AN ANALYSIS OF NON-CONFORMITY OF LAND USE IN JINJA MUNICIPALITY WITH REFERENCE TO THE JINJA MUNICIPALITY LAND USE PLAN OF 1994-2004

BY

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DECLARATION

I hereby declare that this dissertation is my original work and has never been submitted to any Institute/University for any award and all sources quoted and referred to herein have been acknowledged by means of full reference.

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APPROVAL

This is to certify that this research has been conducted under our supervision and is now submitted to the Kyambogo University Post Graduate School with our approval.

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DEDICATION

This research report is dedicated to my dear Mother Mrs. Florence Nsadhu, my dear wife Malita Mutesi, the rest of my brothers, sisters, spiritual leaders, relatives and noble colleagues who have been a great encouragement to me during my time of studies.

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LIST OF ACRONYMS

CBD – Central Business District

MUBS – Makerere University Business School

NEMA – National Environment Management Authority

NHPC- National Housing and Population Census.

SDG - Sustainable Development Goals

UBOS – Uganda Bureau of Statistics

YMCA – Young Men's Christian Association

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ABSTRACT

The study analyzed the non-conformity of land use in Jinja municipality with reference to the municipality land use plan of 1994 – 2004. This research was prompted by the fact that upon going through the town one is able to notice a lot of disorder which reflects anomalies that have ensued over time. It investigated the forms of non-conformity existing in land use in Jinja municipality, factors responsible for divergences in current land use and how non- conformity in land use is being addressed. One hundred fifty three (153) people were involved in this research, 54 of whom were subjected to questionnaires because they were literate while the rest were subjected to oral interviews in a bid to collect primary data. Observation and documentation were done in the field alongside photography to establish the ongoing forms of land use visa vis the land use plan of 1994-2004. Findings revealed that although there is evidence of conformity in land use to the 1994-2004 land use plan in some areas, there are many cases of unconformity discovered in the town in places of residence, the central business district, the green belt, the institutional land and the industrial land. For instance within residential areas there are educational institutions and business enterprises, the industrial areas are encroached on by places of worship, the communication system is littered with rubbish and used as parking yard for Bodaboda cycles, while the wetlands are being encroached on by industries. This has resulted from people either being adamant or having limited knowledge on what is expected of them. However some effort to avert the situation is being done for instance restraining people from illegal land uses and giving approval to settlers before they settle. In conclusion, land use non-conformity is of challenge in Jinja and is bound to affect other towns but with concerted effort it can be overcome. It is therefore recommended to the central government to do constant monitoring and evaluation in the field and close any administrative gaps, while to the municipal technical staff it is recommended that they should get closer to the people and give them technical guidance and support to avoid errors that can be made and that the land users should be alert and knowledgeable on what is expected of them, and they should also be submissive to legal authority.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Jinja Municipal Council is one of the oldest urban centres in Uganda, having been established in 1908. It therefore ought to be a model urban area to many other urban areas around the country. Jinja municipal Council is a product of urban planning which has given rise to different land uses within the Municipality.

Urban planning is very crucial because in an urban setting there are many people competing for the limited land resource thus they need guidance. For that matter Pacione (2001) observes that urban planning and urban policy are activities that seek to influence the distribution and operation of investment and consumption process in cities for the "common good". He adds that urban policy and planning are dynamic activities whose formulation and interpretation are a continuing process. Measures introduced cause changes that may resolve some problems but create others for which further policy and planning are required. Relatedly, Aaron et al (2015) say that urban master plans play a crucial role in environment management of urban landscapes in that they guide the physical developments that take place in them. They go ahead to argue that, most cities in developing countries are confronted with a number of problems, including, but not limited to, the upsurge in slums, increased congestion and environmental pollution. These problems are usually indicators of non-implementation of physical plans, or a mismatch between actual master plans and land use outcomes (Diaw, et al 2002, Chaigara et al, 2013, AfraneandAjei-Poku 2013)

In respect of the above expressions, it is evident that urban planning is not a new phenomenon in Uganda too because it has continually been regulated by the Uganda Town and country planning act (1994) which in turn was derived from a similar British Act, that was first passed in 1947. Since 1962 and more specifically, 1971 urbanization in Uganda has proceeded on a largely uncontrolled basis. Kampala and to a lesser extent Jinja currently compose a complex mix of highly regulated former colonial development and more recent largely uncontrolled informal urban neighborhoods. This therefore implies that urban planning had been introduced earlier

and even today new plans keep coming up but they have resulted in both conformity and non-conformity to these plans in having the people use the land in these gazetted areas. Conformity means the plan has been adhered to while non-conformity means the plan has been violated in making use of the land for which a plan was made.

In this study therefore effort has been made to study the factors behind unconformity in land use in Jinja municipality and an analysis made on how these challenges have been overcome. For the case of Jinja, urban planning stems as far back as 1890 when settlers and government buildings took shape overlooking the Ripon falls. Provincial government headquarters for Busoga were relocated from Iganga to Jinja in 1901 and in 1908 Jinja was declared a township. In 1990 the first Uganda Urban Project was approved. This was later followed by the Jinja land use plan of 1994-2004-Fig.1.1.

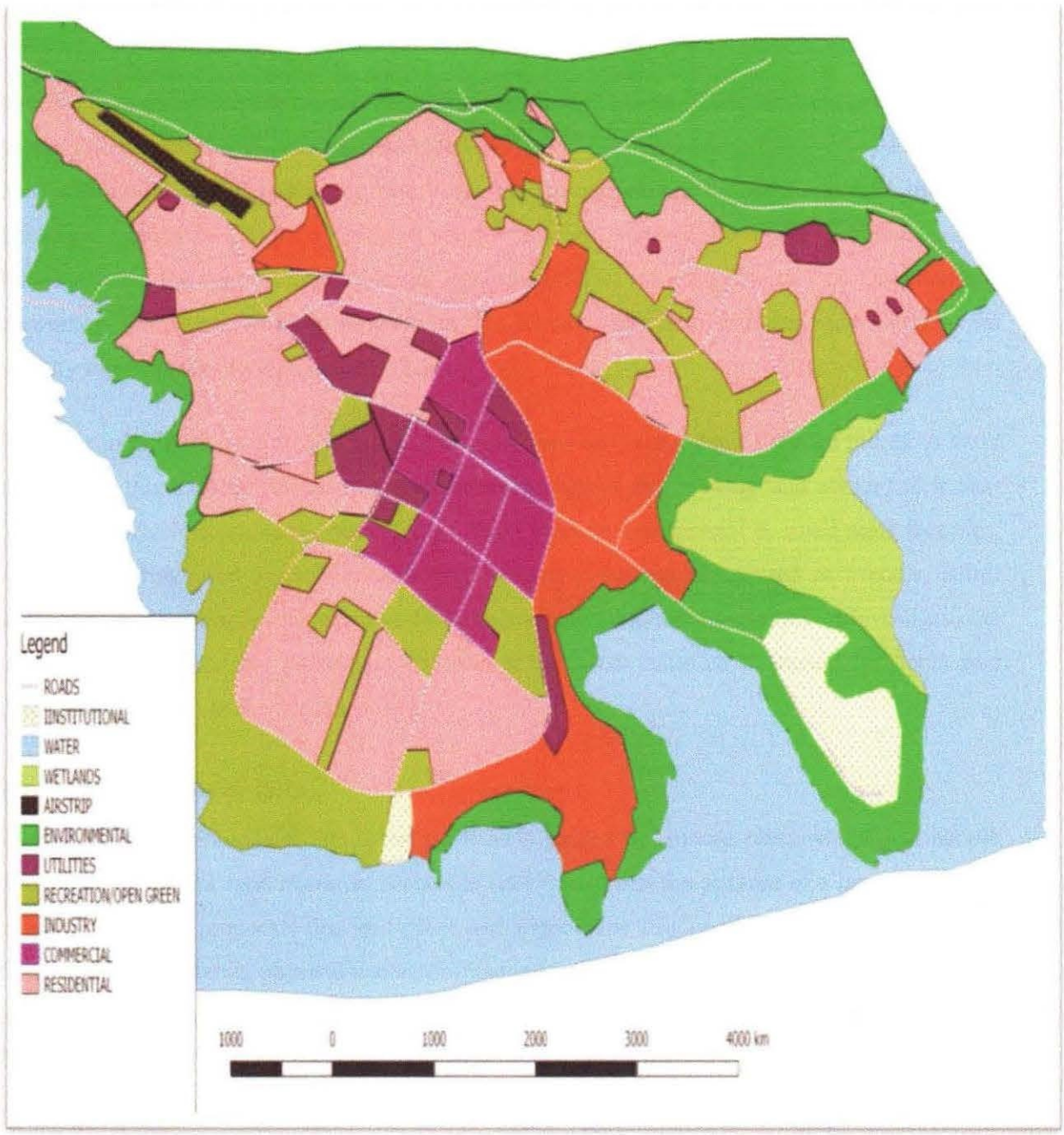


Fig 1.1 : Jinja municipality land use plan (1994-2004)

Source: District planning office (1994)

Urban planning in general reflects the different urban land use models which were advanced by Burgess, Ullman and Haris or Hoyt. A closer look at Jinja municipality reveals a close relationship with the Burges model in which he observed that a town is characterized by

concentric zones stretching around the Central Business District (CBD) that contains the major shops, offices, commerce, transport etc as the case is in Jinja. This one is followed by a transition zone with Old houses deteriorating into slums. On moving outside the town one finds low class housing occupied by people working in nearby factories. Beyond these one finds high quality housing. From the centre of Jinja Central Business District following North East Direction one encounters Walukuba Housing Estate with Old houses adjacent to factories plus slums in the vicinity as one moves to high quality houses.

However in as much as a number of land uses are confined within their gazetted places. A walk through the municipality reveals mismatch between planned and existing land usesor call it non-conformity which involves residential spots being used for commercial & small scale factories, walk ways being used as Bodabodastations, residential houses being used as schools, petrol stations as parks for taxis etc. Such issues have prompted this research to further investigate the landusefactors behind the status quo and how these issues have be addressed for better and compliant land uses in the municipality..

1.2 Statement of the problem

It is a common phenomenon that urban land use is guided by landuse plans which give people direction in using the land resource. Melanson (2017) says that the purpose of a land use plan is to set policies and proposals that will guide and support the structured development of the city from a social, economic, physical and environmental perspective. This augments the fact that the land use plan gives direction on how to use land. The Jinja municipality landuse plan of 1994 – 2004 provides a guide for different land uses in the municipality which include the Central Business District right in the centre, residential places on the outskirts, institutions like schools and health centres, industrial areas, transport network, plus recreational areas.

However evidence indicates that while it has been possible to maintain the designed land uses in a number of areas, divergences from the original plan of 1994 to 2004 are quite prevalent. For example some residential areas are now housing educational institutions or business enterprises, some roads and petrol stations accommodate taxi parks, wetlands host industries among others. This therefore means that although adherence to the plan is evident in some areas non-conformity to the plan is as well a challenge to reckon.

This is in line with the views of Oriye and Fakere(2015) who state that land is used for several purposes ranging from recreational, commercial, residential, industrial and religious, and that people tend to either misuse land or put it to proper use, for example it is improper to locate a mechanic workshop very close to a residential area .So it is such mismatches that prompted the researcher to devout efforts towards analyzing land uses in Jinja municipality in a bid to reveal its conformity and non- conformity to the 1994 – 2004 land use plan. The study also endeavors to expose the factors behind such unconformities and how the challenge is being handled.

1.3 General objectives

The general objective of this study was to make an analysis of the level of non- conformity of land use in Jinja municipality in relation to the municipality landuse plan of 1994 – 2004.

1.4 Specific objectives

The specific objectives of the study were:-

(i) To analyze the forms of non-conformity in land uses existing in Jinja municipality in relation to the 1994 – 2004 land use plan.

(ii) To establish the factors responsible for the divergences in the current land uses in relation to the 1994 – 2004 Jinja municipality land use plan.

(iii) To find out how non-conformity of land use according to the 1994 – 2004 municipality land use plan is being addressed.

1.5 Research questions

(i) What are the conforming and non-conforming land uses in Jinja municipality according to the 1994 – 2004 land use plan?

(ii) What are the factors responsible for the divergences in the current land uses in relation to the 1994 – 2004 Jinja Municipality land use plan?

(iii) How is non-conformity of land use in Jinja municipality being addressed?

1.6 The study area

1.6.1 Location and size of the study area

Jinja municipality is located inJinja District in Busoga sub-region in the Eastern Region of Uganda (Fig.1.2). It is found along latitude$0^0$28'North of the Equator and along longitude $33^0$14' East of Greenwich Meridian. It is the district capital for Jinja and as well a regional capital for Busoga sub-region. Jinja municipality is located 80km East of Kampala on the Northern shore line of lake Victoria, overlooking the Napoleon Gulf which constitutes the source of River Nile. It is on a plateau which is about 1,230 metres above sea level at its highest point. It is within what might be described as Uganda' Eastern urbanized corridor which runs from Kampala through Jinja and into Tororo and Mbale, following the alignment of Uganda's major road and railway links with Kenya.

With an approximate population of 92,100 people (NHPC – 2014) and covering an area of approximately 28km^2, Jinja is one of the main urban areas in Uganda. For long it had been regarded to be the second largest town in Uganda after Kampala but currently it is 5th after Kampala, Gulu and Lira and Mbarara (Population of cities in Uganda, 2018). It was the administrative centre for the provincial government headquarters for Busoga Region. In the subsequent years Jinja grew economically with considerable expansion of commercial activities before the town later becoming the focus of modern manufacturing industries and the industrial heart for Uganda. However in recent times it has lost this position to Kampala. Like many of the municipalities in Uganda, according to the official gazette of the East Africa and Uganda Protectorate Vol. III No. 161, Jinja was designed as a township on 26th June 1906 and about 50years later in 1975 it was declared a municipality.

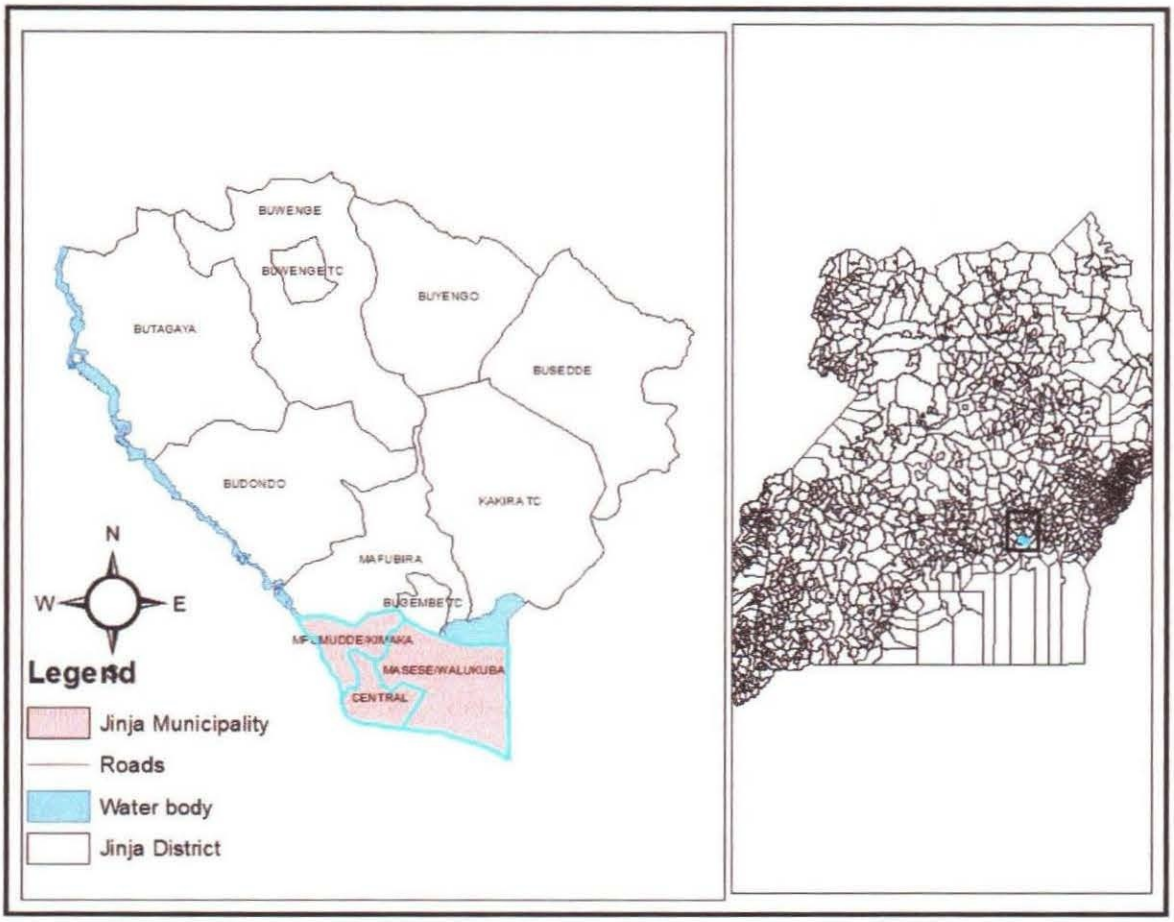


Fig 1. 2 : The location of Jinja Municipality in Jinja District in Uganda.

Source: Field data 2018

1.6.2 Climate

Jinja Town is in a region of Equatorial climate characterized by high temperatures and high rainfall throughout the year (about 1500mm/annum). The average temperature is 27°c. This kind of climate has favoured arable farming in the surrounding areas which are a source of food supplies to the municipality. This climate has also encouraged farming activities in the municipality, some of which have ended up instigating people to deviate from the original plan of the town by practicing un authorized agricultural activities like growing sugar canes and bananas. This means that the favourable climate has induced people to abuse the land use plan.

1.6.3 Drainage

Jinja is on the North shores of L. Victoria with some areas endowed with water logged swampy areas next to the lake for example around Masese and Kirinya. River Nile on the Western side drains water from Lake Victoria and carries it through Lake Kyoga. The municipality is generally well drained given the undulating nature of the landscape in many parts. A few hilly areas around like Masese and Rubaga have a threat of soil erosion. The surrounding water bodies were crucial in influencing urban planning in this area because they were a ready source of water for domestic and industrial use. Even the undulating landscape and gentle hills around attracted settlement. However the water logged swampy areas around especially because of increased industrialization are steadily being encroached on, and this does not conform with the plan that allocates such land environmental conservation.

1.6.4 Vegetation

The natural vegetation around Jinja town has largely been cleared to the extent that the town is generally covered by a planted forest reserve in Kimaka close to river Nile in an area of 47 hectares. However swamp vegetation is found in WalukubaMasese Division close to lake Victoria and bushes on top of hills where settlement is yet to be done for example on Masese hill. The forest around is designed to freshen the air around the municipality and compensate for the lost natural vegetation while the swamps are reserved to help filter the water that drains into the lake. However they are also under threat of destruction hence affecting conformity to the land use plan. Some people think that the wetlands are idle areas which can be used for anything and therefore they go ahead to encroach on them.

1.6.5 Soils:

Jinja is well endowed with fertile loam soils which favour the growth of annual crops like beans, maize, sweet potatoes and perennial crops like sugarcanes, and bananas. However there are clay soils in the swampy areas and laterite soils on the slopes of hills like Rubaga and Masese where there is less luxuriant vegetation.

Such hills with laterite soils have turned out to be favourable for settlement and have served this purpose. The fertile soils have attracted all sorts of crops ranging from annual to perennial and this is improper because the land use plan can only tolerate moderate cultivation of annual crops to a minimal extent but not perennial crops like bananas and sugarcanes. The clay soils in some areas have also attracted some cultivation which interferes with the natural set up and also encourages slum development in such land which seems abandoned. These end up adulterating the land use plan.

1.6.6 Economic activities

As earlier noted, there is urban agriculture in Jinja municipality though not encouraged. It involves some poultry farming and growing of annual crops like beans, maize, vegetables, some bananas and sugarcanes are also visible. These largely supplement on people's incomes. Fishing thrives on the surrounding waters of Lake Victoria and River Nile where fish is caught for commercial reasons. These economic activities have attracted illegal settlements in form of kiosks or stalls in every corner most of which are not commensurate with the land use plan.

Transport is also a common activity with routes linking the immediate surrounding and international areas like Kenya, Tanzania by road, railway and water. The broad ways in the transport sector have attracted other activities on them e.g the Bodaboda cycles being parked carelessly across different roads and some vehicles as well, something which reduces the road size and encourages traffic jams. Jinja has a number of industries which include BIDCO, Steel Rolling mills, Nile Agro Industries, Engaano millers, Sun belt Textile industry among others. Some of these are in originally planned areas while others are ending up encroaching on the wetland reserve areas, which is a violation of the original land use plan.

1.7. Definition of key terms/words.

Urban Planning - Planning with a spatial or geographical component and its objective is to provide for a spatial structure of activities or land uses which are better than the pattern existing without planning.

Landuse - Different ways in which land or space is utilized for example agriculture, industry, and communication lines.

Conformity - Behaviour that obeys the accepted rules of society or a group.

Non-conformity - Failure to act according to certain accepted rules/standards.

Structure Plan - An arrangement of land use patterns in an urban place.

Model – Someone or something which people want to copy because they are successful or have good qualities.

Bodaboda – Motorcycles/Bicycles used to transport people.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter is intended to make a literature review related to the topic of study which is focused on analyzing non conformity of land use in Jinja Municipality in relation to the 1994 – 2004 land use plan. The reviewed literature first of all looks at conforming and non-conforming land uses in relation to land use plans in urban areas, then it looks at factors influencing land use in urban areas and finally looks at ways of improving on land use in urban areas.

2.2. Conforming and non-conforming land uses in relation to urban land use plans.

As one goes through any urban place he/she realizes that there is a set pattern or style in which land is used. This could be in line with the set plan governing that urban area or it could be quite different from what is reflected on the plan. Melanson (2017) in reference to City of Dieppe Municipal development plan observes that the plan sets long term council policies with a view to guiding all future land use within the city limits. Oriye and Fakere (2015) say that land is used for several purposes ranging from recreational commercial, residential, industrial and religious and the people tend to misuse land or put it to proper use. The above views simply mean that urban areas have plans for various uses. However people choose either to obey or implement those plans or they go ahead and use land according to their own wishes.

Uganda's Auditor General's Report (2015) says that the government of Uganda through the Ministry of lands, Housing and urban development has undertaken steps to ensure that growth and development of urban areas in Uganda is realized in a planned and orderly manner. This has been done through interventions, such as ensuring that urban authorities have physical development plans to guide urban development. It adds that despite these government efforts, however, urban authorities still experience a number of constraints in ensuring orderly development, and physical planning in general has not yet reached the desired level.

Diawand Ninkya (2002), Chigara, et al, (2013), Afrane and Adjei – Poku, (2013), as quoted by Mabaso et al (2015) say that most cities in developing countries are confronted with a number of

problems...These problems are usually indicators of non-implementation or inadequate implementation of physical plans, or a mismatch between actual master plans and land use outcomes. Planners seek ways of determining whether and how well plans have been implemented because plans and land use outcomes do not match perfectly, giving rise to areas of non-conformance (Loh,2011). The above views clearly illustrate that it is not possible or easy to achieve a hundred percent conformance to the land use plans, especially in the developing countries and this culminates into non- conformance to the land use plans in one way or the other.

Aribgbola (2007) says that although land use planning and policies and mechanisms are in place in the city, they are not fully implemented and do not have any significant effect on land accessibility. Dodman et al(2013) observe that the management of environmental resources including wetlands may also be complicated through differences in geographical sectoral responsibilities. And that in Kampala (Uganda) urban expansion into wetlands has taken place outside the city's administrative boundaries, meaning that wetland management is constrained by a lack of coordination between district and city authorities. These two statements simply mean that implementation of the established plans is quite challenging, which results into encroachment on areas gazetted for other uses e.g wetlands where uncontrolled cultivation and industrial establishments often take place illegally.

According to Nyakaana et al (1998) despite the existence of planning schemes, Kampala city continues to experience unplanned developments where activities such as residential housing, commercial and industrial use are located outside the planned area. They further add that solid waste management is one of the serious problems in Kampala that have undermined the councils' capacity to proper management and efficient disposal. This culminates into non-conformance of land use.

Leong and Morgan (1992) says that the internal structure and arrangement of towns differs very widely from place to place and this is one of the main concerns of urban geographers and because of differences in site, function and history of development as well as the age of the town. The newer a town is the more attention has usually been paid to planning in building it. He further observes that the Greeks, Romans and ancient Chinese all had strong ideas on town

planning but they were only able to put them into action when founding a new town. New towns built in Europe in the seventeenth and eighteenth centuries also employed both ancient and more modern town plans which concentrated on providing impressive "visitors". Long straight streets ended in a monument or place which enhanced the appearance of the streets. Among the towns which were planned in this way were Karlsruhe in Germany which had a radial pattern and Versailles in France the seat of the French king outside Paris...in much of the USA and Canada, the grid –iron pattern was adopted, as it was for rural land the only difference being that the city 'block' was ofcourse much smaller that the rural section. As a result, a modern town often has curved streets, and its broad roads and streets are usually lined with trees. Examples are Welwyn Garden city, the original town built according to the "garden city" idea. In the new planned city of Milton Keynes mid-way between London and Birmingham. In Britain great attention has been paid to the long-term development of parks and open spaces. The city has been planned around a linear park along a river and trees are being planted in parks and road sides at the rate of a quarter of a million each year.

As far as functional zoning in towns is concerned, distinctive quarters in a town are not the only form of differentiation (Leong and Morgan, 1992). The working of economic laws often results in the functional zoning of towns. Thus the best position for shops, for instance is on busy roads near the centre of the town where they can be reached by most people. On the other hand Waugh(2002) advances that while each urban area will have its own unique pattern of functional zones and land use most British cities exhibit similar characteristics where;

- the central business district has shops and offices.
- old inner city with low class housing, industry and warehousing and after redevelopment, regeneration, modern low cost housing and small industrial units
- inter-war (medium class housing)
- suburbs(modern high cost/high class housing, open space, new industrial estates, science and business parks, shopping complexes and office blocks

Pacione(2001) advances that the Business District remains the focus of the metropolis. Its functions may have changes over the years but it still houses the major banks and financial institutions, government buildings and corporate headquarters as well as the region's main cultural and entertainment facilities. A few large department stores retain flagship establishments

down town, but most retailing has moved with the affluent population to the suburbs, with many remaining outlets being specialty stores catering for daytime commuters.

Getis (1999) says it is a common observation that recurring patterns of land use arrangements and population densities exit within urban areas. Society deems certain functions desirable without regard to their economic competitiveness. Schools, parks, and public buildings are assigned space without being participants in the auction for land. Other uses through the process of that auction, are granted spaces by market forces. The merchants with the widest variety and highest order of goods and the largest threshold requirements bid most for and occupy parcels within the central Business District which became localized at the convergence of mass transit lines. The above statement therefore points to non-conformance in land use which consequently arises.

The municipal and country planning board provides for the orderly planning in urban and rural areas. It defines building operation and development in relation to any land.Jinja municipality has tried to develop the town in accordance with the above provisions to the extent that the town boasts of a regional referral hospital and private clinics plus privately owned hospitals, terminals and parking facilities, electricity coverage leading to establishment of medium scale industries. All this reflects partly how land is used in Jinja municipality.

2.3. Factors responsible for Divergences in urban land use

Abel (2007) explains that some towns grow and expand partly due to the decisions of government through deliberate planning. Entebbe municipality owes its growth and development to its initial status as the first capital of Uganda in the colonial times. Dar-es-salaam, Nairobi and Kampala are capital cities for their respective countries and this function has contributed to their growth and development. The many government departments headquartered in these cities influence a number of services that directly lead to urban development. This reflects that the policies of any one government can largely influence the set up or land use in any urban centre.

The Historical influence also goes a long way to influence land use in an urban area. Taking the example of Luxembourg city, the capital of Luxembourg state, it is reported that the city started in 1987 when Egbert, Archbishop of Tier, blessed five alters in the church of Redemption,

which is today called St. Michael's church. Near the church a market place started and around it the city developed (Nathan (2010). He also adds that owing to its location and the natural geography Luxembourg has been a place of strategic military significance. The first military fortifications were built as early as the 10^{th} century Luxembourg city is one of the wealthiest cities in the world; having developed into a banking and administrative centre of Europe. Luxembourg is a seat of several institutions of the European union including the European court of Justice, the European court of Auditors and the European Investment Bank.

Population increase also has a bearing on land use in an urban area. Taking the example of Nairobi,(Carol et al 2011) observe that the population of Nairobi has been growing steadily in the past few years. It has a population of over 3million people. The rapid increase in population has led to the development of Nairobi city in many ways. The physical and social infrastructure have increased in the past few years. These include Hospital and educational institutions, housing estate for both high and low income earners have been constructed, manufacturing industries and processing plants have been set up, hotels and lodges have been constructed to cater for increasing number of visitors, well developed transport and communication systems have been set up. There are plans to improve traffic flow to contain congestions.

Taking the example of New York City, it is regarded to be the second largest industrial centre in the world. This implies that industry is one of the aspects of land use in the city and this has been favoured by such factors as availability of raw materials, (Coal, iron ore), a big market within North America, availability of capital, cheap power supplies, high levels of science and technology, high skilled labour and well developed infrastructure (Elsie 2010).

According to Leong (1992) some population zoning in towns is caused simply by income differences. Thus the suburbs, with their houses, gardens and pleasant tree-lined streets are homes of the poorer people in most towns. In many under developed countries there are areas of squatter settlement around the edges of towns, where people who cannot afford to live in rented homes build small shacks often out of cardboard & corrugated iron. This kind of settlement is found around many Asian, African and South American cities e.g. Rio de Janeiro, Johannesburg etc and is aggravated by migration of poor people from the county side or of refugees as in the case of Hong Kong or Ho chi Minch City (pp.85).

The government is charged with the responsibility of ensuring that people stick to the established plans and therefore this can induce compliance to the land use plan. Thus according to the Auditor General's Report (2015) it is reported that the Government of Uganda through the ministry of lands, Housing and urban Development and the ministry of local government together with local governments has undertaken steps to ensure that growth and development of urban areas in Uganda is realized in a planned and orderly manner. This has been done through interventions, such as ensuring that there is a legal framework to guide physical planning and ensuring that urban authorities have physical development plans to guide urban development.

It is further observed that, planners seek ways of determining whether and how well plans have been implemented because plans and land use outcomes do not match perfectly giving rise to areas of non-conformance (Loh, 2011). The coordination between district and urban (city) authorities is also important in determining urban land use. For instance David Dudman et al (2013_ observes that in Kampala (Uganda) urban expansion into wetlands has taken place outside the city's administrative boundaries meaning that wetland management is constrained by a lack of coordination between district and city authorities.

One of the ways through which there can be good practices that can help attain positive environmental effects as reported by Arturo Samper is by making an effort to define, make and effectively protect "no go" areas in recognition of their high environmental historical or cultural values, for their biodiversity or because they can help contain unnecessary and costly urban expansion. So in other words, deliberate planning and effective implementation of set plans/policies influences urban land use.

The direct involvement of the state also influences urban land use that is why in a publication on Environment and urbanisation, it is observed that the appointment of state minister for population and environment in the third five year plan period was to ensure a more effective implementation of environmental law (Santosa, 2000). It was also to promote a more active role by non-governmental organizations in the project of the environment. A much needed strategic measure was taken with the enactment of law no. 4 (1982) on the environment and this was followed by the enactment of various implementing regulations and instructions.

Political involvement in urban management can however be counterproductive. Ross et al (2000) observed that, "our integrative analysis of Bangkok suggests that the root of environmental (and some social) problems lie in decision making structures and a political culture which has historically fostered self-interested decisions by stakeholders rather that the public interest. Given the above it is very possible to have disorganized urban areas due to selfish interests.

Having partnerships in urban environmental management can help ensure conformity and improved urban land use. Mwangi (2000) states that with the assistance of some NGOs and other actors, the partnership approach seem to be having some considerable success. It is clear that the residents of Nakuru and specifically those in the low-income settlements are now involved in improving the quality of their living environment.

Community involvement in urban planning and land use is urbanisation in that overall sustainable urbanisation envisages human settlements where all residents are adequately involved in the formulation, implementation, monitoring and budgeting of urban policies and urban plans in order to strengthen the effectiveness, transparency and accountability in their development (Wunder and Wolf (2015) as quoted by Sietchiping et al.

In a study made on Bangladesh it revealed that the concept of participation in planning demonstrates that citizens have access to the planning process to different degrees to influence development initiatives and planning decisions. Local participation is also identified as a tool for empowering citizens and a catalyst to enable suitable structure within the institutions for establishing good governance. So it can be concluded that if we are to have good results then the local people must be engaged to be part of the planning for effective implementation which thereafter ensures conformity to land use plans.

2.4. Ways of addressing non-conformity of land use

Non conformity of land use regarding an established land use plan simply means that somewhere things have gone out of order and therefore there is need to address the visible anomalies. Such anomalies include using certain places or buildings for purposes different from those for which they were designed, creating parking spaces where they are not meant to be, encroachment on reserved areas like wetlands and rest places. Therefore Waugh(2000) observes that the Cairo

authorities are trying to overcome these problems by extending the old sewerage system and building a new one, organizing refuse collection, constructing an underground metro system, building new roads and erecting numerous high rise apartment blocks.

Aribigbola(2008) concerning Nigeria says that the 1992 National planning law assigned responsibilities to all the three tiers of government and created National planning Board at state level and planning Authorities at the local government level. The laws make planning a local government affair, the tier of government that is closer to the people. Drawing on the experience of other countries, policy makers should develop appropriate mechanisms to involve local people in land use planning and decision making about the use and management of land forest resources. Traditional institutions which have close relationships with local people should be involved in managing resources and government agencies should work together with those institutions. More over the policy formulation process should be made participatory. This is to imply that matters pertaining to land use are handled at various levels by different stakeholders.

White (2017) observes that a use that in no longer allowed in the zoning district is a non-conforming use. He adds that if a community is happy with its zoning districts and wants them fully implemented, it can control or eliminate non-conforming uses by:-

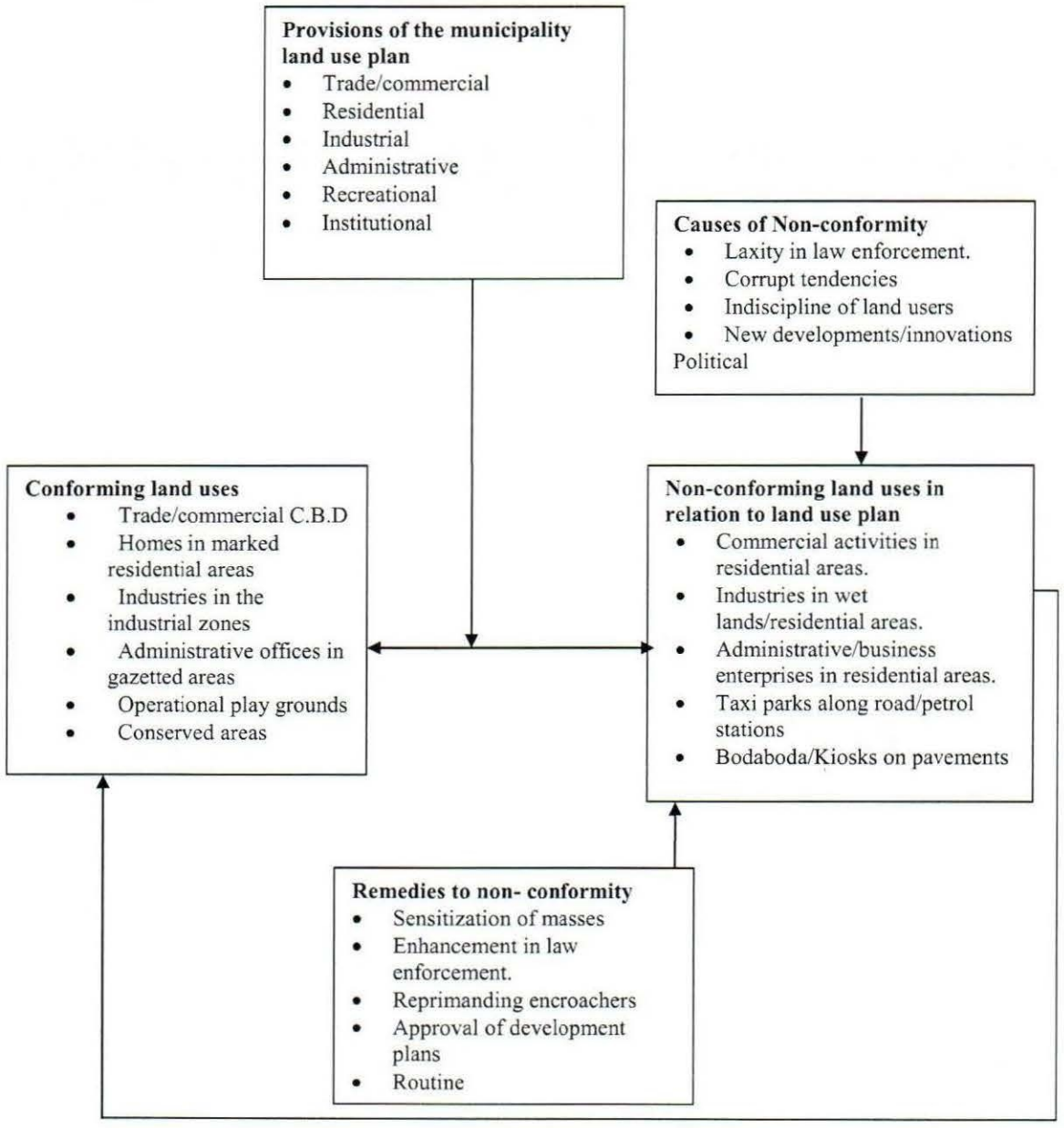
- Prohibiting their expansion
- Providing that any change in the use must conform to the new district regulations
- Providing that if the use changes, it can never change back the non-conforming use or specify that the non-conforming use is terminated if it is abandoned (for example, ceasing operations for one year or knocking down the building or destroying by natural causes (such as fire, flood or similar involuntary conditions.
- More aggressive means include amortization requirements, which provide that the use must end within a given time period after it becomes non-conforming – for example within one year after it is no longer allowed in the district.
  also certification or registration requirements, which require the owner to register the use within a given time period after it becomes non-conforming or cease operations.

Craig (1989) also adds that eventual termination of land use non-conformities by "amortization" has been a widely though not universally sanctioned approach to common land use control

problems since the early 1900s. Despite challenges since the procedure's inception, state courts have generally upheld amortization provisions since 1950s.

In conclusion therefore, the cited related literature has given us an affirmation that challenges of urban land use, and therefore non conformity to the land use plan are real but have been appreciated and can be addressed.

2.5. Conceptual framework



The municipality land use plan gives rise to several activities which result into either conformity or non -conformity to the land use plan. The conformity and non- conformity is attributed to a number of factors as highlighted above. However remedies are put in place to avoid mismatches and create more order and compliance. This restores the established municipality land use plan.

CHAPTER THREE

METHODOLOGY OF THE STUDY

3.1. Introduction

This chapter was focused on the description of the methodology employed in the study. It focuses on the research design, measurement of variables and choice of study population and methodology of data collection among others.

3.2. Research design

Given that this study is qualitative (cross sectional design), it involved assessing people's behavior and attitudes towards an established plan to establish whether they were compliant or non-compliant to it. The cross sectional design was used to decide the study population, select samples, contact respondents, collect and analyze information concerning conforming and non-conforming land uses(Fig.3.1)

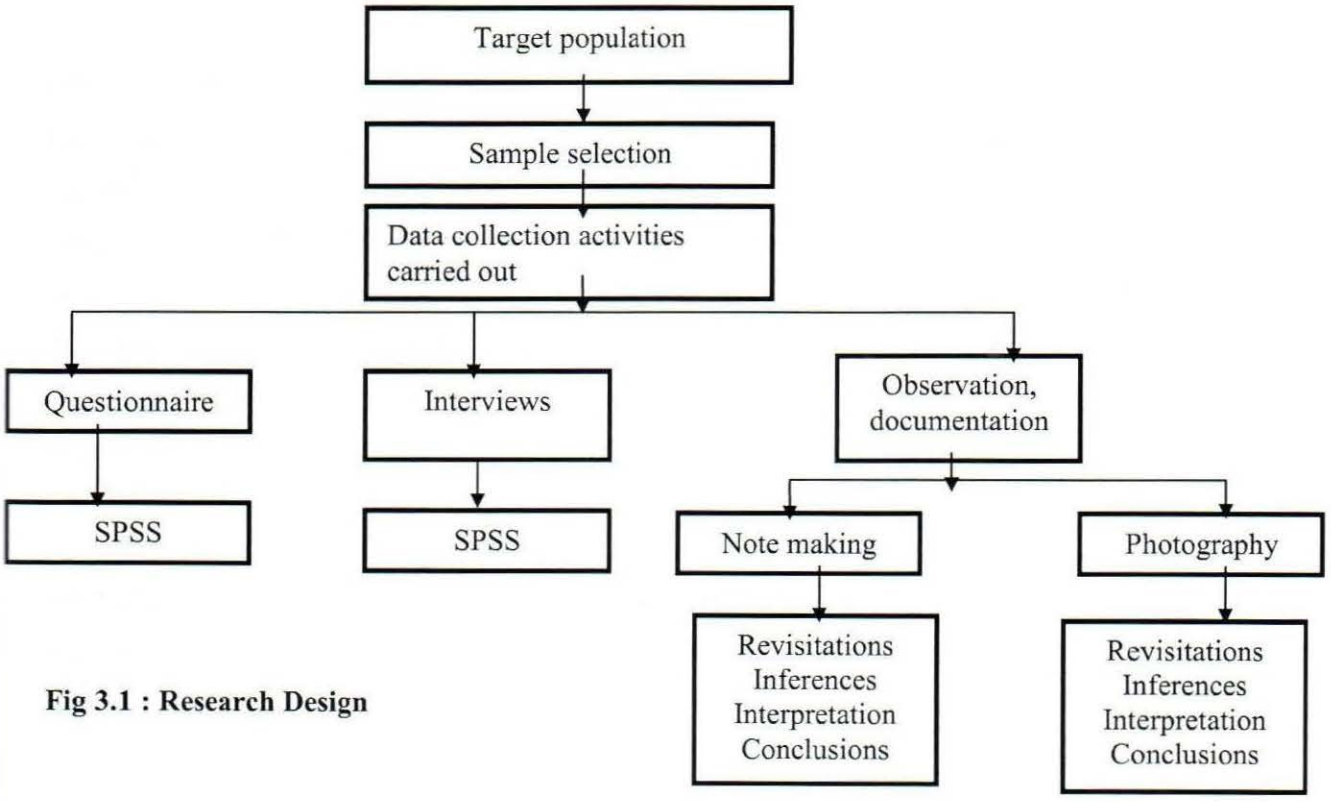


Fig 3.1 : Research Design

3.3. Measurement of variables

The independent variable of this research was the land use plan of 1994 – 2004 which was the basis of land use in Jinja municipality during this period. The dependent variable was land use which was measured in terms of adherence (conformity) or non-adherence (non-conformity) to the set land use plan. In those particular areas that were sampled. It was established that for several reasons land use had tended to violate the set structure plan and therefore an investigation had to be made on what precipitates this.

3.4. Target Population

This comprised of the people within the municipality from whom the identified respondents were selected. The Central Division had 34,500 people,17,100 of whom were males and 17,400 were females out of whom 49 were selected for interaction with, in the research. 47 out of 25,800 people (14,000 being males and 11,800 females) were selected from Mpumudde- Kimaka Division, while 52 out of 31,800 people (16,000 being males and 15,800 females) were selected from Walukuba-Masese Division.

3.5 Choice of study population

Public servants who are directly linked to the municipal council were considered to be some of the respondents. These include the Town clerk, Town Engineer and physical planner. The local council right from LC I to LC 4 were considered for interview because they are directly involved in what takes place in town. The ordinary people who practically use the land were consulted in the process of research. This is because they directly interact with the planned environment. Such people include the retail traders, market vendors. Other people involved were the industrial entrepreneurs and vehicle operators because they occupy a significant portion of the land planned for in the municipality.

3.6. Sample size and sampling procedure

The total sample size was 153 people with whom interaction was made, stratified in different categories deemed relevant to the study- Table 3.1.

Table 3.1 : Sample size

S/No	Type of Respondent(s)	Area of operation /Number				Total	%age
		Municipal	Mpumudde-Kimaka Div.	Walukuba-Masese Div.	Central Div.		
1	Town clerk / assistant town clerks	1	1	1	1	4	2.6
2	Physical planner	1	-	-	-	1	0.6
3	Mayor	1	-	-	-	1	0.6
4	Town Engineer	1	1	1	1	4	2.6
5	Law enforcer	1	1	1	1	4	2.6
6	LCI chairpersons	-	2	2	2	6	3.9
7	LCIII chairpersons	-	1	1	1	3	1.9
8	Owners of industries	-	2	7	2	11	7.1
9	Road side vendors	-	5	5	5	15	9.8
10	Bodaboda cyclists	-	8	8	8	24	15.6
11	Taxi/park operators	-	5	5	6	16	10.4
12	School operators	-	2	3	2	7	4.5
13	Restaurant operators	-	5	5	6	16	10.4
14	Bar operators	-	4	3	4	11	7.1
15	Town residents	-	10	10	10	30	19.6
	Total	**05**	**47**	**52**	**49**	**153**	**100.0**

The sampled people as per the Table 3.1included 1 town clerk and 3 assistant town clerks from each of the divisions. One physical planner for the entire municipality was involved in this investigation. The mayor for the municipality was involved plus the three LC3 chairpersons for the three divisions in the municipality. Two LC I Chairpersons were also engaged from each of the three divisions in the municipality. Four law enforcers were selected one from the main office and one from each of the three divisions. It can be noted that the respondents mentioned above were deliberately picked on in this research given their vital and inevitable roles in guiding and giving direction to the way of using land in the municipality.

However other respondents in the other categories as shown- Table 3.1 were randomly selected for interrogation. For instance eleven(11) industrial owners were engaged in data collection with 2 from each of the other two divisions (Mpumudde-Kimaka and Central), with fewer industries and seven from Walukuba-Masese Division with the majority of industries. 5 road side vendors from each of the divisions were considered and 8 Bodaboda riders also from each of the divisions. 5 – 6 taxi/park operators were got from each of the divisions and 2 – 3 school operators as well. 5 - 6 restaurant operators were picked on from each of the divisions. Finally ten residents were picked from each of the three divisions for interrogation for this research.

3.7. Methods and tools of data collection

Data was collected using a number of methods like questionnaire administration, interviewing, observation and recording.

3.7.1 Questionnaires

A questionnaire is a form prepared and distributed to secure responses to certain questions. It is a systematic compilation of questions that are submitted to a sample of population from which information is desired. Businessdictionary.com defines questionnaire as a list of research or survey questions asked to respondents. In this case, the technical staff of the municipality and the politicians was subjected to questionnaires which they filled out with relative ease, given their substantial levels of education that is-**appendix 1**. The questionnaire helped in gathering primary data concerning the bio data of the respondents. It also helped in collecting people's responses to the set questions regarding current land use in relation to the 1994-2004 land use plan. It also helped to gather information on the factors responsible for the divergencies in land use and how non conformity is being addressed in the municipality.

3.7.2 Interviewing

This is a person to person interaction between two or more individuals with a specific purpose in mind. Also an interview is a conversation for gathering information. A research interview involves an interviewer who coordinates the process of the conversation and asks questions and an interviewee responds to those questions (Easwaramoorthy and Zarinipoush, 2006). Interviews were designed and conducted with the lay people or non- technical people who are directly involved in the day- today land use activities around town. These include the residents, vendors,

Bodaboda riders and those in the transport sector. This is because many of such people would have had difficulty in writing if they were given written questionnaires. The interviews also helped to gather bio data about the respondents, and issues to do with their work visa vis the land use plan of 1994-2004, that is, how they are trying to fit in- appendix 2., for example the road vendours, bodaboda riders among others.

3.7.3 Observation and documentation

Observation is a purposeful, systematic and selective way of watching and listening to an interaction or phenomenon as it takes place. This was enhanced with taking of photographs of different areas showing how land is being used and this was consequently documented.

There are different stakeholders in town and several activities taking place whereby the easiest unbiased way of getting information was through observation, photography and documentation for example the transportation and trading activities, settlements, transportation activities, institutional set up and industrial establishments. The researcher used participant observation by getting involved in some activities like the transportation and trading activities or non-participant observation where he was only watching activities taking place for example industrial and institutional set up. In the case of photographing, the researcher was able to take shots around the municipality and in the course of analyzing, these photos were compared with objective 1 to establish conformity and non-conformity. There after inference, interpretation and conclusions were made.

3.7.4 Recording

This is the storing of acquired information in writing or on tapes (audial, visual) that is mechanical devices. Some audio visual information was recorded on camera for further scrutiny during data analysis and also the information that was got from administering the above data collection methods was recorded in black and white. For instance, some interview sessions were recorded audially and some filming while observing land use was done at different spots which included industrial area, central business district and communication system

3.8. Data analysis

The descriptive approach was used to analyze qualitative data. Besides, frequencies and percentages were also computed to analyze the Bio-data of the respondents. In analyzing the conformity and non-conformity of land use, maps and photos were used along- side descriptions. In analyzing factors responsible for divergences in land use, percentages were used together with SPSS computer packages and chi- square calculations while tables and percentages were used to analyze ways of addressing non-conformity of land use. After subjecting the collected data to SPSS calculations people's responses were tested to analyse their responses to the questions in the questionnaire. The results were compared with the objectives and what had been observed in the field; in other words a visitation to the study plan was made. This was followed by inferences and interpretations of the results got in as far as conformity and non-conformity of land use was concerned and finally conclusion was made.

In conclusion, the combination of different data collection methods gave the researcher a wide exposure which enriched data collection and eased the analysis.

CHAPTER FOUR

DATA PRESENTATION, INTERPRETATION AND DISCUSSION

4.1. Introduction

This chapter presents and discusses the field findings in as far as the topic of study is concerned, that is, an analysis of the non-conformity of land use in Jinja Municipality with reference to the Jinja municipality land use plan of 1994 to 2004. The discussions are in light of the objectives which included identifying the conforming and non-conforming land uses as regards the land use plan, the factors responsible for the divergences and how the non-conformity is being addressed in Jinja Municipality.

4.2. Bio-Data of respondents

4.2.1 Respondents' categories

The respondents were divided into eight categories namely; the technical municipal staff, the politicians, the industrial operators, transporters, institutional operators, traders/business operators, Bodaboda riders and urban dwellers. Frequency tabulations were made use of to gather bio data about the above categories of people in light of their location, gender, age, and educational background. The categories of respondents are depicted in Table 4.1.

Table 4.1 : Categories of study respondents

Respondent type	Frequency	Percent	Cumulative percent
Technical staff	13	8.4	8.4
Politicians	10	6.5	14.9
Industrial operators	11	7.1	22.0
Transporters	16	10.4	32.4
Institutional operators	07	4.5	36.9
Traders/business operators	42	27.4	64.3
Bodaboda riders	24	15.6	79.9
Urban dwellers	30	19.6	100.0
Total	**153**	**100.0**	

Source: Primary Data

Table 4.1 indicates that 27.4% of the respondents were traders and business operators. This is because these are wide spread all over and are in easy reach for interaction with. These were followed by the urban dwellers who accounted for19.6% because there is a substantial number of this in each of the divisions. The bodaboda riders accounted for 15.6%, reason being that they are also wide-spread and are easy to extract information from. The others are averagely represented and the least group is of institutional operators (schools) 4.5% because they are fewer compared to the previous categories mentioned above.

4.2.2 Divisional distribution of respondents

The 153 interviewees were distributed in the different divisions within the municipality that is, the Central Division, Walukuba - Masese Division and Mpumudde -Kimaka Division -Table 4.2

Table 4. 2 : Distribution of interviewees per division

Division	Frequency	Percent	Cumulative Percent
Central division	49	32.0	32
Walukuba-Masese division	52	34.0	66
Mpumudde-Kimaka division	47	31.0	97
Municipal Headquarters	05	03.0	100
Total	**153**	**100.0**	

Source: Field Primary Data

Table 4.2 reveals that Walukuba-Masese Division had the biggest number of interviewees at 34% because it has the biggest number of industries compared to the two divisions whereas the central was represented by 32% and Mpumudde-Kimaka by 31%. The Municipal Headquarters has some section of politicians like Mayor and deputy Mayor who are not necessarily at division level, plus other technical staff like those in the engineering and planning sections.

4.2.3. Gender of respondents

The respondents were of both female and male gender because gender sensitivity is paramount. The distribution of respondents by gender is summarized in Table 4.3.

Table 4.3 : Distribution of respondents' gender

Gender type	Frequency	Percent	Cumulative percent
Male	100	65.3	65.3
Female	53	34.7	100.0
Total	**153**	**100.0**	

Source: Field Primary Data

It is worth noting that, 65.3% of the respondents were males compared to 34.7% who were females. The major reason for this was that certain sections of the respondents are dominated by

males for example the transport sector, the Bodaboda riders, the political institutions and also most offices had a majority of male respondents.

4.2.4 Age distribution of the respondents

The respondents were divided up into 4 age groups for easy management that is, below 25years, between 25 and 35, between 36 and 45 and finally those of 46years and above as shown by Table

Age group	Frequency	Percent	Cumulative percent
Table 4.4 : Distribution of respondents by age			1.9
			38.9
36 – 45 year	54	35.0	73.9
46 and above	40	26.1	100.0
Total	**153**	**100.0**	

4.4.

Source: Field Primary Data

Table 4.4 indicates that the dominant age groups are those of the people between 25-35 years(37%) and 36-45years (35%) . The simple reason is that these are the most dynamic groups of people one is likely to find in the Bodaboda and transport sectors. They are also active in business and also in office jobs. Those below 25 years accounted for(1.9%) and these were not so significant because most of them are not yet well established.. However, those above 46 years (26.1%) can be found in any of the mentioned categories of respondents..

4.2.5 Educational Background of respondents

The respondents were found to be of different educational backgrounds that is A' level, certificate, diploma, Bachelor's degree, Master's Degree and those outside these categories. Details are as follows in Table 4.5:

Table 4.5 : Educational level of respondents

Educational Level	Frequency	Percent	Cumulative percent
A' Level	14	9.1	9.1
Certificate	40	36.1	35.2
Diploma	30	19.6	54.8
Bachelor's Degree	25	16.3	71.1
Master's Degree	03	1.9	73.0
Below A' Level	41	27.0	100.0
Total	**153**	**100.0**	

Source: Field Primary Data

Table 4.5 shows that the least number of respondents was that of master's degree holders who accounted for 1.9%. Reason is that the majority of the areas that were targeted don't necessarily involve people who are highly educated. It is only some few in offices that had such qualifications. The majority were people having certificates who accounted for 36.1%. This was expected given that the research was conducted in an urban area where a reasonable number of people are fairly educated. The same reason explains the 19.6% of diploma holders. Those with Bachelor's Degrees were 16.3%, while those with A' level only were 9.1%, indicating a fair number of people that were literate. Those that were below A' level accounted for 27% meaning that the research was conducted with a majority of educated people whose responses were largely dependable because of being a bit enlightened.

4.3. Extent to which land use in Jinja Municipality conforms to the Municipality land use plan of 1994 – 2004

Land uses refer to the different functions of land and in this case within the Jinja Municipality. Such functions include residential, commercial, industrial, institutional, communication, recreational and reserve areas like forests and swamps. This part of the research report therefore shows how man has gone on to use the land in Jinja Municipality that was planned for and the different activities. These include Residential, Commercial, Industrial, Institutional, Recreational, Environmental and Utilities. Despite the land allocations made by the land use plan of 1994-2004 (Fig,1.1) scrutiny of the current land use situation in Jinja Municipality reveals

that while some land has been used in conformity to the plan, there are manifestations of non-conformity in several areas- Fig.4.2:

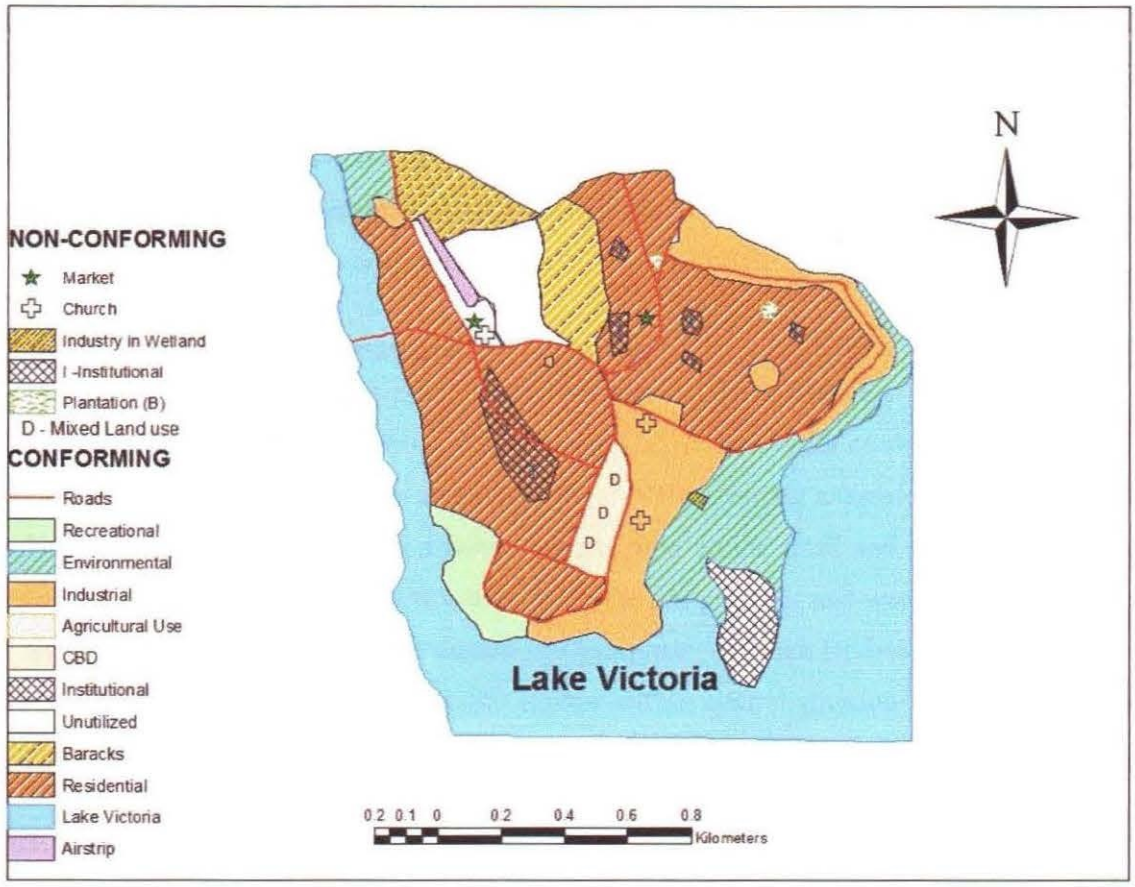


Fig 4.1 : Conforming and non-conforming land uses in Jinja municipality

Source: Field data (2018)

Fig 4.1indicates that certain areas are in conformity with the land use plan while other areas are in non- conformity. However even where land seems to be in conformity as per the map investigations on the ground revealed that non conformities were quite prevalent.

4.3.1. Conforming land uses according to the 1994 – 2004 land use plans

Comparing the 1994 – 2004 land use plan and what is observed on the ground some areas within the municipality are found to be conforming to the 1994 – 2004 land use plan:

4.3.1.1. Residential areas

Some of the designed residential areas include:-Mpumudde Housing estate in Mpumudde-Kimaka Division, Walukuba Housing estate in Walukuba-Masese Division plus areas South and West of the Central division. All these mentioned areas continue to house people as they were planned for. The Walukuba-housing estate has both low and high class residences. Mpumudde Housing estate has medium income earners while areas South and West of the Central division have moderate and high class residences.

4.3.1.2. Commercial developments

Within the heart of the municipality, they designed to have business and trade, that is, commercial activities. That is why a central market and various types of shops are seen in this central business district. Businesses range from the smallest scale for example by road vendors,to the level of large scale stockists and factory agents who do the retail and wholesale business. There are also decentralized business points that were designed for and were found operational for instance markets like Mpumudde market in Mpumudde –Kimaka Division Walukuba market in Walukuba-Masese Division, Madhvani market within central division and other gazetted trading points.

4.3.1.3. Environmental land use

Regarding Environmental land use the 1994-2004 land use plan caters for environmental zoning and open space/ recreation zoning. The environmental zoning includes areas where no development is permitted such as sensitive shoreline areas (wetlands) and designed urban agricultural areas. The open space / recreation zoning includes parks like Ripon and Nile gardens, cemeteries like along the Tororo highway and near the Referral Hospital, crematoria near the source of the Nile, forest reserves like in Kimaka along the River Nile banks and sports ground like the Golf course near the source of the Nile, football fields like along Nile Avenue, Kakindu Sports ground among others.

All these areas area centered for and are serving the purpose for which they were designed in the land use plan. Some of the outstanding wetland areas are found in the East and South of the Municipality along the shores of Lake Victoria.

4.3.1.4. Institutional, transport and utilities

There are yet other significant land uses in Jinja Municipality and these include; institutional, transport and utilities. These were designed in different areas of the Municipality to cater for people's needs. Institutions include; Health, education and community facilities. There exist several primary schools like Main Street Primary School, Spire Road Primary school, Victoria Nile P/S, Walukuba East and West Primary schools, Mpumudde Estate Primary school among others. There are also public and private secondary schools like Jinja S.S.S, PMM Girls' S.S, Jinja College, St. James S.S, St. Peters' High school, Jinja Progressive S.S, Mother Kevin Secondary School. There are also institutions of higher learning both government and private like Jinja School of Nursing and Midwifery, International Institute of Health Sciences, Hotel Tourism and Training Institute, YMCA, MUBS, Jinja Vocational Institute, Bethel Vocational Training Institute among others. There are also numerous private nursery schools and day care centres of different kinds.

Concerning health facilities, the town is endowed with a regional referral hospital, four out - patient and two maternity clinics. These are found in Mpumudde,Walukuba, Town Hall & Town Yard. They are all government owned. However there are several privately owned clinics around town.

There are three community centres in the town, one in each of the three divisions of the town. These are designed to offer education, health and community functions. Within the town, there are also a number of Religious institutions like Churches and Mosques which cater for the spiritual needs of the people. All over the Municipality there are Anglican, Catholic and Pentecostal churches plus Mosques and Hindu temples. Jinja municipal council is designed to have a network of utilities which include water/sewerage system, Electricity, road network, telecommunication system. All these are designed to take care of the people's social welfare.

4.3.1.5 Industrial Development

Jinja town according to the 1994 – 2004 land use plan has industrial regions which are mostly found in the Walukuba -Masese – Division and part of Mpumudde-Kimaka Division. The latter has a distilling, knitting industry and grain warehouse while the former has a multiplicity of industries including iron and steel industries, soap & vegetable oil industries, fish processing,

grain milling and bread industries, wood product industries, safety matches, animal food production, leather tanning and so on. All these areas were catered for in the plan and are currently serving the purpose for which they were planned.

4.3.2. Forms of non-conforming land uses in Jinja Municipality according to the 1994 – 2004 land use plan.

In doing this research, observations were made all around the municipality to establish those areas where land use is apparently different from what was designed according to the land use plan of 1994 – 2004. Observations revealed that in each of the designated areas for various functions, divergences in land use are clearly evident. In some cases there are conflicting land uses, which are provided for in the plan but are located where they are not supposed to be and therefore they end up competing with the bona fide activities planned for particular areas. On the other hand there are land uses that are not catered for by the plan but they are evident in several areas. These are therefore illegal or non-urban activities for example sand depots, washing bays and some garbage disposal points. The identified forms of non-conformity in the different gazetted areas are as follows:-

4.3.2.1. Non conformity in residential land

While it is true to say that most areas originally gazetted for residences still maintain this function, it is also observable that violations of this function cannot be over looked. Variations in the original plan manifest in different ways. For instance some residential areas have been converted into other land uses like schools, office blocks or retail shops, drinking points among others.

It is also observed that while some structures still maintain being residential, in their vicinity other structures have come up hence adulterating the original plan. A case in point is the sunrise Bakery which is found in a residential premise within Ghokale place. This now becomes a mix up of residential area with an industrial activity. It is also common to find small shops/ kiosks intermingled within these residential areas and standing apart from the officially gazetted commercial areas -Fig 4.2 and fig 4.3:

Fig 4.2 : Residential place turned into medical, office and entertainment centre

Source: Clive Road West – (Sept. 2018).

Fig 4.2 shows part of Nile Gardens overlooking Clive Road West and this area was designed as a residential area. However, the area shown is having five buildings each serving a different purpose. The building on the extreme left is a medical clinic, the next high rise building is a business centre, the next (with blue colour) is still residential, the next one has a clinic and restaurant, while the last one on the right is housing offices of the Inspectorate of Government. This simply means that in the particular area only 20% of the planned land is still serving the original purpose and 80% in non-conformity

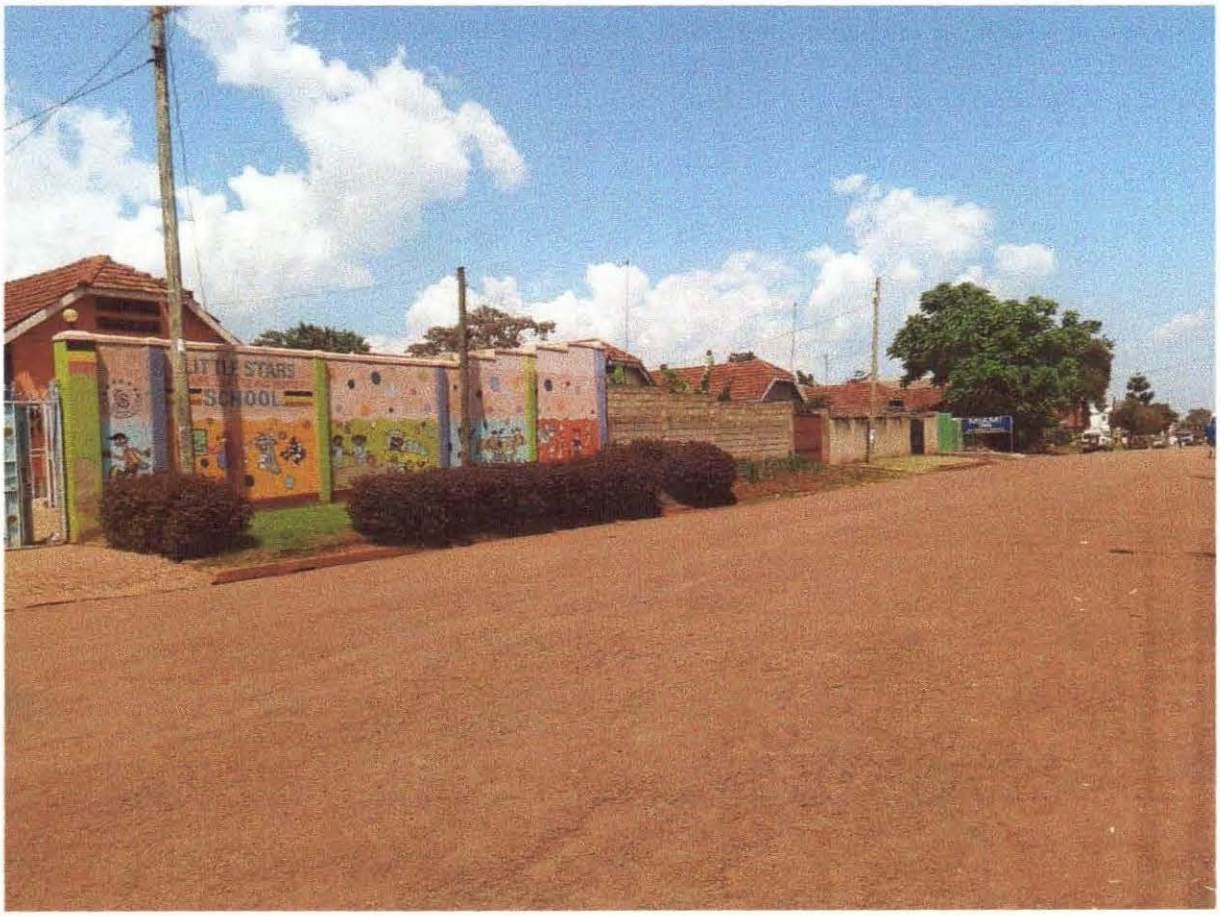


Fig 4.3 : Residential area with a school, inn and restaurant

Source: Kutch Road West – (Sept 2018).

Fig 4.3 shows a stretch with 10 houses originally planned as residences. However on the extreme, left, one area was turned into a school, as one moves on he finds an inn and eventually a bar/restaurant. This means only 30% of the houses in that area do not conform to the plan for that area and 70% of the houses are conforming to the plan. Along the same road on the opposite sideFig 4.4 an open area within the residential place is serving as a washing bay and therefore it becomes a misallocated activity, not conforming to the plan of the area.

Fig 4.4 : Washing bay in a residential area.

Source: Kutch Road West-(Sept 2018)

Another observation was made along school lane in a residential area where a church has been established within a residential premise –fig.4.5. This is a mismatch because such institutions for religious affairs are supposed to be in well gazetted areas that are planned by the municipal council.

Fig 4.5 : A worship centre in a residential premise.

Source: School lane-(Jan 2017).

At this point it can be concluded that divergences in land use plans are not a new phenomenon because other researchers have encountered similar scenarios.

Gesa (2013) in his research done around Mbale town, he concluded that there were generally mixed up land use patterns in all the divisions and that zoning had been generally affected as land use was not as per the 1954 and 1957 urban land use plans.

Abongo (2002) also made an observation in Lira Municipality that records in the land department indicate that some structures are not conforming to the plans. This therefore underscores the need to address issues of non-conformity in land use.

4.3.2.2. Non –conformity of land use in industrial land

Although land gazetted for industries has gone a long way to serve this purpose, it is also noticed that some encroachment on such land by other activities has taken place. There is for instance a vivid structure of a church along Walukuba Road right amidst a complex of factories and it is evidently misplaced -fig 4.6. Further still not far from this very point, one sees some towering

buildings housing a school (Horizon high school) and a Hospital (Nile International) in an area that is meant for industrial establishments, that is, very close to Engaano Millers complex -fig4.7. Looking at the 1994 – 2004 land use plan of Jinja, one observes some areas that had been planned for industries but are apparently being used for other purposes. Some area around Mailo Mbili round about on the left hand side as one leaves the municipality centre you find an area along Kyabazinga way that was planned for industries having business enterprises and residential establishments. This of course becomes a non-conformity of land use, further still, there is another area around Amber court round about between Kyabazinga way (Jinja-Tororo) and Kimaka road which was gazetted for industries but incidentally it is having some worship centre and a market with no industry at all -fig 4.8. Instead there is a grain ware house on the opposite side in an area which is even partly a wetland.

Fig 4.6 : A church in middle background between industrial premises

Source: Tobacco Road-(Sept. 2018)

Fig 4.7 : A school and hospital in the left and mid central ground next to factory premises in the right middle ground.

Source: Tobacco – Kyabazinga Roads, Walukuba-Masese Division- (Sept 2018)

Fig 4.8 : A market place in an area meant for industries

Source: Kimaka Road (Amber court-September 2018)

This kind of experience rhymes with the observation by the Auditor Generals' Report (2015) that the growth of towns has been unplanned, with high rates of spatial expansion (sprawl) and un planned growth, lack of integration between sectoral and spatial planning, inadequate provision of basic services, weak urban management capacity and significant fiscal constraints. This means therefore that while it is true that land use plans have been put in place to guide land use, several spots reveal that effectiveness in implementing the set goals leaves something to be desired, no wonder the mismatches in land use highlighted on above.

4.3.2.3. Non-conformity in Central Business District

Most of the commercial areas are within the central business District although there are other spots elsewhere all over the municipality. Commercial activities within the Central Business District are increasing day by day and this is eventually leading to non-conformity as far as land use is concerned. The bus park which was originally designed as a bus terminal is now a commercial centre with several business buildings within and around it. People have also resorted to putting up kiosks in every point especially along pavements to create room for business transactions.

Fig 4.9 : Retail business along a pavement

Source: Ghokale Road West-(Jan 2016).

Fig 4.10 : Kiosks along a street

Source: Nile Avenue-(Jan.2016)

It was also observed that within the CBD there are situations where land is misappropriated, a case in point being that, a petrol station was found being used as premises for a taxi park. This continues to reflect confusion and competition between two different activities - Fig 4. 11

Fig 4.11 : A taxi park at a petrol station

Source: Alidina Road-(Sept 2018).

Incidents of animals grazing within the municipality have also been encountered at several spots and this is an activity with no space on the land use plan. So it is an illegal non-urban activity that accelerates confusion and competition for space within the different areas of the municipality. A case in point is illustrated in - Fig 4.12:

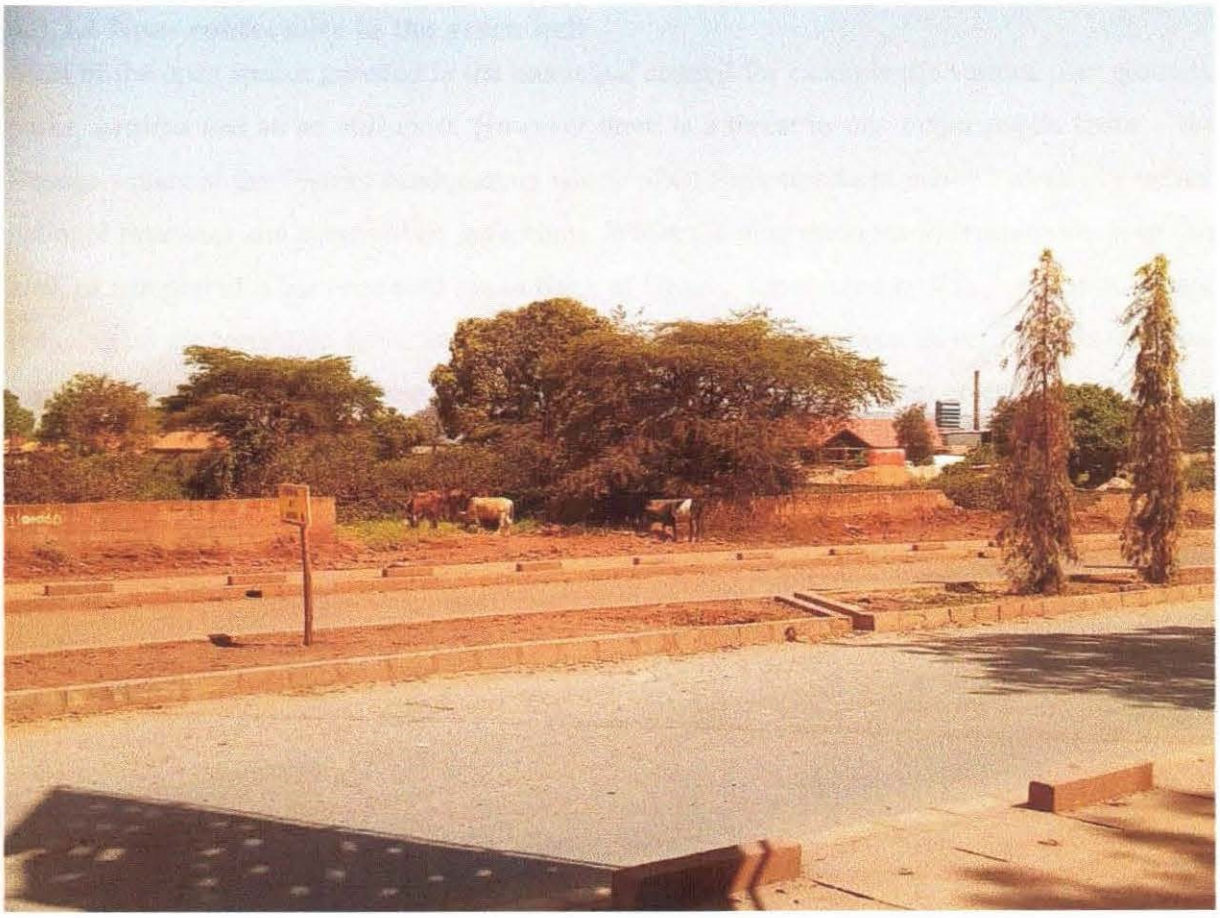


Fig 4.12 : Cattle grazing in the municipality

Source: Engineer Zikusooka way-(Sept 2018).

The cited observations are in agreement with a study that was conducted in India by Bhattacharya et al (2016) that the number of people in India had led to problems and land shortage, housing short fall and congested transit and had also severely stressed the existing basic amenities of the towns and cities. This statement means that as people increase in the urban areas cases of undesirable land use practices also get on the increase.

4.3.2.4 Non- conformity in the green belt

Most of the open spaces gazetted in the municipal council for example the various play grounds, parks, gardens and so on still exist. However there is a threat to one major public space – the Busoga square at the District headquarters which often accommodates public events like rallies, national functions and other public gatherings. While the plan provides for rehabilitation of this area, of late part of it has been sold out to Bank of Uganda for extension of their structures hence reducing on the recreation space and the friendly trees which have been there. This has therefore turned out to be a violation of the earlier plan which had this place as open green- Fig.4.14.

Fig 4.13 : Open Green space being diverted for construction

Source: Busoga Square-(Jan 2016).

Furthermore there are areas within the municipality which have been put to uses not officially known to the plan, for example washing bays. This is often done in vacant places within the central business district or in between buildings, therefore turning out to be misallocated land uses- Fig.4.14.

Fig 4.14 : A washing bay in an open green space within a railway reserve.

Source: Tobacco Road-(Sept 2018).

Abongo (2008) observes that that in Lira Municipality social amenities like play grounds and parks for children are lacking in densely populated areas. Land originally set aside for such facilities has been allocated to individuals for residential or commercial building construction. This is all evidence that it is common for gazetted land to be used for other purposes hence non conformity to land use.

Fazal (2000) however puts forth a view which condones alterations in the set plans that alteration is nearly inseparable from human occupation and use, and the goal is to encourage improvement and to counter forces that encourage degradation. His view therefore means that provided the outcome of the alteration is for the common good then it should not be blocked.

4.3.2.5. Non- conformity within the transportation facilities

Regarding transport, a number of tarmac and murram roads are found around the municipality. These are used by vehicles of all kinds, motor cyclists, bicycle riders and pedestrians. The established bitumen (tarmac) roads have sidewalks for the pedestrians.

It is however surprising to note that these establishments have ended up being used in an awkward manner. Some roads have ended up being used as permanent car parks and bicycle (Bodaboda) stations. At the same time, some pedestrians' sidewalk sections a serve as Bodaboda stations - Fig 4.15. This does not only inconvenience other road users but also creates disorder and clumsiness in the town, besides being a violation of the set plan for the town. It has also been noted that some sections of railway lines and their reserves are not under their original use but have ended up being used as roads or storage areas hence a violation in the 1994-2004 land use plan - Fig 4.16. Furthermore some road islands are being misused as Bodabodastations - Fig4.17 or drying areas for maize bran in the industrial area-Fig 4.18. Also along some roads you find garbage containers and rubbish spilling over into the roads - Fig 4.19.All these are misallocated functions within the municipality.

Fig 4.15 : A road serving as a taxi park and the pavement serving as a Bodaboda station.

Source: Clive Road West Jan 2016

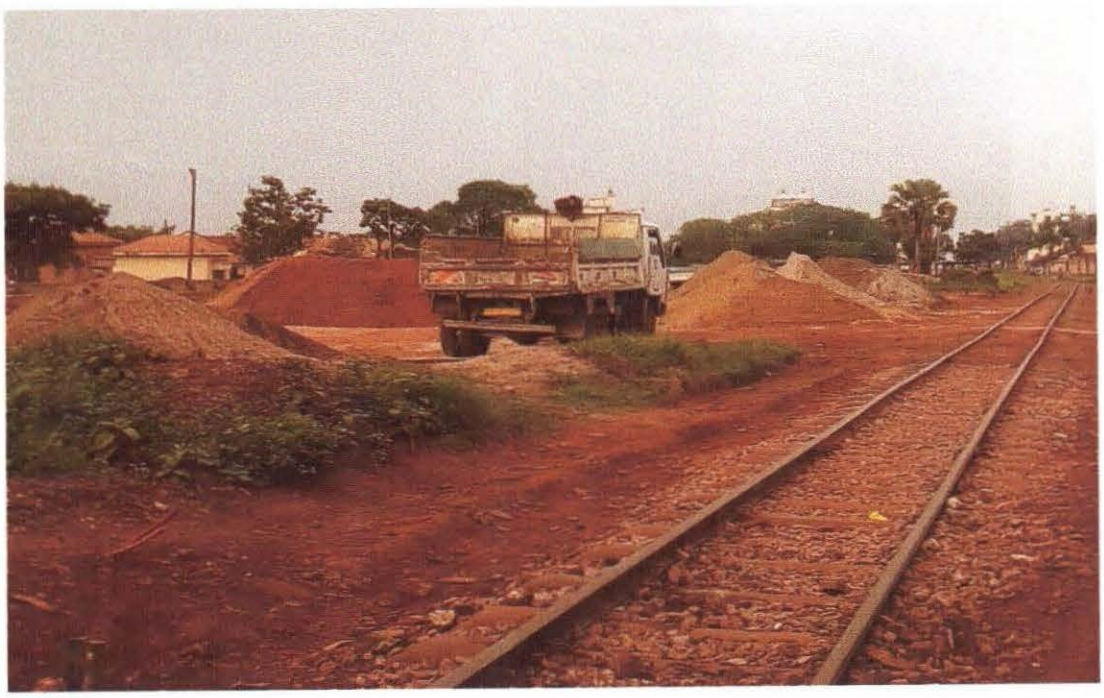


Fig 4.16 : Railway reserve serving as a sand depot.

Source: Engineer Zikuzooka way- (Sept 2018).

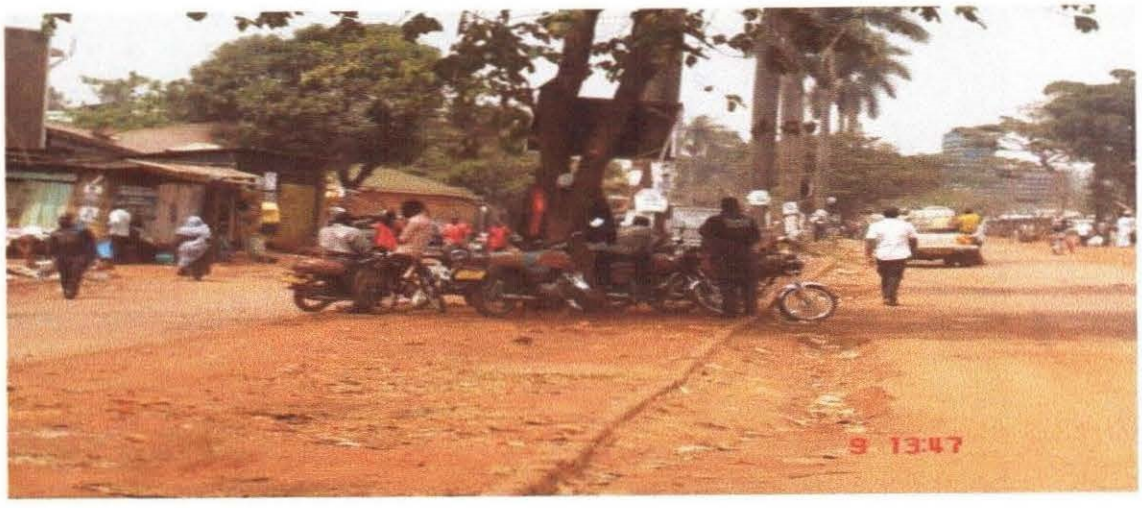


Fig 4.17 : Road Island serving as a bodaboda station

Source: Engineer Zikuzooka way-(Jan 2016).

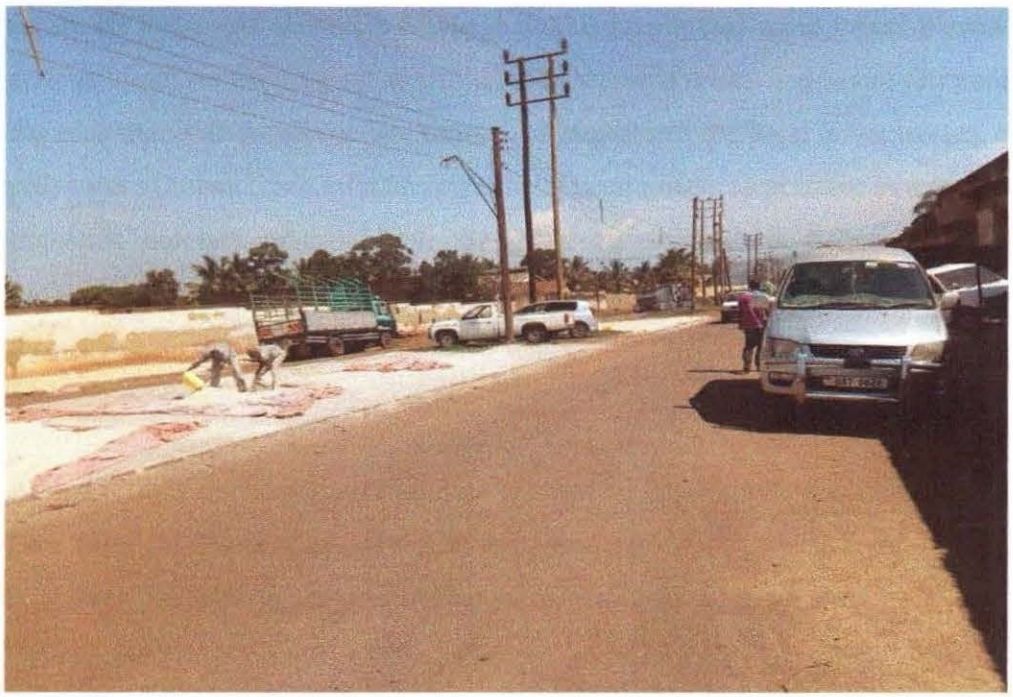


Fig 4.18 : Road Island serving as a drying ground.

Source: Factory street – Kazimingi Industrial area-(Sept 2018).

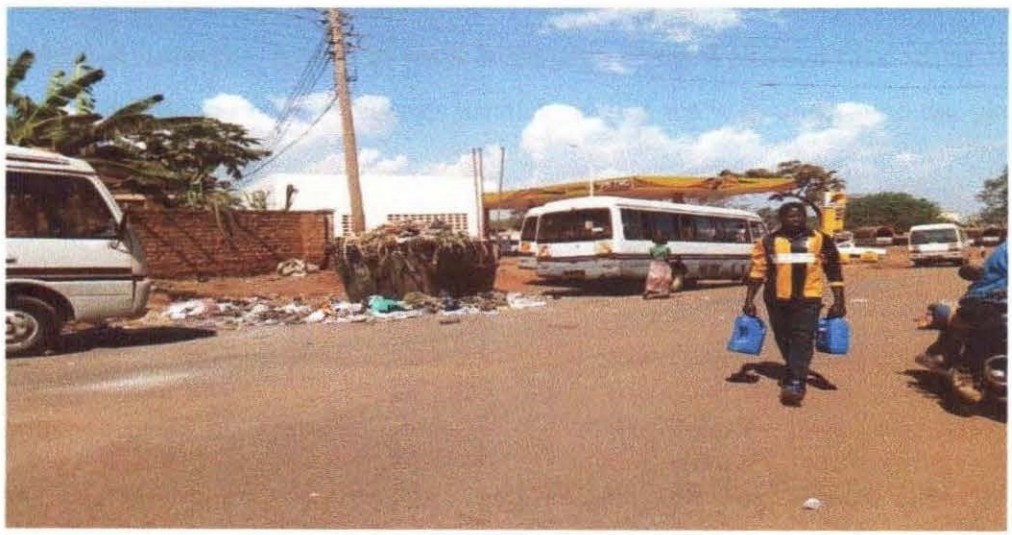


Fig 4.19 : Garbage Disposal point along a street.

Source: Ghokale Road- (West Sept 2018).

Given all the above scenarios Mwangi (2000) puts it that rapid urban growth is also putting a serious strain on existing urban infrastructure and services and many environmental problems. He adds that with respect to institutional arrangements the local governments, entrusted with the provision of urban basic infrastructure, have been unable to perform as a result of administrative problems and lack of capability. So given his expressions, it becomes clear that there is a problem of managing infrastructure within urban areas and urban authorities need to reinvent themselves to squarely address these challenges. No wonder the challenge of poor garbage disposal as shown - Fig 4.19.

Abong (2002) also observes that there is mismanagement within communication systems like in Lira Municipal where some roads were diverted while others were simply blocked due to structures that were put in place without conformity to the town plan.

4.3.2.6 Non-conformity within the Wetland areas

The 1994 - 2004 land use plan gives respect and restrictions to safeguard the water resources and wet lands whereby settlement in the wetlands in supposed to be checked so as to control depletion and eventual water pollution of the nearby water bodies. It is surprising to note however that parts of the shoreline and the wetlands are being encroached on especially through industrial activities. A case in point is the area along Walukuba road where we have the MMI steel industry and other industries located yet this tends to undermine the plan that was made previously -fig 4.20

Fig 4.20 : Industrial activity encroaching on a wetland

Source: Walukuba Road in Walukuba–Masese Division (Jan 2017).

Given - Fig4.20, it becomes dangerous to have factory premises in wetlands because there is a danger of interfering with the eco system, but also polluting the environment through waste disposal. That's why Ross et al (2000) wrote about Bangkok that in some cases, households and small businesses had no option: where there was no sewage, wastes were discharged directly into the canals. Where they did have options, political and economic incentive structures tended to reward environmentally damaging behaviour. Until regulations and monitoring were tightened up around 1992, it was common for factories to avoid running their waste water treatment plants because of the cost.

Opio (2008) also observes that the government of Uganda made significant progress in establishing a comprehensive policy, legal and institutional framework for wetlands management. None the less, there are numerous challenges that undermine the sustainable utilization and management of wetlands in Uganda. Therefore all that said, it becomes

incumbent upon our local governments to ensure that either the wet lands are not settled in or it is done with regulations and control mechanisms or else unprecedented pollutions will compromise the quality of our environment in the name of industrialization.

4.4. Factors responsible for the divergences (Non-conformity) in the current land uses in relation to the 1994-2004 land use plan of Jinja municipality.

Following the discussions on the extent to which land in Jinja Municipality conforms to the Municipality land use plan, one discovers that part of the land within the municipality has been put to use according to the earlier plan of 1994 – 2004. However, it is also common knowledge that there are a number of black spots around the municipality which reflect that the requirements of the plan were not followed hence non-conformity. So it is these areas where there is non-conformity that were investigated to establish the cause of this scenario.

Table 4.6 : Chi-square test on association between factors and divergence in land use plan (n=54)

Strategies	Yes (n=29)	%	No (n=25)	%	X^2	*Df*	p≤0.05
Historic	31	57	23	43	4.054	1	.044
Government influence	43	80	11	20	4.392	1	.036
Ignorance	47	87	07	13	3.315	1	.069
Weak law	46	85	08	15	4.314	1	.038
Limited room for expansion	28	52	26	48	1.238	1	.266
Negligence	32	85	22	15	4.314	1	.038
No govt funding	39	72	15	28	1.404	1	.236
Corruption	46	89	08	11	5.819	1	.016
Incompetent staff	32	59	22	41	3.130	1	.077
Favoritism	40	74	14	26	.851	1	.356
Population explosion	34	63	20	37	1.630	1	.202

*Significant at α =0.05 probability level

Respondents were asked to indicate the possible causes of non-conformity to the land use plan of 1994 as indicated in *Table 4.6*. Results showed that majority of the respondents indicated corruption (89%), followed by ignorance (87%), negligence (85%) and government influence

(80%) to have contributed to divergence in the 1994 - 2004 land use plan of the municipality. Also, slightly above average of the respondents indicated limited room for expansion (52%), historical factors (57%) and incompetent staff (59%) as the least factors that caused divergences from the acceptable land use plan of 1994 - 2004. The association between the respondents' divergences from the 1994 - 2004 land use plan and the factors was tested using a Chi-square statistic. Also, factors that that were found to have contributed to divergence from the 1994 - 2004 land use plan were tested for internal consistence using the Cronbach's Alpha statistic which was $\acute{a}$=.956. This implied that all factors were consistent and fit to be analyzed at 96%. Furthermore, results in table 4.6indicated of all the factors presented to have caused divergence from the 1994 – 2004 land use plan, only historical factors, Government influence, weak law enforcement, negligence and corruption tested significant. In other words, there was an association between historical factors (X^2=4.054, *df*=1, *p*=.044), Government influence (X^2=4.392, *df*=1, *p*=.036), weak law enforcement (X^2=4.314, *df*=1, *p*=.038), negligence (X^2=4.314, *df*=1, *p*=.038) and corruption (X^2=5.819, *df*=1, *p*=.016) and non-conformity to the land use plan of 1994 - 2004. This implied that respondents that agreed to the divergences from the 1994 - 2004 land use plan likely looked at the historic factors in terms of indigenous, socio-political and socio-cultural structuring of the municipalities that affected the strict adherence to the land use plan that was crafted and legalized in the 1994 – 2004 land use plan. This could be true in a sense that when the colonialists and subsequent planners first planned for the town, it had a less population and fewer demands than what is apparent. But overtime the society has become more demanding and complex for instance in the earlier years the Bodaboda industry was non- existent. So when it comes on board, it turns out that such people are part of the current society yet because they were not there before they were not catered for. That is why you find them parked carelessly everywhere. Of late other religions different from the traditional ones have come up and these had no space initially, that is why they have ended up taking up space in railway reserves and industrial areas.

Government influence can be viewed in terms of policies and political figures that use state machinery or positions of influence to superimpose their plans on the existing municipal land use policies. Government influence has been also a major challenge in other areas of Uganda such as Kampala Capital City Authority (KCCA) as far as adherence to land use plans is concerned.

Also, similar evidence can be cited in Bangkok city where government interference affected the implementation of the land use plans of the cities and towns as put by Ross(2000) that analysis of Bangkok suggested that the root of environmental (and some social) problems lay in decision making structures and a political culture which had historically fostered self-interested decisions by stakeholders rather that the public interest. Given the above it is very possible to have disorganized urban areas due to selfish interests.

Respondents perceiving weak laws being associated with non-adherence to the land use plan of the 1994- 2004 can be attributed to limitations in the punitive measures that can help back off people who violate good land use practices in accordance to the legalized plan of the 1994 - 2004. It is also possible that the existing laws can be easily challenged in the courts of law when someone violates the plan and is committed to courts of law. Ross (2000) still observes about Bangkok that until regulations and monitoring were tightened up around 1992, it was common for factories to avoid running their waste water treatment plants because of the cost. This means that unless the government is committed to enforcing laws, non-conformity in land use will always prevail.

Corruption further weakens the existing laws and increases corrupt government officials' influence on the existing land use plan. This is in line with what happens in Uganda, that people take up land fraudulently and develop them without approval by KCCA.

4.5. Ways in which non-conformity in land use is being addressed in Jinja Municipality

Data concerning this objective was subjected to SPSS calculations as per the data analysis plan to determine the ways in which non- conformities to land use are being addressed- Table 4.7:

Table 4.7 : Strategies found among respondents as having helped improve land use practices (n=54)

Strategies	Yes (n=29)	%	No (n=25)	%	$\bar{x}$Diff.	*t-Value*	p≤0.05
Gazetted land for development	49	91	5	9	.17241	2.240	.029*
Routinely Monitored land	51	94	3	6	.10345	1.667	.102
Clearance to development	52	96	2	4	.06897	1.335	.188
Garbage removed	45	83	9	17	.23586	2.398	.020*
Sensitized the masses	53	98	1	2	.03448	.927	.358
Charged offenders in law courts	50	93	4	7	.13793	1.963	.050*
Developed idle land	51	94	3	6	.10345	1.667	.102
Increased government funding	43	80	11	20	.23034	2.146	.037*

*Significant at α =0.05 probability level

In order of ranks by percentages, *Table 4.7* shows that strategies including sensitization (98%), clearance (approval by the council) before developing (96%), routine monitoring (94%), development of idle land (94%), charging offenders in law courts (93%), gazetting land for development (91%), garbage removal (83%) and increasing government funding to municipal councils (80%) were found to be useful in improving land use in Jinja Municipal council. However, there were differences in strategies that were found to be important in improving land use in Jinja municipality. Significant differences existed among the officials who indicated that there was no adherence to the land use plan of 1994 – 2004 and those that did not, concerning, gazetting of land for development (t=2.240, p=.029) with a mean difference ($\bar{x}$=.17241), garbage removal (t=2.398, p=.020) with a mean difference ($\bar{x}$=.23586), charging offenders in courts of law (t=1.963, p=.050) with a mean difference ($\bar{x}$=.13793) and increase in government funding (t=2.146, p=.037) with a mean difference ($\bar{x}$=.23034). This implied that gazetting of land for development, garbage removal, charging offenders in courts of law and increase in government funding were seen as the most preferred among those who thought that 1994 - 2004 land use plan had not been adhered to compared to those who did not believe so. Such strategies can be rewarding just like Aribigbola (2008) observed in Nigeria that the 1992 National planning law assigned responsibilities to all three tiers of government and created National planning Board at

state level and planning authorities at the local government level. It therefore means that such mechanisms can go a long way to enhance proper urban land use.

In conclusion, the analysis confirms that the respondents affirmed that interventions have been made to address the issue of un conformity.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1. Summary of major findings

In conducting this research it was observed that there is a set structure plan for Jinja municipality which was designed for the period 1994 – 2004. This plan accommodates different forms of land use which include residential, commercial, institutional, industrial, open green/recreation, transportation, utilities, environmental and wetland areas. Actually when one moves across the town, all the above forms of land use patterns are evident.

However, while one would say that to some extent the town has conformed to the 1994 – 2004 land use plan, there are clear evidences that there is non-conformity to this plan in several areas. For example many residential areas were found accommodating activities that had not been allocated to the zone. Such land uses include offices, bars, schools and medical clinics. Further still, within the industrial areas, there are some worship centres and markets that have been established hence diverting from the original land use plan. The central business district has become congested with commercial activities carried out on pavements. And Bodaboda stations in every part of the road as well as some pavements. Some reserve areas especially the wetlands in Walukuba –Masese Division have been encroached on by industrial activities hence affecting the eco-system. Whereas urban agriculture involving growth of annual crops was catered for by the 1994-2004 land use plan, perennial crops like bananas are a common sight in the municipality.

All in all it turns out that the land use plan of 1994-2004 for Jinja municipality has been conformed to, to some extent, however it has dents of non-conformity which cannot be overlooked and have been the gist of this study. The reasons for non-conformity have been established; among these being inefficiencies within the municipality staff circles, undue interference by political leaders plus ignorance and adamancy of the land users

Remedies to the challenge of non- conformity have been put in place to help address the problem. Some of these include; routine monitoring, developing idle land, sensitization of the masses on the need for conformity, plan and constant garbage collection.

5.2. Conclusion

This research study was conducted about non- conformity of land use in Jinja municipality with respect to the 1994 – 2004 land use plan. It was done with an aim of wanting to analyze forms of non- conformity of land use in Jinja municipality, factors responsible for it and how the issue is being addressed. At the end of the process the researcher has been able to establish that truly there are land use unconformities in Jinja municipality in the different zones gazetted for different activities; the residential areas, commercial, industrial, open green, wetlands and institutional are all affected. However this is just an eye opener that what is happening in Jinja is also happening elsewhere,Therefore this can be a basis for further related studies in other urban centers elsewhere.Turyabanawe(1998) in her study around Rubaga Division, Kampala observed that only 47% of land use was in conformity to the land use plan while 53% was not. Through studies of this kind academicians can make more discoveries to promote better utilized urban centers. Furthermore it was established that collective effort needs to be done to address the issue of non- conformity, that is, the users, the council officials plus the local and central governments.

This research has exposed the fact that plans are constantly made by town/municipal councils but in as much as they try to implement them, it turns out that violations of these plans co-exist with their implementations. So it is pretty difficult to achieve 100% conformity of land use.

Further still in this research it has been established that non conformity of land use in Jinja Municipality largely emanates from socio-economic factors which require critical analysis and thereafter a plan be hatched to go about addressing them. And for sure this research has gone a long way to discuss ways in which the challenge of non-conformity of land use is being addressed, and this can work not only in Jinja municipality but also in other towns/urban centres that are faced with a similar challenge.

Through this study a number of gaps have been identified both in the social and academic areas:

(i) It was discovered that one of the leading causes of non-conformity and disorder in Jinja is uncontrolled Bodaboda (hired cycle) operations. Therefore in future studies, more work needs to be done around this area, how to better manage the Bodaboda, industry in urban places

(ii) In the course of this study still, it was discovered that insolence or call it lawlessness is a big cause of trouble not only in promoting non-conformity but also in putting society in general at stake. Uganda is for instance known for having very many enacted but non-functional laws, for example the failed laws on speed governors and seat belts in passenger vehicles. Therefore study needs to be made on how best to implement set laws in urban centres so that we can have livable town.

5.3. Recommendations

These are three fold that is to the central government, the technical team and the land users. To the central government, the following ought to be done:-

(i) Constant monitoring and evaluation of the performance of urban councils to ensure that sanity prevails. They should constantly have inputs to make.

(ii) The central government should also consider timely funding of the urban councils to ensure that they develop infrastructure in time to attract timely and orderly development, without which illegal establishments are bound to take place.

(iii) It is also paramount to strengthen law enforcement. The central government should give support to the technical departments and local governments to this effect.

(iv) There should also be sensitization to the masses about urban land use, masterminded by the central government

(v) The technical staffs who fail to execute their services as expected should be reprimanded by the central government to ensure effectiveness of service delivery.

To the technical managers I would recommend that;

(i) Refresher training and guidance be done from time to time to the management teams to be better mangers

(ii) They also need to constantly be on ground and keep in touch with people to give them necessary counsel and guidance so that they avoid possible errors

(iii) They need to prevent other than to cure whereby they should not allow illegal establishments to exist even for a week or they deter illegal construction other than thinking of erasing after they are establishment.

(iv) The technical teams should also constantly advise the local governments on due technicalities to avoid making planning errors.

Finally to the land users I do recommend that;

(i) They should be prudent enough to do necessary consultations with the urban technical staff to avoid making errors and eventual get disappointments

(ii) Land users also ought to have respect for the law so that they are not merely coerced to obey lawful instructions

(iii) They should also seek for funding from financial institutions to grow their investments so that they can afford gazetted places for business transactions other than illegal settling in non gazetted areas due to limited resources.

In final conclusion, it was a successfully conducted research which can be a basis for further research by other people.

REFERENCES

Abongo EO (2002) *Physical planning and the quality of urban development in Lira municipality,* in Lira district.

Aribigbola, A. (2007). Fourth Urban Research symposium. Akure, Nigeria.

Bhattacharya, S, Anuszree, S., and Rathi, S. (2016) Creating inclusive cities: *A review of Indicators for measuring sustainability for urban infrastructure in India,* SAGE Publications.

Craig, A. Peterson and Claire, MCarthy. (1989). *Amortization of legal land use non conformities as regulatory undertakings*: An uncertain future, Washington.

Chigara B, Magwano - Ndiweni, L (2013) *An analysis of the effects of Piece meal planning on development of small urban centres in Zimbabwe*: case study of plum tree International Journal of management and Social Sciences Research.

Diaw, K. and Ninkya, T.(2002). *Planning of Education in Sub-Saharan Africa: Responding to the demands of a changing context*. Planning Practice and Research.

Dodman, David.,McGranahan, G. and Dalal-clayton, B. (2013). *Integrating the environment in urban planning and management. Key principles and approaches for cities in the 21st Century*. International institute for environment and development. United Nations Environment Programmes UNON/Publishing Section Services, Nairobi.

Easwarmoorthy, M. and Zarinipoush.(2006). *Interviewing for research. Imagine Canada*, Toronto.

Fazal, S. (2000). *Urban expansion and loss of agricultural land – a GIS based study of Saharanpur City*, India, Environment and urbanisation Vol. 12 No. 2.

GESA, A. (2013). *Factors influencing the changing Urban land use patterns in Mbale Municipality since 1995*. Dissertation submitted to Kyambogo University Graduate School.

Infrastructure design forum and SaasYahya Associates. (2009). Jinja Municipality.

John Van Nostrand Associates Limited (1993). Jinja structure plan (1994).

Leong, G.C. and Morgan, G.C. (1992). *Human and Economic Geography*, 2nd Edition. Oxford University Press, Oxford.

Loh,C.G.(2011). *Assessing and interpreting non-conformance in land use planning implementation, planning practice research.*

Longman, P. (2006). Longman Dictionary of contemporary English, New Edition, England.

Mabaso, A., Shekede, M.D., Chirisa, 1. Zanamwe, L., Gwitira, 1. And Bandauko, E. (2015). *Urban physical development and master planning in Zimbabwe: An assessment of conformance in the city of Mutare. University of Nambia, Journal for studies in Humanities and Social Sciences Vol 4 No. 1 & 2.*

Maleche, Z.(1993). *Training manual prepared for introduction to planning in Uganda.* First Urban Projection GTZ Urban Planning Associate, Kampala.

Marc Melanson City Clerk of the City of Dieppe.(2017). Municipal Development Plan 2 – 9.

Mwangi, S.W. (2000*).Partnerships in urban environmental management: an approach to solving environmental problems in Nakuru*, Kenya. Environment and Urbanisation vol. 12 No.2

NEMA (2008). *State of the Environment Report, Kampala.*

Office of the Auditor General. (2005). *Implementation of physical development plans in Municipalities.*

Nkutu D, Otim M and Muhumuza M (2004) Jinja municipal council *environmental impact statement for the proposed land fill and waste composting plant at Masese III village*, Masese Parish, Walukuba

Division, Jinja Municipality

Nuwagaba, A (1994), *urbanization and environment crisis in Uganda, implication for environmental management and sustainable development, a working paper presented for the African research network for urban management, Nairobi*

Nyakana, JB, Sengendo H and Lwasa S (1998) *Population urban development and the environment in Uganda; the case of Kampala city and its environs*.

Opio M (2008), *An institutional analysis of the management of wetland resources: a comprehensive study of Floahreppur municipality in south Iceland and Oyam district in Uganda*, land restoration training program Keldnabolt,112 Reykjavik, Iceland.

Oriye, O. and Fakere, A.A. (2015). *Urban land use in the city centre of Akure, Nigeria. Ethiopian Journal of Environmental Studies and Management.*

Oxford Advanced learners' Dictionary.(2014).

Paciene, M.(2005). *Urban Geography, A Global Perspective.* 2nd Edition, Routeledge, New York.

Ross, H., Poungsomlee, A., Punpwing, S., and Archavanitkul, K. (2000). Integrativeanalysis of city systems: Bangkok "man and the Biosphere" programme study, Environment & urbanisation Vol. 12 No. 2.

Santosa, H. (2000). *Environmental management in Surabaya with reference to National Agenda and the social safety programme*, Environment and urbanisation, Vol. 12, No. 2, Indonesia.

Sietchiping, R., Reid, J. and Omwamba, J. (2016). *Implementing the SGDs and the New Urban Agenda,* SAGE Publications.

Swampan, M.S.H. (2016). *Participatory Urban Governance in Bangladeth. A study of the gap between Promise and Realities*. National institute of Urban Affairs, SAGE Publications.

Turyabanawe, Loy.(1998). *The competing and conflicting land uses in Rubaga Division with special reference to the 1972 Kampala Structure plan*. A dissertation submitted in partial fulfillment of the masters degree of master of arts in the department of Geography, Makerere University, Kampala.

Uganda Bureau of Statistics.(2011). Kampala.

Waugh, David. (2002). *Geography, an integrated approach*, 3rd Edition Nelson Thomas, UK.

White, M. AICP.(2017). *Issues in land use law and zoning. Non conformities: Dealing with uses.*

Wunder, S. and Wolf, F.(2015*). International Governance Screening of global urban policies and their impacts on sustainable land use*. Globalands discussion paper.

www.businessdictionary . com.

National Housing and Population Census (2014). Revised Edition, Kampala.

Population of Cities in Uganda (2018). World Population Review.

Getis a, Ord JK(1996). *Local spatial ststistics an overview.in Longlay P A*, Batty M(eds) Spatial Analysis; modaling in GIS environment. Geoinformation International, Cambridge pp.261-277.

APPENDICES

APPENDIX 1: QUESTIONNAIRE

Introduction

The study about conformity of land use in Jinja Town with the Jinja municipality structure plan of 1994-2004 is using a questionnaire as a data collection instrument to investigate the means of improving land use in urban centres.

Given your central position and stake in this sector, you have been selected to participate in this study therefore the information you give is purely for academic reasons and will be treated with due confidentiality. The findings and recommendations of the study are likely to benefit academicians and local governments among others.

You are therefore kindly requested with due respect to spare a bit of your precious time to answer the questions below.

Thanks very much in anticipation for your kind help and cooperation.

Yours faithfully,

GODFREY MUGOYA

SECTION ONE: GENERAL INFORMATION:

Fill in the gaps or tick the box with the description that best represents your response;

1. Name of :
   (a). Department: .....
   (b). Section:
   .....

2. Gender a).Male ☐ b). Female ☐

3. Age group a). below 25 yrs ☐
   b). 26-35 yrs ☐
   c). 36-45 yrs ☐
   d). above 45yrs ☐

4. Marital status a). Single ☐ b). Married ☐
   c). Divorced ☐ d). Widowed ☐

5. Educational background:
   (a). Below A' level ☐
   (b). A' level ☐
   (c). Certificate (+ O' level) ☐
   (d). A' Level + certificate ☐
   (e). Diploma ☐
   (f). Degree ☐
   (g). Others (specify).....

6. Job Title: .....

7. Work experience at present Job. .....

SECTION TWO: CURRENT LAND USE PATTERNS IN JINJA TOWN

To what extent do you agree with the statements in regard to land use in Jinja town?

Kindly indicate by ticking your opinion from the several alternatives given in the table where **1**is **strongly disagree** and**5**is **strongly agree**:

	LAND USE PRACTICES	**Strongly disagree** **1**	**Disagree** **2**	**Undecided** **3**	**Agree** **4**	**Strongly agree** **5**
1.	Guidelines of urban planning are followed					
2.	Management and staff have knowledge about the presence of the municipality structure plan.					
3.	Management and staff have access to the municipality structure plan					
4.	Land developers are made aware of the municipality structure plan before using acquired plots.					
5.	Developers always comply with the structure plan.					
6.	There are illegal settlers/users who violate the structure plan.					
7.	The municipal council periodically reviews people's adherence to the structure plan.					
8.	Measures are taken to restrain illegal and errant land users.					

SECTION 3: RELATIONSHIP BETWEEN THE CURRENT LAND USE IN JINJA AND THE 1994-2004 MUNICIPALITY STRUCTURE PLAN

	LAND USE AND STRUCTURE PLAN	**Strongly disagree 1**	**Disagree 2**	**Undecided 3**	**Agree 4**	**Strongly agree 5**
9.	Currently land use does not fully reflect the 1994 -2004 structure plan.					
10.	Where variations have been noticed, no corrections been made.					
11.	Some land has not yet been used as per the 1994 – 2004 structure plan.					
12.	The 1994 – 2004 structure planhad some loop holes and therefore needed revision.					

SECTION 4: FACTORS RESPONSIBLE FOR THE CURRENT LAND USE PRACTICES IN JINJA TOWN

	FACTORS FOR CURRENT LAND USE PRACTICES	Strongly disagree 1	Disagree 2	Undecided 3	Agree 4	Strongly agree 5
13.	Current land use is attributed to historical factors.					
14.	Government is responsible for the variations in the set plan.					
15.	People's ignorance and indifference have escalated disorder in the town.					
16.	Weak law enforcement procedures are responsible for violating the structure plan.					
17.	Limited room for expansion has led to violation of the structure plan.					
18.	Negligence by the municipal council has led to increased violations in the structure plan.					
19.	Shortage in government funding has hindered implementation of the set structure plan.					
20.	Corruption.					
21.	Incompetent staff.					
22.	Favouritism.					
23.	Temporary development procedures.					
24.	Population explosions.					

SECTION 5: STRATEGIES IN PLACE TO ADDRESS NON-CONFORMITY OF LAND USE IN JINJA MUNICIPALITY

Put a tick under 'YES' to agree or 'NO' to disagree with the following strategies

	Strategy	Response	
		YES	NO
25.	Gazetting particular places for particular functions		
26.	Routine monitoring of activities in the municipality		
27.	Issuing clearances by the council to developers before they begin on any project in the municipality		
28.	Constant garbage collection		
29.	Continuous sensitization of the masses about the importance of conformity to the land use plan		
30.	Charging those who violate the land use plan in courts of law		
31.	Developing idle land in the municipality		
32.	Increase in government funding to promote better management		

APPENDIX 2: INTERVIEW GUIDE FOR ORDINARY PEOPLE.

1. What is your occupation?
2. For how long have you been in it?
3. What is your age?
4. Are you rightfully occupying your area of operation?
5. (a). If yes, who authorized you to use this area?

(b). If no, why did you particularly choose this place?

6. (a). Are you aware that there is a municipal structure plan?

(b). If yes, how did you come to know of it?

7. Do you have any fears of being evicted some time?
8. Does the council guide people on how they should use land in the town?
9. What are some of the problems encountered in executing your duties?
10. What could be some of the possible solutions to these problems?

APPENDIX 3: OBSERVATION PROTOCOL

The following aspects of land use were listed for observation by the researcher in the field;

Human settlements

Commercial activities within and outside CBD

Different human activities within the central business district

Industrial establishments

Institutional areas

Green belts and open spaces

Agricultural activities (animal and arable)

Communication infrastructure (roads and railways)

Other activities and land uses relevant to the study.