 people per unit, followed by Construction with 35 people, Utilities 16 and Education 15.

The Uganda Bureau of Statistics Business Census carried out in 2010 established that 131,326 people are employed in the formal sector in Wakiso district. The survey revealed that the majority are employed in the trading sector 39% (Figure 3.7).The Education sector followed with 17%, Accomodation and Food Services 12%, Manufacturing 10% and the rest of the sectors share 22%. It was worth noting that people employed in the formal Agriculture, Forestly and Fisheries sector were only about 3%. These are employed in institutions such as Ministry of Agriculture, Animal Husbandry and Fisheries- Entebbe, Kawanda and Namulonge Reseach Institutes, Ugachick farm Magigye and Jesa Dairy farm among others.

Figure 3.7: Wakiso Formal Employment Numbers by Sector

Source:UBOS, Census of Business Establishments 2010/11

In the Uganda National Household Survey 2010, it was revealed that the Central Region had the highest number of households with informal businesses (36%) followed by the Western Region (26%) and the Eastern Region (24%). The Northern Region had the least number of businesses (14%). Wakiso District contributes significantly to the high figure indicated in the Central Region.

In a Social Economic survey carried out by the consultant, the Informal Sector was second to wage, in contributing to household income with 13.2%. The informal sector employed majority of the women and youth and work in this sector was slowly gaining ground in the entire district, both in the rural and urban areas. The informal sector has adopted technology, for example traders use the mobile telephone for information on prices and marketing of goods and service. Examples of informal business include; boda boda cycling, Taxi driving, petty trading, street vending, market vending, tailoring, metal working, carpentry among others. These were spread throughout the district in the many trading centres, some having their enterprises in their homes.

3.6.6 Labour Force and Unemployment in Wakiso

Wakiso had the highest population in Uganda according to 2014 Population and Housing Census by Uganda Bureau of Statistics. Wakiso had a population of almost 2 million people, with a very high growth rate of 6.6%. The proportion of urban population in Wakiso grew from 7.8% in 2002 to almost 80%, compared to the proportion of rural population which fell from almost 90% in 2002 to 21% in 2014. The youth population (18 – 30 years) was 25% (slightly higher than the national figure of 22%) of the total population while the working population (20 – 59 year) was 45.3%. These population figures have an implication on labour force and unemployment in the district especially for the youth. The young and rapidly growing population in Uganda implied that the labor market was flooded every year with new job seekers, especially in the urban areas, because this is where most wage and salary jobs, especially high paying jobs are found (Fox & Gaal, 2008).

The Labour Force Survey of 2012 conducted by UBOS indicated that 3 out of every 10 youth in Uganda are unemployed. Other estimates are as high as 83% (Edyegu, 2012). According to the Ministry of Gender, Labour and Social Development; around 400,000 youth are annually released into the job market to compete for the mere 90,000 jobs available. In the Wakiso District Development Plan 2015 – 2020, it was stated that poverty, unemployment and underemployment are the main problems affecting the youth and these are caused by lack of employable skills, lack of access to land and capital, lack of apprenticeship schemes, negative cultural and attitudes. These include gender discrimination, negative attitudes by the youth towards work especially in agriculture and negative attitude towards government programmes that target community groups for support in income generating activities.

However, the lack of formal registration of much employment and self-employment opens up diversity of interpretations of the unemployment rate (GEM 2012). Many youths are engaged in small income-generating activities like boda boda, brick making, and petty trade and in the service sector. If these are considered as employed then the rate of unemployment would be down and efforts would be focused on supporting the youth to build their enterprises, which would absolve more youth in employment.

Wakiso has an arc on Lake Victoria and some Islands are in Wakiso district such as Zzinga, Naluggala, Kigungu and Bussi. The lake offers employment opportunities, through fishing, farming and other activities. A good number of trading activities are carried out on the lake landing sites such as kigungu, Nalugala and others. Among the trade items include, fish, firewood and agriculture produce.

3.6.7 Income levels in Wakiso

Income could be referred to as earning from providing goods and services. Income of individuals is important to an economy. This determines the level of consumption (and hence welfare of households) and savings in an economy. The population with income has purchasing power and hence can consume the goods and services produced, ensuring continued production of those commodities and hence employment. Income also determines the level of savings which savings eventually can be invested to produce more goods and services and hence ensure continued employment and government income in terms of taxes.

In the survey carried out by the consultant, it was discovered that the predominant source of income for households in the district (41.5%) was salary/ wages, which may not be surprising given that Wakiso was considered a dormitory district for many working in Kampala City. The informal Sector contributes 13.2% to household income, while animal rearing and crop production contribute 11% and 10.8% respectively. A good percentage of the population depends on income from rented commercial and/or residential buildings.

In the same survey it was established that about 61% of the households received above UGX 350,000 (about USD 100) as monthly income. Of these 37.6% households received earnings above UGX 550, 000 (about USD 150) per month. The further survey revealed that 49.5% of the household could afford three meals a day. These income figures and sources are quite reasonable and were above average household income for many other areas in Uganda. This grants a reasonable purchasing power and market for products and hence attracting investment.

3.6.8 Agriculture and Its Potential in Wakiso

In Uganda, about 45% of total Gross Domestic Product (GDP) and over 90% of Uganda's export earnings are derived from the agricultural sector. In the production sector, food crop production predominates, contributing approximately one-half of the agricultural GDP in 2002/03. Cash crops provided a further 17%, the livestock sub-sector 16%, fisheries 12% and forestry 4%. Nearly 90% of the population lives in rural areas where agriculture provides approximately 80% of employment.

In Uganda 80% of the farmers own an average landholding of less than 2 ha. The majority of these are small-scale subsistence farmers who engage in non-market-oriented commodities and predominantly use rudimentary technologies and environmentally unsound practices. Their products are often of low volume; poor quality and are expensive to assemble for sustained market supply. The problem was further worsened by farmers' inability to efficiently access inputs and market their produce collectively. This leads to incurring high production and transaction costs, which affect the profitability levels in the enterprises.

According to the Population and Housing Census Module on Agriculture (2002) 33.7% of the households in Wakiso are involved in agriculture. In a survey by the consultant, 22.8% of the households were involved in agriculture. In the Census Module 2002, 77.3 % of the farming households are involved in crop farming. The Majority of farming households are small holders practicing subsistence farming. Also 90 % of the households operate on less than 10 acres of land. A few commercial farming units and plantations exist in the district. The major crops produced in the District are cassava 54.3%, sweet potatoes about 49%, beans 33.7%, banana about 33%, maize 25.4%, and coffee 4.5%. The district also has a number of commercial flower farms and one tea estate.

The government through the Ministry of Agriculture, Animal industries and fisheries (MAAIF) has set up various fish demonstration farms and outlets in Wakiso District to help teach fish farmers on how to grow and harvest fish throughout the year. Various fish demonstration sites

can be found in Kajjansi Town Council; these fish farms have enabled a smooth supply of fish in the district throughout the year. This contributes to the Nationals economic growth and development and ready supply of fish in the markets. The fish was also exported to the neighbouring countries which generates foreign exchange to the country hence local economic development. More so, fish was also consumed by people within the district, this ensure good proteins to those who consume it, enabling better health.

In the Presidential Directive for Agricultural Zoning, Wakiso was classified under zone VI, Lake Victoria Crescent, with other districts including Kampala, Mukono, Wakiso, Eastern Mpigi, Eastern Masaka, Eastern Rakai, Kalangala, Jinja, Mayuge, Southern Bugiri, and Southern Busia. The crops identified as best suitable for this zone are Robusta coffee, Fisheries, Spices, Floriculture, Horticulture (Okra, French beans, Tomatoes), Vanilla, Cocoa and Dairy cattle.

The zoning concept was premised on the grounds that opportunity for trade arises from exploitation of Comparative and Competitive Advantages of different zones. This will improve the standard of living of the rural poor by imparting skills, facilitating access to supportive services and facilities as well as quality control on production and post-harvest handling.

The report on the Presidential Directive for Agriculture Zoning: Increasing Incomes through Exports: A Plan for Zonal Agricultural Production, Agro-Processing and Marketing for Uganda, identified the following factors as advantages in Lake Victoria Crescent Region to which Wakiso belongs, which could support agriculture of the identified products.

- Soils that are good to moderate found on hilly and flat areas with wetland and forested areas
- Small, medium and large-scale intensive farming with potential for commercial production
- Generally good Infrastructure, roads, Water for industry and irrigation (potential) and availability of other infrastructure services.
- Lots of private investment opportunities including prospects for processing zones and warehousing
- Entrepreneurship skills which are fairly well developed, and availability of skilled labour due to fairly high literacy levels and migrant labour which comes from other areas of the country and outside Uganda to seek for opportunists. This also contributes to positive attitude and openness to new technology.
- Generally well endowed with resources Stable and mostly cosmopolitan with high potential for peri-urban farming
- Land is generally available through sale
- Presence of most ongoing programmes government programmes.

Wakiso was becoming more urban, with a leap from 7.8% urban population in 2002 to 80% urban population in 2014, with a growth rate of 6.6% and accelerated activities of real estate developers land for agriculture was likely to become less each passing year. According to the statistics collected, agriculture was becoming less significant, 33.7% of households were involved in agriculture in 2002 while the Consultant's Social Economic Survey put it at 22.8%. The biggest sector was trade having 60% of the formal businesses and employing 39% of the people in formal employment. The soils are becoming less productive due poor farming practices and yields can only be increased with support of fertilizes which are expensive and un reliable in some instances.

Nevertheless, because of food security and improved household incomes, planning in Wakiso District should focus on high technology, high yielding, and high value agriculture products, which require little land yet can give high yields and value. These could include; green house farming, poultry farming, rabbit rearing, mushroom growing, horticulture farming (on relatively bigger plots) such as okra, spices and French beans. A combination of poultry, rabbit rearing and high value crops would yield good results as animal droppings can be used as fertilizer for the small plots to support crop production.

Wakiso has big chunks of wetlands, totaling to 28,179.0 hectares which is 10% of the land use area. Many of these are under attack due to high population growth. However, these areas cannot be maintained in their natural form and hence may need modification given that Wakiso was becoming an urban district. Plans should aim at conserving but also modifying these areas, through encouraging activities which are friendly to these areas for sustainable development.

3.6.9 Natural Environment Character and Potential

Wakiso was among the most naturally endowed districts in terms of soil and water resources, climate and location that favour diversification and intensification of agriculture, aquaculture, silviculture and marketing of fresh & processed foods and by-products of high value, for all year round supply to local and foreign, urban & peri-urban markets. However, Climate Change resulting into unpredictable weather conditions has led to low harvests and resultant low income which have significantly affected those households dependant on agriculture in the district.

3.6.9.1 Climate conditions

Wakiso has a warm and wet climate with relatively high humidity. Wakiso district area receives average rainfall of 1,200 to 1,450 mm, with two rainy seasons in the year. The main season was from March to May with peak in April, while the secondary season was from August to November with a modest peak in October/November. Evaporation exceeds rainfall by a factor of 2 to 3 during the dry months, June to August. During the main rainy season rainfall was greater and/or equal to evaporation. Temperature ranges from 15° – 30°C. Wakiso enjoys good sunshine and many farmers use the nature sun to dry their crops. These conditions favour rapid plant growth and have an indirect benefit to local economic growth.

3.6.9.2 Soils conditions

The most dominant soil group, covering approximately 60% of the land area has been classified as “Black redsandy clay loams” or Buganda Catena in association with Mirambi Catena (Randwanski, 1960). This was equivalent to “Ferrallitic soils that are predominantly reddish sandy clay Loam” (GoU, 1960). The larger part of the catena was on the long middle slopes, which are mostly clay loams with moderate rooting volume and good drainage. This makes the soils good for both seasonal and perennial crops, trees and pastures/fodder. The agriculture potential was termed good to medium. The presence of National Research stations of Kawanda, Namulonge and Kabanyolo where good practices are disseminated to farmers has supported agriculture in Wakiso for long periods. The good practices include: mulching, trenches and fallowing.

The limitation with this catena was abundance of murram (soils with a lot of iron) on the hill summit and some slopes, shallow sub-soils of less than 20cm depth, presence of stones in parts and Potassium – fixation. Poor farming practices such as inadequate fallowing, frequent bush burning and absence of soil erosion control, limited use of fertilizer, and absence of water conservation methods have led to poor yields affecting livelihoods in the district.

The second wide spread soil type was “Grey Humose Clays”, also called “Kaku Series” (Radwanski, 1960). These soils developed permanently waterlogged conditions in river beds (water ways) by alluvial deposits brought by runoff water and illuviation from surrounding uplands. They are grey in colour due to high organic carbon content and reduced state of iron compounds. These soils have high acidity and sodium. If well managed that is good drainage management and irrigation, can support crops such as coco yams, vegetables, rice and sugar cane and probably aquaculture. These swamps can also be developed for dairy farming.

3.6.9.3 Water and Drainage

Wakiso District was generally endowed with adequate surface and sub-surface water reserves including Lake Victoria, numerous streams, rivers and wetland; both permanent (such as Lubugi, Mayanja, Lwajali, Namanve) and seasonal. Minor valleys have distinct seasonal swamps and rivers. The water tables along these swamps are quite high and are suitable for sinking shallow wells which are commonly used as sources of water for domestic use especially in the rural Wakiso. Sub-surface water reserves occur in fissures and aquifers of the rocks. This was indicated by the number of boreholes, spring wells, tube wells and shallow wells, which have been drilled to harvest water for domestic supply. Much of Wakiso district's water resources are generally not polluted and hence can easily be exploited for fish farming, small and medium scale industrial development.

3.6.10 Tourism in Wakiso

Wakiso district has a good potential of tourism. The district has a number of tourist attractions with the majority in Entebbe Municipality. These attraction centres can be grouped as cultural sites, historic sites nature based sites which include; bird watching, flora and fauna. Wakiso has a large proportion of tourism facilities such as hotels, restaurants and entertainment centres, which was an added advantage to promoting tourism. The major tourist attraction centre include; Ngamba Island Chimpanzee Sanctuary, Namugongo Martyrs' Shrine, Uganda Wildlife Education Centre, Water front club, Entebbe Botanical gardens, Muzinga park monument, Kigungu landing site, Kigungu bird bleeding site, Omuti Gwedembe, Uganda Reptiles village, Kampala Snake Park, Banana Village, Zika Forest, Naggalabi Buddo Coronation site and Mabamba wetland. Wakiso has a good number of beaches including; Imperial Resort Beach, Andreita Beach, Ssese gateway beach, Entebbe bay swamp, Garuga resort beach, and Lutembe bay wetland. Promotion of tourism will provide employment to residents in the wakiso district.

3.6.11 Financial Institutions in Wakiso District

Financial sector development, matters for economic growth. A well developed Financial Sector mobilises savings which avails capital for investment and hence development. Uganda's financial system was composed of formal, semi-formal and informal institutions. The formal institutions include Banks, Microfinance Deposit-taking institutions, Credit Institutions, Insurance companies, Development Banks, Pension Funds and Capital Markets. The semi - informal institutions include Savings and Credit Cooperative Associations (SACCO) and other Microfinance institutions, whereas the informal ones are mostly village savings and loans associations.

In the survey carried out by the consultant there was very low coverage of banking services in Wakiso District. This was because financial institutions were available to only 23.3% of the households and yet the services were used by 32.6% of the residents. 64.5% of the users would cover a distance of more than 5 km for the service.

However, the cover of financial institutions was better in Wakiso than other districts. The district was served by 14 banks which have 35 bank branches and 20 other credit institutions (Table 3.13). It was Busukuma, Gombe, Masuliita, Mende, Namayumba and Nabweru Sub- counties which are not served by any bank but the rest have at least a bank branch. Other efforts to mobilise fund for development included SACCOS. The district was served by 459 SACCOS with all Sub-counties served by at least 4 apart from Mende-Kalema. The expansion of unregulated SACCOS, cause concern regarding the safety of small-balance deposits which they hold. Some of these institutions use subsidized funds from the government supported Microfinance Support Centre which might introduce distortions by weakening credit culture and thus undermine the viability of these institutions. However, SACCOS have the advantage of promoting savings and investment at the very local level and community level. These

institutions easily avail savings and credit facilities to the common man, without going through the seemingly more complicated procedures and requirements by the bank.

Table 3.13: Financial Institutions in Wakiso by Sub-county.

Lower Local Government	Credit Institutions	SACCOs	Cooperatives
Busukuma		11	1
Entebbe Municipality	6	45	-
Gombe	-	19	-
Kakiri	2	15	3
Kasanje	1	4	-
Kira	8	54	10
Katabi	5	30	1
Masuliita	-	5	4
Makindye	5	64	7
Mende	-	-	-
Nabweru	-	27	3
Namayumba	-	7	5
Kasangati (Nangabo)	3	31	2
Nansana	6	28	2
Kyengeru (Nsangi)	6	23	6
Kajjansi(Ssisa)	5	11	3
Wakiso	2	51	6
Total	55	459	54

Source: Production and Commercial Services Dept. Wakiso

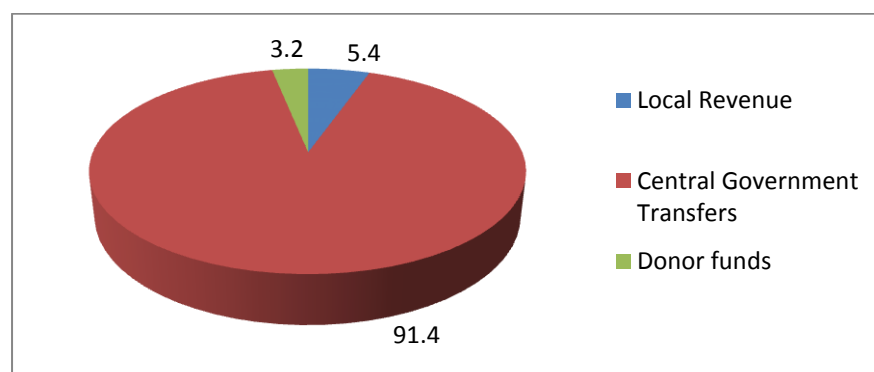
3.6.12 Land Ownership in Wakiso

Land was a vital resource in development since all activities are carried out on land. In the social economic survey by the consultant, It was revealed that the prevalent land ownership was bona fide (Kibanja), followed by mailo land with 28% and 7.7% free hold. This situation was undesirable for economic development since, there was no security of tenure for majority of the residents, which makes it difficult to promote formalized and organized development. The district administration has no much land for development, hence it can only rely on private partnerships for development activities.

3.6.13 Wakiso District Financial Capacity

Wakiso district has three major sources of income, that is, locally raised revenue, central government transfers and donor funds. Wakiso receives a total income of about UGX. 44Bn. The major income comes from the central government which contributes over 90% of the total income (Figure 3.8). Local revenue contributes 5.4% of the income, which is a very minimal contribution. The sources of local revenue include; local service tax, property rates, business licenses, inspection fees and land fees. Many of these taxes are direct taxes and hence have challenges of collection related to direct taxes. The district has very limited revenue compared to the demand for services.

Figure 3.8: Percentage Contribution to Total Income in Wakiso (2013/14)



Source: Wakiso District Development Plan

The major challenges in revenue mobilization and collection include;

- Inadequate data for tax assessment and collection.
- Limited awareness of population as to the need/reasons for paying taxes.
- Poor collection methods in comparison to the new e-collection methods.
- Tax personnel who do not have adequate skills in revenue mobilisation and collection.

3.6.14 Programs and Projects Supporting Local Economic Development in the District.

Operation Wealth Creation (OWC): this was a Government project in Wakiso district and it helps in providing agricultural extension services under NAADS to farmers. This project was in support for LED reason being that its existence was in the form of partnership between the government, business community and the NGO's. It tries to ensure that the people at community level are empowered through agriculture. This project has helped to transform farmers through provision and construction of different maize mills, seedlings etc. This implies that government was supporting farmers to improve on the quality and adding value to their products. i.e. instead of transporting maize from their gardens to the markets, they are now able to turn the maize into flour which was a ready product for sale. Hence adding value to the original product. This in turn leads to improved local economic development.

CDD activities: the youth and other stakeholders have enjoyed government benefits from CDD. Some have set up poultry farms, others have invested the funds in livestock. CDD is a government program which was aimed at improving income to the youth and other stakeholders in the county. As long as the youths and other stakeholders are organized into groups which are recognized, funds are released to those members through a process and this process has to be verified right from Local Council I. Many stakeholders are now employed in gainful businesses because of the CDD and are able to acquire basic needs in life such as health, education, feeding, shelter as well as clothing.

3.6.15 Development regulations and legislation;

3.6.15.1 Activities derived from development regulations and legislations:

Fishing and provision of fishing permits: Wakiso has a good cross section of a lake and rivers where fisher men draw fish from, however in order to be accepted to fish, one has to be given a fishing permit. There are official permits to allow fisher men to fish certain types and sizes of fish from the lake. The fishmongers in return are employed and hence earn a living. This has a direct impact on local economic development.

'Boda boda' riding and special hire and taxi drivers: this activity was one of the dominant activities in the region. One was allowed to operate an automobile such as a boda boda, a taxi or special hire when one has a clear driving permit issued by Ministry of Works through the computerized driving permit. So such acts and laws necessitate the creation of jobs in the region, thereby bringing about economic growth since the workers are able to access basic needs in life.

Setting up CBO's and NGO's: these organizations need to be registered at the District, Sub county and national levels. There are many NGOs and CBO's operating in Wakiso District i.e. TASO, CARITAS, VAD – Voluntary Action for Development, Save the Children, SOS children's village etc. These organisations have helped to improve on the economic development of the district through provision of bursaries to children to study, provision of health care services, this implies that the organisations contribute to the health of the person and more so contribute to knowledge generation leading to improved literacy levels in the district through their interventions.

Margistrates courts and high courts. These courts exist in the areas of jurisdiction to help maintain law and order and to punish those who commit both civil and criminal offences i.e.

Nabweru court, they handle all cases related to criminal and civil matters. The existence of these courts brings about peace and harmony and justice in society which in the long and short term leads to Local Economic Development.

Transparency and accountability: For transparency and accountability in the District, LED is ensured through;

- Proper guidance and support provided by the Line Ministry and Local Government Finance Commission;
- The Monthly budget Monitoring meetings, these enable the districts, and lower local government in planning, executing and implementing programs;
- The quarterly audit to check on transparency and accountability;
- Timely settlement of salary and accountabilities by the relevant technicians;
- Holding Consultative meetings with lower LGs and Administrative Units and other stakeholders;

3.6.15.2 Activities existing due to the institutional transparency and accountability:

Direct banking of taxes in banks by tax payers to avoid temptations, direct banking by customers brings efficiency in utilizing available scarce resources and avoids bringing temptations to revenue officers who would have been tempted not to bank the funds and use it for their own gainful expenses.

3.6.16 Social development and social capital:

3.6.16.1 Activities existing due to gender equality interventions in the District:

Youth livelihood project: this project exists due to the intervention of government through youth outcries. There are number of organized youth groups engaged in different activities such as poultry, saloons, brick making etc, because of the element of gender inbuilt into the project, the beneficiaries are able to employ themselves.

Basket weaving by organized women groups: these have helped women in acquiring weaving skills and other practical skills such that they are able to earn a reasonable income and are able to meet some of the demands in life such as clothing, feeding, and health services.

3.6.16.2 Civil Society Organization;

There are many activities that have come on board due to the interventions of the civil society organisations in Wakiso District. Civil Society Organisations include, Save the Children, TASO Uganda. These Civil Society Organisations provide bursaries to children who are unable to pay fees and others who are orphans. By going to school, the children shall be able to read and write and shall be able to communicate in society.

3.6.17 Economic Activities existing in Wakiso District because of Culture, education, health, housing and safety

- **Tourist attractions:** Wakiso was blessed to have cultural sites like Naggalabi where the Kabaka of Buganda was crowned. These are manned by people and they earn a living from the activities they undertake in these sites. These tourist sites employ a number of people. Tourism brings about foreign exchange to the district and the country at large.
- **Education institutions:** Wakiso was blessed to have pre primary schools, secondary schools, tertiary schools and Higher education institutions which offer employment opportunities to residents such as teachers, lecturers, cooks, cleaners etc. The existence of education facilities in Wakiso implies that many people in Wakiso are able to read and write and are able to access information on government programs.
- **Health centers;** Wakiso was blessed to have grade II, III and IV health centers and hospitals in the various Sub counties and Municipalities. These provide services to the

people as well as providing employment opportunities. This also implies that the people shall be healthy given the fact that they have adequate medical care.

- **Shrines provide employment opportunities;** there were significant presence of shrines in areas of Busabala, Jinja Kalori, Kyengera Town Council, Kasanje, Katabi Town Council and parts of Wakiso Sub County. One of the positive aspects of these was that they can be explored and developed for cultural tourism. The most profound challenge with shrines was some of their operatives are feared to be involved in human sacrifice.

3.6.17 The Comparative Advantage Wakiso has over the neighbouring districts which lead to Local Economic Development:

a) Wakiso's Strategic location

- The district is located in the Central Region and in the Great Lakes Region. Its strategic location enables it to be a centre of business.
- Has a lot of Trade and improved economies of scale at both wholesale and retail trade. The towns within the district have developed economically; they can serve as whole sale trading shops to the neighboring districts of Kiboga, Hoima and Mpigi etc once proper interventions are made by investors through private public partnerships.
- High Exchange of modern technology and ideas because of numerous people who traverse the region going to Hoima and beyond; because of its strategic location, farmers who traverse to Kampala and to hoima have acquired knowledge and exchange knowledge on farming hence boosting technology.
- The gate way to the City Oil Region of Hoima: it's one of the districts which serve as a gate way to the great oil region. This was looked at as a comparative advantage since people can be accommodated in the good hotels located in the region on their way to the oil city.

b) Centre of Agricultural and livestock Productivity

- **Modern farming (Flowers and Rice);** the district was blessed to have modern farming methods and to a large extent commercial farming. These have created employment opportunities and the products from these farms are feeding many masses in the country.
- **Milk processing plants;** Milk processing plants exist in the district. These offer employment opportunities as well as skills and knowledge to the youths who can in future be engaged in such similar projects.
- **Modern markets for livestock and animal products;** morderm markets exist in Wakiso District. The existing markets serve as sale point of agricultural products as well as livestock. Many people are engaed in such market activities hence derive their source of livelihood from there.

c) Housing Major Reginal and Service Centers

- Ministry zonal offices i.e. lands office for proccesing of land title in Wakiso District. The Ministry of Lands has decentralized some of the services to district level. This is done to bring services more closely to the people. Now land titles can be easily got and this helps to improve service delivery within the district.
- Wakiso has different regional offices of Telcommunication service providers like MTN. This enables smooth running of businesses, improves efficieny and brings about improved economic development.
- There are international facilities like Entebbe International Airport which is a gate way to Uganda. This helps to link Uganda to the rest of the world. The airport also employs a number of people from support staff to proffessionals. By doing so, the workers are able to meet the basic needs in life.
- Regional education center and health services. The district has regional health centre services and tertiary, secondary and primary education services. These have provided

education services to students and children thereby improving knowledge and practice skills to the stakeholders such that they can compete in the labour market.

d) Influence of Key National Infrastructure Projects

- The existence of the Northern Bypass in the district and the construction of Southern Bypass have tremendous positive effects on the district. There is easy movement of goods and services, traffic congestions is reduced and as such goods are moved on time from up to where they originate to their final destinations.
- District link roads with Kakiri, Kiboga up to Hoima, the Oil Region. The availability of a good network of roads that link from one town to another enables smooth movement of products from one place to another within the district. This facilitates improved service delivery and smooth movement of agricultural produces to the markets as well as commodities for both wholesale and retail products.

e) Wakiso the District of living and employment

- According to the population census of 2014, Wakiso District has a population of about 2 million people majority of these people are in the youthful stage and as such they offer a formidable labour force which can make Wakiso District shine from other districts.
- Wakiso has many migrants and hence this could mean that these new comers come with new innovations which add value to the livelihoods of the people in the district.

3.6.17 Potential for enhancing Local Economic Development (LED) in Wakiso District

- Proper physical planning of the area is needed first. Once this is done, it will act as a road map towards LED;
- Government intervention in financing the entity in;
 - The implementation of the physical development plan, once financed, there can be economic growth and development since there will be planned developments, open access roads, utilities etc;
 - Construction of good road networks which can connect the peasantry of the district to the market center so as to increase access to the markets easily ;
 - Construction of social facilities like health and education institutions in all sub counties. For example vocational institutions to equip the youths with practical skills that makes them become job creators that being job seekers;
 - Sensitization and training of people in urban agriculture and introduction of agro processing plants;
 - Encouraging public – private partnerships in order to attract investors in the region;
 - Encouraging communities to set up SACCO's such that government support them with loans at subsidised interest rates;
- Provide serviced land to attract industrialists who will provide employment opportunities for the youth;
- Promote employment centres for small and medium scale industries (Jua cari) which require little investment and land requirement to employ most of the young people in the district
- Improving on the existing markets to set up whole sale shops such that the region becomes a hub to tap revenue from traders from Arua and the other neighbouring districts;
- Promote tourist activities in the district
- Encouraging other banking institutions to invest in the district and provide loans to the people at lower rates. Once banks invest in Wakiso district, they will be able to provide agricultural loans to farmers and mortgage loans and business loans at subsidised interest rates. This will in the long run boost trade and eventually leads to economic growth and development;
- Setting up and designing modern traffic flow management plans and enforcing them, this will improve on traffic flow and hence improved trade;

- Setting up modern parks for taxis and special hires to park, this will enable efficient collection of revenues for the District but at the same time create employment for the people;
- Setting up of Centers of academic excellence with higher institutions of learning with good quality, this will bring about stakeholders to acquire skills, knowledge and do research which can bring about innovations in the district economy;
- Construction of modern markets in places where the local markets are existing, this will enhance local economies of scale since farmers will be able to sell their products;
- Partnerships with investors to construct modern hotels for accommodation and meeting places, this will help to offer accommodation facilities to tourists and business people. In the long run it will create employment opportunities for the people in the district;
- The District has to ensure that there is effective communication of the ICT and fast internet services at school, public places like; tax terminal and market places. This will help the planned town to enhance quick and better communication for effective service delivery but also for traders to know what is in the market with ease.

3.6.18 Conclusion

The Vision 2040 was conceptualised on harnessing strategic opportunities. The identified opportunities included geographical location, trade and abundant labour force. The Vision emphasise transformation of society from peasantry to modern society from low income to middle income country by 2040. At the local level, it is important for Wakiso to harness the strategic opportunities available.

Wakiso's geographical location has its challenges, it has advantages which could be exploited. These include concentrating the population in small area, the majority of who are youth and hence can provide the much needed labour force. Population which may possibly have effective demand and purchasing power and can provide market to industrial products.

Wakiso may not be able to provide enough services without assistance from other development partners given that it can finance only about 5% of her entire budget. In addition, Wakiso does not have much in the district for development and benefitting from rental income.

3.6.19 Interventions to enhance Local Economic Development in Wakiso

Future plans for Wakiso District should emphasis urban Planning and development than rural planning. This is because Wakiso district form a crescent around Kampala a geographical advantage and location which has influenced to a great extent the level development in the district. The urban growth and influence has spilled over in Wakiso affecting development there. The major roads radiating to other areas even to other countries has accelerated urban influence along these roads causing Wakiso to become more urbanized than ever before.

It is important for Wakiso District to partner with other government institutions and attract investment (industrial development) but also market the district to potential investors. Given its strategic location around Kampala, the nearness to Kampala where most of government offices are located, the availability of services which are crucial to industrial establishment (water, electricity, etc.), the availability of a reasonable market of Wakiso itself, Kampala and some parts of Mukono and Luwero can attract investment because of nearness to market.

The entrepreneurship spirit was higher in youth 90% of whom preferred to have own business. This enterprising spirit should be exploited further by the district so as to have more investments especially for the youth. Access to capital, training of young entrepreneurs could be some of the programmes to promote economic development. Creation of employment centres like industrial parks for small scale businesses which are well serviced could be some interventions to improve employment and foster development.

Given the changing structure of development, agriculture was likely to become less significant in Wakiso especially where large expanses of land is required. It is therefore better to encourage high tech agricultural practices, where small plots can optimally be utilized to produce high yields and the keeping high yielding animals. High tech agriculture could include the use of green house farming, poultry, rabbit keeping, zero grazing and horticulture. Wetlands have been conserved but cannot be maintained in their natural form especially in urban areas. Therefore, these could be modified by planning pastures to support dairy and fish farming. This will enhance the desired sustainable use of wetlands.

7.0 Report on Housing and settlement patterns in Wakiso District

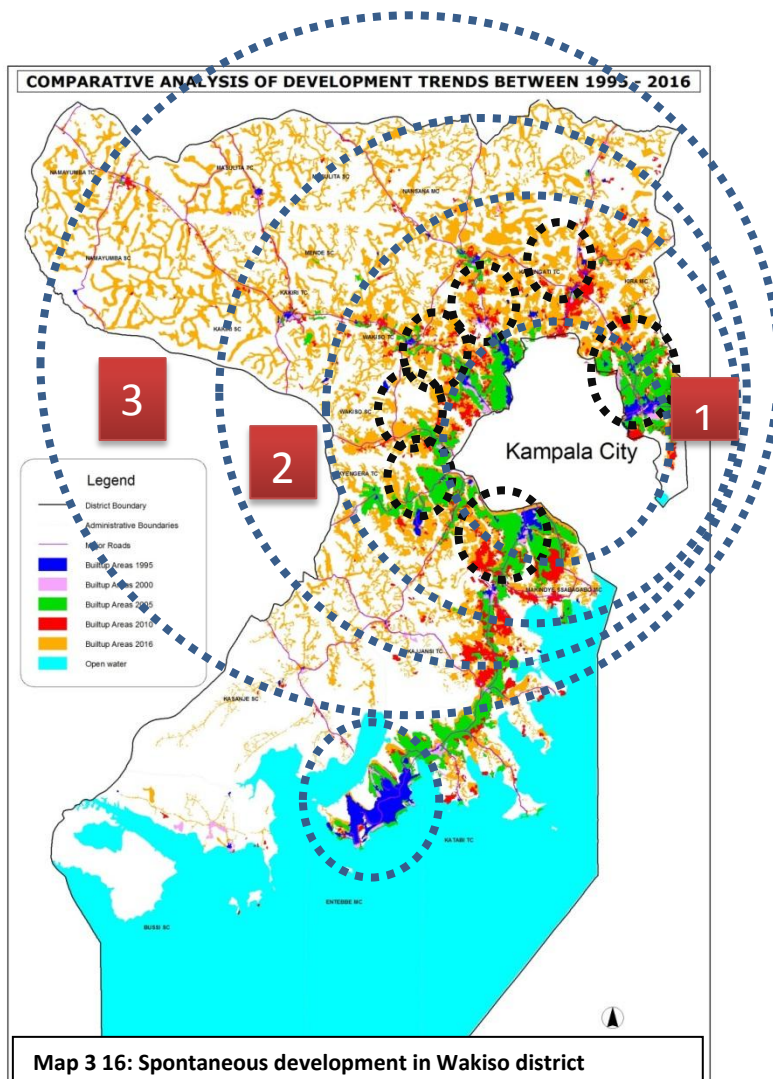
7.1 Introduction

Housing is one of the basic human rights and is one of the pillars of the social growth index capacity of a community to provide for its people's basic needs in life. It includes among others; accessibility to adequate and affordable housing with ancillary basic utilities. There is a relationship between a household socio-economic status and housing standards. It is essential for the wellbeing of all mankind and a necessity that influences one's welfare, health, economic productivity, social attitude and the nature of one's residence is a proxy determinant to his/her social status and standard of living. Poor housing condition adversely affects the health of the household members and poor hygiene and sanitation arising from poor housing condition is a key to poor health and poverty.

There is a significant contribution of urban areas and the housing sector in particular to economic development and poverty reduction goals in Uganda (UN-HABITAT Uganda Urban Housing Sector Profile 2010). Effective 1992, urban areas have experienced strong growth and poverty reduction. The depth and severity of poverty also declined. Non-income welfare measures have improved including the ownership of assets and the quality of housing. UBOS Population and Housing Census report 2014 provided the detailed household statistics for Wakiso district. The consultant further carried out a survey, analysis of district planning data and field observation on socio-economic conditions to validate and update UBOS Census data.

7.2 Wakiso District Housing Status and Development Trends

The 1995 constitution under the general social and economic objectives guarantees the fulfillment of rights of the Ugandan population to enjoying rights and access to decent shelter among others. This is to be attained through partnership between government, private sector, cooperatives and individuals. The role of government is to establish a conducive environment for the growth of the housing sector through provision of serviced land with access roads,



electricity, water and sewage network. Also the government was to ensure that the cost of building materials was affordable to all people of all walks of life. However, government's performance in this respect was inadequate. This has made housing provisioning especially for low income class very costly.

Government has the responsibility, through the Housing finance Bank and National Housing and Construction Corporation, leverage access to affordable housing financing. Unfortunately, this has mostly benefited the elite due to the inability of the majority low income earners to provide collateral to enable them access mortgage to support housing provision. As a result, the overall housing situation is inadequate in the entire country.

The consultant noted that the housing pattern and general trend of development can be classified following three segments (Map3.16):

- Ring 1; the Immediate settlements neighboring and forming a crescent outside the Kampala City boundary was characterised by the following;
 - Incorporates most of the Municipalities of Kira, Makindye Ssababagabo, Kyengera and Nansana
- High density residential development, concentrating almost 37% of the district population in less than 9% of the land mass.
- Tenements/Mizigo (two roomed units) accounting for 20.2% (HH Survey) the most common form of housing generally occupied generally by the low income class.
- Their high prevalence was driven by the need by the majority who are poor to access affordable shelter within close proximity to employment areas and basic services at reduced transport costs.
- Driven by the absence of basic housing in the City of Kampala and surrounding areas.
- Population in this ring does not control and enjoy the vast bulk of the District affluent environment and its facilities
- Very limited services
- Environmental degradation was common in such unplanned environments.
- Ring 2; Urban Peripheral housing characterised by;
 - Appeared like urban extensions, translating into Urban Peripheral Towns
 - Include areas extending south-west towards Entebbe (with urban extension developing from Entebbe north east towards Kampala), Masulita, Namayumba, Mende Kalema, Kasanje and Bussi and to the east towards Mukono.
- Housing type was middle income to high income with a mix of high standard single detached houses on sizable plots (generally quarter acre to one eighth of an acre)
- A large bulk of new single detached houses and a significant proportion of new apartments being developed.
- Exclusive suburbs of Kajansi, Zana, Kireka and Lubowa, Kakungulu Estates, Entebbe, Kira, Wakiso had typical high standard single detached houses on very large plots (one acre, half acre plots to quarter acre plots);
- Limited access to services
- Ring 3; Rural Periphery housing settlements characterised by;
 - Mainly low density residentials in areas such as Kakiri, Namayumba and Masulita.
 - The housing pattern was largely clustered with a lot of rural characteristics with some individual large scale farms and some institutions dotted around the landscape.
 - The area was slowly gaining and entrenching into the urban foot print
 - Real Estate Developers are encouraging urban sprawl and significantly extending the urban limits into the rural landscape.

7.3 Wakiso District Housing Characteristics

The quality of housing is a proxy indicator of one's socio-economic status, alongside others. The bigger proportion of population in Wakiso District was urban, thus demand for housing was high and as it is the case in most developing countries. Urbanisation and housing are positively related. As the urban society of the district extends, the demand for housing which has not been effectively satisfied has escalated to unprecedented levels. This has led to an improvising with the provision of housing which in one way has compromised the quality of housing by increasing the percentage of slum dwellers (haphazardly developed) majority of who have no

property rights. Such informal settlements lack facilities like safe water, proper sanitation and sewerage services and inappropriate accessiibility. This has forced the residents to endure dreadful and unhygienic living conditions and pausing serious risk to health.

In Wakiso District, the average Household size was 4 persons per house. The average size of adult females per Household was 1.4 while that of adult males was slightly lower at 1.2. The average size of girls per Household was 1.2 while that of boys was estimated at 1.3 boys per Household. Generally, the distribution of population at household level in Wakiso District shows that the average household size was 4 persons in each sub county apart from Bussi whose household size was at 3. On the other hand Masulita sub-county, Masulita Town Council Mende Sub-County, Nsangi Sub-County, Wakiso Sub-County, Wakiso Town council and Nansana Municipality had the biggest average household size of 4.3. This has a bearing on the average size of a housing unit in the area which was mainly two roomed houses.

7.4 Housing typology and standards for Wakiso District

a) Low density – high income

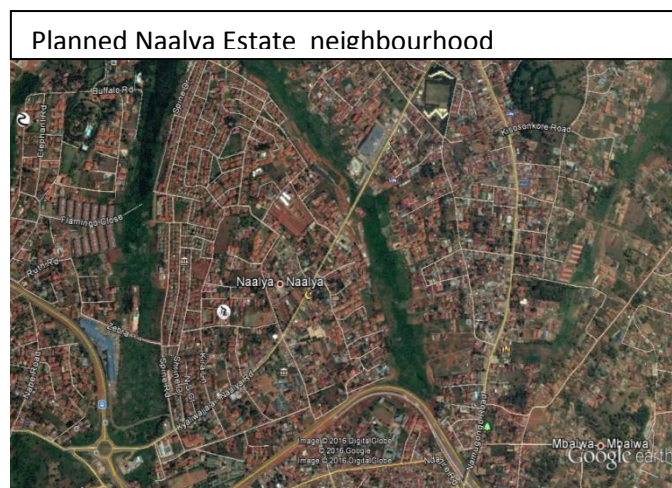
The area was composed of neighborhoods of varying standard and quality including:




- Exclusive suburbs beyond Munyonyo, Kajansi, Zana, Kireka, Lubowa, Kakungulu Estates, Entebbe, Kira, and Wakiso with high standard single detached houses on very large plots (one acre, half acre plots to quarter acre plots);
- Entebbe town was the main centre with distinct structured urban elements (housing, employment, public places, services, employment opportunities anchored by the airport and government offices, unique attractions and more) but still of very low density development and low intensity of activity. Entebbe serves in many respects as a “model” town in the district, the metropolitan area and the entire country.



b) Medium density

Middle class neighborhoods are located majorly in the first and second rings in the areas of Kira, Kasangati-Gayaza, etc. with a mix of reasonable to high standard single detached houses located on reasonably sized plots (generally quarter acre to one eighth of an acre). A large bulk of new single detached houses and a significant proportion of new apartments are being constructed in Nalya in Kira Municipality and in the entire district.



		
<i>Low density in Kira parish, periphery, real estate developers</i>	<i>Medium density in Buloba</i>	<i>Typical high density in Bweyogerere/Kireka/Kasokoso</i>

The area also had mixed development neighborhoods with a wide range of single and semi-detached houses of varying standard (from inadequate to reasonable) on plots of varying size, with a scattered presence of apartments and hostels.

c) **Detached**

These types of residential houses were dominated by Bungalow at 63.2% which was slightly below the national average (67%) of the households who resided in detached dwelling units. Bungalows on the other hand were mainly found in Makindye Ssabagabo Municipality (16.1%), Wakiso Town Council (13.6%), Kira Municipality (10.9%) and Entebbe Municipality. Single detached houses however, given the wide variety of sizes, standards and locations. They are occupied by a wide range of populations with differing sizes.

d) **Semi - detached and flats/apartments**

Whilst many in the Lower Middle and Upper Middle categories “choose” to live in rented accommodation, often of basic or inadequate standard, they generally ensure minimum spatial standards and pay the price to avoid excessive residential overcrowding. Semi - detached households accounted for (13.9%) and flats/apartments with (2.3%). The national average of Households living in in semidetached units was 12 percent. Kira Municipality had the highest percentage of Apartments (51.7%). Semi-detached houses are similarly generally occupied by low income household populations with a small minority of high income categories. Conversely, apartments are generally occupied by high class Household.

e) **High density – Low income housing**

The survey identified that Tenements/Mizigo (two roomed units) accounted for (20.2%). This was the most common form of housing generally occupied by Households in the lowest, subsistence or below, category with a sizeable minority in the low category and a small minority of higher categories. Areas close to the city and the key urban centres in the District of Wakiso are prone to this kind of housing typology. Their high prevalence was driven by the demand by the majority poor for minimal shelter within close proximity to employment opportunities and basic services at reduced transport costs.

This category constituted basic housing in informal settlements with those in the Inner City progressively densifying and developing into slums. Most of the working poor were housed in such large slums, exclusively *Muzigo*, if not controlled. This population does not control and enjoy the vast bulk of the District affluent environment and its facilities. Access to employment, opportunities and services remains limited to pedestrian access given income and cost




constraints. Major traffic and transport problems are endemic throughout despite the introduction of some Public Transport and possibly even the introduction of some mass transit.

Environmental degradation was common in such unplanned environments given the limited sewage coverage and the scale of human settlement in the wetlands causing a failure to filter the urban waste to become cesspools. Most, if not all, groundwater sources within these built areas were contaminated and unusable.

7.5 Settlement patterns and development trends in Wakiso

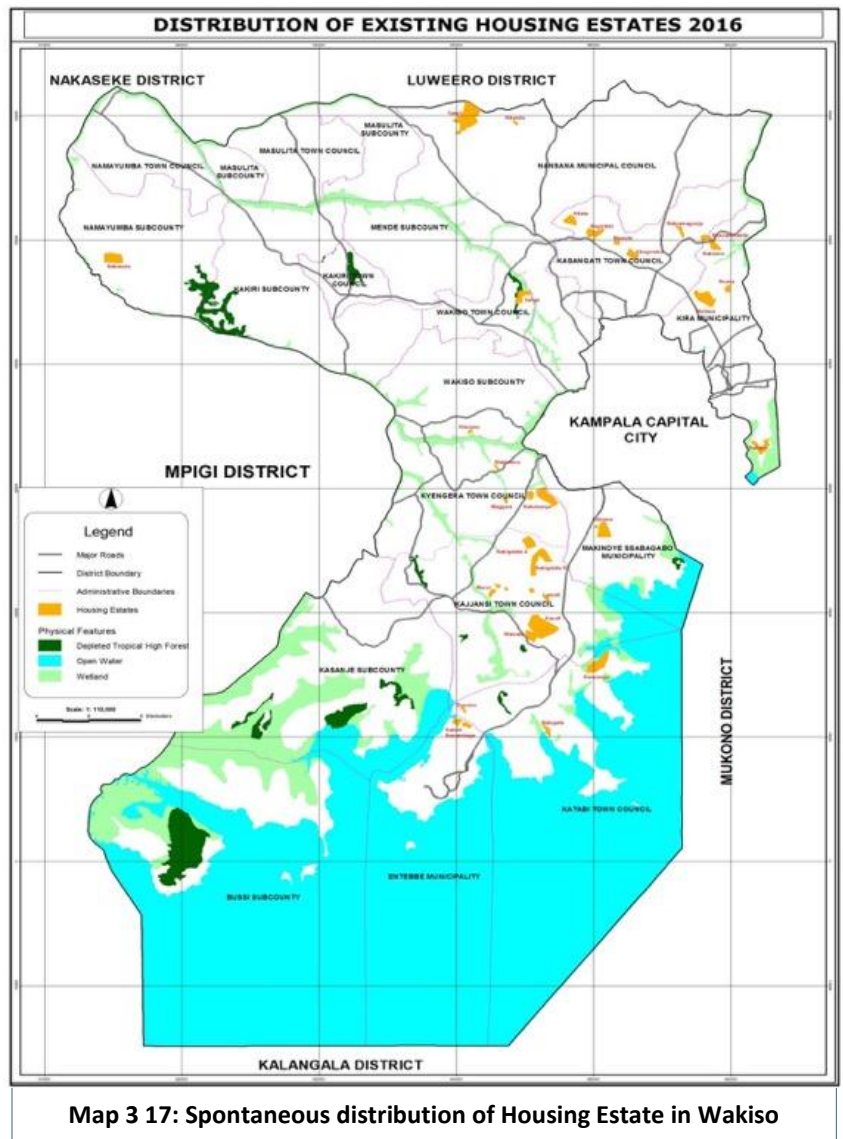
The survey and analysis in the District indicated that most settlements follow a ribbon/linear development pattern especially radiating and following the major international trunk roads, National trunk roads or highways, primary distributor and secondary motorable roads. However, it was evident of the spontaneous and unplanned infill of the areas between these roads. Other settlements were generally scattered with no proper access except for foot paths and dead end roads.

The more organized settlements could be found in areas of Entebbe (which had been planned during colonial times), Lubowa in Kajjansi Town Council and Naalya in Kira Municipal Council. Plots in these areas were visibly organised with proper access roads. The latter are housing estates of National Housing and Construction Company Limited a government of Uganda real estate developer. The rest of the district had settlements which grow organically and in some cases, looked disorganised and/or uphazard like in Bweyogerere.

		
<p>Low density in Kira parish – private real estate driven</p>	<p>Medium density in Buloba</p>	<p>Typical high density in Bweyogerere</p>

The Consultant also noted the significant role played by the Real Estate Developers in encouraging urban sprawl and these have significantly stretched the defined urban limits (Map3.17). The need has sprung from the demand for housing in the city of Kampala and surrounding areas. In Wakiso, Real Estate developmnets constitute primarily single detached houses in response to the demand of the middle classes for basic and/or improved housing. Apartments are also springing up at a rapid pace in assorted locations (including in the middle of slums) but remain a relatively small segment of the housing supply and are for rental.

The private sector/real estate developers identify land in the district, buy it from the private owners and subdivide it using their own defined standards. These purchased and subdivided pieces of land are scattered in various parts of the district affecting systematic and organised planning intervention by the district. In fact Real Estate developers are driving the trend of development in Wakiso District where the district may have very little role if not in the general outlook of the new developments other than just approving their building plans. This situation needs to be arrested before it becomes unmanageable.



Map 3 17: Spontaneous distribution of Housing Estate in Wakiso

Over the last few years, high land values in the adjoining areas of Wakiso have precipitated redevelopment of the area with some prime parcels of land still undeveloped. The commercial function also tends to expand in a circular manner in all directions. Commercial functions have also tended to move into transportation nodes, manifesting in the form of satellite towns of the district with an encroachment into the residential neighbourhood.

There was thrust of growth in the East (Bweyogerere), South West (Kajjansi), North West (Wakiso) and towards the Western (Kyengera) of the district. This has further been encouraged by the availability and easily transferable Mailo Land in the peri-urban areas. The Eastern and Southern parts of the district seem to be the major recipient of urban investment. The South Western part was gradually picking up as low density residential neighbourhood. The industrial development has also picked up in Sanga along Semuto road and Kiryamuli along Bombo Road.

Much as developments may vary within the district, there was a general consensus that different pieces of land may require varying levels of input to develop. Further, some areas accommodating development often result in ecological instability, which was against the principles of sustainable development.

7.6 Wakiso District Housing and Service Challenge

The survey statistics above indicated significant shortage of residential accommodation within the district. The survey indicated the following;

- i. Significant proportions of the population live in one and/or two roomed Muzigo accommodations without the required adequate facilities,
- ii. Significant population lives in rented residential houses,
- iii. The main problems affecting the housing situation include high rental cost in town, soaring prices of building/construction materials and lack of security of land tenure,
- iv. Absence of detailed physical development plan to guide organized housing development,
- v. There was vivid absence of enforcement of compliance to standards and regulations,
- vi. The soaring cost of land due to speculation and in-migration causing fragmentation into unacceptable plot sizes, giving rise to poor housing construction.

UN Habitat highlights the inefficient way within which available land can develop. The influence of the regulatory framework of planning regulations and standards directly influence this, though the creative skills of planners and designers which is also important. The efficiency of future land developments was influenced by the following official standards;

- The proportion of land available for private use (residential, commercial or industrial);
- The proportion of land allocated for communal facilities, such as schools, hospitals and places of worship;
- Minimum and average plot sizes;
- The widths of roads, rights of way, etc., especially in residential areas;
- Accessibility costs of design materials;
- Utilities;
- Landscaping; and
- Ancillary uses.

7.7 Structural impediments to Housing Development in Wakiso

There was lack of local housing strategies and the defective housing property market was responsible for the current challenges (UN Habitat). This was as a result of market failure as a result of a combination of factors, primarily:

- The lack of appropriate, available land as a result of the dominant land Tenure System and the ensuing duality in property rights which causes tenure uncertainty and insecurity;
- The overwhelming scale of rural in-migration lacking realistic alternatives for urban life in the district and the country at large;
- The depths of poverty in the metropolitan area where Wakiso is located and the consequent low level of household income, severely compounded by the weight of expenditure on services (education and transportation), effectively reducing housing expenditure capacity by at least one-third of normative levels;
- The absence of mortgage financing on any effective scale - whilst mortgage financing does exist, its scale was marginal. Its capital base was very limited, its terms restrictive (particularly given the shortcomings of the Tenure System) and its rates exorbitant;
- The debilitating effects of inflation on savings, further distancing the average Middle and Working Class family from home ownership;
- The effective absence of appropriate housing alternatives, specifically inner-city condominiums (sectional title apartments), on any scale approaching needs;
- The incapacity of the formal sector, both developers and contractors, to build on any scale approaching needs;
- The extensive infrastructural gaps which dis-intensifies investors.
- The high levels of corruption, ineptitude, bureaucracy and political mis-direction

7.8 Resolution of the structural issues

The resolution of the above structural challenges was required to allow best planning, effective implementation and determined enforcement to contribute to the resolution of the housing backlog and future housing needs. The requirements include;

- The construction industry in the district must be revamped by developing the formal sector to match the current and future scale of housing needs:
- Close the current gap for reasonable standard housing over the coming decade by doubling the rate of construction of non-*Muzigo* housing to be largely provided by the formal sector.
- Urgent resolution of the primary shortfalls in the tenure system and the bottlenecks in the management of land registration; resolution of Dual Ownership and Tenure Insecurity - in a manner that enables, indeed encourages, maintenance, upgrading and/or development and/or redevelopment of the specific property; successful development and implementation of the LIS under development; effective on-the ground land regularisation; definition, statutory approval and implementation of an effective, economic Land Acquisition System for infrastructure and public service provision;

7.9 District Population Targets and Housing Requirements for Wakiso

the consultant project population for Wakiso basing on three scenarios; scenario 1 was based on the growth rate of 6.6% (as per the 2014 NHPC), scenario 2 was base on the national urban population growth rate of 3.3 that is if Wakiso district was to grow at the same rate with other urbanizing area in the country. The third scenario was taken as the mid point between the current Wakiso growth rate and the national urban growth rates. This was put at 5% with assumptions that serious interventions will upheld to control the current growth rate which was abnormal. The projected population for Wakiso for 20140 for the three scenarios is indicated in table 3.13.

Extrapolation of current population growth trends indicates that the district will house some 10,523,310 persons by 2040 (current growth rate of 6.6%). To accommodate the additional population resulting from in-migration and other external factors, the Consultant recommends that planning for 2040 be based on a target population of 7,014,612 persons (based on best case scenario with the growth rate of 5%). The consultant made projections of housing demand for the three mentioned scenarios between the year 2017 -2040 and found out that for scenario 1, 2 and 3 (population targets and housing requirements) are presented in the tables 3.14 – table 3.17.

Table 3.14: District Population projection

Growth Assumption	2017	2022	2027	2032	2037	2040
1.Business as usual - 6.6%	2,419,582	3,333,630	4,584,716	6,311,003	8,687,292	11,958,328
2.Ideal scenario - 3.3%	2,201,760	2,589,832	3,046,303	3,583,231	4,214,795	4,957,675
3.Best case scenario - 5%	2,312,261	2,951,096	3,766,430	4,807,025	6,135,117	7,830,137

Table 3.15: Housing Requirements Projections for scenario one

Year	Population projection	Avarage HH Size	Projected Number of households	Projected Housing demand (units)
2017	2,312,261	3.9	592,887	282,327
2022	2,951,096	3.9	756,691	360,329
2027	3,766,430	3.9	965,751	459,881
2032	4,807,025	3.9	1,232,570	586,930
2037	6,135,117	3.9	1,573,107	749,098
2042	7,830,137	3.9	2,007,727	956,060

Table 3.16 Housing Requirements Projections for scenario two

Year	Population projection	Avarage HH Size	Projected Number of households	Projected Housing demand (Units)
2017	2,201,760	3.9	564,554	268,835
2022	2,589,832	3.9	664,059	316,218
2027	3,046,303	3.9	781,103	371,954
2032	3,583,231	3.9	918,777	437,513
2037	4,214,795	3.9	1,080,717	514,627
2040	4,957,675	3.9	1,271,199	605,333

Table 3.17: Housing Requirements projections for scenario three

Year	Population projection	Avarage HH Size	Projected Number of households	Projected Housing demand (units)
2017	2,312,261	3.9	592,887	282,327
2022	2,951,096	3.9	756,691	360,329
2027	3,766,430	3.9	965,751	459,881
2032	4,807,025	3.9	1,232,570	586,930
2037	6,135,117	3.9	1,573,107	749,098
2040	7,830,137	3.9	2,007,727	956,060

The projections above indicate that in 2017, Wakiso was having a housing stock of 295,430 to accomodate 2, 312,261 people. If the consultant considers the bast case scenario with a growth rate of 5%, in 2040, Wakiso district will need 956,060 houses to accomodate 7, 830,137 people. This means that currently Wakiso District has a housing deficit of 660,630.

The proposed residential densities for Wakiso district are 8 persons per acre on average, assuming measures to reduce in-migration are enforced. These densities will ensure availability of adequate land and space for the expected population with a deficit of only 94,480 acres. The implication is that the projected population figure will not be accommodated within the district without rationalization of the urban structure and densification of development, both residential and commercial.

Land in any given location is a unique asset and land within any given area is limited. As growth occurs and land is developed the available supply of vacant land declines and its value increases. As a result, the feasibility of acquiring land for public use in a particular location or area declines in proportion to the scale of growth and the cost increases exponentially. As such, all land requirements are defined to meet long term demand.

The scale of residential areas is projected to grow at a significantly lower rate than that of the population. Important to note is that there is need to significantly increase land for formal employment (particularly industry) and public use (particularly public open space). There is also an urgent need to ensure the adequate supply of land for infrastructure, public facilities and public open space to meet the requirements of the long term demand and not merely the short to medium term requirements to meet demand to the planning horizon 2040.

7.10 Key Players in housing Sector

Ministry of Lands, Housing and Urban Development is responsible for providing policy direction, national standards and coordination on all matters concerning land, housing and urban development. Ministry of Works and Transport is responsible for promoting standards in the construction industry and is charged with the responsibility to plan, develop and maintain efficient and effective transport infrastructure. The same Ministry is also responsible for testing materials and implementation of the Building Control Act which is meant to regulate the building construction activities and ensure that safety standards are met.

Local authorities; fully responsible for the complicated process of land use management, and physical planning for developments in their areas, thus affecting the way housing is supplied within their respective areas of jurisdiction. The lack of information on existing ownership patterns and land values remain major barriers to effective local planning. While planning and standard setting powers have been devolved to local government, they lack the financial and technical capacity to build up information systems on land, and until these needs are met, planning standards at the local level are unlikely to be fully or effectively implemented.

7.11 Community and traditional actors in urban housing service delivery

Community and traditional actors are bound together with local administration and local council's charged with responsibilities to plan for service delivery. Whilst land and housing responsibilities have been devolved to local government, management of land by private agencies such as the Buganda Land Board in Wakiso, still requires the cooperative engagement of district and national-level government. Community engagement occurs in the form of budget conferences that are held at the village and district levels to discuss pressing needs and prioritize investments. Although housing is not explicit in the list of services to be provided by local governments, utilities and others services are discussed as possible targets for investment; water supply, drainage, road construction and maintenance, street lighting and solid waste collection all relate to and support the comprehensive development of local housing by the private sector and individual residents; infrastructure investment decisions are based on administrative units at the village and parish level, this system can help to create a strong sense of community participation and encourages collective action in the housing sector. The importance of linking service lobbying and local community development was observed in the increasing activity of civil society actors in the planning and development process in urban centers. Non-governmental organs, and a number of religious and Community Based Organizations (CBOs), have played significant roles in various aspects of housing, including improved water supply, drainage systems, roads and housing micro-finance for households.

7.12 Other Players and Alternative Sources of Financing for Housing

7.12.1 Household Savings

For many of Uganda's urban households, financing home construction is a complex process that can often take a number of years. Housing finance initiatives in Uganda are informal, arising out of household savings and from rental income requiring tenants to pay months in advance (Mukiibi 2008) such sources hardly provide enough funds for decent housing. The private sector involved in provision of housing cannot match the pace of demand for housing due to the intermittent financial resources, thus the scale of provision of housing units was not commensurate to demand. Furthermore, housing supplied by private developers with limited resources are not usually to the level of decent output. So Provision of decent housing was compromised by the low income of intended tenants who seek solace in what they can afford. Decent housing on the market was skewed to higher income earners; low income earners have always resorted to what they can afford.

7.12.2 The Private Sector Housing Financing

Formal sources of finance are gradually expanding, but at the national level, housing finance structures remain weak. The country lacks a unified housing mortgage system that is accessible to the majority of citizens, especially those in the low income category. This condition does not exclude Wakiso district. It should be noted that the private sector is interested in the category which can meet their profitable rates which majority of residents in Wakiso can not afford.

7.12.3 Housing Finance Bank of Uganda and Development Finance Company of Uganda

The Housing Finance Bank of Uganda is the leading mortgage financing bank in the country. In order to be eligible to submit a mortgage application with the Housing Finance Bank of Uganda, one must have an active account and a guaranteed cash flow for a period of at least six months, including proof of formal employment. Once these conditions are met, the Bank offers two types of mortgage financing; either assists in buying a finished house or lends the funds necessary for home completion.

The challenge is the prerequisites for mortgage lending requiring certified copies of land titles and photographs of the planned house which majority of the people in the planning area cant

afford. The difficulty in providing formal proof of tenure, and, to a lesser extent, the photographic requirement, further complicates the mortgage application process for lower-middle income urban residents in Wakiso district.

UN Habitat indicates that the two banks have limited capital to serve the increasing demand for housing development in urban areas. They lend conservatively and only with strong backing through government treasury bills from the central bank. The two are city centre-based and do not provide specialised services for housing development targeted towards slum dwellers who are emerging in Wakiso and in the rural areas or at the urban fringes. Accessing their services requires that one possess formal land titles or other collateral needed to guarantee loans or credit services, both of which the majority of households in Wakiso lack. Furthermore, the building must be deemed to have full services, be constructed of permanent materials and have local authority approval yet the rate of informality in Wakiso is high.

To obtain a mortgage loan from Development Finance Company of Uganda, applicants need to have an account for a minimum period of six months and the account cash flow must prove the client's ability to pay the mortgage loan.

7.12.4 Housing Initiatives by Real Estate Developers

The housing market that has been fostered by the 2001 law demonstrated a different business model for housing provision than what had hitherto been employed by national and municipal governments. As a consequence, many private companies and individuals have invested in housing, heating up the land market and contributing to urban sprawl as agricultural land at the peripheries of the district is being transformed into housing estates. Real estate developers are active in meeting the needs of middle and high-income households, though there was a lack of data on the proportion of the total housing stock which they contribute. Major players in the housing sector include the following Cana Sites, Akright, Jomayi, East Land Agency, Sema properties among others.

The operators face challenges of significant financial handicaps. Lack of transparency over property pricing and local planning in the metropolitan area is cited as a barrier to creating growing a sustainable housing construction business. Established developers argue that the current housing construction boom has encouraged many inexperienced real estate developers to commit huge financial resources to the sector. There are concerns among operators over how the housing construction sector will maintain current rates of growth. Insofar as the currently active developers are committing funds in the sector, they have only generated housing for the middle and high income groups and excluded poor communities, all of whom are in dire need of housing, and represent of the majority of the market.

The other disadvantage of private real estate development was that companies are often competing for land directly with the poor. Real estate developers, especially individuals, are partly responsible for forced evictions that displace communities and destroy livelihoods. They are also often outside the administrative boundaries of urban areas where land was cheaper. As such, they are exempt from property taxes and other charges that would otherwise ensure that more affluent groups contribute to the costs of urban management and the provision and maintenance of essential infrastructure.

The spatial withdrawal of middle and upper income groups from the urban community enables them to enjoy the benefits of urban life without contributing to the costs, as a result of which urban areas decline and further withdrawal is accelerated. Such processes present a challenge to both local administrative systems and national infrastructure providers.

Utilities providers such as the National Water and Sewerage Corporation are increasingly frustrated by the private development of un-surveyed lands on the urban periphery, as these compounds are expensive to service and cannot be included in long-term planning.

7.12.5 Non-Governmental Organisations

There are approximately 8000 non-governmental organisations (NGOs) active in Uganda and most of these are engaged in some form of community development and slum upgrading activities. In Wakiso, a number of church organisations and related institutions are involved in supporting slum. Major providers of formal financial services include but not limited to the following

- **Local Banking Institutions**
 - Centenary Bank Housing Finance Bank
 - National Bank of Commerce
 - Diamond Trust Bank Uganda Ltd.
 - Orient Bank
 - Tropical Africa Bank Ltd.
- **Foreign Banking Institutions**
 - Bank of Africa
 - Bank of Baroda Ltd.
 - Barclays Bank Ltd.
 - Cairo International Bank
 - Citibank Ltd.
 - Kenya Commercial Bank

7.12.6 International Organisations

A number of international organisations (IOs) and donor agencies are involved at different levels of development in the housing development process. Those that are grounded in different areas of housing in Uganda, include; UN-HABITAT, USAID, the UK Department for International Development (DFID) and others.

7.13 Need for Government Intervention

If the housing industry was to develop in a sustainable and meaningful manner, the government must spearhead the construction of low-cost housing option either through partnership with development partners or giving incentives to the private sector in the housing industry. One thing that must be emphasised though is that all initiatives must be undertaken with full participation and involvement of the beneficiaries.

Government initiative to provide conducive environment to facilitate the growth of suitable, affordable housing has not come to fruition. While not minimising the social aspect of housing and public intervention case, it is important to understand what the private sector can do on its own to satisfy housing demand, in particular to extend affordable and decent housing to low income earners. Housing's public good nature, just like infrastructure, and its universal reach was good ground to warrant government full intervention since housing transcends from being just a social welfare problem to an economic growth opportunity. Government is yet to recognize housing as a viable segment that can contribute to economic growth.

7.8.1 The Need for Government policy and strategies on housing

Policy and strategies on housing are embodied in different sectoral laws, regulations and policies. There was a clear gap in terms of policy formulation between 1971 and 1980 due to the nature of governments during that period. However, the laws and regulations passed after 1980 indicate renewed interest on the part of government to respond to the potential role of the housing sector in social and economic development. One of the critical issues is the need to formulate an overarching housing policy that is based on current and projected needs and the resources available to public, private and community based sectors within a redefined coordination framework.

Any new policy will have to build on the 1992 housing strategy and the Draft Housing Policy of 2005 in order to address the issues of decentralized implementation mandates. Although there has not been an evaluation of the enabling strategy, the overall evaluation emerging from the sector profile indicates that the strategy to promote home ownership has largely failed to guide

proper housing development and promote equitable access to housing by all social groups, particularly the urban poor including those in Wakiso District.

7.10 Interventions on housing needs for Wakiso district

The objective of the plan in the housing and service sectors is to address the emerging trends and challenges by putting in place policies and tools (physical development plan) for the district to address the above gaps and challenges. Among the proposals raised by the household respondents were the following;

- i. There urgent need for planned and serviced land to facilitate and attract investment in the key activities supportive to the housing sector.
- ii. Provision of appropriate housing solutions at the various levels – to avoid the expansion of existing housing types; to enable upwards socioeconomic mobility by enabling home-ownership; and to ensure minimum health standards by enforcing minimum housing standards
- iii. Mortgage financing on any effective scale and at affordable rates
- iv. Need for improvement of the roads in the district
- v. Need for standards and control measures to regulate building materials use
- vi. Plan and improve infrastructure and services (electricity, health services)
- vii. Promote self-help policies as opposed to policies that advocate for demolition of slums. This would enable low income earners build at their own pace as per their income levels. This would help gradual upgrading of informal settlements in the district.
- viii. Review of existing land policies to eliminate the inconsistencies arising out of multiple land tenure system.
- ix. Government to change its perception of housing as a service sector, to a viable economic entity contributing to the nation's economic growth because of the trickle down multiplier effect.
- x. Sound and conducive policies that support the private sector to increase the supply of low-cost decent and affordable rental accommodation.
- xi.

To cater for the future housing requirements there is a need for a fundamental shift in the housing typology from current practice. The recommended strategies in this endeavor include the following:

b). Densification and upgrading of the existing housing stock

One of the key strategies will be the densification and upgrading of the existing housing stock, requiring the following:

- Densification of existing low density plots, medium density, reasonable and high standard single and semi-detached house plots by subdivision and/or addition of residential units on the plot.
- Densification by redevelopment (town-houses, row-houses, apartments) and/or upgrade (rehabilitation, extension, addition of second and third floors).
- Providing and/or upgrading infrastructure (water, sewage, electricity, roads, lighting, etc.) to meet the current and future demands;
- Enforcement with appropriate local taxation, construction licensing and utility connection fees;
- By redevelopment with row houses, apartments and/or upgrade by extension, addition of second and third floors).

c). Basic Shelter

Large sections of the population within the immediate ring after Kampala are housed in Muzigo which provide inadequate and most often inappropriate for human habitation.

The primary goal of the District PDP is to enable access to basic housing to the bulk of the district's population. The intervention is to provide the following;

- Development of new and upgrading of existing multi-unit residential and hostels
- Development of new improved basic shelter solutions to provide alternative accommodation for slum Muzigo residents by providing alternative basic shelter designs

and construction techniques, free prototype designs and professional direction for construction and provision of future expansion and upgrade.

- Development of new housing and site & service projects to grant basic interim shelter with expansion and upgrade options for owner-occupants primarily in outer suburbs, peripheral and new towns but also utilising infill and redevelopment reserves within the Inner City
- Redevelopment of existing *Muzigo* and sSlums through systematic, staged neighbourhood redevelopment (primarily apartments and/or mixed use);
- Relocation of low valued-added economic activities (produce markets, workshops, labour intensive industry, etc.) to more peripheral locations;
- Development of alternative affordable low-cost housing adjacent or near to relocated employment;
- Multi-unit apartment blocks ranging from high and reasonable standard, penthouses and duplexes for upper end (High and Upper Middle class) segments;
- Provision of minimum basic standard, including unfinished shells of limited size, single or twin blocks with predesigned improvement possibilities including compulsory laying of foundations to enable future unit expansion) for lower range market segments (Working Class);
- Small apartment complexes on medium size plots in the Outer Suburbs and Peripheral Towns and Inner City redevelopment projects;
- Larger complexes, integrated with Town-houses, including local services and amenities²⁴, on appropriate residual Inner City land reserves and/or redevelopment projects, in the Peripheral Towns and the New Towns;
- Multi-unit Town-house Complexes
- Multi-unit Row-houses
- Higher density Single and Semi-detached Houses

d) Enabling

To ensure the adequate supply of developable land on the scale indicated above will require, *inter alia*, the following intervention;

- i. Resolution of Land Tenure system
- ii. Land Regularisation
- iii. Systematic integrated planning for Infrastructural Development, with emphasis on Infrastructural Corridors to limit the scale of requisite and to pool resources for land acquisition
- iv. Preparation and implantation of a “Compact” for the planning, management and development of all Public Lands (Uganda Lands Commission, Land Boards including Buganda Land Board Kampala City and other Kampala Metropolitan Area Local Authorities which includes Wakiso District);
- v. Introduction and implementation of an effective, economic Land Acquisition System for Public Projects (MoLH&UD);
- vi. Introduction and implementation of Land Readjustment and/or Land Swap mechanisms to provide access to essential land required to enable upgrading and redevelopment including infrastructure and public facilities;
- vii. Systematic Land Acquisition, registration and protection of acquired land;
- viii. Protection of public lands; demarcation (where possible with trees), systematic enforcement;

8. Report on Social Services and Facilities

8.1 Introduction

This section presents the Consultants analysis of the situation and recommendations for the establishment and distribution of social services and facilities, land allocation standards and requirements for services in the following facilities:

- i). Religious;
- ii). Education;
- iii). Health;
- iv). Sports and Recreation;
- v). Markets;
- vi). Community Services and Facilities;
- vii). Public Open Space;
- viii). Emergency Services.

There are various social services provided by different actors in the planning area. These ranged from health, educational, religious, among others. The distribution of these facilities has been analysed at administrative level to show their distribution and associated challenges.

8.2 Health Facilities

Wakiso District has a total of 104 health facilities both government and privately owned. Table 3.18 illustrates the distribution of the facilities per administrative unit. It also shows which areas are over provided and those that are under provided with facilities. There was one government hospital, 5 Health Centre IV and 14 Health Centre III in the entire district with 1.9 million people. Namayumba and Masulita Town Councils did not have any health facility by the time of the survey (Map 3.18).

Table 0.18: Distribution of Health Facilities

Administrative Unit	Hospital		HCIV		HCIII		HCII		Total Totals
	NGO	GOVT	NGO	GOVT	NGO	GOVT	NGO	GOVT	
Kakiri SC	-	-	-	-	-	1	3	4	8
Kakiri TC	-	-	-	-	-	1	-	-	1
Masulita TC	-	-	-	-	-	-	-	-	-
Masuliita SC	-	-	-	-	1	2	-	4	7
Namayumba SC	-	-	-	1	-	-	-	3	4
Namayumba TC	-	-	-	-	-	-	-	-	-
Kasanje SC	-	-	-	-	2	1	-	1	4
Katabi TC	1	-	-	-	-	-	1	2	3
Kajansi TC	-	-	-	-	-	2	3	1	6
Kyenger TC	-	-	-	-	1	1	4	3	9
Wakiso SC	-	-	-	-	-	3	2	1	6
Wakiso TC	-	-	-	1	-	-	-	-	1
Entebbe MC	-	1	-	-	1	2	1	2	7
Kira MC	-	-	-	-	7	1	2	4	14
Kasangati TC	1	-	-	1	1	1	3	1	8
Makindye Sabagabo MC	1	-	-	1	1	1	3	4	11
Nansana MC	-	-	-	1	-	6	2	5	13
Total	3	1	0	5	14	21	22	33	104

Source: Wakiso District Health Department

The survey findings also showed that only 41.1% of the households had a health centre available in their neighbourhood even though 55.0% were willing to use them. A considerable 34.2 % travelled a distance between 1k -5km to the nearest health facility. However, a total of 74 parishes did not have health facilities. The biggest challenge faced by the residents in relation to the health facilities was that they were far from where they stay, services are extremely poor, health facilities infrastructure are in a sorry state of despair, poorly equipped,

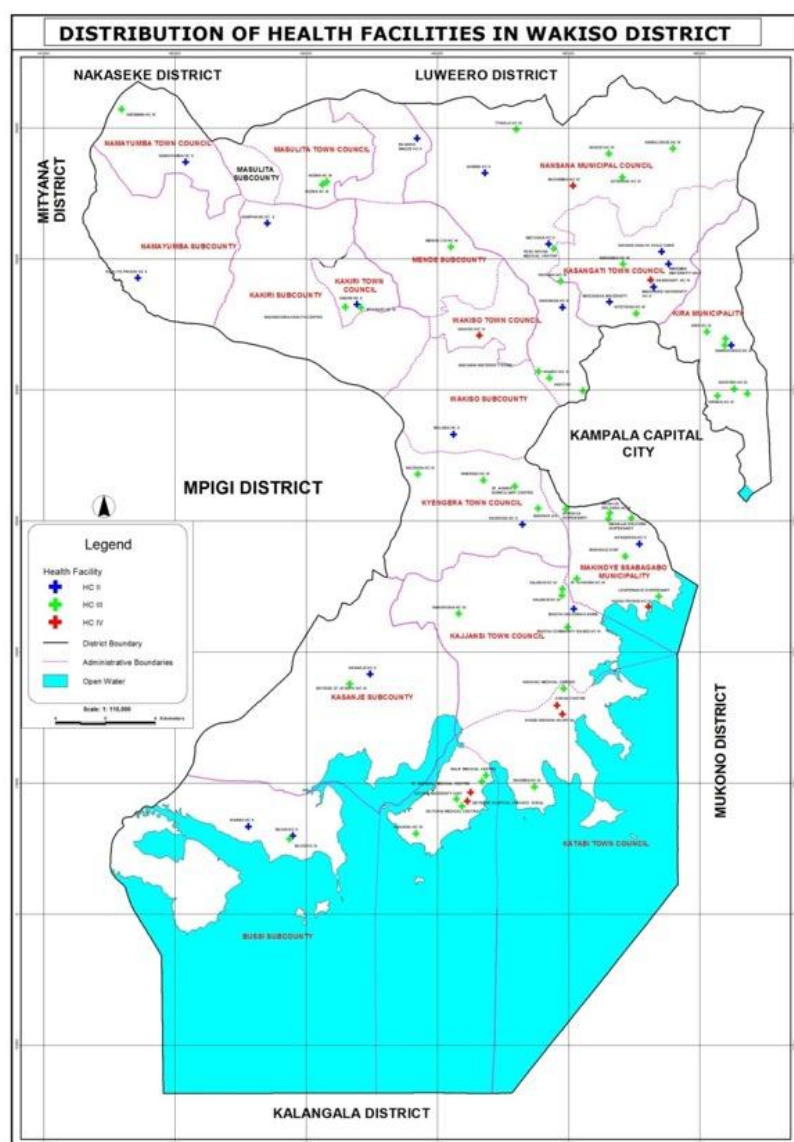
drug stock outs, poor customer care and are very expensive compared to the incomes of majority of the residents.

The study further revealed that only 17.2% had access to a nearby hospital though many would be willing to use it. It was worthy to note that although Wakiso was the most populous district in the country, it had only 4 hospitals, only one of which was a government hospital and the three are NGO/PNFP supported.

The consultant survey indicated that clinics were readily available and 84.5% of the households used these facilities. The biggest proportion of the people (52.2%) travelled less than 500m to the nearest clinic.

Maternity homes were not common in Wakiso District. The results indicated that only 23.1% of the residents had access to a nearby maternity home. However, 34.1% indicated that they used the maternity homes, which means that good a number of them use alternative unconventional health methods.

Drug shops were easily available in most of the areas and 72.1% of the household indicated that they used them. It was also reported by most of the residents (53.6%) that drug shops were located within a distance of less than 500m from their homes.



Map 3.18: Distribution of Wakiso District Health Facilities

8.3 Educational Facilities

Wakiso district is the hub of education services in the country since it hosts some of the most prestigious public and private schools, tertiary and training institutions (Survey school, Metrology school, fisheries institutions, Police Training center at Bwebajja, Nkumba University, Kisubi Brothers' University and the only female university campus in Uganda). Furthermore, there was a good number of Schools that offer the international curriculum (Vienna Collage Namugongo, Galaxy International School, International School of Uganda, and Taiba Internal School) and all these services are consumed by beneficiaries from majority of districts in Uganda and beyond Uganda's boundaries.

The district has a total of 1,591 education institutions comprising universities, tertiary and vocational institutions, primary and secondary schools and a number of pre-school institutions, unevenly distributed

between the counties of Entebbe, Kyadondo and Busiro Table 3.19). Distribution of these institutions within respective sub counties and municipality shows a lot of disparities as majority were within urban centres (Map 3.19).

Table 3.19: Distribution of Educational Institutions by category

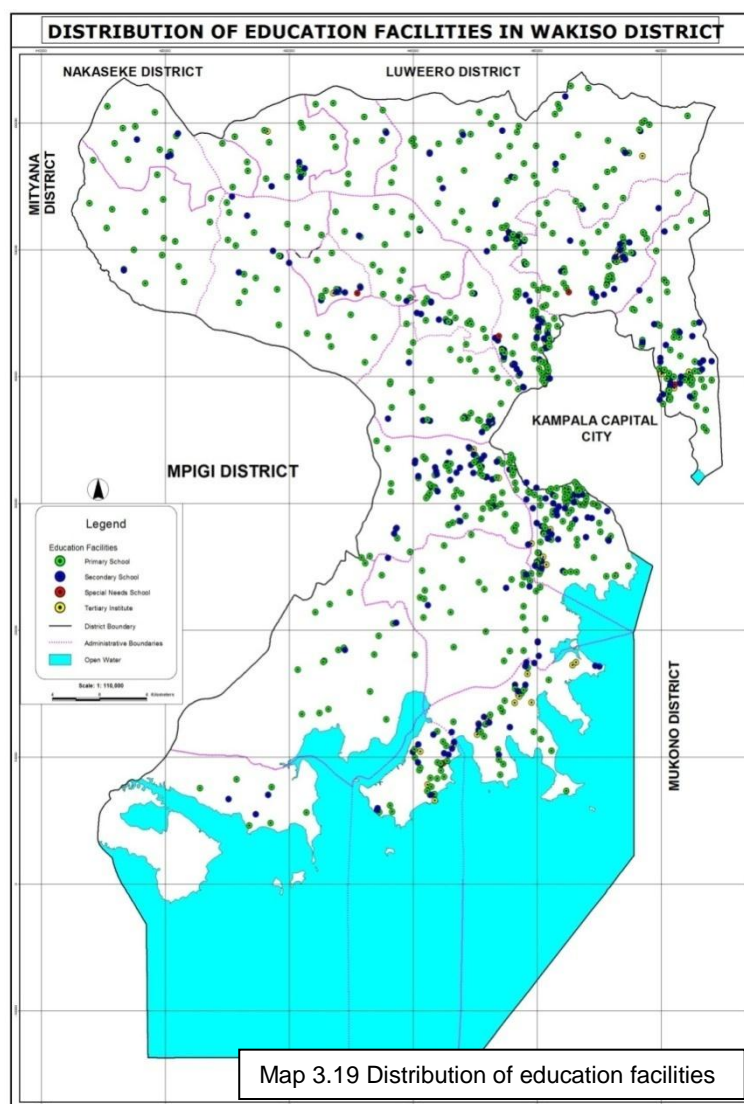
County	Total No. of Institutions	Universities	Tertiary		Polytechnic/ Vocational		Primary		Secondary	
			Govt	Private	Govt	Private	Govt	Private	Govt	Private
Entebbe	78	-	2	-	1	-	16	43	3	13
Busiro	590	2	-	6	2	1	140	314	9	116
Kyadondo	923	-	-	5	1	-	109	640	6	162
Total	1591	2	2	11	4	1	265	997	18	291

Source: Wakiso District Development Plan 2015/2016 -2019/2020.

The best provided service under this category was nursery schools. These were accessible to over 96% of the households and yet only 40.5% Of the households utilize them.

The district was well endowed with primary schools (1,262) and 75% of households in wakiso access primary schools within a distance of 1 km or less. However, 79% of primary schools were managed by the private sector and are considered expensive to the average low income earners. Primary schools were accessible to 95% of households and utilisation was at 47%. Secondly, 24 parishes in the district do not meet the central government requirement of having primary schools per parish.

There were 309 secondary schools in the district accessible to 75.6% of the population, although utilization was very low at 24%. 94% of the secondary schools were privately owned. Much as vocational and tertiary institutions are vital for skills development relevant to the job market, the district had only five institutions to cater for the almost two million people, thus the need to address this service gap.



Map 3.19 Distribution of education facilities

The public education services in Wakiso have been overwhelmed by the rapid population growth and demand for quality services. Some of the public institutions lacked adequate and appropriate infrastructure and were prone to poor academic performance and not well facilitated to offer quality education.

Poor academic standards /output especially of the public education system have given opportunity to private education service providers to tap into the desire for quality education. As a result, the majority of primary schools (79%) and secondary schools (94%) in the district are owned and managed by the private sector. Furthermore, the government's promise to

commence provision of early childhood learning services by public primary schools had stalled so all those that were in the district were privately managed. However, majority of these services cannot be afforded by a good number of the population. Thus although education services appear to be on ground in Wakiso, a good number of the local population are missing out and the services appear to benefit mostly residents of other districts. This was confirmed by the findings of the survey which established that access to secondary school institutions was at 75.6% and utilisation only at 24.1% and primary school access at 95.6% while utilisation was at 47.2%.

As the public sector struggles to manage its education facilities, it has the legal mandate to supervise, regulate and enforce standards of the services provided by it and the private sector. However, the education services were found to have numerous challenges. As reflected by 'The East Africa State of the Nation Report 2015'. The report indicated that despite massive public investment made in recent years in the education sector, it was still stuck with issues of low quality: literacy and numeracy skills among young scholars is lacking while at the tertiary level, a good number of graduates lack requisite basic and practical skills commensurate with the level of education and hence make poor fit for the job market.

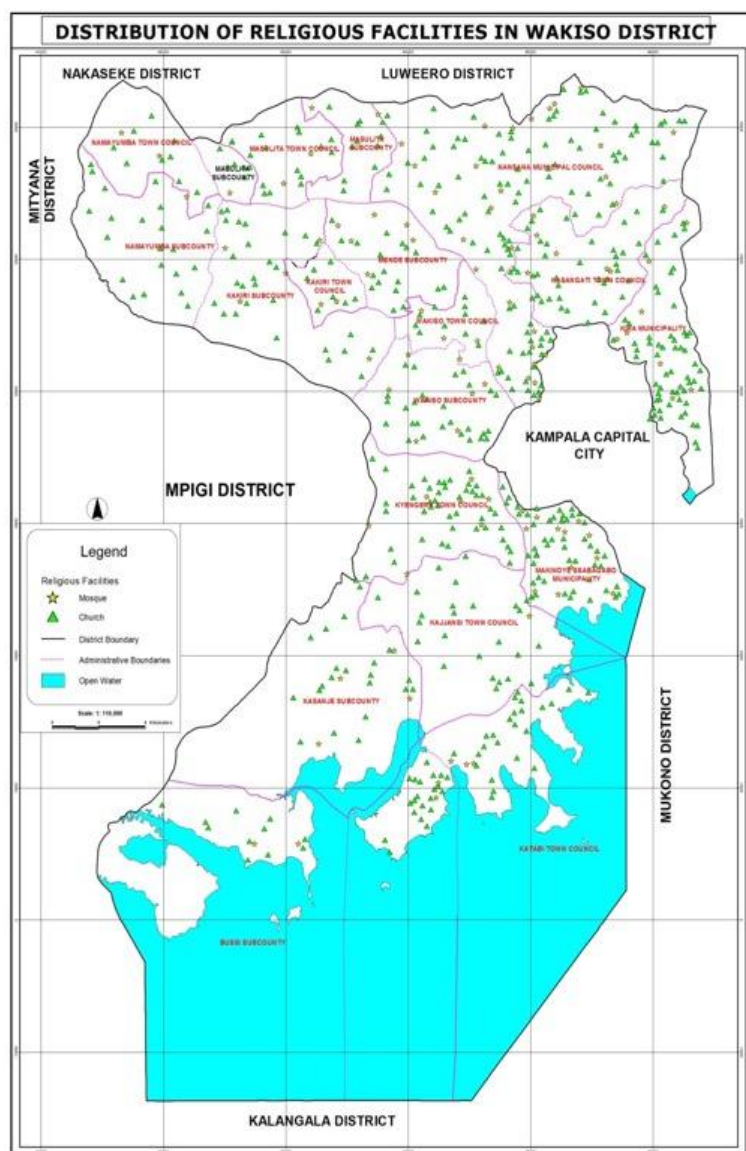
A total of 27 parishes at the lower local government level, mainly in Bussi and Kasanje lacked public primary schools, Masulita and Busukuma lacked public secondary schools. This was in contravention of government policy of establishing public primary schools at the parish level and at least one public secondary school per sub-county.

Challenges established by the social economic survey unique to Wakiso district included:-

- High school drop- out rate especially at the secondary school level which could partially be attributed to early marriages, early pregnancies, poverty and child labour, among others, which were common in the district.
- High school dues vis-à-vis income.
- Inadequate facilities; [- poorly maintained infrastructure, inadequate tools and equipment and poor sanitary and kitchen facilities.
- Absenteeism and late coming by both the teachers and students and lack of accommodation for staff especially in the hard to reach areas.

8.4 Religious Facilities

Wakiso had the highest number of religious institutions in the country (669) which was used by a range of faith groups and community organizations, some of which have attained international accreditation. The district has 561 churches and 108 mosques. They are



Map 3.20 Distribution of religious institutions

This institution are used to enhance community cohesion and in some instances a social safety net as they provide conducive space for people to socialize, meet and mark important community and family milestones. Close analysis of the survey findings indicated that these were well distributed throughout the district and in close proximity to neighborhoods. Churches were accessible to 96.2% and utilization was at 71.4% and within less than a distance of 1 kilo meters to 80.4% of the households. Mosques on the other hand were accessible to 86.9% and utilized by 24.9% which shows that Wakiso has a fair share of both churches and mosques. Since these attract large numbers of followers they are, in some instances, a source of noise pollution, some have adverse impact on the amenities of neighboring residences while a good number does not have adequate provision for parking. These issues need to be carefully addressed in selecting a suitable location for new places of worship or for considering proposals for the redevelopment or extension of existing ones.

On the other hand some religious institutions in Wakiso are applauded for the provision of other social services such as schools, health facilities, community centers and Vocational training facilities. Religious institutions should be encouraged to expand these services to communities where they are lacking since some of these institutions do have a lot of land at their disposal.

Markets in Wakiso district play a central role in the provision of supply of food (both fresh and durable produce) domestic products and clothing. They are a source of livelihood to a number of youth, women and to some extent elderly persons. Wakiso district had a network of close to 40 markets, some located in residential neighborhoods, while others were along public transportation routes (Map 3.21).

DISTRIBUTION OF EXISTING MARKETS 2016

NAKASEKE DISTRICT

LUWEERO DISTRICT

MPIGI DISTRICT

MUKONO DISTRICT

KAMPALA CAPITAL CITY

Legend

- Markets
- District Boundary
- Administrative Boundaries

Scale 1:100,000

Map 3.21 distribution of markets

There are some markets that have been constructed by the local authorities with all required amenities and infrastructure but have been rejected by the communities due to perceived inappropriate locations. Bulaga market in Wakiso Sub County and Namulanda market have been abandoned by the community, an indication of lack of community consultation and participation in the inception and implementation of these developments.

On the other hand, majority of the markets in Wakiso lacked the stipulated physical planning requirements: they were lacking parking lots for both shoppers and off –loading facilities, lacked infrastructure to cater for surface run-off, proper sanitary disposal facilities and some lacked clean piped water. There was also a lot of wastage in these markets as there was no organised way of preserving perishables sold therein, thus the need to devise methods of value addition to highly perishable goods. This would contribute to food security and improved income.

Generally, the service level in this sector was not commensurate to the expectations of the ever rising population in the district and lack of an adequate number of well-planned markets has been substituted by the sprawl of informal markets and kiosks throughout the district, especially in busy trading centres, resulting into serious breakdown in trade order. There are a number of vibrant markets along the various landing site although most of them were constructed in temporary materials.

Most of the markets do not meet the stipulated national physical planning standards and require remodelling or redevelopment.

8.6 Sports and Recreational facility

These are facilities set a side for public relaxation, sports and leisure with intrinsic benefits of broad economic and health value. They attract investment in business, tourism and real estate, provide employment and enhance individual health. The district has a number of playgrounds, public and private, though the former were not well maintained. Play lots vital for community moulding of children and youth are conspicuously lacking. Public parks and open spaces are few and mostly distributed in urban areas like Entebbe, Kira and Katabi, but conspicuously lacking in some of the local governments with high density settlements like Makindye Ssabagabo. Wakiso hosts the most prestigious stadium in the country plus a notable number of tourist sites and an expansive water shoreline, all of which exhibit the district's potential for recreating.

Although the service gap in this sector has been bridged by the private sector through establishment of private gardens and entertainment parks, Wakiso district should give serious consideration to strategic exploitation and extension of its sports and recreation facilities to meet the current and future need.

8.7 Community centres

As Wakiso undergoes rapid population growth and acquisition of a cosmopolitan population, coupled with mass densification with both residential and commercial developments, there is need for social support networks to harness and harmonise the various social norms and expectations which will enable the population take on its new modernised identity. Thus the need for community structures and support systems to mould especially the children and the youth into responsible citizens, to promote community cohesion and social stability.

The community centres are public premises which communities can use free of charge for recreation purposes, avenues for community meetings and gatherings for exchange of ideas which can develop society, or host public administrative offices at the grassroots level and information centres. These were relatively scarce: only 15.0% of the households even though 27.3% use the service, which shows a gap in provision of the facilities throughout the district.

8.4 Wakiso Future Social Facilities Requirements

The consultants identified and analysed the long term sustainable development for Wakiso district based on three development scenarios. They are:-

- Business as usual with the ongoing population growth trend at 6.6% annual growth, accelerated in migration resulting into distinctive mismatch between service delivery and population explosion. This scenario also takes into consideration of the spillage of demand for services from the neighbouring districts of Kampala, Mpigi, Mukono, Mityana and a host of others since this is the situation obtaining.
- The ideal scenario where it is assumed that population influx would begin to subside as surrounding districts of Mukono, Mityana, Mpigi and Luwero benefit from the integrated rural-urban development planning, with improved services and infrastructure extended to these districts and urbanisation beginning to set therein. Annual population growth in this scenario was set at 3.3% which is the average urban population growth rate.
- The final is the best case scenario; whereby focused and deliberate interventions can result into a district that develops in a sustainable, orderly and balanced manner. This is determined at a mid-point annual population growth rate of 5%. Based on the on the above, population growth is projected as 10.5 million, 4.6 millions and 7.0 millions respectively.

8.4.1 Educational requirements

Wakiso still retains the capacity to serve as the leading educational Centre in the nation and in East and Central Africa capable to drive the social and economic development of the nation. However the education system of Wakiso requires significant upgrading and extension, building on the remarkable achievements in universal education to date. Given these achievements, the challenge now is to extend the scope of education in the district whilst consistently improving pedagogic and physical standards to acceptable international norms, leading Uganda and East and Central Africa.

The future requirements of the district education services need to concentrate on the following requirements;

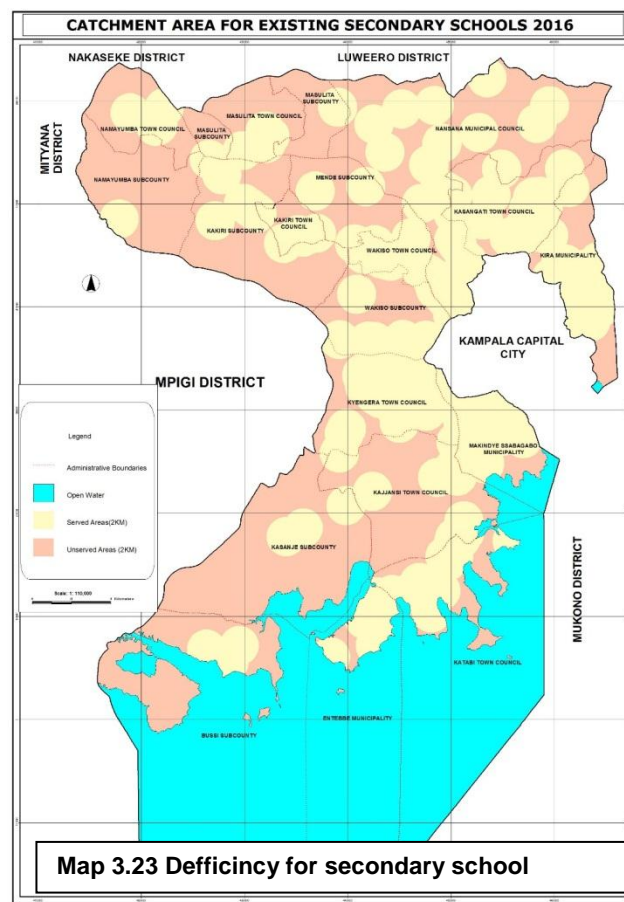
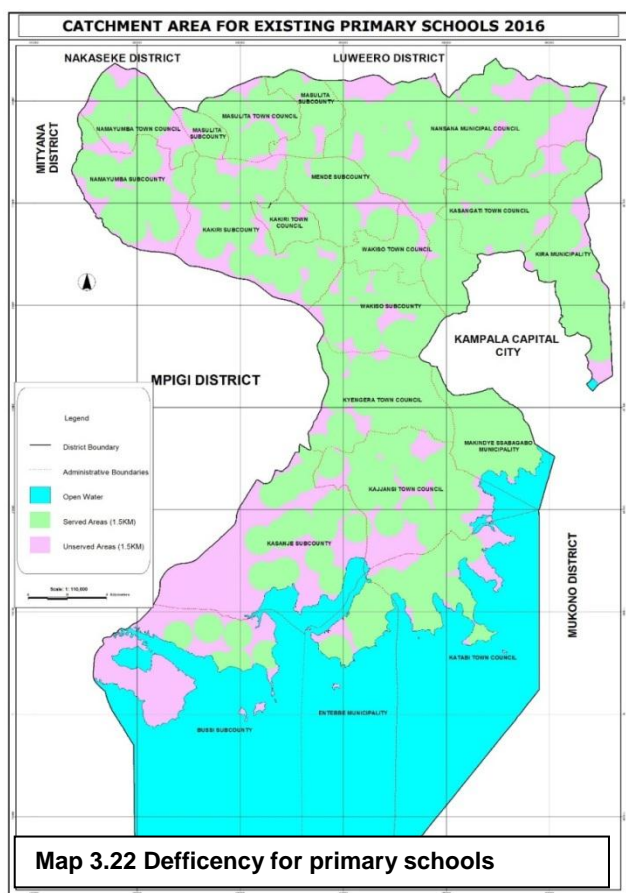
- i. Attainment of full universal secondary education;
- ii. Planning and provision of extensive, accessible and affordable pre-school education;
- iii. Planning and provision of vocational training (including adult vocational training); and technical (academic) training.

Based on the analysis of the distribution of educational facilities it was clear that most of the district was covered by educational facilities with exception of Busi subcounty for primary schools and Namayumba, Masulita, Kakiri and Busi sub counties for secondary schools (Maps 3.22- 3.23).

However the Wakiso district PDP recommends and provides a distribution and land provisions for education services incorporating community services and sports, coordinated with similar existing plans and that of GKMA based on the district population projections and quantitative programmes.

This would enable the attainment of the goals and targets detailed in this section including the redistribution and rapid extension and upgrading of educational facilities. Significant land allocation is required to provide the requisite facilities that support education services. The Consultant's recommended standards for application in downstream planning;

- i. Adequate allocation of land for educational facilities in the district to meet long term needs, as detailed below
- ii. Ensuring the balanced distribution of educational facilities in the district and integrated with the metropolitan scale
- iii. Prioritising provision of and enrolment in local schools and pre-schools whilst ensuring easy NMT access and promoting community, efficiency and economy, in detailed local physical planning;
- iv. Provision of standards and mechanisms to extend the range of educational facilities and services (e.g. pre-schools, sports and extramural activities, youth centres, multi-functional community centres for enrichment and recreation, etc)



- v. Planning provisions and support in the relocation of some urban centrally located schools to residential areas enabling improved access to the schools and releasing significant inner-city land reserves for appropriate development and use, including public open space;

8.4.2 Health requirements

Using the criteria of threshold in the projection and provision of social services, parameters outlined in the National Physical Planning Standards and Guidelines were used to determine the approximate number of health facilities and Fire station requirements for the respective projected years.

In 2017, Wakiso had one regional Referral hospital and that was within the stipulated threshold of one to 2,000,000 people. However, the number projected under scenario one (business as usual) would rise to 2 in 2020. Regional Referral hospitals would still be required under the same scenario in 2040, 2 under scenario two (ideal scenario) in 2040 and 4 under scenario three (the best case scenario) in 2040.

Wakiso has the potential and capacity to be the leading services provider and destination for majority of the districts in Uganda and beyond. Already the district had the required infrastructure in place but there was need to improve upon them by put in place services where they are lacking, improve upon the quality of the service and the need to make the revamped system affordable to benefit the population of Wakiso as well.

The social and economic impacts of improved health services on the individual, family and the country as a whole have significant multiplier impact on community development and integration. Health services in the district still lack in terms of quality of service, equitable distribution and affordability.

By national health standards, the district currently needs 20 HC IVs, will need approximately thirty two (32) HC IV's by 2030 and Seventy one (71) HC IV's by 2040. (Table 3.20).

Table 3.20: Projected Health Facilities Requirements

Type of Health facility	Existing numbers	Year								
		2017			2020			2040		
Growth Assumption		6.6%	3.3%	5.5%	6.6%	3.3%	5.5%	6.6%	3.3%	5%
Projected Population (000s)		2,419.5	2,201.8	2,312.3	2,931.1	2,42.1	2,676.7	10,523.4	4,645.9	7,102.2
Regional Referral Hospital	0	1	1	1	2	1	1	5	2	4
District hospital	0	5	4	5	6	5	5	21	9	14
Health Centre IV		24	22	23	29	24	27	105	46	71
Health Centre III	100	120	110	116	147	121	131	526	232	355
Fire Stations		24	22	23	29	24	27	105	46	71

8.5 Conclusion

From the analysis made above the current social services can meet the demand if the issue of immigration is attended to. Ther only key issue is the quality of services which was foud wanting especially for health services.

8.6 Recommendations

8.6.1 Education

To bridge some of the gaps identified and work towards provision of quality education services, the following recommendations are made:-

- Pay specific attention to the 24 parishes in the district that still lack public primary schools, and the two divisions of Gombe and Busukuma which lack public secondary schools. The district can plan for phased construction of these facilities.
- Provide public pre-primary school education.
- Plan for additional Vocational education which would develop required skills that are greatly lacking in the large work- age group and skilling the youth to improve the outlook of the informal sector. Particular attention should be given to fields relevant to current and future economic development which include among others, agro- business, Tourism, Information Technology, construction, oil and gas management. Due regard should also be given to fields that promote local content especially in the building sector.
- Sensitisation of the general populace towards change in mind-set in regard to the wide misconception that technical and vocational training was mostly for the academically challenged individuals.
- Staff accommodation should be set up in hard to reach education institutions to attract qualified technical staff.
- The district must set aside a reasonable budget for maintenance and rehabiliatee the education infrastructure and revamp the inspection arm of the Education Department to ensure quality service delivery by both the public and private sector.

8.6.2 Health Services

There is need to improve access and utilization of the current health facilities by:-

- Making health services less expensive and affordable.
- Rehabilitation or redevelopment of existing public infrastructure especially the seven Health center III that lack maternity services , have the necessary equipment, tools and drugs especially in public hospitals.
- Specifically plan for staff houses especially in hard to reach areas.
- Strictness, consistency and transparence in supervision health services of both private and public practitioners is paramount.
- Provide incentives for private health care providers to expand to rural areas.

- With the predictable population explosion in Wakiso and expanded demand for specialized services such as young children who require specific healthcare products or the elderly who are prone to chronic and degenerative diseases, deficiency in this sector will require improvements to existing facilities or construction of new premises for health services. Specific attention should be given to phasing out of construction of health centers in the 74 parishes where they lack in conformity with government policy of establishment of a health center in every parish.

8.6.3 Sports and Recreation

- Establishment of community sports fields/ open spaces at the parish level preferably at the same site where community centres are to be hosted. These are to be shared by schools in vicinity and the community.
- Specific infrastructural and traffic flow plans for some specific areas that periodically attract sports fans in big numbers such as Garuga and Busiika should be provided.
- Enforce strict guidelines and regulations for the future development of the Lake Victoria shoreline and tourist sites.
- Regulate the activities of the private gardens, parks and entertainment facilities located in residential neighbourhoods to minimise on noise pollution.

8.6.4 Markets

- Explore the possibility forming partnerships with willing landlords on whose land the markets are located under the public private partnership (PPP) to redevelop some of the markets to the required standards.
- Lobby the Ministry of Local Government to benefit from the Market Improvement Program for construction of more markets
- Rehabilitate some of the markets to include basic facilities and infrastructure that was lacking in most of the markets,

8.6.5 Community Centres

- Establishment of community centres at the parish level to serve as resource centres, well facilitated as libraries, meeting venue and information centres for the community. These could also host public offices relevant at the local level.

9. Report on Infrastructure and Utilities for Wakiso District

9.1 Introduction

This report informs the development of Wakiso District Physical Development Plan for 2040. The two core drivers of demand for infrastructure services in any locality are population and the Economy. Therefore the analysis and interpretation of this section hinges on these two very important aspects to development.

Ten different infrastructural types have been assessed as being significant to the economy and the population of the District, and the results of assessments are presented in this report. The report also touches on cross region perspective issues because infrastructures are networks often are cross boundaries.

9.1.1 Methodology and limitations

This report was prepared by undertaking analysis of existing information using the greater Kampala metropolitan area (GKMA) network perspective to assess each infrastructure. Literature was reviewed to identify the current state, future pressures and trends, and potential and opportunities for each infrastructure type and identified particular linkages/dependencies. Twenty year development horizon has been adopted in line with the nation vision of 2040. Table 3.21.

Table 3.21 Summary of assessment approach and explanation

Assessment approach	Explanation
State	Extent to which infrastructure is fit for the current purpose and enduring.
Trend	Outlook based on forecast pressures from the drivers of change on future demand and ability to meet changes in demand.
Risk	Extent to which governance and management mechanisms available in place to manage future demand and meet agreed expectations. Extent to which corrective action is required.

9.1.2 Greater Kampala Metropolitan Area (GKMA context).

The main analysis was focusing on infrastructure that lies within the administrative boundaries of Wakiso District. However infrastructure networks do not stop at the district boundaries and in order to plan for them, they must be viewed in a holistic approach hence the need to look at the infrastructure in GKMA. The spatial plan will take a high level view of critical networks and priorities to understand the inter relationships.

9.1.3 Infrastructure defined in the Wakiso PDP context

In this plan **Infrastructure refers** to structures, systems, and facilities serving the economy of an area (Wakiso District), including the services and facilities necessary for its economy to function. It is basically the physical systems of an area (District) such as transportation, communication, sewage, water and electric systems etc. These systems tend to be high-cost investments; however, they are vital to the district's economic development and prosperity. For the purpose of proper analysis in this report; infrastructure was divided into; Roads, Public Transport, Inland port, Rail, Airport, Water, Sanitation, Solid Waste Management, Energy and ICT

9.1.4 Importance of infrastructure to Wakiso District

Every resident of Wakiso District uses infrastructure on a daily basis. Infrastructure was important for the services it provides than for its own sake. Responsibility for infrastructure differs between assets, different parts of the same networks and between networks.

Effective transport networks, including roads, public transport, rail, ports and airports which enables businesses to get their goods to markets while at the same time enabling employees get to work, students to get to school, visitors to reach their destinations, and people to access goods and services. Transport relies on fuel, businesses and households rely on energy transmission that is reliable and safe. Quality telecommunications network allow efficient transmission of data and information, connecting buyers and sellers. Water is also critical for every household including primary industries and manufacturing processes.

9.1.5 Planning, funding and delivery for infrastructure in Wakiso

Infrastructure is planned, funded and operated by a number of agencies/organizations nationally and locally, from central and local government, to state owned enterprises and private sector. These are highly complex tasks which create coordination challenges within and between central and local government and private sector. Increased attention to integrated planning is required to improve outcomes. This requires planning which cross boundaries and jurisdictions (inter and Intra planning). Effective planning addresses how individual projects contribute to a wider infrastructure network.

9.1.6 Demand for infrastructure.

The two key drivers of demand for infrastructure are the population and the economy. When the population grows, settlement patterns do place pressure on the type of infrastructure required and where it is located. Likewise the growth of the economy and population in Wakiso District has placed pressure on key infrastructure networks.

9.1.7 Regional signifiy for infrastructure services

From a metropolitan perspective, infrastructure has different levels of service. Some are important to the local community while others are significant to entire metropolitan area. Regionally, significant infrastructure will benefit a region such as major roads or grid connection as opposed to providing benefits to the immediate locality. Some are of national significant. For example in Wakiso District roads like Bombo, Jinja roads are of national important because they move mass goods and services and connect the coutry to the East African Region.

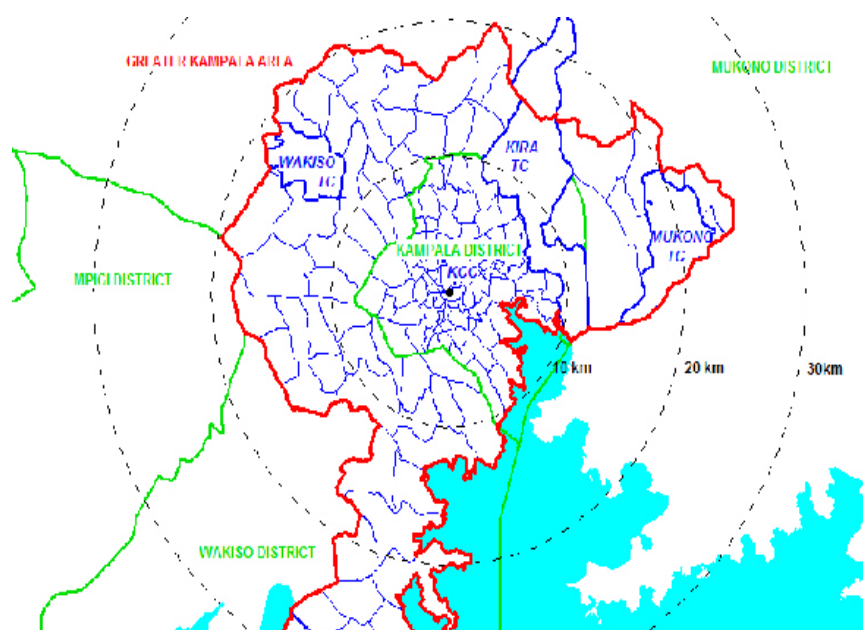
9.2. Roads.

A road network is currently and will continue as the primary means of transport within the Wakiso District. It performs a vital and social economic function, enabling social accessibility and providing a lifeline function and contributing to quality of life. The road network also provides economic opportunities by providing a means for people and goods to access business opportunities including employment and markets.

Wakiso road network forms part of a wider national road network. Within the network there was a hierarchy of roads which link the key centres of population and business. These include key roads like Kampala-Jinja, Kampala-Masaka, Kampala-Mityana, Kampala-Hoima, Kampala, Gayaza-Ziobwe and Kampala-Bombo.

Wakiso is part of the Greater Kampala Metropolitan Area (Map 3.24). The GKMA contains the Capital City of Uganda, Mukono and Mpigi districts with surrounding small towns and outlying areas which are strongly connecting social and economic relations. Hence wakiso road network forms part of GKMA road network.

Map 3.24: Wakiso District in the Greater Kampala Metropolitan Area



9.2.1 Ownership and Governance of Roads in Wakiso District

In Uganda, there are three broad categories of roads based on maintenance, responsibility and function. These are national roads, district roads and community access roads. However the Road network in Wakiso District falls into four categories: National roads, District and Urban roads, and Community access roads.

National road network in Wakiso District covered 419Km, which comprised of 192Km (46%) of paved and 227Km (54%) of unpaved gravel roads. These are operated and maintained by Uganda National Roads Authority (UNRA).

The district road network covered 638 Km, which comprised 39Km (11%) of Paved and unpaved Gravel 329Km (89%). These are operated by the District Local Government and urban authorities in Wakiso. Urban roads in Wakiso District are those roads that are within the boundaries of urban councils and are operated by the Urban Local Governments (Table 3.22).

The current total length of community roads in Wakiso District was estimated at 777 Km which are all earth roads and are a responsibility of Sub-County administration.

Table 3.22: Length of Road Network Classified by Surface and Administration

Network by Administration	Length in Kilometres by Classification of Surface							
	Paved		Un-paved Gravel		Un-Paved Earth		Total	
	Km	%age	Km	%age	Km	%age	Km	%age by Administration
National Roads (UNRA administered)	192	45.8	227		-	54.2	419	26.8
District & Urban Roads (District & Urban Local Governments management)	39	10.6	329	89.4	-	-	368	23.5
Community Access roads (Sub-County Local administration management)	-	-	-	-	777	-	777	49.7
Total	231	14.8	556	35.6	777	49.6	1,564	100

(Source: Wakiso District Engineering office)

9.2.2 Legal and Policy and institution Framework.

The legal framework outlines the rights and responsibilities of different stakeholders and gives a legal basis for road network management and regulation in Uganda. The policies provide the principles of action to be followed in the implementation. They provide the rules of practice and give direction to the activities in the sector. The institutional framework details the roles and responsibilities of key sector players as illustrated in Table 3.23.

Table 3.23: Major laws influencing road network in Wakiso.

Act	Main aspects
Road Act 1964 (to be amended)	Provides for the establishment of road reserves and for the maintenance of roads
Access to roads Act, 1964(to be amended)	Gives a person the right to construct a road through other peoples land in order to access a public road or highway. This road however, shall not be wider than 20 feet.
Uganda National Roads Authority, 2006	Provides for establishment and operation of the Uganda National Roads Authority (UNRA) and managing the provision and maintenance of the national roads network
Local Government Act 1997(amended 2001)	Decentralization of a number of public services, including maintenance of <i>District, Urban and Community Access Roads</i> .
Traffic and Road Safety Act, 1998	Provides for establishment of the National Road Safety Council and the Transport Licensing Board. The Act also prescribes revised penalties in relation to road traffic offences and for other purposes connected with road traffic and road safety;
Uganda Road Fund Act	Establishes a Road Fund for financing routine and periodic maintenance of public roads in Uganda. The Fund is to be managed by a Board representing both public and private sectors, and will have a Secretariat responsible for day-to-day operations.
GKMA Transport Master Plan	Comprehensive 15-year sector investment plan, covering roads, railways, air, water, pipeline including urban transport in GKMA and non-motorized transport (NMT), 2010;

9.2.3 Road Surface Condition.

Analysis indicated that in Wakiso District Only 15% of total road network in the district was paved. This may imply that the biggest percentage of the network was still in bad condition. It was also found out that 35% of the road network in the district was unpaved (Gravel) and that 50% of the same network were earth roads. This means that with in Wakiso area there are areas that are difficult to access especially Mende and Bussi Sub counties.

The district's road network should be a well-developed network of corridors performing the intended purpose. The road network generally performs well from a network capacity perspective. The capacity of the road is usually influenced by the following:

- The Design Volume i.e. the greater the traffic volume the wider the carriageway and normally, the greater the number of lanes.
- Vehicle Dimensions i.e. heavy commercial vehicles require wider carriageways to ensure adequate clearances.
- Design speeds i.e. vehicles travelling at high speeds require wider carriageways to ensure safe clearances between passing vehicles.
- The higher the road classification the greater the level of service.

In Wakiso District just like all other districts in Uganda such parameters are not in place hence the current distortions in the flow of goods and services in the district.

9.2.4 Road classification and function

Since there is no urban road standard in Uganda, road classifications were prepared for rural purposes only. And this does not exclude Wakiso District which by structure is a rural district but mostly operating in an urban setting with virtually no intervention. The rural roads in Uganda are divided into 5 classes according to their major function for the road networks (Table 3.24).

Table 3.24: Function class.

Class	Roads	Function
A	International Trunk Road(Arterial)	Roads that link International Important Centers. Connection between the national road system and those of neighboring countries. Major function is to provide mobility.
B	National Trunk Road(Arterial)	Roads linking provincial capitals, main population centers and nationally important centers. Major function is to provide mobility.
C	Primary Roads (Collector)	Roads linking essential provincial centers to a higher class road (urban/rural centers). Linkage between districts local population centers and development areas with higher class road. Major function is to provide both mobility and access.
D	Secondary Road(collector)	Roads linking locally important centers, to more important centers, or to higher class roads (rural/market centers) and linkage between locally important traffic generators and associated rural hinterland. Major function is to provide both mobility and access.
E	Minor Road (Access road)	Any road link to minor center (market/local center) and all other motorable roads. Major function is to provide access to land adjacent to the secondary road system.

Source: Geometric design manual in Uganda.

The road network is composed of National trunk road, primary roads and secondary roads. In Uganda major focus was on national trunk roads (all Paved) and primary roads (Paved and unpaved). Little or no attention was given to primary, secondary and minor roads which constitute the biggest percentage of Wakiso road network.

9.2.5 Design Class.

In addition to the Functional Class there is a Design Class which is divided into 7 classes, as indicated in table 3.25.

Table 3.25: Design Class.

Design Class	Capacity [pcu x 1,000/day]	Road-way width[m]	Maximum Design speed			Functional Classification				
			Level	Rolling	Mountainous	A	B	C	D	E
Ia Paved	12 – 20	20.80-24.60 (4-lane)	120	100	80	9				
Ib Paved	6 – 10	11.0	110	100	80	9	9			
II Paved	4 – 8	10.0	90	70	60	9	9	9		

III Paved	2 – 6	8.6	80	70	50	9	9	9		
A Gravel	4 – 8	10.0	90	80	70		9	9	9	
B Gravel	2 – 6	8.6	80	60	50				9	9
C Gravel		6.4	60	50	40					9

Source: Geometric design manual in Uganda.

Passenger car unit (Pcu) is metric used to assess traffic flow on a road. Passenger car unit is a measure of impact that a mode of transport has on traffic variables (such as headway, speed, density compared to a single standard passenger car). The unit values are indicated in Table 3.26

Table 3.26: Passenger car unit Values

Vehicle Type	PCU Value
Motorcycle	0.4
Passenger car	1.0
Light goods vehicle	1.0
Medium goods vehicle	1.5
Buses and coaches	2.0
Heavy Goods Vehicle	2.3
Articulated vehicles	3.2

Source: Field Survey

Estimating future levels of service based on the 2016 UNRA PCU values for Wakiso National roads is based the formulae $P_f = P_c (1+GR)^n$ where,
 P_c is the current traffic volume for base year,
 P_f is the future traffic volume for design year,
 Gr is projected traffic growth based on population growth,
 n is the design year (2040)

9.2.6 Future road traffic growth.

The Greater Kampala Metropolitan Area (GMKA) Transport Master Plan projected that there will be a traffic growth rate of 8% per annum from 2008-2023. National population and housing census 2014 reported National GDP growth rate of 5% and a population growth rate of 6.6% for Wakiso District. A critical analysis of table 3.27 indicates Radial routes like Nansana-Busunju, Busega-Mityana, Busega-Mpigi, and Kawempe-Bombo road will exceed their expected capacities by 2040. Collectors are currently gravel ,However the analysis considered a 2-lane paved road where expected operating conditions will be free, stable , unstable flow on the assumption of being 2-laned paved roads hence the need to upgrade them from gravel to single paved carriageways.

Table 3.27: Future PCU values as per UNRA traffic census 2016 on Wakiso Roads

Current PCU/day	Road Name	Current PCU/hr	Future 2040 PCU/hr	Future level of service	Expected road operating conditions
14,722	Entebbe Airport	920	2972	E	Capacity of road
19,982	Nansana - Busunju	1249	4034	F	Queues
8,172	Najanankumbi – Busabala	511	1650	D	Approaching unstable flow
8,176	Kireka-Namugongo-Misindye-Seeta	511	1650	D	Approaching unstable flow
7,879	Lweza - Kigo Prison	492	1589	C	Stable flow
9,135	Matugga - Semuto – Kapeka	571	1844	D	Approaching unstable flow
6,984	Abayita Ababiri – Kasenyi	437	1412	C	Stable flow
9,689	Natete - Nakawuka – Kisubi	606	1957	E	Capacity of road
11,439	Old Masaka Road (Kyengera -Kabojja Secondary)	715	2310	F	Queues
2,443	Nakawuka - Namutamala - Katende – Bujuko	153	494	A	Free flow
2,656	Buloba – Wakiso	166	536	A	Free flow
4,830	Kakiri-Masulita-Danze-Mawale	302	976	B	Reasonable free flow
2,263	Namayumba-Kakonda-Wabikokoma-Semuto	141	455	A	Free flow
3,007	Namayumba - Kitalya Prison – Kamuli	188	607	A	Free flow
3,828	Wakiso-Kassengejja-Matugga	239	772	A	Free flow
4,653	Matugga – Kasangati	291	940	B	Reasonable free flow
6,425	Kasangati – Kyaliwajala	402	1299	C	Stable flow
8,960	Nakawuka Kasanje	560	1809	D	Approaching unstable flow

Analysis of Classification by design of the existing National trunk roads and primary Roads in Wakiso District indicates that national trunk roads should be dual carriageways with respect to the current traffic volume they carry. However currently they are single carriageway roads (roads which embrace aspects like road reserve width, carriageway width, central reservation (median), shoulders, camber, side slopes, horizontal and vertical clearances) under 1a Paved Class.(Masaka, Bombo, Entebbe roads) as indicated in table 3.28. This means they lack capacity to provide the required level of service.

Currently Dual carriageways are Northern by-pass and Entebbe Express way (51Km). (Dual traffic lanes of 3.5m lane width). Primary (Paved and un-paved) roads are single carriageways under **A Gravel** Class where road reserve encroachments exist and this was attributed to the roads not being gazetted and yet by design these roads should have reserve width of between 30-40m. They also lacked the required geometric standards to meet the required level of service.

Table 3.28: PCU values as per UNRA traffic census 2016 on Wakiso Roads

PCU	Road Name	Roadway width	Reserve width
14,722	Entebbe Airport (Dual)	4-Lane	Dual
19,982	Nansana - Busunju	4-Lane	Dual
8,172	Najanankumbi – Busabala	10m	30
8,176	Kireka-Namugongo-Misindye-Seeta	10m	30
7,879	Lweza - Kigo Prison	10m	30
9,135	Matugga - Semuto – Kapeka	11m	40
6,984	Abayita Ababiri – Kasenyi	10m	30
9,689	Natete - Nakawuka – Kisubi	11m	40
11,439	Old Masaka Road (Kyengera -Kabojja Secondary)	4-lane	Dual
2,443	Nakawuka - Namutamala - Katende – Bujuko	10m	30
2,656	Buloba – Wakiso	10	30
4,830	Kakiri-Masulita-Danze-Mawale	10m	30
2,263	Namayumba-Kakonda-Wabikokoma-Semuto	8.6	30
3,007	Namayumba - Kitalya Prison – Kamuli	8.6	30
3,828	Wakiso-Kassengejja- Matugga	8.6	30
4,653	Matugga – Kasangati	10m	30
6,425	Kasangati – Kyaliwajala	10m	30
8,960	Nakawuka Kasanje	10m	30

9.2.7 Road Hierarchy and Function in Wakiso District.

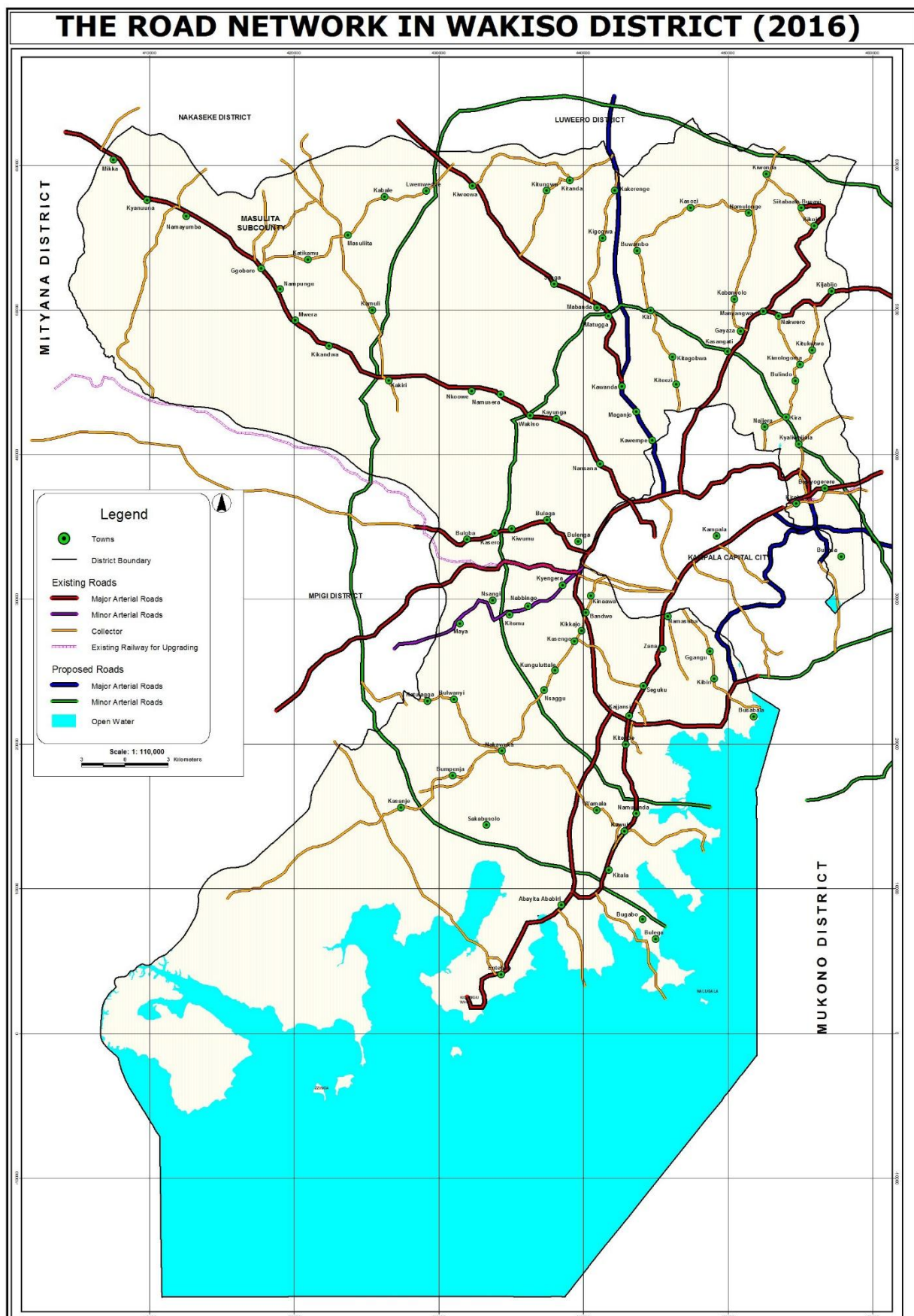
Roads are categorized in terms of their actual and intended uses within the network as a whole. These categories define their design, adoption and management standards regardless of which local authority is responsible for any particular road. A well planned and well-designed hierarchal road system is expected to;

- Accommodate traffic entering or leaving a town rapidly and safely or circulate freely in it.
- Provide for through traffic not diverted to outer by passes.

Hierarchal road system classifies roads as being arterial, collector or access in nature in Wakiso District Road network comprises of the following;

- National roads (major arterials) originating from the Capital City radiating through Wakiso District to national/regional centres. (Kampala-Masaka, Kampala-Bombo, Kampala-Mityana, Kampala-Gayaza, Zirowe, Gayaza-kalagi, Kampala-Hoima and kampala-Entebbe roads). All the above mentioned roads are paved. Sections of these roads are characterized by traffic congestion in a radius of 20km from the capital and this was attributed to current capacity of the roads being exceeded.
- National routes (Distributors) interconnecting major arterials originating from the city centre. (Seeta-Kasangati-Mattuga-Wakiso-Buloba-Nsangi and Nakawuka-Kasanje Road). However these are gravel roads characterized with low speeds due to poor surface, narrow carriageways. Network capacity was affected because of lack of mobility and motorists diverting to paved roads.
- District and urban roads (Collectors) connecting Urban/rural centers to arterials and are also gravel roads with serious road reserve encroachments. Connectivity was constrained due to poor surfaces and being narrow roads that do not ensure safe clearances for passing vehicles.

Map 3.25 gives an illustration of the major road network in Wakiso district.



Map 3.25: Road network in Wakiso District

9.2.8 Road Safety in Wakiso District

Road safety was of great concern in Wakiso District because the rate of road accidents had become unacceptably high especially on arterial roads. This was compounded by over speeding, reckless driving, poor conditions of roads and poor attention to vehicle maintenance requirements. There are four types of deficiencies which occur in the entire length of road network in Wakiso District which were identified:

- Inadequate road signs, direction signs and pavement markings on almost all the roads,
- Inadequate provision of public transport stopping areas and areas for passenger transfer (Bus and Taxi Stands),
- Inadequate vehicular and pedestrian (red and green modes) separation in urban areas and commercial centres especially along roads with heavy traffic,
- Sporadic urbanization along major road networks (Linear Settlements) which eventually spread into organic infill.

The existing road network was not keeping pace with the ever increasing traffic. At pick hours, traffic volumes increase and driver speeds reduce and roads get congested. In general, high traffic volumes and congestion affect road safety. Road safety was affected by the increase in vehicle traffic and number of interactions between vehicles. In analysing safety it was important to separate road sections and intersections because these have different characteristics. Normally road sections are characterised by uninterrupted traffic flow whereas intersections are characterised by interrupted traffic flow.

Intersections.

In Wakiso District the most common intersections are roundabouts and signalised intersections. Roundabouts are considered to be safer than traditional 3 or 4 arm intersections because there are fewer conflict zones. Some of these round about are too small to serve the intended pupose e.g. Gayaza roudabout

Road sections.

These are uninterrupted traffic flow facilities. When the traffic is not much traffic flow speed is high and vehicles can overtake each other. Characteristics of the road and road side are very important factors which play a role in road safety and traffic volumes such as the presence of area access roads, Presence of vehicle stop areas and heavy vehicles. In Wakiso when the traffic volumes are high it is difficult to enter and exit such road sections especially on major high ways. Where there is vehicle stop areas road section narrows reducing clearance for passing vehicles.

9.2.9 Pressures and trends

National (Primary Roads) are mainly maintained by UNRA and for district and urban local governments do receive annual assistance from Ministry Local Government and Uganda Road Fund for maintenance of roads as in the interventions illustrated in Table 3.29 below. These funds however are not sufficient to make significant impact on road network. The periodic maintenance was done by either contracting out or in-house. There was also mechanized road maintenance with utilization of District Road Equipment but the equipment was very old to serve the purpose. Sometimes they use labour based road maintenance which also has conventional challenges. The district would require 9.5 billion shillings annually for road maintenance alone yet not even a quarter of its annual budget could cater for that.

Table 3.27: District Expenditure for maintenance of district roads

Source	Indicative planning figures UGX.2016
Road Fund	1,270,000,000
Urban Roads	893,704,000
Road mechanical imprest	68,759,700
Road rehabilitation	9,500,000

Source: District Engineering office.

Population change has a strong influence on economic activity by affecting the size of work force and local markets. The district had a population of age blacked 20 – 59yrs (45.3%), Very high rate of growth 6.6% hence urban labour force was available. This population structure was likely to increase the growth of private car use yet the road infrastructure in the district seems to remain in situ.

Increasing concentrations of population and economic activity can increase the demand for travel and in turn result in pressures on transport corridors. Wakiso receives migrants from all other districts in Uganda, Kampala inclusive. They try to escape absence or breakdown on service delivery, poverty and unemployment perceived to exist in rural areas. Hence pressure on the existing roads.

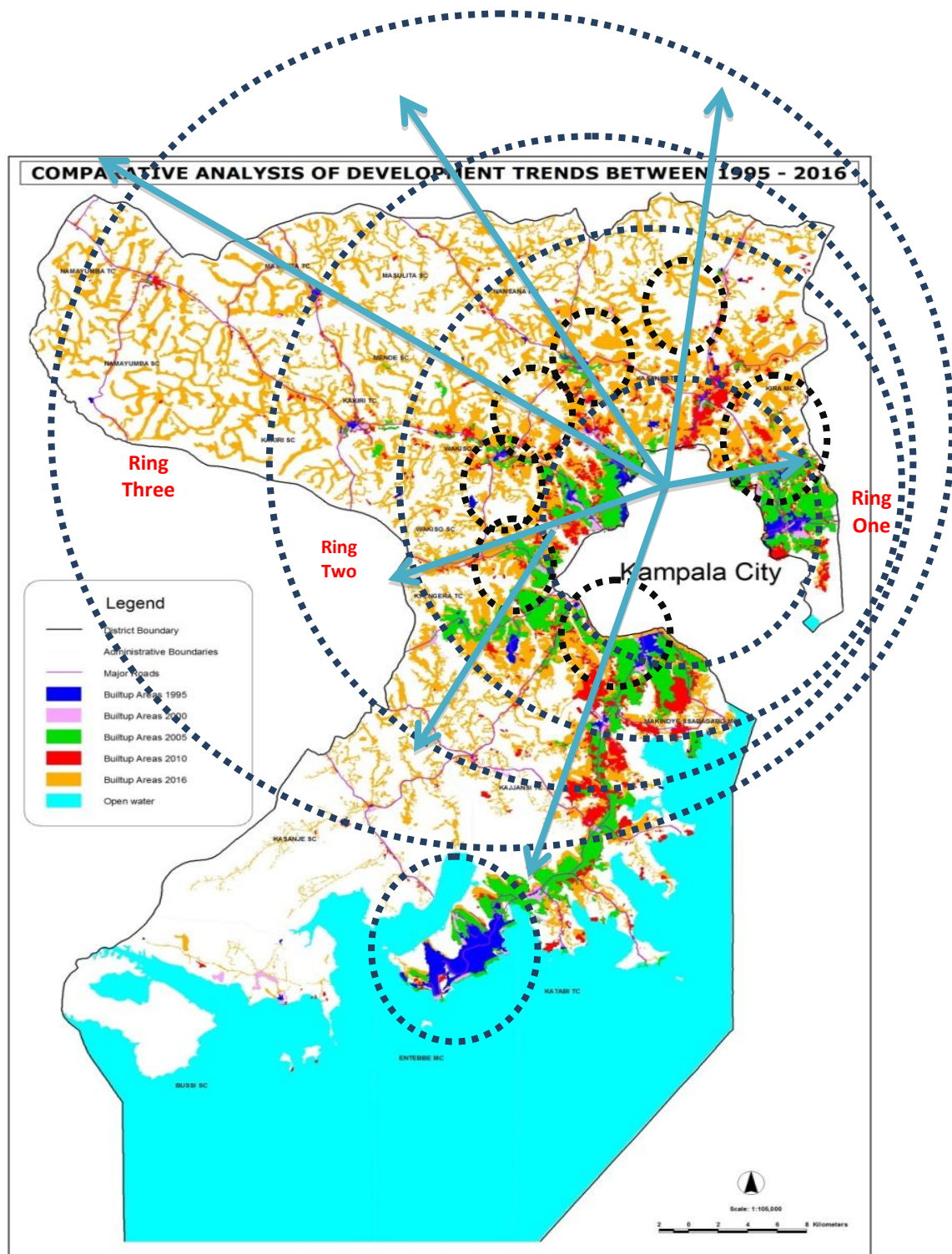
The city pressure, radiating development pattern and concentric pattern from the City establishment acts as the main core. Physical development extends into Wakiso District radiating along the primary movement routes originating from the city centre, dissect and extend through the District, vis;

- The international links
- National link highways
- Local link roads

This has resulted into the trend and general district settlement and development pattern that is composed of the following segments:

- i. **The Immediate ring 1 neighboring with KCCA** - highly urbanized, acts as outer dormitory suburbs for Kampala City (Map 3.26).
- ii. **Ring 2; Urban Peripheral Towns** - specifically Kakiri, Kasangati, Wakiso Kakiri, Namayumba, Masulita, Kajansi, Kyengera, Katabi and Kira
- iii. **Ring 3; Rural Periphery** - significant peri-urban extension “fingers” to the south-west towards Entebbe (with a urban extension developing from Entebbe north east towards Kampala), Masulita, Namayumba, Mende Kalema, Kasanje and Bussi.

The economic growth depicted by majorly trade sector of 39% and with agriculture becoming less significant. Vehicle traffic was expected to increase in line with economic growth of 8% per annum as projected in GKMA Transport Master Plan (2013).



Map 3.26 settlement and development patterns in Wakiso

9.2.10 Deficiencies of the road network in Wakiso District.

- It was observed that the district road network does not perform well because the network was lacking capacity (Cannot accommodate traffic entering or leaving, It rapidly and safely or circulate freely in it and Provides for through traffic not diverted to outer by passes).
- Only 15% of the road network was paved and the network also lacked a clearly defined road hierarchy which could be helpful in rational planning for traffic flows. Hence poor connectivity.
- Roads were designed without taking into account the needs for pedestrians walk ways (NMT).
- Road safety had become a problem due to traffic congestion, reckless driving (mainly caused by behaviour of the rapidly growing “Boda-boda” operators).
- The design of some main intersections and roundabout are outmoded and not functional.
- Rapid population growth and growth in vehicle ownership and volume of trade had greatly increased the demand for road space and therefore caused pressures on existing road network.
- Some of areas in the district like; Bussi, Mende, Kakiri, Namayumba, Kasanje Sub counties are not easily accessible due to absence of certain classes of roads.
- Under funding for maintenance of roads was a long standing problem in Wakiso District, Road Maintenance was not up to date and this adds to the congestion and road safety problems resulting into increased travel costs.
- Majority of the urban roads were dead ended making connectivity very difficult.
- Inadequate road signs, direction signs and pavement markings on almost all the roads,
- Inadequate provision of public transport stopping areas and areas for passenger transfer (Bus and Taxi Stands),

9.2.11 GKMA identified issues and opportunities affecting Wakiso District.

Issues

- Continuing to achieve an integrated planning approach to land use, infrastructure and funding.
- Enabling planned land use change while not compromising the function of the transport network.
- Managing the competing demand between commuter taxis, buses and boda-bodas particularly in the Municipalities.
- Providing a resilient road network that appropriately meets Metropolitan community and business needs.

Opportunities

- Working collaboratively to plan, manage and fund the road network.
- Promoting a ‘one network’ approach for the customer and response to dealing with future demands e.g. understanding how the rail and road network can work together to address future freight demands.
- Promote increasing walking, cycling and public transport use particularly in urban centres to manage future demands.
- Better understand how land use form and responses can influence demand for the road network.
- Work with freight operators to better understand how future freight demands can be managed to meet customer expectations (both the freight operator and commuter).

- Investigate mechanisms to understand how future affordability challenges can be managed.

9.2.12 Conclusion.

9.2.12.1 Legal, Policy and Institutional Issues.

There is so far no legislation governing District, Urban, and Community Access Roads and how they dovetail with national roads in terms of functional responsibilities. Therefore, a proposed legislation will be a *Uganda District, Urban and Community Access Roads Act*, for which a bill is to be drafted after a detailed study. There is lack of Non-Motorized Transport Policy in Urban Centers. Establishment (and implementation) of the district road equipment scheme which is meant to strengthen the modalities for road maintenance will go a long way in boosting maintenance efforts. However lack of professional capacity, lack of proper organization and tools can still affect efficiency of the scheme.

9.2.12.2 Network Capacity.

Connectivity is a measure of accessibility without regard to distance. In considering the *capacity* of the *road network*, it is important to consider the *capacity* in terms of 'total people movement', including travel by public transport, cycle and on foot. Chen et al. (J. Adv. Transp. 33 (2) (1999) 183–200) introduced capacity reliability as a new network performance index. It is defined as the probability that the network can accommodate a certain traffic demand at a required service level, while accounting for drivers' route choice behavior.

a) Major arterials.

All major arterials according to the 2016 UNRA traffic are carrying traffic above 12,000 pcu per day. According to 2010 road designers recommendation, these are classified by design to be Dual carriageways. Hence for the current traffic they have limited capacity because of their design. Therefore for the 8% annual traffic growth rate recommended by GKMA Transport Master Plan 2023, major arterials should be upgraded to (Multi lane) carriageways.

b) Minor arterials and Collectors.

At the current traffic levels (6,000-10,000pcu per day) according to 2016 UNRA traffic census, they have limited capacity due low speeds attributed to poor surface conditions and road reserve encroachments that do not allow clearance for passing vehicles. No separation for cyclists and pedestrians.

c) Additional network capacity.

Additional arterials have been planned to boost connectivity of the network and these will include express highways but with toll charge.

9.2.13 Road hierarchy and function.

The hierarchy of roads categorizes *roads* according to their functions and capacities. The existing land use patterns in Wakiso are not related to functionality of these roads. Within a wide network of the GKMA, the existing routes need to be defined in relation to future capacities and land use patterns if they are to improve efficiency.

A road hierarchy has, for some time, been accepted as one of the important tools used for road network and land use planning. Roadways serve a variety of functions, including but not limited to the provision of direct access to properties, pedestrian and bicycle paths, bus routes and catering for through traffic that is not related to immediate land uses. Many roads serve more than one function and to varying degrees, but it is clear that the mixing of incompatible functions can lead to problems. A road hierarchy is a means of defining each roadway in terms of its function such that appropriate objectives for that roadway can be set and appropriate design criteria can be implemented. These objectives and design criteria are aimed at achieving an efficient road system whereby conflicts between the roadway and the adjacent

land use are minimised and the appropriate level of interaction between the roadway and land use is permitted. The road hierarchy can then form the basis of ongoing planning and system management aimed at reducing the mixing of incompatible functions.

It should ensure the orderly grouping of roadways in a framework around which Wakiso District local government can plan and implement various construction, maintenance, and management schemes and projects. It should also assist local government with the adoption of appropriate standards for roadway construction.

9.2.14 Road Safety.

a) Intersections.

There many (3 or 4) arm intersections within Wakiso road network hence the risks to accidents have been reported to be high. There was need to shift away from these traditional intersections to controlled signalised intersections.

b) Road sections.

The exiting road network was characterised with area access roads, no vehicle stops, heavy vehicles and with almost no road side area as there are road reserve encroachments. Overall there was lack of road safety management system i.e. planning and designing , operation and use of the road network, entry and exit of vehicles.

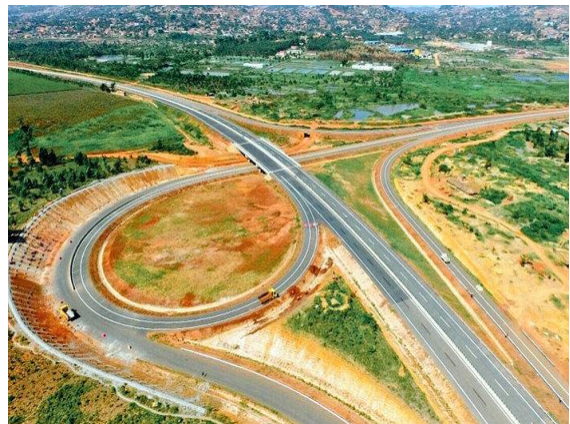
Direction-Strategy, means of delivery (Policies, guidelines, standards, procedures, expertise, qualification). Control-Management systems,

9.2.15 Proposals and/or Recommendations for road infrastructure in Wakiso.

Create a conducive legal, policy and institutional environment that will facilitate the improvement and development of District road network.

The plan proposes express ways of 308 Km which are highways designed for fast traffic, with controlled entrance and exit, a dividing strip between the traffic in opposite directions, and typically two or more lanes in each direction. These require a road reserve width of 60 metres

- Kampala-Bombo Expressway-50Km.
- Busega-Mpigi Express way-23Km.
- Southern by-pass-18Km.
- Outer belt way-120Km.
- Inner Belt way-64Km.
- Entebbe Expressway-51Km (dual and toll charge) under construction



The plan also proposes dual carriageways of 320 Km which are conceived as 4-lane or 6-lane routes which may include high capacity public transport services in express, limited stop or local service. Provision of non-motorised transport and these are and these require a road reserve

width of 40 metres;

These are mainly radial routes from the centre of the Capital City

- Masaka Road-23Km.
- Bombo Road-50Km.
- Entebbe road-49Km.
- Gayaza-Zirobwe Road-30Km.
- Gayaza-Kalagi Road-21Km.
- Mityana road-20Km.
- Hoima Road-17Km

Also single carriageways of 440 Km are proposed. These will be upgraded and properly engineered roads with a minimum of two lanes, adequate shoulders and proper drainage. They will be paved which require a road reserve width of 30 metres and these are;

a) Short term strategy (240.9Km).

- Najanankumbi – Busabala-Kazi-12Km,
- Lweza - Kigo Prison-8.7Km,
- Abayita Ababiri – Kasenyi-5.5Km,
- Nambole - Kampala Industrial Park – Mukono-14Km.
- Kireka-Namugongo-Misindye-Seeta-14Km
- Kisubi-nakawuka-Nateete-28Km,
- Nakawuka-kasanje-mpigi-buwaya-59.8km
- Kakiri-Masulita-Danze-Mawale-23Km,
- Namayumba-Kakonda-Wabikokoma-Semuto-14Km,
- Namayumba - Kitalya Prison – Kamuli-19Km,
- Nakawuka-Kasanje-9.5Km,
- Seguku-Kasenge-Budo-10Km,
- Namasuba-Ndejje-Kitiko-Kibiri-9.4Km,
- Nansana-wamala-Katooke-Nabweru-8.6Km,
- Bunamwaya-Kisigula-Mutundwe-5.4Km,



b) Medium term strategy (150.5Km).

- Kira-Kiwologoma-Nakwero & Kiwologoma-Kijjabijjo-12.6km,
- Kawuka-Bwerenga-10km,
- Kitala-Garuga-Gerenge-12km,
- Kawuku-bwerenga-10Km.
- Najeera-Buwate-Kungu-Kyanja-7.4km,
- Namugongo-Nsasa-Bulindo-5.2km,
- Sentema-Buloba-Kakiri-27.3Km,
- Kitende-Kitovu-Nsaggu-Kitemu-11.3km,
- Seguku-Nalumunye-bandwe-Klnawa-Kyengera-8.2km,
- Namasuba-Kikajjo-Gwowonya-gere-3km,
- Nansana-Kyebando-Ganda-3km,
- Kiteezi-Kiti-Buwambo-bombo road-15.2km,
- Kitende-Nsaggu-Kitemu-11.3Km.
- Seeta-Namanve-Nambole Stadium-14Km,

c) Long term strategy (50Km).

- Watuba-Jokolera-3.6Km,
- Maganjo-kisimula-Katooke-4.6km,
- Kayunga-Kawanda-Kiteezi-Luteete-12.9km,
- Namanve-Kiwanga-Butto-3.2km,

- Agenda-Namugongo-Mbalwa-Bweyogerere Industrial Park-6.0km,
- Namungode-Bugiri-5.0Km.
- Namulanda-Bweya-Kajjansi-Lweza-Lubowa-Link-11.5km,
- Kyengera-Kabojja-2.6km

The plan proposes graveled single carriageways of 303 Km in the district. These will be upgraded and properly engineered roads with a minimum of two lanes, adequate shoulders and proper drainage. They will be graveled which require a road reserve width of 20 metres.

9.2.16 Wakiso Network Hierarchy and Function.

The plan proposes that for arterial roads the district should ensure that 308Km of expressways and 320Km of radial routes are grouped as arterial routes for adoption of appropriate standards for roadway construction.

For collectors the district should ensure that 440Km of collector routes are grouped as arterial routes for adoption of appropriate standards for roadway construction.

9.2.17 Road safety.

The plan proposes that the district should development road safety management system. This will include;

- 50 locations where Intersection improvements are required,
- Provision of vehicle stops on all Collector roads,
- Ensure there are no road reserve encroachments,
- Introduction of 220 km of paved walkways that are separated from motorized traffic.



9.3 Public Transport system in Wakiso District

Public transport (also known as public transportation, public transit, or mass transit) is a shared passenger-transport service which is available for use by the general public, as distinct from modes such as taxicab, carpooling, hired buses, and transportation network companies, which are not shared by the general public. Public transport modes includes city buses, trolleybuses, trams (or light rail) and passenger trains, rapid transit (metro/subway/underground etc) and ferries.

They are generally run by the Government of a country. Its advantage is that all people travelling through it are charged equal and reasonable fare. But on the other hand, these buses and trains are over stuffed with passengers and there occurs a congested environment inside the vehicle making it difficult to travel through it. Furthermore, timings of these transport facilities are not fixed in developing countries so people have to wait for a long period of time to get into a bus / train.

While public transport is the most efficient means of travel, taxis bridge the gap between commuting and driving a car. Though a lot pricier than other modes of travel, taxis offer a choice for commuters who wish to have a personalized and convenient door-to-door service. Buses are safer than individual vehicles. Communities that have high *public transit* movement are proven to have better overall security and reduced crime rates. Traveling on *public*

transportation reduces the amount of cars on the road and decreases your likelihood of getting into an accident.

There are strong and potential linkages with other infrastructure such as road, rail, port and airports as well as education and health services, commercial transport operators and tourism sector. Introduction of public transport in a place like Wakiso District will require new infrastructure including bus stop infrastructure, bus shelter, Bus stations, rail stations, road rail, and inland ports.

Public transport is strongly linked to land use patterns and urban growth patterns, growth has to be supported with delivery of integrated transport solutions to ensure efficient movement of people.

Inter-regional connections provided by inter urban coaches require dedicated interchanges within the vicinity of urban bus services/urban transport services. A transport hub (also transport interchange) is a place where passengers and cargo are exchanged between vehicles or between transport modes. Public transport hubs include train stations, rapid transit stations, bus stops, tram stop, airports and ferry slips. Considering the above perception of public transport and associated characteristics, there is lack of conventional public transport system in the case of Wakiso District.

9.3.1 Ownership and Governance of public transport.

Under the current legislation, transport sector regulation is currently carried out for roads and water by the transport licensing board (TLB). Responsibility for public transport infrastructure lies with the District Local government. But in reality there is virtually nothing to show. The National/GKMA Transport Master Plan (2008-2023) is the only available document giving strategic direction to regulate primarily transport sector services but not infrastructure.

Responsibility for air sector regulation and safety enforcement shall, however, remain with CAA, which is already experienced in this specialist role. Also, specific responsibility for road safety will be transferred to a new National Road Safety Authority (NRSA). MTRA will also regulate pipelines, once these are constructed.

To address Transport challenges, the GKMA Transport Master Plan calls for establishment of a Greater Kampala Metropolitan Area Transport Authority (MATA), to act as a single-purpose urban transport authority on behalf of seven local authorities (Entebbe Municipal Council, Kira Municipal Council and Wakiso Town Council.) MATA will act to exercise urban transport functions delegated under a formal protocol jointly and severally agreed by the seven local authorities. MATA will also receive delegated authority from MTRA to enforce regulatory provisions for licensing, economic regulation and environmental issues, and to perform transport-related legal services.

9.3.2 Status, Future Pressures and Trends on public transport system in Wakiso.

Bus Services.

Public transport on roads does not utilize buses in Wakiso District. Public transport services are exclusively performed by the private sector. Passengers travel largely by 14-seat minibuses known as “taxis” or “Kamunyes”, which are generally organized into privately managed operator associations. There are 25 medium-sized buses in Wakiso



District; however, even on long-distance routes, many journeys are made by Kamunye.

connecting to bus terminals in Kampala.

Inter-regional bus services are available through private commercial companies



School bus services do exist for both private and public schools.

Infrastructure however was not available in terms of Bus stands, Bus Stops, Bus lanes, Bus Shelters and even where bus stops used to exist, they have been deliberately removed or rendered un-purposeful.

Ferry services.

Ferry services exist which operate between Nakiwogo and Kalangala district with landing facilities at Nakiwogo landing site. Infrastructure was in a fair state. Private ferry operators provide informal services on waterways, mainly using open canoes with on board or outboard engines. The canoes carry passengers, goods and livestock. The vessels are often overloaded, with the attendant risk of capsizing.

Passenger train.

There was a commuter train operating on Kampala-Namanve through Kira Municipality route. There was also a pilot project to re-introduce passenger services under Uganda Railways Corporation. The passenger services were revamped in December 2015 under a partnership between Uganda Railways Corporation (URC), Kampala Capital City Authority (KCCA), and Rift Valley Railways (RVR) as part of the efforts to ease transportation in the city.



The number of passengers boarding the train from Namanve has steadily increased over the eight months of its operation. Passenger volumes have increased to an average of 1,500 people per day. Passenger service train operates twice daily from Kampala Railway Station to Namanve. It has stopovers at Namboole, Kireka and Makerere University Business School.

9.6.9 The Quality of public transport services in Wakiso District

The overall quality of public transport services in Wakiso District was not good. This was attributed to a number of factors namely: -

- No urban bus service system only commuter taxis exist which act as an alternative to public transport, tending to restrict service quality and passenger choice. Because competition is limited.
- Poor road network causing inaccessibility to commuter taxis in some areas of the district like Busukuma, Gombe and Masulita;
- Regional bus services which operate on radial routes through Wakiso District are not facilitated with road furniture like bus stops and bus shelters.

- Prevalence of high transport costs and the poor roads as reported in the household survey conducted by the consultant. The planning must ensure transport mode alternatives that offer low-cost travel opportunities to all and increase levels of mobility for the underprivileged who currently cannot afford to pay high public transport fares let alone afford their own private vehicle;
- The lack of infrastructure requirements for the dominant mode of non-motorized transport - walking – hence the need for provisions for pedestrian facilities, space to cater for these services that is increasingly getting encroached on by competing land uses and unplanned activities;
- Absence of commuter taxis in some areas due to bad roads (Nakawuka road) has compelled passengers to use boda-bodas as an alternative. However, Lack of organization and regulation of Boda-bodas has caused discomfort to passengers as there are many reported cases of accidents involving motorcyclists;
- Private ferry operators provide informal services on waterways, mainly using open canoes with onboard or outboard engines. The canoes carry passengers, goods and livestock. The vessels are often overloaded, with the attendant risk of capsizing.
- Passenger train services are not regular and reliable and are restricted to only one route.
- The existing streets in the major Urban Centres (Makindye, Nansana and Kira Municipalities) in Wakiso District are characterized by narrow widths of 6m which does not allow for street parking and, cannot sustain high volume traffic which therefore has potential for causing severe congestion in the near future.

9.6.10 Public parking spaces

The parking situation in the urban centres of Wakiso District was rapidly becoming problematic. This was because the main urban streets are continuously congested as parked cars obstruct the flow of traffic leave alone the streets being too narrow to provide such a service adequately.

Bus/taxi terminals which exist are privately operated and not well planned to effectively serve the public. Connectivity to allow for smooth transfer of passengers was very limited. Matters are made worse with the absence of designated parking spaces for boda-bodas, who equally contribute to congestion and misuse of the roads.

9.6.11 Pressures and Trends on public transport in Wakiso District

The establishment of urban public transport system requires substantial amount of funds and central government interventions either by soliciting for public private partnerships or laying strategies for transport funding capacity.

Higher fuel prices impact on the affordability of private vehicle use for many people. This will drive greater demand for public transport. A downward trend in private vehicle use also equates to less tax revenue and affects the overall transport funding capacity of the government.

Forecasts indicated that the District's population will continue to grow strongly into the future. This growth, however, will not be uniform and smaller settlements may experience growth. This will directly impact of the typology of public transport promoted in the district. The District was also experiencing growth in migrant populations from neighboring Kampala and access into the growth areas from more remote communities (e.g. to access employment or health, education and other services) will become more important. Wakiso has tourist destination potential because of significant cultural sites and tourism sites like Mabamba, Namugongo shine and beaches.

Linked with population growth, economic growth will place increased demand on the District's transport network, with more commuters seeking to gain access to main urban areas. Public transport has a role in relieving congestion and maintaining/improving accessibility and amenity, in turn increasing economic growth, and therefore ensuring the district can attract and retain skilled workers by providing an attractive place to live and work.

Within the District, there was significant increase in industries that attract travel for employment. The most significant industrial zones are Watuba, Sanga and Kiryamuli in Gombe Division. Absence of public transport network has compelled owners of private schools and institutions to operate school bus services for their students. This was one of indicators for need of urban bus service.

Infrastructure provision was currently driven by services (which was a mixture of patronage- and coverage-based services). Greater demand for services would lead to greater demand for associated infrastructure, such as bus priority measures which would in turn reduce travel times, leading to greater demand and increased cost efficiency. A reduction in demand, however, was unlikely to result in reduced customer expectations (i.e. they will still expect at least a similar level of service as now).

9.6.12 The GKMA issues and opportunities.

Creation of public transport system will require coordinated land use, appropriate parking and public transport policy development, to ensure that future growth and investment in public transport infrastructure and services are mutually supportive.

A challenge for rural sub-counties like Busi, Memde, and Masulita was to provide bus based transport where it was difficult to justify and sustain fixed route services, due to the dispersed and low density patterns of settlements.

Development of public transport in the District provides an opportunity to proactively manage traffic growth and avoid congestion spilling over from GKMA, potentially extending the life of strategic road corridors and delaying the need for major investment in road infrastructure.

Overall, there is opportunity to plan now for a comprehensive and sophisticated public transport network in the district that will meet future demand and expectations. This would allow for staging of development and would also ensure that provision of other infrastructure considered public transport needs (e.g. road projects).

9.6.13 Conclusion.

The absence of public urban transport policy affects greatly public transport system of Wakiso District. Transport policy when developed would prevent or control the inherent monopolistic tendency of many transport modes. Unrestrained competition commonly leads to market dominance by a company thereby achieving monopoly power. Such dominance brings into question many issues affecting the public interest such as access (smaller actors prevented to access infrastructure), availability (smaller markers being less service or services being discontinued) and price (the monopolist being in a position to charge high prices). Break the dominance of 14-seater commuter taxis (Kamunyes).

High fuel prices associated with private cars, prevalence of high transport costs, environmental pollution, high vehicle maintenance costs because of poor roads, have and will in future

significantly affect the movement of passengers and goods. It is important this is solved by presence of passenger transport service that is cheaper, convenient and reduces travel times.

Presence of bus terminals/interchanges for inter-regional bus services outside the city would reduce the burden of delay to passengers as they won't go through the congested city roads to connect to their destined routes. This has caused discomfort and increased travel times.

9.6.14 Recommendations for public transport in Wakiso district

a) Passenger train

Wakiso District should adopt the light rail transit as mass transit system for its population. In order to provide cheap, reliable, convenient, comfortable and safe public mass transport for the GKMA, the Government of Uganda is developing a Light Rail Mass Transit (LRT) system.

The project will be phased with the first (immediate) phase covering about **35 Km** and costing about **USD 500 million**. The proposed first (immediate) phase routes to be operational by **2020** will include:

- **Kampala-Namanve** via Nakawa, Kinawataka, Banda, Kireka and Bweyogerere (12 Km);
- **Kampala-Lubowa** via Kibuye, Najjanankumbi and Zana (7 Km);
- **Kampala-Kyengera** via Katwe, Kibuye, Ndeeba, Nalukolongo and Natete (7Km);
- **Kampala-Kawempe** via City Square, Buganda Road, Wandegeya, Mulago, Kubbiri and Bwaise (9 Km).

However for long term planning this LRT should be extended to the radius of 20 Km in each of the above proposed directions in order to address the long term challenges that may occur if only a distance on average of 20 Km was considered.

b) Bus services

Government should formulate urban transport policy to guide operationalization of public transport system.

The government should also develop bus terminals to facilitate the transfer of passengers and goods connecting to radial roads and to the light rail mass transit system. The proposed four bus terminals are;

- Nsangi Bus terminal.
- Mattugga Bus Terminal.
- Mbarara (in Mukono) Bus Terminal.
- Kajjansi Bus Terminal.

c) Busways.

It is envisaged that bus ways should be on two major expressways (**outer and inner belt ways**) to enable connection to the above proposed transport interchanges.

d) Ferry services.

Infrastructure improvements at 05 Selected landing sites namely; Nakiwogo in Entebbe MC, Kyanvubu in Kasanje SC, Busabala in Makindye



MC, Kinyante in Bussi SC, Dewe in Kajjansi TC, Kasenye in Katabi TC (Map 3.250). These will ensure that all local governments sharing their boundary with the lake have interconnecting routes.

9.6.14 Inland Ports and Landing sites in Wakiso District

An inland port is a port on an inland waterway, such as a river, lake, or canal, which may or may not be connected to the ocean. The term "inland port" is also used to refer to a dry port, which is an inland extension of a seaport, usually connected by rail to the docks. Landing sites on the other hand act as both collection and trading centres for fish located off fresh water sources like lakes and rivers. Ports serve as significant pieces of infrastructure and allow producers to reach larger markets and national/local consumers to access products from elsewhere. Ports also contribute to economy of areas where they are located by attracting economic activity.

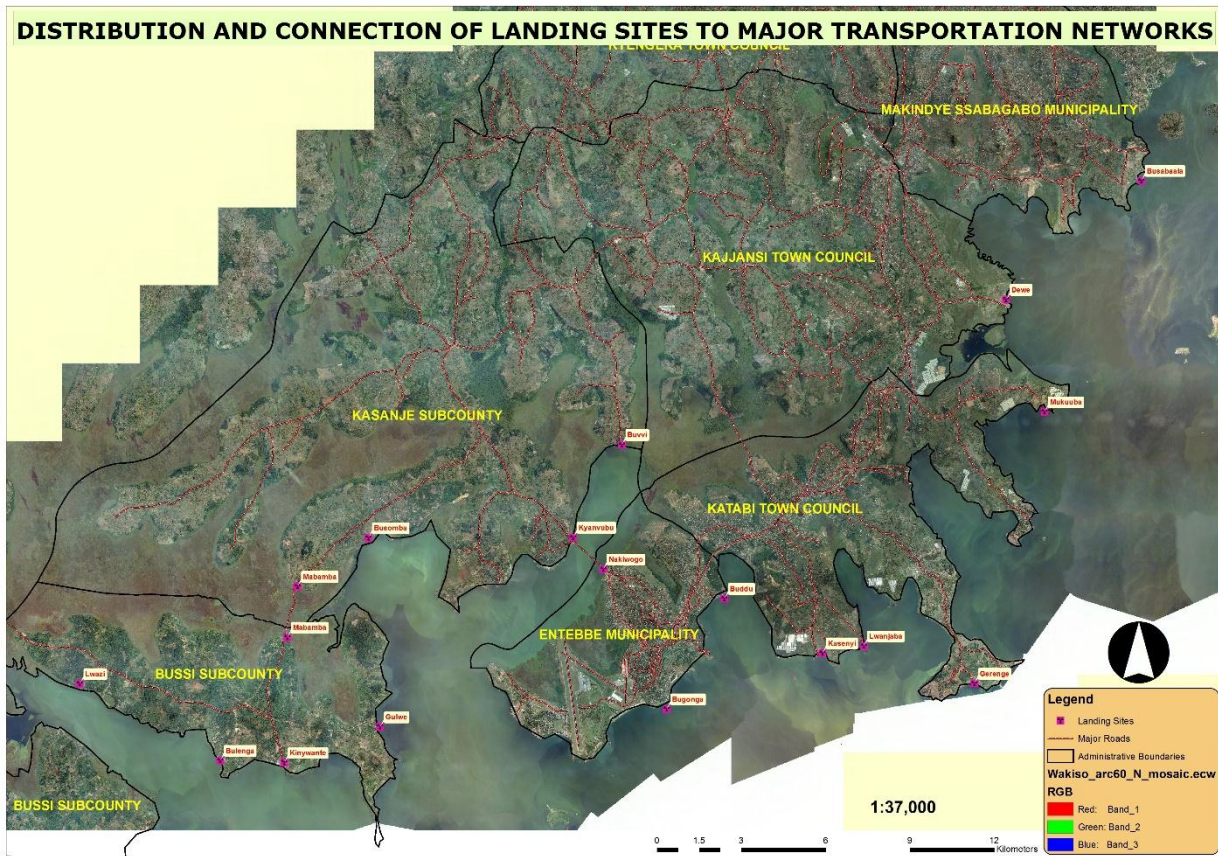
Most activities of fish trade take place at landing sites which act as both collection and trading centres for fish. It is necessary to consider availability of transport and storage infrastructure. The major fresh water source in Wakiso district was Lake Victoria. Cargo moving through the ports must be transported by road and rail network to its destination. Currently all the landing sites in Wakiso District are connected to existing road network with seasonal gravel roads that are characterized with poor road surface conditions making mobility very difficult. No connection to rail and/or the airport was in their vicinity.

9.6.14.1 Ownership and Governance of Inland Ports in Wakiso

There was no Ports Authority in Uganda due lack of legislation and infrastructure. Landing sites on the other hand are poorly governed by the district local government. The Multi-sectoral Transport Regulatory Authority (MTRA) study of 2006 recommended that MTRA become the regulator of inland water transport, and that inland water transport legislation be overhauled. Reforms are necessary in this legislation to give effect to recommendations of both the National Transport Master Plan (NTMP) and MTRA studies, and also to bring Ugandan inland water laws into conformity with the EAC Lake Victoria Transport Act. Although the EAC law affects only transport on Lake Victoria, it would be highly desirable to harmonise standards, laws and regulations for all waterways in Uganda, taking the cue from the Lake Victoria Act.

9.6.14.2 Status, Future Pressures and Trends of Inland ports and landind sites in Wakiso District

Many Landing sites exist in Wakiso District along Lake Victoria shores. Their locations are indicated on the Map 3.27.



Map 3.27 Location of landing sites on Lake Victoria in Wakiso



Kasenyi landing site was one of the district's selected fishing sites located in Entebbe, hidden about 3 kilometers away from Abayita Ababiri along Kampala – Entebbe road. It is a fishing town and one of the eight key landing sites on Lake Victoria. It was a site that connects to other different landing sites like Kigungu, Senyi and many more.

Its infrastructure can be regarded as good well-organized. Market infrastructure consists of mainly containers and wooden structures. A

modern fish handling structure consisting of taps, weighing facility, landing and washing slabs were in place which only factory fish passes through. Display wooden sheltered tales are used for fresh fish. Smoked fish were displayed on wooden unsheltered tables. A water pumping system, tanks are present for water provision though unchlorinated. Permanent pit latrines and toilet structures were also available.

Kigungu Landing site **was** a less busy big landing site with over 50 boats, 100 households located in a bay 3km away from Entebbe road. Boat landing areas,



enclosed off factory fish purchasing area, fuel stations and aerodrome airport rescue station comprise the landing site.

Generally, infrastructure on the landing site was average. There exist permanent structures of shops, residential houses, health centre, clinics, fuel stations, fisheries offices and a modern fish handling facility.

Nakiwogo Landing Site off Nakiwogo road in Entebbe Municipality is where the biggest water vessel (MV Kalangala) in Uganda docks. It transports travellers to and from Kalangala District. Infrastructure there was not good because repairs to the pier at Nakiwogo landing site is required immediately to avert possible accidents. The raised concrete floor on the dock was damaged and travellers risk sliding and drowning into the lake.



Mabamba Bay has about 6 landing sites, all having lucrative fisheries activities for both subsistence consumption and as a source of income. The Wetland was mainly used for fishing and eco-tourism activities. It also serves as a source of raw materials for local crafts, building materials, water for domestic and livestock use and fish. Part of the bay is forested and the forests are used for wood and non-wood products like herbs and mushrooms. Forestry related activities are also common in the swamp forests and one of the commercial activities in the forests was charcoal burning. Sand mining was also a major economic activity in the area.

Conclusion

Generally water transport in Wakiso District was considered inadequate and was characterised by; poor landing infrastructure and facilities, disjointed laws and regulations and inadequate planning and monitoring.

9.7 Proposals and Recommendation

a) Bukasa Inland Port project

This project will sit on 3,000ha of land, 500ha of which has already been secured. It will be an intermodal facility linking the central corridor through a marine bridge over Lake Victoria and the more active northern corridor that handles the bulk of freight to and from the East African hinterland through Mombasa. Completion to primary infrastructure stage was expected to take 05 years while supporting infrastructure such as warehousing will be developed under PPP arrangements. The realization of the Bukasa port project will provide alternative transport system connecting Uganda and the global markets.

b) Landing sites

There was need to improve Infrastructure at selected landing sites namely; Nakiwogo in Entebbe MC, Kyanvubu in Kasanje SC, Busabala in Makindye MC, Kinyante in Bussi SC, Dewe in Kajjansi TC, Kasenyi in Katabi TC. These will ensure that all local governments sharing their boundary with the lake have interconnecting routes on water. This in a long run will ease on the



movement of goods and services with minimal obstruction. However the district should encourage investors to develop infrastructure and the vessels being used.

9.8 Rail Infrastructure

Railway infrastructure includes railway lines and other structures, buildings and equipment, together with the corresponding land, located on railway premises, designed for the management, passenger or freight transport, and for the maintenance of the infrastructure manager's property for these purposes. Railway line is defined as a railroad that has a start and an end, together with its adjacent strip of land, and includes line sections, buildings, structures and equipment designed to manage rail traffic, together with their corresponding land. Rail freight provides easier, faster, more efficient way of moving heavier goods than road hence reducing congestion on roads and significantly cut costs. Rail freight plays an important role in the economy of an area by employing thousands at rail stations and easily delivering food stuffs to supermarkets and stores.

In Uganda railroad links the country to Mombasa container terminal through Wakiso District from Kampala City. There exists a rail network radiating through Wakiso District to both Eastern and Western Regional areas of Uganda. There is intermodal movement of freight between sea, rail, road and airport which becomes very essential when it comes to economic development.

9.8.1 Ownership and Governance Rail infrastructure

The operation of railways in Uganda was up to 2006 under the management of Uganda Railways Corporation, a Government statutory body. In line with the Government Policy of divestiture, management of the railways was from 2006 concessioned to a private company, Rift Valley Railways (RVR). Wakiso District local government has no obligation in the affairs of rail infrastructure but the facility passes through the district to other destinations.

Under the on-going standard gauge rail project. The Government of Uganda is proposing to develop a Light Rail Mass Transit (LRT) system. In order to provide cheap, reliable, convenient, comfortable and safe public mass transport for the GKMA where Wakiso is part.

9.8.2 Status, Future Pressures and Trends of Rail infrastructure

In general, the rail assets within the District are not in reasonable working condition and have inadequate capacity to deal with current demand. The western rail corridor going through Wakiso to Kasere was not operational but the Kampala-Mombasa rail corridor was operational.

There was a pilot project provision for passenger rail in Wakiso District, and the scale of population would make commuter rail viable within the GKMA. In the future, with the proposed GKMA Light Rail Transit, it may have a role to play in providing for the movement of people between major centers of production. Large volumes of freight are expected to come from East African Region through Mombasa port import and export goods which are expected to significantly increase. Hence the need to connect rail to the proposed port.

9.8.3 Economic benefits of rail infrastructure to Wakiso District

- **Reduced cost of public transport** (by 50%) from an average of UGX 1,000 (USD 0.30) to an average of UGX 500 (USD 0.15) per short trip.
- **Reduced travel time** (by 75%), saving the economy over UGX 70 billion (USD 20 million) per annum.
- **Increased public transport revenue** (by 340%) from the current UGX17.5 billion (USD 5 million) per annum to UGX 59.5 billion (USD 17 million) per annum with LRT operating at maximum capacity.
- **Reduced road wear and tear** (by 50%) resulting in road maintenance cost savings along

the LRT routes of around UGX 10.0 billion (USD2.8 million) per annum.

- **Reduced fuel consumption** (by 75%) resulting in savings of aroundUGX 56 billion (USD 16 million) per annum.
- **Enhanced economic activity** along the LRT routes which will reduce poverty through enhanced market access.

9.8.4 GKMA issues and opportunities for Rail Infrastructure.

Issues

- Identifying and designating new rail corridors in the district for the future. The GKMA transport system may lack the flexibility to cater for long-term changes in land use and demand if future transport corridors are not identified and protected.
- High capital costs associated with new infrastructure.
- Safety, issues with level crossings and corridor trespass issues.

Opportunities

- Taking advantage of the fuel efficiency of rail.
- The rail network is a critical economic lifeline and should it fail, the road network would be placed under significantly greater pressure by increased freight volumes.
- Improving rail as an economic option, particularly for freight transportation.

9.8.5 Conclusion.

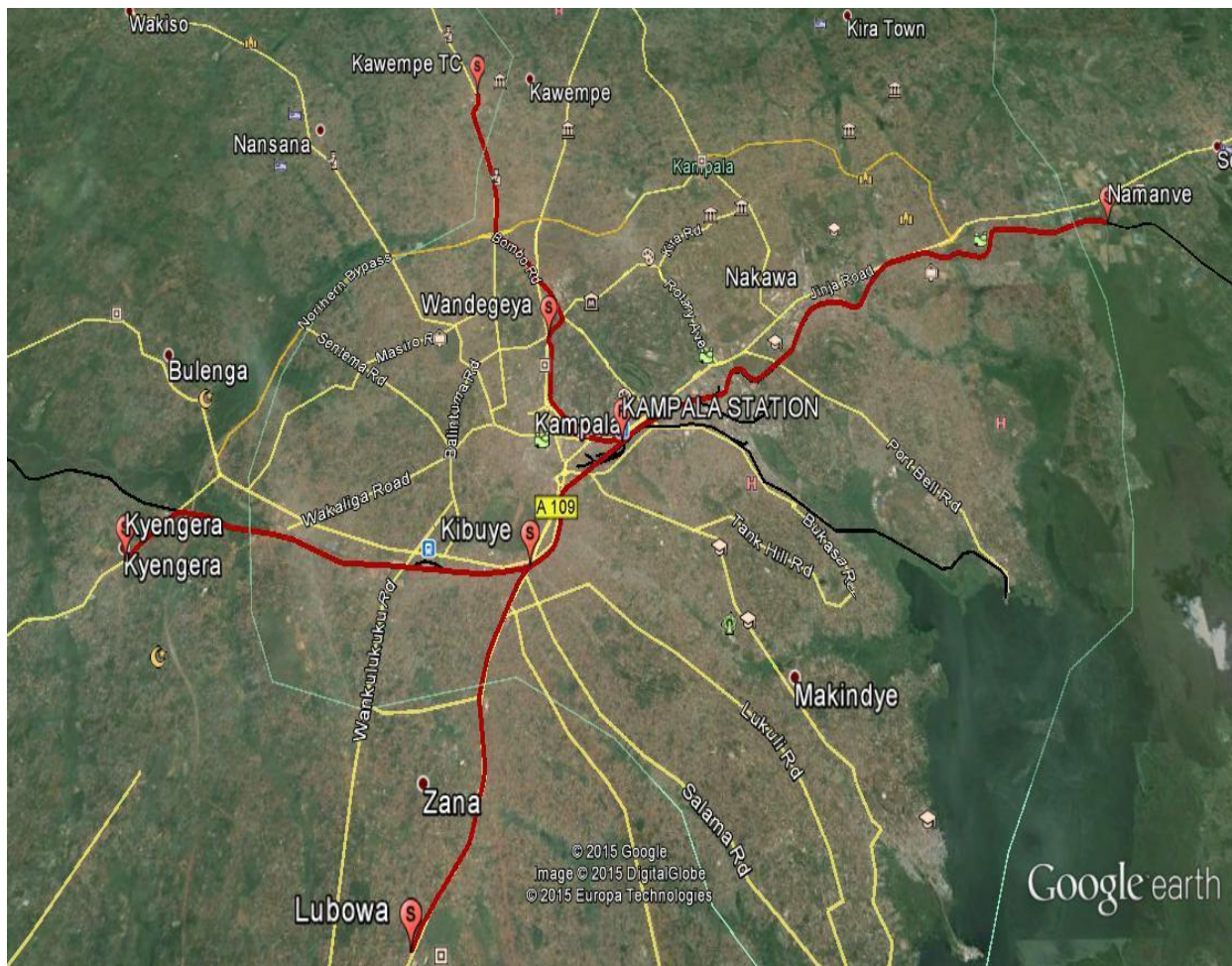
Pilot project for passenger rail shows there will be increased demand for passenger rail in Wakiso District and GKMA as a whole. The scale of population would make commuter rail viable within the GKMA. The proposed GKMA Light Rail Transit with its associated economic benefits has the potential to become the mass transit system for the future. Freight merchandise from global markets through proposed Bukasa inland port should be connected to Rail network for distribution.

9.8.6 Recommendation

Ensure that there is adequate rail infrastructure to facilitate the development of mass transit system and freight transport services. The district must work hand in hand with KCCA to implement the LRT as proposed in the Standard Gauge Rail as indicated in Map 3.28.

The plan acknowledges the planned LRT by the central government. But for purposes of ensuring efficiency in rail transport, the provision of LRT should be extended to a radius of 20km from Kampala that is from Lubowa to Kajansi along Entebbe road, Kawempe to Matugga on Bombo, Namanve to Mbarara along Jinja road and Kyengera to Nsangi along Masaka road.

Map 3.28 Future Light Rail Mass Transit Systems.



Source: Standard Gauge Railway Report, The Greater Kampala Metropolitan Area LRT.

9.9 Airport Infrastructure

Airports play a significant role in globalization, connecting cities and continents. Airports are a major part of a country's infrastructure and foster economic activities by encouraging international commerce and tourism and generate employment.

Air transport has the overwhelming advantage of speed over longer journeys and it is the only feasible option for long distance international journeys. It is also invaluable in transporting high value perishable products and considered the safest mode of transport in the world.

Wakiso District has Uganda's only International Airport located at Entebbe and an airfield in Kajjansi Town Council. At the airport, air traffic was dominated by international passengers and Cargo Traffic to and from Entebbe International Airport. Domestic flights within the country from Entebbe exist but are characterized by low traffic levels with only one regular carrier (Eagle air). Other domestic flights are chartered but limited to a few destinations in the country.

Airport interfaces with different surface modes. Door to door road travel times are different from door to door travel times associated with air travel. Wakiso District has tourist attractions that need connection from the airport. On-going Entebbe expressway is intended to connect the airport to road network in safe, fast and efficient way.

9.9.1 Ownership and Governance of airports

Civil Aviation Authority (CAA) exercises both regulatory and operational authority over

Entebbe international airport and the other airfields located around the country. CAA also designates domestic and international air carriers. Wakiso District Local authority has no obligation in the management of airport infrastructure.

9.9.2 Existing strategic Investment plan/options for airports

National Civil Aviation Master Plan (CAMP) 2013-2033 was in place and does not include Entebbe Air Master Plan which is a separate document due its unique importance. Entebbe Airport Master Plan considered the current situation of the airport and proposed necessary actions for the next 20 years up to 2033. Beyond that an ultimate vision of the airport development was proposed. The master plan also defines the land use strategy.

There is also the National Airports Development Plan which considers classification system based on airport functional roles which clearly demonstrate the types of facilities and services that should be provided at each airport facility.

Existing airport infrastructure 2013



In Wakiso District, there was Nambi-Bweya Airfield located in Kajjansi Town Council. Kajjansi Airfield was an airfield serving Kajjansi, a town in the Central Region of Uganda. The airfield was approximately 20 kilometres north-east of Entebbe International Airport.



There is already a proposal in the GKMA Transport Master Plan (2008-2023) to look for suitable land to develop an airport to serve Kampala due to constraints limiting Entebbe International Airport. However there is need to compare it with a second runway at Entebbe Airport. Impact of tourism was likely to influence airfield developments.

Traffic forecast done by the National Aviation Master Plan (2013-2033) considers the economic growth of East African Region and the impact of liberalization of air transport within East Africa.

Passenger traffic at Entebbe expected to grow from almost 1.4 million to more than 7.5 million passengers in 2033. Cargo handled at the airport was expected to increase from 56,000 metric tonnes to 172,000 tonnes in 2033. However there was no strategic direction to meet the traffic demand expected at Entebbe by 2040.

9.9.3 Recommendation

Expansion of Entebbe Airport (2013-2033).

The Civil Aviation Authority has acquired land to embark on the expansion program of Entebbe International Airport (Table 3.30). Uganda government allocated the national aviation body 66.5 acres of land to kick start the expansion works of the country's main airport. It has given CAA part of the land that belongs to the ministry of agriculture in Entebbe to establish a modern cargo center to decongest the airport.

CAA has earmarked Sh.60bn in internally generated funds to expand the aircraft parking area and maintenance center. The Entebbe International Airport master plan, CAA will also need \$67.4m between 2019 and 2023 for further upgrade, as well as an additional \$160.5m for the same purpose from 2024 to 2033.

Proposed Expansion of Entebbe International Airport



Table 3.30: Entebbe Airport Development Actions (2014 – 2033).

Action	2014-2018	2019-2023	2024-2033
Terminal Expansion phase 1	x		
Terminal Expansion phase 2			X
Cargo Area Phase1	x		X
Cargo Area Phase1	X		
Domestic terminal		X	
Fuel Farm			X
MRO			X
Multi Storey car park			X
Others	X	X	X

The CAA Master Plan for expansion ends in 2033. It is recommended that CAA Master Plan should be revised to include the National Vision 2040 so as to match with planning horizon for this plan.

9.10 Water Supply Infrastructure

Water services infrastructure enables social, economic, tourism and cultural activities to take place in both urban and rural communities. Access to drinking water is a human right and therefore very important in facilitating development in the district. Water services infrastructure is a fundamental enabler and contributor to activities such as Hospitals, Schools, Markets, and Constructions. Without water supply commercial, industrial, primary production and education facilities would not function.

9.10.1 Ownership and Governance of water infrastructure in Wakiso

The Ministry of Water, and Environment (MWE), through the Directorate of Water Development (DWD) is the lead agency responsible for managing water resources, as well as coordinating, regulating and monitoring all water and sanitation activities and providing support services to local Governments like Wakiso District and other service providers. DWD regulates water use and waste discharge, supports districts in implementing decentralised water supply and sanitation programmes and implements new construction and rehabilitation of schemes in small towns and rural growth centres (RGCs). DWD has established eight Technical Support Units (TSUs) to support Districts to build their capacity to implement this sector mandates. DWD is also responsible for the development of water supplies for production.

On the other hand National Water and Sewerage Corporation (NWSC) operates and provides water and sewerage services in 18 large urban centres assigned to it. NWSC's activities are aimed at expanding service coverage, improving efficiency in service delivery and increasing labour productivity. Key among its objectives is to plough back generated surpluses towards infrastructure improvements and new investments. The implementation of urban reform aims to create an independent regulatory framework and an Asset Holding Authority (AHA), which will affect the future management of urban water and sanitation systems.

9.10.2 Integrated Land use planning

There should be District Plans to provide integrated decision making and co-ordination of resources and infrastructure funds to meet community outcomes. These outcomes are also facilitated through the land use provisions in the District Plans i.e. directing development to where infrastructure has capacity.

9.10.3 Existing strategic investment plans/Options for Water supply.

A water supply Master Plan (2040) for Kampala, some parts of Wakiso and Mukono Districts has been finalized by NWSC and Based on the assessment of the existing water supply system the following general measures are required to improve the water supply service:

- Water production has to be increased to satisfy present and future water demand.
- The transmission system has to be optimized and reinforced.
- The reservoir capacity is to be increased in the future.
- Pressure zones must be re-established to reduce physical losses.
- Supply zones are to be separated into district metered areas (DMAs) in order to identify areas with high leakages and undertake targeted leak detection and repair activities
- The distribution system is to be reinforced.

9.10.4 Status, future Pressures and trends of Water supply in Wakiso.

The district has a population of approximately 2 million people of which 67 % had access to safe water. The functionality rate in urban and rural areas was 78 % and 81 % respectively (Table 3.31). The access rates vary from 25 % in Nabweru Division to 95 % in Kakiri, Masulita, Namayumba, Ssisa, Wakiso and Gomba Sub-Counties.

Table 3.31: Key Facts on Water Supply in Wakiso district

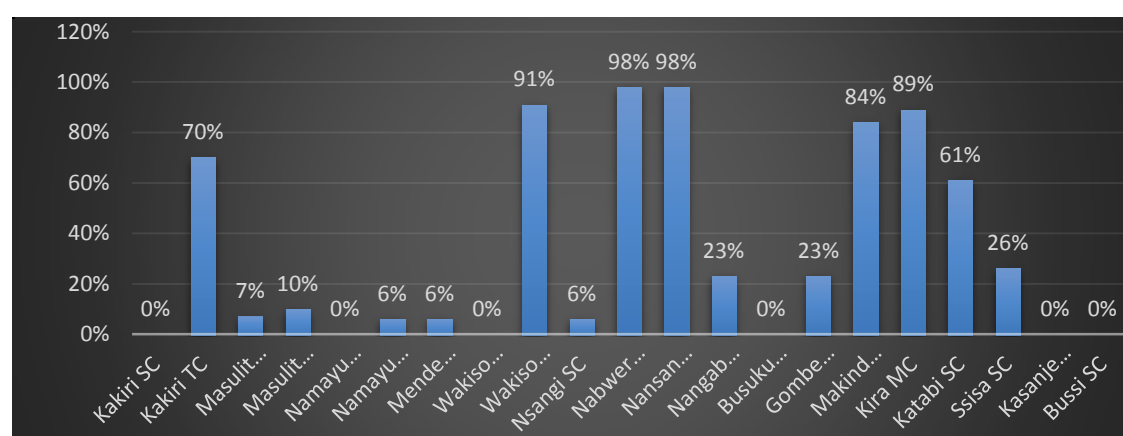
Key Facts	Total	Urban	Rural
Population	1,997,418	589,238	1,408,180
Population served	1,338,270	341,259	997,011
Access	67 %	59 %	69 %
Functionality		77 %	81 %
Equity			107
Management (functionality of WSC)			69 %
Gender			69 %

Source: District Water Status Report

9.10.5 Water Coverage in Wakiso

District safe water Coverage was (43%-rural and 44%-Urban) as compared to 68% national coverage (Figure 3.9).

Figure 3.9: Percentage Piped Water Coverage by Local Governments in Wakiso



9.10.6 Emerging issues on water access & coverage

- Accessibility to safe water has a relationship with the coverage but in Wakiso District the two are not related at all.
- Findings indicated a wide coverage of piped water yet accessibility to water was noted to be still very poor. This could be attributed to a number of reasons namely; majority may not be able to afford connection and/or where there was a network there was no water flowing in the pipes as it was the case in areas of Kasangati Town Council and Gombe Division in Nansana Municipality.
- Due to the high rate of urbanisation in Wakiso District, piped water supply overrides other water sources due to problems associated with them.

9.10.7 Capacity of the Water Systems.

In Wakiso District water supply system was divided into categories rural and urban systems;

Rural water supply system involves provision and maintenance of adequate safe water supply for human consumption and domestic chores. End users are responsible for the management, operation and maintenance of their improved water supply facilities.

Urban water supply system involves provision and maintenance of adequate safe water supply for human consumption, industrial uses and other uses to gazetted towns and centres

with population of more than 5000 people. In Wakiso District Urban water supply was subdivided into large and small towns. Large towns are managed by NWSC under a performance contract arrangement with government (Table 3.32). Private operators accountable to the Local Government, through the water authorities managed the small town schemes.

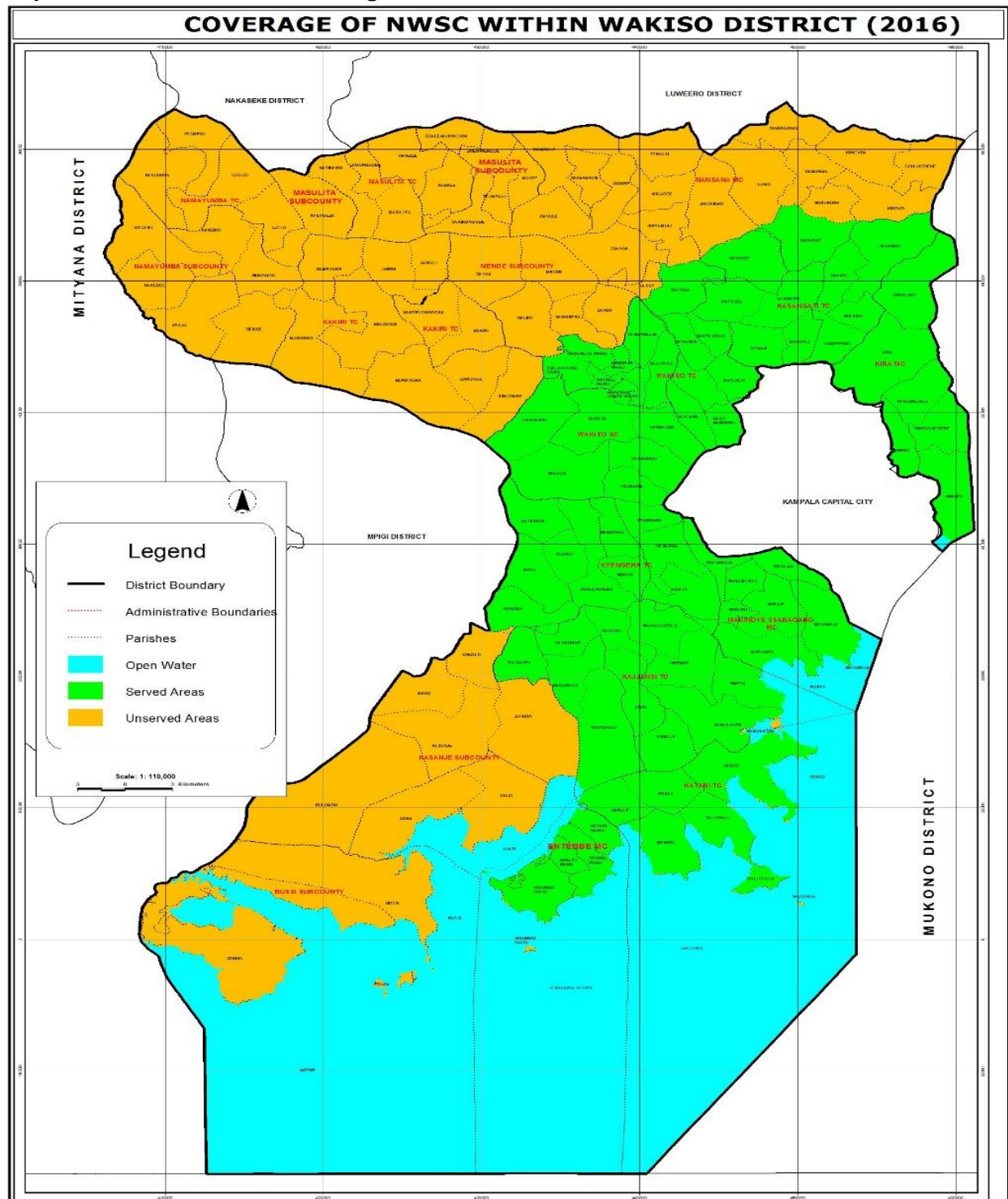
NW&SC supplies more than a half of Wakiso and the remaining areas are served by the DWD through the district water office. However it was noted that there were some areas which were not served by any of the two and instead the community improvise with shallow wells and un protected springs which may be conterminated.

Table 3.32: Areas Covered by National Water Supply System in Wakiso District

Local Government	Parishes/wards
Busukuma Division	Magigye
Gombe Division	Mattugga
Kira TC	Bweyogerere, Kira, Kimwanyi, Kireka, Kirinya, Kyaliwajjala
Mende	Banda, Namusera Ward.
Nabweru TC	Kawanda, Maganjo, Nakyesanja, Wamala, BULamu, Gayaza, Kabubbu, Katadde, Kiteezi, Masooli, Nangabo, Wampeewo, Wattuba.
Nansana TC	Kazo ward, Nabweru North ward, Nansana south ward, Nansana East ward, Nansana west ward, Ochieng Ward.
Nsangi	Buddo, Kasenge, Katereke, Kikajjo, Kasozi/Kitemu, Kyengera, Maya, Nabbingo, Nanziga, Nsangi,
Sabagabo-Makindye	Bunamyaya, Busabal, Massajja, Mutundwe, Mutungo, Ndejje, Seguku.
Ssissa	Bweya, Kitende, Nkulungutale, Nsaggu.
Wakiso	Bukasa, Buloba, Kyebando, LuKwanga, Nakabugo, Sumbwe.
Wakiso TC	Kasengejje, Kayunga/Gombe ward, Kisingiri ward, Mpunga ward, Naluvule, Namusera ward, Ssala/Kona ward.
Entebbe	The Entebbe /Kawuku/ Kajansi area stretches from Kigungu in the South to Seguku, Katale, Kitiko, Lweza & Kajansi trading centre in the North. It also covers the areas of Kasenyi, Garuga, and Kakindu, Lutembe & Bweya in the East and Nakiwogo, Bunono, Bubuli/Mpala, Ssisa, Akright, Makandwa, Kiwamirembe in the West. Central Areas are Entebbe town, Abaita Ababiri and Kawuku, totalling to 146 Km ² .

The area covered by NWSC was 844.42 sqkm (84,442.8 hectares) out of 2807.75 sqkm (280,775 hectares) the total area for the district which is only 30% as reflected in map 3.29. this shows that a big coverage was not accessing clean water.

Map 3.29: National water Coverage in Wakiso District



9.10.8 Water treatment plants

Majority of Water treatment plants producing water for Wakiso are located in Kampala Capital City. Only one exists in Entebbe Municipality. Tables 3.33, 3.34 and 3.35 give an assessment of the water treatment capacities, storage reservoirs and power to support transmission respectively for the district.

Table 3.33: Wakiso Water Treatment Plants Capacities and Assessment

Infrastructure	Characteristics	Assessment
Water Production	<ul style="list-style-type: none"> - 3 WTPs: Ggaba I, II and III - Present capacity: 183,000 m³/d - Original design capacity: 232,000 m³/d - Future capacity after rehabilitation of - Ggaba I and II: 232,000 m³/d 	<ul style="list-style-type: none"> - Present capacity is less than present water demand; consequences are water supply interruptions and dry zones in parts of Kampala Water supply area - Capacity after rehabilitation will still be insufficient to cover the future water demand
Water Production	<ul style="list-style-type: none"> - 1 WTPS: Bugonga-Kakeeka bay - Present Capacity 20000m³ /d 	<ul style="list-style-type: none"> - Only 82 % of water needs are met

Table 3.34: Wakiso District Storage Reservoirs and their Assessment

Infrastructure	Characteristics	Assessment
Water Storage	<ul style="list-style-type: none"> - 3 primary reservoirs Muyenga, Naguru and Gun hill - 5 secondary reservoirs Namasuba, Rubaga, Mutungo, Seeta and Mukono - A number of small balancing tanks - Total capacity: ca. 69,000 m³. - Entebbe-5000m³. 	<ul style="list-style-type: none"> - Reservoirs are generally in good condition - Total capacity is sufficient for present day-time balancing - Total capacity is insufficient for future water demand - Due to the gap between water production and demand reservoirs are partly insufficiently filled and outlet valves are regularly closed (e.g. at Naguru and Namasuba)
Balancing Tanks	<ul style="list-style-type: none"> - Nansana-270m³, Lubowa-270m³, Kireka-50m³, Makindye-200m³, Mattuga-600m³, Akright-500m³, Kitende-100m³ 	<ul style="list-style-type: none"> - These are mainly supplied by booster pumping stations and from these reservoirs limited small supply areas are fed.

Table 3.35: Power Transmission lines Characteristics and assessment

Component	Characteristics	Assessment
Transmission Mains	<ul style="list-style-type: none"> - From pumping stations at Ggaba WTPs to primary high level reservoirs Muyenga and Naguru and to primary low level reservoir Gun Hill - From high level reservoir Muyenga to secondary high level reservoir Namasuba and low level reservoirs Rubaga, Mutungo, Seeta and Mukono (supply by gravity) - Total length: ca. 100 km 	<ul style="list-style-type: none"> - All secondary reservoirs are fed from Muyenga, which is the highest situated reservoir in Kampala. - Consequence is that 83% of the water is pumped to the high level zone although only 25% of the water is required in this zone. This leads to unnecessary high operating costs.

9.10.9 Pumping stations

Areas requiring more pressure are supplied through a number of small booster pumping stations placed all over the coverage area. A total of 27 booster stations were in-stalled. The booster pumps are operated manually according to the pressure level and time.

9.10.10 Future urban water supply-Large Towns

Water Demand Forecast.

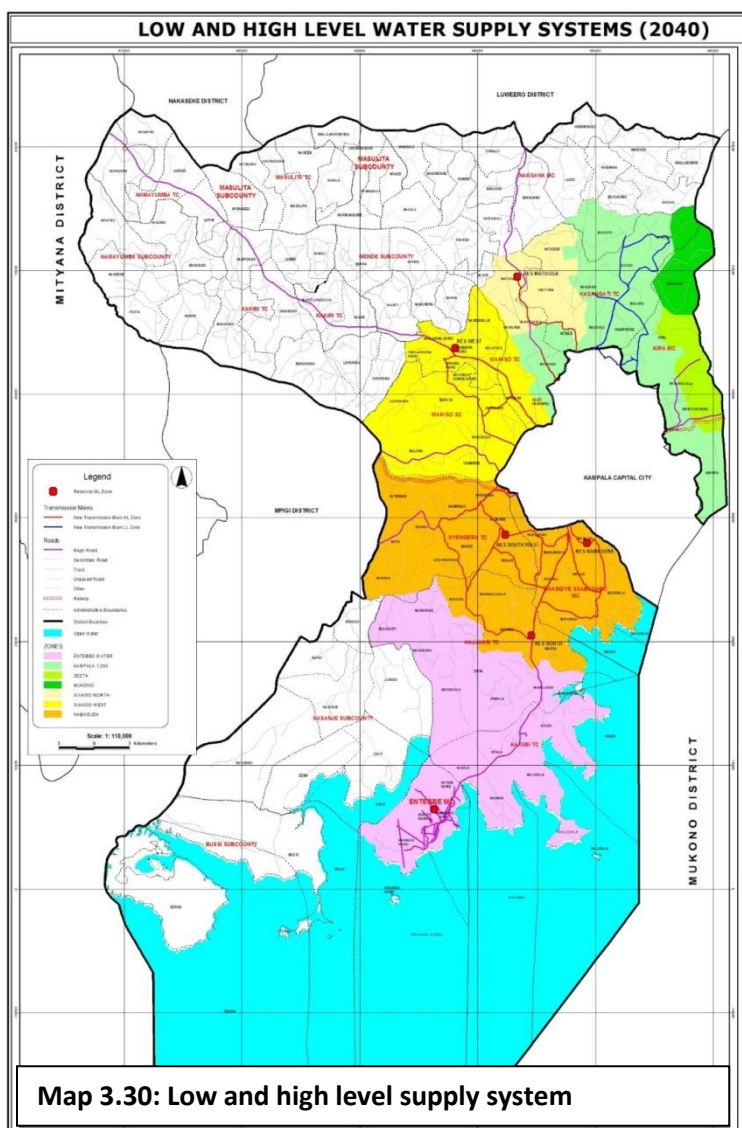
The water demand was estimated to rise from presently 210,000 m³/d to 325,000 m³/d until 2025 and 525,000 m³/d until 2040.

The main requirements for the development of a concept for the future water supply system are:

- Design of production, storage, transmission and distribution systems satisfying the water demand up to 2040.
- Re-establishment of pressure zones under consideration of existing facilities, particularly of existing low and high level reservoirs.
- Separation of the existing distribution network into district metered areas'

The re-establishment of the low and high level pressure zones was determined by Kampala's topography and the elevations of the existing reservoirs. From the existing low level reservoirs Tankhill, Rubaga and Mutungo located at elevations of 1,224 masl supply areas below 1,200 masl can be supplied. From the existing high level reservoirs Muyenga, Naguru and Namasuba located at elevations between 1,275 masl and 1,305 masl supply areas below 1,260 masl can be supplied.

The analysis of the topography shows that within the KCCA limits about 75% of the area was below 1,200 masl and can be supplied by the low level system. The remaining 25% of the area above 1,200 masl must be supplied by the high level system. Areas to the North and East of the KCCA area (i.e. Wakiso North-East and Mukono) are mainly situated below 1,200 masl and can be supplied by the low level system as illustrated by Map 3.30. Areas to the North-West, West and South-West of the KCCA area (i.e. Wakiso North, West and South) are mainly situated above 1,200 masl and can be



Map 3.30: Low and high level supply system

supplied by the high level system. Based on Kampala's topography and existing reservoir elevations the following separation of the water supply system into low and high level zones is envisaged below: -

- Low level zone for: -
 - ✓ KCCA areas < 1,200 masl and
 - ✓ Areas of Wakiso North-East and Mukono District
- High level zone for: -
 - ✓ KCCA areas > 1,200 masl and
 - ✓ Areas of Wakiso-North, Wakiso-West and Wakiso-South.

9.10.11 Future rural water supply for small towns in Wakiso.

Under the Directorate of Water Development, efforts to supply water in specific towns of Wakiso have been undertaken since 2012 as indicated in Table 3.36.

Table 3.36: Existing Directorate of Water Development (DWD) water supply system

Water Supply System	Serving lines	Year of Completion	Reservoir Capacity(m ³)
Kakiri Town	Kakiri Town Area Namayumba Town Area	2012	120
Wakiso Town	Wakiso Town Area	2012	-
Kasanje Town	Kasanje Town Area	2013	100

Major problems associated with the future rural water supply system in Wakiso District include the following: -

- The design horizon for these supply systems was 2028.
- NWSC projections do not cover all the urban areas.
- The high rate of urbanisation does not match with water supply.
- In Kasanje trading centre the system was serving only one village out of the whole parish,
- Many small towns and rural growth centres are not yet covered especially in Busukuma and Gombe Divisions of Nansana Municipality, Mende-Kalema Sub County, Masulita Town Council and Bussi Sub County. Even where attempts have been made like in the case of Kasangati Town Council, the supply is very erratic.

Table 3.37 illustrates the possible strategies and interventions to be implemented by NWSC and DWD in the short and medium term. However in the long term, the plan proposes that NWSC should take over the entire Wakiso District because of the high rate of urbanization.

Table 3.37 strategic interventions for water problems in Wakiso

Problem areas	Objectives	Strategies/Interventions
NWSC projections do not cover all the urban areas.	Enhance the coverage and connectivity of piped water in Wakiso	<ul style="list-style-type: none"> ✓ Connect all small towns and rural growth centres with piped water. ✓ Extend the coverage of NWSC piped water to all areas under its mandate.
The design horizon for DWD supply systems is 2028.	Enhance the coverage of piped water in Wakiso	<ul style="list-style-type: none"> ✓ Rehabilitate and upgrade all existing DWD water Supply systems.

9.10.12 Sanitation and Utilities for Wakiso District.

Sanitation covers key areas of human excreta disposal management, personal and food hygiene, solid waste management, waste water disposal, and drainage. This section however

will focus on the infrastructures for human excreta disposal, waste water and solid waste management. Facilities for Excreta disposal can be subdivided into household sanitation, school sanitation and public sanitation. Sanitation facilities and services are required to protect public health. Waste water and storm water networks contribute to management of health and flood hazards in the community. Without sanitation facilities commercial, industrial, health and education facilities would not function. Storm water infrastructure contributes to flood management in urban areas enabling effective and efficient operation of the road network.

9.10.13 Ownership and Governance of Sanitation facilities in Wakiso District.

As earlier noted the Ministry of Water, and Environment (MWE), through the Directorate of Water Development (DWD) is the lead agency responsible for managing water resources, as well as coordinating, regulating and monitoring all water and sanitation activities and providing support services to local Governments and other service providers. DWD regulates water use and waste discharge, supports districts in implementing decentralised water supply and sanitation programmes and implements new construction and rehabilitation of schemes in small towns and rural growth centres (RGCs).

The National Water and Sewerage Corporation (NWSC) on the other hand operates and provides water and sewerage services to large urban centres of Wakiso assigned to it. NWSC's activities are aimed at expanding service coverage, improving efficiency in service delivery and increasing labour productivity. Key among its objectives is to plough back generated surpluses towards infrastructure improvements and new investments.

Wakiso District local government on the other hand is responsible for flood mitigation and storm water drainage and management. NWSC has prepared Kampala sanitation master plan (2040) which has not been significantly implemented.

9.10.14 Status, Future Pressures and Trends for sanitation facilities in Wakiso

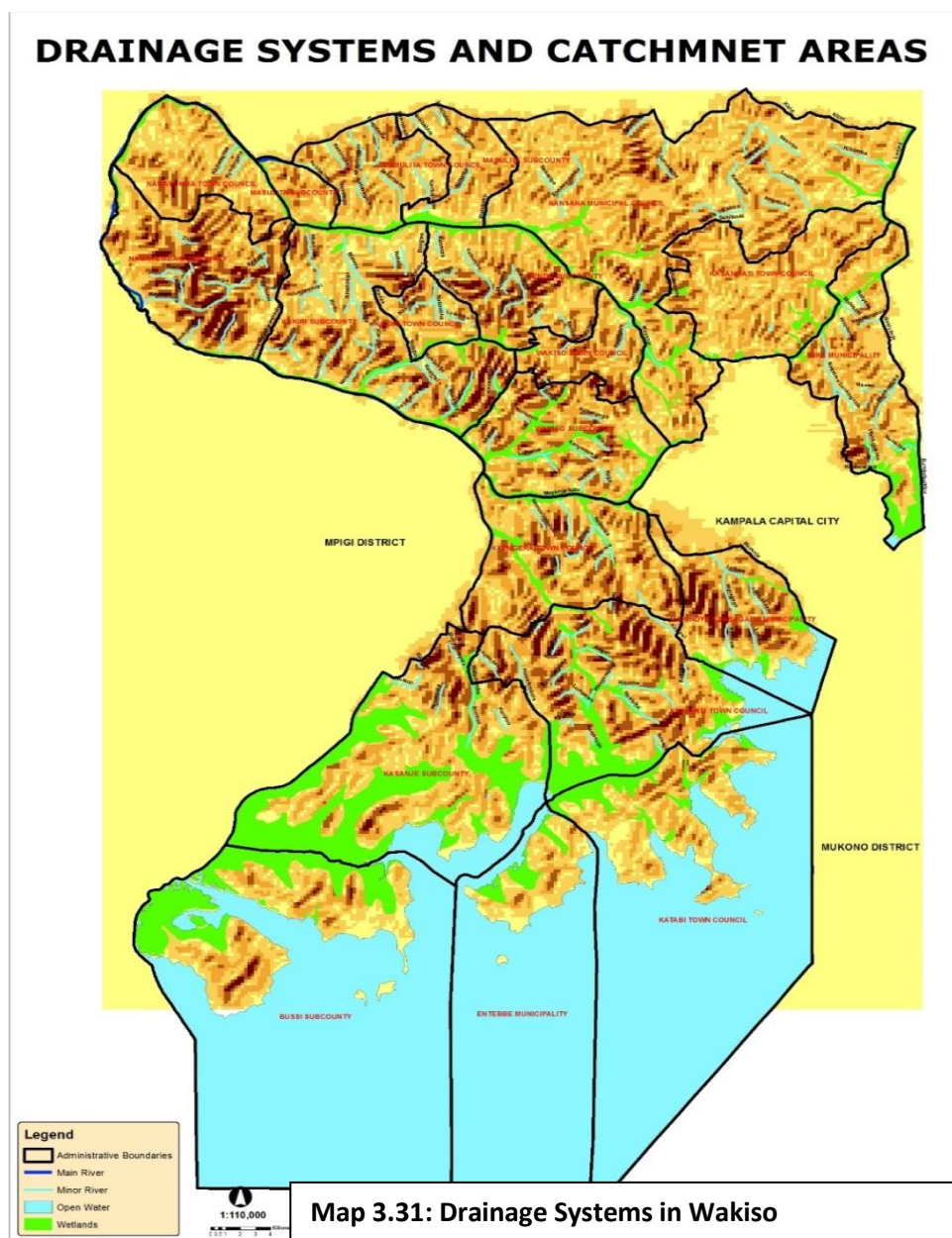
i) Topography and Natural catchment areas

Wakiso District presents two main topographic zones;

- The high land zone (central and northern hills); characterized by isolated flat-topped hills with steep slopes in some areas, often merging abruptly into long and gentle pediments, which are usually dissected by relatively broad valleys occupied by surface and sub-surface water reserves (streams, rivers and wetlands, both permanent (Lubugi, Namanve) and seasonal). The catchment zones of Wakiso are illustrated in table 3.38.
- The low lying zone; defined the three district water catchment areas namely; Kafu, Kyoga and Victoria.
- The major rivers of Mayanja, Lwajari and Nakiyanja drains into the Kafu basin.
- Supported by numerous small rivers like Danze, Kajansi, Kyetinda, Lufuka, Nonve, Nkerenge, Wabitamu, Mulanda, Semongo, Kayanja, Lubigi, Namanve, Wankongolo and Kitegala rivers (Map 3.31).

Table 3.38 Catchment zones of Wakiso district

River	Areas contributing to catchment
Mayanja Catchment.	Namayumba SC & TC, Masulita SC & TC, Wakiso SC & TC, kakiri SC & TC, Nansana MC, Mende SC & TC.
Lwajali and Nakiyanja Catchment.	Kira MC, Kasangati TC
Part of Victoria Catchment- Significant wetlands draining to Lake Victoria.	Entebbe MC, Kyengera TC, Katabi TC, Bussi SC, Kasanje SC.
Lubigi Catchment.	Kajjansi TC, Makindye MC



9.10.15 Sewage and sewerage infrastructure

The existing sewerage systems in Wakiso District are, in principle, separate systems aiming at collecting only sewage from various origins but no storm water flow.

i) Lubigi Sewerage system-5,000m³ (Operated and Maintained by NWSC)

The area suitable for piped sewerage was limited to Kampala District & the neighbouring Wards of Nabweru North and South, Nansana East and Kazo in Nansana Municipality, Masajja in Makindye – Ssabagabo Municipality and Kireka in Kira Municipality (Map 3.32). And the above areas are not yet covered by sewer network.

ii) Entebbe Sewerage system (Operated and Maintained by NWSC).

The sewer systems drain part of Town center down along Airport road to waste stabilization ponds at Kitooro and Lunyo. Other areas covered by sewer services are Fire Quarters, Survey Quarters, Windsor, Lake Victoria Hotel and State House.

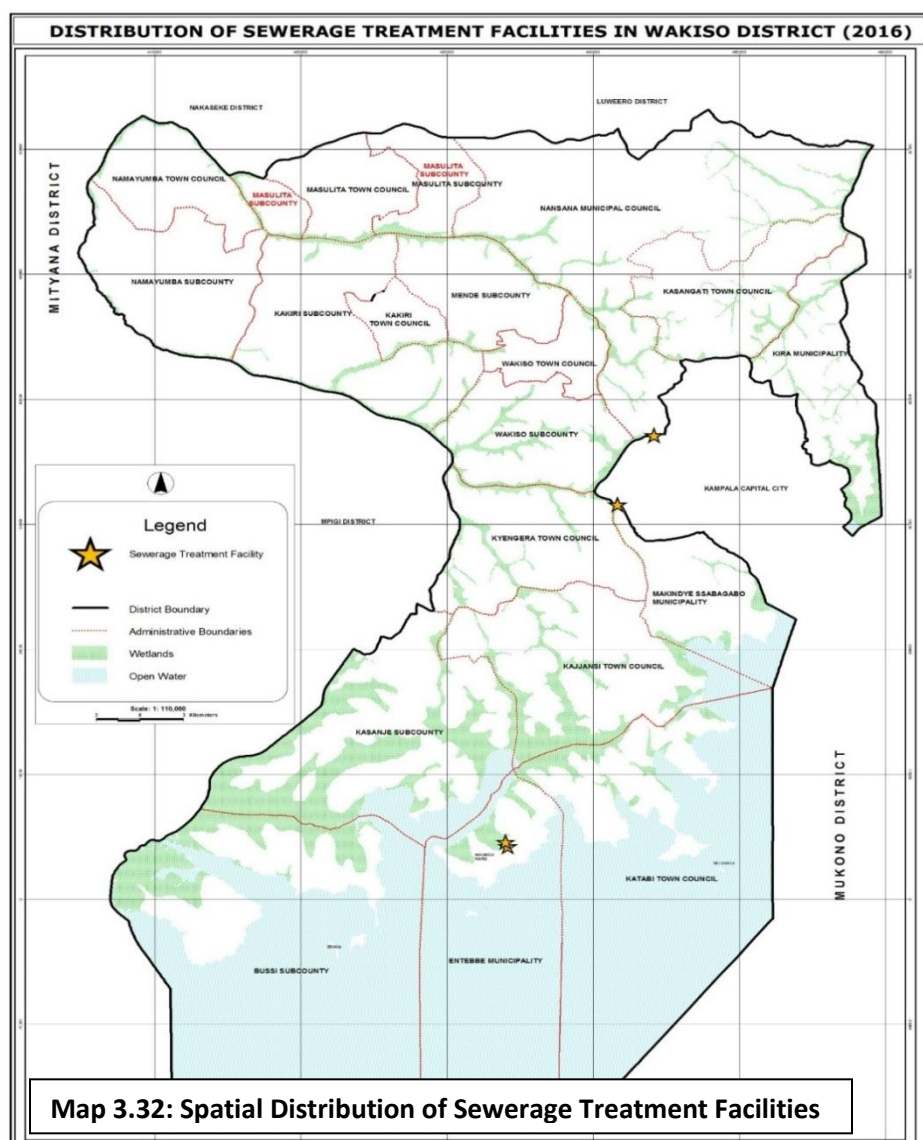
iii) Small Treatment plants.

Naalya Housing estate has a treatment plant comprising of 04 waste stabilization ponds and total capacity of 17,900m³ and it meets national discharge standards. Recently it has been taken over by NWSC. Nambole National stadium has a treatment plant comprising of 02 waste stabilization ponds and total capacity of 3,600m³ and it meets national discharge standards. Other areas which have stabilization ponds include; Kawnda and Namulonge Research stations, Kabanyolo University farm but their capacities were not established by the consultant.

iv) On-site sanitation

According to Kampala sanitation Master Plan (2040), only 7% of the population's sewerage needs are being served in Kampala and in Entebbe 5%. The remaining population around (93 %) relies on on-site sanitation, mostly traditional pit latrines (81 %) and improved (VIP) latrines (10.4 %) as well as septic tanks especially in the middle to high income population. Majority of the on-site sanitation facilities used private facilities (62.6%) while 36.9% share them. The on-site sanitation facilities are generally not properly maintained and emptied, especially in the low-income informal areas, because of excessive costs and difficulties to access the facilities by usual vacuum trucks.

			
Private pit latrine not properly utilised	Public shared	Temporary pit latrine still used in rural areas of Wakiso	High rise pit latrine constructed in areas of high water table



v) Faecal sludge management.

One system for latrine emptying and faecal sludge collection currently exists in urban areas of Wakiso: • Vacuum trucks, most are privately owned and operated. They are however rarely used in the area.

9.10.15.1 Industrial Control.

Industrial pollution control was a key issue in Wakiso as important industrial polluters are located in different industrial areas in Wakiso. Most of the industries discharge their effluent to the sewer network or to the environment in an uncontrolled manner and industrial discharges generally lacks control, monitoring and enforcement of the applicable legislation relating to discharge control. Major Industrial areas in Wakiso that discharge into the environment are located in Kajjansi, Sanga & Kiryamuli Industrial zone.

9.10.15.2 Storm water drainage.

Surface water drainage was strongly connected to sanitation as most of the grey water was generally discharged into the storm water drainage channels intentionally or accidentally. This

includes faecal sludge from on-site sanitation facilities, industrial wastewater and solid waste. Most surface drainage in the built areas was in open culverts of varying types and sections along the road side. These were in poor condition and often clogged by solids which at times cause flooding whenever it rains.

9.10.15.3 Deficiencies of sanitation situation in Wakiso District.

- Sewerage needs of majority of population in Wakiso are not served (at least 90%).
- Frequent blockages and damaged sewer lines.
- Small diameter pipes.
- Untreated water was generally discharged into the storm water drainage channels intentionally or accidentally. This situation leads to increasing costs for water treatment and supply shortcomings.
- Indiscriminate discharge of wastewater, sludge and solid waste, constitute severe health and localised flood risks.
- In Lubigi Catchment combined waste water and faecal sludge was already exceeding the plant's capacity

9.10.15.4 Pressures and trends for sanitation in Wakiso.

High investment costs required in new infrastructure and lack of funds to facilitate these developments.

9.10.15.5 Future sanitation Plans in Wakiso district.

Future sanitation System has considered the following guiding principles:

- **Priority to gravity sewers:** Follow the natural topography to avoid pumping stations.
- **Priority to major polluters:** Densely populated areas, industrial areas, commercial and institutional Facilities.
- **Priority to increase sewer connections:** Increase the number of sewer connections in already sewered areas compared to major extension of sewer network.
- Continuity with the existing sewerage systems.
- **New Nalukolongo Sewerage System:** Should be Operated and Maintained by NWSC by 2040.
- **New Kajjansi Sewerage system:** Should be Operated and Maintained by NWSC by 2040.

9.10.15.6 Deficiencies of future sewage systems:

- Characterized by low coverage hence population's sewerage needs are not served.
- Area suitable for piped sewerage was limited to mostly areas within Kampala.
- System was only aimed at protecting Lake Victoria no other basins that receive water from the rest of Wakiso Catchment.
- Sanitation problems of Wakiso are not addressed and this affects the Environment because no control on industrial pollution and sewage disposal.

Table 3.39 illustrates the possible strategies and interventions to be implemented by NWSC and Wakiso District in sewage management systems. It is envisaged that in the long term, NWSC should take over the entire Wakiso District because of the high rate of urbanization.

Table 3.39 possible strategies and intervention for sewage management

Problem areas	Objectives	Strategies/Interventions
Low coverage 90% of population's needs are not served.	Improve sanitation in the district	<ul style="list-style-type: none"> ✓ NWSC should expand their sewerage services. ✓ Increase the coverage of DWD services.
No environmental protection due contamination and pollution	Improve sanitation in the district	Prepare Wakiso District sanitation master plan.
Industrial pollution	Improve sanitation in the district	Creation of small treatment plants for major polluters that are not connected to the existing network.

9.10.16 Solid Waste.

Improper solid waste disposal would lead to social and economic problems like costs associated with treating diseases. Major sources of refuse (biodegradable) is notably the local households (comprising of agricultural wastes, homestead sweepings), businesses entities (especially eating and drinking places) institutions (notably educational centres, churches/mosques and health centres). Waste was transported to landfill and dumping grounds. These waste flows create reliance on the road network for effective transportation of waste.

9.10.16.1 Ownership and Governance for Solid Waste Facilities.

Responsibility of waste disposal is solely on District and all urban Local governments however they lack legislation to regulate waste management. Wakiso District like other area in Uganda has serious challenges in solid waste management. This was manifested in the lack of legal instruments to enforce the collection, storage, transportation and disposal of the waste in the district (Kirunda, 2009).



Plate: Kitezi Landfill

9.10.16.2 Status, Future Pressures and

Trends for Solid Waste Facilities

Waste in the district was haphazardly collected, stored (Plate), transported and indiscriminately disposed. There was evidence from the Ministry of Water and Environment that even areas which are well served refuse skips do not utilize them despite having heaps of garbage around their houses. On the other hand, there were areas which lacked garbage skips and hence had no alternative but to throw garbage in the open.

The house hold survey revealed that the main type of refuse waste generated in the district was bio-degradable which was mainly generated by households. The non-biodegradable waste was mainly generated by health centres, construction sites, industries and other institutions.

Major sources of refuse were notably the local households (comprising of agricultural wastes, homestead sweepings), businesses entities (especially eating and drinking places) institutions (notably educational centres, churches/mosques and health centres).

There was a land fill located Kitezi in Kasangati Town Council Wakiso District but owned and managed by Kampala Capital City Authority (KCCA). The KCCA had serious disputes with the district over the location and management challenges especially with Kasangati Town Council where the landfill was situated. The quarrel emanates from the fact that in 1992, Kampala City Council then bought a piece of land at Kitezi from a private individual within the district and started dumping waste at the site without adequate facilities to handle the waste and without even consulting Wakiso District, by then Mpigi District (Kirunda, 2009).

This landfill was not accessible to the various administrative units within Wakiso District and the management conditions of this landfill does no longer qualify it to be called a landfill but a vast dumping ground with a lot of associated environmental challenges which needs to be seriously addressed. As a result, several problems have resulted at Kitezi Dump Site such as, “pollution of drinking water in surrounding settlements by leachate from the garbage; fresh air pollution due to the stench; heavy use of the dusty road to the landfill site by lorries carrying solid waste usually not secured by nets, leading to dust pollution and dropping of unsightly garbage along the road side and constant breakouts of respiratory infections, dysentery, cholera and malaria in the environs of the dump site” (Kirunda, 2009).

		
Dump site at Kasenyi Landing Site	Disposal challenges in Bweyogerere	indiscriminate dumping by the roadside in Namasuba
		
Exposure to health problems in Kira	Katabi poor management challenge	Hazardous waste and non-bio-degradable waste

The other refuse management facility located in Entebbe Municipality was also not properly managed. The wastes are dumped openly and often scattered by the many scavengers who are looking for valuables. Apart from these two areas mentioned above, the rest of the district does not have a conventional waste management system. The private collectors who pick the waste especially in the densely populated areas of Wakiso District indiscriminately dump it wherever they found convenient especially in places like wetlands, bushes and in isolated areas along major roads. These private collectors individually engage the waste generators in different localities within the district from whom they collect a small fee for disposing of their waste. This problem was more profound in Makindye Sabagabo, Kira, and Nansana Municipalities and in all the Town Councils in the district.

District has a serious challenge as far as solid waste collection and management was concerned. As a coping mechanism for waste management in the district residents, industrialists and the business community have resorted to indiscriminate dumping in the wetlands, in open drains, in peoples' back yards, along the roads and specifically, along the railway line in Kireka Division of Kira Municipality.

However Katabi Town Council and Entebbe Municipality have made an effort to establish a dumping site which is in Katabi. But this was poorly managed. In the rural areas of the district like Masulita, Namayumba and Bussi organic bio degradable waste was thrown into the gardens as a mulch and in densely populated informal settlements (slums) like Nansana, Makindye Sabagabo and Kasokoso garbage was burnt (the burning of poly ethane bags was suspected to cause the rise of respiratory diseases and cancer in the country). In the more affluent areas of the district like Entebbe Municipal Council, Katabi, Lubowa, Arkright and Naalya Housing Estates, solid waste was collected by private collectors and the residents pay for the service.

Table 3.40 illustrates the possible strategies and interventions to be implemented by Wakiso District in solid waste management systems. It is envisaged that in the long term, NEMA should support the Wakiso District to implement these strategies.

Table 3.40: Future solid waste management plans.

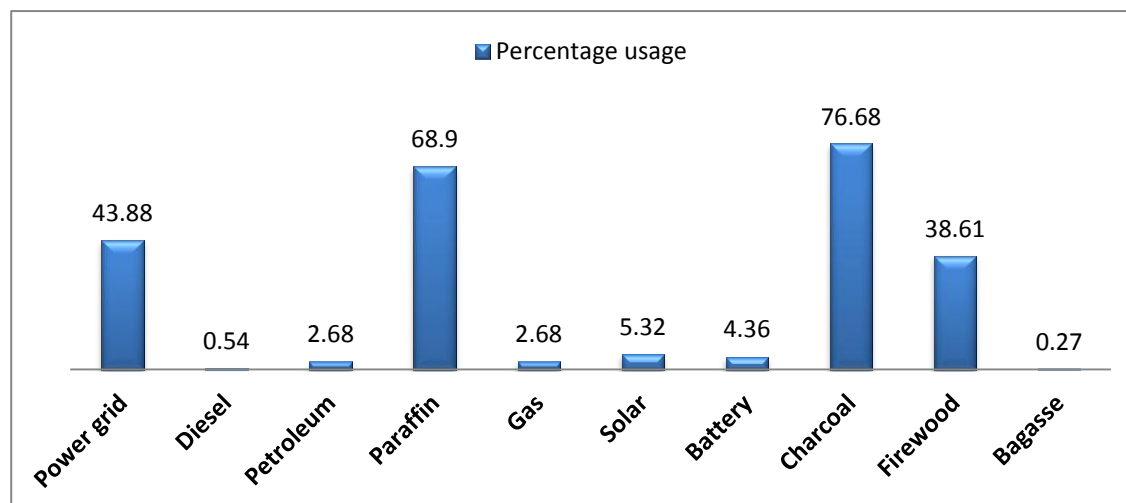
Problem areas	Objectives	Strategies/Interventions
lack of legal instruments to enforce the collection, storage, transportation and disposal of the waste in the district	Formulation of policies, bye-laws to regulate solid waste disposal & Management	✓ Prepare District solid waste ordinance.
Lack of solid waste infrastructure.	Establish, operate and maintain solid waste infrastructure.	✓ Allocate land for infrastructure. ✓ Solicit for funds and construction of land fills.

9.10.17 Energy use in Wakiso District.

The district's economy and society depend on energy to power households, work places, communication technologies, other infrastructure and industry. Energy plays a critical role in everyday life. Energy is divided into the following sub-sectors: Power, Petroleum, non-renewable and renewable energy sources. In the developed world, power and biomass energy were the commonly used energy sources. The major energy sources for lighting and cooking in Wakiso District however were charcoal at 76.68% followed by paraffin at 68.9% (Figure 3.10).

The district's population was reliant on electricity from the national grid spread throughout the district mainly for lighting in homes and industrial use. There was ongoing demand for bottled liquefied petroleum gas for homes and businesses in the district. Energy grid demand in Wakiso was also analyzed where at household level the demand was at 90.9%, business 90%, health 100% and educational at 90%.

Figure 3.10: Percentage Household Energy sources



10.17.1 Ownership and governance of energy facilities.

The power sub sector covers electricity generation, transmission, distribution including rural electrification. Uganda Electricity Generation Company (UEGCL) Ltd was responsible for electricity generation services. Uganda Electricity Transmission Company (UETCL) Ltd was responsible for transmission of electricity to the Distributor. Uganda Electricity Distribution Company (UEDCL) Ltd was responsible for distribution of electricity to the End User. However in 2004 Umeme Ltd entered a 20 year concessionaire agreement to operate business of electricity distribution. Rural electrification agency is in charge of managing rural electrification projects.

A national oil company was to be created for management of oil exploration, transportation and storage. Uganda petroleum authority was to be established to be responsible for safe and efficient petroleum activities. A favorable policy, legal and regulatory framework was in place to ensure consistent support of the planned initiatives and ensures responsiveness to the technological as well as business environment.

10.17.2 Status, Future Pressures and Trends for energy facilities in the district.

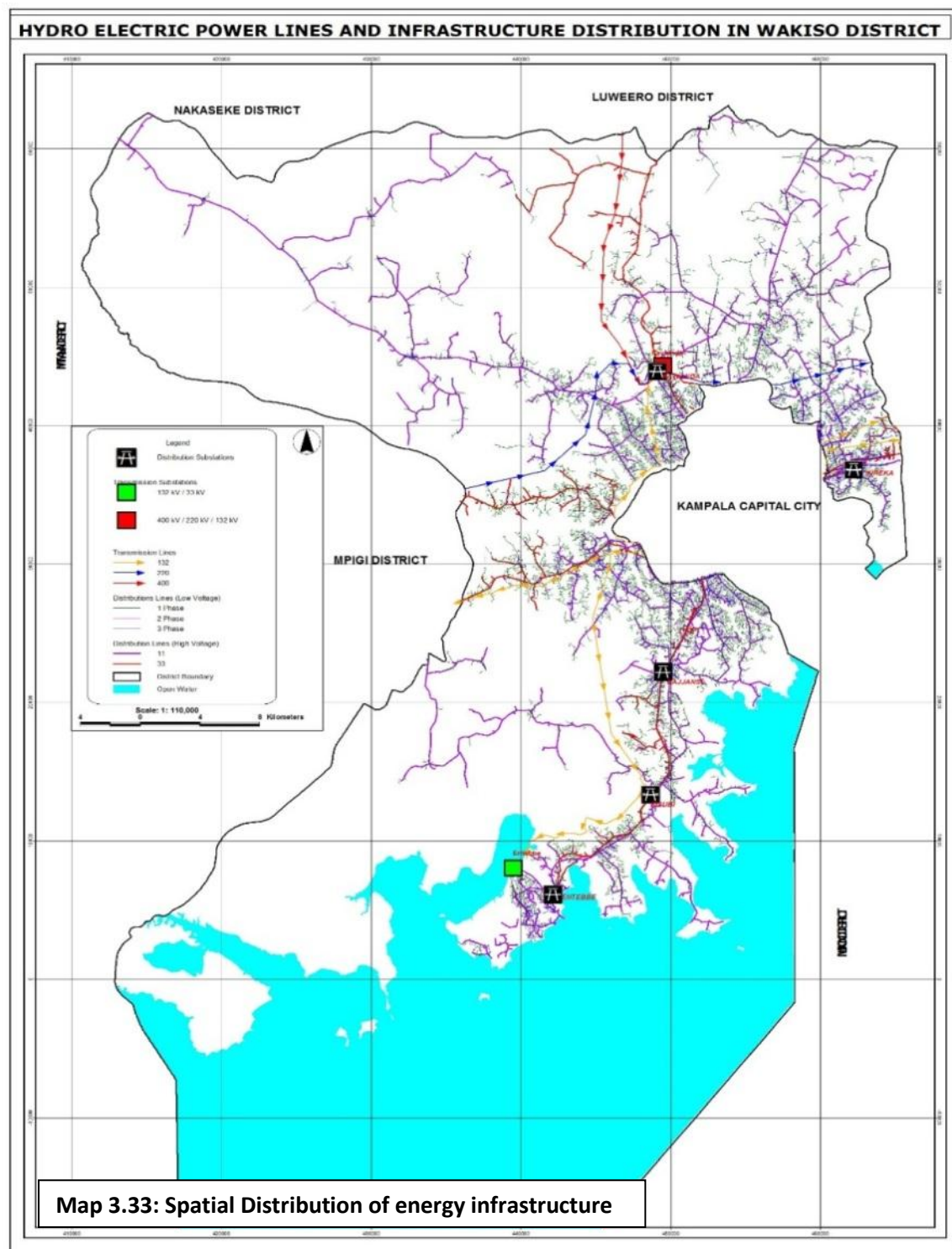
i) Power access and coverage.

National electrification rate was very low with grid access of 5% for the whole country and 2% for rural areas. This means only 200,000 customers are connected to the grid with an annual growth rate of between 5.5% and 7.5% per annum. Another 1% of the population provides itself with energy using diesel and petrol generators and solar PV systems. The household survey established that only 4.3% of the household in the district used electricity for cooking and 74.6% for lighting. In Wakiso the distribution of electricity was majorly confined to areas close to the Capital City and along Entebbe road. It reduces as you move away to far rural areas of the district. This means that despite the fact that Wakiso is close to Kampala, areas of Kasanje and Bussi Sub counties had limited or no grid network as illustrated in Map 3.33.

ii) Power Infrastructure.

- 132kV and 66 kV high voltage transmission lines.
- 11kV and 33kV low voltage Distribution lines

The distribution of electricity in Wakiso District further shows that there are five power sub stations supporting the grid.



iii) Petroleum.

Petroleum is divided into upstream and downstream industries. Upstream industry deals with exploration, development and eventual production of petroleum. Downstream industry deals with transportation (both crude & refined products), refining, storage and distribution and marketing of petroleum products. Upstream industry is not established in Uganda. It's only the downstream which involves transportation of petroleum products. There is no local production and all products are imported from outside Uganda. The cost of transportation from sea ports is high hence the government proposal to construct an oil pipeline(10-12 inch diameter 1450 km from through Tanzania to Uganda) through Wakiso District. In Wakiso according to the household survey, 8.0% still use paraffin for cooking 22.4% for lighting.

iv) Biomass

In terms of fuel wood, it was noted that this was highly used and it had affected the forest cover of the district. At household level energy was used mainly for lighting and cooking. The source of energy used for cooking and lighting could be a major factor on the health of the household members and the environment. The household survey established that (81.8%of the household in the district used charcoal for cooking in the district. Firewood was used by a reasonable 27.3% of the household for cooking.

10.17.3 Future plans.

Energy grid demand in Wakiso was also analyzed where at household level the demand was at 90.9%, business 90%, health 100% and educational at 90%. Apart from on-going rural electrification program where small and medium scale schemes are being implemented. Transmission infrastructure was expected to remain business as usual.

10.18 Information and Communications Technology.

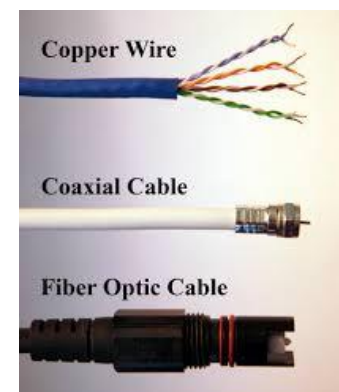
10.18.1 Overview.

The ICT Sector is composed of telecommunications, postal, information technology (IT), and broadcasting subsectors.

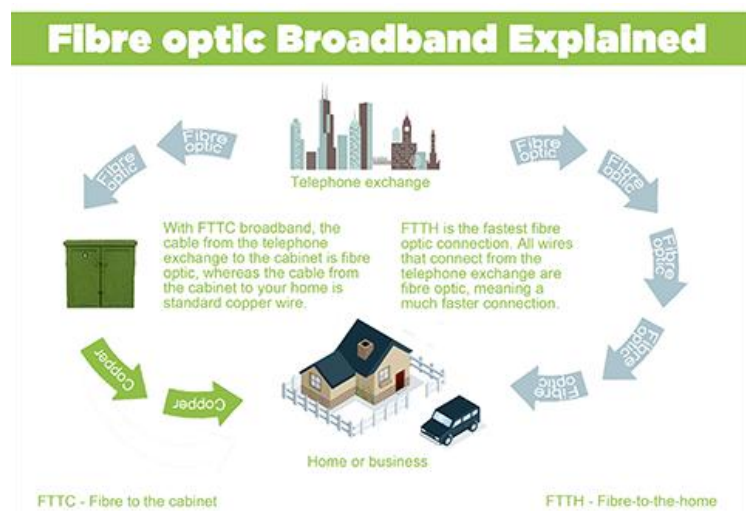
ICT infrastructure includes Physical telecommunication systems and networks (Cellar, Broadcast, cable, satellite and postal) and the services that utilize them (internet, voice, mail, Radio and television).

ICT infrastructure includes all those assets which enable the exchange of information between two or more parties, and it incorporates all telephone, mobile and internet technologies as well as TV and radio transmission.

The copper legacy network and low capacity broadband network connections, fibre network enabling content rich data and video transfer, mobile phone base stations, wireless nodes and broad cast transmission stations all comprise ICT infrastructure.



Globally, broadband has been acknowledged as the foundation for transformation of knowledge based economy. Broad band is transmission capacity with sufficient bandwidth to permit combined provision of access to voice, data and video. Cable Internet access, shortened to cable Internet, is a form of broadband Internet access in which infrastructure previously used solely for cable television carries digital Internet.



Cable TV networks and telecommunications networks are the two predominant forms of residential Internet access. Recently, both have seen increased competition from fiber deployments, wireless, and mobile networks.

10.18.2 Why is ICT infrastructure important in Wakiso?

ICT provides services directly to the consumers and also indirectly by supporting delivery of infrastructure based services. It facilitates economic wellbeing and also contributes highly to social interactions and wellbeing across the district. The district with high potential of tourism and industrial establishment would require organized and well managed as well as easily accessible ICT.

10.18.3 Ownership and Governance.

The Ministry of Information and Communications Technology (MoICT) heads and coordinates all the ICT sector related activities in collaboration with the regulatory bodies namely the Uganda Communications Commission (UCC) and the National Information Technology Authority Uganda (NITA-U). At the service provision level, are the Ministries, Departments and Agencies (MDAs); Local Governments (LGs); Academia; and the Private Sector.

10.18.4 Existing strategic investment plans/Options.

There is a National Broadband Strategy-2020 which defines the minimum throughout requirements for high speed transmission and access for voice, data and video to homes and businesses in Uganda. The Government of Uganda, through the National Information Technology Authority of Uganda (NITA-U) has implemented the National Data Transmission Backbone Infrastructure and e-Government Infrastructure Project (NBI/EGI). It's major aims are to connect all major towns within the country onto an Optical Fibre Cable based Network

and to connect Ministries and Government Departments onto the e-Government Network.

10.18.5 Current Status, Future Pressures and Trends.

10.18.5.1 Broadband Infrastructure

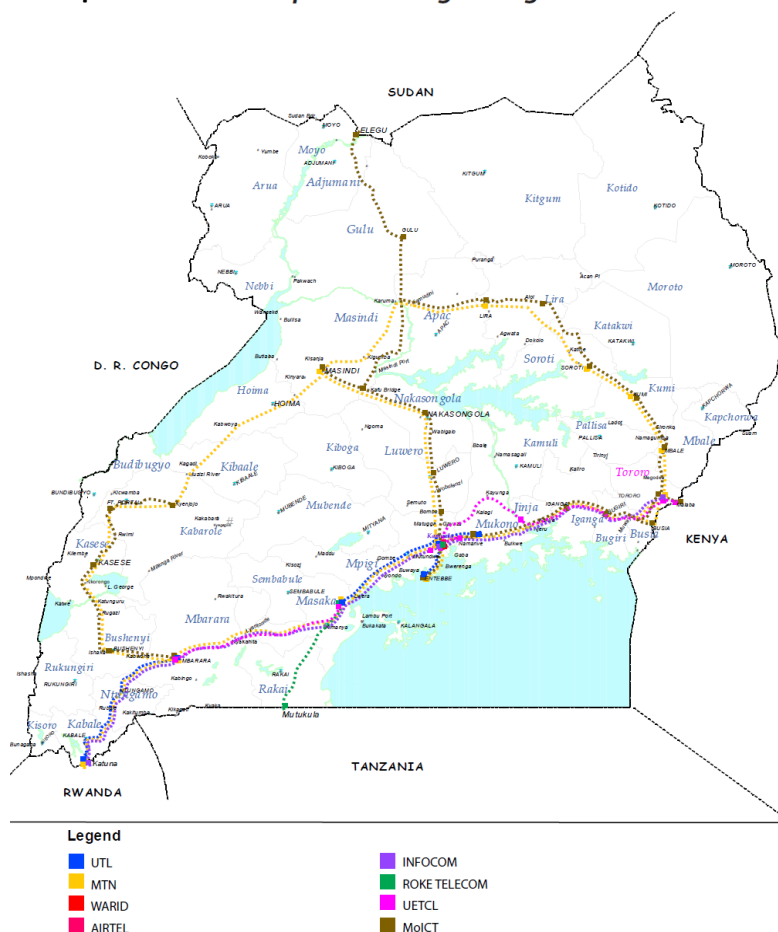
i) Optic Fiber Network infrastructure.

The National Data Transmission Backbone Infrastructure and e-Government Infrastructure Project (NBI/EGI) was being implemented in phases. Phase I and II were completed and consisted of the following; NBI Component designed to connect all major towns across the country to optic fiber network and EGI component designed to connect the MDAs on to e-government network. Laying of 1,590 Km of Optical Fibre Cable across the country to build the National Data Transmission Backbone; Privately owned optic fiber networks have been rolled by MTN, Airtel, UTL, Africell, Roko Telecom, Infocom, Google among others. UETCL, government owner entity has rolled out optic fibre transmission along its high transmission lines. These services also cover parts of Wakiso district like both Entebbe and Bombo (Map 3.34).

ii) Broadband Satellite.

Today broadband was used by internet service providers to connect their servers to upstream international internet connectivity. Satellite technology was also used in the provision of internet access to hard to reach areas, mobile telephone trucking, television broadcasting, and internet connectivity and community internet cafes.

Map. 3.34 Fiber Optic Coverage in Uganda



10.18.5.2 Mobile Broadband Infrastructure.

GSM was the predominant technology for mobile internet based on EDGE in rural areas, with 3G mainly in urban areas and 4G LTE concentrated around Kampala.

10.18.6 Future Pressures and Trends.

Overall, the sector appears to be in a strong position; however, there was a significant lack of publicly available data at a local level in comparison

with some other infrastructure sectors making analysis difficult. Demand continues to rise in both urban and rural areas, with particular increases in demand for mobile services in urban areas and internet in rural areas.

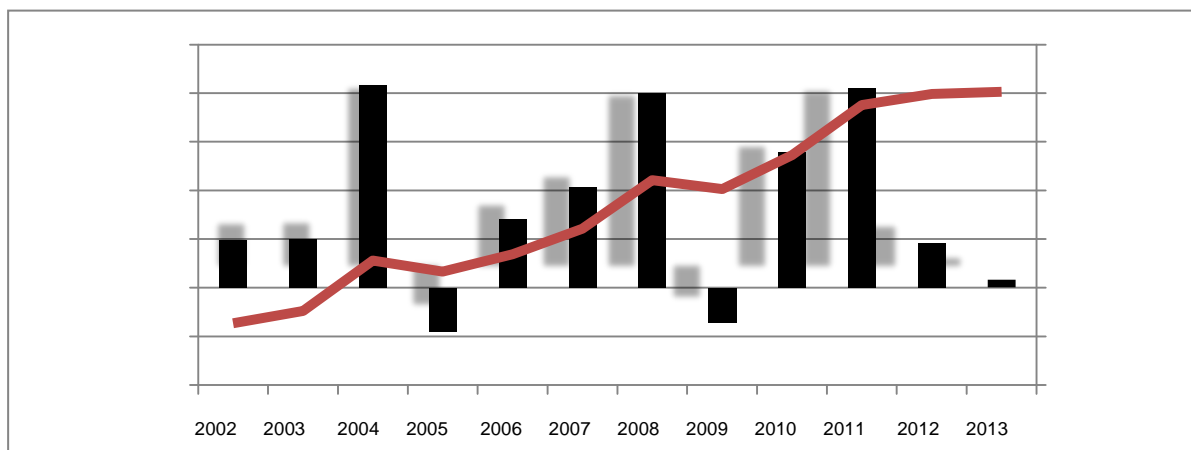
11. Report on Tourism, Culture and Recreation

11.1 Tourism Development – Ugandan Context

11.1.1 Tourism Contribution to GDP

Uganda Vision 2040 identifies tourism as one of the opportunities that should be harnessed to propel Uganda to a middle-income status. Uganda's inbound visitor numbers have almost constantly grown over the past 20 years to reach 1.2 million visitors in 2013 which is 7.9% of GDP (Figure 3.11).

Figure 3.11: International visitor arrivals to Uganda (2002-2013)



Source: Tourism Issues Paper, 2014

However, after three years of a strong contribution to Gross Domestic Product (GDP) growth (2009- 2011), tourism currently follows a sudden and worrisome period of stagnation both in arrivals (0.8% increase between 2012 and 2013) and in its contribution to GDP. While incidences of Marburg and Ebola in Western Uganda and the economic meltdown in the source market countries were identified as responsible for this decline, the numerous recent accolades received by Uganda (Best destination 2012, Kidepo Valley as one of top 10 national parks in Africa, etc.) did not help to mitigate the consequences of the adverse health and world economic environment although tourism growth was sustained in several of Ugandan neighbouring and competitor countries over the same period (e.g. Tanzania, and Rwanda). The contribution of tourism to the balance of payments shows a consistent positive trend for the last 10 years and is indicative of the hotel and restaurant revenues being higher than international tourist expenditure. This can either be explained by an increase in domestic tourism or an increase in the number of Ugandans going to restaurants and attending conferences in hotels. It also illustrates a two-fold increase in revenues from one of the key segments of the Uganda tourism sector namely the Hotel & Restaurant sub-sector over the past 8 years.

The travel sector is Uganda's largest services export industry, having contributed US\$ 1,003 million to Uganda's total export earnings in 2012. According to the Ministry of Tourism, Wildlife

and Antiquities, the total impact of the travel and tourism industry went up to US\$ 1,830 million in 2012 (8.8% of GDP and 11% of the services sector). Hotels and restaurants, as defined in the National Account, are making an increasing contribution to GDP growth and also represent a significantly large proportion of the services sector. The data for the year 2009 shows that the hotel and restaurant sector has been more resilient during the financial crisis than the services sector in general. Until 2012, Uganda has experienced a sustained growth in the balance of travel with its average contribution to GDP growth for the last three years at almost 50%, with a peak of 60.5% for the year 2010.

11.1.2 Tourism contribution to local economies

Tourism presents economic opportunities for regional and remote communities to diversify their livelihoods, generate higher standards of living and create jobs. Table 3.41 gives some of the tourism businesses and employment opportunities in Uganda.

Table 3.41: Number of tourism businesses and employees

Businesses	No. of establishment	No. of people
Accommodation and food (2011)	64,602	154,167
Hotel and camping sites	3,876	29,635
Restaurants & Mobile Food	36,413	79,572
Events and other food service	24,313	44,960
Recreation and Personal (2011)	41,766	80,893
Transport (land + air transport) (2011)	445	-
Tour Operators (registered) (2013)	113	975
Travel agencies (registered) (2013)	82	
Tour guides (registered) (2013)		325
Community-based enterprises (UCOTA)		2,901
Total		239,261

Source: MTWA and UBOS, 2014

Direct employment in tourism in Uganda reached 191,500 employees in 2014 corresponding to 2.8% of total employment in Uganda. However, cross-aggregate information from several sources about employees in the tourism sector, excluding the transport sub- sector which indicates a significant difference with the WTTC figure (+25%). The difference stems from the issue of the definition of the tourism industry that still impedes the evaluation of the sector's impact. It is important to note that tourism benefits close to 3000 people working in community-based enterprises mostly located in the vicinity of national parks which is likely to have a strong impact in terms of poverty reduction.

Currently, a major proportion of leisure tourism expenditures in Uganda is generated in the regions where national parks are located. The case of Bwindi Impenetrable Forest where

Gorilla permits cost \$ 600 received more than half of these expenditures (51%). Although Queen Elizabeth National Park has been the most visited National Park for more than ten years now, Murchison Falls National Park became the main attraction for international leisure visitors in 2013 with 70,798 visitors (UBOS, 2014).

11.2 Review of tourism resources and assets in Wakiso district

This section in parts, review and update the range and extent of tourism resources that were comprehensively identified in the planning area. The resources were organized into four sectors, namely: 1) natural attractions; 2) historical heritage; 3) cultural heritage; and 4) other types of attractions.

What is also included in this report is the identification of issues of concern in relation to the quality, extent and management of these resources. Given the large variety of tourism resources in Wakiso, every effort was made to visit as many resources and attractions as possible, which reflect a good collection of the diversity and strength of Wakiso's tourism product. Field trips were made to some of the key sites and areas considered important for possible inclusion in the tourism action plan. Many of the issues identified are relevant to the majority or all of the sites within a sector - and some apply to the tourism resources generally, in all sectors.

11.2 Tourism resources in the district

a) Namugongo Martyrs' Shrine

About 15 km east of Kampala city off Kampala-Jinja road lies the Namugongo Martyrs' Shrine where more than 20 catholic and Anglican Martyrs were burnt alive on the orders of Kabaka Mwanga in June 1886. Consequently, Christians from all over the world flock to Namugongo to pay their respects and renew their faith by paying pilgrimage to the martyrs on June 3rd, every year. A church was constructed in the shape of a traditional Baganda hut (akasiisiira) in memory of the martyrs. It stands on 22 copper pillars representing the 22 catholic 11

Plate: Namugongo Martyrs' Shrine



One Love Beach

Presently owned by the popular Ugandan artist Bobi Wine, One Love is more than just a beach. Located in Busabala, One Love Beach is a place to relax and inhale the lake breeze on a lazy day. Visitors can enjoy fun games of beach volley ball, sun baths, a pleasant stroll along the shore, exciting boat cruises and other activities. The beach also offers a variety of food, snacks, alcoholic and non-alcoholic beverages. Local events are hosted on the beach regularly.

Nabinonya Resort Beach

Accredited for its natural beauty, Nabinonya Resort Beach is considered a youth and family-oriented place. For those looking for an adventure, there is the lovely site of the remnant forest, home to a variety of monkeys, birds and reptiles. The beach also has a popular campsite nearby. The spot is perfect to observe the local soccer youth team in action, as they use the campsite from time to time. There are a number of stalls that sell snacks and drinks.

Ngamba Island Chimpanzee Sanctuary

Located on Ngamba Island, Ngamba Island Chimpanzee Sanctuary constitutes 100 acres (approximately 40 hectares) of tropical rainforest. It is situated 23 km offshore from Entebbe, near the Equator in Lake Victoria. Ngamba Island Chimpanzee Sanctuary was established in October 1998 to care for orphaned chimpanzees that had been rescued by the Uganda Wildlife Authority from poachers and/or traders, with no chance of survival back in the wild.

Aerial view of Ngamba Island



Chimpanzees at Ngamba Island



Birds at one love beach



Plate...: Nabinoonya



Ngamba Island is part of the Kome archipelago, a group of about 15 islands and islets separated from the northern shore of Lake Victoria by the 10km wide Damba channel.

The island supports a rich diversity of natural wildlife some of which is food chimpanzees. It offers a unique opportunity for close viewing of chimpanzees in their natural environment. Pre-arranged supplementary feeding times brings the chimpanzees to within meters of the raised walkway specially designed for easy viewing and provides excellent photographic opportunities. Main activities include walking around local communities, chimpanzee viewing; forest walks with playful chimpanzees, bird watching and boat riding.

Uganda Wildlife Education centre

Uganda Wildlife Education Centre is about 1 km from Entebbe airport road just below statehouse. The centre was opened in 1952 by the Colonial Government then, as an animal Orphanage that offered sanctuary to young animals found abandoned in protected areas due to the death or poaching of parent animals. In 1994 it was turned into a conservation education Center for conservation awareness purposes; hence the name, 'Uganda Wildlife Education Centre Trust'. The centre is a very popular attraction

Wildlife Education centre



Rhinoceros at UWEC



At the centre one can see the following species; chimpanzees, olive baboon, patas monkey, red tailed monkey, black and white colobus monkeys, white rhinoceros, lion, hyena, serval cat, water buck, bohor reedbuck, giant forest, hog, Uganda kob, bush buck, warthhog, African buffalo, zebra, eland, impala, sitatunga, camel, giraffe, donkey, Ankole cow, Nile crocodile, spotted necked otter, African rock python, Egyptian cobra, African helmeted turtle, bells hinged tortoise, viper, African fish eagle, shoe bill stork, Egyptian geese, ostrich, African crowned crane, Indian peafowl, African grey parrot, leopard tortoise, leopard, chimpanzee, patas monkey, red tailed monkey, Uganda kob, serval cat, wood owl, eagle owl, African rock python. These species provide a window into Uganda's rich wildlife endowment.

Waterfront club

Located on the shores of Lake Victoria in Entebbe near the Wild Life Education Centre (formerly Entebbe Zoo), the Waterfront Club is one beautiful destination. Set on Lake Victoria's northern neck, bordered by the natural rocky and botanical green environment, singing birds and fresh waters, it is the finest services in waterfront facilities and great hospitality.

Waterfront Club in Entebbe



This is a breeding place for birds, swamp fly catchers and the only place with a civilian pier in Entebbe. There are a variety of birds such as duck billed, stocks, and fork tailed trogons. Fishing, boat racing and nature walks, night entertainment with fusions band and features movies can attract tourists.

Imperial resort beach

Located in Entebbe, the beach is part of Imperial Resort beach hotel. It is 1.5 km from the Entebbe Airport road near the Entebbe golf club. The beach is about 600m long and 50m wide and offers an excellent environment for lovers. It is famous for beach sports such as volley ball, football and swimming in an aura of soothing music.



Imperial resort beach



Entebbe Botanical gardens

The Entebbe Botanical Gardens was established in 1898 and is about half a kilometre from Entebbe airport road on the northern shores of Lake Victoria. The gardens are virtually on the equator. The gardens are a beautiful stretch of greenery that is a habitat to a collection of

species of plants of the tropical, sub-tropical and temperate zones. Besides the elegant and luxuriant trees, there are several shrubs and other plants naturally regenerated over the years into a mosaic pattern that is appealing to the eye.

The gardens are estimated to have a collection of 309 species, 199 indigenous to Uganda, 110 exotic; 122 with known medicinal value. They include Columbus monkeys, Palm Nut Vulture and African Grey Parrots and the Bat Hawk which is often seen over the gardens at sunset. The gardens are therefore an opportunity for birding enthusiasts to open their birding account for Uganda or merely to add to their existing list.

Muzinga park monument



This monument comprises an anti-aircraft canon gun that symbolizes Uganda's participation in the 2nd world war. The monument is located along Entebbe Airport road below Entebbe state house

Kigungu and Bugonga Catholic monument

This site is 7km from Entebbe town behind Entebbe International Airport. It is where the first Catholic

missionaries landed about 130 years ago. Every year on February 17, Catholic Faithful from all over the country and beyond, make a pilgrimage to Kigungu to commemorate the arrival of the two French missionaries, Father Siméon Lourdel (Mapeera) and Brother Amans Delmas (Amansi). It has a good view of Lake Victoria and overlooks the famous Mabamba swamp; the home for shoe bills. The site also acts as a transit route to Kalangala islands and is famous for fishing, boat riding, bird watching and village walks.

Present day Mapeera church



Kigungu bird bleeding site

This site is located 4 km from Entebbe town just behind the Airport run way and acts as a bleeding site for birds especially swallows and pied king fishers. The site is also renowned as a worshiping place for traditionalists.



Entebbe bay swamp

This site is located behind Entebbe airport and acts as breeding place for swamp hens, crakes and lots of African rock pythons. It's about 1km from Kigungu landing site. The site is also a habitat for sitatungas.



Omuti Gwedembe



This is the oldest tree in Entebbe and is located besides Total Petrol station along Entebbe road. The tree derives its name from the struggle for independence times when pro-independence agitators used to meet under its shade.

Anderita beach

Anderita beach is part of Anderita beach hotel and is about 1 km from Entebbe road opposite the Mayor's garden. The beach is famous for swimming, bird watching and scenic viewing in the cool lake breeze while enjoying soothing music.



Ssese gateway beach

This beach is along Entebbe road in Kitubulu village on the northern shores of Lake Victoria. The beach is approximately 33km from Kampala city centre which is about 30 minutes drive. It is one of the popular spots around Entebbe and is renowned for swimming, playing volleyball, sun bathing and scenic viewing among others

Uganda Reptiles village

Uganda Reptiles village is a community based organization that was formed in 2003 by a group of community youth within Bunono village in Entebbe. The village is about 3km from Entebbe road at Kitubulu. The reptile village is a home to various snake species and lizards.



Kampala Snake Park



Kampala Snake Park is located 3km in Bweya village off Kajansi trading centre on Entebbe road. The site has various snakes including Jameson's mamba, forest cobras, puff adders, Gabbon vipers, pythons, monitor lizards, sand snakes, twig snakes, olive house snakes, great lake bush vipers; Jackson tree black snakes and Blanding's tree snakes.

Kasenyei landing site



Kasenyei landing site is located in Kasenyei village, Katabi Sub County. It is 5 km off Entebbe road at Baitabiri trading centre. The main activities at the site include fishing, boat cruising and bird watching. Common birds at the site include great white pelican, great cormorants and dimorphic eaglets.

Banana Village

Banana village is a retreat centre situated 1.5 km from Kitale trading centre along Entebbe road in Nalugala village. An ultimate destination for families, Banana village is set up in a typical 18th Century African village with bandas that give you an opportunity to live life as it was then. The village is situated in the middle of a bird sanctuary. Horse and camel riding, bird watching and village walks are some of the other tourist attractions in banana village.



Country lake resort

This is located on the northern shores of Lake Victoria; 7km from Entebbe road off Kitale trading centre. The lake resort is established on a six acre piece of land with magnificent creation that include romantic gardens and stunning scenic views of the lake. Tourism features include; boat cruises, canoeing, bird watching, angling, sport fishing, beach games, camping/picnics and village. The resort has excellent children play facilities.



Katomi Kingdom Hotel



Katomi kingdom is a lake side hotel on the shores of Lake Victoria. It is 7km off Entebbe road at Kitale trading centre along Garuga road. It offers bird watching and boat cruises.

Garuga Resort Beach

Garuga resort beach is 10 km from the Entebbe road off Kitale trading centre on garuga road. The resort presents an avenue for perfect relaxation in the quiet and inviting gardens and the beach expanse.

Garuga Resort Beach



Lutembe bay wetland reserve Ramasar site

Lutembe bay swamp is 5km from Kampala-Entebbe road off at Namulanda village on the shores of Lake Victoria. The site supports globally threatened species of birds, endangered Cichlid fish and over 100 butterfly species, including three rare ones. It is a breeding ground for Clarias and lungfish, and regularly supports more than 52% of the White-winged Black Terns (*Chlidonias leucopterus*) population.

Lutembe Resort Beach



Lutembe bay wetland Birds reserve



Besides the bay, the site is neighbour to famous lutembe resort beach where other tourist activities such as play volleyball, basket ball, go swimming and canoeing can take place.

Wildlife Division does not own the land within Ramsar sites. The Ramsar status imposes less environmental constraints compared to the national parks, resource reserves and wildlife sanctuaries. Landowners have more freedom and local control and although the Wildlife Division is a statutory consultee to planning applications within the sites, their recommendations are not always followed and inappropriate development takes place. The District Assemblies are not always following Wildlife Division advice and there are local political and social pressures to allow development in certain places despite the loss of valuable natural and ecological resources. Lutembe bay wetlands are particularly under pressure from intrusive residential development therefore creating conflicts between ecological sites and urban development.

Lido beach:

Lido beach:



Other beaches include Lido Beach, sports beach, aero beach and steak out beach located along the airport road close to the Entebbe International airport.

Zika Forest

Zika forest located 500m off the Kampala-Entebbe main road at Kisubi high school in Kisubi village, Katabi Sub County. Tourist activities undertaken include forest walks, bird watching and camping. The site is owned and managed Uganda Virus Research Institute.



Guide Leisure farm

Gudie leisure farm is located in Mukutogoma village, Kiira town council, 14 km from Kampala city centre and 8km from Ntinda trading centre on Ntinda-Kira road. It is a peri-urban integrated leisure farm on 14 acres of land. The farm provides an opportunity for families especially the young generation to interact with domestic animals and participate in farming while enjoying the leisure facilities such as fishing, canoeing, playing football, bicycle riding among others.

Guide Leisure farm



Mabamba wetland

This place is located just 40 kilometers/ 25 miles (one hour's drive from Entebbe and 55 kilometers/34 miles West of Kampala City. This is one of the must visit places for tourists interested in birding safaris in Uganda. The wide Marsh that stretches through a long narrow bay and is considered an Important Bird Area (IBA) especially the rare Shoebill stork call Mabamba Swamp home. Not only that, this site obtained the status of a protected area with Bird categories including globally threatened species and Lake Victoria Basin Biome Species. This means that the key activity that takes place here is bird watching which is mainly conducted on canoes, and tourists navigate waterways composing of Lily pads and Papyrus Swamp. This site is a quiet environment with no noise except the sounds of birds that welcome you to this bird sanctuary. Mabamba is also a Ramsite Site and Catchment Area for Lake Victoria.

Birds of Mabamba Wetland



Shoebill in Mabamba Wetland



The Swamp covers an area of 165 square kilometers (16,500 hectares). Besides Murchison Falls National Park, Mabamba is another site rated among best spots in Africa where the Elusive Shoebill Stork (*Balaeniceps rex*) and about 38% of the world's population of rare Blue Swallow (*Hurundo atroaerulea*) can be sighted at any time of the day, unlike other places where sighting them is a matter of luck. There are about 260 species of birds in total recorded within this Swamp and bird watchers can get a chance to spot at least 157 species in one day. This makes this place an amazing bird watcher's paradise.

Apart from the elusive Shoebill storks, the other bird species you are likely to sight include Blue-breasted Bee-eater, Grey-rumped and Angola Swallows, Intermediate Egret, Hammerkop, African Jacana, Banded Martin, Malachite Kingfisher, Swamp Flycatcher, Winding Cisticola, Intermediate Egret, African Pygmy



Goose, Red-billed Fire-finch, African Purple Swamp-hen, Little egret, Blue Swallow, Common Moorhen, Black-headed Weavers, Yellow-billed Duck, Lesser Jacana, Pied Kingfishers, Long-toed Lapwing, White-faced Whistling-duck, African Pied Wagtail, African Water Rail, Purple Heron, Rufous-bellied Herons, Black Crake, Common Waxbill, Long-toed Lapwing, Swamp Flycatcher, Winding Cisticola, Pallid Harrier, Blue-headed Coucal, Fan-tailed Widowbird, Blue-headed Cuckoo, White-winged Warbler, African fish eagle, Migrants like Goliath Heron, Malachite Kingfishers, Carruther's Cisticola, Gull-billed Terns, Spur Winged Geese, Pygmy Geese, Northern Brown-throated weaver, White-winged Black Terns, Grey-headed gulls, Common squacco heron, Fan-tailed widowbird, Yellow backed weaver bird Purple and Black heron, cattle egret, Common moorhen, Papyrus gonolek and African marsh harrier among others.

In conclusion, Uganda is a home to over 1000 species of birds including the elusive shoebill stork found in few places in Uganda, and one of the unique places that shelters these birds is Mabamba Swamp a catchment area for Lake Victoria. Besides the shoebill storks, tourists can be able to see over 260 bird species hence it is considered an Important Bird Area and a perfect birdwatcher's paradise.

11.4 Intangible cultural attractions

The culture of Baganda is a very important part of its appeal and character as a tourism destination. Particularly so, it is relevant to the everyday lives of the people of Uganda and is accessible to visitors, by virtue of the openness with which Buganda shares its cultural assets and heritage. Perhaps the most distinctive and attractive aspect of this is the general friendliness and warmth that is given to tourist visitors within the district. The range of culture represented in Wakiso includes: festivals and funerals; traditional crafts and contemporary arts; music and dance; as well as the core cultural beliefs and practices, which manifest themselves in different ways in the different parts of the district.

It is not possible, or realistic, to give an update on changes to these attractions since time immemorial as these are, generally, not tangible assets and resources, but aspects of Ganda life that permeate every part of the country and every tourist destination, in one way or another. Rather, it can be observed, that the attractions listed in the Ministry of tourism report, and summarised here, are no less relevant today than they were in the past. They should be nurtured and remain as a crucial part of the cultural appeal of Wakiso and Uganda as a tourist destination.

Cultural sites

A. Ntebe za Mugula

Located at the shores of Lake Victoria, about 10km off and adjacent to the runway at Entebbe Airport Kigungu. It looks deserted save for a few traditional healers smoking pipes. It carries a lot of historical significance to Buganda; it is the place where Chief Mugula Bukulubwa Wada sat to preside over various judicial cases and village meetings around 1700.

“From Ssesse, Mugula came with some people and a chair carved from the rock to settle along the lakeshore. He had a special boat he was travelling in dubbed Namyalo, a Luganda word translated to mean “one that can access all landing sites,” he says. Mugula, who was only known as Bukulu bwa wada, then settled at a rock cave called Namilyango that he made his home because many people feared to enter it, thinking it was a place for spirits. This earned him the name Mugula nziji, which means ‘one who opens doors’. Later, it simply became Mugula. The Namilyango rock cave where Mugula stayed has since been cut off by water, making it look like a small island.

Ntebe za Mugula Site



Preserve the site

“He had a place at the present-day old airport called Zilya, where he executed people given the death sentence,” Kiberu says. Mugula would always scorn people by asking them “Ensegazilya?” (Meaning “Are the vultures eating?”). If one answered no, he would then order for the person to be killed to keep the birds feeding. If he got a positive response, he would thank the person or give him a small reward.

Having occupied a place that was feared and being the only person with a chair made Mugula popular in Buganda and people started referring to the place as Entebbe za Mugula.

The British took over administration of Buganda failed to pronounce the word Entebbe za Mugula, and reduced it to Entebbe and that is how it has been known since. Entebbe’s Mayor Vincent De Paul Kayanja says the Municipal Council intends to exploit the tourism potential of the place because of the great importance the place owes to Entebbe. “We need to preserve this site as we make Entebbe the best tourism centre in Uganda,”

B. Katereke Prison

Located on the outskirts of town, royal prisoners were starved in the prison ditch during the upheavals of 1888–89. Kabaka Kalema killed 30 of his brothers and sisters here in 1889 in his quest to keep control of the throne. It’s not much more than a deep, circular trench, but it’s an evocative site and is worth the trip if you have time. The unmarked turn-off is opposite the police post in Nsangi and the prison is 1.7km north

C. The Buganda Kingdom Coronation Site Naggalabi Buddo

The site is located 3.5km off Kampala-Masaka road along Buddo road on top of Naggalabi Buddo hill. It is approximately 11km from Kampala City center driving through the vibrant Kyengera center. This panoramic hill is the historic heart of Buganda Kingdom. It was at this place that the Buganda Kingdom began or came into existence during the time of Bemba. It is at this place that all the Kings of the Buganda Kingdom were and are still crowned. The site also has the Buganda house where the King has to live for about 7 days after coronation so as to full fill cultural rituals.

Naggalabi Coronation Site**Kabaka of Buganda during Coronation**

On top of the Naggalabi Budo Hill is a very important historical site to the Buganda Kingdom. The Naggalabi-Budo Coronation site is an amazing place. It was established back in the 14th Century and since then it has served as the place where Kings in the Buganda kingdom are crowned. For the last 700 years and so, this Buganda kingdom coronation site obtained its present status after Bemba Musota was killed by Kintu after which he proclaimed himself as the King of Buganda. It is the only coronation site in the country and the current king of Buganda Kingdom Kabaka Ronald Muwenda Mutebi II was likewise crowned here on 31st July 1993 and thousands and thousands of people both local and foreign guests attended that memorable event.

D. Buganda royal tombs

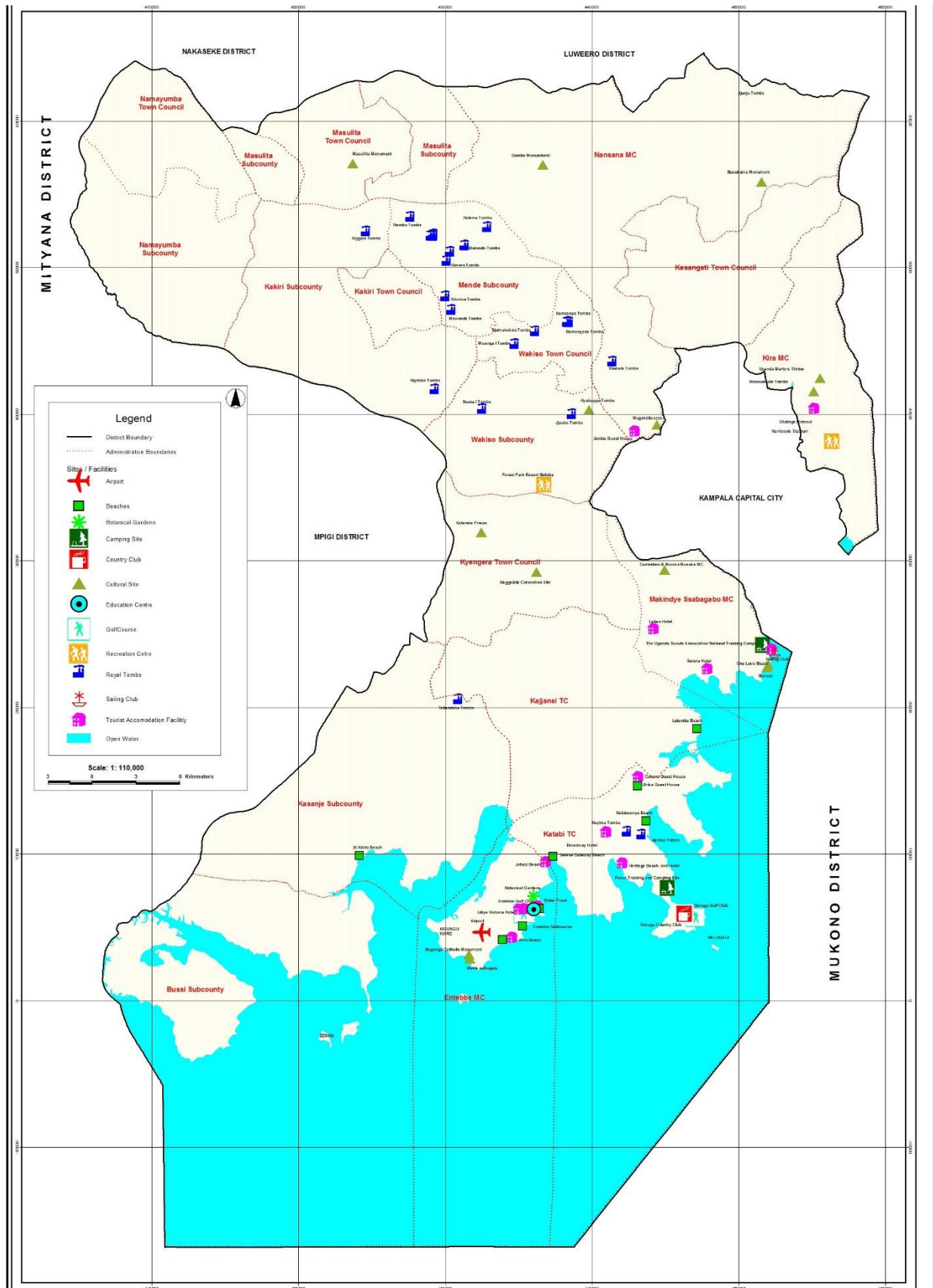
33 of the kings of Buganda have their tombs in Wakiso District as per table 3.42 and map 3.35 below. These if developed and marketed to both the international and domestic tourists, will be a tremendous attraction, thereby a source of income to both the kingdom and Wakiso as a district. The tombs need facilities like visitor signage, interpretation centres, reception facilities, well documented information about the king in the place. For example when was his reign, his name, contribution to Buganda kingdom, famous and infamous cultural norms he introduced and those he banished, prime minister of his reign, number of children, what led to the end of his reign, when and many others. Such information will arouse curiosity of visitors.

Table 3.42: Location of Buganda Kings' Tombs in Wakiso

King	Burial Place/village	County
Kimera	Bumera,	Busiro
Ttembo	Bujuuko,	Busiro
Kiggala	Ddambwe,	Busiro
Kiyimba	Ssentema,	Busiro
Kayima	Nnabulagala,	Busiro
Nakibinge	Kkongojje,	Busiro
Mulondo	Bulondo,	Busiro
Jjemba	Bubango,	Busiro
Ssuuna I	Gimbo,	Busiro
Kimera	Bumera,	Busiro
Ssekamaanya	Kkongojje,	Busiro
Kimbugwe	Bugwanya,	Busiro
Katerega	Buterega,	Busiro
Mutebi I	Kkongojje,	Busiro
Jjuuko	Bujuuko,	Busiro
Kayemba	Nabulagala,	Busiro
Tebandeke	Bumpenje,	Busiro
Ndawula	Musaba,	Busiro

King	Burial Place/village	County
Kagulu	Bbugu,	Busiro
Kikulwe	Kaliiti,	Busiro
Mawanda	Sserinnya,	Busiro
Mwanga I	Kavumba,	Busiro
Namugala	Muyomba,	Busiro
Kyabaggu	Kyebando,	Busiro
Jjunju	Luwunga,	Busiro
Ssemakookiro	Kisimbiri,	Busiro
Kamaanya	Kasengejje,	Busiro
Ssuuna II	Wamala,	Kyaddondo
Kalema	Mmende,	Busiro
Prince Bamweyana shrines	Kasengejje	Busiro

Map 3.35: Tourism Sites, Open Spaces and Ammenities in Wakiso District



E. Kavumba recreation centre

With the advance of urbanization and development in Wakiso Town Council, the farm came out of place. A concept of transforming it into a modern entertainment and wildlife park was born cognizant of a huge and growing urban population settled in small residential plots with no ambient space for play and entertainment especially for family. Consulatnt also noted that wildlife was being quizzed out with wetland encroachment along the unprotected areas as a result of urbanization. It is on this premise that the current facility came into being and has since continued to grow in this direction. The company specializes in Entertainment and Leisure industry and has made significant progress in the past five years. In 2012, KRC acquired class E Wildlife user rights and was therefore permitted to conduct wildlife conservation education and research. With a projection of 158,000 guests per year involving both local and international visitors, the company is expanding her services in this sector to accommodate more guests so as to be the leading private hub combining both ecotourism, conservation with standard leisure park activities for family entertainment.

F. Kavumba Game facilities

Kavumba has a range of game facilities which include Kids bouncing castles, Football pitches, Boxing Rings among others. The site is green, beautiful, ambience and scenic. A zoo has been established with help from Uganda Wild Life Authority-UWA.

Luxury accommodation to suite individuals, couples, families or groups on either short or long holiday are present. Other facilities including the swimming pool, sports facilities, business centre, donkey and Horse riding are present.

11.5 Other attractions

Other attractions not covered in the categories above include museums, cultural centres, churches and mosques, theatres and libraries, sports and recreation, gold and diamond mines, as well as special facilities such as Mandela national stadium, which has a visitor centre.

a) Entebbe Town

It is not intended to give a full appraisal of Entebbe and its relationship with the tourism sector. However, it needs to be acknowledged that as the capital city of the colonial administration and the principal arrival point into Uganda for international visitors, it inevitably plays a role in the experience of the international visitor as well as being a focus for expats within Uganda, and an important population centre, and potential attraction, for domestic tourism.

Entebbe is by far the most visited destination in wakiso as the main business centre and the seat of government but also as the principal gateway to the country. Most trips start and end in Entebbe for international travellers. Tourism has influenced the development of the Municipality, which has grown organically as business has increased and expanded into different suburbs in recent years. Rather the city has spread where offices have been built and hotels have been built in those areas to cater for the business market. Entebbe has nearly 3,000 rooms, both in star-rated and unrated hotels in Uganda. Several new high-end shopping malls are currently in construction including the Victoria mall.

Therefore tourism and leisure in Entebbe is determined by the business market that it serves as well as the large expat community living in the city and the growing Ugandan middle class. As a result several high-end restaurants have opened to cater for these markets. The city has no recognized centre that could be developed as a focal point for tourism. The areas around CBD and around Airport are the liveliest and are most likely to attract tourists and residents in the evenings.

Entebbe is located by the shores of Lake Victoria and has a number of beaches. Unfortunately some of the shore line of the municipality is taken over by government offices, the most important tourism assets in Entebbe are the beaches, Entebbe state house is currently the office of the President and it is completely closed off to the public.

The District is an already established tourist destination as already indicated by the attractions above, which include cultural and historical sites; nature based attractions and has the largest proportion of tourism facilities such as hotel rooms, restaurants and entertainment centres. By its geographical location Wakiso is host to the Entebbe international Airport which is the gateway to Uganda from abroad. This guarantees it heavy traffic of visitors. With good positioning and offer of services that meet international standards, the food and entertainment industry and shopping malls would generate a lot of revenue, especially in Entebbe Municipality.

With the Entebbe Express Highway near completion and the expansion and modernization of the airport, Wakiso is destined to be the main business hub in the country. The District Administration should acquire land for the construction of an international MICE/Convention Centre (Kigali Convention and Exhibition Centre should be a case to under study). More land should be acquired to attract investments in beach resorts, high end Accommodation, and construction of a port to attract water transport from Entebbe to Jinja, Kampala, Mukono and Ssese Islands. Leisure boats and cruise ships have high potential for income generation and job creation. In the case for major infrastructure that will act as catalysts to attract other investments, these should be solely owned by the Local Government. It may consider leasing management. The need for integrated planning and enforcement of the building codes needs to be emphasized as these are the bedrock for tourism development.

11.6 Tourism accommodation facilities in the district

The average tourist facility today contains just 50 beds (and without the three much larger properties Entebbe resort beach hotel (400 beds), Botanical beach hotel (450 beds) and Lake Victoria Serena hotel (300 beds) the average figure was only 25 beds per property). In many cases the tourism footprint was managed in such a way as to maintain exclusivity for visitors, preserving the high quality business tourist and leisure experience that Wakiso has become renowned for.

Urban tourism has also grown markedly in recent years a result of general growth in Entebbe and Kira in particular and as a by-product of the wider natural appeal of Wakiso. Majority of the facilities here, are targeting business travellers and leisure tourists who are drawn to Wakiso by its relative accessibility from Kampala and the proximity to the airport.

Table 3.43 below is a summary of existing tourism facilities in Wakiso gathered during the time of preparation of this plan the bed numbers data remains in the process of development). It important to note that majority of the accommodation facilities are located in Entebbe.

Table 3.40: Accommodation Facilities in Wakiso

	Name Of Uganda Hotel	Star Rating	Average Room Rates (USD.)
1	Anderita motel	3	53
2	Lake Victoria serena resort	4	139
3	Laico Lake Victoria Entebbe Hotel	3	50
4	Imperial Resort Beach Hotel Entebbe	5	-
5	Imperial Botanical Beach Hotel, Entebbe	4	-
6	Windsor Hotel, Entebbe	4	-
7	Lake Victoria Hotel	-	-
8	Travellers Inn, Entebbe	3	-
9	Flight Motel Entebbe	-	-
10	Central Inn, Entebbe	3	45

	Name Of Uganda Hotel	Star Rating	Average Room Rates (USD.)
11	Golf View Inn, Entebbe	3	40
12	Frank's Tourist Hotel & Campsite Entebbe	2	40
13	Neul Guest house Entebbe	2	35
14	Highway Motel , Entebbe	2	30
15	Executive Airport Hotel	2	35
16	Airport View Hotel	2	30
17	Entebbe Flight Motel	2	32
18	Sophie's Motel Entebbe	2	28
19	imperial golf view hotel	4	90
20	Sports View Hotel Kireka,	2	31
21	Buloba forest park	2	34
22	Kavumba recreational centre	2	35
23	Kasangati resort hotel	2	36
24	New African village hotel	1	11
25	Garuga resort beach	2	53
26	Gorilla africsn guest house	1	24
27	Malakai eco lodge	1	36
28	Nyange resort and marina	2	58
29	The sanctum	2	56
30	Acacia beach hotel	2	47
31	Golden pearl	1	11
32	Airport guest house	2	64
33	Hibis hotel	1	28
34	Lake height hotel	4	139
35	Victoria region motel	2	31
36	Banana village	2	28
37	Comfort hotel	1	22
38	Protea hotel	4	203
39	Airport view hotel	3	89
40	Lubowa cottages	2	36
41	Katomi kingdom resort	2	50
42	Egg botanical motel	2	36
43	Botanical skyway inn	1	28
44	Askay hotel suites	2	42
45	Frank suites and guest house	nr	6
46	828 suite	1	0
47	Dian will hotel	1	14
48	Gorillas nest	2	25
49	Dreams guest house	1	33
50	Lake view gardens	1	17
51	Bwebajja resort hotel	1	18
52	Lindsay cottages	3	17
53	Livani beach motel	1	100
54	Bwerenga villas	2	23
55	4 penguins	1	50
56	Entebbe vine in	2	25
57	Sky beach hotel	2	36
58	Papyrus guest house	2	36
59	Penile beach	2	56
60	Santamaria health resort	3	31
61	Great wolf inn	2	64
62	Entebbe transit inn	1	50
63	Keba inn	1	17
64	Carpe diem guest house	3	16

	Name Of Uganda Hotel	Star Rating	Average Room Rates (USD.)
65	The residence Entebbe	3	69
66	Pulickal airport hotel Entebbe	3	154
67	Sienna beach hotel	3	42
68	Ngamba island tented camp	4	72
69	Hotel royal nest	2	272
70	Kions apartment	2	31
71	Green valley guest house	2	50
72	Island inn	2	19
73	Glory guest house	1	25
74	Kidepo guest house	2	17
75	De la conte	1	31
76	Arch residence	2	25
77	J residence motel	2	50
78	Executive airport hotel	3	44
79	Mowi cribs hotel and spa	2	58
80	Thames hotel	2	72
81	J courts guest house	1	39
82	United motel	2	28
83	Entebbe apartments	3	47
84	Entebbe travellers inn	3	131
85	Areba motel	2	100

Source: Field Survey

Lake Victoria Serena Hotel



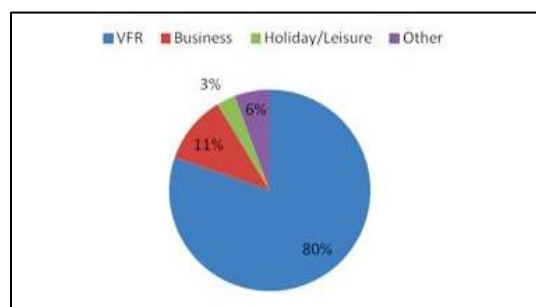
Lake Heights Hotel Entebbe



11.7 Domestic tourism in Wakiso

Domestic tourism has been increasing as the economy has been growing. The number of locals and residents visiting major sites like wildlife education centre and beaches along the lake shores has been on the increase (Figure 3.12). Based on the latest Uganda Living Standards Survey – Report (September 2008), domestic tourists are mostly aged between 25 and 64 (60%). There is no significant difference between men and women travelling for tourism purposes within Uganda. The older visitors classified as the silver hair market segment are the group that travel the least (5.5% of domestic visitors). Domestic visitors travel mostly by road (97% of same-day visitors and 99% of overnight visitors). The main purpose for travelling within Uganda is to visit families and friends followed by attending funerals and business meetings. In 2005-2006, only a small proportion of domestic visitors (3%) indicated that they travelled for holiday and leisure purposes.

Figure 3.12: Purpose of Visit by Domestic Tourist



VFR: Travelling to visit friends and relatives, attending funeral, marriage ceremonies, birthday parties, graduation ceremonies, and open days.

Business: Travelling for business and professional issues, government affairs, conferences and workshops.

Holiday/leisure: travelling for holiday, vacation, leisure, cultural festivals, sports and recreation.

Source: UBOS survey, September 2008

Other: travelling for religious/pilgrimage, studies, teaching, health and others.

The average length of stay for overnight trips was 10.5 nights in 2005-2006. Close to 82 per cent stay with their friends and relatives and roughly 10 per cent in private houses. Only 1.4 per cent reported to have stayed in hotels and 0.1 per cent in holiday resorts in 2005-2006.

Most domestic trips are self-financed. About three-quarters of the domestic same-day visitors and two-thirds of the domestic overnight visitors are self-financed. Household members sponsor some 20 per cent of the domestic same-day visitors and nearly 28 per cent of the domestic overnight visitors. Private organisations sponsor just 2 per cent of domestic same-day and 1 per cent of overnight visitors. The Government and international organizations sponsored less than one per cent of same-day and overnight visitors. A larger percentage of men pay for their own domestic trips compared to their female counterparts.

The survey conducted in September 2005 and September 2006 indicates that the majority of Ugandans do not visit the country's tourist sites. Nearly 97 per cent of respondents had not visited any tourist site. Uganda wildlife education centre and Beaches in Entebbe are the main sites visited by single day visitors within Wakiso district.

11.8 SWOT analysis of the tourism sector in Wakiso

Identifying the Strengths, Weaknesses, Opportunities and Threat (SWOT) of the tourism sector in Wakiso presents a synopsis of the current situation of the sector and provides a basis for formulating strategies to capitalize on identified strengths, address weaknesses, focus on opportunities and avoid threats. The SWOT analysis presented in Table 3.44 below is a summary of the more important points to highlight

Table 3.44: SWOT analysis of the tourism sector in Wakiso

Strengths	Weaknesses
<p>Statistics</p> <ul style="list-style-type: none"> • Historic experience of stakeholder cooperation through an Inter-Ministerial Committee to develop the Tourism Satellite Account 	<p>Statistics</p> <ul style="list-style-type: none"> • Inadequate and/or unreliable statistics for policy formulations and for policy-based research • Key data sets not collected • Inter-Departmental and stakeholder cooperation and communication is weak • Capacity weaknesses at both national and regional levels in statistics collection and analysis

<p>Tourism Economy</p> <ul style="list-style-type: none"> Uganda is becoming more and more open to outsiders, businessmen and pleasure seekers. Growing middle-income earners Expansion of the banking services and easy conversion of foreign currencies Availability of policy framework that protects investment and makes it easy for repatriation of dividends on tourism investments by foreigners Political Stability as an enabling environment for tourists and foreign investors 	<p>Tourism Economy</p> <ul style="list-style-type: none"> Inadequate politico-economic will to prioritise tourism as having high potential for generating incomes and as a labour-absorbing (-intensive) activity that will reduce the level of unemployment Relatively weak and unstable macro-economy within the EAC sub-region Lack of hard-core venture capitalists who can partner government to exploit opportunities in the sector for mutual benefits Lack of recognition of the industry by financial market operators as an activity of high potential profitability and, therefore, deserving investible funds Weak linkage of the sector to other sectors to maximize benefits to the economy through supply and value chains Lack of financial incentives to the locals in participatory development to enhance and preserve the quality of destinations.
<ul style="list-style-type: none"> Presence of the only international airport in Uganda All the major highways from Kampala go through Wakiso 	<p>Tourism infrastructure and services</p> <ul style="list-style-type: none"> Relatively high airport taxes resulting in high air fares Congestion and poor roads inhibit convenient and rapid movement around the country and urban areas Only 58% of the population have access to a safe water supply (2010 figures) Some big airlines like BA have closed shop in Uganda
<p>Tourismresources andassets</p> <ul style="list-style-type: none"> The overall diversity of tourism resources within Wakiso The genuine and general friendliness of local people and, on the whole, their positive attitude to tourists The accessibility for tourists by engaging with Local people, traditions and culture 	<p>Tourism resources and assets</p> <ul style="list-style-type: none"> General standards of cleanliness and sanitation in public areas Lack of enforcement of planning control and guidance leading to inappropriate development to the detriment of tourist resources
<p>Marketing and branding</p> <ul style="list-style-type: none"> Growing middle and higher income domestic market segment Steady increase in international arrivals Uganda's unique variety of cultural and natural resources, its safe environment and inherent hospitality are foundations for a strong tourism brand Brand Wakiso and other overall image campaigns provide a basis for building a tourism brand 	<p>Marketingand branding</p> <ul style="list-style-type: none"> Market research is limited. Wakiso is not known as a tourist destination Market structure dependent on business and volunteer tourists; real leisure tourism market limited A weak tourism brand identity and fragmentation of tourism brand application among public and private sector partners Lack of financial and human resources for managing and coordinating the tourism brand
<p>Institutional framework</p>	<p>Institutional framework</p>

<ul style="list-style-type: none"> Organized sector with well-established public and private sector institutions Willingness to work together in partnership if conditions are appropriate Public Private Forum endorsed by law 	<ul style="list-style-type: none"> Unstable leadership Weak implementation capacity of the public sector Ineffective Public Private and Inter-Ministerial relationship
<p>Policy and regulatory framework</p> <ul style="list-style-type: none"> Commitment of the government to formulating a Master Plan for tourism A comprehensive policy has been drafted in conjunction with tourism stakeholders 	<p>Policy and regulatory framework</p> <ul style="list-style-type: none"> Weak capacity and lack of funding to implement the Master Plan The Policy has not been ratified by Parliament, is too long and complex and is not an official document for the sector to base itself on There are ambiguities in the wording in the Act and in the description of the functions of the many tourism organisations
<p>Human resource</p> <ul style="list-style-type: none"> Academically qualified and enthusiastic managerial and supervisory staff Goodwill of government to develop tourism Enthusiastic market for training 	<p>Human resource</p> <ul style="list-style-type: none"> Absence of Human Resource Development and Management policy framework both for the Public and Private sectors Inadequate professional capacity and relevant experience in the Public sector in spite of the possession of minimum academic qualifications by incumbents Lack of national standards for all levels of hospitality and tourism training lack of tourism office in Wakiso
<p>Environmental issues</p> <ul style="list-style-type: none"> Strong presence of NGOs focusing on environmental conservation The environment is a major tourism asset in Wakiso 	<p>Environmental issues</p> <ul style="list-style-type: none"> Problems of pollution and sanitation at tourism sites The capacity of the District to ensure compliance to sanitation and environmental health standards
<p>Community involvement</p> <ul style="list-style-type: none"> The community in Wakiso is accessible to tourists because of the natural friendliness of locals and the safe environment The volunteer sector is strong in the district and there are opportunities for community tourism initiatives 	<p>Community involvement</p> <ul style="list-style-type: none"> Over-reliance on NGOs – some initiatives disappear after NGO cease operations Marketing remains a problem for local communities Quality issues Community-based tourism not well established in Wakiso

Opportunities	Threats
<p>Tourism economy</p> <ul style="list-style-type: none"> Both politicians and economic policy makers are gradually becoming aware of the need for diversification into alternative activities from agriculture and mining with long-term sustainability like the tourism development 	<p>Tourism economy</p> <ul style="list-style-type: none"> Recession in key generating countries could pose a threat to the growth of the industry. Similarly, financial crisis in those economies can impact negatively on tourism arrivals. In terms of local tourism destinations, a civil

<ul style="list-style-type: none"> • The recently established GTA and the Development Fund should provide useful administrative and funding avenues for the development of the sector • With sustainable economic growth and development through democratic governance, and exchange rate stability, neighbors in the EAC sub-region, especially Rwanda and Kenya, may become more interested in touring the district and Uganda in general than previously. • Supply of accommodation facilities and a pool of tour operators are on the increase and can result in competitive pricing that will lower the cost of stay and travels within Uganda respectively. 	<p>strife that impacts on the local economy can negatively affect demand for the destination</p> <ul style="list-style-type: none"> • Unhealthy competition among tour operators in order to maximise individual returns seems to undermine the collective growth of the industry • Threats to political cohesion can be translated into future economic instability and, as such, negatively impact on tourists.
<p>Tourism infrastructure and services</p> <ul style="list-style-type: none"> • Reopening of Uganda airlines will increase travel options and arrivals in the country • proposals for improved infrastructure on Lake Victoria offer a great opportunity for tourism development • New investment into highway improvements will increase accessibility for tourism 	<p>Tourism infrastructure and services</p> <ul style="list-style-type: none"> • Poor road networks may not keep up with demand, resulting in the loss tourist visits • lack of and poor tourism signage in the district
<p>Tourism resources and assets</p> <ul style="list-style-type: none"> • Historic places and sites that remain, which could form the basis for tourism development, such as Buganda kingdom royal tombs • Almost all beaches on the lake are exclusive to the district • Exclusive accommodation facilities • Presence of Entebbe airport the main gateway to Uganda • The district houses almost all the cultural history of Uganda • The district has the main recreational facility (Nambole stadium) • Existence of Namugongo shrines • Other tourist attractions like birds and scenery • Close proximity to Kampala • Existence of lake Victoria • Existence of the only zoo in Uganda (Uganda wildlife education center) 	<p>Tourism resources and assets</p> <ul style="list-style-type: none"> • Tourism development initiatives being carried out by agencies such as the Buganda kingdom and the district, without any linkages or liaison with the Ministry of Tourism • Weak and ineffective planning control by District • Lack of will and resources to restore and promote historic and heritage assets • Pollution of lake Victoria • Migratory birds come with bird flu • Regional Political instability. • Destruction of bird habitat. • Uncontrolled tourism growth • Local communities. • Competition from neighbours. • Tourism development greed. • Global financial crisis. • Mismanagement. • Not fully informed decision making • Population pressure in the tourism area • Mining activities in the tourism area
<p>Marketing and branding</p> <ul style="list-style-type: none"> • The product diversification opportunities match the needs of diversified international markets and segments • Public-private sector partnership in marketing and promotion • A coordinated tourism branding initiative can raise Wakiso's tourism image and 	<p>Marketing and branding</p> <ul style="list-style-type: none"> • Limited buy-in by key public and private sector stakeholders for a public-private marketing and branding partnership • High costs will outperform the attractiveness of the district as a leisure tourist destination and limit the market structure to business tourism

<p>performance immediately</p> <ul style="list-style-type: none"> Acceptance and application of the tourism brand by all tourism role-players will serve as an important vehicle for industry cohesion 	<ul style="list-style-type: none"> Lack of institutional capacity and funding for an effective tourism brand initiative
<p>Humanresource</p> <ul style="list-style-type: none"> Professional up scaling of capacities in the Public sector to match roles and best practices Development and implementation of an effective tourism awareness campaign at various levels and sectors of the economy 	<p>Humanresource</p> <ul style="list-style-type: none"> Inadequate budgetary allocations for capacity building in the Public sector Weak and ineffective succession planning for the public sector Uncoordinated training interventions in the public and private sector may be detrimental to the sector
<p>Environmentalissues</p> <ul style="list-style-type: none"> Enforcement of rules to ensure the environmental quality of tourism sites and of beaches Opportunities to develop specialized tourism based on nature like animal viewing, bird watching, hiking and so on Potential to obtain funds from government and companies to protect the environment and to support tourism community tourism initiatives 	<p>Environmentalissues</p> <ul style="list-style-type: none"> many accommodation and recreational centres on the shores of Lake Victoria resulting in dump untreated waste in the lake Illegal cutting of trees, and depletion of forests are not controlled Government does not provide appropriate waste management treatment plants for tourism enterprises Poor sanitation and the possibility of outbreak of life-threatening and/or highly-expensive-to-cure diseases can create bad image for the sector.
<p>Community involvement</p> <ul style="list-style-type: none"> The natural hospitality and friendliness of locals makes for an ideal district for visitors to integrate with local communities The interest in tourism is increasing, including amongst local communities Volunteer organizations are interested in developing tourism initiatives 	<p>Community involvement</p> <ul style="list-style-type: none"> Over-reliance on foreign NGOs result in projects failing Established community-based businesses devastated from encroachment by big business

11.9 Major challenges and constraints for the tourism sector in Wakiso district

Tourism marketing and promotion

- Uganda's performance in the leisure and holiday segment from key markets in America and Europe is declining while that of regional players was rising. This includes all places in Wakiso too.
- Weak market segmentation and targeted destination marketing for both domestic and inbound markets.
- Efforts to promote domestic tourism are still adhoc, without a comprehensive strategy.
- Limited market research was being done. The Majority of local Tour Operators lack liability insurance which was critical in securing transactions with the outbound tour operators in the source markets.
- Uganda's brand was not well established and positioned in the desired markets. The brand was weak and barely recognized.

- Inadequate supply of promotional materials at local governments and other MDAs resulting in very limited awareness of the potential that lies in tourism. The online marketing strategy for the tourism sector was still weak.
- Absence of a national crisis management strategy; Lean on marketing team at UTB, limited in skill depth and human capital

Tourism product development

- The product range was very narrow largely concentrated on wildlife. Wakiso's cultural and historical heritage resources are in a latent state while others are being destroyed.
- Tourism on Wakiso's large water bodies together with diverse avian life was till underdeveloped. This also applies to Wakiso's entertainment sector.
- Wakiso's product was delivered by fragmented service providers who are inefficient and ineffective which ultimately makes the product expensive.
- Limited government support for investment in the sector as there are no incentives for people interested in developing specific products
- There are no realistic work plans and budgets for tourism product development at the local government level.
- The sector remains highly centralized, based in Kampala, limiting information sharing to other regions to facilitate opportunity recognition and product development.
- There was lack of a tourism investment fund specific for regions

Tourism and human resource development

There was limited knowledge of existing inventory of skills by value chain nodes as well as the skills requirements for each Tourism management and regulation value chain actor in the industry. The tourism sector was dominated by SMEs and family owned businesses employing unskilled family members at low pay thus compromising quality visitor experiences. There was weak capacity in terms of instructional infrastructure, training manpower and the human capital of the trainers in the available tourism training institutions, and the working conditions are generally poor leading to high labour turn over in the sector. Meanwhile, there was also limited investment in skills development of existing workforce in the private sector.

Tourism education and training are fragmented across a multiplicity of stakeholders (Ministry of Tourism, Wildlife and antiquities, Ministry of Education and Sports, Ministry of Gender, Labour and Social Development, National Council of Higher Education, Uganda Tourism Board, Education and Training institutions, Tourism Industry Employers). This has resulted into low level of tourism skills throughout the national tourism value chain, at managerial, technical, operational and in key development supporting functions both in government and private sector.

Tourism Financing

There was gross underfunding of the tourism sector's core activities compared to the major competing countries as well as the Sector's contribution to GDP. As a result of meagre government funding of the sector, there was very minimal marketing of the destination and Tourism product development was limited. The private sector has no access to affordable credit or subsidized financing, and thus was uncompetitive. The tourism levy which was established by the Tourism Act 2008 has not been implemented.

Quality assurance

There is weak enforcement of the regulations on quality of facilities in the sector. This is a result of inadequate capacity both human and financial to enforce implementation of quality standards in the sector. In addition coordination, governance and leadership for implementation of quality standards among the different stakeholders is still inadequate. However, failure to comply is also due to limited awareness on the quality guidelines and standards by both the public and private sectors.

Coordination, governance and leadership

Tourism management and development is not yet adequately decentralized to the regions. Tourism management responsibilities are dispersed across many government departments and agencies, leading to overlaps, underutilisation of resources, and inefficiencies. Tourism resource management and prioritization at district level is influenced by the district councillors, who are not sensitive to tourism needs due to limited awareness and knowledge of tourism. The District Commercial officers are inadequately facilitated to undertake tourism development activities

Infrastructure development

Poor tourism infrastructure in Wakiso and the country at large include: poor road access to and between some of the key tourist sites; shortage of affordable quality accommodation in and around tourist sites and other tourism products; inadequate supply of energy, water, ICT in key tourism sites; lack of well-maintained tourist information centres in the district; lack of tourist stopover facilities; Single international air access route to destination Uganda (Entebbe) which is a risk to a flourishing industry

Private sector development

There is inadequate private sector institutional and human resource capacity to initiate significant tourism development. The private sector is fragmented and weak to effectively harness the available tourism potential. The tourism private sector, like in other sectors, is still bedevilled by limited access to affordable credit financing for investment. Investors in the tourism sector lack adequate technical guidance on investment guidelines for facilities.

Tourism statistics

There is absence of reliable, consistent and appropriate statistical information on the tourism sector in Uganda. Such data and information include: data on the tourism markets which the district is targeting; statistical significance of existing information and problems in data quality; information on tourism and tourism-related businesses. This is coupled with limited research studies in the sector. Lack of data, information and limited research has led to inability to assess economic impacts of tourism and weak enforcement of the regulation.

11.10 Product improvement and development strategy

11.10.1 Recommendations/Proposals

a) Improve sightseeing in Wakiso

Packages offered by local and international tour operators highlight the following places/themes in their product portfolios (this list is not exhaustive):

Places: Entebbe, Lake Victoria,

Themes: traditional circuit (history and culture), return on the roots, festivals, culinary tours, honey moons, adventure (climbing, hiking), beach packages.

Sightseeing tours currently offered by the local ground tour operators, cover both general as well as special interest tours. The following issues should be addressed in the sightseeing tours:

Build awareness of sightseeing opportunities in key international markets: The travel trade in key international markets is not aware of the opportunities that wakiso offers for sightseeing whether general and special interest. Ensure attractions are 'elderly-friendly' and adapt tours to market changes. For example, the younger generation is more interested in active holidays and combined holidays not necessarily pure sightseeing holidays in big groups. Develop package tours for domestic tourists. Packages for domestic tourists in the form of weekend breaks on the beach and in national parks (quality time with the family; spouse; friends).

Improve information dissemination: tourist suppliers, such as hotels and other accommodation facilities, should be able to provide adequate information on sightseeing tours being offered in the district. Tour operators in the key source markets should be made aware of the opportunities that Wakiso offers.

Improve interpretation: Interpretation plays a key role in sightseeing tours whether they are general or special interest sightseeing tours. The goal of interpretation is to change attitudes and behaviour, motivate and inspire, and make information meaningful and exciting.

When developing a plan for interpretation, needs for rest areas, shade, toilets and safety as well as interpretive requirements must be considered in addition to carrying capacity. Interpretation plan is thus also a tool for visitor flow management.

Interpretive centres can provide services to both local people and visitors. They can offer the content of the place (e.g. Nagalabi coronation site; royal tombs; martyrs shrines), the entertainment of a themed attraction and the services of a tourism information centre. Depending on resources, information centre should appreciate local designs.

An interpretative centre can tell the story of the area, illustrate a story that cannot be told in-depth on-site, bring artefacts and stories to a place where people are, display and protect valuable artefacts, allow visitors to discover the story at their own pace, encourage visitors to further explore the community, meet the information needs of tourists and serve as a home base for tourists.

b) Improve and diversify theme-based tours:

The travel trade should distinguish Group Inclusive Travel (GIT) and Special Interest Tourist (SIT) groups as their demands are different. Usually the tours should offer a variety of accommodation establishments from rustic type of accommodation (one or two nights) to four-star hotels, all included in one itinerary.

c) Improve the quality of tourism facilities and services

Train ground tour operators in international business practices: Malpractices of local ground tour operators may result in a lack of trust by the international travel trade in services offered by the destination. Arrange training for local tour operators in market research, product development and marketing. Joint training could be organized for the tourism bureau and tourism industry.

d) Develop City tourism in Wakiso

By developing city tourism, Wakiso should be able to target medium-to high-yield market segments both within Wakiso and in the neighbouring Districts, as well as increase the spending

of e.g. MICE related tourists. City tourism can be promoted further by including it in town planning and development.

e) Improve the quality of tourism facilities and services:

The quality and standard of services should not vary—e.g. two-star rated hotel in Kakiri should have all the prerequisites for two star hotels as is the case for two star rated hotel in Entebbe. Tourists should be able to trust the star rating system and expect same level of quality at various star-rated hotels.

Improve signage in the major towns and municipalities: currently street names are not seen and signage to tourist sites is lacking.

Improve shopping opportunities by providing information about shopping centres, boutiques and markets: Shopping is one of the major activities of regional international tourists while on holiday.

f) Increase entertainment opportunities:

It is a common fact that there is a lack of evening entertainment for tourists and visitors alike or information about evening entertainment—other than bars and discos—is not easily available. Consideration could be given to e.g. theatre plays, music, and local football matches to be promoted to the tourists.

g) Provide information about city tours in hotels:

Tour operators should offer packaged half-day and one-day city tours in Entebbe and other municipalities within Wakiso. However, there is no hop-on–hop-off type of tours that are common in most popular tourist cities.

h) Develop ‘living museum ‘cities:

Study should be undertaken for the tourism development example of the historical town of Toledo in Spain to find out how the government is encouraging local residents to preserve the old architecture and maintain the attractiveness of the city as a tourist destination. This could be the model for historic cities in Wakiso, for instance Entebbe.

Information dissemination within the Municipalities and town councils should be improved. This includes setting up information centres at the airport(s) and in the centre of towns to provide information on tourist attractions and activities. It will also include distribution of tourist maps and to take bookings on behalf of local tourism businesses.

i) Share our heritage and traditions:

A route introducing local heritage and knowledge and connecting with local communities. Interpretation and facilitation is key. This could be of interest to both the domestic and international market. In the domestic families, that is, parents would introduce the local traditions to their children while in the International market culture would be the main motivation and interest.

j) Challenge yourself in Wakiso:

Concentrating on various outdoor activities such as water sports, hill climbing, other sports like golf and football.

Beach Drive: introducing the best beaches, holiday and leisure destinations along the Lake Victoria shores.

Family Drive: concentrating on attractions, activities and educational sites. Selection of the sites would depend on the age of the children in the families.

The routes should be named and packaged in order to help potential customers to recognize the product. For the long-term future, when infrastructure is more developed, self-drive holidays should be promoted. Development of self-drive holidays requires good cooperation between tourism suppliers (accommodation establishments; attractions) and governmental organizations (tourism administrations, cities, planning departments, transportation department). In other countries private associations called Automobile and Touring Club have been established for private motoring within the country. The association looks after the interests, services and hobbies of individual motorists.

k) Develop holiday and leisure resort tourism

Holiday resorts have been developed along the beaches and lakes in Wakiso. In many of these resorts there is little differentiation to reflect the nature of local resources and the type of demand. Most of them aim at targeting Meetings, Incentive, Conferences and Events (MICE) tourists, the high-income domestic market segment, expatriates and international tourists.

Wakiso should aspire to develop leisure tourism, especially targeting the high-and medium-income domestic and neighbouring international markets and expatriates in Uganda as well as in neighbouring countries. For these markets, various types of resorts should be developed and existing ones improved.

Urban resorts located close to large centres and key arrival points have the potential of attracting a large number of visitors, both excursionists and overnight visitors. Holiday resorts will be more peripherally located and aimed at encouraging visitors to stay for several days by offering arrange of resort-based activities and excursions. Local resorts will depend mainly on attracting excursionists/ day visitors from the local area and will serve as a means to distribute visitors more evenly with in the country and to balance seasonality (they will limit the need to travel to the major resort areas during the peak season). Specialist resorts have the benefit of being linked to an attraction, which determines the nature of the resort and can potentially attract a specific market segment, which may be excursionists or overnight visitors, or both.

The younger to middle-aged domestic population with higher income levels is increasing. Wealth, pleasure-seeking and the desire to live for today drives the domestic and international market to enjoy leisure, adventure activities and alternative sports.

This trend, along with the expansion of the middle classes, stress at work, and the pressure of urban living, fuels a growing demand for outdoor activities away from the city hustle. The following leisure trends have been noted i: motorized boating (for example in Entebbe, Busabala Garuga, and Nakiwogo); mountain biking (trips/tours should be organized by experts and by the local community in Wakiso to tour the remote areas in the district); Hiking and camping and annual paragliding festivals.

l) Focus on events and festivals

The UNWTO hand book on product development states that, the organization of events and festivals meet several tourism objectives. These include;

- To offset seasonal imbalances by holding events in the shoulder and off seasons;
- To improve international perception and image of the district and attract visitor segments to whom the destination's other attractions do not appeal.

m) Event quality

Focus on MICE tourism

Business conferences can be subdivided into director conferences, sales conferences, administration conferences, and training programmes. These conferences choose their location between holiday resorts, downtown hotels, suburban hotels, airport hotels, and conference centres. Generally speaking, holiday resorts are preferred conference destinations.

Conference travel is a highly specialized business. It requires a systematic approach from the bidding stage to the organization of the conference. Conferences are usually run by professionals such as meeting planners, professional conference organizers and destination management companies. Therefore if Wakiso wants to develop its conference tourism sector a professional conference organising firm needs to start operation.

The strategy should be to integrate conference facilities and services with the leisure and sightseeing products offered in the country—package one or two day conferences with one day sightseeing or leisure tourism products in order to multiply the conference and exhibition site profits by nine times (expenditure on accommodation, catering, communication, tourism, shopping etc.).

n) Product improvement: development and planning approach

There is a very broad range of tourism products within Wakiso, each of which has its own specific context, requirements, constraints, opportunities and detailed issues. Rather than give a prescriptive list of standards and detailed guidelines in this document, it is more appropriate to help understand the key issues and design criteria that need to be taken into account when developing concepts, ideas, plans and proposals for tourist sites within Wakiso.

Whilst conventional design standards are most commonly applied to new development, it is also very important that existing tourist products are regularly monitored and evaluated to ensure that they are fit for purpose and are adapting to any changes in the development context and to appraise their relative success.

11.10.2 Recommendations on tourism branding

Why tourism brand?

The brand communicates and embodies a promise about the nature, essence and inherent rational and emotional rewards of the tourism experience. This promise is at the core of a Wakiso's appeal to millions of potential travellers looking for new experiences and destinations. On the other hand poor marketing and communication of the brand promise and failure to deliver the facilities and services promised by the brand will no doubt negatively affect the reputation and attractiveness of the destination. Wakiso lacks a creative, inspirational and commonly used tourism brand identity. The following major challenges and opportunities stem from the situation analysis and will be addressed by the recommendations contained below;

Wakiso does not have a clear and implementable tourism brand identity and guardian ship

The lack of clear tourism brand identity and guardianship has created a confused image among prospective customers. Thus there is a danger that Wakiso is dropped from the prospective customers 'shopping list.

Brand communication is currently fragmented

The meagre marketing budget of the Uganda Tourism Board does not allow for effective brand communication and there is no clear—brand custodian in tourism that has the mandate of taking care of brand management and communication

It should be made clear that the objective of the Tourism Master Plan brand exercise is focused on stimulating travel demand and unlocking the benefits associated with tourism growth rather than providing an all-encompassing national brand identity. The brand identity proposed should be specific to tourism and thus contains specific wordings and visual designs that are aimed at stimulating tourism demand in the international and domestic markets.

Since there is a large degree of brand fragmentation in tourism an internal communications drive should be launched to secure the understanding, participation and enthusiastic fall relevant Wakiso stakeholders in applying and promoting the tourism brand identity. This should include tourism brand endorsement and commitment by major opinion leaders in tourism and related sectors, including Brand Wakiso, to accept, promote and apply the brand. The brand will only work if it is communicated and promoted by all relevant parties.

The following institutional measures should be pursued:

- The Uganda tourism Board should be the custodian of the tourism brand on behalf of public and private sectors and should be adequately capacitated to fulfil this mandate. Adequate financial and human capacity (e.g. appointment of a strategic brand manager and having a dedicated brand management budget line) should be provided in UTB. The brand manager should work closely with all divisions of the UTB, the Ministry and private institutions to ensure a holistic brand roll out
- A dedicated brand management office and capacity should be established with a clear mandate and capacity to manage brand implementation, including setting of guidelines and standards for applying the brand, continuous communication regarding monitoring brand usage and other tasks. The key tasks will be to:
- initiate and coordinate brand promotion initiatives e.g. branding and rebranding of marketing materials, corporate image branding, media communications regarding branding
- initiate and coordinate tactical tourism branding actions when opportunities arise e.g. significant positive events like sport victories
- advise on branding or promotion initiatives and designs
- commission and conduct surveys and market research to track and monitor Ghana's tourism brand image
- ensure that all relevant stakeholders buy in and use the brand
- approve applications by external stakeholders to use the brand
- monitor brand usage standards and technical application of the logo
- coordinate effective brand messaging
- The brand strategy should be agreed among public and private stakeholders and all tourism stakeholders (institutions, companies and individuals) should actively communicate and display a common brand identity and imagery, either as their main marketing brand or as complimentary to their brands. Tourism stakeholders (both public and private sector institutions and businesses) have indicated their willingness and keen interest in embracing and applying a common brand identity and messaging. Mobilizing the major tourism operators and institutions could set in motion an expanding brand communication momentum. Key brand adopters should include:

Primary brand partners i.e. partners that should be actively encouraged to promote the tourism brand consistently and continuously include:

- Ministry of Tourism

- Uganda Tourist Board (UTB) and their regional offices
- Industry bodies and their members including Uganda Tourism
 - Association (UTA) and its affiliates namely Uganda Association of Travel and Tour Agents (UATTA), Association of Uganda Tour Operators Uganda Hotels owners Association, Uganda Restaurants and Nightclubs Association, , Car Rentals Association of Uganda, Tour Guides Association of Uganda,
 - Civil Aviation Authority Company for branding at airport entry points.
 - Secondary brand partners, i.e. Partners that should be encouraged to promote the tourism brand at suitable and appropriate occasions and locations, include:
 - Ministry of Foreign Affairs and its international offices
 - Other economic Ministries and agencies that from time to time deal with tourism related
 - Major corporations, especially those with strong and visible consumer brands associated with communication, socialization and transport, e.g. mobile phone companies, beer companies, petroleum companies, soft drink companies, etc.
 - Foreign airlines
 - Retail companies (clothing, electronics, etc.) Aiming to attract Tourist clients
 - Non-Government Organizations (NGOs) involved in promoting and developing Wakiso's economy

A public-private marketing forum should be established consisting of relevant, senior representatives of the key brand partners. This group should act as an oversight body for tourism brand promotion and monitoring and will play a key role in facilitating joint decision making, agreement of joint marketing programs and ensuring that public and private tourism stakeholders promote a common brand identity and messages

A crisis communication team should be established to attend to the tourism image effects of events that may be detrimental to or contrary to the brand image and values

Adequate finances should be allocated for rolling out the brand identity visually, online and through other communication media. Promoting a common tourism brand identity will require substantial funding. The collection of a 1 percent tourism levy should assist in alleviating current funding shortages for marketing; provided that an adequate proportion of such funds are applied for brand communication and promotion Short-term (2017-2021): Consolidation of current markets while attracting some special interest market segments

During the first five-year period, the current markets should be consolidated and some special interest market segments targeted. This is the best option to improve and diversify the product for the anticipated expansion of leisure and holiday tourism during the mid-term phase.

Based on the consolidation approach, the following markets and market segments should be targeted during 2017-2021

The domestic market provides a healthy base for tourism activities around the country. With income levels increasing, this market is becoming more and more attractive to tourism. During the first five-year period, the Greater Entebbe Region, Kampala and Central region should be targeted in the marketing activities as residents in these regions have the highest per capita expenditure in the country.

Specific segments to be targeted are: Corporate/business segment, Couples with no kids segment, Families/small groups of friends segment, School groups/church groups segment, Semi-international markets, Expatriates, Volunteers, Overseas Ugandans, Visitors from neighbouring countries (EAC), Business travelers, Nature-based tourists, and Birdwatchers:

Promotional tools and materials

Awareness raising and image building needs a well-organized and coordinated promotion involving:

- Editorial coverage in appropriate media by the UTB
- Tour operator support-selected tour operators targeting the desired markets and market segments should be assisted by providing them with specific material including photos, information on new developments (responsibility of the UTB).
- The provision of well-designed and quality information via both on a website and in printed collateral materials as well as social media by the UTB.

Familiarization trips (farm tours) for travel trade representatives

There is a need for educational trips for tour operators and travel agents. These trips should be organized in regular intervals. The cost of these trips should be jointly covered by both the private and public sectors (e.g. hotels providing the rooms, transport companies providing transport and soon). Fam tours should also be used to gather proper feedback from the participants. This information is especially valuable for product development.

Tradeshows/fairs

Participation at selected trade exhibitions held in primary source markets is crucial. Joint participation (UTB and private sector) should be supported. The list of recommended travel trade fairs to attend in the short and medium-term: World Travel Market (WTM), UK; International e Tourism us-Börse (ITB) Berlin, Germany; International Adventure Travel &Outdoor Sports Show (IATOS), USA; One fair in Scandinavia (this could be on a rotating basis): MATKO in Helsinki, Finland and/or TUR in Gothenburg, Sweden and Vakationburs, the Netherlands

Trade shows should always be evaluated on the basis of the performance and potential of the market versus the associated costs of participation. The Wakiso Tourism Office (WTO) should report the evaluation to the public-private sector-working group.

Tour operator/travel agent presentations

Seminars and workshops for selected travel trade personnel should be given high priority and should be organized by the WTO in conjunction with participation at trade exhibitions and fairs, especially overseas.

Tour operator support

Tour operator support is the responsibility of the WTO. Materials and information to assist tour operators in their programme formulation should be made available e.g. copies of collaterals, photos, videos, should be prepared and a specific section for the travel trade on the WTO website reserved. National and provincial tourism authorities should also be ready to respond to the travel trade's requests and proposals for features to be included on their tourism websites.

Trade advertising

Some travel trade advertising will be required in all identified key market store in force trade awareness and acceptance of Wakiso that is serious in developing and promoting itself as a tourism destination. Trade advertising should be organized by WTO in accordance with the action plan approved by the public-private sector-working group.

Conduct advertising and promotion for the public

Consumer focused marketing can be highly expensive and ineffective unless properly targeted. The general public needs to know about Wakiso, what it has to offer, and to find out about its attractive offers. The travel trade needs to be encouraged to respond positively to rising consumer interest in Wakiso by designing and offering tour programmes and travel arrangements. This objective could be met by advertising in specialist media, direct mail shots, website and social media development, and brochure production and distribution. Other activities would include public relations. The main responsibility lies with the WTO.

11.10.3 Proposals on improving the statistical system for tourism in Wakiso

a) Recommendations for policy on tourism statistics

There is need for accurate, reliable and comprehensive tourism statistics and correctly points out the general weaknesses exhibited by the existing system of tourism statistics and the constraints this places on an objective understanding of the condition and performance of the tourism sector.

The policy objective then correctly identified for tourism research and management systems is to address those inadequacies in order that understanding is improved and that this in turn better informs policy planning for tourism marketing and development.

The strategies for achieving this objective are correctly, if broadly and simply stated as the establishment of tourism research and management information systems for all themes and all levels (national, regional and local) 'and to ensure thorough information is available on tourism attractions and facilities and adequate road

b) Committing to developing and establishing the Tourism Satellite Account:

The TSA demands the existence of a robust system of tourism statistics as the basis for its evaluation and demonstration of the tourism sector's performance and contribution to the national economy and this can only be delivered by a collection of specialist surveys which are custom-designed, efficiently conducted, capably analysed and whose results are effectively published and disseminated. This represents a strengthening of the system of tourism statistics which can only be successfully achieved through the development of a collaborative culture between the WTO, UTA, UTB Uganda Immigration Service (UIS), Uganda Bureau of Statistics (UBOS), Bank of Uganda (BOU) and the several other public agencies and private sector businesses that are both contributors of data and end users of the analysis and results.

c) Recommendations for statistics-related institutions

The weaknesses within the existing system of tourism statistics are to be found, in institutional terms, to lie principally with UTB and UIS but it should not be forgotten that the private sector, who are a major source of valuable data, also demonstrates weaknesses and the successful implementation of the plan cannot be achieved without addressing issues associated with these non-institutional business organizations.

The purpose and value of collecting tourism statistics (indeed any statistics) is to enable a picture to be painted and an understanding to be reached of the activity and performance of the country or business being considered which then provides an information base to encourage and assist the planning and decision-making processes within these countries and businesses. The existing tourism statistics, collection and analysis situation in Uganda however does not readily meet the purpose and value criteria described and therefore are unable to meaningfully fulfil the role of informing future planning and decision making and it is this disconnection between purpose, value and informed use which is missing as much as the collection and analysis itself is inadequate.

d) Committing to developing and establishing the Tourism Satellite Account:

Thus the principal recommendation in institutional terms is not so much what, for example, Ministry of Tourism and UIS need to do to improve their collection and analysis of data (the details of which follow in section below) but how does this compilation of individual improvements recommended to various organizations become a coherent and focused approach which deals with identified weaknesses but also overcomes the disconnection between purpose, value and informed use. The answer to this question is the introduction, in policy terms, of the intention to pursue the adoption of the TSA, an initiative which is best developed and directed through the introduction of an institutional framework and focus for the integration of the many requirements and processes needed to strengthen the system of tourism statistics through to the delivery of an experimental TSA and beyond.

Essentially, the need is to create a purposeful cooperative and collaborative environment, which brings together the various bodies that produce tourism statistics and basic tourism information such as Ministry of Tourism, UTB, UTA, UIS, UWA, BOU and associations of national tourism businesses plus other potential users of tourism information (universities, research bodies, other sectors of the tourism industry etc.). This forum then becomes responsible, through the use of technical sub-committees, for identifying the short comings of the existing system of tourism statistics, then for proposing, designing and implementing technical solutions and there by moving the demanding and complex process forward.

It is equally clear that the existing system of tourism statistics lacks the authority to transparently represent the key performance indicators of the tourism sector and unless the political commitment and financial resources to address this in adequacy are made available, the fundamental basis for understanding the economic and social contribution of tourism to the economy will be further compromised and also undermine the effective planning and development of the sector.

The creation of the WTO with its newly acquired revenue earning and self-financing authority may be considered as part of the solution to the problem outlined above but the lack of clarity that exists over the Tourism Levy collection mechanism at a county and sub county level, where the WTO already suffers capacity weaknesses, and the uncertainty that exists over the budgetary priorities for the funds once collected, does suggest that caution is required when interpreting the opportunity that this new power represents.

There is no evidence of any thought having been given to how the Tourism Levy questionnaire might integrate with other data collection instruments already in use by UIS, particularly the Hotel Occupancy Rate Survey, for example, where the later could become unnecessary in light of the former or whether there is any overlap with the data requested on another collection instrument, the accommodation registration card.

e) General recommendations

The UNWTO has for many years recommended the internationalisation of tourism signs and symbols so that tourists are able to immediately recognise international standards that are meaningful. Signage should contribute to the tourist experience by easing access and providing useful information. This requires Government to formulate a tourism signage policy to develop a system based on international designs, general content and guidelines on standard symbols to be used around the country. The signage to be developed can be broadly categorized as

- Directional and informational signage
- Viewpoints at areas of natural beauty
- Campsites to provide or increase accommodation at selected tourism sites

The WTO must have a policy that will set guidelines for tourist signage and symbols to be developed in the district. Institutions that are likely to erect signs such as the Ministry of works, the Ministry of trade and tourism, the Ministry of the Environment, Science and Technology as well as private sector stakeholders wanting to direct tourists to their facilities would be consulted in the policy formulation so that an agreement can be reached on the types, design, colours and so on.

f) Summary of recommendations

To guide the development of the tourism sector in Wakiso over the next 20 years key recommendations are proposed in this Plan to achieve the desired results, as summarised in this section of the report.

11.10.4 Policy and regulatory framework

- Initiate a PR campaign aimed at high-level government officials and people of influence in Wakiso to explain the value of the tourism sector. Engage a specialist Public Relations firm to carry out the assignment, which will include: organising an international conference to generate media exposure; disseminate the messages of the conference; create an online presence and a lasting legacy. This will build up a general understanding of the tourism sector in Uganda generally and Wakiso in particular by addressing misguided and negative views of the industry, in particular those held by other government institutions, which are affecting its credibility as a productive sector generating income and jobs and benefiting other sectors of the economy
- Consider involving the private sector in quality assurance and monitoring of the sector, especially the hotel classification system.
- Consider collecting the 1% levy from tourism enterprises that are above a certain size or a certain turnover.
- Agree a formula for the application of the Tourism Development Fund to the relevant tourism activities
- Highlight the loss of revenue resulting from the strict and expensive visa regime and continue lobbying policy makers to review the system

11.10.4.1 Institutional frame work and the role of institutions in implementing the plan

- Address the problem of leadership instability
- Develop a demonstration tourism zone as a tourism development model which can be replicated in other areas of the district
- Designate the Ministry as a Technical Ministry through appointments of key technical personnel, functions and outlook
- Improve the working relationship of the district and Buganda kingdom as regards tourism
- Build the capacity of district staff as regards tourism
- Strengthen the use of Information, Communication and Technology at the Ministry and at its implementing agencies
- Restructure Departments at the district and their functions:
- Strengthen the MOT's monitoring and evaluation function
- Strengthen the Ministry's communications and information technology functions
- Create a permanent inter-agency task force to coordinate the implementation of the Plan
- Ensure that the Plan is legally adopted
- Appoint professional staff at senior management level at the tourism department and not political employees
- Establish an environment at WTO conducive to building a positive and productive

working structure

- Ensure that all stakeholders in the tourism sector embrace the recommendations of the Plan and are involved in its implementation
- Strengthen Public Private Partnerships:
 - Organise regular investment fairs
 - Invite private sector members from outside the sector
 - Encourage stakeholders from large tourism enterprises to participate in the Forum
 - Agree on a work plan and budget for joint activities
 - Strengthen private sector associations

11.10.5 Product improvement and development strategy

Develop each of the nine project that has been described in the profiles during the first 5-years of the 2013-2027 Plan:

- Busiro county cultural visits and Baganda clans story
- Entebbe craft villages
- Lake Victoria and surrounding attractions
- Entebbe-Kira Urban Regeneration
- The royal tombs Route
- Recruit consulting teams to carry out the scoping studies and formulate detailed integrated Plans for each area
- Identify funders and implement the plans
- Improve sightseeing in Wakiso
 - Build awareness of sightseeing opportunities in key international markets
 - Ensure attractions are „elderly-friendly“
 - Adapt tours to market changes
 - Develop package tours for domestic tourists
 - Improve information dissemination
 - Improve interpretation
 - Improve and diversify theme-based tours
 - Improve the quality of tourism facilities and services
 - Train ground tour operators in international business practices
 - Arrange training for local tour operators
- **Develop city tourism in Wakiso:**
 - Take tourism into consideration in town planning
 - Improve the quality of tourism facilities and services
 - Improve signage in the major towns
 - adopt proper numbering of houses and improve/street names and directions
 - Improve shopping opportunities by providing information about shopping centres, boutiques and markets
 - Increase entertainment opportunities
 - Provide information about district tours in hotels
 - Consider attracting investor(s) to set up a boutique hotel chain in the various municipalities and townships around wakiso
 - Improve information dissemination within the towns

11.10.6 Wakiso tourism branding

- Apply the key brand elements consistently across all media and stakeholder channels
- Intensify brand promotion
- Manage and monitor collective brand application

a) Marketing strategy

- Short-term (2017-2021) strategy: Consolidation of current markets while attracting some special interest market segments
- Medium-term (2021-2025) strategy: Expanding to new international markets while still attracting the consolidated markets and the special interest markets
- Long-term (2026-2030) strategy: Further expansion of international market segments as well as special interest markets
- Promotion strategy: Launch a Public Relations (PR) campaign using press releases, information briefings, hosting travel and general feature journalists and TV film crews, celebrity endorsements (e.g. Musicians) and publicity events
- Travel trade promotion strategy: Conduct advertising and promotion for the travel trade including familiarisation tours, trade shows/fairs, tour operator/travel agent presentations, tour operator support, and trade advertising. Organise:
 - Familiarisation trips (fam tours) for travel trade representatives
 - Trade shows/fairs
 - Tour operator/travel agent presentations
 - Tour operator support
 - Trade advertising

Advertising and promotion strategy for the general public: Conduct advertising and promotion for the public by developing: Collaterals, Videos, Social media, Website and Consumer advertising and direct mail

b) Enhance the economic performance of the tourism sector

- enhancing economic benefits
- Increase tourists' stay and spending
- Strengthen linkages in the supply and value chains
- Facilitation of the investment process
- Raise awareness about investment opportunities
- Provide investor guidance; identifying possible financial assistance where needed

c) Tourism human resource development in Wakiso

- Develop policy on tourism human resource development for the public sector
- Improve public awareness on career opportunities in tourism
- Develop and implement targeted awareness creation
- Carry out a training needs assessment and evaluation of public sector tourism human capital
- Carry out training needs assessment and evaluation of private formal sector operators
- Establish a tourism human resource research unit
- Develop training programmes for the private formal sector
- Develop standardised hospitality and tourism training programmes
- nationally accredit hospitality and tourism training programmes
- Develop the capacity of instructors in tourism training institutions by offering on-the-job training and off-site training to improve their teaching skills
- Establish national hospitality and tourism training institutes
- Create a technical committee with members selected from academia and industry to develop and implement guidelines that will promote stronger collaboration between academia and industry

11.10.6 Enhancing community involvement in the tourism sector and socio-cultural considerations

- establish tourism office in Wakiso district

- Establish community tourism desks at MOT and Wakiso district
- Establish tourism liaison offices in all sub counties in Wakiso
- Set up Destination Management Organisations (DMO) in wakiso's tourism zones
- Establish a funding mechanism to finance the staffing and activities of the DMO
- Intensify community involvement in tourism development projects in cultural tourism, nature and ecotourism, and adventure tourism
- Create partnerships to develop and market the creative industry (handicrafts, music and dance among others)
- Create partnerships with hotels and resorts to provide complementary services and products to tourists (i.e. the hotel provide rooms, food and beverage, the local community cover the excursions offered through the hotel), work together within the supply chain (local communities supply the hotels and resorts), exchange services (hotels and resorts offer educational programmes to local schools, the school children keep the beaches clean), and so on
- Encourage outsourcing to local farmers
- Promote local content in tourism architecture, design and furnishing
- Ensure that the inclusion of women, the youth and disadvantaged groups in the tourism sector is supported by Government policies and strategies
- Ensure that social protection legislation regulating the tourism sector extends to women, the youth and vulnerable groups

11.10.7 Environmental and cultural heritage protection and management

- Establish desks at NEMA and WTO to address environmental issues related to tourism
- WTO Officers must work with the EPA to ensure that tourism enterprises operate in a sustainable manner, report the impact of their operation and are regularly inspected
- WTO must work with tourism stakeholders and Town and Country Planning to ensure that tourist areas are environmentally well maintained and that public waste management services are effective and efficient
- Ministry staff must liaise with the NEMA, Science and Technology (MEST) and with the seconded Officers from the UWA, from Buganda Kingdom on establishing environmental protection systems and on protecting cultural heritage assets
- Work with NEMA to develop a set of indicators that will measure environmental impacts at tourism sites
- Develop guidelines for establishing a visitor management system at each attraction and cultural heritage site that attracts large flows of tourists at certain time
- Build community awareness about the importance of stopping illegal activities and the importance of keeping tourist areas clean and litter- free
- Encourage the corporate social responsibility of large firms from other sectors to protect the environment and contribute to the tourism sector
- Conduct impact studies in tourism areas to identify the projects that are affecting tourism and the environment
- Identify specific locations which are visited by tourists or have tourism potential in these areas to be designated as tourist sites by the Minister
- Approach these businesses and obtain their commitment to behave ethically and contribute to economic development by contributing to the tourism sector and improving the quality of life of the local community living in the area around the projects
- Invite the businesses to regularly attend the Public Private Forum so that they are aware of developments in the sector and contribute their know-how and experience to the forum

11.10.8 Rationale and Competitive Positioning

This section sets out the goals and objectives to be achieved over the next 20 years during tourism development plan. It discusses the reasoning behind the choice of strategy that will be pursued and identifies Wakiso's competitive position in the regional and global context.

Development goals and objectives

The development goals and objectives guiding the tourism development strategy expounded in this plan reflect the Government of Uganda's aspirations expressed in Vision 2040, the United Nations commitment to achieving the Millennium Development Goals (MDGs) and the principals set out in the New Partnership for Africa's Development (NEPAD). These are captured in the Ministry of Tourism's Vision and Mission.

Thus the **overarching goals** are: to contribute to the country's economic wealth, reduce poverty, conserve the environment, promote sustainable development and practice, foster national cohesion, and achieve greater GDP growth. This will be achieved by:

- creating a conducive and favourable environment for sustainable growth and development that will ensure that the sector greatly contributes to GDP
- the effective and efficient use of appropriate policies
- developing corporate planning programmes and projects as well as public private partnership

These overarching goals are enhanced by the following specific goals and objectives:

To develop tourism in a planned and sustainable manner by;

- formulating a phased spatial plan to guide the distribution and nature of tourism development
- improvement and expansion of existing attractions and assets and developing new attractions
- exploiting the opportunity of planned infrastructure development and influencing development priorities
- Encouraging sustainable and responsible development that protects the natural, cultural and historical resources of the district

Business development goal: to improve and expand commercial tourism facilities and services

This will be achieved by:

- supporting the development of SMEs promoting and supporting investment in tourism plant and products
- building the human and institutional capacities of the sector to provide high quality services
- maximising opportunities for local communities to participate in tourism through supply and value chain linkages
- promoting sustainable consumption of resources such as water and energy and encouraging appropriate disposal of solid and liquid waste as well as recycling
- ensuring the quality of services and products offered by the business community by providing guidelines on standards and through extension
- Services, training and enforcement of regulations

Marketing goals:

To diversify tourism source markets and market segments. This will be achieved by:

- developing a positive and sought-after tourism brand identity and improving Uganda's and

therefore Wakiso's tourism image locally and abroad

- ensuring consistent application and promotion of a common brand identity by all public and private tourism stakeholders
- adopting a targeted marketing approach
- diversifying the product base to match the needs of the different markets and market segments (providing value for money)
- intensifying public-private partnership in marketing and promotion
- establishing a presence in key source markets
- developing promotional tools and materials as per the key markets and segments
- monitoring and evaluating the results of marketing activities by conducting market research at regular intervals

Human resources development goals:

To improve the capacity, quality, quantity and performance of human resource of the tourism industry. This will be achieved by:

- promoting public private sector partnerships to establish training institutions
- promoting uniform tourism and hospitality training standards
- encouraging the establishment of a national hospitality and tourism training school to set the benchmark for other hospitality and tourism training schools
- ensuring coordinated training and workshops for current public sector and industry personnel
- establishing a national hospitality and tourism accreditation body to accredit hospitality and tourism programmes
- developing the academic and professional competencies of the private sector to deliver quality services

Institutional and management goals:

to provide an effective institutional, regulatory and financial framework to support the development and growth of the sector. This will be achieved by:

- ensuring proper coordination between public and private sector tourism industry and related stakeholders
- clearly defining the roles and functions of tourism institutions
- Promoting effective stakeholder partnerships (public-private, public-public, private-local community, etc.)
- providing reliable and credible data and information as a basis to inform
- planning and investment choices and enable performance monitoring of marketing and product development initiatives to be undertaken
- developing a regulatory system that promoted sustainable development, conserves the resources and ensures the quality of the tourism experience
- reducing and eliminating obstacles that may be deterring investment in tourism or tourists from visiting the country
- providing a safe, secure and healthy environment for tourists as well as for the local population that interact with tourists
- prioritising actions that will help the local population derive benefits from tourism either directly by participating in the sector or indirectly by supplying the sector
- securing adequate levels of financing to implement the tourism strategy and plan

11.10.9 Goals to maximise the economic impact of tourism:

To ensure maximisation of tourism contributions to the economic development of Wakiso district. This will be achieved by:

- formulating policies and providing enabling environment that will maximise tourist arrivals
- ensuring the availability of tourism data and information to accurately identify and determine the extent of economic impact
- keeping a up-to-date statistical database which records documents and researched planning, development, product development, marketing and promotion issues
- finding ways to raise the value and supply chains to induce tourists' longer stay and higher expenditure
- ensuring an efficient and effective financial system in order to minimise exchange rate volatility
- promoting the use of local inputs and contents to minimise foreign exchange leakages
- upgrading skills of the industry's workforce in order to enhance their professionalism and earnings
- formulating optimal tax policies to ensure compliance from the industry's players
- providing appropriate tax incentives and/or subsidies to promote investment in the industry which will, in turn, raise tourism impact on the economy
- facilitating the investment environment
- incorporating a poverty-focus into tourism policy
- emphasising local people's priorities and circumstances in the planning of all tourism projects and programmes
- improving opportunities for the wider involvement of communities in the supply and value chains of tourism products and services
- increasing access to training and skills for women, the youth, the unemployed and the handicapped

Strategy rationale

At this stage of Wakiso's tourism development it is important that the strategy that is adopted delivers the desired objectives in a realistic, achievable and logical manner and that the pace of development is appropriate. Therefore on the supply side an incremental growth approach is described in this strategy document consisting of three main stages:

Stage 1: consolidation of areas where tourism is well established and already attracting a regular flow of tourists by creating a framework that will allow tourism to continue growing, reducing barriers and building up the credibility of the sector

Phase 2: expansion to open up underdeveloped tourism areas and resources

Phase 3: sustainable and consistent growth

At the moment Wakiso attracts a limited number of market segments. Therefore on the demand side the strategy will focus on expanding the portfolio of market segments during the life of the plan focusing in the first instance on developing the leisure market and the domestic market.

Competitive positioning

It is expected that Wakiso's competitive positioning will evolve over the next 20 years as the above-mentioned phases unfold.

During Phase 1 (Consolidation) the destination will build on the achievements to date and will depend heavily on its position as a safe haven choice for travel segments with a low demand elasticity and who have limited choices due to business, heritage, travel distance, social requirements and other factors. These include business travellers; SAVE market (scientific, academic, volunteer, educational); visitors from EAC countries, expatriates living and working in Uganda and the Uganda domestic market.

During Phase 2 (Expansion) will be a period of rapid market and product growth.

Wakiso will retain a strong position among established market segments and will increasingly be considered as a safe, high value destination for a broad range of experiential travellers. These expanding segments could include backpackers, the more mature, higher spending traveller in search of new culture and nature experiences, special interest niche markets, conferences and exhibitions, etc. Tour operators and tourism investors will expand the tourism portfolios rapidly during this phase.

In Phase 3 (Sustainable Growth) the country will be firmly established as a popular leisure travel choice in Africa offering excellent value and being frequented by wide range of travel segments in search of the local culture, lifestyle and variety of natural and heritage attractions. Tourism arrivals and product capacity will increase consistently and steadily during this phase.

It is expected that the Tourism Plan will require substantial revision following these three phases, to ensure continued and sustainable tourism expansion and growth.

12. Report on Wakiso Land Use and Development Patterns

12.1 Introduction

The following section covers the analysis of the existing land uses in Wakiso District. The study area encompasses the heart of Entebbe, the international airport town of Uganda, four Municipal Councils, eight Town Councils and seven Sub-counties which make up Wakiso District Council. Each jurisdiction has its own identity, characteristics and transit options. The land uses within each of these neighbourhoods are inseparably tied to transportation routes. It is therefore important to note that the size, diversity and locations of neighbourhoods, as well as the built up characteristics within each area impact physical planning.

One of the general primary functions of this plan is to guide the physical growth of the Wakiso District. This will be by establishing where land uses or types of development physically occur and how they interrelate with each other and how they are connected to the transportation network. The land use plan is really the first of many steps to create, enhance or preserve communities, neighbourhoods and the natural environment. The land use plan is also critical to ensure that the district has the mix of uses needed to meet the needs of its residents. This includes employment, commercial, industrial, agricultural, nature conservation and housing opportunities which are critical for the fiscal and environmental sustainability of the district.

This report is intended to provide existing conditions to aid in the creation of a land use plan, as well as the creation of goals and policies that will guide future private and public development in the district. The report describes Wakiso District's existing urban fabric, discussing the existing location and relationship between residential neighbourhoods, commercial areas, industrial establishments, institutional locations, centres of employment and many other land uses.

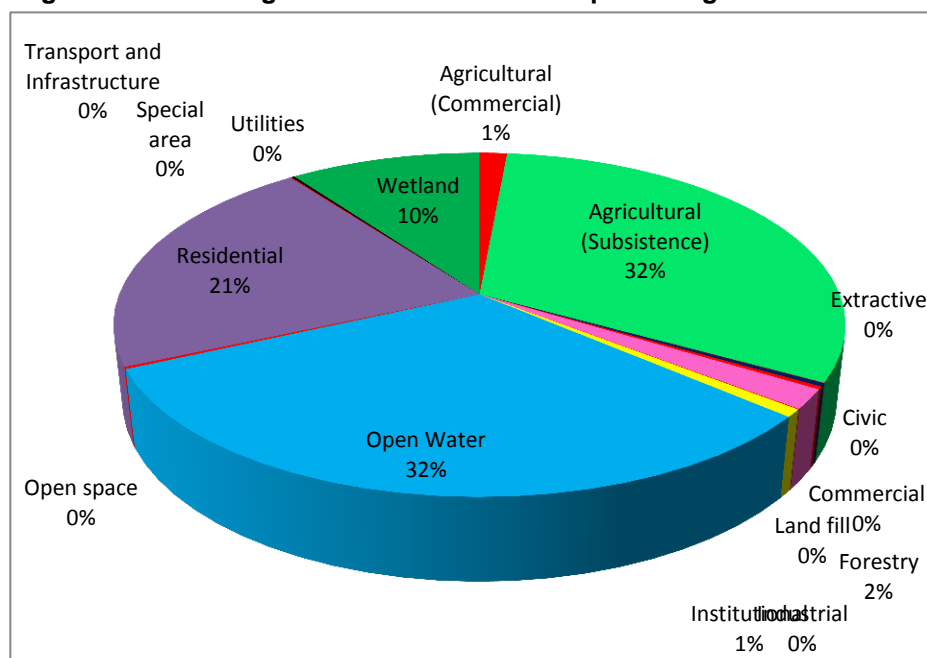
Land use designations

The existing Land Use Analysis classified nineteen (19) level 2 land use categories as required by the level of planning. These are residential, commercial, industrial, institutional, recreational, wetlands/nature, open spaces, extractive, civic, transport, infrastructure and agricultural (Table 3.45) with their acreage and percentage coverage (Figure 3.13).

Table 3.45: Existing Land Uses within Wakiso District

Type	Coverage (Ha)	Percentage (%)
Agricultural (Commercial)	4,033.1	1.44
Agricultural (Subsistence)	93,133.2	33.17
Civic	100.9	0.04
Commercial	867.1	0.31
Extractive	734.7	0.26
Forestry	2,282.6	0.81
Industrial	115.3	0.04
Institutional	2,028.2	0.72
Landfill	11.7	0.00
Open Space	501.9	0.18
Open Water	89,557.3	31.90
Residential	58,570.0	20.86
Special Area (security installation i.e. police, army, prison and air force)	196.9	0.07
Transport and Infrastructure	437.3	0.16
Utilities	23.1	0.01
Wetland	28,179.0	10.04
TOTAL	280,772.3	100.00

Source: Mapped Data 2016

Figure 3.13: Existing land uses for Wakiso in percentages

Map 3.32 displays the comprehensive land uses described in Figure 3.9 showing the relationship between the different land uses to the major transport routes. Also shown are the locations of the major employment areas i.e. commercial centres of Entebbe, Kajjansi, Kisubi, Kawuku, Kyengera, Nasaana, Wakiso, Kira and Bweyogere. The land uses in Wakiso District as a predominantly suburban area, tend to

be segregated into lower land uses as it is the case in many other Ugandan districts.

In Namayumba Sub-county, for example, the industrial and commercial uses are generally located in distinct areas although sometimes they tend to overlap. Most areas are composed of

residential uses, containing minimal neighbourhood hosting retail stores and other services. Furthermore, many residential areas in Wakiso District are far from the industrial and commercial areas which are supposed to provide employment opportunities for residents. The location and characteristics of each of the broad land use categories, illustrated in Map 3.36 and presented in Figure 3.13 are discussed in more detail in the sections below.

(i) Residential uses

Of the total of 693,809.4 acres/58,570 Ha (20.86%) of the total district acreage are occupied by residential uses. Map 3-18 illustrates how much of the Wakiso District is comprised of residential uses. Not only do residential land uses occupy the third biggest land in Wakiso District as a whole, but single family residential, as its own distinct land use category, occupies more land than the other residential and non-residential land use categories. This data supports the common perception that Wakiso District is primarily a residential district and a dormitory for the primate City, Kampala. The only areas that do not have residential are those areas that are predominantly agricultural and open surface water. It is noted further that residential use is organically spread making it very difficult to make use of the remaining undeveloped land into major investment projects without incurring high costs.

(ii) Commercial uses

The commercial land use category includes a variety of uses including retail stores and services, professional and medical offices and services and entertainment uses such as restaurants, bars and night clubs. As shown in Table 3-16, commercial land uses occupy 867.1Ha which is only 0.31% of the total land area. The commercial land use category includes major commercial centres, small scale trading centres, markets, fish landing sites and major shopping centres. Much of the commercial land uses are spread throughout the district typically located along arterial transport routes in a ribbon/linear built up environments.

Not to be overlooked, Entebbe and Hoima Road contain the most significant concentrations of commercial uses probably these roads lead to the main international airport and the oil towns of Uganda respectively. Retail stores are the largest user of this commercial space, followed by restaurants, accommodation and others. Notably so is the fact that the spread of commercial uses has a lot of relationship with residential and as such it is equally organically spread without any form of guidance.

(iii) Industrial uses

Within Wakiso District there are 115.3 Ha (0.04%) occupied by industrial land use. The Industrial land use category includes a wide range of industrial establishments including large to small scale uses. The industries identified clay industries along the Entebbe Highway that drive Wakiso's economy and contribute significantly to Uganda's economy. Among Wakiso's industrial uses are foods processing industries, clay processors and green technology. The industrial land use category also includes traditional heavy and light industrial uses such as manufacturing, auto and truck repair, warehousing and distribution. These traditional industrial uses not only provide important services to Wakiso District residents but also provide significant services and supplies to Wakiso commercial businesses. While pockets of industrial uses are spread throughout the district, there are a number of concentrations of industrial uses in Bweyogerere in Kira Municipality and along Entebbe Road.

(iv) Agricultural (Subsistence)

Subsistence Agriculture occupies 93,133.2Ha which is 33.17% of the total acres. This land use is the second largest and includes small scale agricultural farms mainly for home consumption as well as supporting the Wakiso resident's financial needs. This land use is mainly found in the North West in Namayumba, Mende and Masuulita sub-counties as well as the South Western parts of the district in areas of Kasanje Sub counties and Ssisa, now Kajjansi Town Council. It is noted however that even in the classified residential use there were pockets of backyard farming and small gardens.

(v) Agricultural (Commercial)

Commercial Agriculture covers 4,033.1 Ha (1.44%) of the total planning area. It entails facilities like National Agricultural Research Organizations of Namulonge and Kawanda, flower farms, fish ponds and the Jesa Dairy Farm located in Namayumba Sub-county and Ugachik in Kasanganti Town Council. All these have large scale agricultural establishments primarily meant for commercial purposes.

(vi) Open water

The open waters comprise of Lake Victoria water which is world's second largest fresh water lake and Uganda's largest water body. Located in the southern part of the district it is found in Entebbe Municipality; Katabi and Kajjansi Town Council, Kasanje and Bussi Sub counties. It covers the largest area of 89,557.3 Ha (31.90%).

(vii) Institutional

The institutional land use category includes a variety of uses including; educational facilities, health facilities and religious facilities. Institutional land uses occupies 2,028.2 Ha of land which is only 0.72% of the total land area. The institutional land use category includes universities, colleges and schools both government and privately owned. Under health there are hospitals and health centres and dispensaries. Religious institutions include churches, mosques and African traditional shrines. Many of these institutional land uses are spread throughout the district, typically located in major towns and trading centres.

(viii) Wetlands

Wakiso wetlands occupy 28,179.0 Ha (10.04%) of the total Wakiso District area. This land use occupies a significantly large area as compared to many other used classified. The wetlands are evenly spread throughout the district and drain Wakiso District to the south into Lake Victoria basin, the West to the Kafu Basin and to the North into Lake Kyoga Basin. Wakiso District holds the famous and notorious Mayanja Wetland known for its heavy floods. It was noted that a lot of farming activities are taking place in the wetlands. This was commonly seen in Lumansi Wetland of Gombe Division, Nansana Municipality, where people have planted sugar cane and eucalyptus trees for commercial purposes. The encroachment on wetlands for agricultural use and at times settlements has attributed to the change in local area climate. There is drought, the weather patterns have changed; short intensive rainfall events, for example one rainfall event can have two months' rainfall. The day time temperate have increased with heat waves occurring both in the dry and wet seasons.

(ix) Special areas

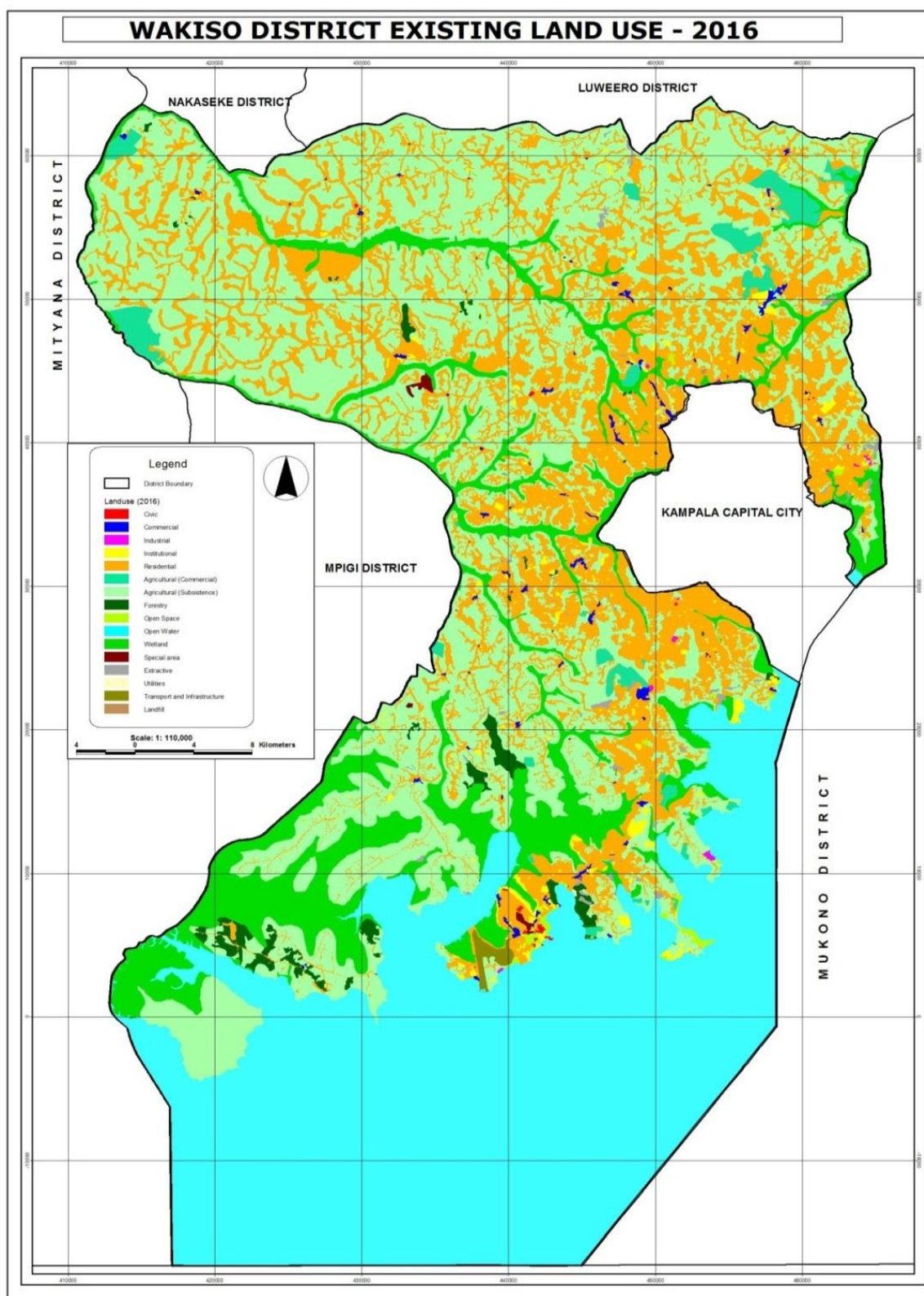
The special area land use category includes uses like police stations, police, air forces and military barracks. As shown in Table 3-16, special area land use occupies 196.9 Ha which is 0.07% of the total land area in Wakiso District. These too are scattered in different areas within the District.

(x) Mining

Within Wakiso District area mining covers an area 734.7 Ha which is 0.26%. The mining land use category included; stone quarries, sand mines, clay and soil mines for brick making and murrum pits for extraction of gravel for road filling. These too are scattered in different parts of the districts.

(xi) Other land uses

Other notable land uses covered an area of 3,357.5 Ha (1.2%) of the planning area and were occupied by forests both natural and planted forests, 2,282.6 Ha (0.81%), Transport and Infrastructural land use which mainly covers the main Entebbe airport and Kajjansi air strip, 437.3 Ha (0.16%) open spaces including recreational facilities, public play grounds, beaches found along the water front of Lake Victoria and grazing land covering 501.9 Ha (0.18%), Civic which is 100.9Ha (0.04%) mainly occupied by government offices including the state house, garbage dumping site which is 11.7 Ha located in Kiteezi Kasanganti Town Council, Utilities mainly sewer lagoons occupying 23.1 Ha scattered in different parts of Wakiso District but mainly in Entebbe Municipality.



Map 3.36: Wakiso District Land use (2016)

12.2 Development potentials and constraints

There were a number of development potentials and constraints identified during the survey. Potentials here imply areas where land is available for future development and/or can easily be converted to other uses. Constraints are areas where future development will not be possible and/or can be done with high costs. Map 3.37, gives the picture of the available land for future development against that land which is not available for development.

Development potentials

(a) Undeveloped land

The district still has substantial undeveloped land (33.1%) especially in the northern and the South western parts (Table 3.46). The availability of green areas such as farm land, grazing areas, mining area and open spaces is advantage because it is easier to propose new developments.

Table 3.46: Potential areas for development

Type	Acres	Percentage
Agricultural (Subsistence)	226,308.4	32.6
Mining	1,815.4	0.3
Open Space	1,240.3	0.2
TOTAL	229,364.1	33.1

(b) Attitude of the people

Majority of people were willing to participate in the planning process. The welcoming attitude is a potential to development as people will follow the plans hence adhering to rules and regulations.

Constraints

Constraints are major hindrances to new development. These can be social, political, physical, economic and environmental. In Wakiso District, identified constraints included; built up area, ecological zones like wetland, open surface water, natural forests and commercial agriculture (Table 3.47). They covered 66.9% of the total planning area. This means that areas still available for future development are very minimal and this may require the use of extra costs to covert some areas into new development potentials.

Table 3.47: Physical constraints to development

Type	Acres	Percentage
Built up	157898.8	22.8
Forests	5640.3	0.8
Wetland	69631.5	10.0
Open Water	221300	31.9
Agricultural (commercial)	9966	1.4
TOTAL	464436.6	66.9

- **Built up area**

The built up area in Wakiso District comprises of residential areas, commercial, industrial, institutional and recreational areas. It covers 22.8% of the total planning area. Such areas may be very difficult to change their use because the occupants may not be willing to do otherwise. Where they may willing, it may have high cost implications in terms of compensation.

- **Land tenure system**

Most land in Wakiso is under private Mailo. This kind of tenure also becomes cumbersome when it comes to provision of infrastructure services. Owners most times expect to be compensated and at times they even refuse to allow services go through their land. This delays decision-making and makes plan implementation difficult.

(c) Ecological areas

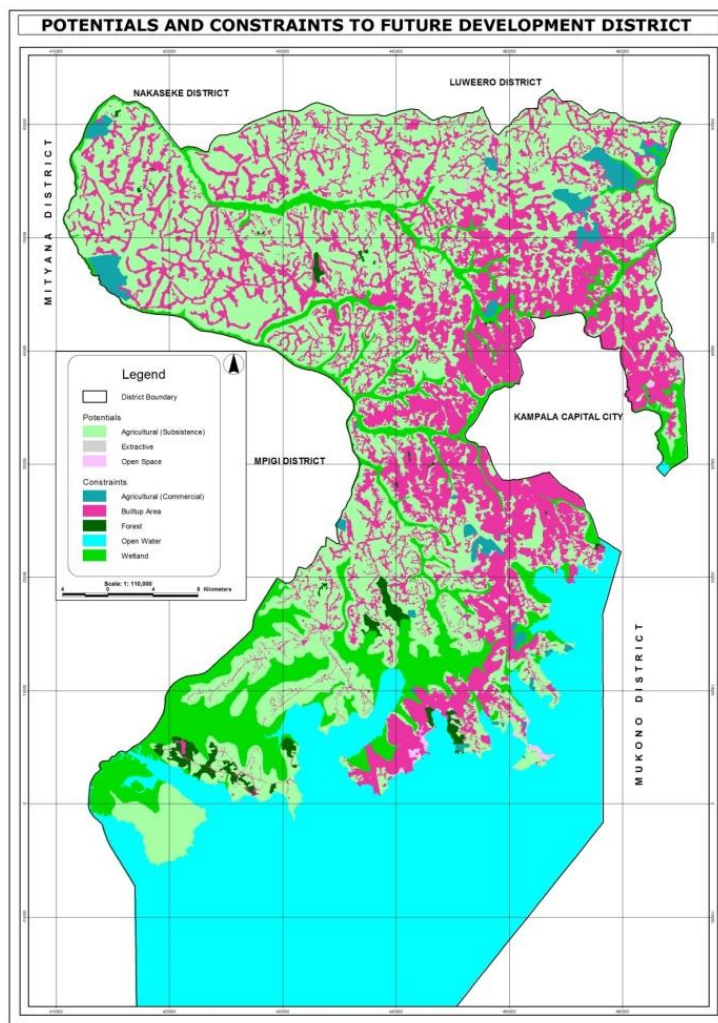
Ecological areas include rivers, wetlands, natural forests and open surface water were considered to be constraints to new development covering 42.7% of the total area. There are a number of rivers that crisscross the district, the wide swamps in the valleys, the natural forests and Lake Victoria water which cannot be turned into new developments because they are under protection/conservation. These are environmentally sensitive areas that need to be preserved hence making it hard to reclaim them for future development purposes.

(d) Physical features

The district has a number of hills which need to be protected from any form of development. They are also a constraint to development in terms of limitations to the extension of services and utilities. In case development is to be enforced, costs incurred are likely to be too high.

(e) Commercial agriculture

Wakiso District has a number of both private and government commercial farms. Under the private ones there is Jessa farm in Namayumba Sub County and Ugachick in Kasangati Town Council. Among the government farms include; Kawanda and Namalere, Kabanyolo, Namulonge and Sendusu in Nansana Municipality. These farms registered a sizable chunk of land equivalent to 1.4% of the total planning area. The Consultant is aware that such areas may also be very difficult to convert into other uses since majority these areas already gazetted.



Map 3.37: Potentials and Constraints

12.2.1 Conclusion

Spatial Analysis of existing situation in Wakiso District Planning Area

The spatial analysis of Wakiso District Planning area in its current state was necessary in order to understand the present and future development scenarios. The spatial analysis, as opposed to other types of analyses, focused on the spatial and physical aspects of the existing situation. The situation in Wakiso can be summarized as follows: -

i. The Challenge of In-migration from Kampala City and from Outlying Up Country Districts

According to the National Population and Housing Census 2014 Wakiso District currently accommodates 1,997,418 residents, a number which decreases during the day as millions flood Kampala, the Capital City of Uganda for work and return later to sleep in Wakiso the dormitory area of Kampala. As Wakiso District continues to attract residing migrants from all corners of the country, a population growth is predicted in the short and long term. Increased in-migration has created a mix of unstructured and dysfunctional land uses with different implications on the functioning of Wakiso District with its Municipalities and Town Councils such as employment, transportation, housing to mention but a few.

ii. The Existing land use, Physical Structure and Networks

a) Incoherent and Imbalanced Physical Structure

The district bears the significant impact of the radial movement network to and from Kampala City centre concentrating all activities of significance, or of higher order in and towards or inside the City Centre.

The land use pattern and structure lacks a coherent and even partially balance. Its growth has been and remains radial sprawl along the major movement routes as “fingers” or “stubs” and fills in the gaps, amoeba-like, without meaningful structure, amenity or adequate service forming concentric, increasing inner densities and spreading out concentrically, restricted only by access constraints, severe slopes (largely to the west) and water bodies (with significant construction and encroachment on marginal lands including extensive wetlands in the district).

The land uses, routes and the urban centres no longer constitute functional corridors. They lack almost all complementary elements except movement, housing, basic local services (primary schools, low order clinics) and largely small local, informal commerce often located in ungazetted areas.

Entebbe Central Business District (with its airport, government institutions and recreation facilities) and Jinja Road at Namanve (new industrial zone, university) provide some signs of developing into “activity corridors.” The routes along Masaka Road, Mityana Road, Hoima Road and to a lesser extent Gayaza Road display intensive generally lower-order activity but are not structured to function as integrated functional corridors. The district generally lacks a clear hierarchy of urban centres and sub-centres, with visible functional specialisations but all generally dealing in lower order activities strung out along the primary radial routes.

b) The Challenge of Sprawl

Wakiso District today is characterized by a rising of urban sprawl. The urban sprawl stems from the main Capital City Kampala into Wakiso District. It extends beyond the boundaries of the urban nodes in the district into the peri-urban and rural rich agricultural areas spreading even

beyond the district boundaries. Three additional urban centres exist within the confines of Wakiso District: Wakiso-Nansana, Entebbe and Kireka-Bweyogerere-Kira. Though these centres are scattered within the district, they are linked and dependent on the whole district and its neighbours for services, employment, etc. The areas between these centres are littered with disorganized settlements along the roads, which form the urban sprawl. The density in these areas is equally high in comparison to Kampala the immediate neighbour. The result of this situation is disjointed and incremental growth. The recent adjustment in the administrative set up of the district has compounded the issue even further to the extent that it is quite difficult to find a sizable piece of land in the district undeveloped.

These settlements burden the existing infrastructure and services of the district as many flood the district daily in search of employment and services. The continued unplanned sprawling growth holds several dangers to the future of the district: -

- Burdening existing infrastructure
- Poor functioning of the district and metropolitan systems
- The decreasing quality of life and living conditions
- Destruction of urban economy
- Damage to the ecological system
- Blocking modern development

Urban structure enables, organises and directs human activity and land use. It determines the legibility and impacts on its functioning and hence its efficiency and productivity. It attracts channels, enables or constricts movement. It sorts, orders, enables or limits levels and scale of activity (residential, economic, commercial, recreational, industrial, *et al*). It contributes to the urban form, intuitively informing both resident and visitor as to the “natural” location of facilities and activities or fails to do so. It balances and integrates the natural and the built elements into a cohesive whole or mixes them in a haphazard, mutually detrimental manner. It confers identity to the city and the specific neighbourhood, be it positive or negative, in as much as the individual home confers identity to its residents.

The implications of the unbalanced growth and unplanned urban development pose a serious threat to the district and must be avoided. As such, Wakiso District planning area urgently requires a coherent, legible, functionally efficient and integrated structure, to begin tackling its current severe social, economic and environmental problems and its considerable future challenges.

Part III

CHAPTER FOUR

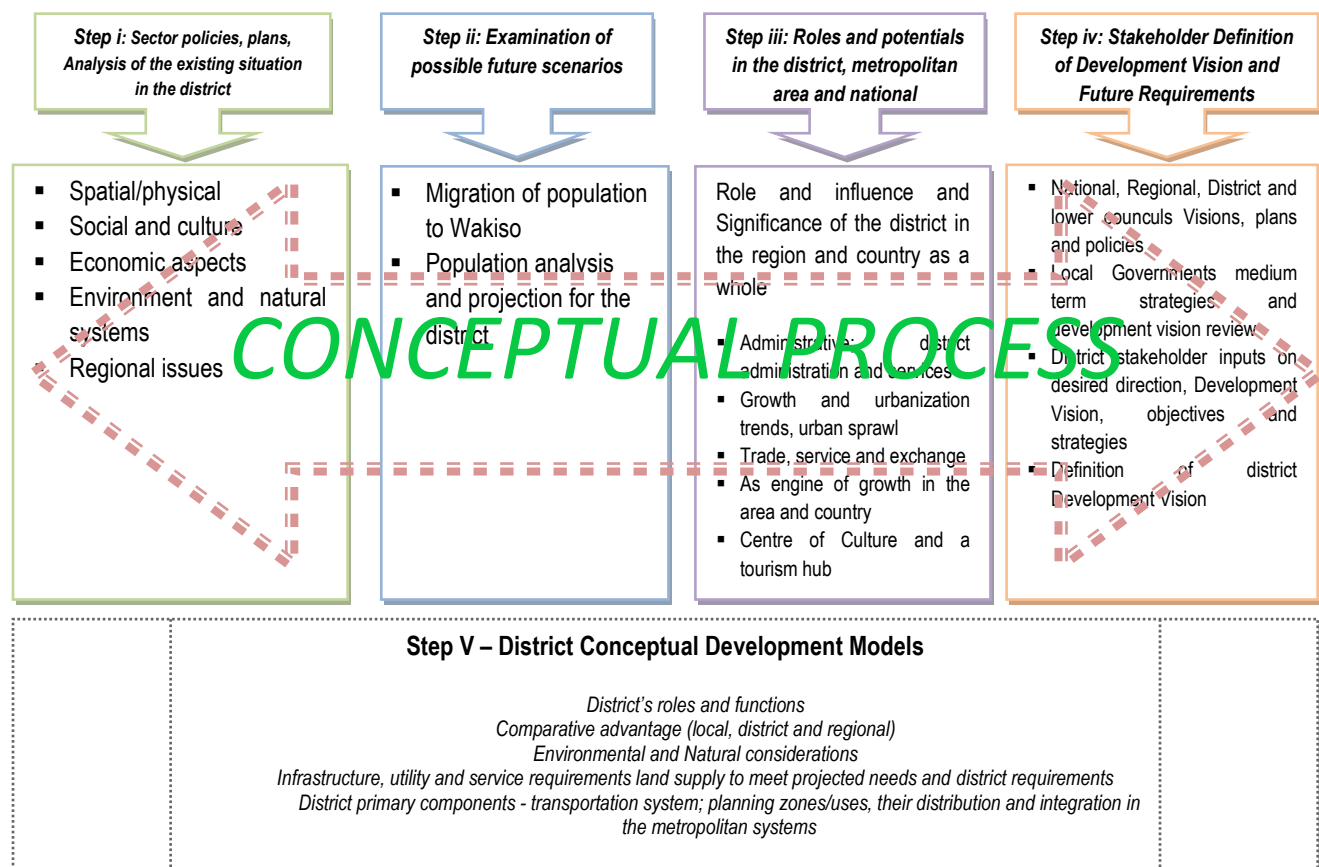
4.1. Wakiso Planning Vision and Development Strategy 2018 – 2040

This chapter presents the Consultant's proposed Vision, Development Strategy for the physical development, roles and function of Wakiso District.

4.2. Process of Definition of District Development Vision and Strategies

The summary below indicates the processes leading to the definition of the district development Vision, objectives and strategies.

Figure 4.1: Process on Definition of Wakiso Physical Development Vision and Development Strategies



4.3. Policy Basis for the District PDP

Wakiso District long term physical development Vision, Goals, Objectives and Development Strategies was informed by the existing policies; National Vision 2040; the Second National Development Plan (NDP II); District Strategic Development Vision, Mission and Strategies; the analysis of the existing spatial and physical aspects/situation in the district, examination of possible future scenarios, roles and potentials of the district over the planning horizon, and the

stakeholders defined Physical Development Vision for the district to project future development scenarios.

4.4. The Uganda Vision 2040

Uganda Vision 2040 provides development paths and strategies to operationalize Uganda's Vision statement which is:

“A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years”

This involves changing from a predominantly low income to a competitive upper middle income country within 30 years. It is envisaged that the country will graduate to the middle income segment by 2017 and reach a per capita of USD 9,500 by 2040. The Vision 2040 is conceptualized around strengthening the fundamentals of the economy to harness the abundant opportunities around the country. The identified opportunities include: Oil and Gas, Tourism, Minerals, ICT Business, Abundant Labour Force, Geographical Location and Trade, Water Resources, Industrialization and Agriculture among others. The Vision attributes, which are consistent with the principles of the constitution, are:

- Independence and sovereignty;
- Democracy and the rule of law;
- Stability and peace;
- Knowledgeable and skilled;
- Able to exploit and use its resources gainfully and sustainably;
- In a strong federated East Africa with an effective African Common Market and a strong African Defense Mechanism.

4.4.1 Key Vision Strategies

Key Strategies in the Uganda Vision 2040 are:

- Review the architecture of government service delivery system to act as a unit, harness synergies and deliver public services efficiently and effectively.
- Government will invest directly in strategic areas to stimulate the economy and facilitate private sector growth.
- Pursue an urbanization policy that will bring about better urban systems that enhance productivity, livability and sustainability.
- Government will pursue policies aimed at leapfrogging in the areas of innovation, technology and science, engineering, human resource development, public sector management, and private sector development.
- Develop and implement a National Innovation System that will help in initiating, importing, modifying and diffusing new technologies.
- Government will front-load investments in infrastructure targeting areas of maximal opportunities with focus on oil, energy, transport and ICT.
- Accelerate industrialization through upgrading and diversification to effectively harness the local resources, offshoring industries and developing industrial clusters along the value chain.
- To develop and nurture a national value system by actualizing a national service programme to change mind sets and promote patriotism and national identity.
- The vision will be implemented in accordance with existing and future agreements, standards and protocols within the framework of regional integration.

4.4.2 The Second National Development Plan (NDPII) 2015/16 – 2019/2020.

The National Development Plan (NDP) stipulates the Country's medium term strategic direction, development priorities and implementation strategies. In addition, it details Uganda's current

development status, challenges and opportunities. In line with the National Vision Framework, six (6) five-year NDPs will be implemented and so far two NDPs have been produced. The first NDP (NDPI) was for the period 2010/11 – 2014/2015 and the second NDP (NDPII) is from 2015/16 – 2019/2020.

The thrust of the NDPII is to propel the country to middle income status in the next five years through prioritizing investment in five key growth drivers with the greatest multiplier effect as identified in the Uganda Vision 2040. This thrust builds on the achievements of NDPI which was largely based on strengthening the foundation of the economy to set the stage for future economic growth and social transformation.

The theme for the Second National Development Plan (2015/16 to 2019/20) is;

“Strengthening Uganda’s Competitiveness for Sustainable Wealth Creation, inclusive Growth and Employment.”

The goal of this Plan is to attain middle income status by 2020 through strengthening the country’s competitiveness for sustainable wealth creation, employment and inclusive growth. Government shall pursue a private sector-led, export oriented, quasi-market approach, fast tracking infrastructure, industrialization and skills development strategies in order to achieve the objectives and targets for the 5 year period.

4.4.3 Second NDP Development Objectives

The second NDP has four objectives, namely:

- i. Increase Sustainable Production, Productivity and Value Addition in Key Growth Opportunities,*
- ii. Increase the Stock and Quality of Strategic Infrastructure to Accelerate the Country’s Competitiveness,*
- iii. Enhance Human Capital Development, and*
- iv. Strengthen Mechanisms for Quality, Effective and Efficient Service Delivery.*

4.4.4. NDP II Provisions on Physical Planning and Urban Development

In the NDP II the Physical Planning function entails implementation of the Spatial Frameworks for arrangement and organization of socio-economic activities on land at the National, Regional, District, Municipality and other local levels to achieve optimal use of land and sustainable development. Physical planning is therefore a major vehicle for streamlining the country’s Vision and Spatial Framework.

In the NDP II it was noted that the country lacks a National Physical Development Plan and the existing Sectoral and Local Government social and economic development plans are not yet harmonized with Physical Plans. The extensive sprawling nature of settlements is reducing land available for agriculture, especially in more populated areas. The NDP II expressed the need to plan and build more concentrated urban settlements.

The NDP II noted Uganda’s annual urban growth rate of 5.2 percent was among the highest in the world and therefore needs urgent attention. However, the level of planned urbanization is still low in most regions of Uganda ranging between 7 percent and 14.5 percent. The urban population can be attributed to the creation of districts, rural urban migration, and natural growth among others. The urbanization process in Uganda is characterized by lack of planning leading to unrestricted sprawling of the major towns.

The Plan also observed that the rapid increase in urban population was not matching with basic infrastructure, housing, and social amenities. There is overcrowding, traffic congestion, and growth of informal settlements, dilapidated housing, and poor sanitation. Most urban dwellers do not have stable income and the level of urban unemployment was quite high.

4.4.5. Stakeholder contributions to the District Long term Development Vision, Mission, objectives and Strategies

The stakeholder contributions to the District Vision and Mission, objectives and Strategies was guided and confined within the following aspects:

- The National Vision, relevant urban sector policies, objectives and strategies as defined in the National Vision 2040 and the Second NDP 2015/16 – 2019/20.
- The relevant sector policies, objectives and strategies as defined in the National Policies.
- The Wakiso District, Municipal Councils, Sub-counties and Town Council Strategic Visions as defined in their Five Year Development Plans 2015/16 – 2019/20;
- The strengths, opportunities, weaknesses and constraints for future development as identified during the engagement with stakeholders;
- The opportunities and constraints for future development as identified in the consultants situational analysis requirements/needs and SWOT stage;
- The MoLH&UD, District, Sub-county and Urban Councils stakeholder engagement on the District future development requirements and Development Vision;
- Existing Physical Development Plans in some of the Urban Councils in the district

The cardinal requirements and reflections out of the National Vision 2040 and the Second NDP 2015/16 – 2019/20 are indicated in sections 4.2.2 to 4.2.4.

(i). Wakiso District Development Plan 2015/16-2019/20

Wakiso District Local Government Five Year Development Plan 2015/16 - 2019/20 is the cardinal policy reference at the Local Governments level. The five year strategic economic development Vision is set as ***“A Transformed Wakiso District Community from Semi Peasantry to a Modern and Urbanized District”***. The theme in the Development Plan was; *“Quality Social Service Delivery, Employment Creation and Better Planning for Sustainable Development”*. The plan provides sector objectives that were critical reference points in formulation of the District physical development Vision.

(iv). The Natural Resources Sector Plan 2015/16-2019/2020

Natural Resource Sector Objectives and Strategies on sustainable utilization of the district natural resource base with emphasis on land use, forestry, environment, wetlands and development control. The Sector Specific Objectives were:

- Adherence to laws and develop ordinances governing the natural resource sectors.
- To coordinate with other departments harnessing the natural resource base.
- To ensure compliance by private sector developers.
- To administer the natural resource office.
- To compile data and information for the Environment and Natural Resource Centre.

The sector strategies were:

- i) Liaise with other departments in harnessing the natural resources.
- ii) Mobilize for funding through proposals writing and lobbying with Line Ministries.
- iii) Sensitize Lower Local Government to support the Local Economic Development.
- iv) Use of Mass Media for public educational and awareness programmes.
- v) School environmental clubs and committees.
- vi) Development control.

(v). Forestry sector

The overall forestry sector objectives looks at maintenance, managing and safeguarding forestland to ensure efficiency and optimum economic and environmental benefits to the District and the country at large.

To promote sustainable forest management and utilization the sector strategies are lined to include the following:

- i. Implementation of planned activities by lobbying for increased funding and developing funding proposals to supplement district efforts.
- ii. Community sensitization, education and tree planting campaigns so as to enhance collaborative forestry management and reduce extensive deforestation and increase forest cover.
- iii. Strengthen enforcement of laws and regulations.
- iv. Use of Religious and cultural leaders to boost mobilization for tree planting.

(vi). Wetlands sector

The sector objectives target sustainable utilization/management of wetland resources. The key **objective is to promote wetland sustainable resource management and utilization.**

The set strategies on wetlands are:

- i. Sensitize and mobilize communities so as to improve community attitude and participation in wetland conservation issues.
- ii. Formulate community byelaws and ordinances and conduct community education so as to enhance wetland management, conservation and wise use of wetland resources.
- iii. Develop a District Wetland Action Plan.

(vii). Environment

The key requirement in the sector is to ensure sustainable use of the environment. The set objective in the plan focuses on “efficient mechanisms for sound environment management”. The sector strategies line up in the plan include;

- i. Sensitize and mobilize communities so as to improve community attitude and participation in environmental issues.
- ii. Formulate community byelaws, ordinances and promote community education so as to enhance environmental conservation and wise use of resources.
- iii. Facilitate local environment committees and the sub county focal persons for environment and wetlands to enhance their functionality.

(viii). Land Management Sector

The sector major objective is “sustainable and equitable socio-economic development through optimal, management documentation and allocation of land”. Attainment of the sector objective is indicated as requiring attainment of the following specific objectives:

- i. Ensure efficient, effective and equitable delivery of land services.
- ii. To improve on the quality of cadastral surveys in the district.
- iii. To ensure that the process of acquiring land titles is transparent and easy to follow.
- iv. To improve on record keeping at the land registry.
- v. To drastically reduce on the number of unqualified staffs doing survey works.
- vi. To ensure that all public land under the District Land Board is managed well to the benefit of the local population.
- vii. To promote and protect the land rights and interests of the public

The District lines up the following sector strategies:

- i. To ensure that sufficient resources for the management and smooth running of the Department are constantly available.
- ii. Civic education and motivation of stakeholders and professionals in land management and administration is undertaken.
- iii. Strengthen community level institutions for effective management of land.
- iv. Regular field inspections and supervision of the field surveyors.
- v. Densification of the existing UTM control and ensuring that all surveys are based on a single control system.
- vi. Capacity building of the departmental staffs.
- vii. Computerization of the land office.
- viii. Holding regular meetings of the District Land Board and facilitating the members in carrying out regular field inspections.
- ix. Consult with the relevant line ministries to ensure compliance with national policies.

(ix). Urban Planning sector

The plan indicates the sector overall objective as “to carry out spatial planning, direct and control urbanization within the District in order to achieve well planned, balanced and environmentally friendly developments”. In pursuance of the objective the following specific Objectives are specified in the plan;

The specific objectives of the district development plan are:

- i. To carry out spatial planning for the district.
- ii. To guide and control developments in the whole district.
- iii. To direct and control the rate of urbanization within the district by controlling the growth of new Town Councils and Boards.
- iv. To manage solid waste generated in urban centres of the District.

4.4.6. Strategies

The following are the strategies for the implementation of the District Development Plan:

- i. Have structural plans made at larger scale for Rural Growth Centres and preliminary/topographical surveys, undertaken, identify boundaries for particular land use and have detailed plans/layouts made.
- ii. Lobby for funds from other organizations to supplement the district’s effort to fund unfunded planning priorities.
- iii. Community sensitization and education on land ownership, management, and waste management.

4.5. Synthesis of Stakeholders Defined Vision and Mission

The situation analysis report from the Lower Local Governments guided and provided integrative requirements for the visioning and setting missions for the Wakiso Physical Development Plan. Additionally, the district Vision, the Natural Resources Sector Objectives and Strategies guided the vision for the Physical Development Plan for the district. The current district strategic development vision is” ***to Transform Wakiso District Community From Semi Peasantry to a Modern and Urbanized District***”. The Physical Development Plan Vision and Mission is designed to focus on the next 22 years to see Wakiso through the following: -

- Physical Development Plan that caters for economic, political, social and environmental concerns;
- Promote and enforce organized development;
- Working towards achieving a district city status;
- A transformed society with well developed infrastructure.

Arising from the outcome of the consultation it was clear that the visions and missions of the lower local governments as expressed during consultation and in the development plans are similar, and they are all hinged on the national and Wakiso district vision, goal and mission. It can therefore be concluded that majority of the lower local governments in Wakiso district have goal congruent and are pursuing similar vision and mission.

4.6. The Vision and Mission of the Physical Development Plan for Wakiso

With due consideration of the above Visions and the current and projected developmental needs of Wakiso, the proposed Vision for the long term development of Wakiso, is that of

Vision

“A well planned, structured and economically sustainable city”

Mission

“To improve, transform and develop the district in a sustainable manner towards a modern society”.

The development of the Physical Development Plan of Wakiso District is to fit into and aligned with the national development goals and the district overall development objectives, visions and missions. Physical development is very challenging as it affects many stakeholders. It is very difficult for people to appreciate the expected outcomes; besides, it involves high costs. It therefore demands for a higher level of participatory planning than what has been the practice hitherto.

4.7. General objectives

For proper implementation of the Physical development Plan by Wakiso as an institution, the following requirements are critical:

- i. Review the current structure of the district with a lens of a city status and create a structure commensurate with current development trends;
- ii. Fill vacant positions with relevant qualified staff
- iii. Make By-Laws and Ordinances to guide development of the areas and the general standard of living for the community to uplift them to the middle income status
- iv. Strengthen revenue collection, administration and accountability;
- v. Disseminate the district vision and mission widely;

- vi. Encourage Private Public and People Partnership (PPPP) in the development process of the district;
- vii. Advocate for policies that create linkage and coordination of development by the various government departments, agency and institution to that of Wakiso;
- viii. Build the capacity of the district to transit to a city status by 2019.

4.7.1. Roles and Functions of Wakiso District

Wakiso District serves multiple roles and functions of critical importance to the Greater Kampala Metropolitan Area, the Capital City of Uganda, the Central Region and Uganda as a whole. These roles and functions have directly influenced and will continue to shape the direction of the district's development in the future.

The district's long term roles and functions are here by defined with due consideration of the current developmental scenario, primary development trends, the development Vision as defined above by the Stakeholder and Civil Society perceptions and interests;

- Centrality, regional influence and comparative advantage of Wakiso District
- District functionality and comparative advantages
- Serviced growth centres with economic vibrancy
- Gateway and to showcase Uganda
- Engine of growth for the country
- Home to quality living environment
- Tourism hub

These roles and functions directly or indirectly influence physical development and they also have an influence on the physical development trends. These key roles and functions are expounded below.

4.7.2. Regional influence and comparative advantage of Wakiso District

Wakiso District is at the central most important point of the Metropolitan Area of Kampala and the Central Region. The District forms a crescent around Kampala, the Capital City of Uganda. In the south where it bounds Lake Victoria, has large expanses of large scale commercial agricultural lands, small scale peasantry farm holdings, Urban Centres, industrial establishments and educational institutions. It also has large expense of serene nature, which includes wetlands and forests. All these contribute to the district's diversity, ecological importance and socio-economic vibrancy. Many of these assets are shared with the neighbouring Kampala Capital City, other Regional Urban Centres and districts like Mukono Luwero, Mityana and Kalangala. This puts the district in a dominant niche at the local, regional and national level. The development of the district must take up these glaring opportunities.

The district is anticipated to experience high growth rates as a result of its strategic location and functions. It is also clearly a major component of the central development transition and hence depicts and presents special development and environmental challenges, infrastructure and service requirements. The location in particular has been diagnosed as an area of high urbanism, experiencing invasion succession of spatial urban land use activities which need proper planning in order to have positive impacts on the local, regional and national economy.

The district physical development must be balanced, structured and complemented by a comprehensive, sustainable urban system incorporating a series of the very distinct, viable, interlinked and mutually complementary Urban Centres providing a wide range of employment, opportunities, services and amenities to their local residents and wider metropolitan target populations. The district must also contribute to the development of both a balanced national urban system and a balanced metropolitan area. The key requirements therefore include the following:

- Role, functions and serving centre/area with a properly structured, balanced system within the local, national and metropolitan scales;
- Sorting out hierarchy of services and activities and at what location (lower order services and activities, middle order ranges of services and the higher levels);
- The need for institutional systems, tools and capacities to drive and manage the physical development process and the required urban, peri-urban and rural systems.

4.7.3. District functionality and comparative advantages

The district houses many employers, investors and client of the private sector. It is also responsible for much of the infrastructural development and services which significantly impact the neighbouring local government's residents. The impacts of the district therefore underpin the local district economy. The formal employment opportunities in the district are highly sought after by the middle class and largely dependent on the district employment.

The district's location attracts individuals and businesses from the entire country and the region (East and Central Africa) at large. This also is underlying and/or supporting the middle and lower segments of the commercial, service, industrial, tourism and recreational sectors in the district. The district also houses a very big population working in the Capital City and its inhabitants by providing the utilities, services and goods required for day-to-day functioning.

4.7.4. Serviced growth Centres with economic vibrancy

The district growth rate is higher than that of primate city – Kampala. The services provided such as; administration, commerce, finance, education, culture, recreation *et al* for the entire district stretch beyond their capacity and almost equivalent if not superseding to the levels of the primate city.

The 2014 Population and Housing Census indicates that the district now constitutes the highest population in the country and houses the second largest urban centre (Nansana) and two of the next 10 largest towns in the country that include Kira, Entebbe and Makindye - Sabagabo. The district is estimated to contribute close to quarter of the national GDP, hosting *inter alia*: -

- The District Local Government;
- A big percentage of the Financial and the Professional Sector in the country;
- High level of commercial services;
- Is taking over significant elements of the country's manufacturing, warehousing, logistics, construction and transportation sector;
- The emerging leisure, hospitality and some of the key tourism facilities/attraction;
- Hosts the only international airport in the country;
- The district serves as the centre of Uganda's educational system with some of the key universities and tertiary institutions. Its hosts a significant portion of the best government

and private schools in the country both secondary and primary. It hosts most of the conferences and academic events held in Uganda;

- It also serves as the centre of the health system with some of the best health facilities and some of the leading private and government health support facilities in the country;

The administrative role together with its strategic location has been reinforced by the momentum of development over the years, achieving economies of scale and agglomeration unattainable in any other parts of the country. However, this emerging role comes at a considerable price such as mass rural in-migration which has overwhelmed the district in terms of service delivery.

4.7.5 Gateway and to showcase of Uganda

The district serves as the primary gateway to Uganda by land, water and air. It hosts the country's only international airport. All routing for major internal and international public transportation services pass through the district. It is normally the first feel of the Capital City for tourists and the business travellers.

With the Entebbe Express Highway near completion and the expansion and modernisation of the airport, Wakiso is destined to be the main business hub in the country. There is more potential for attracting investments along beach resorts and high end accommodation facilities like hotels and housing estates. Construction of a port at Bukasa to attract water transport from Entebbe to Jinja, Kampala, Mukono and Ssesse Islands, Kisumu, Mwanza, Musoma and Bukoba will support investment. Leisure boats and cruise ships have high potential for income generation and job creation for the local people.

The image Wakiso portrays, its infrastructure, services and amenities define the visitor's perception of the country as a whole - as a place to visit, a place to do business and a place to invest in. It is the host to the media which introduce new concepts into the society and the economy. It is also part of the first target market and test ground for all new services and goods arriving in the country and hence the conduit for new technologies and innovations.

Hence, the districts' structure, form and function significantly impacts competitively the ability to develop, attract investment and tourists on the international and regional scale and adapt to innovation.

4.7.5. Engine of growth of the country

The district is emerging as a key force in contribution to the national economy. The district emerging position is in the following areas:

- The invasion succession of commercial, manufacturing and dormitory services from Kampala to Wakiso;
- Its contribution to the country's financial and business service sectors;
- The internal market for agricultural products and manufactured goods;
- The conduit for a large proportion of goods, services and people moving in and out of the country;
- Meeting and market place for the country.
- The concentration of demand for goods, services and utilities allows Wakiso to achieve relatively high threshold levels required for the development of a middle income country by 2020.

4.7.6. Home to quality living environment

The district serves as a dormitory area for Kampala city and its community a function it will continue to provide for its future population and that around it. There is reasonable framework, infrastructure and services wherein the population lives its daily life; works or seeks employment; studies; finds shelter and feeds itself or goes hungry; travels; interacts within the household and socially; prays, exercises and plays; develops goals and dreams; and much more. However the existing situation is not good and the standard of living, servicing and infrastructure fall far behind the requirements.

The district is developing and/or retains the potential to develop as a home and provider of a quality for living environment for the future population. By this therefore it must provide the framework, for infrastructure and services where the population lives and work now and in future. There is need to provide good Standard of Living, Quality of Life, amenity and service to the bulk of its population. However, with planning intervention, this must cause modern, functional, balanced development in order to provide a reasonable high Standard of Living, a high Quality of Life, a Quality Environment, extensive amenity and quality services to its population. This therefore will require the following;

- Organized and structured land uses and systems providing a wide range of appropriate, accessible employment opportunities offering high remuneration;
- Sort out the housing problem and provide a range of appropriate, affordable housing options to the various sectors of society;
- The need to sort out and protect or even rehabilitate its natural and the built environment, especially places around Kampala area;
- Provision of a wide range of equally distributed accessible and affordable services, both public and private, and of appropriate standard;
- The urgent need to sort out the problem of deficient infrastructure and utilities;
- The need to sort out the handicaps and challenges in the Local Economy;
- Provision of a comprehensive, integrated, affordable and reliable mass and integrated Public Transport system using all modes, ensuring wide access to housing, employment, points of economic opportunity, services, facilities and amenities;
- Greening and beatification of the urban centres in the District; and more.

4.7.8 Tourism and culture

Tourism in Wakiso was seen as a potential but still largely untapped. The bulk of tourists traveling to Uganda, pass through Wakiso. They generally stay in the city or in the district for a given period of time. Apart from the business sector they are not attracted to Wakiso itself but rather to the country's natural assets to which Wakiso has in abundance. The district hosts a number of cultural and traditional facilities for the Buganda Kingdom. The Kingdom's role and status provides the district and its habitants much value including distinct, ethnically inclusive, identity, culture, music, art, fashion and values - in all a heritage to pass on to future generations. It further contributes significantly to social cohesion and stability amidst the poverty. Public participation processes indicate a clear desire, on the part of both stakeholders and civil society, to preserve and enhance these roles as an integral part of the district's identity and culture. The kingdom can and should therefore constitute a major tourism attractor. This by protecting, preserving, where relevant restoring and opening up its facilities to the wider public and tourists alike hence these demand protection and where possible public access. These can be found in:

- Entebbe -old Colonial Suburbs;
- Historic schools, churches, hospitals and missionary compounds
- Kabakaship cultural and traditional sites and more.

The district should develop as a Tourism Destination and Hub :

- For the benefit of future generations, for cultural identity. For tourism it is essential that these old buildings be protected and where possible renovated.
- Catering and marketing to new expanded international and tourism markets;
- Developing its tourism infrastructure, complemented with its branding;
- Developing as the leading Cultural and Educational Centre of East and Central Africa; and more.

4.8. Development Strategies

The long term Vision for the development of Wakiso as defined above, presents a toll order for the authorities and the future generations. There was need to determine the benchmarks before the PDP development have to be set in place. The development requirements will need to be met largely over the coming decade, the defined planning horizon of 2040.

The district houses the highest population in the country of 1.9 million people and was growing rapidly. The current situation was not sustainable and must be controlled. Hence, the Consultant recommended a development strategy requiring the following;

- The need to resolve the imbalances and unstructured developments, sprawl, controlling the structural constraints, putting essential infrastructure in place, providing the enabling frameworks to direct the spatial development of the district;
- The need to rationalize the distribution and upgrading of services; creating opportunities and enabling entrepreneurship; improving in as much as possible services, utilities and housing from inadequate to basic standards.

4.9.0 GKMA Development Framework Intervention (Regional Plan)

The consultant reviewed the GKMA development framework which was prepared alongside the Kampala Physical Development plan 2012. The GKMA framework provides the main issues to consider in planning and development in the Greater Kampala Region as a regional policy framework for planning and development in the GKMA region. The GKMA Development Framework provided two levels of interventions;

- i. National Level Intervention
- ii. Regional Level interventions

4.9.1. National Level Intervention

The GKMA Development Framework National Level Interventions point to the need for a balanced development by sorting out a number of issues at the national level.

The approaches recommended include;

- National Rural-Urban Integrated Development to curb migrations
- Resolution of Urban Land Tenure Constraints
- Resource Development and Allocation

4.9.1.1. National, Rural-Urban Integrated Development

This approach will meet the bulk of the mounting demand for employment, education and services of Uganda's rural youth in their home regions, in part a product of the success of educational reform. The requirement was to cater for the service needs and demands both in the urban and rural hinterland beyond Wakiso in order to meet the needs and demands of these rural young adults locally hence curtailing migration to Wakiso and the Metropolitan Area. This intervention needs to be prioritized to enable the development of a more balanced national urban system capable of mediating and moderating migration to Wakiso.

4.9.1.2. Resolution of Urban Land Tenure Constraints

There was need for enabling interventions to allow the property market to function efficiently to meet projected scale of demand for housing and for employment facilities to the requisite standard and in the shortest possible time. The need for land regularization and administration, the resolution on the dual tenure systems and the structural constraints have to be resolved to enable essential redevelopment, densification and upgrading of the built stock in Kampala and to enable appropriate large scale new developments to house and service the rapidly growing population. Otherwise, uncontrolled sprawl will continue apace, with all the attendant social and economic costs.

4.9.1.3. Resource Development

The public sector requires an appropriate, dynamic tax base and a functional, efficient collection system that the physical planning interventions guarantee. The private sector requires appropriate, accessible, affordable financing for developers, investors and home buyers. These need to be enabled by the government.

There was need for adequate resource allocation and support by the government to the District to finance and/or participate in the financing of the relevant infrastructure and service facilities in Wakiso given its central role as an engine of development driving development of the entire country. The needs of Wakiso district and Kampala are unique and these need to be met over and above standard budgetary formulae.

4.9.2. The Regional Development Framework and District PDP Interventions

The GKMA Development Framework further provides recommendations and future development interventions needed at the metropolitan and local scales for future balanced development. The interventions include the following;

4.9.2.1. Planning

- i. There was urgent requirement of interventions at the lower planning entities to translate the District PDP sector policies objectives and strategies through preparation of balanced and structured lower Municipal, Town Council's and Sub-county PDPs and Detailed Plans in order to ensure significant rationalization of land use, the physical development structure and densification of development; residential, commercial, industrial and agriculture.
- ii. The need to systematicall integrates planning of the lower Municipal, Town Council and sub-county with that of the district and national levels.

4.9.2.2. Transportation

The main goal of the district and transportation plan is to ensure an efficient, sustainable and integrated transport system using available and viable modes to facilitate sustainable and integrated land use in the District.

4.9.2.3. Infrastructure

The infrastructure objective for 2040 is for the district's residents live in areas which are reasonably protected from floods, have access to clean water, clean energy, have well maintain accessibility and connectivity, have sewerage systems and regular collection of solid waste to gazatted areas.

4.9.2.4. Sanitation

Major goal is the extension of the piped sewerage network over the entire district and with priority given to the key urban centres (municipalities, Town councils and highly populated areas) and planned industrial areas on an economic basis.

4.9.2.5. Solid waste

The main goal of the PDP is to provide a spatially comprehensive solid waste system which maximizes recycling, provides a cost-effective hierarchy of collection and disposal components, and maximizes permanent elements such as land-fills, so as to improve health and prevent pollution of the district's human and natural environments.

4.9.2.6. Social Services

The PDP objectives in the social service sector is to “ensure access to basic services so as to guarantee and equip the citizens with capacity to improve their quality of their life, protect the environment and promote inclusive development in order to achieve both social and economic development”.

4.9.2.7. Housing

The district therefore must provide good Standard of Living, Quality of Life, amenity and service to the bulk of its population and extend opportunities to all.

4.9.2.8. District Local Economic Development Objective

The district economy was weak, unsustainable, unstructured and depicts high levels of poverty, low level of service and amenity and low standards of living yet the economic development of Wakiso district was critical to the development of the country and contribution to the national GDP. The objectives of the plan in this area will be, to enhance investment and entrepreneurial capacity and enabling its application across the board and to improve the district capacity for local revenue mobilisation and collection and increase revenue collection.

4.10. Development Goals, Objectives, Targets and Policies

To bring Vision to fruition requires concrete actions in a wide range of fields. To this end specific targets and goals need be set and appropriate policies defined, adopted and implemented. This section indicates the Consultant's proposals for developmental targets, goals and policy that have been set and appropriate strategies defined to be adopted for implementation. The key fundamental requirements for the physical development plan for Wakiso district shall basically revolve around; the existing natural and physical structure, social and economic realities; key roles, functions and district's comparative advantage in comparison to other centres; and the key infrastructure and services it requires to drive the community into the middle income status. This section presents the Consultant's proposals for developmental goals, objectives and strategies in response to the following key district requirements:

- Future projections; Population Dynamics and Trends to 2040
- Future roles and Functions of Wakiso district
- Housing requirements and densities requirements
- District's Comparative Advantage, the Local Economy, Economic development interventions and requirements
- Social Servicing requirements and development;
- The spatial, traffic, transportation, infrastructural and regional integration requirements

- Future requirements and supply of land for the planned land uses
- Land tenure interventions
- District financing and resource enhancement interventions
- Environment and natural systems protection plans and strategies
- Climate Change interventions
- Institutional and capacity requirements

4.10.1. Population trends and projections to 2040

Our extrapolation of current district population and trends indicates that the district will house some **7.0 million** persons by 2040. The population growth rate used was on assumption of both the natural progression and the additional population resulting from in-migration and other external factors. The projection for 2040 was based on the best case scenario (growth rate of 5%) where planning interventions are enforced. The population targets and housing requirements are presented in the table 4.1.

Table 4.1: Population Trends and Projections

Sex	Popn 1991	Popn 2002	Popn 2014	Popn 2017 (6.6%)	Popn Growth Projection 2020			Popn Growth Projection 2040		
					6.6% (Business as usual)	3.3% (Ideal scenario)	5% (best case scenario)	6.6% (Business as usual)	3.3% (Ideal scenario)	5% (best case scenario)
Male	5	440,534	949,035	1,149,618.7	1,392,596.9	1,267,228	1,330,827	4,999,994.7	2,207,448.5	3,374,457.8
Female	283,021	467,454	1,048,383	1,269,958.7	1,538,364.5	1,399,875.4	1,470,129.6	5,523,410	2,438,434	3,727,001.5
Total	562,887	907,988	1,997,418	2,419,582	2,930,975	2,427,007	2,676,732	10,523,310	4,645,937	7,014,612

Source: Wakiso DDP 2015/16-2019/20 and consultants' projections

The district land use requirements provisions are provided in table 4.2. The district still has substantial undeveloped land (34%) especially in the northern and the South western parts housing subsistence agriculture, commercial agriculture, green areas, grazing areas, 0.3% under extraction, and 0.2% under open spaces. This was an advantage because it was easier to propose new developments.

The district land use requirements and provisions are as follows:

- Developable land will be 230,136 Hectares
- Peri-urban, agricultural, forested, environmental land will be approximately 311,546.2 Hectares.

Table 4.2, Current and Future Land Use Requirements

TYPE	Existing Land Use 2017 (in Hectares)	PERCENTAGE	Planning Provision 2040 (in Hectares)
Agricultural (Subsistence)	93,133.2	32.6	4,221.6
Agricultural (commercial)	4,033.1	1.4	
Built up	61,471.7	22.8	144,091.4
Open Space	501.9	0.2	
Landfill	11.7		-
Forests	2,282.6	0.8	28,058.1
Mining	734.7	0.3	-
Wetland	28,179.0	10.0	5,234.4
Open Water	89,557.3	31.9	-
TOTAL	279,905.2	100.0	-

Source: Consultants' Mapping and Planning Projections

From the above projection and analysis of district land rationalization, there is a shortfall of 94,480 acres. In addition, the land required for both formal employment (particularly industry) and public use (particularly public open space) needs to significantly exceed population growth rates. The implication is that the projected population figure will not be accommodated within the district with rationalization of the urban structure and densification of development, both residential and commercial and utilization of inner vacant land. There was an urgent need to ensure the adequate supply of land for infrastructure, public facilities and public open space to meet the requirements of the long term demand and not merely the short to medium term requirements to meet demand to the planning horizon of 2040.

To ensure the adequate supply of developable land on the scale indicated above will require, *inter alia*, the following intervention:

4.10.2. Enabling

- i. Resolution of Land Tenure
- ii. Land Regularization
- iii. Systematic integrated planning for Infrastructural Development, with emphasis on Infrastructural Corridors to limit the scale of requisite and to pool resources for land acquisition.
- iv. Preparation of a “Compact” for the planning, management and development of all Public Lands (Uganda Lands Commission, Land Boards including Buganda Land Board and Local Authorities);
- v. Introduction and implementation of an effective, economic Land Acquisition System for Public Projects (MoLH&UD);
- vi. Introduction and implementation of Land Re-adjustment and/or Land Swap mechanisms to provide access to essential land required to enable upgrading and redevelopment including infrastructure and public facilities;
- vii. Systematic Land Acquisition, Registration and Protection of acquired land;
- viii. Protection of public lands; demarcation (where possible with trees), and ensure systematic enforcement and compliance;

4.10.3. District future roles and functions

The district serves and retains critical functions at the district, at four (4) municipalities, at eight (8) town councils and the seven (7) sub-counties. These range from the provision of services, required infrastructure, supervision of implementation of policies and decisions of Government, the District and those made by the lower councils. Hence these roles and functions constitute key planning sectors hence with specific requirements as indicated below;

(a) Administration

The district serves and will retain the roles and functions of local government administration at the district, Municipalities, Town Councils and Sub-counties and is responsible for the provision of services, the required infrastructure, supervision of the implementation of policies and decisions of Government, the District and those made by the lower councils and the decentralized mandates. The various administration and technical departments therefore form some of the primary formal employment facilities in the district. To ensure the performance of the above roles and functions, the district will be required to carry out the following interventions;

- i. Acquire adequate land reserves and develop the required public infrastructure with the development of the required administration infrastructure and tools at the top for

- the district, urban and lower local governments to function well and deliver the required services.
- ii. Strengthening the human resource capacity at the District, urban and Sub-county levels and re-engineering the staffing structure and institutional process.
- iii. The establishment of a district, urban and local governments Information System to support planning and management
- iv. Increase human, financial and technical resources required at District, urban and Local Government levels to enable effective planning, development and management.

In line with the requirements of this function, the PDP integrate the key requirements indicated below;

Table 4.3; Administrative Roles, Functions and Land Requirements

Roles and Functions	Civic Functions and Land Use Provisions in PDP Alternatives	Land Requirements
Required centres of administration	The eight Municipal headquarters	12.5 hectares
	The seven Sub-counties headquarters	10.5 hectares
	The eight Town council offices	8 hectares
	The 156 Parish offices	1 hectares
	Police and security provisions	0.4 hectares
	Others; <ul style="list-style-type: none"> ▪ Public Library ▪ Public square/open space 	16 hectares 0.4 hectares

(b) Provision of Social Services Required in the District

The district will retain roles serving as the centre of provision of key and superior social services (education, health, culture, recreation/sport, religious, et al) for the entire district and the neighboring Districts. In line with the requirements of this function, the PDP objectives in the social service sector is to “ensure access to basic services so as to guarantee and equip the citizens with capacity to improve their quality of life, protect the environment and promote inclusive development in order to achieve both social and economic development”.

1.10.4. Objectives for the provision of Education services

Wakiso has the potential and capacity to be the leading services provider and destination for majority of the districts in Uganda and beyond.

The district PDP provides a distribution and land provisions for education services incorporating community services and sports, coordinated with similar existing plans and that of GKMA based on the district population projections and quantitative programmes.

The main objectives therefore include:

- i. Adequate allocation of land for educational facilities in the district to meet long term needs
- ii. Ensuring the balanced distribution of educational facilities in the district and integrated with the metropolitan scale

- iii. Prioritizing provision of and enrolment in local schools and pre-schools whilst ensuring easy NMT access and promoting community, efficiency and economy, in detailed local physical planning;
- iv. Provision of standards and mechanisms to extend the range of educational facilities and services (e.g. pre-schools, sports and extramural activities, youth centres, multi-functional community centres for enrichment and recreation, etc.)

Table 4.4 indicates the distribution of Educational Institutions by category and the consultants projections of requirements over the planning period to 2040.

Table 4.4: Distribution of Educational Institutions by category and Projections for 2040.

County	Universities	Tertiary		Polytechnic/ Vocational		Primary		Secondary	
		Govt	Private	Govt	Private	Govt	Private	Govt	Private
Existing facilities									
Entebbe	-	2	-	1	-	16	43	3	13
Busiro	2	-	6	2	1	140	314	9	116
Kyadondo	-	-	5	1	-	109	640	6	162
Total	2	2	11	4	1	265	997	18	291
Additional requirements for 2040									
	0	0		0		0		0	

Source: Wakiso District Development Plan 2015/2016 -2019/2020 and consultant's projections.

1.10.5. Objectives on provision of Health Services

The district PDP provides a distribution and land provisions for health services and is coordinated with similar existing plans and that of GKMA based on the district population projections and quantitative programmes. The main objective in the sector is to **“to improve access and utilization of the health facilities”**. To ensure the realization of the key objective, the following strategies are proposed:-

- i. Provide equitable distribution, improved, accessible health services in a hierarchy of health centres as per the Health Master Plans currently under preparation on the national and district scales
- ii. Adequate and appropriate allocate land for the provision of accessible health services
- iii. Rehabilitation or redevelopment of existing public infrastructure especially the seven Health centers III that lack maternity services, provide them with the necessary equipment, tools and drugs especially.
- iv. Development of required health supportive infrastructure and facilities (staff houses, health structures, roads. etc.) especially in hard to reach areas.
- v. Ensure strictness, consistency and transparency in supervision of health services for both private and public practitioners.
- vi. Incentives and provision of requirements to attract private health care providers to expand to rural areas.

The district currently needs 23 HC IVs, will need approximately thirty two (32) HC IV's by 2030 and Seventy three (71) HC IV's by 2040. Currently, Wakiso district has no fire stations and the projected requirements are 27 at 5% growth rate by 2020. By the year 2040, the requirements are; 71 at the same growth rates (5%).

(c) Home for quality Living Environment

The district is a dormitory area for the current 1.99 million inhabitants and 7.0 million persons in 2040 albeit in a situation of low standard of living, with a low Quality of Life, very limited amenity and service. Yet the district is developing and/or retains the potential to develop as a home and will provide a quality living environment for the future population growth and immigrants projected above. The PDP provides the framework, infrastructure and services wherein the population will live; work; study; shelter and feed; travel; and more. The district therefore must provide good Standard of Living, Quality of Life, amenity and service to the bulk of its population, the bulk of the population and opportunity to all yet the housing and service still remain a challenge.

Interventions

The key objective in the housing and service sectors is to address the emerging trends and challenges by putting in place policies and tools (physical development plan) for the district to address the housing gaps and future requirements.

1.10.6. Housing Objectives

- i. To provide conditions for the housing industry to develop in a sustainable and meaningful manner, through government interventions by construction of low-cost housing option either through partnership with development partners or through giving incentives to the private sector in the housing industry. The enabling policy on housing seems to have failed in Uganda generally.
- ii. The need to fast track the required housing policy that is based on current and projected needs and the resources available to public, private and community based sectors within a redefined coordination framework.
- iii. To institute measures to resolve the structural issues and challenges in order to allow best planning, effective implementation and determined enforcement to contribute to the resolution of the housing backlog and future housing needs.
- iv. To accommodate the additional population resulting from in-migration and other external factors based on a target population of 7,014,612 persons (based on best case scenario growth rate of 5%).
- v. To address the emerging trends and challenges by putting in place policies and tools (physical development plan) for the district to address the housing gaps and challenges
- vi. To provide planned and serviced land to facilitate and attract investment in the key activities supportive to the housing sector.
- vii. To provide appropriate housing solutions at the various levels to avoid the expansion of existing housing types and to enable upwards socio-economic mobility.
- viii. Finance measures for efficient mortgage financing on effective scale and at affordable rates.
- ix. Densification and upgrading of the existing housing stock through incremental development scheme.
- x. To provide basic shelter to the bulk of the district's population
- xi. To ensure the adequate supply of developable land on the current and future development scale.

4.10.7 Residential Development Land

District Gross densities

The calculated carrying capacity of the district is as follows;

- Immediate zone after Kampala Capital City on average was 64 persons per acre implying that each acre will accommodate 16 housing units.
- Urban and/or new towns on average was 32 per acre which is 8 housing unit and
- Outer suburbs and peripheral areas on average was 16 persons per acre which is 4 housing units.

These densities will ensure availability of adequate land and space for the expected population and take care of the deficit of the required additional 94,480 acres.

The objective of the plan in the housing and service sectors is to address the emerging trends and challenges by putting in place policies and tools to address the above gaps and challenges. Among the proposals raised by the household respondents were the following;

- i. There urgent need for planned and serviced land to facilitate and attract investment in the key activities supportive to the housing sector.
- ii. Provision of appropriate housing solutions at the various levels – to avoid the expansion of existing housing types; to enable upwards socio-economic mobility by enabling home-ownership; ensure multiple incremental development on the same plot and to ensure minimum health standards by enforcing minimum housing standards
- iii. Mortgage financing on an effective scale and at affordable rates
- iv. Need for improvement of the roads in the district
- v. Need for standards and control measures to regulate use of building materials
- vi. Plan and improve infrastructure and services.

Interventions

To cater for the future housing requirements there is a need for a fundamental shift in the housing typology. The recommended strategies in this endeavour include the following:

Densification and upgrading of the existing housing stock

One of the key strategies will be the densification and upgrading of the existing housing stock, requiring the following:

- Densification of existing low density plots, medium density, reasonable and high standard single and semi-detached house plots by subdivision and/or addition of residential units on the plot
- Densification by redevelopment (town-houses, row-houses, apartments) and/or upgrade (rehabilitation, extension, addition of second and third floors).
- Providing and/or upgrading infrastructure (water, sewage, electricity, roads, lighting, etc.);
- Enforcement with appropriate local taxation, construction licensing and utility connection fees.
- By redevelopment with row houses, apartments and/or upgrade by extension, addition of second and third floors).

Basic Shelter

Large sections of the population within the immediate ring after Kampala are housed in Muzigo which provide inadequate, often inappropriate form of human habitation.

The primary goal of the District PDP is to enable access to basic housing to the bulk of the district's population. The intervention is to provide the following;

- Development of new and upgrading of existing multi-unit residential and hostels
- Development of new improved basic shelter solutions to provide alternative accommodation for slum Muzigo residents by providing alternative basic shelter designs and construction techniques, free prototype designs and professional direction for construction and provision of future expansion and upgrade.
- Development of new housing and site & service projects to grant basic interim shelter with expansion and upgrade options for owner-occupants primarily in outer suburbs, peripheral and new towns but also utilising infill and redevelopment reserves within the Inner City.
- Redevelopment of existing *Muzigo* and slums through systematic, staged neighbourhood redevelopment (primarily apartments and/or mixed use);
- Relocation of low valued-added economic activities (produce markets, workshops, labour intensive industry, etc.) to more peripheral locations;
- Development of alternative affordable low-cost housing adjacent or near to relocated employment;
- Multi-unit apartment blocks ranging from high and reasonable standard, penthouses and duplexes for upper end (High and Upper Middle class) segments;
- Provision of minimum basic standard, including unfinished shells of limited size, single or twin blocks with predesigned improvement possibilities including compulsory laying of foundations to enable future unit expansion) for lower range market segments (Working Class);
- Small apartment complexes on medium size plots in the Outer Suburbs and Peripheral Towns and Inner City redevelopment projects;
- Larger complexes, integrated with Town-houses, including local services and amenities²⁴, on appropriate residual Inner City land reserves and/or redevelopment projects, in the Peripheral Towns and the New Towns;
- Multi-unit Town-house Complexes
- Multi-unit Row-houses
- Higher density Single and Semi-detached Houses

4.10.8 Framework for the Balanced and structured lower Municipal, Urban and sub-county Land use and development

There is urgent requirement of interventions at the lower planning entities to translate the District PDP sector policies objectives and strategies through preparation of Balanced and structured lower Municipal, Urban and Sub-county PDPs and detailed plans in order to ensure significant rationalization of land use, the physical development structure and densification of development. The analysis indicates that significant additional land for development is required.

From the table above, the scale of development (residential, commercial, industrial and other developments/buildings) is projected to grow at a significantly lower rate than that of the population. This will therefore require significant densification of both built areas (densification and infill) and new developments (higher density) in the additional area provided in the PDP.

Important to note is that, despite the shortfalls in land requirements and the need to absorb new populations, the scale of land to be allocated to both formal employment (particularly industry) and public use (particularly public open space) needs to significantly exceed population growth rates.

In light of the above, there is an urgent need to ensure the adequate supply of land for infrastructure, development, public facilities and public open space to meet the requirements of the long term to the planning horizon (2040). As such, all land requirements are defined to meet

long term demands of the district. To ensure the adequate supply of developable land on the scale indicated above will require the following intervention:

- a) Physical planning (preparation of entity PDPs and detailed plans) to ensure structured, rational and optimal use of available land within the defined framework
- b) Land adjustments and regularization to provide access to essential land required to enable upgrading and redevelopment including housing, industries, services, infrastructure and public facilities
- c) Systematic integrated planning for Infrastructural Development, with emphasis on Infrastructural Corridors to limit the scale of requisite and to pool resources for land acquisition
- d) Introduction and implementation of an effective, economic Land Acquisition System for Public Projects;
- e) Systematic land acquisition, registration and protection of acquired public lands; demarcation (where possible), systematic enforcement of PDPs and planned land use by all agencies concerned;

4.11 Local Economy planning and Development Interventions

The scale of the challenge facing Wakiso is indicated by the size of the projected population and the existing land use structure. The district land use structure lacks a coherent, legible, functionally efficient and integrated structure to tackle the legibility and impacts on its functioning and hence the current inefficiency and lack of productivity. The resultant effect is the lack of order and low levels and scale of activity (residential, economic, commercial, recreational, industrial, *et al*).

The challenge is to ensure and provide basic and appropriate employment on the appropriate scale and at the appropriate locations within the entire district to pull the bulk of the district's population out of poverty whilst enabling Wakiso to develop and function in an organized, structured, functional and efficient manner. This will require significant intervention in the comparative economic advantages of the District, to restructure land uses, the workforce and the local economy to systematically reduce unemployment, extend education and training and expand the productive and the formal sectors - "creating the wealth" necessary to provide proper housing, infrastructure and services and to enable consumption, savings and investment.

In order to achieve the above the objective of the plan is to enhance investment and entrepreneurial capacity and enabling its Application across the board .To cater for the anticipated growth and allow the district to function sustainably there is a need to redistribute, in as much as possible, the distribution of employment opportunities. The existing urban centres and administrative centres will form the central points but integrated with each other in the district and the GKMA region economies. The PDP targets are presented in Table 4.5.

Table 4.5: Land Use Planning Interventions within Wakiso District

Land Uses	Existing Land Uses (2016)	Existing Land Use Coverage within Wakiso District [(Ha)]	PDP Key Sector targets 2040 [Coverage (Ha)]
Commercial Agriculture	Agricultural (Commercial)	4,033.1	4,221.6
	Agricultural (Subsistence)	93,133.2	-
Environmental	Forestry	2,282.6	28,058.1
	Wetland	28,179.0	5,234.4

Land Uses	Existing Land Uses (2016)	Existing Land Use Coverage within Wakiso District [(Ha)]	PDP Key Sector targets 2040 [Coverage (Ha)]
Manufacturing	Industrial	115.3	1,829.2
	Extractive	734.7	-
Services (formal)	Institutional	2,028.2	270.6
	Residential	58,570.0	137,545.5
	Civic	100.9	-
	Open Space	501.9	-
	Special Area (security installation i.e. police, army, prison and air force)	196.9	214.3
Tourism;			205.9
Utilities	Landfill	11.7	8.2
	Open Water	89,557.3	-
	Utilities	23.1	-
Logistics and Transport (formal)	Transport and Infrastructure	437.3	425.6
Communications;		-	-
TOTAL		280,772.3	

The centres will be planned with significant employment centres and to serve higher order function leaving the lower level economic activities for the local sub-centres hence making all activity in the centre highly efficient.

The GKMA development framework indicated the requirements for functional and structural distribution of employment in Wakiso. The consultant reviewed the proposals and are still largely applicable. Therefore, the consultant adopts them with minimum necessary adjustments. The requirements are;

- Clear demarcation and planning of the district main urban centres/nodes;
- Extension of mixed-uses in the district urban centres including redevelopment of the slums;
- Identification and planning of industrial, business parks and employment centres as identified in the PDP
- The development of a specialized Airport and Business Zone in Entebbe (200 Ha. including future reserves);
- Development of specialized Hi-Tec Business Park in Entebbe (15 Ha);
- Upgrading of Kampala Metropolitan Town Centres and enhance the other urban centres which include; the, Municipal CBDs, Town councils District centres, and Sub county Local centres. This will involve the planning and developing of these as employment Centres including those located at high access points along the movement system;
- Provision and planning of mixed Commerce-Residential Urban Centres and Corridors;
- Planning of neighbourhood scale commercial centres (markets, services).

The requirement is the provision of the requisite land allocations and detailed planning to enable the development of these elements, significant intervention requires the following:

- Preparation and implementation of the individual centre Economic Development Plan including the Long Term Strategic Development Plan and Action and Investment Plans 2040;
- Resolution of administrative and bureaucratic competitiveness constraints;
- Coordination of supply of appropriately trained professionals, technicians and tradesmen
- Marketing strategies and structures;
- Ensuring appropriate financing;
- Prioritization of infrastructural development and service provision;
- Restructured Markets System including: Extension, upgrading and establishment of Commercial Markets in Residential Zones, integrated with the transport system
- Extending, upgrading and developing new Tourism Attractors and Facilities

4.12 Infrastructure Development

Chapter three in part 2 indicated the critical gaps in the infrastructure of Wakiso district. The gaps have critical implications on the functioning of the district, the health of the population, the ecological system, the economy and an acceptable living environment for the residents of Wakiso and beyond. The district infrastructure Vision for 2040 is aligned with the GKMA vision, thus; “to ensure an efficient, sustainable and integrated transport system, ensure that all residents live in areas which are reasonably protected from floods, have easy access to clean water, and have piped sewerage systems and regular collection of solid waste all integrated with the land use in the District”.

(a). Transportation

The main goal of the district and transportation plan is to ensure an efficient, sustainable and integrated transport system using available and viable modes to facilitate sustainable and integrated land use in the District.

The key objectives include the following;

- To provide an Integrated Transport System using all available and viable modes in the district to allow sustainable and integrated land use
- To improve hierarchy of road network, capacity and provide requirements for future mass transport system and infrastructure
- To increase structural and geometric capacity of existing road network to cope with the future higher traffic flows.
- To provide requirements for regulating and managing traffic and parking in the district
- To establish and implementation a district road equipment and plant in order to strengthen road network expansion and maintenance.
- To improve institutional capability and professional skills so as to guarantee an efficient and sustainable traffic and transport system in the District.
- The need for implementation of the GKMA Transport Master Plan 2008-2023 recommendations towards establishment of Multi – Sectoral Transport Regulatory Authority (MTRA) and the Metropolitan Area Transport Authority (MATA) to regulate primarily transport sector services and urban transport functions delegated under a formal protocol jointly by the seven local authorities(Entebbe Municipal Council, Kiira Municipal Council, Wakiso Town Council to enforce regulatory provisions for licensing, economic regulation and environmental issues, and to perform transport-related legal services
- To plan and provide additional arterials in order to boost connectivity of the network including express highways.

- ix. To ensure that the district land use patterns are related to functionality of the district road network, hierarchy, future capacities and land use patterns.
- x. To ensure the orderly grouping of roadways in a framework around which Wakiso District local government can plan and implement various construction, maintenance, and management schemes and projects.
- xi. To ensure provision of an integrated, multi-modal movement system.

b). Drainage

- i. To provide drainage measures which prevent regular inundation of residential or business and industrial areas
- ii. To ensure that there is congruence between location of population and the planning of drainage systems;
- iii. To build institutions and capacities to enforce compliance to the district PDP and ensure that unauthorized construction does not take place in flood prone areas;
- iv. To plan and provide a drainage strategy and framework in order to resolve flood threats in the district
- v. To provide adequate funding for investment in drainage management system.

c). Water

- i. To ensure that the plan provides requirements for the timely provision of increased capacity of the system, a decrease in the proportion of the population served only by stand-pipes, and ensuring that new residential areas are properly supplied with water, with the provision that preference be given to those areas which conform to the principles and proposals of district PDP.
- ii. Access to clean water by all residents of the district whether by house connection or yard pipe close to place of residence; at economic prices. The use of springs and shallow wells should also be eliminated.

d). Sanitation

Major goal is the extension of the piped sewerage network over the entire district and with priority given to the key urban centres (Municipalities, Town councils and highly populated areas) and planned industrial areas on an economic basis. The key objectives therefore include;

- i. To ensure that all residential areas should have either piped sewers with treatment plants of sufficient capacity or as a temporary solution only regular collection of fecal sludge from latrines and other facilities; with the sludge being treated in a scientific manner which prevents pollution of the ecological systems, and allows for recycling of the end product.
- ii. Ensure that all industrial areas should be connected to proper sewerage systems, with pre-treatment as appropriate, and, if necessary, specialized treatment facilities

e). Solid waste

The main goal of the PDP is to provide a spatially comprehensive solid waste system which maximizes recycling, provides a cost-effective hierarchy of collection and disposal components, and minimizes permanent elements such as land-fills, so as to improve health and prevent pollution of the district's human and natural environments. The main objectives and interventions include the following;

- i. Plan and provision of a comprehensive waste handling and disposal system in the district so as to share facilities, obtain economies of scale and enable efficient logistics;

- ii. To ensure that all areas and activities in the district should have regular and effective collection of solid waste, with emphasis on sorting at source or close by, recycling, composting and environmentally sound land-fills.
- iii. To ensure effective management of hazardous industrial, health and other waste and ensure that it is treated in specialist facilities.

4.13 Environment and natural resources

The district natural environment is one of the district's greatest strengths but also under constant threat and pressure however it still retains immense value and potential. The other side is the built environment that is of an immense challenge and constituting a dire and growing threat to the district's sustainable development. The concerns are four fold;

- The challenges and requirements for protection of natural systems
- The recommended policy in respect to Flora and Fauna
- Contribution to the minimization of climate change
- Pollution of majorly water, air, and land.

4.13.1 Strategies and requirements for protection of the district natural systems

There are major challenges created by the absence of an appropriate sewage system to deal with the effluent produced by human habitation hence resulting in degradation of the wetlands and associated ecosystems and contamination of Lake Victoria and groundwater. The district community and sustainable economic wellbeing therefore requires the following interventions;

- i. A comprehensive piped sewage system. The proposed housing and industrial development strategies must be connected to an appropriate piped sewage system.
- ii. Careful management of water level changes as a result of hydroelectricity generation and mitigation measures on changing lake levels as a result of climate change is also a key requirement.
- iii. Tackling of the multiple sources of lake pollution especially in Kampala Wakiso and Mukono inadequate drainage, sewerage and solid waste management systems that tremendously contribute to pollution.

4.13.2. The District and Regional Wetlands

Natural systems span beyond district or even regional boundaries hence will need concerted protection strategies given their significant ecological value. The consultant affirms to the GKMA framework recommendation of a policy for the protection and rehabilitation of the metropolitan's wetlands. The policy will require the following:

- i. Preservation of natural wetlands that are non-degraded, beyond the urbanized, built areas by ensuring their conservation,
- ii. Development of comprehensive sewage systems in the district to serve the current and planned towns.
- iii. Land use planning and servicing in urban and peri-urban areas;
- iv. The immediate requirement for the delineation and gazettement of wetland boundaries beyond current urbanized Wakiso supported by strict and effective development control by the MoW&E, relevant LAs, protection agencies/security;
- v. Planning, relocation and compensation of residents of wetland areas in urban, peri-urban and rural area to move to areas with proper planned services and economic opportunities;
- vi. Intensification of sensitization of communities on the problems of living in wetlands, including health risk avoidance, difficulties of providing adequate services and the benefits of conservation and rehabilitation;

- vii. The required coordination between relevant LAs, MoW&E and the water and electricity utilities to ensure that services such as water, electricity are not supplied where activities are illegally located in wetlands.
- viii. Urgent need to drain protect residential areas already intruding into wetlands whilst effectively restricting any further intrusion, including the use of drainage channels and flood barriers as access barriers

4.13.3. Flora and Fauna

The recommended strategies include the following:

- i. Conserve and actively protect all natural forests;
- ii. Develop and maintain woodlands, tree lined parks, indigenous gardens, tree lined avenues and boulevards throughout the existing and planned urbanized areas;
- iii. Incorporate trees and indigenous gardens on the grounds of public institutions;
- iv. Institute requirements and measures for enforcement of planting of trees, particularly fruit trees, and indigenous flora in private plots;
- v. Programmes to support and encourage commercial forestation of large sections of the rural areas and in hinterland of the towns in the district particularly hill tops and participation in the global carbon credit market to support financing of tree planting.
- vi. Government intensification of rural electrification and reduction of charcoal use for household energy needs;

4.13.4. Climate Change Mitigation Strategies

The primary requirement is for the district to institute measures towards reduction of vulnerability to the impacts of climate change. The key strategies include;

- i. Changes in energy sources (e.g. from charcoal to hydro-electricity and solar power).
- ii. Planning of all urban and rural development in the district to take into account of more extreme climatic events leading to greater flooding in the future, specifically ensuring all new development along the lake Victoria coastline is located within the stipulated requirements in the national (wetlands, river banks and lake shore) management regulations 2003 and the Physical Planning Guidelines 2011;
- iii. Relocation of residents and community facilities out of the low lying areas
- iv. Planning and construction of infrastructure outside and protecting wetlands and natural systems to ensure less vulnerability to impacts of floods;

4.13.5. Ground water Quality Management

The GKMA framework also emphasized entities in the metropolitan area to both end the degradation of groundwater sources, to reduce, and eliminate the use of groundwater for domestic (and commercial and industrial purposes) because of problems of limitations of aquifers. This plan is in agreement with the GKMA framework proposals. Therefore the strategies to tackle the above problems include;

- i. The urgent need for developing a comprehensive piped sewage system for all urban areas (existing and planned);
- ii. Ensure extension and provision of sufficient and timely supply of clean to all community and upgrade existing systems and networks in time to cater for projected 2040 population and spatial growth;
- iii. The need to provide water at an affordable price;
- iv. Complete end to the usage of springs in urban and heavily settled area and only allow use of unpolluted springs in peripheral sparsely populated areas, as an interim means of supply.
- v. Enforcement of industrial waste disposal management.

4.13.6. Air Pollution Control and Mitigation Strategies

There is need for the district and the Metropolitan Authorities to ensure that greater use of cleaner sources of energy and proper management and control of existing sources of pollution through the following strategies and recommendations:

- i. Planting of trees where appropriate
- ii. Wide use and supply of affordable electricity especially (renewable energy –hydro, solar etc instead of charcoal and wood fuel) for cooking. The supply to district users should be at economical fees and manageable consumption charges;
- iii. Control and avoidance of burning of solid waste and instead resort to conventional collection and disposal practices;
- iv. Reduction of vehicle emissions by planning and implementation of a mass public transport, more efficient public transport, traffic management and improvement of roads so as to reduce traffic congestion.

Chapter Five

5.0. Wakiso District Development Trends, Scenarios and Spatial Development Model

5.1 Introduction

Wakiso District is a place of promising opportunity, which is reflected in its growth and on-going demand for housing, employment, tourism and urban agriculture. To ensure that new growth captures the community's vision for the area, Wakiso District embarked on the Physical Development Plan to set forth the policy guidance to improve the area's quality of life, promote a sustainable environment and economy far into the future.

Wakiso District strives to achieve a quality growth development pattern "that makes efficient use of the developable land; optimises urban services and infrastructure. It also uses innovative mixed-use approaches; promotes a wide variety of transportation and housing options to absorb and effectively serves a significant portion of the future population growth of the district. It protects the environmental character of the district through compatible, high quality and environmentally sensitive development practices and helps provide a distinct separation of urban and rural land uses.

The purpose of the following sections of the report is to present the conceptual approach to this plan for the next 22 years and the actions required in order achieving the vision. The Consultant addressed the District, Municipal, Town Council and the Sub-county Scale to create a comprehensive vision for the future development of the whole district.

Accordingly, the report focuses on two components, the Physical Development Plan which is the conceptual structure of Wakiso District and presents guidelines for large scale planning and development. The Consultant is aware that there are other administrative units within the district which are autonomous but not independent with a mandate of preparing similar plans but at a lower level. These are the Municipalities, Town Councils and Sub counties. Both the District Physical Development Plan and the Physical development plans of the lower level administrative units must complement each other to construct a full and comprehensive development and planning strategy for the district.

5.2. Objective:

The objective of the Wakiso District Physical Development Plan is to provide a progressive framework for coordinating development trends and growth of the district in order to have a sustainable future.

5.3. Scope

The Conceptual District Physical Development Plan identifies the growth strategy in more specific spatial terms. It is intended that the conceptual plan be used as an overall guide to more detailed planning to ensure that important land use priorities, transport connections, infrastructure, social service provisions and environmental corridors are considered and taken into account.

The Wakiso District Physical Development Plan is informed by the analysis of the existing spatial situation and physical aspects of the district. It examines possible future scenarios, roles and potentials of the district over the planning horizon, defines the physical development vision for the district and to project the future development scenarios. The summary below indicates

the processes leading to the definition of Wakiso District Conceptual Spatial Development Model: -

Step i: Analysis of the existing situation in the district

- *Spatial/physical*
- *Social and cultural*
- *Economic*
- *Environment and natural systems*

Step ii: Examination of possible future scenarios

- *Impact of Kampala City; invasion succession – Kampala's dormitory area*
- *In-migration from rural areas to Wakiso District*
- *Population analysis and projection for future Wakiso District*

Step iii: Roles and potentials of the district over the planning horizon

- *Role, influence and significance of Wakiso District in Central Region and the country as a whole.*
- *Administrative; District, Municipalities, Town Councils and Sub-counties administration and services*
- *Growth, urbanization trends and urban sprawl*
- *Gateway to Uganda (international, City to other parts of the country and through regional routes e.g. Kenya, Rwanda, Burundi, DRC, Southern Sudan)*
- *Centre of culture and a tourism hub*

Step iv: Stakeholder Definition of Development Vision for the District

- *Local Governments medium term strategies and development vision review*
- *Stakeholder inputs on desired direction*
- *District symposium input and defined Physical Development Vision for the district*

Step v: Wakiso District Conceptual Spatial Development Model

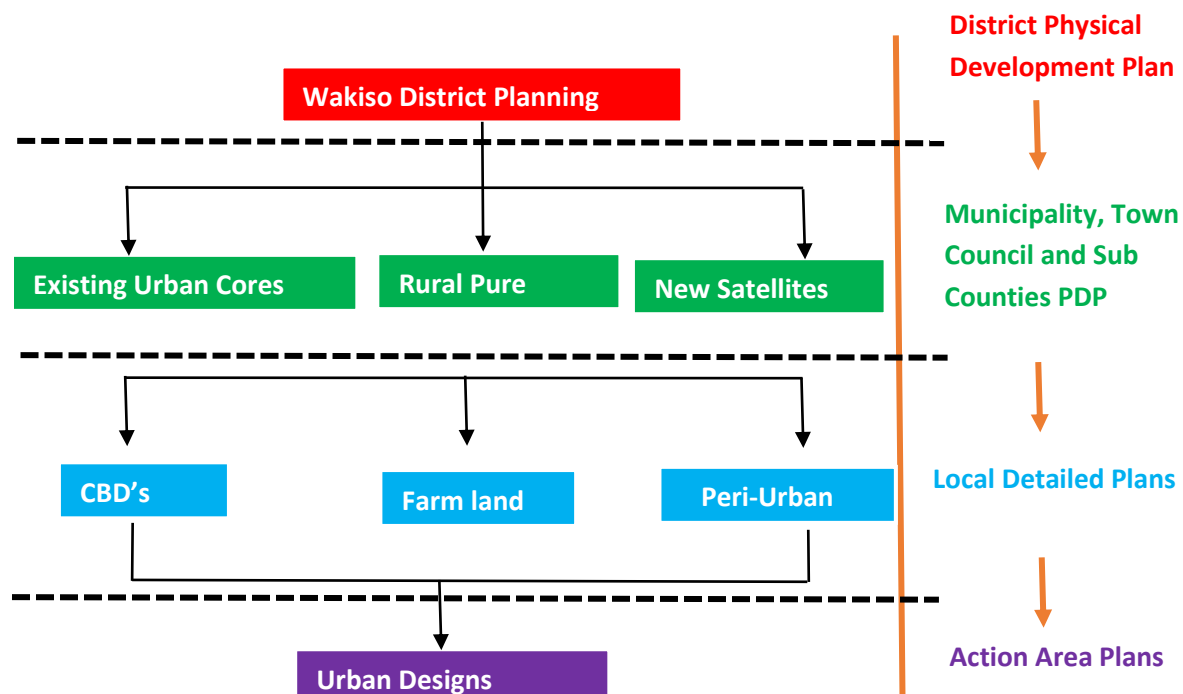
5.4. Planning Hierarchy of Wakiso District Planning Area

The Wakiso District Planning Area was divided into four levels of planning: 1 District Structure, 2 Municipality Structure, 3 Town Council Structure, 4 Detailed Local Development structure. Accordingly, the Wakiso District Planning Area conceptual plan was broken down to three type of planning zones: Existing Urban Cores, New satellites and Wakiso rural. Wakiso District is divided into Municipalities, Town Councils and Sub Counties which are planning units as per the legal framework of Uganda (Figure 5.1).

5.5 The Wakiso District planning hierarchy.

Wakiso Physical Development Framework addresses the District Physical Development Plan (DPDP) and constitutes the first level of the Wakiso District Planning Area hierarchy. This section deals with the conceptual structure of the Wakiso District Planning Area. The section begins with the spatial analysis of the existing situation in Wakiso District and examines possible future scenarios.

Figure 5.1: Conceptual Structure of Wakiso District Planning Area



5.6 Wakiso District Development challenges

The population census of 2014 revealed that 7% of the Ugandan population was living in Wakiso District and the population was approximately 2 millions with a growth rate of 6.6% and the mean household size of 3.9 persons per house hold (NHPS 2014). This indicated that the level of service delivery has also to increase to match with the increasing population. The same Population and Housing Census also established that the District was the most populated in the country. Since the inception of Wakiso District in 2001 to date, the rate of physical developments has more than quadrupled. Urban trends are taking over the rural setting with no significant planning intervention casing fears for an emerging mega slum.

The district is clearly a major component of the Greater Kampala Metropolitan Area and hence depicts and presents special urban challenges especially those related to infrastructure and service delivery. Wakiso in particular has been diagnosed as an area of high urbanism. It is anticipated to experience high growth rates and levels of invasion succession especially of the urban land use activities which needed proper planning in order to have positive impacts on the district economy and standards of living of its inhabitants. Decisions are being made about locations for specific key development facilities, land uses, processing centres, related industrial establishments, improved road network as well as related settlement growth patterns including residential, commercial, industrial and social and economic amenities. All these will have numerous impacts in way district spatial development is conerned. Consequently, Wakiso District Local Government recognizes the need for a District Physical Development Planning to provide a development guiding framework for the district covering a period of 22 years (2018 to 2040) to match with the national vision of 2040.

5.7 Spatial Analysis of existing situation in Wakiso District Planning Area

The spatial analysis of Wakiso District Planning area in its current state was necessary in order to understand the present and future development scenarios. The spatial analysis, as opposed to other types of analyses, focuses on the spatial and physical aspects of the existing situation. The situation in Wakiso can be summarized as follows: -

i. The Challenge of In-migration from Kampala City and from Outlying Up Country Districts

Wakiso district population decreases during the day as millions flood Kampala, the Capital City of Uganda for work and increases as they return later to sleep in Wakiso the dormitory area of Kampala. As Wakiso District continues to attract residing migrants from all the corners of the country, a population growth was predicted in the short and long term. Increased in-migration has different implications on the functioning of the district.

ii. The Existing Physical Structure and Networks

a) Incoherent and Imbalanced Physical Structure

The district bears the significant impact of the radial movement network to and from Kampala City centre concentrating all activities of significance, or of higher order in and towards or inside the City Centre.

The structure lacks a coherent and not evenly partially balanced. Its growth has been and remains radial sprawling along the major movement routes as “finger like protrusions” or “stubs” and fills in the gaps between them gradually as you move close to Kampala. It has no meaningful structure, no amenity or adequate services. There was increasing inner densities and spreading out concentrically, restricted only by access constraints, severe slopes (largely to the west) and water bodies (with significant construction and encroachment on marginal lands including extensive wetlands in the district).

The routes (“fingers”) and the centres no longer constitute functional corridors. They lack almost all complementary elements except movement, housing, basic local services (low order services) and largely small local and/or informal commerce often located in ungazetted areas. Entebbe Central Business District provides some signs of developing into “activity corridors.” The routes along Masaka Road, Mityana Road, Hoima Road and to a lesser extent Gayaza roads display intensive generally lower-order activity but are not structured to function as integrated functional corridors. The district generally lacks a clear hierarchy of urban centres but generally sub-centres, with visible functional specialisations of lower order activities which strung out along the primary radial routes.

Urban structure enables, organises and directs human activity and land use. It determines the legibility and impacts on its functioning and hence its efficiency and productivity. It attracts channels, enables or constricts movement. It sorts, enables or limits levels and scale of activity (residential, economic, commercial, recreational, industrial, *et al*). It contributes to the urban form, intuitively informing both resident and visitor as to the “natural” location of facilities and activities or fails to do so. It balances and integrates the natural and the built elements into a cohesive whole or mixes them in an haphazard, mutually detrimental manner. It confers identity to the area and the specific neighbourhood, be it positive or negative, in as much as the individual home confers identity to its residents.

As such, Wakiso District Planning Area urgently requires a coherent, legible, functionally efficient and integrated structure, to begin tackling its current severe social, economic and environmental problems and its considerable future challenges.

b) Impact of Infrastructure Networks

It is important to consider Wakiso District in the greater context of the entire country. The district is based in the central-south side of Uganda, near Lake Victoria. It is traversed by all main roads and railways to and from the Capital City – Kampala hence the main transit and gateway to Uganda. Being such, the structure of the Wakiso in relation to the City must be taken into consideration and as such will have implications beyond the district boundaries.

c) District Physical Form

The District's topography, its hills and valleys have determined the district's form and dictated the initial settlement pattern. But it could also sort out the apparent transport movement routes developed between these elements and outlying centres in the lower valleys, generally skirting the wetlands and crossing them at narrow or strategic points. Sporadic infill and sprawl over the years has however blurred out these historic elements and is slowly transforming the district into a single contiguous, ever growing, lacking order, clarity, legibility and identity. Nonetheless, the district still retains significant natural values and still grants the potential to develop as a setting of quality, green, utilizing its natural potential to provide amenity for its residents.

d) The Challenge of Sprawl

Wakiso District today is characterized by rising urban sprawl. The urban sprawl stems from the main Capital City Kampala into Wakiso District. It extends beyond the boundaries of the urban nodes in the district into the peri-urban and rural rich agricultural areas spreading even beyond the district boundaries. Additional urban centres exist within the confines of Wakiso District: Wakiso, Nansana, Entebbe and Kireka-Bweyogerere. Though these centres are scattered within the district, they are linked and dependent on the whole district and its neighbours for services, employment, etc. The areas between these centres are littered with disorganized settlements along the roads, which form the urban sprawl. The density in these areas was equally high in comparison to Kampala and Mukono the immediate neighbour. The result of this situation is disjointed and incremental growth. The recent adjustment in the administrative set up of the district has compounded the issue even further to the extent that it is quite difficult to find a sizable piece of land in the district undeveloped.

These settlements burden the existing infrastructure and services of the district as many flood the district daily in search of employment and services. The continued unplanned sprawling growth holds several dangers to the future of the district: -

- Burdening existing infrastructure
- Poor functioning of the district and metropolitan systems
- The decreasing quality of life and living conditions
- Destruction of urban economy
- Damage to the ecological system
- Blocking modern development

The implications of the unbalanced growth and unplanned urban development pose a serious threat to the district and must be avoided.

The only course of action which can eliminate the above threats of the continued unplanned and disorganized growth is to form a Planning Strategy capable of addressing the sources of the above threats. Based on the analysis of the existing situation, the district roles and potentials

over the planning horizon, future scenarios and threats the Consultant conceptualised a Planning Strategy to guide the preparation of Wakiso District Physical Development Plan:

- The defined new Physical Vision for Wakiso will guide the development of the district in a planned and organised manner.
- Determining the urban limit/Buffering and proper planning of existing and new urban centres within the district will ease the pressure on the district infrastructure and services, allowing future development.
- A planned district structure will eliminate sprawl.
- Sustainable development which protects the most important existing district environment and natural resources will ensure a modern and quality district for future generations.

5.8.0 Development trends and Scenarios

5.8.1 Wakiso Future Growth Scenarios

The consultant's extrapolation of future population growth trends was based on three scenarios to determine and assess the future needs and constraints which will affect the future of Wakiso District. The scenarios take into account three possible courses of future development based on different population growth, in-migration rates and intervention policies:

- *Business as Usual* – where there is no intervention/regulation of migration into Wakiso
- *Worst Case scenario* – assuming a situation of accelerated migration into Wakiso
- *Best Case scenario* – where there is regulated and hence decreased migration rate

The projection scenarios cover two timeframes; the short term of 4 years; the long term up to 2040. Based on the "Business as Usual" scenario where there was no control and with accelerated migration, our forecasts indicate that the district will have a high population of 2,930,975 people by 2020 and 10,523,310 by 2040. The ideal case forecasts indicate that the district will have a controlled population of 2,427,007 people by 2020 and 4,645,937 by 2040 and this would require stringent national, regional measures to control migration into Wakiso in addition to natural growth control measures (Table 5.1). The viable position was where the district through planning interventions and migration control measures will be able to reach the goal of the "Best Case" scenario where a population of 2,676,732 people by 2020 and 7,014,612 by 2040 was envisaged. The population growth rate used was on assumption of both the natural progression and the additional population resulting from in-migration and other external factors will be controlled and stabilized at 5%. The Ideal situation is where the rate of urbanization in Wakiso follows that of the national urbanization rate of 3.3%. The consultant finds this scenario as impossible to reduce it from the 6.6%. Wordse still it is expected to grow even further in no interventions are made.

Table 5.1: Population Projections by the Different Growth Senario

Sex	Popn 1991	Popn 2002	Popn 2014	Popn 2017 (6.6%)	Popn Growth Projection 2020			Popn Growth Projection 2040		
					6.6% (Business as usual)	3.3% (Ideal scenario)	5% (best case scenario)	6.6% (Business as usual)	3.3% (Ideal scenario)	5% (best case scenario)
Male	279,866	440,534	949,035	1,149,618.7	1,392,596.9	1,267,228.0	1,330,827.0	4,999,994.7	2,207,448.5	3,374,457.8
Female	283,021	467,454	1,048,383	1,269,958.7	1,538,364.5	1,399,875.4	1,470,129.6	5,523,410.0	2,438,434.0	3,727,001.5
Total	562,887	907,988	1,997,418	2,419,582.0	2,930,975.0	2,427,007.0	2,676,732.0	10,523,310.0	4,645,937.0	7,014,612.0

The three scenarios will have the following long term development implications on the physical development of the district.

5.7.2. Business as Usual / Worst Case scenario

The scenario is where there is no control and with accelerated migration pushing the district population to 10,523,310 by 2040. The trend will worsen the current physical development structure with accelerated urban sprawl, unplanned, high-density development; the area required for accommodation of all inhabitants will be more than twice the size of the district land today. Other challenges that will surface included;

- i).* Urbanization and the built environment will further densify and encroach into the district peri-urban, rural areas, agricultural lands and worse still encroach into environmentally sensitive areas. Environmental degradation can be expected to continue apace. With limited sewage coverage and the scale of human settlement the wetlands can be expected to fail to filter the waste. In the inner core and surrounding areas/neighbourhoods, groundwater sources within the built areas will be contaminated and unusable for use. The danger of encroachment into or even depleting the forests resources will be inevitable and large tracts of agricultural land will suffer intrusion.
- ii).* Continued, very wide and consistently growing income inequality and poverty will become further entrenched and multi-generational for the bulk of the population majorly in the periphery.
- iii).* Poor service and infrastructure distribution. Improved infrastructure will be expected to be found primarily, if not exclusively, in the centres. Access to services will be characterized by extreme gaps in standards especially in the periphery. The wealthy and the middle classes will pay for and enjoy modern commercial and personal services, private quality education, private quality health services, etc. The poor on the other hand will continue to remain dependent on basic informal and inadequate services, inferior education, basic health service, etc.
- iv).* Most of the working poor will be housed in informal settlements at the periphery and may lead to some parts in the inner core to progressively densifying and developing into slums.
- v).* The challenge of sprawl will remain given the population and physical development curve far above physical planning, the relaxed controls in land use and standards emanating from the lack of planning and development imbalance are largely blamed for this situation.

5.7.3. Ideal Scenario

The ideal case will require stringent controls on growth and migration leading to a population of 2,427,007 people by 2020 and 4,645,937 by 2040. This will require organized planning and development and stringent national, regional migration control measures into Wakiso. The assumption is based on the fact that the district will be able to avert the current population growth rate of 6.6% to 3.3% like most urban areas in Uganda.

Threats and implication of the above case scenarios

Continued unplanned growth holds several dangers to the future of the district and the metropolitan region:

- The future burdening existing infrastructure and services in the district hence leading to decreasing quality of life and living conditions
- Poor, unstructured and dysfunctional land uses and district systems which in the end discourages and blocks modern development

- Destruction of district local economic set-up and the ecological system
- Reducing the districts growth rate by a half was considered very costly and unrealistic big dream.

5.7.4. The Best case scenario and Spatial Planning Strategy

The viable position according to the consultant is for the district to address the development challenges through planning interventions and measures related to migration. The best case scenario recommended by the consultant is to target the projected population at 2,676,732 by 2020 and 7,014,612 by 2040. The population growth rate used was on assumption that both the natural progression and the additional population resulting from in-migration and other external factors will be controlled and stabilized at 5%. To the consultant this was achievable in the next 20 years. The critical requirement therefore is for the district to address and eliminate the threats of the continued unplanned and disorganized growth. The best case position will therefore require a physical planning strategy encompassing the following;

- i. Definition of a new conceptual spatial development for Wakiso to guide the development of the district in a planned and organized manner.
- ii. Preparation of a district Physical Development Plan to guide the planning and development of the district and the key urban centres therein.
- iii. Defining and planning the urban footprint of the key urban centres in the district for organized infrastructure and service provision and direct the sustainable future development; eliminate unbalanced sprawl; protect the most important existing natural resources to ensure the future development of the district as a modern and with quality for future generations.

5.8. Wakiso District Conceptual Spatial Development Model

In the analysis of the current situation and potentials the Consultant examined several planning models for the future development of the district. The examined models are based on our analysis and findings on the current situation and potentials in Wakiso District, consideration of the Greater Kampala Metropolitan Framework development requirements and the best existing models of metropolitan planning from around the world. These models constitute potential Conceptual Topological Schemes for the long term development of Wakiso District planning area.

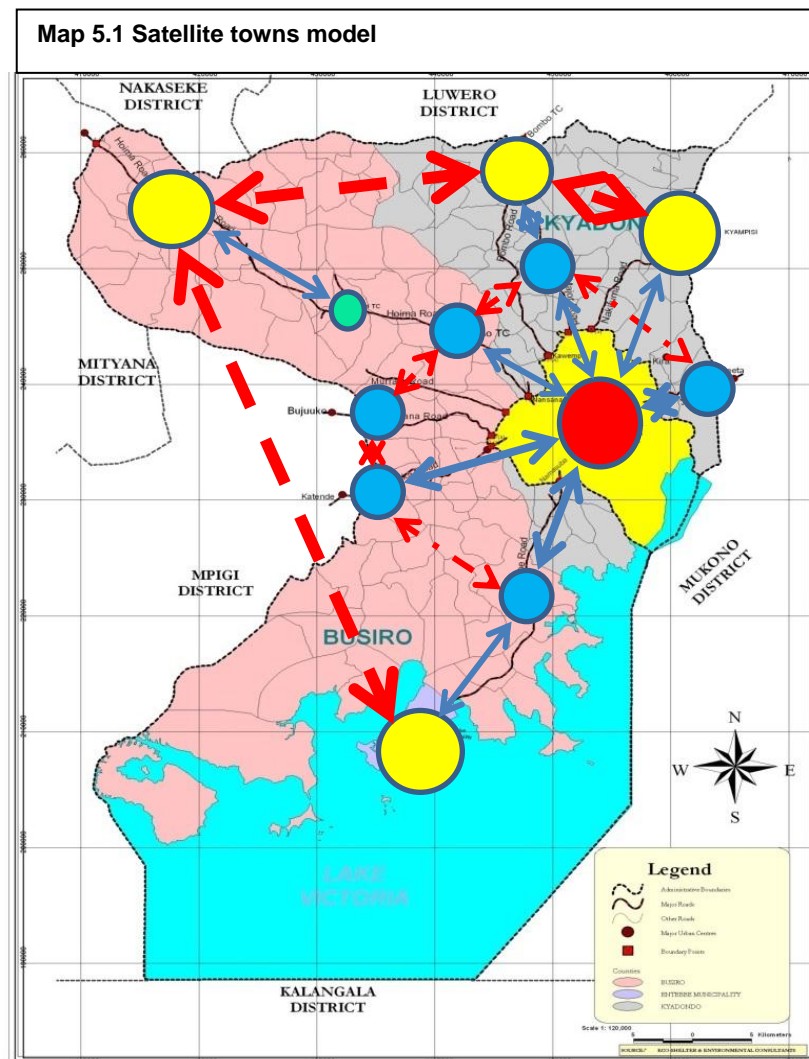
A total of four models were examined by the Consultant for this purpose namely: -

- *The “Independent Satellite Towns” Model (ISTM)*
- *The “Urbanised Belt” Model (UBM)*
- *The “Transport corridor/ ‘wedge shaped’ model (TCM)*
- *The “Integrated Satellite towns and Wedge Model (ISTWM)*

Each model has its strengths and weaknesses, and offers different potentials. The summary below provides the suitability analysis of each model that guided the choice of the most suitable spatial model for the district’s future spatial development plan.

5.8.1. The “Independent Satellite Towns” Model

The district is the seat of administration, control and service delivery. This is done through the four (4) municipalities, seven (6) sub-counties and eight (9) Town Councils. The key urban centres identified include Entebbe, Kasanje, Nansana, Kira, Kyengera, Masulita, Namayumba, Kasangati, Wakiso and Nsangi (Map 5.1). The “Independent Satellite Towns” Model builds on organizing and protecting the existing situation in the district. Some of these centres were also pointed out in the GKMA spatial development strategy. The centres in this model are the proposed focal points within the district where to plan and concentrate physical development. The centres would be planned as independent and self-sustaining basing on the locational comparative advantage or economic specialisation giving each centre a unique identity and economic specialisation. The satellite towns will be connected to each other and Kampala City through a system of road hierarchy, both existing and proposed. The model tempts as the most suitable given that there would be no need for drastic alteration or significant externalities.



The satellite towns will be connected to each other and Kampala City through a system of road hierarchy, both existing and proposed. The model tempts as the most suitable given that there would be no need for drastic alteration or significant externalities.

a) Benefits of the Independent Satellite Towns Model

The benefits of this model include the following: -

- It respects and matches with the current political and administrative set-up in the district;
- The nodes will become the growth poles for development hence reducing pressure on agricultural land and limiting the current sprawl from extending beyond the boundaries of the urban nodes into the district rural rich agricultural areas. This in essence would protect and guarantee increased agricultural production;
- The model also defines the urban limits where clear distinct uses between built up and un built up are defined.
- Environmental degradation will be contained. With provision of sewage services and provision of buffers, the wetlands can be expected to thrive and perform their functions

of filtering waste water from the built environment. The danger of encroachment into or even depleting the forests resources will be eliminated and large tracts of agricultural land be protected;

- v. Within each centre, there is a high possibility of optimum use of land and saving land for other uses
- vi. It reduces the cost of infrastructure and service provision. The pressure on the district infrastructure and services will be minimized and it will offer developers with urban alternatives;
- vii. The model has the advantage of triggering and creating a balance in spatial development in the entire district. It eliminates the amorphous 'brown agenda' structure by dispersing unplanned development even into land that would have been used for agriculture and environmental protection and
- viii. Within the individual centres, it allows a sustainable mix of forms and functions and creates a balance in spatial development. Hence it facilitates balanced growth and economic opportunity in both the centre and the periphery but also preserves sustainable use of the environment and natural resources.

b) Challenges with Independent Satellite Towns Model

Despite the above mentioned benefit, this model also has some encumbrances such as: -

- i. Given the weak finances and weak economic base of the district, improved infrastructure will be expected to be found primarily, if not exclusively, in the centre and the better surrounding neighbourhoods;
- ii. The urban centres in the district have grown organically starting as local shopping centres majorly to serve the neighbourhood dormitory residential areas. The economic specialisation and identity of these centres is not clear. The direction dictated in the model indicates that this may tend to aggravate the amorphous nature of development, further adding to the emerging incongruous mix of forms and functions. Thus creating a further imbalance in spatial development within the centre, with undefined and limited economic opportunity. The model therefore demands clear identification of the centre's economic potentials and comparative advantage in relation to others in the district as a whole so as to guide planning around the strengths of the local economy. This would guarantee economic sustainability and competition;
- iii. The model creates multiple core and power centres;
- iv. The wealthy and generally well-to-do middle classes will be limited in size, proportion and concentrated around the core. They will enjoy improved, reasonable housing, upgraded infrastructure and quality services that will be concentrated in this area. However, given the widening gaps and their social impacts, their personal safety and security will be threatened by those in need at the periphery. As a result, gated, fenced and patrolled housing compounds will spring up and become the norm for both the wealthy and the middle classes which aesthetically is not appearing;
- v. Given the scarcity of labour and municipal financial resources to plan and enforce orderly development, most of the working poor will be housed in basic housing found in informal settlements at the periphery and may lead to some parts in the inner core to progressively densifying and developing into slums to house the urban poor and many working poor and
- vi. The challenge of sprawl will remain given the relaxed controls in land use and standards emanating from the lack of planning and guided development.

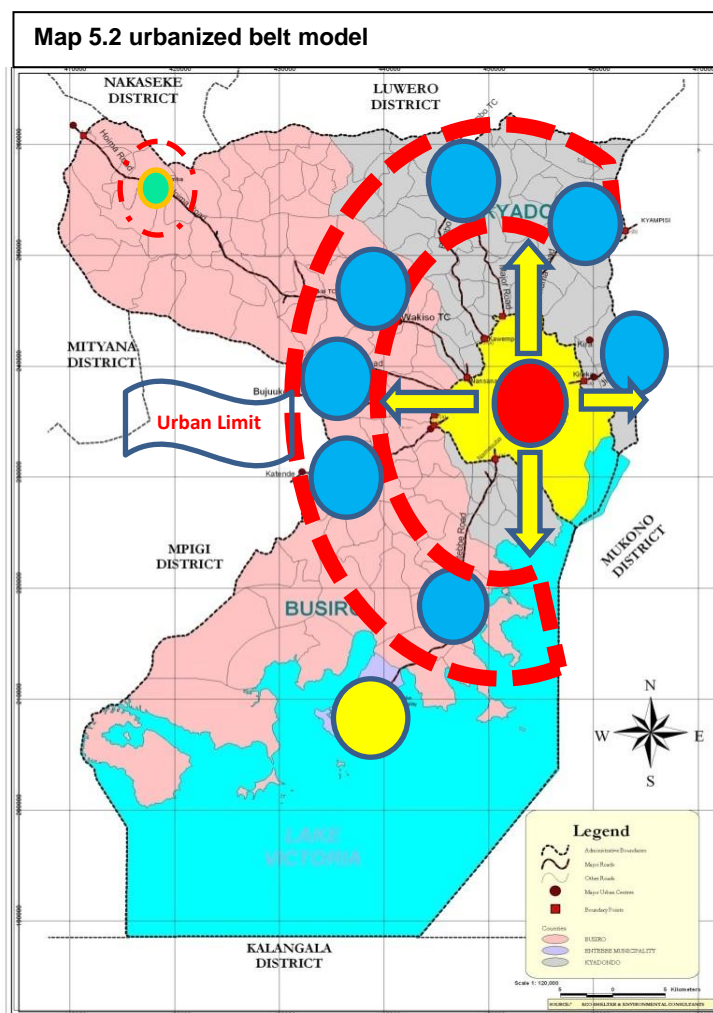
5.8.2. The "Urbanised Belt" Model:

The "Urbanised Belt" Model (Map suggests creating a belt of continuous development within the district or a buffer zone cutting off the district from the outside development in the direction of Luwero, Nakaseke, Mityana and Mpigi Districts. This in effect terminates the urban sprawl. The

Kampala Capital City Authority Physical Development Plan incorporates the same buffer zone between the City and Wakiso District. The Wakiso District buffer zone would provide the second other belt to check the sprawl evident in the metropolitan area. The belt will be connected to the district through a system of metropolitan roads, both existing and new ones. The use of ecological zones in some areas where it is applicable is a considered factor to control urban sprawl.

a) Advantages of urbanized belt model

- i. The benefit of this model (Map 5.2) is that it limits the district's urban sprawl using a buffer zone to prevent further expansion of developments from Wakiso into the neighbouring districts of Mukono, Luwero, Nakaseke, Mityana and Mpigi.
- ii. In this model some of the existing centres in the periphery will be incorporated into the belt.
- iii. The belt could also be used to manage sprawl at the local urban centre level within the district.
- iv. The district topography, the natural systems such as rivers, wetlands and forests provide the required buffer that can be emphasized with adequate reserves to provide the required belt. The belt would provide protection from encroachment into or even prevent the depleting the forests resources and provide large tracts of land for agriculture and animal rearing.
- v. The model respects existing situation hence minimising costs of overhaul.
- vi. This model will interrupt/check the current development trend of sprawl. It has the advantage of triggering and creating a balance in spatial development and would be an ideal solution to the concept of urban centre hierarchy which is accidentally already evident in the district.
- vii. It eliminates the amorphous nature of development allowing dispersed development in the district there by promoting uniform growth. It allows a sustainable mix of forms and functions, and creates a balance in spatial development eliminating over-concentration in one location. Hence it facilitates balanced growth and economic opportunity both in the centre and in the periphery of the district.



The challenges obtaining in the first model however persists in the urbanised belt model.

5.8.3. The “Transport Corridor/Wedge” Model

The model (Map 5.3) upholds the district urban centres connected to the Capital City through existing major transportation corridors and allows linkages between the centres themselves. The benefits of this model are that it allows connectivity between the existing centres and creating a strong lakefront.

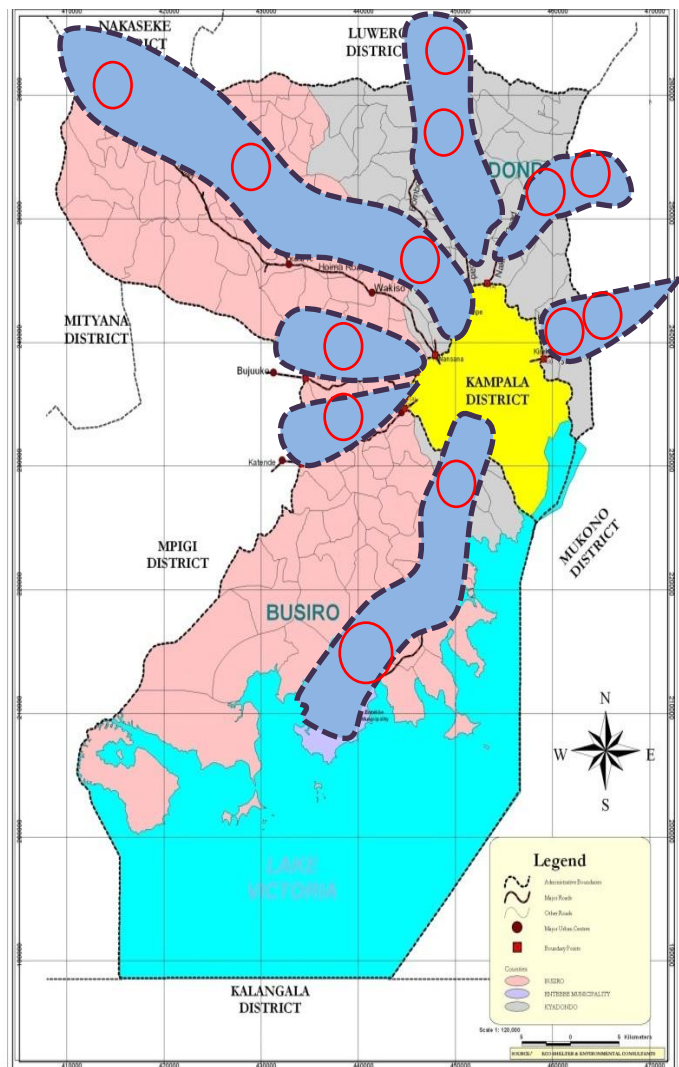
Urban sprawl in the district is majorly evident along the major radial routes from the centre. The wedge is employed as a buffer zone along these roads hence interrupting and checking development from outside Wakiso District in the direction of Luwero, Nakaseke, Mityana and Mpigi in effect terminating sprawl. In this model, sprawl from the individual existing urban centres will also be addressed using the same principle. The land in between could be used for supporting agriculture.

The district topography, the natural systems such as rivers, wetlands and forests provide the required features that can be emphasized with adequate reserves to provide the required wedge and buffers between Wakiso and other districts and between the individual centres within the district. The wedge reserve would provide protection from encroachment into or even prevent the depleting the wetlands and forests resources and provide large tracts of land for agriculture and animal rearing. This in effect will lead to conservation of the district ecological system.

Confining the urban limit will lead to densification and ease on infrastructure and service provision at the local and at the district level.

The major challenge is that controlling urban sprawl will be very difficult as development will continue to follow the major roads. Service provision will equally become very expensive because of the distances involved and worse still the ribbon kind of development that will result is not sustainable. There is a possibility that in the future what is reserved as agricultural corridors will eventually be filled up and it will result into an amorphous mega polis which may be very difficult to manage and service.

Map 5.3: Transport Corridor/Wedge” model



The model would provide protection from encroachment of the wetlands or even prevent the depleting of the forests and provide large tracts of land for agriculture and animal rearing. This in effect will lead to conservation of the district ecology and the marginalised sensitive ecosystems like wetlands.

Confining the urban limit will lead to densification, optimum use of land and ease on infrastructure and service provision at the local levels and at the district level.

5.8.4 Selection of the preferred conceptual model

In selecting the best conceptual model the consultant looked at a number of issues. These included;

- i). the current administrative set up of Wakiso District which encourages proliferation of urban centres. Areas which have been purely agricultural are urbanising e.g. Gombe and Busukuma which were typically rural are now divisions of Nansana Municipal Council. This in a way will make the regulation of urban sprawl very difficult.
- ii). The impact of real estate developers cannot go without mention. They have identified, acquired and subdivided land all over Wakiso District turning areas which were well known for food production into residential neighbourhoods. In these areas, they have established such estates, ancillary services and other developments which have been attracted and raised land values making the use of such land for agricultural purposes not economical.
- iii). The comparison of soil fertility and the location of the established real estate development are very paramount in taking choices between food production and provision of highly required shelter for the residents and the new comers. A decision has to be made between agriculture and the built up environment.
- iv). The primacy of Kampala City which is too small in terms of size attracts many people who end up seeking for land for accommodation in Wakiso District.
- v). Wakiso District is commonly referred to as the dormitory area for Kampala City. But from the socio- economic survey carried out by the Consultant it was revealed that it has also become a dormitory for the whole country where by majority of civil servants throughout the country do own a house in Wakiso where they retire every weekend. This is as a result of the Kampala City acting as a 'Pull Factor'.
- vi). There is also the issue of land values in relation to optimum use of land. This puts the district at cross roads. I.e both are desired but how to choose from the most optimum was not easy.
- vii). The improved infrastructure development has also attracted massive developments in the periphery of the district. The tarmacking of major roads radiating from Kampala to other parts of the country has made the city centre look nearer to potential developers. These good roads have attracted public transporter on various routes and they are less congested. Secondly the cost of land in Kampala City was too high forcing people to look for cheaper alternative land in Wakiso District and as such developers could now afford to build in the commuter zones which is defined as far as 35 km in all directions from Kampala's Central Business District.
- viii). The district administration however lacks the capacity to handle this influx of people. This was evident in terms of the skeletal planning staff and the poorly maintained feeder roads which could otherwise encourage compact development in the district.

The evaluation of metropolitan planning models was conducted through a Location Analysis and Spatial Suitability Analysis process. The process entailed examining a number of district spatial aspects. These include: -

- *The district topography, natural features and assets;*

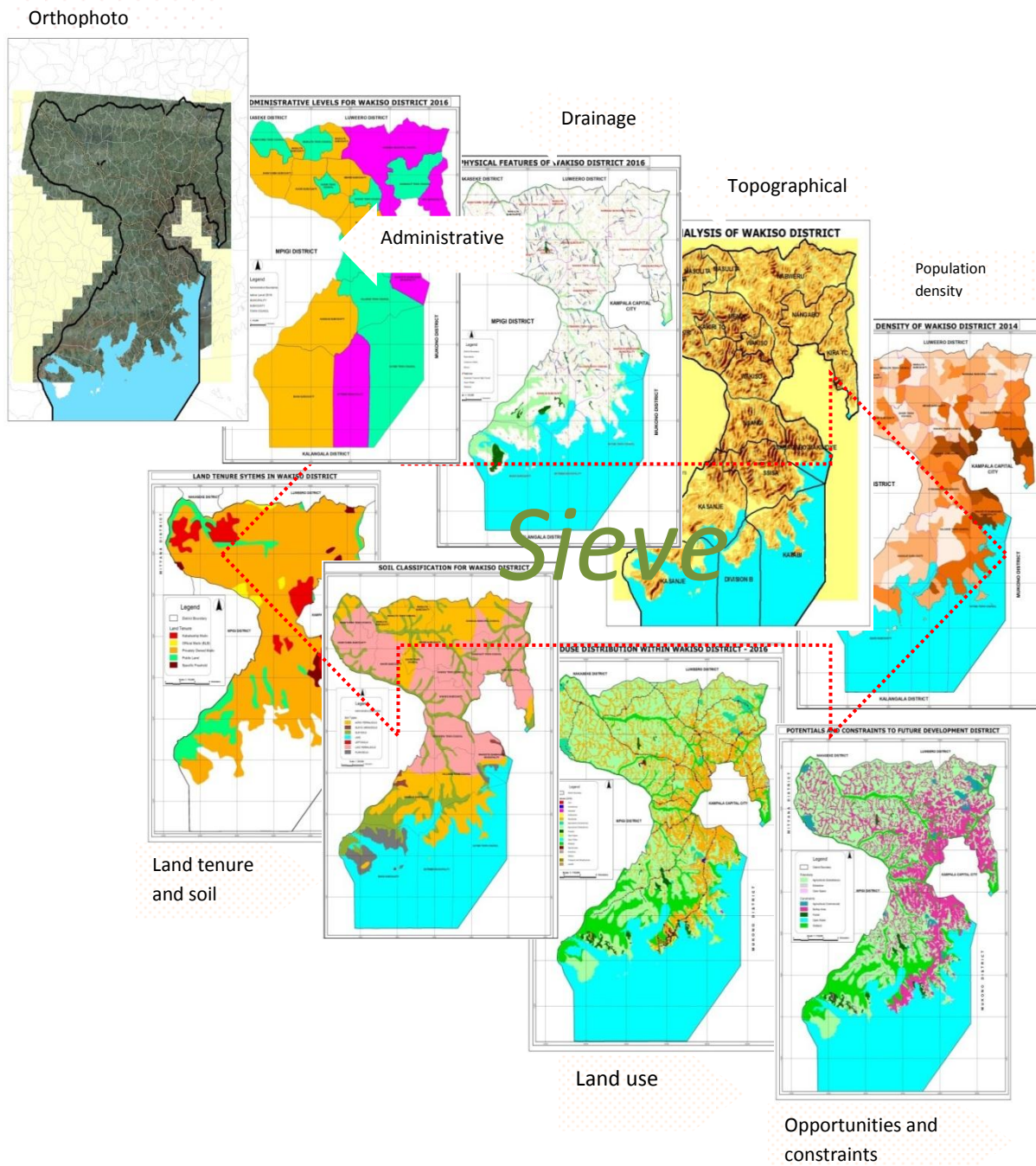
- *Existing Public open spaces;*
- *The district satellite towns and settlement parttens;*
- *Existing and emerging industrial sites, public services, business cores and*
- *The national, regional, metropolitan and district infrastructure, traffic and transport modes.*

The aim of this analysis was to scan the areas of the district, Kampala Metropolitan Area and adjoining area to identify potentials and suitability for development based on future growth forecasts. The output of the Spatial Suitability Analysis (SSA) was a Spatial Suitability Map (SSP) which integrated the different aspects in the Planning Area. The Suitability Map was integrated with the Topological Schemes of the possible district planning models to create a district's long term spatial form.

The Suitability Analysis identified sites having greater potential, functions and development areas, land uses, restricted areas and open areas for potential development. An analysis of topography and a slope analysis were also conducted in order to identify area suitable for development.

The Spatial Suitability Analysis identified the existing potentials. This was facilitated by analysis of the following layers: - *Satellite Image, Administrative layout, Population Density, Land use, Environmental, open, restricted areas and natural systems, topography and/or slope analysis, soil classification, land tenure system and land values.* The layers are captured in the situation analysis but are also presented figure 5.2.

Figure 5.2: Different Layers Used in the Sieve Analysis



The suitability Analysis pointed to the 13 existing urban centres, all with potential for development. The centres are already having dense development but with potential to accommodate more development. Each area was examined according using ranking criteria which included its suitability for development according to the following: -

- *Permitting terrain;*
- *Connection to existing urban structure in the district;*
- *Connection to the main radial roads from the city;*
- *Large available area and vacant land around it;*
- *Key features to utilise for controlling sprawl.*

The identified urban areas included the following: -

- Nansana, Wakiso, Kakiri and Namayumba
- Kyengera
- Kira,
- Kasangati, Gayaza, Masulita
- Makindye – sabagabo, Katabi, Entebbe and Kajjansi

The detailed Spatial Suitability was purposely to determine the areas with highest potential for new development and for strengthening of existing core. These areas were examined and found to have permitting terrain. They already had an administrative centre, along the highways hence very well connected to the existing urban structure. The areas were beginning to fill up given the migration from Kampala City. These areas were found to be more suitable for strengthening of the existing core which already includes an active centre (Maps 5.4 - 5.7).

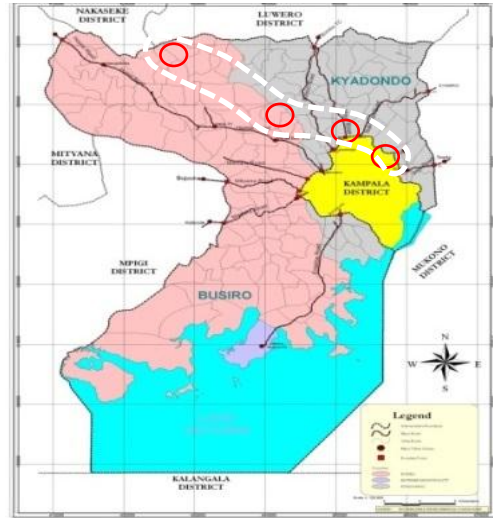
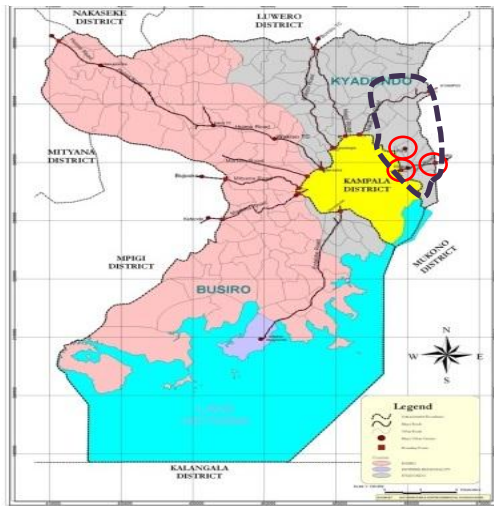
5.8.5 The Town Integrated Conceptual Model

The analysis I done indicated that in Wakiso it was very difficult to use one model if the current problems were to be addressed. The consultant concluded that application of all the three models discussed above would result into an intergrated conceptual model which was a realistic approach to the situation of Wakiso district. The “Integrated” Model was an integration of the “Independent Satellite towns” Model, the “Transport/ Corridor Wedge” Model and the urbanized belt model. The model upholds the district urban centres which are interconnected and also linked to the Capital City through existing major radial transportation corridors. The model also integrates the wedge as a buffer zone along the existing infrastructure hence interrupting and checking development from within and from outside Wakiso District in the direction of Luwero, Nakaseke, Mityana and Mpigi there by terminating urban sprawl. It further introduces a concept of **intermittent** densities defined by new highways which will be carrying through traffic. In this model, urban centres along the radial routes will be planned and integrated but their growth and expansion will have a defined urban limit and also defined by a buffered wedge along the existing major radial transportation corridors using natural barriers and roads to control.

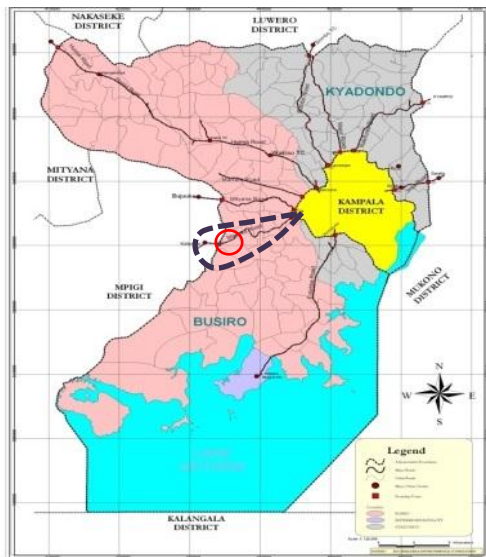
The benefits of this model are that it takes into account the existing situation of the district and the metropolitan area whereby urbanisation stretches out along the roads from the City Centre, through the district with emphasis on the key transport corridors. The un-built areas could then be used for agriculture to support the food basket for the district and the capital city.

The model will also check sprawl between the City and the District, between Wakiso and the neighbouring districts and between the urban centres within the district. It emphasises relatively larger urban centres at the periphery to act as barriers to urban sprawl (Map 5.8).

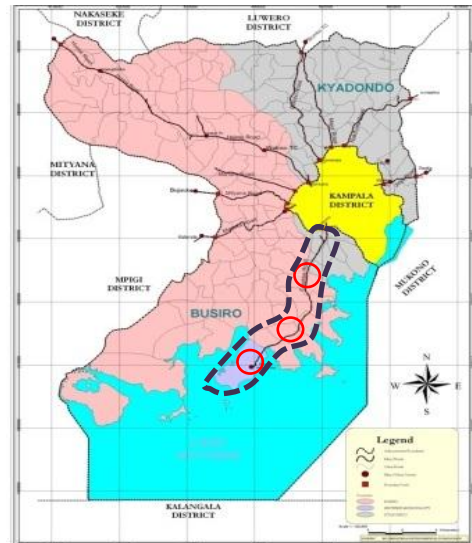
Map 5.4: Jinja road urban centers



Map 5.5: Hoima road urban centres



Map 5.6: Masaka road urban centres



Map 5.7 Entebbe road urban centres

5.9 The Preferred Conceptual Model

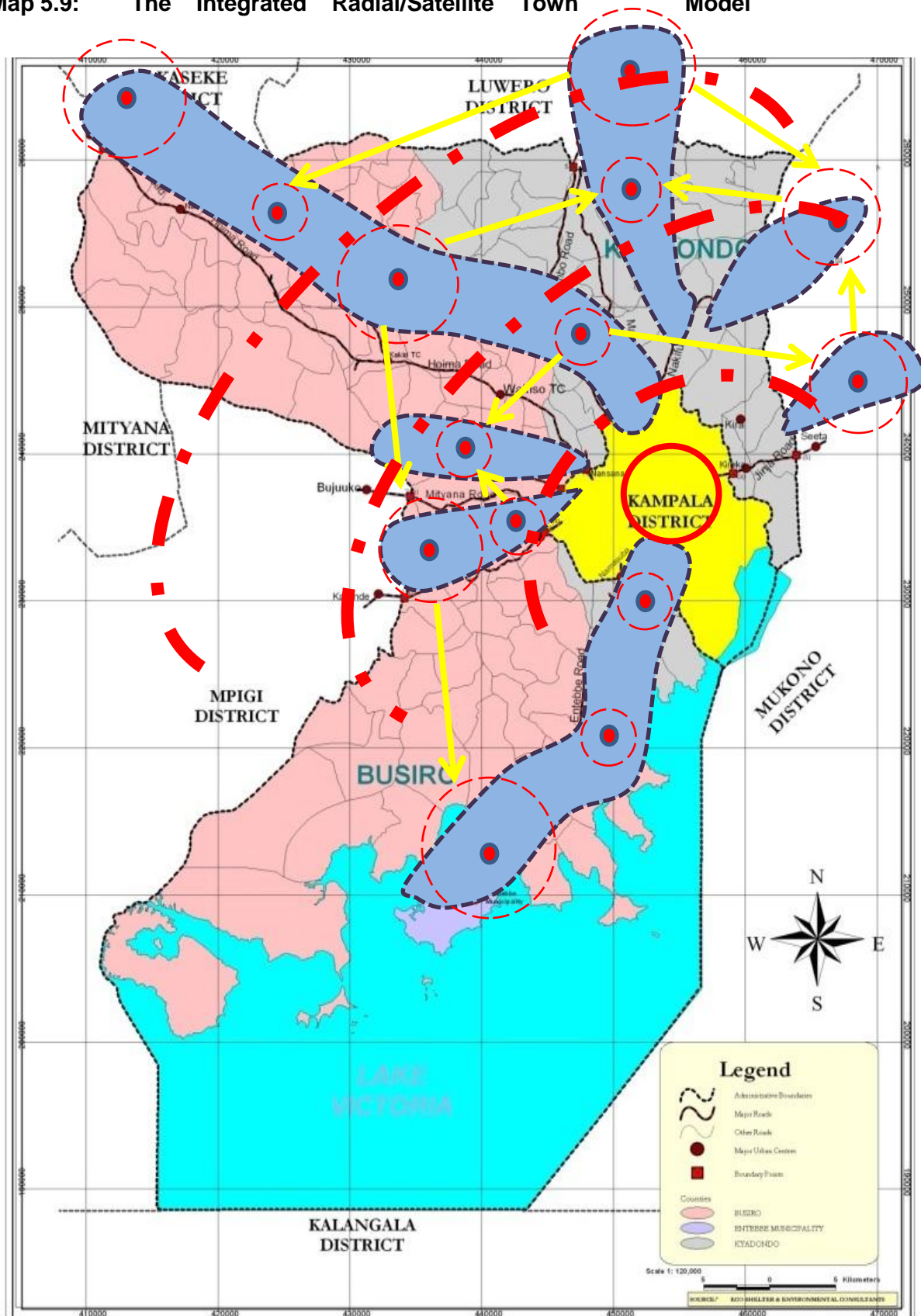
The preferred option was produced by cross referencing of the District Suitability Map with the above Conceptual Schemes revealing the most suitable model. The best model was found to be the intergration of the three models mentioned above. Radial/Satellite Town Integrated Model ("Satellite Towns and Transport Corridor") and the Greater Kampala Metropolitan Area Physical Development strategy that must be married with the District Suitability Analysis Map. The combination of the three creates a hybrid model which best represents the best approach to tackle the physical development challenges of the Wakiso District.

The Integrated Model development strategy will integrate the spatial elements of the district as follows: -

- i. Clear identification of the key urban centres in Wakiso District requiring immediate attention through extensive physical planning, identification and strengthening of the their local economy, creation of employment, education, health and services, as well as organized residential areas. The new towns will be planned and developed according to modern standards, creating organized, specialised and sustainable satellite towns capable of accommodating a large number of inhabitants in a quality environment;
- ii. Identification of the key transportation corridors that must be developed/upgraded for better connectivity and provide linkage between the urban centres with the district and with the Capital City and beyond;
- iii. Clear demarcation of the key wedge/belts/buffers including natural systems and environmental areas to be emphasized in the plan to address the existing development challenges. These will provide barriers to stop urban sprawl between Wakiso and the neighbouring areas and between the urban centres within Wakiso District;
- iv. Identification of clear and precise development strategies to address the identified physical development challenges and
- v. Recommend priority actions to ensure the achieving of the plan development strategy.

The combination of the three models creates a hybrid model which best represents the existing situation in the district. This model, presented in the following scheme, gives special importance and suggests a corridor system which follows the existing radial routes from Kampala City but terminated utilizing a buffer along the extensive natural systems and wetlands at the boundary of the district with the districts of Mukono, Luwero, Nakaseke, Mityana and Mpigi to control sprawl. These centres are to act as the district key urban centres interconnected but also connected to the city and outer districts. The through traffic highways will also regulate the extent of the various densities in the district.

Map 5.9: The Integrated Radial/Satellite Town Model



Following the analysis presented in previous sections the Consultant's recommends the following to guide Wakiso District Physical Structure: -

- Adaption of the Integrated Model as the structural model for Wakiso District and metropolitan area with a defined urban limit;
- Planning, management and strengthening the existing urban cores and centres of: -
 - Nansana, Wakiso, Kakiri, Namayumba and Masulita, along Hoima road
 - Kyengera along masaka road
 - Kira along Jinja road
 - Kasangati, Gayaza and Kiwenda along Gayaza Ziobwe road.
 - Makindye – sabagabo, Kajansi, Katabi and Entebbe along Entebbe road;
- Provide linkage between the above urban centres; the Kampala City, Business Centre Districts and the outlying districts with through high way traffic;
- Identification and instituting buffer (wedge) area between Kampala City and Wakiso District and between Wakiso District and the outlying districts of Mukono, Luwero, Nakaseke, Mityana and Mpigi to control sprawl and

The above recommendations act as guidelines for the Physical Plan Vision and Policy of Wakiso District and a basis for the operationalisation of the District Physical Development plan.

5.10 Wakiso District Physical Vision and Policy

The preferred model is a crystallisation of a Physical Vision and Development Policy for the district's planning area for the next 22 years. The Development Policy is aimed at creating balanced growth of well-organized and modern urban metropolitan system alongside the rural agricultural economy.

The Development Policy is composed of four planning operations: -

- Planning, management and strengthening the functioning of the existing urban cores and centres;
- Construction of modern metropolitan road system to provide linkage between the above urban centres with Kampala City, urban centres and the outlying districts.
- Creation of a buffer (wedge) area between the Kampala City and the district and between Wakiso District and the outlying districts of Mukono, Luwero, Nakaseke, Mityana and Mpigi to control sprawl, allow densification and optimum use of land resources.
- Protection of the agricultural, environmental and rural economic set-up and ecosystem

i. Planning, management and strengthening the functioning of the existing urban centres

The selected areas for widening and strengthening of existing cores are: -

- Nansana, Wakiso, Kakiri, Namayumba
- Kyengera
- Kira
- Kasangati, Gayaza and Masulita
- Makindye – Ssabagabo, Kajansi, Katabi and Entebbe

The above centres are local government entities with self-governance functions and mandates enshrined in law. Key among these mandates is the planning, budgeting and service delivery. The sorting out of the District Physical Structure will require putting in place the district and individual urban centre's Physical Development Plans. This will help to sort out the incoherent and imbalanced Physical Structure and to address the current severe social, economic and environmental problems and their considerable future challenges. The

interventions will require widening and strengthening of the town's physical, social and economic set-up in terms of employment, education, health, environment, and services, as well as organised residential areas.

The centres must be planned and developed according to modern standards, creating organised and sustainable satellite towns capable of accommodating a large number of inhabitants in a quality environment (Map 5.9). The new towns will become perfect substitutes offering quality housing, employment and services outside of Kampala City. This will allow the sustainable development and growth of the district.

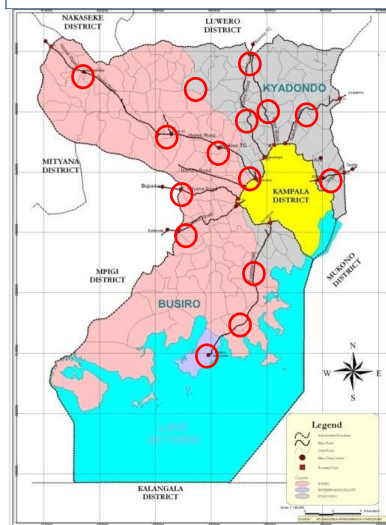
ii. Construction of modern metropolitan road system to link the urban cores and centres; and of the centres with the City and the outlying districts

The functioning of the identified urban metropolitan road system will require a good and modern road network system to serve and connect them and also connect these centres to the city and the rural districts. The road system will be an improved radial road system based partially on the existing system but expanding it for better connectivity with through traffic highways. The main components of the road system will be provided in the PDP for the district (Map 5.10).

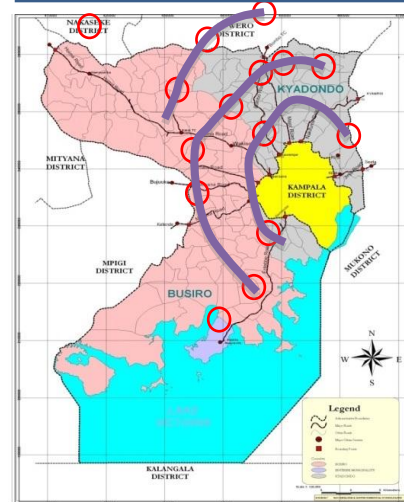
iii. Creation of a Buffer (Wedge) to control Urban Sprawl

The District PDP must sort out the incoherent and imbalanced physical development structure in order to address the current severe social, economic and environmental problems. To achieve this plan must create an urbanizing belt of continuous development within the district; the boundary with the outlying districts and with the City of Kampala to eliminate urban sprawl. The Kampala City Physical Development Plan incorporated the same buffer zone between the city and Wakiso District. The Wakiso District buffer zone would provide the second other belt to check the sprawl evident in the metropolitan area. The belt will be connected to the district through a system of metropolitan roads, both existing and new.

Map 5.9: buffer and wedges in Wakiso



Map 5.10: Connected Centres in Wakiso by semi-circular roads



PART IV

Chapter six

6.0 Description of the Proposed Wakiso Integrated Land use Plan (2018-2040)

6.1 Introduction

The plan presents a proposed framework for development of the urban and rural components relevant to the district under the two broad categories. The land use proposals and the future detailed planning. In each of these categories planning standards and development control mechanisms are suggested.

6.2 Suitability analysis

Physical planning is necessary to be carried out by utilizing methods which as much as possible take advantage of spatial analysis of development requirements. Suitability analysis for development of the different uses was conducted and modelled for provision of layers used in the land use proposals. A brief description of the suitability analysis is given below.

6.2.1 Criteria for land suitability analysis

In order to analyse land suitability for various land uses, the consultant developed a criteria based on map-able factors as illustrated in (Table 6.1).

Table 6.1: Criteria for suitability analysis

Criterion	Map-able factors	Remarks
Convertible vacant land	<ul style="list-style-type: none"> Subsistence agriculture Grassland/bush land Planted Forests Grazing land 	<i>Land cover that is convertible for future physical development</i>
Convertible built up areas	<ul style="list-style-type: none"> Low density areas with significant agricultural use 	<i>The densities can easily be upgraded to increase on densification (optimum use)</i>
Wetlands	<ul style="list-style-type: none"> Swamp wetland 30m away from the wetland Forested wetland 	<i>Land cover not suitable for physical development. They are for protection.</i>
Forests	<ul style="list-style-type: none"> Natural forests Hilltop and low lying forests 	<i>Non-swampy forests. They were considered as a no go area for future development. They were restored to its original gazetted boundaries.</i>
Slopes	<ul style="list-style-type: none"> 0% Flat 1% - 5% Gentle slope 5.1% - 9% steep 9.1% - 14% Moderately steep 14.1% - 20% relatively very steep 20.1+% Highly very steep 	<i>Highly very steep slopes present development problems and increase costs. They also increase environmental degradation related issues such as erosion. These were also not suitable for future development.</i>
Rocky outcrops	<ul style="list-style-type: none"> Exposed to the surface and had a significant area coverage 	<i>Areas that would not be available for development due to their hindrance</i>
Convertibility	<ul style="list-style-type: none"> Intensively built up Hard areas 	<i>Hard areas include land under religious sites, special areas high density residential and educational</i>

Criterion	Map-able factors	Remarks
Commercial servicing areas	<ul style="list-style-type: none"> Sub-district Parish areas Local servicing areas 	<i>Classified map of commercial servicing areas basing on existing trading centers and population catchment served</i>
Services demand based on population	<ul style="list-style-type: none"> Mainly the range of services The threshold of services 	<i>It's both social services (health, education, community centres, police, remand homes, vocational centers) and infrastructure (sewerage, water, garbage)</i>
Connectivity	<ul style="list-style-type: none"> road density (land use) inter-connectivity 	<i>To determine the circulation within the area. High density areas required high density circulation network and low density areas required low density circulation network. It also had an element of control of urban sprawl.</i>
Water resources	<ul style="list-style-type: none"> 0 - 100 m 	<i>For their protection apart from those uses that do not threaten its existence.</i>
Infrastructure Service levels	<ul style="list-style-type: none"> Well serviced Moderately serviced Poorly serviced Un serviced 	<i>Water</i> <i>Sewerage management</i> <i>Waste disposal method</i> <i>Energy supply</i>
Land values	<ul style="list-style-type: none"> Costs per acre 	<i>Determine areas for different social classes though mix was encouraged</i>

Source: Field Survey

6.3 Design Principles for the future Physical development Plan (2018 - 2040)

In this report, the approach to zone planning has been greatly influenced by the existing situation for cost effectiveness and to accommodate the national development priorities which include; poverty reduction, conservation of natural resources, HIV/AIDS reduction and gender mainstreaming. This physical development plan contends that planning cannot on its own adequately deal with the urban situation and therefore must be supported by urban design strategies as well as enabling policies and programmes. Thus this plan identified achievable strategic action programmes, which would benefit all categories of people in Wakiso District. Therefore the proposed land use was based on reinforcement of already existing activities in the district i.e. compatibility of live – work relationship. But of importance was that the future development of the district must address environmental sustainability.

Therefore the development of the proposed land use plan was based on principles that include the following: -

- The road network should have a hierarchical order in order to control interruption of traffic flow and future likely congestion,
- All land use development proposals should conform to the environmental protection requirements where by green corridor and buffers are used to break the built up monotony and to preserve the natural environment,
- Sensitivity analysis done to cater for the concerns of all stakeholders, encouragement of mixed development as a way of maintaining existing development and also promoting the concepts of user interdependence and live-work relationship,
- The design of new and/or upgraded communities should allow for the progressive upgrading of both individual plots and community as a whole,
- The urban form that takes a dispersed and stratified compact neighbourhood pattern in order to allow development that preserves land for future use, creation of employment centre and easy service provision;

- A range of services should be provided in scale to the proposed form of densities and in order to facilitate easy reach of people to these services,
- Encourage incremental development and implementation of the Action Plan.

6.4 Principles for land use proposal

- i. A plan that takes into consideration of the existing situation to minimise the cost implication of implementing the plan
- ii. A plan with an urban form which mixes gentrification or densification and dispersion of developments taking advantage of the current development trends.
- iii. A plan that is cost effective by taking into account of the existing situation.
- iv. A plan that promotes and encourages hierarchy of commercial centres for easy access to services.
- v. Maximization of the general circulation in the planning area.
- vi. A plan that encourages mixed uses for activities that are fairly compatible.
- vii. Protects the environment for sustainable development.
- viii. A plan that promotes and encourages the development of affordable social services and infrastructure for sustainability.
- ix. A plan that is cost effective by re-organizing and relocation of certain land use activities to promote aesthetic development.

6.5 Reports on Land Use Proposals for Wakiso District

6.5.1 Planning Options

Based on the planning scenarios analysed above and the input of various stakeholders, it was agreed that the land use pattern for Wakiso district take cognisance of the fact that the district was already built up and therefore there was need to make it realistic and affordable.

6.5.2 Residential Land Use

Basing on the situation analysis it was noted that Wakiso was predominantly residential. The plan has proposed three residential land use zones whose densities are based on the level of existing development and proximity to Kampala. The total residential area (137,545.5 Ha) which is 49% and it is divided into residential inner (43,226.6 Ha), which is 15.4, residential central (44,716.9Ha) which is 15.9% and residential peripheral (49,692.1 Ha) 17.7%. The description and function for residential is provided in tables 6.2 – 6.4.

Table 6.2: Inner Residential

Land Use: Inner Residential	Coloured:	
<i>Description:</i> Established closest to the city forming a crescent around its boundaries and within the inner ring road, high density, compact plot sizes with emphasis to high-rise developments, high circulation network and encourages mixed use (commercial, institutional, light industrial, civic and recreational). The areas may include; Kira MC, Kasangati TC, Kyengera TC, Makindye Ssabagabo MC, Nabweru and Nansana Divisions of Nansana MC. These residential zones are mostly residential but with more non-residential functions.		
Functional requirements:		
High density residential homes, streets, complexes and neighborhoods		
Large scale local commerce		
Large scale office facilities in neighbourhood commercial centres		
Public services and institutions		
Public open spaces including pedestrian and cycling routes		
Recreational activities		
The details of the above functional activities will be determined at lower level plans		

Table 6.3: Central Residential

Land Use: Central Residential	Coloured:	
<i>Description:</i> Established between the inner and outer ring roads, medium density, relatively big plot sizes with limited high-rise developments, medium circulation network and encourages mixed use like commercial, institutional, civic. The areas may include; Kajjansi TC, Katabi TC, Kakiri TC, Wakiso SC and Mende-kalema SC.		
Functional requirements:		
Medium density residential houses and complexes		
Offices and business facilities		
Light commercial		
Mixed use with commercial functions on ground floor and either office or residential uses on upper floors		
Public services and institutions		
Public open spaces		
Organised urban agriculture to support the food basket of the district		

Table 6.4: Peripheral Residential

Land Use: Peripheral Residential	Coloured:	
<i>Description:</i> Established beyond the outer ring road, low density big plot sizes (above an acre) with no high-rise developments, clustered settlements, low circulation network and encourages mixed use (agriculture, residential commercial, institutional). Areas covered include; Namayumba SC, Masulita SC, Namayumba SC, Kakiri SC and Bussi SC).		
Functional requirements:		
Low density residential neighborhoods		

Small scale commercial
Public services and institutions
Large scale agriculture for commercial purposes
Public services and institutions
Wetlands and natural forests
Public open spaces

6.5.2.1 Proposed Building Standards for Residential Land Use Development

Standards for building lines (**Table 6.5**) and Plot coverage (**Table 6.6**) were also formulated for future guidance of physical development in the district. A Building line is a distance from a road reserve from which a building can be erected. It protects the road reserve from encroachment and also eases future expansion of the road with minimal demolition in case need arise. The Consultant recommends that Wakiso district Council; specifically the physical planner communicates to residents or property owners about these standards. Violating the set building line within planned residential zones will not be permitted. These were given in ranges including;

Table 6.5: Proposed Building line standards

<i>Density</i>	<i>Standard range</i>
High density	1.5-5 m
Medium	5 – 10m
Low	10 -20m

It is recommended that all buildings should follow prescribed plot coverage to allow aesthetics (beauty) and greenery in their lawns and gardens. The developer can be advised on how best to utilise the un built area by professionals such as planners and landscape architects

Table: 6.6 Proposed Plot coverage

Density	Percentage coverage
High density	80%
Medium	40%
Low	20%

6.5.3 Proposed Commercial Land use

Commercial areas were structured in a hierarchical manner for example high order goods and low order goods. The former will be provided in the high order centres' like the CBD and latter in low order centres like the district and local centres. Low order goods are needed on a day-to-day basis, and therefore need convenience and easy access to goods and services. It is also envisaged that these centres will be used as growth poles to encourage uniform development but at the same time facilitate the creation of employment opportunities in the district. The classification of these commercial centres was guided by the existing administrative hierarchy of the lower administrative units.

The district will have multiple CBDs which will be at the level of the municipality. These are Entebbe, Nansana, Makindye Sabagabo and Kira Municipalities. The CBD covers an area of 1,269.3 Hectares (0.5%) and each was slightly expanded by invading some few residential areas which had tendencies of changing from residential to commercial use. The Town Councils will have

the district centres as their major commercial hub which covers an area of 1,462.1 hectares (0.52%) and proposed in Kajansi, Kasangati, Masulita, Wakiso, Kyengera, Kakiri, kasanje and Namayumba Town Councils. The local commercial centres are proposed in each sub county namely Namayumba, Masulita, Kakiri, Wakiso, Mende Kalema and Bussi. They cover an area of 868.9 Hectares (0.32%). These will help to extend services nearer to the people and/or encourage sustainable neighbourhood development. Therefore the total land under commercial use is 3,600.3 hectares (1.3%). The description and function under residential is provided in table 6.7- 6.9.

Table 6.7: Central Business District (CBD)

Land use: CBD		Coloured	
<u>Description:</u> provided at all centres of the four Municipal Councils (Entebbe, Makindye Ssabagabo, Kira and Nansana).			
Functional requirements:			
1	Offices and business facilities		
2	Markets		
3	High tech industries		
4	Storage and logistics areas		
5	Public service and institutions		
6	Public open spaces including pedestrian and cycling routes		
7	Transportation centers and urban highways		
8	Hotels, tourism, recreational and entertainment facilities		
9	Conference facilities		

Table 6.8: District Centres

Land use: District Centres		Coloured:	
Description: provided for all Town councils major towns .			
Functional requirements:			
1	Offices and business facilities		
2	Markets		
3	Light industries		
4	Storage and logistics areas		
5	Appropriate public service and institutions		
6	Public open spaces		
7	Transportation centers		
8	Appropriate recreation and entertainment facilities		
9	Emergency and police services		

Table 6.9: Local Centres

Land use: Local Centers		Coloured:	
<u>Description:</u> They are small scale Business, Community Services and Commercial centers within the built urban tissue. The local centers are to supply services for the residents of adjacent neighborhoods. The local centers have been provided to service the remaining sub counties and the different divisions within each of the four Municipal Councils.			
Functional requirements:			

Land use: Local Centers		Coloured:	
1	Commercial areas including markets		
2	Public services and institutions		
3	Limited offices and business facilities		
4	Recreational facilities		
5	Public open spaces		
6	Low level Transportation centers		
7	Emergency and police services		

6.5.4 Proposed Industrial development

Wakiso district is one of the most populated districts in Uganda and as such there was need to identify uses that will attract investors who will create employment opportunities. Industrial land use in this plan covers a total land area of 1,829.2 hectares (0.7%). The selection of these areas was influenced by the following factors:

- Guided by the existing situation.
- The areas are low-lying and gently sloping which suitable for industrial establishment.
- Industrial location was suitable near CBD in order to allow easy distribution of goods and services and minimize transport cost especially of the working class. But at the same time as a way of distributing employment centres in the district, some industries were proposed in the inner and periphery zone areas. These industries are to target both large and small scale industrial developments.
- They can easily draw manpower from residences of high density zone.
- They can also access raw materials to feed the small scaled industries for example food processing industries within the periphery.

However, it's recommended that the green belt of different canopies and proper landscaping should be enhanced around the industrial area during detailed planning level in order to control pollution from these industries. The plot sizes for industrial development will be determined when the district is developing industrial master plans. The description and function of this use are indicated in table 6.10.

Table 6.10: Industrial establishment

Land Use: Industrial	Marked:	
<u>Description:</u> Reserved for industrial activities both medium and heavy. Takes into consideration the previous planned industrial zones of Namanve, matugga/Kiryamuli/ Sanga/ kakerenge, Kakajjo/Mbarwa and Janda		
Functional requirements:		
a. Industrial activities / establishments		
b. Ware housing facilities		
c. high density residential		
c. Permissible commercial activities		
d. Recreation and entertainment		
e. Open Spaces		

6.5.5 Commercial Agriculture

This type of agriculture covering a total land area of about 4,221.6 Hectares (1.5%) was proposed in order to ensure sustainable food supply. This use has become popular because

many times urban dwellers have suffered with food shortage especially during the time of insecurity where rural areas may not be in position to supply the numerous urban centres that are rapidly growing in the district. It is also envisaged that this use will also support agricultural processing industries (maize and flower growing, dairy and poultry farms). They are located in areas like; Namulonge, Magigye, Nakyesasa, Sendusu, Mayirye, Kawanda Namayumba, Nkungulutale, Kitende and Nanziga. The following are proposed:

- Local people should be encouraged to grow fruit trees, vegetables, and other crops and/rear animals that will feed into the established industries.
- Zero grazing of cattle for milk production and also controlling animal loitering in gazzatted urban areas must be adopted,
- Poultry keeping can also be promoted at household scale. All these are aimed at enhancing nutrition and household income at household level to fight poverty.

However, the land for the proposed agriculture can be converted into other uses in future if needs arise but with approval from the National Physical Planning Board. The description and function of this use are indicated in table 6.11.

Table 6.11: Commercial Agriculture

Land Use: Urban Agriculture	Coloured:	
<i>Description:</i> Reserved for commercial agricultural activities. Takes into consideration the existing commercial farms.		
Functional requirements:		
a. Farm land		
b. Stores		
c. Permissible commercial activities		
d. Permissible residential activities		
e. Recreation and entertainment		
f. Open Spaces		

6.5.6 Institutional areas

This category covers broader educational, health and religious facilities. Basing on the analysis it was discovered that the existing facilities were sufficient to service the district in the in the next 20 years. Detail analysis of these land use category can be seen in the detailed report on social services in chapter three. The land use covers a total land area of 270.6 Hectares (0.1%). The description and function of this use are indicated in table 6.12.

Table 6.12: Institutional

Land Use: Institutional	Coloured:	
<i>Description:</i> Reserved for health, education, religious services and administrative such as major government institutions / offices		
Functional requirements:		
a. Social services		
b. Residential establishments (strictly serving a particular institution)		
c. Open Spaces		

6.5.7: Environmental and natural resources

This section considers all elements that have a bearing on the environment and its protection. They include; wetlands, natural forest reserves and buffer zones. This plan considers the protection and restoration of these natural features to take care of the climate change threats that are threatening the Sub Saharan Region. The wetlands in Wakiso covers an area of 28,058.1 hectares (10%) namely Lubigi, Mayanja, Lwajari, Nakinyanja among others. Natural forests covers 5,234.4 hectares which is 1.9%.the included; like; Luwawa, kasozi, Nakindiba, Tumbi, Nonve, Nalubaga, Wakayembe, Walumwany, Kajansi, Semunya, kalandazi, Mako, Kanjaza, kalangalo, Kitubulu, Kyewagga, Ggunda, and the buffer zone of 30 metres to protect these areas is 2,427.8 hectares which is 0.9% of the total planning area. The description and function of this use are indicated in tables 6.13 -6.15.

Table 6.13: Wetland Reserve

Land Use: Wetland	Marked:	
<i>Description:</i> Natural wetlands in the district. The wetlands have an important role in the district ecologic system and constitute the most significant land reserves in the district.		
Functional requirements:		
a. Wetland reserves including preservation and/or rehabilitation of natural fauna and flora, natural drainage and water bodies		
b. Natural open spaces		
c. Sustainable use of wetland by carrying out activities which are permissible		
d. Tourist attractions		
e. Facilities required for maintenance of the natural reserve		

All wetland development must be consistent with environmental regulations and include comprehensive drainage planning to ensure the protection of the ecologic system.

Table 6.14: Natural Forest Reserve

Land Use: Forestry	Marked:	
<i>Description:</i> Natural forest reserves form part of the natural resources reserves and open spaces. They are gazette and catered for under National Forestry Authority.		
Functional requirements:		
a. Forest reserves including preservation and/or rehabilitation of natural fauna and flora		
b. Tourist attractions		
c. Facilities required for maintenance of the natural reserve		

Table 6.15: Buffer Zones

Land Use: Buffer Zones	Coloured:	
Description: 30m reserve to prevent any unauthorized activities within the wetlands. Has been established along all wetlands		
Functional requirements:		
a. Protection reserve		

b. Fruit tree growing
c. Tourist Attraction
d. Open space and/ or recreating

6.5.8 Recreation and Tourism facilities.

In order to involve the community in active leisure and good health, the community especially the young people needs such Open spaces like golf course, beaches and tourism centres covering a total land area of 205.9 Hectares (0.1%). It should be noted that other lower facilities shall be provided at lower planning levels. Details on tourism and recreation can be seen in chapter three under tourism, cultural and recreation report. The description and function of this use are indicated in table 6.16.

Table 6.16: Tourism and Recreation

<u>Land Use:</u> Tourism and Recreation	Coloured:	
<i>Description:</i> Tourism and Recreation areas within the district existing sites (cultural sites.) to meet the different needs of local, regional and international tourism.		
Functional requirements:		
a. Tourist attractions including culture, entertainment, leisure, recreation and sporting		
b. Public open spaces and parks		
c. Hostelry		
d. Tourist facilities		
e. Convention facilities		
f. Appropriate tourism oriented commercial facilities.		

6.5.9 Water Front Area

Wakiso district has un tapped potential of the water front areas especially along Lake Victoria. This water front if well-developed can become a spring board for economic development of the district and the country at large. It therefore requires immediate attention before it goes to waste. It covers an area of 6,517.5 hectares (2.3%). The plan proposes that all Water front development must be consistent with environmental regulations and include comprehensive drainage planning to ensure the protection of the ecological system. The description and function of this use are indicated in table 6.17.

Table 6.17: Water Front

<u>Land Use:</u> Water Front	Coloured:	
<i>Description:</i> The Water front consists of the Lake Victoria shoreline in Wakiso District. The Water front is a mixed use area which includes functions of employment, commerce, tourism and recreation together with the protection and preservation of the coastline itself.		
Functional requirements:		
a. Urban parks		
b. Sports fields		

c. Hotels
d. Tourism facilities
e. Culture, entertainment, leisure, recreation and sports facilities
f. Offices and business facilities
g. Appropriate commercial facilities
h. Public services and institutions
i. Public open spaces including promenades, pedestrian and cycling routes
j. Transportation facilities
k. Hostelry
l. Convention facilities
m. high class residence
n. Marines and water sports centers

6.5.10 Land fill

Management of solid waste in Wakiso district still pose a big challenge and without coming out with clear and streamlined intervention the problem will turn into disaster in the near future. For this pupose the plan proposes that Wakiso should have a properly managed land fill where all generated solid waste in the district can be disposed. The land fill covering 8.2 hectors is proposed at Menvu in Busukuma Division, Nakaseta in Namayumba, Sekiwunga in Kajjansi and Sentema in Wakiso Sub County. The landfill at Kitezi should also be relocated to the new site and the area should be re-instated to be used for open space and recreational. For the case of Entebbe area they need to upgrade their dumping area to a land fill. Also proper management mechanisms of land fill should be put in place such as sorting of wastes at the source before final disposal, compacting and covering waste with soil layers at the landfill to prevent scavengers, leachates from polluting the ground water, bad odour that is associated with such a facility thereby controlling conflicts with the nearby neighborhood.

6.5.11 Special areas

These uses cater for special areas such as the army, police and prisons barracks. The existing special was maintained as it was discovered that their distribution is sufficient to service the district in the next 20 year. It covers a total land area of 214.3 hectares which is 0.1%. The description and function of this use are indicated in table 6.18

Table 6.18: Special Areas

Land Use: Special Areas	Coloured:	
Description: Reserved for areas of national security like barracks, prisons, and statehouse.		
Functional requirements:		
a. Administration offices		
b. Institutional like health and education to serve the inhabitants		
c. Permissible commercial activities preferably conner shops and shopping malls		
d. Recreation and entertainment		
e. Open Spaces		
f. Residential strictly for the inhabitants		

6.5.12 Transportation

The plan recommends expansion of the international airport at Entebbe to develop a specialize airport and business zone in the area. It covers an area of 425.6 hectors (0.2%) of the planning area. The description and function of this use are indicated in table 6.19. The details of land requirements for inland ports, and all other transportation terminals as proposed in this plan will be provided at lower planning levels (Municipal and Town Council levels).

Table 6.19: Transportation

Land Use: Transportation Terminals	Coloured:	
<i>Description:</i> Reserved for conveying goods and services both locally and internationally. This includes the Airport, Airfields, inland ports and bus terminals		
Functional requirements:		
a. Transport interchanges		
b. Storage facilities		
c. Permissible commercial activities		
d. Recreation and entertainment		

6.5.13 Sewer lagoons

The current management of human waste in Wakiso district leaves a lot to be desired. There is need to transform the system from dominantly traditional individual pit latrines to conventional sewerage management systems given the fact that the district is urbanizing very fast. For this matter the plan proposes sewer lagoons in the following areas; Gombe division, Busukuma Division of Nansana Municipality and the existing Lubigi to serve Nansana and nabweru Divisions. In Kira it is proposed in Kiwanyi Division, Kajjansi to cater for Makindye Sabagabo and Kajansi Town Council. The one existing in entenbbe will be upgraded to serve Entebbe Municipality and Katabi Town Councils. This use covers an area of 19.7 hectares (0.01%). The above land uses are illustrated in map 6.1 - 6.3.

6.6 Potentials for the different development Zones

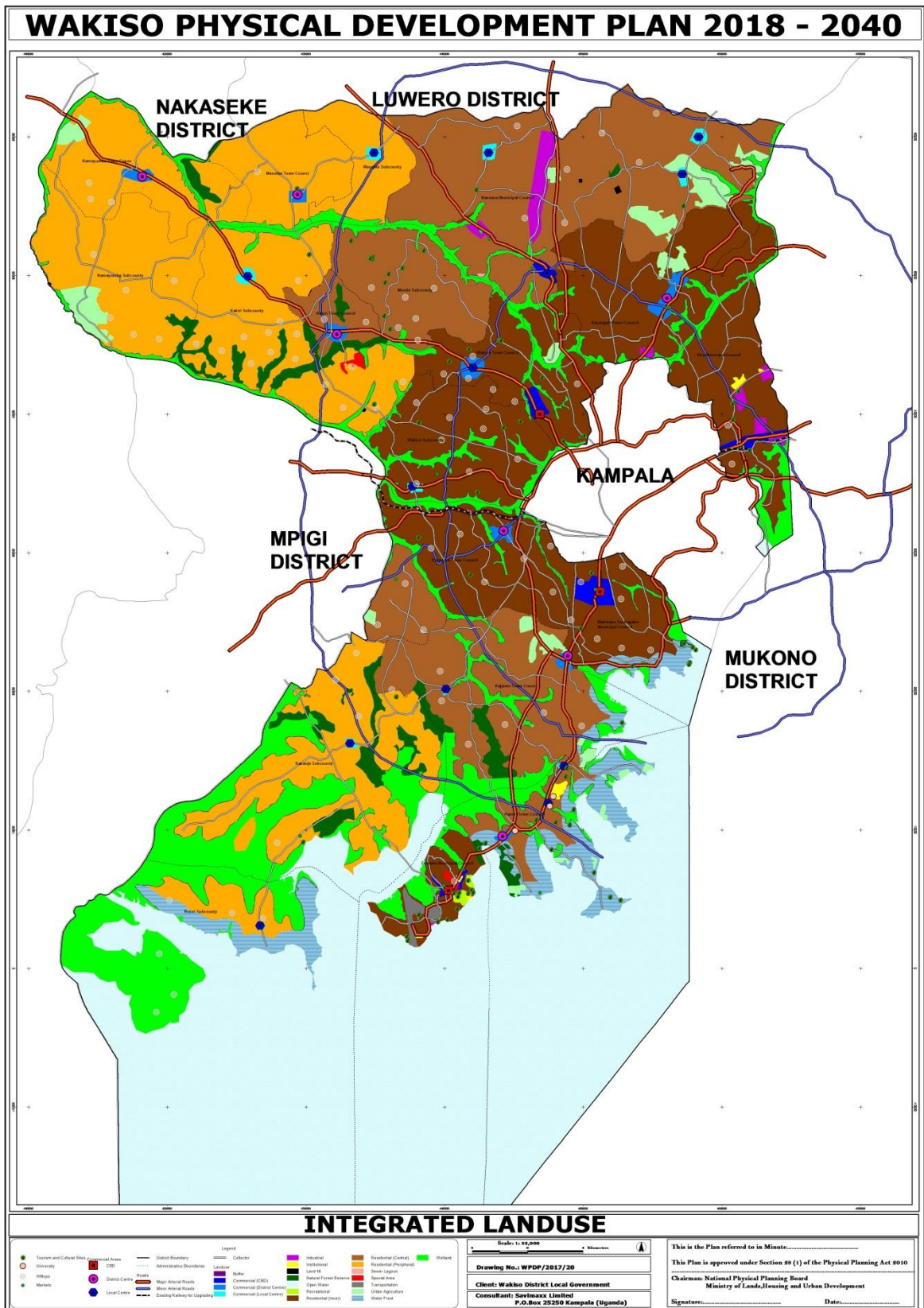
The consultant further assessed the potentials for the different areas for puposes of encouraging different administrative areas to focus on development aspects to which they had potential. The analysis indicated that the district can best be subdivided into five large potential zones which can be harnessed to promote economic development. These include; educational, industrial, agricultural tourism and fisheries. The selction of these places was majorly based on the existing situation.

The plan identified areas like Kyengera and Kasangati Town Councils to become centres of educational excellence. This was based on the availability of high quality performing schools in the area and their potential to develop it further. For Industrial Development, the plan identified Nansana and Kira Municipality. For commercial/large scale agriculture, the plan identified Namayumba, Masulita, Kakiri and Mende-Kalema. Tourism leasure and recreation, the pla identified loal councils which are along the water front areas. They include; Entebbe MC, Katabi Tc, Kajansi TC and Makindye Sabagabo MC. Areas suitable for fisheries industry in the district were Busi SC and Kasanje TC as illustrated in Map 6.4.

6.7 Action Areas

The consultant identified a number of issues which require immediate attention. However the implementation of these requirements needs a lot of money which the district may not have at ago. These will require to be broken down into short medium and long term priorities for puposes of implementation. The consultant recommends however that the district needs to focus on the following action areas as away of averting the current not so good situation;

- Preparation of an Industrial park Master Plan – Kiryamuli, Sanga – Kakerenge
- Developing a detailed Waterfront Master Plan
- Preparation of PDPs for all urban councils – Namayumba, Masulita, Kakiri, Kasangati, Katabi, Kajjansi, Kyengera and Kasanje
- Development of the Solid Waste Management Plan
- Promote Slum upgrading programs to take care of such areas like; Kasokoso, Bunamwaya Nfufu, Kisimu, Jinja Karoli, Bweyogerere
- Restoration and preservation of ecological zones (forests, wetlands)
- Development of a Drainage Master Plan
- Preparation of a transportation Master Plan



Map. 6.1 Integrated land use

NATURAL RESOURCES AND OPEN SPACES

Legend

- Hilltops
- District Boundary
- Administrative Boundaries

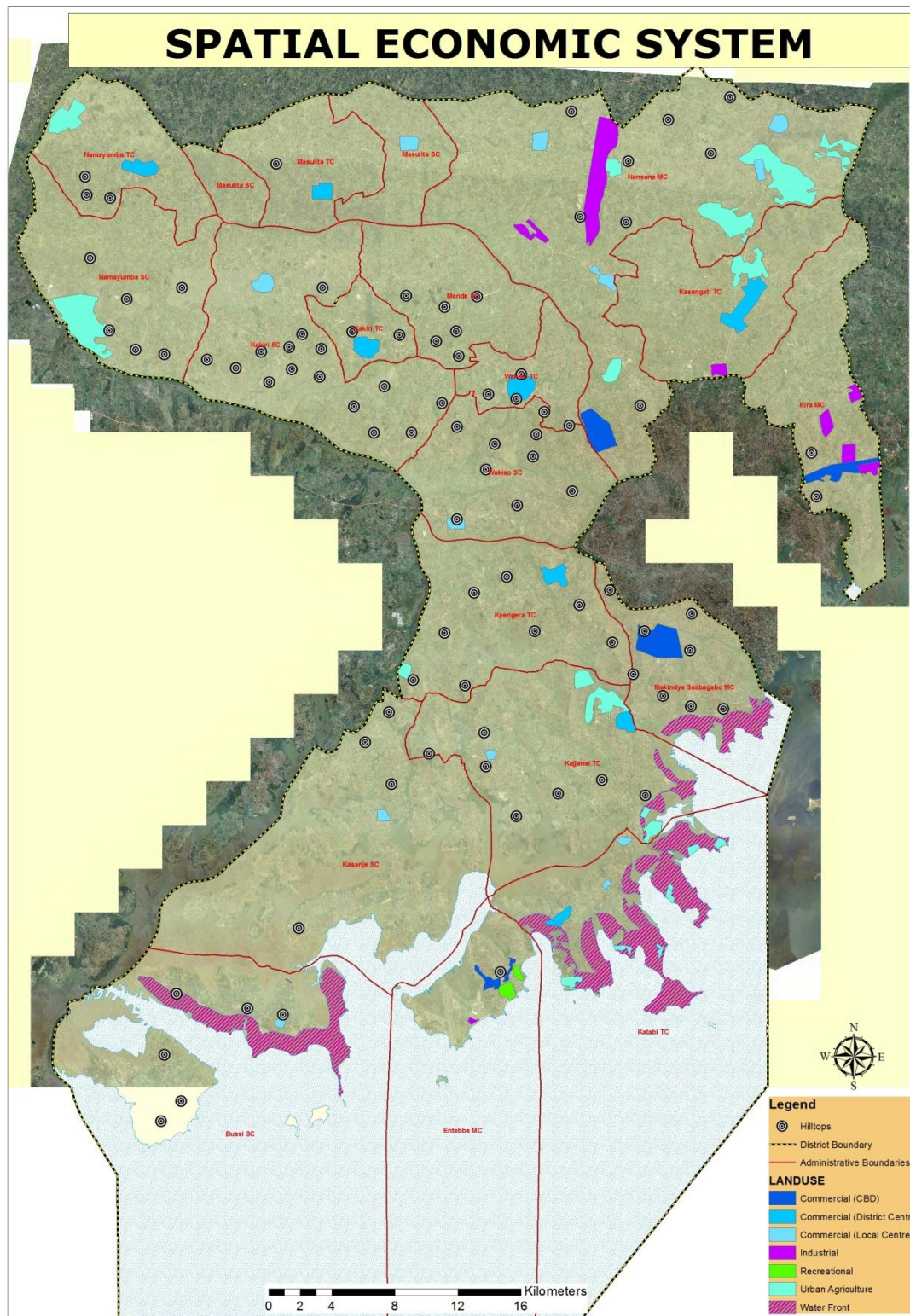
Natural Resources

LANDUSE

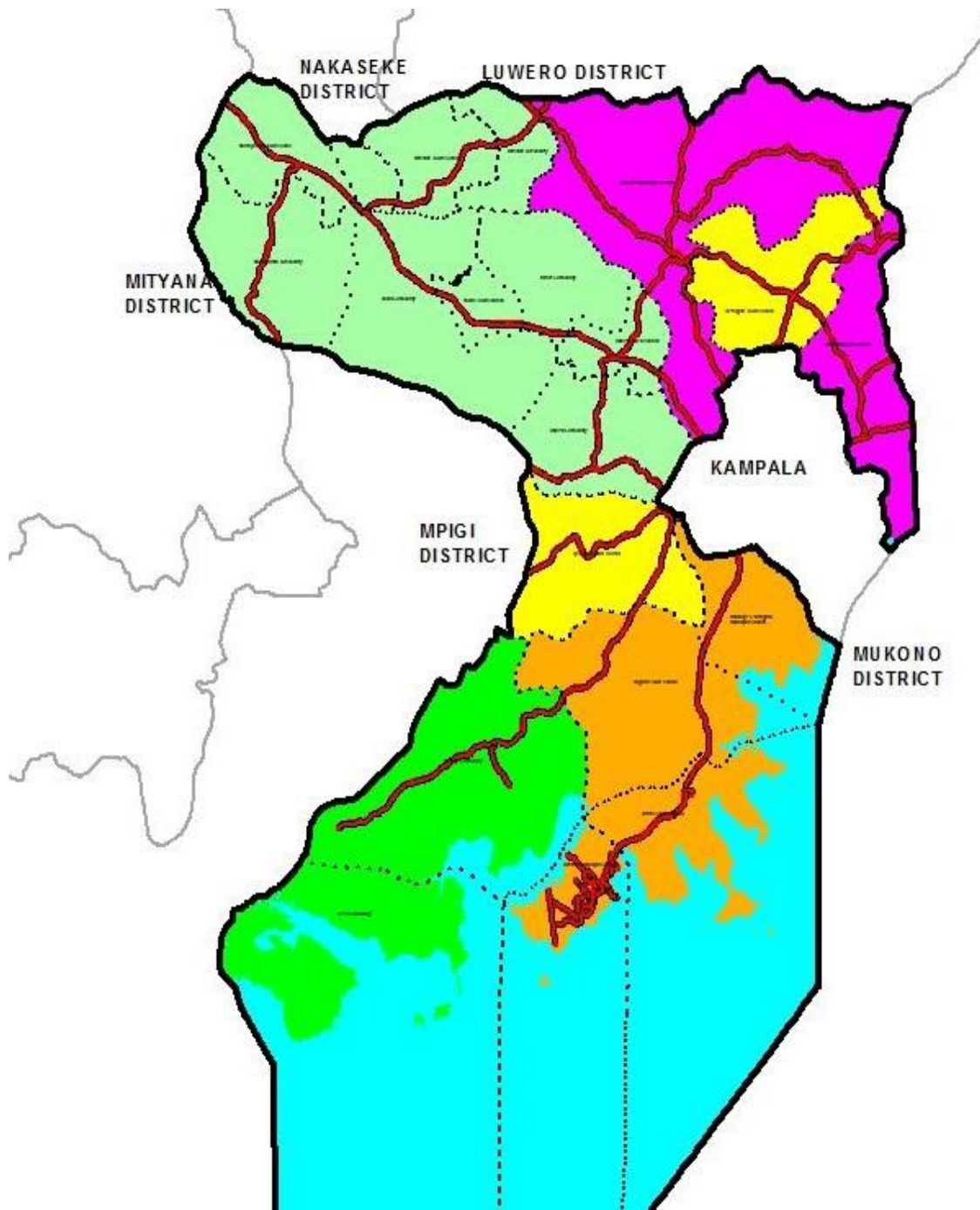
- Buffer
- Forestry
- Open Water
- Recreational
- Water Front
- Wetland

0 2 4 8 12 16 Kilometers

Map 6.2: Natural Resources and Open Spaces



Map .6.3: Spatial economic Systems.



Map 6.4 Development potential Areas for Wakiso District

Chapter Seven

7.0 Written provisions strategic interventions, general recommendations and development control mechanisms

7.1 Written provisions.

7.1.1 Planning horizon

Planning in Wakiso District will take place according to the proposed hierarchy below.

1. Wakiso Physical Development Plan (WPDP)
2. Municipal Physical Development Plan (MPDP)
3. Town Council/ Sub County/Municipal Division Physical Development Plan (TPDP)
4. Neighbourhood Development Plan (NDP)

It should be noted that in this plan the District, Municipality, Town Council are referred to as planning authorities as provided for in the Local Government Act 1997.

7.1.2 Wakiso District Development Plan

This plan will give a framework for future land use development in the district. It will guide the major land use zoning, the physical infrastructure (Major arterial roads) and social services. It will also indicate the boarder planning standards which will guide the lower planning levels as indicated in 7.1 above.

7.1.3 Municipal Physical Development Plan

This plan will work as a framework for future land use development in the municipality. It will guide land use zoning, the physical infrastructure, social services and any other supporting services in the municipality. It will indicate the planning standards and regulations that will guide planning at lower levels as indicated in 7.1 above. The plan will fit into the higher level physical development plan like the district, regional and national physical development plans.

7.1.4 Town Council/sub county/division Physical Development Plan

This plan will work as a guide to future land use development in the respective town council, sub counties and municipal divisions. It will regulate land use zoning, the physical infrastructure, social services and any other supporting services at this level of planning. It will indicate the planning standards that will guide planning at other lower levels as indicated in 7.1 above. The plan will fit into the higher level physical development plan like the municipal (where applicable), district, regional and national physical development plans.

7.1.5 Neighbourhood Physical Development Plans (NPDP)

A neighbourhood in this plan is taken to include but not limited to parish/ward, village/cell specific site and /or a combination of all or part of the above. Every Neighbourhood shall have a Physical Development Plan. The Neighbourhood Development Plan (NPDP) will indicate the land use zoning and the detailed plan of that area. It is to be planned at a scale of 1:2,500 with planning reference to the context of its respective levels. It will conform to all other higher level physical development plans as indicated in 7.1 above. It will highlight the standards for plot sizes, the road hierarchy, social amenities and services and all other related infrastructures.

The NPDP is to allow orderly, coordinated, harmonious, progressive and sustainable development of the area to which it relates in order to promote health, safety, order, amenity, functionality, accessibility, general welfare and economy to all its inhabitants and efficiency in the process of development.

The NPDP will include the following components:

1. Land use plan (scale 1:2,500)
2. 3D Urban Design and images
3. Written provisions
4. Standards and regulations for all the proposed activities
5. Statement of compatibility with and/or divergence from the upper level plans and compatibility with the Physical Planning Act 2010. In the event the NPDP is prepared by a body other than the stated upper level planning authorities or the MoLH&UD, this statement will be a sworn statement signed by both the representative of the body proposing the plan and by the lead planner. It will also require approval by the relevant authorities as provided for under the National Physical Planning Act 2010.
6. Action Area
7. Investment plan

The NPDP will address the following provision

A. Physical elements

1. The area to which the PDP is to apply, detailing and in accordance with Boundaries and Map. Boundary changes of not more than one hundred (100) meters will not be considered changes to the NPDP. NPDP boundaries must be adjacent with no overlaps or gaps.
2. Detailing , adjusting and altering the boundaries, area, shapes, and positions of any land use including roads, streets, pedestrian and cycle paths and rights- of –way;
3. Classification and subdivisions of the plan area for residential, commercial development, institutional and service facilities, business and industrial development, infrastructure, environmental protection and natural resource management, public and private open space and tourism, or a combination of any of the above. No land or structure within the plan area will be developed or used for any purpose other than in accordance with the plan.
4. Determining the type and density of development generally or in any particular locality, for all or specific uses and functions consistent with the average density targets.
5. Assessing the balance in the supply of and demand for local public services, facilities and amenities for the projected population, identifying any gaps and in the event of a projected shortfall defining requisite ameliorator solutions to ensure appropriate service provision.
6. Determining the location of public service facilities including major public institutions, education (primary school upward), health (HC III upward), community facilities, sports facilities, major ecclesiastical facilities for all denominations, playground, etc.
7. Conservation and enhancement of historic buildings and objects of architectural, archeological, historical or scientific value.
8. Feasible routes for existing , upgraded, and new roads, streets, cycle routes, pedestrian routes, rights –of- way, railways and canals, probable sites for bridges, docks, harbors, piers, power-lines, telecommunications, water drainage and sewerage or any other work or undertaking of public utility.

9. Determining the appropriate location for major infrastructural facilities including water storage and distribution; collection, transfer, treatment and disposal sites for solid, liquid and hazardous waste; power transformation facilities; communication masts with appropriate exclusion areas; etc.
10. The 3D urban form and architectural principles of the urban fabric
11. Traffic analysis of the proposed plan and comprehensive transportation plan for the entire neighbourhood.
12. Mapping and assessment of environmental values and defining mechanisms for their appropriate use, protection, rehabilitation and/or preservation.
13. Mapping and assessment of sources of pollution and defining mechanisms for their resolution or mitigation;
14. Mapping and assessment of all historic buildings and landmarks and defining mechanisms for their appropriate use, protection, rehabilitation, and /or preservation.
15. Assessing access needs and ensuring access to services, opportunities and public transport for all residents with special emphasis on pedestrians and on the disabled.
16. Assessing needs and defining mechanisms ensuring all plots in the precinct can be connected to power supply, on-plot water supply and water borne sewage systems.
17. Undertaking appropriate participatory and consultative processes, identifying, assessing, balancing, and addressing, as best possible, relevant stakeholder and public (civil society) interests, needs, desires and preferences.

B. Redistribution of land ownership (when necessary)

18. Facilitating easy accessibility to land ownership within the plan area by re-distributing land among the people.
19. Effective exchanges of or cancellation of existing land sub division as may be necessary or convenient for giving effect to the NPDP.
20. Adjusting property rights between owners of land.
21. Compulsory acquisition of land for public use by the planning authority.

C. Implementation.

22. Defining implementation stages, prerequisites and conditions for NPDP implementation
23. Action plans for implementation
24. Directing Construction Licensing and Enforcement
25. Any matter necessary or incidental to the implementation of the NPDP.

D. NPDP Approval

Subject to requirements of the Physical Planning Act 2010 and consistency with higher order plans, all proposed NPDPs will be assessed, rejected or approved in part or in full or subject to changes by the planning authority: all deviations from WDPDP are subject to National Planning Board approval.

All NPDPs will be initiated by the planning authority or prepared by other parties subject to prior approval by the planning authority which will include prior definition of plan boundaries and mechanisms and benchmarks for reporting and consulting.

approval of each NPDP will include:

- a) All requirements and processes defined in the Physical Planning Act 2010 for local Urban Physical plans.
- b) Preparation of the plan under the direction of a Physical Planning Committee chaired by the planning authority Town Clerk.

- c) Preparation of plan on the basis of extensive stakeholder and public (civil society) participation and consultation.
- d) Presentation of the proposed plan in an open, structured consultative forum for public feedback to be held in the precinct or within easy access thereto;
- e) Assessment and recommendation of the plan by the concerned Authority Planning Department.
- f) Presentation of the proposed plan to the Authority Council.

7.2.0 Strategic Interventions and Recommendations

7.2.1 Approach

The long term vision for Wakiso District as indicated above, presents challenges of generational scale. The preconditions for such development have to be set in place before Wakiso District can begin to develop into a city as decision makers and residents desire. These preconditions need to be met largely over the coming decades under the proposed strategic interventions.

Wakiso District Council is the enforcer of by-laws and/or ordinances set out by her. It has been recognized that the district is a highly urbanizing area with the necessary human resource but lacking finances to implement these laws by itself. Therefore the physical development plan proposes for further funding from the central government, international organizations, NGOs, the private sector and other local institutions for effective implementation of the proposed strategic intervention as illustrated in (Table 7.1).

Table 7.1: Strategic interventions

Development issue	Strategic intervention	Time frame	Actor
Land use planning and management	<ul style="list-style-type: none"> Embank on the development of Municipal Physical development Plans to guide and control the haphazard physical development with emphasis on Nansana, Makindye Sabagabo and Kira municipalities. 	5 years	Nansana, Makindye Sabagabo and Kira municipalities, MoLH&UD, MoLG, MoFPED, NPA, Donor partners and the Private sector

Development issue	Strategic intervention	Time frame	Actor
	<ul style="list-style-type: none"> Survey and gazette all public open spaces, reserves for major roads, ecologically sensitive areas and other physical infrastructures to protect them from encroachment Preparation and implementation of detailed plans for all CBD, District and Local commercial centers and industrial areas in order to act as growth poles and employment creation centres to attract balanced growth in the entire municipality There is need to develop a communication strategy in order to popularize the plan 	10 years 5 years 1 year	Wakiso district, MoLH&UD, MoFPED, Wakiso district, MoLH&UD, MoFPED, Donor partners and the Private sector Wakiso district, MoLH&UD,
Population explosion	<ul style="list-style-type: none"> There is need to redistribute possible employment opportunities across the District. The CBDs inevitably remains the focal point for the local, regional and national economies. This should be complemented and balanced by significant employment centers in the district such as industrial areas. There is need to control population explosion through supporting programs aimed at curbing rural urban migration and improving the management of the Municipality with the view of minimizing problem related to the district caused by population pressure. These programs include, integrated rural development which allow the provision of appropriate rural technologies hence accommodating the rural population. This should be implemented in conjunction with other social policies. 	10 years	Nansana, Makindye Sabagabo and Kira municipalities, MoLH&UD, MoLG, MoFPED, NPA, Donor partners and the Private sector Wakiso District MoLH&UD, MoLG, MoFPED, NPA, Donor partners and the
Housing sector	<ul style="list-style-type: none"> There should be deliberate interventions to tackle informal settlement especially for the poor communities. The district should acquire land, plan it and provide low cost housing for purposes of reorganizing settlements but at the same time addressing the housing shortage in the district. The district should develop prototype development plans so that the poor who 	10-15years 2 -3 years	Wakiso District MoLH&UD, MoLG, MoFPED, NPA, Donor partners Wakiso District

Development issue	Strategic intervention	Time frame	Actor
	can't afford architectural services can be able to put up structures with approval from the Municipality.		MoLH&UD,
Economic development	<ul style="list-style-type: none"> Revenue enhancement for the district is very critical. There is need to identify other revenue sources which are not yet been tapped and also maximize the collection of property rates especially in the already established municipalities and town councils in the district. There is need to develop a computerized register to support collection of taxes 	3-5 years	Wakiso District, MoLH&UD, Donor partners, Private sector
	<ul style="list-style-type: none"> The district should put in place mechanisms that will promote the tourism potential which seems to still be lying un utilized. 	5 -10 years	Wakiso District, MoTW&H, Donor partners, Private sector
	<ul style="list-style-type: none"> There is need to legalize the informal sector so that they contribute to the local revenue of the district. The District should also plan for their existence as a measure of promoting local economic development. 	2 -5 years	Wakiso District MoLH&UD, MoLG, MoFPED, NPA, Donor
Infrastructure development	<ul style="list-style-type: none"> The need to strengthening the districts' financial capacity to improve their self-financing capacity and their creditworthiness with respect to investments in infrastructure systems. An essential criterion of success is the involvement of all levels of government responsible for the various sectors and their financing. There is need to improve infrastructure based on concrete plans of the district, for example the development of integrated public transport systems, There is need to develop the ring roads to increase circulation and flow of traffic. The drainage system needs immediate attention to avoid road damages and continuous flooding whenever it rains especially in densely built areas of Kira, Makindye Sabagabo and Nansana municipalities. There is need to revive railway transport to 	5-20 years	MoW&T, Wakiso District Council, Private sector, MoLH&UD

Development issue	Strategic intervention	Time frame	Actor
	<p>support the movement of people at affordable costs.</p> <ul style="list-style-type: none"> ▪ The existing airfield also needs to be upgraded to supplement the other existing modes of transport. ▪ Improvement on water, electricity and sewerage network coverage is critical for purposes of attracting external investments in the district. 		
Staff development	<ul style="list-style-type: none"> ▪ There is urgent need to build capacities of all technical staff who will be implementing this plan ▪ The district needs to pattern with other institutions like universities and the private sector to provide backer stopping and promote community outreach. 	5 years	Non-Governmental Organization, Wakiso District, International Agencies
Environmental health	<ul style="list-style-type: none"> ▪ The municipality should encourage collective responsibility by promoting “The Keep Wakiso district Clean Campaigns” through awareness creation, competitions at municipal and town council’s levels and where necessary enactment of district bylaws especially in areas of sanitation to ensure community participation so as to reduce on open dumping of waste in the urban areas. ▪ There is need to develop a modern solid waste management plan as a measure to encourage proper refuse disposal. ▪ There is need to gazette and construct slaughter houses in the district and they should be properly managed. ▪ Environmental education/capacity building; to encourage and promote onsite environmental management, conservation and monitoring by the local council and public. ▪ Wetland management programme; to ensure demarcation of valued wetlands as habitats, flora and fauna in them and other cultural values, ▪ Restoration of all natural forests in the district and protecting them ▪ Refuse disposal management; for extensive research on appropriate collection, 	3-5 years	Wakiso District Council, All municipalities and town councils, NGOs, NEMA

Development issue	Strategic intervention	Time frame	Actor
	<p>transportation and disposal.</p> <ul style="list-style-type: none"> ▪ Tree planting programme for landscaping and creation of a roadway portal for domestic or local community aesthetic value ▪ Human waste treatment; to reduce the use of pit latrines for lagoons especially within congested areas. The district must make use of the existing Lubigi sewage treatment plant 		
Social services	<ul style="list-style-type: none"> ▪ Need for construction of more community centers at list one per parish/ward where training sessions especially of the youth can take place. 	3-5 years	Wakiso district, Municipal Council and town councils in the district, NGOs

7.3 General recommendation

7.3.1 Institutional development

- Given the development trends for Wakiso, there is need to review the status of Wakiso from a rural district to a City District as it was the case for Kampala before the creation of KCCA. Government should adopt the staffing structure and funding similar or even more to that of KCCA.
- Develop sensitization programmes for the Wakiso District Council community to begin the transformation process from rural to controlled urban systems that meet the international standard and way of life.
- Develop local laws that regulate human behaviour in the area. Setting up such things like village rules for the locals and for the visitors, which can be printed on a brochure/or pinned on a log at specific sites can help to control behaviour.
- To enable smooth running and management of the development of the Wakiso District Council it is necessary that within the district Institutional Framework, a vote be created specifically to oversee the physical development of the planning area. This is advisable in order to allow for direct generation and allocation of funds, manpower, materials and other resources specifically for the developing lower local plans for the proposed areas in the strategic plan.
- In order to reduce degradation of ecosystem disturbance such as vegetation loss, interference with wildlife dispersal and in order to encourage development in accordance with development guidelines and ensure environmental safety, the proposed sector/institution at the district should identify key development sectors in the planning area in order to develop and set guidelines, environmental quality standards, laws, rules and regulations governing use and management of environmental resources and development projects. Relevant sector bylaws must be laid down e.g. for natural resource conservation; for any indigenous tree felled for construction purposes a replacement must be planted. Incentives to encourage compliance and penalties for violation of laws and regulations especially among private sector developers such as visitor centre operators, industrial

owners and amenities providers must be defined. Appropriate economic incentives are also necessary to attract especially the private sector to invest in tourism projects in the area.

- The local sector development guidelines must be harmonized with the current guidelines from e.g. relevant government agencies, the ministries, and various existing national laws and policies related to conservation.
- Local management and enforcement organs e.g. pollution control organs within the planning area need to be developed, strengthened and empowered with training and skills, funds, manpower, materials and equipment to effectively regulate and supervise development activities. Contribution and involvement is expected from relevant stake holders including NGOs operating in the area, local government offices, business enterprises, and other relevant bodies and individuals.

7.3.2 Physical Development

- In order to sustainably utilize the natural environment and to direct development activities according to the area development plan, physical planners of the area must clearly zone the area into designated development areas during the development of detailed schemes. This will result into positively restraining disorderly development and land speculation and will also minimize negative environmental impacts of development on the ecosystem.
- To avoid any unnecessary alterations to the landscape and disturbance to the ecosystem, Environmental Impact Assessments (EIA) must be carried out by registered environmental parishioners before any development related activity such as construction and reconstruction, water supply development, industrial plant establishment, infrastructure development, transport projects, sewerage management, commercial agriculture, tourism development etc, is done. Approval from NEMA must be obtained on completion of the normal procedures of an EIA and presentation of an Environmental Impact Statement (EIS). For development plans to be approved they must be accompanied by a certified EIS.
- All developments of infrastructure, facilities, amenities, and other activities must be done in accordance with the required standards, in the designated zones, by competent organs and for approved purposes. This will enable systematic monitoring and evaluation of the development projects and also minimize environmental and social impacts of the projects.

7.3.3 Marketing and advertisement

- Train local people to become professional entrepreneurs.
- Creation of an Information Centre where residents and visitors can easily obtain any form of information about the district.
- Preparation of brochures, pamphlets, magazines, souvenirs for advertisement and visitor information but also very importantly information on development requirements and standards.
- Use of regular local and national radio programs to give information, educate, encourage participation, create awareness, and raise interest of the local people in the district activities.
- Monitor quality of products and processes in order to attract investors and generally visitors.

7.3.4 Capacity Building and Training

- In order to sustainably implement the plan there is need for building capacities of technical staff and the policy makers in understanding and implementing developmental programmes in Wakiso District Council. It is the wish of this plan to see the Physical Planners, the Community Development Officers, Environmental Officers, surveyor and Civil Engineers trained in graduate programmes such as; integrated regional planning, ecotourism development and management, development control systems and land management, GIS and remote sensing, natural resource management, PPP in urban infrastructural

development and others. Such courses range from 3 month to 1 year programmes locally and abroad.

- It is highly recommended that the programmes must be tailored toward enhancing capacities of local staff for better management. For the policy makers programs like urban development and management, finance management and budgeting, mobilization and communication strategy are recommended. Recommended institutions for such programmes include UMI, MAK, and Nsamizi for local courses and ITC Netherlands, RCMRD Kenya, ESAMI Tanzania for international courses among others.
- There is need for establishment proper management of educational systems/ institutions in the area with the objective of developing trained local personnel as professional workforce. It is necessary to create a workforce with general understanding of ecosystems, resource management, human relationships and the urban physical development management systems etc.
- Institutions involved in Community and Environmental Education need to be encouraged in order to provide conservation knowledge, provide necessary skills for transformation of their activities to conform to proposed land use changes, encourage behaviour change, and enlist their positive participation and acceptance of development and conservation initiatives. Institutions such as NGOs, CBOs and the District Community and Environment offices should be identified, motivated and liaised with to intensify conservation and development education among the community members.

7.3.5 Resource mobilization

- The district Service commission responsible for recruitment of staff in Wakiso needs to employ competent persons skilled enough to aggressively lobby both local and international bodies to provide financial and material resources for the development initiatives. Such skills may include ability to organize and manage fundraising activities, write funding proposals, lobby international and local donors, solicit for grants, etc.
- Competent organs need to be consulted to define and/or revise user fees, fines, local taxes, etc. to match the scale of development expected in the area and the services to be provided. This will be a convenient way to generate local funds from the area for its own development activities.
- Local manpower should always be given priority in employment in areas such as facility management and provision, construction, enforcement, local leadership, local program management, community education, monitoring etc. This is a strategy to ensure participation of the local people in development initiatives and getting them involved in beneficial non-consumptive use of resources.

7.4.0 Development Control

For purposes of proper coordination and harmonization of all plans at the different planning levels in the district, It's recommended that development control will be the responsibility of both Wakiso District Council and all other Lower Local Governments so as to allow conformity of the Wakiso District Council development plan.

There is need to provide affordable shelter options and its related services but which conform to the planning, building and engineering standards so as to ensure safety of people's lives. In most cases the existing statutory, planning, building and infrastructure standards do not conform to the local needs and resources of people in Wakiso District Council with the regularities and complexities involved in enforcing them notwithstanding. Such emanate from political interference, administrative weakness and resource constraints. Therefore recommendations for

the standards made herein have put into consideration the above factors. The areas addressed here include building requirement, infrastructure requirement and planning requirements.

7.4.1 Building requirements

It's recommended that Wakiso District Council setup and review existing by-laws, planning regulations and infrastructure standards to operationalize the recommendations made in form of guidelines in each sector considered in this plan.

All the developments above shall be guided by qualified relevant technocrats who will ensure the following requirement are satisfactorily followed: -

- Well ventilated,
- Well illuminated by natural light during the day,
- If residential each adult should have enough space in the room to stand, sit and sleep in,
- Provide resident with sufficient facilities for the storing of food and utensils. (The nature will depend on the locality of the area being addressed).

Other functions of the Wakiso District Council shall also include but not limited to; Guide developers on matters related to application and requirements for buildings to be developed (see Annexes for Application and approval samples as provided by law, which could be adopted). Such requirements shall include inter alia;

- Written application for development,
- Site and layout/block drawings,
- Landscape plan in case the development is more than 1,000 square metres
- Plumbing and drainage installation drawing,
- Building material and specifications,
- Fire protection specifications,
- Structural drawing in case of storied development,
- Refuse disposal specifications,
- Public safety requirements,
- Sanitary provisions,
- Electrical layout drawing,
- Consideration for disabled groups in case of public building,
- Gender specification and consideration say ion case of rest rooms etc.

The Physical Planning Committee (PPC) of the planning authority in the district on receiving such application should expedite its approval or rejection within 30 days. In case of approval of a building, the PPC shall issue a permit allowing consent of the development. In case of objection, the PPC shall do it in writing to the affected parties giving reasons for objection.

The building/engineering section should ensure that building construction and site operation are carried out as stipulated by the Uganda's Building Regulations. The Engineering Department should also provide technical guidance to Developers where appropriate. The following particular areas are strictly recommended: -

- Structural plans (Prototype plans),
- Landscape, public open space and earth works,
- Building construction,
- Temporary building erection,
- Demolition works,
- Site operations,
- Material selection,

- Plumbing and drainage works,
- Refuse disposal,
- Public safety,
- Gender specification,
- Building and property maintenance.

7.4.2 Infrastructure requirements

The Wakiso District Council should be responsible for the entire infrastructure to be planned, established, developed and used/maintained so as to ensures accessibility, it does not become a health hazard and shall not be a danger/injurious to the community. Such infrastructure shall include but not limited to the following: -

- Waste water borne systems other than those operated by NWSC,
- Water supply other than those operated by NWSC,
- All access and tertiary roads,
- Drainage of surface runoff/storm water system,
- Refuse management system.

To effectively enforce the above there is need to build capacity to administer tasks mentioned above. It requires further building capacities for some of the following offices and establishing those that are non-existent.

- Principal Physical Planner (1)
- Senior Physical Planner (to handle the remaining sub counties in the district)
- Senior Physical Planner (1 per municipality)
- Physical Planners (1 per Town Council)
- Plans Office – Plans Clerk (2)
- Building Inspection Office (1 per urban council)
- Assistant Public Health Office (1 per urban council)
- Cartographer (2)
- Assistant Land Surveyor (1)
- Assistant Physical Planner (1)
- Assistant Community Development Officer (1)
 - Assistant environment officer (1)

These Officers should be able to fit in the local government staff establishment structures. There will be need for equipment and avail logistics to Officers in order for them to operate efficiently. The equipment and logistics can be acquired gradually depending on the availability of financial resources in the district.

7.4.3 Planning requirements

Developers applying to construct buildings and infrastructure are required to make formal application to the planning authority and applications shall be accompanied by any and not restricted to the following documents: -

- Site plan,
- Block plan,
- Service drawing showing locations of existing and proposed point connection,
- Site drainage plans,
- Structural design details,
- Construction technology specifications,

- Fire protection plan,
- Building material tests and specifications,
- Lighting, heating, and ventilation requirements,
- Environmental safety,
- Gender specifications in case of public buildings,
- Disabled group specifications,

Application for subdivision and change of user shall be made to the PPC for approved or deferred depending on the circumstances and situation that does not contravene this plan. For change of use shall be subject to Council recommendation and final approval by the National Physical Planning Board. Where the area of concern is too big and or sensitive to District and/or national interest the approval of the National Physical Planning Board shall be sought, with support of other relevant government agencies.

Issues relating to the skyline, building line, orientation, setbacks shall be prescribed at detailed planning level where flexibility shall be prevalent as seen deemed necessary by the planning authority Physical Planner and the PPC.

Further guidance shall be sought from the National Planning Authority and the secretariat of the National Physical Planning Board on matters related to planning in Wakiso District Council.

It's recommended that Council should acquire information related to land administration and/or management so as to ensure effective management. Such may include updated topographic and cadastral maps, which will expedite effective detailed planning.

This Plan is a framework for future development planning of Wakiso District Council and therefore it's important to effectively and immediately embark on preparation of lower level zoning plans to help in the preparation of detailed planning schemes.

The District Council also needs to mobilize funds to establish a fully-fledged GIS unit and purchase a satellite image for the district every after two years to aid surveying and physical planning team in executing their mandate but also to support revenue enhancement.

7.5.0 Plan Implementation

7.5.1 Tasks and Responsibilities

In order to implement the plan effectively, it is important to point out the key activities and the major actors in the implementation process. Table 7.2 gives an overview on roles and responsibilities during the plan implementation. Table 7.3 gives the indicative costs for implementation of the plan and Table 10.3 identifies the implementation phases.

Table 7.2: Tasks and Responsibilities

Activity	Lead agency	Support agency
Capacity building	District	Relevant Government Ministries
Sensitization	District	<i>Local and International Organisations</i>
Survey of planned infrastructure	District	<i>MoLH&UD</i>
Opening surveyed infrastructure	District	<i>MoLH&UD</i>
Preparing detailed plans	All planning authorities in the district	<i>MoLH&UD & MoLG, NPA</i>
Local revenue enhancement	All planning authorities in the district	
Publicity of the plan	All planning authorities in the district	<i>and other NGOs</i>
Developing By-laws	All planning authorities in the district	<i>MoLG and other line ministries</i>
Knowledge management	All planning authorities in the district	<i>NGO and other donor agencies</i>
<i>Monitoring and evaluation</i>	All planning authorities in the district	<i>MoLH&UD & MoLG</i>

7.5.2 Budget

Table 7.3: Indicative Costs for Project Implementation

phasing	Projects/Activity	Implementation Period	Indicative Costs (USD)
	1.Sensitization of the community of Wakiso District Council	Continuous	30,000
	2.Institutional and administrative restructuring	1 year	50,000
	3.Phased capacity building of technical staff	5 years	380,000
	4. Construct a new slaughter house in the new area with properly managed.	2 years	80,000
	5.Strengthen and promote “The Keep Wakiso Clean Campaigns” through awareness creation, competitions at municipal level, and where necessary enactment of Municipal bylaws especially in areas of sanitation to ensure community participation so as to reduce on open dumping of solid waste in the town.	Continuous	140,000
	6. Develop the ring roads and widening all major arterial roads.	20 years	500,000,000
	7.Repair all the drainage and landscape the main streets in the municipal and town council centres to improve aesthetics		8,000,000
	8.Expansion and redevelopment of the CBD and other local commercial centers to create more employment opportunities	2 years	230,000
	9. Develop prototype development plans to encourage the poor to access architectural services to be able to put up guided structures.	1 year	25,000
	Sub total		508,935,000
	1.Preparation of neighbourhood zoning plans and detailed schemes	3 years	800,000
	2.Carry out environmental education to encourage and promote onsite environmental management, conservation and monitoring by the local council and public	1 year	57,000
	3. Develop strategic plan for Eco - tourism development.	6 month	50,000
	4. Develop one community centre in each division of the municipalities and a rehabilitation centre in the district	2 years	370,000
	5. Tree planting programme for landscaping and creation of a roadway portal for all local community roads.	3 years	125,000
	6.Develop a modern transportation terminal	3 years	35,500,000
	7. district to district collaboration (local and international) Twinning.	Continuous throughout implementation period	10,000
	8.Developing a computerised register for local revenue enhancement	3 years	3,700,000

	9. Carry out a study to improvement on water coverage master plan	6 months	80,000
	Developing and implementing a modern solid waste management plan	5 years	1,300,000
	10. Opening up infrastructure (secondary roads and drainage works) This does not include compensation	6 years	820,500,000
	Sub total		862,492,000
	1. Carry out a study to improvement on electricity and sewerage network coverage is critical for purposes of attracting external investments in the town	1 year	70,000
	2. Acquisition of land, plan it and provide low cost housing to accommodate the internally displaced people.	5 years	10,000,000
	4. Monitoring and evaluation of plan implementation	Continuous throughout the implementation period	40,000
	Sub total		10,110,000
	Total costs		1,381,537,000

Table 7.4: Specific indicative costs for road construction

Type of Upgrading	Cost (UGX/km)
Track/open bush to earth road	100,000,000/-
Earth road to Gravel road	900,000,000/=
Gravel road to Paved road (<i>compensation inclusive</i>)	2,800,000,000,-
New Paved road (<i>compensation inclusive</i>)	4,000,000,000/=

7.5.3 Schedules for Plan Implementation

Table 7.5: Schedule for plan implementation

Phase	Activity	Duration	Execution office
1	Plan approval	3months	Wakiso District Council
2	Publicity of the plan	Continuous	Wakiso District Council
4	Surveying infrastructure	12 months	Wakiso District Council
5	Compensations	2 months	Wakiso District Council
6	Opening of infrastructure	3 years	Wakiso District Council